R-390 Reflector December '05 Edited

From w5or at comcast.net Thu Dec 1 15:17:11 2005
Subject: [R-390] OT: Need manual for Racal

> Subject: [R-390] OT: Need manual for Racal > I have a "B" version of the Racal RA6790/GM (i.e., not the standard

Don,

there is specific mail list for Racal equivalent to the R-390 list.

There has been some discussion of the 2174B VLF receiver there and you might find a manual or other info from members therein. RACAL mailing list http://mailman.qth.net/mailman/listinfo/racal

Don Reaves w5or@comcast.net who owns an R-2174 with a dead power supply, and a set of uninstalled VLF ROMS.

From tfrobase at kitparts.com Thu Dec 1 18:00:38 2005
Subject: [R-390] Incomplete IF module

The question was why do we find serial numbers affixed to modules before the guts get soldered into the subassembly? Roger KC6TRU

Begs another question, were all of the module serial numbers in a given radio identical? ... Tom, N3LLL

From Flowertime01 at wmconnect.com Thu Dec 1 18:21:16 2005
Subject: [R-390] Incomplete IF module (matched numbers)

writes: Begs another question, were all of the module serial numbers in a given radio identical? ... Tom, N3LLL

No way. Some days someone tried to get a few of the modules of the same number into a chassis and then the final inspector would pass a bunch of receivers. The last act was to put the tag on the front panel and make it government property. Some times someone would try to match the tags to the internal modules.
Field stations had hundreds of receivers. At the initial "building of the station" several hundred receivers from likely the same contract would arrive all at once. This provided a lot of receivers with consecutive numbers. Over the years, the technicians had time to play games and match up modules and numbers. Some technicians though the receivers once were all together as matched sets and the miss matched modules had been swapped out and needed to be put back.

On some small contracts, things fell into line fairly well.

There is this holy grail of a receiver with all matching modules inside. It did happen. But more from bored assembly crews than a matter of assembly requirements. Some times technicians in the field would swap a few modules around to get the last one back in place. Some front panel tags also got swapped to make a matching set. But this was from technicians have some free time on their hands. Roger KC6TRU

From tfrobase at kitparts.com Thu Dec 1 18:51:18 2005
Subject: [R-390] Incomplete IF module (matched numbers)

Thanks for clearing they up, that was my guess although every time I sell one that question comes up.

In summary if the modules are all the same contractors manufacture and pretty close to the same numbers that is probably a radio that did not get messed with much? ... Tom, N3LLL

There is this holy grail of a receiver with all matching modules inside. It did happen. But more from bored assembly crews than a matter of assembly requirements. Some times technicians in the field would swap a few modules around to get the last one back in place. Some front panel tags also got swapped to make a matching set. But this was from technicians have some free time on their hands. Roger KC6TRU

From shoppa_r390a at trailing-edge.com Thu Dec 1 21:48:23 2005
Subject: [R-390] Fixture for finding low-noise 6DC6's?

Is there such a thing as a test fixture or something I can lash up to find the lowest noise 6DC6's of my collection? Or is the only real test putting it in the R-390A itself and measuring S+N/N (probably with the GAIN ADJ for each one, I guess.). Tim.

From normn3ykf at stny.rr.com Fri Dec 2 01:30:38 2005
Subject: [R-390] six position rf bandswitch

Hi all!

I cleaned the geartrain by seperating it from the rest of the rf deck. The six position rf banswitch won't align properly(they all do work, however!). I have had the deck out three times and it's still not right. When tuning, sometimes you have to go below (electrical) the band and come back up. The manual is pretty vague, such as: "center the contacts on the switch".

Not very helpful. When this deck was out, I looked carefully at the switches and I do realize that if I screw this up by a few degrees, it never will work right. Does anyone have a good proceedure to set the switches so that this works every time, or is it just an "r390a-ism" It's a bug that I'd like to shoot once and for all. Thoughts, questions or comments! Norm n3ykf

From wewilsonjr at gmail.com Fri Dec 2 05:26:49 2005
Subject: [R-390] six position rf bandswitch

Norm,

Take a look at this page, if you have not already seen it. The paragraphs and last photo near the bottom of the page describe and show a picture of the gear clamp that needs to be adjusted to synchronize the RF six-position band switch.

http://r-390a.us/gear_train_rebuild.htm Good luck, Walter - KK4DF http://www.r-390a.us

From odyslim at comcast.net Fri Dec 2 09:21:17 2005
Subject: [R-390] HF Multi-Coupler wanted

WTB. 1 HF multi-coupler with at least 12 outputs. 2 eight output couplers will do as well. Will pay good price for a working unit. Regards, Scott W3CV

From odyslim at comcast.net Fri Dec 2 09:22:58 2005
Subject: [R-390] Looking for Ed Weisert

Ed, lost your email address. Please get back with me. Scott W3CV

From roy.morgan at nist.gov Fri Dec 2 10:10:25 2005
Subject: [R-390] Fixture for finding low-noise 6DC6's?

wrote: >Is there such a thing as a test fixture or something I can lash up >to find the lowest noise 6DC6's of my collection?

Tim,

Yes, you could build one: Take the front end of an R-390A, hook up power and mechanicals, feed the IF to another radio and do measurements.

Of course you should not bother doing that. Just use your radio as it is.

> Or is the only real >test putting it in the R-390A itself and measuring S+N/N (probably >with the GAIN ADJ for each one, I guess.).

It's not the "only real" test, but it certainly is the easiest and most practical.

The IF Gain Adjust should not have too much effect as you find the lowest noise tubes, as long as it's not set too high so the IF strip noise masks the RF section noise! If when you pull the RF tube out, the noise in the speaker does not get lower, you have some work to do before you test for lowest noise tubes.

Roger has posted the way he and his fellow R-390A technicians selected tubes for best noise ratio. There is also a very long collection of similar articles, including Rogers, posted on the net. It's called sensitivity-alignment.pdf and came from Wu Li's Pearls of Wisdom page, which I cannot find just now. In the past, I got it from the Frequently Asked Questions page, and even though I now can't find it in the web page, it is there: <http://209.35.120.129/Pearls/sensitivity-alignment.pdf>

In summary, I suggest you get an AC voltmeter and resistor load on the line output, a signal generator with some modulation and a 3- or 6- or 10- db pad at the receiver input. You are looking for the tube(s) with the lowest signal to noise ratio, NOT just the lowest noise. (A really dead tube will give you very low noise, but no signal either.)

Notes:

General Radio and others made "Output Power Meters" that are very useful for this job. The GR types are 583 (low power), 783(high power), and the most recent is the 1840A. These things present a wide range of resistive loads and a meter to measure power delivered. There are a couple versions of a military meter also, some TS- number I can't recall.

Any AC meter that will measure the audio output level can be used (with a resistor for a load) - a dB scale is useful but not necessary. An oscilloscope will do the job.

Pulling hot tubes out of the chassis is less painful if you have a tube puller of any kind. Some rubber roller "tires" from the copy machine repair person work very well, the wire kind recently discussed on the list work fine, rubber covered chemistry lab grabbers work fine. It would be a shame to drop and break the hot rf tube you just decided was the very best in your collection.

Those rectangular carpet samples from the rug store work well on the bench to help prevent breaking and losing stuff and save paint jobs on radios. Happy Noise-Figuring, all. Roy

From bipi at comcast.net Fri Dec 2 10:20:46 2005
Subject: [R-390] HF Multi-Coupler wanted

Hi Scott,

I highly recommend this unit designed by Jim Garland. It is an excellent multi-coupler and the pre-amp works great.

http://www.miami.muohio.edu/president/personal/w8zr/multicontroller/index.htm

No connection with Jim other than building one of these myself and really liking it! 73 de Mike K7PI

From roy.morgan at nist.gov Fri Dec 2 10:21:55 2005
Subject: [R-390] six position rf bandswitch

wrote >... The six position rf banswitch won't align properly(they all do work, however!). I have had the deck out three times and it's still not right. When tuning, sometimes you have to go below (electrical) the band and come >back up.

Norman,

Make sure the wafer is not worn at the point that the switch shaft goes through it. This can cause enough play to create the trouble you describe above. The moving wafer positions correctly when moving clockwise but not when moving counter clockwise (or vice versa).

I have a Crystal Oscillator module with a shim jammed in the hole where the shaft passes through the wafer. NOT a good solution. Some kind of surgery on the wafer may be in order, such as epoxy-ing a section of metal or phenolic onto the wafer to re-create the correct face for the shaft to bear against. (Saran Wrap will keep the epoxy from sticking to the shaft and causing other troubles.)

From the "GOOD ole Days": The RAL and RAK and the RBA -B, and -C radios have ceramic band switches. The rotors have a central metal bushing staked to the ceramic rotor and having a square hole for the shaft. The R-390 folks could not afford this kind of build quality.

The manual is pretty vague, such as: "center the contacts on the switch".

>Not very helpful.

That means "center the moving contact within the fixed switch contact and tighten the gear clamp for best alignment throughout the range of the switch."

I was a kid when they were writing those manuals. Roy

From bipi at comcast.net Fri Dec 2 10:17:07 2005
Subject: [R-390] six position rf bandswitch

This should be the information you need. It is a great description of how to align the bandswitch (as well as reassemble the entire RF deck).

http://militaryradio.com/r390a-rfdeck-geartrain.html Good luck... 73 de Mike K7PI

From n4buq at aol.com Fri Dec 2 11:02:21 2005
Subject: [R-390] Fixture for finding low-noise 6DC6's?

<snip> > General Radio and others made "Output Power Meters" that are very useful > for this job. The GR types are 583 (low power), 783(high power), and the > most recent is the 1840A.

TS-585. Fair Radio sells them (I bought one from them). Barry - N4BUQ

From paul at pdq.com Fri Dec 2 11:25:24 2005
Subject: [R-390] six position rf bandswitch

wrote: > I cleaned the geartrain by seperating it from the rest of the rf deck. > The six position rf banswitch won't align properly(they all do work, however!). I have had the deck out three times and it's still not right. > When tuning, sometimes you have to go below (electrical) the band and > come back up. The manual is pretty vague, such as: "center the contacts > on the switch". Not very helpful. When this deck was out, I looked > carefully at the switches and I do realize that if I screw this up by a > few degrees, it never will work right. Does anyone have a good > proceedure to set the switches so that this works every time, or is it > just an "r390a-ism" It's a bug that I'd like to shoot once and for all.

> Thoughts, questions or comments!

One thing I found is that the geneva coupler is highly sensitive to being securely shimmed into place. There are some very very thin shims that go in to hold it in, and I _think_ they are there to reduce the side to side rocking that is _just_ enough to cause problems with the bandswitch mechanism getting too sloppy.

I had exactly your problem with several RF decks, and this was the best explanation I could come up with. When I scraped around and found a shim that seemed hard to put in, that was about right.

I also noted that after removal, trying to put exactly the same shim into exactly the same spot wasn't

always easy. It may be that this calls for a very tight fit just to get rid of the slop.

I don't exactly know what will work for you, but I'd hold the deck so you can see this coupler turning and moving, and look very, very closely at it while turning through the bands to see if you're getting any slop there.

This problem cropped up in R-392, R-390A and R-390 radios that I have here. Paul

From JMILLER1706 at cfl.rr.com Fri Dec 2 14:01:50 2005
Subject: [R-390] Fixture for finding low-noise 6DC6's?

Why couldn't the radio (R-390a) itself be used as a "fixture"?

From aa9il at sbcglobal.net Fri Dec 2 14:56:21 2005
Subject: [R-390] The ultimate heresy?

Hi all

Dangerous question.... Has anyone attempted to completely rebuild the modules or (entire?) R390 A radio with new low noise resistors, modern caps, wiring, etc - obviously all the mechanics, tubes, slugs, major components, etc stay. Regards Mike AA9IL

From crips01 at msn.com Fri Dec 2 17:14:50 2005
Subject: [R-390] The ultimate heresy?

Sounds very interesting, I to would like to know if anyone has done this, also add to the list the trusty R388/URR. Ken de W7ITC

From drewmaster813 at hotmail.com Fri Dec 2 17:27:23 2005
Subject: [R-390] RE: Fixture for finding low-noise 6DC6's

Tim wrote: >Is there such a thing as a test fixture or something I can lash up >to find the lowest noise 6DC6's of my collection?

There is a DIY tube noise tester at http://members.aol.com/sbench102/RAT_Noise/

The project measures noise at audio frequencies; I'm not sure how that test would correlate with noise performance at RF.

The site presents material primarily for the tube audiophile but there are some other interesting projects there such as power supplies and a transconductance tube tester. Drew

From shoppa_r390a at trailing-edge.com Fri Dec 2 18:05:01 2005
Subject: [R-390] The ultimate heresy?

wrote: > Hi all > > Dangerous question.... Has anyone attempted to > completely > rebuild the modules

or (entire?) R390 A radio with new > low noise > resistors, modern caps, wiring, etc - obviously all > the mechanics, tubes, slugs, major components, etc > stay.

Well, many of us have gone through and replaced any questionable caps and any questionable resistors in some/all modules.

Doing everything everywhere could prove disastrous in the case of special tempco parts. There must be some of these in the PTO.

And remember there's not just the caps in the chassis but also caps inside many of the coil cans.

Replacing wiring sounds a more than just a little bit overboard. You'd still have the same old connectors (which would be the weak point). Some here have replaced individual bad cables etc. in the harness, and it's a fair amount of work to unlace the harness, remove the cable, put in the new cable, and lace it all back up. While I've done some cable-lacing in the past I can guarantee you that I would never be able to put it all back together as well as it was done at the factory.

The parts most likely to be in need of refurbishment are the mechanical controls and switch sections. Many of these have custom wafers/contact arrangements that make them certainly NOT off-the-shelf items. Usually donor rigs are found and/or Deoxit + some very particular refurbishment takes care of the problem area. I'm guessing the cost of fabricating new switch wafers/contacts throughout would run into thousands of dollars, very much discouraging en masse replacement from "new stock". Tim.

From jmiller1706 at cfl.rr.com Fri Dec 2 18:19:31 2005
Subject: [R-390] The ultimate heresy?

I have found that replacing some caps has actually improved performance when it had degraded, even the disc .005 bypass caps. In areas where I was having problems, especially along the AGC lines and screen bypass lines in the RF deck, replacement discs have helped. They were more than likely marginally leaking. I wouldn't do it wholesale, but in selected areas such as this. Any resistor in a B+ or screen line to a tube should be suspect, even if it looks OK to the eye. They will drift in value with age and heating. Normally 2200 ohm mostly. I replace them with 1 watt resistors. Beware, however, some modern resistors exhibit inductance, they are not pure carbon as the older ones are. Replacing the straight wiring probably wont help, but I did have a case where the miniature coax cable carrying the diode load signal from the IF deck was breaking down and causing popping noises on strong signals... the dielectric in the cable started breaking down after many years, even with the low voltages there (less than 10 volts). Don; bother with ozone free oxygenated monster wire, it is a fraud.

From normn3ykf at stny.rr.com Fri Dec 2 18:43:37 2005
Subject: [R-390] six position rf bandswitch

Thanks gentlemen! When I get back from work, I'll check all of the suggestions. Norm n3ykf

From greybeard5150 at sbcglobal.net Fri Dec 2 21:42:36 2005
Subject: [R-390] Please forgive the off topic post...

but this was so unusual that I thought it might be of interest to some of the R-390 list-folks here. It may

be the worlds largest (and possibly earliest) 'clock-radio'. #6583303657 @ the 'e' place. Thx for the bandwidth ... Quig

From wli98122 at yahoo.com Sat Dec 3 00:38:37 2005
Subject: [R-390] re: The ultimate heresy?

Years ago, Nolan Lee went through his EAC R-390A and checked everything down to the resistance of each wire in the interconnecting cables! He found "lots" of faults, most minor, some major (like unsoldered grounds!). He did not strip out the modules and rebuild them from the 'ground up' as you describe. He did replace a mess of resistors and capacitors though. It is all described in his post in "Restoration_general.pdf" in Pearls. W. Li

From r390a at bellsouth.net Sat Dec 3 04:47:11 2005
Subject: [R-390] "Civilian" EAC R-390A Seen FA

There's one listed on Ebay. From the photos and description, as-new condition, supposedly second owner. FYI Take a look. http://tinyurl.com/85ljw No connection with seller, etc73 Tom NU4G

From r390a at bellsouth.net Sat Dec 3 04:50:07 2005
Subject: [R-390] OT "Civilian" EAC R-390A Seen

FYI

There's one listed on Ebay. From the photos and description, as-new condition, supposedly second owner. First time I've seen as much as a photo of one, outside a copy of the '67 or so QST ad. Take a look. http://tinyurl.com/85ljw No connection with seller, etc73 Tom NU4G

From DJED1 at aol.com Sat Dec 3 09:33:26 2005
Subject: [R-390] "Civilian" EAC R-390A Seen FA

I've been watching that auction, but noted that there is no confirmation that the rest of the radio matches the nametag, and there is no statement that the radio works at this time. So you're paying top dollar for the nameplate and the possibility that the radio is authentic and in good condition. I decided to pass, although I may regret it someday. The other one represented as "mint" is over $1K and rising, so I guess my Amelco is worth that, but still nowhere near what I paid for it in inflation-adjusted dollars (sigh). Ed

From fwbray at mminternet.com Sun Dec 4 00:03:34 2005
Subject: [R-390] Need Oldham Coupler Spring

I recently acquired a R-390a that is missing the anti-backlash spring for the Oldham coupler. Does anyone know of a source of this spring. Many thanks. 73, Fred Bray KE6CD

From kc8opp at yahoo.com Sun Dec 4 06:58:09 2005
Subject: [R-390] Need Oldham Coupler Spring

Fred,

Old VCR's Old tape players73's Roger KC8OPP

From wa9vrh at mtco.com Sun Dec 4 08:00:16 2005
Subject: [R-390] Collins Collectors Assoc. First Wednesday AM NIght Dec. 7th!

FIRST WEDNESDAY AM NIGHT!!! Sponsored by the Collins Collectors Association.

Wednesday December 7th on 3880 kcs at 7:00 PM local East Coast time marks the start of the latest chapter of First Wednesday AM Night, drawing hundreds of vintage stations from across the country.

The event is anchored by a "tall ship" AM station in each time zone. The East Coast and Central sections will now run for 90 minutes in response to the tremendous participation in those time zones. The remaining time zones will be an hour. We encourage stations to check-in on AM using Collins and other AM transmitters, new and old. It's an opportunity to revel in this nostalgic mode, enjoy giving vintage equipment a "run," and sharing some storytelling about classic vacuum tube homebrew and commercial designs. Typically more than a hundred stations take part in the evening's coast-to-coast AM event; by the time it concludes at 10:00 PM Local PST.

LISTEN for the following anchors and stop by to say hello, won't you? You don't have to be running Collins or vintage gear to be welcomed into the group.

7:00 PM-8:30 PM Local East Coast Time Anchor: Stu AB2EZ filling in for Bob W0YVA

7:30 PM-9:00 PM Local Central Time Anchor: Jim W0NKL

8:00 PM-9:00 PM Local Mountain Time Anchor: Jim WA0LSB

8:00 PM-9:00 PM Local West Coast Time Anchor: Bill N6PY comments please to wa9vrh@mtco.com

From fwbray at mminternet.com Sun Dec 4 12:10:16 2005
Subject: [R-390] Coupler Spring

Thanks to everyone who responded.

As this is my first R-390A, I will probably be asking a lot of
questions. I do have Chuck's video and the Y2K manual, so that should help. 73 to all Fred KE6CD

From jshorney at inebraska.com Sun Dec 4 12:50:02 2005
Subject: [R-390] OT: radio store inventory

I'm not sure how appropriate this is for this forum, but I thought if anyone would be able to take advantage of this, it would be one of you guys.

Ladd Electronics in Omaha, NE, is closing down. At the age of 92, Frank Ladd has decided that it is time to retire. Like many such businesses today, eBay and the internet have been killing his business.

Frank has a warehouse full of vintage parts and equipment, and he was supposed to be out of the building last month. Time is getting critical, and they're talking dumpsters now. I've heard quotes such as "$20,000+ worth of stuff", "enough to keep somone busy on ebay for years", and you're gonna need a barn". I have NO IDEA what he has in there (so don't email me asking), but over the years I have seen everything from Collins (there, back on topic), Galaxy, Heath, Swan, Clegg, WRL, Drake, Johnson, you name it, in his store. Word has it that someone could offer Frank $2000 and take it all. Below is an email fron Rich WA0ZQG on the subject:

Hi Jim:

.

It's getting pretty close to too late to do anything aobut it I think. The DEADLINE was this past month but it's been extended to hte end of the year. Got to have the stuff OUT OF THERE by then. Sad situation for Frank I think. . His number is 402) 556.3023 at the store. . signed, rich

I've got no affiliation with Frank, nor do I have the money or space to take advantage of this, I would just hate to see it all go to the dump. Pass the word. Jim Shorney

From greybeard5150 at sbcglobal.net Sun Dec 4 13:36:39 2005
Subject: [R-390] Re: OT: radio store inventory

snip Ladd Electronics in Omaha, NE, is closing down.

Dr. Jerry looks to be the one that's actually closest to the store if anyone is in personal contact with him. Don't know if he'd be interested in taking a peek, but it wouldn't hurt for someone to ask. You never know... Quig

From r390a at bellsouth.net Sun Dec 4 18:39:45 2005
Subject: [R-390] 1968 EAC 390A

Figured I'd raise more of a discussion over the civilian EAC '390A (similar to that seen on Ebay). It wasn't meant as strictly an ebay subject, but a discussion of this particular sort of R-390A.

Seriously, while we've raised the issues of ballasts, end points and gear rebuilds on a regular basis, this isn't a subject I've heard discussed in some number of years. We've discussed other contract years of note, but not mentioned much about the EAC end-run.

Looking at Tom Marcotte's s/n list, the high serial seen for these seems to be near 118. Anyone know how many of these were sold? Were these all repaired QC failures or were they simply the "tail end" from the 1967 contract? Anything in particular different about these units other than the front tag? Tom NU4G

From barry at hausernet.com Sun Dec 4 19:49:35 2005
Subject: [R-390] 1968 EAC 390A

Glad you brought this up because I have a question.

Tom Marcotte's production chart shows DAABO5-67-C-0155 for the EAC '67 Contract, followed by EAC Industries/Hammarlund '68 as "consumer" no contract number with highest reported S/N as 118.

Following the consumer run the chart shows DAAB05-68-C-0040 '68 contract, but as Dittmore-Friemuth with highest s/n as 215.

I recently acquired a '390A with a '60 EAC tag on it, but nothing is from that contract. The contract stamped on the back panel is DAAB05-68-C-0040, however the rubber stamp job shows "Electronic Assistance Corp." not Dittmore-Friemuth. The serial # on the back panel is 153.

The IF deck has the same contract and mfr as does the Xtal Osc. deck. The power supply is a '67 EAC, and has what looks like a depot rectifier upgrade job tube shield mounts crushed in the usual fashion. The audio deck is a Collins just has "Collins" and a serial number. However, the plug-in caps have a '67 date. I have not pulled the RF deck and can't see the stamping, but looks like it belongs to that Xtal deck probably that '68 contract.

So ... did the D-F's say Dittmore-Friemuth on the back or EAC? Or what ??? standing by .... Barry

From leslocklear at cableone.net Sun Dec 4 20:04:26 2005
Subject: [R-390] 1968 EAC 390A

My understanding is that the Ditmore Freimuth receivers were all 67 EAC built R-390A's. Les Locklear

From r390a at bellsouth.net Mon Dec 5 00:45:35 2005
Subject: [R-390] 1968 EAC 390A

So, where did the commercial receivers end up coming from, supply- line wise? Did the good EAC receivers go to them and the ones that didn't pass qa end up being sold commercially??

I didn't get an email off to the ebay seller before he had his radio boxed up, or he'd been happy to have taken a shot of the back panel. Tom

From r390a at bellsouth.net Mon Dec 5 03:21:36 2005
Subject: [R-390] OT - LOL snort sputter

I'm not telling the group where I saw the description that included the following. You can guess the place and the seller.

"...What makes it unusual is the dial cover to stop any light escaping from the dial so as to not be seen by the enemy and another unusual point is that the receiver has the exceptional Collins PTO which is very rare to find as they were only usually put in to special one off receivers built to a higher spec receiver for a special purpose."

Uh huh.

Figured if my on-topic EAC post doesn't get discussion this week, maybe this one will. 73 Tom NU4G

From shoppa_r390a at trailing-edge.com Mon Dec 5 06:32:54 2005
Subject: [R-390] 1968 EAC 390A

wrote: > So, where did the commercial receivers end up coming from, supply-

Supply-line wise, wouldn't there have been a problem with directly producing for the consumer using tooling etc. owned by the US Gov't?

The earlier suggestion that these are made out of rejected/repaired modules sounds sensible to me although I certainly have no personal experience that would lean me that way! Tim.

From courir26 at yahoo.com Mon Dec 5 07:36:59 2005
Subject: [R-390] 1968 EAC 390A

All the ones I've seen had the contract number marked out.

I think they were all over runs or QC repairs. The one I got from Robert Edwards had very low and very high s.n.s in it, indicating it may have been made from QC repairs. Tom

From leslocklear at cableone.net Mon Dec 5 08:24:15 2005
Subject: [R-390] OT - LOL snort sputter

> "...What makes it unusual is the dial cover to stop any light escaping from the dial so as to not be seen by the enemy

Martyn puts a spin on even the most mundane/common items. Les

From hankarn at pacbell.net Mon Dec 5 08:51:16 2005
Subject: [R-390] OT - LOL snort sputter

He probably would not know if a Collins PTO snuck up and bit him in we all know where. Total unadulterated BS of the highest Degree. Hank KN6DI

From robert.boyd at servicecanada.gc.ca Mon Dec 5 09:27:59 2005
Subject: [R-390] OT - LOL snort sputter

More than a spin, in fact outright deception-since when did Motorola become Collins?

From barry at hausernet.com Mon Dec 5 09:38:27 2005
Subject: [R-390] OT - LOL snort sputter

Spin, nah has it all wrong.

Those flip down lids were to prevent oscillator leakage through the Veeder Root window when R-390's were used on ships and submarines. The U-boats had very sensitive direction finders which could zero in on such stray tiny singals from 200 miles away. The PTO's in these "one-off" receivers were all Collins, simpy because no one else made them in WWII. Also used on B-17's and B-29's racks of 'em. (No bombs on those special aircraft).

Yeah, I know ... you're going to tell me that can't be because R-390's were developed after WWII. That's what they'd have you believe. Most of the pre-50's units came with false fronts in black wrinkle which made thos R-390's look like SX-28's, AR88's, RAK/RAL's or somewhat too tall BC-342's. Gray ones were disguised to look like SP-200's, etc.

After the war, many were destroyed or dumped overboard. Some went back to special, secure depots and subjected to extreme makeover with thorough module-mixing and removal of the false fronts. The contract dates were also falsified by 10 years forward. (e.g. "53 was really '43) A few of those survived you can identify them with a good microscope. A special symbol was micro-engraved somewhere on the tag it looks like this: ;-) Barry

From leslocklear at cableone.net Mon Dec 5 09:44:33 2005
Subject: [R-390] OT - LOL snort sputter

The group in charge of that "Black Operation" must have been the ones that "staged" the moon landing.....:-) Les Locklear Gulfport, MS.

Reminds me of my safari in Africa. Somebody forgot the corkscrew and for several days we had to live on nothing but food and water. W.C. Fields (1880-1946)

From fwbray at mminternet.com Mon Dec 5 10:01:39 2005
Subject: [R-390] OT - LOL snort sputter

Also interesting is his claim to have re-painted the receiver. If he did, it must have been a long time ago considering the wear marks on the front panel where the receiver was rack mounted. Or maybe that is a special feature of this rare radio? Fred Bray KE6CD

From chacuff at cableone.net Mon Dec 5 10:20:56 2005
Subject: [R-390] Latest R-390 FS by RM

If you will notice he is also reusing the text stolen from my last R-390/URR sale there. I complained to the Ebay folks and they said they couldn't see any significant similarities in the listings but if I wanted to submit specific examples the would consider the matter further....

I sent them two pages of significantly similar text for comparison and have heard nothing since... Didn't really expect to.

Also a few weeks back I tried to broker a deal between members of this list and a fellow who contacted me about some Collins gear his dad wanted to sell...75S3, KWM2A and accessories...

Look for them soon on Martyns auctions as he ended up purchasing it all....

Bought the KWM2A, speaker and station console for something around $700....you guys let that one get away! Cecil....

From n4buq at aol.com Mon Dec 5 10:59:54 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

This weekend, I began the rather sad task of filling in the engravings in an R390A a front panel and will have it powder-coated and then will need it silk-screened. The engraving was too badly damaged to try to restore and the chemical stripping they used to remove the first couple of attempts at powder-coating left some rather bad pitting in the panel. I had to coat the entire front side with JB Weld and sand back down to the metal (kind of like a grain-filling operation for wood). It should turn out nicely but will need silk-screening.

I'm wondering if there is any kind of price break if more than one panel is done at a time? Is the screen a "use-once and throw-it-away" kind of thing? If so, then there's no need in trying, but if it can be used for more than one panel if done together, then perhaps there might be some cost saving? Anyone? Barry - N4BUQ

From barry at hausernet.com Mon Dec 5 11:19:28 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

Here's an idea for you. Replicate the little known R-390A(x) it came with the flip-down cover for the counter, to prevent passers-by from noting what frequency was being monitored, but went a step further no panel markings.

You should know the panel blindfolded by now. And, at this point, you don't need to be warned to read the instruction manual as ordinarily declared at the lower left.

Any problem, fully replicate the x model by pasting a laminated, shrunk down front panel diagram from one of the manuals on the reverse side of the Veeder Root flipdown thing. Make sure you mount it upside-down so when you flip up, it will read rightside-up.

Finish is best to be totally monochrome satin black, so in low ambient light, the radio can hardly be seen at all. Hope this helps .. ;-) ... ooops, there's one of those secret marks again. Barry

From n4buq at aol.com Mon Dec 5 11:24:39 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

Actually, I suppose I could market it as one that made it past Collins QC without getting silk-screened. A truly R@RE model. Barry - N4BUQ

From mikea at mikea.ath.cx Mon Dec 5 11:32:20 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

To really add some pizazz to it, frob up a tag with an FSN starting with "5810-" and "SECRET CRYPTO" somewhere on it. That would explain the lack of markings, too. You can claim that the freq display is really a key- entry device. Mike Andrews, W5EGO

From r390a at bellsouth.net Mon Dec 5 11:33:19 2005
Subject: [R-390] OT - LOL snort sputter

I think RM does the refurbs himself, then compares himself to Rick. Probably mentions Rick in detail

so the folks that read much English or don't bother to read the text will think that Mish is the one that rebuilt the radio.

RM says in the listing:"I fully restored and professionally aligned the receiver with lab grade test gear, I have a full RF workshop here. I fully disassembled and cleaned of years of dirt, grease and cobwebs and washed and coated the chassis and mechanical components"

Wonder what he coated the thing with? Tom

From roy.morgan at nist.gov Mon Dec 5 11:42:33 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

wrote: ... filling in the engravings in an R390A a front panel and will have it powder-coated and then will need it silk-screened. I'm wondering if there is any kind of price break if more than one panel is done at a time?

Barry,

It depends on who the supplier is.. and what you are having done.

Howard Mills has some black powder coated, silk-screened panels. You send your usable panel plus $150 to him and you get a completed panel back. I don't know about discounts for quantity, and I don't know if that covers shipping. Usable means no dents or holes.. and I think it should be a previously screened panel so he does not have to fill in the stampings. Do check that the matierial you are using to fill the stampings would stand the heat of the powder coat process. Repair or metalwork on your sent panel means you pay more. As I understand it, you get an already done panel back, not your original one.
Hank Arney has had refinished panels also, check the archives or email him for details. Dan Arney <hankarn@pacbell.net>

If you are having a silk screen MADE FOR YOU, and then used to screen panels you provide, it will cost less per panel to do a bunch. Making the silk screen may cost you $350 or more. Then they (whoever "they" are) will charge a setup charge an an amount per piece to do the screening. If you are doing just one or two, don't plan to get a screen made and have it be economical. Final costs *per panel* might be $400.
If you were going to do a hundred panels, the cost of making the silkscreen would not be too important, and the cost per panel would be much lower, especially if you had the hundred panels to send to the screener all at once.

Powder coating is similar: setup charge plus per piece charge. Then there is the paint/powder needed.

I say get one from Hank (gray) or Howard (black)

The black is nice. An added "bonus" is that it will irritate the total-originality-at-all-costs folks. Yes, there were black faced R-390A's made that way, presumably for a three-letter agency. And presumably very few of them. The panels Howard has are quite stunning. Quite. Most likely he could get your CY-979 cabinet powder coated black to match the next time he does a KW-1 cabinet. Which might be soon. Very soon.

"Howard Mills W3HM" <w3hm@nfis.com>304-876-6483 Roy

From jpl15 at panix.com Mon Dec 5 12:04:30 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

wrote: wrote: >> ... filling in the engravings in an R390A a front panel and will have it powder-coated and then will need it silk-screened. I'm wondering if there is any kind of price break if more than one panel is done at a time? >

Hmmmm - I'm wondering if Front Panel Express (www.frontpanelexpress.com) might be an economically viable way to get this done - I think you'd have to provide a plot of the panel scanned into Autocad, or just re-drawn using their own software - it's pretty simple panel as these things go - then, if the price was sensible, you could run a few of them and sell the surplus to us Lazier Louts... ;}

I've used these folks a lot doing military re-furb work - never been a problem and they've been very good to work with in terms of panel material, finishes, paint specs, etc. Just my 200 millidollar for to-day. Cheers John KB6SCO

From n4buq at aol.com Mon Dec 5 12:09:30 2005
Date: Mon Dec 5 12:11:42 2005

I downloaded a front-panel design tool (might be FrontPanelExpress) and considered that route. They have all the ability to make all the necessary cutouts, reliefs, holes, etc., as well as the engravings. It would take quite a while to make the lettering look correct, but they would make a pretty nice panel.

The only thing that was brought up about these before is that they are anodized and that they might scratch easily. Once scratched, there's not much you can do for them. Of course, being anodized, proper care would have to be done to make the front panel electrically conductive where it is necessary for it to be. Barry - N4BUQ

From chacuff at cableone.net Mon Dec 5 12:30:07 2005
Subject: [R-390] OT - LOL snort sputter

> I fully disassembled and cleaned of years of dirt, grease and cobwebs and washed and coated the chassis and mechanical components" > > Wonder what he coated the thing with?

Love!

From Bonddaleena at aol.com Mon Dec 5 14:54:01 2005
Subject: [R-390] OT - LOL snort sputter

writes: The group in charge of that "Black Operation" must have been the ones that "staged" the moon landing.....:-) Les Locklear Gulfport, MS.

Reminds me of my safari in Africa. Somebody forgot the corkscrew and for several days we had to live on nothing but food and water. W.C. Fields (1880-1946)

Yep. The easiest way to tell if RM is lying, is to check and see if his lips are moving. Been to his 'house', and seen his "lab". ha ha ron N4UE

From future212 at comcast.net Mon Dec 5 16:08:13 2005
Subject: [R-390] PTO

Hello,

I stumbled on to an R-390 non A PTO. Are they the same as a R-390A PTO except for the BNC vise MB connector? Thank you for your help. 73's DW Holtman WB7SSN

From r390a at bellsouth.net Mon Dec 5 16:29:02 2005
Subject: [R-390] 1968 EAC 390A

The item that sold on ebay showed a photo of the power supply and indeed its contract number was marked out. I had wondered why it was. Tom (the other one) NU4G

From richardlo at admin.athabascau.ca Mon Dec 5 16:37:57 2005
Subject: [R-390] PTO

wrote: > I stumbled on to an R-390 non A PTO. Are they the same as a R-390A PTO > except for the BNC vise MB connector? Thank you for your help.

No they aren't the same but they are less common so you stand a good chance of selling it or trading it for a 390A PTO. To me for or instance. Richard Loken VE6BSV,

From dhallam at rapidsys.com Mon Dec 5 16:35:04 2005
Subject: [R-390] PTO

According to the information I have, the only differences are the RF connector and the power cable. I think the power connector itself is the same David. KC2JD

From richardlo at admin.athabascau.ca Mon Dec 5 17:06:41 2005
Subject: [R-390] PTO

wrote: > According to the information I have, the only differences are the RF > connector and the power cable. I think the power connector itself is the > same.

That is useful information. This means that I can now look at certain R390A parts with much more (malevolant) interest than I used to. I always thought that they were differant and I was encouraged in this belief by the 24V filiment wiring more so than by the difference in RF connectors.

I would still recommend selling it and getting a much more common 390A (and probably newer) 390A PTO. Richard Loken VE6BSV

From roy.morgan at nist.gov Mon Dec 5 17:25:03 2005
Subject: [R-390] PTO

wrote: wrote: > > According to the information I have, the only differences are the RF connector and the power cable. I think the power connector itself is the same.

Do be careful here.

Radio PTO
R-390/URR: 70H-2
R-390A/URR: 70H-12

The power plugs may be quite different: one having a different number of contacts than the other one, even though they are both the small hex shaped Winchester type.

It's not clear to me but the B+ supply to the PTO may be thought the output coax in the R-390/URR PTO (70H-2). The output voltage may be specified as different, but likely would work ok.

The frequency span, plate voltage, heater voltage and current, filament voltage and number of turns are the same.

I can't say about the physical size and mounting point dimensions.

Any one with a 70H-1 PTO: It will *not* work in either of these radios, send it to me. Roy

From dhallam at rapidsys.com Mon Dec 5 17:31:20 2005
Subject: [R-390] PTO

The filament circuit for the VFO and BFO is identical in the R-390 and R-390A. The two tubes are in series with the ballast tube.

IMO the R-390 is much the better of the two receivers. The mechanical filters in the R-390A do not make that module superior to the R-390. I set up a R-390A IF module for use in my R-390. After a few hours of use, I took it out and put the original back in.

In general higher quality parts were used in the manufacture of the R-390. The R-390 does not normally need have wholesale replacement of capacitors (paper and electrolytic as does the R-390A. The R-390A was designed to reduce cost. Longevity was not a consideration. David KC2JD

From danrae at verizon.net Mon Dec 5 18:00:56 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

One alternative I don't remember seeing for losing the hard to find ballast tube is to run the two oscillator tube filaments from the otherwise unused 12.6 Volt center tap on the power transformer.

This involves adding one wire in the power supply (from transformer pin 9, the centre tap, to the previously unused pin 9 on the connector J111), moving the filament feed to the IF strip from the present pin 1 inside plug P111 to pin 9 (in mine, it's the thinner of the two white / brown wires), and finally shorting out the current regulator pins 2 and 7 in the IF strip. And that's it.

This has some advantages over the methods using a resistor, it's cheap, retains the original tubes rather than replacing them with 12BA6s, but does not have the advantages of another form of current regulator, solid state, for example.

Anybody tried this before, or got any comments for or against? 73 Dan ac6ao / g3ncr

From dhallam at rapidsys.com Mon Dec 5 18:34:04 2005
Subject: [R-390] PTO

Roy,

I guess I should review my notes before opening my mouth. It is not a plug and play interchange but is readily doable. The R-390 get screen voltage from a dropping resistor in the B+ line while the R-390A has a separate 150 VDC regulated supply. Since you will have to rewire the power cable anyway (the R-390A cable is too short), the changes are minor.

The R-390A mounting bracket will take some changes to mount in the R-390.

Bottom line for me is that I would not hesitate to make what I believe minor changes to use a R-390A VFO to use in a R-390 if I had to. David KC2JD

From dhallam at rapidsys.com Mon Dec 5 18:49:36 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

I guess I have to ask why?

Tests run by Dallas Lankford and published to this group showed the resistor substitution was just as effective as the ballast tube and maybe even better. I also think he stated that his test showed if you really wanted stability, the VFO and PTO should be run from a separate regulated DC supply.

Either replacing the ballast tube with a resistor or replacing the 6BA6's with 12BA6's and the ballast tube with a short is effective and reversible with a few minutes work not involving circuit changes. David KC2JD

From paul at pdq.com Mon Dec 5 19:06:22 2005
Subject: [R-390] 70-H1 PTO.

wrote: Roy is being too deferential: the 70-H1 PTO ONLY works in the R-389.

One went on eBay a few months ago for a few hundred bucks. Paul

From Flowertime01 at wmconnect.com Mon Dec 5 19:14:22 2005
Subject: [R-390] Need Oldham Coupler Spring

Fred Bray,

There is nothing sacred in the springs. They need to be stiffer than the coupler back lash. short enough to get stretched between the pegs. On a bad day a twist tie in there will do better than nothing. Most ball point pen springs are not stiff enough. The small diameter is the tricky part.

The guys are right, start looking into old VCR's and other items for a spring that will work. True Value hardware may have some stock that will work. My Ace hardware has become as lost as Home depot and Lowes for this small stock.

Someday when you tare down a relay in an octal plastic box to make a capacitor package, the relay spring may be just about the right size. Hope you do not have to resort to a whole order from a web site to get your self a spring Roger KC6TRU

From Flowertime01 at wmconnect.com Mon Dec 5 19:17:44 2005
Subject: [R-390] Coupler Spring

writes: As this is my first R-390A, I will probably be asking a lot of questions.

Fred,

Just let them come, feel free to post any thing you want. Some of us will try to get you some real help and hopefully all of us will try to have some reading enjoyment from the exchanges. Roger L. Ruszkowski KC6TRU

From roy.morgan at nist.gov Mon Dec 5 19:25:00 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

Quoting: .. run the two oscillator tube filaments from the otherwise unused 12.6 Volt center tap on the power transformer.

Is one end of the 26 volt winding grounded??? I am not sure without getting out the schematic.

> Anybody tried this before, or got any comments for or against?

No, I have not tried it.

One comment is that it means the modules are now not interchangeable, at least to some extent. Roy

From Flowertime01 at wmconnect.com Mon Dec 5 20:02:34 2005
Subject: [R-390] 1968 EAC 390A

asked, Supply-line wise, wouldn't there have been a problem with directly producing for the consumer using tooling etc. owned by the US Gov't? The earlier suggestion that these are made out of rejected/repaired modules sounds sensible to me although I certainly have no personal experience that would lean me that way!

Tim,

I have no idea who built the EAC receivers that were sold as commercial units.

The design was Collins. Collins was paid to do the design and retained ownership to the design. The typical deal was you got paid for the design work even if nothing was ever produced.

There was a small contract for proof of production and verification that produced product meet design requirements. I have no idea where those original first receivers went.

After that was production contracts. The contract was to produce a commodity for contracted cost. The exact commodity of this contract looks just like this item setting here (one of those first proof of production receivers). You received this contract from the government.

Collins had patens on "manufacturing methods". Every time someone built one and used Collins "manufacturing methods" you paid a royalty to Collins. The government made sure Collins got a check for every receiver it contracted to have built.

There is nothing in this deal that prevents any manufacture from cutting their own deal with Collins to make and sell the receivers. At some time the patens on the manufacturing processes expired and then any one could build a knock off of the receiver.

All the machines to cut and bend chassis metal were owned by private manufactures. A lot of it was subbed out to metal fabrication shops.

I knew a neighbor named Jigs. That was not his real name but he built jigs for GM in Flint Michigan. What I though were stamped metal parts on 1950 and 1960 cars were in fact parts that went through 15 or 20 bending steps. It was all generic metal presses and stop jigs.

In 1977 I as working at Essex wire in Clare Michigan. They mostly made the wire harness for the Chryslers. They had a custom department. They would build one of for the proto type cars and proof of production for cost estimates. Some times they would build a 100 of some model harness from years past for a parts house. I have no idea where they found all the molded plastic connectors. The terminals were fairly stock. We would hand paint and strip wire to specific colors. The items out of the custom department looked just like items coming off the production lines from a look and fell stand point. Is there a shop out there some where that would build an exact wire harness for an R90 or R390A? I think there is at least a few places.

Look at Hank out in California and how many parts he has been able to have fabricated.

If you have the money, and the idea is good, you can make more money. The real test is getting from no money to money. Roger KC6TRU

From Flowertime01 at wmconnect.com Mon Dec 5 20:23:55 2005
Subject: [R-390] 70-H1 PTO.

Roy is being too deferential: the 70-H1 PTO ONLY works in the R-389. His has been badly mauled, munched, and otherwise twisted into a pile of unrecoverable junk, and he really NEEDS one.

Fellows,

David at Fair Radio Sales who has put most of the R390A out their doors over the last few years would also like one for his own R-389. Someone at Fair let his get away one day thinking it was a R390 item.

The customer never complained that his unit did not work so David has never had a chance to get it back. Do not ask David why his PTO was out of his R389 and just laying around. I do not need to know the bitter facts. Roger KC6TRU

From drewmaster813 at hotmail.com Mon Dec 5 20:28:02 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Barry,

Why not redo it with Dymo labels - it would then resemble the listing in you-know-who's catalog over which we all used to drool :o) Drew

From ToddRoberts2001 at aol.com Mon Dec 5 20:43:45 2005
Subject: [R-390] Anyone getting a front panel silkscreened?

I'll say one thing, Hank does first-class work on painting front panels and silkscreening - B-E-A-U-T-I-F-U-L results! 73 Todd WD4NGG

From jshorney at inebraska.com Tue Dec 6 00:08:53 2005
Subject: [R-390] OT: More on Ladd Electronics

From courir26 at yahoo.com Tue Dec 6 06:48:31 2005
Subject: [R-390] 1968 EAC 390A

There are so many problems with your post I don't know where to start.

First of all the tooling was owned by EAC, not the Govt. This was not a govt ammunition plant. It was a private business.

EAC built the units sold as commercial units by EAC.

Collins did not make a small proof of production batch of R-390As, they made about 6000 units or more than 10%. Out Tom

From galpinp at absamail.co.za Tue Dec 6 06:51:27 2005
Subject: [R-390] Silk Screening

I had a panel silk screened for the R206 I rebuilt from 3 old ones. Cost - x Rands. Cost for 3? - exactly the same, provided that they were all done at the same time! Definitely a no-brainer! Paul Galpin ZS2PG

From courir26 at yahoo.com Tue Dec 6 06:55:10 2005
Subject: [R-390] PTO

The output frequencies are the same but be cautious about the connector. Tom

From n4buq at aol.com Tue Dec 6 10:17:25 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

I'm thinking if I can get it screened in a Russian font and pencil "Nakita" on the back, I'd have a very rare cold-war relic. Barry - N4BUQ

From barry at hausernet.com Tue Dec 6 10:37:06 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Well, the jig is up already if you do that ... It's spelled "Nikita".

Believe it or not, I have an AR88 with a yellow front panel with a very neatly done Dymo job on all the labels. Also was "re-knobbed" with modern looking black and aluminum skirted knobs in place of the most excellent and hard-to-find-in-all-the-right-sizes RCA "console knobs".

This was a cast off from a museum in Vancouver BC as I recall, probably as it was surplus and unhistoric. Barry

From odyslim at comcast.net Tue Dec 6 12:25:01 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

How bout the one Tokyo Rose used to listen in on us?

From David_Wise at Phoenix.com Tue Dec 6 13:56:33 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

Roy: Yes, the 25V winding is grounded.

While Dan's mod can be done very neatly without a prohibitive amount of effort, I give a thumbs down because as Roy said, it makes the IF deck incompatible with the standard power supply module. Although the 12BA6 mod renders the IF and PTO incompatible with standard PTO's and IF's, they at least can be restored without removal/rewiring. If you aren't keen on regulating the heaters, I favor the 42 ohm resistor mod because it represents the absolute minimum effort to install and remove. Myself, I want to regulate them, and after a long hiatus I've resumed work on the 3DW7D 2.0 . Meanwhile, schematics of the 3DW7A are free for the asking, but only a zealot like me would make the effort to squeeze it into a tubester format, and if you give up the format, there are easier regulators to build. None cooler though in either sense! 73, Dave Wise (SWL in Portland OR)

From leslocklear at cableone.net Tue Dec 6 14:13:44 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

Dave,

I'll say this, you certainly have a "stick to it tiveness" that is admirable. If Hank Arney is ever looking for an somebody to pick the fly poop out of the pepper, you will get my recommendation.....

Out of all the modifications that have ever been posted here or other places, none of them make a difference imho. resistors, diodes, tubes or the elaborate mod that Chuck Rippel does, which held the voltage to 6.2 volts for months on end seem to make a difference as to whether one can hear that heterodyne from Pitcairn Island.

Once again, just in time for the holidays, the "Deadest Horse Thread" that has ever been has surfaced once again. We should all live so long..... Les Locklear

My wife has a slight impediment in her speech. Every now and then she stops to breathe. - Jimmy Durante

From dhallam at rapidsys.com Tue Dec 6 14:45:56 2005
Subject: [R-390] PTO Stability

What PRACTICAL application does improving the PTO stability over the ballast tube design have other than perhaps participating in the ARRL frequency measuring contest? You notice I emphasize the word practical. David KC2JD

From David_Wise at Phoenix.com Tue Dec 6 15:39:50 2005
Subject: [R-390] PTO Stability

One day I wanted to listen to music on AFRTS SSB. Even a few Hz off, it goes out of key something fierce. DW

From David_Wise at Phoenix.com Tue Dec 6 15:46:25 2005
Subject: [R-390] R-390A Current Regulator Tube replacement?

> I'll say this, you certainly have a "stick to it tiveness" that is admirable. If Hank Arney is ever looking for an somebody to pick the fly poop out of the pepper, you will get my recommendation.....

I'm allergic to fly poop, though you wouldn't guess it. The 3DW7 is one of my few really neat ideas, I continue to have fun poking at it, and I'd feel bad if I gave up and walked away.

"He tasks me. He tasks me, and I shall have him!" Dave

From kf4yio at charter.net Tue Dec 6 16:20:11 2005
Subject: [R-390] !st I.F. Transformer needed.

Does anyone have a 1st I.F. transformer for a R-390 Non0A? Either an extra or one for sale. Please email info to John WA0ENE..... MANGOIMG@bellsouth.net Thanks - Jack

From wa2onk at verizon.net Tue Dec 6 17:24:27 2005
Subject: [R-390] E-bay R390

Greetings,

There is a R390 on e-pay listing # 5838448701. The pix supplied are a bit poor, and there are none of the inside of the radio. I sent off a request, if he (or she) could remove the covers and send a couple pix of the inside. The response was " I will not take the covers off. I have had the radio for eight years and never took them off ".

I'm a little hesitant about bidding on it after the response I received. Chuck wa2onk

From future212 at comcast.net Tue Dec 6 17:37:26 2005
Subject: [R-390] PTO's

I picked up the PTO that I asked about yesterday. The party that I bought it from assured me that it was from a R-390 non A. I looked at and it must have shrunk. It is about 1/3 the size of a R-390a PTO. After doing a little research on it, it is from a R-393. It is a 70 E 18. The only thing that they have in common is their frequency.

I'm very sorry for any confusion that I may have caused. Next time, i will take a look before asking questions. 73's DW Holtman WB7SSN

From leslocklear at cableone.net Tue Dec 6 17:38:12 2005
Subject: [R-390] E-bay R390

I'd be even more than hesitant. I wouldn't even waste my time bidding on something like that. YMMV. Les Locklear

From pmills7 at houston.rr.com Tue Dec 6 17:39:17 2005
Subject: [R-390] E-bay R390

Chuck,

First off....the seller has a feedback score of 1....that is ONE... Why would you want to risk doing business on a possibly expensive item with someone who has no history on eBay?

Second, he is obviously ignorant of R-390's and electronics in particular. He has no concept of proving to the potential buyers the quality (or lack thereof!) of his radio. It works....or it "lights up" and what else do you need to know.

If you want to gamble, bid heavily. If you want to play it safe, let someone else deal with this guy. good luck, Phil W5BVB

From future212 at comcast.net Tue Dec 6 17:39:25 2005
Subject: [R-390] PTO's

OOPS, it is from a R-392.

From jshorney at inebraska.com Tue Dec 6 20:38:07 2005
Subject: [R-390] Re: [drakelist] OT: More on Ladd Electronics

wrote: I'm not saying that THIS TIME it's not true, but as they say, "I've heard this before". Maybe this time it's for real?

Maybe, maybe not. The difference this time is it's being publicisd by members of the SWIARC. Here's the portion of the last post that I left out:

Date: Fri, 02 Dec 2005 22:37:40 -0600
Subject: [Fwd: [Fwd: [HDXA-NI0DX] Ladd Electronics Going out of Business Sale]]

Rich:

I cannot come to the garagefest tomorrow because I must attend the board meeting of the Great Plains, Inc. (CS nursing service) tomorrow. You may want to give the folks in attendance the information in the following e-mail. I am Frank's lawyer, and I can confirm that all of the facts in the message are accurate except the phone number (it is 556-3023). Brian Jim

From r390radio at gmail.com Tue Dec 6 21:08:33 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Solid Oak or Walnut panel with "woodburned" engravings?????

Dang it, I'm a month or so behind on my fake tag project, I'd better get cooking!! Tom NU4G

wrote: Hey why not scratch it in with an old hunting knife, then you will have the finest antique Daniel Boone engraved R390a panel that our favorite Kentuckian has every seenit will be worth even more on ebay. He might even buy it so it can be from his personal collection, given to him by a relative of Daniel himself... You can even scratch in "D. Boone killed a resistor on this panel 1803." Mike

From r390radio at gmail.com Tue Dec 6 21:09:46 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Hey!!!

You may be on to something Barry!! There can be screens done up in several languages, Russian, Greek, Arabic, German, Klingon, etc!!

Appropriate pencil markings on the back, or in the case of Klingon, I suppose it would have some version of "Nikita" on the back marked in blood. Tom NU4G

From jshorney at inebraska.com Tue Dec 6 21:19:57 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

wrote: >Appropriate pencil markings on the back, or in the case of Klingon, I suppose it would have some version of "Nikita" on the back marked in blood.

If someone does a Klingon panel, I may just bite....

From r390radio at gmail.com Tue Dec 6 21:31:53 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Solid Oak or Walnut panel with "woodburned" engravings?????

Dang it, I'm a month or so behind on my fake tag project, I'd better get cooking!! Tom NU4G

From r390radio at gmail.com Tue Dec 6 21:33:04 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

Hey!!!

You may be on to something Barry!! There can be screens done up in several languages, Russian, Greek, Arabic, German, Klingon, etc!!

Appropriate pencil markings on the back, or in the case of Klingon, I suppose it would have some version of "Nikita" on the back marked in blood. Tom NU4G

From r390radio at gmail.com Tue Dec 6 21:57:07 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

The past week or so about half of what I post to the list gets bounced back by s.o.r.b.s. as being "spam" or at least it gets bounced back because someone at bellsouth sent spam somewhere at sometime and one of the ip addresses in that address pool is marked as evil.

The sorbs website gives users whose mail has bounced a chance to input their ip address and "clear their name" so to speak. Trouble is, I'm on dialup and therefore have a dynamic ip.

I call BellSouth and they have no idea what I'm talking about, nor do they care when I give them the information.

Anyone else getting email on QTH.net lists bounced back by this sorbs service?????

This is becoming more and more frequent to the point that posting is nearly impossible on any of the lists I'm subscribed to on qth.net. Tom

From redmenaced at yahoo.com Tue Dec 6 21:57:31 2005
Subject: [R-390] Re: Anyone getting a front panel silkscreened?

K A Bar w/ R-390, skint it' w/ nif. Joe

From bill at iaxs.net Tue Dec 6 23:32:04 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Welcome to the club!

SORBS is an acronym for something. It is also the name of a group of highwaymen that have set out on the holy quest to rid the internet of spam. Highwaymen? You bet! If your ISP lets a spammer slip through then SORBS blacklists them until they have paid for every bit of spam that SORBS has received. Never mind that the ISP was not the spammer. They should have had some software in place that intercepted the spam.

This goes back to the days when some ISPs were open gateways for spam, like GTE. Now, the only spam that gets through an ISP is from somebody who signed up with the ISP and agreed not to spam, but didn't mean it. SORBS thinks that the ISP should have somehow known better.

SORBS distributes its blacklist services for free. They make their money by holding ISPs hostage until they pay the toll. The only way out of this is for people who use SORBS' "service" to realize what's going on and drop SORBS. It is still true that you get what you pay for.

My ISP let a spammer slip through for a day before they shut him down, back in August. They will not pay SORBS and so they are still on the block list. Been there, heard both sides, want nothing to do with SORBS. Ho, ho, ho Bill Hawkins

From 2002tii at softhome.net Wed Dec 7 00:01:20 2005
Subject: [R-390] OT: SORBS

> SORBS is an acronym for something. It is also the name of a group > of highwaymen that have set out on the holy quest to rid the internet > of spam.

I'm sorry to be so dense, but I don't understand how SORBS affects qth.net.

Or maybe I do: SORBS distributes a list of "bad" addresses and/or domains, and individuals and/or ISPs load SORBS's list into their spam filters. (It would have to be the ISP to generate a bounce message, wouldn't it?) Unfortunately, qth.net goes against the grain for typical listprocs and shows the poster's address as both the "From:" and the "Reply-To:" addresses, instead of using the listpost address and moving the poster's address to another header ("Original-Sender:" or something). (This is doubly unfortunate it means most e-mail clients will address follow-up posts to the original poster if you hit "Reply"; if you want to post to the list, you have to paste in the listpost address.) Anyway, some list members (or more likely, their ISPs) use the SORB list. When a list member whose domain is blacklisted posts a message, it generates a bounce message from every SORB-enabled recipient, which goes back to the poster, not to the listpost address, because that is what the "From:" field contains.

Anywhere close? If so, the cure would be to reconfigure the qth.net listproc to put the listpost address in the "From:" and "Reply-To" headers. Presumably, the listproc checks the "From:" address of incoming posts and will only let members post, so the bounce messages would be harmlessly discarded, not posted to the list.

> This goes back to the days when some ISPs were open gateways for spam, > like GTE. Now, the only spam that gets through an ISP is from somebody > who signed up with the ISP and agreed not to spam, but didn't mean it.

Would that this were true! There are still zillions of open servers on the net, they're just harder to find these days. Don Charles

From barry at hausernet.com Wed Dec 7 01:47:32 2005
Subject: [R-390] OT: SORBS

Hi Don ...

Re your explanation & solution I don't think so ...

Apparently they block by IP address of the SMTP (sendmail) servers. That might be a sequence of IP addresses, such as an entire 256 number group (last 3 digits of the 12-digit IP numerical address.)

Apparently SORBS does not block by email address or domain name not the from- or reply- address either.

I had the same problem with QTH and posts bouncing. My main email with the "hausernet" domain is provided by the same company that hosts my website of that name. They do not provide me with a connection to the Internet. We use Optimum Online the cable modem company here. The web host does provide a sendmail server, and we sometimes use that. It was blocked. When I changed over to the Optonline sendmail server in the Outlook Express settings, the posts went through. Same from/to/reply email address, just the sendmail server was changed.

Here are three workarounds:

1. Get a cheap or free separate email account, such as with Juno. They have a Megamail package email only, no Internet access for $25-30 per year that allows attachments up to 10 megs and what is now 2 gigs of storage they and others have all sorts of packages.

2. Use a free Web email site for posting mail, such as http://www.mail2web.com/

You use your existing email address it's just an alternate means to retrieve and send your email. Very handy if borrowing someone's computer or when traveling. When you send/post, you are using their sendmail server. I haven't used it recently, but will later on to make sure it's sendmail server is not blocked.

3. Of course, you can go directly onto the QTH site and post from there. Barry

From w9ya at arrl.net Wed Dec 7 02:49:47 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

What is truly ironic is that qth.net was/is a user of the sorbs lists themselves. Hi...Hi....

(I know because I tried to explain the very argument below for NOT using sorbs to the owner of qth.net a while back to no avail. And I am being polite about how my argument was received by saying "to no avail".) Vy 73; Bob w9ya

From jmiller1706 at cfl.rr.com Wed Dec 7 08:01:51 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Apparently Tom Norris is using Google mail (gmail). Google embeds advertising to pay for the "free" service. Does this advertising find its way into outgoing emails and get blocked by sorbs? The sorbs

website is http://www.us.sorbs.net/ maybe that can help.

From mikea at mikea.ath.cx Wed Dec 7 10:11:10 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

. wrote: > Apparently Tom Norris is using Google mail (gmail). Google embeds > advertising to pay for the "free" service. Does this advertising find its > way into outgoing emails and get blocked by sorbs? The sorbs website is > http://www.us.sorbs.net/ maybe that can help.

I do mail filtering and security for a living, as you might infer from my sig block. This is a subject which pays my salary and determines whether my annual evaluation will be good or bad. It's near and dear to my heart, and I've been doing it long enough (10 years now) to be able to speak abouot it with some credibility.

As others have written earlier in this thread, SORBS distributes a list of IP addresses and blocks from which spam is known to have come. SORBS does not block anything; it provides a means for others to decide to block or not (or, in my case, to add to a score or not) depending on whether or not the sending IP address is listed in SORBS.

Google Mail (gmail.com), as handy as it undoubtedly is, is a prolific source of spam, and so gmail.com's outbound mail servers are listed in SORBS. Google has been unresponsive to repeated complaints from *BIG* outfits, like AOL, Cox Cable, and Time-Warner, about the volume of spam coming from its IP space, and I suppose that the SORBS operators got enough valid reports of these spams to cause gmail to be listed. _I_ use gmail, and _I_ think it should be listed, because of all the spam I get from gmail.

This is not vigilantes riding to Save The Internet. It's not people who want to hurt other people. It's _NOT_ a conspiracy, despite what the subject says. It's just people who run mailservers, trying to keep spam from consuming their bandwidth, disk storage, processor busy, and administrative resources. This is self-regulation at work. Absent a contract, we're not obliged to accept mail from anyone else, and even an ISP has the right under existing law to apply such filters as it sees fit to use.

Here's what I've seen so far in December:

	Mails Total	spamassassin says 'spam'	rejected by ruleset	scanner says virus	total mails undelivered
Dec 1	20051	6334 (31.59%)	4549 (22.69%)	1385 (6.91%)	12268 (61.18%)
Dec 2	19744	6822 (34.55%)	4329 (21.93%)	1710 (8.66%)	12861 (65.14%)
Dec 3	13282	5908 (44.48%)	3944 (29.69%)	1225 (9.22%)	11077 (83.40%)
Dec 4	13394	5413 (40.41%)	3999 (29.86%)	1418 (10.59%)	10830 (80.86%)
Dec 5	18456	6103 (33.07%)	5173 (28.03%)	1540 (8.34%)	12816 (69.44%)
Dec 6	18769	6483 (34.54%)	4533 (24.15%)	1511 (8.05%)	12527 (66.74%)

The "spamassassin says 'spam'" column is based on the total score of a piece of mail after SpamAssassin checks body and headers against some thousands of rules, specifically including SORBS. If the score is over a threshold that I set, the mail is marked as spam and not delivered.

That's how things work here at ODOT and at other places which use MailScanner and SpamAssassin. Other places may just check the SORBS list and various other DNSBLs, and reject mail which comes from listed servers. We could do that, but it's a bit Draconian for my management right now.

We just spent $20K on hardware to run the mailfilter software, and I get paid something like $40K per

year. That last is public record, so I don't mind sending it to the list. That's a bunch to spend just to get the spam down to a manageable level, but it's what it takes here.

The problem is that spam makes up something like 60% to 90% of all the mail on the Internet, and it's only getting worse. I catch flak because I don't catch enough; that means I should screw down the filters, but doing that means that I'll plonk too much real business-related mail.

Each ISP or other mailserver administrator has to make his own decisions on what to do, and it's damned hard.

When I complain to ISPs about the spam they (or their subscribers) emit, I usually include one or more of these as food for thought:

o End-to-end connectivity is the "coin of the realm" for internet operations. Use it wisely. You only control your end of it.

o ISPs sell connectivity to the world. They provide connectivity to their own facilities. The "product" they sell depends upon the forebearance of millions of other systems whose cooperation is REQUIRED for them to not be fraudulently selling something they cannot provide.

o Being a "good net neighbor" isn't just some geeky hippy touchy feely nor politically correct concept. It's the core usability of the Internet, and inherent in its technical designs. It's the way it works, and it isn't going away.

o "You are a _guest_ here, and an uninvited one at that. Stop behaving as if you were the landlord."

o Part of being a provider is taking responsibility for what leaves your network. If every provider did this, each provider would be spending most of their time managing mail from ONE network, their own. Instead, every provider has to manage the mail flow from every other provider. Huge waste of resources. CM Borgia

o This is about doing the right thing, not about having the contractual right to do a questionable thing.

Mike Andrews

From ka1kaq at gmail.com Wed Dec 7 10:33:08 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Mike -

Great dissertation, but I have one question related to the gmail end of it: I've been using it for over a year, now. Only recently did I see any bounces from it on QTH (only place, so far). And the odd thing is, if I resend later, it goes through to the lists fine. This speaks to only the few (4-6) times it has bounced back. Every other time it makes the lists fine.

I'm a mainframe geek here, we're in the same 40K range but I get to do 'fun' stuff (*cough*cough*) like DASD space management, SMS/HSM updating, and managing a Virtual Tape system. I'd rather be playing with old radios!

wrote: wrote: Apparently Tom Norris is using Google mail (gmail). Google embeds > > advertising to

pay for the "free" service. Does this advertising find its > > way into outgoing emails and get blocked by sorbs? The sorbs website is > > http://www.us.sorbs.net/ maybe that can help.

From barry at hausernet.com Wed Dec 7 10:54:40 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Interesting stuff, Mike.

Due primarily to spam and spam blockers, I did away with 95% of the email traffic in my business. It had become unreliable to the point where something like 20% of emails weren't delivered or received and our computers were too exposed to worms and viruses, despite the latest protection software.

We set up a customer service type, web based help desk "ticketing system". While it has an email feature, we have it turned off. Those who need to communicate with us have accounts and passwords and log into a special web site to post messages. Topics are organized with click-on options and this controls the routing to whomever is supposed to handle the various types of inquiries.

The near equivalent can be replicated with the reflectors by simply eliminating email input and output and allowing only direct reading and posting on the web site.

If things continue this way or get worse, that might have to be the way to go. It's just too bad the "modern marvel" of email has gotten fouled up already. It's already gotten to the point that clients and agents have to phone in to make sure their email has been received which sort of defeats a good deal of the purpose.
Fortunately (segue-ing to on topic) our R-390's are relatively spam proof. I say relatively as there's always the odd chance that a previous owner tossed in a few morsels of the canned stuff, possibly to feed the radio spider, or when he was muching on a spam, spam, ham and spam sandwich while doing an alignment. Barry

From richardlo at admin.athabascau.ca Wed Dec 7 13:17:11 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

wrote: > SORBS is an acronym for something. It is also the name of a group

I think ORBS stood for Open Relay Blocking Service. There are very few open relays left, the spammers have to be a bit more direct in there actions these days.

> of highwaymen that have set out on the holy quest to rid the internet > of spam. Highwaymen? You bet! If your ISP lets a spammer slip through > then SORBS blacklists them until they have paid for every bit of spam

That is not all. They used to blacklist ISP's if the ISP would not allow SORBS to surf their address block looking for SMTP listeners to test.

They are first class A**H***s! Richard Loken VE6BSV

From wd8kdg at worldnet.att.net Wed Dec 7 13:47:27 2005
Subject: [R-390] A Christmas Wish

To All,

Well, after becoming a caretaker of a R-390A for less than a year, I would like to make a suggestion to this illustrious group, using the phrase "To make the best, better", the Y2K manual could use a few additions. Also please accept the fact, I don't know the original intent of those who wrote this manual.

With that said, I'll further clarify. Roger, KC6TRU, made a post on Sept.26,2005 and it included a few sentences. "Once you get to the point where you have a calibration tone every 100 KC, you have a working R390/A. A working R390/A and a wonderful receiving R390/A should not be confused with a good looking R390/A. Each of these are different. Good looking R390/A's are selling for over $1000.00 on Epay and may not work at all." His next few pages outlined what it takes to arrive at a wonderful receiving R390/A. Now, Roger is to blame for my quest of a wonderful receiving R390/A.

The Y2K manual is great. Without its content, I would not of been able to arrive at the point where I have a working R390/A. Note, this is the first receiver I've ever attempted to repair, fix, restore, align, etc. Heck, the manual is only 300 and some pages, what's a couple more to take us to a wonderful receiving R390/A.

So, addition one: How about something like Scott Seickel's illustration of how to reassemble the gear train. Using his information and good techniques on disassemble, I laid everything out on a clean bench in order, it still took over 12 hours to clean, reassemble, and lubricate the tranny. Note, I did not say copy his work without his permission. Great work Scott!

At some point the IF section has to be able to pass a 30db Signal + noise to noise test. Or at least some authors in the past have stated. With that in mind and not wanting to start a feud, measurement creeps into the picture. A short dissertation of what happens when a sig-gen, such as a URM-25() is used without consideration of impedance matching, RF leakage, etc. Then addition two: A blow by blow account of what to connect, where to connect, the values are we looking for, and the correct order of tubes to swap while measuring for the 30db goal. Is that clear?? I believe I know the answers and pitfalls, but they were spread out at different sites and had to sift through several hundred pages.

Addition three: Same thing in the above paragraph to the RF section all the while hoping for the 20db difference between modulated signal to unmodulated signal. Of course ignoring impedance matching between the sig-gen/receiver, RF leakage, plus the antenna to be used with the receiver will vary your results in real life.

The three above wishes are made without criticism. Not everyone that follows this group has a radio background as a living. Bet you a soda few here have ever sent an instrument to a metrology lab for calibration/certification.

Gotta find some tubes.....with that and not trying to be politically correct, after all more people are trying to get into the U.S. than are trying to leave. MERRY CHRISTMAS!!!! wd8kdg Craig

From w9ya at arrl.net Wed Dec 7 17:59:13 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Hey Mike and the gang;

That is all well and good OM except for one thing: Your diagnosis and such below ASSUMES that

SORBS only blocks with care and with repeated offenses and etc.

HOWEVER that is not the case. I run my own email, and some of which was blocked not by ip address but by domain, which in one case I both owned and was the ONLY email account that originated. I was NOT generating any spam, viruses ladened email, etc. which was/is document-able. YET I was STILL listed by SORBS. Their reasons were specious and the details of which are convoluted and NOT worth discussing herein.

Nonetheless I was black-listed by SORBS and my ONLY choice was to pay them large amounts of money to be unlisted. <- That was what the original email on this thread was about and I agree with the author of that email: SORBS is a rip-off. Vy 73; Bob w9ya

From stevehobensack at hotmail.com Wed Dec 7 18:58:11 2005
Subject: [R-390] PTO Stability

From: "David Wise" <David_Wise@Phoenix.com> Date: Tue, 6 Dec 2005 12:39:50 -0800
Subject: RE: [R-390] PTO Stability

One day I wanted to listen to music on AFRTS SSB. Even a few Hz off, it goes out of key something fierce. DW

The R-1051b is outstanding for this purpose. It has the best stability short of a rubidium or cesium standard. ...Steve..N8YE

From Flowertime01 at wmconnect.com Wed Dec 7 19:12:40 2005
Subject: [R-390] A Christmas Wish

Craig wd8kdg,

I owe you I admit it. I am going to do what I can to help you achieve a wonderful receiver. Bad news, All I am going to do is push E mail. You are going to have to do all the real work in real time and make your own wonderful receiver. You may even have to buy some of your own tubes to get there. Please watch for several post. I am not even going to try and get it all in one mail. Along the way I hope some others jump in with some fine tuning and comment on my grammar and English. It's been said I lie. Just accept that as the strange other side of the story and my poor memory.

More to follow Roger L. Ruszkowski AKA KC6TRU

P.S. I now live in South Carolina and am no longer in left coast land. As soon as my web browser from Walmart get up to FCC web page speed I will be getting a new call sign. After a year I have been able to get my license address changed. My cores registration address is still California. One day I spoke with a live warm body at the FCC on the phone. She was aghast that I shared a phone line with my computer and could not be both on line and on the phone at the same time. That I did not have a cell phone caused her more distress. I offered that I had a valid Amateur License and if she would like we could get on the air and in CW, RTTY, AM, or SSB on any of a spectrum of frequencies so she could walk me through the bureaucratic maze. This got me a follow up phone call from the FCC to determine if I was happy with the previous phone call. I'm still working on some updates. But am not trying to push the envelope and overload the system.

From leslocklear at cableone.net Wed Dec 7 19:14:06 2005
Subject: [R-390] PTO Stability

Gotta agree there, listening to afrts on isb is a treat with those wider than normal ssb filters. Mine was completely rebuilt recently and is a damn good receiver within limits. Les Locklear

From stevehobensack at hotmail.com Wed Dec 7 19:16:12 2005
From: stevehobensack at hotmail.com (Steve Hobensack)

>(snip) >Yeah, but an R-1051 is about as much fun as kissin' yer sister on a Tuesday >morning...2 little dinky-arse tubes...Don't even get the broadcast >band...-Sandy G.

Maybe so, but it makes me feel good. ...N8YE

From Flowertime01 at wmconnect.com Wed Dec 7 20:48:54 2005
Subject: [R-390] Christmas Wish List

Craig WD8KDG

Warning NOT ONE IOTA in this post about getting to a wonderful receiving R390/A.

I'll further clarify. Roger, KC6TRU, made a post on Sept.26, 2005 and it included a few sentences. "Once you get to the point where you have a calibration tone every 100 KC, you have a working R390/A. A working R390/A and a wonderful receiving R390/A should not be confused with a good looking R390/A. Now, Roger is to blame for my quest of a wonderful receiving R390/A.

The Y2K manual is great. Without its content, I would not of been able to arrive at the point where I have a working R390/A. Heck, the manual is only 300 and some pages, what's a couple more to take us to a wonderful receiving R390/A.

Craig, I had nothing to do with the creation of the Y2K manual. The Army taught me R390A from lecture notes and no one I met in service from 1968 to 1975 waxed elegant about the wonders of TM 11-5820-358-32 8 December 1961 a copy of which is here in the desk as I work on this mail.

I though when the Fellows did the Y2K manual it was to address the mush in the TM and the fact that many folks had R390/A and no TM of any Varity. I still like the Y2K manual, as the best book to start with when I reach beyond the front panel of my R390/A into is a warm glowing innards.

If the Y2K manual did it all then we would not have this fine reflector discussion going. The begging and end of all R390 on the web would be the Y2K web site with down load instructions.

So, addition one: How about something like Scott Seickel's illustration of how to reassemble the gear train. Using his information and good techniques on disassemble, I laid everything out on a clean bench in order, it still took over 12 hours to clean, reassemble, and lubricate the tranny. Note, I did not say copy his work without his permission. Great work Scott!

12 Hours not bad time for your first one.

Did you look at the size of all those files to present Scott Seickel's illustration. These fellows have done a good job of getting a lot more good stuff out there on the web for use than was ever in the TM11-5820-358-32 of any printing.

Learning R390's is a lot like your sex life. I do not care what they said, you know you did not learn it in school and you picked up a little here and a little there and along the way their was a lot of just plain hype.
There is a lot of stuff that has also been archived from the mail here and stuff in the frequent questions web pages.

Umpucky, ballast tubes, cap replacement, solid state rectifiers and Langford diode modifications are just not in the TM. Window covers and micro dials are not TM topics either.

In 8 years of fixing R390 for a living I never took a gear train down further than needed to replace a clamp or a missing spring in a split gear. Back then those receivers were "new" and did not need a good deep cleaning to get a half-century of crud out of them.

At some point the IF section has to be able to pass a 30db Signal + noise to noise test.

Now you just get down to some inside information from the real been there done that guys. This stuff is just not in the TM. Strange as it is trouble shooting skills are also not in the TM. You will find trouble shooting procedures. A lot of skilled instructors at many military school taught some basic skills. All of the students had passed an aptitude test and had a minimum probable chance of being a good troubleshooter. In the field I knew many guys that were good at doing preventive maintenance. I knew others we would not let hold a screwdriver. Then there were the guys who did trouble calls. This was when something quit working. An op would drop in the shop and tell the trick lead that he had a problem. The item and its location was logged into the 2402 logbook and given a log in time. The trick did not get relived until every trouble call was fixed or accepted as passed. It was less than 20 minutes old and could get passed. In 20 minutes any one could walk out to the floor, go yep it broke, go get a spare and have it installed. That closed the trouble call and got a new one open. I have a broke critter here in the shop on the bench. A lot of small problems got fixed in place. But guys just hated to even think about doing a front panel diagnostic and making a fix in place. Much of the stuff was loose knobs and were give mes. One guy in five or six was willing to walk up to one of these on the bench and "fix it". The best solution to problems was prevention through maintenance. No one wanted to let anything run until it broke. If it just needed a wash, tube check, alignment peak and paper work, lots of guys were able to achieve that. The book says the receiver shall do 10:1 but how do you get there. How do you divide and conquer? When it ain't 10:1 what's a body to do and where do you start? How do you know your beating a dead horse? What does a dead horse look like? The TM goes on and on about smoked tube sections and oscillators that do not. It says nothing about a noisy tube. You check them in the tube tester and they are good or not good. All 1964 Ford Mustangs are not equal in 2005. What differentiates them? The blue book only gives a range of values. And some should not even be allowed on the road today. But the blue book does not tell you that. It just says for the one that should be on the road the range of values is as follows. You have to go to a different place to find "roadworthy" defined. And yet another place to judge how to inspect that poor mustang for its roadworthy attributes. More to Follow. Roger KC6TRU

From shoppa_r390a at trailing-edge.com Wed Dec 7 21:06:47 2005
Subject: [R-390] Christmas Wish List

> So addition one: How about something like Scott Seickel's illustration of how to reassemble the gear

train.

I think the pictures and procedure that Scott's put together are marvelous.

Sometimes I'm not sure what to think:

1. There is no such geartrain teardown/clean/rebuild procedure in the TM because they never thought that a tech would go to that level.

or

2. The radio techs of the 50's and 60's had a lot more mechanical competence (and intuition for tearing down and rebuilding geartrains) than I do, and that one exploded diagram was more than enough for them.

I'm no slouch in terms of tearing apart and (usually!) putting back together electromechanical gadgets, I THOUGHT. Then I attempted to rebuild my club's R-390A in the 80's, only with some phone help did I get everything back together and then it was probably worse than before! Now here I am a quarter-century later and I can actually do it, but only thanks Scott Seickel's resource (and some others too.) Tim.

From Flowertime01 at wmconnect.com Wed Dec 7 21:54:39 2005
Subject: [R-390] Christmas Wish List

Tim,

That's just one subject in the TM we hated. I have no clue why the subject was skipped.

The R390 TM covered PTO end point adjustment.

Several editions of the R390/A TM never picked it up.

Guys wrote long letters and some provided ever good copy to the change board and just had their input ignored.

We woud get nice letters back thanking us for our input.

We keep some of the stuff on KSR punch tape so we could print it on the TTY machines and pass it from station to station. Most shops keep a note book of stuff.

Good pictures we never had. A camera in an ASA building was a one ticket to jail. A photo of an R390 would get you more third degree than one wanted. Roger KC6TRU

From barry at hausernet.com Thu Dec 8 00:05:23 2005
From: barry at hausernet.com (Barry Hauser)

Hi Guys,

As one of the gang of three, with supporting cast, let me cast some light on the origins of the Y2K manual.

Al Tirevold and I had the idea virtually simultaneously. Ironically, I had some problems with inconsistencies in the R-105(a)/ARR-15(a) manuals. I posed the question are there anomalies/errors in the various R-390A manuals and the answer came back in the affirmative. So that was one reason a gone-over, proofed and corrected manual. But the ideas kept flowing. Many photos and line drawings in the existing manuals aren't very clear. Then someone suggested replacing many with color photos. That would seem to be fluff, but it's much easier to make out the components in a module in color. Then, while we were at it, adding additional notations/blurbs with more up-to-date info and tips would make sense.
I did the original OCR work. After some consideration basically a no-brainer the '85 Navlex (Navy) manual was my choice and another list member supplied a good copy. The typography was much crisper and it was laid out with a single wide column, not two. Apparently that manual was word-processed by or for the Navy. It is one of the better ones in terms of content, though one of the Army manuals has some material it does not have. I OCR'ed the Navlex manual in sections and distributed (by email) the text for proofing.

Pete Wokoun recreated many (most all) of the line drawings to improve clarity and enhance them. When the pieces were all ready, Al did the Acrobat (pdf) publishing. The original version of the manual was about 4.3 megs. A revision was done about a year later, incorporating a number of corrections for errors that slipped through (OCR-ing is far from perfect and proofing parts lists is a bear). It also included some enhancements. Al re-published it with a newer version of Acrobat. It wasn't so much the additional content, but the new version somehow produced a file on the order of 14 megs or so.

(BTW the version on my website is the old one get the revised one from Al's website. It's available as one big file or several sections.)

The intention was generally to develop it further. One area was the gear train diagram, which is still the original. As I recall, Pete concluded that it would be too time consuming to replicate/improve upon with a CAD-CAM job. Perhaps Scott's gear train photo piece would be a nice addition or it might be a bit much size-wise. It's a trade-off while it would be nice to have one big book that covers just about everything you'd need to know in one place, at some point, it may become unwieldy. Here are a few of the things I had in mind ...

Incorporation of some of the more established mods/workarounds like 3 or 4 of the ballast tube subs, including the resistor, silicon rectifier replacement for the power supply with recommended initial dropping resistor value (yeah, basic, but document it),

Capacitor "hit list", updated for some of the silver micas that seem to be failing.

More on PTO adjustment by make of PTO

Troubleshooting lifted from TM-4000

(TM-4000 is a training manual that covers a number of pieces of equipment - but oddly not by name. The receiver section uses the R-390A as a model but never mentions "R-390A". It is rather extensive. However, an expert or several would have to read through the receiver section to make sure that the authors did not take "literary license" anywhere, or fail to clean up errors that were not significant for book training.)

But then again, is it necessary or that helpful to have everything imaginable between a single set of (electronic) covers? I dunno. The idea is not to usurp or render obsolete other works, such as the "Pearls of Wisdom", also available on Al's site. Also might be difficult to get permission from some who are

now difficult if not impossible to reach. Another approach is to organize an essential "library" consisting of the Y2K and 3 or 4 other reference pieces.

Realistically, a lot depends on Al's availability if and when some new volunteers contribute material or pitch in to prep it for inclusion. For example, excerpting from other manuals generally means keystroking it they're not OCR-able.

But, the idea was to periodically enhance the Y2K manual, it's a question of what belongs in there ... and time available. And, yes, we want to leave some material as grist for this (reflector) mill, I suppose. So you're both right ;-) Barry

From recycler at swbell.net Thu Dec 8 00:21:59 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Precisely.

qth dot net uses the sorbs list. This problem can happen with any qth list. It mostly happens if you include a URL in your post, as I did when I tried to announce the transformer and tubes site was back up. It can also happen from sending to several qth lists at once.

sorbs is merely a pompous and self-important net-terrorist and extortionist-pirate who has pandered themselves to the list owners somehow, perhaps it is free and sorbs makes its money from the extortion racket, who knows. They have added two of SBC email servers to the list in the last 4 monhs, notably, immediately after I posted some bona fide quality information with a url in it.

ever e-mail sorbs? notice how sorbs reply to address is payments at sorbs dot net or somesuch. Apparently it is not against the law to interfere with information processing systems or run extortion rackets in Australia where these queens squat.

In order to resolve the problem, it is easiest to look up the whois of the ip address of the server they say sent the spam (it will be one of your isp's) and there will be listed the contact e-mail for the server administrator.

Just let that person know that sorbs is performing an DOS attack on their server by causing a block on their paying customers e-mail, and include the bounced e-mail from sorbs including the headers as well as the email from sorbs with a trouble ticket number telling you that there is nothing you can do and that's the way it is, (you did go there and request assistance in order to get the ticket number, right?) and the issue will get resolved. The customer service people at the isp have no eartly idea what this is all about, but the ISP server administrative contact does, and this person also is a person who is generally not to be e-mailed without good cause. It was a last resort for me.

On the sorbs page, they claim to be above and aloof from from the influence and penalties of various governing bodies and they think they can't be reached out and touched, but in fact an ISP which is a power on the net and of sufficient magnitude (sbc yahoo for one) can turn them easily, fixing the problem. I believe the isp works it out with them without paying the extortion.

Since I use this list for free I will have no right to make negative comments about the owner's judgement of what 'service' he/she chooses to use for black hole list services. I merely make my opinion of one such BHLS with which I have had several negative experiences. We do see by this topic that the 'issue' is quite more widespread than one would conjecture.. 73, PJ

From Flowertime01 at wmconnect.com Thu Dec 8 01:14:17 2005
Subject: [R-390] Christmas Wish List

Fellows Craig mentioned cleaning the gear trains. Back when we would take them over to the teletype typewriter degreaser. We would hang the whole receiver over the edge of the degreaser. Likely setting on a cart. Pour degreaser fluid through the gears and elsewhere. Let it drip dry. Blow it out with the air line. Return the unit to service. I am sorry I did this to many receivers in the past. I just know some of you who own receivers that received this abusive treatment. But those knobs sur spun nice when we finished up and the front panels were clean.

I had no idea how bad the degreaser fluid (K1 so not to smell and additives to dissolve things.) trashed wire harness over time. Hay they put the TTY stuff in there and closed the lid and spun it around. How much was I hurting the poor R390's with just a rinse job? Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Dec 8 01:34:13 2005
Subject: [R-390] Christmas Wish List (part 2)

Craig WD8KDG

Part 2 and more to follow (tomorrow) This about the RF signal to noise test.

Tomorrow will cover those tube swaps and IF deck test.

Thank you Barry Al, and Pete for the Y2K manual. It is still the best book an R390 owner or an A owner can have next to his receiver. Just my 2 cents.

OK its Christmas. I owe Craig. Hopefully someone will put this in the frequent question file. You all copy this into you personal files. Healthy comment is welcome but when, Barry, Barry, Barry or Barry start to complain the horse is beginning to smell we drop this thread.

A short dissertation of what happens when a sig-gen, such as an URM-25() is used without consideration of impedance matching, RF leakage, etc.

Now this is a very dead horse in the archives. Mostly no one has an isolated shielded environment where impedance matching makes a "measurable difference". Les and other fellows provided some very real detail on this the last time we flogged this poor horse to death. Craig, from your point of view, do a Force mind trick here and just ignore it. Hey it worked for every one in service for years. It was just the way it was done. You start getting scientific here and the fun just falls right out of it. But you are right it is a relevant subject. Just saying ignore it is a flippant response. But the truth is not provided in the TM. Some Fellows have thought about it and there are real answers in the archives. From a practical point of view in any ham shack you just ignore it because the leakage exceeds any gain from cable matching and or impedance matching. At the real levels in use, the open bench work area, and the leakage, the effort to shield things and do matching exceeds return on investment. Accept that thousands of technicians working on thousands of receivers for half a century did not even venture down this path and produced good results every day. There is an explanation for why this has worked. It is scientific. It stands up to good logical investigation. I do not have the exact data here to pass on in this mail. Hopefully someone will dig it out of the past mail and post it again. Its Christmas and we can put it on the wish list.

Addition three: Same thing in the above paragraph to the RF section all the while hoping for the 20db difference between modulated signal to un-modulated signal. Of course ignoring impedance matching between the sig-gen/receiver, RF leakage, plus the antenna to be used with the receiver will vary your results in real life.

Exact calibration level and signal generator level is not required for this test. Exact output level is not required for this test. If you hang a 600 ohm ? watt resistor (1 watt preferred, 560 ohm is OK) on the line output of the receiver you can use the line level meter for your output measuring device. The meter of military choice was exactly a TS585 test set. This is a milliwatt / DB meter with range switch and internal load resistors. One load resistor is 600 ohms and about 10-watt (de-rated because its in the case to 5 watts). Any AC voltmeter with a DB scale will work. Better meters and finer granularity of DB values just aid in getting the job done. Beyond the scope of this Christmas gift is the fact that with some math, just a plain AC volt meter can be used to meter the local or line output of the receiver for this test.

So the signal generator does not mater, the output meter does not mater; the cabling does not mater. What counts is a relative difference in output meter reading when the signal generator modulation is switched on and off. All this gets you is a relative merit value of your receiver on any given day. It is not calibrated and it will not travel across the internet in mail as my receiver is better than your receiver because we have no clue as to the wholesomeness of any of the receivers, equipment or people involved in the comparison of the two events reported to have been conducted on planet earth in one or more of its current dimensions or incarnations. This silly little test does work to determine if the last, tweak, tube swap, change, adjustment, fiddle, nudge or whatever was an improvement.

Why does this test need the un-modulated signal? Because with no input to the receiver, the front-end stages do not produce an output of the first stages noise into the next stage and thus yield a noise level at the output. So one test-state is with a continuous signal activating all the stages and providing an output that reflects all of the receiver noise.

Why does this test need the modulated signal? This provides the test with a second different state that can be compared to the first state. Someone please jump in here with some good real explanation of the signal to noise test. We were asked quite politely as a Christmas wish. I'm begging here not beginning here. (See past post). Actually the modulated signal is richer in content and more of the receiver noise mixes with the modulated signal to produce a greater output level. Greater output level is not by its self, good. Observe that as we make changes to the receiver and inject the same modulated and un- modulated signal the difference between the two test states increases (good) or decreases (bad) and the relative output power may go up or down (indifferent). You may change one tube then measure; less noise less power (OK), less noise, more power (good), more noise less power (very bad) or more noise more power (bad). More or less power is not the true grail. As long as there is the required ? watt (OK 0.4-watt). The exact input level is not critical the exact output level is not critical. Notice that the absolute noise of the signal generator is not an aspect of this test. As long as the modulated signal from the generator is not so microphonic that every thump on the bench pegs the output meter. Some is OK as long as you let the setup rest while you are trying to evaluate the output meter reading. Again moving targets should be avoided.
Accept that any change you make to the receiver that lets you reduce the signal generator output is good. Accept that any change you make to the receiver that produces a larger output meter reading between modulated and un- modulated signal is good. The method of coupling the signal generator into the antenna input is not critical because the leakage of the equipment on the bench

often exceeds shielding provided by the test setup. Here impedance match can be ignored for much the same reason. On the output you do want to provide a 600-ohm load. 600 Is the "manufactures recommendation" 550 - 800 is likely OK. A wattage rating large enough to not smoke and change the resistance value during the conduct of the test is sort of nice. I hate working with moving targets. The output meter scale is not critical. It need not even be a DB scale. The right scales and easy to read numbers just makes the project more fun. More difference in range between the two test states is good. Having the value in DB across a 600-ohm load just takes the math out of the problem. Hang a 600-ohm resistor across the line output and use the line meter to find the DB ranges on your AC voltmeter. The better resolution of the AC meter will help you judge if small differences are better or not.

The military required 10:1 ratio in these two test states. The military required 0.4 watt output for 4 micro-volts of input. Collins engineers did a very good job on the design. We find that with good lab grade calibrated test equipment in very controlled test setups, the receivers will do 20:1 any day of the week even after half a century. Back when (68 -75) I saw receivers do 30:1.

Using just military calibrated test equipment, miss matched cabling, no extra shielding, just setting on the bench, one side of the balanced antenna input grounded, long ground straps from receiver to a bench ground that when forever to the station ground, and a TS585 for a load resistor and output meter. That sorry test setup was used every day by every one in service. The test got good receivers up to the best we could get out of them. We shoot for a 20:1 ratio. If you were not getting it easy, you went looking for a few good tubes to install. Tweaking will bring the whole power level up and it will help the ratio. But you cannot tweak a receiver up to 20:1 if the tubes are not up to it. Tweak 20:1 on some poor tubes and you can have 25:1 just by swapping in some better tubes.
Exactly what were we getting? Who knows. But it was every thing those receivers were capable of. We could determine if every change we did was making the receiver better or worse. You just had to know your limitations. How dead could you beat that receiver before the horse-meat began to smell so bad you got banded from the mess hall at mid meal time. There is just no exact absolute benchmark in this test. But getting a 30:1 ratio was an all day job with a supply room that had all the tubes I wanted at no cost to me and no restocking charges.

At what RPM does your Mustang idle? Who knows. But you know when you get it down low and smooth enough so it fells right and does not stall at the stoplight. Where does your Mustang red line? Who knows. At what ever you need to dust that thing in the other lane.

So for the RF test, This is the full receiver from end to end. Specification is 10:1 signal to noise at 4 UV in and a 0.4-watt out across a 600-ohm load.

Wonderful life is a 20:1 ratio and about 4 UV in and 400-Milliwatt (0.4-watt) output. Never mind the impedance match or shielding. The exact audio modulation frequency is not critical. The URM-25 had 1000 and 400 Hz. We used 400 HZ just to save our ears.

Run the signal generator into one side of the balanced antenna input. Ground the other side of the input IF bandwidth switch set to 2KC.
Antenna trim to max.
KC and MC to peak the signal pass.
AF gain to Max
RF gain to Max.
Function to Manual
AGC not being used.

Limiter off.
BFO off.

What did I miss? Like it says in the TM. Someone quote the Y2K paragraph just to drag this horse a few more yards.

Paragraph 93 Sensitive Test in the TM details this test. (Almost no one has a copy) The procedure calls for a ratio of 10:1 in milliwatt on the TS585. We would get a 20:1 ratio with this test set up. You can fudge a 30:1 DB ratio if you work at it.

To do a by the book 10:1 we would set the AN/URM-25 for 4.0 microvolts. Set AF and RF gain to max. Adjust the IF gain for 0.4 watts with the 30 % 400 hertz signal. This is also 26DB on the TS585 meter (16+ 10). Back the local gain off some. Switch the meter down one step. Back the local gain off unit the TS585 reads 10 milliwatt (10DB). Turn the modulation off and switch the meter range down until you get a meter reading. To pass the test you needed to switch the meter down one step. This was down 10 DB and from the 10-milliwatt range to the 1-milliwatt range. The meter had to read less than 1-milliwatt (1DB) to pass this test.

For the 20:1 20 DB test we would set the AN/URM-25 for 4.0 microvolts. Set AF and RF gain to max. Adjust the IF gain for 0.4 watts with the 30 % 400 hertz signal. This is also 26DB on the TS585 meter (16+ 10). Back the local gain off some unit the TS585 reads 100 milliwatt (20DB). Turn the modulation off and switch the meter range down until you get a meter reading. To pass the test you needed to switch the meter down two steps. This was down 10 DB and from the 100-milliwatt range to the 10-milliwatt range. Plus down 10DB from the 10-milliwatt range to the 1-milliwatt range. The meter had to read less than 1-milliwatt 1(DB) to pass this test.

For the 30 DB test we would set the AN/URM-25 for 4.0 microvolts. Set AF and RF gain to max. Adjust the IF gain for 0.5 watts with the 30 % 400 hertz signal. This is also 27DB on the TS585 meter (17+ 10). Turn the modulation off and switch the meter range down until you get a meter reading. To pass the test you needed to switch the meter down two steps and watch the meter very close. This was down 10 DB and from the 100-milliwatt range to the 10-milliwatt range. Plus down 10DB from the 10-milliwatt range to the 1-milliwatt range. The meter had to read less than 1-milliwatt (1DB) to pass this test. If you had a good clean reading at 1-milliwatt 1 DB you were at a 27:1 ratio. If the meter would peak on noise at less than the number 9 mark on the meter you were down 30:1. This was of course a judgment call and you had to work at getting a receiver to do it.
I have read this a couple times and I think I have this all correct. We can rewrite it and re-post it until someone doth protest to much. Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Dec 8 01:46:52 2005
Subject: [R-390] QTH.NET and the sorbs conspiracy

Patrick Jankowiak,

I am one cheap guy. I use Walmart connect for my service provider. For almost no cost I get a connection most of the time. If SORBS get between my Walmart connection and the QTH.NET, I bet Walmart will get my service restored without paying any extortion fees to off shore locations.

If the thing was just of more service. They are in with so many other well meaning groups. Protecting us all from a few nuts is such a pain in the wallet and ass. Someone planted a bottle of pills on a store

shelf one day and we have not been able to get into a pill bottle since. Enough is enough. We need to keep this topic alive. If we need to more it over to another QTH.NET subject so be it. Roger KC6TRU

From R390rcvr at aol.com Thu Dec 8 08:41:39 2005
Subject: [R-390] Digital copy of TM-4000

Good morning all:

The Y2K discussion and mention of TM-4000 makes me wonder if anyone has a digital copy of the TM-4000 manual? LOGSA doesn't, nor does BAMA.

I would appreciate a copy if someone has it! Thanks! Randy

From roy.morgan at nist.gov Thu Dec 8 09:35:47 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

wrote: >As one of the gang of three, with supporting cast, let me cast some light on the origins of the Y2K manual....I did the original OCR work.

Barry, and others who contributed: THANKS.

(Some of) Barry's suggested changes/additions are:

> Incorporation of some of the more established mods/workarounds ...
>
> Capacitor "hit list", updated for some of the silver micas that seem to >be failing.
>
> More on PTO adjustment by make of PTO
>
> Troubleshooting lifted from TM-4000

To this I would add:

Mechanical Filter topics (testing, repair, alternatives)

Signal generator topics (impedances, actual RF input levels, matching) and other test bench topics
The gear train rebuild

The Noise Figure measurements/testing and tube selection

Barry continues:

>... is it necessary or that helpful to have everything imaginable between >a single set of (electronic) covers? I dunno. ... Realistically, a lot >depends on Al's availability if and when some new volunteers contribute >material or pitch in to prep it for inclusion.

I agree, and so I PROPOSE:

That we assemble a Y2K-like addendum. Call it: The 21st Century R-390A/URR Maintenance Addendum And Miscellaneous Notes

FURTHER, I volunteer to help put it together. I'm a good writer, and the R-390 receivers are among my favorite topics. I am somewhat known for my diatribes on fused line cord plugs and the making of widows, and the dangers of variacs. The beating of dead horses in those areas seems to be fairly infrequent nowadays, so I could use a new topic.

The thing could start as a web page that either assembles or links to work-in-progress type sub-pages. Once the material is written, edited, and gathers comments from folks who have used it, the transition to the PDF format would make sense. Roy

From n4buq at aol.com Thu Dec 8 09:42:03 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

How about a glossary with terms like ukkumpukky, etc.?

Barry - N4BUQ

From barry at hausernet.com Thu Dec 8 10:31:08 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

> How about a glossary with terms like ukkumpukky, etc.?

I was also thinking about that and including traditional "folk" terms and possibly some urban (and rural) legend items. There might even be an entry for ...

Barrys, Barries While a less common name than Tom, Dick or Harry, tend to turn up in clusters of 3 or 4 or more for yet unknown reasons, perhaps attracted to exotic items such as the R-390 series.

Black Beauty Molded tubular paper capacitor, black with color code stripes. Originally the actual trade name for this style of capacitor produced by Sprague. also see BBOD - black beauties of death. It is rumored that these are known to leak and often physically split open.

Brown Beauty same as black beauty, but brown.

Bristo Wrench According to the archeologists, "bristo" is a misspelling of "Bristol" which appeared in some military manuals. (also see "alinement")

Dead Horse R-390(A) topic which is discussed over and over again, even though one would think it was resolved long ago. R-390 people are foresquare against cruelty to live, real animals.

GLOD acroynym for "gray ladies of doom" gray colored equivalent of black beauty.

Kielbasa sometimes mentioned (in jest) as a sub for the 3TF7 ballast tube, actually a sausage of Polish design. See Chapter78, pps. 723-985 where the 205 known workable subs are discussed.

Ukkumpukky black gooey stuff found in plug in capacitors and other components. Chemically identical to the stuff found in the La Brea Tar Pits. Do not eat.

YMMV original for "your mileage may vary", relating to the disclaimer re: advertised auto gas mileage. Euphemism for "your results WILL vary", also popular as a closing line equiv.to '73's.

Actually, the glossary would be helpful to archeologists 100's of years from now who try to interpret 21st century civilization based on some posts they un-earth. ("Well, you can recall the team from Warsaw, it turns out they were just JOKING about Kielbasa. Good thing we found this Y2.1K manual.") Barry

From n4buq at aol.com Thu Dec 8 10:35:45 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

A section of wise sayings would be good too.

"Don't eat the insides", etc. Barry - N4BUQ

From RLucch2098 at aol.com Thu Dec 8 10:44:41 2005
Subject: [R-390] FS: Lots of Parts, help me dig'em out:-)

Hi All;

I have many parts, used & otherwise. There are transformers, I know there is a Deck with a Freed Modulation transformer.

A Pre-amp deck with Thordarson xformers, all sorts of neat stuff. Even tubes of all kinds, used & new! Of course you need to be here:-) No firm prices, we can work something out. tnx & 73.. Rich WA2RQY

From barry at hausernet.com Thu Dec 8 10:56:46 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Hi Roy & gang ...

I second the nomination!

Not sure though about what's fit for the addendum vs. incorporated within, but it's a practical approach to alow things to move forward and avoid too many versions.

The Hollow State Newsletter web site has plenty of room and unlimited bandwidth. I offer that as a collection point for works in progress and completed modules. There they can be looked over and recommendations for additional material and edits could be communicated to Roy and/or others developing contributions. When the dust settles on a piece i.e. no more comments coming in, it could be "finalized".

To avoid confusion, duplication of effort, etc., changes should be routed through the original author/compiler.

This is not to displace Al Tirevold's site which should remain central. However, I suspect Al has been

very busy and travels quite a bit. So, we can do this for the time being and the HSN website is also appropriate as an expansion site long term. Make sense? Barry

From wli98122 at yahoo.com Thu Dec 8 14:28:54 2005
Subject: [R-390] Christmas Wish List (part 2) comments

Speaking for myself, I really appreciate Roger's post re RF s/n test in the R-390's. It illuminates a part of this hobby that many of us were not aware of when we were on active duty. In a way, most folks are compulsive and perfectionists in the confines of our warm and unpressured shop environments (for example: Nolan Lee's saga on his 1967 EAC unit); and it is quite a shock to see what actually went on in the "real world" of field facilities in the 60's.

The real value in this kind of post lies in emphasizing what is of utmost importance (picking up low strength, intelligible signals) and what is desirable (silky smooth gear train action), and what is not so key (matching serial numbers).

Scientific theory (ie: high powered math) is very important in deriving S/N ratios, impedance matches, etc. and loads of intellectual fun.... but is often forgotten or lost when it comes down to actually doing stuff. Here these two disparate processes are shown to be actually intertwined. The fun lies in the fact that we may take as much of one or the other as we wish at any point in time. In the final analysis, it is the wrench-turner that gets the job done, and for that we can all thank Roger in his current postings.

Today, we have the distinct advantage of the Y2K manual Pete's beautiful schematics, and Barry's OCR texts, and Al's work... all in one invaluable publication.

BTW, I have seen the original 1958 TM-11-4000 service manual; and it would be a very good addition of have on our archives as a pdf document.

"Pearls" is only an attempt at collating current posts on specific subjects for fast and easy retrieval. W. Li Mercer Island

From wd8kdg at worldnet.att.net Thu Dec 8 15:14:21 2005
Subject: [R-390] Christmas Wish List (part 2)

Rodger KC6TRU,

I see said the blind man! Your following explanation is just for the RF section. More in coming days, thanks.

Putting this into terms that us non-radio background old grayed hair farts can understand helps. Using equipment on hand, I will add these comments.

For lack of a TS585; the first time setting up this test, I'll use two meters to measure voltage and current across the 600 ohm load resistor. (P=IV) Write down those values somewhere not to be lost, for future reference, and should only have to dial in the voltage next time (oh my). In other words the first target is 0.4 watts across the 600 ohm load.

To make things just a little easier, more than one way to skin a R390/A, I'll use a db chart for power, voltage, and current ratios from an old ARRL handbook. This way, just have to measure voltage across

the 600 ohm resistor and I trust the two meters owned.

After setting switches, dials, sig-gen, etc. and arriving at 0.4 watts; turn off modulation. Then back down the local gain to one volt AC across the 600 ohm load resistor. Next step turn on modulation and read voltage; a smidgen more than 3VAC is 10db, 10VAC is 20db, and 30VAC is close to 29.5db. Or where 20 x log(V2/V1)=db

I had to do the math to understand the chart, suffering from CRS. If this is a valid method of squeezing the proverbial last bit from the RF section, I've got work to do, tubes to find, and so forth.

Going to guess the IF follows in similar fashion, it is fine in that event?? That part of the radio is near 28db. But will check everything again after all comments and votes are in. wd8kdg Craig

From w5or at comcast.net Thu Dec 8 15:28:20 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Why not use a wiki? You could set up trusted contributors and allow users to post and/or submit material for archiving, as well as including existing sites and sources of info. Perhaps even integrate your HSN site.

I've been thinking about this as an alternative and adjunct to this standard email list.

See http://en.wikipedia.org/wiki/Collins_Radio for a hint of how wiki's work.

I'll include this post on the list as a topic for general discussion. Don R-390 list admin

From richardlo at admin.athabascau.ca Thu Dec 8 15:52:23 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

wrote: > Why not use a wiki? You could set up trusted contributors and allow users > to post and/or submit material for archiving, as well as including existing > sites and sources of info. Perhaps even integrate your HSN site.

Yes but when all is said and done, I want a binder containing a paper document with a table of contents, page numbers, and an optional index that will sit open on the bench while I stare and measure and muttter.
Computer provide a nice way to store and organize information but they are lousy for reading it. I tried writing notes on my screen but they don't stick to the document. Richard Loken VE6BSV

From roy.morgan at nist.gov Thu Dec 8 16:07:15 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

wrote: > Why not use a wiki? Yes but when all is said and done, I want a binder containing a paper document with a table of contents, page numbers, and an optional index

Richard,

I agree. Based on my limited experience with them, wiki's are good for large groups of either document

development collaborators or interested users, or both.

By the way, what does "wiki" mean, anyway? Google says: "Wiki is sometimes interpreted as the backronym for "What I know is", which describes the knowledge contribution, storage and exchange function. ... "

Ok good, but what's a "backronym"? Holy Acros, Batman, this stuff is COMPLICATED!

The process of gathering, editing and writing what may become an addendum is really not all that complicated. It can be done one chunk at a time, and likely will not involve more than a very few people per chunk.

The next step, getting some folks to use it and make corrections/comments, can be done nicely with a simple web site document, it seems to me. Lots of dialog, commenting and contributing can be done over this mail list, which is it's purpose, right? Roy

From jpl15 at panix.com Thu Dec 8 16:18:59 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

wrote: > By the way, what does "wiki" mean, anyway? Google says: "Wiki is sometimes

AFAIK - "wiki" is Hawai'ian for 'celerity', or 'quickness' or 'rapido'.

I know the airport shuttle at Honolulu Airport was (is) called the "Wiki-Wiki Bus". etc etc Mahalo John KB6SCO

From greybeard5150 at sbcglobal.net Thu Dec 8 16:49:34 2005
Subject: [R-390] Re: The Y2K Maintenance Addendum

I'd whole-heartedly agree that with all of the additions that have been made to the R390 gene pool, an 'addendum' to the R390 Y2K Manual is called for at this juncture, however: there's just something about the word 'addendum'...
?
How about 'codicil'?? The 1st Codicil to the R390 Y2K Manual v2.0

By their very nature codicils?are designed to be?changed after the original composition, and insofar as 'dead-horses' are regularly and unmercifully flogged around here anyway,?it just seemed 'right'to me ..... *smile* Quig SWL guy from WAY out on the left coast

From David_Wise at Phoenix.com Thu Dec 8 17:01:00 2005
Subject: [R-390] Re: The Y2K Maintenance Addendum

Supplement. Dave (SWL in Oregon)

From David_Wise at Phoenix.com Thu Dec 8 17:04:51 2005
Subject: [R-390] PTO Stability

On the strength of Steve and Les's recommendations, if I run across an R-1051, I'll let it follow me home. I'm not stopping with the 390A though! You'll have to pry it from my cold, dead fingers. Dave (SWL in Oregon)

From Flowertime01 at wmconnect.com Thu Dec 8 17:18:55 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Roy,

I would like to see someone champion the effort as a new set of web pages.

I would put some cash in the Kitty to pay the bill to keep them on line.

I think there is a lot of stuff we need to cull out off the old mail and get into a set off additional frequently ask questions.

I like the ideas of it going up as web pages to start with and then amend as commented on. Once it got big it could be offered on CD by mail as just to much to down load. I remember when I did not have a CD burner on every machine and I still do dialup mail that takes an hour to down load a JPEG photo.

I would pick up some of the topics and put together a paper on the subject to get posted into a page.
Roger L. Ruszkowski

From Flowertime01 at wmconnect.com Thu Dec 8 17:38:36 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Barry suggest the Hollow State site.

To avoid confusion, duplication of effort, etc., changes should be routed through the original author/compiler.

I think a two phase effort here. One is a subject boss and the second is a web page boss.

One and only one guy should be posting pages on the web site and get to rebuilt when it trashes its self.

A second poor soul should be the final editor or new stuff going onto the web pages. Hopefully these two fellows would have some fast home computers and links to support their efforts. Sure would hate to have this work being done on some employers bandwidth.

The subject book boss could keep the list of topic needing work. we could toss out a horse a week and any one that wanted a slice could post what ever on it. Plow up the archives we could. Then let every thing posted for the topic could get edited by some enterprising Fellow. I would be willing to do that type stuff.
Then this first cut gets passed to the book boss to bless and dig the ugly bad formats trash out of.

Then a nice work gets presented to the web page Fellow to post up as a new page and get indexed into the web site.

We could open a topic for a week. Then the editor could post the topic up for darts, knives, shot and just plain rude comments. After that for ever hold you peace. Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Dec 8 17:46:08 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Fellows,

Yes but when all is said and done, I want a binder containing a paper document with a table of contents, page numbers, and an optional index that will sit open on the bench while I stare and measure and muttter. Richard Loken

_____

Right ON Roger KC6TRU

From wli98122 at yahoo.com Thu Dec 8 19:55:11 2005
Subject: [R-390] Re: Y2K maintenance addendum

Guys:

This is a great idea: coming out with an addendum. I vote it come out as a separate publication, as opposed to being embedded in the Release 2.0 volume... and set up under topics paralleling V2.0. Barry has made a significant offer of using the HSN site as a clearing site.. thanks! There has been a wealth of practical experience and technical expertise appearing in the posts here over the years that could easily fill up such an addendum.

I will help any way I can! W. Li

From ba.williams at charter.net Thu Dec 8 20:17:47 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Roy,

I was a graphics designer/illustrator, so I volunteer to do the graphics if needed. The other other other Barry

P.s. Since Joe isn't around, let's volunteer him for something. Something he would hate....

From ba.williams at charter.net Thu Dec 8 20:21:17 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Barry and Barry,

You left off cat piss, and whatever we called the zippo lighter technique for gassy tubes that Nolan was big on. Also, we never named the dead spider in every radio phenomena either. Wasn't there some research at one time regarding the correct size of repair hammers?

The other other other Barry

From hankarn at pacbell.net Thu Dec 8 20:48:19 2005
Subject: [R-390] The Y2K Maintenance Addendum

I am still here and can still take pictures as required. I have a Nikon digital Cool Pix which has better resolution. Hank KN6DI

From N4BUQ at aol.com Thu Dec 8 20:55:53 2005
Subject: [R-390] The Y2K Maintenance Addendum

If they let us have the crayons back on Tuesdays, I'll be glad to color the pictures if needed. Barry - N4BUQ

From redmenaced at yahoo.com Thu Dec 8 21:13:21 2005
Subject: [R-390] A Treatise on Dead Horse Dressage, an R-390Y2K Codicil

In the tongue-in-cheek spirit of the orginal Y2K manual.

It's really the only thing that will fit, Joe

From barry at hausernet.com Thu Dec 8 21:19:38 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

Just between us Barry's and everybody else on the list ...

I've been getting live spiders in recent shipments. Just ran across a real fast one this afternoon well, actually it ran across me.

Wish people would just ship the merchandise and skip the livestock.

On the other hand, maybe these spiders can be put to good use making or refubing litz wire. Just have to train them to go a round in a tight circle as you unspool the copper wire. I suspect the dielectric properties of spider webbing is comparable to silk.

You may be jesting, but it would be a good idea to compile all that stuff probably should be a separate work so it can be put in the fiction section if need be. Something like "R-390 Lore 'n Legend". Or maybe a one hour History Channel thing would that be Modern Marvels or History's Mysteries, Stranger than Fiction?

BTW - I think the cig lighter rejuvenation was called the Zippo Technique.

I suggest that, in deference and respect, we name the radio spider "Artie". I suspect they are all males who know the real deal about arachnid courtship and mating and are smart enough to hide out. "Uh, I'll be out later dear, I'm busy workin' on this radio. Hmmmmm, 'nother one of those funny lookin' black bumblebees with the colored stripes. I'll see if this one splits open as easy as the other ones, dum de dum.. "

Well, coulda' happened ... Barry

From pwokoun at hotmail.com Thu Dec 8 21:23:03 2005
Subject: [R-390] The Y2K Maintenance Addendum

Looks like we have a volunteer to clearify that infamous RF gear train assembly drawing! That drawing was beyond my capabilities back in 2K. pete

From ba.williams at charter.net Thu Dec 8 22:10:08 2005
Subject: [R-390] The Y2K Maintenance Addendum

> Looks like we have a volunteer to clearify that infamous RF gear train > assembly drawing! That drawing was beyond my capabilities back in 2K. > > pete

Actually, I did scan those 2 page drawings and pieced them together. I remember that it was more legible, but maybe the file size is what kept it out of the manual update. I sent it to somebody. I may still have it. If so, anyone is welcome to the file. Barry non-Hauser

From greybeard5150 at sbcglobal.net Thu Dec 8 22:41:46 2005
Subject: [R-390] Hank Arney Restoration Job

Hot diggity dog! Today was a big day for me!

For the last 4 or 5 years I've had an old '59 S-W 390a stashed far away upstairs in a safety-kept spot that kept it away from dogs, kids, and mice. Now this radio wasn't a virgin by any means, but at the same time it was a far cry from being a blue-striper survivor from the massacre too. Fairly easy on the eyes actually and it appeared to be a thorobred, filled with 100% Stewart-Warner modules. While there were no indications of any mods or field changes whatsoever, it did have 3 fuses that appeared to be from the factory.

To make a long story short the time and the money finally rolled around, and I dropped an email in Hank Arney's mailbox about possibly bringing my vintage prize back to life for me. He said that it would be a while, but he'd contact me at the appropriate time.....which he later did. He had a dickens of a time with some wafer switches, the PTO, and other things too, but one by one he crossed them off the list and did the radio proud.

As of this afternoon, my now BEAUTIFUL Hank Arney restored Stewart-Warner R-390a is back home where she belongs, and man o' man does she look sweet. A beauty of a fresh grey-front panel that's been re-silkscreened to perfection, fresh alodining, proper covers, and gnats-ass detailing everywhere you look ... and that's just on the outside. I can't wait to pop the covers and check out the reworked gear train, and all the rest of the freshly reworked/rebuilt/recapped and re-markable work that Hank has done for me. Then she's getting slipped right inside the CY-979A/URR case that rolled through here 3 or 4 weeks back. Oh YEAH!!

Dammit anyway! I'm in a wheelchair, and I'm so screwed-up that I can't get the radio anywhere even close to properly hooked up tonite. I'll have to get my son to help ol' Pop, and we'll see what we can do for a couple of proper antennas. But I sure CAN throw a length of wire on the floor and see what I can

hear out there tonite.

Thanks a million Hank! You did a beautiful job. I could have done this in a private email to you, but I wanted to show you the respect and admiration that's due you for the work that you do.

I thought that anyone here on the list that isn't one of the 'regulars' might not be familiar with you, and your work. If that's the case, they do now! Thanks again .... Quig

PS: It really WAS a thorobred Stewart-Warner!

From bipi at comcast.net Thu Dec 8 23:06:19 2005
Subject: [R-390] Hank Arney Restoration Job

Quig,

Glad to hear such enthusiastic glee! Enjoy that 390! Hank has helped many of us out on a smaller scale, but just as important, with his supply of parts and knowledge. It is always nice to say thank you, so thank you Hank!

73 de Mike K7PI Mercer Island, WA

From hankarn at pacbell.net Thu Dec 8 23:51:28 2005
Subject: [R-390] Hank Arney Restoration Job

Hi Daren,

Well I am happy that you are now in possession of a great performing S-W R-390-A.

I cannot take all of the credit as my friend Matt Parkinson soled some of the problems with the unit. Like replacing the PTO that I sent, tweaking the OSC. deck and the gear train.

So it was a joint venture of Matt and Hank but a very enjoyable task. to get one up and running in a great performing radio. So enjoy it Daren. Hank KN6DI

From Flowertime01 at wmconnect.com Fri Dec 9 00:10:41 2005
Subject: [R-390] Bounced a seven pager.

Fellows,

Christmas wishes part three went up. It bounced.

The reason it is being held: Message body is too big: 51796 bytes with a limit of 40 KB

If it gets OKed we may see it tomorrow. If size matters and it stays bounced, I'll slice it in two and post the parts. What ever management rules is OK Craig, needs to have his wishes fulfilled. Roger KC6TRU.

From Flowertime01 at wmconnect.com Fri Dec 9 00:15:03 2005

Subject: [R-390] Hank Arney Restoration Job

Quig,

Hank is doing us proud. Roger KC6TRU

From vhfplus at bmg50.com Fri Dec 9 00:49:57 2005
Subject: [R-390] R-390A FS

Due to recently incurred medical expenses I am forced to sell the R-390A that I acquired a couple of months ago.

I have turned the receiver on and it is evident that it is in need of work. Mechanically the receiver is in good condition but obviously needs to have the band-change mechanism cleaned and lubricated and some of the controls, like the zero adjust and antenna trim, need to be repaired.

Electrically it is readily apparent that the receiver needs a thorough alignment since the only signals I can hear are a few AM BC stations on my 40-meter 1/4-wave vertical. It does appear that all filters are functioning since I can hear the narrowing of the IF bandwidth when switching from 16 to 8 to 4 and down to 0.1kHz BW. The BFO works but the alignment is far enough off so that rotating the BFO pitch control does not sound normal. The line level and carrier level meters appear to be original and are both functioning. Other control functions (line gain, AGC, limiter, audio repsonse and break-in) appear to be working. Unfortunately I have no access to even a tube tester and signal generator so cannot do even the most minimal work on the receiver.

I hope that the above descriptions are not too confused but I have never owned an R-390A before and have only learned a bit about the receiver from reading the posts to this reflector. I do know, based on an answer to one inquiry I made, that this receiver does have an R-390A IF strip.

If anyone on the reflector may be interested in this R-390A I will be glad to provide any additional information required and will be able to provide .jpg images either tomorrow or Saturday. I will try to provide whatever digital photos of the reciever that anyone would desire plus would answer any questions as thoroughly as possible. Thanks, Jack, AE7DX

From w9ya at arrl.net Fri Dec 9 02:04:45 2005
Subject: [R-390] Re: The Y2K Maintenance Addendum

Here Here...I also vote for "Supplement"

Vy 73; Bob w9ya

From jmiller1706 at cfl.rr.com Fri Dec 9 08:44:50 2005
Subject: [R-390] Bounced a seven pager.

You could post the file to a third party storage service and then each could download at will outside of the list. For example, Yahoo has a free service called Yahoo Briefcase. Upload your file, then send email to anyone on the list interested in it. There may be other services like this.

From vhfplus at bmg50.com Fri Dec 9 09:40:21 2005
Subject: [R-390] R-390A FS

An addendum to my original post as a result of an inquiry:

I have no idea of the brand...the front name plate is missing and there are no other obvious identifiers. The only markings on the receiver are rubber stamps, one on the rear, upper right, that looks like a spread-eagle with sevreal letters but it is so blurred I can't tell what they are. The other stamp is on the right side panel toward the front...it is red wit a large letter "A" in the middle and the letters "S" to the upper left of the A, the letter "C" to the upper right of the A, the letter "L" just abover the cross-bar of the A and four small numbers (looks like "9431") below the cross-bar of the A. All this is inside a square about 5/8-inch on a side. That's a pretty odd one but maybe it will tell a knowledgable R-390A afficianado something. Is there some other way I might be able to determine the manufacturer?

FWIW, the front panel is silk-screened rather than etched and is, although a bit dirty, is in very nice condition. There alsmot no detectable wear on any of the lettering...I note that the "N" in RF-GAIN is worn on the uppper right of the letter but I see no other wear on any lettering on the front panel.

Also, I forgot to mention that the jumbo "BNC" connector on the rear panel has a couple of missing center pins.

Based on previous e-mails with members of this list I think the R-390A is likely worth at least $500. Given that I sold the CY-979 case for almost that much I figure the receiver must be worth just a little more :>) Thanks, Jack, AE7DX

From cmurray at tntech.edu Fri Dec 9 11:17:18 2005
Subject: [R-390] 17 MHz osc pull from AGC

Hey gang,

I'm working on a '62 Amelco and I have just noticed the 17 Mhz xtal oscillator in the first mixer is pulling just under a hundred cps or so in step with the AGC voltage. The stronger the signal, the further it shifts. CW on the bottom 8 bands is chirpy when using the AGC. MVC is fine. Signals above 9 MHz are fine.
Replacing the oscillator tube and mixer tube didn't make things better or worse. The 150 volt line is dropping about a volt between AVC and MVC mode with a strong signal applied. I don't think that is enough to cause this problem .... is it?

I have had other lesser receivers with combined mixer/oscillator stages chirp, but I refuse to believe the '390A is supposed to act in this manner as some of the posts in the archives suggest. I have owned three other 390As in the past 25 years and I don't remember any of them doing this.

Has anyone else been able to cure this problem? Thanks and 73, Conard, WS4S

From Flowertime01 at wmconnect.com Thu Dec 8 23:58:31 2005
Subject: [R-390] Christmas Wish List (part 3)

>From Craig C. Heaton AKA wd8kdg Christmas Wish Number Two.

A blow by blow account of what to connect, where to connect, the values are we looking for, and the correct order of tubes to swap while measuring for the 30db goal. Is that clear??

Warning this diatribe will induce drowsiness. Warning most satire was left out and this is no fun to read. But it was ask for and I offer it in the spirit of the Season. May you all enjoy. If any one wants any thing more, just ask. I'll give it another shot. I can fix them my self faster than I can write about it. Roger KC6TRU

Ok so you have run all the subassemblies through the dishwasher. Pulled the RF deck, cleaned the gear train and lubed it with the magic synthetic Mobile oil. Everyone that went this far was sure to visually check the RF band switch alignment. Some have even taken the whole frame out in the summer sun light and given it a bath. A few more have removed the front panel, sanded it clean, scraped out the engravings an applied non military paint like things to the panel. Then all the parts were heaped back inside, the green screws (bolts) were snuggled up (yep snuggled), the connectors connected and the RF deck cover replaced, many more than the recommended tube shields inserted, all the knobs checked and twiddled, some (like me) mounted the micro dial on the BFO shaft, a few more installed the "@RARE@ dial bezel with @SPOOK@ cover to arrive at one specific incarnation of a good looking receiver. All this effort has been dully noted and good credit standing with Santa applied for.

Then the shocking receiver was placed on the "bench" and properly grounded so that it could be checked to be a working receiver. After much tube testing, tweaking and other maintenance procedures as described in the manuals were completed the receiver was found to have a calibration tone on every 100 kilohertz. The signal generator was attached to the antenna input, the voltmeter and load resistor attached to the output, the calculator dusted off and the End to End sensitive test was performed. After some button smashing on the calculator, review of math and magic thumping of test equipment, the receiver is found to clearly pass the military 10:1 signal to noise ratio any where on the dial. Some spots almost made 20:1 but the receiver clearly passes the 10:1 with less than 4 microvolts in and .4 watts out. All this effort has provided a working R390 receiver in much better condition than some things we have seen sell on E-bay. At least you know what state your state is in and that's a step ahead of some things we have seen sold.

You have solid stated the rectifiers. Inspected the caps and replaced the brown and black critters. You have looked under all the subassembly decks and fixed any charred resistors, leaky caps and other real problems. You have the RF band switch properly adjusted by visual inspection. You have the crystal oscillator switch adjusted by visual inspection. You have the dial over run set. You have the Zero adjust set. You have the detent load set. You have the mechanical alignment set. You checked the slug racks for nice operation. You have resolved your ballast tube problem to your satisfaction. You have the power supply caps on the Audio deck under control. You have the PTO end points set to your satisfaction. You have been through the RF alignment more than once. You have watched the receiver glow in the dark both the top side and the bottom side and none of the tubes have that that unhealthy blue glow in them. The 5654's tend to get it first. Then the 6C4's. Just using what you have you are doing the best you can. But maybe you can get a bit more with what you have if you just had some inspiration. You have a good working R390 and you have done the real right stuff to get it up to snuff. You have done all the right stuff, But you been watching Emeril Live and you want to kick it up a notch. Its Christmas and you deserve some additional sensitivity. Besides the sun-spots are not all that good this year and you need some additional sensitivity.

You have been reading the E-bay pages and other things where you have seen allusions to

receivers that do better than just pass requirements and work. You have explored this subject and understand that if you just replaced every tube in the receiver it could be better. A quick look at some tube prices and your pocket book tells you that that approach is not practical. Asking for a tube tester is not a solution to the problem. A more selective scientific selection of tubes to place on the Christmas Wish List is in order. You could get every tube you ask for no matter what the cost if you approach the request with rational. The I want it may fly with the children but these kinds of glow tube procurements need a bit more presentation to get through the procurement approval process.

So you put out an E-mail request for some help to the R390 reflector Fellows and start asking for the inside real spook tips on how to get this done. All right enough ducking and dodging. Enough introduction. Enough procrastination. Its time to fish as I am not cutting no stinking bait. I did the RF end to end sensitivity test in DB milliwatt and too much detail. So I will do this tube time in AC volts across a 600-ohm resistor. All in plain text as tables do not go through my mail tools. That's My choice and I'm sticking to it. Beat the 600-ohm problem with a pair of 1.2K ? watt resistors. A pair of 1.2K ? watt resistors will work. Pick you AC meter with the most readable scale. Go digital if you must. Warm up the signal generator.

OK so you have this receiver on the bench. Its semi time. You did a good face wash, mechanical check and electrical alignment. You do the RF end to end sensitivity test described in part 2 of Christmas wish list and the receiver fails to get the 20:1 you need to have the trick chief hack off on the paper work so you get down the hall and on to important things. Where and how do you start trouble shooting this receiver problem. The receiver is aligned. Its OK. It works (sort of). It has no specific problem. It just does not pass the shops 20:1 signal to noise test setup. I seen this twice a day six days in a row took a trick shift (2 days more or less) off and did it again for years. You need to know how to deal with this problem. It is not in the manuals. It was taught in school.
You need a minimum tube test set of each type tube in the receiver. (More is good but not required) For every tube type you need N-1 tubes. There is one 6DC6. N-1 is zero 6DC6 in the tube test set. There are 3 6C4's one is in the first mixer. Above 8 MHz the receiver uses only two of the 6C4's So N-1 is 1 6C4 in the test set. The 26Z5 are sand state and need zero. The 0A2 either lights or got replaced. N-1 is zero 0A2. The pair of 5654 AKA 6AK5 needs 1 The three 6AK6's need 1 because the line and local are in parallel and you only meter one branch. You need 4 each 5749 AKA 6BA6. You can grab the 5814's out of the calibration area and V509 for the theses test, but 3 each 5814's help.

So you need
1 signal generator (and wire to antenna input)
1 AC volt meter (and test leads)
1 600 ohm resistor
1 6AK5
1 6C4
2 6AK6
2 6BA6 /5749

That's the ingredients

A blow by blow account of what to connect, where to connect, the values are we looking for, and the correct order of tubes to swap while measuring for the 30db goal. Is that clear??

For the 60's Vets

EXACT

On the back of the receiver is J116. On the outside this is a BNC connector. On the inside this is a mini BNC connector. If your receiver is missing this item ask Santa for one this Christmas.

On the inside of your receiver is a coax with two mini BNC numbered P116 and P114. The P114 connector should be attached to J514 on the IF subassembly. The R390 did this sanely in BNC cable and all this mini stuff is avoided. If your receiver is missing this small assembly or it does not have continuity ask Santa for one this Christmas.

Set the signal generator up for 455 kHz, 150 microvolts un-modulated. For those with a copy of the TM. this is paragraph 73 Adjustment of GAIN ADJ Potentiometer. Right out of the TM and to follow here in detail. But for reference and history just so every one knows where this stuff is being drug in from. So people with keyboard say I miss the truth some days. Its close to Christmas, My wish list is in and I'm not about to jinx my chances with any fibs here. Understand.
If you were doing the electrical alignment of the receiver and got to paragraph 73 to set the IF gain R519, and knowing that proper prior planing prevents poor performance, you would make a could switch flips while in the conduct of this test and ensure the IF and audio deck was going to make the grade when you get to the end to end sensitivity test. Paragraph 73 has no clues on how to do a signal to noise test on the IF and Audio decks. This is where the inside information comes from. Believe you need a 30:1 ratio here. Exact reference to a voltage or power level is not needed. Exact calibration is not needed. The signal generator should be in the 2KC-band pass as best you can rock the generator into the band pass. The mechanical filter is not tunable, so you have to rock the generator into the filter. The 150 microvolts is not exact. The 150 number is what got published in the book. Crank your generators output to 150-microvolts and accept it.

If I have no frequency counter how do you get my signal generator set to exactly 455? And the follow on question is how do I get the BFO set to exactly 455 and the knob pointing at zero? Glad you ask and it offers a nice transition into the next paragraph.

Un hook P218 from J518 and P213 from J513. Tube pullers worked good for this.
Un kook P114 from J514.
Hang a 600-ohm resistor across terminals 6 and 7 of TB 102.
Hang the AC voltmeter across this load resistor.
Set the local gain to max
Set the RF gain to max
Set the BFO off
Set the limiter OFF
Set the function switch to MGC

To set the signal generator on frequency do the following :
Back the signal generator output down very low.
Turn the BFO off.
Set the band width switch to 1KC.
Hook P114 to J513.
Turn the signal generator modulation on.
Set modulation to 30% and 400 Hertz as published in TM paragraph cited above.
Hook the signal generator to J116 using a suitable length of coax and connectors as require too make the setup.

Hook P114 to J513

Rock the signal generator into the 1KC band pass while watching for a AC volt meter peak.
Set the band width switch to .1KC.
Rock the signal generator into the .1KC band pass while watching for a AC volt meter peak.

This get the signal generator peaked into the 455 crystal filter of the .1KC band pass.

To set the BFO to zero do the following;
Turn the modulation off on the generator.
Turn the BFO on.
Tweak the BFO Pitch knob to zero beat with the signal generator, while watching for an AC voltmeter null.
If null is not with the Know pointed to zero, perform a shaft clamp adjustment as required to correct problem.
Do not adjust knob to shaft.
Shaft at knob is burred and will not adjust easy.
Spline bolt in knob is inaccessible at BFO zero.
Set clamp inside front panel so Spline bolt is easily accessible while making this adjustment.
Just some inside info not in the TM.
Turn the BFO off.
Set the generator output to 150 microvolts turn the modulation back on and peak it into the 455 crystal as best you can.

Un hook P114 from J513
Hook P114 to J518
Set the band switch to 2KC
You likely pop the top off the mechanical filters here and trim each cap up to the best you can.
This is a subject for another mail.
You may neutralize the BFO at this point
This is a subject for another mail.

Set the gain adjust as follows.
I can name five ways to do this "properly" For this test do the following and readjust later if necessary.
Hang a DC voltmeter on the diode load to ground.
Set the signal generator modulation off.
Set the signal generator output to 150 microvolts.
Set the BFO off
Set the bandwidth to 2KC
Set the function switch to MGC
Adjust the IF gin R519 for -7 volts on the DC load.
Remove the DC meter.

As long as you are here, you may as well check to see if this receiver IF and Audio are going to make the signal to noise test. You can do it now as part of the alignment of come back as part of your trouble shooting. As long as you are here. 400-milliwatts across a 600-ohm load is Volts = square root (P * R) = 15.4919 Volts = square root (0.4 * 600)

Verify the local gain as follows
Set the signal generator modulation on.

Set the signal generator output to 150 microvolts.
Set the RF gain to max
Set the local gain to max
Set the BFO off
The AC volt meter on the local gain must exceed 15.50 volts. (It could even be twice this voltage)

Verify the line gain as follows
Set the signal generator modulation on.
Set the signal generator output to 150 microvolts.
Set the RF gain to max
Set the line gain to max
Set the BFO off
Move the AC volt meter on the line gain with the load resistor
Output must exceed 15.50 volts. (It could even be twice this voltage)
The line level meter will flat peg out on the +10 meter setting.
100-milliwatts across a 600-ohm load is Volts = square root (P * R) = 7.745 Volts = square root (0.1 * 600)
Reduce the line gain from max until the AC voltmeter reads 7.745 volts.
The line meter should read 20 DB +10 on the switch and 10 on the meter scale.
I know this is tricky math but follow along.

Ok a 150 microvolts modulated 30 % with 400-hertz tone should produce .4-watts of output into a 600-ohm load on both the local and line outputs. The power gain is there. Both channels work. The line meter works. The BFO is set. Run through all the 2, 4, 8, and 16 bandwidth switch settings and check that the power is up. All the mechanical filters are at least passing signal. You checked the .1 and 1 when you rocked the generator to 455. Depending on what modifications you have made to the caps in the audio section, the power output may be over 1 watt. At least a ? watt in a stock deck.

If you have -7 volts on the diode load and less than ? watt out of either audio channel you know you are looking for poor tubes between the diode load and the output. Grab your schematic and see which tubes are in the line.

If you have trouble getting -7 volts on the diode load, look at the 5749's and 6AK6 in the IF deck. The diode load should crank to -10 or 15 on the end of the resistor range.

Ok a 150 microvolts modulated 30 % with 400-hertz tone should produce .4-watts of output into a 600-ohm load on both the local and line outputs. You can do the signal to noise test on either the line or local. You can do them both at the same time. If they are not equal you now the 5814 and 6AK6 in the audio deck is the difference between the two outputs. Ok a 150 microvolts modulated 30 % with 400-hertz tone should produce .4-watts of output into a 600-ohm load on both the local and line outputs.

To get the receiver to pass a 20:1 one signal to noise test this much of the receiver must be able to demonstrate a noise level that is 30 DB down from this output. 30 DB in AC volts across a 600 ohm resistor is 16.67 volts.

Verify the IF and audio noise range as follows.
Set the signal generator modulation on.
Set the signal generator output to 150 microvolts.
Set the RF gain to max

Set the local gain to max
Set the BFO off
Set the band width to 2KC
Set the limiter off
Set the function switch to MGC.
Set the audio gain for the channel under test so the AC voltmeter reads 17.32 volts.

This is .5 watts into a 600 ohm load and equivalent to 27 DB.
Set the signal generator modulation off.
The AC voltmeter must read less than 0.65 volts.

This test is not exact. Set the Audio as high as it will go.
Turn the modulation on.
Read the AC volts.
Turn the modulation off
Read the AC volts
Is the difference more than 16.5 volts.
Yes you are OK
No you have work to do.

Seeing all these silly AC voltages you understand why a nice Analog AC voltmeter with a DB scale and range switch you understand how to use is nice here. With a DB scale on the meter you just read the max DB level with the modulation on. Switch the modulation off and read the meter in DB again if the difference is greater than 30 you pass go and collect $200.00 if not you have work to do.
What do you do when you do not have the 16-volt or 30DB difference?

Round up those tubes. We know from life that front to back makes the most difference. In this test setup V501 is first and that 6AK6 in the audio channel is last. Some AGC tubes are out of the circuit. The exact order is as follows V501, V502, V503, V504, V506, V801, V602 and V603 or V604. That all there is in the test string, eight tubes.

Pull the BFO and PTO 5749s for test critters. Pull V508 for a test critter. V502 and V503 are under control for this test. V501 is the test socket. 5749 / 6BA6 is the test subject.

If you have two extra 5759's install them into V502 and V503. If you have been here and done this before you have the two poorest 5749 you own marked and ready for this test.

Run the test.

Verify the IF and audio noise range as follows.
Set the signal generator modulation on.
Set the signal generator output to 150 microvolts.
Set the RF gain to max
Set the local gain to max
Set the BFO off
Set the band width to 2KC
Set the limiter off
Set the function switch to MGC.
Set the audio gain for the channel under test so the AC voltmeter reads 17.32 volts.

This is .5 watts into a 600 ohm load and equivalent to 27 DB.
Set the signal generator modulation off.
The AC voltmeter must read less than 0.65 volts.

Swap the 5749 out of V501 and repeat the test.
Did this tube provide a higher maximum voltage?
Did this tube provide a wider range between modulation on and modulation off than the first tube?
Check all the 5749 you can round up and rank them more range is best.
If you do not have spares, swap the poor ones into V502 and V503 and run them all again.
If you do not have spares put the poor one in the BFO
Put the second poorest one in V508 AGC IF AMP.
Run the receiver in MGC do not listen to SSB or CW and wish for 5749 for Christmas.

First put the very best 5749 into the PTO.
Second put the next best one into V501.
If this set up will not pass the 30:1 ratio test here, then put the best one in V501 and wish.
Third put the next best into V502,
Fourth is V503.
Fifth is V505 (BFO)
Sixth is V508 AGC.

Save at least two off the 5749's for test.
Any tube that will not get you the 30 after 2 spares is a discard.
Save the rest if you have them.

The next time you run this test put your two weakest but (hopefully) passing 5749's into V502 and V503 and grade all the other 5749 you can round up. Install the best of the 5749 and re grade all the spares so you know which will at least pass and which bottom end ones to save to start the test with the next time.

You next test the 6AK6's in V504. You need to leave one in the audio channel you have the meter on. You can swap the other audio channel with V504 and pick the best one to go into the audio channel under test. Then check that one against the third one again for comparison. Put the best one in V504 and the second best in the local channel V603. If you have one spare 6AK6 to start with you can rank all three and place them in V504, V603 and V604.

You next test the 5814's in V602 because this socket tests both side of the tube at once in series. You can pull almost all the 5814's in the receiver and rank them. You need to have a tube in V506 the detector and V602. When you do this in the R390 you have to watch the series filaments to keep the tubes you need lit up. Rank them all and put the best as follows.
First one in V506 the detector
Second one in V601 audio.
Third one in V602 audio
Fourth one in V507 limiter
Fifth one in V509 AGC
Sixth one in V205 Calibration
Seventh one in V206 Cal buffer

Save at least two for the next test event.

Once you do this one time you start to see how tubes are making a difference. You swap the order

of V501 and V502 a couple of your best 5749's and see a 6 or more DB change in the span of the modulated to un modulated signals and you become a believer. Once you get enough good tubes in the receiver to get the range in the IF and audio sections you can hear the difference in the receiver when you put it back on the antenna.

V501, V502, V504 are the first three to receive new tubes if you can not get the 30:1 range. This is 2 5749's and a 6AK6. Three 5749's and two 6AK6 will get you there as V501, V502, V503, V504 and V603 or V604. You almost can always find a few good 5814's to fill the string. Trade a 6AK6 or 5759 for the 6DC6 on your Christmas list and have a 5 pack shipped in time for the Holidays.

Once you get the IF and Audio deck aligned and tested you put the receiver back together and start on the end to end sensitive test as detailed in part 2. You go into the RF deck alignment knowing the IF and Audio are good those tubes are good and the signal to noise ratio is good. What ever you need to do to the receiver now is in the RF deck.

If you went through this mess of testing for the um-tenth time it takes about a ? hour to just do it. First time can take a week of you hobby time. If you go through all of this and you have a meter needle that just wants to bounce big time, and none of the tube juggle seams to help, you may need to be rethinking caps. But you should still be able to rank your tubes and know the better from the poor. You can look into the IF deck and judge the cap problem. An assembly full of brown or black things is a cause to heat a solder iron. Been there done that is cause to consider some new tubes.

Once upon a time a brought 5 new Raytheon 6BA6's. They were the hottest tubes I have ever had. Power out over 1 watt. I can not get any of them to pass the noise test. I'm burning them in the BFO and AGC rectifier. I know its BFO noise but I can live with it. Moral new tubes may be worse than what you have. There are lots of good brands. So all this work may not cure all ills.

In service we just knew if you did not get past this test you were not going to make end to end test. It was a place we learned to divide and conquer. We had to set this test up and do the BFO and IF gain here anyway. It was just a few switch steps to do the test. If you had to go for tube jockey status, this test at the half way point sorted the tube types. Only the 6C4, 6AK5 and 6DC6 were left for the RF section.

These tubes were done the same way with the receiver set up for the end to end sensitivity test. You set up the RF alignment and could get the 20:1 ratio when you did an adjustment or you swapped some tubes. If the receiver was looking poor after getting the IF to pass, you just started with a new 6DC6. If it did not make a lot of difference you put the old one back in and went through the adjustments. You swap the 6AK5 into the crystal deck above 8 meg and rank the 6AK5's. You swap all the 6C4's you have into V603 and rank them. Put the best one forward. Do you put the best 6C4 into V202 or V203? Depends on what you are going to do under 8 meg.

You keep at this long enough, buying tubes and grading them you get over 20 end to end and have a wonderful receiver. You stay at it and you find you have 25 or more end to end. Then you find the meter is just not laying real still. So now you can go at it back to front one stage at a time with signal injection and see where that meter bounce is coming from. Then you can consider nosey caps. But until you get a real good set of tubes in the less noisy caps are not your major problem. I have found just getting good low noise tubes to be a problem or buy and try. This cap subject has driven most of us to just acquire a complement of good quality caps and re work the whole subassembly one-week end. Again the IF deck gets it firs and then the Audio deck gets it and last we do the RF deck.

So I hope this covers the subject clearly and allows everyone to test their R390 so as to generate a concise wish list of parts that will make a difference in what they hear with out exceeding the allowance.

Merry Christmas to All From Roger KC6TRU

From roy.morgan at nist.gov Fri Dec 9 11:44:38 2005
Subject: [R-390] 17 MHz osc pull from AGC

.. the 17 Mhz xtal > oscillator in the first mixer is pulling just under a hundred cps or so > in step with the AGC voltage.

Conard,

Are you sure it is the crystal pulling, or the PTO?

> ... CW on the bottom 8 bands is chirpy when using the AGC.

Likely it's the crystal oscillator, then.

>... The 150 volt line is dropping about a volt between AVC and MVC > mode with a strong signal applied. I don't think that is enough to cause > this problem .... is it?

It might be.. have you tried a different (new) VR tube? That would be my next step. (I can't say what variation is expected on the regulated B+ line normally - do you have another receiver to test?) See if the VR tube is starved by a drifted-high dropping resistor. (I can't remember if that is a wire wound unit or a carbon one.)

Some speculations:
1) You may have leaky or resistive capacitor(s) in the 17 mc oscillator section. Are tube voltages and resistances normal in that circuit? For instance, a leaky screen bypass cap can bring the screen (or plate) voltage down so the oscillator is running weakly, or at very much changed voltages and currents. This can get the thing into a state where slight, normal, changes in voltages (due to the AGC action) cause frequency drift.

2) The 17 mc crystal, or it's oven, may be the trouble. Try another oven if you have one. The oven should be cycling after warmup. If it's thermostat is stuck ON the crystal will be baking at a much-too-high temperature and be far away from it's stable region. Same if the heater or thermostat is open.

I look forward to hearing what you find. You are right, the receiver should not act this way. A hundred cycles' wander in detected tones would wreak havoc with an RTTY comm channel. Roy

From wd8kdg at worldnet.att.net Fri Dec 9 13:06:32 2005
Subject: [R-390] Re: Y2K maintenance addendum

To the List,

First: Many thanks to Roger, KC6TRU, I've just printed (part 3). Well done! All eight pages contain

years of experience that those of us who didn't work in this field could never attain.

Second: My Christmas Wish, was not intended to start the volume of e-mails that have followed. But I do admit pleasure in the positive posts. With that said, I'll second W.Li's motion for a addendum to the Y2K Release 2.0. So, having been a guilty part of this; can I help in any way?

IMHO: The Y2K manual, in my limited experience, is well enough written to take anyone new with a R390/A to the point of a working receiver. The addendum should contain illustrations and practical experience like Roger's to help those who desire the next level, a wonderful receiving R390/A. Maybe a title?

As caretakers, our charges are reaching 50 years of age. At times these poor boatanchors have been exposed to the elements and physically abused. Age alone is taking its toll. Once again if a new manual is developed, I hope it contains a section on the gear train, recapping, Roger's part 3, and the list goes on.

Can I help with its development? 73's wd8kdg Craig

From jmiller1706 at cfl.rr.com Fri Dec 9 14:06:05 2005
Subject: [R-390] 17 MHz osc pull from AGC

I have noted the same thing. I put a counter on each oscillator and ran some tests looking at the frequencies as AGC voltage changed. It is indeed the 17 osc. Trying different tubes in the mixer that it drives seemed to improve things. My guess is that as the AGC to the first mixer grid (V202) changes, it changes some operating condition or impedance that the 17 osc looks into through T207, and that pulls the osc. slightly. There is also a variation in B+ to the osc. as the AGC changes current draw by the other tubes. The B+ to the 17 osc. is not regulated. That could be causing some pulling. I thnk both the osc. and 1st mixer tube operate from the same B+ line, maybe there is some interaction there. It does this more on my Collins than on my SW radio. Could be some aged resistors or caps, ... don't know. I have been thinking of going in to check values but too lazy.

From w5or at comcast.net Fri Dec 9 14:18:54 2005
Subject: [R-390] Bounced a seven pager.

I have doubled the message size limit. Don list admin

From bobs at pacbell.net Fri Dec 9 16:31:39 2005
Subject: [R-390] Re: QTH.NET and the sorbs conspiracy

Hi

Was just wondering f this is why my submissions to the r-390 are usually rejected - and waiting to see if this message is "bounced"

Bob a HAm wannabee and an owner of a R390A

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From Flowertime01 at wmconnect.com Fri Dec 9 19:16:33 2005
Subject: [R-390] 17 MHz osc pull from AGC

Conard, WS4S,

Roy offered up some of the best things to try first.

You may be dealing with an old age problem here. Do the stuff Roy suggest first it easy, painless and most likely to fix the problem.

I was thinking you may have a bad wire in the harness or a contact problem in the RF deck connector. Not a real open but enough to get you a voltage drop. My though was that as AGC voltage goes down (more AGC) the IF stages get cut off. The IF stages and the first crystal ocs share the RF IF B+ line. Plug 108 pin K at the RF deck. As AGC changes tube gains, the B+ line voltage may be changing.

You may try a visual inspection on the back side of Plug 108 for frayed wires. The other end of that is the RF IF B+ fuse. A bad fuse could be getting you or poor connection in the fuse holder.

You should also go the other way and try to look into plug P112 at the IF deck.

After this you could try a tube extender into the osc tube and see if you can watch the B+ shift as the AGC is built-up with a strong incoming signal.

You may have to pull the RF deck and do a real visual for a poor connection. It may or may not be on the B+ line. It could be in the cathode circuit or in the screen circuit for the Osc tube. It could also be in the grid and the crystal can socket.

In MGC you just hold the AGC line flat and thus do not shift the current operating points of the tubes. Signals run through the tubes and current varies but not to the extent the AGC shifts the operating points of the tubes. You are seeing a 17,000 to 1 shift on the Osc. The amount of B+ shift you see at the tube may well be under a volt.

We have seen cold solder in the IF cans. You could have a cold solder joint in T207. Not an easy place to inspect but it can be done. Good Luck with this one. Let us know what you find. Roger KC6TRu

From Flowertime01 at wmconnect.com Fri Dec 9 19:39:49 2005
Date: Fri Dec 9 19:42:43 2005

Bob,

I understand your E-mail Spam problems. My last project at Raytheon put 11 contractor sites behind a

fire wall so we could all get along. Then us guys at Raytheon had to go across a fire wall to see our Raytheon Time cards and stuff. We had to cross that net to a gate way fire wall to cruse the Internet. There was more bucks paid to Lucent to manage the T3 lines between all the sites literally across the Nation. That was considered just the barely acceptable solution to the network problem. But yes Raytheon has resorted to "private" networks between contract members to allow work to get done and not have to filter Spam all day. Then when we try to do business with a vender on line and have to go across a fire wall into the "open Internet" it was hell. The stuff piling into the Raytheon known IP addresses was ugly. Two servers were mounted right over the big dumpsters just to deal with the rejected bits.

Really this problem is going to get worse. I hide behind my Malmart services and mail to the Qth.net. I have no Idea how many bits my service provider dumps when I spend a couple hours do a search on the Internet for some product. Roger KC6TRU

From odyslim at comcast.net Fri Dec 9 21:31:44 2005
Subject: [R-390] Reman IF to trade.

I have a Rick Mish remanufactured and aligned Stewart Warner IF that I am interested in trading. All of the filters are good. It has all new tubes and is fully functional. It was gone over and aligned this year and works perfectly.

I know this is a long shot but I am willing to trade for an older Collins IF from the 375-P-54 contract. This is all I need to have the 1954 contract Radio with correct modules.

I will trade the newer and better SW for the Collins IF if it is complete/working/ restorable. As I said, what I am looking for is the 375-P-54 contract IF is what I need.

Everybody check your junque boxes and radios and try to help me out. This is not for a sale on eBay. It is for my collectiom of fine radios. Scott W3CV

From odyslim at comcast.net Fri Dec 9 21:38:03 2005
Subject: [R-390] last plea for a multi-coupler

Hi.

I really need an HF multi-coupler for my listening station. Preferably military surplus boatanchor full of tubes. I have tons of interesting items to trade or will buy outright . I only ask that it works and has not been used as a wheel chock. Regards, Scott

From shoppa_r390a at trailing-edge.com Sat Dec 10 10:58:56 2005
Subject: [R-390] Reman IF to trade.

wrote: I have a Rick Mish remanufactured and aligned Stewart Warner IF that I am interested in trading.

This is a probably a silly question, but if anyone wants to whack we me with a clue-by-four I'm sure I'll learn something in the process :

I have a Collins IF deck. On the side it says:

FINAL I.F. UNIT
54G 7677 005
COL. SER. No. 2167

On the top, by J512, it says "MOD 2".

4 Collins filters, 3 of which have orangish ID stickers and the fourth is more red. No trimmer caps on the filters, just the postage-stamp micas.

Long ago somebody stripped out the BFO reactor. I may be somewhat mixed-up about the "54G 7677 005", maybe that last 5 is a 6, maybe the G is a 6.

Probably this has been subject to a lot of abuse, several of the Vitamin Q's are leaking gunk and a lot of the brown beaties are cracked. So how is this related to a Collins contract #? Tim.

From r390a at bellsouth.net Sun Dec 11 00:59:41 2005
Subject: [R-390] OT - test do not read

Move along, nothing to see here.

wrote: Apparently Tom Norris is using Google mail (gmail). Google embeds advertising to pay for the "free" service. Does this advertising find its way into outgoing emails and get blocked by sorbs? The sorbs website is http://www.us.sorbs.net/ maybe that can help.

From r390a at bellsouth.net Sun Dec 11 01:29:03 2005
Subject: [R-390] The Y2K Maintenance Addendum (was: Christmas Wish List)

wrote: A section of wise sayings would be good too.

WARNING! In the rare even you must disassemble meters, do not lick meter faces! Tom

From vk2abn at bigpond.net.au Sun Dec 11 03:40:14 2005
Subject: [R-390] Osc pulling with AGC

I would check the resistors around the various oscillators and specifically the plate feed and screen resistors , But first I would check the regulation of the 150V supply and also the series resistor for the regulator tubes 73 s from Oz

From mark.richards at massmicro.com Sun Dec 11 06:45:11 2005
Subject: [R-390] A (very) big project

Amateur Radio has sent some of the first raspy dits and dahs across the ether and communications into orbit by satellite. Perhaps it's time to engage in what may be seen by some as insane: re-manufacture the R-390a.

After all, we know how to re-build them.

The supply of these radios is, despite the interest and forward-thinking of surplus dealers and the tinkerers, traders and preservers among us, drying up. Evidence the cost of these beautiful beasts - even un-restored. And it's likely that the value of our R-390 stock will not be dropping anytime soon.

When NASA used to do things right; when the US was less averse to risk; when there was a true mission with leadership and commitment behind it, great things were achieved. The successes would have otherwise been impossible without a massive effort of the ten thousand vendors who built specialized parts and pieces, all brought together by invetive minds and a system of management that was invented to meet the challenge. We have the same in our R-390 community. Someone does panels. Another has experience in tubes. The expertise and capability I've witnessed on this reflector over the years is astounding. And the commitment to keep these radios alive seems to me a widely-shared idea.

Some might ask "why?". "Why would we re-build something that could be so much easier produced with circuit boards, plastic, microprocessors and bytes?" Perhaps the answer is in that very question.

Maybe these thoughts are just crazy early morning ramblings. I put them out knowing that it would be impossible to back them up with much in the way of my own experience, knowledge, or financial substance.

Would there be enough of a market for the reproduction of this radio? How would the effort be organized? Would it need financing to sustain itself? Would it ever break even?

Guess I'm selfish. I'd love to see this come to be. Mark Richards K1MGY

From leanne at islc.net Sun Dec 11 07:24:59 2005
Subject: [R-390] A (very) big project

It could be done on or two boards mounted on the rear of a front panel using the same layout for the controls. I would see the biggest project is marrying the freq control to get the proper tuning. Sounds like a fun project for a one off. Leanne W1WXS

From greybeard5150 at sbcglobal.net Sun Dec 11 13:25:03 2005
Subject: [R-390] Re: A (very) big project

'Perhaps it's time to engage in what may be seen by some as insane: re-manufacture the R-390a.'

Unfortunately the key word here is insane. I just don't think that the end consumer support base would be broad enough at this point in time to support an undertaking the size and scope necessary to recreate the instrument as a whole.

'After all, we know how to re-build them.'

Re-building is done with existing resources, whereas the manufacture/remanufacture of them would involve re-creation rather than re-building, which is a horse of an entirely different color. This entails the design and manufacture of tooling for the stamping of all the various modules and cabinetry, setting up all of the necessary equipment for making that incredible gear-train, finding and securing adequate supplies of the numerous electronic components that are no longer available, etc, etc, ad infinitum...

'The supply of these radios is, despite the interest and forward-thinking of surplus dealers and the tinkerers, traders and preservers among us, drying up. Evidence the cost of these beautiful beasts - even un-restored. And it's likely that the value of our R-390 stock will not be dropping anytime soon.'

This story is not unlike the numerous devotees of the venerable all metal bodied '32 Ford (ALL models), and it is most likely going to end up in the EXACT same fashion. One by one, by one, people are stepping up to the plate and recreating bit and pieces of the R-390a. They are finding and filling niche markets as they become necessary. It's the age old motor of capitalism.... supply and demand. As certain critical components become unavailable, someone takes the bull by the horns and designs and manufactures that component, thus creating an inventory of a previously extinct piece. The process is not totally unlike the design of the radio itself, its modular. This process will undoubtedly continue until finally,..... someday, ...you'll be able to build an entire R-390a from the various components remanufactured by a plethora of individuals that have specialized in one small aspect of the process. It will most likely be just like the all steel '32 Ford situation in that in the beginning the quality of the various parts, pieces, and modules will vary for a while, with some being top-notch and others being so-so at best. The playing field will eventually even however, with the poor quality remanufactures either improving their product, or being forced out of the game entirely by those others holding higher QA/QC standards. In the end, when you can finally build one of these radios, it will still be a brand new modular built unit, it's just that there will be no coordination in the creation of the modules, which is what Collins did, yes? You also won't be able to buy one off the shelf, at least not at first. In the beginning you will have to endure the formidable task of gathering all of the numerous and voluminous parts and pieces, and then put it together yourself. This will ONLY happen if you are well heeled enough to bear the HUGE cost of collecting all the necessary components, but it WILL be possible. In the end, the brand new remanufactured R-390a will happen by accident rather than design, which is exactly what happened with the '32 Ford. There were FINALLY enough pieces being re-manufactured that it became possible to create an entire automobile. You can now (and it's been possible for quite a while now) build a 100% complete, all steel '32 Ford without the need for so much as one, single original part. They are ALL remanufactured components, and as more and more time has gone by the selection of top quality parts to do it with has become truly astounding. This is going to happen to the 390. I just know it is
. One has to bear in mind that the '32 Ford is not the ONLY vehicle that has undergone this process, it's just that it was the FIRST. Only the true classics are popular enough to garner the vast interest necessary to sustain this process. I feel safe in saying that the R-390/R-390a receiver is one of the very few radios ever created that genuinely stands a chance of actually making it through this long and arduous process. IMHO as a layman and a consumer, it is one of the few truly remarkable electro-mechanical devices of the last century. I also believe that in the long run it will not only stand the test of time, but continue to evolve into an even MORE remarkable creature as this evolution process continues to refine, and define, what could eventually be universally acknowledged as the 'best that ever was'....

My $.02 worth . (Ok, ok, ok, maybe it?s a nickel) ..... Quig (The SWL crippled up biker guy out in crazy, creepy California w/a beautiful Arney/Parkinson thoroughbred Stewart-Warner R-390a)

From muttman at charter.net Sun Dec 11 14:17:31 2005
Subject: [R-390] Re: A (very) big project

My .02,

I disagree. In a few more years as we tube type collectors die off estate sales will put more radios into the market then the prices will drop. The younger electronic enthusiasts are interested in robotics, wireless control, and uC controlled devices. They know little about transistor theory let alone tube

theory and with the Internet, cell phones and FRS who needs amateur radio? These radios that we appreciate and admire will become oddities at a garage sale or a museum.

Back in the early 60's I received 2 or 3 trade mags a month and started to read about integrated circuits with possible applications in uC. Then one evening I was sitting in my shack and looked around, then I realized that all my gear was all tube type equipment. I decided that the hand writing was on the wall and I was soon to be a dinosaur.

The next weekend I loaded my station wagon, and my wife's car, with all of the gear I could, then sold it at the Foothill swap meet for reasonable prices. Sure enough, it wasn't long before tube gear was for sale all over the place.

I think that a lot of these "collectables" will have the same fate, as the demand drops, so will the price. Buzz

you wrote: > Some might ask "why?".

Oh, you don't need to convince anyone on this list of the "why". We and many others understand most of the "why" quite well.

A better question might be "how much?".

My guesstimate is that the tooling to make all the chassis/ inductors/transformers/gears/cams/etc. would run into hundreds of thousands of dollars. We would convince Collins to make mech filters to the original specs (actually, maybe better, in terms of foam...). And then, ignoring the cost of the tooling, it'd be about $20,000 a copy in mass production.

In smaller production runs many of the parts would be made using CNC rather than dedicated tooling, but the cost would go up by a factor of several.

Maybe I'm being pessimistic. On one of the Usenet ham groups a guy was swearing up and down he could build and sell a 60's era mostly-tube HF transceiver for $200, my guesstimate was 20 times as much. Maybe I do too much government-like contracting to be optimistic about the prices.

Does anyone know what the price to the gov't was for each Fowler made in 1985?

I look in my mid-60's QST's and see HF SSB transceivers for $300-$400 on the low end, and kits for 3-tube Eico CW transmitters in the $80 range. In inflation-adjusted numbers those would be like several thousand for the transceiver and many hundred for the CW transmitter. Tim.

From ws4s at charter.net Sun Dec 11 19:16:22 2005
Subject: [R-390] Shifty 17 MC osc report and survey please

Hey gang,

I have seen parts of my R-390A this weekend I didn't plan on seeing for a long time. It was a positive experience though and I managed to get the symptoms under control and maybe most of the problem taken care of. I still don't have a good explanation of what was happening.

Pulling the RF deck revealed C275 (150V bypass) to be a BBOD with several cracks and quite a bit of

leakage. I replaced it with a .033 uF mylar and added a 5000 pf mica across the mylar. I also replaced C326 with a mica cap since I was in the neighborhood. Everything else was fine.

Oh, I also replaced the two .1 uF BBODs while there. After replacing the RF deck, I found the pull to be about half of what it was previously. Adjusting T207 slightly off resonance got rid of the remaining chirp without reducing sensitivity more than a negligible amount. Before replacing the two caps, I couldn't eliminate the chirp by detuning T207 without almost killing the sensitivity. So, what of the survey? Tune in a strong local AMBC station, flip on the BFO, AGC on fast and then swap between AGC and MGC. Notice if there is any change in pitch. A low tone makes it easier to detect a shift. You can also listen to the 17 MC oscillator in another receiver. Please drop me a note and let me know the results. Thanks, Conard, WS4S

From fwbray at mminternet.com Mon Dec 12 00:45:05 2005
Subject: [R-390] Low Audio

I am a new R-390A owner and am encountering a problem.

Over the weekend, I pulled the front panel so that I could align a couple cams and clean the pots and switches on the front panel with Deoxit. I also pulled the power supply and audio deck to do basic chassis cleaning with a paint brush and WD-40 on a cloth. Upon reassembling the radio, I found it has very low audio, with some distortion when I crank up the local audio gain. However, everything else seems to be working normally. I have swapped the audio deck tubes with known good ones, just in case, but this made no difference. It was working before I started, but clearly needed to have the pots and switches cleaned.
Is there anything obvious I might be overlooking? Thanks. 73, Fred KE6CD

From ToddRoberts2001 at aol.com Mon Dec 12 00:53:14 2005
Subject: [R-390] Low Audio

writes: I am a new R-390A owner and am encountering a problem.

Over the weekend, I pulled the front panel so that I could align a couple cams and clean the pots and switches on the front panel with Deoxit. I also pulled the power supply and audio deck to do basic chassis cleaning with a paint brush and WD-40 on a cloth. Upon reassembling the radio, I found it has very low audio, with some distortion when I crank up the local audio gain. However, everything else seems to be working normally. I have swapped the audio deck tubes with known good ones, just in case, but this made no difference. It was working before I started, but clearly needed to have the pots and switches cleaned.
Is there anything obvious I might be overlooking? Thanks. 73, Fred KE6CD

Try turning on the limiter and see if the audio sounds better or louder. If this is the case there may be some bad caps around the limiter tube V507. The ones that usually cause trouble are C532 and C537. Also check limiter tube V507. 73 Todd WD4NGG

From JMILLER1706 at cfl.rr.com Mon Dec 12 07:22:00 2005
Subject: [R-390] Low Audio

Sometimes WD-40 or Deoxit and high-impedance tube circuits don't mix well. If sockets or wafers are

soaked with the chemicals and absorb them, they might form enough of a path to ground to degrade operation until the stuff evaporates.

From fwbray at mminternet.com Mon Dec 12 09:28:51 2005
Subject: [R-390] Low Audio

Thanks for the suggestions so far. I tried to use the Deoxit, etc., sparingly and with q-tips, but it is a good point.

It looks like I will have to run some tests. Well, at least I know that most of the radio is working correctly. 73, Fred KE6CD

From peuhs at bellsouth.net Mon Dec 12 11:47:16 2005
Subject: [R-390] Found Stuff

Friends,

I will be short..I had given to me by the son of a deceased serviceman:...1)..The Ferret Test Speaker mod. 721...scratched, intact..works. 2)..Zenith Trans-Oceanic Royal 1000..Broken, and tape wound handle/antenna cover..but solid...Antenna fine..batt. case broken but usable...no manual... fair exterior..interior of front is fair but a slight dent in front cover..not much bubbling in metal, but a little..3)..Telematic Ind Tele-check..Intact but yoke plastic is deteriorated...case has a couble of loose fabric on edge.

Free for ship on Ferret and Tele-Check..Offer on the Zenith...I ask to NOT be killed for this post, as I do give away most things...and like to offer them to friends here..just to see that they might be saved by someone..I might even give away the Zenith, and I have several other items...I will private mail you if you write... John (JLAP) (Cathys' husbands great uncle...)

From fwbray at mminternet.com Mon Dec 12 14:23:56 2005
Subject: [R-390] Dial Lamp Source

I just discovered that halted.com has the lamps for the R-390A dial for $0.69 each. The SKU is CAL037.
Undoubtedly there are other sources, but elsewhere I have seen them for 2 to 3 times that. FYI, halted.com does impose a $3.00 service charge on orders under $30.00. 73, Fred Bray KE6CD

From redmenaced at yahoo.com Mon Dec 12 13:27:54 2005
Subject: [R-390] Low Audio

wrote: > Sometimes WD-40 or Deoxit and high-impedance tube > circuits don't mix

WD-40 should be kept far, FAR away from your R-390 and any other switches that operate on low voltage, it leaves varnish on the contacts when it dries. NOT GOOD! Joe

From w9ya at arrl.net Mon Dec 12 13:33:29 2005

Subject: [R-390] Low Audio

While the oil in WD-40 will clean about as well as any oil, when WD-40 dries out it leaves behind a waxy substance. i.e. One must *truly* clean-up the residue of WD-40 to maintain good electrical contact.
Needless to say I do not use WD-40 for anything around here. If I need wax, I use wax. If I need an oil I use one that does not leave behind what WD-40 does. Being honest about things I have never been able to give away my unused stock of this stuff. Hi...Hi... Vy 73; Bob w9ya

From pmills7 at houston.rr.com Mon Dec 12 13:40:03 2005
Subject: [R-390] Dial Lamp Source

Mouser has them....a tad more expensive but no minimum order fee. They also have the bulbs for the R-390.

www.mouser.com

I like Mouser because they try to ship the same day. If I order in the morning, I can usually have my order delivered by UPS two afternoons later. Phil W5BVB

From stevehobensack at hotmail.com Mon Dec 12 13:42:49 2005
Subject: [R-390] Gear clamp

I was just sitting here in my hamshack listening and looking. I noticed the microphone connector on my Icom transceiver and AEA 2 meter Cb . The rear of the microphone connector has a two section/ two bolt strain relief. Seems like if one cut off the main body of the connector and ground the rough edges, one could come up with a neat gear clamp and be able to install it without a major dismantle of the clockwork. It looks like the right size just eyeballing it. I have had the misfortune of breaking a gear clamp deep in the gears. I had to salvage a clamp from a parts deck and it wasn't easy.
..Steve...N8YE

From fwbray at mminternet.com Mon Dec 12 14:44:35 2005
Subject: [R-390] Low Audio

Thanks for all the comments and suggestions so far.

For clarification, the WD-40 was just used on a rag to clean the chassis, not sprayed on parts, etc.

One other symptom is that the line meter no longer has any indication and the line gain pot no longer has any effect on the audio level. (Previously, turning it up would increase the audio level slightly.) I did clean that pot, so maybe that's the bad one?

I will let everyone know how it turns out. 73, Fred KE6CD

From jonklinkhamer at comcast.net Mon Dec 12 13:54:50 2005
Subject: [R-390] F103/R390a

Hello to the group,

I recently finished up my rf deck and reinstalled it, upon powering up the radio I noticed I was blowing the 1/8 fuse (F103)every time I did a power cycle. After disconnecting P108 (RF Deck),P109 (PTO), P110 (Xtal Osc)and P512 (IF module) I am still popping the fuse. According to the schematics the label is the "RF-IF B+ lines. My thinking is leading me down to the S102 switch (the power on/AGC/Cal switch). Does anyone have any ideas. Thanks, Jon, KB1DC

From redmenaced at yahoo.com Mon Dec 12 13:52:44 2005
Subject: [R-390] Low Audio

wrote: > While the oil in WD-40 will clean about as well as any oil,

There is no oil in WD-40, it isn't a lubricant of any kind, neither shows on the can anywhere.

The only thing I use if for is to dry out wiring which is its intended purpose. But it also leaves a nice shine on cast iron surfaces like the table saw or band saw, apply with the wire brush on the grinder,.... nice!
But keep it out of the electronics shop. Joe

From w9ya at arrl.net Mon Dec 12 14:06:22 2005
Subject: [R-390] Low Audio

Thanks for the clarification OM....I probably should have said "oily", which it truly is when coming out of the can.

And yes: the "WD" stands for "water displacement".

Nice reply.... Vy 73; Bob w9ya

P.S... I am glad you found some uses you like it for... On wiring we will have to disagree I guess, but if you would like, I will round up my cans and send them to you !!.

From peuhs at bellsouth.net Mon Dec 12 14:48:43 2005
Subject: [R-390] The Found Stuff...

Friends,

Too bad....:-(...several oscillscopes/sev. s.g./sev. tb test....all pretty bad...and the bulk they decided to have a crew put it in the construction dumpster...so it's gone...only other was a clsd circuit tv w/2 cam..and I am going to try it for a while myself...Total was over a ton of old electronics...been sittin in the rain as well..(Reminds me of the St Julien Creek 390's....:-(....)..and all were missing tubes...guess he pulled them to save..couldn't find them..

All Gone but the Telematic Industries Tele-Chek...and a marine transciever..no good, and a 6" muffin...so don't write for other items...they were NOT usable..Muffin and Telecheck for free..pay me to ship...So Sorry there was not more...Don't kill me for being on and not talkin' 390... John

From future212 at comcast.net Mon Dec 12 14:53:03 2005
Subject: [R-390] WD-40

Hello,

If you google the MSDS for WD-40, you will find out it is a lubricant as well as a cleaner. It contains 50% Petroleum Distillates, which is a cleaner (such as Kerosene) and *25% Petroleum Base Oil*, I think it is a 10 weight oil. It is not a pure oil, but leaves a light coating of oil for protection on the surface. It is a great cleaner, but not so good used alone for oiling gears etc. 73's DW Holtman WB7SSN

From richardlo at admin.athabascau.ca Mon Dec 12 15:50:00 2005
Subject: [R-390] Low Audio

wrote: > There is no oil in WD-40, it isn't a lubricant of any > kind, neither shows on the can anywhere.

I used it to loosen up the rusted and frozen leveling legs on my washing machine yesterday. It works well for that kind of work so it will remain on display in my shop.

Hee hee, maybe I will use in in a potentiometer as recommended by Tekronix as 1975 but I would just do that to piss you all off. Richard Loken VE6BSV father

From vk2abn at bigpond.net.au Mon Dec 12 18:09:30 2005
Subject: [R-390] spiralining values

Regarding the upward value of tube era gear I think that it will probably survive until the end of analog radio ,Digital broadcasting is about to take off , and in Australia they are turning off anolog TV in a couple of years time, to use existing equipment one will need a set top box if you haven't bought a digital TV , but with radio , I don't think that anyone will contemplate the manufacture of set top boxes , Digital radios in mass production will be cheap, and our beautiful 390 RX s will become static exhibits, GREAT BIG BEHEMOTHS, when switched on to demonstrate you will still be able to hear static and tube shot noise and the occasional digital gurgle BUT WILL ANYONE BOTHER? I don't think so there will be some relegated to museums BUT THE REMAINING 60 000 or so I doubt that you will be able to give them away , I hope you all don't think that my vision of the future is too severe but I feel pretty confidant that THIS is reality and it will happen within the next 10 years , I HOPE I AM WRONG, Regards to all Bernie Nicholson

From redmenaced at yahoo.com Mon Dec 12 18:12:31 2005
Subject: [R-390] Low Audio

Which amp do you have your audio hooked to? LINE or LOCAL? Joe

From r390radio at gmail.com Mon Dec 12 18:22:24 2005
Subject: [R-390] Shifty 17 MC osc report and survey please

[resent from different address due to random sorbs subjegation]

My '67 EAC shifts about 15 CPS by ear with 100 mV from a signal generator, about the same from a

couple very strong local AM stations. I'd never noticed it before. Figured I'd post the results to the list so we could all compare notes. Tom NU4G

wrote: [snip]

So, what of the survey? Tune in a strong local AMBC station, flip on the BFO, AGC on fast and then swap between AGC and MGC. Notice if there is any change in pitch. A low tone makes it easier to detect a shift. You can also listen to the 17 MC oscillator in another receiver. Please drop me a note and let me know the results. Thanks, Conard, WS4S

From dhallam at rapidsys.com Mon Dec 12 17:04:54 2005
Subject: [R-390] Dial Lamp Source

If the R-390A uses the 327 bulb as does the R-390, All Electronics has them 2/$1.00, no min order, $6.00 shipping charge for most orders. David KC2JD

From: r-390-bounces@mailman.qth.net Sent: Monday, December 12, 2005 2:24 PM
[mailto:r-390-bounces@mailman.qth.net]On Behalf Of fwbray@mminternet.com
Subject: [R-390] Dial Lamp Source

I just discovered that halted.com has the lamps for the R-390A dial for $0.69 each. The SKU is CAL037.
Undoubtedly there are other sources, but elsewhere I have seen them for 2 to 3 times that. FYI, halted.com does impose a $3.00 service charge on orders under $30.00.

73, Fred Bray KE6CD

From redmenaced at yahoo.com Mon Dec 12 18:34:17 2005
Subject: [R-390] F103/R390a

Do the resistance checks in the manual especially the wiring harness. It may be the input filter, maybe bad caps in there? Then unplug all the modules and see if the fuse still blows with just the wiring harness hooked up. It might be a good idea to put a light bulb in series with the hot line, just so that blows instead of something expensive.

Check tubes for shorts. If the wiring harness shows no problems try plugging in each module with no tubes in it, start with the power supply, of course.

It could just be too much in-rush current. Is your line voltage a bit too high? Joe

From David_Wise at Phoenix.com Mon Dec 12 18:48:48 2005
Subject: [R-390] F103/R390a

I can't see how the electrolytic filter caps C603 and C606 could do it; they're upstream of F103. I'd plug in each module in turn as Joe suggests below, with a milliammeter in place of F103. Due to the charge in the electrolytics, you'd better fuse the meter even though F102 is above it.

F103's output goes to the RF, IF, Crystal, and VFO modules. If one makes the meter peg, you've narrowed it down. In fact, if it pegs without any modules, then you've narrowed it down to the harness, S101, or S102. Dave

From Bonddaleena at aol.com Mon Dec 12 19:24:04 2005
Subject: [R-390] interesting eBay item

OK, it's not a 390, but take a look at Item # 5838522399. Check out the backdrop and it's color. Next, read the verbage. It lacks everything but "from my personal collection". Could this be RM's evil twin? ha ha ron N4UE

From Radiograveyard at aol.com Mon Dec 12 19:44:20 2005
Subject: [R-390] interesting eBay item

Ahh yes check the plush red background, but then the bottom picture has the Radio_mart copy protection logo in the lower left corner. Will the real radio_ mart "please stand up"!

From courir26 at yahoo.com Mon Dec 12 19:59:29 2005
Subject: [R-390] interesting eBay item

At least it doesn't have Collins in the description.

From k4kwm at hotmail.com Mon Dec 12 20:11:16 2005
Date: Mon Dec 12 20:14:38 2005

Well, if you look closely at the lower left hand corner of the picture, it says " radio-mart". DUH. He seems to have started a new list under a different name. John John Page K4KWM Hollow State since 1953 (ex W8PKU,N8BLB,NA8O)

From jclark6 at gmail.com Mon Dec 12 21:03:52 2005
Subject: [R-390] interesting eBay item

Or someone ripped off one of his photos. If you own Collins Amp 30L-1 SN 29068 Contact me

From r390 at al.tirevold.name Mon Dec 12 21:06:47 2005
Subject: [R-390] Y2K Addendum(s)

Gentlemen,

I'm all for it!! Perry Sandeen had also volunteered to re-organize and refine the Y2K pages to make them easier to deal with. I had some ideas about reorganizing things so that any 'addendums' could be included inline with the manual if desired.

Let's get the knowledge gathered and edited and beaten with a dead horse (or whatever) and publish it. Somebody needs to troll Wei Li's "Pearls" and get the accumulated wisdom distilled.

The space issues with the r-390a.net site have long been resolved, so there is plenty of virtual library shelf available.

I'm itching to use a new .PDF generating software tool or two that I obtained - this gives me an excuse.

I don't have the kind of free time available that I had when we did the Y2K manuals (R1 and R2), but I can certainly work it into place piecemeal.

Somebody head it up - and bring it on!! Al, WA0HQQ..

From wd8kdg at worldnet.att.net Mon Dec 12 21:41:44 2005
Subject: [R-390] Y2K Addendum(s)

Season's Greetings,

As a guilty party of stirring this pot, what do others feel needs to be added? Then search for the good stuff on those items. Much less effort if some of the web authors would donate their work, Scott Seickel's tranny rebuild as an example only. I don't like reinventing the wheel if there is no need.

I've download Revision one and thought it was fine as is, allowing for errata. A list of caps that are giving R390/A owners things to think about, several good web sites have rebuild photos of the power supply caps/cans and step on how to rebuild them, better detail on the gears, a section for those who have the measurement equipment and how to get a valid sensitivity number, and the list goes on! Comments? wd8kdg Craig

From chacuff at cableone.net Mon Dec 12 22:01:38 2005
Subject: [R-390] spiralining values

Bernie and Group,

I think the proposed time line is a little short...short by at least 10 years probably 20. I find it hard to believe that the world as a whole could or would move that quickly to Digital. We've been talking about digital TV in the US for the last 10 years and it still hasn't happened to any great degree. I think we are on the brink but I expect it to take at least 5 more years to achieve any significant market saturation. The government (FCC)will slip the deadlines....economics always rules.

I don't see any real changes in the domestic AM broadcast band for 10 years or more...If one wants to go digital in their cars they can do so today with Sirius or XM today...most are listening to FM. I can't remember the last time I used the AM radio in my vehicle for entertainment...but I cruise the BCB on my tube gear for a different reason....DXing.

I don't see villagers in the jungles of Africa having access to digital capabilities due to the economic realities for many years....meaning to continue to reach those folks analog service providers will be necessary for many years to come.

If all else fails there will be Amateur Radio analog to tune to.

Personally I think there will be something to listen to on our analog receivers for the remainder of our

life times....(25 - 30 years. I'm 49) Can't say much beyond that though.

I think the reality is we will see the prices of these radio's continue to climb till us "Baby Boomers" as we seem to be called are all dead and gone.

I'm certainly not ready to dump my collection for next to nothing because of concern of a market crashing technology change. Heck I'll set up my Johnson Valliant and broadcast at 100mw to the shop and play oldies or something....HA! Cecil....

From chacuff at cableone.net Mon Dec 12 22:09:36 2005
Subject: [R-390] interesting eBay item

Doesn't have the private bid list or the negative feedback.

I think somebody has snagged one of Martyns pix's and is playing the game the way he does.... Cecil....

From pwokoun at hotmail.com Mon Dec 12 22:50:44 2005
Subject: [R-390] Y2K Addendum(s)

Greetings,

Now that a lot of folks have added their inputs as to what should be included, what is needed is for someone to 'take the bull by the horns' and start doing it. There were a lot of good suggestions tossed out to make a great addendum. Waiting for a consensus to start will not get anything going. Once someone starts the work others can add to it, critique it, and improve it.

What got the Y2K done was 3 guys who decided to stop talking about it and do it. Al, Barry, and I may not have the time to do it this time but we sure are willing to help others run with it. pete

From w9ya at arrl.net Mon Dec 12 22:55:26 2005
Subject: [R-390] spiraling values

We are in the 100th market Tee Wee wise here. There are slightly over 200 total, and the station I engineer at is already digital because of our needing to meet FCC deadlines for our market. There was precious little wiggle room and we are now running both analog and digital signals on two different channels simply because the FCC said we have to.

I rather believe that the April 2009 deadline to cease analog transmission will be met as there will be little reason not to and precious few arguments that will carry any weight. The rest of the stations will already be running digital transmitters by then, the FCC will see to it. And so it goes.... Vy 73; Bob w9ya
P.S. Our 2gHz interlinking equipment will also be entirely digital by then as well. Conversions are going on as we speak. Here in Albuquerque we will be converting during the first half of 2006. i.e. The entire 2gHz allocation for tee wee aux. use for the U.S. will be digital within less than a year or so.

From pwokoun at hotmail.com Mon Dec 12 23:23:19 2005
Subject: [R-390] F103/R390a

You can get a power distribution drawing showing current levels throughout the receiver on my website at: http://www.qsl.net/kh6grt/page4/r390aschematics/r390aschematics.htm It's the last one down on the list.

From pmills7 at houston.rr.com Tue Dec 13 05:23:08 2005
Subject: [R-390] interesting eBay item

I think you are right about someone stealing Martyn's picture. The grammatical errors in the text certainly do not sound like Martyn. Though, Martyn is in Kentucky.....

From chacuff at cableone.net Tue Dec 13 11:25:02 2005
Subject: [R-390] spiraling values

My comments about the time line was mainly to do with SWBC. Conversion to digital on our TVBC bands is ahead of all the other bands and technologies. I do still find it hard to believe that the FCC expects everyone that still gets a signal off the air to be digital capable by 2009. They better start giving away set top converters. I guess the cable companies will still be distributing analog well beyond 2009 to accommodate their customers that only have analog TV's unless of course they just include a set top converter in the standard basic subscription package...

Anyway to be more on topic with this I still expect it to be 20+ years before the world of SWBC and/or domestic BC to turn off the last Analog transmitter. So our 390's should be safe for some time to come. Cecil...

From pulsarxp at earthlink.net Tue Dec 13 12:27:44 2005
Subject: [R-390] spiraling values

Hams will be able to use R-390As on the ham bands for a very long time. SSB, AM and CW will be around and the R-390A will work just fine for these purposes.

Spark equipment can't be used today but have you ever looked at the prices for acquiring a spark system? I can't afford to buy one. Trust me, a R-390A will hold it's value. Lee w0vt

From roy.morgan at nist.gov Tue Dec 13 13:05:27 2005
Subject: [R-390] Low Audio

com: > One other symptom is that the line meter no longer has any indication and > the line gain pot no longer has any effect on the audio level.

Fred,

Sounds like an open pot.

If you used WD-40 to clean that pot, the stuff may have dissolved the carbon material in your pot and rendered it useless.

Use Caig MCL (Moving contact lubricant) on pots. Only. www.caig.com Roy Roy Morgan

From r390radio at gmail.com Tue Dec 13 14:27:42 2005
Subject: OT - Re: [R-390] spiraling values

wrote: [snipped previous dying thread about analog radio] Ned Ludd was OK in my books. 66 de Gord, VE3EOS

Gee Gord, I always thought he was too technologically advanced for my tastes... heeheehee

The way power costs have been, it might not be a bad thing to adopt some neo-luddite values. The world isn't ready for a coal-fired R-390, though. 73 Tom NU4G

"Just think, if it wasn't for Thomas Edison, we'd all be computing by candle light"

From: Tom Norris <r390a@bellsouth.net> Date: December 13, 2005 12:18:19 PM CST
Subject: OT - Re: [R-390] spiraling values

Update on the low audio problem.

Last night I used a VOM to check the pots. All three of those cleaned (RF gain, local audio and line audio) with Deoxit report the correct values and seem to track correctly when I measure between the wiper and either side. So, the problem would seem to be elsewhere.

I am going to make resistance and voltage measurements on the audio deck tonight.

Thanks for all the comments and suggestions. 73, Fred Bray KE6CD

From future212 at comcast.net Tue Dec 13 16:21:57 2005
Subject: [R-390] Am I missing something her4e?

Why is this manual over $150.00 on epay? 6586555599 It was originally listed as a a "Buy it now for $24.00" Maybe because the item number is a good poker hand?. 73's DW Holtman WB7SSN

From ToddRoberts2001 at aol.com Tue Dec 13 17:27:34 2005
Subject: [R-390] Am I missing something her4e?

writes: Why is this manual over $150.00 on epay? 6586555599 It was originally listed as a a "Buy it now for $24.00" Maybe because the item number is a good poker hand?. 73's DW Holtman WB7SSN

That is the same bidder who bought a pair of the R-390 finger-type tube pullers for $72.75. Anyone out there want to buy a bridge? 73 Todd WD4NGG

From leslocklear at cableone.net Tue Dec 13 17:30:09 2005
Subject: [R-390] Am I missing something her4e?

We could use two new bridges on the Mississippi Gulf Coast connecting the east and west ends of the coast across the bays of biloxi and st. louis. Price? Les

From ToddRoberts2001 at aol.com Tue Dec 13 17:42:48 2005
Subject: [R-390] Am I missing something her4e?

writes: We could use two new bridges on the Mississippi Gulf Coast connecting the east and west ends of the coast across the bays of biloxi and st. louis. Price? Les

Maybe if they named one of the bridges The R-390 Memorial Bridge they could find a buyer on eBay? 73 Todd WD4NGG

From pmills7 at houston.rr.com Tue Dec 13 17:45:16 2005
Subject: [R-390] Am I missing something her4e?

Well, probably because the first bidder did not do the buy it now and it went away so later bidders did not get the opportunity. I have sold quite a few items on eBay for much more than the "Buy It Now" price. I usually don't bother with a the BIN anymore. 73, Phil W5BVB

From Radiograveyard at aol.com Tue Dec 13 17:51:29 2005
Subject: [R-390] Am I missing something here?

Check the bid history on the manual only three bidders. Remember an auction is an auction the big buyer needed someone to take him into the clouds he didn't just bid that much. Now lets see I have a great unused bridge 7 miles long in the Florida keys on ebay who knows!!!!! Pete

From barpilot13 at hotmail.com Tue Dec 13 17:55:00 2005
Subject: [R-390] Digital

For what it's worth since the fed's (FCC) will be making millions and millions (read billions) of $$$$$$ on the auctions of the present TV channel spectrum to private industry, I think its only fair that they either reimburse us for our conversion costs or provide us with free converters. The cost can come out of the $$$$$$ that they will be reaping. Walt (N4GL)

From Flowertime01 at wmconnect.com Tue Dec 13 18:28:26 2005
Subject: [R-390] A (very) big project

Mark,

We may not have to start with the whole thing.

Hank has done some covers already. There is a need for some big knobs to be die cast. Some mechanical filters packaged to a form that would fit the R390A IF deck would likely be a paying project. Front panel in designer colors and texture look to be selling well.

Some have though that printed circuit board may be in order. As in Audio decks with a form of plug

and play into the R390A chassis but with solid state audio parts. The IF deck would be next with a real product detector.

Some other things have come to mind. As the last stage some new chassis and wire harness could be assembled to go with all the available subassemblies. Roger KC6TRU

From greybeard5150 at sbcglobal.net Tue Dec 13 18:49:59 2005
Subject: [R-390] Re: Am I missing something here?.

In trying to crawl inside this guys head (the buyer), I think what you may have missed were the words 'Original GI' and 'Unused'. YOU see the word 'original GI', HE sees *Vintage*. YOU see the word 'unused', HE sees *Rare*, *NOS*, and *Pristine*.

This guy obviously has deep-pockets and he appears to be on a mission. I'm betting that he has one of those astounding refurbs/remans from Rippel or Mish and is hell-bent on obtaining every accessory, book, gizmo, gadget, whatnot, doo-dad and whiz-bang that has ever been made to surround the radio with. If I'm right he wants each and every one of these accessory items to be at least as pristine as the prized radio itself.

I'm thinking that I need to let this guy know about the genuine NOS CY-979A that I just picked up from Joe Grossbauer. God only knows what he might shell out for THAT. *smile* - Quig -

From Flowertime01 at wmconnect.com Tue Dec 13 18:58:52 2005
Subject: [R-390] Low Audio

Fred Bray KE6CD

One of the audio problems with the R390 or R390A is in the wire harness shape. On some receivers the loop in the audio harness to audio deck is a bit long. Setting the deck on a surface will scrunch the wires in the harness a bit. Some times it will cause the wire harness plug to pull off the deck connector. Over time things break.

As many thing as you have had to try from the mail list here has not gotten the problem fixed. So its time to look into the audio deck wire harness back shell for a frayed wire.

I is right that the line audio and local audio should both die. There is only one detector, one limiter, and one audio amp V601 a 5814 in the audio deck. Then the audio comes through the deck plug J620 to P120 to the front panel. The audio is wired common going out on pin 2 of the plug to both the local and line gain pots.

Check your diode load jumper on the back panel. This is the 1/2 way point between the detector and the audio deck.

With an AM station and no BFO you should see -4 to -10 volts on the diode load. With the BFO on a cal tone you should have over -20 volts on the diode load.

If you have it travel to the audio deck.

If you do not have it travel to the IF deck.

Why do you think you have an Audio Problem?

Just because you were working on the Audio pots when the receiver died may have nothing to do with your problem. Hope this helps Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Dec 13 19:11:54 2005
Subject: [R-390] spiralining values

Bernie Nicholson

We are also going to go solar panel. So expect low power electronics. Expect a fiber optic cable into the house with at least 10 colors of laser light. So you get so much bandwidth every one in the house has their own channel on demand.

Cell phones will be short haul from the tower to the person. Cell tower to tower will be fiber. Cell tower will be solar power.

Expect nothing below 30 Mhz in the air. Radio silence almost across the planet under 30 Mhz. Amateurs will have to fight to stay on the air on HF because our transmitters will be interference to the short haul cell phone stuff. Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Dec 13 19:15:51 2005
Subject: [R-390] Dial Lamp Source

Dave,

The R390A uses a 6.3 volt lamp while The R390 uses a 28 volt lamp.

But you are right All Electronics has them 2/$1.00, no min order, $6.00 shipping charge for most orders. Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Dec 13 19:26:52 2005
Subject: [R-390] Y2K Addendum(s)

Al, and Fellows

One of the things we need to add is the front panel diagnostic and trouble shooting.

Just two many of us do not know how to localize a problem when one pops up.

We get the question it died and it does not work. what do I do.

We can point the owner to the front panel diagnostic and await the question that comes back from that operation. For those that know how to front panel an R390 or R390A problems get narrowed down much faster to much smaller areas.

Do we have a good schematic analysis with trace of signal through the receiver? It goes with the front

panel analysis. Front panel runs back from head phones to antenna relay click. Schematic analysis runs forward from antenna relay to audio output.

Some time you use both and meet some where on a problem in the middle.

We need both items for both receivers. They read alike, but are receiver specific with the proper tube and connector numbers in the verbiage.

I would do the drafts and clean up the incoming comments to get the text ready. It just needs a place to hang it into the bid web page index. Roger KC6TRU

From djmerz at 3-cities.com Tue Dec 13 19:29:20 2005
Subject: [R-390] 390/390a gear train

Hi, the comments on reproducing the 390a radio raised a question in my mind. Does anyone have a dimensional drawing of the gear train in either the 390 or 390a? I'm interested in the dimensional layout/number of teeth of the gears in these radios. I have seen some of the drawings in the manual, Y2K and otherwise but I don't recall seeing anything that showed number of teeth, and placement of the gears dimensionally. I would like to attempt making a computer-displayed simulation of gear movement, cams, and cores, and the placement of gears would be useful. Or even a list of gears, size, number of teeth. I hate to have to take my radios apart to figure all this out. Any help will be appreciated finding the best available info on this aspect of the two radios, Dan.

From Flowertime01 at wmconnect.com Tue Dec 13 19:37:12 2005
Subject: [R-390] spiralining values

Bernie Nicholson wrote,

I don't see villagers in the jungles of Africa having access to digital capabilities due to the economic realities for many years....meaning to continue to reach those folks analog service providers will be necessary for many years to come.

Hughes put up a FM satellite over Africa some years ago. It went up over Africa because they could not get "aproval" for one over the Americas. Africa has coast to coast FM. There are "National" stations as well as religious and independent stations. Africa has windup transistor radios as well as solar powered FM receivers for under $10.00 US available to them That price is still out of reach of lots of people in Africa.

But I agree analog will likely be here for a while. It will not go digital over night. I do not think it will ever go digital over the air long haul. Most of the digital will stay on fiber optic. Copper wire will get recycled and new construction will be fiber into home to a local wifi wireless home. All digital and encoded in the house so the neighbors cannot watch you download for free. Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Dec 13 19:46:33 2005
Subject: [R-390] Y2K Addendum(s)

Fellows,

I am on the end of this dial up line and stuck with what you see on the Qth.net for text. I can look at web pages after I wait for the load.

I would be happy to post subject per week to go mining for. I would accept the input to my mail and try an edit a subject into something usable. I would post that back up for a second go around and reedit. Rule one put it on the open post through r-390@mailman.qth.net. Rule two if you send it to me personal I will do my best to ignore it forever.

Who would like the task of managing the web page?

The subject is Re: [R-390] Topics to start.

Please post a top ten list. Most votes goes first. I will compile and sort the list and post it back in a week for review. Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Dec 13 19:51:43 2005
Subject: OT - Re: [R-390] spiraling values

The world isn't ready for a coal-fired R-390, though.

Tom, Can we fire it on wood? That a green renewable resource. Roger KC6TRU

From Tarheel6 at msn.com Tue Dec 13 20:04:19 2005
Subject: [R-390] Low Audio

Fred,
Have you checked for leakage from the pot to ground? I have found many pots that tested okay as far as resistance goes, but what tripped me up (and caused problems in the circuit) was that the pot was shorting to the pot case (and therefore to ground) at a relatively high resistance. Some older pots are failing this way. Heath VTVM pots are notorious for this. 73's, -tom

From Flowertime01 at wmconnect.com Tue Dec 13 20:14:56 2005
Subject: [R-390] Big Knobs

Hank,

Thank you for this post. I did not know you had these knobs available. Roger L. Ruszkowski

From jgolden365 at aol.com Tue Dec 13 20:39:37 2005
Subject: [R-390] 26Z5W tubes

I just ordered a pair of new 26Z5W tubes from Goldcrest Electronics in Rochester, NY for $12.85 each. Don't know the brand.

From chacuff at cableone.net Tue Dec 13 20:49:58 2005
Subject: [R-390] Big Knobs

I think he also has CNC machined Oldham couplers and has had CNC machined replacement front panels and I believe makes repop front panel tags. Makes some of the best affordable shipping containers for the R-390 series and others as well....(reminds me I need to order another one the last two didn't come home from the R-390 sale)

Ain't much Hank hadn't tried....including breaking even on selling most of his creations to the community. I'll sit back and watch for the 2006 model R-390B. Somebody is going in the hole big time on that one. Cecil....

From chacuff at cableone.net Tue Dec 13 20:51:13 2005
Subject: [R-390] 26Z5W tubes

I don't believe there was ever more than one manufacturer....at least that I have seen. Cecil...

From leslocklear at cableone.net Tue Dec 13 21:33:54 2005
Subject: [R-390] 26Z5W tubes

My guess would be Tung-Sol. I've never seen any other brand. YMMV Les Locklear

From ka6tya at arrl.net Tue Dec 13 21:35:54 2005
Subject: [R-390] Big Knobs

Hank

I need two of the big knobs for the R-390 receiver. How can I contact you?

From redmenaced at yahoo.com Tue Dec 13 22:07:13 2005
Subject: [R-390] 390/390a gear train

Hey, any chance anyone would like to do CAD drawings of the gears and cams? Joe

From odyslim at comcast.net Tue Dec 13 22:10:12 2005
Subject: [R-390] 26Z5W tubes

I have some branded Lewis & Kaufman Scott W3CV

From wli98122 at yahoo.com Tue Dec 13 22:28:49 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

Here is one approach to the Y2K Addendum:

Compile and organize by topic all the important areas such as "RF gear train rebuilds", "sensitivity and alignment" or "power supply" or "recap projects"... then go to the ver 2.0 of the exisitng Y2K publication and hotlink to each area in question (or insert a footnote about where to go in the Addendum).

One underlying fact re maintenance procedures: they almost always break down to mechanical AND electrical. We could divide up each subject area into these basic components for clarity. We are often drawn to electrical because of our training and orientation; but we often neglect mechanical aspects as they are obvious to us, maybe not so to a newbie....

OK here is my list on 'topics to start' (in order of preference)

1) basic electrical safety measures (not mentioned by Joe Foley's excellent piece)
2) re-capping (when to, pro's & con's,
3) power supply (solid stating, B+ delay, in-rush currents, fuses, AC power filters)
4) ballast tube subs (all schemes available)
5) PTO alignment
6) mechanical RF train clean and lube
7) restoring front panels and knobs
8) panel meters
9) SSB options
10) tubes
11) mechanical filters
12) antennas
13) heat-buildup (IERC shields, fans etc)
14) weird and unusual problems with their solutions
15) test equipment

W. Li Mercer Island, WA

From craigmc at pacbell.net Wed Dec 14 09:34:18 2005
Subject: [R-390] 390/390a gear train

If I recall correctly there is a detail drawing for each and every gear, clamp and so forth on the R-390A drawing set CD. Been a while since I looked at it though. Craig

From mikea at mikea.ath.cx Wed Dec 14 10:28:39 2005
Subject: [R-390] Am I missing something her4e?

wrote: writes: > We could use two new bridges on the Mississippi Gulf Coast connecting the > east and west ends of the coast across the bays of biloxi and st. louis. > Price? > Les > > Maybe if they named one of the bridges The R-390 Memorial Bridge they could > find a buyer on eBay? 73 Todd WD4NGG

I suspect that if the bridge construction were done by a company named "Collins" and the bridge were named "The R-390 Memorial Bridge", it'd go _fast_ on the e-place. Mike Andrews, W5EGO

From redmenaced at yahoo.com Wed Dec 14 12:50:22 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

wrote: > Here is one approach to the Y2K Addendum: > > Compile and organize by topic all the important > areas > such as "RF gear train rebuilds", "sensitivity and > alignment" or "power supply" or "recap projects"... > then go to the ver 2.0 of the exisitng Y2K

++++++++=
I did think about that, such was left out on purpose. I thought that the new owner should have training or experience already in that area and that it wasn't the purpose of this manual to train in that area. And I didn't want the liability of it either. So I focussed on the radio and kept it closer to the subject at hand. Joe

From dathegene at hotmail.com Wed Dec 14 13:02:13 2005
Subject: [R-390] 600 to 8 ohm phone mod

Question: I would like to plug in my Heil phones into the phone jack.

Are there any ready made plug in 600 to 8 ohm converters out there? Or; How have you modified yours? Thanks, Gene NAØG

From barry at hausernet.com Wed Dec 14 13:07:13 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

Joe has a good point there. It may not be a good idea to try to take the total newbie into high voltage electronics. Instead, it might be better to beef up the warnings and add a disclaimer if one isn't there already. Barry

From DJED1 at aol.com Wed Dec 14 13:41:47 2005

I don't know if this made it into the "pearls of wisdom" but there is an easy fix for the headphone impedance problem. The reason the low-Z phones don't work well is that there is a 6800 ohm series resistor between the audio line and the headphone jack. Thus 600 ohm phones divide the voltage a little, 8 ohm phones drop the voltage a lot. However, you can parallel the resistor by connecting another lower value resistor from terminal 6 to terminal 8 of the audio terminal strip on the back. I used 470 ohms, but it can be adjusted to suit your phones. Works good with my 8 ohm phones. Ed

From ghayward at uoguelph.ca Wed Dec 14 13:53:38 2005
Subject: [R-390] 600 to 8 ohm phone mod

I put a tiny 600-8 ohm transformer in a film can with appropriate plugs. It seems to work well. 66 de Gord, VE3EOS

From wd8kdg at worldnet.att.net Wed Dec 14 15:18:49 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

In today's world of lawyer/sue happiness, beef up the warnings and disclaimer! (First page in the addendum) Craig,

From jonklinkhamer at comcast.net Wed Dec 14 16:58:55 2005
Subject: [R-390] FW: F103/R390a

Just wanted to say thanks to the group on guiding me in the right direction with respect to finding the

problem with popping the fuse. It was a pinched wire (BFO wire) aganist the frame of the IF module. As soon as the front panel was taken off the short went away. A visual inspection solved the mystery. Thanks again!! 73,Jon KB1DC

From kf4yio at charter.net Wed Dec 14 16:12:38 2005
Subject: [R-390] R390A Small Knob

Hank: I could use one of the small R390A knobs. Please let me know your email. Jack kf4yio@charter.net

From djmerz at 3-cities.com Wed Dec 14 18:20:08 2005
Subject: [R-390] 390/390a gear train

Craig, I perused the various manuals that I've downloaded over a couple of years and found an exploded view of the gears and connections to the cores, with number of teeth indicated on each gear, but so far have found nothing on dimensional layout of the shafts that go through the gears. Maybe this kind of info never reached the public, or has not been found yet. Perhaps it exists in an old file cabinet somewhere. The manual photos of the front and rear of the rf deck could be used to extract the layout dimensions using a reference dimension or two but I don't think all the shafts could be located this way in the photos I've seen. The posted assembly of the rf deck by Scott Seickel with all the steps documented would also be a good way to put approximate locations on the shafts. I'm still wondering if anyone has seen a set of engineering drawings of the gear assembly. It seems rare to find original drawings used for the manufacture of any old radios. I have a Westinghouse drawing for a 20's RC set, but I know the only reason it made it out of the company was because some collector in the 50's wrote to Westinghouse concerning the set and some staff member was kind of enough to dig through files and send a copy of an original drawing. Unfortunately, he did not include the mechanical layout drawings, which were probably in the same file. Dan.

From Flowertime01 at wmconnect.com Wed Dec 14 18:32:23 2005
Subject: [R-390] Web Page Lay Out

Al,

When doing the R390 web pages, what's the chances of opening to a text only page that pops open sort of fast. Lots of text will still open slowly. On the opening page could we do lots of links as a menu to other pages.

Can we have the pictures / photos as separate linked pages? I would like to see lots of photos. I can ask for that as I do not expect to have to get them all edited and put up on the pages.

I see this work turning into a large awesome project. We had better plan to allow pages to open before some of our fellows die of old age waiting for a down load. Thanks Roger

From Flowertime01 at wmconnect.com Wed Dec 14 18:48:37 2005
Subject: [R-390] Low Audio

I have concluded that it is an audio problem versus an rf stage problem based on carrier level readings I get on local AM broadcast stations. Frederick Bray

Fred,

Great job. You know every thing from the Antenna input to the carrier level meter circuit in the last IF stage is working.

Keep checking as you get the time you will find the problem.

I ask these questions trying to be helpful. Being the nut I am and a lazy typist, some times the questions read somewhat antagonistic. I do not mean them that way. I like to think I am getting better at my mail. However I am not going to ask for a reader poll.

A very good reply from you and you are making progress that will get you to the problem. Keep us posted. Roger.

From Flowertime01 at wmconnect.com Wed Dec 14 18:56:47 2005
Subject: [R-390] 390/390a gear train

Joe Foley ask any chance anyone would like to do CAD drawings of the gears and cams?

Page 50 figure 30 Tuning system, simplified mechanical diagram of TM 11-5820-358-35 has a fair cartoon of the gear train for the R390A.

How about we get someone to do a good scan or photo of that figure and get up on Al's R390 page.

Could we find the equivalent one for the R390?

But then if someone wants to go into history as the Fellow that did a CAD drawing of the R390 gear train here is your invitation to immortality. Roger

From redmenaced at yahoo.com Wed Dec 14 19:08:49 2005
Subject: [R-390] 390/390a gear train

> Fellow that did a CAD > drawing of the R390 gear train here is your > invitation to immortality.
+++++++
You betcha! My idea was that the file would then be ready to dump into a CAM equipped machine that could then spew forth finished gears, the programming being the expensive part. Joe

From Flowertime01 at wmconnect.com Wed Dec 14 19:17:12 2005
Subject: [R-390] Low Audio

wrote, I measured the diode load and have over -30 volts on both AM and with the calibrate/bfo, depending upon where I set the RF gain control. I pulled the hoods on both of the cables to the AF deck and could not find any broken /lose wires. Guess its time to start measuring things in the AF deck.

Fred,

>From the diode load the signal goes back into the IF deck and to the limiter V507. The tube is a 5814.

Turn the local gain all the way up. As you turn the limiter on and off you should hear a pop or click in the audio output as the limiter tubes goes into conduction when turned on.

>From V507 the signal goes to the audio deck and V601. The tube is again a 5814 and both sides of it are used as audio amps. The signal out of V601 goes to both the line gain and the local gain controls on the front panel. You should be able to hang an AC volt meter on the controls and measure a small AC signal when you have a good AM station or Cal tone and BFO on that pegs the carrier meter.

If you have AC signal on the local and line gain controls that you can very in voltage by changing the RF gain control, the you are good to that point.

If you do not have a measurable AC signal on both the line and local gain controls, you will have to explore V601 in the audio deck or V507 in the IF deck. You also need to keep the wire harness in mind as you are exploring. Do an eyeball on the 5814s to ensure you filaments on both side of each of the tubes.

The wide sharp audio response switch is associated with V601. You may need to explore this switch behind the front panel for a problem. When you dropped the front panel to clean the other controls, you may have the wide narrow switch and wiring giving you problems. It may have seen you working on the other controls and feels a need for a snit as it was being ignored. Roger

From Flowertime01 at wmconnect.com Wed Dec 14 19:27:51 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

Joe has a good point there. It may not be a good idea to try to take the total newbie into high voltage electronics. Instead, it might be better to beef up the warnings and add a disclaimer if one isn't there already. Barry

Here Here. Roger

From ba.williams at charter.net Wed Dec 14 19:53:38 2005
Subject: [R-390] 390/390a gear train

Joe,

Are you talking about the exploded parts diagram? I checked my files and have the 3 page diagram scanned, pieced together, and cleaned up. I use it to zoom in, but it prints well too. I have several versions if that is what you mean. I have one that is probably around 500k, and the full rez version that weighs in around 2 mb.

I spent a lot of time doing 3D CAD a few years back and still have 3 or 4 software packages here. The main program is Alias Sketch by Alias Research, but I also have a nice, fast one called Swivel 3D by the forerunner company that later became Macromedia. It has a companion rendering system called Renderman by Pixar. The problem is the work load. I spent a few evenings experimenting with some of the gears when we first started the Y2K manual. It looked to be several weeks, if not more than a month

of work to get it right. One of the problems with doing it as a 3D CAD work is that the true value lies with everyone having the same CAD program to manipulate it all, explode the parts, rotate it to look-see, etc. Otherwise, it would produce a rather nice file like the existing exploded parts figure only with shading, customized parts placement, etc. Another and better idea, IMO, is to do a full illustration file. That I could do also as that used to be my job, but I would only start it if I knew it would be of value to everyone. Still, doing gears is a beach of a job. I once did a fully shaded 3D cutaway of an Allison turbine engine and that took more than a month at a job that was only 4 hours a day. The computer I used was a 33 Mhz job. Yes- thirty three Megahertz. I still have that file. Anyway, this approach would produce a very nice file that could be saved out at a TIFF or PDF. It could be changed around and customized further if that was needed too. Barry

From ba.williams at charter.net Wed Dec 14 19:54:51 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

> Joe has a good point there. It may not be a good idea to try to take the > total newbie into high voltage electronics. Instead, it might be better to > beef up the warnings and add a disclaimer if one isn't there already. > > Barry

Well, what about an addendum to the addendum? Maybe a secret handshake to access it? Barry

From greybeard5150 at sbcglobal.net Wed Dec 14 19:56:49 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

wrote: Joe has a good point there. It may not be a good idea to try to take the total newbie into high voltage electronics. Barry

As one of those TOTAL newbies, I'd like to take a moment to say... THANK you and God bless! I need all the help I can muster... LOL

From barry at hausernet.com Wed Dec 14 20:04:57 2005
Subject: [R-390] 390/390a gear train

Hi Roger,

That diagram has been in the Y2K manual since the first version Fig 3-10, page 3-25 (printed page), page 63 (pdf page.) The diagram is also available in a number of other downloadable manuals, including the copy on the LOGSA army web site.

While in the Y2K manual, it can be blown up in Acrobat for viewing or printing. It can also be copied out and pasted into a single page file. (A page was reserved for an improvement later on in the Y2K with the notation "Photo Needed".)

A higher res scan wouldn't accomplish much other than make the file larger. (Been there, done that.) Resolution is not the problem.

So, not clear on the purpose of someone doing another scan and uploading it separately. Barry

From redmenaced at yahoo.com Wed Dec 14 20:22:32 2005
Subject: [R-390] Re: Topics to start (Y2K Addendum)

wrote: > Joe has a good point there. It may not be a good idea to try to take the total newbie into high voltage electronics. Instead, it might be better to beef up the warnings and add a disclaimer if one > isn't there already.
+++++++
Yup, I warned, I disclaimed. Joe

From roy.morgan at nist.gov Wed Dec 14 23:52:04 2005
Subject: [R-390] 390/390a gear train

Quoting: > Craig, I perused the various manuals that I've downloaded over a couple of > years and found an exploded view of the gears and connections to the cores, > with number of teeth indicated on each gear, but so far have found nothing > on dimensional layout of the shafts that go through the gears.

Gear Detail Seekers,

Has anyone got "The EDMICS Drawing Set" for the R-390A available?

This is a large set of the original drawings, with a very lame index, and the special reader program needed.
I had it installed on an earlier computer that more or less died some time ago. As I remember, someone developed a supplemental index that was more useful.

(Sorry if someone has investigated this set of drawings, and reported - I have not seen every mesage in this thread.) Roy, K1LKY

From dathegene at hotmail.com Thu Dec 15 06:09:39 2005
Subject: [R-390] 600 to 8 ohm phone mod

Thanks to all who responded both on and off list. Ed had what I was looking for; I half remembered that mod but forgot the details quick, easy, reversible. Thanks for the early Christmas present. Seasons Greeting to All 73, Gene NAØG

From Craig.Anderson at saintpaul.edu Thu Dec 15 08:30:58 2005
Subject: [R-390] RE: R-390 Digest, Vol 20, Issue 34

The detailed drawing of the gear set is in the CD-ROM set that I have which includes the complete drawing set for the 390A. These could be digitized into an AutoCAD file. I actually did that with the front panel and had a CNC file created to reproduce the front panel. I have access to a 50,000 sq. ft. machine shop filled with 3 to 5 axis machining centers. Craig W9CLA

Date: Wed, 14 Dec 2005 06:34:18 -0800
To: <r-390@mailman.qth.net>

If I recall correctly there is a detail drawing for each and every gear, clamp and so forth on the R-390A

drawing set CD. Been a while since I looked at it though. Craig

From: Joe Foley <redmenaced@yahoo.com> Date: Wed, 14 Dec 2005 09:50:22 -0800 (PST)
Subject: Re: [R-390] Re: Topics to start (Y2K Addendum)

wrote: > 1) basic electrical safety measures (not mentioned by Joe Foley's excellent piece)
++++++++=
I did think about that, such was left out on purpose. I thought that the new owner should have training or experience already in that area and that it wasn't the purpose of this manual to train in that area. And I didn't want the liability of it either. So I focussed on the radio and kept it closer to the subject at hand. Joe

From: "Gene Dathe" <dathegene@hotmail.com> Date: Wed, 14 Dec 2005 18:02:13 +0000
Subject: [R-390] 600 to 8 ohm phone mod

Question: I would like to plug in my Heil phones into the phone jack.

Are there any ready made plug in 600 to 8 ohm converters out there? Or; How have you modified yours? Thanks, Gene NA?G

From: Barry Hauser <barry@hausernet.com> Date: Wed, 14 Dec 2005 13:07:13 -0500
Subject: Re: [R-390] Re: Topics to start (Y2K Addendum)

Joe has a good point there. It may not be a good idea to try to take the total newbie into high voltage electronics. Instead, it might be better to beef up the warnings and add a disclaimer if one isn't there already. Barry

From: DJED1@aol.com Date: Wed, 14 Dec 2005 13:41:47 EST
Subject: Re: [R-390] 600 to 8 ohm? phone mod

I don't know if this made it into the "pearls of wisdom" but there is an easy fix for the headphone impedance problem. The reason the low-Z phones don't work well is that there is a 6800 ohm series resistor between the audio line and the headphone jack. Thus 600 ohm phones divide the voltage a little, 8 ohm phones drop the voltage a lot. However, you can parallel the resistor by connecting another lower value resistor from terminal 6 to terminal 8 of the audio terminal strip on the back. I used 470 ohms, but it can be adjusted to suit your phones. Works good with my 8 ohm phones. Ed

From: Gord Hayward <ghayward@uoguelph.ca> Date: Wed, 14 Dec 2005 13:53:38 -0500
Subject: Re: [R-390] 600 to 8 ohm phone mod

I put a tiny 600-8 ohm transformer in a film can with appropriate plugs. It seems to work well. 66 de Gord, VE3EOS

From: "Craig C. Heaton" <wd8kdg@worldnet.att.net> Date: Wed, 14 Dec 2005 12:18:49 -0800
Subject: RE: [R-390] Re: Topics to start (Y2K Addendum)

In today's world of lawyer/sue happiness, beef up the warnings and disclaimer! (First page in the addendum) Craig,

From: "Jon" <jonklinkhamer@comcast.net> Date: Wed, 14 Dec 2005 16:58:55 -0500
Subject: [R-390] FW: F103/R390a

Just wanted to say thanks to the group on guiding me in the right direction with respect to finding the problem with popping the fuse. It was a pinched wire (BFO wire) aganist the frame of the IF module. As soon as the front panel was taken off the short went away. A visual inspection solved the mystery. Thanks again!! 73,Jon KB1DC

From: Jack Absalom <kf4yio@charter.net>
Subject: [R-390] R390A Small Knob Date: Wed, 14 Dec 2005 16:12:38 -0500

Hank:

I could use one of the small R390A knobs. Please let me know your email. Jack kf4yio@charter.net

Date: Wed, 14 Dec 2005 15:20:08 -0800
To: "'Craig McCartney'" <craigmc@pacbell.net>, <r-390@mailman.qth.net>

Craig, I perused the various manuals that I've downloaded over a couple of years and found an exploded view of the gears and connections to the cores, with number of teeth indicated on each gear, but so far have found nothing on dimensional layout of the shafts that go through the gears. Maybe this kind of info never reached the public, or has not been found yet. Perhaps it exists in an old file cabinet somewhere. The manual photos of the front and rear of the rf deck could be used to extract the layout dimensions using a reference dimension or two but I don't think all the shafts could be located this way in the photos I've seen. The posted assembly of the rf deck by Scott Seickel with all the steps documented would also be a good way to put approximate locations on the shafts. I'm still wondering if anyone has seen a set of engineering drawings of the gear assembly. It seems rare to find original drawings used for the manufacture of any old radios. I have a Westinghouse drawing for a 20's RC set, but I know the only reason it made it out of the company was because some collector in the 50's wrote to Westinghouse concerning the set and some staff member was kind of enough to dig through files and send a copy of an original drawing. Unfortunately, he did not include the mechanical layout drawings, which were probably in the same file. Dan.

From chacuff at cableone.net Thu Dec 15 09:07:38 2005
Subject: [R-390] Web Page Lay Out

Folks...

I am not sure the goal should be to optimize it for dial-up. That's not the future....nor really the present. It's gotten to where it's not expensive to have a broadband connection and it will only come down further with time. Right now instead of lowering the pricing much they are increasing the bandwidth every year or so. At some point that will max out and price will probably be the next thing to start to fall. A 2-3 Mbps connection will probably be $19.95 per month in the near future. That's not a lot of money folks and if you have not experienced the convenience of it you don't know what you are missing. Dump the dial-up...you'll be amazed!

Besides what good is the web site if you don't have highly detailed pictures and drawings....

Just my 2 cents worth...don't beat me up too bad! Cecil....

From chacuff at cableone.net Thu Dec 15 09:24:12 2005
Subject: [R-390] 390/390a gear train

To add to what BW has said...I'm not a production pro but I don't think it is as easy as just dumping a CAD drawing into a CAM machine and out pops new gears and what not. My brother is in that business with Volvo...I'll pick his brain on that part.

To document and display the gear train I think it's a good idea for the printed page but not as good as one might expect for a computer screen displayed version of the gear train because of the proprietary nature of most of the programs that generate output. You pretty much have to own a copy of the software used to generate the graphics to display the graphics. Most of these programs are expensive.

We have the same problem in the workplace. Our engineers use AutoCAD. Problem is the guys that use the drawings in the field can't display them without having a version of AutoCAD on their laptops...too expensive and not intuitive at all. We like Visio in the field because it's easy and fairly cheap to distribute to 100 folks. The engineers don't like it because it won't do what they like to do. We went to another product...can't remember what it was....but it would allow you to view an Acad file but you couldn't make any changes....so much for field modified "as built" drawings. Then that company quit supporting the product. It's a nightmare...and none of that even touches manufacturing....it gets deeper as I understand it! Cecil....

From wewilsonjr at gmail.com Thu Dec 15 09:36:51 2005
Subject: [R-390] Web Page Lay Out

For those on dialup, I believe you can keep pictures from downloading simply by setting IE Tools/Options/Advanced to not show the pictures. You can also turn off sounds, animations, and video as well. I believe that turning these off also keeps them from being sent as you call up the web page.

From barry at hausernet.com Thu Dec 15 09:52:49 2005
Subject: [R-390] 390/390a gear train

Hi Cecil & crew.

For the heck of it, I quickly converted Scott Seickel's gear train photo instructions to a single pdf file. I brought the graphics into a Word file and "printed" to a file with a pdf driver. Without any optimizing for efficiency, it's only 3 MB or so. It could be a good deal more compact if the text were separated from the graphics and re-stroked as true text, and some other things could be done without much sacrifice of quality.

So, if Scott's permission could be secured, his gear train rebuild sequence could be part of either the next revision of the manual (there's a spot for it) or an addendum/supplement. It could benefit from some labeling of the gears by the same references as in that exploded diagram. At any rate, the combination of the two should be more than enough unless someone wants to recreate the gear train in a CAD

program for sport.

I noticed in re-reviewing the Y2K manual itself that there remain a number of unimproved photos the old black & whites were picked up from the Navlex manual. They were intended as placeholders until replaced with new color photos with re-done parts callouts.

The Y2K was/is a work in progress, so might be premature to jump to a supplement until finishing up some unfinished business. Just my 2 cents. Barry

From paul at pdq.com Thu Dec 15 11:19:23 2005
Subject: [R-390] building new components

I think the ideas of building new receivers, don't get me wrong.

But... if one were to prioritize first, I doubt it'd be the mechanical parts that would be first on the list. The stainless steel gears, etc, just don't rust, and the majority of the other frame and mechanical parts are readily available for the R-390A.

Here's my perspective on rough priority:
meters (many R-390A's are without)
390 RF deck parts, especially slugs
390-A mechanical filters (repairing and replacing)
small parts easily lost:
oldham couplers
390/391/390-A PTO coupler
390/391 crystal deck coupler
392 bandwidth control coupler springs wiring harness clamps (390/391 and 392 come to mind)
covers and shields (all)
R-389 parts of all types, PTO especially
gear clamps
spline screws
big knobs
various connectors, UG-970/UG-971, etc.
R-391 autotuner spares

I really wouldn't spend time tooling up for the mechanical parts that there still lots of around, like gear trains and module chassis.

Obviously, a lot in the list above are made, or can be made fairly readily, but those are the bigger items that keep the receivers down.

>From watching what Hank Arney goes through, and also watching eBay prices on various bits and parts, I don't think there is much market to justify even making very many of the highly needed parts, given the actual cost.

It's fun to think about, but when it comes down to brass tacks, it just doesn't pay. With so many receivers surviving in complete condtion, and with so many being basically non-destructable, there are going to be lots of parts units around for a long time (of R-390A).

I think to make it even worthwhile from a hobbiest perspective, that whoever it was that wanted to step

up and make a part would have to do a market survey of this and other groups to get an idea of how many might be sold, then divide that number by about 4 (or more), and then hope you could approach break-even on that quantity. Paul

From mdmerz at verizon.net Thu Dec 15 12:36:33 2005
Subject: [R-390] 390/390a gear train

Roy/Craig, very appropriate to what I was looking for. I don't think I've seen reference to "EDMICS Drawing Set" in my travels through the 390a archives or elsewhere. This sounds like an important piece of data to keep track of for future 390 travelers. Is this file format the same as "JEDMICS" which I get reference to if I google EDMICS ? I see one can download a "free" JEDMICS viewer. I hope your memory of this particular 390a material turns up a source for the drawings. In looking thru Craig McCartney's list of drawings on the R390.net page, I realize I don't know where the drawings that the numbers refer to are located. Is this a list of drawings that are available somewhere to me or is this just a list of drawing extracted from some document, and the drawings themselves are unavailable? To the "new" traveler like me, I'm unsure where to pursue seeing the actual drawings. Perhaps this is the index to the "EDMICS" drawings? Maybe this is the set of drawings that Craig Anderson mentions having on a CD-ROM in a later post? regards, Dan

From wli98122 at yahoo.com Thu Dec 15 12:37:23 2005
Subject: [R-390] Re: Topics to start (Y2K Supplement)

Guys:

After mature reconsideration, I think that you are all correct in not including a treatise in high voltage safety in the Supplement. A bold-faced large-font disclaimer is sufficient for our purposes.

There are already many salient safety issues addressed re 3-wire pwr cords and AC pwr filters under "pwr suppy" in "Pearls" for whomsoever trolls thru that section for inclusion in the Supplement. W. Li

From mdmerz at verizon.net Thu Dec 15 12:43:18 2005
Subject: [R-390] test

Test, Dan

From twc9198764412 at earthlink.net Thu Dec 15 13:41:56 2005
Subject: [R-390] Re: Topics to start (Y2K Supplement)

To their credit, (probably not dictated by lawyers back then), the original manual makers included a high voltage warning on the first page or two of the R-390 and R-390A Maintenance Manuals. It seems to vary somewhat by version. My reprint of TM 11-5820-358-35 (R-390A, 8 December 1961) also added a radioactive tube warning: "Before handling or disposing of defective voltage regulator tubes 0A2WA and 0A2WB refer to TB SIG225, Radioactive Electron Tube Handling." Anybody seen that manual?

And in TM 11-5820-357-35 (R-390, 9 March 1962), they even added a warning about selenium rectifier failures ("don't breath the poisionous fumes").

No such warnings for the 28V R-392, therefore I will continue to lick my fingers and poke around at will... Bruce WA4ZLK

From DJED1 at aol.com Thu Dec 15 14:01:04 2005
Subject: [R-390] building new components

I'm inclined to agree with Paul. There's a few items that are no longer obtainable that also have the biggest impact on functionality. IMO these include the meters, the mechanical filters and the BFO and PTO. I think you can buy repackaged Rockwell filters, but there is no source of meters that I know of. And I see my PTO gradually deteriorating (the hermetic seal disappeared years ago) with no way to refurbish it. If it dies, the receiver is dead. I did some thinking as to whether it was feasible to build a solid-state replacement that would go in place of the PTO, but couldn't find an encoder with enough resolution. It sure would be nice to have a PTO that really gave perfect 100 Hz readout over the whole 1 MHz band, even it it was (Gasp) solid state.

On the other hand, I think Fair Radio has piles of non-working modules which are available to use for mechanical parts. Obviously there are some shortages like Oldham couplers, but they should be easy to reproduce. Ed

From leslocklear at cableone.net Thu Dec 15 14:20:43 2005
Subject: [R-390] building new components

If I'm not mistaken, Hank Arney has oldham couplers available for sale.

Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From cmurray at tntech.edu Thu Dec 15 14:53:29 2005
Subject: [R-390] building new components (PTO)

Back when I was a young whippersnapper, my elmer was given a '390A from a batch that MARS was distributing without PTOs. This guy was a build-it-yourself sort of ham and since PTOs weren't as available in 1978 as they are now, he built up a solid state VFO for it using a 10 turn pot as the tuning element.

I especially remember this because we went through what seemed like thousands of 10 turn pots at hamfests looking for a non-wirewound one for the tuning element.

This lashup actually worked out with fairly decent tracking, so it can be done. Conard, WS4S

From r390a at bellsouth.net Thu Dec 15 15:17:47 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

wrote: > ... It was a pinched wire (BFO wire) ...

Jon's solution reminded me of a Troubleshooting Adventure I had not too long ago on a radio marked "not repairable"

This was a 1962 Amelco that appeared all-original. Seems every time you'd turn it on, it would blow the RF/IF B+ fuse. First thing I found was that line showed a short, and indeed there was a pinched wire right at the BFO switch. I turned off the radio, unplugged the radio, took off the front panel, fixed the wire and the short went away. Put it all back together. *bam* the fuse blows again when it's switched on. I unplug the radio and check that side of B+ at the fuse, and sure enough, a dead short to ground. I unplug the IF, RF, Crystal Osc, still, dead short. Unplug Audio and PTO. Power Supply. Dead short. I remove the front panel and I check around, nothing unusual and no short any longer. I plug in all the modules, switch off the power, plug in the radio, and with the front panel down turn it on. Radio works fine. Mumble "bad wiring harness..." unplug, turn off, button up. Plug in turn on.... and as I turn it on I just *happen* to be looking down the front panel and see a *flash* as my next to last fuse in the box blows.
Defect Found: Terminals from the function switch were *just* touching the RF deck. Apparently this particular switch stuck back behind the panel enough to allow this. Nothing appeared to be modified in any way nor did switch appear to be damaged.

Solution: Bent terminals out of the way and removed lockwasher between switch bushing and panel. Considered replacing function switch in the future.

73, Merry Christmas and happy troubleshooting. Tom NU4G

From r390a at bellsouth.net Thu Dec 15 16:03:29 2005
From: r390a at bellsouth.net (Tom Norris)

That's double whammy for my, cuz I don't think any of my current browsers will allow me to do that. Not only is dialup the only thing that's available, but I don't use Windows. I am, however, in the minority and will gladly put up with it. Tom

From r390radio at gmail.com Thu Dec 15 18:06:19 2005
Subject: [R-390] building new components

(I'm hitting 50/50 with sorbs today)

wrote: On the other hand, I think Fair Radio has piles of non-working modules which are available to use for mechanical parts. Obviously there are some shortages like Oldham couplers, but they should be easy to reproduce. Ed

Interesting about Fair, though. They had held back selling many 390 parts so as to use them on their repairables going out the door. I emailed them the other day and was told that those items such as knobs etc marked as unavailable were still not available. Didn't ask for Phillip or anyone. Probably just got the generic answer. Figured more parts would be freed up with no whole radios going out the door. Tom NU4G

From k3pid at sbcglobal.net Thu Dec 15 19:07:20 2005
Subject: [R-390] What did I miss?

I've been on the road a few weeks and now I am seeing a lot of emails that seem to be talking about a web page project. What's up? K3PID Ron H.

From Flowertime01 at wmconnect.com Thu Dec 15 19:08:15 2005
Subject: [R-390] Web Page Lay Out

Cecil,

I am not pushing for the lowest common denominator. I would like Al, web pages at http://www.r-390a.net/ to continue to open as quickly as it does. Once you get there pop open References, Scroll down to Tutorials pop open Wei-Li's Pearls of wisdom Then open one of those pearls.

After that opens for you go back and open one of the PDF scanned TM's

I just favor the much faster access to Wei-Li's pages. If we are going to add a zillion new bits to the web pages, I would like all R390 Fellows to be able to access those bits this week. Fellows that own R390's are not necessarily in love with the latest fastest whiz bang of the week. After some Fellows acquired their R390 from some sources we are amazed they can still support an Internet connection.

From Flowertime01 at wmconnect.com Thu Dec 15 19:28:31 2005
Subject: [R-390] What did I miss?

writes: I've been on the road a few weeks and now I am seeing a lot of emails that seem to be talking about a web page project. What's up? K3PID Ron H.

Ron so glad you ask.

First off Craig put in a Christmas Wish List for you know when 2005.

The reply to that was so fat, the powers to be managing the Qth.net looked favorably on the text and enlarged the size of text message we can exchange on the reflector without getting a blessing from management.

Second this being that season every one has been on their very best behavior. The mail has simple been very very nice of late.

Third the wish list just blew up when every one seen wishes being granted left right and daily.

Fourth some big wishes popped in that may not be filled by any one this year. But not wanting to dash hope for any one the date Y3K was proposed at least once.

Fifth everyone that wanted to commented that some addendum to the Y2K manual was needed. A look at http://www.r-390a.net/ indicates that a simple text addition to the Y2K manual just will not do the wish list justice.

Sixth Al Tirevold WA0HQQ has allowed that the web page he supports at http://www.r-390a.net/ could be utilized to support some additional materiel if someone was willing to support the collection and editing process.

Seventh Roger (me) offered to mange a list of topics and edit a topic a week for a while until we best the topic list to death.

Eight a call went out for your top ten items you would like to see as topics added to the available web pages.

Ninth once the web pages were up dated and settled down, then a CD collection of the best of the page could be generated. Getting a hard paper copy would be left to the reader as an exercise for their printer. No one is thinking two cent could be make printing and sell paper copies. Even Amazon.com is trying to get out of the paper selling business.

Tenth, to separate the talk from the walk the first topic to research, compile, review and beat to death is the mechanical alignment of the R390 and R390/A receivers.

Ron there was much more as I am sure I missed a few things.

Roger L. Ruszkowski KC6TRU (still) Thu Dec 15 19:39:16 2005
Subject: [R-390] building new components (PTO)

Conard is talking about Bill Hoehl, WB4MUZ, and he did indeed build a PTO replacement using a 10-turn pot and a diode linearizer. There's an article published in the 1983-84 timeframe (QEX? Not sure).

Today I'd do it with a DDS and either two encoders (one fast to handle fractional kHz and another one to handle the higher steps with suitable gearing) or else revert to something simpler and just ADC the 10-turn pot and use it to drive a lookup table for the DDS. The only thing I didn't like about the 10-turn pot is that if you forgot and turned past 000 going low or 999 going high you were going to break the pot. A 15-turn pot would be the cat's meow. Dave WB4FUR

PS. Bill died of colon cancer in 1986. He didn't take good enough care of himself, so by the time he actually DID something about the fact that he couldn't eat, it was too far gone. If you aren't taking care of your health, PLEASE remember that even if it seems inconvenient there's someone somewhere who really, really needs you to be healthy.

From Flowertime01 at wmconnect.com Thu Dec 15 19:39:54 2005
Subject: [R-390] Web Page Lay Out

Cecil,

I popped the last post in the mail with no autograph. I am sorry for the omission Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Dec 15 19:57:01 2005
Subject: [R-390] Call for input on 1st addendum topic

Fellows,

After one has done a good receiver cleaning and before ones jumps into an electrical alignment of the receiver a good mechanical alignment is in order.

At http://www.r-390a.net/ under Wei-Li's Pearls of wisdom is a couple of papers on cleaning and oiling the gear train. A popular wish is for collection of wisdom on the alignment of both the R390 and R390/A receivers. That wish feels like a small book in its self and needs some decomposition into

manageable sections. An electrical alignment begins with a mechanical inspection and adjustment as necessary. Most receivers having been well adjusted mechanically need no adjustment. However a proper inspection is in order. Before plunging into an electrical alignment section the mechanical alignment should be conducted.

Here is your chance to ask any question you ever wanted on the mechanical alignment of either receiver.

Here is the call for help. Will every one who has saved a bit of mail on mechanical adjustment, clamps, parts, bolts, screws, where to get things, reworking the mechanical counter and any aside for the mechanical aspect of the RF gear train please post it again as Mechanical Alignment Input. Will any one who remembers something useful from a mail please go out to the archives and mine it out. Please post the information back on the mail.

Please include names for any thing you can. I want to include those into the text to get credit to contributors. Let us not have many new web pages that present the idea this knowledge just fell into the Internet from anonymous. Thanks Roger L. Ruszkowski

From redmenaced at yahoo.com Thu Dec 15 19:59:09 2005
Subject: [R-390] Re: Topics to start (Y2K Supplement)

I think I even said, "Don't drop it on your foot!" Joe

From anchor at ec.rr.com Thu Dec 15 20:10:13 2005
Subject: [R-390] re: What did I miss?

Ron,

Consider yourself lucky, it all got said about 16 times, it'll be there again in a few minutes and you can catch up wtihout all the pain. Several topics in the process of becoming battered dead horses. 73, Al, W8UT resident grouch, apprentice annoyer

From mark.richards at massmicro.com Thu Dec 15 20:11:26 2005
Subject: [R-390] Call for input on 1st addendum topic

I don't have any pearls to offer, but would request that I'd like to see some mention of the effect, if any, of worn bushings between the front panel controls (particularly the tuning knob) and the proper operation of the gearing. Tolerances, and how to replace (or repair?) these would be most helpful. /mark richards k1mgy

From Flowertime01 at wmconnect.com Thu Dec 15 20:12:20 2005
Subject: [R-390] Call for input on 2nd addendum topic

Don't drop it on your foot! Joe Foley

Fellows,
Wise sayings and safety is coming to the top of the list as a popular subject. Early on mail suggested that these words of wisdom needed to be given a place of honor and not forgotten. Keeping with the

spirit it is not to soon to start on the wisdom list. So while you are out mining items on mechanical alignment feel free to post any bits of wisdom to Things We Once Knew. Roger.

From Flowertime01 at wmconnect.com Thu Dec 15 20:13:54 2005
Subject: [R-390] Things We Once Knew

Consider wisely, Don't drop it on your foot! Joe Foley

From Flowertime01 at wmconnect.com Thu Dec 15 20:22:40 2005
Subject: [R-390] 1st addendum topic bushing inspection / repair

Mark,

Good question, Thank you.

There are two bushing in the front panel around the Megacycle and Kilocycle shafts. These need alignment. There are also two bushing around the BFO and bandwidth shafts for the IF. These need adjusting. There is a bushing around the Antenna trim in the R390A. Were you thinking of other bushings?

Fellows, does the R390 have a bushing around the antenna trim? Any other questions on bushings that need consideration? Roger

From mark.richards at massmicro.com Thu Dec 15 20:36:46 2005
Subject: [R-390] 1st addendum topic bushing inspection / repair

The MC, KC, BFO, Bandwidth, and ANT TRIM are exactly the ones that I believe are the most important and in the case of the radio I'm restoring, the KC shaft/bushing seems (naturally) to need attention the most. Didn't think these could be aligned, so look forward to The Instruction on this topic! /m

From redmenaced at yahoo.com Thu Dec 15 20:38:39 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

wrote: > Jon's solution reminded me of a Troubleshooting > Adventure I had no > too long ago on a radio marked "not repairable"
++++++++
Good story, Tom,

Whenever I'm discussing troubleshooting I always want to know WHO worked on it last and what their level of expertise is. It's important!

I want to know what they might have looked at and what they have seen in the past. If that person is a good troubleshooter I KNOW I have to look much closer for something THEY didn't find and I must suspect EVERYTHING.

But, if the guy was a newby then I know I have to start with the obvious first, maybe even the REALLY

obvious.

A maintenance electrician has an advantage over the new-construction electrician in that he knows the machine worked at one time, the construction electrician has no idea whether the thing will actually work, or even if it was designed properly, or what effect any design changes had on the final product. Joe

From redmenaced at yahoo.com Thu Dec 15 20:59:16 2005
Subject: [R-390] 1st addendum topic bushing inspection / repair

Um,....

Can we change that for the KC CHANGE knob?

There are THREE bushings on that shaft, the one on the front panel should be left "snuggish" so the other two won't be bound by it. Also, that shaft is the one most likely to be bent, being that it is so far from the protective handles. On a total rebuild of the radio it should be removed and centered on a lathe to be checked for run-out, then straightened.

This will make it run true, not be apt to bind and will help to keep the DIAL LOCK from binding and making that awful scraping noise so common on these radios. Joe

From r390radio at gmail.com Thu Dec 15 21:56:49 2005
Subject: [R-390] For the r-390 wishlist Things for the R-390/URR

Since Dave Medley retired, we've only see a few bits here and there on the R-390 vs the 390A. Anyone able to add any 390 experience?

I've only recently dug into any R-390's. The 390A I can almost tear down and put together blindfolded* - though I'm not sure I can add anything that hasn't been covered in "Pearls" Other than the one odd troubleshooting incident written about earlier, I've not ran into many things that weren't simple by-the-book fixes.

Reason I ask about the R-390 is I have 2 here that don't seem to have simple by-the-book problems. (they'll get back up on the bench eventually)

*Roger's suggestion of a front panel troubleshooting guide may have helped in chasing that odd problem mentioned in the earlier post. Though in that case a cigarette along with the blindfold may have been more helpful... Tom NU4G

From ba.williams at charter.net Thu Dec 15 21:59:30 2005
Subject: [R-390] 390/390a gear train

> To add to what BW has said...I'm not a production pro but I don't think it > is as easy

Actually, it is worse than that. Most of these packages rely on .DXF files for interchange. But, these aren't always compatible. Then, there are various DXF formats brought about over time. More compatibility issue here. Well, I say that they rely on DXF. Maybe it has changed in the past few years.

Autocad isn't very intuitive and never was. The whole CAD scene is a mish mash of features. Some of the best aren't numerically accurate for measurements. Those that are lack other vital modeling tools. For instance, Alias Sketch by Alias Research is a top name program. Alias was the leader in video modeling some years back and I bought it because I had plans to start my own video company for southern Alabama. If you could do Alias modeling, you were hired pretty much on the spot. My main gripe about Alias Sketch is that it wouldn't mirror objects. For instance, if you designed a right wing for an airplane you couldn't mirror it for the left wing....at least not easily if at all. I guess I could have copied the right wing coordinates and entered negative signs to each coordinate but that would have been a nightmare. Anyway, that is an example of a fine program with fundamental problems like most of them.
Sketch was orphaned a few years after I bought it. It still runs just fine on new operating systems so I can still run it. Barry

From greybeard5150 at sbcglobal.net Thu Dec 15 22:18:54 2005
Subject: [R-390] Quick reference R-390 member list

Have you ever wondered where that guy is at, that just posted to the list? Maybe wonder how old he is?

Have you ever dumped posts from the list and then remembered that someones email address was supposed to get saved before you deleted it?

Have you ever wondered about the demographics of this list?

Have you ever wished that there was someone on the other side of the country that might be able to look at something for you, or maybe box it up and send it to you because someone refused to deal with mailing it?
I'll admit that a couple of these may be a bit far-fetched, but hey, you never know, right?

I ask these questions only because I've put together a list (admittedly incomplete) that contains many of the 'frequent flyers' here on the R-390 reflector. I have WAY too much time on my hands and I did occasionally wonder who was where or how old they might be, and I got tired of wearing out the Call Sign Lookup.

There are also many folks here that either aren't licensed amateurs (like myself), or else they never refer to their calls, and for those I have emails listed for quick reference. If they have mentioned their QTH in posts, then some also have locations listed (city only).

All info has been culled from qth.com R-390 reflector posts, and Call Sign Lookup ONLY. First it's aphabetical, and then it's also been cross referenced by state as well. This is not some indepth thing, and with rare exception I only started paying attention to the players and taking notes about a month or two ago. At this point there's 116 people accounted for. Frankly, I never realized that so many different people actually check here at the list from time to time.

I'm sure that I've missed some people but it really doesn't matter. If anyone would like to have a copy of this list, just drop me an email off-list, and I'll shoot you one in the next couple of days. It's been done in Microsoft Word and saved in .rtf format, so as to be backward compatible for more users. I suppose that I could save it in .txt format too, it's just gonna' look mighty ugly after all of that nice color and text formatting work that I've done. ~ Quig ~

From r390radio at gmail.com Thu Dec 15 22:38:22 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

Whenever I'm discussing troubleshooting I always want to know WHO worked on it last and what their level of expertise is. It's important! [snip]

To make the original story even more odd....

Remember Conard, WS4S and the strange problem of the 50 CPS shift with strong signals? Same radio. That problem didn't show up during a regular alignment.

I most certainly agree with Joe since this came from the estate, there wasn't any way to trace it's history. I *do* know the history of the PTO, IF deck, meters and about half the knobs since those were replaced, seeing as it didn't have them when it showed up. :-)

So unless the knobs fall off, hopefully the radio will behave from now on.

For the wishlist? The bushing suggestion partially loosen all the front panel bushings before replacing the front panel to the shafts a bit of "play" so they'll be less likely to bind.

wrote: Jon's solution reminded me of a Troubleshooting Adventure I had no too long ago on a radio marked "not repairable"
++++++++
To which Joe Foley replied Good story, Tom,

From hankarn at pacbell.net Fri Dec 16 00:45:01 2005
Subject: [R-390] building new components

Paul,

I have a lot of the parts in the list. I will not make any more of the parts on spec as I have lost my A** on the flakes that want the part and say they will order but when push comes to shove and you ask for deposit or money up front they come up with some asinine excuse and disappear from the scene. Then after you go to the cost, time and effort. They then say I charge too much.

A good example are all of the parts that have been done on CNC centers boils down to not just the programming but the proofing of the work making a sample, and all of the leg work dealing with all of the vendors. Selling, packing, shipping, ebay, paypal cost, trips to the post office, UPS charges, employee costs taxes, insurance and my fixed overhead.

I have had excellent luck in dealing with hams from all over the world. No bum checks from over 2000 dealings, and I do not hold checks to clear, as a matter of fact I stick the checks in my briefcase and when I get several after a few weeks I then deposit them. AS we all know money talks and we ALL know what WALKS.

As I slide off of my .02 slippery sliding soapbox and go beddy bye. 73 to all and have a happy PC holiday season.

BUT ABOVE ALL A MERRY CHRISTMAS AND HAPPY NEW YEAR ALL WITH BEING THANKFUL OF OUR MILITARY PEOPLE PAST PRESENT AND FUTURE THAT GIVE US THE

MOST FREEDOM OF ANY PEOPLE IN THE WORLD.

In my flying career of making over 120 trips around the world into 117 countries along with living in 12 for some period of time. Believe me their is nothing putting your down in the USA and being glad you are home. So screw the ACLU and all of their rabble rausers. 73 HANK, KN6DI

From clemens at it.dk Fri Dec 16 06:54:19 2005
Subject: [R-390] Ideas for Y2k companions (and an off-topic query on RA-1772)

This is one group that you never tire of! - ("If you are tired of the R-390 list, you are tired of life")

Someone mentioned it already, but in case it got lost in the blizzard of suggestions and mails:

It would be a great help to have access to the TM-4000 manual on troubleshooting, which is based on the R-390A

Later it got called " Troubleshoot the radio receiver 390A/URR to the faulty component" Its STP nr is STP 34-33T14-SM-TG 867-816-1008

There is also, with end number 1009 "Align the radio receiver R390A/URR"

How useful it would be to have these two in digital form.

Now for the off-topic query. A Racal RA1772 just found its way into the shack. It has a number of fine 1.4 mhz filters, but the AM one is as wide as 8khz.

Does anyone have, or can anyone direct me towards, such a filter that I might buy? Many receivers have these, Skanti 5001, R & S EK070, Redifon R550, Plessey 2250B and 2282A , as well as a number of Eddystone receivers. And of course the American and Canadian versions of the 1772.

Sorry about this non-hollow state question, but it is certainly a boat-anchor, a fine receiver and perhaps the ultimate achieved before the transition to microcontrolled receivers, excepting of course R390 and R390A. All the best, and seasons greetings, Clemens S.Ostergaard

From kc8opp at yahoo.com Fri Dec 16 07:34:36 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

Joe,

With all due respect, I believe you should start all trouble shooting jobs with the "REALLY obvious". More times than I can count I have followed up some very good techs only to find that they have missed a very important step or symptom. Sometimes this can be perceived as an insult to their ability, because they KNOW they have checked/followed everything. Don't assume anything, cause you know what that makes u and me. Roger KC8OPP USAF trained R-390 fixer (30474)

From chacuff at cableone.net Fri Dec 16 08:34:26 2005
Subject: [R-390] Ideas for Y2k companions (and an off-topic query on RA-1772)

I have a very nice original copy of the TM-4000 manual....but no way to digitize it. I don't mind shipping the manual to someone that has the capabilities to do it properly as long as I get the thing back. You don't see them around much. Cecil....

From chacuff at cableone.net Fri Dec 16 08:37:06 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

The standard first step in troubleshooting any piece of electronic equipment is to do a very thorough visual inspection. If a problem turns up after work has been done it is reasonable to assume the problem is in the area last worked on. These two "truths" have always saved me a tremendous amount of time. Cecil...

From R390rcvr at aol.com Fri Dec 16 08:43:34 2005
Subject: [R-390] TM 11-4000

Good morning all:

I will take up the cause of scanning in the TM 11-4000. I have a good original, which I will unbind to scan in the receiver portion of it. I don't think I can handle the big schematics, and haven't checked them out carefully enough to see if they are different from the other manual schematics.

I do think it will be a very handy troubleshooting aid. Randy

From barry at hausernet.com Fri Dec 16 09:15:23 2005
Subject: [R-390] For the r-390 wishlist Things for the R-390/URR

Hi Tom & Gang

I have a few R-390's and R-391's. They all work - mostly. The only repair experience I've had was with one of the last R-390's out of Fair Radio. Dave, who used to work there back then and the R-390 resident expert, had kept it on his bench, tweaking it here and there and burning it in for a few weeks before shipping it. When I got it, it was DOA.

The problem was an oddball one not dissimilar from your function switch experience on the R-390A. Someone mentioned some other situation that was similar - wire pinched by the IF deck or something like that.

The R-390 has a big cable bundle running across the bottom of the mainframe. Where it crosses part of it is a cutout where there should be a small retainer clip. Sometimes they're missing. That cable bundle runs into a big connector that plugs into the audio deck. It's like the R-390A setup, only the R-390 has heavier coax. I'm not sure what made me do it, but I opened up that connector backed off the shell.

Inside, the shield/braids of something like 12 or 13 cables are connected to a terminal in the connector by means of a piece of solid hookup wire. I seem to remember it was #13. May have some significance :-). The hookup wire and solder glob around it was cracked through from stress. Even with the shell off, it wasn't obvious.

With or without that clip on the frame bottom, the cable bundle tends to sag and gets jostled when the receiver is set down or moved around. A bottom cover would minimize the movement, but still allow

some jostling. While the bundle can shift, it's fairly stiff and puts quite a bit of stress on the connections inside the plug. Yes, there is a strain relief on it, but these are often not tight enough as the rubber wrap tends to shrink. Ground point for a lot of connections, so, if it fails it renders the rig inoperative. Short piece of hookup wire, soldering with a high wattage iron, shore up the strain relief and she's good to go. It's also a good idea to replace that clip and make things tight with some electrical tape or whatever.

The only other things I know come from Dave Medley's notes like replacing the 47 ohm resistors, etc. and how to solid state the voltage regulator to eliminate the heat from the 6082's, though a muffin fan is another solution.

I suspect many R-390's haven't needed the kind of intensive repair and pre-emptive PM applied to R-390A's, as they were of an earlier, more expensive, more proven design, and, as Les Locklear likes to quote, "a man's radio". That said, perhaps the most important tips are to

1. wear the correct (not politically correct) after shave,
2. but don't shave for a few days and work up a good sweat (so as to exude some manliness),
3. consume compatible beverages (like regular, like Southern Comfort, Jim Beam, etc., but not light beer or Tanqueray and so on. (If you go with 180 proof rum, or vodka, you can also use it to clean the gear train and if you want to truly prove your manliness and bond with the radio, you can imbibe some of the gear train drippings). An ailing R-390 will generally perk up and work, purely out of mutual respect, even with a couple of weak tubes and crispened resistors.

Don't know if all that really works, but does improve one's general orientation and attitude before approaching the project. Barry

From barry at hausernet.com Fri Dec 16 09:27:37 2005
Subject: [R-390] TM 11-4000

Hi Randy

I have a copy too, but better you than me, heh heh.

Some considerations:

1. It's better to scan and OCR the section. If you just scan and leave it as as bit image/graphic, it will be much larger in terms of file size, and you'll probably have to back off on the resolution, resulting in grainy-ness. If the text is OCR'ed, the photos and small line drawings can be scanned an incorporated in place in a higher resolution. Also, true text means that the digitized result can be searched for word and part references.

2. Your scanning software may already contain a variant of OCR software. They typically have to be "trained" on samples to recognize the type face accurately. Even then, it all has to be proofed word by word and edited. There's no such thing as 100% with OCR'ing this stuff. Also, I think the manual is set up as double column.

3. That said, it might be better to restroke the thing.

4. The TM-4000 section should be reviewed by some who know the R-390A like
the back of their hands. Because it's a training piece, the authors may have taken liberties with some of it and may vary from the realities. Again, that manual doesn't even mention "R-390A" anywhere, which

makes me somewhat suspicious of that possibility.

5. One approach is to divvy up the section between three or four volunteers to type it up. If those guys are also familiar with the R-390A, they may be able to detect any anomalies or variances as they do it.

Barry (the been-there-done-that guy)

From chacuff at cableone.net Fri Dec 16 10:27:53 2005
Subject: [R-390] For the r-390 wishlist Things for the R-390/URR

Hey Folks,

I've done a few in the last year and to tell you the truth they are much easier to work on than the "A". (MHO) Mainly because they don't require so much concern about the capacitors used when manufactured. I have spot checked in the few I have done and found maybe one or two I have replaced due to leakage. One was the top hat looking tantalum that is often found in the "A" all corroded up. It was strange because I had not seen one of that type in an R-390 before..only in the "A". There are 4ea. 47 ohm resistors that need to be replaced usually. I upgrade those from 2 watt to 5 watt. And that's about it. I have never found the filter caps to be out of spec but it's because they used high quality oil bath caps for filters. (I'm not saying they don't go bad...just I haven't come across that yet) It's a good thing I haven't found them bad because I don't know what you would ever do to replace them and not make the radio looked hacked.
As far as the gear train....the fabled "GREEN GEAR"....is of no real use! You don't need it to keep the world from coming apart. The only purpose it serves as far as I am able to tell is to keep the Veeder-Root counter in sync with the gear train if removing the RF deck for a simple repair and dropping the deck back into the chassis. If you are doing a restoration you will probably remove the counter anyway.

I sat for hours one night on the bench pondering the purpose of the green gear with the RF deck out and the green gear in place. I studied and studied and finally through caution to the wind and pulled the "GREEN GEAR" off and went to work. I figured if I had overlooked some obscure function of the gear it would become obvious upon reassembly. It never did and all worked fine. The biggest "Gotcha" if there is one is to mark the band switch in some way to get it back to a known position upon reassembly and sync of the RF deck.

I start by setting the radio at the prescribed 2.000 Mc and begin disassembly. I take a spring loaded hand punch and put a dot on the two brass gears that mesh on the band switch. Kind of a timing mark of sorts for you old car buffs. Now you have 90% of the battle under control...the other 10% is the PTO position. I do my best not to disturb the PTO shaft but if you do that is pretty easy to fix too with a frequency counter. The PTO tracks from 3.455 Mc to 2.455 on each band. It is inverse to the tuning so it starts out on the high end and tracks to the low. So if you set up the gear train after cleaning to the marks, reassemble the counter to the front and set it to 2.000 Mc, have the timing marks on the band switch gears back to their original position and the Xtal osc coupling adjusted to indicate 2 Mc in it's window you can reinstall the RF deck. It's a little tricky to hold everything in place as you remesh some of the chassis gearing to the RF deck gearing but it can be done...without the "GREEN GEAR". If you have it you can screw it in place after you set the gear train to the marks and sync the counter to 2.000 Mc just to hold everything in place while you set the RF deck back in place. A dab of heavy synthetic grease will hold the Xtal switch Oldham coupler insert in place as you reassemble the RF deck to the chassis. Leave the Oldham coupler insert out of the PTO shaft coupling allowing easy adjustment of the PTO shaft position with your fingers. At 2.000 Mc the output from the PTO should be near 3.455 Mc. Just get it close so the couplers will align and reassemble the Oldham coupler. Helps to have the screws

on the PTO loose to do that.

With that your gear train is resync'ed.

At this point you go through the alignment which will include the fine tuning of the PTO. The book covers all the rest!

Not a hard radio to work on. The IF is straight tuned...as opposed to the stager tuning in the "A". The adjustment of the trimmers on the rear panel can be a little tricky and if you get out of whack there the radio behaves strangely but the procedure in the book works.

That's my experience with the R-390....in a nut shell.

I'd love to own an R-390 someday....all the ones that have passed through my fingers have belonged to others. I really hated to see the last one go...it was in such nice shape. Maybe someday....would be a nice companion to the "A" and the SP-600 I think.

On another subject....I am in the process of finishing up the replacement of the small coaxial cables on an R-390A RF deck...what a pain! Cecil....

From W1RC at Verizon.net Fri Dec 16 09:51:24 2005
Subject: [R-390] Re: Y2K Addendum

Hello to the Gang:

I don't know this has been mentioned; it may very well have - but I don't follow the List as regularly as I would like so at the risk of being redundant, here goes.....

The Navy version of the R-390A manual is far superior to the Army and Air Force versions which are basically the same. The troubleshooting and theory of operation sections are far more detailed. So if you can get your hands on one of these you have a real gem. They are hard to find. I am wondering if it exists in .pdf format. I have several versions of the Army/Air Force manuals in .pdf.

The Y2K rewrite is based on the Navy manual. Best wishes for the Holiday Season! 73, Michael, W1RC

Wise sayings and safety is coming to the top of the list as a popular subject. Early on mail suggested that these words of wisdom needed to be given a place of honor and not forgotten. Keeping with the spirit it is not to soon to start on the wisdom list.

From future212 at comcast.net Fri Dec 16 10:42:23 2005
Subject: [R-390] TM-4000

Hello,

If the chore of typing up the TM-4000 is going to be done, (as Barry H. suggested) I would be happy to do a chapter or two. I have a copy of the manual. 73's DW Holtman WB7SSN

From chacuff at cableone.net Fri Dec 16 10:46:56 2005
Subject: [R-390] TM 11-4000

Hey Folks,

I looked at the block diagrams and the schematics in the TM 11-4000 this morning and the R-390A is definitely the test subject in the manual but is never mentioned as such as Barry H. has correctly pointed out.

The manual is a pretty general work aimed at the troubleshooting and repair of tube Receivers, AM transmitters and FM transmitters. I assume we are talking about only including the parts pertaining to Receivers here.

Maybe getting the entire April 1958 TM 11-4000 on CD would be a nice thing to have one day....not sure how many of these are floating around....just like the others someone mentioned. I've never seen those! Cecil....

From barry at hausernet.com Fri Dec 16 10:48:55 2005
Subject: [R-390] Re: Y2K Addendum

As I mentioned some posts ago, I OCR'ed the '85 Navlex manual as a basis for the Y2K, so when you are reading the Y2K, you are mostly reading the last and best Navy manual that was published. I agree that they are also generally better than the Army manuals, though I recall someone mentioning that the Army versions have a few things that the Navy books do not don't recall offhand what those were.

The reason for the choice was also that the Navlex was apparently produced by word processing and has a single column format (full width of the page). That's not particularly desireable for readability there's a reason for columnar text (limits horizontal "eyeball" scanning when reading), however, the single columns plus the relatively modern typeface made OCR-ing much more efficient and accurate.

Point is though no need to seek the Navy manuals if you have the Y2K. Barry

From kgordon at moscow.com Fri Dec 16 11:01:18 2005
Subject: [R-390] OCR software and the new Y2K manual

I would be happy to OCR some books, etc. for the project. I use Textbridge Pro 11 regularly to OCR various ancient books for a research project I have been involved with for the past 10 or so years.

Textbridge Pro 11 seems to be excellent for the purpose.

BTW, www.scantips.com has OCR software for sale at VERY substantial discounts.

And Barry is right: OCRing books both makes the final file sizes MUCH smaller, and in addition, much easier to read. Ken W7EKB

From kgordon at moscow.com Fri Dec 16 11:11:42 2005
Subject: [R-390] Ideas for Y2k companions (and an off-topic query on RA-1772)

wrote: > I have a very nice original copy of the TM-4000 manual....but no way to > digitize it. I don't mind shipping the manual to someone that has the > capabilities to do it properly as long as I get the thing back. You don't see > them around much. > > Cecil....

If no one closer steps up to the plate, I can do that. I have all necessary software, hardware, and experience. However, I am pretty slow, and if a time-crunch raises its ugly head in the project, it should probably be done by someone who is not "time-challenged". Ken Gordon W7EKB

From peuhs at bellsouth.net Fri Dec 16 12:40:58 2005
Subject: [R-390] A Good Item

Friends...

In the continuing prep. of the property where the old tech. I knew had his shop, I recieved three amps, a rec., an FM tuner, VTVM, VOM, several tv and reg sig. gen's...lots of junk..(what am I to do?)..And ALSO, A:

Tube Tester TV-7D/U S.N. 268 Mfg: MULTI-AMP ELECTRONICS CORP. CRANFORD N.J. with Complete manual, w/sup.: Changes No. 1 31 May 1962

Condition is V. Good, w/some limited al. corrosion, missing the adapter in the upper left corner, and the two test leads...All others are on board.

In addition it is missing the bulb/fuse, and I don't remember what voltage it is..and also don't know if it should be powered up by me, anyway...

I do know that all these Mil. tube testers are in demand, and I have a really great and pretty wood case tester I like....so..If any are interested, and any not interested and willing to make a guess as to reasonable value e-mail me...

I assume this is o.k.post, as I wouldn't keep and I want to offer to you first, ...And in addition...It is a valuable item for use with your 390A and 390 non a....so it fits the list..

Thanks, John (JLAP)

From jmperge at adelphia.net Fri Dec 16 14:30:32 2005
Subject: [R-390] Black Marker on Tubes

Hello,
Is it safe to
use a Black Marker to mark the tube number on the glass of a tube? Safe in the sense that it would affect emissions inside the tube. I have found radios where someone used a piece of paper taped to a tube with the shield over it! I don't think that is safe. Thanks, Joe, WB8HWF

From shoppa_r390a at trailing-edge.com Fri Dec 16 14:47:09 2005
Subject: [R-390] Black Marker on Tubes

> Is it safe to use a Black Marker to mark the tube number on the glass of a tube?

For high-power (transmitter, >20W) glass tubes there might be some issues having to do with differential heating that could crack the tube.

Hard to see how it could do anything to change emissions.

Most "black marker" inks are actually transparent to infrared and probably won't do much to change cooling, and like I said I cannot see how it could affect emissions at all.

The marker ink might not stand up to long-term heat or shield insertion very well. When I've seen people mark their own tubes (often good/bad or ranking for emission/transconductance) it was with paint and they put little dots on the top. Tim.

From r390radio at gmail.com Fri Dec 16 14:59:09 2005
Subject: [R-390] OT - Klingon 390A Front Panel Drawing

Guys, a while back when the panel thread was going on, someone made an offhand comment about a front panel in Klingon. Even meter scales are in Klingon.

Well.... I was bored the other day. I don't know Russian, but I did find several alien fonts in my collection. Those I can fake. Please see the URL below.

http://www.fernblatt.net/A/frontpanel/ 73 Tom NU4G

From n4buq at aol.com Fri Dec 16 15:05:48 2005
Subject: [R-390] OT - Klingon 390A Front Panel Drawing

Gotta love the manufacturer's logo on the tag! Barry - N4BUQ

From b_hagen at sbcglobal.net Fri Dec 16 15:19:14 2005
Subject: [R-390] Black Marker on Tubes

The cathode & plate will never know. Bruce

From greybeard5150 at sbcglobal.net Fri Dec 16 15:23:45 2005
Subject: [R-390] OT - Klingon 390A Front Panel Drawing

I could read it. I'm starting to be concerned....

From Craig.Anderson at saintpaul.edu Fri Dec 16 15:35:49 2005
Subject: [R-390] RE: TM 11 4000 Manual

I have an original TM 11 4000 manual and I could scan it in on our professional tabloid scanner (13" x 19") plate size. It is an excellent resource for trouble shooting as it uses the R-390A as the example in the receiver section of the manual complete with schematics. I let K5?FF in Louisiana borrow it to scan the pages and when the manual was returned to me the spine was cut off so it would be easy to re-scan. Craig W9CLA

From _dave.f at mail.com Fri Dec 16 16:00:05 2005
Subject: [R-390] RE: TM 11 4000 Manual

I have access to a sheet feed 11"x17" scanner and Textbridge Pro as well. The scanner is probably too coarse for pictures but great for OCR. I'd be willing to help in whatever capacity. I can type pretty fast if restroke is needed, (but not over 60WPM cuz I've got GreenKey's disease. :) I don't have a copy of TM 11-4000 however. Dave,WW8S

From n4tua at aol.com Fri Dec 16 16:09:37 2005
Subject: [R-390] What are these?

Hello Friends,

I have picked up some IF transformers that look like Collins or similar. The number is 278-0104-009. Does this ring a bell with anyone? Thanks, Collin

From crips01 at msn.com Fri Dec 16 16:33:16 2005
Subject: [R-390] storage question

This does not concern my R390A but other vintage electronics I have, test gear and some non-operational receivers. I need to move them into my un-heated garage. I am not so worried so much about the Military gear but there is some non milspec test gear. The temperatures at this time of the year can go to 20 below zero F but normally will stay above zero F. Will storage at such low temperatures harm these old rig's. Ken de W7ITC

From barry at hausernet.com Fri Dec 16 17:31:42 2005
Subject: [R-390] storage question

Chances are the low temperatures won't hurt anything, but the changes in temperature at certain times of the year with the combination of high humidity may result in condensation. With commercial gear (and some military) the moisure from condensation may contribute to surface corrosion.

I would suggest, if possible, sealing in plastic bags in dry conditions with some dessicant bags tossed in. Not sure where to buy new ones, but the old ones from mil packing can be rejuvenated by drying slowly in an oven. When sealed in with the equipment the dissicant will absorb out
any residual moisture.

On the other hand, maybe excessively low humidity will dry out your capacitors ;-) Barry

From Flowertime01 at wmconnect.com Fri Dec 16 18:34:14 2005
Subject: [R-390] For the r-390 wishlist Things for the R-390/URR

Barry,

I do like your aproach to your receivers. Roger.

From chacuff at cableone.net Fri Dec 16 18:38:19 2005
Subject: [R-390] storage question

I wouldn't do it.... Temps that low can cause the metals to shrink so much that I've seen paint damage. I think generally that 20 below would not be good for any of it. Cecil...

From Flowertime01 at wmconnect.com Fri Dec 16 18:52:54 2005
Subject: [R-390] storage question

Ken,

I have a restored Gurnow that wintered about 30 years in a Michigan barn. It has a wood case and steel chassis.

The cold did not do it any more harm than the flood waters did. You have to do what you have to do to save it from the dumpster. Put it up off the ground on a block or two. Roger KC6TRU

From redmenaced at yahoo.com Fri Dec 16 19:07:00 2005
Subject: [R-390] Troubleshooting "unrepairable" radios

wrote: > The standard first step in troubleshooting any piece of electronic equipment is to do a very thorough visual inspection.
++++++++
I agree, Cec.

That's why when we get an unknown radio the first thing to do is to clean it up, you can't do a visual inspection on a dirty radio! And tighten all the ground connections. Didn't I put that in the preface to the Y2K manual? Joe

From Flowertime01 at wmconnect.com Fri Dec 16 19:25:16 2005
Subject: [R-390] TM-4000 Project

David and Craig

Could you two Fellows swap some E-mail and arrange for a copy of TM-4000 to pass through a scanner. An OCR copy would be wonderful. Mostly we are not in the business of cutting and pasting text. So if we just had a readable copy we could send someone to read a few paragraphs from to help them with a problem would be a start. Once we get an electronic file copy you could send it to Al Tirevold and ask him to add it to the manuals on line at http://www.r-390a.net/ Once you Fellows got a copy to Al and he added it to the web page there will forever (OK a while) be a note that the document was Courtesy of you two fine Fellows. Craig Anderson W9CLA and David Freeman WW8S

We would always love you two forever as the Fellows that put that TM into the electronic domain for everyone to enjoy. Roger L. Ruszkowski

From r390radio at gmail.com Fri Dec 16 19:29:26 2005

Subject: [R-390] Re: storage question

Plain brown clay cat litter is a good desiccant. That's what "old fashioned" non-silica desiccant is. Dry a small coffee can's worth of clay by spreading out on a baking sheet or two and cooking in a closed oven at low heat for a couple days or longer. Pour into muslin bags and place in and around gear when packing.
The more the merrier as far as this goes. Unless the item is hermetically sealed, I'm not sure how long the desiccant will last so be sure to re-bake, renew and reseal on a regular basis. Not sure what the guidlines are on that. Tom NU4G

From Flowertime01 at wmconnect.com Fri Dec 16 19:32:55 2005
Subject: [R-390] Hunt is on for two more @RARE@ manuals

Fellows,

Clemens S.Ostergaard remembers two other manuals that we need to find, scan and post.

Hunting for a copy of STP 34-33T14-SM-TG 867-816-1008 " Troubleshoot the radio receiver 390A/URR to the faulty component"

Hunting for a copy of STP 34-33T14-SM-TG 867-816-1009 "Align the radio receiver R390A/URR"

Any one have a copy of either that we could scan? Thanks Roger KC6TRU

From mahlonhaunschild at cox.net Sat Dec 17 09:10:52 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals

I don't have either of these, but I do have a copy of MWO 11-5820-294-35/1, which is the MWO for the R-389, R-390, and R-391 to provide more adequate fusing (big whoop).

On a more interesting note, I also have a set of figures for TM 11-856/TO 31R1-2URR-154, which is the separate set of fold-outs for the R-390. I've never checked to see if they're all there; I suppose I should. If I had access to a big-enough scanner I'd scan 'em. regards, Mahlon - K4OQ

From fwbray at mminternet.com Sat Dec 17 12:40:08 2005
Subject: [R-390] More On Low Audio Problem

First, let me thank everyone who has replied both on and off list.

I think I have narrowed the problem down to the first AF amp/cathode follower. I would appreciate it if those who are more experienced that I with the 390A can confirm that I am on the right track.

I used an audio signal generator to ascertain that a signal injected at the local and line level controls seems to produce a normal audio output.

Using a VTVM, I confirmed that on there is an AC voltage on terminal 1 of the wide/sharp switch and that I can trace this voltage through the switch. Jumpering this voltage to terminal 6 on the switch seems to restore the audio level to approximately normal, or at least much closer to normal.

From looking at the schematic, I think that what I am doing is bypassing the first AF/cathode follower and going directly to the local and line AF amps.

Does this make sense? Thanks, Fred Bray KE6CD

From chacuff at cableone.net Sat Dec 17 12:53:58 2005
Subject: [R-390] More On Low Audio Problem

Fred,

In the wide position the response switch S-104 should be already shorting pin 1 to pin 6. If you are using a clip lead to connect pins 1 and 6 and it restores audio you have a bad contact on S-104 or a broken wire between pins 3 and 9.

Looks like you are close...

I didn't have a schematic for the 390A from the shop but used the pull out in the TM11-4000 that was already on my desk here in the house. I hope the designations are correct...I believe the schmatic to be. Cecil....

From chacuff at cableone.net Sat Dec 17 12:58:34 2005
Subject: [R-390] More On Low Audio Problem

Of course another possibility is that the switch is inadvertently in the sharp position which would yield low, strange sounding audio as described.... Just a thought.... Cecil...

From fwbray at mminternet.com Sat Dec 17 13:02:37 2005
Subject: [R-390] More On Low Audio Problem

I should have noted that it also works if I jumper terminals 1 and 4 of the switch. In the wide position terminal 7 connects to terminal 4. Jumpering from 1 to 4 works regardless of whether the switch is in the wide or sharp positions. TNX

From chacuff at cableone.net Sat Dec 17 13:22:12 2005
Subject: [R-390] More On Low Audio Problem

Fred,

I went and got the real live R-390A manual to be sure there were no pin designation issues and there weren't.

My drawing shows no connection between pins 7 and 4 except through a 470K resistor isolating those two points in the circuitry. (R608)

Jumpering between pins 1 & 7, and 1 & 4, is doing the same thing just on opposite sides of R608....basically bypassing S-104 which appears to be where you problem is! Cecil....

From chacuff at cableone.net Sat Dec 17 13:28:36 2005
Subject: [R-390] More On Low Audio Problem

Got a bit crosseyed....should have said 1 and 7 not 1 and 6.... Cecil...

From jmiller1706 at cfl.rr.com Sat Dec 17 13:44:41 2005
Subject: [R-390] More On Low Audio Problem

Ask yourself, what could have happened when the front panel was removed and replaced. There are large cable bundles that get flexed when you remove the panel. I have broken many wires going to gain pots in the process of removing the panel. Something could have happened to a wire on the audio pot of wide/narrow switch. Sometimes the twi multipin connectors to the AF module work loose. Hopefully a wire wasn't crimped under the panel when you replaced it. JM

From chacuff at cableone.net Sat Dec 17 14:01:31 2005
Subject: [R-390] More On Low Audio Problem

Fred,

I have been studying the schematic since we swapped some emails and went back and read your original post this morning to see what I had missed.

Here is what I see....

If you can trace a signal from pin 1 through the switch, which would be out pin 3 to pin 9 then out pin 7 which goes to pin 7 on V601B then through R608 at a lower level (about half I would expect) then back to pin 4 which is connected to pin 6 within the switch and out to both the Line gain and Local gain pots. It should work. The only thing in that signal path the switch and R608. You might check R608 and make sure it's not broken or way out of spec. By jumpering pin 1 to 6 you are bypassing the switch and R608.
Just some additional thoughts...

I have to leave to go to a church function but will be back in a few hours and I'll check on the groups input and your progress! Cecil....

From wa6knw at sbcglobal.net Sat Dec 17 14:07:06 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals (Mahlon Haunschild)

STP (STUDENT TRAINING PAMPHLET)
34 (SCHOOL CODE - INTELLIGENCE SCHOOL FT DEVENS)
33T14 (COURSE CODE - IN THIS CASE THE MOS 33T)
SM (SUPPORT MATERIAL)
TG (TRAINING GUIDE)
867-816-1008 (ITEM STOCK/ORDER NUMBER)

We need an ASA dude or dudette who may have a copy rat holed some place. The school at Ft Devens was moved to Ft Huchuca and I seriously any of this material made it there. Excepting, maybe,

someone decided to provide copies for historical reasons. There should be an archives section at the Intelligence School Library that may have this material. We need someone who has accsee to that library to see if this or other related documents are available for copying. RICH WA6KNW

From greybeard5150 at sbcglobal.net Sat Dec 17 18:10:43 2005
Subject: [R-390] Re: Fred's low audio & trouble shooting

As one of the 'electronically challenged' members of this esteemed group, I just want to say that watching this process of remote electrical problem solving unfold is absolutely fascinating. And I wish I could understand more of the process.

I live in Stockton, CA, and I've noticed that there are a few folks in this group that are also in the NorCal area. Should you know of anyone here in Stockton (preferably older, and retired like myself) that could/would be willing to be an elmer for me, by all means let me know. I've already got a URM-25d, and there will be an HP 410b here in a week or two. I sure do would like to learn the correct way to use them.
At 55 years old and being in a wheelchair, travel outside of Stockton just isn't feasible or practical for me. At this juncture in my life I now find myself in the unenviable position of hungering for the knowledge that my Dad had hoped to pass on to me some 40 plus years ago...but at the time I was more interested in working with wood, and building cars and motorcycles.

He was a master electrician/electrical engineer that was the Dept. head for the San Joaquin County Building Dept. for 20 years. He also taught electrical code and theory to apprentices for 25 years here at the local community college. There's a remote possibility that a few of you here on this list may have actually crossed paths with him by accident in the past. His name was Frank Catelli, and he passed away back in 1990. But I'm getting off track here....

If there's a tube-savvy elmer here in Stockton (with the patience of Job, LOL) that would be willing to take on an eager student in need of starting at the very beginning, please let me know. Thanks... ~ Quig

From fwbray at mminternet.com Sat Dec 17 18:18:47 2005
Subject: [R-390] Low Audio Problem Solved!

I finally discovered that the problem was with a broken wire to the local audio pot. The particular terminal is supposed to have two wires going to it. However, one had broken and had slipped up under the cable lacing where it was not readily visible. Since I could see a wire going to each of the three terminals, I thought everything was okay. Only by using the schematic and testing every pin on the connector did I discover that one was completely open. Jumpering the broken wire to the correct terminal on the pot restored the audio.

I still have to clean up the wiring. The last person who replaced the pots did a terrible soldering job, among other things. I have to decide whether just to fix this with the old pots or wait until the new ones I have on order arrive and swap them out.

Thanks to everyone who helped. 73, Fred KE6CD

From mhuss1 at bellatlantic.net Sun Dec 18 10:15:21 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals (Mahlon Haunschild)

Forwarded this to the Instructors at the School in Huchuca for action. I'll forward any replies.

From Flowertime01 at wmconnect.com Sun Dec 18 20:16:29 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals

Mahlon Haunschild,

Wander over to http://www.r-390a.net/ and look.

MWO 11-5820-294-35/1, which is the MWO for the R-389, R-390, and R-391 to provide more adequate fusing.

TM 11-856/TO 31R1-2URR-154, Separate set of fold-outs for the R-390. Mahlon - K4OQ,

-
Mahlon, are you willing to take them over to a copy center and have some good copies made to go into the mail?

Once you have a good copy we can find someone with a scanner that would take on the scan job of your copies. Then we can get them hung into Al's web page for every one to utilize. Thanks Roger.

From Flowertime01 at wmconnect.com Sun Dec 18 20:18:30 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals ASA school texts

Fellows,

I we do not get a reply from the school house, I will go over to the ASA pages and ask them if any one has a copy. Roger.

From fwbray at mminternet.com Mon Dec 19 05:01:41 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Have you been wondering what to do with the old brown and black beauties you take out of your R-390 or other old radios?

Take a look at item # 7376034900 at that well-known auction place. In no time you will be able to generate funds for another R-390 or 390A! 73, Fred Bray KE6CD

From mhuss1 at bellatlantic.net Mon Dec 19 10:22:52 2005
Subject: [R-390] Re: Hunt is on for two more @RARE@ manuals ASA school texts

I have a 33 Instructor checking the Schoolhouse Library. He recalls that the Library decided to destroy all retired documents and handouts during the move from Ft. Devens to Ft. Huachucka. Will get back to me soon. You might want to go ahead and hit up the ASA pages now.

Also, right now, I am laid up until Jan 26th after an operation. I am not the best typist, but will volenteer

to proofread and correct any OCR files sent to me.

From dhallam at rapidsys.com Mon Dec 19 13:22:18 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Don't laugh. I have sold some of mine on that place. One lot went to Japan. I have never tried selling used ones though. I guess I should dig out some of the old ones and try to sell them too. Mine have longer leads than those in the picture David KC2JD

From fwbray at mminternet.com Mon Dec 19 14:33:29 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Be sure to list yours under musical equipment. For those that came out of R-390's I guess you could advertise them as used mil-spec capacitors.

In the present case, at least the seller is listing them "as-is". One wonders how they would be described if that well known seller of "mint" R-390's was holding the auction. Fred KE6CD

From jdkopke at cablespeed.com Mon Dec 19 13:44:13 2005
Subject: [R-390] Sunaire GSE-924

I recently purchased a Sunair GSE-924, it is an exciter (2 m/w). transmitter (100 Watt), fully synthesized stand alone rig that is operational from 1.8 thru 30.0 MHz.(a nice companion for my R390A). My problem is that there is no information with it, and it has a 9-pin power plug, that could be ac/dc/12vdc/24vdc/120vac/240/ac, I need at least a schematic to power it up to test it before I pay $ 90/100 dollars for a factory manual, and then spend more for the correct Amphenol Plugs.

I would be happy to compensate anyone for this information. (Yes, my preference would be a T-368, but I haven't seen any lately, and my suspicion is that they may be pricy.) Im new to this and will gladly accept constructive criticism. (Maybe I should not have said that.)

I read the R-390 Mail daily and am indebted to all contributors, although some of the terminology is confusing, such as " The R-390 puts out like a Victory Girl", in 1945 , I was 2- years old, too young, to assign a comparable Value. Many thanks for such Great Information, and also to anyone that can give any direction. john kopke

From JMILLER1706 at cfl.rr.com Mon Dec 19 13:53:05 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Don't forget item 4426014266 which he is also selling, pickup only!

From dhallam at rapidsys.com Mon Dec 19 14:15:19 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

I guess I should dig through my boxes of old tubes and see if I have any 6L6 or KT-88. I think they are bringing a fortune from the audio crowd too. David KC2JD

From richardlo at admin.athabascau.ca Mon Dec 19 14:53:51 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

wrote: > Be sure to list yours under musical equipment. For those that came out of > R-390's I guess you could advertise them as used mil-spec capacitors.

That is rediculous! I am sure that the audio community knows that the military only needs communications grade audio so obviously a mil-spec capacitor would be designed with C message weighting built in.

I better stop reading my email for a few days. Richard Loken VE6BSV

From b_hagen at sbcglobal.net Mon Dec 19 16:07:34 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Wondering about Mil Spec on Black Beauties. During that era I was involved with a rather large radio/tv service companies and we replaced a lot of them. Looked the same, failed the same, (are the same. Mil spec or not?). The audiophiles would probably fault them because the colored bands around them choke out the audio. Glad my 390 has VQ's. Bruce Hagen

From tfrobase at kitparts.com Mon Dec 19 21:52:00 2005
Subject: [R-390] What To Do With Your Old Capacitors Only Slightly OT

Speaking of old capacitors, I replaced another C-327 100PF in an EAC radio.

Interesting candidate for an eBay sale, hi hi, after I replaced it I checked the capacity on my Tektronics 130, 100PF, just like the label said, put 1000 volts across it and did not leak, guess it just does not like to resonate at 17 MHz, go figure. I guess I could put it on the 250 Boonton to see where it does resonate. An interesting failure mode ... Tom, N3LLL

From future212 at comcast.net Mon Dec 19 22:57:50 2005
Subject: [R-390] Cosmos PTO

Hello,

Is there anyone in the group that could take a high resolution picture (jpg) of the label on a Cosmos PTO. Both of the PTO's that I have are Cosmos PTO's from Fair radio (blue stripppers). the labels are almost beyond recognition. I plan on making new labels.

Thank you in advance for anyone with a Cosmos PTO and the time and digital camera to take a picture. 73's DW Holtman WB7SSN

From vk2abn at bigpond.net.au Tue Dec 20 01:44:45 2005
Subject: [R-390] Training manual

I think that I have a copy of the training manual that is already scanned to a disc, I am on broadband so I could send it to someone , Regards Bernie n

From tfrobase at kitparts.com Tue Dec 20 08:33:07 2005
Subject: [R-390] Cosmos PTO

Here you go ... Tom, N3LLL http://www.kitparts.com/misc/cosmos.jpg

From _dave.f at mail.com Tue Dec 20 11:55:37 2005
Subject: [R-390] Training manual

I'd like to take a crack at OCR'ing this manual. Can you send it to me? If it's over about 5Mb I'll have to give you another e-mail address or we can piece meal it. Dave, WW8S

From JMILLER1706 at cfl.rr.com Tue Dec 20 12:02:46 2005
Subject: [R-390] Training manual

If you have a Yahoo account you can upload and download very large files using "Yahoo Briefcase" at http://briefcase.yahoo.com/bc//home .... without clogging email systems. It's very easy to sign up, no cost.

From dmetz at ntelos.net Tue Dec 20 21:01:05 2005
Subject: [R-390] power plugs 390's? 392's

I realize this might seem inappropriate but people are always looking for power plugs for the 392 and 390. This sure looks like the real deal.

http://cgi.ebay.com/4ft-military-ground-radio-cable-cx-4720-jp2746_W0QQitemZ6581044228QQcategoryZ588QQcmdZViewItem look at his store, he has a lot of "suspicious" plugs between pages 16-19. hope this helps. 73's dave

From vk2abn at bigpond.net.au Tue Dec 20 23:59:48 2005
Subject: [R-390] Training manual

Jay I sent various files to FRED at radio@urlhits .com & mparkinson1@socal.rr.com they can be the US distributors hi the training manual is pretty basic but there were about 4 other manuals which I thought might be interesting, merry xmas to everyone & 73

From odyslim at comcast.net Wed Dec 21 10:05:46 2005
Subject: [R-390] corroded tube pins

I bought some " NOS " OA2's on ebay. I know, you get what you pay for. Anyway, every pin on every tube is heavily corroded. Usually, I scrape them off but I bought 11 of them and was hoping for an easier solution.

I wonder if there is any type of solution one could soak the pins in to remove the corrosion? Baking soda and water ? Thanks, Scott

From mdmerz at verizon.net Wed Dec 21 12:41:10 2005
Subject: [R-390] corroded tube pins

Scott, I suggest shoving them in and out of a loose tube socket a few times, applying a little deoxit to the tube socket and putting one in the deoxit laden tube socket and taking it out and testing it on a tube tester. If it tests ok, that may be all that's necessary. If the pins are so badly corroded that the vacuum is compromised, you'll know right away. Good luck, regards, Dan.

From greybeard5150 at sbcglobal.net Wed Dec 21 15:08:50 2005
Subject: [R-390] Re: corroded tube pins

This offered as a possible 'wives tale' solution and NOT from a scientific viewpoint. I'm hesitant to offer this, and I hope I'm not making myself appear foolish by posting.

You might also try bundling them together with a heavy rubber band and then standing them up in a shallow pan with Coca-Cola in it. My wife has used this trick on various things over the years without harming the base object. I have also seen something on TV about it. As I recall it has to do with a very mild acid contained in the Coke formula. ~ Quig ~

From b_hagen at sbcglobal.net Wed Dec 21 16:20:45 2005
Subject: [R-390] Re: corroded tube pins

And you do not have to waste the Cola. When the tube pins are clean pour into a glass with ice and add enough 180 proof rum to sanitize and flavor. Yes, I agree that coke will probably clean the pins. It's a very mild dose of phosphoric acid. Bruce

From bill at iaxs.net Wed Dec 21 16:25:59 2005
Subject: [R-390] Re: corroded tube pins

The mild acid is carbonic acid, from the CO2 added to the flavored water to make it tickle. Any carbonated beverage will work.

Does it work on corroded tube pins? Depends on what corroded them. Pretty sure the pins could fall off without affecting the vintage vacuum.

Anybody know the base metal and plating of tube pins? It probably varies with the vintage. May the sun rise higher in the sky for the next six months, Bill Hawkins

From b_hagen at sbcglobal.net Wed Dec 21 16:51:41 2005
Subject: [R-390] Re: corroded tube pins

Hi Bill:

Never thought about carbonic. Maybe it's the combination of the two that makes it work. Bruce Hagen

From Flowertime01 at wmconnect.com Wed Dec 21 17:07:23 2005
Subject: [R-390] Training manual

Fellows,

I have the following mail from the boatanchor pages. Are 5651 the regulator tubes used in the R390?

I found the box marked 12AX7's (good news), what was in there was 20 nos mil pkg. RCA JRC 5651's (bad news). Sorry guys, I should have looked first before I sent my first message. Anyone have a use for these? $2.00 ea plus postage or $30.00 for all 20 and I'll pay for shipping in the lower 48. Requests for all 20 take first preference. I do not have a listing for testing these on my Hickok 534 so they are as is and appear to be NOS. John Flood KB1FQG

Subject: [R-390] Re: corroded tube pins
References: <004301c60675$22d89f40$0500a8c0@darius.domain.actdsltmp>

The PINS mady be of a Tungsten or Tungsten alloy. I've run across the same corrosion or is it severe oxidation. In those cases I have used a fine wire bush (not those cheap brass on that you find from abroad), but thie good high density ones that are small on a wooden handle. It is still difficult to reach the inside area of the tube pins, in which case mild scrapping with a X-ACTO Knife blade, Razor Blade, or I use a Medical Scapple which also does the trick. Just scrap gently at an angle as not to gouge or nick the pins. Merry Christmas, Great Joy Happiness and Pprosperity & Good Health to ALL. It's Been a FUN YEAR with all the great lists, and comments. 73 Glen Galati, KA7BOJ

From chacuff at cableone.net Wed Dec 21 18:44:59 2005
Subject: [R-390] Training manual

Regulators in the R-390/URR are 6082's... Cecil...

From jamminpower at earthlink.net Wed Dec 21 19:16:05 2005
Subject: [R-390] Training manual

It uses two 5651 tubes (V608 and V609) in series to set the voltage. Then it uses an active series regulator circuit employing a 6BH6 as the error voltage amplifier (V607) followed by two 6082 triodes as cathode followers (V605, V606).

The 5651 is sorta like an 0A2 or 0B2 except that the voltage is supposed to be more precise. James A. (Andy) Moorer www.jamminpower.com

From chacuff at cableone.net Wed Dec 21 20:13:20 2005
Subject: [R-390] Training manual

Sorry about that I thought the 6082's were the regulators...didn't go look it up. I know they are the ones that generate all the heat! Cecil....

From vk2abn at bigpond.net.au Wed Dec 21 20:24:51 2005
Subject: [R-390] Training manual ect.

I guess that the Info I made available has been disseminated and read what did you All think about it ,its info that I have collected over many years mostly off the Net, but sights come and go, quiet often I check something on the favourites list and its no longer available so I tend to download onto a disc every new thing that I find , I thought that the training manual was a bit basic but I guess that the services had to start somewhere Hi the min performance forms ect are interesting as are the tags for recording same which I guess would have been kept in the depot until the radio reappeared for service , and interesting about Parasitic oscillations in the rf stage ect also, xmas greetings to all 73 from Oz.

From dsmaples at comcast.net Wed Dec 21 20:58:15 2005
Subject: [R-390] Re: corroded tube pins

All: As I recall it's carboNic acid (NOT carboLic acid, which is terribly powerful).

Canada Dry seltzer water has the same stuff in it, without the sugar and caffeine. Dave WB4FUR

From: w5or at comcast.net (w5or@comcast.net) Date: Wed Dec 21 21:04:26 2005
Subject: [R-390] FW: Troubleshooting Question

Forwarded for Tom who is having posting problems. Replies should go to the list or to Tom mailto:r390a@bellsouth.net

———

Troubleshooting Quiz. (quiz?)

One of the radios in the stable an AGC problem. On strong AM signals, depending on the modulation, it gives me an an AGC response. On certain types of music/voice - I listen to talk radio quite a bit - it clips on peaks, very quickly dumps AGC, momentarily increases gain then quickly settles back to where it was. Again, this only happens with certain voice types, it doesn't happen with most types of music, it usually doesn't happen with rapid Spanish speech. Do I really have a problem, or does this radio have Dallas' mod installed? It seems to copy SSB very well compared to the other radios.

I've not removed the dust covers nor pulled the IF deck to confirm this, but monitoring the AGC line shows my ears are correct. I've only used this radio a few times since I've had it - and only on the hand bands. I don't believe I've installed the Langford mod in any of my other radios, so I'm not familiar with it's behaviour on strong AM.

Merry Christmas All! May Santa leave each of you a Helena Rubenstein Tom NU4G

From barry at hausernet.com Wed Dec 21 21:19:38 2005
Subject: [R-390] Re: corroded tube pins

Phosphoric acid is the stuff used to prep bare steel before applying a primer coat. It micro-etches the surface so the primer will grab. Nowadays, they often use self-etching primer.

That's also the incredient in Coke, Pepsi, and other soft drinks that helps eliminate nausea. In the old days, the soda fountains (and drug stores, etc.) offered "phosphates", quite popular with the ladies.

I generally find that DeOxit does a good job on crusty tube pins. Barry

From leslocklear at cableone.net Wed Dec 21 21:24:09 2005
Subject: [R-390] FW: Troubleshooting Question

If it does have the Lankford mod, simply back off the rf gain a tad. Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From greybeard5150 at sbcglobal.net Thu Dec 22 01:56:12 2005
Subject: [R-390] Mother of all HF R390 multi-couplers

A week or two ago someone on THIS reflector was looking for a high capacity multi-coupler. Well here it is: #5845333692 at the epay place. If I could remember who it was I wouldn't have posted here, but my remembery isn't what it used to be...

It was hard to control myself, and keep from hitting that cursed 'Buy It Now' button, and I don't even NEED it. I'd be willing to bet that a few of you could use it though. It really is an incredible work of art. ~ Quig ~

From mhuss1 at bellatlantic.net Thu Dec 22 21:21:08 2005
Subject: [R-390] Nuvistaplug?

Here is one for all the experts. A plug-in modification for SP-600's was the Nuvistaplug. This was a replacement for the first RF amplifier in SP-600 that substituted a pair of 6DS4's in a cascode circuit. The resulting 6 to 9 dB increase in Signal to Noise level made the SP-600 sound like a new receiver. My brother recalls that there was a similar modification using a 6CW4 for the R-390A, popular with MARS operators. I happened across the schematic today, and it looks like with changing one pin in the Nuvistaplug, you could drop in the replacement for the 6DC6. This should increase the signal to noise level of the first RF Amp. So has anybody even heard of this being attempted?

From: "DQ" <greybeard5150@sbcglobal.net> Sat, 17 Dec 2005 15:10:43 -0800 (PST)
Subject: [R-390] Re: Fred's low audio & trouble shooting

As one of the 'electronically challenged' members of this esteemed group, I just want to say that watching this process of remote electrical problem solving unfold is absolutely fascinating. And I wish I could understand more of the process.

I live in Stockton, CA, and I've noticed that there are a few folks in this group that are also in the NorCal area. Should you know of anyone here in Stockton (preferably older, and retired like myself) that could/would be willing to be an elmer for me, by all means let me know. I've already got a URM-25d, and there will be an HP 410b here in a week or two. I sure do would like to learn the correct way to use them.

At 55 years old and being in a wheelchair, travel outside of Stockton just isn't feasible or practical for me. At this juncture in my life I now find myself in the unenviable position of hungering for the knowledge that my Dad had hoped to pass on to me some 40 plus years ago...but at the time I was more interested in working with wood, and building cars and motorcycles.

He was a master electrician/electrical engineer that was the Dept. head for the San Joaquin County Building Dept. for 20 years. He also taught electrical code and theory to apprentices for 25 years here at the local community college. There's a remote possibility that a few of you here on this list may have actually crossed paths with him by accident in the past. His name was Frank Catelli, and he passed away back in 1990. But I'm getting off track here....

If there's a tube-savvy elmer here in Stockton (with the patience of Job, LOL) that would be willing to take on an eager student in need of starting at the very beginning, please let me know. Thanks... ~ Quig ~

From: "Frederick Bray" <fwbray@mminternet.com> Sat, 17 Dec 2005 15:18:47 -0800
Subject: Re: [R-390] Low Audio Problem Solved!

I finally discovered that the problem was with a broken wire to the local audio pot. The particular terminal is supposed to have two wires going to it. However, one had broken and had slipped up under the cable lacing where it was not readily visible. Since I could see a wire going to each of the three terminals, I thought everything was okay. Only by using the schematic and testing every pin on the connector did I discover that one was completely open. Jumpering the broken wire to the correct terminal on the pot restored the audio.

I still have to clean up the wiring. The last person who replaced the pots did a terrible soldering job, among other things. I have to decide whether just to fix this with the old pots or wait until the new ones I have on order arrive and swap them out.

Thanks to everyone who helped. 73, Fred KE6CD

From: "Mark Huss" <mhuss1@bellatlantic.net> Sun, 18 Dec 2005 10:15:21 -0500
Subject: Re: [R-390] Re: Hunt is on for two more @RARE@ manuals (Mahlon Haunschild)

Forwarded this to the Instructors at the School in Huchuca for action. I'll forward any replies.

Flowertime01@wmconnect.com Date: Sun, 18 Dec 2005 20:16:29 EST
Subject: Re: [R-390] Re: Hunt is on for two more @RARE@ manuals

Mahlon Haunschild,

Wander over to http://www.r-390a.net/ and look.

MWO 11-5820-294-35/1, which is the MWO for the R-389, R-390, and R-391 to provide more adequate fusing. TM 11-856/TO 31R1-2URR-154, Separate set of fold-outs for the R-390. Mahlon - K4OQ,

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Mahlon, are you willing to take them over to a copy center and have some good copies made to go into

the mail?

Once you have a good copy we can find someone with a scanner that would take on the scan job of your copies. Then we can get them hung into Al's web page for every one to utilize. Thanks Roger.

Flowertime01@wmconnect.com Date: Sun, 18 Dec 2005 20:18:30 EST
Subject: Re: [R-390] Re: Hunt is on for two more @RARE@ manuals ASA school texts

Fellows,

I we do not get a reply from the school house, I will go over to the ASA pages and ask them if any one has a copy. Roger.

From: "Don Reaves" <don@reatek.com> Date: Fri, 23 Dec 2005 02:52:37 -0600
Subject: [R-390] new scan

Here's my draft scan of the parts manual for the R-390/URR. I have never seen this online anywhere else so perhaps this manual is uncommon. I'll redo this when I get access to a better scanner.

http://militaryradio.com/manuals/R-390/TM11-5820-357-35P.pdf

Don Reaves W5OR@reatek.com W5OR@comcast.net

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 23 Dec 2005 08:22:34 -0500
Subject: Re: [R-390] Nuvistaplug?

wrote: Never heard of this one. Any chance you could scan the circuit and make it available?

The instalation manual and schematic is here: http://www.mines.uidaho.edu/~glowbugs/receivers.htm see item number 7. I figure you can either use it unmodified (will have to substitute 6CW4's for the 6DS4's, because the 6DS4's won't handle the higher B+ voltage) and sacrifice AGC control of the first RF Amp, or you can rewire pin 8 of the first 6DS4/6CW4 to connect to the unused pin 2 of the seven-pin plug to restore some AGC operation.

In 2004, W3CRR was going to build one, and wondered if there was any interest in copies.

Now, the 6CW4 has a higher noise than the 6DS4, but the 6DS4 is rated for only 135VDC plate voltage. Can any tube gurus out there tell us if using a 6DS4 as the first tube and a 6CW4 as the second would be safe? This might give a better noise figure than two 6CW4's. Further thought tells me that most receiver locations would have an ambient noise at their location to make this no real improvement except above 20 MHz.

From: Jack Absalom <kf4yio@charter.net> Date: Fri, 23 Dec 2005 09:06:51 -0500
Subject: [R-390] Merry Christmas

Hi everyone;

Just want to say Merry Christmas and Happy New Year to everyone on the list. Jack - KF4YIO

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Fri, 23 Dec 2005 09:27:06 -0500
Subject: RE [R-390] Nuvistaplug?

I've tried other tubes. I always go back to the 6dc6. It's resistant to overload especially on strong nearby stations. The nuvistor mod would work great for an r-390/sp-600 more or less dedicated to 14 mhz and above. A nuvistor would make a great 10 meter receiver. I use a 6dc6 in my sp-600 also. Just have to touch up the rf slug. ....Steve...N8YE

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 23 Dec 2005 09:42:20 -0500
Subject: Re: RE [R-390] Nuvistaplug?

I'd beleve it about the overload. Just wondering if theree would be a significant improvement in cases where this is not a concern.

From: "Kenneth G. Gordon" <kgordon@moscow.com> Date: Fri, 23 Dec 2005 08:45:34 -0800
Subject: Re: [R-390] Nuvistaplug? Other possible tubes.

wrote: The installation manual and schematic is here:
http://www.mines.uidaho.edu/~glowbugs/receivers.htm

I am thinking that a better, much lower-noise, Nuvistaplug could be made using a single 7963 submini dual triode instead of the Nuvistors.

The 7963 has far higher transconductance, 13000, than either of the two Nuvistors mentioned. However, its maximum rated plate voltage is only 100 VDC, so allowances would have to be made for that.
Go here: http://pw2.netcom.com/~wa2ise/radios/penciltubes.html

for details on submini tubes.

And thanks for the plug to the Glowbugs web site. I administer that. Ken Gordon W7EKB

From: "Kenneth G. Gordon" <kgordon@moscow.com> Date: Fri, 23 Dec 2005 08:58:03 -0800
Subject: [R-390] Another tube for a NuvistaPlug.

A PAIR of 7994 subminis would also make an excellent low noise front- end for a receiver. That tube has a gM of 18,000. Max plate voltage of 100 VDC again however.

BTW, filament requirements are 6.3 VAC at 350 mA for the 7963 and 6.3 VAC at 250 mA for the 7994. Ken Gordon W7EKB

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 23 Dec 2005 12:10:34 -0500
Subject: Re: [R-390] Nuvistaplug? Other possible tubes.

I thought about 7963's as well, but for two factors. First is that I don't know of a good way of reducing the 150 volt B+ to under 100 volts. The second is personal experence. Two receivers, part of the TRQ-23, that I worked on in the Army, used peanut tubes like the 7963. Every time I pulled them in for annual maintenance, I always had to replace several of the peanut tubes for low gain. It is like they don't last as long when you run them for any length of time. It could have been the receivr circuits were designed too critical. I don't know.

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 23 Dec 2005 12:13:43 -0500
Subject: Re: [R-390] Nuvistaplug? Other possible tubes.

Besides, the receivers (HF and VHF) were terrable. At least compared to the R-725's in the accompaning TRR-20.

From: "Drew Papanek" <drewmaster813@hotmail.com> Date: Fri, 23 Dec 2005 12:36:04 -0500
Subject: [R-390] RE: Nuvistaplug?

wrote: A plug-in modification for SP-600's was the Nuvistaplug. attempted?

Perusing the R-390 Final Engineering Report (at r-390a.net) I see where the Collins engineers tried a cascode circuit using a dual triode TV front end type tube. They found that the RF amplifier stage so configured had insufficient AGC control range.

Perhaps the 6CW4 is different; that tube was not available back in 1948. A cascode circuit using 6CW4's might have a comparable AGC control range to the 6DC6 circuit if the 6CW4 has a variable mu characteristic. I don't know what dual tiode types were tried at Collins nor do I have a set of characteristic curves for the 6CW4 to compare.

Maybe in our application we could tolerate less AGC control range.

That said, the 6DC6 circuit in a properly functioning R-390A can hear right down to the thermal noise level and no additional gain would be required. More gain would reduce reduce the radio's dynamic range (more tendency toward the dreaded intermod).

The R-390 and R-390A have quiet 6C4 triodes as mixers and do not need much RF amplifier gain to override the small mixer noise contribution. The SP-600 uses a 6BE6 pentagrid converter as a mixer; that is one of the noisiest mixers known to mankind. The SP-600 needs plenty of RF amplifer gain ahead of the mixer, particularly on the higher bands, so that signal can drown out the mixer noise. Drew

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 23 Dec 2005 17:06:21 -0600
Subject: [R-390] Test post do not read

This is a test post to the list. In case you read it, Merry Christmas. NU4G I'm going to see if I can post 3 times in a row

From: Flowertime01@wmconnect.com Date: Fri, 23 Dec 2005 21:07:54 EST
Subject: Re: [R-390] Mechanical Alignment Part 01 Front Panel Bushings (start)

Fellows,

For reading and editing. Thanks Roger.

Mechanical Alignment
01 Front Panel Bushings

Mark Richards asked; is there any tolerance for the front panel control bushings?

Once upon a time and some where in all the military specifications you know in your heart that some one specified exactly how much clearance every one of the bushing must have. Enough to allow the shaft to turn freely and not so much as to be excessive. As a shaft is hand rotated, it is unlikely you have a bushing with a hole worn to large.

Mark Richards asked; how do you replace front panel control bushings?

The bushing come in two sizes. There is a small bushing for the Bandwidth, BFO pitch and Antenna Trim shafts. There are larger bushings for the KC and MC change shafts. The small bushing are standard ¼ inch shaft extension bushings.

A suitable replacement is available for small parts houses. A potentiometer can be scraped to salvage the mounting bushing from it as a replacement part. The larger bushings for the KC and MC change shafts are somewhat rare. If you are short a large bushing, place the one you have on the KC change shaft. Several members on the R390 mail reflector know of limited parts. The inventory is always changing so ask the current members in a mail posting if you need a bushing. The larger bushings are not exotic and a reasonable bushing can be machined to fit. The bushing need not be stainless steal. A plastic bushing would give years of service.

The bushings have two problems. The shafts get burs on them that prevent the front panel from being removed and bushing bind after the front panel is replaced.

To disassemble the large KC and MC change shafts bushing in order to removes the front panel remove the knobs and then remove the retaining nut from the front of the bushings. Let the large bushing remain on the change shaft. If your receiver bushings are assembled with the retaining nut inside the front panel, reverse the bushing assembly the next time you have the front panel off your receiver. The KC and MC knobs have a clamp and sleeve design so as not to score the shafts and prevent the bushings from sliding off the shafts when the front panel is removed. Burs happen. Use a small file to remove any burs that prevent the bushings from sliding off the shafts. Burs are a repeat offence and you may encounter one any time you need to disassemble the front panel.

The antenna trim bushing should also be assembled with the retaining nut on the outside of the panel. The knob and bushing retaining nut can be removed to disassemble the front panel. The shaft has a flat milled on the shaft. The antenna trim knob should always placed on the shaft so the knob set screw rest on the shaft flat. This practice helps reduce bus on the shaft that hampers the front panel disassembly process.
The Bandwidth Select and BFO Pitch knobs and extension shafts are almost never disassembled. The standard practice is to loosen the clamp on the extension shaft and pull the shaft forward to release it from the IF deck shafts before the front panel is removed. The shafts float in the front panel bushings while the front panel is removed. The knob pointers are set by positioning the knobs and then tightening the extension shaft clamps onto the IF deck shafts. The knobs set screws on the extension shafts

generate burs on the shafts. These burs make setting the knobs on the shaft for exact alignment a problem. These burs also make getting the shafts out of the bushings a problem. The shafts can be filed to remove the high burs and allow disassemble.

Once you have these five major bushings, shafts, knobs disassembled the front panel bolts can be removed and the front panel dropped. Remember to also disassemble the dial lock before pulling on the front panel. The front panel is almost never "removed" as the wire harness to the front panel is still attached to many switched mounted on the front panel. However the front panel can be dropped. There are several maintenance actions that require the front panel to be dropped.

Once the front panel is dropped and alignment is not an issue of the moment the bushings likely run free on the shafts. If a bushing is binding some small amount of filing or use of emery stone will return the bushing and shaft to a free moving condition. You likely find you do not need to replace the bushings. The bushing only needs to be replaced if the threads on the bushing have become so fouled that the retaining nut can not be easily seated.

Bushing can be drilled or reamed out. Likely a bur on the shaft has been forced into the bushing and "turned" some metal thus causing the bushing to bind on the shaft. Cleaning the grim and bits out of the bushings will also helps. Some bushing have been squeezed out of round. If one of these bushings can not be reamed to run free, then by all means replace it.

All bushing should be assembled with the nut outside the front panel. Thus if a shaft binds in the bushing, the nut can be removed and the front panel dropped with the barrel of the bushing left on the shaft. With the front panel dropped the shaft and bushing can receive whatever maintenance is required to remedy the assembly problem. When reassembling the dropped front panel, leave the bushing nuts loose on the bushing barrels.

Mark Richards asked; what do we do for the worn bushings between the front panel controls (particularly the tuning knob) and the proper operation of the gearing?

With the following ideas YMMV and FWIW here are some thoughts.

Joe [name please] contributes

There are THREE bushings on the KC CHANGE shaft the one on the front panel should be left "snuggish" so the other two won't be bound by it. Also, that shaft is the one most likely to be bent, being that it is so far from the protective handles. On a total rebuild of the radio it should be removed and centered on a lathe to be checked for run-out, then straightened. This will make it run true, not be apt to bind and will help to keep the DIAL LOCK from binding and making that awful scraping noise so common on these radios.

Tom Norris contributes

Partially loosen all the front panel bushings before replacing the front panel to the shafts a bit of "play" so they'll be less likely to bind.

The sequence in which the front panel bolts are tightened will make a difference in the bushing alignment. Set the receiver frame on blocks so the front panel hangs free when reassembling the front panel. Leave the bushing nuts loose on the bushing barrels when first mounting the front panel. The IF deck green bolts can be loosened to shift the IF deck and improve the alignment of the extension shafts. The same can be done to the RF deck. RF deck alignment does not offer as much shift as the IF decks

appear to have. But it has been found to work. A little here and a little there and soon you have a smooth running assembly.

The bushing are "standard interchangeable parts" that are not perfectly centric. Thus the bushings are eccentric by definition. That hole is not exactly in the center of the mass. So some time rotating the bushing to one position will allow some more freedom than other positions. Almost always some combination of deck shift, front panel bolt insertion sequence and bushing rotation will allow all the shafts to operate very smoothly with bushing nuts tightened.

If you have a bent KC change shaft, you can operate the receiver with the front panel bushing nut loose on the barrel until you have time to get into a shaft bending maintenance period. The shaft may be straightened with out removing it from the RF deck. Do not strike shafts. A proper diameter tube of good length should be placed over the shaft and gentle (this is steel to be bent gentle) pressure applied to remove the bend as best as can be judged with available resources. Feel free to use all the resources available to you when ever necessary.

The most common problem is the MC shaft binds. There are two sources to this problem. The detent spring is often seated with two much force against the detent stop ring or the MC shaft bushing needs service. Service may be cleaning or adjustment. Often removing all the front panel bolts and reinstalling them will shift the front panel and provide less binding of the bushings.

These receivers are getting over a half-century old. If the bushing holes in the front panel needed filing, it likely has been done. Mostly getting every thing aligned to operate smoothly is just a mater of persistence. Knowing that the front panel and decks can be shifted gives the maintainer insight into the problem. Also knowing the bushing may be eccentric and rotating the bushing may provide a better fit can help the maintainer achieve a smoother operating receiver from a mechanical point of view.

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 23 Dec 2005 20:53:22 -0600
Subject: [R-390] This is a drill, do not reply

Really it's just a screwdriver, or maybe a socket wrench.

In theory the problems with my emails bouncing when sent to qth.net servers is solved. An R-390 Christmas Miracle? Perhaps it is. Merry Christmas, Cool Yule, etc

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 23 Dec 2005 23:23:34 -0600
Subject: [R-390] This is a drill, do not reply 3/3

made you look. Since this is #3, this is not a drill, it's a ratchet- saw.

Just testing to see how many, if any random posts will actually make it to the list. Merry Christmas All and thanks for your patience

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 24 Dec 2005 09:05:48 -0500
Subject: [R-390] Something in the RF deck breaking into oscillation...

On most bands my R-390A is breaking into oscillation during the first hour or so of warmup. After an hour, it's rare for it to do this.

An important clue is that as I rotate the "ANT TRIM" I can start/stop/ modulate the oscillation. It sounds sort of like a regenerative receiver as it breaks into/out of oscillation.

The gears/insulators in the "ANT TRIM" drivetrain are clean.

It's most likely to break into oscillation when "ANT TRIM" is peaked but sometimes it does it no matter what and other times (especially after warmed up) it never does it. It's only when it's going from stable to oscillating that the ANT TRIM has an effect.

Is this a common problem with a known solution, or am I gonna have to resort to shotgunning everything around the 6DC6 RF Amp? (I already subbed out the 6DC6 with no apparent change in symptom.) I do not have extender cables/etc for the RF deck so getting underneath is a rather laborious process and I don't want to do this more than once.

Looking at the schematic for bypass caps that might go bad and cause this I see

C227 - .047 as the cathode bypass. Is this a brown beauty? But being in the cathode bypass it seems unlikely to be causing oscillation.

C229 - 5000mmF as the screen grid bypass. I guess a ceramic disc?

I remember seeing three brown beauties in a RF deck - two as bypasses around the crystal calibrator, and a third somewhere in a mixer. So maybe C227 isn't a brown beauty... but then what is it? Tim.

From: K2CBY-Optonline <k2cby@optonline.net> Date: Sat, 24 Dec 2005 10:46:26 -0500
Subject: Re: [R-390] Mechanical Alignment Part 01 Front Panel Bushings (start)

Although it may have been said before, I always retighten the bushings as the last step in front panel reassembly. I tighten all the panel to chassis screws hard to establish the orientation of the front panel. Then I slide the bushings forward on the shafts through the panel and attach the nuts from the outside. After making each nut finger tight I verify that the shaft turns freely and then dog down the nut, starting with the kilocycle shaft. I check the free movement of each shaft before going on to the next.

Miles Anderson, K2CBY 16 Round Pond Ln, Sag Harbor, NY 11963 k2cby@optonline.net

From: "Jim Temple" <jetemp@insightbb.com> Date: Sat, 24 Dec 2005 12:43:50 -0500
Subject: RE: [R-390] Something in the RF deck breaking into oscillation...

I had this problem a couple of years ago. It turned out to be one of the caps on the rf deck not being properly grounded. After reworking all the grounds, I found that one of the ceramic cap grounds that is underneath one of the cans, was corroded. Tightening the lug on the can restored the ground, and solved the problem. So, the moral of the story is that these old r-390a's, especially the "massacre" ones, need at least a one time rework of most of the grounding points. Sincerely, Jim Temple Louisville, KY.

From: Joe Foley <redmenaced@yahoo.com> Date: Sat, 24 Dec 2005 09:58:46 -0800 (PST)
Subject: RE: [R-390] Something in the RF deck breaking into oscillation...

NUTS! You beat me to it.

Don't forget to tighten the tube socket bolts,..... ah, just go through and tighten everything! Joe

From: Terry Sellick <tsellick@ieee.org> Date: Sat, 24 Dec 2005 12:18:29 -0600
Subject: [R-390] Looking for R390A Dial Lock mechanism

Hi all,

I'm looking for the Dial Lock mechanism for an R390A. Does anyone have a spare or have any suggestions where I can get one? I have already tried Fair Radio.

Merry Christmas to all! Thanks & 73 Terry WA9TTY

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 24 Dec 2005 12:22:24 -0600
Subject: Re: [R-390] Something in the RF deck breaking into oscillation...

Be careful in tightening everything. I found, in the last night or so while working on my SJC project, that there was an insulated standoff on the back side of one of the screws that holds one side of a tube socket in place that was rotating while I was turning the screw top side. Luckily I took a look underside and found that before I turned it more than 10 or 15 degrees. Could have twisted off whatever was soldered to that point creating more work.

Bottom line is look at what is attached on the bottom side of what you are twisting on or damage may occur.

From: odyslim@comcast.net Date: Sat, 24 Dec 2005 19:17:24 +0000
Subject: Re: [R-390] Something in the RF deck breaking into oscillation...

I had the same problem, the plates in the antenna trimmer were corroded and rubbng one another.
Scott

From: Flowertime01@wmconnect.com Date: Sat, 24 Dec 2005 15:03:23 EST
Subject: Re: [R-390] Mechanical Alignment Part 01 Front Panel Bushings (rev A)

Miles Anderson, K2CBY

Thank you for the additional paragraph. watch for it the next time I post the full text. Joe says I need to do these post in parts because the full post is two large for Yahoo mail to receive. I can do that for every one so watch these post to come in parts.

Roger L. Ruszkowski AI4NI (was KC6TRU yesterday)

Although it may have been said before, I always retighten the bushings as the last step in front panel reassembly. I tighten all the panel to chassis screws hard to establish the orientation of the front panel. Then I slide the bushings forward on the shafts through the panel and attach the nuts from the outside. After making each nut finger tight I verify that the shaft turns freely and then dog down the nut, starting with the kilocycle shaft. I check the free movement of each shaft before going on to the next.

From: "Michael Murphy" <mjmurphy45@comcast.net> Date: Sat, 24 Dec 2005 16:55:59 -0500
Subject: Re: [R-390] Nuvistaplug?

Mark,

I don't know if anyone talked about the voltage situation. As far as voltage goes, the cascode circuit can be done in a parallel or series bias configuration with good results. In the parallel, the stages are usually cap coupled and each tube is given the full B+ voltage through a choke or tuned circuit. In the somewhat simpler series cascode configuration, sometimes preferred in VHF and UHF circuits, each stage gets around half of the B+. The series circuit is commonly used with bipolar and J-FET circuits as well. Mike WU2D

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sat, 24 Dec 2005 19:16:20 -0500
Subject: Re: [R-390] Nuvistaplug?

In that case, the 6DS4 or 7963 may well work. Now, if Anybody runs across a Nuvista-Plug, Stock number 5960-H00-9058, grab it so we can drop it into an R-390A and see how much improvement we get. I'm betting there will not be that much, but would be interested to find out. And if not, then one can always sell it to a poor SP-600 owner so that he can get reasonable performance out of his receiver;)

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sat, 24 Dec 2005 19:58:21 -0500
Subject: Re: [R-390] Nuvistaplug?

FOOOD...FIGHT!!!!

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 24 Dec 2005 19:40:35 -0600
Subject: Re: [R-390] Nuvistaplug?

Group,

Well whatever the SP-600 may lack in performance against the R-390A (the boys radio I'm told) it makes up for in it's tuning system, audio and classic looks.....we don't call any of them "Depot Dawgs" either do we Mr. Moorer. (does have a pedigree though!)

It's molded paper caps fail just as often as the ones in the R-390A and the government never set a mountain of them out in the weather for an extended period (that I've heard about anyway)....which has been blamed for the failures of those in the R-390A. Much scientific testing, such as boiling (or was it baking) and freezing of them many times over to simulate the SJC conditions has been conducted, as I understand it, to substantiate that conclusion. (results published elsewhere)

HA!....just a little Christmas Eve fun folks...they are both great radio's and I am proud to own several of each! Merry Christmas to all.... Cecil Acuff WB5VCE Gulfport MS (Katrina Central)

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sat, 24 Dec 2005 22:18:42 -0500
Subject: Re: [R-390] Nuvistaplug?

Oh, I could go on and on about the comparative performance of the R-390/R-390A as opposed to the Sp-600 (including you need 21 major changes to get it right!), but to be honest, I'm one of the guys that have been bidding unsuccessfully for an SP-600 on E-Bay, so I shouldn't talk. Indeed, the only reason I don't have one yet is trying to decide which of the 21 different models is best for MW DX'ing. I saw some down in the Air Force place, and was not impressed with it's ability to dig some very weak signals out of the noise that you knew were there. But for scanning for unknowns, it felt very good. A hassle converting the tuning to an exact frequency. So anybody want to sell me their #5 SP-600? Maybe give me a better idea of the differences in the various models off the group. P.S. Another writer sent me an e-mail at my direct address about the Nuvistaplug. Said that it gave his SP-600JX1 another 9dB S+N/N, dropping the noise floor to about equivelent to the R-390A, and he liked the broader slope of the filters. Gave it more of an R-390 sound.

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 25 Dec 2005 02:34:18 -0600
Subject: [R-390] More Ideas for the Y2.005K FAQ, etc

Some time ago someone -- was it Nolan? Someone put together a parts breakdown on Amperite Ballasts that showed the differences between a 3TF7, 3TF4, etc so folks could "decode" any mystery ballasts they might find out in the wild. Is that information still floating around somewhere?

More info as it pops through the cobwebs. :-) Tom NU4G

From: ToddRoberts2001@aol.com Date: Sun, 25 Dec 2005 13:06:17 EST
Subject: Re: [R-390] More Ideas for the Y2.005K FAQ, etc

writes: Some time ago someone -- was it Nolan? Someone put together a parts breakdown on Amperite Ballasts

Tom - About all the information you could ever ask for about the Amperite Ballast tubes used in the R-390A are located in the R-390A Pearls Of Wisdom pages. Here is a recap of the info -
Amperite numbering system in general (not consistent!)
First Digit - regulated maintain current in tenths of an ampere
First Letter - envelope type
Second Letter - not sure, version perhaps?
Last digit - threshold voltage in volts?
Thus 3TF7 = 0.3 ampere regulated maintain current range, T6-1/2 bulb 9 pin miniature, 7 volts threshold voltage

According to Amperite specs the actual regulated voltage drop range is from 8.6-16.6 volts, so the 3TF7 will try to maintain a regulated current of 0.3 amps (300 milliamps) within a voltage drop range of 8.6-16.6 volts. The voltage drop across 2 6BA6's in series drawing 0.3 amps will be 12.6 volts and with a 25.2 volt filament circuit the required voltage drop across the 3TF7 will be also 12.6 volts, therefore the 3TF7 will be operating right in the middle of its voltage drop range for optimal regulation.

We all may want to keep in mind the R-390A Pearls Of Wisdom pages so we don't needlessly repeat info that is already out there? 73 and Merry Christmas to All - Todd WD4NGG

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 25 Dec 2005 12:29:08 -0600

Subject: Re: [R-390] More Ideas for the Y2.005K FAQ, etc

I had thought I'd looked there first. Hmmm. Thanks Todd!!! Tom

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sun, 25 Dec 2005 16:46:53 -0600
Subject: Re: [R-390] Nuvistaplug?

Hey Folks,

Les Locklear can speak better to this...as can Andy and Al Parker but there aren't really 21 different models....I think there were just a group of different contracts of sorts over the years in the JX series and the JX numbers were not in order of manufacture. Just because it had a different JX number didn't mean it had a change to the circuit configuration. I think the JX-1 through JX-14 were pretty much the same then came the JX-17 which is know as the "Diversity" model and then back to the pretty much standard circuit configuration from that point on up to the top...which was what the JX-26 or 31 or something like that.....Then there was the VLF!

There were a few field modifications released by the military such as the variable IF gain control on the front panel which is a nice mod!

They changed from paper caps to ceramic caps at some point.

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If buying I would be more concerned about the condition of the radio than the model designation, but they are all getting more expensive for sure! I own a JX-1 and a JX-14 and I think the JX-1 is the nicer of the two and will probably be my keeper along with the VLF and the SP-600 Leary.

Those who are more knowledgeable in the models please correct me if I have led anyone down the wrong path! Cecil.....

From: rbethman@comcast.net Date: Sun, 25 Dec 2005 22:54:59 +0000
Subject: Re: [R-390] Nuvistaplug?

Hello All,

Just my $0.02 worth.

I've got one of the "infamous" Northern Radio diversity types of the SP-600.

I find it "very" nice, and it seems to hold its own with a well aligned and tubed R-390A. I don't know how or why. I only know that its own alignment is a royal pain, especially because of the changes done by Northern. Bob - N0DGN

From: Les Locklear <leslocklear@cableone.net> Date: Sun, 25 Dec 2005 17:35:17 -0700
Subject: Re: [R-390] Nuvistaplug?

I saw that remark earlier, but let him slide. He obviously doesn't know what he is talking about. And, I

have tuned up enough people this year, my quota is almost used up.

Actually there were over 40 different suffix numbers, the highest suffix number being the JX-39 which was built for the FAA. The last SP-600 series built was the JX-21A which had the product detector and 22 tubes vs. 20 in the standard models. Early versions didn't have a suffix number, simply marked SP-600JX.

A properly aligned and operating will hear anything you can hear on a R-390/URR or R- 390A/URR (see how simple that is) (for the NON-A crowd). Those that whine about the frequency readout don't know the bands very well, I know exactly what I'm listening to when tuning with an SP-600. But, knowing the bands has become a lost art for the digital generation. Les Locklear Gulfport, Ms. Professional Curmudgeon Equal Opportunity Annoyer

From: Barry Hauser <barry@hausernet.com> Date: Sun, 25 Dec 2005 20:44:55 -0500
Subject: Re: [R-390] Nuvistaplug?

YBW the J-NON X series?

BTW - Merry X-mas and Happy X-Year.

BTW #2 -- anybody know the origins of the format "X-mas"? Betcha I do but I ain't tellin'. Barry

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sun, 25 Dec 2005 20:53:36 -0500
Subject: Re: [R-390] Nuvistaplug?

Oops, there was supposed to be a" ;) " at the end of that "(including you need 21 major changes to get it right!)" Sorry if I offended anyone. Indeed, as I said, I am looking seriously aabout getting one of my own, preferabilly one without Diversity. And for the people in the business of listening to the HF bands, the SP-600J series is perfect for scanning for new signals, and the R-390A for monitoring. As for difference in sensitivity, there are few people that can afford to live at the very quiet sites the professionals use.

Date: Sun, 25 Dec 2005 22:04:31 -0800 From: Dan Arney <hankarn@pacbell.net>
Subject: Re: [R-390] Nuvistaplug?

Les very well said. I think your last statement should for "The Digitally impaired". Happy Holidays to all. Hank KN6DI

From: Dan Arney <hankarn@pacbell.net> Date: Sun, 25 Dec 2005 22:46:22 -0800
Subject: Re: [R-390] SP-600's - was Nuvistaplug

Hi Al,

I agree if all of the cheap tight wads that read and make all of the comments would take the few shiny coppers out of their pants pockets for a week and convert them into Greenbacks for hams that are not so tight they are known as Green Stamps and mail them to AL W. just for one week a year that would make the kitty really "PURR".

That is an example of how many El Cheapo Tightwads lurking on the NET.

This is like Voting if you don't vote it does not count.

So you tight wads put up or shut up. Send Al A buck a year and he would be a happy camper/owner.

I learned a long time ago that their is no free lunch.

If you think it is cheap to keep al of this running, check on the price for a few T1 lines. modems, routers, raid drives, servers, electricity plus floor space and all of the person power to it all functioning. And sure the software is free, hold your breath.

By this time all of the tightwads have hit the big "D" key and off in dream land.

One of these days they will wall wake up and it will all be a thing of the past. "WHAT HAPPENED??" iF YOU DO NOT PAY YOUR PHONE BILL WHAT HAPPENED? Hank KN6DI

From: Tom Norris <r390a@bellsouth.net> Date: Mon, 26 Dec 2005 00:57:18 -0600
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Some of those earlier scans are quite clear as they were made from the 1956 manual. The images in the later manuals lacked the quality and clarity of the earlier versions.

I think that large version of the manual is on the "Pearls" site. Tom

From: Dan Arney <hankarn@pacbell.net> Date: Sun, 25 Dec 2005 22:59:10 -0800
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

Hi Tim, Now you come up to the surface after a bunch of us put a lot of effort into the Y2K. So I think if you added your expertise it help a lot. So good luck on the surgery and have at it. Hank KN6DI

Date: Sun, 25 Dec 2005 23:35:20 -0800 From: Dan Arney <hankarn@pacbell.net>
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

I now have a higher resolution digital camera and can make better pictures. Plus I have all of the modules out of frames in all sorts of condition. Hank KN6DI

From: ToddRoberts2001@aol.com Date: Sun, 25 Dec 2005 13:06:17 EST
Subject: Re: [R-390] More Ideas for the Y2.005K FAQ, etc

writes: Someone put together a parts breakdown on Amperite Ballasts that showed the differences between a 3TF7, 3TF4, etc

Tom - About all the information you could ever ask for about the Amperite Ballast tubes used in the R-390A are located in the R-390A Pearls Of Wisdom pages. Here is a recap of the info - Amperite numbering system in general (not consistent!)
First Digit - regulated maintain current in tenths of an ampere
First Letter - envelope type
Second Letter - not sure, version perhaps?
Last digit - threshold voltage in volts?
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From: "Barry" <N4BUQ@aol.com> Date: Sun, 25 Dec 2005 20:14:56 -0600
Subject: [R-390] BTW#2 (was Nuvistaplug?)

"X" is the Greek letter "chi", the first letter in the word for Christ. Many times, the early Christians combined "chi" and "rho" (the first two letters in the word "Christ") together to make a chi-rho symbol which was "code" for "Christ" and was used by early "underground" Christians. At least that's what my history books told me in HY-102. Barry - N4BUQ

From: "Al Parker" <anchor@ec.rr.com> Date: Sun, 25 Dec 2005 21:46:12 -0500
Subject: [R-390] SP-600's - was Nuvistaplug

Hi folks,

Well, Les is The Historian. He's put a lot of time into documenting SP-600's, and much if it may be found on The Hammarlund Historian website: http://www.hammarlund.info/

The "SP-600" page adresses a lot of the points that I guess Mark was wondering about, and Les has covered some of it in his post.

Les, Barry H, Andy M, & I try to keep things up there, tho' I have been remiss in putting some of Les's stuff there**, like pix of the Leary units he's owned. He sent me the pix months (yrs now?)ago**, I recently got a better scanner & will try to get a round tuit soon. I'd much rather work on old radios than on website stuff. I got some ads, pix, etc. on Hammarlund from the archives of the IEEE a few months ago, and will get back to work on it also.

One concern I have with the present website is that it is often very slow to load pages, particularly the info we have in the "H-Files" which consists of a lot of large files of scanned ads and product info. The web hosting is provided by Al Waller and his great qth.net, etc., and is free to users, tho' at least partly supported by users' contributions. It's hard to complain about something that's taken as free by most, supported largely by Al Waller & a small percentage of users. Al W. is the owner of "hammarlund.info" and the servers that it is displayed upon. He's recently posted 1 of his not very often requests for supporting contributions, I guess this is my pitch to help bring some in. 73, Al, W8UT resident grouch and apprentice annoyer

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Sun, 25 Dec 2005 22:00:30 -0500
Subject: [R-390] Amperite Ballasts

As a rule of thumb, the first number is the operating current in hundreds of mills, the second number is the minimum value of head voltage needed for the low end of the regulation range. The 3tf7 runs at 300 mills, a minimum of 19 volts is needed to hold regulation in the r-390a bfo & pto filament circuit.(6 + 6 + 7 = 19) The supply voltage in the r-390a is 26 volts. If the voltage drops below 19, the regulation ability goes below spec. I think Amperite has a web site and has a pdf file on ballasts. Some of the older octal amperites omit the letters and use only two numbers. ...73...Steve...N8YE

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Sun, 25 Dec 2005 22:19:20 -0500
Subject: Re: [R-390] Nuvistaplug?

Many years ago, I think it was Popular Communications magazine, I read an article on broadcast band dxing. The champion dx (the most qsls + countries) person used the Super Pro 600. I have the JX-17 model. **Raymond Moore's magazine "Communications Receivers" explains most of the differences in the models. Most all of the receivers have the same basic circuit and performance.** ...Steve...N8YE

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sat, 24 Dec 2005 22:18:42 -0500
Subject: Re: [R-390] Nuvistaplug?

Oh, I could go on and on about the comparative performance of the R-390/R-390A as opposed to the Sp-600 (including you need 21 major changes to get it right!), but to be honest, I'm one of the guys that have been bidding unsuccessfully for an SP-600 on E-Bay, so I shouldn't talk. Indeed, the only reason I don't have one yet is trying to decide which of the 21 different models is best for MW DX'ing. I saw some down in the Air Force place, and was not impressed with it's ability to dig some very weak signals out of the noise that you knew were there. But for scanning for unknowns, it felt very good. A hassle converting the tuning to an exact frequency. So anybody want to sell me their #5 SP-600? Maybe give

me a better idea of the differences in the various models off the group. P.S. Another writer sent me an e-mail at my direct address about the Nuvistaplug. Said that it gave his SP-600JX1 another 9dB S+N/N, dropping the noise floor to about equivelent to the R-390A, and he liked the broader slope of the filters. Gave it more of an R-390 sound.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 25 Dec 2005 22:24:14 -0500
Subject: [R-390] A modest proposal (was Y2K Addendum)

OK, my mind is oversimplistic this Christmas. But let me try to categorize the things running around in my mind:

1. The Y2K Manual is a nice electronic edition of what's in TM 11-5820-358-35 (Field and Depot Maintenance Manual), PLUS it includes many of the military-approved mods, PLUS it is cross-indexed in a few interesting ways (broken out schematics, etc.)

The scope of the Y2K manual, in other words, is almost the same as the scope of the military maintenance manual.

2. There are some misprints/typos/incorrect statements in the Y2K manual, most of which have been discussed here in the past or are self-evident on comparison with reality.

3. There are lots of other resources out there on the 'net and elsewhere which are very useful. BUT... if we tried to put them into a form like the Y2K manual it blows it out of the water in terms of size/weight/editing effort.

4. Some of the "other" resources consist of opinions and factoids which have been the subject of much discussion, and occasional vitriol, on this mailing list and in other places. Incorporating these might prove difficult (unless we've got a single editor with an iron fist, in which case we may all end up disagreeing with the result in at least one and maybe multiple major ways!)

So, MY opinions:

A. Limit the Y2K addendum to corrections to the current document and things that "should have been" in the field/depot maintenance manual. The one thing I can think of that "should have been" is the teardown/ rebuild of the RF deck mechanisms, ala Scott Seickel's very fine writeup and photos. And seeing as how Scott's writeup is so fine already, I don't feel that it should have to go through an editing process - just link to it.

B. For the things that are not clearly in the scope of the original field/depot maintenance manual, we already have this mailing list, it's archives, and Wu Li's selected and categorized extracts from the list. The wonderful things about these forms is that we don't have to all agree as to what goes in - skip the editorial process and give access to the raw stuff.

C. What would be useful is an electronic index to certain factoids to make it easier to dig up previously posted facts. Sifting through the mailing list archives can be difficult, as a month's worth of postings often tops a megabyte, and even Wu Li's Pearls is less straightforward to search than I'd like (popping open a dozen or so PDF's and searching each by hand is cumbersome at best.) I'm thinking that I should be able to type "C227" into a search engine and have it come up with past posts to this list and maybe into the Pearls that tell me more about C227, and even better (you know I'm dreaming now!) show it to me in the schematic and in a photo of the chassis.

Now Google does not serve as the electronic index: qth.net's mailing lists are excluded by QTH's sysadmins from being crawled by Google.

BUT I can imagine a search engine that does know about, for example, part numbers and common "noise" threads (e.g. ballast replacement!) and gets to what I want.

So am I too far off-base in my proposal? I happen to have some time coming up in mid-January, as I recover from a certain common elective surgery and will not be allowed to work on the house or haul around 80 pound radios, that maybe I could put something like my modest proposal of a R-390A specific search engine together. Am I onto a good idea, or a pipe dream, or worthless drivel? Tim KA0BTD.

From: Barry Hauser <barry@hausernet.com> Date: Sun, 25 Dec 2005 23:00:09 -0500
Subject: [R-390] Re: BTW#2 (was Nuvistaplug?)

wrote: > "X" is the Greek letter "chi", the first letter in the word for Christ.

First, my apologies for starting this OT thread, but it's timely and was provoked by the mysteries of the origins of the varous SP-600's -- I guess it was the X in JX what done it. When you get older, the mind wanders.

Before relating my theory, as you know, history is subject to change on short nor no notice. Seems to change every week on the History Channel.

I found on a website, the following:

"This abbreviation for Christmas is of Greek origin. The word for Christ in Greek is Xristos. During the 16th century, Europeans began using the first initial of Christ's name, "X" in place of the word Christ in Christmas as a shorthand form of the word. Although the early Christians understood that X stood for Christ's name, later Christians who did not understand the Greek language mistook "Xmas" as a sign of disrespect. "

This has the practice beginning in the 16th century -- I don't know about that.

Whenever it started, the practice of using "Xmas" has continued -- probably as a convenient abbreviation, but even that seems odd -- doesn't really save many letters, does it? No reason for it to be underground, not for a millenium and a half or so.

I suspect it may originate from the orthodox (current and ancient Judaism, the latter applicable to earliest Christians) of not spelling out the name of the "Chief Engineer of the Universe" in full in anything but a truly holy book or scroll. These were/are not ever burned, but must be buried with a special ceremony when they eventually wear out. However, other written materials are burned, so you might see --even on a web site or post on a list -- the spelling "G-d" which is an old-fashioned workaround.

Hmmmmm.... everything goes round and round and comes out here: How about "xtals" for crystals? I guess that's more Greek, eh? Hence, JX vs. J(non-X). I can see X and xtals for crystals, but the other one has always mystified me. Maybe an early attempt at political correctness?

Back to on-topic mode - sorry for the digression again. Barry

From: Barry Hauser <barry@hausernet.com> Date: Sun, 25 Dec 2005 23:49:29 -0500
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

Hi Tim & List

I agree mostly, but must disagree on corrections. The whole effort on the Y2K manual initiated from the idea to correct errors and inconsistencies, so it makes sense that if any remain, they should be corrected in place -- so the manual stands on its own.

There were a number of other significant enhancements vs. the military manuals that are generally available - -improved clarity of drawings, fresh color photos to make it easier to spot the components, etc. Some photos were never replaced and should be to make the work complete and consistent. Part of the idea was to have a manual on line that was at least edit-able -- not a pdf consisting of all grainy, un-modifyable gray scale images of old manual pages.

So -- Y2K should get a second revision to complete it and correct any remaining typos. (Are those typo's in the revision or original version?)

It would also be nice to incorporate Scott's gear train rebuild -- with his permission. That would add about 3 megs to the 14 or so of the current version. I would only suggest adding some labeling/callouts here and there.

Other stuff can be developed separately to avoid overburdening the Y2K manual. As I recall Wei Li offered to further develop his "Pearls", so maybe they can be reorganized and indexed. I'm sure someone can assist if he needs it.

Between those two things, and perhaps one other work, practically everything imaginable would be covered -- leaving some room for further activity on the reflector. like beating dead horses and deja vu all over again stuff. (Would be nice to have a digitized version (true text) of the TM-11-4000 receiver section.)

So, basically, I agree, primarily with the exception of the corrections. The Y2K is not carved in stone. At the same time, I would not recommend using it as the foundation of a new pyramid at Giza. Barry

From: Dan Arney <hankarn@pacbell.net> Date: Sun, 25 Dec 2005 22:04:31 -0800
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wrote: > Hi Tim, Now you come up to the surface after a bunch of us put a lot of > effort into the Y2K.

Again, I don't really want to change the scope of the Y2K manual. Correct and add things that "should've been there to begin with" (especially a geartrain rebuild with pictures), yes. Color photos are nice too (although the halftone B/W pics in the original paper ones I think are "good enough".)

Something that has always been my job over the years is preparing tables, charts, and graphics of very high information density. I think some of the tables in the Y2K manual are a little "heavy" on thick black lines around every box, and I think the smaller type, smaller format, and the dual-column text in TM 11-5820-358-35 are nicer for everyday use. But other than those typographical things and a few typo's and thinko's in the Y2K I think it was exactly on target.

> So I think if you added your expertise it help a lot.

Oh, I have very little R-390A expertise! All that I know, I learned from this list or the books, with just a little bit from the school of hard knocks. I've been around ham radio and tube radios for only a couple

of decades, and mil-spec surplus for only a few years, which puts me at a severe disadvantage compared to those who actually know what's going on!

But a "R-390(A) search engine" is I think within the scope of my ability, let me see if I can get a demo going before New Year's... Tim.

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 10:03:15 -0500
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

Hi Tim

That's what I suspected -- you're a bit out of synch. That was the original version -- about 4.3 megs overall.

The latest revision is on Al Tirevold's web site (where the Pearls of Wisdom reside).

Go to http://www.r-390a.net/

Then scroll down to "References" and click on it, Then scroll down to R-390A Y2K and click on it.

Or just try clicking on this: http://209.35.120.129/Y2K-R2/index.htm

It's available by chapter or as one big file -- actually now 16.7 megs. I suggest downloading it as one big file so you can check out the navigation/search capability.

It is referred to as the Y2K-R2. The much larger size does not reflect humongous additions... it somehow mushroomed when Al re-authored it in a newer version of Acrobat. It may well be when it is revised again, it will shrink down. Seemed to be some peculiarity of that Acrobat version as I recall.

A number of corrections were made and navigation was added or improved. Some additional photos were replaced with color and there may have been some other things which I can't recall.

As I've mentioned before, way back when we embarked on the manual the first time, someone suggested color photos. I thought that might just be fluff and would result in larger file size. However, color beats even the best quality original manual B & W's because it's easier to make out the overlapping components in shots of the undersides of the modules. Even with the best black and white/greyscale, if two adjacent components are about the same "grayness" they tend to merge together into an amorphous blob in black and white. I don't remember five years later who it was who clamored for color, but it was a good idea and not fluff at all.

You really need to download the newer version and take the time to go through it. While you're at it, make sure that all the typos you found in the old one were caught and corrected. Barry

From: "Cecil Acuff" <chacuff@cableone.net> Date: Mon, 26 Dec 2005 09:23:17 -0600
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

I agree....the Y2K manual should be revised as needed to improve accuracy where identified and to add usable information such as the gear train info and the parts of the 4000 manual that makes sense.

The manual is a reference and cannot be expected to be an all encompassing R-390A training manual. There are some pre-requisites to this course that one should possess from experiences elsewhere in life! Cecil....

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 10:30:47 -0500
Subject: Re: [R-390] Y2K - Photos

Just paging through the revised Y2K to check for unimproved photos.

BTW -- not all the line drawings were recreated. Those that were -- many -- show "Courtesy of Pete Wokoun" at the bottom. Quite a piece of work and never fails to amaze me. The not-redone drawings were good enough in terms of clarity and quality -- I think.

Here's a list of photos that were not re-done and should be:

Acrobat page -- Manual Page -- Photo #

147 - 6-6 - Fig 6-1
152 - 6-11 Fig 6-3
185 - 6-44 Fig 6-14
190 - 6-49 Fig 6-15
197-198 - 6-56 & 6-57 Fig 6-19 (Sheet 1 and Sheet 2)
199 - 6-58 Fig 6-20
202 - 6-61 Fig 6-23
203 - 6-62 Fig 6-24
214 - 6-73 Fig 6-25
215 - 6-74 Fig 6-26
220 - 6-79 Fig 6-31
221 - 6-80 Fig 6-32
223 - 6-91 Fig 6-36 -- placeholder for new exploded gear train diagram/photos -- this is where Scott's photo sequence would go if that's OK.

192 6-51 Fig 6-16 was re-shot by Hank Arney and re-annotated with callouts by Pete W as were Figs. 6-17, 6-18, Also see Fig 6-21 & 6-22. There were quite a few others. See the difference!

So, take a look at what those photos are -- shoot some new sharp color ones and then need someone to re-do the annotations/callouts. (Pete? -- since you're soooo good at it.) Barry

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 10:54:52 -0500
Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

Hi Cecil & gang

At first -- about 3-4 years ago -- I felt that it would be good to incorporate the whole R-390A section of TM-11-4000, but in retrospect don't think so.

I'll have to go take another look at it, but I suspect it would be cumbersome -- it has it's own page and figure numbering, and some of it is redundant with the maintenance manual stuff, so just dropping the

whole thing in would create a hodge-podge. It would be a piece of work to re-do and coordinate all the numbering and cross references. It is also a bit oddball in that it never mentions the R-390A by name and takes a different tack.

Better approach: Someone should digitize the R-390A section of the 4000 manual, including OCRed text and just pick up the figures as they are in place for now. As I mentioned before, OCRing the 4000 might be tough and call for a lot of editing and/or restroking.

Some of the figures may coincide with those that have already been recreated in the Y2K and can be subbed into the digitized 4000 book.

Once it is in computer form, we could lift some pieces and include within the Y2K if/where it makes sense. At that point -- with the 4000 online somewhere, it could have the benefit of a number of list members reviewing and recommending improvements and exerpting.

Make sense?

Also, the digitized 4000 could be expanded on its own to form "The R-390A Training & Tips Manual" or whatever, with a section derived from the Pearls of Wisdom and other things. Alternatively, it could be called the "Supplement" as someone else suggested, or maybe we go with Y2K Vol I, Vol II, etc. as if building an encyclopedia. (As with the Brittannica and others, after we get to 24 vols., then issue annual supplements ;-) Barry

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 11:37:13 -0500
Subject: Re: [R-390] TM-11-4000 Course Correction

I should have skimmed through the 4000 book before posting. I seemed to recall a whole lot more of direct R-390A material than is actually there -- unless I'm missing something.

What I see now is basically about 20-25 pages starting on page 66 dealing that applies to the R-390A, though not mentioned by name. It includes the standard simplified block diagram, a larger block diagram in the foldouts and a two-sheet schematic which is referred to as Fig 65. Offhand, looks like the same schematic as in the manual.

The troubleshooting text refers to specific component numbers on the schematics. If they match the schematic version in the Y2K, no problem.

So, the receiver portion may be short enough and easy enough to incorporate in the Y2K -- just about 20 pages of text. It might be better to restroke it rather than try to OCR which can produce a lot of difficult-to-find typos as well as other glitches.

Also, some listmemembers who are highly experienced should read through those pages before we even consider it - to make sure there is no misinformation. After all, this was part of a training course, made no mention of the R-390A and so some of the references could be off.

There may be some other pieces here and there. I seem to remember another section that I originally figured could be included, but not so now. There is, for example, a receiver "alinement" section, but it doesn't match the R-390A. Time for someone else to review the 4000..... Barry

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 11:59:59 -0500
Subject: Re: [R-390] Y2K Errata

I just revisited the Y2K Errata page on Al's web site.

Struck by a couple of things:

1. 12 pages of Errata and proposed additions. I don't know how much of this got resolved in the revision, however, David Wise pointed out some elements that seemed to be missing -- not only from the Y2K but other mil manuals (chart entries on coils or something like that.). I suspect not everything was resolved from this.

2. The major part of the errata was compiled by David Wise (thanks Dave!), some by Jim Bunting, Norman Ryan, Bruce Maclellan, Walter Wilson, Al Solway and others.

Anybody hear from Norman Ryan lately? I don't recall seeing any posts. Anyway, this work should be re-reviewed vs. the revised manual to see that everything got in, though I suspect the missing stuff may still be missing. No sense in re-inventing wheels until advantage has been fully taken of the work that was done. Barry

From: "pete wokoun, sr." <pwokoun@hotmail.com> Date: Mon, 26 Dec 2005 12:09:54 -1000
Subject: Re: [R-390] Y2K - Photos

Those color id photos in the Y2K-R2 could be redone a lot clearer as well as ones not done previously. If memory serves me, the originals were taken on film by Dan Arney. I scanned them prior to annotating them. That whole process fuzzied them up a little. If they were now done with a digital camera I bet they would look super. pete

From: Barry Hauser <barry@hausernet.com> Date: Mon, 26 Dec 2005 17:14:52 -0500
Subject: Re: [R-390] Y2K - Photos

Hi Pete

Hank says he has a new hi-res camera -- also has a large assortment of loose modules as models.

You might be able to lift the original callouts you did and superimpose over new photos, then make a few adjustments for accuracy of positioning of the pointer lines.

The photos I listed had not been done at all yet, so starting from scratch on those. Barry

From: DQ <greybeard5150@sbcglobal.net> Date: Mon, 26 Dec 2005 14:39:52 -0800 (PST)
Subject: [R-390] Al Waller & QTH.net

As one of those that's outside of the ham community and looking in, I have to agree with Dan Arney about the basic necessities of running the QTH operation. They have to be immense.

Al is doing nothing short of a phenomenal job of keeping this invaluable resource available to not only the ham community, but also the radio community a whole, and I certainly don't want to take the chance

of seeing it disappear.

None of us can automatically 'assume' that there will always be someone else to foot the bills, or do the work, or that it will always be here. We all know about that cliche' concerning the word 'assume'...

That's precisely why I sent my check for $25.00 about a week ago, and why I'm hoping that everyone else will stop whatever thay are dong for a moment, pull out that checkbook, and write that check (no matter what the size may be) and send it on to Al. We all need to let him know that the many efforts that he makes on OUR behalf are gratefully appreciated by us ALL.

It's the RIGHT thing to do... ~ Quig ~

From: "Leigh Sedgwick" <bipi@comcast.net> Date: Mon, 26 Dec 2005 14:54:29 -0800
Subject: Re: [R-390] Al Waller & QTH.net

Plus, right now, if you donate $25 you get 1 chance at winning a brand new Icom 756 Pro 3 do be drawn on Jan 15, 2006. Fifty bucks gets you 3 chances and a hundred bucks gets you 10. So, here is a chance to help out this great resource plus possibly win a great radio (ya, know, it's not an R390 or R390A but it is still a great radio). BTW, I have no affiliation with QTH.NET, just sent in a donation like others and love the service Al (and his helpers) provide.

Happy New Year 73 de Mike K7PI Mercer Island, WA

From: ToddRoberts2001@aol.com Date: Mon, 26 Dec 2005 18:30:13 EST
Subject: [R-390] Winter Transmission of SAQ 17.2 KHz?

I received a note from one of the directors at Radiostation Grimeton in Sweden that they are considering a wintertime cw transmission of SAQ 17.2KHz when conditions are optimum for worldwide reception on VLF. He asked if there was any particular day, time of day and month of year that would be best for radio amateurs and radio hobbyists to listen for their signal. I told him I thought a Sunday morning transmission would be optimum when most radio amateurs are home from work and radio noise is usually quietest on a Sunday and that January and February are the best months of the year for low static on VLF. Does this sound good to most everyone here? He said they have run into problems in the past with cooling water for the Alexanderson Alternator bearings being too chilly in the winter months but they are working to fix that problem. This would be a great opportunity for more hams worldwide to listen to their VLF transmission under optimum conditions. Now would be a good time of year to pull out your R-389s, SRR-11's, RAKs, RBAs and other cool tube and solid state VLF boat anchor receivers from storage to make sure they are still working properly! Conditions are great on LF/VLF right now! I will pass along any news if they decide to go ahead with a wintertime transmission! 73 Todd WD4NGG.

From: Dan Arney <hankarn@pacbell.net> Date: Mon, 26 Dec 2005 16:12:01 -0800
Subject: Re: [R-390] Y2K - Photos

Pete,

Just let me know what you need and when. Jan. is going to be bad for me as I have to move all of my shop, radios and parts. 73 Hank KN6DI

From: <fwbray@mminternet.com> Date: Tue, 27 Dec 2005 01:57:57 -0000
Subject: [R-390] Need Small Standoff

While replacing the black beauties in my IF strip, I damaged the small stand-off used to mount C-529. While I have mounted a terminal strip there as an interim measure, I would really like to replace it with the correct part.

Has anyone found a source of these? Many thanks. Fred Bray KE6CD

From: <peuhs@bellsouth.net> Date: Tue, 27 Dec 2005 10:19:24 -0500
Subject: [R-390] Are you there?

Hi---I am cut off due to spam, it appears...Can I get it cleared up? John (JLAP)

From: <peuhs@bellsouth.net> Date: Tue, 27 Dec 2005 13:28:05 -0500
Subject: [R-390] My thanks!

Dear Friends,

Thanks for the comeback on the issue of my failure to post...They were coming back with a sub-head of spam, and I was caught once before with a bit of spam running on my postings...

It appears it is cleared up, and I only wished to say at the time, that I had no more items for free at present..

I also am appreciative of the work going on for an update for the Y2K Technical Reference, of which I have a copy...and often read to confirm an item on the list ....

I also am present much of the time, though not active anymore, and am ALWAYS in awe of the excellent work and the strong sense of purpose from this group!! You will always have my deepest appreciation... My Regards, John (JLAP)

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Tue, 27 Dec 2005 15:50:47 -0500
Subject: Re: [R-390] Re: Y2K Manual Revision question

> Just as a matter of curiosity, can someone explain how to edit a .PDF file?

Generally PDF is a "Read-only" format, created by exporting from other formats.

There are some very excellent tools for manipulating and extracting data/text/images from PDF files, though. Among them are ghostscript (a command line tool even though there is a GUI front end that won't get you to where you want to go). and PDF::API2 (a set of Perl modules that are top-notch in their abilities). Not for the faint of heart! Tim.

From: Flowertime01@wmconnect.com Date: Tue, 27 Dec 2005 19:13:51 EST
Subject: Re:[R-390] More Ideas

Quig, I like your ideas. so is it? greybeard5150@sbcglobal.net? Quig?

Do you have a call? I am putting what I have out there. I am asking for edits and replies. When I get the names and calls I will add them.

I am a volunteer. I am asking for help. So be patient and we will see what we get for input. Were you going to add some text?

Thanks Quig. Honest I am trying and I am putting in what I have. Lets put your idea on the reflector and get every ones input to help. Roger.

From: Flowertime01@wmconnect.com Date: Tue, 27 Dec 2005 19:16:50 EST
Subject: Re: [R-390] Amperite Ballasts Info Needed again

writes: Tom, Good Idea. Who has a copy of this stuff

Some time ago someone -- was it Nolan? Someone put together a parts breakdown on Amperite Ballasts that showed the differences between a 3TF7, 3TF4, etc so folks could "decode" any mystery ballasts they might find out in the wild. Is that information still floating around somewhere? Roger.

From: Flowertime01@wmconnect.com Date: Tue, 27 Dec 2005 19:41:41 EST

Subject: Re: [R-390] A modest proposal (was Y2K Addendum)

Tim,

Could you teach the search engine to search http://www.r-390a.net/ ?

I have no intention of editing on the Y2K manual but some things come up on the Christmas wish list this year. And some Fellows thought it would be nice if the answer to the wishes were shared in the spirit of the season. So it was though that as some wish grants were made that Al's web page would be at least one place where the fulfilled wishes could be shared.

Already we see there are things hanging on Al's pages we have forgotten. Last week several documents come up on the wish list. The solution is not to cram everything into the Y2K manual. But we could try and cram it on or link it on a set of web pages.

I agree that being able to search a web page for bits would be helpful.

As we tried to add new pearls to the pages, I though we should keep the new stuff as searchable text. While Qth may not let crawlers in, I though Al's pages were searchable from the crawler. Again you have to know what to ask for before a search engine will give you a usable answer.

I was really hoping for lots of photos or links to photos. So many of the Fellows have done very nice modifications and some pictures of the work should be shared. I find the photos inspirational. I am wishing for a 2006 resolution from Al to work diligently at updating http://www.r-390a.net/. Roger.

From: "Les Locklear" <leslocklear@cableone.net> Date: Tue, 27 Dec 2005 18:47:38 -0600
Subject: Re: [R-390] Amperite Ballasts Info Needed again

I put up a ballast tube 101 several years ago, it is in the "Pearls" section here: http://www.r-390a.net/
Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From: Flowertime01@wmconnect.com Date: Tue, 27 Dec 2005 19:56:26 EST
Subject: Re: [R-390] Amperite Ballasts Info Thanks

writes: I put up a ballast tube 101 several years ago, it is in the "Pearls" section here: http://www.r-390a.net/

Les, Thank you Roger AI4NI

From: "Dave Maples" <dsmaples@comcast.net> Date: Tue, 27 Dec 2005 20:17:16 -0500
Subject: RE: [R-390] Winter Transmission of SAQ 17.2 KHz?

All: I'd love to do this on Sunday, but AM church interferes if it's between about 1230 and 1530Z. I'd not expect the world to adjust to my schedule, but as this is being set up, please try to remember those of us who go. Thanks very much! Dave WB4FUR

From: "WA0HQQ" <r390@al.tirevold.name> Date: Wed, 28 Dec 2005 01:40:51 +0000
Subject: [R-390] Y2K PDF Editing

Folks,

All of the source files are still extant. I have the master copy in MS Word files.

If someone needs the source files to do some 'editing' or re-formatting, just let me know. They can be made available. No need to jump through hoops attempting to decompose .pdf files!!

As additions are identified and provided, they will be added to the r-390a.net web page. As I find the time, I will look into ways to make the web page more easily useable/searchable. It is already indexed regularly by the usual web crawlers.

Does anybody have a suggestion for organizing the r-390a.net web pages better?? What should be the 1st order breakdown of the information presented?? what about the second-order breakdowns within each 1st order item??

Non-public portions of the r-390a.net web site can be made available as staging areas for folks wanting to share 'in-progress' copies of their work. Al, WA0HQQ

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Tue, 27 Dec 2005 22:07:11 -0500
Subject: Re: Re:[R-390] More Ideas

If anyone would like to add my "Cosmos PTO Adventures" article to the mix please feel free to do so. The latest original is at: http://home.cfl.rr.com/jmiller1706/cosmos.htm

You should be able to download the files from http://home.cfl.rr.com/jmiller1706/ If not I can zip them and ftp or email them.

It was also on Dave Medley's page but some of the image files were corrupted on Dave's copy. Jim M. N4BE

From: Tom Norris <r390a@bellsouth.net> Date: Wed, 28 Dec 2005 01:46:29 -0600
Subject: Re: [R-390] Y2K - Photos

Barry most of those photos are the ones I had mentioned that I had available clearly from my 1956 manual for use for those not taken anew. I'm working on them now to clean them up further. The pre-1962 manuals had illustrations that were photo quality halftones, the later printings did not.

Never got a reply from anyone, but will continue to work on them.

It will only take a few days, then I'll mails a CD to you or hank or someone and you guys can decide which other ones need to be done. Upload them? On dialup?? heehee

Never got a reply from anyone, but will continue to work on them.

From: Tom Norris <r390a@bellsouth.net> Date: Wed, 28 Dec 2005 02:31:12 -0600
Subject: Re: [R-390] Winter Transmission of SAQ 17.2 KHz?

That would be wonderful! I've been trying for years, and I believe so have several others here on the list! Please keep us informed. :-) Tom (the grumpy one) NU4G

From: Roy Morgan <roy.morgan@nist.gov> Date: Wed, 28 Dec 2005 09:15:42 -0500
Subject: Re: [R-390] Amperite Ballasts Info Needed again

wrote: writes: >Good Idea. >Who has a copy of this stuff

Some info is on the Pearls of Wisdom site as mentioned in an earlier post. Also, I recently found a four-page brochure by Amperex at: http://www.bunkerofdoom.com/xfm/index.html there is a four page pamphlet from Amperite on Ballast tubes:
http://www.bunkerofdoom.com/xfm/amperite/AMPR_AB51.html (Click each of the four pages to get a bigger version of the image.)

NOTE: that site contains the biggest collection of transformer catalogs I have seen. NOT to be missed. Roy

From: Flowertime01@wmconnect.com Date: Wed, 28 Dec 2005 20:16:00 EST
Subject: Re: [R-390] Amperite Ballasts Info Needed again (Thanks Roy)

writes: Roy, Thanks for the links to those pages. Roger.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Wed, 28 Dec 2005 20:05:57 -0800 (PST)

Subject: [R-390] Y2K Manual redo

Hi Al and List,

A slight correction. I have the ENTIRE Y2K manual done EXCEPT I need someone to send me the drawing files. (Ahem, which I have asked for for the last 6 months.)

To answer Craigs question of why:

1. Some of the PDF pages would be OK on screen but would not print properly.

2. Many of the tables had widows and orphan splits between pages.

3. There was a lot of extra space and the column spacing wasn't uniform.

4. I added pages to each chapter so that the new chapter starts on an odd page.

5. With the space reduction, the new manual is about 15-20 pages shorter.

6. I added the component values to each component. Previously, for example R4XX would be listed "as the same as R3XX". When you went to R3XX it would then say "same as R1XX". This is bad karma causing foul language to ensue.

7. The manual was in PDF form. Mine is in both MS Word AND Acrobat 5 PDF so it can be edited to an individuals needs.

8. I have downloaded almost 500 megs of associated files that could be inserted to the manual if one wished.

Finally, I have downloaded ALL the R390 list files. They have been converted to MS Word 6 files and Acrobat 5 PDF files. All the redundant posts were removed so a months worth of posts now takes up 80 percent less space.

We're rehabbing a house 80 miles away from where we live and it's eating time like crazy. With dial up, they are too large to send. I c will burn CD'd for the cost of postage or I can go to a B&N book store and get a wi-fi connection and send them from there. Reply off list to me at sandeenpa at yahoo.com for files. It will be after MERRY CHRISTMAS TO ALL before I can do this. Regards Perry (five year lurker). 11 BA's & counting. Regards Perrier

From: Tom Norris <r390a@bellsouth.net> Date: Wed, 28 Dec 2005 22:34:37 -0600
Subject: [R-390] 390A SSB "Stock Mod" info search

This may or may not be fodder for some of the latest info updates or what have you, but I've not seen it online, not on Pearls....

There seem to be several 390A's around with SSB mods, some are said to have come from mil surplus in that condition. Over the years folks have posted pics here and there, and there was a good writeup on a book by an Italian fellow that went over that mod. Not sure if that book is still in print, etc. (if it is, I'm broke, etc.)

Many of us have seen the product detector mod that's in Cap't Lee's "Mars" mod series, but this is a different sort of thing, for those that aren't sure what I'm talking about. This lashup has a small box that mounted just behind the headphone jack, apparently there were assorted different versions, some may indeed have followed the mars mod. There was at least one modded radio discussed in the distant past on this list (ten years or so ago, more?) that supposedly "came that way" though I can't find the messages I'm looking for in the archives about it. May have been discussed on Boatanchors.

If nothing else, does anyone still have a copy of the book I'm thinking of? Tom NU4G

From: "Michael Murphy" <mjmurphy45@comcast.net> Date: Thu, 29 Dec 2005 00:02:12 -0500
Subject: Re: [R-390] 390A SSB "Stock Mod" info search

I have not seen it Tom. I installed a Cap't Lee /N2NIR type circuit in mine a couple of years ago and the 6BE6 product detector does a fine job. I understand that there are better circuits out there. Mike WU2D

From: "Tom M." <courir26@yahoo.com> Date: Thu, 29 Dec 2005 05:26:21 -0800 (PST)
Subject: [R-390] 390A SSB "Stock Mod" info search

Chuck has some info on this at: http://www.r390a.com/html/r390a_factory_ssb.html 73 Tom

From: "Les Locklear" <leslocklear@cableone.net> Date: Thu, 29 Dec 2005 07:36:04 -0600
Subject: Re: [R-390] 390A SSB "Stock Mod" info search

The book was R-390/URR - R-390A/URR Handbook written by Paolo Viappiani. It was originally published in 1996. Written in Italian. Over the years I have been in touch with Paolo and he is finally going to have it printed in English. He is editing the book and adding some newer information. Some of those modifications had the product detector mounted on the audio deck. Several of those modified R-390A's were in the St. Juliens Creek pile. Les Locklear

From: DW Holtman <future212@comcast.net> Date: Thu, 29 Dec 2005 14:22:48 -0700
Subject: [R-390] Chassis finish

Hello,

Does anyone know if the yellow coating put on the aluminum parts (including the chassis) throughout the R-390A is Alodine? I was under the impression that Alodine was not tough enough for an exterior coating on a chassis, that will be subjected to rough handling.

Another question. Was the modification that installed variable caps (C-569 through C-571) in the input and output of the mechanical filters in the If module applied at Depot during rebuilds, or just put on newly manufactured modules? The reason I'm asking, there is an IF amp for sale on Ebay without the variable caps on the IF Module. It went through depot 1982, and does not have the variable caps. This particular module looks like it has yellow plastic caps? Ebay item number is 5847326968. I'm just courious about this mod, because I have two IF modules, one with and one without the mods. Thank you in advance for any help. Happy New Year to all. 73's DW Holtman WB7SSN

From: "Barry" <N4BUQ@aol.com> Date: Thu, 29 Dec 2005 16:25:33 -0600
Subject: Re: [R-390] Chassis finish

Yes, the finish is Alodine (or a generic chromate coating -- not specifically Alodine which is a brand name product). I have had two chassis recoated and they look great. Barry - N4BUQ

From: Flowertime01@wmconnect.com Date: Thu, 29 Dec 2005 20:22:20 EST
Subject: Re: [R-390] Trim Caps on Mechanical Filters

DW Holtman ask,

Was the modification that installed variable caps (C-569 through C-571) in the input and output of the mechanical filters in the If module applied at Depot during rebuilds, or just put on newly manufactured modules?

There are two flavors of mechanical filter caps in production. What you see is what you get. The field never went back and "upgraded" the caps in the IF deck.

Early production had selected fixed caps.

Later production had 4 caps under the can and 4 more on the side of the deck. These units also had 4 more holes in the side of the frame to access the side caps.

If you have an IF deck with side caps and no side holes in your frame, you have a swapped in IF deck. Conversely if you have holes in the frame and no caps you have a swapped out IF deck. This will start some chatter and likely get us another dead carcass. So near the new year and such tasks to be dealt with.
There was much todo about what to do if you had to replace a mechanical filter in a deck that did not have trim caps. The last word in 1975 as I was getting out of service was still to just put the filter in and ignore the cap optimization problems. Wisdom from management powers was that once the caps were properly trimmed they needed no further adjustment. If you measured the output before you tweaked on the trim caps, you likely found your diddling produced no further gain. Experience in the field did not support this wisdom from higher management. It was standard procedure to tweak all the filter trim caps on every PM event. We wondered why there was no modification work order to at least add the top caps to the IF decks. We could see why no one wanted us drilling into IF deck and installing caps in the bottom side.
I think if we look at decks with and without trimmers on the bottom side, we will see that the decks have a lot of differences to allow the caps to be inserted. There was just not a big blank chassis wall space there waiting for additional caps. The extent of these changes may have been why no field modification was ever kited and fielded. The idea of providing new decks with caps was just a non starter from spending and contract point of view. Letting someone drill holes in the frame to trim decks in place was not a popular subject.

We always wondered how much better a deck would have been if it had had adjustable caps. Decks without trimmers still passed signal to noise test like every other receiver, so we believed the assembly folks did a good job testing and selecting the fixed caps.

One myth was the early production was "selected" to closer specification. Once Collins had a big pile of good but not good enough filters, a proposal was produced and sold to get the trim caps in and the less exact filters in. Myth was that a well trimmed deck never needed adjustment. I have no evidence to

support that statement.

Hope this provides you some insight on the subject. Roger AI4NI

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 29 Dec 2005 19:29:40 -0600
Subject: [R-390] Index for Drawings Files on Y2K CD

Is there a "flat" index for the engineering drawings on the Y2K CD? I've forgotten from when I've used it with windows if there was one. Now that I'm on a Mac and am interested in accessing them, they appear to be spread out over several directories in several places. Any help appreciated. thanks Tom NU4G

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 29 Dec 2005 17:30:39 -0800
Subject: Re: [R-390] Chassis finish

All of my repro R-39XX parts are gold alodined. Also the R390-A's that I rebuilt frames are torn down and caustic cleaned and gold alodined with the exception of the rear panel and harness assembly which is cleaned with Awesome and then run through the dishwasher using Cascade. Hank KN6DI

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 29 Dec 2005 19:46:39 -0600
Subject: Re: [R-390] Chassis finish

DW noted there is an IF amp for sale on ebay for the 390A. From the tag it appears to be a simple depot repaired unit. Are ordinary depot repairs now "Government Rebuilt Units" for the sake of Ebay? I guess they may have been all along and I just wasn't paying attention. Tom

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 29 Dec 2005 17:58:35 -0800
Subject: Re: [R-390] Chassis finish

Look at the bidder junkbox with one hell of a history (0). Maybe a new nom de plume for radio M****??? Hank KN6DI

From: DW Holtman <future212@comcast.net> Date: Thu, 29 Dec 2005 19:32:16 -0700
Subject: Re: [R-390] Chassis finish

Hello,

I was not trying to say anything bad about the seller (have bought from him in the past with good results), just curious about the variable cap mods. Thank for all of the responses and great info. Best, DW Holtman

From: "Barry" <N4BUQ@aol.com> Date: Thu, 29 Dec 2005 21:17:00 -0600
Subject: Re: [R-390] Chassis finish

No, it's not him. I think I know who it is, but I don't want to say as I think he's a member of this list. I figure he'll speak up if he is. Barry - N4BUQ

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 29 Dec 2005 23:54:19 -0600
Subject: [R-390] Another glaringly obvious 390A question for the hypothetical newbie

A newbie, all aglow from receiving his first ever R-390A from Ebay but wanting to find something to replace the rusted screws in the front panel of his new radio emails the list and asks --

"Is there a list of the sizes of hardware used on this radio? I need to replace the rusty ones on my front panel, and several other screws around the radio are missing too."

Where would you send him for a list that has a breakdown of what sizes of screws are used where on the front panel, and what are the common sizes used elsewhere?

I'm asking this from a person's view who has never seen one of these radios before, and while probably has a manual on the way it hasn't arrived yet.

Myself I keep a well-labeled assortment. Tom NU4G

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 08:39:34 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

wrote:> I think if we look at decks with and without trimmers on the bottom side, we will see that the decks have a lot of differences to allow the caps to be inserted. There was just not a big blank chassis wall space there waiting for additional caps.

Actually, there was a big blank chassis wall space. I've got right in front of me an early no-trimmer Collins IF deck and a with-trimmer EAC IF deck. I do see some changes in components (they were built more than a decade apart after all) and wiring between the two, and a significant improvement in sheet metal in the EAC (which has bossed in nut threads on the shield between the last two IF switch wafers, while the Collins has a nut and a washer). But if the holes were put in the outer wall and the little trimmer board were added, there are absolutely no physical constraints to putting them into the old Collins.
Overall the much later EAC has sheet metal work that looks spiffier and done with fewer pieces and joints and nuts and bolts. Mounting of grounding lugs etc. differs in a few ways from the Collins as a result but I can see that the EAC layout is more highly evolved.

I do feel that the trimmer tree at the top of a trimmer-cap IF filter box looks ungainly and fragile, but they did it anyway... On one of my trimmer IF decks it looks like a trimmer cap broke off the tree and was glyptol'ed back on. Tim.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 30 Dec 2005 09:48:28 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for thehypothetical newbie

I'd give him Walter Wilsons Email address and have him order a hardware kit. It comes with all the stainless hardware you see on the front panel. I don't think you can go just anywhere and buy the conical lock washers. Elsewhere in the radio standard stainless hardware available at any good hardware store should be fine...a lot of it is stuff like 6-32 or 8-32 sizes if I remember correctly... Cecil....

From: "Don Reaves" <don@reatek.com> Date: Fri, 30 Dec 2005 09:57:54 -0600
Subject: [R-390] Straight Key Night

If this year's Straight Key Night is like last, here is a chance to exercise your R-390A narrow CW filters. Lots of crowded, slow speed signals bunched up in the bottom half of the 80,40,20 meter ham bands. Many of the signals you hear will be rarely used vintage transmitters, so there is a challenge to twist knobs and track the chirpers and drifters and weak sigs. Just what R-390 receivers were born to do...

New Year's Eve 7pm EST to New Year's Day 7pm EST. Details at
http://www.arrl.org/contests/rules/2006/skn.html

Hope to work some of you. Happy New Year W5OR don@reatek.com w5or@comcast.net

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 15:38:21 -0500
Subject: Re: [R-390] Another glaringly obvious 390A question for thehypothetical newbie

wrote: > I don't think you can go just anywhere and buy the conical lock washers.

I've had very good luck with flat external tooth lockwashers. Just screw them down until they become conical...!

> Elsewhere > in the radio standard stainless hardware available at any good hardware > store should be fine...a lot of it is stuff like 6-32 or 8-32 sizes if I > remember correctly...

And a certain amount of 4-40's and 2-56's as well if you're getting down to the component level (as opposed to simply removing subassemblies).

I've heard rumor that the spline set screws are 8-36, but I've never run across that thread elsewhere to check! Tim.

From: "Barry" <N4BUQ@aol.com> Date: Fri, 30 Dec 2005 17:37:48 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for thehypothetical newbie

Yes, they're #8-36 threads. I have a tap I use to clean the threads out after coating the knobs. Barry - N4BUQ

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 30 Dec 2005 18:06:40 -0600
Subject: [R-390] Y2K CD? No Jeff Adams CD? Yes (Was "Index for Drawings Files on Y2K CD")

For reasons unknown I had gotten the Y2K manual mixed in with my directory containing Jeff Adam's Big CD o' Manuals and Drawings that was published a while back.

I had also backed them up as one volume, so that is where the confusion began....

The mechanical drawings to which I was referring are on Jeff's CD. That CD contained a dos/windows based reader with a file indexer that was - to me - a fairly clunky affair. Now it's not usable, not sure how many others are having the same problem, it may just be me. In my previous post I indicated I can

read the files with no problem, but I'm limited to reading them randomly at the moment. Thanks for an earlier reply regarding the possiblilty of an Exel index. Tom NU4G

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 30 Dec 2005 19:27:52 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for thehypothetical newbie

Well, if we're going to get that detailed, let's not forget the roll- pins that the ends of the cam shafts on!! I didn't measure than at the time, and I can't find the drivers I used so I dunno the size. It's a possible repair.
#2-56? Where are those? They're nearly the size of those pins I had to drive out! heehee I know there 4-40's in there. Tom

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 20:44:32 EST
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Tim,

OK so now you have looked under the two different types of IF decks and find ample space to place four trimmer caps.

Before the end of 2006 as a new year resolution please provide the R390 reflector here a very concise write up equal to a field modification procedure. Exactly detail how to modify the non cap chassis to a cap chassis. Please provide a detail list of parts. Please provide mechanical drawings such that the mechanical mounting parts can be fabricated from the drawing to provide some of the parts to make up the complete parts kit. Please include in the field kit installation, a template for drilling the side of the receiver frame. You get the parts list and detailed instructions and I know we can find the parts to do kits.
I write that prior to 1975 the military looked at the problem a couple times and chose not to spend the money on it. Your response is there is room on the deck to do it. If that was the only item I am sure the military would have done it. Because I said there was not room on the chassis and you think there is room every thing else I posted is mostly not credible. You rate eight good years of my life as fiction. I try to write this really boring trivia with some humor. Some Fellows today wonder what the engineers in the past were thinking and why they made the choices that were made. I call these choices compromises. I find most are motivated by return on investment. How much bang do we get for the buck? There is value to be taken away from these questions and answers. >From these questions and answers I take way a lot of humor and get much practice with my typing and writeing skills. I am sorry it falls on you to grade my work. A boring job but some one has to do it. I do try to keep it on the R390 subject while varied. While most days I do enjoy taking a cut at providing some insight and sharing what I saw go down in my life, I am sorry my post are not up to your exacting critical reading expectations. I believe if I had more writing skills, I could have been a good author and would not have had to make a living prior to my retirement at age 55, assembling auto engines, repairing radios, being an electrician, and a computer scientist. I will continue to share my response to questions here on the R390 reflector and try not to worry as much.
Here's your chance. I bet lots of fellows own R390/A decks without the variable caps and would like to have the write up to make the modification. It sure would be a very nice addition to the R390 resources.

I am looking forward to your work and the chance to modify one of my decks from your wonderful work. While the military considered and rejected the idea having the IF decks field modified, that would not stop some R390/A owners from taking on the task and doing it very successfully. Many

Fellows have many more resources today for doing the task than were available back it the old days.

How about the can on top, Will it need to change size or can we squeeze every thing in the original can?

How much improvement will we get in the signal to noise ratio?

How will the band pass be effected?

What gain will one get for the pain?

Just because one can make the change should we make the change? Roger

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 21:04:46 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

wrote: > OK so now you have looked under the two different types of IF decks and find ample space to place four trimmer caps.

Wow, Roger, didn't mean to tick you off.

I enjoy questions that are easily answered by looking under the covers, poking around with ohmmeters and voltmeters and signal generators, and comparing/contrasting small technical details.

So if you say "it wasn't done for reason X", I read what you write with enough interest to go look and see reason X for myself. Don't take that as a mistrust of your facts, but take it as me being interested in what you write about.

If I misinterpret your intended-to-be-factually-incorrect-for-humorous- intent statements as being actual mistakes, I apologize.

I do seem to have rubbed you the wrong way a couple times in the past couple of weeks, putting me in the "bad guy" column way more than anyone else on this list. Who knows, maybe I'll get kicked off the list the next time I look under the covers of my R-390A instead of trusting the word of a respected poster. Tim.

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 30 Dec 2005 20:52:24 -0600
Subject: [R-390] Part II "What Hardware Do I Need For My 390A?"

I was hoping to get a straight forward answer for that question, since I wasn't asking for myself, since I know what the answer is. I was asking since we are looking for ideas to help folks that may be new to the R-390 and such.

One answer to the "What would I need" is to simply by a ready made kit from KK4DF at http://r-390a.us/parts.htm Not a bad idea. He puts together some good kits for restoring your 390A. He has the hardware kit, a couple types of cap kits. Nice guy to deal with too. I highly recommend Walter, he's a good fellow!.

But the question I posed with the current post was "Is there a list of sizes for the hardware needed..." etc. Sending me to Walter would be like my asking what I needed to become a fisherman and you handing

me a can of sardines.

I suppose I was asking if anyone on any site has a listing of the sizes of the hardware used for the front panel of the 390A. Like most of the lists I've looked for this week that other folks have known where to look, I've searched and not found one. If I were a new person and didn't know about Chuck's site or the Y2K page or any site, where would I go for something as simple as that??

The list of screw sizes in case the new fellow is hardware illiterate? For the front panel he'd need several flat or oval head conical stainless steel machine bolts. (So say some of the bags my hardware is in, depending on the hardware) If I were the person answering him, or the person whose web page had the information, I'd have photos and examples of where to get stuff - either as a kit like from Walter above, or if the guy was brave, list the sizes and point him toward a hardware store.

Believe it or not I found all I needed at Lowes. They didn't know they had it, but most did. Even if I did have to argue with the salesguy at a couple stores - right in front of the bin. As I pulled the package *out of the bin right before his eyes* Anyway....

Hardware bulk sellers (example "Scott Bolt and Screw in Nashville) will have what they need w/o a doubt.
Here are the sizes that are on misc removables of mine --

8 each #8x32 x 1/2" long
5 each #6x32 x 3/8" long
3 each #4x36 x 3/8" long & nuts (for harness clamps)
4 each #6x32 x 1/4 for around dial readout
5 each #6x32 x 1/4 for RF deck cover, if one exists
16 each #6x32 x 1/4 (if they have dust covers and want to put all the screws on both top and bottom.)

I *realize* it sounds silly, but I'm trying to think of questions to ask this stuff from a newcomer's point of view. I'm asking them as I know nothing of the commonly know web resources exist and the first thing I found was the R-390 list. I'm asking as if I just bought a radio off Ebay or at a hamfest and need to know basic things that may be Common Knowledge to most but are NOT to someone who's not even seen a tube before buying one of these big behemoths. I'm just sayin, before this particular thread goes off into Lutefisk mode

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 21:54:35 EST
Subject: Re: [R-390] Chassis finish

Hank,

Thank you for that inside information.

I am about to remodel the Kitchen and a dish washer was on the list of must haves. I have been telling Wanda, she deserves it and we can afford it and I will make sure she gets one. Then I will make sure she gets a long appointment at the beauty shop.

If once around does not get the parts looking like I want, she will be going out again someday. Roger AI4NI

All of my repro R-39XX parts are gold alodined. Also the R390-A's that I rebuilt frames are torn down

and caustic cleaned and gold alodined with the exception of the rear panel and harness assembly which is cleaned with Awesome and then run through the dishwasher using Cascade. Hank

From: Les Locklear <leslocklear@cableone.net> Date: Fri, 30 Dec 2005 19:56:13 -0700
Subject: Re: [R-390] Part II

Tom,

There is a "list," I'm at work, so don't have the files available. It is the manual that ends with a "P" it has all the hardware listed on the entire receiver, plus other errata. I'll post the manual number tomorrow when home. Les Locklear Gulfport, Ms. Professional Curmudgeon Equal Opportunity Annoyer

From: DW Holtman <future212@comcast.net> Date: Fri, 30 Dec 2005 20:22:46 -0700
Subject: [R-390] R-390A Hardware

Hello,

A couple of the many places where stainless parts are available with no minimum order is below. In the case of McMaster-Carr the amount of hardware they carry is mind boggling. Everything from oldham couplers to gears. They ship the same day, I usually receive orders in a couple of days.

http://www.mcmaster.com/ http://www.boltdepot.com/ 73's DW Holtman WB7SSN

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 22:33:54 EST
Subject: Re: [R-390] Part II "What Hardware Do I Need For My 390A?"

Tom Norris,

I think a look into the R390 -35P TM would list the hardware for you. The parts TM had almost all the parts listed with a parts description i.e. bolt, 8x32x0.75 stainless steel, recessed head, #2philips.

Lets get the new guy pointed out to the files on the web pages and explain to him what a parts manual for the receiver is and how to make use of it.

We never ordered bolts for the receivers. Every ASA shop had a big parts cabinet with all kinds of things in it. It was called an ME9 Kit. If you ran out of something you ask the supply sergeant to order some. His response was not good but someday (30-60 later) a box of 100 would show up and we would dump the contents of the box into a drawer in the cabinet.

We would order broken clamps. The spline bolts we ordered by the hundred. I would change those out in the IF deck extension shaft clamps and the KC MC knob clamps on a whim. Just let my spline wrench slip in one of those and it was replaced. The parts were just over there in the drawer and did not even need any paper work.

Finding good stainless steel bolts with the proper head style is a bitch. The exact length is not real critical. The thread is standard. Most any one can cut one off if it is so long as to be offensive.

Put together a kit of every thing and it will still cost more for the mailing envelope and postage than the

kit contents. Just doing it you could sell a bunch. (OK maybe 20 and I would ask Hank for a second opinion on that number.) The most useful item would be a large bunch (20) of the 4-40x 1.0 clamp bolts. These would not be spline but just a hex key head. Include enough bolts and matching nuts to convert all the clamps in the receiver and have some spare. It will not take care of the splines in the transformers. But it would help a lot of the mechanical problems. Include a clamp for the 1/4 IF deck extension shafts, One for the KC MC knob. Look into the parts list and provide one clamp with hole diameter for the gear train and cams. A hole bunch of pan head 6x32x0.375 straight slot bolts for the terminal strips on the rear panel would go a long ways. Some 6x32x0.74 Philips for the RF deck cover would also be nice. Just my quick list. Roger AI4NI

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 22:46:29 EST
Subject: Re: [R-390] Part II "What Hardware Do I Need For My 390A?"

Tom,

Let me try this again.

I think the best we could do is send a new guy out looking for the parts TM. And try to respond to the question he posted to the reflector.

Then us Fellows need to get better at knowing where what we already know is located. Getting a good search index together looks like a project worth doing.

I see your point and we need a short list out on the web page that could be found with a search engine. So the short list should be on a page with R390, hardware, parts, bolts, screws. clamps. Then a search engine can find the terms and return the list of nuts, bolts, screws, a count of each per receiver and likely a reference to available kits as a cost effective alternative to getting up an order to a parts house.

Searches are nice when you know what you are looking for. Asking Lycos for R390 hardware sizes is not going to return good usable results to the new guy.

The R390 pages here where you can just ask away and have the several hundred Fellows here post you back some clues just cannot be beat. Roger AI4NI

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 22:47:59 EST
Subject: Re: [R-390] Part II

Les, I fell off my chair agin and you are at fault, Roger AI4NI

From: Flowertime01@wmconnect.com Date: Fri, 30 Dec 2005 22:56:24 EST
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Tim,

I hope no one puts you off the reflector. Lets not go down that path.

I hope my post do not cause you to quite reading the reflector. Some times we get to beating on the tree bark and miss most of the forest. I so hate banging my head that way. Keep on writing. Roger L.

Ruszkowski

From: "Barry" <N4BUQ@aol.com> Date: Fri, 30 Dec 2005 22:39:48 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question forthehypothetical newbie

The #2-56 screws are for the tag on the front panel. Barry - N4BUQ

From: "Barry" <N4BUQ@aol.com> Date: Fri, 30 Dec 2005 22:45:17 -0600
Subject: Re: [R-390] Part II "What Hardware Do I Need For My 390A?"

The #6-32 screws for the terminal strips are "binder head" style. I buy them by the pack at the local old-timey radio store in town. They have an undercut head especially made for terminal strips. Barry - N4BUQ

From: Dan Arney <hankarn@pacbell.net> Date: Fri, 30 Dec 2005 21:17:42 -0800
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Roger, I agree with you.

We now have a new "EENNGGIINNEEERR" coming out years after the fact to redesign a piece that has survived nearly 60 years of Superior service. All of the Guvment and Collins Engineers decided it was not worthwhile and not economical to change it. "WHY" & What are you going to prove? "NADA" "NOTHING" Hank KN6DI

From: "Barry" <N4BUQ@aol.com> Date: Fri, 30 Dec 2005 23:38:34 -0600
Subject: Re: [R-390] Trim Caps on Mechanical Filters

I don't get it. Tim posted some comments about two decks, one without trimmers and one with them, and maybe hinted that there seems to be sufficient room to add the trimmers to the non-timmer deck. What's wrong with that?? Barry - N4BUQ

From: Dan Arney <hankarn@pacbell.net> Date: Fri, 30 Dec 2005 21:42:37 -0800
Subject: Re: [R-390] Part II "What Hardware Do I Need For My 390A?"

Roger,

My response in agreement to your post and mine was aimed at Time rengineering idea. Hank KN6DI

From: DQ <greybeard5150@sbcglobal.net> Date: Fri, 30 Dec 2005 23:07:22 -0800 (PST)
Subject: [R-390] Re: Part II "What Hardware Do I Need For My 390A?"

"I *realize* it sounds silly, but I'm trying to think of questions to ask about this stuff from a newcomer's point of view. I'm asking them as if I know nothing of the commonly known web resources that exist, and the first thing I found was the R-390 list."

Oooooh, there is absolutely NOTHING silly about the info that you are seeking to provide for the 'virgins' that wander in here. To make this type of information readily available, and in plain languge, is pure genius. This is EXACTLY the kind of thing that I was hoping to find when I first wandered in here 4 or 5 years ago. Kinda like a "Big Dummies Kwik_Guide to the R-390".

The screw ID chart is something that even the vets might glance at now and then.

I would also make available:

Fuse TYPES and RATINGS, with the info for which fuse goes in which fuseholder on the back panel. The panel may not have the info on it any longer.

Meter types and identifiers, as well as any common sources for obtaining them.

Audio jumper settings for the rear panel with the basic minimum "let's git 'er up and runnin" parts and/or settings allowing him to grab an 8 ohm speaker out of the broken boom-box, and see if he's receiving anything.

The proper way to install a 3 wire grounding plug in the R-390.

A "kwik-list" identifying the antenna receptacles on the rear panel, and the ID numbers of the commonly available fittings for them. There ARE folks that have never seen anything but a PL-239.

Knob types, sizes, and the sources where they may be obtained for those missing any front panel knobs.

I'm sure that something else will come to mind, but that's all that I can come up with at the moment. I realize that many here may consider this being the "dumbing down" of the book, but a disclaimer can be posted for the more erudite radio buffs to just keep "movin' on" past this part. ~ Quig ~

From: "Michael Murphy" <mjmurphy45@comcast.net> Date: Sat, 31 Dec 2005 07:58:12 -0500
Subject: Re: [R-390] Straight Key Night

Don,

CQ SKN! I am going to let loose with a "new" ARC-5 TX on 80M and the R390A on RX. This T19/ARC-5 chirps like a bird so it should "ring in" the new year if you have your passband too tight. I do not ever remember my novice BC-696 chirping this bad, and I was using unregulated supply per the handbook back in the 70's.

When I started bringing it up last week it REALLYchirped... I have tried everything to calm the beast down and things are better:

Fancy DC regulation on the oscillator and PA screens. Isolating the 1625 fils with a common mode choke. Beasty choke input HV Supply for the finals B+ Better grounding.

Neutralizing the finals critically (this had by far the most pronounced effect on improving chirp, better in fact than the regulation).

Results: - It still chirps. It must be pulling pretty bad. Mike WU2D

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 31 Dec 2005 08:22:16 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

wrote: I don't get it. Tim posted some comments about two decks, one without trimmers and one with them, and maybe hinted that there seems to be sufficient room to add the trimmers to the non-timmer deck. What's wrong with that??

The same thing that happens every couple of months on this list.

A "regular" writes whatever he feels and expects the world to interpret it like he wanted (e.g., if it's factually wrong then of course the words were intended to be taken only rhetorically and not for any fact-based purposes. If it were just a simple and true fact, why would he build several pages of rhetoric up around it, after all?)

A "newbie" like me comes by and checks out the facts, and doesn't know enough to keep his mouth shut when he finds out that his literal interpretation doesn't match reality.

Friction ensues, the newbie is put in his place through a series of sarcastic and denigrating comments (often making the newbie a fool for something the newbie never even wrote - it was some argument that came up 30 or 40 or 50 years ago when the "regular" was in the service and that he never won, but now he has a newbie to beat up over it), and the newbie learns to shut up and stop contributing.

I'm not saying that all the above happened to me this time around. But I've spent a lot of time perusing this list's archives and the pattern seems common overall.

What seems so pointless about this particular round is that I fully agree with Roger that it doesn't make economic/functional sense to add trimmers to an IF deck without them. Yet all of a sudden I've become the poster boy for wanting to add trimmers to IF decks (a position that I never advocated!!!). And all this just because I went and looked at both early and late decks and posted a list of differences and not-differences between the two. Tim.

From: "John Page" <k4kwm@hotmail.com> Date: Sat, 31 Dec 2005 13:40:24 +0000
Subject: RE: [R-390] R-390A Hardware

Lowes also has them. Including trim washers. Thats where I got mine. John

John Page K4KWM Hollow State since 1953 (ex W8PKU,N8BLB,NA8O)

From: Barry Hauser <barry@hausernet.com> Date: Sat, 31 Dec 2005 09:04:29 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Gentlemen,

Let's wrap this up for 2005. The more basic root problem is that we sometimes push the envelope on this communications mode. We're basically trying to conduct an interactive conversation in text. What's missing is the tone of voice, inflection, etc. as well as the real-time interaction with interruption and clarification, etc. That interchange about trimmers would have gone differently with the equivalent in-person contact, over the phone or on the air. The same problem occurs with private email, but has an

additional edge when the mail is public -- read by 100's of others silently in the background.

When writing, we hear what we are saying in our heads with "full audio" but that part of the bandwidth is clipped as it flows through the filtes of our fingertips into the keyboard and onto the screen. No problem with posts that are short and narrow-band to start with, but things would be dull if we limited ourselves to that.

Of course, there's a good chance this post will be taken other than intended ;-) (Incidentally, this explains the origins of "emoticons" -- to compensate for the lack of tone in text messages.)

OK, as far as IF decks go, I recently went through a pile of stripped down ones and noticed three basic kinds -- four hole, two hole and no-hole. I probably should know, but somebody please review/explain. Barry

From: Barry Hauser <barry@hausernet.com> Date: Sat, 31 Dec 2005 09:23:11 -0500
Subject: Re: [R-390] Scott's Gear Train Rebuild

I recently made contact with Scott Seickel who gave us permission to incorporate his gear train rebuild sequence into the next revision of the Y2K manual.

Also asked if he was still on the R-390 reflector, as I hadn't seen a post from him in ages. Scott said he left the list after a run-in with Dallas.

Well ... I went into some detail about why it wasn't necessary to depart due to that and won't repeat it here. I encouraged him to rejoin.

Might have gone a bit too far, as I mentioned that I hadn't seen anything negatory on the reflector in quite some time. Might have spoken, er wrote, too soon, eh?

I haven't heard back from him yet. Hopefully he'll re-subscribe. Barry

From: "Joel Richey" <richey2@mindspring.com> Date: Sat, 31 Dec 2005 09:47:32 -0500
Subject: [R-390] Hardware

Another place where stainless is available is at a boating store, Boats US is a good example if your in an area that has one, very large stock of stainless. Just an FYI. Joe W2DBO

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 31 Dec 2005 09:21:36 -0600
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Everything should be questioned.....that's how we learn. There has been things learned about the R-390A from guys that never went through the military schools that have proven to be valuable. I doubt the military ever taught gear train teardown and reassembly. I'm not sure it was even done at Depot level in most cases.

Also there is no one, all knowing, R-390A guru on this list...a lot of really helpful guys...and many really motivated guys to further the art but any of us can be wrong about something at any moment due to many factors such as communications breakdowns, (imagine that) our lack of understanding in certain

areas...that we think we understand, intolerance.....

Questions are good....

This list has displayed a level of self management over the years....manifested in several ways....one of which I hope never occurs again and that was, lack of participation.

We have a good group right now, though with a lot of new faces in the last two or so years. Handle the groups heritage carefully....take advice from some of the groups elders in relation to the heritage seriously (the original Y2K manual team for example). Lets not go back to where we have pulled ourselves up from in the last 5 or so years due to intolerance, indifference, arrogance....etc. Now back to our regularly scheduled program..... Happy New Year to all! Cecil...

From: "Craig C. Heaton" <wd8kdg@worldnet.att.net> Date: Sat, 31 Dec 2005 08:20:04 -0800
Subject: RE: [R-390] Scott's Gear Train Rebuild

Barry,

Glad you got through to Scott. I've tried several e-mail addresses and one bounced. Scott never replied and have been wondering if any of the attempts made it to his PC screen.

His work will be a great addition to the addendum. Craig,

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Sat, 31 Dec 2005 11:46:25 -0500
Subject: RE: [R-390] Trim Caps on Mechanical Filters

Anything is possible as long as we do not have to eat Lutefisk. Bruce Hagen Norwegian

From: "Les Locklear" <leslocklear@cableone.net> Date: Sat, 31 Dec 2005 12:15:11 -0600
Subject: [R-390] Is this the beginning of the end?

Just received my Fair Radio Sales Co. Winter 2005 catalog supplement. Not much of anything in it except some R-392's w/substitute meters, checked for $550.00.

Since most Military electronics are now being de-milled, I would suspect that this is the dying gasp of a once thriving industry.

Just my opinion, YMMV. Happy New Year to each and everyone of you!! Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From: Barry Hauser <barry@hausernet.com> Date: Sat, 31 Dec 2005 13:45:56 -0500
Subject: Re: [R-390] Is this the beginning of the end?

Just got mine too....

That rackmount cabinet is interesting -- drop shipped kd'ed in black or ivory.

Has a smoked acrylic front door with keylock. The next level in security over the counter lid gimmick. Might be a way to get an R-390 into the living room, though not sure if the door will clear the knobs. Just don't put it too close to the kitchen or someone will try to heat up the leftovers in it.

Full page of inductors on page 3. Hope to remember when & where I saw it when time comes that I need one. Happy New Year Barry

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 31 Dec 2005 14:24:10 -0600
Subject: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

Please bear with me, and I apologize in advance for this posting.

Hit your delete key now if you have no interest in military radios or surplus.

I've been reading the Armyradios list from time to time. Seems DRMO is wanting some things BACK, apparently because terrorists might use it. I've only been reading snippets, so no details as to what models need returned for further demil or what simply needs a renewed end user agreement. It's been a very heated discussion. Anyway.

Scenario, a semi-crowded city street, mid-afternoon.

Two fellows are talking on radios. One has a PRC-something or another with a long foot whip slapping around strapped to his shoulder and is talking on a bulky handset (or may be wearing a headset of some sort). The other fellow has a small everyday commercial HT.

Who will be the first one noticed? (I've heard similar stories from military vehicle collectors. WTF?!?!)

Most commercial off the shelf, gear is smaller and some can cover from DC to daylight -- my Icom 706 MkIIG works as wonderfully on the top end of AM broadcast as it does in the middle of a shortwave band or VHF low or air band or any number of places. It would take a several pieces of average (average stuff, nothing exotic) mil gear to accomplish the same thing -- [mil gear that is commonly found at somewhere like Mike Murphy's and not lifted from a depot or smuggled in from somewhere else. And lets not talk about spare parts and test fixtures needed to service some of this milstuff.]

For HF, an IC-703 works many hours with battery power, has an internal tuner and works well with an antenna slung over a tree. Slips into a backpack easily.

For non-HF look at any number of HTs that do DC-Daylight on tx as well.

Why would a terrorist need a military radio? According to "war stories" from buddies, those in the field in Iraq, etc use disposable commercial radios. Some say a "goodly number" of coordination takes place via email or IM - or even cell phone text message. How hard is it to have an IM message with someone to discuss plans, then finalize the plans by sending them a cell text message? ("Dearest brother, it is now Tuesday. Third building on the right, may God bless you" Boom) No army radios.

So why are US citizens right taken away in the name of [this weeks excuse] TOM

I hesitated to post this, but I saw the supplement too. And have been reading about the foolishness of surplus being recalled. Yell at me if you wish.

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sat, 31 Dec 2005 16:26:27 -0500
Subject: Re: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

Shhhhhh. If they find out they will start taking away REAL radios such as the IC-706 and the handhelds. With licensing becoming easier, any run-of-the-mill terrorist can get on the air now. Will they next take away internet, cell phones and Blackberries? No, after all it's easier to police those services. Jim M.

From: Jim <jclark6@gmail.com> Date: Sat, 31 Dec 2005 15:53:49 -0600
Subject: Re: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

I am sure the first thing a terrorist will do is run down and get a no code license to get on the air with his new IC-706 so the FCC will not fine him or have Ronnie send him letter after they commit an act of terror. You are correct a 7 day waiting period for a Blackberry is on the horizon.

The punishment could be to make the terrorist carry around a R390A for a few weeks using it as a portable receiver. Jim

From: Flowertime01@wmconnect.com Date: Sat, 31 Dec 2005 16:58:37 EST
Subject: Re: [R-390] Trim Caps Science Experiment.

Fellows,

I do not have a sweep generator and would like someone to conduct a science experiment for us using said test equipment.

Selecting an IF deck with filter trim caps. Applying the sweep generator to the IF at 455Khz plus and minus 16 Khz. Monitoring the output of the IF deck with suitable scope to go with sweep generator.

While sweeping a mechanical filter and observing the output band pass, slowly vary the trim caps. Repeat this procedure for each mechanical filter and adjust both top and bottom cap for each filter.

While a test conducted on one item is a statistic of zero value would you attempt to report your observations on the following.

Does the filter band skirts change in width with changes in cap setting? Does the filter bandpass shift in center frequency with changes in cap setting? Does the filter become more peaked with changes in cap setting?

If the filters do not shift frequency or bandpass width, then any other change in filter response from adjusting the trimmer caps can be "faked" by making other adjustments else where (IF gain adjust) in the receiver. Thus rendering the trim caps nice things to have and diddle with but not required to make the minimum passing receiver.

Thanks for taking on the project and reporting your results. Just what do them caps really do for us?
Roger AI4NI