R-390 Reflector October ’05 Edited

From wa6knw at sbcglobal.net Sat Oct 1 12:40:39 2005
Subject: [R-390] Re: Xtal Question

Some one on the list had the MIL specs in pdf format on their web site. Dennis McLaughlin

That someone would be Nolan.... RICH WA6KNW
- - - - - -

From mikobrien at yahoo.com Sat Oct 1 13:16:58 2005
Subject: [R-390] Hickok CA-4 data using Nolon Lee's TV-7 series data

Hi All

A few years ago I had compiled data into an Excel spreadsheet using a Hickok CA-4 adapter with Nolon's spreadsheet for the tv-7 series tube tester. Nolon's data is based on the military version of the CA-5. I had contacted him at that time and he thought it was a good idea. I just recently found out Nolon had a stroke and does not remember much. I would like to post this data before it is lost (R390 site?) I do not know what complications there would be because his data was copyrighted but posted on the web. It might also be a good idea if Nolon's data and imformation can be saved before his web site dissapears. Mike

From Flowertime01 at wmconnect.com Sat Oct 1 18:23:59 2005
Subject: [R-390] Xtal Question

Dennis,

Because we run the receivers with the ovens off, should we be using the speced at room temperature CR-36A/U type in the first Oscillator? Instead of the calibrator/oven CR-27/U type l specs at 75 deg C.

I have gone and misplaced my TM !!!. Does the oven in the 17MHZ and calibration crystal run all the time even with the ovens off?

How far off will the frequency be for these crystals if we run them at the wrong temperature? Roger KC6TRU

From redmenaced at yahoo.com Sat Oct 1 19:26:42 2005
Subject: [R-390] Xtal Question

> I have gone and misplaced my TM !!!. > Does the oven in the 17MHZ and calibration crystal > run all the time even with > the ovens off?
++++++++++
Yes, it does run all the time, you should hear it clinking on and off while the set is operating. Joe

From dmclaughlin3 at neo.rr.com Sat Oct 1 20:53:09 2005
Subject: [R-390] Re: Xtal Question

wrote: > That someone would be Nolan....

We do miss his R-390 and R-1051 knowledge. Most of all in the way he answered the questions.

From dmclaughlin3 at neo.rr.com Sat Oct 1 21:27:01 2005
Subject: [R-390] Xtal Question

I think the round oven in the back left corner of the RF chassis is on all the time. It has the first crystal oscillator (17MHz) and the calibrator crystal (200 KHz) in it. Only the second crystal oscillator chassis and the PTO ovens are controlled by the ovens switch on the back. I did a test a while back and the 17MHz oscillator started 342Hz high at a cold start and after 47 hours the oscillator was 223Hz high. The spec is 20ppm or 340Hz. Mine is running on the high side but still within spec after 40 years. Not bad. What a great radio. I guess of you disconnected the oven and realign the RF chassis you could use the other crystal. The stability on the 0-7MHz bands might suffer. Dennis McLaughlin

From jim_cott at earthlink.net Sat Oct 1 21:47:58 2005
Subject: [R-390] A little help on sensitivity - where to look

Hello to the group.

I finally had the distinct pleasure of turning on my R-390A today after building a roll-around rack for it. I have the diode load output connected to an old Altec Lansing computer speaker system. Here is my problem:

The AM broadcast band sounds simply fabulous. BFO works, both meters work, Veeder-Root is very accurate. I can get NOTHING ELSE! There seems to be a distinct lack of sensitivity on most all other frequencies.

On my ICOM 756 pro II, I had WWVH coming in today at a solid S-9 with some fading. When I swapped the antenna over to the R-390A, I could hear nothing. On further digging, I could hear with the headphone output (through some Sony headphones), the WWV signal but barely discernible, way down in the mud of the noise and only with the AF gain turned all the way up.

Obvious some work to do on the beast. Anyone have any ideas where to start? Thank you in advance for any advice. Regards, Jim AC4EA

From stevehobensack at hotmail.com Sun Oct 2 08:47:01 2005
Subject: [R-390] RE: R-390 Digest, Vol 18, Issue 2

Jim,

The diode load is a very sensitive hi-z circuit. Computer audio systems are at line-level impedance. Are you using a DC blocking capacitor and 10k to 250k ohm resistor in series between the diode load and audio input of the computer audio? How does the rig perform using the rcvr's own audio module? How does the rcvr hear its own 100 khz calibration signal? If the 756 Pro will hear 455 khz, put it on the rcvr's IF output and listen. You can use a ricebox receiver tuned to 455 khz, with a blocking cap on the ricebox coax, move the make-shift probe back through the if deck until you find the problem. Here is where it helps to have tube socket test adapters.

Use the balanced line antenna input even if you are using a single line antenna. Just ground one side of the input. The single line coax input doesn't perform good with a long wire. It was made for a whip antenna fed by short coax. Good Luck ...Steve...N8YE

From jamminpower at earthlink.net Sun Oct 2 09:06:54 2005
Subject: [R-390] R-648

Anybody know anything about the R-648? There is one you-know-where (item 5814012399). It looks a lot like our good friends - slug racks, PTO, mechanical filters. It looks like someone took a lot of parts from a 51J4 and an R-390 and put them back together without a manual. Interesting receiver. James A. (Andy) Moorer www.jamminpower.com

From future212 at comcast.net Sun Oct 2 12:15:22 2005
Subject: [R-390] RF Rack Slug

Good Morning,

I'm looking for an RF Rack slug, I have a broken one on my Fair Radio Blue Stripper.

I have an IF slugs that I would could trade. I was not sure if the RF and IF slugs were different. I removed an RF transformer from the RF Deck and hooked the coil up to a digital LRC bridge. I measured the coil with no slug and it measured 64 uH. Next, I insurted a slug from an RF rack into the form, it read 602 uH. Last, put in the spare that I have it read 246 uH. I tried this with several RF and If slugs, they all read the same. The permability if the RF and If slugs is a lot different. I'm sure most of the old 390A hands already know this.

If anyone has one for sale or trade, please let me know. 73's DW Holtman WB7SSN

From leanne at islc.net Sun Oct 2 12:21:07 2005
Subject: [R-390] re: R-648

This was an airborne receiver that was the replacement for the BC-348 in the early 60's. When the Marine Corps (and probably Navy) removed the ART-13/BC-348 combination (AN/ARC-8) , from their transports, and replaced them with the AN/ARC-38 transceivers and added the R-648 for an auxiliary receiver. Leanne

From Flowertime01 at wmconnect.com Sun Oct 2 13:24:29 2005
Subject: [R-390] Xtal Question

Dennis McLaughlin,

Thanks for the input. Good exact experience and knowledge. It looks like if we use the wrong crystal we could be off by 500 or less hertz. Maybe not within specifications for certainly operable and within alignment range. Roger KC6TRU

From ToddRoberts2001 at aol.com Sun Oct 2 13:26:07 2005
Subject: [R-390] R-648

writes: Anybody know anything about the R-648? There is one you-know-where (item 5814012399). It looks a lot like our good friends - slug racks, PTO, mechanical filters. It looks like someone took a lot of parts from a 51J4 and an R-390 and put them back together without a manual. Interesting receiver.

The R-688 is a nice receiver but it does have a few limitations. It does not cover the broadcast band. I believe the first band is 190-550KHz and the next band up normally starts at 2MHz but there is enough overtravel that you can get it to tune down to almost 1.9MHz. Also the one on eBay does not have the case but one could be made up for it or possibly you could find an old R-648 case somewhere from a real junker R-648. It is best to replace the noisy dynamotor power supply with a small 120VAC power supply and one can be fitted inside the chassis easily and there was an old construction article in 73 magazine I believe showing how to build an AC power supply for it - that makes it a very nice table-top receiver with a built-in AC supply. Another thing about the R-648 is that it uses 500KC filters similar to the ones used in the 51J-4 except the ones in the R-648 are solder-in types and the 51J-4 filters are plug-in. The R-648 comes with 2 stock bandwidths - 1.4KHz and 6.0KHz. The 1.4KHz BW filter is not really too practical as it is too wide for CW and a bit too narrow for SSB or voice. If you replace the 1.4 with a 3.1KHz filter from a 51J-4 then the receiver plays great with 3.1KHz for SSB/Narrow AM and 6.0KHz for wide AM. The R-648 filters will play nicely in a 51J-4 also if you file off the solder tabs on the pins, then they will plug into the 51J-4. You may need to file down the threaded mounting studs a little bit also to plug into the 51J-4 but I believe the studs have the same spacing as the locator pins in the 51J-4 filters. One could mount some standard HC6-U crystal sockets in the R-648 IF amplifier box so you could have it compatible with the 51J-4 plug-in filters and file off the solder tabs on the original R-648 filter pins so everything would be compatible to swap filters back and forth between the 2 radios. 73 Todd WD4NGG

From Flowertime01 at wmconnect.com Sun Oct 2 14:05:35 2005
Subject: [R-390] A little help on sensitivity - where to look

Jim,

I put this mail up last week to a similar question.

Do you have a copy of the Y2K manual? It is on line and a must have read.

Run the cal tones and tell us what bands have tones. You either have a tone some where in a 1MHz band or you do not. If tones are missing on one or more bands, then a band problem is to be resolved. If you are missing tones on whole octaves (.500 -.999) (1-1.999) (2-3.999)(4 - 7.999) (8 -15.999) (16-31.999) Then you are looking at a set of octave transformers, slugs and caps. If you are missing two or more octaves, then you should look at the band switch.

Likely you have enough AM stations to get through some weak tubes. The rest of the receiver range just does not have enough antenna and signal to drive it to the output. From day one the most likely problem was just plain old tubes that have reached the end of their useful life.

You may need to check your RF band switch if the receiver only works on the .5 - 1 and 1-2 octaves. Pull the RF deck and do the band switch by eye ball. All the switch sections are not exact and you want to get the best possible adjustment on all the octaves. The switch contacts carry current. If you get one section just barely making contact, over time the contact will burn. You want a good alignment when the octaves are changed going both up and down in range.

Check your cam adjustments at 7 +000. The RF and IF slugs should all be about mid range. If any are at the upper or lower limits, some real good alignment is in order. You may need some tubes in the RF deck if the cam alignment is good and the slugs are at the ends or there range.

Now you get to checking tubes and RF alignment.

Once you get to the point where you have a calibration tone every 100 KC you have a working R390/A. Between a working R390/A and a wonderful receiving R390/A is a range of work. 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 are selling for over $1000.00 on Epay and may not work at all.

A good working tube and a real good tube is a range that a tube tester will not evaluate for you. Old used tubes can work better than some new tubes. I do not want to send you out shopping for bunches of new tubes, because what you buy may not in fact be any really better than what you have. All tubes are not equal. Swapping the 5749s around will change your signal to noise. Changing the 6C4s will also make a difference. Finding a good 6DC6 can be a treasure hunt. Swapping the 5814s around will make differences. The 6AK5s or 5654s also make differences. Start looking for tubes for your receiver. Accept what you can find when you find them. If you really need some tubes because some are just bad and you have nothing else to use, then buy some new ones. Hopefully not from Radio Shack. RCA and Sylvania are good. Other good brands are also around. Old JAN tubes are likely OK.

Then comes alignment. Do the mechanical alignment of the dial over run and set the zero adjust to center before doing the RF cams. Once through the mechanical alignment of the RF cams will get you OK.

Once the PTO is set you are OK. You can set the PTO against WWV and zero the cal osc to WWV. The mechanical coil alignment of the RF deck will improve with as many as 4 passes. If you change any RF tubes, 6C4, 6DC6, a realignment is in order. The Y2K manual will get you through that OK.

A signal generator and a volt meter will get you through any alignment you need.

Truth is that the cal tones and a volt meter will get you into good alignment. A good frequency counter that lets you set the PTO and BFO is a blessing. Not required, but use it if you have it.

Real good reception comes from just swapping tubes into the same socket and evaluating the results.

As my ear is not calibrated, I use a signal generator and a volt meter. I like my signal generator as I can turn the modulation on and off. This compares CW to Modulated, AM. Some (Military) like to call this signal to signal plus noise test.

I hang a 580 ohm (600 Ohm) 1 watt resistor across the local output on the terminal board with an AC volt meter. My AC voltmeter has a DB scale. A good receiver will put out 1/2 Watt so you need a 1 watt resistor or spares to burn.

Using any signal frequency you can and start swapping tubes for comparison. Run all the tubes

through a tube tester some where just to get the shorted ones discarded. Watch them all to get out the ones that glow blue. In the receiver circuit thump them all a time or two to get out the microphonic ones.

Get all your 5749's or 6BA6's and sub them one at a time into the first IF socket. Using the same level of signal generator input. inset a tube and compare the audio output level with the signal generator modulation turned on and turned off.

A good (acceptable) receiver will have 10 DB difference. A nice (up to military spec) receiver will have 20 DB difference. 25 is very doable in today's R390/A even with their age. 30 has been seen on many receivers and can still be achieved today. (You may spend more on tubes and caps than you paid for the receiver to get there.)

So sticking several tubes into a socket and comparing them to each other you can judge them for noise. Put the better performing ones into some of the other tube sockets. Set the test up again and compare the tubes you pulled. Find the best of what you have and use those tubes. Doing the 5814's needs two test to get each side of the dual triodes. Run the 6AK6's in the last IF not the audio deck. Swap the 6C4 into the second mixer above 8MHZ. If you are not blessed with tubes, Just buy your self a new 6DC6. Compare it to the one or ones you have and write that down some where (on the tube box side) so you can judge it again at some later date.

The Army ran these receiver 24 x 7 for six months or 4380 hours. Tubes would go for a year or 8760 hours. We would check all the tubes every six months and swap out the poor ones to get the receiver back up to minimum of 20 DB signal to noise at 1/2 watt output. Also need 4uv sensitive to get the 1/2 watt. If you do not have a calibrated signal generator this means nothing. It also has no impact on your ability to get your R390/A working very good. You can compare tubes using the Cal tone and BFO on and off. It will let you compare the same tube type in same socket and judge them from best to not best. You can them insert the best to the front end and work down the line from there with what you have.

If you have a signal generator that puts out 150 uv at 455 you can get the IF deck into shape real fast. You need 150 uv in to the IF deck by moving the IF out jumper wire over to the IF input and feeding the BNC connector on the back panel. Set the RF gain adjust on the IF deck to -7 volts on the diode load. Set the RF gain to mid range and adjust the generator for -7 volts on the Diode load. Set the band switch to .1 setting and rock the signal generator frequency for maximum signal level through the 455Khz crystal. You can zero the BFO against the signal generator. This will get you amazingly close. If you think you generator is close, set it to 150 uv and then set the RF gain to -7 volts. Set your generator modulation to 30%.

Open the IF bandwidth back up to 2KC. Turn the BFO off. Start swapping between modulation on and modulation off, you need a 30 DB difference. If you do not have this 30 DB difference in the IF deck and Audio deck string, you will never get a 20 DB difference for the full receiver. You will get 30 DB in the IF deck and have the meter needle bumping around. This random noise will not get it. You may get 28 and have a rock solid flat meter needle. This may be OK and things are just not all that exactly calibrated. So accept this and get on with life. Better tubes will come in the future. A bouncing needle may be a leaky cap. More likely its a noisy tube. Over time and repeating these test, you will get a feel for what is passable. Just get your receiver as good as you can with what you have today. Enjoy it.

The IF front end 5749's will make the most difference. The 6AK6's are next in order. The 5814's will also make a difference. You can swap poor ones into the line audio path. Some 5814's are in

the limiter, 455 cathode follower, and AGC circuit. You can get the better tubes into the critical path and put some of the others elsewhere until you can find some better tubes.

Once you are getting 30 DB in the IF deck and audio string, you know that end of the receiver is good. You can move over to the RF deck. In the RF deck you run 4 uv into the antenna input and look for a 20 DB difference between modulated signal generator to unmodulated signal generator.

You can set the IF band switch to the .1 position and rock the generator frequency into the band pass. Once you tweak over peak, you can roll the KC knob for maximum signal point. Doing the cap or core slug alignment in the RF deck within 50KC of the specified number in the procedure will not cause you any grief in the final alignment and signal to noise ratio. Get the generator close and use the KC knob to get max signal. Then do adjustments.

When you are done, go find the Chuck Riddle RF gain setting procedure and use that to get the best receiver sensitive setting.

Swapping tubes in the RF deck will make improvements. When comparing tubes, do not try to align the RF deck for each tube. Just plug what you have of each tube type into the same socket for comparison.

You will get real hot great gain tubes. Some will have lots of noise. Some lower gain tubes will give better noise ratios. Its just a plug and try process.

Once you get the best of what you have sorted and the best moved to the front of the line the receiver will improve in sensitive. Do the RF deck alignment more than once over with a set of tubes. It will make a difference.

If the R390/URR receiver TM there is a procedure to feed both sides of the balanced antenna input from one signal generator wire through 2 each 68 ohm resistors, one to each side of the balanced antenna input. This set up lets you adjust the first antenna cap in the octaves of the RF deck. Any resistor pair between 50 and 120 ohms has been shown to work for this test setup. Grab a pair of resistors and do this alignment on your receiver at least once. While any single ended input setup will show no difference in output or signal to noise having these caps balanced will improve the minimum signal you can hear. If you ever get to feed the receiver from a balanced antenna, you will want these caps adjusted. The R390/A URR manual has never covered this alignment procedure.
I do use an antenna match box and band pass filter with my R390. It has a balanced output into the receiver. So I do this alignment.

You have a working receiver. It works on some bands. What it needs now is within your ability to provide. The US Military taught thousands of guys and some gals to convert that receiver into an up to spec receiver with under 4 hours of hard work using only a screwdriver, spline wrench, volt meter, 600 ohm resistor, signal generator and one hand behind their back for safety. It took the instructors 50 weeks to teach the required theory and mechanical skills to each student. It took 40 hours to teach someone every thing the military mind knew about an R390/A and what was needed to service any problem that Receiver may ever have. Two Instructors taught me what I needed to know as part of a class of 10 guys. I used what I learned to fix receivers for 8 years back in 68 to 75. I have still not found a R390 problem I could not isolate and fix. The credit goes to the receivers. The engineers at Collins did an awesome job. For as many parts as these receivers have they are still flat reliable and simple. There is not any problem in that receiver you cannot fix. Ask hear on the R390 reflector and you will more help and humor than you will need

to get er done. Roger KC6TRU

From bill at iaxs.net Sun Oct 2 14:18:09 2005
Subject: [R-390] R-648

Never used one, but saw one at a hamfest after I had repaired and used an R-390.

While the R-390 is a mechanical marvel, it is relatively easy to work on, like a 1938 Ford engine.

The R-648 is an aircraft radio, where weight and size must be minimized and there is no 110 V, 60 cycle power. Think of a carefully crafted Oriental puzzle or today's Ford engine.

I left the R-648 behind because I've got enough puzzles in my life. I buy VT equipment because I can fix it, but that didn't seem to apply to the R-648. I don't work with old wristwatches, either. Bill Hawkins

From jeeper at netins.net Sun Oct 2 14:44:23 2005
Subject: [R-390] help 2 r-388`s

Hello to all,I have two r-388`s first one has been restored. Works great, looks great. Second one has new tubes, works-to good to use for parts. want to trade for good working r-390 jeeper@netins.net

From r390a at bellsouth.net Sun Oct 2 14:48:44 2005
Subject: [R-390] Nolan Lee's web site

Since Nolan's web site has been up for the past couple years, is someone actively taking care of it?

I've downloaded the whole thing for the sake of downloading it. Lotta good info therein. 73 Tom NU4G

From wf2u at starband.net Sun Oct 2 15:04:02 2005
Subject: [R-390] R-648

Interesting, this discussion came up just recently on another list. Instead of composing the information I have, I'll just copy and paste the info from existing messages. This info agrees with what I've known regarding this receiver. I had one myself but I traded it for another piece of military surplus gear some 15 years ago.

I'm quoting Mike KK5F, who is a real airborne radio equipment expert/collector:

"The R-648/ARR-41 was made by Collins, but I don't know of any module or major assembly in the R-648/ARR-41 that is interchangeable with one in the R-390, -390A, or -392 receivers. The similarity is coincidental and cosmetic.

The R-648/ARR-41 is the auxiliary HF receiver that was normally installed with the US Navy's AN/ARC-38 HF AM/CW receiver-transmitter (also made by Collins) in larger aircraft. The AN/ARC-38 was the USN's mid-1950s replacement for their earlier AN/ARC-25 HF set (combo of the T-47/ART-13 and the R-105/ARR-15). The frequency coverage and modes of operation of the AN/ARR-41 are identical to that of the AN/ARC-38 (2 to 25 mc), plus the AN/ARR-41 covers the LF/MF beacon band.

Anyone re-creating an AN/ARC-38 set should include the AN/ARR-41 with it as a matter of course.

Don't believe the common ham operator BS stating that the R-648/ARR-41 was a replacement for the USAF's BC-348 for use with the T-47A/ART-13. It wasn't. There's at least one ham's ARR-41 web page that persists in putting out that nonsense long after that ham was shown otherwise. The USAF did not use the AN/ARC-38 or AN/ARR-41 except in the few aircraft they got from the USN that already had them installed, and there's absolutely no documentation of the military ever pairing an AN/ARR-41 with an AN/ART-13."

Courtesy of Scott Johnson:
"I might add, the ARR-41 has several modules in common with the ARC-38, so one might think of it as a manually tuned receiver from an ARC-38, Mike is absolutely correct, the USAF never procured them, early ones were Collins, later ones were made by another contractor that slips my mind. At any rate, it is one of my favorite receivers (next to the ARR-15), which , interestingly enough share design features with the ARC-2 receiver section, and the 18S- receiver section."

I hope this answers your question. 73, Meir WF2U Landrum, SC

From bill at iaxs.net Sun Oct 2 15:06:51 2005
Subject: [R-390] Stuff that's not in the book

Many thanks to Roger KC6TRU for a great write-up of a little help with sensitivity. He mentioned the alignment of the balanced antenna input as being "not in the book."

I worked on an R-390 with a very scratchy local audio pot. Had a 2.5 K pot from ATC, so assumed it was for audio, but decided to check the taper. The ATC pot taper was linear - turn it to half rotation and measure half the pot resistance to the cold end. That didn't seem right. The existing R-390 pot measured less than 1/4 of the total to the cold end, more like what you would expect for an audio (log) taper.
So I removed the original pot after dropping the front panel, bent the cover tabs and opened it, sprayed it with regular contact cleaner (Caig can empty) then air, closed it up and reassembled. Had to bend a handle a bit in a vise to get the threaded studs to line up. You wouldn't think you could bend the handle by hand, but it didn't take much.

Oiled and re-set the bushings for KC and MC shafts, then found that the MC knob clamp was slipping even though it was tight. Used some cleaner to get the oil off the external shafts and cleaned black gunk out of the knob shaft bores so there was no lubricant between the knob and the shaft. Much better. Wonder how many clamps have been broken because of the overtightening required when the shaft is slick.

Is the pot taper mentioned in the manual? Looks like the RF Gain pot has a reverse log taper.

How about stuff in the manual that is wrong? The instructions to drop the panel want you to loosen the clamps between the IF deck shafts and the panel. It is much easier to leave the clamps alone and remove the knobs. There's no retainer that keeps the extension shaft from going through the panel bushing.

This is not true if you want to remove the IF deck without dropping the panel. Then you have to have a long Bristol wrench to loosen the clamps, or long-nose pliers and plenty of patience. Regards, Bill Hawkins

From jamminpower at earthlink.net Sun Oct 2 18:25:30 2005
Subject: [R-390] R-648

Thanks to all the interesting responses about the R-648. I still have one question:

Roughly when was it produced? I gather it predates the R-390. Does it also predate the R-388, and 51J4? James A. (Andy) Moorer www.jamminpower.com

From Flowertime01 at wmconnect.com Sun Oct 2 18:48:46 2005
Subject: [R-390] Stuff that's not in the book

HI Bill,

Good job on the pot clean up and recovery.

Knobs set screws put burs on shafts. That why they did the big knobs with the split and clamp. So as not to burr the shaft. The idea on the IF deck extensions is to let the burred extension shafts stay in the front panel. Some receivers have the micro dial on the BFO for RTTY work. It was eisier to do the clamps on the extesion shafts.

If you do not have a long spline wrench that will reach in to the deck and your RF gears, you need to make one. Grind (sawing spline wrench is a for ever job) chunk of spline off an wrench so you have a straight piece. get out the acid core solder and solder the sline into a length of small brass tubing. Arange a good handle.

> Oiled and re-set the bushings for KC and MC shafts,

Amazing what reseting the bushing can do for tunnel carpo relief

How about stuff in the manual that is wrong? Not all that much is wrong. But there was enough to movite the Fellows to produce the Y2K manual.

I like that manual a lot. Roger KC6TRU

From Flowertime01 at wmconnect.com Sun Oct 2 18:54:33 2005
Subject: [R-390] R-648

I don't work with old wristwatches, either. Bill Hawkins

Bill,

Love that line. Me neither, But I did pick up a couple old Seth Thomas wall clocks to rebuild. Its nice to look into some things and have all the parts large enough to see. Roger KC6TRU

From jim_cott at earthlink.net Sun Oct 2 19:06:39 2005
Subject: [Fwd: Re: [R-390] A little help on sensitivity - where to look]

Roger,

Thanks so much for your lengthy and helpful email. I did a little inspecting today and found two serious problems (one which is my original and probably one new one). The first was a single slug in one of the tuning racks that had broken free of its screw, meaning it was always stuck in the bottom of the coil form. The only place this was supposed to be the case was on the 1 MHz megacycle setting. I think this was my major problem, so a little glue got it back to where it will track with the other two. Secondly, today I could not get very much at all to work...then I noticed that the first 6BA6/5749 (V501) looked really cloudy. On pulling this tube, it had cracked diagonally across the base of the pins. I would bet that even before its catastrophic failure, it wasn't all that good. So NOW I am all set to proceed with a proper IF and RF alignment. I am sure that I will have a healthy beast when done. Your swapping tips are greatly appreciated, for these are not common knowledge, even in the technical manuals. Thank you for your tips. It is truly a wonderful beast to have in tip top shape. James AC4EA San Francisco

From r390a at bellsouth.net Sun Oct 2 22:24:44 2005
Subject: [R-390] R-392 on the 'bay

R-392, untested condition, but from pics appears complete. Few bids so far. Just a heads up in case anyone was interested. Item 5813515251 Not mine, don't know seller Tom NU4G

From courir26 at yahoo.com Mon Oct 3 15:40:43 2005
Subject: [R-390] R-648 contracts

I dug into my bar napkins and found these contract notes on the 648. I'm still a little fuzzy on the freq coverage. Did only some of them cover medium wave? Tom

R-648/ARR-41 hi sn

NOas55-821r 150

NOas57-438 1045

NOas60-0164(medium wave) MW-897

N383(19-383)74432A YY-125

total 2207

From dsmaples at comcast.net Mon Oct 3 19:50:28 2005
Subject: [R-390] Off-topic questions on coastal stations

All: There was a posting several months ago about coastal stations WLO, etc. I have several off-topic questions about coastal stations; will the list manager allow them to be posted here? I guess you could make the oblique connection that they can be listened to on an R-390 (rather a long stretch!). Thanks, Dave WB4FUR

From jlkolb at jlkolb.cts.com Tue Oct 4 03:13:54 2005

Subject: [R-390] R-648 contracts

The NAVAER 16-30ARR41-501 Handbook operation Instructions lists the freq coverage as 190-550 kHz and 2-25 MHz

The R-648 I have, however, does not have 190-550 coverage. The LF group of coils are not installed, and the tuning will not go below 2 MHz. No label on this one, so can't give contract #. John http://www.jlkolb.cts.com

From muttman at charter.net Tue Oct 4 13:38:12 2005
Subject: [R-390] R-648 contracts

Guys,

I was a radio operator in the 60's and flew in several Neptunes with the R-648 and none of them had the VLF band. But the VLF band was available on the ARN-21 RDF. Also I think by that time 500 Kc was no longer an emergency frequency and I THINK, that we were monitoring 2.125, 121.5, and 243.0. Buzz

From N4BUQ at aol.com Tue Oct 4 22:44:57 2005
Subject: [R-390] Power Cords on eBay

Just in case you need one, someone (NOT ME!!) has some power cords for the R390 and R391 for auction. I think these are a bit hard to find and these might be pricey, but wanted to let the group know about them. Item number: 5815270255 Barry - N4BUQ

From jpl15 at panix.com Tue Oct 4 23:31:01 2005
Subject: [R-390] Power Cords on eBay

wrote: > Just in case you need one, someone (NOT ME!!) has some power cords for the > R390 and R391 for auction. I think these are a bit hard to find and these > might be pricey, but wanted to let the group know about them. > > Item number: 5815270255

I bought one of these in August for my R-390 - it came nicely packed, very well made and works perfectly. I can recommend this person.... nice fellow, seems to care about this Stuff. Cheers John KB6SCO

From w5or at comcast.net Wed Oct 5 01:43:20 2005
Subject: [R-390] Off-topic questions on coastal stations

Go ahead, Dave. It's not too far off topic to every now and then explore listening targets.

From hankarn at pacbell.net Wed Oct 5 08:54:24 2005
Subject: [R-390] Power Cords on eBay

If you swim over to the site and look closely you will find it is a homemade 2 WIRE cable and connector plus I would guess a 18 gauge. Bill Perry gets $25.00 plus shipping when he has them. Price

is not bad if you consider the time involved to wire the plug. my .02 Hank KN6DI

From roy.morgan at nist.gov Wed Oct 5 08:54:18 2005
Subject: [R-390] Power Cords on eBay

wrote: >... power cords for the R390 and R391 for auction. ... >Item number: 5815270255

Wary buyers will note that the cord supplied is a non-polarized two-conductor cord. This is almost certain to cause trouble (hot chassis at half line voltage if not grounded). Why would anyone pay forty bucks for a dangerous line cord???? Roy

From n4buq at aol.com Wed Oct 5 08:57:48 2005
Subject: [R-390] Power Cords on eBay

I wondered about that. I didn't know if the original cords were non-polarized or not. Thanks, Roy.
Barry - N4BUQ

From fwbray at mminternet.com Wed Oct 5 10:01:19 2005
Subject: [R-390] Listening Target Coast Station KSM

For those who want a good target for their R-390's, I am posting a message I received from W6AWO. (This is a re-post of a message the bounced the first time, so please excuse me it it somehow makes it through twice.) 73, Fred KE6CD

KSM will be on the air this coming weekend, October 8 and 9.

KSM, the coast station of the Maritime Radio Historical Society, has recently been operating on Saturdays, running a wheel and soliciting traffic from ships. Our best customer so far has been SS Matsonia/KHRC on the San Francisco - Honolulu run. RO Reese Jones has been filing his AMVERs and personal messages via KSM. We have several messages on the hook for him.

This weekend SS Jeremiah O'Brien/KXCH will be participating on the annual Fleet Week on San Francisco Bay. We will be listening for calls from them on 500kc. At the time of writing the exact start time for transmissions from KSM have not been decided but we hope to be QRV around 1000pdt/1700Z

The KSM transmitting frequencies are: 500kc 426kc 6474kc 12993kc

KSM will listen for calls from ships on: 500kc 6276kc 12552kc

Contact is typically made on one of these calling frequencies. The ship operator then advises his working frequency (usually just the last three digits) and the shore station acknowledges with "up". The shore station always remains on its assigned transmitting frequency.

KSM reception reports may be sent to:

Ms. DA Stoops

P.O. Box 381
Bolinas CA, 94924-0381
USA

Denice has a particularly nice verification in the form of a historic Globe Wireless radiogram (the call KSM was assigned to a Globe station in the distant past) to send to those submitting a written report.

K6KPH will listen for calls from amateur stations on 7050kc. VY 73, RD Chief Operator, KSM/KPH Richard Dillman, W6AWO

From jpl15 at panix.com Wed Oct 5 10:44:22 2005
Subject: [R-390] Power Cords on eBay

wrote> If you swim over to the site and look closely you will find it is a homemade > 2 WIRE cable and connector plus I would guess a 18 gauge.

Um, no. The one I got is three-wire and nicely made... obviously the gentleman is using a commercial cordset and assembling the connector, but it's a good job nonetheless.... and I'm not saying this just because I *bought* one.... ;} Cheers John KB6SCO

From odyslim at comcast.net Wed Oct 5 12:46:10 2005
Subject: [R-390] WTT tube shields

I have 48 IERC 6015B tube shields that I don't need. I don't know what they fit. Looks like a sawed off 5814A.

I am wanting to trade for IERC (any type) 5020B and6020B. Any takers? Scott W3CV

From richardlo at admin.athabascau.ca Wed Oct 5 14:04:04 2005
Subject: [R-390] Power Cords on eBay

wrote: > I wondered about that. I didn't know if the original cords were non-polarized or not.

Polarization was irrelivant. The manual told you in no uncertain terms to run a separate ground wire at all times. Richard Loken

From jpl15 at panix.com Wed Oct 5 13:10:07 2005
Subject: [R-390] Power Cords on eBay

wrote wrote: I wondered about that. I didn't know if the original cords were>> non-polarized or not. > Polarization was irrelivant. The manual told you in no uncertain terms to> run a separate ground wire at all times.

I notice now (after my previous posting) that this current cordset is inexplicably two-wire. I do repeat that the cable I bought from him in August was in fact three-wire, and is working well on my R-390. I wrote him a quick note to ask about why he decided not to use a grounded cordset on this - we'll see what the response is.

And I certainly agree that the radio oughta be tied firmly to Mother Earth - by any means available. Cheers John KB6SCO

From jpl15 at panix.com Wed Oct 5 16:39:50 2005
Subject: [R-390] More on the the 390 / 391 power plugs

> Sure John you can post it and a link to my site if you like. I will actually make them any way the buyer wants!

The eBay pic is an old one - new ones come 3-prong, like the one I have.

John KB6SCO Date: Wed Oct 5 20:12:42 2005
Subject: [R-390] Power Cords on eBay

Ah - the proverbial "hot" chassis.. In this case the operator should remain isolated at all times from ground. Grease your entire body with insulating gap filler and don your neoprene wet suit. Next comes the rubber gloves and those big Mickey Mouse arctic boots that you can inflate. After isolating yourself, you need to be equalized to the R390's chassis potential. A #10 solid copper wire from the chassis to a gold foil coved golf ball held just over the tounge should do the trick. Now you are ready for a night of listening pleasure.

From bill at iaxs.net Wed Oct 5 20:10:30 2005
Subject: [R-390] Power Cords on eBay

What a great way to sum up zillions of messages on the subject of hot sets and leaking capacitors, over the years. Ground the set or wear the wet suit. Bill Hawkins

From dsmaples at comcast.net Wed Oct 5 20:30:11 2005
Subject: [R-390] Off-topic questions on coastal stations

All: Many thanks to Don for his patience.

I visited Point Reyes, CA this past week and encountered the coastal station there; that reawakened some questions I had:

1. There was a second coastal station down at Half Moon Bay, CA. Was this associated with the station at Point Reyes (e.g. the transmitting half of the station at Point Reyes)? I think it was, but I'm not sure. It now belongs to Globe Wireless, and I think is shared with ARINC.

2. WCC used to belong to Mackay Radio, I believe. It disappeared into the ether some time ago, leaving WLO, etc. I believe that Globe Wireless obtained the license. Did WCC ever show up anywhere else?
3. In tuning the coastal bands, I am now hearing what appears to be a different format. It starts with what appears to be a long SITOR stream repeated several times (kinda like Pactor I), followed by a few short SITOR bursts like would be heard if the station had connected to another station (e.g. a ship), followed by some much higher-speed bursts. I'm not familiar with the higher-speed bursts. Anyone

have a clue what's happening here? Is there a replacement for SITOR in the works?

4. Globe Wireless used to look for SWL reports. It's very hard to find out anything about what GW is doing on HF from their Web site now. Do they still welcome questions about their operations? This is not to diminish what GW is doing--they have obviously made a new silk purse out of a a purse that nobody else valued.

5. Does anyone besides me recall the really interesting "fist" that WLO used to have in the late 60s on their CQ tape (slower speed, very long dahs, and very short dits as I recall)? Again, no criticism, just thought it was interesting.

6. I checked the USCG web site, and they don't list anything on MF any more. I see the notes about NAVTEX operation around 500 kHz, but I get the sense that nothing else is happening there now. Is this correct? Dave WB4FUR

From recycler at swbell.net Wed Oct 5 23:08:42 2005
Subject: [R-390] A tale of Two R-390A's

Hello,

I'm new to this list, but have owned an R-390 or two in the past.

I have never had to repair one yet. In the last month, after 10 years without an R-390, I went from zero to two R-390A's. I would appreciate from this wize list any comments or suggestions which come to mind after these acounts:

Stewart-Warner R-390A #1258.
This unit is nice an clean, but does not work. All the tubes light up, and the 600 ohm speaker emits a low hiss which can be controlled by the RF gain and the audio gain control. It will not receive any signal. If I unplug the VFO's Rf cable, the hiss goes away. I also found that the OA2 was bad and the radio had been run before with 240VDC in the 150V regulated line. I replaced the tube and cured that, but still no workie. The AGC voltage is 0.8 (or zero if I switch to manual) and the RF gain control properly varies the cathode bias line. I have not gotten out the test equipment yet, but I wonder if the power supply malfunction might have cooked something.

R-390 #2: label is missing, no idea how to tell..
This one seems to work reasonably well, except for the BFO, and the VFO tracking is off a little. The main thing I am searching for here is what the "record of modification" label on the back indicates. The label is USAFSS form 245. Here are the mods, listed by publication and date.

publication date
MB +04 +03 +01 03 FEB 69
MB 4-4-2 8 FEB 69
MB 4-4-8 8 JUL 69

Anyone know what mods these might be? Thanks in advance, Patrick

From vhfplus at bmg50.com Thu Oct 6 00:08:49 2005
Subject: [R-390] Power Cords on eBay

wrote: wrote: wrote: I wondered about that. I didn't know if the original cords were non-polarized or not. Polarization was irrelivant. The manual told you in no uncertain terms to run a separate ground wire at all times.

I was given an R-390 a couple of weeks ago and had to replace a damaged power cord. Upon turning the radio on I found that it trips the GFI outlet in my shack/garage even with no antenna connected. I then disconnected the ground (yes, only temporarily as a test) and find that the '390 works without out tripping the GFI. I have no documentation so I cannot determine a cause at this point.

I am curious as to how I can determine whether this is an R-390, an R-390A or some other variation. It has been many years since I have seen one and this unit has had the front name plate removed so I don't even know the manufacturer. Can anyone suggest any identifying marks/labels/etc to assist?

Thanks, Jack, AE7DX

From jpl15 at panix.com Thu Oct 6 00:50:51 2005
Subject: [R-390] Power Cords on eBay

wrote: > I was given an R-390 a couple of weeks ago and had to replace a damaged power

Take $20 for it? I pay shipping.... ;}

(I learned this here) If the "ANT TRIM" knob is at the top of the panel, centered over the frequency readout - you have an R-390A. If the "ANT TRIM" knob is beneath the "CARRIER LEVEL" meter, it's a 'non-A'. Also, if the power cord is attached to the back of the radio (under a cover) - it's an "A". If the cord plugs into the back with a right-angled 4-pin plug, it's a 'non-A'. From your description of the power cord, it seems you have an R-390A.

If your radio is tripping the GFI with the ground pin active, then I'd hazard a guess that the line filter unit inside has developed a leaky capacitor, or other high-resistance leakage path to ground, which of course will upset and trip your protection circuits - it's actually doing what it was designed to do. Another place to look might be replacing the power cord again, on the off-chance that the cord itself is bad.
I would first download the full docs on your set, and then you can do a bit of troubleshooting. Obviously things are bordering on being unsafe as it stands now.

I hope this points you in the right direction.... this List is a wonderful resource for keeping the 390s alive and well. Cheers John KB6SCO R-390A, R-390, R-388

From bill at iaxs.net Thu Oct 6 01:10:08 2005
Subject: [R-390] Power Cords on eBay

Ah, yes, the GFI problem is the other ground issue. The old power line filters were designed for worst-case environments. Each side of the line is bypassed to ground by 0.1 mfd. The reactance at 60 cycles is about 10K ohms. That's enough to trip a GFI.

The ground is important, so either the GFI has to go or you'll need about a 200 watt isolation transformer. IMHO, GFIs make sense around plumbing, where appliances may not be grounded. You

are much more likely to get across the line on a workbench. Anybody that remembers to keep one hand in a pocket while working around live equipment doesn't need a GFI.

You have a non-A if the antenna trim is on the right side of the panel, near the rack handle about mid way up. You have an A if the antenna trim is in the center near the top of the panel. Regards, Bill Hawkins

From roy.morgan at nist.gov Thu Oct 6 09:37:35 2005
Subject: [R-390] Power Cords on eBay

wrote: > If your radio is tripping the GFI with the ground pin active, then I'd > hazard a guess that the line filter unit inside has developed a leaky capacitor,

Not likely (Though they ARE paper caps in there). The line bypass caps are simply acting like capacitors and are not necessarily leaking.

>or other high-resistance leakage path to ground, which of course will >upset and trip your protection circuits - it's (the GFI device, he means) >actually doing what it was designed to do.

A leakage path is possible, of course, but unlikely. It normally is the too-large line bypass caps in the line filter.

The "cures" are:

1) Don't use a GFI-protected line.

2) Use an isolation transformer.

3) Remove the line filter and:
A) Rebuild it with smaller bypass caps or:
B) Replace it with a modern IEC (computer style) line cord connector, either a filtered one or a non-filtered one. or:
C) Do away with the filter altogether and cobble in an unfiltered, directly connected line cord.

In ANY case, Please do use a grounded three wire line cord for safety. Roy

From r390a at bellsouth.net Thu Oct 6 16:30:28 2005
Subject: [R-390] FYI - Power Cords On Ebay

Please don't spend $40 when you can buy a $10 connector and a $5 AC cord!

Not to fuss at anyone, but I just bought two of these style connectors from Fair Radio and they were $10 each for cutoffs. They work quite nicely for both AC or DC use for assorted sets. It's the same AC connector my 390 and GRR5 use, it's the same DC connector as my T-195 and GRC-106 bits use - though the DC cable itself is larger. Tom NU4G

From redmenaced at yahoo.com Thu Oct 6 19:44:28 2005
Subject: [R-390] Power Cords on eBay

I'm sure all of this got covered in the Y2K manual. That and a lot more. It should be your first download, it'll answer a lot of questions, and probably start even more! Joe

From r390a at bellsouth.net Fri Oct 7 09:02:53 2005
Subject: [R-390] Power Cords on eBay

Joe's right. First couple things anyone should do when they get their first R-390 or 390A --

1 Get a maintenance manual, see link below. I'm partial to the Army version, TM 11-5820-358-35. It wouldn't hurt to get the -10 and -20 versions of that manual as well as they go over the very basics of operation.

2 Just as important, download the R-390 Y2K manual and read the FAQ at http://209.35.120.129/faq-refs.htm Tom NU4G

From vhfplus at bmg50.com Thu Oct 6 23:24:30 2005
Subject: [R-390] Power Cords on eBay

Thanks to everyone who responded...I do have a '390A and it'll take more than $20.00 plus shipping to pry it out of my hands :>)

Interesting about the RFI filters on the AC input. I'll have to either put the '390A on the operating desk or run a ground strap over to the work bench to connect to my antenna system ground. 73, Jack, AE7DX

From future212 at comcast.net Fri Oct 7 16:10:54 2005
Subject: [R-390] Variable Caps

Hello,

Is there a way to clean the variable caps in the Rf transformers located in the RF Module. They look like they cannot be dis-assemblied, they look sort of sealed with a rubber looking gasket/seal around the bottom of the top ceramic part, under the adjustment screw. The shaft extends through the board to the solder connections. Is there a good way to clean these caps?

Thank you in advance for any information. 73's DW Holtman WB7SSN

From n4buq at aol.com Fri Oct 7 17:26:12 2005
Subject: [R-390] Variable Caps

If these are the caps I'm thinking of, you should be able to *carefully* push the "Y-looking" clip (the solder connection thingee) from around the center shaft underneath the board. The top part of the cap should then pull out from the bottom part and the cap will come right apart. Barry - N4BUQ

From r390a at bellsouth.net Fri Oct 7 17:44:30 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Several of us talk about the "Non-A" when discussing the original R-390 vs the R-390A. Just for the fun of it I slapped together a tag for the elusive "R-390 Non-A."

http://www.fernblatt.net/_radio/r390_phoney_tag.pdf Tom Norris NU4G

From mikea at mikea.ath.cx Fri Oct 7 18:09:54 2005
Subject: [R-390] R-390 Non-A Name Tag for download. Really.

wrote: Just for the fun of it I slapped together a tag for the elusive "R-390 Non-A."

"Gump Brothers" indeed!

Tom, that's _great_. So how many are you planning to make and how much will they sell for? Rick Mish probably would like a few. Mike Andrews, W5EGO

From barry at hausernet.com Fri Oct 7 18:21:57 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Looks great and finally establishes the validity of the appellation.

Gump Bros.? Hmmmm. You should now clone a tag for the R-390A with Gump Bros. on it plus the following slogan: "Life is like a blue striper. You never know what you're gonna' get."

All of them should have the same serial number, like this ... "S/N 12345 ... Again !"

The R-390/URR could have the slogan: "A man's radio." (courtesy of Les Locklear who got it from someone else.) Barry

From Flowertime01 at wmconnect.com Fri Oct 7 19:01:01 2005
Subject: [R-390] Power Cords on eBay

Why would anyone pay forty bucks for a dangerous line cord???? Roy,

---
Because it was built that way back then and by gosh its going to stay as original as possible even if it kills me. Oh my gosh it just could literally do that. Roger KC6TRU

From Flowertime01 at wmconnect.com Fri Oct 7 19:31:25 2005
Subject: [R-390] Power Cords on eBay

Jack, AE7DX

Mostly we just put a three wire cord on the receivers. Bond the green wire to the receiver frame. likely with one of the screws used to hold the cover plate over the hot post where the white and black wire get attached. Use a meter and determine which wire goes to the off/on switch and put the black wire to it.

Most of us do not use GFI breakers as these get upset with the leakage currents.

The real task is to ensure the third wire in the power receptacle really goes to ground and will hold the chassis close enough to ground so that when you grab a knob you do not get bite. This works OK on receive and on the bench. If you transmit, you better have a much better ground than the return line to who knows where on the power cord. Back when, we accepted nothing was ground. You bonded your receiver with a nice chunk of 1/4 braid. On the bench, in the rack, in the van, You always went looking for the ground before you went looking for power. You can drag the generator to the ground rod, but you cannot always get a ground rod in the ground. Find the ground first. Roger KC6TRU (new offer follows)
Thanks to everyone who responded...I do have a '390A and it'll take more than $20.00 plus shipping to pry it out of my hands :>)

OK, I'll offer $25.00 and come pick it up to save you the trouble of getting it packed. Roger.

From fosterp at wizard.com Fri Oct 7 19:47:12 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Why not call it as it is ? A REAL R-390 and then there are the cost reduction models Foster W4HCX

From barry at hausernet.com Fri Oct 7 19:52:15 2005
Subject: [R-390] Power Cords on eBay

Truth be told, there are an awful lot of grounded outlets that aren't grounded or not grounded well enough. My place was built in the early 50's complete with 60 Amp service four 15 A glass fuses. Two conductor "Romex" throughout.

Of course, the old two-conductor outlets wear out and there's nothing but grounded ones available as replacements. Wall plate screw? "Gem box"? Forget it.

The service was upgraded two or three times and eventually the kludge of separate fuseboxes was replaced by one big fuse panel 200 Amp service. Any new wiring is grounded, but upgrade the old? Quite a tall order can't use the old Romex to pull through it's stapled and trapped all along the way. Run new? - Have to tear up the walls they are full of "cats" and not the white meat meow kind. (16" horizontal 2 X 4's between the studs).

So, fact is, if you have to run separate grounds anyway, and that ground lug on the power plug wouldn't do anything anyhow ... no big deal if it's a two wire cordset with a separate ground-wire the ground wire can go to lug attached to a good outlet strip and the 3-prong outlet strip into a good grounded outlet. Or, if the ground's no good on the outlet, I suppose a separate ground line.

The builing I rent for my business is not much better. Commercial code here calls for only two-conductor BX cable (armored). The metal jacket on the BX clamps to the Gem boxes supposed to be metal not plastic here. Then the ground lug in the receptacle is connected by means of the mounting tabs on the receptacles. Of course, BX armor is made of one of the most conductive metals known to Man, the clamps in the Gem boxes are gold plated and the screws on the receptacle tabs never get loose. Uh..huhhhh.
It's a funny thing. The Earth is the biggest thing we got going 24K milies in circumference plenty of it wherever you go (OK a lot of it is under water), but when you want a good chunk of it hooked up to the other end of a piece of wire ... you have to drive a copper clad stake 10 feet into it and keep it wet.

Back in the 50's they didn't have the same ideas about grounded power cord sets. Of course, hot chassis were also popular in the spirit of "we don' need no steenking transformers". Barry

From leslocklear at cableone.net Fri Oct 7 19:53:02 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

That would be too simple and make too much sense. I have a suggestion, it may sound crazy, but here it is: R-390/URR or R-390A/URR

Do you think that might prove to challenging for some of the "Non A" crowd? Les Locklear

From Flowertime01 at wmconnect.com Fri Oct 7 20:07:21 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Tom,

Nice job on the tag. I was able to grab it and get it sized on a sticky label with no problem. It printed real sharp on my epson printer.

I have it stuck on my non A receiver. What can you tell us about the Gump contract, I have not seen that contract. Roger KC6TRU

From wa9msd at ggnet.net Fri Oct 7 20:11:56 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

OK the plan is to print these out on a cheap (or is that cheep) inkjet printer and sell them on ebay. Joe WA9MSD

From Flowertime01 at wmconnect.com Fri Oct 7 20:22:59 2005
Subject: [R-390] Power Cords on eBay

writes Truth be told, there are an awful lot of grounded outlets that aren't grounded or not grounded well enough.:

Barry,

You know it. Ground and wiring are poor.

My "home" here in Westminster South Carolina was built in 1948, I am still finding the gas lamp plumbing in the walls. The electric was all two wire Romex. I have no idea what the refrigerator was plugged into at the wall. It may have been a 1950s appliance for all I know.

I am replacing all the dry wall and rewiring as I go. I have a basement so I go some three wire in there real quick. The service and box was upgraded before I brought the house so I have a ground rod. The breaker box, disconnect and meter box were up to code. All the old two wire was just tugged enough to get it into the new breaker box and staked to a breaker. Roger KC6TRU

From Flowertime01 at wmconnect.com Fri Oct 7 20:27:13 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Les,

Love your way with words. Roger KC6TRU

From Flowertime01 at wmconnect.com Fri Oct 7 20:28:36 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

wrote: OK the plan is to print these out on a cheap (or is that cheep) inkjet printer and sell them on ebay. Joe WA9MSD

Joe, That will be cheep Roger KC6TRU

From barry at hausernet.com Fri Oct 7 20:58:39 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Actually, to be thematically consistent, it would have to have a tagline which reads "Non-Cost-Reduced Model"

From peuhs at bellsouth.net Fri Oct 7 21:12:18 2005
Subject: [R-390] R-390 non-a

Yes, a tag design...neatly done....BUT,

What so many still fail to see is that there is only one specific radio that is an R-390, and is NOT an R-390 A....It is an R-390..... John

From r390a at bellsouth.net Fri Oct 7 23:04:16 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

wrote: Looks great and finally establishes the validity of the appellation.

Hmmmm, ideas, ideas.... also.... Instead of Signal Corps, I could put "CIA" or "Unnamed Three Letter Agency" like the last several multi K$ radios have claimed to be. I can do the art, but don't have a way to make the tag itself. :-(Tom

From hankarn at pacbell.net Sat Oct 8 00:30:44 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Tom, Neat tag. Shall i make some up???!!! HiHi. Hank KN6DI

From hankarn at pacbell.net Sat Oct 8 00:43:01 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Foster, There are too many around with blinders on that the R-390A is the gospel. Then there is the R-390, R&S EK-07, E311a and others that rank right up there. Hank KN6DI

From shoppa_r390a at trailing-edge.com Sat Oct 8 07:58:48 2005
Subject: [R-390] Power Cords on eBay

> Commercial code here calls for only two-conductor BX cable (armored). [...] Of course, BX armor is made of one of the most conductive metals known to Man, the clamps in the Gem boxes are gold plated and [...]

I had a small, um, disagreement with local inspectors on this issue a few years ago. We had run a separate ground wire inside flexible conduit because we explicitly did not trust a daisy chain of conduit-box-conduit-box connections (it was EMT, so the "connection" consisted of nothing but a set screw.) The inspectors told us we were not allowed to run a ground wire. Eventually, after going up the food chain and across the county, we got permission to run the ground wire (bonded at every box and to every outlet), but it was a lot of pain and effort to do it the right way. Tim.

From mhuss1 at bellatlantic.net Sat Oct 8 08:40:08 2005
Subject: [R-390] R-392 help

This is a little off subject, but I just procured an R-392/URR from a little old lady in Pasadena (O.K., she is not that old, and she is from Tucson). Designed by Collins between the R-390 and R-390A, it has much more in common with the R-390 than the A. The major differences are a different tube set, a fixed squelch level (you adjust it using the RF Gain control), and the lack of the 16 kc, 1 kc, and 0.1 kc bandwidths. It also is powered by 28VDC without using a dynamotor or vibrator power supply. This means that the B+ voltage is 28 VDC!

It came advertised as working, but did not when I first hooked it up. But after plenty of knob-twisting (I Looooove twisting knobs), the switches cleaned themselves enough to get working. With one caveat. When I switch to the CAL position, the thing cals up nice. Switching back, however, the receiver is almost dead for about fifteen minutes, then slowly regains its sensitivity. Note that I live near two strong AM stations that put better than 10 millivolts into the receiver. And there is no loss of sensitivity when tuning across them. Also note that switching to Standby, then back into Normal does not cause the problem (eliminating the antenna relay).

Have not started troubleshooting it yet. Anybody have any ideas? And are there any other R-392 owners out there to swap knowledge with?

By the way, she is horrified that it did not work when I got it, and is grateful that I am sooo? understanding about it. But it came with the power connector, all the tools and tube pullers still inside, origional audio output tube, and an original manual. And with the exception of more than a few scuffs on the case, remarkably clean! She just.doesn?t.get.it!

P.S. Anybody have an LS-166/U speaker with origional connector they are willing to part with?

From barry at hausernet.com Sat Oct 8 10:18:30 2005
Subject: [R-390] R-392 help

wrote: > This is a little off subject, but I just procured an R-392/URR from a > little old lady in Pasadena
<snipped> R-392 is fair game on this list part of the '390 series. We even entertain R-388's on special occasions ;-)

> It also is powered by 28VDC without using a dynamotor or vibrator power supply. This means that the B+ voltage is 28 VDC!

That's right we don' need no steenking dynomotors, hombre. Actually that's nominal 24 volt vehicular which runs close to 28 when the engine is running and revving. With a 12 volt system, it can range from 12v to max charging voltage of about 13.6, so double in a 24 volt system. The tube filaments are 26 volts nominally.

There are two separate pins for the supply voltage - one for B+ and one for filament. They are usually strapped together, or the power cord might have 3 or more leads with separate connections whereby they can be spliced together or not. I've heard that some use two supplies with 24 v on the filament and around 30 on the B+ supposed to optimize performance while going easy on the tubes.

> It came advertised as working, but did not when I first hooked it up. But > after plenty of knob-twisting (I Looooove twisting knobs), the switches > cleaned themselves enough to get working.

Actually, that counts as "working" as you're expected to twist some knobs to work it. A lot of my acquisitions arrive in that state.

>With one caveat. When I switch to the CAL position, the thing cals up nice. >Switching back, however, the receiver is almost dead for about fifteen >minutes, then slowly regains its sensitivity.

Hmmmm ... you need to download some manuals and study up on it. There are several '392 manuals on the bama site. The 200 KC crystal is in a plug-in oven. You can try pulling it and switching to see if the oven has anything to do with it, but I doubt it. When you switch to Cal on the AGC switch, among other things, it cuts out the AGC, grounds it or whatever. You might have a leaky cap or a bad tube (gassy/grid emissions, etc.) in the AGC or related ciruits.

Note that I live near two strong AM > stations that put better than 10 millivolts into the receiver. And there > is no loss of sensitivity when tuning across them. Also note that > switching to Standby, then back into Normal does not cause the problem > (eliminating the antenna relay).

Check out the manuals where they describe the calibrator/AGC etc.

> Have not started troubleshooting it yet. Anybody have any ideas? And are > there any other R-392 owners out there to swap knowledge with?

Many of us also have R-392's. I'm sure someone else will pop in. IMHO, the '392 is one of the more neglected, unsung units going. The thing is, they tend to work on deliver after a fashion often well enough that it does not stimulate the usual tweaking and tinkering. Also, they're small and humble and can hide under a bench or at the bottom of a closet for eons. I have several of them including one that was totally solid-stated. More out of curiousity than need, I did a full alignment on one of the stock units (not the solid state one). Quite an improvement and resulting performance was close to that of an R-390/R-390A.

You should check out Josh Rovero's web pages on the '392. Search under "rovero R-392".
>
> By the way, she is horrified that it did not work when I got it, and is > grateful that I am sooo? understanding about it. But it came with the > power connector, all the tools and tube pullers still inside, origional > audio output tube, and an original manual. And with the exception of more > than a few scuffs on the case, remarkably clean! She just.doesn?t.get.it!

Lucky fellow tools and tube pullers are @RARE@

> P.S. Anybody have an LS-166/U speaker with origional connector they are > willing to part with?

Looks like Fair doesn't have 'em anymore. They tend to turn up on you-know-where from time to time. Enjoy. Barry

From wa6knw at sbcglobal.net Sat Oct 8 13:19:13 2005
Subject: [R-390] R-390 Non-A NameTag for download. Really.

Foster, There are too many around with blinders on that the R-390A is the gospel. Then there is the R-390, R&S EK-07, E311a and others that rank right up there. Hank KN6DI

What would Foster know, Hank? He was in the Navy. They used real boatanchors; like: RBA, RBB, RBC, RBH, RBK, and RBL. Just to name a few. Heck, Come to think of it the Navy didn't have any REAL radios until thay got R-390's. Ask him about R-1051's and golfing gloves.... RICH WA6KNW
- - - - - - - - - - - - -

From redmenaced at yahoo.com Sat Oct 8 13:49:41 2005
Subject: [R-390] Power Cords on eBay

wrote: > > Commercial code here calls for only two-conductor> BX cable (armored). > > [...] Of course, BX armor is made of one of the

Hmm, you crashed into a tough one. You might have inquired about "isolated" grounds and "dedicated" grounds.

Also, I got into a big "discussion" about HOW the boxes got bonded, the lead electrician read it to mean that each ground wire was to be attached to the box seperately, with it's own screw. Not so! All grounds in each box will be tied to the box with ONE screw. That way the box is bonded but the steel of the box isn't part of the ground path. Joe

From mhuss1 at bellatlantic.net Sat Oct 8 16:48:35 2005
Subject: [R-390] R-392 help

That was my first thought, too. That is why I tried Stand-By. I think Barry is right. Sounds like an AGC problem.

I also own an R-390A from 1955, Origional Collins #2792. And if anybody has a spare PTO they want to part with, I am buying. (the origional one has about a khz of 'slip' from wear).

As for the LS-166. I actually need the UG-77 connector on it. As a point of note about the tinny sound. Researched this while stationed in Korea for the RATT Rig operators, who liked to tune in shortwave on the secondary receiver. They couldn't use stereo speakers because 2nd LT 'Crash' Rothman objected to the 'Unauthorized Equipment'. The little 600 to 8 ohm transformer is the main culpret. Manually swept it using an audio oscillator and there is a nice rolloff below 300 hz. Cured the problem by replacing the transformer with a 70.7 volt one, and stuffing the metal cabinet with fiberglass. The ops were appreciative. Said it sounded a lot better. And 2nd LT 'Crash' Rothman was none the wiser. R-392/URR, Stewart-Warner, Sn# 2681R, Order nr. 11653-PH-52. And from the paint on the case, belonged last to the Radio PLT, Co B, 198 Sig.

By the way, has anyone else noticed how Collins slips these little things into their designs. Like the seperate B+ pin on the Power connector of the R-392? One would 'almost' think that somebody was thinking about making the R-392 capable of running AC for the filaments and seperate DC B+ for fixed operation. Has anybody tried that? Note, It does not have the solid-state audio module. Can't think why it would not work. My little 4Amp open frame linear power supply gets mighty warm powering all those filaments!

From jim_cott at earthlink.net Sun Oct 9 00:54:05 2005
Subject: [R-390] How to free stuck IF slugs?

OK, so I finally got around to doing an IF alignment on my R-390A. On the first fixed IF transformer, the primary slug (bottom) moves so that I can peak the diode load at 455Khz. The top slug, however, is stuck to where an unsafe amount of torque will still not allow me to turn it in the coil form. What does one do to free these ferrite slugs in the coil form? I know that turning it with force is definitely NOT the answer, for that has been known to crack the coil form. I am left with the question: Does anyone have a tip in how to free these slugs? I know they are normally tight, but should not be immovable. I had the same problem with the single slug form T208. All I want to do is peak T203 and T208 I think these are the numbers...not messing with the staggered IF transformers) Any help would be appreciated.

Thanks in advance Jim AC4EA San Francisco

From dhallam at rapidsys.com Sun Oct 9 08:41:08 2005
Subject: [R-390] R-390 Parts on eBay

Does anyone know anything good or bad about the fellow in Greece who is selling R-390 parts on eBay? I guess the prices are low because of the shipping costs. If you buy something from him, does he deliver? David C. Hallam KC2JD

From wd8kdg at worldnet.att.net Sun Oct 9 11:27:43 2005
Subject: [R-390] How to free stuck IF slugs?

Good Morning Jim,

Sounds as if the slug is already cracked. Try using a small pick, etc. and clean the top of the slug. You might now be able to see or feel crack/cracks in the slug. If this is the case; time to shop for a new/used IF transformer.

Others have been lucky and used a alignment tool with a dab of super glue and the slug has moved/peaked after the glue dried and pulled the slug away from the ID of the coil.

I had this same issue on T101, don't have the manual in front of me, could be another transformer. Anyway, someone on the forum listed a transformer and some RF slugs for sale a couple months after finding the cracked slug. Just what dad needed!

Another option if a spare transformer is available/found; a root canal. Use progressively larger drill bits drilling out the stuck slug and replacing it with a slug from the other transformer.

Good luck, it can be fixed. Regards, Craig

From k0jd-l at seboldt.net Sun Oct 9 12:23:49 2005
Subject: [R-390] R-392 help

Hey, the R-392 is the only reason I'm on this list :-) ... I was always interested in the R-390 family, but the R-392 showed up cheap. And, as others have said, it seems to have less to go wrong with it, probably being a vehicular rig.

You definitely want to run it at about 24.5 volts for filament life, according to a source I heard from when I first got it - makes sense. I had the same experience you did, where a little switch exercise got it back to life. I do have one nice quirk - the thing can go dead, but tapping the chassis near one of the top deck tubes brings it right back. Haven't dug inside to find the problem, since it's so easy to pop the thing out and tap... the time may come when I will have to, though.

Nice sound with the wide LC filter bandwidths... someday may try tapping the IF into something external, but it has a nice feel to it just the way it is. Certainly not a rig for a crowded band!

John K0JD Milwaukee, WI www.seboldt.net/k0jd

From Flowertime01 at wmconnect.com Sun Oct 9 12:24:51 2005
Subject: [R-390] R-392 help

wrote. R-392/URR is powered by 28VDC without using a dynamotor or vibrator power supply. This means that the B+ voltage is 28 VDC!

Yup,

The R-392/URR was a mobile receiver. It mounted in military vehicles and was powered off the vehicle generator / alternator and battery. Most military vehicles are 24 volts systems. Like today's vehicles have 13.8 volt 12 volt systems. Military vehicles have 27.6 volt 24 volt systems. Two 12 volt batteries are run in series.

Most were in como vans "communication vans" likely 4 receivers and two transmitters. They likely had RTTY machines. You likely were "assigned" a set of operating frequencies so you were not "scanning" the bands looking for signals.

Some were used with tank units for AM voice. I do not know if the R392 went in the tanks or if they were only used at the "command" end of the links.

The R390 design was best receiver sensitivety of the era. It was "copied" over to the follow on receiver models. Moving core inductors even became popular in auto radios of the 50's. Collins pioneered single side band voice for aviation and that created a whole new line of transceivers and fixed frequency "channels" which is where communications is at today.

The R390 R392 R390A were the last of the "band cruiser" receivers. I cannot imagine tuning the ham bands with an R1051 by flipping the 10KC step knob.

I hope you can put up a good stiff 24 -28 volt power supply and get your R392 back into daily operation.
Roger KC6TRU

From Flowertime01 at wmconnect.com Sun Oct 9 12:40:52 2005
Subject: [R-390] R-392 help

wrote, By the way, has anyone else noticed how Collins slips these little things into their designs. Like the separate B+ pin on the Power connector of the R-392?

John,

My late 1920s 6 volt Gurnow has separate conductors for the filaments and the B+ lines. In the military models you could run an extra "line filter" on the B+ line for less generator noise when the engine was running. The filaments were by the 1950s isolated from the cathodes so some noise on the filament voltage line was "OK".

Some time the good battery was run on the filaments to give good current and the weak battery was run on the plate line that usually draws less total current.

There are lots of reasons to support multiple power conductors between the power source and load.
Roger KC6TRU

From sacramento.cyclist at gmail.com Sun Oct 9 13:10:52 2005
Subject: [R-390] How to free stuck IF slugs?

If your slug is actually cracked and not just a binding problem...stop here. This probably won't help you.

I had a similar problem with the AGC transformer that binded before I could complete the adjustment. I found a tip in the Pearls that worked quite well. Put a VERY small shot of WD-40 into the top of the transformer and let sit overnight. Problem solved (for me). Good luck. Dennis

From Flowertime01 at wmconnect.com Sun Oct 9 13:24:15 2005
Subject: [R-390] How to free stuck IF slugs?

Good Morning Jim, James Cottle,

Sounds as if the slug is already cracked. Try using a small pick, etc. and clean the top of the slug. You might now be able to see or feel crack/cracks in the slug. If this is the case; time to shop for a new/used IF transformer.

Others have been lucky and used an alignment tool with a dab of super glue and the slug has moved/peaked after the glue dried and pulled the slug away from the ID of the coil.

I had this same issue on T101, don't have the manual in front of me, could be another transformer. Anyway, someone on the forum listed a transformer and some RF slugs for sale a couple months after finding the cracked slug. Just what dad needed!

Another option if a spare transformer is available/found; a root canal. Use progressively larger drill bits drilling out the stuck slug and replacing it with a slug from the other transformer.

Good luck, it can be fixed. Regards, Craig

From mhuss1 at bellatlantic.net Sun Oct 9 16:38:23 2005
Subject: [R-390] R-392 help

Sounds like a cold solder joint. The business I work for manufactures electronics boxes for the military. When Dave pulled the case off to look inside, we all went 'EEEUUU...' at the solder joints. Don't know what the Mil-Spec was back then, but it never should have made it past the Inspector with all that rosen still on the joints.

Right now, I am powering it from an open-frame Linear Power Supply brick rated for 28V@4A, left over from the C-17 Simulator Program and floating around the back of more than a few cabinets for the last 15 years. Too valueable to throw away, but never quite needed. The surge current triggers the current limit (surge is about 8 amps). But it pulls about 2.3 to 2.8 amps depending on the position of the lamp switch and the ovens. Gets up to a toasty 30 degrees C above ambient. (about 55C.). Well within rating, but don't touch it. When I order the UG-77 audio connectors from Fair, I'll also order a 25.2 Volt 11A transformer to feed the filaments. Then use an ST LM317 and a 28 Volt transformer to supply 30-35 Volts to the B+. Looking at the schematic, I don't see anything the higher B+ should hurt. And it should provide a bit more dynamic range. Does that sound about right?

From r390a at bellsouth.net Sun Oct 9 19:27:13 2005
Subject: [R-390] R-392 help

I've done so for ages. I've kept the filaments down at 24 volts so they'll last longer, then put 30 volts on the plates. Works well for me. I'd not go over 32 volts since there are 35 volt caps in there. Tom NU4G

From leslocklear at cableone.net Sun Oct 9 20:16:45 2005
Subject: [R-390] Looking for Bob Camp

Group,

I seem to have lost his e-mail address. I have a message for him from Cecil Acuff. Les Locklear

From N4BUQ at aol.com Sun Oct 9 22:48:46 2005
Subject: [R-390] Black Anodizing?

Anyone know of a good source for black anodizing? I have eight small aluminum parts (1.5" x 1.5" x 2.25" aluminum tubing (4pcs) and 1.5" x 1.5" x 0.125" plate (4pcs)) I would like to have black anodized. These are the new filter cap housings for my R390A. I'm going to try to find a local place that will do these hopefully in with a batch of other stuff so minimum charges won't make this cost-prohibitive, but I thought you guys might know where I can get this done very reasonably.

By the way, this is a new design for replacement caps that doesn't involve gutting the old caps. I plan to post some pictures when I get them finished. Thanks, Barry - N4BUQ

From edw488 at earthlink.net Sun Oct 9 23:08:46 2005
Subject: [R-390] Re: R-390 Digest, Vol 18, Issue 14

Hi Dave,

If you mean digi91, I have dealt with him before, no problems. Bought some meters and other items from him, items were in good shape, well packed, and arrived quickly... 73's Ed, N3LHB

From recycler at swbell.net Sun Oct 9 23:30:42 2005
Subject: [R-390] Re: A tale of Two R-390A's

No one replied to my question, so I'll have to answer it myself, at least for the dead R-390A. 13 tubes later, it's working. Never seen so many bad tubes in one radio. I'm still looking through the data for the mods. PJ

Date: Wed, 05 Oct 2005 22:08:42 -0500
From: Patrick Jankowiak <recycler@swbell.net>

Hello ,

I'm new to this list, but have owned an R-390 or two in the past.

I have never had to repair one yet. In the last month, after 10 years without an R-390, I went from zero to two R-390A's. I would appreciate from this wize list any comments or suggestions which come to mind after these acounts:

Stewart-Warner R-390A #1258.
This unit is nice an clean, but does not work. All the tubes light up, and the 600 ohm speaker emits a low hiss which can be controlled by the RF gain and the audio gain control. It will not receive any signal. If I unplug the VFO's Rf cable, the hiss goes away. I also found that the OA2 was bad and the radio had been run before with 240VDC in the 150V regulated line. I replaced the tube and cured that, but still no workie. The AGC voltage is 0.8 (or zero if I switch to manual) and the RF gain control properly varies the cathode bias line. I have not gotten out the test equipment yet, but I wonder if the power supply malfunction might have cooked something.

R-390 #2: label is missing, no idea how to tell..
This one seems to work reasonably well, except for the BFO, and the VFO tracking is off a little. The main thing I am searching for here is what the "record of modification" label on the back indicates.

The label is USAFSS form 245.

Here are the mods, listed by publication and date. publication date
MB +04 +03 +01 03 FEB 69
MB 4-4-2 8 FEB 69
MB 4-4-8 8 JUL 69

Anyone know what mods these might be? Thanks in advance, Patrick

From CRIPS01 at MSN.COM Mon Oct 10 00:41:59 2005
Subject: [R-390] Black Anodizing?

Here is a listing of places that do this kind of work. http://www.aluminumanodizing.com/

You might check out local Gunsmiths to see who they use for this They deal with this short of thing all the time. Ken

From gwmoore at moorefelines.com Mon Oct 10 01:50:50 2005
Subject: [R-390] Black Anodizing?

GM Ken, Barry, es the list...

Boy, now, you hit the 'ol nail on the head --hibeing a boatanchor fanatic, a Greenkeyer, AND a gunsmith, I couldn't help but try to answer the question.....

Now Barry, I did a search for anodizing in your area (Huntsville) and came up with the following URL: http://www.thomasnet.com/alabama/anodizing-1790179-1.html

There seem to be a couple of places in the area, I don't, of course know if they do jobbing work or one off stuff..but, it wouldn't hurt to call.. 73 de Greg "GW" Moore WA3IVX/NNN0BVN

From JMILLER1706 at cfl.rr.com Mon Oct 10 08:05:36 2005
Subject: [R-390] Variable Caps

Yes they can be disassembled and cleaned - carefully. The three- pronged spring thing under the circuit board slides into a groove on the shaft, it can be gently pulled away from the shaft with needle nose pliers, even withour de-soldering. Then the rotary part just lifts out, and you can clean the surface with denatured alcohol. And clean the metal parts with deoxit and a tooth brush. Alternately, just dab a very small amount of deoxis onto the shaft where it is held by the spring piece and rotate it a few times to clean off any corrosion. Jim N4BE

From n4buq at aol.com Mon Oct 10 08:55:48 2005
Subject: [R-390] Black Anodizing?

Greg,

Thanks. I know there is at least one place here that does anodizing, but they have a very hefty minimum charge (something like $50 or more). This is mainly for cosmetic purposes and if I can't find a very reasonable solution, I'll probably just leave them bare. I can get them alodined and I may see what they'll charge for this very small lot if I can't find inexpensive anodizing. I had the other parts of a couple of frames alodined there and they look great. I'd rather have them protected, but I already have quite a bit "invested" in these things so if it comes to it, they'll be left bare. Thanks all, Barry - N4BUQ

From brumac at juno.com Mon Oct 10 10:01:36 2005
Subject: [R-390] Black Anodizing?

Hi All,

I copied this from the internet a few years ago as something that might be usefull. Well, that hasn't happened with me yet but someone on this list might want to try it. Looks simple enough. Good luck.

Oh yes, the usual disclaimer that I have no intrest etc. Bruce

Anodizing at Home by Jim Bowes

Based on the number of companies selling, and people looking for, anodizing services for their gun's aluminum bodies and parts, I wanted to provide this info to the paintballing community. I first came across the process in Super Chevy magazine, in an article about anodizing your own parts and brackets, for a custom touch on your hot rod. (* Original article by Bruce Hampson.) Often anodizing is considered and/or presented as a difficult and expensive procedure.

As it turns out, it really isn't that hard or that pricey. Supplies Needed:
The first thing to do is to get the following things together: First on the list is the most expensive item: a 6 to 12 volt battery charger. This item is what might make this too expensive for some paintballers. I (and most other hot rodders) already have one, for my car. If you don-t, then you will need to pick one up. They run from $45.00 to $110.00 depending on model, functions, etc.

While it may seem like a lot, it does have other uses. (You could charge a battery, for example.) =) The next item, though not that expensive, will take some effort to find: battery electrolyte, a.k.a. sulfuric acid. This should be available at a battery wholesaler for about $2.00/gal. To make the negative ground, you will need some aluminum ground wire and aluminum-foil. The wire can be found at an electronics store for about $35/spool, and you should have the foil in the kitchen. If you happen to be out of foil, you can pick up some more at the store when you go to buy the last item for this project.

No super-special chemicals or solutions necessary to make the colors; just plain-old fabric dye. (Something like Rit dye, for about $5.00.) Rit offers something like 30-40 different colors, so you have quite a number of choices for what color you want your parts to be.

An optional item is nitric acid: about $25.00/2.5 L. (This is used to clean parts prior to anodizing, but there are some cheaper alternatives. See end notes.)

This is available at chemical supply stores. Should you not be able to find any, you can try to get on the good side of the high school science teacher. He may help you out since you only need a few ounces.

Safety Precautions: There are a few precautions I want to go over to help keep you from blowing up the house or trashing the garage.

First of all, do not mix or store your anodizing solution in a glass container. Something could happen to make it break, and most households are not equipped to deal with that kind of spill. You also don't want to knock over the container, so a stable, rubber bucket makes a good choice. You will also need to be certain that the part you want to color will fit in the container without sticking out of the solution, and without touching the negative ground in the bottom of the container.

Any acid that you don't use, keep in what it came in, or an old plastic bottle, like a bleach bottle. You can also store your used solution this way for doing more parts later. (Make sure that there is absolutely no bleach left in the bottle. Acid and bleach make chlorine gas. Very bad. Don't breath. Poisonous

Safety also applies to the nitric acid, but in a different way. It is imperative that you label and keep track of this stuff, as it is a stronger acid than sulfuric, and more dangerous. The breakage/spill problem is not as likely since you won't have that much around. (Unless you bought more than a few ounces from the chem store.) The last note about the acids is to mix properly when adding acid and water. Always pour acid into water, never the other way, and do so slowly, being sure to mix in well. There is a reaction taking place and it releases a lot of energy. During the anodizing process, you will be running electricity through a weak acid solution. This creates hydrogen (just like charging a battery) which is very flammable. This stuff burns at the speed of thought when ignited, so do be careful. (Read as Remember the Hindenburg?)
Make certain that there is some way to ventilate the project area, and DO NOT let any sources of ignition near the project area. Other precautions you should take include safety glasses, rubber gloves, and maybe some sort of drop sheet under the area.

(Editor's Note: While Mr. Bowes recommends not using a glass container, we highly recommend use of glass within a plastic container to help keep the acid from eating through plastic, but keeping the glass less breakable in the event the container falls over.)

Preparations: One of the most essential things you need to do in order to get even color over the whole part is to be sure that the part is absolutely clean. You want it free of all contaminates, from dirt to the oils in your skin. This is where the nitric acid and some rubber gloves will help. A solution of 1-2 ounces of nitric acid in a gallon of distilled water will allow you to clean the surface in preparation for the anodizing. Aluminum oxidizes very quickly when exposed to air, so the easiest way to keep it clean is to clean it just before you are ready to start working on the piece. (You should rinse the part with distilled water before you put it in the next acid solution.)

Other options are carburetor or brakes cleaners, or other similar degreasers. Soap and water will work also, or cleaners like Simple Green. These are cheaper, a nitric acid wash is the best. (You decide, it's your money.) =) Make your negative ground with the aluminum wire and foil. Shape the end of the wire into a paddle shape and cover the round part with the foil. What you want to do is create a flat, round shape to sit on the bottom of the bucket, with a lead that comes up out of the bucket. You will clip the battery charger's negative lead to the wire that comes out of the bucket. When you are ready to start, you will want to mix up your immersion solution. In your rubber bucket, combine the sulfuric acid and water to come up with a solution that is about 30% water. (1 part water to 2 parts acid.) Place the paddle in the bucket and attach the negative lead. Then attach the positive lead to the part, making it an anode, and immerse it in the solution. (Remember that the two leads the paddle (cathode), and the part (anode) should not touch.) This is the best time to turn on the charger: once the part begins to fizz, leave it in there for about 10-15 minutes. After about this time the part should no longer conduct electricity. (You can also use an ohmmeter to check conductivity, but this is not needed.) Turn off and disconnect everything, and rinse the part in cold water. Don? ?t use hot water! You? ?ll find out why in the next section. A couple of notes: I have read some other procedures that say it is important that the copper

lead from the charger does not enter the acid solution. The article says nothing about this, and shows a picture with the lead right in there. It may take some trial and error to find out if this is a problem. It wouldn't be a bad idea to get some scrap aluminum and play with it before you start anodizing your paintgun? ?s parts. You can check out the above, as well as pick the colors you like best. If you test out some colors, you? ?ll also learn just how long or short you need to work with the color solution. Color: So now it doesn't conduct electricity, and is ready for color. It's been rinsed and waits eagerly to change to a new look. Don't wait too long to do the color, due to that oxidizing thing again. You want to mix up a strong solution of dye and water, in a container that can be heated. The solution needs to be at low heat, such as on the stove, so bread and cake pans work well. Again, you need something that will fit the whole part, but it's okay if it touches the bottom this time. I would recommend turning parts every few minutes just to make sure that you get all-over color. Inform your mom or wife that the pan can (and will be) washed out. It is important that the heat be low enough. If the solution gets too hot, you will seal the surface, and it will no longer take any color. (See, told you to rinse it in cold water!)

Leave it in the dye until the part is slightly darker than you want it. The next step is to seal the surface of the metal in clean, boiling water. This will leech a bit of color from it, thus the slightly darker color in the previous step. End Notes: It is important to realize that the process described above will yield only one color on your part. At this time, I haven't found out how to do any of the splash type of anodizing. (That's okay though, it looks really ugly anyways.) =) Should anyone happen to figure it out, I suggest you submit it to Warpig so they can put it up for others who like it. Also, this process is for aluminum. I don't know how, or if, it will work on other metals. (I doubt it.) Anodizing only works well on rock metal like bar or sheet stock, as opposed to castings. If it was forged or machined, it should have the density to take color through this process. I figure this shouldn't be too big a problem with the guns, but just thought I should let you know about it. Something to consider when looking for a charger, is how many amperes it puts out. Without getting into any mumbo-jumbo, anodizing relies on 10 to 40 amperes per square foot. For small brackets and such, this is no problem. The larger parts in a gun however, may need the higher levels of amperes. The other note about part size, has to do with how long you leave it in the solution. Above it said 10-15 minutes, but that is for a smaller part. The larger parts may not only need higher amperes, but more time as well. I would recommend an ohmmeter, but again, I have one already. So there you have it. Quick, fairly easy, and not too expensive. If you don't have the charger, then your first anodizing session could cost as much as sending your gun out to be done. But, then you can do it again for much less. Or do your buddies stuff. Or talk them into chipping in on a setup for all of you to use. We all know ways to help make things cheaper. And the stupid statement required to cover myself... If you try this and something gets messed up, or someone gets hurt, you are on your own. Deal with it, you can't blame it on anyone else.

From wd8kdg at worldnet.att.net Mon Oct 10 10:31:23 2005
Subject: [R-390] Black Anodizing?

Good Morning All,

I'd like to add $0.02 to this tread. Nitric acid must be handled with extreme caution! This acid loves

protein, toss a house fly into nitric acid and the fly will disappear quicker than you can blink your eyes. Anyone who has spent time in a chem lab might of tried this experiment. In other words, don't get none on you! A rubber apron and eye protection are a must. Should nitric acid splash on your skin, I doubt it can be washed off quick enough. nuf said..... Regards, wd8kdg Craig

From n4buq at aol.com Mon Oct 10 10:33:09 2005
Subject: [R-390] Black Anodizing?

I figure if I try this, I'll skip the nitric acid. I plan to clean the surfaces with wet-or-dry paper just before processing to expose fresh metal.

BTW, anyone know how to properly dispose of the sulfuric acid? My car batteries are "sealed" so I can't use it in them and I don't relish the thought of keeping it around the shop. Barry - N4BUQ

From N4TUA at aol.com Mon Oct 10 12:20:56 2005
Subject: [R-390] More stuck slugs

Hello A and NONA Friends,

I finally have reached the point of doing the fixed IF alignment and guess what. You got it. Stuck IF transformer slugs. I have inspected them closely and do not look to be cracked or broken. Are there any ideas from the group on how to get the slugs turning again? How about the WD-40 idea? I have two that will not turn T501 and T502. Any and all help would be greatly appreciated. Collin

From n4buq at aol.com Mon Oct 10 12:29:54 2005
Subject: [R-390] More stuck slugs

Collin,

I haven't tried it, but I have heard that *gentle* heating of the slug by heating the tool used to adjust it and inserting that into the slug sometimes works. I would think you could also *gently* heat the entire xfmr with a hair dryer and that might help too. Good luck with it. Barry - N4BUQ

From sacramento.cyclist at gmail.com Mon Oct 10 13:02:27 2005
From: sacramento.cyclist at gmail.com (Dennis Wade)

Although I had good results with the *very* small shot of WD-40, I would exhaust other mechanical/thermal means before I tried that. Dennis

From brookbank at triad.rr.com Mon Oct 10 13:22:27 2005
Subject: [R-390] More stuck slugs

If the slug is stuck, it must not have been moved for a long long time, that means to me that it is in alignement, leave it alone. Pat

From r390a at bellsouth.net Mon Oct 10 13:26:26 2005
Subject: [R-390] Black Anodizing?

For any extreme caustic/corrosive, always use chem gear - long gloves, rubber apron, closed goggles, face shield. Or the best handling method yet is to not handle it at all. Nitric'll burn a hole clean through, and keep going. (flush with liberally with water, call 911) About the only worse acid is hydrofluoric. Not only does it burn your flesh, but if exposure is sufficient it binds to calcium in your body, which things like your heart need to work. I have no idea what my babbling has to do with either R-390's or Anodizing. Tom

From jpl15 at panix.com Mon Oct 10 13:29:51 2005
Subject: [R-390] Re: More stuck slugs

Am I mistaken in my dim remembrance that some ferrite slugs were impregnated with a paraffin compound to aleviate just this problem? And, if I am correct, is it possible that high-end radios of this era used them? Just something I recall from over 4 decades of Junque Collecting... Cheers John KB6SCO

From jpl15 at panix.com Mon Oct 10 13:31:22 2005
Subject: [R-390] More stuck slugs

wrote> If the slug is stuck, it must not have been moved for a long long time, that> means to me that it is in alignement, leave it alone.

Unless (as is the case here) you've changed tubes, or otherwise disturbed the circuit... Cheers John KB6SCO

From brookbank at triad.rr.com Mon Oct 10 13:39:49 2005
Subject: [R-390] More stuck slugs

Then check the tubes and/or return the disturbed circuits back to what they were, the problem, if any, should be there and not with the slug.. Pat

From dhallam at rapidsys.com Mon Oct 10 13:46:35 2005
Subject: [R-390] Black Anodizing?

As a chemist by education and over 45 years of experience in the field, I can state that strong acids of the type in used in these anodizing discussions present minimal danger IF the proper safety precautions are taken. Remember they are utilized in large volume by commercial anodizers with a semiskilled workforce.

Always use safety protection gear, goggles, rubber gloves, and a rubber apron doesn't' hurt Work with the smallest volume possible Always pour the acid into water SLOWLY and never ever pour water into the acid When you are finished, don't pour the left over down a household drain or into a storm sewer. Take it to a hazardous waste disposal facility Above all, exercise common sense David C. Hallam

From N4TUA at aol.com Mon Oct 10 13:51:09 2005

Subject: [R-390] IF slugs

Hello Again,
I am getting some good input on the stuck slugs and I am tending to just leave them alone. I would wonder though if one was going to do the fixed IF alignment. How do you get to those bottom slugs? What type of tool do they take? I would think the tool would be smaller than the hole in the top slug and would go down through to adjust the bottom slug. What type of tool does it take? None like I have that is for sure. Thanks for the help, Collin

From n4buq at aol.com Mon Oct 10 14:25:40 2005
Subject: [R-390] IF slugs

The typical adjustment tool has a short tip that has the hex shaped business end. Further down the shaft, the tool relieved to a sufficiently small enough diameter to clear the hex shape from the "upper" slug. I hope that makes sense... Barry - N4BUQ

From brookbank at triad.rr.com Mon Oct 10 15:01:09 2005
Date: Mon Oct 10 15:12:35 2005

The IF transformers normally require no adjustements, however, if you are set in adjusting them, follow the procedures outlined in "The 21st Century R-390A/URR technical reference" a collection of wisdom for enthusiasts, paragraph 6.2.7.1

As far as an adjustement tool, with a little patience, you can fashion a good one out of a bamboo skewer. If you narrow the shaft so that it can go thru the first slug, then the second slug can also be adjusted. Be aware that the instructions for this adjustement requires that resistor R504 should be 560 ohms.

Again I stress that unless one of the transformers have been replaced, I would not adjust any of them, contrary, if any transformer has been replaced I would adjust all 3 of them. Back to the old proverb "if it is nor broken, do not mess with it" Pat

From drewmaster813 at hotmail.com Mon Oct 10 17:37:18 2005
Subject: [R-390] Re: More Stuck Slugs

Patrick wrote: >If the slug is stuck, it must not have been moved for a long long time, >that means to me that it is in>alignment, leave it alone.

It may or may not be in alignment depending on motion, drifting capacitors, and aging characteristics of the core material. Core permeability tends to decrease with aging and hence inductance drops.

But this is an R-390A we are talking about. The bandwidth is determined by the mechanical filters and the IF is otherwise broadly tuned; exact adjustment is not critical. Yes, if maladjustment were to cause the IF to become broader then the IF's noise contribution would increase, but by how much.

The R-390A 's IF has far more gain than necessary and so we reduce it by use of the IF gain control. There is sufficient reserve gain to compensate for a little IF misalignment. Drew

From Flowertime01 at wmconnect.com Mon Oct 10 19:44:54 2005
Subject: [R-390] Re: More stuck slugs

John,

As a radio repairman from 68-75 I did some things to R390/URRs R390A/URRs that I will not even repeat. From these "experiments" I can assure you there is no paraffin compound that will soften or dissolve in a petroleum base solvent, in the R390 slugs.

I cannot say about other items as I was not subjecting them to "experiments" in removing living growths from the interior. Roger KC6TRU

From jpl15 at panix.com Mon Oct 10 20:27:07 2005
Subject: [R-390] Re: More stuck slugs

wrote: . From these "experiments" I can assure you there is no paraffin compound that will soften or dissolve in a petroleum base solvent, in the R390 slugs.

I have miscommunicated. What I was referring to is that, over the years, I have encountered IF slugs that appeared to be imbued with some form of waxy lubricant - and since these were generally very old devices, I assumed (and y'all *know* what you get when you assume) that the substance exuding from the ferrite core was wax, paraffin, whatever.

Haven't seen that many - I do have a few hundred IF and other 'cans' around here - I'll paw thru some and see if I'm remembering correctly, or if it's just another one of them damn Hippy-Era Flashbacks... ;} Cheers John KB6SCO

From john at gumlog.net Mon Oct 10 20:36:41 2005
Subject: [R-390] R-392

I've been doing some work on my R392 and would like a couple of questions answered before I button it up. The work has been setting the end points and attempting to reduce the spread of zero settings from aging crystals. When I first started, I had 18 bands < +/- 1KC, 10 bands < +/- 2KC & 4 bands < +/-3KC. After 5 runs and changing two 1st xtal osc crystals and 6 2nd xtal osc crystals, it's now 25 bands < +/- 1KC, 6 bands < +/- 2KC & 1 band < +/- 3KC. Even though I had a complete set of spare crystals, not all the spares were better than the ones in the radio. This is as far as I care to go with this, as I don't want to be looking for more crystals. The spares I had were a lucky find for a very good price at a past Shelby Hamfest.

My first question came up while checking the IF alignment. I had a scope looking into the IF output cathode follower while doing the alignment. I noticed the carrier waveform was a perfect sinewave until the input signal was increased and then the bottoms of the waveform started to flatten out and ultimately looked like the output of a halfwave rectifier. Checking the wave form ay the plate of the AGC IF tube, showed a perfect sinewave, right at the point it feeds the grid of the cathode follower as well as the two AGC rectifiers. After alignment the signal level at the ant connecter had to be less than 4uv to have the signal "look normal". The AGC action seems normal, as at a signal input level of 10K uv the audio product sounded good with the RF Gain control fully clockwise. Can any one give me any idea if this is normal or if there is a trouble in the receiver that I have not found?

Second question is: I have four packages of Silica-Gel, two cloth ones with 15 grams each and two larger paper ones with about one ounce each. I've heard about putting them in a cookie tin or something and low temperature baking them for ?? hours before putting them inside a case such as the R392 has. Mine used to have condensation in it when I would turn it on in my cold shop. I thought that these packages of desiccant tied on to the VFO case would probably absorb and remaining moisture and do away with the internally fogged up dial windows. Does that sound reasonable and could I use a small toaster oven instead of the large oven in our range? and how long and at what temperature? TIA, John, W4NET

From jamminpower at earthlink.net Mon Oct 10 21:15:12 2005
Subject: [R-390] R-392

The cathode follower for the IF output on the R-392 is very poorly designed. The waveform is essentially saturated on one side - it is quite ugly and has lots of harmonics. This waveform is not used internally - it is only for external SSB converters. It does tolerably well for that. Unless you plan to use your IF output for, say, a Sherwood detector, just ignore it. If you have to have a pretty sinusoid, you will have to redesign that stage, probably using transistors instead of the tube. I haven't tried to do this yet, but it looks straightforward (if you have done circuit design before). James A. (Andy) Moorer www.jamminpower.com

From dsmaples at comcast.net Mon Oct 10 21:41:32 2005
Subject: [R-390] Re: More stuck slugs

All: If the R-390A hits the target for sensitivity, I'd leave it alone. The urge to tweak is strong, but if it's hitting the spec target, and there's a chance to tear the thing up by tweaking, the logical (but not emotionally satisfying!) thing to do is leave it alone... Just my own opinion, of course. Dave WB4FUR

From r390a at bellsouth.net Mon Oct 10 22:05:00 2005
Subject: [R-390] OT - Gazillion Dollar Collins Headsets?

DeJaVu All Over Again Again?? Ebay item 5815980926. Same seller. Wish I had the guy's luck. 'fess up, who is it on the list? Or not. Whatever. Tom

From normn3ykf at stny.rr.com Tue Oct 11 00:34:44 2005
Subject: [R-390] 3tf7 replacement proceedure

Hi all.

I've been doing some reading on the 3tf7 replacment schemes. For the time being I think I'll use a 12bh7 in place of the 3tf7. All I have to do is move the wire on pin two to pin four and the wire on pin seven to pin five, right? de n3ykf

From mhuss1 at bellatlantic.net Tue Oct 11 07:24:37 2005
Subject: [R-390] 3tf7 replacement proceedure

wrote: I've been doing some reading on the 3tf7 replacment schemes.

Lankford did some data collection on replacement options for the 3TF7. Turns out the most stable option is a simple 40-50 ohm, 10 watt wirewound resistor. Not only is it a bit more stable than the tube sub, but you get less rush current on turn-on. After doing a bunch of design work trying to come up with a solid state replacement, i just put the resistor in my R-390A with pins soldered to the leads. works fine for me.

From richardmay at hotmail.com Tue Oct 11 09:03:35 2005
Subject: [R-390] IF core size

I used to know this but lost my info. Can anybody tell me the size (diameter) of the slugs in the IF cans? I see two sizes in catalogs that are most popular. 5/64 and .100 inches. Any help would be appreciated. Richard, W8FCW

From mhuss1 at bellatlantic.net Tue Oct 11 09:27:14 2005
Subject: [R-390] Need PTO

Does anyone have a working PTO to spare? My 1956 Collins PTO has a slippage problem I think is due to wear. With the Cal on, tune up to the cal signal and zero-beat. Tune down a few hundred kHz. Tune back up to frequency you cal'ed at. Cal is still correct. Tune up a few hundred kHz. Tune back down to the frequency you cal'ed at. Frequency is now off by about 1500 Hz. Note you have to move off frequency about 50 kHz for the effect to be seen. The effect is quite repeatable. Cleaned the shaft ground connection without effect. Will throw in the old PTO if you want it. Thanks. Mark

From roy.morgan at nist.gov Tue Oct 11 10:42:05 2005
Subject: [R-390] Wanted: RBA (was: R-390 Non-A NameTag...)

wrote: >What would Foster know, Hank? He was in the Navy. They used real boatanchors; like: RBA, RBB, RBC, RBH, RBK, and RBL.

Anchorites,

I recently got an RBB and RBC with power supplies (no cables yet, alas.) I seek an RBA. Not necessarily working but "all there" preferred. Power supply not essential. Cable(s) a plus.

Anyone have one for relocation? Roy (Washington DC area.) Have Volvo, will travel.

From roy.morgan at nist.gov Tue Oct 11 10:55:44 2005
Subject: [R-390] Black Anodizing?

wrote: >... This is mainly for cosmetic purposes and if I can't find a very reasonable solution, I'll probably just leave them bare....'d rather have them protected,

Barry,

Apply car wax. Wait 10 or 20 years between re-applications. Roy

From djmerz at 3-cities.com Tue Oct 11 11:03:16 2005

Subject: [R-390] 3tf7 replacement proceedure

Norm, Hi, if I recall correctly, I just put jumpers between these pins (2 to 4 and 5 to 7) rather than moving the wires. That way, the 3tf7 could still be plugged in without changes if you, or a later person, wants to put the 3tf7 in for some reason, or doesn't know you made the mod. This puts ac heater voltage on the two grids of the 12bh7 but that affects nothing since you're just using the tube filament to drop the voltage I have the socket in my 390 hooked this way. Now I'll have to check my notes to confirm that I did this. (added note: I just checked my set and that's the way I did it - works ok for about 6 months so far) Dan.

From roy.morgan at nist.gov Tue Oct 11 11:44:27 2005
Subject: [R-390] R-392

wrote :... have four packages of Silica-Gel, two cloth ones with 15 grams each and two larger paper ones with about one ounce each.

John,

(This is based on limited experience with silica gel):

A dried out pack of silica gel will absorb maybe one third it's weight in water. It's unlikely that an R-392 contains more than an ounce or two of water in the air inside, even if warm and saturated. But:

1) If you dry out your silaca gel packs, weight them, put them back in the radio and the weight goes up by maybe a third or half, then they can't glom any more water. ("Glom" is a technical term used by a jeweler while we were an buying engagement ring about a year ago: "Don't glom the stone!" I was sternly advised.)

2) If the radio shows condensation inside the window, especially upon cooling, then there's moisture inside there. Good idea to get it out. Though I don't own an R-392 (yet), here is my suggested procedure:
- wait till a dry day arrives
- Run the radio till quite warm, and crack the case so it ventilates.
- close the case nicely to keep the dry air inside.

3) If (when) I have an R-392, I will tuck inside there somewhere an 8-ounce pack of silica gel from among the few I've collected. (They were found in helicopter transmission and engine packing cans during my time in the Navy.) I'm assuming that room for such a pack can be found in there somewhere. About the size of a large pack of M and M's.

4) To de-water, place in any oven, kitchen- or toaster- at 220 to 250 (low to medium "WARM" on the dial) for a couple hours.. then allow to cool off with the oven. If you weigh your packs before and after de-watering, you will know how much water they can absorb.

> I've heard about putting them in a cookie tin or something and low > temperature baking them for ??

The cookie tin won't keep in much moisture with heat but I would not put them in any tin.. just in the oven. You are baking the water OUT, not trying to keep it in. Plastic bags, maybe two layers, server as storage after drying. Roy

From john at gumlog.net Tue Oct 11 14:33:12 2005

Subject: [R-390] R-392

Andy,

Thanks for the reply, I sure don't want to do any design work on this classic. Just was bugged about that clipped negative waveform. Won't worry about it any longer as I do not have any legitimate need to use that IF output jack. 73, John, W4NET

From john at gumlog.net Tue Oct 11 14:43:56 2005
Subject: [R-390] R-392

Roy,

Thanks for the good information. I have a small postal scale that I use to weigh ink cartridges that I'll use. It has 1/2 Oz calibrations and I can interpolate between those for a better idea of the before and after weights. The R-392 has a nice vent hole in the front panel just below the center of the dial window assembly. The plug has a neoprene "O" ring around it and I used it to get excess moisture out after a 48hour run early on. I've always figured that was what it was intended for. The size of the hole looks to be around 1/4". 73, John, W4NET

From normn3ykf at stny.rr.com Tue Oct 11 15:42:18 2005
Subject: [R-390] 3tf7 replacement proceedure

Mark,
I considered the 47 ohm 10 watt resistor. The problem is how to mount it.
1. Vertically in the tube socket secured how?
2. Underneath? Not a lot of space between the bfo shaft and coupler. How did you do it? Norm

From ghayward at uoguelph.ca Tue Oct 11 17:13:37 2005
Subject: [R-390] R-392 Cathode Follower

I had the same problem and fixed it somewhat with an op-amp. The circuit I built plugged in so there was NO blacksmithing involved. I don't have to be burned at the stake for this one. Its posted on Josh Rovero's site. Cheers, Gord VE3EOS

From jpl15 at panix.com Tue Oct 11 17:25:33 2005
Subject: [R-390] 3tf7 replacement proceedure

wrote: > Mark, I considered the 47 ohm 10 watt resistor. The problem is how to mount it. 1. Vertically in the tube socket secured how?

I got my -A with a 'sandbar' resitor plugged by it's leads into the ballast socket. I was shipped about 2500 miles like that, has been worked on and moved several times since then - still standing there in the socket. I was trying to figure out all sorts of clever ways to make it "better" - but, as is oft repeated: "If it ain't broke...." Cheers John KB6SCO

From normn3ykf at stny.rr.com Tue Oct 11 17:40:50 2005
Subject: [R-390] 3tf7 replacement proceedure

Thanks all for the input. The resistor is an easy fix. Tonight is tube socket resistance checks for the radio with all modules in place. I love being on vacation. Norm

From stevehobensack at hotmail.com Tue Oct 11 17:42:58 2005
Subject: RE [R-390] 3tf7 replacement proceedure

Norman,

You could probably leave the the wires the way they are on the 3tf7 tube socket and add two jumpers to encompass the filament of the new 12bh7. That way, if you ever come across a 3tf7 at a hamfest/radio fest at a decent price, you could just plug it in. .....Steve...N8YE

From mhuss1 at bellatlantic.net Tue Oct 11 20:50:43 2005
Subject: [R-390] 3tf7 replacement proceedure

wrote: How did you do it?

At first, I used 18 gauge solid wire, bent to fit to center the wirewound resistor vertically in the tube socket. Then, using high temperature epoxy, and the bad 3TF7 to make a mold, i made a solid plug-in base. Now it can't fall over and short something. Used Ohmite L12J47R 12 watt, or the L25J50R will do, too. This way if I ever get around to getting another 3TF7, I can just plug it in.

From Flowertime01 at wmconnect.com Tue Oct 11 21:22:24 2005
Subject: [R-390] Re: More stuck slugs

John,

Not all slugs are R390 slugs. I'll bet you have encountered some that were wax impregnated or not exactly as robust as R390 slugs. Other slug from other radios are likely to be compsed of almost anything.
I just wanted to point out that I had never encountered a R390 or R390A slug that would dissolve.
Roger.

From Flowertime01 at wmconnect.com Tue Oct 11 21:29:37 2005
Subject: [R-390] 3tf7 replacement proceedure

Norman,

If you have the 12bh7 base diagram from the back of a hand book you are OK. I am running the modification in my R390A. Have been for 21 years. Roger KC6TRU

From Flowertime01 at wmconnect.com Tue Oct 11 21:47:10 2005
Subject: [R-390] Re: R390A meter movment current.

Fellows,

I do not have a R390A parts manual so I need some help.

What is the meter current for the R390A line level meter and the signal strength meter? I don't need an exact value. What is the nominal or specified full scale current?

Hell I do not think I ever knew, the little critters either worked or I got a new exact replacement from supply. I never use to care how much current it needed to peg the needle to the right side. Thanks

From mjmurphy45 at comcast.net Tue Oct 11 22:24:34 2005
Subject: [R-390] 3tf7 replacement proceedure

Of course there is the tried and true:

1. Remove the 3TF7 with tube pullers (it may be warm).

2. Replace with a new 3TF7

3. And always good advice for the R-392: SilicaGel - "Do Not Eat" Mike WU2D

From recycler at swbell.net Wed Oct 12 00:21:26 2005
Subject: [R-390] OT - Gazillion Dollar Collins Headsets?

I have used those Califone "language lab" headphones with fine success! they are made to be comfy and seem to be clear. They cab also be had for about $5 sometimes. some are 8 ohms, some 600. Patrick

From recycler at swbell.net Wed Oct 12 00:25:10 2005
Subject: [R-390] R-390A Rectifiers

One of my R-390 units hase little solid state rectifiers plugged in. The B+ is somewhat higher than on the one with tube rectifiers. Should I go find the correct rectifiers to ease the life of the set? I never use SS rects in my other old radios or tube audio gear, for that reason. I suppose it would also be well to adjust the line voltage to 115V instead of 125. Patrick

From recycler at swbell.net Wed Oct 12 00:29:43 2005
Subject: [R-390] OT: wanted: cabinet for RBB receiver

as long as the RBB was mentioned,

Somehow I ended up with an RBB and no cabinet for it. I know it's a big metal box, but does anyone have one in any salvageable condition? I've previously asked the GB and other lists but no luck. Patrick

From ezeran at ezeran.cnc.net Wed Oct 12 00:51:53 2005
Subject: [R-390] Wanted: RBA (was: R-390 Non-A NameTag...)

> I recently got an RBB and RBC with power supplies (no cables yet, alas.)

Darn it Roy! I think I have an extra but that would be a grunch o'shipping. EdZ

From mhuss1 at bellatlantic.net Wed Oct 12 08:13:57 2005
Subject: [R-390] Re: R390A meter movment current.

The audio meter is a standard 600 ohm VU meter. 0dB is 0dBvu (1mW into 600 ohm load)

The Signal Strength meter is a real odd-ball. Worse, its DC resistance is critical to the operation of the AGC. the meter movement is 16.7 to 17 ohms. and full-scale current is xxx. Jan Skirrow http://www.skirrow.org/Boatanchors/ uses an eight-pin op-amp to convert between the meter circuit and the meter you happen to have. Flowertime01@wmconnect.com wrote:

From n4buq at aol.com Wed Oct 12 09:18:33 2005
Subject: [R-390] Re: R390A meter movment current.

I think the FS current on the Carrier Level meter is 1ma. Yes, the rub is the internal resistance. Barry - N4BUQ

From roy.morgan at nist.gov Wed Oct 12 09:21:30 2005
Subject: [R-390] Re: More stuck slugs

wrote: >I just wanted to point out that I had never encountered a R390 or R390A slug >that would dissolve.

Roger,

I think that's because the powdered iron or whatever is bonded together at red hot head in an oven during manufacture. It's a little bit like a ceramic. Roy

From roy.morgan at nist.gov Wed Oct 12 09:28:21 2005
Subject: [R-390] Re: R390A meter movment current.

wrote: >The audio meter is a standard 600 ohm VU meter. 0dB is 0dBvu (1mW into >600 ohm load)

That all means that the meter runs on alternating current from the audio line output.
- it has a copper oxide rectifier inside the case
- the actual DC full scale current and series resistance of the meter movement is not too critical

>The Signal Strength meter is a real odd-ball. Worse, its DC resistance is >critical to the operation of the AGC. the meter movement is 16.7 to 17 >ohms. and full-scale current is xxx.

Information I have indicates a one milliamp full scale movement. Roy

From crips01 at msn.com Wed Oct 12 14:19:29 2005

Subject: [R-390] Black Anodizing?

Why not powder coat them go here:
http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=42802

It is not super expensive and would set you up to powder coat knobs, front panels, and other parts
Ken de W7ITC

From n4buq at aol.com Wed Oct 12 15:14:40 2005
Subject: [R-390] Black Anodizing?

The "system" is reasonable enough, but if you plan to use a separate oven (instead of the kitchen oven), that gets expensive. Also, it requires air pressure and I don't have a compressor.

Otherwise, it's a great idea. There's a local place that will do powder coating for me and does a pretty good job. Yes, it costs more than the "system", but then I don't have to find a place to put all the "stuff".
Thanks! Barry - N4BUQ

From Flowertime01 at wmconnect.com Wed Oct 12 15:34:28 2005
Subject: [R-390] Re: R390A meter movment current.

Fellows,

I need to thank you all for input on this subject. I am almost sorry I kicked this can of worms.

I found some nice looking meters at fair radio to install into my Julian Creek less meters R390A. The meters have the correct look and size. I am now examining the interior guts to see what conversion will be necessary. More to follow. Roger L. Ruszkowski

From anchor at ec.rr.com Wed Oct 12 15:54:35 2005
Subject: [R-390] R-390/URR Geneva Mechanism needed

Hi folks,

I have discovered, much to my chagrin, that the Geneva Mechanism is different in the R-390 and the R-390A they are mirror images of each other.

My R-390 has a stripped large brass gear on it's G-mech. I helpful friend and list member has supplied a mechanism for an R-390A, and I first thought that the brass gears were the same. They are not, the indexing pin is placed one tooth away from being 180 degrees from the notch that the ball fits in, in opposite directions for each unit. (the other parts are also mirror images.)

I may be able to drill a new hole & relocate the pin, but it's only 8 degrees difference, and not having an indexing head for the drill press I may mess it up.

So, does anyone have, for the R-390, a complete Geneva Mechanism, or just the brass gear, that they would sell me?

You can see pix and more of the gory details of all this at:
http://www.thecompendium.net/radio/R390sn385.htm thanks & 73, Al, W8UT New Bern, NC

From r390a at bellsouth.net Wed Oct 12 17:44:34 2005
Subject: [R-390] R-390 auctions to watch

Was cruising Ebay and came upon some pricing oddness. Might be worth keeping an eye on, given the odd auctions that have been going on lately - the $15 headphones going for over $200, the $3500 "Collins" R-390A made by Stewart Warner, and other amusements.

First one is an R-390A listed with a Plano Texas consignment shop with one day to go, has meters, all covers, clean, appears to be complete. Has what appears to be a genuine Collins tag, but the rest of the radio looks a bit later than the Collins era IMHO not that it matters. Currently $167 Item 5816708745

Next is an R-390 said to be complete, in good shape, powers up and receives, 4 days to go at $210 with a higher reserve. Additional photos at http://n8yhy.tripod.com/collinsr390forsaleonebay/ but for me the page never fully loaded. Item 5817800900

The last item sort of blew me out of the water pricewise. It's a CV-591A in decent condition and said to work. 4 days to go and only at $425. Item 5817746818 I've had a couple of these critters and not really liked them, but then again I'm not a collector. Not intentionally, anyway.

I'm a bit disappointed, there's nothing really to make fun of on Ebay today. The CV-591 comes close, but there really *aren't* as many around as there were just a few years ago. 73 Tom NU4G

From future212 at comcast.net Wed Oct 12 18:08:45 2005
Subject: [R-390] Re: R390A meter movment current.

Roger,

Keep the group informed asw to what you find. It is a problem, many of us face. 73's DW Holtman WB7SSN

From future212 at comcast.net Wed Oct 12 18:12:28 2005
Subject: [R-390] Black Anodizing?

Has anyone used this power coat system? If it works, the price is right. 73's DW Holtman

From crips01 at msn.com Wed Oct 12 18:20:58 2005
Subject: [R-390] Black Anodizing?

Did I mention this outfit also has real good prices on air compressors?

http://order.harborfreight.com/EasyAsk/harborfreight/results.jsp?ts=Wed%20Oct%2012%2015:18:45%20PDT%202005 Ken de W7ITC

From David_Wise at Phoenix.com Wed Oct 12 18:41:42 2005
Subject: [R-390] Re: R390A meter movment current.

For what it's worth, I spent some time mulling over the schematics some time ago and came to the conclusion that unless you are willing to (a) hack the IF deck in a way that makes it incompatible with the stock carrier meter, and (b) put up with some degradation in AGC performance, your only choices are either the stock meter or an amplified one like Jan's. Jan did a fine job, but he worked a bit too hard: as long as the replacement meter can be calibrated to read full-scale under the appropriate conditions, it's not necessary for the replacement meter or circuit to have an 18-ohm impedance. It can be literally anything, from zero to infinity. The key is the product of full-scale sensitivity and resistance. The circuit generates so little voltage that most meters don't get enough current through them to go full-scale. I don't remember the details now, but I think I worked out how they could have done it in a way that would work with most any meter, but it would have cost them an extra tube, so you know how far *that* idea got. HTH, Dave Wise

From DJED1 at aol.com Wed Oct 12 19:17:14 2005
Subject: [R-390] R-390 auctions to watch

"The last item sort of blew me out of the water pricewise. It's a? CV-591A in decent condition and said to work. 4 days to go and only? at $425.? Item 5817746818? I've had a couple of these critters and? not really liked them, but then again I'm not a collector.? Not? intentionally, anyway."

Does make me a little wistful- I remember buying CV591As from the Goverment for $35 each, and thought I was doing good selling them for $100 each. I was never too impressed by them- took up a lot of space on the desk and had to use headphones, as I recall. But to each his own. Ed

From w4qg at cfl.rr.com Wed Oct 12 19:56:09 2005
Subject: [R-390] Re: R-390 Digest, Vol 18, Issue 21

Hello All,

Sorry to beat a very dead horse but I'm looking for a current source for 390A front panel painting. I have a Collins 390A with a rough front panel, all original, needs some work (had audio for about 5 minutes, then dead...) I'm planning on doing a complete restoration on it. (got my Orange drops, B+ fuse holder and new microswitch in hand..) . Anyone have any recommendations for a front panel painter? (this is an engraved panel.....) 73, Paul W4QG

From DCrespy at aol.com Wed Oct 12 20:52:30 2005
Subject: [R-390] Re: R390A meter movement current.

On the 1 mA carrier meter:

Looking for replacements over the years, I have found only original meters with 18 ohm internal resistance. I have found several others at swaps and surplus houses, at about 38 ohms. These work fine when compared side by side with an original. AGC seems to work well and the meter deflection is identical in the side by side comparison. They do take a different zero set of course. Some of the "international" brand 100 ohm 1mA meters have an internal series resistor, that when jumpered makes the meter a 38 ohm movement. So they are worth opening, so long as they

are not the glow in the dark versions. Note, when you open them, some of the screw/bushings are left hand thread! Good hunting! Harry KG5LO Saline MI

From w0nbz at juno.com Wed Oct 12 22:17:26 2005
Subject: [R-390] (no subject)

Roger -

There's an article in Electric Radio some months back that showed how to build a small, simple, IC op amp and use any meter. I've done it and it works great. Dave

From chacuff at cableone.net Wed Oct 12 22:56:45 2005
Subject: [R-390] Survived Katrina

Hey folks,

After over 6 weeks of pretty rough times I finally got my internet connectivity back yesterday. Gulfport was pretty much ground zero for Katrina. I stayed home with my family and we stayed in the eastern eyewall during the storm passage. It got pretty ugly. Lost the chimney, opening a large hole in the roof on the upwind side and lost the majority of the shingles on that side of the house as well. The paper held though and minimized the water entry in other areas. Still lost some sheetrock ceilings and most of the carpet in the house. Had water running out of ceiling fans and a few light switches. Got most everything under control for the moment with tarps. Most of the carpet and padding and a good bit of the affected attic insulation has been removed and we are still waiting on the insurance adjuster to make it around to settle up.

Took some roof damage on the shop but no water in there. All radio's, test gear etc. in good shape. Lost my antenna anchoring pine tree but did take down the Windom before the storm so I guess I'll not be listening for a while.

Working for the local Power Company I've been real busy as well....16 hour days for the first couple of weeks while also trying to squeeze in home cleanup and temp. repairs. The last 6 weeks have been a blur. Things are getting back to a little more normal in the last week or so.

Real proud of the company I work for though. They took very good care of us. Food, water, ice and fuel for our home generators to keep us all going. They brought in as many as 11,000 additional people to help get the restoration work done. We went from every customer we had...195,000 in the dark to everyone that could accept electricity back on in 12 days! A monumental feat! Still much to do though. We lost all of our coastal office space including our corp. headquarters to the storm and 500+ folks are having to be placed in temporary office locations for up to 18 months. Been doing fiber and microwave work for connectivity to trailer villages and rented office space for the last couple of weeks.

Coastal economies are a shambles.....

Anyway enough of that....once I was able to get back to the lists I had 973 unread mail messages.....good to see dead horses being kicked around still on the list....a good diversion for a storm weary reader! Cecil Acuff Gulfport MS

From N4BUQ at aol.com Wed Oct 12 23:05:10 2005
Subject: [R-390] Survived Katrina

Cecil,

I went down and helped do some cleanup in the Ocean Springs (near Biloxi) about two weeks after the storm hit. Very devastating. I'm glad you fared as well as you did. From what I saw, I'd say you were very fortunate to have survived with the damage you incurred.

Glad you're back on line and life is returning to some semblance of normalcy. Barry - N4BUQ

From roy.morgan at nist.gov Thu Oct 13 09:44:30 2005
Subject: [R-390] Re: R-390 Digest, Vol 18, Issue 21

wrote: Sorry to beat a very dead horse but I'm looking for a current>source for 390A front panel painting....

Paul and others:

Howard Mills, well known as a re-builder of "Black Collins Radios", is able to provide a BLACK front panel with white lettering for the R-390A. His panels are NOT-"engraved" (stamped) but are silk screened. Some time ago he offered these at $150 exchange (plus $ if your panel needs additional work to get it in shape for later re-finishing). You send him your panel, and he sends you one already done. If you send him a stamped panel, I think he plans to fill in the stamping and then silk-screen the lettering when he does another batch.

I don't know if he has gray or not. An email or phone call to him will tell:

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

From tshoppa at wmata.com Thu Oct 13 10:08:49 2005
Subject: [R-390] On the subject of manufacturing front panels...

Roy reminded me of the subject of front panels... why was anodizing front panels (black, other colors too) never very popular for 50's/60's radios?

Something to do with fungus-proofing maybe?

Certainly by the 70's consumer stereo equipment was being anodized.

Anodizing with engravings can get a bit tricky (with "grown" thickness smearing out the engravings) but it's gotta be less of an effect than painting.

Looks like someone with a little bit of patience and a PC could design up a pretty spiffy R-390/390A front panel using http://www.frontpanelexpress.com/material/examples.htm and get it anodized black or green or bronze (looiks more olive to me) or whatever, lettered (engraved, maybe silkscreened?), and delivered for circa $150-$200. Tim.

From n4buq at aol.com Thu Oct 13 10:22:53 2005
Subject: [R-390] On the subject of manufacturing front panels...

Good idea, but the front panel needs to be electrically conductive. Unless you mask certain areas, it wouldn't work very well. Barry - N4BUQ

From tshoppa at wmata.com Thu Oct 13 10:58:08 2005
Subject: [R-390] On the subject of manufacturing front panels...

[Anodizing] > Good idea, but the front panel needs to be electrically conductive. Unless > you mask certain areas, it wouldn't work very well.

True. When I've done this at home I can always go back in with a drill bit to clear the anodizing out of a hole or a mill to scrape stuff off the back for bonding to the rest of the chassis. I'm not sure what order FPE does stuff in but I'd think that by default all the machining comes before anodizing. Tim.

From n4buq at aol.com Thu Oct 13 11:58:58 2005
Subject: [R-390] On the subject of manufacturing front panels...

I looked at their site and it appears they start with a sheet of pre-anodized aluminum. I didn't know such a thing was available. I'm tempted to load their "front panel designer" software and give it a go. I have the file with the dimensions for the holes and cutouts. The only thing would be the reliefs on the backside not too much work there.

One thing that might not look too good is the outside edges of the panel would be bare aluminum. If the radio is in a rack or cabinet, this wouldn't be an issue, though. Barry - N4BUQ

From leslocklear at cableone.net Thu Oct 13 12:40:37 2005
Subject: [R-390] On the subject of manufacturing front panels...

Chuck Rippel does engraved panels. Might want to check with him : WA4HHG@R390A.com

Rick Mish does silk screens. His address: radiomon@buckeye-access.com

Hank Arney does panel too. His address: hankarn@pacbell.net Les Locklear

From n4buq at aol.com Thu Oct 13 15:45:22 2005
Subject: [R-390] On the subject of manufacturing front panels...

Downloaded their design tool. Slick. You can place tapped holes, thru-holes, lettering, even "cavities" (counterbored holes) on the reverse side. It will tell you exactly how much your panel will cost (minus tax and shipping). It looks like it wouldn't be very difficult to design the R390A front panel this way. Barry

From tshoppa at wmata.com Thu Oct 13 15:47:53 2005
Subject: [R-390] Drop-in, GFCI-friendly line filters for R-390A's?

Others here have talked about replacing the existing high-leakage- current R-390A line filter with a GFCI-friendly IEC-plug style power entry module.

If I wanted to be less ambitious and simply bolt in a regular line filter unit, are there any that are a "perfect" fit in terms of mounting holes and electrical connections?

Just looking in the catalogs I see a bunch of Qualtek, Schaffner, Schurter units. Mostly one-stage, a few two-stage. Non-medical units seem to have leakages of under 1mA and the medical units seem to have leakage currents of just a few microamps. The number to be under in terms of GFCI-friendly is 5mA, is that the right ballpark? Tim.

From roy.morgan at nist.gov Thu Oct 13 17:06:33 2005
Subject: [R-390] Drop-in, GFCI-friendly line filters for R-390A's?

wrote: >Others here have talked about replacing the existing high-leakage- >current R-390A line filter with a GFCI-friendly IEC-plug style >power entry module.

Tim,

The line filters normally do not "leak". The capacitors in side there pass ac current because of the basic nature of capacitors. There happen to be a lot of capacitance (and more in the R-390/URR "non-A" line filter) and the capacitance is larger than other more modern line bypass filters.

>If I wanted to be less ambitious and simply bolt in a regular >line filter unit, are there any that are a "perfect" fit in terms >of mounting holes and electrical connections?

I don't think so. The holes in the rear panel for the two small studs exiting the R-390A/URR line filter are small and separate.

The R-390/URR has a single hole in the rear panel to allow the entire line cord connector, which is part of the line filter, to go through the panel. This thing is large enough so that an IEC type line cord connector *might* well mount in that hole with only the flange mounting screw holes being needed.

>Non-medical units seem to have leakages >of under 1mA and the medical units seem to have >leakage currents of just a few microamps.

Medial applications require far less leakage. There is a specified maximum leakage for normal appliances and household electrical equipment (I don't know what it is.) There also has in the past been a recommended test circuit that allows measurement of such leakage - if I remember correctly, it consists of a capacitor and a resistor. You measure the voltage across the resistor when it is placed in the leakage path. (That would be from the ungrounded chassis of our R-390 radios to the safety ground.) This little circuit may no longer be recommended or allowed under standard testing procedures.

> The number to be under in terms of GFCI-friendly is 5mA, is that the >right ballpark?

I can't say. You may find more specifications associated with GFI devices than I did: research GFI outlets and circuit breakers to see if this number is specified in catalog or engineering info available on the web.
Here are some references: Simpson makes an appliance leakage tester called the 229-2. See: http://www.simpsonelectric.com/pdf/test/229.pdf

That page mentions the applicable standard: ANSI C101.1-1986 "Leakage Current for Appliances"

Unfortunately, ANSI has historically gained much or some of it's income from the sale of standards in paper form that we use to build and run our society. (What's wrong with this picture?) If you search for "C101.1-1986" at www.ansi.org you traverse through a very frustrating series of dead ends and never do find the standard.

In the UK these test devices are known as a "PATs" - Portable Appliance Testers. The tester is portable, not necessarily the appliance, I think. This page indicates that 0.1 ma is the test for "sensitive computers". http://www.instrotech.com/manual_PATS.pdf

One manufacturer of such devices, the Jinjiang Zhentai Science & Technology Co., Ltd.

lists the specs I partially quote below at:
<http://zhentai.en.alibaba.com/offerdetail/51139649/Sell_Appliance_Leakage_Circuit_Interrupter.html>

" 4) Leakage protection current: when leakage current is 4mA, does not trip; when leakage current>=6mA, do trip

5) Tripping delay: when leakage current is 6mA=<5.6s, 204mA=<36.1ms, 264mA=<25ms, 550mA=<1.68ms"

This tells us that the thing trips at about 5 milliampere and above.

Note that in the R-390A/URR, the line filter has in each side of the line a PI-section filter with two capacitors from the ends of the inductor to the chassis:

C-104 and C-105 on either side of the inductor L101 and C-105 and C-106 on either side of the inductor L102.

Each of these capacitors has the value listed as "Part of FL101, listed for reference only." One email some time ago indicates that they are 0.068 uF paper caps. Thus, the capacitance from the hot line to chassis is 0.136 uF. Let's refer to an capacitance calculator at: http://www.opamplabs.com/rfc.htm and get a "resistance" of about 19.5 kilohms. Then the calculator at: http://www.opamplabs.com/eirp.htm gives some six miliamperes of ac current.

This is above the four milliamperes of the ground fault interrupter above. Roy

From wb8feq at mfr.tzo.com Thu Oct 13 20:53:49 2005
Subject: [R-390] Drop-in, GFCI-friendly line filters for R-390A's?

Several years ago I took a nasty lightning strike which in addition to totally wiping out the electrical system (it exploded the glass plug fuses in the fuse box) my R-390 line filter ended up toast (the only component in the R-390 to suffer). I ended up temporarily bolting one of the computer type line filters in place. The 3-prong socket is accessible in the round hole for the original and it was necessary to use a strap to get the second hole of the filter stationary but it does work.

I have since opened the original filter box (adventures with a dermal tool 101) and found the capacitors were just paper dust. The coils (toroidal which was a surprise) were in good shape. I have rebuilt the

box with HV disc ceramics but I have yet to solder the box back together (hey I like he original looks).

While I never plugged either into a GFI circuit, there are alternatives. Good luck and 73 Al - WB8FEQ

From mhuss1 at bellatlantic.net Thu Oct 13 21:20:44 2005
Subject: [R-390] R-392 help

Change 1; Just got my hands on an old LS-166/U speaker. I repeated my experiment with the low frequency cutoff of the 600 ohm to 8 ohm transformer. Either I mis-remembered, or they changed the transformer design. It swept 3dB down at 4 Hz to 0dB down from 10 Hz to greater than 200kHz! Noted a few peaks and troughs less then 3 dB from the speaker load. as I swept it. I did note that it sounds quite as tinny as I remembered. But the speaker itself is entirely different from what I remembered. So changing the transformer won't work on the LS-166/U for bettter lows. At least not without changing the speaker itself. Cabinet size probibily has something to do with it, but the sound does not change with the back off. Can't do an audio sweep because the Sound Level Meter brought the farm many moons ago. Sorry about the bum steer.

From N4BUQ at aol.com Thu Oct 13 21:27:32 2005
Subject: [R-390] Drop-in, GFCI-friendly line filters for R-390A's?

On the back plate of the cabinet in which my R390A resides, I have a computer-type line filter which then feeds a recepticle that provides the filtered power for the R390A. I gutted a line filter so it looks kind of original from the outside of the R390A. I run this on a GFI circuit with no problems. Barry - N4BUQ

From mjmurphy45 at comcast.net Thu Oct 13 21:33:46 2005
Subject: [R-390] On the subject of manufacturing front panels...

Tim,

Sure, anodize is sexy, sheds heat, is an excellent insulator and is "harder than paint". But, you can't hide blemishes, seams and mistakes with anodize. In fact anodize will tend to bring out imperfections. Hard anodize isn't. Scratches and dings will inevitably appear and they tend to really stand out on an anodized panel.

At work we switched from Sherwin Williams paint to powercoat which was fine but lately the craze is hard anodize. Last week we a got a lot of black hard anodized chassis that all looked like a million. We built up 10 units and burned them in. They all came out purple. Woops.

A lot of military manufacturers, especially microwave module houses, prefer paint. A scratched subassembly can be stripped and repainted or repainted and rebranded. Paint can actually help a module pass a hermetic test too.

Just a few thoughts.. Mike Murphy WU2D

From barry at hausernet.com Fri Oct 14 00:56:01 2005
Subject: [R-390] R-392 help - Green Speaker-ology

Hi Mark & gang:

I coulda' told ya' ... the primary limiting factor with the LS-166 (and LS-454, etc.) is not necessarily the transformer, it's the basic speaker/enclosure design. They are built to be waterproof and blast/concussion resistant. The R-392 is waterproof, which was bathtub-verified by one of the list members a few years ago and actually floats, though face-down which is not particularly convenient. ;-)

The LS-166 and others of the series, can be called Accidental Acoustic Suspension design. In addition, the cone is made of heavily varnished/sealed cloth and has two form-fitting grilles or baskets front and aft as part of the water-proofing and blast resistance, respectively. The suspension is very stiff. Also, the intention is to cover the code and voice frequency ranges, to hopefully improve intelligibility, as with other "communications" type speakers. That's on the presumption that much of the signal content outside the range of, oh, 300-3,000 Hz is likely to be noise or not needed.

I used to home brew speaker systems years ago with hightly variable results so had studied up on it. So here's some more background for what it's worth.

There are two basic types of speaker enclosure designs unsealed and sealed. For the most part, until the late 50's or so, maybe mid 60's, the unsealed were the rule. These ranged from simple open back designs like many popular acccessory speakers for communications gear, to rather elaborate bass-reflex designs. It all has to do with the back-wave. When a speaker driver physically oscillates, it produces both. For HF transducers, it doesn't matter much as high frequency audio is directional. However, the back wave of a regular or LF/woofer speaker cancels out much of the front wave. If you run a woofer driver outside of an enclosure, sometimes you can barely hear it. If you do the same with a full-range driver, it will lack bass and you'll mostly be hearing the higher frequencies.

So, a primary challenge in speaker design is to deal with the back wave. Simple open back speakers sort of deal with it providing side walls which suppress/redirect some of it. Then there were the bass-reflex designs and variants which generally attempt to make use of the energy by physically reversing the phase of the back wave and putting it out the front of the enclosure through a tuned port. Just how well in-phase it becomes as well as a bunch of other parameters would determine resulting frequency response and overall fidelity. Bass reflex designs usually benefitted from size the bigger the better but not always as the "monsters" I built proved out.

Along came the acoustic suspension design. The basic idea was to bottle up the back wave but as with most things, there's a lot more to it. This design is inherently less efficient, requiring more power, but allowed for a more compact enclosure. (Remember the wattage wars of the old days? Triggered by the introduction of lower efficiency speakers.) Not only is the back wave not make use of, but sealing the enclosure puts much more physical resistance on the movement of the cone the driver is basically "trying to" compress and expand a given volume of air. This begat the need for more compliant suspension parts - -surround and spider (corrugated disk that supports the voice coil), yet stiffer cone material. Many drivers are specifically designed for either accoustic suspension or free-air enclosures. In fact, some of the more extreme suspension drivers can self-destruct if operated at high volumes in free air because the thing is supposed to be impeded by the trapped air and there's nothing to restrict movement.
Anyway, you can buy a small metal speaker unit about the size of the LS-166 that is acoustic suspension and will sound pretty good. That's largely because the driver is high-compliance and acoustically matched to the enclosure. They also sell a lot of small bass-reflex speakers of similar size they have small ports either front or back.

Which reminds me .... If you take an old National, or similar, open back communications speaker and

place it so the back is about 12 inches from a wall, it will improve the lower frequency end. You can experiment with varying the distance effectively tuning the phase of the reflection of the back wave. Also may benefit from being in a corner - as with many speakers - for that and other reasons. There are a number of other relevant parameters re speaker systems, such as dealing with peak resonance of the drivers and enclosures, etc. Fortunately, I don't remember the rest of it all that clearly. ;-)

Back to the LS-166. Here's a simple experiment try running it with the back off, if you haven't already, and vary its position. There may be some improvement. However, the tinny sound is also due to its construction the stiff, waterproofed cone and suspension materials, etc. which restrict movement. In addition, the enclosure was not designed and "tuned" for best fidelity either.

The next step would be to replace the driver, however, I'm not sure what would be the best choice. A unit made for acoustic suspension may require higher wattage than the R-392 can put out. Probably better to use a universal type and leave the back off. There would still be the limitation of the transformer, but you could use a Hammond instead. Or, leave the LS-166 for display and use a different speaker, or even amplified computer speakers and bypass the audio stage of the R-392. (You can remove the 26A7 and reduce heat.)

Oddly though, the speaker in the "Angry-5" AN/GRR-5 R-174 "gas" receiver built into the power supply half, is of similar design waterproof, concussion-resistant front and back screens, etc. However, they sound a good deal better actually not all that bad. I'm sure part of it is due to the larger enclosure space the power supply section but the driver is somewhat different and, I suppose, other factors are involved. They were from the same time frame as the LS-166's, though. Probably more than you wanted to know about speakers, eh? Barry

From tshoppa at wmata.com Fri Oct 14 08:07:09 2005
Subject: [R-390] On the subject of manufacturing front panels...

> Sure, anodize is sexy, sheds heat, is an excellent insulator and > is "harder than paint".

Isn't black anodized the IERC "black tube shield" secret?

> But, you can't hide blemishes, seams and mistakes with anodize.

If I understand the Front Panel Express process, the raw pre-anodized panel will be flawless. Machining is done entirely by automation. I haven't seen their black anodize in person (have seen some unanodized work - incredible!) but it looks pretty spiffy.

> Hard anodize isn't. Scratches and dings will inevitably appear > and they tend to really stand out on an anodized panel.

Yeah, I like my 13 year old car because it's already covered with scratches and dents so I don't have to worry about new ones!

> At work we switched from Sherwin Williams paint to powercoat > which was fine

Everybody keeps writing "powercoat". Is that the same as "powdercoat", or a specific brand name for powdercoat, or something completely different?

> but lately the craze is hard anodize.

I thought that craze was from the 70's!

> Last week we a got a lot of black hard > anodized chassis that all looked like a million. We built up > 10 units and burned them in. They all came out purple. Woops.

I've seen that on heat-sinks that get run to 300F or higher. You must have a pretty serious "burn-in" process! Tim.

From roy.morgan at nist.gov Fri Oct 14 09:43:37 2005
Subject: [R-390] R-392 help

wrote: >Change 1; Just got my hands on an old LS-166/U speaker.

Mark,

When I read your first post about how you helped the "RATT Rig operators, who liked to tune in shortwave on the secondary receiver", I imagined the 19-inch rack mount two-speaker thing. In one version this is known as the LS-206A/U. The main compartment of this thing is divided into to parts, each with a transformer and speaker and each side about 8" high by 9" wide by 9" deep.

To refresh my memory, I found a picture of an LS-166/U speaker. It's about four inches square by 2-1/2 inches deep and has a big mounting bolt on one side face and a switch and cord on another side face. (I presume the switch cuts the transformer in and out.)

> I repeated my experiment with the low frequency cutoff of the 600 ohm > to 8 ohm transformer. Either I mis-remembered, or they changed the > transformer design.

My guess is that your memory is more consistent than the equipment performance compared among the many, many contracts the LS-166 was purchased with. The LS-166 was meant for ruggedness and dependability under "field" conditions.

"Holy Precipitation, Sarge, Is it EVER gonna stop raining? We ain't seen the sun since Spring."

> It swept 3dB down at 4 Hz to 0dB down from 10 Hz to greater than > 200kHz! Noted a few peaks and troughs less then 3 dB from the speaker load.

What is it you were measuring? The acoustic output? The input impedance? It seems unlikely that something 4 inches square would produce sound across a range extending to 10 Hz. And I would not expect its input impedance to be very constant, either, unless there is lots of loss in the system as a whole (which is quite possible).

>... changing the transformer won't work on the LS-166/U for bettter >lows. At least not without changing the speaker itself.

If the LS-166 produces acoustic power more or less level down to 300 Hz, I'd not be too surprised. Much below that would surprise me a lot. By "changing the speaker" do you mean replacing the whole thing, speaker driver, transformer, case and all? If I had to get more lows out of an LS-166, I'd scrap the case and transformer and build a completely new enclosure, likely of the bass reflex sort, and it might wind up as big as the LS-206. I would expect to then figure out that the driver is completely wrong for the job.

>Cabinet size probibily has something to do with it, but the sound does not >change with the back off.

Yes, indeed! I think the case on those I've seen is not very "sealed" - that is closed from air leakage from the action of the driver. However, the water sealing on the thing may actually do a good job of acoustic sealing also. Even if it were well sealed, there is not enough volume of air inside the thing to make it work well at lower frequencies.

It is very interesting to put a moderately well sealed back on our boatanchor speakers, such as the older Hallicrafters and black Collins ones, and then in addition, stuff the now-closable box with absorbing material. It's also very interesting to compare normal radio type speakers to even modest "hi-fi" type speakers. Roy

From tshoppa at wmata.com Fri Oct 14 10:34:09 2005
Subject: [R-390] Drop-in, GFCI-friendly line filters for R-390A's?

wrote: > The line filters normally do not "leak".

I'm not sure exactly what the filter terminology is when they specify leakage current, but getting to the filter topology

> The capacitors in side there pass > ac current because of the basic nature of capacitors. There > happen to be a lot of capacitance [...] > Each of these capacitors has the value listed as "Part of > FL101, listed for reference only." One email some time > ago indicates that they are 0.068 uF paper caps. Thus, the > capacitance from the hot line to chassis is 0.136 > uF. Let's refer to an capacitance calculator at: > http://www.opamplabs.com/rfc.htm > and get a "resistance" of about 19.5 kilohms.

Well, AC impedance.

> Then the calculator at: > http://www.opamplabs.com/eirp.htm > gives some six miliamperes of ac current. > This is above the four milliamperes of the ground fault > interrupter above.

Yeah, my experience is that the R-390A stock line filter will trip a GFCI even when the unit isn't powered on.

The Y2K manual and past posts on this subject have some confusing verbiage ("If the radio continually trips the GFCI check the line filter") that seem to say that only a "bad" line filter will trip a GFCI. But my experience is in agreement with what you write, Roy, in that a "good" stock R-390A line filter will allow enough AC current through that it will trip a functioning GFCI.

It would seem to me that the ladder logic should be that if your R-390A has the stock filter and doesn't trip a GFCI, that either the stock filter is bad or your GFCI has failed shorted.

We're about a half decade too late to update the Y2K manual, right? Who's the current maintainer? Tim.

From future212 at comcast.net Sat Oct 15 09:25:02 2005
Subject: [R-390] Dayton Boatanchors

I have always wanted to go to Dayton to see what boatanchors I might find. I'm going to go next year. I

will have to fly. Too long and too much gas to drive. Does anyone know if someone is usually selling R-390 and R-390A receivers? Is there anyone at the Dayton Hamfest that specilized in packaging and shipping radios? I'm going to rent a car, and do not want to pay a UPS clerk to fill a box with peanuts and ship a 70 pound expensive radio. Thank you in advance for your help. Best, Wayne H.

From roy.morgan at nist.gov Sat Oct 15 10:19:32 2005
Subject: [R-390] Dayton Boatanchors

Quoting > I have always wanted to go to Dayton to see what boatanchors I might find.

Wayne,

I went for the first time last year. It's a unique event and experience.

> ... someone is usually selling R-390 and R-390A receivers?

Although I did not make a complete and thorough tour of the sellers areas, I do not remember many if any R-390 radios for sale. There may well have been one or more but I was not looking for one, so don't remember seeing any.

> Is there anyone at the Dayton Hamfest that specilized in packaging and shipping radios?

Not that I know of. There was a team of people of Pacific Rim origin who were furiously taking radios APART. We assumed that the parts were going overseas, either before they got sold or after. It seems unlikely that they would help you get your new R-390A back to *your* house.

I suggest you make a deal in advance for a radio with someone who is also going to Dayton. Also, you might be able to arrive with a GOOD shipping box or boxes.

Better yet, buy your radio from someone on the list, have it shipped to you now, enjoy it from soon until then, and go to Dayton unencumbered. Roy

From jetemp at insightbb.com Sat Oct 15 10:27:36 2005
Subject: [R-390] Dayton Boatanchors

You might consider a side trip to Fair Radio who still has some carcasses and parts. They are about a 1 hour drive north of Dayton. Instructions and inventory is at http://www.fairradio.com Jim Temple

From DJED1 at aol.com Sat Oct 15 10:33:48 2005
Subject: [R-390] Dayton Boatanchors

Went to Dayton for the first time this year. It took most of two days just to walk the flea market outside. I was looking for boatanchors, and found quite a few. I'd say I saw 6 R-390As, and found one vendor who specialized in them. He had a R-725, as well as lots of Collins 75A4s, and a $4K SX88. Others of interest included HRO500 and TMC GPR-90. R-390As were offered between $500 and $800, and most were complete with meters. My only regret is that the first one I saw (and passed up) was a black-face in excellent condition. I didn't know what the epay folks would pay for such an item. I don't know about shipping- I drove out from NY and carried back my purchases. Of course, that's back when gas

was only $2.50 per gallon. Ed WB2LHI

From DJED1 at aol.com Sat Oct 15 10:40:06 2005
Subject: [R-390] Dayton Boatanchors

I visited Fair while I was out there, and got a tour from Gary, who rebuilds their R-390As. They have a limited stock of carcasses, and Gary is saving any good modules to satisfy his rebuilding program. He's even rebuilding filters to keep up with demand. But what you will get from Fair as "repairable" is a blue striper, without meters, and definitely in need of some repair. On the other hand, I think Gary puts in a whole lot of work to create a "checked" unit, and it only costs a couple of hundred more. But my choice would be to cruise Dayton first- the radios looked in much better shape cosmetically. Ed

From wa9vrh at mtco.com Sat Oct 15 10:47:47 2005
Subject: [R-390] Dayton Boatanchors

Hi Wayne,

Dayton has a mixd bag of boatanchors. You can find a wide variety of boatanchors but unless someone specifically states they will have something you never know. I believe over the last years an R-390A would not be a problem to find. I would ask on the various reflectors a month or so before Dayton if someone is bringing what you are interested in. They most likely (if they go every year) can give you space numbers where they will be in the flea market. Best to be there on Friday because a lot of stuff can move that day.

On shipping UPS has a station set up at the Hamvention. I have not used it or paid much attention to it. I would guess someone on the list can give you a better idea.

My other suggestion would to be bring a suitable couple of boxes with you. Folded up and flat I would guess would not cost much to take on an airline. When in Dayton for to Home Depot (or wherever) and by some closed cell styrofoam and cut to fit and pack yourself.

Good luck Dayton is a lot of fun and much to see. Also a great place to meet the people you converse with either here or on the air. 73 Larry WA9VRH

From iangallimore at rogers.com Sat Oct 15 20:13:03 2005
Subject: [R-390] R-392 help - Green Speaker-ology

Hi, Gang,

For what it's worth, I picked up a Hammond 119 DA transformer today, wired a U-77 connector to its 600 ohm primary, and connected a small 8 ohm bass reflex speaker I had kicking around. Much better sound from my R-392 than from the LS-166. Volume not huge, but quite useable. I think the Collins Collectors group was instrumental in getting Hammond to produce this transformer. Does anyone have any information on this last comment? If someone has a folded horn speaker, like one of the old Klipsch horns, which I understand are very efficient, volume might be even better.

73 Ian Gallimore VA3ODA

From kgordon at moscow.com Sat Oct 15 20:45:13 2005
Subject: [R-390] Dayton Boatanchors

> I have always wanted to go to Dayton to see what boatanchors I might find. I'm going to go next year. I will have to fly. Too long and too much gas to drive. Does anyone know if someone is usually selling R-390 and R-390A receivers? Is there anyone at the Dayton Hamfest that specilized in packaging and shipping radios? I'm going to rent a car, and do not want to pay a UPS clerk to fill a box with peanuts and ship a 70 pound expensive radio.

Wayne:

Part of an estate sale I am working on has an R-390A in excellent original condition. It has all the covers, and the original power cord on the rear. I have not had a chance to check it for original tools, nor for operation, as I would want to replace C-553(?) first so the mechanical filters wouldn't get damaged if the capacitor were faulty.

I also have one of Rick Mish's special form-fitting shipping boxes to ship it in. However, I HAVE to have the box back after you unload the radio.

I can ship it via FedExGround for you as I have an account with them.

I can e-mail you some photos of it, or can post them to my web site for you to look at if you wish.

The heiress would like to get around $700.00 for it, but that is at (least somewhat) negotiable as neither she, nor I, have any real idea of what something like that is worth today. Please let me know if your are interested. Ken Gordon W7EKB

From sletz at msn.com Sat Oct 15 20:42:39 2005
Subject: [R-390] R-392 help - Green Speaker-ology

I have an old Klipschorn I built in 1966- they are VERY efficient- have it out in the shack- maybe I'll try it with the 390A- right now it's connected to my McIntosh MC-60 and my Sherwood tuner- possibly could take the IF out into the MC-60 and then into the Klipsch.

I got the plans from Paul Klipsch back in the early 60's and built a couple of them while in the AF They are FANTASTIC. Sam

From djmerz at 3-cities.com Sat Oct 15 21:10:43 2005
Subject: [R-390] R-392 help - Green Speaker-ology

Ian, I've seen this transformer advertised by Antique Electronic Supply with the comment that the Collins Collectors group prompted its production, so I assume this is accurate. Hammond seems responsive to making items that fill a need for old radio collectors. I haven't tried one, as I have other types of transformers around to make the match when I've needed it. It should be high quality based on its size, rated at 12 watts, and about $18. Dan. Ian Gallimore VA3ODA

From Flowertime01 at wmconnect.com Sun Oct 16 13:05:01 2005

Subject: [R-390] Re: R390A meter movment current.

Keep the group informed as to what you find. It is a problem, many of us face. 73's DW Holtman WB7SSN

DW,

I have a major do it my self housing project going. I am redoing all the drywall, insulation and wiring in our 28 x 38 1000 square foot home. I am also changing a bedroom over to a new full bath. Going from 3 bed 1 bath to 2 bed 2 bath home. So hobby stuff is moving very slow. My next effort needs to drag the R390A URR to the bench and look at some voltage and current readings.

So real progress on this subject is going to be slow. However I will let the reflector know what ever I find and what ever I do to the R390's.

May E-pay humor us until I make some progress. Roger KC6TRU.

From Flowertime01 at wmconnect.com Sun Oct 16 13:38:50 2005
Subject: [R-390] Re: R390A meter movment current.

Dave, Hank, & Harry, Thanks for the meter info. Roger KC6TRU

From dcsfree at comcast.net Sun Oct 16 13:54:05 2005
Subject: [R-390] LONG BRISTILE

I am trying to tighten the set screws on a R-388 dial. it use a bristle set screw but I need a long one to do this. is there anywhere a long bristle that fits this size can be found? Dan K9DTC

From ToddRoberts2001 at aol.com Sun Oct 16 17:16:18 2005
Subject: [R-390] LONG BRISTILE

writes: I am trying to tighten the set screws on a R-388 dial. it use a bristle set screw but I need a long one to do this. is there anywhere a long bristle that fits this size can be found? Dan K9DTC

Xcelite makes an 11 piece screwdriver type set of Bristol Multiple-Spline Socket Drivers with long blades about 4" long. Each blade plugs into a screwdriver-type handle. Great for reaching into tight places. There are 9 blades to a set and one extension blade. Techni-tool carries the set for about $43. I am not sure if they sell individual blades but the set is very nice to have - I wouldn't want to be without one. 73 Todd WD4NGG.

From k0jd-l at seboldt.net Sun Oct 16 17:21:06 2005
Subject: [R-390] R-392

wrote: > The cathode follower for the IF output on the R-392 is very poorly > designed. The waveform is essentially saturated on one side -

I'm glad somebody said something about this - noticed this when putting the signal into my scope, was

thinking of external detectors, etc. myself. Thanks. John K0JD Milwaukee, WI

From normn3ykf at stny.rr.com Mon Oct 17 01:29:09 2005
Subject: [R-390] Odds are?

Hi all!

Had an intresting experience. I am the proud owner of three blue stripers. These things are REAL GRUNGY!!!

Picking over the modules, finding the best of the bunch, cleaning them, recapping the bbod's, ect took three months. Friday night one of them came to life. A little monkying with various things and it recieves on all bands.

This reciever had one little problem. It scared the hell out of me, IT HUMMED!!!! No, not audio 60cps hum, mechanical quiet mrrrrrr, like your kitty cat happy hum.

Shot the bug to distraction, pulled all cables to subassemblies: still there. Swapped power supply: still there.

Threatened problem with various dangerous tools: still there.

Had a thought last night. Power supply one and power supply two were built by the same manufacturer. The likelyhood of two bad supplies is astronomicial, except, when I compared them: They were both Capeharts, with the same contract number, order number and sn's less than 100 units apart.

The Stewart warner I swapped in is an unhappy cat, it doesn't purr.. However it does light up ok and I am a happy ham.

These recievers are real mutts. Some 67 eac, SW, but the real oddball is a collins 54 build audio deck. A bunch of other bugs remain to be shot, like two dead mechanical filters (4kc and 8kc). agc problem. Normal stuff for a reciever that sat in a field, outside, uncovered for years.

BTW, where were these blue stripers that had white dust that is not much different than borax. Every time I went to clean this radio up, I sneezed, my nose watered. Leave the room, come back, Everything was ok until I took out my cleaning tools. 73 for now Norm n3ykf

From n4tua at aol.com Mon Oct 17 02:54:08 2005
Subject: [R-390] Fixed IF stuck slugs

Hello Friends,
I have received many helpful ideas on this subject and would like to thank everyone who added to my question. I have decided to leave the stuck slugs alone for now anyway. I will continue to look elsewhere for the cause of the low sensitivity. Any ideas on this? I do receive signals that are low in volume with the rf gain turned to 100%. Also seems to be a loud noise floor. Almost like the noise is as loud or louder than the signal. Any help would be appreciated. Sure don't want to have to change those fixed IF cans.... :'- (Thanks, Collin

From kf4yio at charter.net Mon Oct 17 09:34:27 2005
Subject: [R-390] replacement for bristo wrenches

Hi Gang.

Great group here. I am writing to tell you about a cheap temporary replacement for the bristo wrench. Go to Sears and in the tool departemnt, look for a small rack with Torx wrenches. They are cheap (less than 3 bucks) and made by Craftsman.

look for "professional T8 X 2-1/2 torx. they have a black handle with a red top. They are a "LITTLE" loose but do work. I think that if you ground off a little bit of the end it would fit better as they are tapered. I have used mine during my R390A restoration and it seemed to work fine. Give it a try. Jack - KF4YIO Ringgold, Georgai

From r390a at bellsouth.net Mon Oct 17 12:31:24 2005
Subject: [R-390] Odds are?

Hey Norm

Blue stripers are fun, huh. :-)

I purchased several a few years ago for resale, but with patience, all worked fine. Shame they're such slim pickin's these days at Fair.

Unless the hum is loud to distraction, and as long as all the voltages are correct, it's only sorta bad. I have a "like new" '63 Teledyne/Imperial with a mildly hummy supply, and a '67 EAC with moderate hum. They don't seem to run any warmer than the ones that don't mechanically hum, so I figured they were just content. The Imperial has been happily purring for a bunch of years. I figured it was odd for a sealed transformer to hum, but since it worked I didn't try to fix it.

Good thing about that radio is I can tell folks I have a "like new" '63 Imperial and not be telling a fib! That is, as long as they don't look in my driveway. :-) Tom NU4G

From wbreeden at tconl.com Tue Oct 18 07:22:18 2005
Subject: [R-390] Long Bristol

Tecra Tools sells the individual Xcelite blades. They are a handy source for extra .096 blades. Put "spline" in their search box to see what they offer. Xcelite uses the term "spline" to describe their 4 flute and 6 flute bristol drivers. http://www.tecratools.com/ 73, Bill - AB0FX

From kc0lwn at yahoo.com Thu Oct 20 00:58:33 2005
Subject: [R-390] OA2 replacement

Can the OA2 be replaced by simply putting in a 150 volt 10 watt zenner in the appropriate socket pins?

From tshoppa at wmata.com Thu Oct 20 08:00:33 2005
Subject: [R-390] OA2 replacement

kc0lwn asks: > Can the OA2 be replaced by simply putting in a 150 > volt 10 watt zenner in the appropriate socket pins?

Pretty much. But a real OA2 has better performance (lower dynamic resistance, less noise) than a high-voltage Zener. (There's a reason they use Zener's in noise generators!)

And there's already enough heat on the audio deck - my gut feeling is that it's better to put an OA2 there (which dissipates heat over several square inches) than to put a Zener that'll run mighty warm in the vicinity. Yeah, I know that the total power dissipated is the same, I just think it's better to spread it out. Most of the heat dissipated by a 10W Zener gets conducted out through the leads, which is passable on a PCB with big pads but tube sockets aren't so good at conducting out heat, realistically you'd have to derate a 10W Zener to just a few watts in that environment.

Is there a shortage of OA2's or something? They happen to be a lot more readily available to me than 10W Zeners at the moment... but if you were in a pinch and couldn't find an OA2 I think it'd work OK as a short-term substitute. Better would be to use a low-voltage Zener as a reference for a transistor shunt regulator, it's easier to heat sink the transistor and you'll get a lot lower noise. Tim.

From muttman at charter.net Thu Oct 20 13:07:09 2005
Subject: [R-390] ARR-41 with mount FA

The e place.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5821287659&rd=1&sspagename=STRK%3AMESE%3AIT&rd=1

or 5821287659

From dathegene at hotmail.com Thu Oct 20 15:22:19 2005
Subject: [R-390] OA2 replacement

Why would you want to? I will be severely corrected if I'm wrong, but the OA2WA regulator is not known for regular failures--the only tube I've lost after 24-7-365 for 7 years is a 26Z5W...I've replaced some weak 12AU7s when doing PM's on the tester... other's experience out there? Just my 2 cents...Gene, NAØG

From R390rcvr at aol.com Thu Oct 20 15:32:00 2005
Subject: [R-390] R-391 by Motorola

Good day all:

Well, another curiosity has surfaced. A R-391 with all Motorola modules, except the PTO, Collins, and a power supply marked: Chester Mfg. company, instead of the usual Collins or Motorola on the nomenclature tag. Of course it has no tags. It appears to have had very little work done on it, green paint still good on screws, gear train very clean, etc. Engraved front panel. The number 275 is inked on the area normally covered by the tag.

So, has anyone ever seen a true Motorola R-391? Tom Marcotte doesn't have any records of same. Randy

From tshoppa at wmata.com Thu Oct 20 15:56:33 2005
Subject: [R-390] OA2 replacement

> OA2WA regulator is not known for regular failures--the only tube I've lost > after 24-7-365 for 7 years is a 26Z5W...I've replaced some weak 12AU7s when > doing PM's on the tester... other's experience out there?

I've had several OA2's (not the militarized/ruggedized, just the plain jane ones) go bad in rigs over the years. Generally they intermittently fail to strike a glow and soon after outright fail to glow/regulate.

These were not rigs that were on all the time but only a few hours a week. If you never remove power then the glow can't go out, huh? :-) Tim.

From recycler at swbell.net Thu Oct 20 19:26:39 2005
Subject: [R-390] OA2 replacement

> Can the OA2 be replaced by simply putting in a 150> volt 10 watt zenner in the appropriate socket pins?
Yes Indeed! PJ

From stevehobensack at hotmail.com Thu Oct 20 20:29:26 2005
Subject: [R-390] RE- OA2 replacement

Can the OA2 be replaced by simply putting in a 150 volt 10 watt zenner in the appropriate socket pins?

Yes, I have done this on my Super Pro 600, but I replaced the 0D3 with a 150 volt stud mounted zener rated at 10 watts. I bolted it directly to the chassis. It makes just as much heat as the VR tube. Since the heat generated is considerable, an axial style diode wired to the pins will soon fail due to inadequate heat dissipation.

From ham at cq.nu Thu Oct 20 21:17:57 2005
Subject: [R-390] OA2 replacement

Hi

The voltage may be a bit different, but it will work. The OA2 is rated at 144 to 164 volts at a current of 17.5 ma. It's internal resistance is < 240 ohms. It will regulate down to about 5 ma. A silicon diode will have a bit different resistance and a normal 150 volt 10% part would break over at 135 to 165 volts.
Enjoy! Bob Camp KB8TQ

From mjmurphy45 at comcast.net Thu Oct 20 21:27:17 2005
Subject: [R-390] RE- OA2 replacement

Steve,

If wasting time and effort while learning and good old fashioned danger is just as important as actually

achieving good regulation...

If you have a junkbox full of old bipolar power transistors TO-3 or TO-220, the actual breakdown voltage of many of these devices can be in the 150 VDC range. I call this a poor mans Zener.

How? The maximum reverse bias voltage that can be applied to a transistors p-n junctions is limited by breakdown. Breakdown is characterized by the rapid increase of DC current under reverse bias. The corresponding applied voltage is referred to as the breakdown voltage. Two mechanisms can cause breakdown, namely avalanche or tunneling of carriers through the bandgap. Neither of the two breakdown mechanisms is destructive. However, heating caused by the large breakdown current and high breakdown voltage causes the diode to be destroyed unless sufficient heat sinking is provided. With a TO-3 or TO-220 package, we can heatsink the diode.

We can look at the VCEO, the Collector to Emitter breakdown or the VCBO, the Collector to Base breakdown. We do not consider VEBO which is always a comparatively low voltage. For instance a 2N3055 has collector to base breakdown voltage of around 12 VDC. A Hint: with an NPN transistor, the tab or case can be directly grounded with no insulation needed which is handy, but remember - do not ground the base.

Set up a test stand with a variable high voltage supply capable of at least 100 mA and a series resistor of about 1K at 2 Watts. You will need a series mA meter and a voltmeter across the junction. Use some insulated clips to make contact with the transistors legs. Slowly increase the voltage until the current pops up - Bingo - Avalanche. After going through a few hundred devices you will get the hang of it and eventually find a 150 Volt junction.

As usual, the Reflector is not responsible for crazy ideas like this, nor the consequences. Mike Murphy WU2D

From N4BUQ at aol.com Thu Oct 20 21:57:15 2005
Subject: [R-390] Our friend is back...

The guy is auctioning cheaply made "Meter Faces" again - item #5821475110 Caveat Emptor (squared)! Barry - N4BUQ

From tshoppa at wmata.com Fri Oct 21 09:25:19 2005
Subject: [R-390] OA2 replacement

>> I've had several OA2's (not the militarized/ruggedized, just the plain jane ones) go bad in rigs over the years. Generally they intermittently fail to strike a glow and soon after outright fail to glow/regulate.

> I guess the radioactive source that gets them started just goes dead > after too many years.

Maybe. Do all OA2's have Krypton-85 in them? The ones that did go bad were generally the ones that came with the Heathkits (mostly from the late 60's/early 70's), and they did have some warning about Krypton-85 on the side of the tube.

Looking it up, Krypton-85 has a half-life of 11 years... which is about how old these OA2's were when they died.

Maybe the early/mid-70's OA2's have marginal quantities of Krypton-85 in them to begin with and go bad after a decade or two?

I have a sizable stock of OA2WA's and none of them say anything about Krypton-85 on them. Does this mean they predate labeling requirements, or maybe they have some other means of ensuring they strike? Tim.

From roy.morgan at nist.gov Fri Oct 21 10:07:07 2005
Subject: [R-390] OA2 replacement

wrote: Do all OA2's have Krypton-85 in them?

Tim,

No, not all 0A2's have any radioactive stuff in them. Only some of them do.

>Looking it up, Krypton-85 has a half-life of 11 years...

That may well explain why these tubes fail to work right.

>Maybe the early/mid-70's OA2's have marginal quantities of >Krypton-85 in them to begin with and go bad after a decade >or two?

Possibly. I'd expect they had just the right amount in them, for the requirements of the time. The purpose of the radioactive stuff (Just a few different materials were used, as I understand it) is to make them fire more reliably. A regulator tube without the radioactive materials and in the dark will strike either less reliably or at a higher voltage than otherwise.

>I have a sizable stock of OA2WA's and none of them say >anything about Krypton-85 on them. Does this mean they >predate labeling requirements, or maybe they have some >other means of ensuring they strike?

It most likely means that they don't have any radioactive stuff in them. There may well be other ways employed to make them strike reliably, but that's tube makers craft and art I am not familiar with. Try some in the dark and then in the light. Report the results.

I repeat Morgan's Rule about Radioactive Meters and VR Tubes: DON'T BREAK THEM OPEN AND EAT THE INSIDES. Roy

From kc0lwn at yahoo.com Fri Oct 21 10:14:03 2005
Subject: [R-390] 26Z5W replacement

Has anyone tried rewiring the rectifier scoket and using another rectifier tube in its place instead of going solid state and wiring in a resistor?

From n4buq at aol.com Fri Oct 21 10:18:22 2005
Subject: [R-390] 26Z5W replacement

There used to be an excellent article about using 12BW4's at this link:

http://www.xmission.com/~cwest/Reference/12BW4Mod.pdf

However, that link is now "404". Does anyone have a copy of that article? I bought some 12BW4's with the express purpose of trying that mod, but I don't think I kept a copy of the article :(Thanks, Barry - N4BUQ

From tshoppa at wmata.com Fri Oct 21 10:26:50 2005
Subject: [R-390] 26Z5W replacement

> Has anyone tried rewiring the rectifier scoket and using another rectifier tube in its place instead of going solid state and wiring in a resistor?

Somewhere on the net is descirbed how to use 12BW4's in place of 26Z5W's. You have to put the filaments in series instead of parallel. 12BW4's are readily available.

Ah, here it is: http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm

Looking in the mailing list archives it is reported that the 12BW4 has slightly higher plate resistance than the stock 26Z5W's. Tim.

From n4buq at aol.com Fri Oct 21 10:31:21 2005
Subject: [R-390] 26Z5W replacement

Tim,

Thanks for the link! I think the one I had is the same article in PDF format. I need to print this one just in case I need to use it. Barry - N4BUQ

From roy.morgan at nist.gov Fri Oct 21 10:41:44 2005
Subject: [R-390] 26Z5W replacement

wrote: >There used to be an excellent article about using 12BW4's at this link: >http://www.xmission.com/~cwest/Reference/12BW4Mod.pdf >However, that link is now "404". Does anyone have a copy of that article?

I tracked down a copy of that thing at: <http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm> (CWest is no longer with us.) I'll be glad to hear how you make out. I expect success, though. Roy

From tshoppa at wmata.com Fri Oct 21 10:43:51 2005
Subject: [R-390] 26Z5W replacement

> Thanks for the link!

You're welcome! One side-thought:

Most of the tubes in R-390(A)'s show up semi-regularly in large lots of JAN tubes on the surplus market. I believe (mostly backed up by hamfest rumor and speculation) that the military surplused most of their receiving tubes in the 90's and that a couple of dealers bought extremely large lots of JAN NOS tubes that they sell off in small chunks.

Of course, it's the ones that don't show up in the dealer's cheap stocks that we think about substiuting. Still, there seem to be plenty of sellers with JAN 26Z5W's and ballast tubes out there, it's just that the prices are uncomfortable!

The 12BW4 (and 2*12BA6 in place of ballast tube+2*6BA6 and other semi-common substitutes) do not exist in the military surplus stream and while they aren't exactly rare, you don't see dealers with thousands of new ones all in one place. They seem to be a bit more onesy-twosy from old radio shop stocks. Tim.

From roy.morgan at nist.gov Fri Oct 21 10:46:59 2005
Subject: [R-390] 26Z5W replacement

wrote: >Thanks for the link! I think the one I had is the same article in PDF >format. I need to print this one just in case I need to use it.

I have made a PDF file of that web page, and can mail it to anyone interested. It's very small at 64 kilobytes. Roy

From kc0lwn at yahoo.com Fri Oct 21 10:57:57 2005
Subject: [R-390] 26Z5W replacement

Barry!

Thanks. I found what you were talking about on the web. Here is the link.
http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm George

From ghayward at uoguelph.ca Fri Oct 21 11:44:18 2005
Subject: [R-390] OA2 replacement

In my GRC 109 manual they talk about 0B2's having 6.7 nCu of Cobalt 60 and I recall other similar warnings about Nickel 63 and some Uranium isotopes in the same tube family. They were probably part of the plate material.

Same as silica gel - Do Not Eat. Cheers, Gord VE3EOS

From r390a at bellsouth.net Fri Oct 21 13:46:40 2005
Subject: [R-390] OA2 replacement

Gee Gord, I suppose this means I can't snort the gasses from a voltage reg tube as a dessert after licking a radium meter face. I'm quite disappointed. Tom (nary a mention of keilbasa, ballasts or the average conductance of damp sheep)

From bill at iaxs.net Fri Oct 21 14:33:12 2005
Subject: [R-390] OA2 replacement

Um, if the VR tube is dark because it's lost radioactivity, all you need to do is supply ionizing radiation from an external source to get it lighted.

Find an old dental X-ray outfit and zap the radio with it after you turn it on. The lead apron is optional at our age. Bill Hawkins

From lester.veenstra at lmco.com Fri Oct 21 15:09:12 2005
Subject: [R-390] ARR-41 with mount FA

Interesting documentation at: http://rawfire.torche.com/%7Emuttmeister/misc/P3Vradio.pdf
Lester B Veenstra

From r390a at bellsouth.net Fri Oct 21 15:23:11 2005
Subject: [R-390] OA2 replacement

Hmmm, good idea, that X-Ray... Would firing a strobe next to it help start it? Tom

Would you believe I know where there is a 50's vintage field x-ray, nice and dirty, little shielding and complete with pcb filled power supply? And it can stay where it is too.

From mjmurphy45 at comcast.net Fri Oct 21 20:10:31 2005
Subject: [R-390] 26Z5W replacement

Hey Barry,

Is there a possibility that a 12BH7 dual triode could be wired as a dual diode? I'm not sure about the current capability but it has some good power specs and should have the reverse PIV because of its service as a vertical deflection amp. Mike WU2D

From ea2ig at euskalnet.net Fri Oct 21 20:37:07 2005
Subject: [R-390] 26Z5W replacement

Hi.

About 2003 on the list some one put a message about using a two 6V4?s instead of the 26Z5W. It required some rewiring of the sokets, an change the fil alimentation from pin 8 to pin 9 on the power transformer. Excuse my poor english Regards. Pedro

From mikea at mikea.ath.cx Sat Oct 22 19:17:27 2005
Subject: [R-390] 26Z5W replacement

I don't see any poor english, Pedro. You haven't had to put up with my horrible kitchen-Spanish.

That sounds like it could be a very nice mod. Mike Andrews, W5EGO

From dhallam at rapidsys.com Sat Oct 22 22:01:51 2005
Subject: [R-390] 26Z5W replacement

I know this is probably heresy but Ted Weber at Weber Copper Top will make a nice plug in SS replacement for the 26Z5 complete with voltage dropping resistor. I've used them in my R-390 for some time now. David C. Hallam KC2JD

From CRIPS01 at MSN.COM Sun Oct 23 01:49:33 2005
Subject: [R-390] 26Z5W replacement

RE: http://www.webervst.com/ccap.html

Thank you!!!! this will be a big help with my Viking 1 and 2 transmitters anything I can do to take a load off of the filament supply on these transmitters will be of a huge help. Ken

From jonklinkhamer at comcast.net Sun Oct 23 17:50:21 2005
Subject: [R-390] Calibration marks on the RF Deck

Hi to everyone in the group,

I have a question regarding the markings on the RF deck with respect to calibration at 8Mhz. Some of the them are almost worn away and one is gone completely. With the ones almost gone I repainted with enamel paint. The one that is missing, I do have another deck and was going to trace out the marking and transfer it over. Is there a better way? Are there any bugaboos I should be aware of? Thanks, Jon,KB1DC

From kgordon at moscow.com Sun Oct 23 17:58:46 2005
Subject: [R-390] Estate R-390A.

Gentlemen:

The disposition of the R-390A that was offered for sale here last week has been taken out of my hands. Watch for it to be eventually posted on the Bay, poorly or inaccurately described. Ken Gordon W7EKB

From drewmaster813 at hotmail.com Mon Oct 24 18:20:02 2005
Subject: [R-390] RE: 26Z5W replacement

wrote: >Is there a possibility that a 12BH7 dual triode could be wired as a dual diode? I'm not sure about the current capability but it has some good power specs and should have the reverse PIV because of its service as a vertical deflection amp.

The 12BH7 hasn't enough emission (current capability) to use for a 26Z5w replacement. Besides, the 12BH7 has become a high priced audiophile-coveted item, whereas the 12BW4 is desired by almost no one and hence is cheap.

The online article about rewiring the power supply rectifier sockets to accept the 12BW4 also mentioned another suitable tube, the 25CT3. Drew

From Tarheel6 at msn.com Mon Oct 24 19:47:04 2005
Subject: [R-390] Physical Height clearance: 26Z5W vs 12BW4 vs 25CT3

Beyond the rewiring of the R-390A power supply sockets, one other important issue to consider is that the 12BW4 and 25CT3 are each taller than a 26Z5. A 26Z5 tube extends a tad more than 1 3/4" once it is seated in the socket. In a similar comparison, a 12BW4 is 2.3" tall and a 25CT3 is 2.87" tall.

I bring this to your attention because after converting one of my power supplies to 12BW4's, I was disappointed to find that the tube extended to just a tad above the horizontal plane normally occupied by the R-390A's bottom cover. Had I reinstalled the bottom cover, the top of the tube would have been snug up against it. It was easy to see that there could be many unanticipated situations where the bottom cover might be accidentally bent slightly inward and thereby breaking the top of the tube. Clearly the 25CT3 at 2.87" of tube extending above the socket completely eliminates the option of reinstalling the bottom cover.

If don't want to reinstall the bottom cover, then the 12BW4 or 25CT3 will work just fine. 73's, -tom KE4RHH

From mjmurphy45 at comcast.net Mon Oct 24 20:37:53 2005
Subject: [R-390] RE: 26Z5W replacement

Yeah Drew, I figured that the current might be the gotcha. Funny how that tube has almost an exact pinout to work though.

Gosh I forgot about the audiophiles. Let's start a thread that touts 832's as max headroom push-pull preamplifiers. "That's some sweet hamonically rich crossover distortion baby" (obviously caused by tungsten-starvation after being used in a red hot SCR-522 over North Africa and stored in a hayloft for 60 years). Mike

From pomerol at mocha.ocn.ne.jp Tue Oct 25 07:41:02 2005
Subject: [R-390] Spoof Email Alert!

Hello guys,

I got a Spoof Email pretending an e-mail from eBay. Be carefull and DO NOT follow the message and Do NOT enter your account/password, if you are an eBay user. I've already forward the e-mail to eBay and they recognized it's a Spoof.

Subject: "eBay Inc: urgent security notification for client "
Sender: "eBay Inc"
Message:"Dear eBay Member,

We regret to inform you that eBay account could be suspended if you don't re-update your account infromation. to resolve this problem please visit link below and re-enter your account information."

Sorry about the bandwidth. Osamu Hazawa http://www4.ocn.ne.jp/~pomerol/MyPage/menu0.html

From Flowertime01 at wmconnect.com Tue Oct 25 19:28:34 2005
Subject: [R-390] 26Z5W replacement

Thank you!!!! this will be a big help with my Viking 1 and 2 transmitters anything I can do to take a load off of the filament supply on these transmitters will be of a huge help.

Fellows,

Any time we can solid state some rectifiers and get some filament supply relief is likely a good idea. Some glow in the dark things must be left glowing. But when exact authenticity is not at issue, a good rectifier may be in order. Roger KC6TRU

From mhuss1 at bellatlantic.net Wed Oct 26 06:01:42 2005
Subject: [R-390] R-390A PTO Needed.

Looking for a working R-390A PTO. If you have a working spare you are willing to part with, please email me with price.

From Thomas.Guest at TRW.COM Wed Oct 26 06:33:16 2005
Subject: [R-390] I search of a spring for a R-390a split gear

Hi everyone,

I am looking to see if anyone would have a extra spring for a split gear in your junk box.

I an finishing a tear down of the geartrain and find I am missing 1 spring. No luck at my local hardware store.

If you have one you would be willing to part with let me know what you want for it. Thanks in advance. Tom Guest

From roy.morgan at nist.gov Wed Oct 26 08:50:18 2005
Subject: [R-390] I search of a spring for a R-390a split gear

wrote: >I am looking to see if anyone would have a extra spring for a split gear in your junk box.

Tom and others,

Go to your local hobby store (airplanes, trains and the like, not the craft store with knitting, paints and so on.) Bring your vernier calipers and the information below.

If that does not work, From my saved emails:

>**I have been able to find many of the precision mechanical components needed for R-309A repair at Winfred M. Berg, Inc. 499 Ocean Avenue, East Rockaway, NY 11518 Tel: 1-800-232-BERG,**

Fax: 1-800-455-BERG website---www.wmberg.com.

They have a lot of hardware including gear collars, oldham coupler springs, snap rings (but no 8-36 spline headed set screws that I could find). They are nice to deal with, and I have used them for years.

Roy

From kc0lwn at yahoo.com Wed Oct 26 16:40:16 2005
Subject: [R-390] Foreign tubes 12ax7 (r390/r388)

This is a technical slightly off topic question. I have an r-388 in addition to my r-390a. Does anyone have any experiance with Russian or Chinese tubes that will replace the 12ax7. The US made NOS stock tubes are getting to be quite expensive. Ibeleive the r390 uses a 12ax7 so I am hoping someone has experiance. (please no political commentary)

From bmg50pa at suscom.net Wed Oct 26 20:42:32 2005
Subject: [R-390] Need info: Projects Unlimited WWV Standard Frequency Calibrator

Hi Folks,

I recently got this WWV receiver made by Projects Unlimited in Dayton, OH. They're still in business but have no information on this oldie. The front panel is labeled 'WWV Standard Frequency Calibrator'. It looks like it was manufactured under USAF government contract. It receives WWV on 5 Mhz & 10 Mhz. I would guess the vintage as 1950's based on the tubes used, including a 6E5 eye tube, for an 11 tube count.

The model/part number is P-1375 Stock No: 7CAC-6625-694-8991 Contract No: AF33(604)23540

It works but I'm in need of a schematic and, hopefully, an operator/maintenance manual as I'm going to have to replace the original capacitors and align the receiver.

Thanks, Mort Denison York, PA

From bmg50pa at suscom.net Wed Oct 26 20:42:32 2005
Subject: [R-390] Need info: Projects Unlimited WWV Standard Frequency Calibrator

Hi Folks,

I recently got this WWV receiver made by Projects Unlimited in Dayton, OH. They're still in business but have no information on this oldie. The front panel is labeled 'WWV Standard Frequency Calibrator'. It looks like it was manufactured under USAF government contract. It receives WWV on 5 Mhz & 10 Mhz. I would guess the vintage as 1950's based on the tubes used, including a 6E5 eye tube, for an 11 tube count.

The model/part number is P-1375 Stock No: 7CAC-6625-694-8991 Contract No: AF33(604)23540

It works but I'm in need of a schematic and, hopefully, an operator/maintenance manual as I'm going to have to replace the original capacitors and align the receiver. Thanks, Mort Denison York, PA

From tshoppa at wmata.com Thu Oct 27 07:54:50 2005
Subject: [R-390] Foreign tubes 12ax7 (r390/r388)

asked:> This is a technical slightly off topic question. > I have an r-388 in addition to my r-390a. > Does anyone have any experiance with Russian or > Chinese tubes that will replace the 12ax7. The US > made NOS stock tubes are getting to be quite > expensive. > Ibeleive the r390 uses a 12ax7 so I am hoping > someone has experiance.

Well, my R-390A has no 12AX7's, but my experience with Eastern European 12AU7's (Tesla, now JJ) was less than stellar, with intermittent interelement shorts.

Don't get too wrapped up in the astronomical 12AX7 prices... some are highly desired by the audiophile types and others are ignored. I'm sure the ignored kind (even if Chinese or Russian or E. European) will do fine. Even though just looking in the catalogs I'm surprised that used random 12AX7's seem to sell for more than the new imports.

And the JAN/industrial number (5751) that's somewhat compatible seems to be pretty expensive too. Tim.

From crips01 at msn.com Thu Oct 27 11:03:15 2005
Subject: [R-390] Foreign tubes 12ax7 (r390/r388)

Simple answer Russian tubes good, Chinese tubes bad. The 12AX7 is a common domestic tube and the supply of this tube is still good. Ken de W7ITC

From courir26 at yahoo.com Thu Oct 27 21:55:40 2005
Subject: [R-390] Interesting Soviet BA

See this BC-348 inspired HF rec. Ebay 5823841417 Tom

From r390a.urr at gmail.com Fri Oct 28 09:51:39 2005
Subject: [R-390] Fair Radio Report

Had a chance to stop at Fair last week on the way back from the East coast. I had not been to the new facility and was quite impressed. A much better location than the old quarters.

I introduced myself to Gary, their R-390 guy, and he gave me the tour of his work area, the outdoor paint booth and the huge back room storage area. Wow - they have so much more stuff than is listed in the catalog, much of it in too small a quantity to advertise. I wish I could have spent the day but my wife's patience only extends so far.

Gary said they were going to stop advertising 'checked' R-390As because they are about six sets behind already and they have reached the limit of usable modules to make a complete receiver. He's the only tech there and he just works part time so it's hard to keep up with demand. I see from their web page that they have taken this step. In fact, they are not even listing 'repairable' receivers at all.

The good news is they still do have parts for sale but you'll have to inquire for anything not listed on the web page. Gary does have a good supply of crystals in all frequencies (I believe there was discussion on the list earlier that they were out of 17 MHz but this is not the case). 73, /dave N9ZC

From flood at Krohne.com Fri Oct 28 09:57:34 2005
Subject: [R-390] 12AX7 tubes

Greetings,

I lost the earlier digest but whoever was looking for 12AX7's should contact me off list with how many they need and what they would like to pay or trade. I have a supply of this series that are as best as I can tell NIB mill surplus. If an audiophool wants to trade equal weight in gold they are welcome to but I'd be happier if they went to BA crowd.

John Flood
TASC Department
KROHNE, Inc
7 Dearborn Rd.
Peabody, MA 01960
Tel.: 978-535-6060 / 800-356-9464
Fax: 978-535-8180

From n6py at qnet.com Fri Oct 28 22:09:29 2005
Subject: [R-390] R-390 Langford SSB Mod

Hi All,

Some of you maybe considering or have the Langford SSB modification in your R-390's and be interested in my experience installing it in my non-A R-390.

I'm very impressed with this simple and easy to do modification which is easily reversible if you are not happy with its performance. On very strong SSB signals it does have a very slight tendency for overload but is a great modification if you plan to mostly use your R-390 for AM reception but occasionally to monitor SSB. If you experience any overload just back off the RF gain a bit.
If you are planning to mostly work SSB than a full blown product detector maybe a little better, but not much. Also if you are using a non-A R-390 like mine and the SSB station your receiving has poor opposite side band or carrier suppression there will be a slight distortion due to the beating effect due to the less steep shape factor of the LC filters compared to the mechanical filters of the A model.

I did run into one little bug that degraded the audio of AM signals but only with fast attack AGC. This was caused by some audio getting onto the AGC line due to the decreased impedance between the AVC rectifier tube and the AGC circuit by adding the diodes across the 180K and 220K resistors. It was most noticeable when listening to music by a reverb type sound on low pitched instruments such as drums.

I easily solved by adding a .5uf cap of at least 25 volt between pins 1 and 2 of the AVC switch, S104 on a non-A or pins 9 and 10 of S107 on a A model. This completely by passes audio off the

AVC line and only slightly slows down the fast AVC, which I think is too fast to begin with. I put the cap on the AVC switch to not affect the time constants of the medium or slow AVC which I didn't want any slower. After adding the cap the fidelity of AM is excellent in all AVC modes. This was the only chance to the original Langford modification I found necessary.

For those of you not familiar with this simple and effective modification let me summarize it here. Carefully remove the IF module after unplugging the power and BNC signal connectors, loosening the two clamps and uncoupling the band width and BFO shafts, then loosening the three green screws securing the module to the chassis.

Add a 1N4148 diode across each of the 180K and 220K resistors between the AGC rectifier tubes anode and the AGC circuit, R556 and R557 on a non-A or R546 and 547 on a A model. Install the diodes so their cathodes are toward the plate of the AGC rectifier tube. This will convert the AGC circuit to fast attack slow decay.

Add a 47pf, at least 300 volt, dipped mica cap across the 10pf output cap for the BFO that is connected to the BFO tubes plate, C536 on a non-A or C535 on a A model. This increased value of 57pf for the coupling cap will increase the BFO injection to the audio detector.

After checking your work reinstall the IF module and test the radio on AM and SSB stations. Offset the BFO +1 to 2kc for LSB in the 2 or 4kc selectivity positions. For USB offset the BFO -1 or 2kc. Adjust the BFO and main tuning dial for best audio sound. Then if you also notice the slight distortion of AM signals in the fast AGC mode, add a cap to the AGC switch pins as described above.

Physically installing the cap was the hardest part of the modification on my R-390 because of the BFO bellows covering the area of the cap but using a small soldering tool hemostats and some patience was possible. Installing the diodes was easy on my R-390 because the two resistor are easy to get to on TB502 located on the back wall of the IF module.

Hope my experience is helpful, Bill N6PY

From ToddRoberts2001 at aol.com Fri Oct 28 22:48:39 2005
Subject: [R-390] Fair Radio Report

writes: Gary said they were going to stop advertising 'checked' R-390As because they are about six sets behind already and they have reached the limit of usable modules to make a complete receiver. He's the only tech there and he just works part time so it's hard to keep up with demand. I see from their web page that they have taken this step. In fact, they are not even listing 'repairable' receivers at all.

Thanks for the report Dave. Well that is a milestone of sorts to hear that Fair Radio has finally run out of 'checked' or even 'used, repairable' R-390A's. The R-390A was one of their featured items it seems for almost as long as I can remember, I would guess for at least the last 15 years or more. I remember reports of them having R-390A's stacked from the floor to the ceiling of their original warehouse, so they must have sold hundreds of them over the years. It may open up more R-390A parts for sale if they are not trying to save certain parts to build complete receivers with. One thing about Fair Radio is they always know how to pack heavy items safely including transformers. They use cardboard and newspaper and heavy boxes and seem to know how to do it right. Like Dave mentions it is always worth asking Fair Radio about something not listed in their website or catalog. They have bits and pieces of other radios like the R-388 so if you need something just ask. 73 Todd WD4NGG.

From w5or at comcast.net Sat Oct 29 10:58:11 2005
Subject: [R-390] R-390 Langford SSB Mod

Nice writeup on using the Langford mod on the original R-390, Bill. Thanks for posting it to the list. I have a 391 in the queue, your notes should apply as well. Don Reaves

From w5or at comcast.net Sat Oct 29 11:03:42 2005
Subject: [R-390] Yahoo mail users list note

Our esteemed QTH.net admin reports on-going trouble between qth and yahoo mail servers. I haven't seen any bounce messages from yahoo subscribed accounts yet but periodically many do get unsubscribed. FYI.

From Flowertime01 at wmconnect.com Sat Oct 29 21:18:22 2005
Subject: [R-390] Fair Radio Report

Fellows,

When I saw Dave at Fair Radio late last month there were only about 80 frames left in the whole place. The radios were stacked 5 to a layer and 4 layers high on a pallet. I think I saw 4 pallets. There were a few others around but not likely more than a 100 in the whole place. Dave said the ones he is putting out today are being reclaimed from ones that were long ago passed over as non repairable. The fact that Dave is getting almost every one into a working state is a testament to the receivers repairability. Most folks are very happy with the receivers Dave is putting out the door. Looking at the items, I though most of them would be repairable. I am sure not all of them will be. I can see Dave becoming a chassis wire harness expert to get the last ones out the door.

There were a couple hundred pulled 16KHz mechanical filters into two boxes on a shelf but no 8, 4, or 2's to be seen. The big KC MC knobs look to be the limiting factor. Dave does not have enough of those for even the receivers he has left. The folks thought that the R390A parts would not make the catalogue as the sales would not cover the cost of print space. It was indicated that the line may be, call and ask for what you need. Fair Radio would try to fill the request as they do with so many of the other unlisted items they supply.

A shame less plug. If you have collected something and need a part to get it restored, call Fair Radio and ask what they may be able to do for you. They just may have what you need if it was produced in OD green or of GI issue. I was amazed. I have been into shops around the world since 1968 and Fair Radio made my day last month.

On one side the story is all those Julian Creek receivers are back in operation and distributed all over the world. OK so not evenly distributed. On the flip side all those receivers are owned by someone who is not I.

Thanks Dave and Fair Radio for all those wonderful surplus items you have put back in the hands of individuals. Roger KC6TRU

From N4BUQ at aol.com Sat Oct 29 23:03:36 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Gents,

A few months ago, I mentioned the idea of building some new capacitors from an octal relay plug and some miscellaneous aluminum pieces. I finally finished the project. See the following link for some brief details and pictures.

My goal was to use modern parts that are available and no modifications to the radio.
http://members.aol.com/n4buq/r390a/ Enjoy. Barry - N4BUQ

From r390a at bellsouth.net Sun Oct 30 00:47:56 2005
Subject: [R-390] Wanted - Dead Bulbs #327, 328, etc

Really. Dead bulbs. Can be broken. Need a few for a small project, and can't find any good or bad here. Needing miniature flange mount such as #328 or similar. Please email offlist. Thanks Tom NU4G

From mjmurphy45 at comcast.net Sun Oct 30 10:06:36 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Wow! looks great Barry.

When are you going to pour in the black potting goop? Just kidding.. Mike WU2D

From beerbarrel at cox.net Sun Oct 30 11:28:54 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Did you use a CNC machine Barry?

From N4BUQ at aol.com Sun Oct 30 14:05:08 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Yeah, I should have saved the black ukkumpukky (sp?) from the guts of the caps I tore apart a few years, melted it down, and poured it back into these just for the original look and smell... :-) Barry - N4BUQ

From N4BUQ at aol.com Sun Oct 30 14:14:21 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

No, just a small manual mill (actually two of them since I didn't quite finish everything the first time around). Truthfully, the internal reliefs could be almost eliminated. The capacitors could be pushed in place, but I didn't want to have any stress on them. If I pull the outer plastic (vinyl?) sleeve off of them, I think they would fit nicely but I wasn't sure if that was a good thing to do to them. The outer relief needs to be there to clear the standoff, though.

One thing I didn't mention is that in order for the relay plug to fit properly, I had to shave the spline off

the center thingee so that they would fit parallel and perpendicular to the chassis. The aluminum casings would not clear the other nearby components if you plug them in with the spline properly aligned. Assembling them the thing the way I did makes it obvious which way the things are to be plugged in, but if you ever take them apart, you have to watch to align everything back the way it should go together.

One other thing to note. I think if I got the type of capacitors with radial leads coming out both ends and stack them like others have done to rebuild the round cans, the internal clearances would not be necessary either; however, it would dictate a slightly taller can. Thanks for the comments. Barry - N4BUQ

From r390a at bellsouth.net Sun Oct 30 18:22:16 2005
Subject: [R-390] Found - Dead Bulbs #327, 328, etc

Bulbs Found Thanks to those who replied Tom NU4G

From Flowertime01 at wmconnect.com Sun Oct 30 18:56:34 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Barry,

Nice job on the caps. Nice web page photos. Are you still going to try and get them colored? Roger KC6TRU

From Flowertime01 at wmconnect.com Sun Oct 30 19:04:06 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

writes: When are you going to pour in the black potting goop? Just kidding..

What? Barry, you do not have the black umpucky in there? and you call the package done? For shame. Roger KC6TRU

From ToddRoberts2001 at aol.com Sun Oct 30 19:35:26 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

Saw this new auction listed on eBay of a beautifully restored R-390. Has a nice description of what the man did to the radio and a wonderful set of close-up pictures. Worth seeing for the pictures alone - I saved all of them. Makes a great tutorial on restoring an R-390. 73 - Todd WD4NGG

http://cgi.ebay.com/Collins-Designed-R-390-URR-R-390-R390-CY-917-NICE_W0QQitem
Z5824706419QQcategoryZ15051QQssPageNameZWDVWQQrdZ1QQcmdZViewItem

From jpl15 at panix.com Sun Oct 30 19:46:58 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

wrote: > Saw this new auction listed on eBay of a beautifully restored R-390. Has a nice description of what the man did to the radio and a wonderful set of close-up pictures. Worth seeing for the pictures

alone - I saved all of them. Makes a great tutorial on restoring an R-390. 73 - Todd WD4NGG

Also quite a bit of "Crapola" - read this again:

"Here is a fairly rare opportunity to add a very nice Collins designed Motorola built R-390/URR receiver to your collection. There haven't been but a couple of these offered on Ebay in the last few years, one sold by me and none in this condition. This is the nicest R-390/URR I've had the pleasure to work on. "
A "couple" in the last few years...? O-Kay.... And y'all can "buy it now" for ONLY $2.5K! My 'Umble Opinion is that, yes, it's a nice radio.... but it ain't *that* nice. Cheers John KB6SCO R-390, R-390A, R-388

From N4BUQ at aol.com Sun Oct 30 19:54:06 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

I kind of gave up on that. One place I called quoted around $50 for those 8 small pieces and another local place never responded. At some point I just had to say enough. Fun project, but enough. Barry - N4BUQ

From r390a at bellsouth.net Sun Oct 30 20:13:56 2005
Subject: [R-390] Fair Radio - Photos from an earlier decade

Though not *THAT* much earlier - These were taken about 1995 or so by a fellow in Nashville, AB Bonds. I had gone up a year or so before but forgot my camera, so AB fixed me up.

http://www.fernblatt.net/_radio/fair_radio_sales_pics/

No fancy web page, just click on the filename to see the pic 73 all Tom NU4G

From redmenaced at yahoo.com Sun Oct 30 20:57:18 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Now, what's going to happen when someone gets that radio after you sell it?

WOW L@@K R@RE!! Unuaual factory mod, never before seen! COLLECTABLE!

Do you know what that will do to the price?

People will be buying them just so they can tear them apart to find out if there are any more with strange mods in them. ARGH, Joe

From r390a at bellsouth.net Sun Oct 30 21:00:31 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

I guess the past time or two of overpriced "Buy It Now"s has got other folks thinking they can do the same thing. tsk tsk. The sad thing is there are folks out there that will pay that much for a shiny radio with a nice description. What's worse is if I put a shiny picture and an honest description in an auction, nobody seems to bid on any of the things I've tried to sell LOL.

I'm holding on to my two Collins designed Collins made R-390's and my Collins designed whoozit made R-390A's.

I *DO* agree with Todd the pix are nice in the auction, though. Tom NU4G

From N4BUQ at aol.com Sun Oct 30 21:08:17 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

...and since I have parts for another set (once I get the caps order from Mouser), I can make a complete set of spare "mods". <insert evil laugh here> Barry - N4BUQ

From DJED1 at aol.com Sun Oct 30 21:10:40 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

Sorry I missed the pics- the auction has been closed by eBay. Guess something was not kosher. Ed

From gharmon at idworld.net Sun Oct 30 21:12:17 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

Receiver is still on eBay. The email with the link had a wrap around and wouldn't load up the link. Go to eBay and just do a search on R-390. 73, gary

From ToddRoberts2001 at aol.com Sun Oct 30 21:14:24 2005
Subject: [R-390] Beautifully Restored R-390 on eBay

writes: Sorry I missed the pics- the auction has been closed by eBay. Guess something was not kosher. Ed

Ed, did you properly copy and paste the adresss? The auction is still up and running. 73 - Todd WD4NGG

From Radiograveyard at aol.com Sun Oct 30 21:18:12 2005
Subject: [R-390] Restored R390 Ebay

Search on Item number: 5824706419

From normn3ykf at stny.rr.com Sun Oct 30 21:35:16 2005
Subject: [R-390] Restored R390 Ebay

Buy it now for only $3500.. Only two sold on ebay in the last few years, he bought one, blah, blah, blah.. what a deal, blah, blah, blah, blah.

From normn3ykf at stny.rr.com Sun Oct 30 21:46:02 2005
Subject: [R-390] Trimmer caps

Hi all!

What are you using for replacment erie trimmers? I have a few that are bad, and I want to stock up..
tnx de n3ykf

From Radiograveyard at aol.com Sun Oct 30 21:51:29 2005
Subject: [R-390] Restored R390 Ebay

Check out this "upgraded" 390A pay attention to the front panel

UPGRADED Item number: 5824682264 As far as the restored unit at $2500.00 goes I ain't buying BUT when you consider what Macs cabinets are bring today and the cost with Chucks and Miltronics restorations if you gotta have it now its not so bad. Just a thought. Pete

From jpl15 at panix.com Sun Oct 30 21:52:23 2005
Subject: [R-390] OT: KWT-6 on eBay

Here: 5823287634 Buy It Now for $6K - seller says it's in service currently on 80M. found it while researching the *actual* number of R-390s sold on eBay this year - not done yet, but there were *three* of them just this month...

Maybe I could sell 'Hyperbole' on Ebay - make enough money to have R-390s made new.... from scratch. That'd be Fun. Cheers John KB6SCO

From hankarn at pacbell.net Sun Oct 30 22:19:17 2005
Subject: [R-390] OT: KWT-6 on eBay

Who is this expert that has just come on the scene? Hank KN6DI

R1051 expert is/was Cecil is he now a 390 GURU???

From r390a at bellsouth.net Mon Oct 31 02:18:39 2005
Subject: [R-390] Barry's '390A Cap Replacements

Good looking replacements. Much better than the empty relay cases I used years ago. Powder coat them generic gray, maybe silkscreen a bogus part number on them. Make 'em look spooky. Be sure to put the Rockwell/Collins CAGE code on the fake part. heehee

Either that or do 'em up in candy apple red and racing stripes. Maybe STP, Holley, Edelbrock stickers. These caps make it modified stock, so it has to go faster!

At any rate, the darned things seem to fit and look good. Helluva job! 73 Tom NU4G

From r390a at bellsouth.net Mon Oct 31 03:44:16 2005
Subject: [R-390] OT: Fair Radio + Granite Mercedes Monument

Sorry about that Glen, thank for bringing that up, I'll get rid of it. Not sure how that got in there....

The story behind that was a young fellow who loved Mercedes died before he was old enough to drive. His brother commissioned a solid granite correct scale 240D as his memorial. Story is here -

http://www.usatoday.com/travel/destinations/2004-04-15-jersey_x.htm

I have a '76 240D and an '85 300TD. BA cars, no computers, mechanical injection and pumps, can run on crisco, good cars. Not collector cars, just taken care of under the hood. Mine aren't granite, though. Makes the hood easier to raise! heehee Tom

From r390a at bellsouth.net Mon Oct 31 05:15:42 2005
Subject: [R-390] Another Ebay 390A

Take a look at the power supply on ebay item 5822129843 And it's up to $600 with a day to go.

With all the 390-ish radios showing up on ebay lately, makes me wonder if someone planted a couple ballasts and grew a batch this year or something. :-P Tom NU4G

From r390a at bellsouth.net Mon Oct 31 05:38:02 2005
Subject: [R-390] Yet another '390A

Item 5824836584 Appears to be a white front panel with black letters. The rest of the radio? ehhhh. It really does look good in that color, at least to me.

From shoppa_r390a at trailing-edge.com Mon Oct 31 05:40:33 2005
Subject: [R-390] Another Ebay 390A

wrote: Take a look at the power supply on ebay item 5822129843 And it's up to $600 with a day to go.

My look-see at the back shows that this radio comes from a time before B+ fuses... if so this would explain why the transformer turned black and the PS perpendicularized itself :-). Tim.

From odyslim at comcast.net Mon Oct 31 07:50:06 2005
Subject: [R-390] Radio Mart does it agian

Since we are on the topic, did anybody notice Radio Marts most recent R-390 for sale (5834836584) he cut and pasted the description from the R390 (5824706419) that everybody is talking about. How convenient. Scott W3CV

From odyslim at comcast.net Mon Oct 31 07:57:09 2005
Subject: [R-390] Light Grey front panel

Even though Radio Mart repainted his front panel light grey, I have reason to believe some were actually painted light grey when manufactured. I have one that is light grey, black letters on both front and back.

The back is definitly all original. Scott W3CV

From tshoppa at wmata.com Mon Oct 31 08:01:07 2005
Subject: [R-390] Radio Mart does it agian

wrote: > Since we are on the topic, did anybody notice Radio Marts most> recent R-390 for sale (5834836584) he cut and pasted the description> from the R390 (5824706419) that everybody is talking about.> How convenient.

How many times can he mention Rick Mish's restorations in his own? I'm sure it doesn't take "100s of hours" for Rick to do a restoration, either.. (although I'm not too zippy in doing all the parts of mine!)

RadioMart seems to have gotten better at spray painting over the years! Tim.

From kc0lwn at yahoo.com Mon Oct 31 10:03:20 2005
Subject: [R-390] Tube microphonics & performance

A friend of mine, an audiophile gave me some used 12au7 tubes. He said they were perfectly fine testing "strong" except he can't use them for audio because of microphonics. Could I use tnem in a R-390a without significantly degrading performance? Thanks George

From mparkinson1 at socal.rr.com Mon Oct 31 10:26:34 2005
Subject: [R-390] Radio Mart does it agian

This is the same receiver he had up there last time and he had to take it off . Ebay made him take it off . Instead of saying Rich mish restored it he is saying he did it what a laught.

The that whole auction with the R-390a is BS on he part tipicial for him. Just an out right crook and lying about almost everything he has on his auctions. Matt Parkinson R-390A Depot Repair.

From crips01 at msn.com Mon Oct 31 10:38:06 2005
Subject: [R-390] Radio Mart does it again

Maybe Radiomart is trying to disprove the premises "Remember you can't polish a turd." Ken de W7ITC

From paolo.gramigna at controllo.it Mon Oct 31 11:03:34 2005
Subject: [R-390] Looking for mini-bnc

Hi,

Where can i find some mini-bnc? I want to make some extension cables for servicing my R-390A--- Thanks Paolo

From chacuff at cableone.net Mon Oct 31 11:11:10 2005
Subject: [R-390] R-390/URR on Ebay

Good Morning folks.....

In an effort to minimize any confusion and idle chatter of the negative nature concerning the merits of the radio I have listed or the perceived value of the radio listed, here are things you should know. (maybe more "Crapola" Mr. Lawson...use delete key as needed)

I am R1051shop as listed on Ebay. Not to be deceptive but because I ran a small business restoring R1051's a few years back and at that time the ID was appropriate. Appears it still is today as I receive responses from past customers when they see me list things for sale on Ebay as has happened with this 390.

I am also a member of this group and have been since the days of Nolan Lee... One would think you guys would be cheering for one of the home team as opposed to finding whatever fault you can in the workmanship and/or the perceived value of the product of many hours of labor by fellow list member.

I am not trying to make a commercial venture out of the R-390 series of radio's....I do love and enjoy working on them as many of you do. Instead of picking up one and restoring it and putting it in my station (which I am doing) and that be that....I'm afflicted with the disease of buying 6 or 8 or 10 because I hate to see them sitting around looking sadly as many do. I enjoy the work but like anybody expect a fair return on the time spent. I have 2 and a half months of evenings and weekends invested in the radio listed and while the "Buy it Now" price is a fishing trip, the reserve is not!

When is the last time you looked at the price of a fairly nicely restored 50+ year old car for sale. Something that sold for 2K when new that is considered a classic design....not unusual to see 20K to 30K selling prices. What makes you think that classic radio designs have not been effected in the same way...besides the desire to wish it wasn't so.

Is the radio I have listed perfect....Nope. Is it Museum quality....don't know, I've seen some pretty crappy stuff in museums...but I didn't list it that way. Is it rare....well judging by the production numbers some might say so. What I do know is that there are probably 20 to 30 "A" models sold on Ebay for every R-390. I haven't seen any that were restored to the level the one I have listed has been restored to.
I watch Ebay daily with the exception of the two months after Hurricane Katrina when I had no electricity and/or internet connectivity....maybe I missed the market surge of sales on R-390's. (probably not) I do know many that listed as R-390 by their sellers seem to end up having an antenna trimmer knob in the middle of the front panel...so validate your search John by checking the pictures....I've seen only one in OCT.....

I sold one a while back to a fellow in Washington DC who has been delighted with it...through Ebay...went for $860.....it was nowhere near as nice as this radio but performed extremely well once finished up. That's two I know of....there may have been others.....

I am open to and able to accept constructive criticism of my work and welcome it....a GURU of things R-390 I don't claim to be.....I manage to learn something new almost daily. I can say that just because my name is not Mish, Medley or Rippel doesn't mean I or many of you cannot produce a product of equal or greater quality and performance. It just takes technical experience, the right tools for the job, a desire to do the work and an eye for some level of detail.

Hope that clears up a bit who has the radio for sale and where I stand on the subject....

Any negative reactions to this note can be sent directly to me at chacuff@cableone.net

Sorry for the length of this post for those of you not really interested.... Cecil Acuff WB5VCE Gulfport MS R1051shop

From wa9msd at ggnet.net Mon Oct 31 11:20:13 2005
Subject: [R-390] R-390/URR on Ebay

A while back, 5 years to be exact, Rick Mish offered 10 restored R-390 (non-As), "best I've ever done", for $2,000 each plus shipping, half were Collins and the other half Motorola. He sold them all. Just a perspective on prices. Joe, WA9MSD

From crips01 at msn.com Mon Oct 31 11:21:39 2005
Subject: [R-390] Looking for mini-bnc

I was looking at Fair Radio Sale website last night and they have used ones. Mini-BNC p/o R-390A, used, $2.50 Mini-BNC chassis-type p/o R-390A, used $2.50

I would not be surprised if they have the original cables. Go here: http://www.fairradio.com/hfrece.htm Ken de W7ITC

From jpl15 at panix.com Mon Oct 31 11:59:23 2005
Subject: [R-390] R-390/URR on Ebay

wrote: In an effort to minimize any confusion and idle chatter of the > negative nature concerning the merits of the radio I have listed or the > perceived value of the radio listed, here are things you should know. (maybe > more "Crapola" Mr. Lawson...use delete key as needed)

Dear Mr. Cecil -

Firstly I lumped R-390 "A" and "non-A" together - I was wrong to do that. My apologies.

But if you do eBay: Advanced Search: click 'completed listings only' with "R-390" as the search argument, you will be able to discern the relative number sold. I bought one four months ago, for $300 - though the auction has dropped off eBay now and I can't cite it for you. Was this the 'other one' to which you were referring? Perhaps not... at any rate many more than "a couple" of "non=A"s have been sold on eBay in the last few years.

Dear Sir: this is what I meant by Crapola, and I stand by my epithet - in my opinion you have written an untrue and misleading statement, that, if not in error, seems designed to 'inflate' the cache of your radio - especially to those who may not be as familiar with the breed as some of the Listmembers.

As to negative idle chatter: I think the device *is* very pretty, though I wonder where the internal covers are, (is the case included?) and I also maintain that your asking price is quite high: but more power to you in that regard - these radios need to be preserved and used.

These are my personal opinions, I speak for no-one but myself, and I remind all readers of the Old Saw equating Opinions with Rectums..... etc etc. Cheers John KB6SCO

From leslocklear at cableone.net Mon Oct 31 12:20:38 2005
Subject: [R-390] R-390/URR on Ebay

It is pretty clear to me that the "case" is included and the covers. You may wish to re-read it. Les

From future212 at comcast.net Mon Oct 31 12:52:13 2005
Subject: [R-390] Radio Mart does it agian

wrote: > This is the same receiver he had up there last time and he had to take it off .

I have been watching Radio Mart's radios for a while. His feedback is pretty bad and everything he sells is "mint", Exceptional", or some other word describing his radios as the best on the planet. 73's DW Holtman WB7SSN

From Flowertime01 at wmconnect.com Mon Oct 31 14:59:20 2005
Subject: [R-390] New Electrolytic Capacitors for R390A

Barry,

I'm afraid Joe is right about this.

You may have to back your package out of the receiver and we will need to purge all this thread from the mail and archives.

Still a very nice job and sorry you are not going to get them colored.

When I see front panel paint jobs selling for $300.00 and panel exchange plus postage both ways it pains me. Guys doing nice work on the inside where it really maters are just not getting enough credit. For to long we have been looking at auto paint on lawn dogs. The hype is gouging our pockets and real work is not being paid any respect. Roger KC6TRU

From DJED1 at aol.com Mon Oct 31 15:03:40 2005
Subject: [R-390] Radio Mart does it agian

Radio Mart always goes for the most optimistic description- that's probably why he won't disclose the identities of his bidders- too many disgruntled customers contacting them. I've been burned twice and now he's on my no-bid list. Ed

From paolo.gramigna at controllo.it Mon Oct 31 15:21:45 2005
Subject: [R-390] Radio Mart

Hi,

You raised my curiosity, but i can't find Radio Mart on ebay. What's the seller name? Paolo

From dcsfree at comcast.net Mon Oct 31 15:25:12 2005
Subject: [R-390] Radio Mart

its one word Dan K9DTC

From greybeard5150 at sbcglobal.net Mon Oct 31 15:43:02 2005
Subject: [R-390] Re: R-390/URR on Ebay

snip
"Good Morning folks...
In an effort to minimize any confusion and idle chatter of the negative nature concerning the merits of the radio I have listed or the perceived value of the radio listed, here are things you should know."

==========
As a very long time "list lurker" I felt the need to weigh in on this thread. It saddens me that Mr. Acuff had to come to his own defense on this situation. Quite frankly I don't see where there is anything to criticize, or debate here. The subject R-390 in question is nothing short of a masterful piece of electronic art.

As one that doesn't possess the necessary "savvy" to wade through one these radios personally, I'm thoroughly impressed with Mr. Acuff's talent. Judging by the looks of this radio he obviously has an obsessive and/or compulsive streak somewhere within, and in this particular line of interest that can only be? construed as being a huge bonus? for whomever ends up being? the lucky prospective buyer of this immaculate piece of radio gear.

I happen to possess an acute appreciation for many things of old.....radios, cars, furniture, motorcycles, tins and thermometers, tools, etc, etc, etc. Because of this I fully subscribe to the argument that has been presented, stating that just because it happens to be?a radio it doesn't diminish the end value upon the? completion of a complete "frame-off" restoration. When looking through a current electronics catalog, and seeing what is avavilable?for the same price, I'd say that Mr. Acuff's R-390 is worth every penny of the price, even if a person had to pay the full price.

How many currently made?pieces of electronic gear will still be around in 50 years, let alone still remain to be a viable, working instrument?

Thank you for all your efforts Mr. Acuff, and more power to you. The same goes to all the rest of you here on the list that keep these old beauties up and running, and make them available to those of us that are "electronically challenged". While this is in fact a hobby to the majority of you, your time, efforts, and expertise deserve to be rewarded as well as applauded. It's only fair.

From Flowertime01 at wmconnect.com Mon Oct 31 15:50:16 2005
Subject: [R-390] Tube microphonics & performance

George,

On a bad day you run what you got. You can use them, HOWEVER. Noise is noise. Try them, they may be better than what you have running right now. Then again they may not be better. Never turn down a tube. You can always use them as part of your test set. If you are not using

your line output, you could drop one in that side of the audio deck. The microphonic per say will not hurt the radio. It may add noise to the signal. If its the difference between radio and no radio, run them. Always run the best tubes you have.

You can compare tubes by hanging a dB meter on the audio output with a 600 ohm 1 watt resistor and comparing tubes with each other when plugged into the same socket. A signal generator is easier to work with than the cal tone and bfo. Most AC meters have a dB scale on them. Hit a few web pages and see how to use your meters AC scale or dB scale. Exact numbers are not required for tube comparison. You are just grading what you have from good to poor. Put the best ones forward in the receiver and use the best of what you have.

Hang an AC volt meter across your audio output. The line level meter works but a volt meter will help you with tubes that are real close together. Set the receiver to cal and BFO off. observe the meter reading. Turn the BFO on. Observe the meter reading. How many dB difference did you get between BFO on and BFO off.

Now change a tube into one socket.

Repeat the test for that tube.

Did the second tube give you more or less dB difference?

Plug all your spare like tubes in the same socket and compare them.

After test put the worst of the bunch into the receiver.

Now retest all of the type you have that is not needed to populate the receiver. Grade all of these from most dB difference to least dB difference.

Now put the best of these into the receiver.

Save the old poor ones for future testing.

Do this for each tube type.

Do the dual triode 5814's twice. Pick a socket where you know which side of the triode is being tested. Use the detecter socket for one side.

This is a quick post. If Its not clear to any one pop me back some mail and I'll try to get some more detail. Roger KC6TRU

From dr7zyq at imbris.net Mon Oct 31 15:51:05 2005
Subject: [R-390] Re: R-390/URR on Ebay

Ditto on all points. David, WA7ZYQ

From jpl15 at panix.com Mon Oct 31 16:57:09 2005
Subject: [R-390] Re: R-390/URR on Ebay

wrote: Ditto on all points.

Since I'm the 'point man' here - I wish to clarify that my initial comments about the eBay auction (before I knew who the Seller actualy was/is) were regarding what I thought was (and is) some distorted 'hype' about the relative rarity of this particular radio - and especially the statement to the effect that "only two have been sold on eBay in 'recent years' " one by Mr. Acuff himself.

As to the radio itself - it looks quite clean, and I have been assured that it is more complete than the average 390 - I must of course take y'alls word on that - all I can do is look at the pictures - this is why I asked about the internal covers. It has been pointed out that I missed the part in the text referring to them.

As this issue is on the verge of being beaten to death - my final comment is that I maintain my opinion that the 'ad copy' was/is misleading - any other attributes of the radio itself must be discovered by the individual interested in purchasing same.

I already got a couple, and an old beater of an R-388 to keep 'em company. Cheers John KB6SCO

From jgolden365 at aol.com Mon Oct 31 20:23:32 2005
Subject: [R-390] R390 PTO?

I have a sealed foil-wrapped PTO (or at least it feels like one) bearing a small white tag with part number 5963-00327-4393 on it, given to me by Norm Litsche years before he died. Is this for an R390A?

From ba.williams at charter.net Mon Oct 31 21:39:28 2005

From: ba.williams at charter.net (bw) Mon Oct 31 21:43:11 2005
Subject: [R-390] Radio Mart does it agian

> I have been watching Radio Mart's radios for a while. His feedback is > pretty bad and everything he sells is "mint", Exceptional", or some > other word describing his radios as the best on the planet.

Some of us have dealt with him in the past thru email or in person. He is a high strung liar who comes unglued rather easily. Maybe it is his meds..... Barry

From ba.williams at charter.net Mon Oct 31 21:40:17 2005
Subject: [R-390] Radio Mart does it agian

> Radio Mart always goes for the most optimistic description- that's probably > why he won't disclose the identities of his bidders- too many disgruntled > customers contacting them. I've been burned twice and now he's on my no-bid > list. > Ed

Ed, How have you been burned, if you don't mind my asking? Barry

From beerbarrel at cox.net Mon Oct 31 21:44:28 2005
Subject: [R-390] Radio Mart does it agian

I was curious about that too. He has been on my banned bidders list for sometime now just based on other folks dealings with him. Tracy

From CRIPS01 at MSN.COM Mon Oct 31 21:51:19 2005
Subject: [R-390] Radio Mart does it agian

RE: Some of us have dealt with him in the past thru email or in person. He is a high strung liar who comes unglued rather easily. Maybe it is his med's.....

No this is learned behavior. He knows if he comes unglued most people will back down and he gets away with his questionable sales practices. I deal with this kind of behaviour every day where I work. Ken

From odyslim at comcast.net Mon Oct 31 21:58:41 2005
Subject: [R-390] Radio Mart does it agian/ More!!

OK, I have him figured out. I have been watching some auctions lately and noticed the same buyer always wins. That's right. He has 2 identities. He buys with " gottahaveit1995 " and then re-sells the item under " Radiomart" . This is true. The R-390A he is selling now, with the crappy looking P/S and PTO was bought by gottahaveit1995 a couple of months ago. just FYI. Scott W3CV

From wa4jqs at mikrotec.com Mon Oct 31 22:12:01 2005
Subject: [R-390] Radio Mart does it again/ More!!

where is the guy located ? 73 Tony