R-390 Reflector February '05 Edited

From hankarn at pacbell.net Tue Feb 1 00:21:16 2005
Subject: [R-390] Pile of about 10 R-390As

They should pay him to haul them out of the basement. Hank KN6DI

From Radiograveyard at aol.com Tue Feb 1 08:04:08 2005
Subject: [R-390] Pile of 390As

Hey guys one of the piles brothers just brought $175.00 on Epay what is a better price guide? If these are the normal "Blue stripers" they will be missing all 5814s, meters, a few other tubes,mabe a knob or two, and the RF deck cover. They should have the solid stated power supplys. Probability of Cosmos PTOs high.Pete

From chacuff at cableone.net Tue Feb 1 09:38:54 2005
Subject: [R-390] Pile of 390As

I didn't find that one after a search but did find a real ratty looking SJC rig that went for $215. I also found a fairly nice, clean Non SJC in Meridian MS that didn't sell but was bid up to over $300 and it included a spare VFO and manual. It's a fickle market....

Then there is the $3400 one....could have bought one directly from Mish for less than that I would expect.
Derek mentioned that only a few of the 10 were SJC's. The military removed all the meters from Demiled R-390A's so that would be expected for any standard surplus radio. The others may be clean.

I agree with what most have said about the pricing of the radio if it's an SJC survivor....a good bit more if it's not! Cecil...

From Radiograveyard at aol.com Tue Feb 1 09:50:32 2005
Subject: [R-390] Pile of R-390As

My error the ebay Receiver Item number: 6507294205 Brought Winning bid: US $215.49 Guess I tuned out when it was a lower price. Everbody can check it out now. Pete

From: vibroplex at mindspring.com (Derek Cohn/WB0TUA)
Subject: [R-390] Pile of 10 R-390As

Hi Guys,

Ok...I think I have an understanding of the prices now. Let me see if I can get these things. It may take a week or two but I'll keep you posted on my progress. Special thanks to all who responded and helped educate me on this issue. 73,

Date: Tue Feb 1 18:33:58 2005
Subject: [R-390] Tubes new or used?

I was wondering about the 3TF7 ballast tubes. When I purchase a tube from a tube vendor or other source, will I ever receive a new tube or have all the existing tube been used at one time or another? My currecnt 3tf7 blew this morning. I have a spare, but I don't want it to die on me, so I saving it and using the resistor again. So, do you think I'd ever find an un-used 3tf7? Chuck

From chacuff at cableone.net Tue Feb 1 20:12:12 2005
Subject: [R-390] Tubes new or used?

> morning. I have a spare, but I don't want it to die on me, so I saving it

There are brand spanking new 3TF7 tubes available from the manufacturer. But they are expensive! Not sure of the price but someone posted recently about it....I just don't remember. There are also what I would think are New Old Stock Military 3TF7's available from time to time on Ebay. Saw one just the other day...may still be there. So the answer is yes....as a matter of fact you can purchase every tube in the R-390A new...they may be 20 years old but new.. Cecil....

From ham at cq.nu Tue Feb 1 20:12:12 2005
Subject: [R-390] Tubes new or used?

Hi, The 3TF7's are expensive but still available. It is not at all clear if they are necessary to the function of the radio. I would recommend using the resistor and not using the 3TF7. At some point an unused 3TF7 with it's box will be worth as much as the radio. Take Care! Bob Camp KB8TQ

From chacuff at cableone.net Tue Feb 1 20:23:29 2005
Subject: [R-390] Tubes new or used?

At risk of being ejected....There is a NOS 3TF7 on the site now...it's at 19.95 with 5 days to go.... Good Luck... Cecil...

From pdulaff at earthlink.net Tue Feb 1 21:53:29 2005
Subject: [R-390] Pile of R390A's - Count me in Derek

Blank Derek, Count me in on this. Parts or complete radios. Paul - WB2NMI

From bill at iaxs.net Tue Feb 1 23:35:42 2005
Subject: [R-390] Tubes new or used?

There's New Old Stock, which may be 40 years old. IIRC, in one of our frequent ballast threads, it came out that the iron resistor in a ballast tube is cooled by hydrogen. Now, hydrogen, being the smallest atom, tends to escape from anything made of bigger atoms, which is everything including glass.

So you need to be careful when you ask about "new" tubes. NOS isn't necessarily what you're looking for. Oh, and hydrogen makes iron brittle over time.

Just to kick over the can, unless you run your receivers from poorly regulated field generators, you don't need a ballast tube. And you don't need the heaters unless you alternate between desert and polar regions with the same receiver. But if the set was aligned with ovens on, it needs to be re-aligned with them off. The calibrator oven needs to stay on. Regards, Bill Hawkins

From chacuff at cableone.net Wed Feb 2 09:11:07 2005
Subject: [R-390] Tubes new or used?

I guess I missed most of that past discussion...but I certainly wouldn't want any tube of mine to be full of Hydrogen. If the filament were to arc when it decided to open up I would expect an explosion. Sounds like the Hindenburg (spelling) all over again. Are you sure it was Hydrogen? Maybe Nitrogen...

Just seems strange to me. Also if it escapes what does it leave behind?

You are also saying that Ballast tubes have a shelf life.....anybody know how long that might be?

Or maybe I have fallen off into a trap here.....hmmm

From Llgpt at aol.com Wed Feb 2 09:57:38 2005
Subject: [R-390] Tubes new or used?

Somewhere in my dusty files I have a letter from Chuck Teeters, the former Director of Radio for the Signal Corps at Ft. Monmouth. He stated what Bill said about iron wire and hydrogen. They knew at that time that shelf life wouldn't be forever....however long that is.

I gave up ballast tubes a long time ago, like cigarettes, neither one does you any good and they are too damn expensive. Les Locklear

From ham at cq.nu Wed Feb 2 18:14:23 2005
Subject: [R-390] Tubes new or used?

Hi, I agree that hydrogen is a bit unusual in a tube. I would have expected helium. In either case you probably don't have to worry much about an explosion. In order to explode you would need a bunch of oxygen in with the hydrogen. Apparently they did a back fill of the tube in order to adjust it's characteristics. I would not be surprised if it was a tube by tube process. Something in the process must have made these expensive to build. The nice thing about hydrogen or helium is that you don't have to use a lot of it to get good thermal conductivity. Those little atoms move heat really well.

In any case - the ballast tread has been going on forever and ever. So far nobody has posted data showing the ballast tube makes the radio work any better. That includes the paragraph about the ballast tube in the original Collins project report on the radio.

As long as you do a plug in resistor mod I don't see any reason why that's a bad thing. Wrap the ballast tube up real well and store it away on the shelf. If you ever want to sell the radio as a "100% real thing" then plug it back in. Take Care Bob Camp KB8TQ

From bill at iaxs.net Wed Feb 2 20:36:32 2005
Subject: [R-390] Tubes new or used?

Bob Camp said, "If you ever want to sell the radio as a "100% real thing" then plug it back in."

Ah, but don't turn it on!

Hydrogen is used to cool multi-megawatt power company generators. Less "air" resistance and better cooling. Lotta risk to using H2 but there must be a payoff. Then again, an invisible hydrogen fire is no worse than an invisible 2000 PSI steam leak. You know the leak is there because of the noise and the clouds of condensate. You look for it with a 2X4. When the 2X4 gets sliced through, you've found the leak. Regards, Bill Hawkins

From ham at cq.nu Wed Feb 2 21:15:17 2005
Subject: [R-390] Tubes new or used?

Hi, Oddly enough you use helium for the same cooling in micro watt level precision quartz resonators. With them you look for a leak with a radiation sensor that finds a stuff at the few atoms level. Takes a long time to chop a 2X4 a few atoms at a time. Take Care! Bob Camp

From RIKKA3TXR at aol.com Fri Feb 4 18:35:55 2005
Subject: [R-390] Re: R-390 Correct B+ voltages

Sorry, a bit off topic but can any one tell me the correct B+ voltage and the best place to see it? I have a print of an original military mod. that discusses voltages exceeding 180vdc - 190vdc and installing the dropping resistor...another source 240vdc...yet another 280vdc..the Y2K manual I think is 215vdc... My line voltage is at 115vac and I have 200 ohms between T801 pin 6 and ground..V603&4 pins 5&6 are both at about 276vdc..V801&2 pin 6 is at 285 vac..The solid state mod is in the pwr. supply...The radio is working but voltages close to 300vdc just seem a bit high to me.. Love to read the mail.. I will learn this animal !!! Thanks RIKK ka3txr

From wewilson at knology.net Sun Feb 6 08:52:33 2005
Subject: [R-390] Ah, now I see!

Joe, Better watch out Joe, with all that "happy day" talk. You might be "stirring the pot" with all that positive talk about an R-390, after many years of owning only an R-390A. You might get a big debate started as to which one is better. And if you go poking around in there very much, you might find even more to brag about with the R-390. Just wait 'til you get that baby on the air, and start listening to that warm audio. If your first experience with an R-390 is anything like mine, you're in for a real treat. Better get you a second R-390, before you start getting everybody excited about owning one, and the supply dries up. Walter - KK4DF

From jdouglasrichardson at yahoo.com Sun Feb 6 10:56:03 2005
Subject: [R-390] R-390A IF module

Hello to all. I've been a lurker and archives reader for a while. What a resource this list is. Thanks to some of you I managed to get one -A up and running well, at least compared to my othger BAs.

A second 390-A came my way last fall at Hosstraders which has been kind of hacked. It has become a project and a learning experience.

Would anyone happen to have a un-messed with working IF module they'd sell? Regards Jim Richardson

From ham at cq.nu Sun Feb 6 13:12:58 2005
Subject: [R-390] Ah, now I see!

Hi, Finding the first "non A" is the EASY part. In my experience that takes a lot less time than finding the second radio. Obviously it's impossible to start a restoration project with only one radio :)

I have had my not an A sitting in the shed for nearly five years now looking for that second radio ....

If you have a couple of R390A's for parts I *think* the fuse holders are interchangeable and a couple of the knobs. That's about it though. Enjoy! Bob Camp KB8TQ

From kc8opp at yahoo.com Sun Feb 6 17:28:12 2005
Subject: [R-390] Ah, now I see!

Bob, Like you I went searching for that parts rig to support my R-390. In the last four years I have found two, which I bought as parts rigs. The problem with parts rigs, when all the parts work together you get a great radio! Now I have three of the dang things and still no parts rig. I keep searching everyplace I go. 73's Roger KC8OPP

From odyslim at comcast.net Sun Feb 6 17:51:30 2005
Subject: [R-390] fixer-upper

I decided to buy an old fixer upper to try and learn a little by repairing it myself. I have a couple of manuals and know how to solder and can follow a schematic just OK.

Well, this is a little more of a hacked up, torn apart junker than I thought. Guess where I found it :-)

I first discovered somebody had unsoldered a couple of the mechanical filters then stopped whatever they were doing for some reason. I ohmed them out and then resoldered them, then installed the IF into a working R390A. GREAT, the IF works! I then installed a grounded power cord and installed a spare PTO. This radio did not have one when it arrived. I know that I am going to be off here but this is just for educational purposes.

I then checked every tube. All were bad, most missing. Replaced them all with good used ones. After checking under all of the other modules for smoke leaks, I checked all of the fuses and moved the function switch to standby for a few seconds and did not hear the antenna relay. Then moved it over to AGC. Silence.... Nothing. Darn! I noticed the OA2 was not burning so I shut it off. The fuse was blown. Geeze, What have I gotten into. After taking a closer look at the AF module, I noticed both caps were 45uf. I borrowed 2 known good caps from another radio and looked around a little more. Ahh... A cut wire in the harness. I don't know one was able to cut it without damaging any others, fixed it. I then noticed the RF gain pot had wires falling from it.

After re-doing the whole pot, I installed another 1/4 amp fuse and tried again. The antenna relay clicked in. Great so far! Ahh, the OA2 is lit, and I am getting hiss in the speaker!!
No signals though, just hiss. No signal on any band. . No difference in noise when I pull the antenna off except for one thing.

At around 140kc I hear a tone with the bfo on. I still have it on AGC so I move the switch to calibrate. The tone remains constant whether the switch is on AGC, MGC or Calibrate. Is the radio somehow stuck in the calibrate mode? I am now stuck. Any ideas? I have no test equiptment besides a volt meter. Regards

From odyslim at comcast.net Sun Feb 6 19:44:44 2005
Subject: [R-390] fixer-upper/ More

I forgot to mention that I did also check the 3TF7. Still no signals. B+ is 150. Scott

From ham at cq.nu Sun Feb 6 20:31:23 2005
Subject: [R-390] fixer-upper/ More

Hi, Well when you only have a hammer fix it with a hammer.

The Y2K manual has a bunch of good stuff in it. If you have not already downloaded it get one now.

One of the things in there is a list of voltages in chapter 5. They are a very good way to work though the radio. I suspect they will help track out the low B+ voltage. Just remember that the voltages in the manual are for a 110 volt line voltage and in some cases a high impedance meter.

The manual also has a set of tables of resistances in it. I have not found them quite as useful as the voltages but they are something else to check out.

Based on what you have found so far I would bet on another loose wire. It sounds like somebody was having fun taking your radio apart ...

Of course if you have another radio handy you could do a couple of module swaps and figure it all out pretty fast. That would take all the fun out of it though .... Take Care! Bob Camp KB8TQ

From redmenaced at yahoo.com Mon Feb 7 18:45:18 2005
Subject: [R-390] New toy.

The 5814's near the PTO are very weak, the two 6082's are weak, one will work the other is too weak. Found a gear rubbing on a wire on the front panel, otherwise very neat wiring.

Charring under the 6082's, well, not really charring, just black heat-type dirt. I guess you could call it smoke marks. Checking the resistors now. Is that first band supposed to be yellow? Or what? I measure the four at 41.8 for R615, 44.0 for R620, 40.8 for R621, and 50.8 for the last one I can't see the number on. Most tubes tested good. Joe

From ham at cq.nu Mon Feb 7 20:21:51 2005
Subject: [R-390] New toy.

Hi, Based on previous posts rather than direct experiance the 6082's are a tube that wears on in the not an A radios. The resistors sound a lot like perfectly good / in tolerance 47 / 20% ohm resistors. Take Care Bob Camp KB8TQ

From ham at cq.nu Mon Feb 7 20:49:48 2005
Subject: [R-390] New toy.

Hi, If you do decide to replace them I would recommend using 5 watt wire wound resistors. They are small enough to fit and they will pretty much last forever.

The only real issue is if the resistors are imbalanced. That will put an unequal load on the 6082's. Unequal load burns out the tubes a bit faster. Of course without matched pairs of tubes I doubt the currents are balanced to anything better than 10 or 20% even with exact resistors.

The whole issue of tolerance on carbon comp resistors has kept a number of threads going here for quite a while. Needless to say it's a "hot" topic. A lot of the parts were 20% when new. There is more than a little data that even when new they spread out over the entire range .... Take Care Bob Camp KB8TQ

From r390a at bellsouth.net Mon Feb 7 21:51:30 2005
Subject: [R-390] Who took over Dave Medley's Web Page

Way back several months ago, someone volunteered to save the info from Dave Medley's R-390 site. Tom

From Lester.Veenstra at intelsatgeneral.com Tue Feb 8 08:25:56 2005
Subject: [R-390] Who took over Dave Medley's Web Page

http://www.r-390.com/

From N4BUQ at aol.com Tue Feb 8 10:14:52 2005
Subject: [R-390] Need Fuse Holders

Does anyone know where I can get some good, military-grade, fuse holders? I need to replace some that are missing/imcomplete in my current set of R390A's I'm restoring. I can get plain holders lots of places, but the nice ones with fluted "knobs" aren't easy to find. The other ones just don't look right.

As a side note, I finally got around to cleaning the chassis parts and sent them out for Alodining. Wow. It's almost like working on new parts from the factory. I can't wait to get the front panels, knobs, and escutcheons powder-coated and get these things back together. Too bad I couldn't get the back panels Alodined, though. That would have really made for a nice looking set of frames. Barry - N4BUQ

From DJED1 at aol.com Tue Feb 8 12:53:44 2005
Subject: [R-390] Noise Figure Tester

I was packing up gear for the local flea market, and thought this tester might be of interest to one of the

R-390 community. It's a Kay Electric Mega-Node which measures receiver noise figure over the range of 5 to 220 MHz. It seems to work OK- I fired it up and measured my R-390A by using the panel meter to measure a 3 dB increase in noise as I adjusted the NF tester with a 50 ohm impedance. The radio measured 9 dB noise figure, which seems about right. I didn't try one interesting feature, which is that the tester also measures at 100 ohms balanced, and 150, 300 and 600 ohms balanced and half of that unbalanced. The range of NF is 0 to 17 dB. So if you want a different way to optimize the sensitivity of the radio, this is it. Note that the measurement is independent of bandwidth. You can convert from NF to microvolts if you assume a bandwidth. No manual but they are available on the web.

$50 plus shipping from 11767. e-mail me if your interested. Ed Newman WB2LHI

From k1kq at motorhomesusa.com Tue Feb 8 15:41:54 2005
Subject: [R-390] More Ballast Tube Noise

Does anyone have information on what the difference is between a... 3TF7 and the, 3TF4 & 3TFV4 ???
Roger Agnew K1KQ - Austin, TX 888-536-5500

From roy.morgan at nist.gov Tue Feb 8 16:39:01 2005
Subject: [R-390] More Ballast Tube Noise

That last one I don't know about but, the first number is the regulating current in tenths of an amp, the last number is the knee of the regulating voltage across the ballast.

So: 3TF7 300 ma current, regulates at 7 volts and upwards 3TF4: 300 ma current regulates at 4 volts and upwards. If I had two 3TF4's, I'd put them in series to see what happens. Roy

From redmenaced at yahoo.com Tue Feb 8 22:12:24 2005
Subject: [R-390] Detent spring?

How much interest is there in manufacturing new MC CHANGE detent springs? Price is looking like about $30 each. Any input? Joe

From doorbar61 at tiscali.co.uk Wed Feb 9 17:35:44 2005
Subject: [R-390] More Ballast Tube Noise

hi, just as a matter of interest about 7 weeks ago i purchased on uk ebay 2 3tf4 ballast tubes both are nos for $18 the pair. i put one in my 390a whicth i use most days and so far it is fine, sure it glows a little more red but is this another and cheaper way to keep the 390a running, yours brian

From redmenaced at yahoo.com Wed Feb 9 17:41:40 2005
Subject: [R-390] Detent spring?

--- John KA1XC <tetrode@comcast.net> wrote: > Hi Joe, > hmm, the price seems a bit high, around $20 would be > more in my comfort > zone. But new springs would be very cool as it's > hard to find replacements > without any wear. Would they be stainless like the > originals?

++++++++

You're right, it is high, I was not impressed either, but the potential supplier is sticking with that estimate, he's doing a bid for it now so we'll know more later. I didn't know they were stainless, are you sure? Stainless doesn't usually make a great spring. Joe

From hankarn at pacbell.net Wed Feb 9 18:04:32 2005
Subject: [R-390] Detent spring?

Joe, try LA Spring. Hank KN6DI www.laspring.com

From PDulaff at dpconline.com Wed Feb 9 18:23:53 2005
Subject: [R-390] Detent spring?

Joe, There are various grades of stainless steel that are for springs (both cantilever and helical) and work well. The thing to check for is if the detent spring is made of spring steel, phosphor bronze, or beryllium copper and has been nickel plated. It will appear to look like stainless steel, but wear marks from use will have worn through the plating and exposed the base material. If fabricating a replacement spring, knowing the material is important. The modulus of elasticity for the above listed materials varies significantly and would have a significant effect on function. If necessary , I can check my radio and determine the material. Paul - WB2NMI

From barry at hausernet.com Wed Feb 9 18:37:31 2005
Subject: [R-390] More Ballast Tube Noise

I don't know that's such a great bargain. I have a couple of 3TF4's around, but never tried them. There is a document on the Amperite web site which includes the following:

"LIFE EXPECTANCY:
Average life if operated as recommended 2000 hrs. If operated continuously at maximum voltage 1000 hrs. If operated continuously at 80% maximum voltage 5000 hrs. If filament is operated below glow point 5000 hrs. and up

In operation, the Amperite filament starts to glow at one point; as the voltage is increased, the glow spreads over the entire filament. Like incandescent lamps, turning the ballast tube on and off reduces its life, especially if operating near its maximum voltage."

So, there's quite a range -- and they recomment operating below the glow point. The differential is such that a $9 glowing 3TF4 might not compare well -- if you need 3 or more of them vs. a 3TF7.

There are some other interesting things in that document, such as:

"GENERAL ADVANTAGES

. Light, compact. No moving parts

. Rugged, will stand vibration of 10G minimum

. Hermetically sealed; not affected by altitude or humidity changes

. Can be changed as easily as a radio tube

. Operates equally well on A.C. or D.C."

Hmmmmm.... hermetically sealed..... 10G's! ... a bargain at twice the price.

Finally, that doc also says "It (the ballast tube) consists of a resistance wire with a positive temperature coefficient of resistance, hermetically sealed in a bulb containing hydrogen or helium gas." So, apparently there are von Hindenburg and Non-von-Hindenburg renditions. You can read the whole thing at http://www.amperite.com/Uploads/Ballasts.pdf Barry

> How do you "change a tube radio"? > > Barry(III) - N4BUQ

Actually, Namesake-san, the thing reads "Can be changed as easily as a radio tube" However, if you want to do it the other way around, this can be accomplished by means of the following procedure:

1. Unplug ballast tube from Radio #1 carefully, avoiding excess wiggling and jiggling and set tube aside carefully in a safe place..
2. Remove Radio #1 and set aside (for shipment approved repository -- address to be supplied later)
3. Move Radio #2 (w/o ballast tube) exactly into position previously occupied by Radio #1. (Radio #2 must be a compatible model, such as R-390/URR, R-390A/URR, R-391/URR, etc, -- not a Zenith Transoceanic which requires a 50A1 ballast tube, unless Radio #1 is a Zenith H-500, x-600, R-520, of course.)
4. Lower ballast tube removed in step one into position in Radio #2, being careful to orient pins properly and gently press downward to install into socket.
5. Congratulations! You have now successfully changed a tube radio.

runnin' & duckin' Barry

From Llgpt at aol.com Thu Feb 10 13:08:54 2005
Subject: [R-390] A ballast tube primer/Tube Class 101 for beginners

I wrote this over five years ago. Since that time many newcomers have asked about replacements for the 3TF7. The 3TF4 seems to always come up as a replacement.

Rather than beat the deadest horse that has ever been beaten into even tinier shreds, I offer this tid bit for those who know not of what they speak.....

1. Ballast tubes have two ratings, a voltage range where current regulation takes place and the regulated voltage.

3TF7 8.6 - 16.6 volts, 200 - 300 milliamps

3TF4 4.3 - 8.3 volts 280 - 320 milliamps

2. If you substitute a 3TF4, it will be operated far beyond its recommended operating voltage rating, and the two filaments it regulates will operate beyond their recommended or maximum voltage ratings.

3. Sure, it will work, but rather than replacing a 3TF7 with an improper tube, substitute one of the other modifications which all work quite well. Les Locklear

From N4BUQ at aol.com Thu Feb 10 14:44:05 2005
Subject: [R-390] More Ballast Tube Noise

Barry H, Thanks for the instructions. When I get my current project radio reassembled, I'll be able to do just that! Barry(III) - N4BUQ

From drewmaster813 at hotmail.com Thu Feb 10 15:44:53 2005
Subject: [R-390] RE: More BallasTube Noise

Brian wrote: >hi, just as a matter of interest about 7 weeks ago i purchased on uk ebay >2 3tf4 ballast tubes both are nos for $18 the pair. i put one in my 390a >whicth i use most days and so far it is fine, sure it glows alittle more >red but is this another and cheaper way to keep the 390a running.

The 3TF4 used in that way will operate above its upper voltage limit with attendant shortened life. One could insert resistance in series to reduce dissipation; the value would range from 15 ohms to 28 ohms. Dissipation would range from about a watt and a half to two and half watts.

Alternatively, a diode could be inserted in series with the 3TF4. The 25.2v secondary when half wave rectified would have an RMS value of 17.8v, 12.6V would be dropped by the 6BA6 heaters and the 3TF4 would see 5.2v.

The BallasTube can be dispensed with entirely. Substitution schemes abound. Goto r-390a.net click on References, Pearls of Wisdom, Ballast Tube. There you will find out more than you ever wanted to know. Drew

From gkaufman at the-planet.org Thu Feb 10 21:37:48 2005
Subject: [R-390] Weird 26Z5W variant??

It looks like Bendix made a hardened version of the 26Z5W numbered RXB-103379. Ok, don't laugh at my bid, but I grabbed a pair off of Ebay:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5748382448 Anyone ever see these before, or know why the military needed a hardened variant? Were these ever used in R390A's? - Gary KB1FBI

From Llgpt at aol.com Thu Feb 10 21:51:24 2005
Subject: [R-390] Weird 26Z5W variant??

Interesting, as I have "NEVER" seen any 26Z5W's that weren't Tung Sols. Possibly used in the R-648? Not sure if they used 26Z5W's or not. Les Locklear

From barry at hausernet.com Thu Feb 10 22:11:53 2005
Subject: [R-390] More Ballast Tube Noise

Roger wrote: > BTW, I did not say or suggest I was intending or wanting to replace a 7 with > a 4 in an

R390. I was just curious on the difference between these tubes. I > just happened to come across all 3 of these tubes in a big tube box at a > swap fest last weekend and I grabbed all 3 for .25 cents a piece.

Actually, Roger, I don't think we were reacting to your question, so much as the guy who said he actually _did_ sub in a 3TF4 -- which glowed a bit brighter, etc. These things have a way of evolving and taking on a life of their own.

Suffice to say, ballast tube lore 'n legend will never die.

25 cents a piece is a good price -- if only just for looking at. Now, all you needed was to find a couple dozen good 1L6's in that big tube box -- or maybe some audiophile specials. Barry

From rickmurphy1001 at earthlink.net Fri Feb 11 21:10:01 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

It's getting time to for cleaning, lube and alignment of my R390a. Need to know the physical position of the ant cap plates in relation to the red dot, i.e. open, closed, 90 degrees etc., for mine is missing the dot and there is no punch mark or other marks to allude to its correct position. Thanks for your help
Murph

From David_Wise at Phoenix.com Fri Feb 11 18:42:51 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

Find a band and antenna length where ANT TRIM peaks in two places. Set it midway between them, and reset the knob on the shaft to be horizontal. That's it.

It's a plain old semicircular straight-line-capacitance unit. Doesn't matter whether +4 is closed or open, you'll get all possible capacitances either way.

By the way, has anybody noticed that the Y2K front-page line drawing got it wrong? It says 0 to 8 instead of -4 to +4. Worse, it goes more than 180 degrees. I can't believe I didn't see this before.

73, Dave Wise

From ham at cq.nu Fri Feb 11 18:51:50 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

Hi, I have always looked at it this way, it may not be right but it seems to work.

The whole idea of the antenna trimmer is to compensate for an antenna that may be either capacitive or inductive. When you do an alignment the trimmer capacitor should be half way meshed. That corresponds to the knob being straight up. I generaly lift the lid to see what the state of the cap is ....
Take Care! Bob Camp KB8TQ

From chacuff at cableone.net Fri Feb 11 21:16:13 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

Best I remember the marking was to denote 90 degrees. Half meshed... Cecil...

From saglek at videotron.ca Fri Feb 11 22:51:44 2005
Subject: [R-390] Downsizing R-390A and R-390 for sale

Hi All, During the summer of 2003 I posted a MSG indicating that I would be selling my radios sometime in the future. This was due to a progressive neuromuscular disease that I have and that my wife and I would be moving into a seniors citizens home, no antennas. At that time I expected that the move would be made in less than a year. Well the less than a year has stretched into more than a year now. The most recent info I have is that I was told to be ready to move with four weeks notice within the next six months. So now is the time to act on selling off all my radios including the amateur stuff.

The first 5 in the "To" addressees above, were those who expressed an interest in 2003. The "first 5" will have priority. In 2003 I promised them that when the time came to sell they would have priority.

I am posting this message to give all those interested in the Collins R-390A and the R-390 radios a chance to purchase this equipment prior to listing on the auction block. For those that are interested, I will provide details by email on each of the equipment's.

AS for pricing I have no real sense of a fair value for the radios. I do know that the R-390A has gone for more than $700 in a similar condition to mine. I will indicate a price for each item, but PLEASE, don't consider this as my one and only price, high or low, but as a staring number. Please feel free to tell me if I am way off base. A package deal is a definite option.I want to be fair to everyone on this Mailing List. Also, I would prefer to either have the equipment picked up or I would deliver or meet someone within 3 hours driving of Montreal, Canada. The reasons for this, it saves on packing and shipping costs and secondly I would like the buyer to try the radio they are purchasing.

The Radios.

1: R-390A $600 No known problems
2: R-390 (none A $500 Has a solid state power supply works great. My details will give info.
PTO end points are out of spec. PTO needs work.
3: Cabinet $50 to $75. For R-390A or r-390
4: SP600-J-1 $350 Good condition.
5: Signal Generator SG-25 $ 60 Good condition. Same as URM-25D. Details available.
6: Kenwood TS-940S $500+ Needs some work. TX & RCVR very good.Details available.
7: MFJ Deluxe Versa Tuner II $60 Good condition.
8: Yaesu Speaker SP-980 $55 Very good condition.
9: Heathkit HR-10B Receiver $75 Excellent condition. Built by myself in 1973.

That's about it for now. Hoping to hear from you soon. Thanks for reading this. If additional details are need please let me know. Al VE2TAS

From stevehobensack at hotmail.com Sat Feb 12 08:27:05 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

This is the way I find half-mesh if the red dots are missing and the knob mounting is questionable. There shoudl be two peaks in signal on the antenna trimmer. Find the mid position between the two peaks. This will be either full mesh or zero mesh. Move the knob 90 degrees from this position.

....Steve...N8YE

From wabate at dandy.net Sat Feb 12 10:12:47 2005
Subject: [R-390] Red Dot - Second try a charm (Maybe)

I was faced with the same problem on my 390A. No marks. A friend told me that it is something that hardly anyone messes with. There just is no reason to. So the knob set screw detent on the shaft is all I needed to align the knob.

I felt I needed to check this so I used my capacitance meter to find the minimum. He was right. The detent indicated the correct alignment. I won't doubt him next time! 73, Bill, K3PGB

From ham at cq.nu Sat Feb 12 11:19:10 2005
Subject: [R-390] R-390A ballast replacement

Hi, The only issue with the solid state ballast tube replacements is that the ones that are easy to build all rectify the filament voltage. With modern diodes this generates RFI on the filament circuit.

Depending on how your particular radio is wired and bypassed this may be more or less of a problem to you. There are several postings in the archives about hum modulation on CW signals that tracked back to various mods that rectify the filament voltage. Simply put you are doing something that the original designers of the radio did not expect. Since they did not expect it the bypassing was not set up specifically to handle it.

If you want to get into the technical details here's more or less what is going on:

If you put in a full wave rectifier bridge (4 diodes) and then attach a resistor to the output of the bridge current will flow as long as the diodes in the bridge are forward biased. With normal diodes this happens somewhere in the 1 to 1.5 volt range. When you are below the turn on voltage no current is flowing. Turning the current on and off, even at a 1 volt level generates noise.

If you put a capacitor across the resistor then current only flows when the AC voltage is greater than the DC voltage on the capacitor plus the turn on voltage of the diodes. If the capacitor is charged to say 70% or the peak AC voltage then the current is flowing less than half the time. This generates even more switching noise since the current it turning on and off at a higher voltage.

Now if you put a solid state gizmo on the capacitor you *may* even increase the turn on voltage a bit more. More is not a good thing in this case.

Bypassing and grounding and filtering is a possibility. Since the bypassing has to go to the ballast tube socket you will only be able to do just so well.

The question is weather it's all worth it. A fixed resistor soldered to a tube base works pretty darn well with normal line voltage variations. They also are very reliable. I have never heard of a wire wound resistor melting and taking out the wiring harness of an R-390. Of course I have not heard of any of the solid state mods doing that either .... Take Care! Bob Camp KB8TQ

From RLucch2098 at aol.com Sat Feb 12 12:15:21 2005

Subject: [R-390] FS: R-390 Small leftover parts.

Hi All; I have an R-390 carcass with still lots of smaller parts on it. Stuff thats gone already: Meters. Tubes & Shields. IF chassis with filters. Both chassis that are underneight. Covers. Knobs. Antenna relay. Still have: Handles. freq. Counter. Stuff:-) I may not know how to remove this smaller stuff like the gears, etc! Regards, Rich WA2RQY

From ham at cq.nu Sat Feb 12 13:01:38 2005
Subject: [R-390] R-390A ballast replacement

Hi, As I have said before the tubes are the last thing we are going to run out of on the R-390A's. They are a glut on the market. With a properly sized series resistor the inrush current into the tubes on the ballast tube string will be significantly less than on the other tubes in the radio. Opinions vary widely about just how important this is.

There is a lot of data on the care and feeding of large transmitting tubes. There is not much real hard data on receiving tubes. Certainly they do wear out from inrush related issues. They also wear out from a lot of other causes. The inrush stuff mainly causes the filament to go open (or rarely short) circuit. That makes an inrush failure fairly easy to spot. I can't say I have seen a lot of dead receiving tubes with open filaments. I don't think I have ever seen one with a straight shorted filament. They seem to go from low emission or gas long before the filament opens up. Obviously this relates to how long you leave it on each time you turn it on. Somebody who turns the radio on and off ten times an hour is going to have very different results than the guy who leaves it on 24/7.

I have no particular problem with putting solid state stuff into radios. I do have a problem with putting it in when there are other equally good alternatives. I also can see no logic to putting it in when it degrades the operation performance of the radio. If you are going to put in a solid state ballast then put one in that does a full wave process with a couple of mosfets rather than diodes. That gets away from the noise issue. It also gets the complexity up there quite a bit. I have seen assembled versions for sale in the several hundred dollars price category. If it's going to double the price of the radio a gizmo better do a lot more than a two dollar (at most) fixed resistor .... Enjoy! Bob Camp KB8TQ

From ham at cq.nu Sat Feb 12 13:06:36 2005
Subject: [R-390] FS: R-390 Small leftover parts.

Hi, Just to be sure what we're talking about here:

1)It was a R-390 not an A before it was stripped

2) The RF deck is still in the radio

3) The wiring harness and chassis parts (panel switches and rear connectors) are still there

I'm not after it but before it gets to confusing I thought it might be good to clarify what it was ... Thanks! Bob Camp KB8TQ

From hankarn at pacbell.net Sat Feb 12 15:35:58 2005
Subject: [R-390] FS: R-390 Small leftover parts.

Would someone in the know the PROS and CONS on installing a R-390 IF deck in a R-390A. Is it worth the time and effort. etc. etc. etc. TIA Hank KN6DI

From saglek at videotron.ca Sat Feb 12 15:56:09 2005
Subject: [R-390] Downsizing R-390A and R-390 for sale

Hi All, First let me express my appreciation to all those who responded to the for sale items. Your concerns about my illness is truly appreciated. It is not life threatening, just an inconvenience to daily normal living. Brain still works, at least I like to think so.

When I checked the mail this morning today I was surprised at the number of responses. BTW my server was down until about 10:30. I realized that I made a major mistake in my initial post. I did not lay down any ground rules. So here they are, better late than never.

1: I will stop taking offers to purchase 17:00 hrs, 15 Feb. 2: Multiple responses to any item will go to the highest offer. Equal offers will be randomly selected by me. Date received would not be fair because of the time zones across the continent. 3: I will not accept offers for more than the prices indicated in the initial post. This is not an auction as pointed out in the initial post. 4: Buyer to pay actual shipping costs and any material packing costs. Receipts will be available. 5: Payment to be worked out between buyer and myself prior to shipping. 6: Buyer to indicate method of shipping. UPS, FedEx, Canada Post/USPS etc. 7: All those that expressed an interest must confirm their offers to purchase by 17:00 hrs, 15 Feb. Please not that delivery to the US border or any destination in the US within 3 hours driving of Montreal is an option. Delivery expenses will be mutually agreed to. Note: Burlington, Vermont is about 1.5 hours from Montreal. Plattsburgh, New York about 1 hour. These times do not include delays at the border with US or Canadian Customs.

Please Note: An exception to,1 above, is that in my initial post I indicated that those in the "first 5" would have priority in offer to purchase and this still applies. As of now one of the "first 5" has expressed an interest. If more than one makes an offer then one will be selected randomly.

I will be sending an email that describes in some detail each of the items to those that responded. .

Any questions email me direct. Packing advise would be appreciated. Thanks to all of you. You have made my day. Al VE2TAS

From ham at cq.nu Sat Feb 12 17:31:13 2005
Subject: [R-390] FS: R-390 Small leftover parts.

Hi, The only significant documented difference is that the 390 not an A has L-C filtering in the IF. Some people simply think this sounds better than a mechanical filter. Since the R-390 (either one) is not exactly a hi-fi set it's not very clear weather it's worth the trouble.

Since the not an A's are a bit harder to find that the 390A there is the issue of soaking up the available spare parts for a rare item to fiddle an item that is not so rare. Opinions on this kind of thing differ. Obviously this would not have even been worth mentioning twenty years ago when the not an A was a "dog" and the 390A was the only radio worth the $100 asking price at the local flea market.

There are some differences in the AGC between the two radios and a couple of equally minor changes in

the IF strip. It is unlikely anybody would consider them in making a conversion.

This all assumes you are using just one radio. If you are trying to set up a dual radio DF setup then the mechanical filters are definitely not a good idea. They have more phase ripple in the passband that the LC filters. That will mess up your bearings ... Take Care! Bob Camp KB8TQ

From TVComlGuy at aol.com Sat Feb 12 17:57:57 2005
Subject: [R-390] R-390 and R-390A RF Tuning slugs

Hi to the group. I have an R-390 that is missing one of the tuning slugs on the RF deck. Are these the same as on the R-390A? Thanks, Ron, KB0WAR

From r390a at bellsouth.net Sat Feb 12 18:35:20 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Simplified Block diagram of the Amazingly Complex Ballast Replacement Unit (ACBRU) -- http://www.fernblatt.net/R390/superballast.jpg

Could build a simple comparator circuit driving a stepper motor controller that in turn is coupled to a motor driven multi-turn pot, but that wouldn't be much of a challenge.

Better results could be had using a tube based servo amp with chopper amp a`la T-195 autotune circuit with selsyns vs newfangled stepper motors. 400 Hz dynamotor optional.

The Rube Goldberg Award to anyone that samples the filament current, feeds it to a voltage to freq circuit, which feeds an AFC circuit similar to the CV-157, complete with spinning disk to indicate "live" ballast error adjustment.

All of these would require an external chassis, preferably rack mounted. Why use a simple resistor when you can do something like this?????? ahem Time for my medication, or a stiff drink, or both. Tom NU4G

From djmerz at 3-cities.com Sat Feb 12 18:55:23 2005
Subject: [R-390] FS: R-390 Small leftover parts.

Hi, It was worthwhile for me to make this installation. It is not a trivial job mainly because of the connection cables and the tight quarters for changing the filament circuit of the R-390 i.f. chassis. I also have a modified R-390a audio chassis in my set ala the ER article on putting a 6360 tube in as the final audio. It produces pretty good audio compared to other boatanchors I have, maybe not as good as a Hallicrafter's S-28a but it's certainly up to listening to broadcast a.m. music and such. I think the R-390 chassis helps but the audio mod helped more. **I'll probably never revert to the original configuration. Someday when I get rid of this set along with the two "original", unmodified chasses,** the new owner can restore the 390a to its original condition without using a soldering iron and the modified chasses can be reclaimed for whatever purpose he desires. Until that day, I will enjoy this radio immensely. It also works quite well on ssb (except the AGC needs help from my hand on the rf gain control-about like the original i.f. chassis in that regard). Yes, it was worth the effort but not an easy one to accomplish considering you first have to find an unattached R-390 i.f. chassis. No need to go to this measure if you have a complete R-390, imho, Dan.

From redmenaced at yahoo.com Sat Feb 12 20:27:06 2005
Subject: [R-390] 47 Ohm resistors

Ok, the hunting trip to the resistor mine yielded several 1% 50 ohm 5 Watt wire-wound Tepro resistors. Will these work, they will be stable and dependable, but is the value too high to work correctly in this circuit? Thanks, Joe

From ham at cq.nu Sat Feb 12 23:11:18 2005
Subject: [R-390] 47 Ohm resistors

Hi, Even these days the "nominal" line voltage in different parts of the country varies by a lot more than 1%. Unless we want to get out to three digit readings on AC wall sockets anything in the 42 to 56 ohm range seems to work ok. I have seen radios with values both above and below that range running along just fine. If 50 ohms is what you have then I'd go with it. A 50 ohm resistor should dissipate about 3 watts in the application. A five watt part will do ok. Take Care! Bob Camp KB8TQ

USMC ET's, lacking any logistics support from the Navy, discover a method of replacing failed ballasts with a combination of twigs and rocks and find the current regulation of their field expedient ballast to be superior to the original 3TF7. The Navy takes credit for the discovery.

USAF specs require systems containing R-390(*)'s include an AC regulator or constant voltage transformer for the AC mains, thus eliminating any problem before it has a chance to occur. Entire system must be dismantled every six months so voltage stabilization system can be calibrated and certified by PMEL. Tom NU4G

From sparks at codepoets.com Sun Feb 13 08:37:08 2005
Subject: [R-390] Trip down R-390 memory lane, a Navy Radioman story from the operator side of the R-390 world

A trip back down memory lane, delete if you don't want to read about the operator side of a Navy Radioman and R-390 user...long winded

Not to offend the potential Navy Electronics Technician (ET) that is on the list, but I was on Radioman (RM) on a tin can (destroyer DD-938) and when we were about to leave port the bridge announced on the 1MC, (ships announcement system), "Underway Shift Colors", most of our ET's did too and retired to their racks. One even lived in the ET shop, and was normally so sick he strung a hammock across the space and rocked himself to sleep and lived there on crackers. No he didn't make the Navy a career, he went back to Minnesota. (Herbie, hope you're not on this list..or are you?...you were always sick) None of the techs wanted to pull an R-390 from the rack in the rough seas most tin cans experienced so we'd log the equipment down, call an ET and grab another receiver, (if we had a spare). Removing an R-390 was a two man job, in a cramped space. There was evidence of damage from "slightly dropped" R-390's with gouges in the deck or operator position desk top from those pointed case corners... ooops... and dents on top of the "Mill" (typewriter) at the CW operators position... it was bad enough in port or in light seas, but bad went to worse on a North Atlantic patrol in winter or in stormy weather. The ET's paid the price when we hit port, no liberty call for them until the Preventive Maintenance and Repairs were done...same went for us RM's... but there was nothing to stop the ET from tagging the gear out as Inop Awaiting Parts then go order a ballast tube or something else and scurry off the ship on liberty. Our (ET and RM) biggest worry was when we would loose power when a SSG (Ships Service Generator)

would fail and the lights would go out... it was a case of "lets see what gear won't come back up". I don't recall one time that the 390's failed. CW was already gone at this time, the Navy pulled our only WRT-1 MF transmitter and replaced it with SATCOM gear. We still had to monitor 500 KHz for distress traffic and keep the 5 minute entries and twice hourly silent periods, but had no way to communicate with a ship in distress if we had to. We retained CW drills on HF, when in port or at refresher training. Morse code was no longer a requirement in RM school, it was open for volunteers, or if there were not enough to fill a class you were volunteered... those that graduated carried the NEC 2304 qualifications code. The snipes down in the machinery spaced didn't like Radiomen because we had cool spaces to work in and their normal 135 degree environment "down there" was wicked so when things went to he!! up in Radio Central they probably smiled. That was in the tube Navy, a long time ago.. there may be ET's left but the Radioman rating is gone and I believe the sparks in the rating badge is gone too... During my first week on that tin can I had a one-on-one collision with the Captain (Commander O-5), RM3 VS O-5, all over CW... but I'll relate that story another time.. One item to point out... the R-390's we had on the tin can I was on had an off green/grey front panel, not the typical Collins grey face, can't remember the manufacturer of the ones we had. Would love to find one of these green/grey faced 390's, anyone got one? Keep em glowin' 73 #0001 BT NNNN Tom K4NCG, RMC USN/USCG retarded...err retired..

From ToddRoberts2001 at aol.com Sun Feb 13 12:54:41 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Most of the 3TF7 substitutes I have read about involve buildng something small enough to plug directly into the 3TF7 socket or on a nearby bracket. This comes with problems of heat dissipation or else installing unsightly brackets near the I.F. subchassis. Some of the recent ideas got me thinking - Why not build a small separate power supply module with a well-regulated/filtered/bypassed 12.6 VDC output that could be placed next to the receiver and the only connection would be a small umbilical cable with a 9-pin plug that plugs directly into the 3TF7 socket? You could run the umbilical through the side of the R390A chassis thru one of the large holes and tuck the power supply and cord out of the way next to the receiver. This layout is similar to the way some audiophile preamps use a separate power-supply module with an umbilical. You could modify one or two pins of the 3TF7 socket with a jumper to ground to provide a ground return for the 12.6VDC so you wouldn't have to tie down a separate ground lead with a terminal and screw somewhere else on the chassis. When you plug in the umbilical it breaks the 25.2 VAC circuit and connects the 12.6VDC circuit and ground. The ground pins would have no effect on the original 3TF7 if you wanted to plug one back in. This way you could build a nice little husky separate regulated/filtered/bypassed 12.6 VDC power supply and not have to miniaturize it or compromize the performance. If you want to go back to a 3TF7 just unplug the DC supply 9 pin plug and put the 3TF7 back in. No unsightly permanent wires or brackets hanging off the I.F. subchassis. The regulated DC supply should give the ultimate in stability and pure DC on the filaments of the BFO/PTO tubes. 73 Todd WD4NGG

From tetrode at comcast.net Sun Feb 13 13:41:20 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Sounds good Todd.

The 12.6 VDC supply doesn't even need to be husky, for only a 300 ma load any of the common 78xx style 3 or 4 terminal regulators in the TO-220 packages would suffice, and even the best regulator would only need a 723 and a pass transistor. I wouldn't even bother with connecting the ground return to the ballast tube socket, just use any chassis ground connection on the back panel.

I've read all kinds of over-worrying about electronic regulator "noise" or oscillations from voltage regulator IC's in radios, but it's really a non-issue. As long as you follow the bypassing suggestions in the app notes for the part, use good parts, and check things with a scope it'll be fine.

Only *once* did I have a problem with a 3 term regulator inside an HF receiver. My TMC GPR-90 has a whole bunch of solid state mods and has a +/- 12 VDC regulated supply under the chassis to run them. After I installed it I heard some 300 kHz carriers that I didn't hear before. It turned out to be one of the 3 terminal regulators oscillating (and I hadn't followed my own advice about checking it with a scope!) which happened to be a TI part. Took it out and installed a Motorola device in its place and it's been clean for years. John

From ham at cq.nu Sun Feb 13 14:03:10 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Hi, The tube swap process works fine as long as all of your radios have the same mod in them. The problem comes when you blindly swap modules between a ballast tube radio and a 12 volt filament radio. Take Care Bob Camp KB8TQ

From ham at cq.nu Sun Feb 13 14:17:04 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Hi, I totally agree that if you are going to do something like this an external box that plugs in with no mods to the radio is the way to go. Chopping up the IF deck or the wiring harness simply is not worth it in this case.

The good old style 78xxx regulators are pretty well behaved. Some of the newer parts are not so forgiving. The older parts generally have NPN transistors in an emitter follower configuration. They are stable into almost anything you can tie to them. The newer parts with the "ultra low drop out" features have PNP devices (or FET's) in a collector output configuration. This makes gives them a lot less stability than the good old parts. Both oscillation and broad band noise are common issues with the newer parts.

If you do go with a solid state filament supply be sure to consider the inrush current. A quick check with an ohm meter on a cold tube should give you a pretty good idea what to expect from that particular tube. Common wisdom (often wrong ...) is to provide 4 to 5X the running current for inrush. Your 300 ma supply would have to source 1.5 amps while the tubes warm up.

Current limit is one way to get around this. The two common options are constant current limiting and fold back limiting. A fold back limiter is not going to do any good in this situation. A constant current limiter actually increases the power dissipated in the regulator as it cuts back. Unless there is a big heat sink this generally either melts the device or puts it into thermal overload. If it goes into thermal overload you get the same problem as with the fold back limiter.

Twelve volt one or two amp supplies are not hard to find. They also won't set the bank roll back by much more than a nice dinner for the family.

This would all be a bit easier to evaluate if we had some real data (1.2 Hz per 1% change) from several radios on the impact of heater voltage on the stability of the radio. The boys at Collins didn't take any data that they found convincing when they designed the radio ....

Take Care! Bob Camp KB8TQ

From djmerz at 3-cities.com Sun Feb 13 14:25:34 2005
Subject: [R-390] The Penultimate R-390* Ballast Replacement

Hi, since some appreciable fraction of the posts are tongue-in-cheek, it's hard to know what to make of this outboard solution. The resistor or wire jumper/tube substitution seems to be the choice I'd make if I didn't have a 3tf7. I've never tried either but it's hard to imagine that either wouldn't work to my complete satisfaction in light of others experience and results. On the other hand, the outboard power supply might provide some advantage in some application..... so I look at it as a mental exercise now filed away and remembered with great respect. I'll await reports of the results, Dan.

From G8JAC at champ1.freeserve.co.uk Sun Feb 13 14:38:01 2005
Subject: [R-390] Product detector kits

Has anyone any opinions or comments on the Jan Skirrow product detector kits being offered on ebay and elsewhere? A major advantage seems to be that it was designed as an add-on, needing no intrusion or mods to the receiver. What are they like in use? Andy G8JAC

Here's IMO the simplest regulator that's also really good.

Parts list:
5ohm 10W resistor.
10ohm 10W resistor.
2.2K 1/4W resistor.
2.7K 1/4W resistor.
1K pot.
3000uF/50V cap.
Silicon rectifier.
LM317 on heat sink.

Vin goes to 5ohm resistor.
5ohm resistor goes to anode of rectifier.
Cathode of rectifier goes to cap and LM317 IN terminal.
Other end of cap goes to ground.
LM317 OUT terminal goes to 10ohm resistor and 2.2K resistor.
2.2K resistor goes to LM317 ADJ terminal and 2.7K resistor.
2.7K resistor goes to 1K variable resistor.
1K variable resistor and 10ohm resistor go to Vout.

This will adjust from 280mA to 335mA. It has four big components, three of which are also hot, and it requires a ground. This was my first step on the road to the 3DW7.

How's it work? The rectifier and cap give you DC. The 5ohm resistor softens the charging peak and takes on some of the heat load. The LM317 will do anything in its power to maintain 1.25V from OUT to ADJ. This puts 1.25V across 2.2K for 0.57mA, which also flows through the 2.7K resistor. (The LM317's current out the ADJ pin is negligible.) 0.57mA * (2.2K + 2.7K) =3D is 2.78V . The LM317 will do anything to make that 2.78V happen. In this case it punches 278mA

through the 10ohm resistor. If you increase the 2.7K resistor to 3.7K, the voltage is 3.35V instead of 2.78V for 335mA out. I can't remember what range of AC input voltage this will work over, but it's at least 25.2 +/- 5% .

[end Dave Wise's text]

Constant current regulation is advantageous because the PTO/BFO tube heaters never see more than their normal steady state (300 mA) current. Possible shortening of tube life because of inrush transients becomes a non-issue.

Dr. Jerry's device is a (fairly) constant current regulator.

A .1 uF disc ceramic across each rectifier diode will address any diode switching noise concerns.

>Twelve volt one or two amp supplies are not hard to find. They also won't set the bank roll back by much more than a nice dinner for the family.

David Wise's circuit described above was intended to use the 25.2 VAC available at the ballaSocket. The diode, 5 ohm resistor, and electrolytic filter cap could be eliminated and the remainder of the circuit powered by a large wall wart. Those commonly used to power cheap inkjet computer printers would be ideal, being rated at around 18 VDC at about an amp. It would be well to connect a .1 uF disc cap across the regulators's "IN" and "ADJ" teminals to ensure stability.

>This would all be a bit easier to evaluate if we had some real data (1.2 Hz per 1% change) from several radios on the impact of heater voltage on the stability of the radio. The boys at Collins didn't take any data that they found convincing when they designed the radio ....

I believe some pertinent data appears in the "Pearls of Wisdom". at r-390a.net Drew

From N4BUQ at aol.com Sun Feb 13 17:03:27 2005
Subject: [R-390] Gear Diagram Needed

I seem to recall there is an exploded diagram of the geartrain in the R390A somewhere. I have the CD from Scott that shows the rebuild operations (VERY NICE), but I don't see where it shows where some of the washers go. There are some stategically placed "thrust" washers at various places and I'm not quite sure where these go.

I don't have the Y2K manual here and that may be where I saw it. I'll check at work; however, I do have teh R390A CD with all the tech manuals in it. The only "diagram" I see is more like a mechanical schematic without detail.

Am I just dreaming? If not, can someone point me to this drawing? If it is in the Y2K manual, then let me know that too. I'll have access to that tomorrow. Thanks! Barry(III) - N4BUQ

From sparks at codepoets.com Sun Feb 13 22:00:11 2005
Subject: FW: [R-390] Trip down R-390 memory lane, a Navy Radioman story from the operator side of the R-390 world

R-390 Maniacs, here is a response I received from Jerry W5KP and with his permission I am forwarding

it to the group. I heard from many of you and not a single negative reply to my trip down memory lane. Many want to know "the rest of the story" referencing RM3 VS Commander, ships Captain. I'll post it next week unless the moderators say No More... I'm not trying to blow my horn but it's always interesting to read details from the operators, and exchange sea stories etc. There is an old sailor saying... What's the difference between a fairy tale and a sea story? One begins with "Once upon a time" and "This ain't no sh**" Here is Jerry's story.... an ET's perspective... and it's not a fairy tale.

Of course, as an ex-ET, I can't let that go without rebuttal. :-)

It's true we ET's didn't have much to do underway (or in port, for that matter) IF the gear was up and our mainenance work was done. When I went aboard my first ship in 1960 that was great for a while, but I quickly got bored with it. Our RM's were constantly shorthanded, and in Port they were always on port and starboard duty (for non-sailors, that's one day on, one day "off", except on your "off" day you work 0700-1600 before you can go home). This was because we had to keep a CW op on watch 24/7, even in port. So just for the heck of it I learned CW on my own, got myself qualified as an in port Radio Watch Supervisor, and added myself to the RM watch bill. This usually allowed them to stay on 3-section duty in port instead of port & starboard. This actually wasn't as gallant as it sounds, because if I hadn't done it I would have been on 3-section quarterdeck watches like the other ET's anyway, and instead of sitting in Radio Central and drinking coffee I'd have been standing around on the quarterdeck at 3 AM yawning and freezing my butt. I figured I might as well help out our "O" division (Operations Division/TC) guys instead, and cut myself a good deal at the same time. Besides, I hated quarterdeck watches with a passion throughout my entire 21 year Navy career.

Our Radarmen (RD's, now called OS's if they even exist anymore) were in The same situation in reverse. They were ok in port, but shorthanded as heck underway. So, what the heck, I started standing underway watches in CIC (Combat Information Center) and was eventually qualified by the Ops Boss (Operations Officer/TC), XO (Executive Officer #2/TC), and CO (Commanding Officer/TC) as a CIC Watch Supervisor underway, which was a pretty big deal as far as knowledge and responsibility go, as any RD/OS will tell you.

Although several officers might get the axe first, the CIC supervisor will be one of the first enlisted men to hang if the ship hits something (or even comes close), screws up a man overboard situation, makes a wrong turn in formation, misses a tactical signal, or in general does anything stupid that might have been prevented if CIC had warned the OOD (Office Of the Deck/TC, Officer in charge on the bridge)in time. My first ship was a Gator Freighter (LSD)(Landing Ship Dock/TC), which means a ship that supports amphibious landing operations involving carrying a whole bunch of marines to a beach and coordinating getting them ashore. Wouldn't you know it, our SM's Signalmen, (or Skivvy-Wavers, as we called them) were short handed during amphib ops, so since I already knew CW, I helped out on flashing light (that blinking code you see ships exchanging in the movies, which is nothing more than visual CW) during amphib landings. I did not qualify as a Signal Bridge supervisor, though, because I never got good enough at semaphore.

At one point I received a bit of publicity from the Squadron Commander's PR people and some local bigwigs for being the only sailor on the west Coast qualified as Radio Supervisor, CIC Supervisor, and Signal Bridge watch stander, as well as being the Leading ET at the time. To be honest none of this was that big a deal, in fact it was kind of fun, but it apparently did wonders for me later when it came time to select Warrant Officers and LDO's (Limited Duty Officers), and I was picked up for warrant officer first try while I was still an E-6 with no hash marks (Hash marks indicate 4 years service, worn on sleeve of jacket etc/TC), although I did manage to make Chief ET (with one hash mark) before I was actually commissioned. Anyway, the point is that Tom was mostly right, in that ET's sometimes don't have enough to do. There were certainly times that I didn't. OTOH, when the surface search radar goes hard

down in a thick fog approaching Hong Kong Harbor, or all three ship/shore transmitters go down at once, or the Goat Locker (Chief Petty Officers Mess/TC) stereo won't work right (heh heh) they definitely earn their keep. BTW, we had eight 390A's on that first ship (got them during an overhaul in '62) and I never (not once in the two years I had them) had to touch one other than routine checks and maintenance. Not a tube, not an alignment problem, nothing. That's why I have two myself out in the shack today. And if any of my people had filed a CASREP or an 8 O'clock report for some nickel-dime part and then went on the beach, he'd best enjoy it that night, because his butt was grass and I had the lawnmower. 73, Jerry W5KP Ex-ET, LT(LDO) USN, Ret

P.S. I got seasick first time out in 1960 on that damned flat-bottomed, evil-riding LSD. Never again happened in the next 21 years, including many ugly rides on FRAM II's.

(FRAM was Fleet Rehabilitation And Modernization, a project to update and upgrade existing ships that still had useful life in their hulls and engineering equipment/TC, FRAM usually resulted in the addition of a hurricane bow (pointy end of the ship up front/TC), ASROC, an Anti-Submarine Rocket and other weapons systems/TC)

Thanks Jerry for the ET perspective. 73 Tom

From DJED1 at aol.com Mon Feb 14 00:07:54 2005
Subject: [R-390] Product detector kits

Jan's detector is a varient of a circuit I offered to the board several years ago. I have one problem with his circuit in how it differs from mine. As best i can tell from his published notes, he has included the product detector, but not the auxiliary fast attack AVC which I included in my circuit. He says in his writeup that you need to reduce the RF gain for strong signals, while my AVC allows full gain on signals up to 80-100 dB. His detector may work well if you have modified the radio's AVC with the Lankford modification. Ed WB2LHI

From ham at cq.nu Mon Feb 14 07:44:22 2005
Subject: [R-390] Product detector kits

Hi, AGC is a pretty darn important item. Audio derived AGC is about the only way to go with SSB. One way or another the radio has to have AGC to make a product detector work well for band cruising. Matching the AGC to the detector is an important part of the design. Manual gain control works, but it's a pain as you tune through a crowded band. That said just about any kind of product detector is going to work better than the BFO in a stock R-390. A lot of this comes down to outboard boxes versus internal modifications. Maybe Jan will offer a product with the full circuit in it ... Take Care! Bob Camp KB8TQ

From dhallam at rapidsys.com Mon Feb 14 08:29:43 2005
Subject: [R-390] Sticky Meter Movement

In the past there have been threads about what to do with sticky meter movements. I didn't file any of the information.

Over the weekend I picked up a very nice HP 606B signal generator, but it has a sticky output meter. If I take to meter off and open it up, the movement seems to be free and move without any problems. When

I reassemble it and put it back on the panel, it is sticky. The meter is not damaged in any manner that I can see.

Any suggestions about how to proceed? David C. Hallam KC2JD

From PDulaff at dpconline.com Mon Feb 14 08:48:16 2005
Subject: [R-390] Sticky Meter Movement

Dave, Sometimes, static electricity can build up on the front of the meter face and cause a meter to appear sticky. This behavior happens with plastic meter enclosures. If the movement is free when the meter is out of the enclosure, this may be the case. Try washing the front of the meter face with water and detergent. Paul - WB2NMI

From barry at hausernet.com Mon Feb 14 09:46:00 2005
Subject: [R-390] Sticky Meter Movement

As Paul wrote, static is the first thing to check out. If you move your finger over the meter glass and the pointer "tries" to follow, then it's static. Gear that is shipped with plastic or bubble wrap often arrives with a bad case of static-y meters -- or may become that way as a result of one's initial cleanup efforts. Put a few drops of dishwashing liquid or soap in some water and wash down as Paul advised. You don't have to drown the thing. Don't buff it dry or you'll recharge the thing.

Another possibility -- something binding against the movement -- particularly the spring, or applying torque to the frame when tightened into the housing. Try loosening the housing screws a bit. See if there isn't some binding occurring where the meter's adjustment tang links up to the screw in the meter case, or the spring might be rubbing on the inside front surface of the housing. Also check that the bottom part of the pointer (below the pivot point) isn't touching something in the housing. If nothing is bent or out of whack, and there is binding against the housing, then you may need to shim it with something when reassembling, so as to back the meter movement away from the front of the housing by a hair.

While I have a 606, I don't know offhand what the meter design is, but it's probably one with conventional needle bearings -- possibly jeweled like watch bearings. When the needle tips wear or the frame expands a bit or whatever, there could be too much play. The meter will work freely in one position, but bind in another. The fix is to adjust the bearings -- and many of the meters have adjustable bearings -- usually set with a blob of glue or glyptol. Avoid touching the pointer itself. If you can tilt the mechanism to force the jamming or sticking to occur, that's what's going on.

If this is the case, the bearing(s) need to be tightened up just a hair. Over-do it however and you can cause damage. I've done this myself successfully, but then it was obvious that the pointer and armature were wobbly fore and aft -- after looking carefully at close range -- and the movement was sticking in or out of the housing.

Also check the spring as you move the needle. (Move the pointer by gentle blowing on it or rotating the frame -- avoid touching it.) Make sure the spring is coiling and uncoiling smoothly and not twisting around or popping in such a way that it would rub against the inside of the housing when assembled.

Hopefully, it's just static. If so, the meter will usually work as current is applied, and the readings past full scale may be accurate, but it will typically fail to zero. Barry

From pwokoun at hotmail.com Mon Feb 14 10:24:12 2005
Subject: [R-390] Gear Diagram Needed

When we did the Y2K we knew it NEEDED this drawing cut up and simplified but we didn't have the time or capability to do it right back then...so it was left to a later generation!

I have the Army TM 11-856A manual which has a pretty good exploded view of the gear train assembly (fig 84). It even seems to show all the spacers, washers, etc. The latest Navy manual also has this diagram as Fig 6-36. The Y2K has it reproduced on page 6-92 but I think you'll do better getting a bigger copy off one of the earlier manuals. The army manual may be one of the earliest and clearest and all the others are just copies of it. pete KH6GRT

From jamminpower at earthlink.net Mon Feb 14 11:06:25 2005
Subject: [R-390] Gear Diagram Needed

As noted, the original Army manual (TM11-856A) has this diagram as Figure 84.

I have high-quality scans on my web site that include this manual with this particular figure here:

http://www.jamminpower.com/main/r390.jsp

These are big and many folks have trouble downloading them. I have just the wide figures in a separate file here: http://www.jamminpower.com/PDF/TM11-856A.wide.pdf

Or, broken up to print on an 11x17 printer here: http://www.jamminpower.com/PDF/TM11-856A.11x17.pdf

If for some reason you can't download these, I'll send a CD-ROM (or I can print 11x17 for you as well). James A. (Andy) Moorer www.jamminpower.com

From JGolden365 at aol.com Mon Feb 14 11:56:03 2005
Subject: [R-390] Re: R-390 Digest, Vol 10, Issue 17

The radioman's story was a great read. Upon being called to active duty in 1964 I reported to DDG-5 in Norfolk as an SN and was immediately assigned to the deck division. When the CO overheard me telling an RM3 that I had a 51J-4 at home he immediately asked me to strike for RM and to sweeten the pot offered me the radio shack instead of chipping paint. No dice. I was transferred to PAMILANTFLT as a computer tech two months later. The J-4 is gone now but I remember that experience every time I look at my R390A.

From N4BUQ at aol.com Mon Feb 14 12:01:49 2005
Subject: [R-390] Gear Diagram Needed

Found the diagram in the Y2K manual, but also loaded your hi-res diagram too. I should be set now. Thanks! Barry(III) - N4BUQ

From r390a at bellsouth.net Mon Feb 14 13:12:02 2005
Subject: [R-390] '390 meter face facsimiles?

Did someone at one time make pdf copies of the original R-390(*) meter faces for use with generic replacement meters? I've found pdf's of meter faces for assorted Collins and other gear, but none for the 390. Thanks Tom NU4G

From richardlo at admin.athabascau.ca Mon Feb 14 13:28:43 2005
Subject: [R-390] '390 meter face facsimiles?

wrote: I've found pdf's of meter faces for assorted Collins and other gear, but none for the 390.

All the potential scanners were so busy being terrified by the possibility that they might accidently eat the meter face that they didn't have time to open up an R390 meter and scan the face plate. That and the fact that those meters are rather unique. :)

From goode at tribeam.com Mon Feb 14 13:50:27 2005
Subject: [R-390] '390 meter face facsimiles?

This may be what you remember: **http://webs.lanset.com/buzz/meters/faces.html**

From r390a at bellsouth.net Mon Feb 14 15:25:52 2005

They aren't so bad if you don't inhale the dust or lick the meter face. (or your hands) It isn't too big a deal to take them apart. If worse comes to worse I can pull the meters off one of my good radios and scan them. Tom

Hey, I have radiac training and a very sensitive counter to see what contamination I've left all over the shack/house.

From r390a at bellsouth.net Mon Feb 14 15:27:04 2005
Subject: [R-390] '390 meter face facsimiles?

Close enough, thank you Steve. At least now I know I didn't imagine seeing such a thing. Tom

>This may be what you remember: http://webs.lanset.com/buzz/meters/faces.html

From Tarheel6 at msn.com Mon Feb 14 11:59:08 2005
Subject: [R-390] 12BW4 mod

After completing the 12BW4 mod (substituting for the 26Z5s) this weekend and plugging them in, I realized that the 12BW4 is substantially taller than the 26Z5. So much taller, I'm not sure I can put the bottom cover on without it hitting the top of the 12BW4s. Anyone else observed this, or do I have a pair of 12BW4s on steroids? By the way, the 12BW4s work great. Hello 12BW4s; goodbye 26Z5s.
Thanks, -Tom

From r390auser at cox.net Mon Feb 14 22:51:39 2005
Subject: [R-390] 12BW4 mod

Tom, I have done this mod and they do fit. Just barely. Find two tall tube shields. This will give you some peace of mind and protect the tubes from the bottom cover. The 12BW4's work great. Kurt Holbrook

From N4BUQ at aol.com Tue Feb 15 09:36:51 2005
Subject: [R-390] Need some small parts for RF deck

Anyone have a "donor" RF deck? After tearing my RF deck down, I noticed last night that someone has replaced one of the roll pins that lock the cam onto its shaft with a small piece of flat metal. This allows the cam to twist slightly on the shaft which, of course, isn't good. I need an original 3/32" dia. x 3/8" long roll pin to properly pin the cam to the shaft.

Also missing are the two brass(?) washers that go on the shafts between the cam and the frame. This makes this particular camshaft have a little too much axial play.

I know a Fair Radio deck would be a good source for these, but I only need such a small set of parts, I really don't want to go that route. Thanks guys! Barry(III) - N4BUQ

From N4BUQ at aol.com Tue Feb 15 11:09:16 2005
Subject: [R-390] RF Deck Parts update

Thanks to all who have replied. I looked at the camshaft assembly drawing and the holes are supposed to be 0.078" +0.003/-0.000 so it looks like these are 5/64" pins, not 3/32".

A list member has replied and says he has these so it looks like my roll-pin need will be met.

I'm going to disassemble the cams and see what size those washers are. Hopefully, I can locate a few of these locally; if not, then maybe someone can point me to these as well.

My main reason for asking here is I was hoping someone might have a donor deck. I'm sure I can buy these parts via the net or mail-order, but the shipping and handling costs just kill you for things like this. One supplier I looked into had great prices on the parts ($1.00 for 25/ea. packs, etc.), with no minimum, but their $12.00 shipping cost just made this very cost ineffective. Thanks again guys! Barry(III) - N4BUQ

From r390a at bellsouth.net Tue Feb 15 12:57:29 2005
Subject: [R-390] 5-25pf ceramic cap needed

I need a variable cap for my R-390 non-A -- it's one of the caps on the crystal deck, 5-25 mmf ceramic ~1/2" diameter. Fair Radio doesn't have them, and I don't have anything close in my junk box nor in any of my 390A carcasses. Thanks in advance Tom NU4G

From r390a at bellsouth.net Tue Feb 15 18:18:26 2005
Subject: [R-390] 5-25pf ceramic trimmer found, thanks all

Thanks for the help guys. Yea, I ran into Murphy's Junkbox Rule -- the parts in your junkbox will not be of any use whatsoever unless they accidently get lost or thrown away.

From dathegene at hotmail.com Sat Feb 19 16:18:38 2005
Subject: [R-390] 26Z5W Failure

Hi gang-- I leave my R-390A on 24-7-365. Yesterday, I lost all output. A quick check revealed both 26Z5W tubes didn't light. I replaced both tubes and was back in business, but I'm wondering if it is common for BOTH tubes to go out at once. Your experience? Sure, we can go silicon, but here I'm interested in how the original design worked... BTW, I guess I need a pair of tung sols; those of you with 100 plus may want to part with some? 73 Gene NA0G

From george-eveland at us.army.mil Sat Feb 19 17:50:48 2005
Subject: [R-390] 26Z5W Failure

Gene: I've had same experience here--lost both filaments at same time....so now keep a couple of spare sets.

From kellerfamily01 at charter.net Sat Feb 19 18:00:19 2005
Subject: [R-390] Dead R-390A

Hi, Group. I've got a problem and need some advice. My R-390A just went dead - no sound, not even a calibration signal. All the tubes and dial lamps are still lit up, and the fuses all check ok. I've checked the speaker and all associated connections and they're fine. Before I start doing things I may not need to do, does anyone have an idea to share with me that might help me find the trouble quicker. Thanks, Bill K.

From richey2 at mindspring.com Sat Feb 19 18:17:00 2005
Subject: [R-390] 26Z5

Losing filament in both tubes at the same time is a little hard to believe, I think what happened since this is a full wave pwr supply you can lose one tube and the B+ stays the same value, the only difference is the ripple freq goes to 60 HZ instead of 120HZ, but the chokes and fliter caps in this RX are very good and you might not even know the difference. Might be interesting to pull one out and see if its noticable.. Joe W2DBO

From N4BUQ at aol.com Sat Feb 19 19:09:11 2005
Subject: [R-390] Dead R-390A

If all the tubes are lit, this wouldn't be the problem, would it? I'd definitely make sure the oscillator tubes are lit, though. If not, an open 3TF7 is probably the problem. Barry(III) - N4BUQ

From chacuff at cableone.net Sat Feb 19 19:24:20 2005
Subject: [R-390] Dead R-390A

Bill are you still getting signal indications on the S meter on a known frequency such as 10 Mhz? You

are sure all tubes have filaments lit....including the PTO? What are you using for a ballast? Cecil....

From r390a at bellsouth.net Sat Feb 19 19:35:00 2005
Subject: [R-390] Fake R390 CD's?

Is the ebay seller "filmsdocs" someone on this list? He had/has an R-390 CD for sale on Ebay, and for curiosity's sake I bought one. Looks to be much of the Y2K disc as well as a few other manuals, including the one I scanned years ago when I was still KA4RKT. I don't mind my file being on there, but what about the rest of the stuff? 73 Tom NU4G

From kellerfamily01 at charter.net Sat Feb 19 22:24:51 2005
Subject: [R-390] More on Dead R-390A

Many thanks to all the people who have given me advice. The 3TF7 checked out fine But something else has changed since I first reported the problem. At first, I was getting no signal period on any band under any conditions or control settings. Now, all of a sudden, I have started getting very weak signals on all bands that I have checked so far, but only with the BFO on and both gain controls turned all the way up. With BFO off, I still get nothing. Before this radio went dead, I was running it 24/7, because if I didn't, reception would get very weak or disappear altogether on bands below 8mc. I wonder if that problem and this one are related? Bill K.

From ham at cq.nu Sun Feb 20 00:16:30 2005
Subject: [R-390] More on Dead R-390A

Hi, It sounds like you have multiple problems on the radio. That always makes troubleshooting things a bit tough. The "everything below 8 MHz dead" problem is normally the 17 MHz oscillator not firing up. It won't kill the whole radio though.

I would strongly recommend starting out with what ever test gear you have and doing some basic checks. Even a cheap radio shack VOM and a downloaded copy of the Y2K manual will get you on the way to isolating what's going on. There are some reasonable voltage charts in chapter 5 (I think ...) of the manual that should be of help in figuring out where to start.

This is a tube radio and running it 24/7 will *eventualy* break it ....

Of course they also are 100% repairable by normal non-rocket scientist beer drinking humans. Time to dive in! Take Care! Bob Camp

From stevehobensack at hotmail.com Sun Feb 20 07:50:47 2005
Subject: [R-390] RE (r-390) 26Z5 failure

It is possible to loose one 26z5 at an earlier time and the radio operate normally. Each tube has two cathodes and two plates (four plates and four cathodes total). Both high tension leads from the power transformer are shared by each tube. If one tube goes dead, there is still full wave rectification.
...73..Steve...N8YE

From odyslim at comcast.net Sun Feb 20 09:47:01 2005
Subject: [R-390] names on the back of my Stewart Warner tag

Hi Group. I wonder if it was habit for the Tech or operator to inscribe their name on the back on the nomenclature tag? One of mine has been signed by 2 people. Maybe somebody here on the list? E-3 Bates SP/4 Johnson Also inscribed was N.B. N.H. Scott W3CV

Hello All,

I receintly got my URM-25/E (uncommon variation - I understand) up and running at 100%. One of the first things I want to use it for was to do an alignment on my 390A. Well, I have most of the accessories but I am missing the MX-1487/U impedance adaptor. Does anyone know if a source for these? I'm sure I could whip something up that would work, but now that I have a nearly complete, fully functioning 25/E I wanted an original.

It was lots of fun repairing that 25/E, it had the common problem with the modulation (dead), those caps on the audio board are a real bugger to replace. Works beautifully now...

Next I start on another 390A that is dead, more on that one to follow, it is an oddball (ITT nameplate, extra position in the function switch, looks to be all Collins sub assemblies inside...) 73,

From ham at cq.nu Sun Feb 20 13:14:20 2005
Subject: [R-390] Source for URM-25 MX-1487/U impedance adaptors?

Hi

There are schematics out there for the adapter. Basically it is a 50 ohm to 125 ohm resistive matching pad if I remember correctly. I suspect that for an enormous sum of money they are available on the auction sites ...

One question to ask before investing thousands of dollars in one of these - If you had one would you want to use it?

The pad is useful for setting the radio up to run out of a 125 ohm source. Most of us seem to be running antennas that are anything but 125 ohm impedance devices. To be totally correct you would have to be running both a 125 ohm antenna *and* 125 ohm balanced coax into the radio. I suppose that if you have the antennas you probably are running the coax as well ....

If you are running a 50 ohm (nominal) antenna and 50 ohm coax then you should align the radio from a 50 ohm source impedance. The same would be true of a 75 ohm setup (75 ohm coax, 75 ohm antenna, 75 ohm generator). There have been numerous posts on this list that verify the value of using the same source impedance for alignment as for operation.

From personal experience the biggest benefit of using the correct impedance is that the antenna trimmer centers up better in actual operation. If you want the maximum correction range from the trimmer then using the correct impedance is a must.

If you want to get hyper about all this then you can look at the input impedance of the radio.

Unfortunately that only makes the problem more complicated since it's a complex impedance (versus pure resistive) even when correctly set up. Then you find that most antennas aren't 50 ohms over a very wide range. Ever *measure* the impedance of cheap coax (don't they won't take it back ...).

Heck of a lot simpler to just look at the source impedance .... Take Care! Bob Camp KB8TQ

From sparks at codepoets.com Sun Feb 20 17:54:15 2005
Subject: [R-390] R-392 power cable needed, LS-454? speaker

Just returned from the Richmond, VA Frost-fest and picked up a Stewart Warner R-392. It's missing the power cord and the lower left corner of the aluminum face is missing, appears to have cracked and was removed. Shows a lot of use, particularly around the tuning knobs, a good sign from my experience as the pretty ones (R-390's) that showed no wear or limited use were often the ones that operators hated for whatever reason, particularly sensitivity. The mint ones were mostly "hangar queens" always down for repairs hihi (Air Force slang for us Navy and Army dudes). My experience was, fire up the most abused R-390 at the operating position as it's probably the best one and often the operators choice. Hihi. so anyone have a power connector/cable and perhaps a parts unit 392 with front? Does anyone refurb the face of the 392 like someone does the 390's. Did these receivers use that LS-454 speaker? Any recommendations are welcome to get this old girl singing. Also, did not see one single R-390 at the Frost-fest today, and this was the only R-392 I saw. Years ago there were rows of them under tables.

Thanks gang... And I'm still working on my" trip down memory lane", "stay tuned for previews of the next weeks exciting episode of.." As the R-390 turns" 73 Tom K4NCG

From kellerfamily01 at charter.net Sun Feb 20 18:05:55 2005
Subject: [R-390] Dead R-390A Update

The situation with this radio is getting more confusing. I went through it and checked every tube substituting one tube at a time and found nothing - ended up leaving the old tubes in. I also checked all connections and replaced the can holding Y201 & Y203 - didn't help, so left original can and crystals in. So, nothing was actually replaced, but somewhere during the time I was doing the checking, the radio gradually went from totally dead to barely working. The strongest signals will now come in barely audible with the gain all the way up but still not strong enough to copy. If I turn the limiter on, they get slightly stronger. And if I turn on the BFO, they get even a little bit stronger, but still not strong enough to even hear unless the gain is turned all the way up. I can barely tell that signals are there, and that includes nearby broadcast stations. Nothing, of course, is anywhere near strong enough to even budge the S meter. This radio was totally restored by Miltronics a few years back and is exceptionally clean, so I know that it's well worth fixing if I ever get smart enough to figure out what's wrong with it. And if I have the time and space to take it apart to work on it. Bill K.

From redmenaced at yahoo.com Sun Feb 20 18:17:48 2005
Subject: [R-390] Dead R-390A Update

Sounds like a loose connection somewhere, check plugs, wiggle things. Joe

From jamminpower at earthlink.net Sun Feb 20 18:20:08 2005
Subject: [R-390] R-392 power cable needed, LS-454? speaker

Fair Radio has the power connectors for the R-392 so you can make your own power cord. www.fairradio.com James A. (Andy) Moorer www.jamminpower.com

From dwade at pacbell.net Sun Feb 20 18:31:34 2005
Subject: [R-390] Dead R-390A Update

Have a good look at the mechanical section of the RF deck....wonder if a gear clamp gave way all of a sudden. Watch and make sure all the slug racks move when you turn the Mc/s and Kc/s knobs. Dennis

From twc9198764412 at earthlink.net Sun Feb 20 20:16:49 2005
Subject: [R-390] R-392 power cable needed, LS-454? speaker

Tom, The matching speaker for your R-392 is the LS-166/U, but that's a little 5 inch square box for vehicular use and you'll want something that sounds better. You can use a 600 ohm to low-Z matching xfmr and use whatever low impedance speaker you have available. I use a Hallicrafters R-46 speaker (rated 500 ohms according to the label- sounds great.) Power connectors are scarce. Wish I could find one also. Good luck with the new project.. P.S. I got a couple of used audio out connectors from Fair a couple of years back... **see http://www.milspec.ca/radaccs/ls-166.html** 73, Bruce WA4ZLK

For R-392 Power Connectors try :

William Perry Co., Inc.
702 (Rear) Beechwood Road
Louisville, KY 40207
(502) 893-8724

I bought 2 R-392 Power Connectors from him a while back. His prices are reasonable and his service is first rate. 73 Todd WD4NGG

From ham at cq.nu Sun Feb 20 22:35:23 2005
Subject: [R-390] R-392 power cable needed, LS-454? speaker

Hi, R-392's are strange beasts. Since they are basically mobile radios the outside condition is often pretty bizarre. It can range from badly beat up to pretty much brand new. A lot depends on weather the particular unit that used it liked to run with the canvas up or down. Having them show up without power cords or speakers is normal. The best bet on power is to feed about 24 volts to the filaments and 28 volts to the plates. You can go as high as 32 volts on the plates but 28 seems to be a better choice. Try to avoid getting much over 25 volts on the filaments if you can.

The inside of the radio should be totally clean. This should have no correlation to the outside of the radio at all. The only way they got messed up inside was when they got left open at the depot. Otherwise they stayed all nicely water and dirt tight forever.

Long ago I went through several R-392's and friends went through quite a few more. I don't have any sitting here at the moment. They got to expensive for my tastes. They are a good radio provided you don't need monstrous amounts of audio. They have an L-C filter IF in them rather than a mechanical filter. This makes them sound a bit more like an R390 not an A rather than a R390A. Some find the sound a bit easier to listen to for long periods.

I have never seen or heard of a R-392 with major problems. They did not get the kind of stack them in the rain treatment the R390A's got. All of them that I have seen have the original set of parts in them. The depot routine did not slice and dice them the way they did with the 390's. If they had had significant trouble with them I suspect that the parts would have been swapped to a much greater extent.

It's a nice radio - enjoy it ! Take Care Bob Camp KB8TQ

From buzz at softcom.net Mon Feb 21 00:57:37 2005
Subject: [R-390] Dead R-390A Update

Bill, After you do a thorough visual inspection, then check for proper voltages out of the power supply, after that check to see that the local oscillator is running. Next I usually start pulling or wiggling audio tubes while listening for any noise from the speaker then work my way up the tube line up. GL,

Subject: [R-390] Dead R-390A Update

Hi, The R-390- either one was built in the era of the VTVM. Most of the voltage checks on the radio are based on a high impedance measuring device. A VOM will give you different readings on *some* of the test points. VTVM's are not a real popular item any more. You see them come up on the auction sites or at flea markets for less than the price of a family lunch at Burger King. They also do not take up a lot of room in storage while you are not using them. If you don't already have one I think it might be a good idea to get one. They make the process you are diving into a whole lot easier.

On a lighter note - this is a perfect excuse to buy a second working radio. Then you could swap modules back and forth to find the problem. The purchase of the $500 radio would save you the $10 or $15 on the VTVM.

Of course once you found the problem module in the radio, you would need a replacement. Now you need to buy a parts radio to swap in the module from. Now with three radios the investment in a signal generator makes sense. So does stocking a full set of tubes.

This is more or less a disease .... Take Care! Bob Camp KB8TQ

From dhallam at rapidsys.com Mon Feb 21 14:16:01 2005
Subject: [R-390] 26Z5W Failure

I have had one of the 26Z5 rectifiers go out without out affecting the other one. Don't know how long this situation went on as I only found it when I took the radio down for a complete alignment. Mine is a R-390 nonA. I had spares and installed them so the alignment could go ahead. However, upon looking at the replacement cost of a pair of 26Z5's**, I purchased a pair of Copper Top replacement solid state 26Z5's from Weber's**. Quite frankly, I purchased my R-390 years ago and a pair of new 26Z5's were about the same price I paid for the radio.

When I received them, I removed the vacuum tubes and installed the SS devices. There was no change the B+ after the SS device installation. David C. Hallam

From wa0hqq at al.tirevold.name Sun Feb 20 17:00:41 2005
Subject: [R-390] Fake R390 CD's?

There have been a number of issues with folks selling documents they pulled from the R-390A FAQ site in the past. It is not worth the effort to chase them down and argue with them, for the most part.

If anyone wants to obtain a full image of the R-390A FAQ web site, including ALL of the web pages, manuals and reports, all you need to do is drop me a US Priority Mail stamp ($3.85) (or equivalent for postage to your overseas location) and I'll burn and mail you a CD.

It doesn't get any cheaper than that. Al, WA0HQQ http://www.r-390a.net

From n4buq at aol.com Mon Feb 21 14:53:13 2005
Subject: [R-390] 26Z5W Failure

David, I don't see the 26Z5W listed on the Copper Cap page. Did you get these custom built? Barry(III) - N4BUQ

From mhuss1 at bellatlantic.net Mon Feb 21 19:15:36 2005
Subject: [R-390] 200 kHz Crystal

Still looking for a 200 khz crystal for the Calibrator. Fair Radio is out of stock. I hear that since the heater for the 200 kHz and 17 MHz crystals are always on, that the life of these is limited. Is anyone interested in developing a frequency doubler for a standard 8.5 MHz crystal to replace the unobtainium 17 MHz crystal?

From jamminpower at earthlink.net Mon Feb 21 19:50:02 2005
Subject: [R-390] 200 kHz Crystal

They are obtainable. Jan crystals (http://www.jancrystals.com/) or MH Electronics (http://www.mhelectronics.com/) will be happy to make them up for you. I have obtained crystals from JAN of up to 21 MHz (they advertise only up to 17, but they can do higher). Last time I did it, they cost about $15 and took about 6 weeks for delivery. They can put them in the HC-6/U package and everything. James A. (Andy) Moorer www.jamminpower.com

From ham at cq.nu Mon Feb 21 22:11:42 2005
Subject: [R-390] 200 kHz Crystal

Hi, The 17 MHz crystals are still made and relatively easy to find. It's the 200 KHz crystals that are a problem. The radio is in big trouble with no 17 MHz crystal. Without a 200 KHz crystal it still limps along with no calibrator.

Stuffing a 100 KHz crystal into the 200KHz position might work with minor circuit modification. I am not sure that helps since all of the old crystals below 500KHz are pretty darn tough to find. There are people who make them but the cost is staggering.

The simplest replacement probably is a (yikes!) solid state divider tacked on to a cell phone TCXO. In

order to switch it on and off you probably would have to do at least one solder junction inside the radio. Take Care! Bob Camp

From r390a at bellsouth.net Mon Feb 21 22:16:29 2005
Subject: [R-390] One last ballast alternative - 12BH7, 12BY7

I don't remember the 12BH7/12BY7 being mentioned in the latest round of zombie* horse beating. I had forgotten all about it until I popped the top on a 390A over the weekend. Seems I had used a "bad" 12BY7 in one of my sets some years back, it still works fine. Is cheaper than a ballast - most of the time, especially if you have a few lying around. Filament current is 300 ma and this particular radio has worked fine with this "fix" for 8 years or so. Drift and stability is comparable to my other receivers that use ballasts. Tom NU4G

*Zombie Horse Beating -- this horse has been beaten so many times it's become undead. At least judged by the number of times this subject comes up over the years. :-)

From r390a at bellsouth.net Mon Feb 21 22:26:27 2005
Subject: [R-390] Crystals made to original specs

ICM can make all the crystals in the 390/390A to original specifications. Just need the frequency and type no. (Like CR-36/U) from the crystal. $18 each for any crystals in either radio. It might seem a bit steep, but the crystal will be made to the same specs as the crystals that were in the radio when new, no guessing at load or series capacitance, etc. Not sure about the 200 KC crystal, but might shoot them an email.

http://www.icmfg.com 73 Tom NU4G

In a message dated 2/21/2005 9:25:58 PM Central Standard Time,
r390a@bellsouth.net writes:

*Zombie Horse Beating -- this horse has been beaten so many times it's become undead. At least judged by the number of times this subject comes up over the years. :-)

LOL!! The ballast tube thread would definitely be the leader in this category! Les

From RLucch2098 at aol.com Mon Feb 21 22:38:21 2005
Subject: [R-390] Need info on R-388 collins Mechanical Filter kit

Hi All; I have what looks like an R-388 but it has NO tags & not sure if its a 51J-3? It doesn't play except I hear the calibrator on a few bands. Not being a tech, I was hoping it would play somewhat, hi! I'll check the tubes next but my question really was, I noticed the front panel hole around the BFO control has 1/3/6 imprinted to select a Filter. The Knob & shaft is missing but inside I notice a box labeled Collins Mechanical filter kit (forgot the model numbers) with provisions for 3 plug in filters. The 3 position has a Collins 3kcs mech. filter. I was wondering if these are rare? Maybe the last fellow installed it wrong? Can is be removed easily? Anyone know its value? I am not looking to sell this unit, just asking because I never seen one before! Any help will be appreciated.

From mjmurphy45 at comcast.net Sun Feb 20 22:40:51 2005
Subject: [R-390] 200 kHz Crystal

Bob, **Ocean State lists a ceramic resonator for 200 kHz for $1.39. This may not oscillate without exploding but it sure would make an interesting foundation for a plug-in solid state calibrator source for the 390A. No idea if it would be stable over temp, but if it were kept at a constant temp, it may work.**

http://www.oselectronics.com/ose_p68.htm Blip Blip Mike Murphy WB2UID

From hankarn at pacbell.net Mon Feb 21 23:47:27 2005
Subject: [R-390] Crystals made to original specs

I have a few hundred of the regular crystals NIB, master pack. Most freqs. Specify freq., minimum order 3 for $20.00 mailed. Hank KN6DI NO 200/17Mhz.

From flash at skybird.biz Tue Feb 22 00:47:55 2005
Subject: [R-390] those pesky ballast tubes

I still have not had time to bench my Capeheart, my life is non stop. At $100 a throw, that is a lot to pay for a light bulb. I recall there was someone who sold a resistor mounted on a tube socket, did I dream this or is this a true story?

I really miss my radio. When it died it impressed everyone. OT:

I live in the aroural zone, and the Ionosphere seems to be broken totally. I have a lot of radios, and NONE of them gets much more than computer hash. The R390 did not suffer from the hash because I put a loop antenna in the back yard, far away from the computer room (I have 8 computers running SkyBirdRadio, which is my first love)

I am in Marquette Michigan and I believe that if I could get the receiver working again, it would pick stuff up. That front end is just amazing.

My last project was restoring a very unique zenith wide console, man they just don't make radios that sound this good, but the 390 using the detector out and running it into the mixing console, I often relayed shortwave programming.

This spring I plan to start a new radio program which will run on Saturday Nights on 5070 WWCR. Needless to say one of the segments will be about this amazing radio.

In order to hear the show, I will need the R390, which blows rings around my Kenwood.

Anyone else notice the bad propo, which has been going on here now for over a year.

Art Bell talks about it all the time, like me he is a 75M fan.

So does anybody make a resistor replacement? There are tubes on the audio module that do not light up.

I am open to suggestions. Chuck did a wonderful job restoring the radio back in 2000. Gary Bourgois

From mhuss1 at bellatlantic.net Tue Feb 22 07:20:36 2005
Subject: [R-390] Re: R390 200kHz Crystal

Guess they were not as unobtainable as I thought! Thanks for your help. Got two of the ovens on order from Barry Hauser ($25 min, you know). As for the 17 MHz replacement, typical Engineer knee-jerk. Not on the shelf? Start whipping up a replacement from the parts drawer! Since my R-390A is an old Collins, 1955 contract, I am very hesitant about doing mods. Even thinking about restoring the 26Z5W's.

Speaking of mods, anybody have a spare IF Deck floating around (R-390 or R-390A)? Want to mod it for 1, 2, 3, 6, 16 khz bandwidth and Lankford SSB detector. How about adding SMA connectors to the RF Deck so that you can bring out the LO.'s for electronic readout? When am I going to get around to doing the Cap replacements? Anybody out there have an R-725 and an electronics bent? Need some info on it. And where do you go to brag about your new acquision?

From n4buq at aol.com Tue Feb 22 09:35:26 2005
Subject: [R-390] Roll Pin

I would just like to publicly say "thank you" to list member Chuck. A few weeks ago, I put out a distress call for one of the little roll pins that locks the cams to their respective shafts. While I might have ordered these in great quantities at relatively great cost (seeing as how I really only needed one), Chuck responded with a "I believe I have some of those" and promptly dropped a couple of them in an envelope to me, gratis. They were exact replacements and this enabled me to get the cams back in proper working order.
Thanks Chuck! Now, after I get the petrified grease off the rest of the gears, etc., and reassemble it, the tranny should work like new. Barry(III) - N4BUQ

From PDulaff at dpconline.com Tue Feb 22 11:23:30 2005
Subject: [R-390] Detent spring?

Joe I haven't checked into this for you yet. Let me know if you still need me to do this for you. Paul - WB2NMI

From jpl15 at panix.com Tue Feb 22 13:48:57 2005
Subject: [R-390] Oldham couplers (repros) on eBay

Noticed this auction:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=5752909331&rd=1&ssPageName=WDVW

know little else about it save for what is described - ISTR someone asking about Oldham couplers here recently - it appears as if the seller is either making these, or having them made... dunno. Anyway, FYI.... Cheers John KB6SCO

From ToddRoberts2001 at aol.com Tue Feb 22 13:56:01 2005

I have seen him on eBay before. The only thing he is selling is the disc that goes in the middle of the Oldham coupler plus a spring. I don't know of anyone selling reproductions of the whole actual Oldham Coupler assembly. 73 Todd WD4NGG

From n4buq at aol.com Tue Feb 22 14:26:59 2005
Subject: [R-390] Oldham couplers (repros) on eBay

I saw that one too and wondered what material he is using which begs the question "what were the original ones made from?" It seems the one in my '56 Motorola appears to be rolled aluminum stock; however, the one from my latest acquisition appears to be made of something a bit lighter. It may be a plastic-like material, but not sure. Anyone know what they originally were made of? Barry(III) - N4BUQ

From K2CBY at aol.com Tue Feb 22 17:22:51 2005
Subject: [R-390] Tube socket adapters

There's a guy on e-bay with Pomona tube socket adapters for sale. Item No. 3875416560 No personal interest. Miles, K2CBY Sag Harbor, NY

From bmarx at bellsouth.net Tue Feb 22 18:53:41 2005
Subject: [R-390] Oldham couplers (repros) on eBay

I bought 2 Oldham Couplers from Dan Arney...First Class! Look no further. Bill Marx W2CQ

From Llgpt at aol.com Tue Feb 22 21:11:15 2005
Subject: [R-390] For Sale: Collins 51J-4

Collins 51J-4 receiver. Complete rebuild by Howard Mills W3HM in September, 2004. NOS cabinet, newly silk-screened front panel, full alignment, JAN tubes, pto is linear, full manual, new dial drum decal, IERC tube shields, Lankford product detector and agc modification. This is a spectacular appearing and performing 51J-4. All documentation and paperwork. I have a custom made shipping container for this receiver by Dan Arney.

I have jpgs available for serious buyers. $900 plus shipping/insurance, USA ONLY Les Locklear Gulfport, MS.

From ham at cq.nu Wed Feb 23 21:13:03 2005
Subject: [R-390] 200 kHz Crystal

Hi The ceramic resonators normally have a frequency tolerance of a few tenths of a percent. Their temperature stability is in the same range for most "mixes" of powder. In both cases these numbers are tens to a few hundred times worse than a typical crystal. They work fine for some things like simple computer clock sources but do not do as well for frequency standards. Take Care! Bob Camp KB8TQ

From N4BUQ at aol.com Wed Feb 23 22:19:19 2005
Subject: [R-390] More geartrain rebuild info

List, In the process of tearing down this geartrain, I noticed the planetary gears were quite clogged with grease. Scott's slide show says it probably isn't necessary to tear the planetary gears apart, but it didn't appear I would get this one clean unless I did and I'm sure glad I did.

Upon taking apart the three split gears, all three exhibited a fair amount of drag when I twisted them against each other. Upon closer inspection, I could see small burrs on the teeth. After removing these burrs, the gears ride smoothly against each other. I would never have known this unless I disassembled them. Also, it gives me a good chance to ensure a lot of the hardened grease and dirt is removed. After a 24-hour soaking in kerosene, there was still a significant amount of grime in this assembly.

Now if I can figure out how to get four split gears all tensioned and reassembled at the same time! Barry(III) - N4BUQ

From redmenaced at yahoo.com Wed Feb 23 22:23:02 2005
Subject: [R-390] More geartrain rebuild info

Hemostats, Barry!

Set each gear set, then clamp each set together with a pair of Hemostats.

From N4BUQ at aol.com Wed Feb 23 22:35:46 2005
Subject: [R-390] More geartrain rebuild info

Yep, that'd work. Now, which way to the E.R.? :~) Barry(III) - N4BUQ

From R390rcvr at aol.com Wed Feb 23 22:37:31 2005
Subject: [R-390] Plastic hemostats

Good evening all:

My favorite for holding tension on the split gears are the disposable plastic hemostats used in prep sets. They don't mar the gears, but hold beautifully. I suspect if you asked at the local ER or doctors office you could scrounge some up. They often are just discarded from kits, never used. Randy

From ham at cq.nu Thu Feb 24 18:50:32 2005
Subject: [R-390] More geartrain rebuild info

Hi I very much agree that a gear train with a reasonable amount of crud in it probably will require the planetary gears be torn down. When you do the only way to really get them clean is to take them down to pieces and clean each one.

The obvious gotcha is how do I get these back together with only two hands and a limited number of toes involved. Cleverly bent paper clips seem to be the "other" way to do this if you don't have access to stuff like plastic hemostats.

Here's an issue that's a little more subtle. The gears probably left the factory all nice and uniform. When they did you could swap any "top" with any "bottom" and there would be no net effect at all. Over the years each "top" has rubbed against it's respective "bottom" for a really long time. Essentially you have created matched pairs of gear halves.

So in addition to needing a number of fingers and toes to put it all back together you also need three sets of eyes to make sure all the sets remain with each other.

The gear will work pretty darn well even if you randomize the gears. My story is that it was a controlled experiment and I'm sticking to it. If you want a silky smooth gear set when you are done it seems to be best to keep everything in order .... Enjoy!

From: chacuff at cableone.net (Cecil Acuff) Date: Thu Feb 24 20:52:51 2005
Subject: [R-390] More geartrain rebuild info

Did we ever come up with a video or a series of pictures detailing the reassembly of the gear train. I am faced with the prospect of rebuilding several over the next several months. **I have in the past been fortunate in being able to very successfully clean them without disassembly. Gummout carb cleaner does wonders for cutting the crud. That and simple green do a great job. I re-lube with Mobile 1 synthetic motor oil in a syringe with the hypo ground flat on the sharp end. Works great!**

I would like to go through one using the disassembly method of cleaning to see if it is really to any advantage. Even the split gears can be separated enough with a knife blade to blow the carb cleaner in...but I would like to try it the other way and get a good feeling for doing a full resync. Cecil... –

From ham at cq.nu Thu Feb 24 21:14:33 2005
Subject: [R-390] More geartrain rebuild info

Hi, I have tried gear trains with the soak it out approach and and then popped them apart. When I have done so There has been grit in some of the split gears. I have not found a really good way to get grit out of them without taking them apart. Getting old lubricant out seems to go pretty well with various solvents. Depending on the radio you may or may not need to pop apart all the gears. As long as you can keep the parts all straight I guess I can't see any problem with taking the gears apart. It's enough work just to strip the whole gear train apart that the added work to separate the gears never seemed like a whole lot more effort.

Truth in advertising - yes I have seen some grubby gear trains. Not all gear trains seem to have the same level of fine dust embedded in the lubricant.

Splitting the gears apart does is it lets you get a nice uniform layer of the Mobil gear lube on the inside of the gear. I will admit that I have no idea if there is any more uniformity doing it that way than just trying to "ooze" in in from the edges.

Finally there is the "the refrigerator door is closed but is the light *really* turned off? You soak the gears in cleaner. You blow the cleaner off. You lube the gears. If you don't take the gears apart how can you be sure there is no cleaner left inside the gears? Of course you can simply *trust* that the light turned off .... Take Care! Bob Camp KB8TQ

From jonklinkhamer at comcast.net Fri Feb 25 08:33:29 2005
Subject: [R-390] EAC R390A question

Hello Folks, I'm going thru the process of restoring a 67 EAC 390A model and was looking for some information on a test point near the phone plug on the front panel. The test point is a green plastic post that does not have any wiring on it behind the panel. Although I think it did at one point since there is evidence of soldering. My reading of various postings and literature seems to indicate that it was for the diode load. Most likely the test point is more convenient in the front then back. It just seems out of place. There is no labeling above to indicate such feature and I don't see a lot of radios with this. Can anybody shed some light? PS: I very much enjoy this group. You guys are obviously very talented bunch.
Thanks, Jon, KB1DC

From ham at cq.nu Fri Feb 25 08:41:33 2005
Subject: [R-390] More geartrain rebuild info

Hi Purely as a controlled experiment I have *also* done the gear shuffle. They do go back together fairly well when you randomize them.

The real trick is to put it all together and then rotate it. It should spin freely with no binding. If you have a point that it binds at then there is a gear mismatch or bur somewhere.

On page 3-23 of the Y2K manual there is an interesting block diagram of the RF deck gear train. The gizmo we call the planetary gear is called out as a differential in the drawing. On page 3-26 section 4 goes into all the messy details of the beast. Bottom line - yes it is driven by both the KC and MC knobs to allow you to tune to both the correct KHz and MHz.

My main concern with the planetary is that it is very much driven off of the KC knob. Because of that any drag is noticeable as you tune in a signal. If you want one of these radios that will tune from one end of a sub band to the other with a single twist of the KC knob then the planetary needs to be in pretty darn good shape. Take Care! Bob Camp KB8TQ

From Lester.Veenstra at intelsatgeneral.com Fri Feb 25 08:49:24 2005
Subject: [R-390] EAC R390A question

The manual I have lists the field changes and shows some information and schematics. It does NOT contain the field change bulletins and is not a step by step guide. Most of the changes are quite simple and should pose no problem to a proficient tech. Others will be of no interest as they pertain to "convenience" changes made to shipboard receivers.

CHANGE AUTHORIZATION APPLICABILITY IDENTIFICATION

1 EIB 526 all Lead connected between pins 2 and 7 of tube socket XV603

2 EIB 542 shipboard only Two soldered jumper leads on TB-101

3 EIB 702 shipboard only "AN" type connectors for terminating audio and AC power cables on rear panel

4 EIB 655 + others shipboard only Diode load test jack located on front panel

5 EIB 664 shipboard only Shorting plug connected to J104 on rear panel

6 EIB 702 shipboard only Rectifier tubes V801 and V802 removed

7 EIMB shipboard installations Decals located on VFO in supplementary radio see EIB-911 assembly and RF amp-spaces only lifier chassis "Modified by FC7"

8 EIMB Selected ships only Elapsed time indicator mounted on front panel

That's the info on identifying the field changes. Most are self explanatory. FC2 modifies the attenuator pad on the line output side to match a 450 ohm load. FC5 allows use of the whip antenna connector with coax cable. A shorting plug is iserted in J104 that grounds the J107 side of the connector. Then cables to J105 and J106 are swapped. I have no idea what FC7 does! Roger N1RJ

Authorized field change, connected to diode load, to allow receiver testing without removal from rack. Les K1YCM/3 (CTM1)

From n4buq at aol.com Fri Feb 25 09:30:08 2005
Subject: [R-390] More geartrain rebuild info

This geartrain was just a tad dirtier than my first one, but not by much. I did not tear down the first one because I had no instructions for putting it back together. Now that I've done the complete teardown on this one and found what I have found, once I get this radio finished, I'm probably going to tear down my first one and do a complete cleanup on it too.

After taking all the gears off, I took the cam/frame assembly to the automotive shop here at work and washed it in one of their parts cleaning tanks. It didn't really do much to cut the dried grease. I tried denatured alchohol with not much better results and am now using kerosene. That works a little better than the other things I've tried, but it doesn't really dissolve the dried grease without a lot of rubbing either. While it might work better, I really don't want to have an open container of gasoline. Any other good solvents? Brake Cleaner? Carb Cleaner? Fire? Barry(III) - N4BUQ

From Llgpt at aol.com Fri Feb 25 09:33:42 2005
Subject: [R-390] More geartrain rebuild info

n4buq@aol.com writes: Carb Cleaner works the best. Les Locklear

From ham at cq.nu Fri Feb 25 10:03:17 2005
Subject: [R-390] More geartrain rebuild info

Hi For a nice complete list of all the things that work best check out the Montreal protocols under the heading "banned substances".

The closer you get to something like carbon tetrachloride the better it works. At the moment (like for another couple of months) they can still sell you bromide compounds that at least work a little like the chlorine based stuff. That stuff starts going away in June at least for electronic applications. Enjoy! Bob

From robert.boyd at sdc-dsc.gc.ca Fri Feb 25 10:32:48 2005
Subject: [R-390] More geartrain rebuild info

Hi: Another great cleaner and almost as good as carbon tetrachloride is available from your friendly local dry cleaner. It's called perc for short-don't know the full chemical name. Arrive with a 500 ml bottle and green stamps-most times you'll get it for free! Robert, VE3BE

From tetrode at comcast.net Fri Feb 25 11:01:04 2005
Subject: [R-390] More geartrain rebuild info

Well, I've found the best solvent is old-fashioned Elbow Grease and a few good brushes, there's no other way to dislodge the really solid gook. For brushes I use old toothbrushes, nylon wooden handles brushes, and for long reaches into tight spots the brushes made for silk-screening work well because they have long handles and short stiff bristles. Q-tip type swabs are also a must for small areas, I buy them in the biggest packages I can find.

Kerosene works as a grease solvent, but I usually use mineral spirits or WD-40 for cleaning. They are good grease solvents but have a low enough evaporation rate so as not to cause breathing problems and are generally not to rough on the skin.

Carb cleaner works well but it's better as a spray-flush to use after the main cleaning is accomplished because it evaporates too fast to remain on the "work". It can also be rough on the skin and creates loads of fumes and I usually don't use it unless I can take the gizmo to be cleaned outside. Ditto fume warning for the brake cleaner aka carbon-tet type sprays. A can of Carb cleaner (with a stem) is also my weapon of choice for instantly taking out big spiders and wasps. :^) John

From tetrode at comcast.net Fri Feb 25 11:35:51 2005
Subject: [R-390] More geartrain rebuild info

Perc is perchlorethylene aka tetrachloroethylene. Really, you got it for free? I used to work in my dad's drycleaning plant and remember that it cost many bucks a gallon, which justified using lots of extra machinery to recover the lost vapors and also residual perc left in the carbon filters prior to their disposal. Because of environmental and health reasons (it's a carcinogin) a lot of plants are phasing it out in favor of other solvents or hi-tech "wet" cleaning.

It is a great solvent but it evaporates like crazy, and it is a close cousin to most Brake-cleaner products and even smells the same. Sometimes when I'm shopping for Brake cleaner in the big auto parts stores I'll spray a small burst into the can cap, if I smell the "perc" smell I know I'm getting the original formula as opposed to the newer enviro-friendlier non-chlorinated formula which is being phased in. I guess I like to buy what I'm familiar with. 73, John

From ToddRoberts2001 at aol.com Fri Feb 25 12:32:17 2005
Subject: [R-390] More geartrain rebuild info

I have had pretty good luck using a long Kerosene soak in a large plastic tub to clean the RF geartrain assembly. Several days seemed long enough plus occasional breaks to rotate the gears

and swish around in all the tight spots with a stiff paintbrush so that nothing gets missed. After a days soaking I would pour the used kerosene thru a filter and toss out the sand and dirt that settled to the bottom of the tub and reclean the tub before soaking another day. After about 4 days of this the assembly looks pretty clean and I would pull it out, put it on a large soft cotton towel and place it in front of a dehumidifier for a day or two and let the warm dry air blow over everything.

After about 2 days of this the RF assembly is bone-dry. It is amazing how dull and porous the metal looks after a thorough cleaning and drying. It is not a good idea to rotate the gears and shafts when the metal bushings/bearings are bone dry like this. What I have done in the past is spray everything with WD-40 and the metal would soak this right up and become shiny again and then individually lube all the bushings and gears with synthetic oil. With what I know about WD-40 now I don't think I would do this again. What I will try next time is put the dry assembly in a tub with light weight Mobil One synthetic oil and let it soak in again for a few days and then let it drip-dry on a big cotton towel. Probably expensive and messy to do it this way but I think that is the best way to insure the synthetic oil will get a chance to penetrate in-between all the split gears and bushings. 73 Todd WD4NGG

From hankarn at pacbell.net Fri Feb 25 15:42:47 2005
Subject: [R-390] More geartrain rebuild info

I have found that the dishwasher does a great job. Yes I do not have a XYL to run around screaming at me. They sparkle when they come out and work just fine. I remove the xfmrs. Hank KN6DI

From fev at ciudad.com.ar Fri Feb 25 17:28:33 2005
Subject: [R-390] More geartrain rebuild info

HI, One way I use sometime to take dried grease is use normal comestible oil. It works very nice ! Then you can use any other substace to clean. Francisco LU3EEC

From odyslim at comcast.net Fri Feb 25 17:32:49 2005
Subject: [R-390] Gear Cleaning = Rifle bore cleaner

Well Guys, I read most of the emails and did not see one for rifle bore cleaner. Although any brand will work. I use a brand called "Wally's". Not only does it clean the grease, but it will make your radio smell really nice. He keeps the ingredients down to just his trade secret, Petroleum by products. It is the best bore cleaner I have ever used and it cuts right through the cosmoline.

Wally's
P.O Box 4463
Linden, NJ 07036

Regards, Scott W3CV

From drewmaster813 at hotmail.com Fri Feb 25 19:35:28 2005
Subject: [R-390] RE: More geartrain rebuild info

Lacquer thinner (not mineral spirits) works quite well to dissolve gummed lubricants (it will also dissolve gummed gasoiline in fuel system components). Don't get the brand in the red white and blue can, it has an odd smell, does not work well as a solvent and is no good for thinning lacquer. The brand carried by your local W-Mart works well.**

Sorry, but lacquer thinner is about as flammable as gasoline. Put the gears in a coffee can, pour in the dissolvent, cover, and set some place preferably semi-outdoors for the night. You will be most pleased by the results. Gasoline does not remove gummed grease very well. Neither lacquer thinner nor gasoline taste very good nor are especially healthful in any other way. So, keep out of reach of children and don't drink ! Drew

From DJED1 at aol.com Fri Feb 25 22:20:09 2005
Subject: [R-390] URM-25 replacement

For the last 5 years I've beeen doing my alignments on my R-390A with a URM-25 I got from Fair Radio.? It's worked OK, as long as I put a frequency counter on it to get on frequency.? But as I was repairing it a couple of weeks ago I saw that it was from 1952, and decided it was time for an upgrade after 50+ years of service.? I looked at the HP signal generators on the e-place, and picked up an HP 8660A for only $300 (not bad for something that cost $25,000 when it was new).? The R-390s certainly hold their value better- I think they only cost about $2000 new and are worth over $500+ now.? Anyway, it's quite a change from the URM-25.? The 8660 was one of the first synthesized generators (mine has a binary display!), and can be set to the nearest cycle.? The one I got has a plug-in that covers .01 to 110 MHz, so it matches nicely the capabilities of the URM-25.?

I struggled with how to test this thing- I expected that I couldn't zero beat to better than 10s of cycles because the receiver audio will cut off at very low frequencies, so how to tell if it worked as specified?? I decided to try and measure with an offset so that I had a beat note of a few hundred cycles, then put the frequency counter on the audio output and measure the beat to a cycle.? It worked very well- I could measure an offset against WWV down to about+- 1 cycle when the modulation was off.? After warming up the generator, I set it to 15.000300, fed it into the R-390A? along with WWV, and measured the audio beat as exactly 300 cycles.? So it looks like the old 8660 still is working well.? I checked the attenuator and it seems to be working OK, so tomorrow I will measure the sensitivity of the receiver, which the URM-25 measures as 0.3 microvolts or so.? The 8660 goes down to 0.03 microvolts, so I should be able to tweak the receiver as never before.? The only drawback is that the 8660, unlike the URM-25 is definitely not portable- it's about 65 pounds.? It may be easier to carry the receiver to it than vice-versa. Ed WB2LHI

From ham at cq.nu Fri Feb 25 23:04:12 2005
Subject: [R-390] URM-25 replacement

Hi, There is one problem that you may run into and a fairly easy way to get around it.

Almost any signal generator depends on the integrity of it's shielding to keep radiated RF from messing up the measurement you are doing. A URM-25 is a fairly simple beast in this respect. A 8660 is pretty darn complex by comparison.

Our beloved R-390's are fine receivers, but they are not right at the top of the class when it comes to shielding. If you have enough RF running around the test bench it will get into the radio without going

through the antenna connector.

If you are going for that 0.03 uV alignment this may be an issue....

The easy way to check what's going on is to simply unplug the coax from the antenna connector on the radio and see if the signal goes away. To be complete you probably should ground the shield of the coax to the radio case just to be sure you don't have a ground loop.

Of course if you fail the test then you have to do a little work. Often it's as simple as dressing the power cords on the bench with a little more care. Other times you need to clean the finger stock on the plug in compartment of the generator. Not a lot of rocket science, but there can be some work involved.

If you want to go totally nuts then here's something else you can do. Make up a "sniffer coil" on the end of a scrap piece of coax. Four or five turns about 3/4 inch in diameter seem to work well. Crank up the generator into a shielded 50 ohm load. Hook the coil to a good radio (R390 recommended ...). Tune the radio and generator to the same frequency. Run the coil all around the generator looking for a signal. Meter openings, attenuator knob's and power cords are all good things to check. If the generator passes this test at 30 MHz and at 500 KHz you should be fine. Take Care! Bob Camp KB8TQ

From barry at hausernet.com Sat Feb 26 09:25:48 2005
Subject: [R-390] More geartrain rebuild info

Hi Barry & gang:

Sometimes, the thing to try if petroleum based solvents and/or trichloroethylene don't work is hot soapy water -- or very hot water itself.

The kerosene or denatured alchohol will get some of it, but the hardened stuff may need some heat. If detergent doesn't work, try mild bar soap -- old fashioned stearate-based soap, like Ivory. You might still need to use an old toothbrush or nylon auto detailing brush -- or that electric toothbrush that needs a new brush end anyway.

Another idea -- one of those small steam cleaners -- if you already have one. If you're in a hurry, an "As seen on TV" version can be bought at places like Walgreens. (They still steam-clean car engines, don't they?) Might work, and they're fairly cheap.

Some have reported good results with the dishwasher -- that means super hot water and maybe some dishwashing detergent too. I haven't yet been so bold, but I have been surprised from time to time, after struggling with one aggressive chemical after another, that hot soapy water cleaned something up right away. Of course, the part was ususally hit with a few different solvents first, so may be a combined effect.
Barry

The above text is a bit scrambled. An original FC7 job will have "Decals located on VF0 assembly and RF amplifier chassis" that say "Modified by FC7". The mod was intended for radios used in "supplementary radio spaces only".

It increases the value of two screen dropping resistors. This weakens the output of the VFO and the first crystal oscillator, to reduce emissions that could be picked up by neighboring equipment. With less injection at the mixers, an FC7 radio is less sensitive than normal, which is why they

only applied it to the less important radios where it didn't matter. I learned this by applying it to my own radio. After I understood, I undid it, and would never recommend that anyone else do it. If I acquired a radio with FC7 and it was for use and not a museum, I'd undo it.

73, Dave Wise (SWL in Portland OR)

From ham at cq.nu Sat Feb 26 09:57:38 2005
Subject: [R-390] More geartrain rebuild info

Hi If you do decide to go the dishwasher route be *very* careful to tie down the parts you are trying to clean. At least around here destroying the dishwasher by getting a gear stuck in the impeller would not enhance the reputation of the boat anchor effort ....

As long as we are on exotic cleaning methods here's one that has not come up recently. Reasonable sized industrial ultrasonic cleaners show up surplus from time to time. The ones I would watch for are made by Crest Ultrasonics. They are a bit higher power than the hobby cleaners out there and are designed for 24/7 use. Even a fairly small one is plenty big enough to fit R-390 gears into. Since they are stainless steel you can use almost any solvent or cleaner in them. An over night run should do wonders ....

If you are going to keep the gear halves together during cleaning then I suspect the only way to get the stuff out from between the gears is some kind of long soak ...

Something that the industrial cleaning gear does is to re-distill the solvent. This lets you get a lot more miles out of a gallon of stuff.

Might be a use for that moonshine setup out behind the barn ....

Regardless of how you do the cleaning a good drying process is important. The family oven could be used, but a $3 garage sale toaster oven probably makes a bit more sense. You want to get the metal parts up to about 250F for 15 minutes or so to be sure you have driven off all the water or solvent. Going a whole lot above this temperature doesn't do a lot of good and you may start to affect the parts. Another nice way to do this is with a surplus lab oven, provided you can pick one up cheap.

The need for drying the parts is debatable, but I think it's well worth it if you are using soap and water. Even with solvents you can get some odd results from small amounts of solvent mixing with lubricant. Air blow off is another alternative and it works, it's just a bit exciting when that little spring slips and now is *somewhere* over on the other side of the room ... Take Care Bob Camp KB8TQ

From dhallam at rapidsys.com Sat Feb 26 10:01:29 2005
Subject: [R-390] Boonton RX Meter

I suppose this is a futile request, but would anyone have for sale a model 515 coax adapter kit for a 250A RX meter? This kit is used to mount a type N connector on the terminals of the RX meter.

David C. Hallam KC2JD

From chacuff at cableone.net Sat Feb 26 11:04:16 2005
Subject: [R-390] URM-25 replacement

Hi Bob and group.

Another suggestion someone mentioned at some time in the past to determine if your setup is causing you to THINK you have that ultimately sensitive receiver is to add 10 or 20db inline pad to the output of the generator at the front panel of the generator and see if your measurements move down the appropriate amount or stay the same. Could be a leakage problem. If there is little change it's probable that the generator is leaking more signal into the air than your attenuator setting indicates and the radio is detecting that instead. I guess it's the same principal as what Bob is describing it just keeps the generator and radio terminated into a controlled load.

Part of the problem with getting a signal into the R-390 series is the darned balanced input and some of the silly things we may do to get a signal into the radio at that port. That is where it needs to be inputted but it should be shielded from connector to connector, radio to generator. That's not always easy to do.

Just my 2 cents worth added on to the good info Bob has posted.... Cecil...

From N4BUQ at aol.com Sat Feb 26 11:27:01 2005
Subject: [R-390] More geartrain rebuild info

One thing I'd like to add to all this. When disassembling the planetary gears, I discovered the spring-loading mechanism is different from the standard ball-point-pen-style springs in the other gears. These are a single circular piece of spring steel enclosed inside the gear halves. Each half has a hollowed-out place to accomodate the spring. If your geartrain is particularly gritty, these can be great little traps for dirt. While you can probably get the regular flat split gears pretty clean without disassembling them, it would take a lot of washing and blowing to get these gears really clean without disassembling them.

As I said, the more I see in this geartrain, the more I'm convinced I need to give my first radio the same treatment. Barry(III) - N4BUQ

From ham at cq.nu Sat Feb 26 11:28:40 2005
Subject: [R-390] URM-25 replacement

Hi

One other odd point. Back when I was at Motorola generator leakage was a big issue when testing pagers. A standard part of the acceptance procedure on *any* new generator was to run around the entire generator with a pager and see if you could "hear" anything. It was amazing just how many generators failed this test.

If you are going the pad route I have always liked a 20 db pad. That way you just have to divide the generator output by 10. It's a lot less work for the poor tired old brain cells. Most pads I have seen work just fine at R-390 type frequencies. You don't have to be terribly careful about them they way you do at UHF or microwave frequencies.

If you have a generator that uses a "stacked attenuator" rather than the old sliding coax attenuator it's a good idea to check the attenuator. They switch in a variety of fixed attenuators to make up your final attenuation value. At any given setting you may have a fairly small number of pads in the circuit. With

an external attenuator and a receiver (R390 recommended) you can step through the entire range of the generator. Since the attenuator is the part most likely to fail in a non-obvious way it's worth doing on a "new to you" generator.

Checking the pads you use is probably a good idea. It turns out you can do a quick and dirty check on *any* pad with the same technique.

Terminate one end of the pad with 50 ohms. Use your DVM to measure the resistance on the other end. It should be 50 ohms. Reverse the pad and repeat the procedure. Pads tend to die a lot more often from RF or DC overload. The thing that usually goes is the part would be a resistor to ground in a PI pad.

If you want to go whole hog on your new pad you can put a *small* DC voltage on the input and check the DC on the output. The key issue here is keeping the DC low enough that you don't blow up the pad. Depending on your voltmeter you can check pads up into the 30 db range this way. Past that an AC signal and an AC voltmeter probably are a better idea.

Both of these techniques depend on the fact that the DC and RF performance of the pads are nearly identical. This is normally a good bet at R390 frequencies. It may not be as good a bet at microwaves. I have certainly seen a number of dummy loads that are AC coupled. I have not seen any wide band attenuators that are AC blocked though. Take Care! Bob Camp KB8TQ

Hi all

Bob's post reminded of something I saw in my URM-25s.

The URM-25 generator uses a switched series of resistors in its output attenuator, the last being a 50 ohm-ish to ground. (It's not 50 ohm but either 49.9 or 50.1 or something like that, can't remember which).
In both of the URM-25s I have owned, that 50 ohm resistor was open. Unless you actually measured the output of the generator, you probably wouldn't notice the problem.

Then, a couple of years ago, Fair was selling the attenuator assembly as a separate part, and I bought one. Guess what? That resistor in that was open as well.

Another thing to check on your URM-25s Jack Jack Antonio WA7DIA scr287@sbcglobal.net

Hi

According to the manual on Bama the magic resistor is 59 ohms. It is DC coupled to the output jack. If you hit the output jack with 12 volts then E^2/R gets you up above 2 watts. Most 1/4 watt metal film resistors aren't going to take that for a real long time ....

The interesting thing is that it's always the final resistor that blows. The 65.6 ohm parts in the rest of the attenuator aren't all that less likely to blow out.

With R-390 type stuff I would suspect the whole attenuator goes if you have B+ on the antenna connector. Not to mention a bit of a surprise to who ever is working on the radio.

Sounds like a great way to rig the generator to get everything to pass .... Take Care Bob Camp KB8TQ

From: "Bob Camp" <ham@cq.nu>
Subject: Re: [R-390] More geartrain rebuild info

Hi

The gizmo we call the planetary gear is called > out as a differential in the drawing. On page 3-26 section 4 goes into > all the messy details of the beast. > Bob Camp > KB8TQ

From mjmurphy45 at comcast.net Fri Feb 25 19:46:32 2005
Subject: [R-390] More geartrain rebuild info

Spare the hose, spoil the R390! Actually I have not sprayed any R390s yet, but I did give my ART-13 and TCS gear a pool party. Mike WB2UID

From ka4prf at peoplepc.com Sat Feb 26 19:54:56 2005
Subject: [R-390] Standy or Off?

Hi all,

I've burnt out a couple of Ballast tubes over the months and I am a little "gun" shy now. I don't want to ware out other tubes in my set, so I am wondering which will prolong the life of any tubes in my receiver best of the three following options?

1. Completely off when not in use - thinking about turning the set on and off all of the time.
2. Standby when not in use - thinking some tube still burning all of the time.
3. On when not in use - thinking all of the tubes are hot all of the time.

Any comments will be appreciated. Chuck

From dhallam at rapidsys.com Sat Feb 26 20:05:12 2005
Subject: [R-390] Standy or Off?

Why use a ballast tube at all since it seems to be generally conceded that they don't do anything useful when operating from a household AC line? Replace it with a resistor or replace the 6BA6's with 12BA6's and use a jumper in the ballast tube socket; no irreversible modifications with comparable or better performance. David C. Hallam KC2JD

Date: Sat Feb 26 22:11:27 2005
Subject: [R-390] Standy or Off?

Hi again,

so far, it's four to zero - leaving the R390 on 24/7 - not in standby. Chuck

From chacuff at cableone.net Sat Feb 26 22:20:40 2005
Subject: [R-390] Standy or Off?

Charles, Standby is not recommended the unloaded power supply voltage rises to dangerous levels due to our line voltage being higher today than it was back in the 50's.

I personally think that leaving the set on is probably best. Powering it on and off subjects the power supply to stresses each time it's powered up and the thermal cycling takes it's toll as well. The company I work for has about 1000 desktop PC.s and they have published a recommendation to all employees that those PC's should be left on 24/7 because lower failure rates have been documented in machines that are not electrically and thermally cycled. I would think that would carry over to other electronic devices as well.
The 390 series was designed to run 24/7 and if you don't mind the cost of electricity that's what I would recommend.

As far as your ballast tube failures...The ballast tube undergoes it's most stress at power up. After that it should only have a barely perceivable glow. If it's brighter than that during run you may have a problem with one of the tubes it regulates. Also what is your line voltage...it may be excessively high. You may want to invest in a variac and set the line voltage to 115.everything will last longer that way....

From mjmurphy45 at comcast.net Fri Feb 25 23:30:16 2005
Subject: [R-390] Standy or Off?

Cecil, My vote is for OFF. Put 1 in the OFF column. Thanks.

OK here's the beef..
Why cook your radio? I do not use any of my radio gear enough to justify leaving anything ON. Why waste the power? Everything including the test gear gets turned OFF. Same goes for all three computers at the house and my work machine. I have been hearing this "always on" stuff for years but for me, OFF means less heat and component aging. If you want to reduce the POWER ON stress, which is the culprit that I think we are talking about, why not make the standby switch turn on only the filaments or better yet incorporate a timer relay that turns on the filaments for 2 minutes before applying the MV and HV. I made such a timer for the ART-13 power supply as a gimmick circuit. Not much to it; a relay, diode, cap and a resistor. The silly circuit has worked beyond my expectations.The 813 and two 811's which I run at 1550 V have been holding up since I put it on the air in 87. I like fans too. Mike Murphy WB2UID

From jonklinkhamer at comcast.net Sun Feb 27 07:01:34 2005
Subject: [R-390] TB 101 on R390A

Hello net,

I’m going over my TB101 in my 390A and came up with some questions. First I found that my EAC does not have wires added by field change no. 2. I was wondering if anyone knows what exactly this change does and if it’s worth adding on. Secondly, I found that R109 is 200ohms and not 3920 ohms as the 21st Century tech reference specifies. I also found that R110 is 250 ohms and not 3570 as called out in the tech reference. My thinking is that the book is wrong but wanted someone to comment.
Thanks & 73s, Jon,KB1DC

From wa9vrh at mtco.com Sun Feb 27 08:05:24 2005
Subject: [R-390] First Wednesday CCA AM Night March 2nd!

!!! Please note NEW TIMES for the Eastern and Central Time Zones!!!
FIRST WEDNESDAY AM NIGHT!!! Sponsored by the Collins Collectors Association.

Wednesday March 2nd on 3880 kcs at 7:00 PM local East Coast time marks the start of the latest chapter of First Wednesday AM Night, drawing hundreds of vintage stations from across the country.

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

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

7:00 PM-8:30 PM Local East Coast Time Anchor: Bob W0YVA !!! Starts 30 minutes earlier for 90 minutes

7:30 PM-9:00 PM Local Central Time Anchor: Jim W0NKL !!! Starts 30 minutes earlier for 90 minutes

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

8:00 PM-9:00 PM Local West Coast Time Anchor: Bill N6PY

comments please to wa9vrh@mtco.com

From stevehobensack at hotmail.com Sun Feb 27 08:51:36 2005
Subject: [R-390] Ventilation

I have an R-390a inside a cv-979 cabinet and that just fits in a cubby hole on a computer table. There is not much spare room and the unit gets quite warm due to lack of proper ventilation. How would one install a cooling fan? Is a fan necessary? Thanks ...Steve...N8YE

From stevehobensack at hotmail.com Sun Feb 27 09:25:21 2005
Subject: [R-390] Re - on 24/7 ?

I was out cutting grass on a riding lawnmower when a power transformer in the ham shack decided to burn up. The house filled with acrid smoke. I was lucky. The fire was confined to the Johnson viking 1. I don't like to leave anything on when the house is empty. I've had wallwarts suddenly go up in flames. 73..Steve..N8YE

From mikea at mikea.ath.cx Sun Feb 27 09:58:21 2005
Subject: [R-390] Ventilation

> Is a fan necessary? Thanks > ...Steve...N8YE

Necessary? No.

A good idea? _VERY_ much so. Putting a fan in to move air through the radio will do wonders for extending its MTBF. Hot components change value faster, and they die faster.

How? I don't have a CY-979 to play with, and don't know where the cooling apertures -- if any -- are. But I'd give serious thought to putting a fan under the bottom, pushing air in, and one on the top, pulling air out, even if I had to make holes to do it. Mike Andrews,

From ham at cq.nu Sun Feb 27 11:54:02 2005
Subject: [R-390] Standy or Off?

Hi,

My preference would be for most radios to be turned off. Having something "smoke off" out here in the country with nobody home is an *expensive* sort thing. That has nothing to do with what's best for the radio.

There is no doubt in my mind that the radios work better after a few hours of warm up. There is also no doubt in my mind that ballast tubes mostly go from power cycling or vibration. They love to be on all the time in a fixed environment.

If you are going to run a radio 24/7 there are a few things to be careful about:

1) The RFI filter is ahead of the fuse. It's well worth the effort to check it out carefully. The only thing protecting it the breaker box.

2) The line cord is a hand wired part on most of these radios. Make sure that the hot and neutral are correctly wired. The fuse and line switch should be in series with the hot lead rather than the neutral lead.
3) I must admit that not every fuse in the known universe is in stock in the basement. From time to time substitutions get made. Check both the fuses in the radio to be sure they are both the correct type and rating (no 32 volt DC fuses allowed ...). If the ovens are turned off on the radio the line fuse can be dropped in value from the normal listed value. This is a *very* good idea in this case.

4) Think about what happens if a part cooks out. Setting the radio on a box of reloading supplies probably isn't a real good idea. Properly spacing it out in a metal rack away from walls and furniture probably is a good idea.

5) Check the electrolytics in the power supply. They have enough energy associated with them that they can be a problem if they go out. Fortunately they normally just drop in value rather than short out. When they get very leaky they will start to get hot and that's not good.

6) Think about where the smoke detector and radio are located (you *do* have a smoke detector in the radio room don't you?). Most smoke rises
....

I will admit that in most cases this is much to do about nothing. R-390's do not burst into flames on a regular basis. The power transformers in them seem to be reliable and even if they do go the metal can is a pretty good fire barrier. Of course there is the smell.

Speaking of the smell. The rectifier that drives the antenna relay is an issue. They are known to fail and when they do they both smell bad and the stuff is bad for you to breathe. If your radio still has an original rectifier in it you have a classic dilemma. Do you *really* want to replace a perfectly good working part? In general that's not a good idea. If you don't and it goes with nobody home - wow ...

If you run the radio 24/7 then at least disconnect the antenna during thunder storm season. R-390's are rugged radios., but RF transformers simply were not designed to take the kind of energy a near by lightning hit induces in an antenna. With a direct hit, well that's why we have home insurance ....

One good thing about 24/7 operation. A warm radio is a dry radio. A lot of the strange problems in components are related to humidity issues. If you are in a high humidity area this could be a significant issue.

Another thing about 24/7 operation - you are more likely to *use* the radio. This also is a very good thing. Take Care! Bob Camp KB8TQ

From dathegene at hotmail.com Sun Feb 27 12:09:24 2005
Subject: [R-390] Variacs

Question for you men of experience: I thought I might add a variac to my shack to drop the 390 input to 108; I see there's always lots on the E-place. Any good, old, reliable, tried and true, that's the old standby brand names that I might be looking for? As always, Thanks for your advice! 73 de NA0G Gene

From R390rcvr at aol.com Sun Feb 27 13:06:06 2005
Subject: [R-390] Variacs

Good day: I almost always use a variac for my boatanchors, and prefer a metered unit, with scales for both volts and amps. I also like an isolastion transfomer, for a variety of reasons. For me, the easiest way to get all of this in one modest sized unit is a B&K 1653 or 1655. They are reasonably priced, and work great. Randy

From djmerz at 3-cities.com Sun Feb 27 13:26:05 2005
Subject: [R-390] Standy or Off?

Hi, since it's a voting situation, mine is turned off on the days when I'm not listening. I have it on about twice a week, usually all day. I've had the 390a for about 4 years - no tube failures since the initial tune-up/tube renewal, uses a 3TF7, which I've never had to replace (and that survived being in place during rough shipping). It has a filament transformer wired in to the line supply to drop the line voltage about 6 volts to about 114.

This makes me feel good.... I don't know if it really makes a difference....it can't hurt and it was easy to do and others recommended it. I have a switch on my line supply transformer that lets me drop the line voltage another 6 volts to 108, put in because it was easy to do with the filament transformer I used. Maybe I should initially use this setting when I turn the radio on to further reduce the transients on

warmup and then switch to the 114 volt setting. So far I haven't bothered. I sort of assumed the rectifier warmup time would take care of such a benefit by itself. The idea that running a radio 24/7 makes it last longer is very appealing, but I think that benefit must be evaluated relative to consideration of other factors such as how often are you going to otherwise be turning it off and on, the effect of sustained temperature on all the components in the set, the power used, the heat generated in the room, and safety. I don't like leaving unattended old gear on in my home overnight, so I would probably turn the set off at night even if I used it every day, even though I consider the risk pretty small for a set like a properly maintained 390a. That's my perspective and experience so far on the matter. I never use the Standby position and turn the radio off and on with a switch on the filament transformer box on the line supply. Dan.

From jpl15 at panix.com Sun Feb 27 13:41:24 2005
Subject: [R-390] On or off?

My radios are off unless I'm in the shop/shack working, or actually using the gear.

Generally I'll put the R-390 on Standby when I first power up the bench, then switch it on and off that way (keeping the fils lit) until the end of the day. Same for the R-288/51J and the othe BA ham gear. During the week if I don't have time to go out into the shack the radios are off.

Years ago I had a Heath DX-100 woof up the Mod Xfrmr while I was out shopping - the fumes formed an 'inversion layer' in the apartment I had at the time, and actually made a brown 'ring' on the walls and drapes... took forever to get things clean and lacquer-stench-free again. Pissed me off so much I gave the thing to the first person who would come and haul it off.

As for wall-warts, I've known of more than one person who had major fires due to wall-warts failing, including one guy who lost a very valuable, and completely irreplaceable mini-computer collection when an Ethernet hub wallwart went up in his garge while no one was home...

All mine, for the computer and comm stuff anyway, live in a steel box connected to a UPS - if one burns the damage will be confined to it. Cheers John KB6SCO

Very Good Advise !
you talk about walwarts going up in smoke. i run the electronics dept along with a few more at an 800+ slip marina. i have over 100 handhelds i keep repaired and i have at least a half dozen or more wall chargers burn up a year. this past year i had a new handheld radio's battery pack short out and catch on fire while the guy had it clipped to his belt.. left a nice red spot before he could get it ripped off his belt.
73 Tony wa4jqs

From dwade at pacbell.net Sun Feb 27 14:33:20 2005
Subject: [R-390] PTO Woes

Hello all, I think I killed my PTO.

Probable cause of death was excessive pressure on the shaft while attempting to re-install the RF deck after cleaning and recapping. Apparently the Oldham coupler wasn't aligned as I had thought, and after the deck was installed, I turned the Kc/s knob and noted an excessive amount of drag. Upon inspection, the mis-aligned disk was *tightly* up against the VFO shaft. Next time I have to take out the RF deck, the PTO is coming out first. Ah, the wisdom of hindsight.

Looking at the output on a counter, it wasn't near 2.45500 Mc/s. (It was over 3). Turning the shaft clockwise brought the frequency *up*! Running the shaft the other direction brought it down to around 3..then back up..then down consistently in the manner it should.

My layman's hunch says the corrector stack and/or the core itself it toast. I've never done it that I know of, but it almost acts like it was run out beyond its 10 turn stop given its symptoms. If I set it now at 2.455, and call that turn 0, it behaves ok till about turn 6 or 7 when the frequency goes amuck, jumping around hitting almost 6 mc and then, around turn 8 settles back approximately the right frequency. However, it reaches 3.455 mc/s in about 9.5 to 9.75 turns.

I'm not up to rebuilding a PTO (See what happened when I took out the RF deck?). Unless I decide to do an autopsy, I have available a Motorola for someone who would like one to rebuild. :/

Maybe someone would like to rebuild mine? :D

Anybody have a good PTO available? I'd like one with linearity screws (as in the Cosmos) if possible. I'd like to find one here, but failing that...anyone have any experience with the "as-is" PTOs from Fair?

Also, please advise appropriate penance for killing a PTO. Thanks, Dennis

From chacuff at cableone.net Sun Feb 27 14:35:27 2005
Subject: [R-390] Standy or Off?

Well let me clarify my position. What was asked was what the radio liked best as far as ensuring longevity. That is what I addressed.

As far as my equipment I power everything down when I leave the shop. (except the PC) I probably sacrifice longevity in doing so but I have the peace of mind that I'm not exposing myself to an unnecessary risk of a fire that would take everything that is near and dear to my heart. My shop is separate from the house so you see where I am going with this.

I usually go out and power up the work bench and a couple of radio's a few hours before I expect an evening of work to commence that way everything is warmed up nicely...including the shop if it's winter.
I am also a little untrusting of things like my SX-28A and leaving it on unattended because the cloth wiring is showing it's age and frankly I don't trust it. I don't worry as much about the R-390A's and the SP-600's as they are built to a higher standard to start with.

I don't trust any newcomer to the shop for a while no matter the make, so they are not left unattended and powered up.

I still believe if one took two otherwise identical R-390A's and placed them side by side, left one on 24/7 and only switch the other on when you sat down to listen the 24/7 would prove to be more dependable. The exception might be the radio listener that only used his radio once every couple of months.... Cecil...

From ham at cq.nu Sun Feb 27 14:39:56 2005
Subject: [R-390] PTO Woes

Hi, I don't know if they still have them, but for a lot of years Fair Radio would sell you a replacement PTO pretty darn cheap. It was a "pot luck" sort of deal so you might have to buy more than one. I seem to remember them being less than $30 ... Take Care! Bob Camp KB8TQ

From buzz at softcom.net Sun Feb 27 14:45:46 2005
Subject: [R-390] Unplug, was On or off?

Gentlemen, Back in the early '60's I worked as a Wurlitzer jukebox field repairman in the Chicago, Ill. area. Wurlitzer introduced their new stereo machine early that spring with a new stereo amp and DC power supply using diodes instead of a 5U4 and selenium rectifiers.

One night in June we had severe thunderstorms north and west of the city. The next day when I came to work we had several complaints of, "no audio" so I loaded up a few spare amplifiers and hit the road to service the machines. As it turned out 18 machines had burned out diodes in the P.S. and most of the machines were turned off. One tavern owner told me that the sound went dead after a lightning strike. When I discussed my findings with my future father-in-law, who was a line engineer for Commonwealth Edison Co., he told me that it is not unusual for their sub-stations see several KV spikes on the lines during a thunderstorm and that voltage will easily jump a "off" switch and damage the equipment.

Living in Reno, NV we quite often see afternoon thunder storms coming so I unplug radio equipment and antennas. I don't worry too much about the computers because they are equipped with UPS's. One day I had a nearby strike and I saw sparks falling from a nearby power pole and the bang was ear shattering. Later that evening I attempted to use my computer and I got a "no connection" message. After further investigation the modem cards on both computers had toasted resisters near the phone line connector.
My thought is.... maybe some of your wall wart failures could have been due to power line spikes. Buzz

From ham at cq.nu Sun Feb 27 14:59:57 2005
Subject: [R-390] Standy or Off?

Hi, No matter what you do with boat anchors (on 24/7 or on/off) *eventually* they break if you use them.
Not using them at all would be one solution to the problem. That kind of defeats the whole reason for owning them though.

We all do things that have risk associated with them. We get up and drive to work. Might get in a wreck ....
Do radios typically cause fires when they break? - no they don't. Have I had a radio catch fire? - yes I have. Did the radio burn down the house? - No it was on the bench at the time and the fire self extinguished. Had the same problem with a video monitor and the same result (fire but it went out). I also have had a lightning hit, no fire but lots of blown gear. Once had a 2,500 Amp 480 three phase breaker fail to trip and got to re-wire the left side of a building - real big mess ....

My experience is probably different than what others have seen. I certainly do run some gear 24/7. I do try to keep the amount of that gear to a minimum. Replacing a tube now and then is not all that hard. I don't like ballast tubes much so they're not an issue. Even a once every couple years dig for a real problem generally is not to bad. From what I have seen on a good radio the amount of work will be even less than that weather you run it 24/7 or power cycle it once a week. Replacing the east end of the house is a lot tougher. I won't even get into things that are harder to replace than simple possessions ...

Watch out for the rant coming .....

A lot of this has to do with just how incredibly dangerous a modern house is if there is a fire. We live surrounded by all kinds of strange plastics. Even stuff made from wood has crazy stuff in the finish. A fire turns all this crud into *very* nasty stuff in a big hurry. It's amazing how little time it takes from the start of a fire to a major hazard being present. Boat anchors are not worth dying for ...

Yes, it's a hot button with me - sorry for the rant ... Take Care Bob Camp KB8TQ

From ham at cq.nu Sun Feb 27 15:11:15 2005
Subject: [R-390] Unplug, was On or off?

Hi, A computer modem card and an R390 have a couple of things in common.

One is that they connect to both a power ground *and* another ground. Another is that they have to deal with some pretty low level signals at the input. A difference is that the modems are supposed to be better able to cope with overload ...

It is not uncommon when there is a lightning strike for the "ground" in the whole house to rise quite a bit relative to earth ground. Your home is probably hooked to a copper ground rod with a chunk of normal electrical cable. The ground rod really isn't all that good as a low resistance ground.

When the house ground bounces up to a few hundred volts anything that is hooked to another ground can get a major bunch of current through it. In the radio that's usually the antenna circuits, but it may also include odd things like the audio output. The modem is a bit more simple since there's only one line.
One cute thing you can do these days is to put in a whole house surge protector. They mount at the breaker box and don't cost a massive amount of money. They will clamp the house voltage to a level that at least will not allow it to jump a switch that's turned off.

Modern gear is *supposed* to be designed for an 800V spike on the input line. That's not to say that everything is designed that way. The 800 volts comes from studies of normal home electrical systems. An 800 volt input spike could put a *lot* of voltage on the output of a R390 power transformer *if* it all got through. Of course a lot of it gets knocked out by the line filter. Even so a two or three times increase in the line voltage puts some significant voltage on the secondaries ... Take Care Bob Camp KB8TQ

From scr287 at sbcglobal.net Sun Feb 27 17:23:49 2005
Subject: [R-390] R-390A available

Hi all, I have an R-390A project radio, for someone who wants a rebuild project. The radio is available in Reno, Nevada, and is pick up only, I'm not going to ship it.

However, the price is FREE, with a catch. The catch is, it is free for someone who is actually going to rebuild and use it. Do not take it as a parts radio, or to resell it or the parts to others.

Also, don't take it if it is going to sit on your shelf as a "rountuit" project.

This radio is a prime candidate for a rebuild, it basically works, but has a few problems. The dial is off

by 30 kc The dial lock and zero adjust don't work, but are there. It has substitute meters, the line level is mounted but the carrier meter is separate.(The line meter does not indicate) The original power cable entry has been changed to a computer style socket. Pots are noisy and scratchy.

Here is what it does have:
The tag says it is a 56 contract Motorola
I don't believe it is a "Blue Striper"
The "Utah" cover is one of Hank Arney's reproductions
It has both top and bottom covers(have a few dings but not bad)
It has a real working 3TF7(but no guarantees how long it will last)
It hears on all bands, but some better than others
The front panel is in good used condition.
All 4 mechanical filters work.
Calibrator works
I will throw in an extra PTO, that came out of one my blue stripers.

Why am I letting it go?

First, it came to me essentially free, so I'm just passing it on. (It was part of a trade package that included a couple of other things I really wanted)

Two, I thought seriously about doing a rebuild myself but I just don't have the time for another R-390 rebuild project (my interests really are in other directions-WWII aircraft radios)

Three, I don't really need three R-390A's

Four, it just seems to be in too good a shape to part out and would be a shame to see it not being used.

Also, if I get multiple takers, I'll just pull a name out the hat. Any takers? 73 Jack Antonio WA7DIA scr287@sbcglobal.net

From ham at cq.nu Sun Feb 27 17:43:21 2005
Subject: [R-390] R-390A available

Hi, Sounds like a fine radio for a rebuild. The zero adjust / dial lock usually isn't a big deal to fix. Certainly the price is right. The meters generally come up at auction from time to time. Somebody could wind up with a fine working radio for less than $100.

There was an inquiry about a PTO earlier in the day. I'm not sure how close to Reno though. Take Care! Bob Camp KB8TQ

From dwade at pacbell.net Sun Feb 27 18:24:01 2005
Subject: [R-390] R-390A available

Well. .that was me....and Reno isn't THAT far,

But.. I don't want to take away from another's rebuild project. That's a fine opportunity for someone to take. I'd take it in a heartbeat...but it would have to wait in line. I'd rather someone who is looking for their first radio take it before I would. Dennis

From ka4prf at peoplepc.com Sun Feb 27 18:47:26 2005
Subject: [R-390] Standy or Off?

Hi all, I didn't realize this was such a sensitive subject. With all of the responsives, I am more uncertain about what I should do than I was when I first asked the question? Since I don't want a fire - (I live in a mobile home) - I think I will turn the R390A on and off. My listening habits are so critical that I need perfect reception immediately when I turn the receiver on. Thanks Chuck

From ka4prf at peoplepc.com Sun Feb 27 19:00:30 2005
Subject: [R-390] Standy or Off?

Correct my last to read: "...my listening habits are NOT so critical ..." Thanks Chuck

From redmenaced at yahoo.com Sun Feb 27 21:59:58 2005
Subject: [R-390] 390 resistors

The resistors under the audio deck and the power supply are changed!

They needed it, too. Even if they weren't out of spec the solder joints were terrible! Two were almost coming apart, probably from being exposed to the heat over the years.

The resistors in the power supply were installed horizontally instead of vertically so as to dissipate more heat to the chassis instead of the nearby wiring. Radio re-assembled, awaiting some tubes. Joe

From enigma_y_2000 at yahoo.com Mon Feb 28 08:25:55 2005
Subject: [R-390] Re: R-390 Digest, Vol 10, Issue 23

Hi, Does anyone have a source for the mini BNC connectors used on the R-390A RF deck? I would take right angle or straight. I need these to build up a "as is" deck.

Please email me with any info. enigma_y_2000@yahoo.com Thanks in advance,

http://info.mail.yahoo.com/mail_250
Date: Mon Feb 28 08:46:21 2005

Hi, The last time I was in Skycraft Surplus, 2245 W. Fairbanks, Winter Park, FL 32789 (407) 628-5634, they had a whole bin full. According to my old catalogs, the correct designation for these connectors is type MB. 73 David C. Hallam KC2JD

From tetrode at comcast.net Mon Feb 28 10:09:30 2005
Subject: [R-390] Re: R-390 Digest, Vol 10, Issue 23 - MB connectors

I was at Skycraft about a year ago on a vacation and saw these too and picked a few up. Cool place! However, you would need to be there yourself and dig out what you want as the counter clerks have

absolutely no clue what they are. Bob, Fair Radio sells them (used) for $2.50 ea. 73, John

From jamminpower at earthlink.net Mon Feb 28 11:52:05 2005
Subject: [R-390] Boonton RX Meter

Assuming it would fit the 250B as well, sure - I could use one. I think the 250B uses the same arrangement for the DUT as the 250A. That was basically the same setup as the 260A Q-Meter as well. Seems like a very useful adaptor. Might be nice to make a BNC one too. James A. (Andy) Moorer

From mahlonhaunschild at cox.net Mon Feb 28 12:02:19 2005
Subject: [R-390] Wanted: PTO Endpoint Adj. Plug

Still looking for a PTO endpoint adjustment plug/cover screw/whatever you wannna call it. If you have a junker PTO with the endpoint adj. plug still in it, maybe you can help me out.

My "recipient" PTO is a Progressitron, by the way. Maybe that makes a difference, maybe not. Thanks. regards, Mahlon - K4OQ

From mahlonhaunschild at cox.net Mon Feb 28 12:21:48 2005
Subject: [R-390] Re: MB connectors

Someone was asking for MB connectors yesterday. I have one metric boatload of used MBs, but they're all for RG-58 cable. If you can use them, write me off-list. regards, Mahlon - K4OQ

From n4buq at aol.com Mon Feb 28 12:38:28 2005
Subject: [R-390] R-390A available

Same here (although Reno is a LONG way from Alabama). Being up to my ears in gears on the current project, it'd have to do some shelf time here as well. I hope it finds a good home.

BTW, I couldn't resist taking the planetary gears for a visit to Mr. Buffing Wheel and Mrs. Jeweler's Rouge. Wow. They really shine. I know -- they won't work any better all shiny and stuff, but it was fun to see them looking so nice. I had to be careful as the brass (bronze?) is fairly soft and it wouldn't take a whole lot of buffing on the teeth to alter their geometry. As it is, they have a nicely buffed edge-break on the outer edges. Barry(III) - N4BUQ

From tetrode at comcast.net Mon Feb 28 14:19:41 2005
Subject: [R-390] FYI group - Easily adding pictures to posts and a quicktour of Skycraft

With the popularity of digital photography there are now quite a number of on-line photo storage sites, and some of these allow "hot-linking" which means that you can access the picture from outside their site and use it for anything you want such as message boards, auction sites, emails, etc.

A number of these sites are free, and all you need is your web browser and a pic on your hard drive to click on and that is it!

It doesn't require having a web page, web space, or using an FTP program to upload. And even if you have a web page it's a good way to post some quick pics of interest and not have your site crash because 600+ people have flocked to it as soon as you've posted the URL and are surfing all over it. There really isn't a catch, the free hosting is simply a lure to attract you to higher levels of (pay) service which provide for file management, better hosting etc. On some sites there might be a pop-up ad for viewers but in general I've found there are not.

A google search will provide many sites to check out, but one I'm familiar with is ImageShack at http://imageshack.us/ To use it, go to the site and click the browse button to browse for the pic on your hard drive that you want, click it, and then click the "host it" button.

It then uploads your pic and provides you with a list of links to use depending on the kind of forum you are posting to. For the purposes of this reflector, choose the "Direct link to image" link at the bottom of the page and just copy and paste that link into the message you are sending to the list. All done! This is now a direct link to the picture, full size.

(Or you can also use the link in the "Show picture to friends" box which will frame the pic in a web page and resize the pic to fit in the viewers browser window if necessary.)

If you want to test the link simply copy and paste it into your web browser and it should come right up. Don't loose the link to the picture before you use it as you will not be able to retrieve it without the URL and you'll have to start over. Once uploaded it will remain on their server forever unless you sign up for one of the higher level services which will allow you to delete it, but this isn't necessary.

Here's some example pics, they are related to the previous thread about the MB connectors and Skycraft in Orlando, FL taken in Jan 2004. I'm a photo bug and snap lots of pics on vacation (jpg files are free!). My camera is a 4 mp Nikon Coolpix 4500, and the pics have been reduced to 45% of original size and also recompressed to make for much smaller file size. Some of the inside pics are a little off-color, I think I was so amazed at the place when I walked in that I took a bunch of pics before remembering to adjust the white balance for fluorescent lighting. Sure would be nice to be down there again, yet another snow storm is on its way to metro-Boston with 6-12" expected :^(

Here we go.....

The Skycraft parking lot views... Lots of racks. Inside one of the big boxes were some surplus tank seats! http://img198.exs.cx/img198/9017/skycraft018qv.jpg

here is the same pic but using the alternative link I mentioned to frame and resize it in a page, clicking that image will make it go full size.....
http://img198.exs.cx/my.php?loc=img198&image=skycraft018qv.jpg
the road sign..... http://img184.exs.cx/img184/5443/skycraft027jd.jpg

and the rooftop UFO... http://img184.exs.cx/img184/2967/skycraft032yr.jpg

Inside.... http://img184.exs.cx/img184/930/skycraft044cx.jpg

big-ass variacs... http://img184.exs.cx/img184/7334/skycraft058ug.jpg

springs and things.... http://img184.exs.cx/img184/5484/skycraft067hv.jpg

parts, parts, and mo' parts... http://img184.exs.cx/img184/848/skycraft075fo.jpg

http://img184.exs.cx/img184/881/skycraft089nz.jpg

the infamous box of MB connectors.... http://img184.exs.cx/img184/941/skycraft099pw.jpg

gold plated copper sheet!..... http://img184.exs.cx/img184/6272/skycraft102qz.jpg

the coax section..... http://img184.exs.cx/img184/3223/skycraft114rd.jpg

the metal section..... http://img184.exs.cx/img184/6572/skycraft121tt.jpg

Seeing these pics again reminds me how bad it feels to have a great place like this NOT within easy driving range.

Hope you enjoyed the tour and that this info is of use; it'd be cool to see some images here. Let's see that 390 in progress, those leaky caps, your handsome or not so handsome mug, or a schematic of something!
73, John

From n4buq at aol.com Mon Feb 28 14:49:23 2005
Subject: [R-390] FYI group - Easily adding pictures to posts and a quicktour of Skycraft

I thought about posting a picture of the shiny planetary gear rebuild. Now maybe I will. Barry(III) - N4BUQ

From wa1qhq at yahoo.com Mon Feb 28 15:57:59 2005
Subject: [R-390] FYI group - Easily adding pictures to posts and a quick tour of Skycraft

Cool pics John, reminds me of Murphy's Surplus on the Left coast. By any chance did you get any pictures of the inside of the UFO...always interested in alien technology. de WA1QHQ

From roy.morgan at nist.gov Mon Feb 28 17:50:04 2005
Subject: [R-390] URM-25 replacement

wrote: >If you have a generator that uses a "stacked attenuator" rather than the old sliding coax attenuator it's a good idea to check the attenuator.

URM-25 folks, I got both a URM-25 and a URM-26 this weeekend. The URM-26 (20 to 440 mc or so) uses a waveguide beyond cutoff attenuator, so there is only one single resisor in the attenuator.

The URM-25 is a switched ladder attenuator. I checked mine by measureing the dc resistance at the output jack. One setting (1 uV) was way above 50 ohms - something like 700. Crispy critter resistor at that spot! Another was modestly off and all the rest were close to 50 ohms.

Gotta find some proper resistors to repair that attenuator! Roy