

R-390 Reflector February '03 Edited

From sletz@msn.com Sat Feb 1 01:54:23 2003
Subject: [R-390] AGC Problems

I have a nice Stewart Warner 390A with a Collins IF module. I can't seem to get the AGC voltage I think I should get.

With 30- 40 uv RF in at 1.5 MHz I get plenty of IF output and > -10 volts output on the Diode load- but < -1 volt on the AGC line.

What should the AGC voltage be? I have seen values quoted up to -10 volts?

Any ideas on what I should check? Have checked tubes and caps in the area of the AGC amps, detectors etc. Any clues will be greatly appreciated. Thanks Sam

From jbrannig@optonline.net Sat Feb 1 02:20:30 2003
Subject: [R-390] AGC Problems

I don't recall the correct AGC voltages, but -1VDC seems low. Did you align the IF, including the AGC amp? Jim

From jamesmiller20@worldnet.att.net Sat Feb 1 03:17:10 2003
Subject: [R-390] AGC Problems

What kind of meter are you using to measure it? If it's a low impedance volt meter, it may be loading down the AGC line and giving an false low reading.

From Dave_Faria@hotmail.com Mon Feb 3 20:40:13 2003
Subject: [R-390] Off Topic Question

Good afternoon list. I need info on a triplett meter picked up at a hamfest. Is there a person or list where I can ask questions? Thanks Dave Faria

From shadow@gilroy.com Mon Feb 3 18:50:59 2003
Subject: [R-390] Manual / Triplett / Off Topic Question

Dave..... Triplett has a site. Send them a email and include you Smail address... If the have a manual or print.... They will mail you photo copy. I have had very good luck getting manuals...Gary KG6NTN

A gun in the hand, is better then a cop on the phone.

From cbscott@ingr.com Mon Feb 3 19:56:29 2003
Subject: [R-390] Bristol-drive set screws available

Listers, Anyone interested in some stainless-steel Bristol-drive set screws? These are #8-32. I don't

remember the length, but they are about 3/16" long. If I'm not mistaken, these are just right for knob screws. I won an Ebay auction for qty 10, but the guy says he has a "large quantity" available. If anyone is interested, I might get several sets. Bear in mind, these are stainless-steel so they aren't exact replacements. Also, I'm not 100% sure if the knob screws are #8 or #6. Someone want to confirm? Thanks, Barry - N4BUQ

From cbscott@ingr.com Mon Feb 3 20:29:59 2003
Subject: [R-390] Bristol-drive set screws available

Just to clarify, these are "headless" set screws, not the cap screws that are used for the clamps. When I mentioned they work for the knobs, I forgot that the KC and MC knobs use a clamp arrangement. These screws won't work for the MC or KC knobs -- only the smaller knobs. Barry - N4BUQ

From anchor@ec.rr.com Mon Feb 3 22:30:12 2003
Subject: [R-390] Off Topic Question

Hi Dave, What model is it? I have 1 or 2 manuals, & I think BAMA has some. 73, AI, W8UT

From rickmurphy1001@earthlink.net Mon Feb 3 23:05:11 2003
Subject: [R-390] A Few Questions for the Group

Hi all, I am getting ready to dig deep into the R390A that I have and I have a few questions for the group.

1. Has anyone changed the tube type and circuitry to support quieter tubes as described in ER magazine #26 June 1991 ? I.E. Change most of the IF tubes to 6JH6's. Change the RF amp to a 6GM6. Change most of the mixers to 6HA5's.

2. Can anyone strap an oscscope to the IF output on the back panel to get a measurement with the carrier level meter at 50db?

**3. What is the rg number for the mini coax that is used through out? Thanks in advance
Richard**

From jbrannig@optonline.net Tue Feb 4 14:00:51 2003
Subject: [R-390] Curious

At one time the FCC did not issue licenses for domestic shortwave broadcasters. Organizations that wanted to reach the US market were located in Central and South America. With my renewed interest in SWL'ing I notice many domestic SW broadcast stations. When did the rules change (I know it has been a while)? What was the catalyst for the rules change, lack of standard BC spectrum?

>From the narrow marketing niche of these stations, I'm guessing that it is cheaper to build a SW broadcast station, than a standard AM or FM station. What power levels are they running and what kind of antennas? Thanks, Jim

From lester.veenstra@lmco.com Tue Feb 4 15:14:30 2003
Subject: [R-390] Curious

I suspect all of them claim to be "International" and the FCC just does not have the "b...s" to fight with them since the all are religious and or extreme right wing politicians.

From michael@flash.net Tue Feb 4 16:39:24 2003
Subject: [R-390] FS: R-390A

I have for sale a very nice condition R-390A. Motorola manufacture, original meters and original top and bottom covers. Very nice cosmetic and operating condition. Local pickup in the Arlington, TX . I do not want to ship this nice receiver. Asking \$650.00. Thanks, Michael

From cbscott@ingr.com Tue Feb 4 20:34:57 2003
Subject: [R-390] Bristol Spline Set Screws

List, Yesterday I posted that I had found a source for the set screws for the small R390[A] knobs. I had thought about buying a small quantity of these from the seller and reselling them to the list, but I thought it might better if everyone who wants them to contact the seller directly. I asked the seller's permission to post his information to the list and he said yes.

They are #8-32 x 3/16" long stainless steel bristol spline-drive screws. I took one of the screws out of one of my knobs and it appears to be 1/4" long instead of 3/16" so be advised these are not exact replacements.

He offered these to me at 10 for \$4.00 plus \$1.00 shipping which will cover up to three sets.

His name is Charlie and his email is pincon@erols.com. His amateur call sign is K3ICH. The address he gave me does agree with the address for K3ICH in HamCall(tm).

Be advised that I do not know Charlie personally nor have I completed the purchase of my screws yet so I can't speak for the product; however, if you need them, this looks promising. Thanks, Barry - N4BUQ

From mark.richards@massmicro.com Wed Feb 5 01:22:19 2003
Subject: [R-390] Update to R390a Restoration Information

I have been embarking on the unique adventure of restoring my R-390a and have updated my web site with some new photos and brief descriptions of the work thus far.

They may be viewed here: <http://www.massmicro.com/boatanchors>

There are two new pages describing more gear disassembly and sub-chassis removal.

This is extremely photo-intensive, although I have gone to considerable length to make certain the images are useful and not too large. Bon appetit! Mark Richards Boston

From ham@cq.nu Wed Feb 5 03:29:37 2003
Subject: [R-390] A Few Questions for the Group

Hi, The level at the IF output varies quite a bit with the setting of the IF gain control and the meter calibration pot. I *think* it ran about -5 to -10 dbm with a fairly full deflection last time I checked it on a couple of radios.

The general consensus on redoing the '390 these days is to make any changes reversible. We are going from a modify the heck out of everything approach to a collect and conserve attitude. Mostly it is driven by the increasing price of the radios and the recognition that a lot of significant radios are getting darn hard to find.

If you compare either of the 390's to a modern radio they are plenty sensitive. If you want to knock them you have to grab something like a RF-590A and compare in band mutli signal overload numbers on 10 meters or something weird like that. The 390 radios are quite good in that respect, there are just some out there that are a little better. The ER mods mainly try to make the radio more sensitive. Usually this is at the cost of overload performance. I don't think it's a good idea in most applications. The mods are well thought out and they should work. If you are going to do a set of these those are the ones to go with. I just don't think that the result will be worth the effort.

I think you will find that there is plenty to do just keeping a flock of 390's running. If you don't have a flock yet, just hang around. You'll catch the bug. A couple of 390A's (early, mid and late contract maybe, say two or three of each). A pair of 390 not an A to compare to. That should be enough to soak up all of your spare time :) Take Care! Bob Camp KB8TQ

From windy10605@juno.com Wed Feb 5 04:00:36 2003
Subject: [R-390] finally got one

I've had quite a bit of ham and military radio gear over the years but never a R-390. It was impressive to "hear one in action" some years agoand to see that gear/cam tuning setup.

Finally located a reasonably priced one in what looks to be in excellent, untouched condition (but it doesn't work ...no surprise there). It's a R-390A made by EAC. lubrication has been done per the manual, but there are still some sticking slug racks which I disassembled and all but one work smoothly now. Tubes are OK, fuses are there, one disconnected ?? connector found, and next we look at supply levels. There is only the slightest hint of audio through the 600 ohm headset, S-meter goes about 1/3 upscale and stays there.

Does anyone have the plug in electrolytics ? I was able to reform one but the other is defective and will have to have the innards replaced or find another one. 73 Kees K5BCQ

From chacuff@cableone.net Wed Feb 5 04:24:28 2003
Subject: [R-390] finally got one

Congrats Kees, I would check with Chuck Rippel....He either can rebuild them or will get you the information that will allow you to rebuild them in the original cans. Check www.r390a.com Good luck...

From djmerz@3-cities.com Wed Feb 5 06:39:10 2003
Subject: [R-390] finally got one

Kees, or you can do what I did following the lead of others - buy some new caps and mount them

topside in a gutted relay enclosure with plastic shroud and octal base. This made me happy and is easily reversible if the next guy wants the set to look "more original", Dan

From BRingwoo@csir.co.za Wed Feb 5 07:56:22 2003
Subject: [R-390] A Few Questions for the Group

Hi, Receiver noise is very low - I would advise leaving the design as is. My 2 cents worth - Bryce

From courir26@yahoo.com Wed Feb 5 13:14:49 2003
Subject: [R-390] Electrolytics

Kees, I've mounted them below the AF chassis. You may have to relocate one or two to a different location, but once you have the leads insulated and tie-wrapped down, they can be made really secure.

From chacuff@cableone.net Wed Feb 5 17:12:06 2003
Subject: [R-390] Electrolytics

Greetings group... That works as well...the thing to remember is that you need to electrically remove the original caps...I received a radio a while back that had caps placed under the chassis (not a 390 series) but also still had the leaky original caps in circuit as well. Got to get them old ones out of the circuit...Probably knew that but it was worth mentioning. Cecil...

From K2CBY@aol.com Wed Feb 5 18:26:16 2003
Subject: [R-390] OT Tech Manuals - Army Logistics site access

A previous posting (some time in Jan 03) on this site recommended Army Logistics Agency (www.logsa.army.mil/etms/find-eln) as a source of downloadable tech manuals for current (or at least more recent than R-390A vintage) military equipment. A visit to the site disclosed that it was passworded and access is apparently available only to military personnel and government contract employees (which I am not). I am looking for a service manual for the AN/USM-223 Multimeter, which is certainly not classified material and is listed in the "logsa.army" site catalog. Does Army Logistics (or anyone else) have an open site where this material can be downloaded. Miles, K2CBY

From David_Wise@Phoenix.com Wed Feb 5 18:44:21 2003
Subject: [R-390] OT Tech Manuals - Army Logistics site access

> From: K2CBY@aol.com [mailto:K2CBY@aol.com] >> A previous posting (some time in Jan 03) on this site > recommended Army Logistics Agency > (www.logsa.army.mil/etms/find-eln) as a source of > downloadable tech manuals for current (or at least more > recent than R-390A vintage) military equipment. A visit to > the site disclosed that it was passworded and access is > apparently available only to military

Into the breach again, Miles. It looks forbidding, but don't get scared off. You can download all manuals except the restricted ones. You'll know when you hit one of those, the black helicopters will come :-)

If you start directly from www.logsa.army.mil, click "Enter", then "Publications and Forms", then

"ETMs Online", then "I accept", then "Enter the site". 73, Dave Wise (SWL)

From r390a@enteract.com Wed Feb 5 18:58:19 2003
Subject: [R-390] OT Tech Manuals - Army Logistics site access

If you start directly from www.logsa.army.mil, click > "Enter", then "Publications and Forms", then > "ETMs Online", then "I accept", then "Enter the site". >> 73, > Dave Wise (SWL)

On a "Search Results" page, as you run your mouse over the PIN, TM Number or title, the file name will appear at the bottom of your browser. If it's in an 'A' directory, then anyone can download it, otherwise an account is required. To the best of my knowledge, ordinary hobbyists like ourselves do not rate accounts. I believe you need to be on a US-domain to d/l even the 'A' items.

Examples:

<https://www.logsa.army.mil/etms/data/A/006287.pdf> <- Okay
<https://www.logsa.army.mil/etms/data/D/006286.pdf> <- Account needed

It's a mystery to me why some manuals are not in the 'A' group as the equipment may be purchased readily on the open market and often original manuals can be found on eBay. Go figure. 73.../dave N9ZC

From windy10605@juno.com Wed Feb 5 21:09:31 2003
Subject: Fw: Re: [R-390] Electrolytics

I think I've got it, replaced the internals with 3 new electrolytics and, since I was a little aggressive removing the internals of the old electrolytic (didn't realize how much "tar" there was inside), found some aluminum tape and it looks pretty good. Next time I'll use a razor saw and cut off only the rolled lip and "heat" the internals to remove themoutside.

Found a qty of "line to 4-8 ohm" transformers ...apparently they work well from 600 ohms to 8 ohms. Gads, I threw away about 20+ of them because I didn't know what they could be used for. The R-390A is playing already, but not on all bands. Jumpers on the terminal strips in backin the correct places, makes a BIG difference. 73 Kees K5BCQ

From wb5hak@sirinet.net Thu Feb 6 03:00:29 2003
Subject: [R-390] Oscilloscope Manual

Anyone in the group need a nice manual (original) for the 535A/545A Tektronix scope?? Yours for postage. 73, Don, WB5HAK

From wb5hak@sirinet.net Thu Feb 6 03:09:18 2003
Subject: [R-390] Scope manual

Hold the emails, AI was quick!! Manual is gone. 73, Don, WB5HAK

From w5kp@direcway.com Thu Feb 6 12:14:07 2003
Subject: [R-390] F.S URM-25D Signal Generators

Ok, ok, I know the cross post rule, etc. But r-390 guys need to know about this. Might be the find of the year for some.. 73, Jerry W5KP

From drewmaster813@hotmail.com Thu Feb 6 18:37:47 2003
Subject: [R-390] ElectrolytiCapacitors

Kees wrote: >I think I've got it, replaced the internals with 3 new electrolytics >and, since I was a little aggressive removing the internals of >the old electrolytic (didn't realize how much "tar" there was >inside), <snip>

The Official R-390A List designator for electrolyticapacitor internals is not "tar", it is "uckumpucky" :)

>found some aluminum tape and it looks pretty good. >Next time I'll use a razor saw and cut off only the rolled lip >and "heat" the internals to remove themoutside. <snip>

A hacksaw carefully guided into the radius where can flares out to base diameter works well also. Make one light cut motion, roll the cap slightly, make another light cut connecting to the first, roll again, etc. After a few revolutions the saw will start to break through. Done right, this leaves a very even cut square to can's axis.

When can is cut, uckumpucky can be very easily removed. Do not cut through internal aluminum connecting straps yet; these along with base provide a way to pull out uckumpucky. Heat can with profane gas torch, keep flame moving and heat more around top end of can (do not heat the now loose base). Wear leather work gloves, grip base and can, gently pull base away and uckumpucky will come out with it. Heat more if stuck. If you overheat, can will start to rise off of base on its own, as though possessed and rising from the dead.

If you have lathe access, cap can be opened by facing off rolled edge and rubber gasket right down to plastic base. Metal spacers/shims may be inserted between pins for support then pins gripped in vise. Taking care not to melt base, apply heat then gently pull can off leaving base with attached (semi melted) uckumpucky.

Is the other (non-disumpuckyed) cap made by General Instruments? If so, redo that one before it fails, spewing corrosive goo all over the inside of your radio. The General Instruments caps are much more prone to failure than caps of other manufacture; at this age quick failure is almost guaranteed. Resultant B+ short circuit is not a nice thing to do to transformer/rectifiers/chokes even in a 3-fuse radio.

>Found a qty of "line to 4-8 ohm" transformers ...apparently >they work well from 600 ohms to 8 ohms. Gads, I threw away >about 20+ of them because I didn't know what they could be >used for <snip>

Besides the usual audio applications, they can be used as step up transformers in bias supplies. Connect low impedance winding to 6.3 VAC filament line, rectify and filter output from high impedance tap of your choice. I did this in the otherwise all line operated Hallicrafters HT-9 transmitter to replace 45V bias battery. Drew

From w5kp@direcway.com Thu Feb 6 18:49:28 2003
Subject: [R-390] Front Panel Paint Removal

Looks like I've got the world's toughest paint on this Imperial/Teledyne front panel. Three different types/brands of paint stripper, the last (marine epoxy stripper) left on for 36 hours with the final result only a mild discoloration of the original grey. Didn't even soften it. I've done several others without this problem, don't know what they used for paint but it is *good* stuff. Thought of chemical dip-stripping, but would like to preserve the original paint/lettering on the rear of the panel.

At this point I'm leaning toward possibly some type of bead or soda blasting. Does anyone know if this has been successfully done without rounding off the edges of the lettering? If so, is there a small job shop I should know about that I can ship this thing to? Local sandblast shops around here just shrug their shoulders and want to know if I have a bridge I need done. Last resort, I'll take it down to the local powder coat shop, and I'm sure they would do a beautiful job, but that would of course wipe out the lettering on the rear of the panel. Sage advice, please. Thanks, Jerry W5KP

From Walter Wilson" <walter@r-390a.us Thu Feb 6 21:23:28 2003
Subject: [R-390] Front Panel Paint Removal

Jerry, Bead blasting with plastic media works fine, and does not round the edges of the engraved lettering. I've never tried anything harder than plastic beads, for fear of damage to the panel. The tough panels are still a bit challenging even with bead blasting, but it works far better than anything else I've tried. Walter Wilson - KK4DF

From cbscott@ingr.com Thu Feb 6 21:30:20 2003
Subject: [R-390] ElectrolytiCapacitors

<snip> Heat can with profane gas torch, keep flame moving <snip Drew

Where can I buy one of these torches? I know I've needed it when working on my R390A. Barry - N4BUQ

From cbscott@ingr.com Thu Feb 6 21:32:40 2003
Subject: [R-390] Front Panel Paint Removal

I just use 400-grit wet-or-dry and finish with an aircraft-grade stripper for aluminum panels for the lettering. It takes a few applications, but using a very stiff nylon brush will aid this process. The lettering is preserved very nicely this way. Barry - N4BUQ

From Dave_Faria@hotmail.com Fri Feb 7 02:03:28 2003
Subject: [R-390] Front Panel Paint Removal

Jerry, I like to use aircraft paint stripper by Klean-Strip. It may take two or three applications. My auto body paint distributor stocks the stripper. I use a plastic paint scraper from Home Depot. The anodized primer on a 390 non A panel I am working on is still intact. To clean the engraved lettering I use the stripper and a power washer set at pencil point stream. The repainted panel almost always comes out good with sharp lettering... The power washer is a 110vac 1300psi cheapo that is used on my drive way and deck. the stripper needs a well ventilated area and temp 60 deg. Feh. or better. Read the can instructions. A quart is abt \$15 I think.

From windy10605@juno.com Fri Feb 7 18:05:13 2003
Subject: [R-390] Some more R-390A questions

More questions for the experts.

Since this unit has not been worked on by anyone, except me replacing the one bad electrolytic, missing jumpers, one bad tube, lubricating the gear train and slug racks, etc, some improvement has been seenbut it's not nearly enough.

So far, the unit receives the Broadcast band but the other bands are very weak. Last night the GFI trippedthe AC filter on the unit has a problem so it will be replaced. I assume that, as with any 35 year old radio, all the tubular capacitors need to be replaced, maybe high value resistors checked, etc. What other things do I need to go through ? Or should I just replace the "definitely bad parts". I seen several pieces of military/ commercial (HP) gear with the sealed tubulars which were just fine after 40 years but not so for the rectangular paper capacitors in URM/25s or any other tubular capacitor which has a broken seal around the leads.

What a marvel of Mechanical Engineering expertise. 73 Kees K5BCQ

From G0uut@aol.com Fri Feb 7 18:23:36 2003
Subject: [R-390] r390a sell?

hello to you all im new to this fine group , i wonder is any one in uk england like to sell R390A please . many thanks for any info elan G0UUT

From courir26@yahoo.com Fri Feb 7 19:08:17 2003
Subject: [R-390] Some more R-390A questions

Have you checked the alignment of the cams in the RF deck? I've never acquired one that was set up properly. This will kill sensitivity if set up wrong.

From tbigelow@pop.state.vt.us Fri Feb 7 19:51:26 2003
Subject: [R-390] Front Panel Paint Removal

Jerry Kincade wrote:

> Looks like I've got the world's toughest paint on this Imperial/Teledyne > front panel. Three different types/brands of paint stripper, the last > (marine epoxy stripper) left on for 36 hours with the final result only a > mild discoloration of the original grey. Didn't even soften it

My dad has worked in sandblasting for many decades as a shape-carver. If you can find a small granite/monument shop they'd be more likely to take a one-piece job. They have different levels of abrasive to use as well. Still, I'd caution you against using this route as it will likely round off your letters and leave you with a fairly rough panel. Cabinets or plain panels, sure - you can always prime/sand/paint them and fill the mild pitting from the abrasive. But stamped/engraved letters are a whole different ball-o-wax. I've never had anything bead-blasted, but it sounds like a safer bet to me. I've heard of people burning paint off, but this sounds like a good way to warp a panel or get some really bad fumes into your system.

Nice to know the Teledyne's have such tough paint. Maybe that explains why mine still looks so good? Not being a 'depot dawg' there has to be SOME explanation... Good luck with it, Jerry - de Todd/'Boomer' KA1KAQ

From w5kp@direcway.com Fri Feb 7 21:35:17 2003

Subject: [R-390] Imperial/Teledyne Front Panel Paint Removal

Thanks for all the excellent ideas and helpful comments on this. Talked to a local plastic bead blaster this morning who looked the panel over and said he'd be afraid to try it, he was pretty sure it would round out the lettering, even using plastic media. **However, he had a gallon can of "Jet-Strip" that he swears by sitting there, so he swabbed a bit on a corner (it was 16 degrees in the outside doorway we were standing in) and in about 3-4 minutes the paint was soft enough to scrape with a fingernail. He said it works much faster (!) in a warm environment. Jet-Strip is an automotive and aircraft paint shop product, available at O'Reilly's Auto Parts stores for \$20 a gallon.** It doesn't appear to be available in quarts. Washes off with water, works when nothing else would, he said it also eats skin like a brown recluse spider bite, chemical/rubber gloves are required. I bought a gallon and will go at it this weekend. I expect to finally be able to paint this thing lime chartreuse with black lettering like I always wanted. (just kidding). Thanks again to all. Jerry W5KP

P.S. I finally unpacked my new CY-979/U cabinet from the carton. Boy, is it pretty. Now I have to get as good a finish on the front panel as is on the cabinet!

From ham@cq.nu Fri Feb 7 22:19:41 2003

Subject: [R-390] Some more R-390A questions

Hi, It is *normal* for the R-390's to trip GFI's. They made them back when things got wired differently. When ever you use a 390 or other radio gear from before about 1960 you need to be careful of having a "warm" or even a "hot" chassis.

Here's what's going on and why:

Warm Chassis - both sides of the AC line are filtered to the chassis with some reasonable sized capacitors. This results in the chassis floating at roughly 60 VAC when the chassis is ungrounded. A simple check with a high impedance AC voltmeter will confirm this. The thing to check for is a voltage way off of 60 VAC. If the chassis is at 120 or at 0 VAC with the ground lifted then you have a capacitor problem. I would guess that about 99% of all the military and Ham gear made back then came out with a warm chassis. It will give you a bite if you have it ungrounded. You should always make sure it's grounded.

The current through these capacitors is often just enough to trip a GFI (thus your problem). The solution is to either put the radio on a non-GFI circuit or to get an isolation transformer. Depending on the way your house is wired you may or may not have any non-GFI plugs.

Hot Chassis - One side of the AC line is hooked directly to the chassis. Yup, not a typo - the AC line is on the chassis. A fast way to spot these is often the fact that there is no transformer in the radio (or TV). It was a cost saving measure that must have been a lot of fun back then. I am amazed that it didn't kill people left and right. If you have one of these my recommendation would be to not plug it in to the wall. Get an isolation transformer first and run it through that. Take Care! Bob Camp KB8TQ

From Scott Seickel" <polaraligned@earthlink.net Fri Feb 7 22:32:43 2003

Subject: [R-390] Imperial/Teledyne Front Panel Paint Removal

I use a aircraft paint remover available from Eastwood Co. to do all my metal stripping. Problem with paint removers available "retail" is that they are all "environmentally friendly" which equates to "not working". Ya see, the paint was not that tough afterall. Scott

From jbrannig@optonline.net Fri Feb 7 22:41:51 2003

Subject: [R-390] Imperial/Teledyne Front Panel Paint Removal

For wood stripping I've given up on the "friendly" strippers. A heat gun does a better job (for wood , not R-390's) Jim

From windy10605@juno.com Fri Feb 7 22:39:20 2003

Subject: Fw: Fw: Re: [R-390] Some more R-390A questions

I appreciate the comments on GFI tripping with the R-390A. The other military gear like my TV-7 and all the URM/25s I've had were perfectly happy with a 3 wire cord.

I pulled the audio chassis because it's easy to do and found all the capacitors and resistors to be in fine shape. No changes in value outside tolerance and no leakage on the capacitors. Since I had it apart, I did replace all five coupling capacitors with mylar units because I had them. From this I'm assuming the rest are overall in pretty good shape too. Also found some rectangular aluminum cans with octal plugs on the bottom. Should make a really nice set of electrolytics which can be readily disassembled.

The heterodyne osc reads low on all frequencies (the TP reads around 0.5-1.5V). I know that's a problem and may be the cause of everything else. That's where it was left when the GFI blew.

Have to figure out how best to replace that filter without hosing something up because the R-390A will have a 3 wire cord and everything in the shack/shop is on GFI (concrete floor, using power tools laying on your back under a car, sweaty, etc). Thanks for your comments. 73 Kees K5BCQ

From ba.williams@charter.net Sat Feb 8 02:21:11 2003

Subject: [R-390] Front Panel Paint Removal

I used to sandblast too. What you want to ask for is sand-texting. We used a hard, metal nozzle instead of ceramic ones. Also, the nozzles are much smaller in diameter. Sandtexting is what you do to frost rifle receivers, etc. It lightly frosts the metal with very small pits. Regular sandblasting will make very big pits and burn away the edges of the lettering. The pits are excellent for holding paint and primer. A good coat or two of primer should smooth out the surface. Also, the sandblaster could hold the nozzle at a much great distance from the panel to further stop any eroding of the letter edges. This gives a less concentrated column of air/sand to hit the surfaces. That is what will erode edges quickly. Barry

From jbrannig@optonline.net Sat Feb 8 12:53:52 2003

Subject: [R-390] CV-591

An update: I've been working on this radio for a while. All the paper tubular capacitors were replaced. The first variable oscillator is unstable so I started to selectively replace by-pass and coupling capacitors. As the "postage stamp" silver micas and tubular micas are pulled, I check them and have found that they are all VERY leaky. I finally realized that this radio will require a TOTAL re-cap to bring it back to spec. This unit has been in use for quite a while and I am surprised at the deterioration of the components. Jim

From windy10605@juno.com Sat Feb 8 16:11:11 2003
Subject: [R-390] R-390A AC filter ??

Does anyone know what's inside the AC line filter ? (circuit wise). I searched the archives and could not find anything. 73 Kees K5BCQ

From asolway@sympatico.ca Sat Feb 8 17:24:50 2003
Subject: [R-390] R-390A AC filter ??

Kees, Go to Chuck Rippel's site at, <http://www.r390a.com/>

Down load the Y2k Manual. It's on the Chucks first page. This is the best all around site for R-390A info. Page 5-50, Figure 5-24 of the manual shows the innards of FL101, the AC line filter. Component values are not given but the schematic is shown. I am sure others will respond with more info. Al

From DCrespy@aol.com Sat Feb 8 17:54:36 2003
Subject: [R-390] Front Panel Paint Removal

I have had AWESOME results using a local furniture refinisher and their paint removal bath. \$20 did two panels. Lettereing is clear with very crisp edges. Absolutely clean of all paint. Only problem: both sides get stripped (if you are trying to preserve the back of panel silk screening). 73 Harry KG5LO

From ToddRoberts2001@aol.com Sat Feb 8 18:17:05 2003
Subject: [R-390] R-390A AC FILTER

I wonder if anyone has any opinions on using one of those IEC-type connectors on the back of an R-390A radio for a line-cord input? I have one R-390A that someone had modified this way and really like it. A typical IEC 3-prong plug will fit through the original mounting hole so the IEC connector can be mounted flush on the inside of the back panel without having to enlarge the hole. This takes care of grounding the set also when the connector is properly bonded to the chassis. I know at least one mail-order house that has the IEC input connectors with a Line-Filter built-in with a 3-AMP rating for about 2-3 bucks each. It is really nice to be able to unplug the line cord when moving or working on the set and not have the cord getting in the way. Properly done the mod looks very nice. 73 Todd Roberts WD4NGG.

From Llgpt@aol.com Sat Feb 8 18:27:40 2003
Subject: [R-390] R-390A AC FILTER

Many of the R-390A's that went through the depots towards the end of the utilization of the R-390A/URR by the military had this modification done at the depots. I have had two different 67 EAC's

that had this done. Les Locklear

From anchor@ec.rr.com Sat Feb 8 18:38:29 2003
Subject: [R-390] R-390A AC FILTER

I did it in my R-390. Some may say that it's desecration, or some such, but it is reversible, and it's nice to not have a cable hanging out when you want to move things around. I don't think my heirs will mind ;-)
73, Al, W8UT

From barry@hausernet.com Sat Feb 8 18:39:10 2003
Subject: [R-390] Front Panel Paint Removal

Hi Harry & gang: That sounds like a very good idea. Stripper is nasty and messy with gooey caustic glop slopping and plopping all over the place. If some gets on your garage floor, you'll be looking at gray splotches for many a year to come.

As for the rear panel silk screening, it might be a good idea to refinish that as well, with transfer lettering and a clearcoat. (Doesn't have to be perfect, 'cause ya' can't see it!) Even when you mask the panel holes on the reverse side, some stripper soaks through and takes some paint on the back anyway.

Of course, if your paint job doesn't come out so great the first time, you may need to strip it again yourself anyway. However, that comes off much more easily -- but still mess-ily. Don't ask me how I know this ;-) Barry

From barry@hausernet.com Sat Feb 8 19:34:46 2003
Subject: [R-390] R-390A AC FILTER

An important communique from the International Yeah-But Society and Drinking Club:

Yeah but ... (all official communiques start this way) ... THAT means your R-390A will have the same power connector as a PEEEE CEEE. Yechhhhh!

Soooo this could happen 50 years from now somewhere out there a brief exchange among Al's heirs:

Heir #1: "Oooo lookie, this ol' big gray radio has the same AC socket as this ol' PC!" ...

Heir #2: "Too bad, I thought the radio might have been worth somethin'. Throw 'em both in the dumpster."

Heir #1: "Looky here -- another one of those rare Radio Shacks. Hear tell they used to be a big time outfit long ago, until they decided to sell phones, and other brands of stuff and stopped carrying the measily parts they used to carry."

Heir #2: "That's great!. Put it up on ePlace with a reserve of \$15,000 an' a Buy It Now of \$20,000 an' don't forget to call it @RARE@."

Deppity Director IYBS&DC P. S. I'm kiddin', but I ain't kiddin' -- know what I mean?

From ToddRoberts2001@aol.com Sat Feb 8 20:45:12 2003
Subject: [R-390] R-390A AC FILTER

If anyone would like to see a picture of the R-390A with the IEC line-cord mod you can go to this address : <http://members.aol.com/toddroberts2001/Item9.jpg>

From R390rcvr@aol.com Sat Feb 8 22:07:22 2003
Subject: [R-390] R-3909(non A) - ten turn stop question

Good evening all! A rather sad R-390 followed me home last night. One of the oddities is that it won't go onto band one. The megacycle shaft hits the ten turn stop before it will allow the gearing to drop into the detent. Its close, but won't quite make it. It seems to go a bit too far on the high end of the range.

I have looked through the manual for this radio, and the R-390A, and although the stops are discussed, how to adjust them isn't. I am not going to do a complete gear train dismantle at this point, and wonder if just that adjustment can be done, without upsetting synchronization?

There is a clamp on the gear driven by the MC shaft, so perhaps by locking the dial lock, loosening that clamp, and rotating the shaft just enough to allow it to drop into the detent will work? The radio is working, kind of, so I would like to not disturb too much until I have a good baseline performance check. Thanks Randy Stout

From windy10605@juno.com Sat Feb 8 22:47:36 2003
Subject: Fw: [R-390] R-390A AC FILTER

Couldn't figure out a clean way to modify the original filterso

That's what I just completed on this R-390A: 1) found a sealed, metal enclosed filter rated at 3A, about the same size as the original, which has an integrated IEC connector, 2) relocated the bathtub capacitor to make room, 3) made an aluminum adapter plate to match up the 4 holes in the R-390A (old filter and relocated bathtub capacitor) to the new filter, 4) since the receptacle is now recessed, shaved a little plastic off the cord end to allow complete insertion. Works great, no additional holes, reversible, no more tripped GFI, no more "tingle". 73 Kees K5BCQ

From anchor@ec.rr.com Sat Feb 8 23:50:35 2003
Subject: [R-390] R-390A AC FILTER

From: Couldn't figure out a clean way to modify the original filterso

Is that OK with the International Yeah-But Society and Drinking Club? Al

From courir26@yahoo.com Sun Feb 9 00:09:21 2003
Subject: [R-390] R-3909(non A) - ten turn stop question

Randy, I've never had to adjust the ten turn stop on the Mcs Change shaft, but there should be nothing wrong with doing what you suggested. You're not going to break it. Make sure you tighten it up well, as this is probably how it got whacked in the first place. 73 Tom

From redmenaced@yahoo.com Sun Feb 9 00:15:29 2003
Subject: [R-390] R-3909(non A) - ten turn stop question

Better check the stop pin on the Geneva drive on the bandswitch under the RF deck, too. That may be where the stoppage really is. Joe

From barry@hausernet.com Sun Feb 9 01:04:35 2003
Subject: [R-390] R-390A AC FILTER

Al asks .. > Is that OK with the International Yeah-But Society and Drinking Club?

Well Al, It's after hours on a Saturday night, and the Yeah-But division is closed. However, the Drinking Club is open and thinks it's terrificcckkk, hic .. urp. Seriously though, howabout some photos of what you did? I think I have some of those "computer filter" things -- 3 amps sounds familiar -- around here somewhere. But, can't quite picture it. Barry

From dsmaples@comcast.net Sun Feb 9 01:28:07 2003
Subject: [R-390] R-390A AC FILTER

All: That's what I did with mine, and used a Corcom filter on it to boot. Like it just fine. Dave WB4FUR

From R390rcvr@aol.com Sun Feb 9 01:44:49 2003
Subject: [R-390] Ten Turn Stop adjustment

Thanks guys: I decided to just go ahead and try it. I forgot that the dial lock doesn't lock the MC knob, but it really isn't needed. I had visually checked the stop, and there was no doubt that in this case, it was the stop limiting the travel.

I loosened the clamp slightly, turned the large MC gear that the clamp holds, until the veeder root registered between 00 and 99 when just off the detent, all the way to the stop. That is the position specified in the manual. Snugged the clamp, and I now have full range. I had never had any problems before with a ten turn stop either, but this poor radio has been rather roughly treated, and I suspect someone had slammed it against the high end of the stop, and it shifted slightly. I think to the casual user, they see there are higher numbers on the Veeder Root, and try to keep turning beyond the end of the normal range!

This rig has a Cosmos PTO, which I don't recall seeing in a non A. I have only seen Collins or Motorola PTOs. Some of the wiring for the PTO is cobbled together. Could you adapt a R-390A PTO to the non A. The bracket is definitely for the non A. Thanks again folks. I will have a few more questions, as I get into it more. Randy Stout

From anchor@ec.rr.com Sun Feb 9 01:45:41 2003
Subject: [R-390] R-390A AC FILTER

Hi guys, Well, it's been almost 5 years since I did it, and haven't looked at it for almost that long. I might not even be proud of what it looks like now, I have learned a little in 4 yrs, I hope. But, I'll see if I can get it exposed without moving too much iron. Give me a cupla days to gather up strength. I've been

body building on SP-600's (comparative lightweights) recently. But you gotta promise to call off the IYBS&DC. 73, AI, W8UT

From mark.richards@massmicro.com Tue Feb 4 13:07:06 2003
Subject: [R-390] Update to R390a Restoration Information

I have been embarking on the unique adventure of restoring my R-390a and have updated my web site with some new photos and brief descriptions of the work thus far. They may be viewed here: <http://www.massmicro.com/boatanchors> There are two new pages describing more gear disassembly and sub-chassis removal. This is extremely photo-intensive, although I have gone to considerable length to make certain the images are useful and not too large. Bon appetit! Mark Richards Boston

From windy10605@juno.com Sun Feb 9 19:36:26 2003
Subject: [R-390] Continuing on the R-390A

I now have this unit completely apart and am going through it looking for defective parts, etc. First, I'd like to thank all the people who made the Y2K R2 manual available on-line. Really great job guys. Unit sure comes apart easilybut I guess you knew that (I didn't).

What I'd like to know is, what are the suggested functional modifications (I'm a little confused by all the postings over the past few years) which I might as well implement while it's apart.

It's a 1967-68 R-390A built by EAC (parts are stamped with around 9/67 date codes). So far I have:

- 1) replace the AC filter with one that does not make the chassis "warm" and trip GFIs
- 2) add a 3-wire power cord
- 3) substitute modern electrolytic "innards" for C603 and C606
- 4) replace the carrier meter potentiometer with a good 100 ohm, 10 turn, potentiometer.
- 5) add Dallas Langston's two diode AGC fix for SSB

What else ? 73 Kees K5BCQ

From Aidehua@aol.com Sun Feb 9 20:14:51 2003
Subject: [R-390] Need SP-600 Parts...Help!!

I have a mint condition SP-600 that had a mishap...The bandspread side lost its glass and the bezel has a dent...I would like to replace both...Can you help? Much obliged. 73, Ed NI6S

From ham@cq.nu Mon Feb 10 00:38:06 2003
Subject: [R-390] Continuing on the R-390A

Hi, Odd thing about the 10 turn pot modification. You really need a different value pot. Strange but true

If you take a look the pot has a 22 ohm resistor across it. When the pot is set to the high end the parallel combination comes out to 18 ohms. The combination is in series with a 680 ohm resistor so it's not like they had to do it to keep anything from burning up.

I have checked a couple of radios and have yet to find one that comes up with more than 15 ohms

for the combination of the pot and the 22 ohm resistor. Normally they seem to run around 7 ohms or so.

If you can get your hands on a 20 or a 25 ohm pot that should improve the situation over the stock part 3 or 4 X. Of course you would have to change the 22 ohm resistor but that's pretty easy to do.

Another way to do it would be 5 ohm pot with a selected resistor in series with it. Again you could use a small single turn pot rather than a big ten turn job. Getting the 10 turn pots under the bracket can be a pain. Take Care Bob Camp KB8TQ

From BRingwoo@csir.co.za Mon Feb 10 06:40:44 2003
Subject: [R-390] r390a sell?

Hi there, Try <http://www.armyradio.com/> - They have R 392 advertised. (Was going to get mine from there but shipping to S Africa cost more than the radio) - Bryce

From pwokoun@hotmail.com Mon Feb 10 07:34:36 2003
Subject: [R-390] Continuing on the R-390A

Mouser sells a 10 ohm pot that works perfectly. Xicon/Alpha 24mm Wirewound Potentiometer 24MM WIREWOUND 10 ohm Makes zeroing very easy. pete, KH6GRT

From plmills@attglobal.net Mon Feb 10 13:41:20 2003
Subject: [R-390] OT need microswitch help

Hello, I need to replace the microswitch on my cardmatic tube tester. The only markings other than the UL stuff is "41SM1-T". It is a dpst switch that is about 3/4 inches long, 3/8" wide, and 3/16" thick. I can't seem to find microswitches in the catalogs anymore. Any and all help appreciated, Phil W5BVB

From sdaitch@gre.ibb.gov Mon Feb 10 13:47:53 2003
Subject: [R-390] OT need microswitch help

Phil, Cant guarantee you this will do what you want but see:

[PDF]Basic and Precision Switches File Format: PDF/Adobe Acrobat - View as HTML ... 642-1118
11SM1 3 Pin Plunger 5 Solder 3.45 642-1119 11SM1-T 3 Pin Plunger 5 Wire Wrap 3.45 642-1120
411SM1 3 Pin Plunger 5 Solder 8.35 642-1121 41SM1-T 3 Pin ...
www.alliedelec.com/catalog/catalogpages/2002/916.pdf - Similar pages

[PDF]Basic Switches File Format: PDF/Adobe Acrobat - View as HTML ... 4.69 4.40 4.25 6115-1SM1
E 5A @ 250VAC - - - 3-5 .330±.015 4.69 4.40 4.25 6115-411SM1 E 5A @ 250VAC - - - 3-7.5
.330±.015 8.50 7.97 7.70 6115-41SM1-T E 11A

...
www.mouser.com/catalog/612/594.pdf - Similar pages

[PDF]Interactive Catalog Replaces Catalog Pages File Format: PDF/Adobe Acrobat - View as HTML ...
005 .004 .330 solder terminals 22SM1-T Best stability under 5 Amps 0,83-1,39 0,28 0,51 0,13 0,1 8,38

varying humidity J 3-5 1 .020 .005 .004 .330 41SM1-T Up to ...
content.honeywell.com/sensing/prodinfo/ basicswitches/catalog/11.pdf - Similar pages 73 Sheldon
WA4MZZ

From windy10605@juno.com Mon Feb 10 20:39:05 2003
Subject: [R-390] 2nd Crystal Oscillator question

The levels I measure now at E402 are about half of what you should see (-2.5V to -5V should be -4V to -11V) with a good VTVM. The cathode measures 0.9V should be 2V. I replaced the 6AK5 with a better one, all the caps check good on value and leakage, the cathode RF choke measures 0.5mH, the 120K grid resistor is OK, B+ levels are OK, replaced the 12pf and 150pf capacitors anyway (with 10pf and 130pf), replaced one crystal to see what happenslevels got a little better (to the above -2.5V to -5V). Any suggestions ? 73 Kees K5BCQ

From David_Wise@Phoenix.com Mon Feb 10 22:08:29 2003
Subject: [R-390] Continuing on the R-390A

> Mouser sells a 10 ohm pot that works perfectly. > Xicon/Alpha 24mm Wirewound
Potentiometer > 24MM WIREWOUND 10 ohm

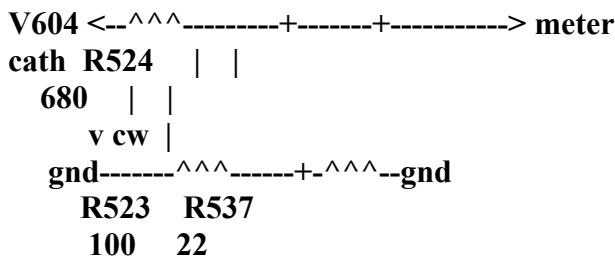
Rather than changing the pot (the brute-force approach), I changed the wiring slightly, and got a linear adjustment range with the original pot.

If you compare the R-390 with the R-390A, you will find that the former has a 15-ohm WW, while the latter has the 100-ohm carbon || (in parallel with) a 22-ohm fixed. A comment in the Cost Reduction Report says this was a response to the discrete steps of the old WW pot. Retrofitting a WW, even a 10-turn, will bring back the discrete steps unless it's some kind of metal film instead of wound wire.

The R-390A arrangement is continuous, but it's also very nonlinear. According to Y2K Figure 5-6, V506A idles with about 100mV at the cathode. V504 cathode is 9V which puts 13mA through the R524/R523/R537 network. To get 100mV (i.e. meter zero), R523||R537 must be 13 ohms, i.e., R523 must be 32 ohms or about 1/3 rotation.

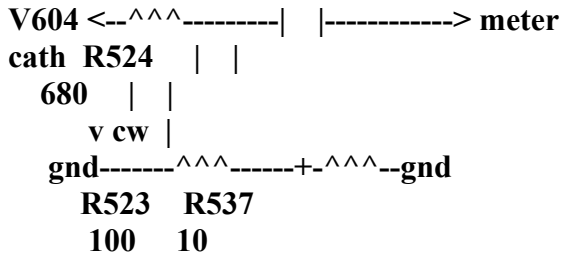
For smaller offsets things deteriorate rapidly. My V506A idles at 60mV instead of 100 . This requires 4.6 ohms total or R5233D 5.8 , which is practically against the stop.

Original circuit:



V604 sees 680 to 700 ohms. The meter sees 0 to 18 ohms, with a nominal value of 13 and in my case 5.

What I did:



With this arrangement, V604 sees between 680 ohms and 710 ohms, and the meter sees 9 ohms. Full CCW is 0mV. 1/4-rotation is 30mV. 1/2-rotation is 60mV. 3/4-rotation is 90mV. Full CW is 120mV. You can experiment with various values for R537. Larger values will increase the adjustment range and decrease the reading on strong signals. My meter was overindicating with the original circuit so 10 was about right.

Due to the way they used the bridged terminals, the change requires that you move wires from one to the other. I don't remember the details, but with the manual it's easy to figure out.

Why didn't they go the way I did? My humble guess is that this relatively unimportant part of the job fell through the cracks. They probably had a junior engineer calculate the 22 ohm resistor and let it go at that.

This mod can be applied to the R-390 as well as the R-390A. 73, Dave Wise

From rickmurphy1001@earthlink.net Mon Feb 10 22:50:00 2003
Subject: [R-390] 8k filter

Has anyone experienced a decrease in signal strength of about 20 db in the 8k filter position? Sometimes mine will read like the other filter (within + - 2db) positions until the radio is turned off, then back to the 20db decrease. Any Ideas? Richard

From R390rcvr@aol.com Mon Feb 10 23:07:53 2003
Subject: [R-390] 8k filter

Rick: It is likely that the filter is failing. They often will show such a decreased sensitivity before they fail outright. Sorry! Randy

From windy10605@juno.com Mon Feb 10 23:35:06 2003
Subject: [R-390] 2nd Crystal Oscillator question

Thanks for all the great input. I think I found the majority of the "won't receive" problem. While testing (wiggle the cable a little while measuring) coax cables from the RF deck to the IF deck, I noticed a glitch on P218. Took the connector loose and the center pin fell off the wirenot soldered, never been soldered. 73 Kees K5BCQ

From jbischof@nycap.rr.com Tue Feb 11 00:02:54 2003
Subject: [R-390] r390, not the a, audio problem, possibloe agc problem

I have two Junker r30, not the a, and am trying to make one good one. I spent all day Saturday and Sunday and I finally got one to work! My problem is this, I have to turn the limiter on to hear the stations. Radio seems to work pretty good. When I turn the limiter off the carrier level is not affected. When the limiter is off I can hardly hear any audio, but I do hear some ac hum. I do not think it is in the if chassis or power supply module. I did sub the audio chassis with out any luck. I think it might be in the rf deck, but I don't exactly know why I think this. I was also thinking I might have a agc problem. Any help please. James Bischof Schenectady, New York Wa2qin

From windy10605@juno.com Tue Feb 11 04:48:14 2003
Subject: [R-390] Need a gear clamp

While examining the RF deck, a gear fell out. The clamp is broken in half. Looking for one of the ".312 inch hole gear clamps". Does anyone have one available ?73 Kees K5BCQ

From k5op@yahoo.com Tue Feb 11 11:50:23 2003
Subject: [R-390] 8k filter

Murph, This is the characteristic sign of failure...Mechanical filters do not last forever, although most people believe they do.... They are designed for about 20,000 hours of use..... Sorry... 73's WALLY K5OP

From Barry Hauser" <barry@hausernet.com Tue Feb 11 12:33:31 2003
Subject: [R-390] 8k filter

Uh, Hey Wally ... Uh, ummmm .. I don't think the kids wanna know that about mechanical filters. Beaver

Seriously though, some run their '390's 24/7 or nearly. 20,000/24 833 days over 365 2.28 years, roughly 2 years, 3 months. Even taking a mere fraction of that daily usage, it would seem a lot of our filters are on borrowed time. Then, again, I've come across quite a few bad crystals. "A diamond is forever", but maybe not quartz. OK, time for somebody to start working on direct replacement DSP filters. Tough part is going to be stuffing them into those shiny little cylinders. ;-) Barry

From w5kp@direcway.com Tue Feb 11 12:29:44 2003
Subject: [R-390] 8k filter

Filter could be going down the tubes, I guess, but looking closely at the IF deck bandswitching contacts might be worthwhile before hunting a new filter. Maybe a touch of Deoxit on a toothpick. Won't hurt, might help, especially if the problem appears and disappears with bandswitch changes. 73, Jerry W5KP

From w5kp@direcway.com Tue Feb 11 12:33:51 2003
Subject: [R-390] 8k filter

Did I say bandswitch? I meant bandwidth. Sorry. Jerry

From mark.richards@massmicro.com Tue Feb 11 17:36:40 2003

Subject: [R-390] Need a gear clamp

Try Dave Medley at <http://www.davemed.com/> davidmed@davemed.info I purchased a few

From cbscott@ingr.com Tue Feb 11 17:46:38 2003

Subject: [R-390] Need a gear clamp

Didn't Hank remanufacture these (or is that just wishful thinking)?

Barry - N4BUQ

From djmerz@3-cities.com Wed Feb 12 00:25:43 2003

Subject: [R-390] warm outlet?

Hi, not exactly 390a but related. What is most common reason for a wall outlet getting warm when drawing about 8 to 10 amps? This is in relatively modern (70's) home with 3-wire wiring and otherwise behaving itself. I'm asking this on behalf of my daughter who reported this happening at her home about 150 miles away and has stopped using the outlet for the heater associated with the behavior. I'd have a look at the outlet innards if I were there and told her she probably needed to replace the outlet. I'm fairly sure it's copper wiring as she mentioned seeing copper wires when replacing a light fixture earlier this year. Any other suggestions or similar experience? thanks, Dan.

From ham@cq.nu Wed Feb 12 00:39:37 2003

Subject: [R-390] warm outlet?

Hi,

1) Loose wires on the back of the outlet - even with copper wire you can have loose screw downs or bad push ins. Either way the wire needs to be in there tight. If it's a screw down that's easy. If it's a push in - replace it.. Outlets are cheap - fires are expensive.

2) Heat duct near the outlet. It just shows up because the outlet conducts heat better than drywall does.

3) Bad contacts on the front of the outlet. This can be either a cord or the outlet it's self. Not to common but it does happen. I had to replace about a third of the outlets here because they were shot. I think somebody had a VERY large plug on the end of the vacuum cleaner here

4) Heat rising from R-390 sitting under the plug ...

That's about all I can think of except for ... 5) Fire in the wall run !!! :) Care! Bob Camp KB8TQ

From courir26@yahoo.com Wed Feb 12 01:33:49 2003

Subject: [R-390] warm outlet?

What is the temp on the other side of the outlet. Is she in Tucson or in a cold clime? If it is not the

environment on the other side of the wall, I'd check the connections on the screws. Tom

From eberbari@indy.rr.com Wed Feb 12 03:41:33 2003
Subject: [R-390] Old EE texts

Hope this is on topic. I know that many of you have had an engineering education and are at least in the 50 plus age range. Hence my inquiry may make some sense to you. I have been collecting the electrical engineering texts in the Frederick Terman - McGraw Hill series. These books were published from about 1946 to 1970 and cover the "modernization" of the EE curriculum. By this I mean the inclusion of high level math and theory and up to the period just before computing became popular. Most were bound in black cloth with red pin stripes on the spine (this can vary with orange in the Princeton sub-series or green in the Brooklyn Poly sub-series). Frederick Terman's contributions were his multi-editions of Radio Engineering. In addition, Terman was well known as the former head of EE and the Dean of Engineering at Stanford and the one who encouraged Dave and Bill to build that audio oscillator in their garage.

Well, I figured there were about 144 different books in this series and I have collected many of them. I have an excel spreadsheet which I would be glad to share if you are indeed interested or have something to offer. The remaining ones are becoming more difficult to find so I am broadening my search. Thanks for your patience. Ed, W9EJB

From bill@iaxs.net Wed Feb 12 04:28:30 2003
Subject: [R-390] warm outlet?

Well now, I replaced a 25 amp outlet that had melted the plastic that held things in place. The incoming #10 wire had been crimped to a ring lug and the lug secured under the screw. But #10 is very stiff, and when the outlet was installed in the wall, pressure on the lug loosened the screw. That provided enough resistance to heat the connection to the melting point of the foundation plastic. Also, an outlet that had been frequently unplugged and plugged had tight connections but the plug got hot from the contacts loosened by simple wear. I'm sure there are other reasons, but there's two examples. Regards, Bill Hawkins

From djmerz@3-cities.com Wed Feb 12 06:09:22 2003
Subject: [R-390] Old EE texts

Ed, some of these books are great - I haven't seen them all but don't forget the 1932 edition of Terman "Radio Engineering", but it's not the pin stripe type. This book has detailed stuff on grid leak detectors that was dropped out of later editions, probably because grid leak detectors went out of fashion. Of course, I'm biased by being a grad of Stanford but I never discovered Terman's stuff til well after my college years though he was a legend by my time. We used the W.R. Hill "Electronics in Engineering" for the general electronics course required of all engineers, which is one of your series. It's still on my shelf and referred to occasionally. Nice to hear about your interest, Dan.

From David_Wise@Phoenix.com Wed Feb 12 22:28:22 2003
Subject: [R-390] 8k filter

> From: MURPH [mailto:rickmurphy1001@earthlink.net] >> Has > anyone experienced a decrease
> in signal strength of about 20 > db in the 8k > filter position? Sometimes mine will read like the other >

filter (within + > - 2db) positions until the radio is turned off, then back to the 20db > decrease.

When I had this symptom, it turned out that one of the mica capacitors used to tune the input and output coils of the filter had gone intermittent. 73, Dave Wise

From kc8opp@yahoo.com Thu Feb 13 10:29:15 2003
Subject: [R-390] r390, not the a, audio problem, possibloe agc problem

James, I had the exact same problem here with one of my R390's. But I never determined what the problem was. During trouble shooting and alignment I noticed the problem and put it on the list of things to work on, a long list for this particular radio. As time went by, the problem diminished and finally disappeared all together. The only thing I did was keep the radio on and operating.

Now after 2 years, there is no evidence of the problem, although I know it is lurking in the background. This is a mostly Motorola set and I leave it on 24/7 as part of my AM station.

Sorry I don't have a solution for you, but I would be interested in what you find out. In the mean time, plug it in and let it play. Could work for you too. 73's Roger KC8OPP

From courir26@yahoo.com Thu Feb 13 13:09:29 2003
Subject: [R-390] r390, not the a, audio problem, possibloe agc problem

I hope it is cool in your location. Too darn hot down here to leave them on 24/7. Tom La.

From lester.veenstra@lmco.com Thu Feb 13 13:17:55 2003
Subject: [R-390] r390, not the a, audio problem, possibloe agc proble m

Thats how we keep warm

From jbrannig@optonline.net Thu Feb 13 13:26:42 2003
Subject: [R-390] r390, not the a, audio problem, possibloe agc problem

Its going up to 20 today. It will be nice to open the windows and air the house out..... Jim

From R390rcvr@aol.com Thu Feb 13 14:42:31 2003
Subject: [R-390] R-390(non A) parts manual source

Good day all. I am looking for an online source for TM-11-5820-357-20P and TM-11-5820-357-35P. These are the parts manuals for the R-390. LOGSA and the usual online sources don't list them. Anyone have a source? Thanks Randy Stout

From R390rcvr@aol.com Thu Feb 13 14:45:40 2003
Subject: [R-390] Cosmos in R-390(non A)

Hello all: I just acquired a non A with a Cosmos PTO. I have only seen Motorola or Collins PTOs on the

non As before. The wiring to the plugs has been spliced, so I have to think it wasn't an original fitment. Has anyone seen this mod before? It is only about 1.5 KC long, with good linearity, so won't change out for now, but am curious. Thanks Randy Stout

From jordana@nucleus.com Thu Feb 13 14:51:05 2003
Subject: [R-390] Cosmos in R-390(non A)

Yes, the PTO's can be interchanged with some re-wiring, and a change to BNC cable output... if I recall, the rear offset mount also needs to be replaced as well....73 de Jordan...

From windy10605@juno.com Thu Feb 13 18:25:03 2003
Subject: [R-390] Chuck Rippel's address

Does someone have Chuck Rippel's e-mail ID ? I just used the one on his web site and it bounced. 73
Kees K5BCQ

From billsmith@ispwest.com Thu Feb 13 19:50:03 2003
Subject: [R-390] r390, not the a, audio problem, possible agc problem

(1) Check jumper is installed across TB101 pins 14-15.

(2) I would suspect a leaky C528 (0.22 mfd) or C527(0.047 mfd) capacitor. But any open resistors around V507 or V510 could cause the problem.

(3) If you can loop a small wire around pin 6 of V507, then reinstall the tube, you should see B+ voltage at this point when the limiter switch is off. It should go to zero when the limiter switch is on. If you don't see B+, either C528 or C527 is leaky, or R543 or R541 is open. You can use the same test with pin 1 of V510 to gain more information.

Does the limiter work when it is switched on? C102 (0.22mfd) is sitting in front of the limiter control. Obviously audio is getting through, but are there any other symptoms? 73 de Bill, AB6MT

From ToddRoberts2001@aol.com Thu Feb 13 20:19:50 2003
Subject: [R-390] Re: r390, not the a, audio problem, possible agc problem

If the audio comes through in the receiver only when the limiter switch is turned on, it is very likely a problem in the Limiter circuit. The limiter circuit in the R-390 non-A is in the IF chassis, not the audio chassis. You have indicated no difference when subbing another audio chassis, so this points to the IF deck. I would check the components around V507 and V510. There are some high-value resistors in this circuit that can open up or radically change value. 73 Todd Roberts WD4NGG.

From w5kp@direcway.com Fri Feb 14 00:39:28 2003
Subject: [R-390] FS: FT-1000D, SP-5, DSP-59Y

For you serious DX'ers, my beautiful condition FT-1000D is up for sale. No need to describe what it can do, if you do DX you already know it's pretty much acknowledged as the best all-around DX rig in the

world. Best part is this one is packaged with the matching SP-5 speaker WITH Timewave DSP-59Y outboard DSP unit installed. This wonderful outboard DSP setup is getting pricey and hard to find. It all works perfectly, every band, every mode. The transceiver was sent to Yaesu a couple of years ago to replace a bad filter and for full checkout and alignment (paperwork included), little use since then. Serial number 1L180040 (I believe that's December 1991). Has 6.0 firmware version. Absolutely perfect front panel, I'd have to drag it off the shelf to see if there are any marks at all on the cabinet, but don't remember any. At 60 pounds this beast isn't something you haul out and look over every week. :-)
Guaranteed operationally perfect or you ship it back to me insured within 10 days and I'll refund your purchase price less shipping. Comes with original Yaesu hand mic, original operator's manuals for all, and complete (huge) Yaesu service manual. Shipping (if needed) will be two boxes via insured FEDEX Ground, and one of them will not be cheap to ship (this is a 60 lb rig). Prefer to sell as a complete package for \$2700 plus shipping. It can also be picked up near Oklahoma City. Alternatively, I'll sell the 1000D alone for \$2400, but I will NOT sell the SP-5/DSP-59Y until the FT-1000D buyer has first crack at it. Cashier's check only, please. Reply off list to w5kp@direcway.com. Many thanks. P.S. My interests are leaning toward AM, so the 1000D currently resides alongside two R-390A's in the shack, thus the relevancy. 73, Jerry W5KP

From R390rcvr@aol.com Fri Feb 14 04:06:21 2003
Subject: [R-390] cyclic reception, 0-8MC, non A

Good evening: Interesting behavior from my 'new' non A. When listening to it tonight, on 0-7MC, the reception would abruptly go in and out on approx 5 sec cycle. On for 5, off for 5 sec. Dropped out completely when off. The cycling varied a bit, not absolutely regular, but fairly close. Was fine on 8 meg and above. I replaced both V203, 1st mixer, used only on 0-8MC, and V401, the first crystal oscillator, which operates only on 0-8MC.

I varied the line voltage, didn't seem to effect cycle speed. No control settings seemed to make any difference. When it was 'on', the reception seemed just fine.

It seems unlikely that some thermally induced problem could be so regular. I would certainly be interested in any ideas that might steer me in the right direction. Cheers Randy Stout

From billsmith@ispwest.com Fri Feb 14 04:26:21 2003
Subject: Fw: [R-390] cyclic reception, 0-8MC, non A

By the way, avoid running the receiver in that condition. As I (further) recall, the output from the regulated power supply voltage oscillated somewhere between 180 volts (correct) and full output (above 400 volts - not good). The 'voltage pin' mentioned below is a test plug. Caution - the test plug is connected directly to the regulated B+ voltage output of the power supply. You can find at least 180 volts, and may find more than 400 volts at the test point if the regulator circuitry is not operating correctly. Note there are also voltage and hum adjustment pots located below the test point.

I found several off-value resistors in the power supply module in the receiver I have. You might consider checking the regulator out thoroughly before placing the receiver in service. 73 de Bill, AB6MT billsmith@ispwest.com

From jbischof@nycap.rr.com Fri Feb 14 04:28:40 2003
Subject: [R-390] Re: R-390 digest, Vol 1 #580 - 13 msgs

Up date on my, r390 non a. My audio problem was a .047 capacitor c527. I also replaced c551, 100 Picofarad cap. Thanks to every one for there input. My radio is working excellent on all bands now. James Bischof Schenectady, New York

From R390rcvr@aol.com Fri Feb 14 04:31:05 2003
Subject: [R-390] B+ reading on cycling non A

B+ 176 volts, solid, during both on and off phases. When I restarted the rig after 10 minutes off, it took ~2 minutes before the signal started cycling. Randy

From liber.fab@iol.it Fri Feb 14 11:40:59 2003
Subject: [R-390] LS-3 info

Hello, I have found a loudspeaker/box marked "Signal Corps. - US Army LS-3" by Best Manufacturing Co. Anybody knows about its impedance value ? Is it a good speaker ? Thanks in advance, Fabio, I0LBE

From Barry Hauser" <barry@hausernet.com Fri Feb 14 13:52:11 2003
Subject: [R-390] LS-3 info

Hi Fabio & list, The LS-3 was used with the BC-342 HF receiver according to the mil lists. The BC-342 was the BC-312 with a rectifier (AC) power supply instead of the dynamotor. I imagine the LS-3 was also used with the BC-312 and BC-314. It's a black wrinkle speaker, right?

I think the impedance would be 500 or 600 ohms. There is probably a matching transformer in the case with a 500-600 ohm primary and 4 to 16 ohm secondary going to the speaker driver. It should be easy to open up and check -- and the transformer might actually be marked with the impedances. In all these years, someone may have removed or bypassed the transformer, and possibly replaced the driver also.

As for sound quality, it certainly is not "hi-fi". What it will sound like will depend more on the condition of the speaker driver -- cone, spider/suspension and voice coil -- after 60 years.

Of course, not all LS-3's were made the same to start with. I am particularly suspicious of a firm that called itself "Best Manufacturing Co." This was a subsidiary of LB Industries (Lowest Bidder) ;-).

It probably fell off a truck some time after the Anzio invasion. It's OK, you can keep it. The US Army doesn't use BC-342's any more. But, now ... you are going to need one to hook up to that speaker. ;-)
ciao Barry

From Aidehua@aol.com Fri Feb 14 15:14:13 2003
Subject: [R-390] Need Plastic Window for SP-600

Looking for the dial window for one of these...Thanks. Ed NI6S

From billsmith@ispwest.com Fri Feb 14 15:47:51 2003
Subject: [R-390] LS-3 info

Bomb proofed? :-)

From richardlo@admin.athabasca.ca Fri Feb 14 17:15:46 2003
Subject: [R-390] what is the value of a R390 (note the lack of an A)

I find myself broke and contemplating selling my R390 that has been sleeping in shack for over five years waiting to be restored. So whats it worth?

This is a Fair radio used, repairable unit in good physical condition with a quite nice engraved front panel that I bought when Fair still had lots of R390's circa 1996. I also have a very good manual photocopy, both proper meters, and spare rectifier and regulator tubes but all three covers are missing. What would be the price range of such a package these days? -- Richard Loken VE6BSV,

From tbigelow@pop.state.vt.us Fri Feb 14 19:23:42 2003
Subject: [R-390] what is the value of a R390 (note the lack of an A)

Richard Loken wrote: selling my R390 that has been sleeping >in shack for over five years waiting to be restored. So whats it worth?

Well, Richard - The good news is that it's an actual radio, not one of the imaginary 'non-A' types. Sounds like it's pretty complete, I think Hank has repro covers (or maybe those are just for the A model?). Not sure if you've tested or used the radio at all, so a lot would depend on that. But my guess is somewhere between \$200-\$400. The R390 is a much nicer radio than the cost-reduced A model IMHO. It's also a lot heavier, so shipping will be a consideration. They are not as plentiful as the later A either. Just having the meters installed is a big plus these days. The missing covers are certainly a lot less important.

If you can find any possible way, keep it. This is *the* receiver to have for long-term listening. The A is nice as well, but the R-390 from which it came is truly a marvelous radio. If you have several A models, I'd suggest moving one of those since it will be much easier to replace. I'm in the process of "culling the herd" as well, but my remaining R-390 is going nowhere. It's one project I won't minding getting to later. I sold my duplicate R-390 to Sir George in 1998 for over \$300, if that's any hint. It was as complete as yours with the Utah cover on top, but missing the other two. Both meters, all knobs, working but needing restoration and a power cord. No manual either.

Hope this helps, and I hope you find a way to keep it. If you do decide to move it, you shouldn't have any problems finding a buyer. I won't quote the words of Les Locklear (who I think quoted someone else?) about these radios, as tempting as it is.... Boomer, KA1KAQ

From Llgpt@aol.com Fri Feb 14 20:19:59 2003
Subject: [R-390] what is the value of a R390 (note the lack of an A)

A now famous quote from Neil Clyne G8LIU..... "The R-390 is a mans radio; the R-390A is a boys radio" Les Locklear

From Dave Campbell" <wcampbell@odyssey.on.ca Sat Feb 15 06:25:17 2003
Subject: [R-390] Need Plastic Window for SP-600

I made mine. For a dollar or two you can get enough material from your local plastic supplier to make several. Dave

From jamesmiller20@worldnet.att.net Sat Feb 15 12:35:54 2003
Subject: [R-390] Need Plastic Window for SP-600

Home Depot or Lowe's sells plastic sheet window glass replacement also. Draw the outline you need, cut it with a Dremmel, sand down rouh edges and you're done.

From plmills@attglobal.net Sun Feb 16 11:43:41 2003
Subject: [R-390] Modified R-388 on eBay....you may not believe it!

This is very interesting.....someone spent a lot of time building a receiver based on an R-388 front-end and variable IF. <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item3007287151&category4673>
enjoy, 73, Phil W5BVB

From windy10605@juno.com Mon Feb 17 16:27:52 2003
Subject: [R-390] Some thoughts on capacitor leakage

Continuing on with my R-390 project..... Time to decide which mica caps are to be replaced. Many of them "fail" at 500V in the "mica" cap position on the Heathkit IT-28 cap checker where the eye closes at roughly 0.1uA for the "paper/mica" cap position and is a little on the sensitive side (an Eico cap checker I had, closed at 1.5uA). So here is a better way: after determining the voltage settings on the cap checker are "close", insert a digital uA meter in series with the leads and read the real leakage at the WV. The C327 mica (Chuck Rippel says it's a problem capacitor) read 2.5uAclearly a bad mica. Most of the mica capacitors which closed or started to close the eye on the IT-28, really read 0.1uA or less at 500V ...perfectly good. 73 Kees K5BCQ

From windy10605@juno.com Mon Feb 17 17:28:57 2003
Subject: Fw: [R-390] Some thoughts on capacitor leakage

The only other bad mica on the RF deck (with a relatively high 4.0uA leakage) is C286 ...also an "El Menco" 100pf mica like C327 ...mmmm, I see a trend developing, maybe. Mfg part # CM15F101GN3.
73 Kees K5BCQ

From windy10605@juno.com Mon Feb 17 17:32:16 2003
From: windy10605@juno.com (windy10605@juno.com)
Message-ID: <20030217.113225.-199381.7.windy10605@juno.com>

Meant R-390A, not R-390

From ToddRoberts2001@aol.com Mon Feb 17 18:00:54 2003
Subject: Fw: [R-390] Some thoughts on capacitor leakage

I have found leaky silver-mica capacitors inside various RF Deck transformers over the years also.

They caused the sensitivity to go down on certain RF bands. Other people have determined that over the years the silver tends to "migrate" across the mica insulation causing the older style moulded silver-mica caps to become leaky and intermittent over the years. Good idea to stock up on various sizes of new manufacture epoxy-coated 500V silver micas to keep on hand for future repairs. Mouser Electronics has a good selection.

From ik0ire@yahoo.it Tue Feb 18 11:44:57 2003
Subject: [R-390] I.F. alignments & BFO

I.F. alignments I am systematizing the my R-390a, anybody could give me of the counsels in worth to:

1) I want to replace the valve V207" 6AK5," I desire know like make gives that the valve v207e mail under the group of tuning.

2) When I insert the BFO order on ON I listen to only that the modulation becomes Dark but there is not no variation of note acting on the BFO order/ Pich

You excuse The trouble, here in ITALY has not found people that could Realign l'R-390a. Surely I will ask you other counsels for realign my Receiver, you want to excuse me, Yours sincerely Frank

From ham@cq.nu Tue Feb 18 12:50:19 2003
Subject: [R-390] I.F. alignments & BFO

Hi, I am not totally sure what problem you are asking about. The stuff below covers more than one problem.

BFO - Here's what I would check - more or less in order:

- 1) Swap out V506, V505 and V504.
- 2) There is a shaft attached from the pitch knob to the BFO coil. Sometimes this shaft comes loose. Make sure that the coil moves when the knob moves.
- 3) If you tune to a strong signal with the bandwidth set to .1 KC the BFO should zero beat with the pitch set to 0. If it does not then loosen the pitch knob and move the shaft until the zero beat is at 0.

First Crystal Oscillator - V207 - Here's what I would check:

- 1) Check the tuning on T207
- 2) Open up the crystal oven HR202 and unplug the crystal Y201. Clean the leads of the crystal and the oven. Clean the socket that the crystal oven plugs in to. Put the crystal back in the crystal oven. Put the oven back together. Put them back in the radio.
- 3) Swap out V207 and V202.
- 4) Check that FC no 7 has *not* been done on your radio. If it has then reverse it. In other words make sure that R210 is 56K ohms and *not* 220K ohms.
- 5) Check the tuning on T207. I hope some of that helps. Take Care! Bob Camp KB8TQ

From hbreuer@debitel.net Tue Feb 18 14:42:43 2003
Subject: [R-390] I.F. alignments & BFO

Hi Frank, I guess you used an automatic translation tool from Italian to English but the results are no good. There are a couple of fellow Italians on this list and they could probably get the sense out of your writing. 73 Heinz DH2FA, KM5VT PS: E pericoloso sporgersi (The only sentence in Italian I know. It was written on the windows in trains in Germany many years ago)

From Miguel Bravo" <mbravoc@wanadoo.es Tue Feb 18 16:46:46 2003
Subject: [R-390] I.F. alignments & BFO

Es peligroso asomarse (Spanih version of "e pericoloso sporgersi"), from the good old times when you can get the window (with ashtrays at both sides!) down and not only see but smell the places you were traveling across. I can remember it and the cinder in the eye too, not to mention the moment the train went into a tunnel. Miguel

From drewmaster813@hotmail.com Tue Feb 18 18:30:47 2003
Subject: [R-390] Plastic Window

Dave, Depending on size and thickness needed, a good source for window plastic is from CD jewel cases. Sometimes these are available in tinted colors also. The best situation is to get one from those useless trial internet access CD's. Drew

From barry@hausernet.com Tue Feb 18 18:46:29 2003
Subject: [R-390] Plastic Window

I assume this is about the plastic window for the Veeder Root counter. If so, Dave Medley may have some.

The plastic from CD jewel cases is rather brittle. If you're not a purist, you can make decent replacement dial "glasses" from blister packaging. Some is much thicker and clearer than others, so pick 'n choose. You just cut it with a pair of scissors. Once in place, it looks like what's supposed to be there. It will never break or crack. OK, if a bulb is right on it, maybe it will melt, but not likely. Barry

From cbscott@ingr.com Tue Feb 18 19:08:16 2003
Subject: [R-390] Plastic Window

Modified microscope slides make good replacements for R390A VeederRoot windows. Barry(III) - N4BUQ

From zelickr@biohazard.pdx.edu Tue Feb 18 19:13:57 2003
Subject: [R-390] Plastic Window

Hello all, In case anyone does want to use a microscope slide, I have an infinite supply of them. Any SASE (padded) that come my way will be returned with a few specimens at no charge. Cheers, Randy

--

R. Zelick

email: zelickr@pdx.edu

Department of Biology
Portland State University

voice: 503-725-3086
fax: 503-725-3888

mailing:
P.O. Box 751
Portland, OR 97207

shipping:
1719 SW 10th Ave, Room 246
Portland, OR 97201

From w2ec@attglobal.net Tue Feb 18 19:17:26 2003
Subject: [R-390] Plastic Window

I don't have one here to try but I seem to recall someone saying once that a lab microscope slide works fine for the veeder root counter with no modifications needed. Anybody out there with a lab slide they can try? Ray

From r.tetrault@attbi.com Tue Feb 18 19:20:43 2003
Subject: [R-390] Plastic Window

You could say, " I have a Sagan of them... Millyuns and Billyuns ... Bob

From plmills@attglobal.net Tue Feb 18 20:18:57 2003
Subject: [R-390] R-390A glass window

The glass measures 3 inches by 3/4 inch. Since it is held in place by clips and the ends, the 3/4 inch measurement could actually go to slightly over an inch and the glass would still fit. Just be careful not to lose those clips that hold the clamping fingers in place. 73, Phil W5BVB

From cbscott@ingr.com Tue Feb 18 21:02:43 2003
Subject: [R-390] R-390A glass window

If memory serves, a microscope slide is 1" wide. The curvature of the inside of the escutcheon was such that the slide did not lay flatly against the window opening. I think I trimmed about 1/4" off the side with a glass cutter. Barry(III) - N4BUQ

From rnharsh@attbi.com Tue Feb 18 22:30:08 2003
Subject: [R-390] R-390 on Ebay

Anyone know anything about rons-rarities? Anyone have an opinion on the R-390 non A that he/she is selling on Ebay? Tnx Ron H.

From Richard.McClung@Dielectric.spx.com Wed Feb 19 00:15:36 2003
Subject: [R-390] BA Information:

I realize this isn't an R-390(*) Receiver but possibly one of you fellow BA collectors may have some knowledge of the receiver I'll describe below. I'm looking for any information and manual / schematic for the following BA receiver:

US Coast Guard Radio Receiver Type R-100 (not the morale rcvr by Hallicrafters)

TRF

19"W X 12" H X 17" D

Frequency range 90KHz - 3MHz

Serial # 417

Order # 80968

Contract # 34775

Date: 18 July 1942

Manufactured by Federal Telegraph Co. Newark, NJ RICH @B> }

From chacuff@cableone.net Wed Feb 19 00:27:09 2003

Subject: [R-390] Plastic Window

Greetings,

I am not sure if this is about the R-390 counter or the SP-600 question a few days ago about a dial window.. The discussion about the Veeder Root counter reminded me of a thread a few years back (the good ole days when I got 30 or 40 posts a day to look forward to) where it was suggested that a cut down Microscope slide was an excellent replacement window for the counter. Haven't tried that but it sounds like a winner to me! Ahhh for the good ole days... Cecil...

From ba.williams@charter.net Wed Feb 19 01:13:25 2003

Subject: [R-390] Plastic Window

Cecil,

You aren't talking about the days when we could tell a joke or two, are you? Ah yes, the good ole days. I remember the Veeder Root threads too. It was the microscope slide replacement that was talked about.
Barry

From r390a@rcn.com Wed Feb 19 22:14:19 2003

Subject: [R-390] ZM-30U Bridge on eBay

Item 2509735330 Not mine to sell, but there is often interest in these.

From windy10605@juno.com Thu Feb 20 00:54:24 2003

Subject: [R-390] R-390A progress

Thought I'd send a note of where I'm at with the receiver. It's a long note so just delete if you're not interested. I'm going to put the repair scenario on my web site with pictures later. 73 Kees K5BCQ

Bringing another R-390A back to life

R-390A purchased at a local swapmeet. Always wanted one because of the performance reputation and the amazing mechanicals. Serial #26xx manufactured by EAC (a division of Hammarlund) per 1967 contract. All the component serial numbers are roughly the same as the unit serial number when you consider yield off a typical electronic sub assembly manufacturing process.

Cabinet #40xx
RF deck #44xx
Gear train #38xx
IF deck #43xx
Osc deck #41xx
Audio deck #32xx

The individual selling it said: "he was absolutely NOT going to take it back home", "it had very low audio", "it didn't work right might be a bad tube" (....sure it is), and had two loose cables (repair effort ?). I detected a level of frustration and he was quite happy to sell it to me.

Replugged the loose cables and powered it up on a variac, nothing unusual, glad to see good B+ (power transformer is OK). Dug around in the junkbox for a 600 ohm to 8 ohm transformer and actually found one. Sure enough, very low audio with both the RF and AF gain fully advanced. Tested all the tubes (all good), borrowed a manual, and later downloaded the excellent Y2K R2 version. Found the two jumpers on the back for remote AGC and RF Gain missing. After making some from aluminum scrap, there was plenty of audio noise, but still no signals.

The mechanicals are impressive but several of the slug racks would cam up and stick. Greased all the bearing points with a little white grease and still had two which sometimes stuck. Removed the two slug racks and cleaned the slugs and the inside of the coil forms of all residue. They all now follow the cams.

On the advice of several R-390A experts, pulled the electrolytics and rebuilt them with new internal parts before they went bad (been there, done that, didn't like it). Found some square aluminum cans with octal plugs to use.

Measured the 2nd oscillator and TP E402 is low, but when connecting the scope ground, tripped the GFI. Found the chassis to be slightly AC "warm" and was informed by several people that R-390As trip the sensitive GFIs we have today. Replaced the AC filter with a 3A junkbox unit which has an IEC 320/13 connector. Made an aluminum adapter plate (no extra holes, reversable). Had to relocate the bathtub capacitor a few inches to make room, again no new holes. Shaved a little plastic off the mating AC cord plug to allow full insertion. Works great, no more tripped GFI, no more AC "warm" chassis.

The 2nd oscillator levels are -2.5V to -8V at the TP and will require further investigation but you should hear "something". Tried all the bands and frequencies. Looks like the 1-2Mhz band "works so-so" but nothing else. You can barely hear the calibration signal with RF and AF gains advanced on the other bands.

Time to take the unit apart because I want to add all the proactive changes and improvements anyway. For a complex receiver, it was easy to disassemble the modularized unit even the RF deck. Most difficult task is to get the Bristol wrenches to bite (almost an interference fit). Made a "long" Bristol from a section of fiber rod, drilled a hole in it for the small end of the Bristol, and attached it with two small cable ties ... works well. Start checking the various sub assemblies for bad capacitors, changed resistor values, etc can't find any values outside 10-15%.

Proactive circuit changes:

Dallas Langford's two diode SSB enhancement

Chuck Rippel's change C-327, C-553, C-531, C-547, C-549, C-609 Add a "no holes" adapter to use the balanced input connector for higher sensitivity

Experimented around with the 2nd oscillator, changing values, better 6AK5, power it up on the bench and am not able to get -4V to -11V levels at the E402 Test Point (six bands are above -4V). Maybe it's sluggish crystals. Four of the crystals have one pin which is very loose. Pulled the four sockets and replaced the pins (one came out in two pieces the others had no spring action). Noticed that the registration of the number tape, at the front of the deck, is "off" by a little more than 1/16" to the left. Since the 32 switch contacts are very closely spaced, I put an alignment mark on edge of the hole to allow proper alignment in the future. Noted the min/max capacitance position of the trimmers since you don't want that to be the peak. All have two peaks ...OK.

Checked all the cables by wiggling them while measuring continuity and found one intermittentP-218 (one of the loose cables when I got the unit). Turns out the center pin is not soldered to the wire. Easy to fix but the radio is not intermittent, it's dead.

While examining the RF deck a gear fell out. Took a while to find out where it goes. Guess what ? ...it's off the RF bandswitch shaft which is "fixed" in the 1-2Mhz position. The gear clamp is busted and a new one ordered from Fair Radio. Ordered one of their reproduction top and bottom cover sets too.

Time to decide which mica caps are to be replaced because many of them "fail" at 500V in the "mica" cap position on the Heathkit IT-28 capacitor checker. On my IT-28, the eye closes at roughly 0.1uA for the "paper/mica" cap position which is a little on the sensitive side (an Eico capacitor checker I had, closed at 1.5uA). So here is a better way: after determining that the voltage settings on the cap checker are "close", insert a digital uA meter in series with the leads and read the real leakage at the specified WV. The C327 mica (Chuck Rippel says it's a problem capacitor) read 2.5uAclearly a bad mica. I replaced it with another mica because it's part of a tuned circuit and disk ceramics move around too much. Most of the mica capacitors which closed or started to close the eye on the IT-28, read less than 0.1uA at 500V ...perfectly good. One more bad mica (also used at B+ levels) was C286 which measured 4.0uA leakage. That one will hose up the bias levels at the 2nd mixer.

Received the gear clamp and re-installed the gear on the bandswitch shaft (glad I'm not a neurosurgeon) . Now the bandswitch is operational. Checked cam alignment in the 7+000 position, looks "OK".

A little light lubrication since you can access everything while it's apart, some contact cleaner, and put the unit back together.

Had to make a tool for installing the Osc deck "third screw" if you-forgot-to-install-it-before-mounting-the-front-panel. Powered it upNothing !! Not even the Broadcast band. Found that the Osc deck tube was not lit. Power at the Osc deck plug is OK, turns out the RF choke in the tube filament lead opened up. Fixed it and tried againWorks !! Tuning was very stiff ...found the dial lock was not installed into the front panel detent, putting pressure on the disk.

A spot check of alignment looks good so we'll use it a while and get familiar with what else needs looking into. The tuning is still "too stiff" and I think the source is the VFO. The S-Meter acts "very damped" and the AGC does not respond as it should for the three positions.

Listened to some 20m SSB and a few European SW stations using a 20ft piece of wire on the floor. Nice Receiver, but I guess you guys knew that.

From ToddRoberts2001@aol.com Thu Feb 20 09:07:49 2003
Subject: [R-390] Stiff Tuning on R-390A / R-390A progress

If the tuning feels very "stiff" on the R-390A you might check to make sure the bushing where the tuning shaft comes thru the front panel is not binding against the shaft. The bushings were made to be adjustable by loosening the large nut on the backside of the bushing assembly. Over the years I have run across several R-390A radios that had this problem of very stiff tuning when turning the Kilocycle knob. In every case a misaligned front-panel bushing was the cause. I suspect that was one of the reasons the radios I have were put up for sale! Also make sure the shaft has lubrication where it comes thru the bushing. 73 Todd Roberts WD4NGG.

From cbscott@ingr.com Thu Feb 20 19:07:30 2003
Subject: [R-390] Bristol Screws for R390 Knobs

A few weeks ago, I sent a post telling about a guy who has some Bristol-drive set screws for the R390[A] knobs. I ordered a couple of sets and it turns out these are not the correct thread size. They are close, but not quite right. They were advertised as #8-32 but I don't think that's what they are. I haven't measured either screw yet, but I have a feeling these most likely are a metric size that is very close to #8-32. At any rate, if you are thinking of ordering these for your R390, they won't fit! My apologies, but I was led to believe these are something they are not. Needless to say I will be contacting the seller. Thanks, Barry - N4BUQ

From CONSTCA@mail.northgrum.com Fri Feb 21 01:21:54 2003
Subject: [R-390] Bristol Screws for R390 Knobs

Barry -- R-390 knob setscrews are 8-36 (UNF size) 73, Carl W6UO

From theprof@texoma.net Fri Feb 21 04:41:06 2003
Subject: [R-390] Pre-SK sale (well almost)

Because of various reasons I am seriously thinking about selling some equipment. I am really not sure if I want to do it or not. It depends on what I can get for the collection and if I can arrange for pick-up near Dallas area and not shipping.

This is not a offer for sale, at least not yet. I would like to get the wisdom of the group. This is the package.

R-390A/URR - Diettmore-Freimuth contact DAAB05-68-C-0040 SN 62A. Good shape, needs knobs painted. Has the original RF deck cover, original IF out jack, and nice looking reproduction meters. RF Deck, chassis, crystal deck, and audio deck from same contract. IF deck from EACH 67 contract. Power supply is Teledyne. PTO is COSMOS. No oddball mods. IERC or equivalent tube shields. Currently set up and used - all bands okay. Could stand a retubing but I haven't got around to that. You can spin the KC knob with your little finger.

Walnut veneer plywood case made by a cabinet maker. Really heavy. Radio mounted on slides. Cabinet has AC fan and internal plug strip.

Two spare IF decks - one Motorola and one Collins

One spare complete EAC 67 RF deck. Has all the gears and transformers, veeder root counter and Y201/203 in holder.

One spare complete audio deck EAC 67 contract.

One spare power supply

One spare Progressitron PTO.

One spare complete crystal deck (all crystals) Teledyne contract.

Set of spare tubes including rectifiers and ballast tube. Two spare (?) power supply electrolytic, new build in metal relay can.

Spare gear clamps and front panel bushings. Spare antenna relay. Two new large knobs.

Lots of domination. Several CD's including Radio Era, a new Depot Manual from the government, several other printed manuals.

I plan on this being a cash only deal. What do you think it will bring? \$1,000? \$1,200? \$1,500?

I promise this is not some attempt to start a bidding war or seed something on eb*y. I don't sell on eb*y, but I do buy there. I have been treated fairly by the folks on this group and plan to do the same.

My arthritis and degenerative disk disease is to the point where I can't manhandle these things anymore. I have a near-mint Hammerlund HQ-145X as well. I saw one on eb*y go for \$600. Most of the rest of my stuff is swap fest material or stuff I want to hang on to for tinkering purposes. 73 de Richard, W5SRB

From cbscott@ingr.com Fri Feb 21 12:31:18 2003
Subject: [R-390] Bristol Screws for R390 Knobs

Carl, Last night I measured them with my screw pitch gage and, sure enough, they are #8-36 UNF. I should have checked that out before I bought these. They are #8-32 UNC as advertised so I have no one to blame but myself. 73, Barry - N4BUQ

From dalmatians98@yahoo.com Fri Feb 21 14:38:00 2003
Subject: [R-390] Pre-SK sale (well almost)

Richard, I'm going to try to talk you out of selling your equipment -- unless of course you need the money, in which case I understand perfectly.

I don't want this to sound like one of those moan-and-groan exchanges we hear on the air as a couple of Old Timers get together to go over their aches and pains. I do want to let you know that I, and probably a few other people who subscribe to this list, identify with your situation. I've had several disc-related surgeries over the past 10 years. I also have a neurological disorder that has begun to rob me of some of my agility, balance and stamina. I also live in pretty much constant pain. But you want to know something? I consider myself extremely lucky.

I love radio, I love AM operation and I love my boat anchors -- including my R-390A (1957 Motorola contract). Recognizing that I am not in the shape I once was where I could easily hoist all kinds of heavy stuff around, I can call on a couple of ham friends not too far from me if a situation comes up where something heavy has to be moved. I don't make a habit of asking, but I have had to ask for their help a couple of times. In the spirit of ham radio, the help has been there. In exchange I've found that there is always something I'm able to do something to help them or someone else. I think that's the way ham radio ought to work.

As activities I really enjoyed, like distance running and cycling, became impossible to continue, radio gave me new friends and has enabled me to meet people who share similar interests to mine. I love getting on the air and having a good laugh filled QSO. Most importantly, radio gives me another way to stop thinking about what I've lost and instead concentrate on what I still have and what I've gained.

Anyway Richard, if you're thinking about liquidating your gear because of your physical limitations, I urge you to reconsider. I imagine you've been around this hobby for a while so you doubtless have a lot of knowledge to pass along to newcomers and other hams who're curious about these beautiful old radios we enjoy so much. Just my two cents, Paul, K2ORC

From roy.morgan@nist.gov Fri Feb 21 14:47:52 2003
Subject: [R-390] Pre-SK sale (well almost)

Goodman, Paul K2ORC wrote: I consider myself extremely lucky. ... I can >call on a couple of ham friends not too far from me if a >situation comes up where something heavy has to be moved. ... I'm able to do something to help >them or someone else. I think that's the way ham radio >ought to work. > >Just my two cents,

Paul, Your two cents is worth a million bucks. Roy

From cbscott@ingr.com Fri Feb 21 14:56:42 2003
Subject: [R-390] Pre-SK sale (well almost)

Hey, Roy, I've got 2 pennies. Can you give me some change? Barry - N4BUQ

From windy10605@juno.com Fri Feb 21 15:11:33 2003
Subject: Fw: RE: [R-390] Pre-SK sale (well almost)

Great note, Paul, and an excellent consideration for all of us. 73 Kees K5BCQ

From windy10605@juno.com Fri Feb 21 15:14:20 2003
Subject: [R-390] R-390A AGC

This has probably been discussed before but has anyone used a 10V-12V zener (with appropriate current limiting resistor) between pin 2 of V506 and ground to eliminate the carrier level meter bounce and 2? second signal blanking when switching between "Slow" and "Med" AGC ? 73 Kees K5BCQ

From ToddRoberts2001@aol.com Fri Feb 21 16:27:10 2003

Subject: [R-390] Lifting Heavy Radios

Some recent threads about lifting heavy radios reminded me of one solution I am planning to get myself. Several companies make what are called "Lift Hand Trucks". These are similar to standard hand-trucks but they have a lifting plate at the bottom. You put the heavy object to be moved on the bottom plate just like a standard hand truck. You roll it around to where you want to put it, say on a table top. You stand it up in place and then with a hand-crank you lift up the item as high as you want it, maximum up to about 4 or 5 feet high, then slide the item onto the table. No strain no pain. These would be ideal for lifting an R-390/R-390A into a 19" rack also. I believe these Lift Hand Trucks go for around \$300 or so. 73 Todd Roberts WD4NGG.

From w6wy@citlink.net Fri Feb 21 17:04:45 2003
Subject: [R-390] FS: refurbished R-390A

I have an R-390a for sale that was refurbished 2 yrs ago by Dave Medley. It is an EAC complete with meters and top and bottom covers. Re-tubed (except 3TF7) and re-capped, completely disassembled, cleaned, lubed, synched and aligned. Front panel and knobs refinished. Can supply photos (haven't taken them yet so give me some time) if needed. \$675 plus shipping. Would prefer pickup of course. Will drive up to 100mi radius from Redding CA. I have a custom R390 shipping container from Dan Arney that could be used if shipped but I'd like it back. Call or email for details. Pete W6WY 530 549 4557 eves PST

From dsmaples@comcast.net Sat Feb 22 00:56:17 2003
Subject: [R-390] Pre-SK sale (well almost)

All: I echo these comments of Paul's. I thought about Richard's e-mail after I read it, and realized that I DID need to come up with a disposal plan for this stuff for when I do depart this Earth. But after reading Paul's note, I concluded that, although I need the plan, I don't necessarily need to execute it all yet. Some of the stuff (like the meters I know I'll never use and some of the really useless junkbox hardware) I probably need to go ahead and move out, but the good gear? Not yet. Richard, I'll support whatever decision you reach, but unless you really really have to do this, I'd recommend against it. It's awful final. Dave Maples, WB4FUR

From ba.williams@charter.net Sat Feb 22 01:01:28 2003
Subject: [R-390] Hickok 600A manual wanted

Got one tester today, a B&K Dyna Quick 350 with tube data book. I'll get the 600A on Sunday. Does anyone know where to get the manual/tube data? I tried BAMA already. These were free, so they have a new home here.

These testers came about from the free 'wanted' ads that I run most of the time. I brought home 3 boxes of good tubes, from what I saw. I saw some 6C4 and 6EW6 boxes in there. There is a pickup bed worth of more tubes to get Sunday when it isn't raining so much. Also brought home a Wurlitzer mono amplifier that uses 2 6L6s. I'll get a Rockola amp with matching speaker on Sunday, and more electronic goodies. The guy said that he had a lot of TV and radio repair books to give me too. Thanks, Barry

From anchor@ec.rr.com Sat Feb 22 01:34:32 2003
Subject: [R-390] Hickok 600A manual wanted

Hi Barry, Sounds like a good haul. I've thought abt doing those ads, like a few guys do, but the "shopper" here charges pretty hi for them. Here's some stuff from my archives, some is old info & links might not work, but first one is good:

'Padgett's page" <http://www2.gdi.net/~padgett/hickok.htm> a good one

<http://www.0wned.org/~hstraub/hickok.htm>

There are schematics, manuals, and settings for this and other Hickock testers at <http://www.0wned.org/~hstraub/hickok.htm> in the TESTER DATA data section. In the ABOUT section there is info to contact Wendell E. Hall who still repairs them.

try Bill Waters (wate@juno.com), who services Hickoks and has a ton of replacement parts and tube data:-----

See: <http://www.vacuumtubes.com/> specifiacally: <http://www.vacuumtubes.com/manuals.html> He offers the lates Hickock roll chart in book form for \$15. ----- 73, A1, W8UT

From w7itc@hotmail.com Sat Feb 22 02:50:17 2003

Subject: [R-390] A question

I have finally acquired a working Johnson Viking II transmitter. I finally gave up on the one I have had here for a number of years. It was apparently detonated by a Chicken Bander now it's parts for the new one 8^) I wish to tie the Viking II to the R390A. My Question is the break in function on the 390A how is it suppose to work. I can either use the 390A's, if it designed to work as a t/r switch, or one several external T/R switches I have.

From windy10605@juno.com Sat Feb 22 18:39:11 2003

Subject: [R-390] R-390Amore AGC

I still have a problem with the carrier meter repeatability, crank the RF gain down and back up and you get a completely different reading. Zeroing the meter varies also ...it's OK for a while, then it's off again. Anyone experience that ?

Got tired of the signal blanking and carrier meter kick when you switch from "Low" to "Med" AGC. Installed a 10V MOV from the AGC terminal screw to a ground screw on the back of the unit. Minimal kick and blanking and no ill effects observed. Would have liked a nominal 10V DC MOV but the smallest one Fry's has is the 10V MOV which has a nominal 18V DC clip level. Lot better than the over -100V spike when you dump the 2mfd capacitor. Zeners were a tradeoff between peak current capability and minimum series resistance. Never found a good match. At least MOVs have no problem with that level of energy. 73 Kees K5BCQ

From ToddRoberts2001@aol.com Sat Feb 22 18:59:37 2003

Subject: [R-390] R-390Amore AGC

Carrier-level meter drift and non-repeatability is usually the result of a worn-out Carr-Meter Adj pot R523. Many fellows replace these with a 10-turn pot for better settability and stability. 73 Todd Roberts WD4NGG.

From Jim Shorney" <jshorney@inebraska.com Sat Feb 22 19:20:28 2003
Subject: [R-390] R-390Amore AGC

windy10605@juno.com wrote: >Got tired of the signal blanking and carrier meter kick when you
>switch from "Low" to "Med" AGC. Installed a 10V MOV from >the AGC terminal screw to a ground
screw on the back of the unit.

How about this? <http://www.littelfuse.com/ASP/Search/Detail.asp?ID522>

Bidirectional or unidirectional silicon avalanche surge suppressors, 1500w. 1.5KE10CA are under a
buck in single quantities from Digikey. Longer life and probably faster than a MOV. Jim Shorney

From windy10605@juno.com Sat Feb 22 21:20:39 2003
Subject: Fw: [R-390] R-390Amore AGC

>I still have a problem with the carrier meter repeatability, crank >the RF gain down and back up and
you get a completely different >reading. Zeroing the meter varies also ...it's OK for a while, then >it's
off again. Anyone experience that ?

Turns out that the meter is "sticky" put another uA meter in parallel and if you slowly turn the
adjustment potentiometer up until the other meter reads "x", the carrier meter reads "20". If you turn the
pot to full scale and slowly turn the pot down until the other meter reads "x" again, the carrier meter
reads "60". I took the meter apart (fun job)that ring with the 4 indentations is NOT threaded into the
housing, its just a pressed in soft metal ring. I drilled through one of the indentations and pried the ring
out. Will JB Weld it back. Also you can now clean the glass ...I don't know how a sealed meter gets junk
on the inside of the glass.

The carrier meter "zero adjust" is basically non functional, so I loosened one of the movement end
screws a 1/4 turn and the meter now moves freely and the "zero adjust" works. Easier to tune up stuff on
the R-390 if the carrier meter works. 73 Kees K5BCQ

From w9wis@charter.net Sun Feb 23 18:47:33 2003
Subject: [R-390] OT: Misc. Mil Parts Question

A guy at work that was in the Navy back in the 60's dug some NOS parts out of his garage and gave
them to me. I got them cleaned up today and was wondering if anyone recognizes them or has any idea
if they'd still be useful ?

1. Gray plug in "tube like" round cans, abt 2.5 " long, marked Engineer Electronics, T-643, Flip-Flop....
are these early flip-flop IC's ?
2. Several NOS Polyphase Instrument Co, LPF 14.5 KC 47K, marked also 6540
3. About 2.75 " long black paper tubes with 6-pins on one end and a socket with spring loaded contact
on the other. Marked with a "pulse trace" with 3C and a part number 3004325. Look almost like a bulb
socket of some type.

He told me these were comm. items as he worked as an ET in a RTTY room.... Mike

From ham@cq.nu Sun Feb 23 19:08:27 2003
Subject: [R-390] OT: Misc. Mil Parts Question

Hi, Logic gates existed before IC's came along. I suspect that if you rip open the flip flop you will find a bunch of diodes, capacitors, resistors and a pair of transistors. I'd keep them intact as an example of what came before the first IC's. Bob Camp KB8TQ

From glennmaillist@bellsouth.net Sun Feb 23 14:24:34 2003
Subject: [R-390] OT: Misc. Mil Parts Question

The Polyphase LPF (Low Pass Filter) is most probably an audio filter based on the frequency (14.5 KC) and the impedance (47 K).

The last item may have been an early optical coupler. There were things like these in early solid state TVs. The six pins could be the optical detector and the socket where a light bulb was to be installed. 73 Glenn WB4UIV

From windy10605@juno.com Sun Feb 23 19:27:05 2003
Subject: [R-390] Carrier Meter adjustment

The Carrier Meter is a little sensitive to adjustment and I guess that is why some people suggest that it be replaced with a 10 turn potentiometer ...or maybe it's burnt/worn because the majority of the current does not go through the 22 ohm, 1 watt resistor leg, it goes through the much less than 22 ohm setting of the potentiometer. My carrier meter is adjusted when the pot is at about 10 ohms ...not much on a 100 ohm pot range.

If you look at the circuit, the 22 ohm resistor and 100 ohm pot are part of the cathode resistance circuit for the 4th IF and I believe the 100 ohm pot was intended as a voltage divider for the meter. The way it's shown in the schematic it will affect the cathode resistance some as you vary the "adjusted pot" valueand it makes adjustment very sensitive.

If you move the green/blue wire to the center tap and remove the wire short from the center tap to one end, you have essentially made the pot a voltage divider for the meter and the cathode resistance stays fixed at about 19 ohms (parallel 22 ohm and 100 ohm). Seems to work fine and the pot is much easier to adjust. Haven't found a down side yet. 73 Kees K5BCQ

From David_Wise@Phoenix.com Mon Feb 24 20:10:58 2003
Subject: [R-390] A question

A relay contact closure between the break-in terminal and ground will disconnect (and ground) the radio from the antenna, and mute the audio. 73, Dave Wise

From R390rcvr@aol.com Mon Feb 24 20:24:16 2003
Subject: [R-390] Source for plastic washers for rack mounting?

Good day all. I have seen small black conical shaped plastic washers that go under the finish washers for rack mounting. Does anyone know a source of same. They look almost like faucet washers! Randy Stout

From hankarn@pacbell.net Mon Feb 24 20:39:55 2003
Subject: [R-390] Source for plastic washers for rack mounting?

McMaster Carr box of 100 Hank KN6DI

From Scott Overstreet" <scott@becklawfirm.com Mon Feb 24 21:55:16 2003
Subject: [R-390] Source for plastic washers for rack mounting?

Look in the Digi-Key catalog for hardware in the Hammond Racks and Accessories section-----lower right hand corner of page 897 in current catalog number T031. Part numbers are HM826-ND for sets of 4 screws and 4 black plastic washers----\$2.46 for the set. Scott

From drewmaster813@hotmail.com Mon Feb 24 22:26:23 2003
Subject: [R-390] Meter zero and AGC

Kees wrote: <snipped> >If you move the green/blue wire to the center tap and remove the >wire short from the center tap to one end, you have essentially >made the pot a voltage divider for the meter and the cathode >resistance stays fixed at about 19 ohms (parallel 22 ohm and 100 >ohm). Seems to work fine and the pot is much easier to adjust. > >Haven't found a down side yet.

Making the pot a voltage divider for meter would change meter sensitivity as zero setting is varied. Maybe that wouldn't really matter - to most of us an "S" meter reading is just a relative indication anyway.

Some list members have suggested keeping the original circuit configuration but changing 22 ohm resistor to 8.2 ohms. I use that setup and carrier meter zeroing is easy and stable (clean that pot).

I too have opened up the carrier level meter to reset tension on the jewels, thereby eliminating stiction. I found (on my example anyway) that the four fasteners holding assembly together are tubular nuts and hollow screws with no "persuasion" necessary for disassembly. Jewel tension is easily adjusted after loosening a small jam nut. I cleaned inside of glass with lacquer thinner - perhaps the dull accumulation there is due to rubber gasket outgassing over the years. Caution: meter scale and pointer are usually coated with radioactive radium paint. Take care not to inhale dust. Perform operation outdoors, wipe up dust with damp cloth and dispose of appropriately. Scraping the paint and using some to decorate cookies whilst snorting the rest for a new kind of high is right out.

On AGC time constant switching voltage spike and "The Moment of Silence": some have used a 24 volt zener to limit AGC line voltage and have reported it to be effective. The 2 diode fast attack / slow decay AGC (Dallas Lankford) modification is also a fairly good remedy. Drew

From billsmith@ispwest.com Mon Feb 24 23:26:35 2003
Subject: [R-390] Source for plastic washers for rack mounting?

Washers can be found in many local hardware stores which sell nuts, bolts and screws. I picked up a handful of them, they are white, think they were 0.05 each as singles. Screws should be available, oval head style, in a box for three bux or so for 100.

They come in various sizes, so make sure you match the screw size with the washer, and make sure the screw fits in your rack. Some are 1/4-20, others are 10-32, yet others are 10-24. Older racks used 12-24 if I recall (12 size is very close, or identical to 1/4"). Bill

From terryo@wort-fm.terracom.net Tue Feb 25 00:16:56 2003
Subject: [R-390] Source for plastic washers for rack mounting

McMaster-Carr in Chicago <http://www.mcmaster.com/>

Do a search for countersunk washers. They have them in natural and black nylon. Somebody makes them in a gray that's perfect for R-390s, but I've never seen them for sale. Terry O' WB9GVB

From BRingwoo@csir.co.za Tue Feb 25 07:27:26 2003
Subject: [R-390] Source for plastic washers for rack mounting?

I was using faucet washers! The computer network guys at work always seem to leave a few screws and washers around. - Bryce

From R390rcvr@aol.com Wed Feb 26 13:32:44 2003
Subject: [R-390] Anodizing knobs on R-390?

Good day all: Can the zinc alloy used for the R-390 knobs be anodized? It would be nice to have a more durable finish than paint.

The other question has to do with repairs to the ears inside the main tuning knobs. We all have seen knobs with the ears broken off. Someone on the list used to do a repair, which I believe involved sleeving the knob to replace the ears. I can't find my old emails on the subject. Does anyone remember the details, or have a lead on the subject? Randy

From R390rcvr@aol.com Wed Feb 26 13:43:26 2003
Subject: [R-390] Update on countersunk washers!

Thanks everyone for there responses on the countersunk washer question.

Several people suggested McMaster-Carr. I looked through their offerings, and besides the plastic, conical washers that would fit under the traditional thin metal finish washers, they had flanged metal washers in stainless steel, which aren't supposed to cut into surface, and solid based finish washers in black, which are completely smooth on bottom surface, so they won't cut in either. I may order a box of each, and give them a try. Thanks again the listings are on page 3002 . Randy

From lal@metrocast.net Thu Feb 27 21:17:28 2003
Subject: [R-390] Connectors

Hello to the list, Would anyone know the name of the place in Miami that sells antenna connectors and coax etc.? They used to run an ad in different publications but I haven't seen it for some time. Thanks Merle W1GZS

From cbscott@ingr.com Thu Feb 27 21:20:17 2003
Subject: [R-390] Connectors

Are you possibly thinking of Skycraft in Orlando? <http://www.skycraftsurplus.com/coaxcable.htm>
Barry - N4BUQ

From W2ZR@aol.com Thu Feb 27 22:07:42 2003
Subject: [R-390] connectors in miami

<<Would anyone know the name of the place in Miami that sells antenna connectors and coax etc.? They used to run an ad in different publications but I haven't seen it for some time.>> it's Nermal Electronics. They have a web site. 73, Steve W2ZR

From lal@metrocast.net Thu Feb 27 22:40:57 2003
Subject: [R-390] Connectors

Hello to the list again.. Thanks to all who responded to my question about who in Miami sold connectors and cable etc. W2ZR came up with the answer, it was Nermal Electronics.. Thanks again. Merle W1GZS

From wgittere@buffnet.net Fri Feb 28 04:27:43 2003
Subject: [R-390] Low gain up to 8mhz

Hello R390 fans, A friend of mine is experiencing a problem with his R390A. He is an AM buff and is experiencing low gain on his R390A on all frequencies below 8mhz. With the calibrator on he sees 20 to 30 db on the carrier meter on frequencies up to 8 mhz. It is especially dead on 75 meters. Above 8 mhz he sees between 75 and 85 db on the carrier meter. He swapped out HR 202 and did not see any appreciable improvement. Any thoughts and suggestions as to a fix for this problem is greatly appreciated. 73's Bill K2LNU

From Damon Raphael" <w7md@arrl.net Fri Feb 28 06:47:22 2003
Subject: [R-390] Connectors

If you are looking for a Twinax coax connector for the antenna input, it is a modern standard connector that is used in certain IBM computer networks. Look for one at a site that sells computer networking hardware. It should run you about \$8.00 at most. 73, Damon, W7MD

