

R-390 Reflector July '05 Edited

From CRIPS01 at MSN.COM Fri Jul 1 01:28:42 2005
Subject: [R-390] BFO question

Thank for all of the advice. I would not have thought of the BFO shaft being way out of position. What is interesting to me about this is this is the problem I had with the BFO on the SP 600. It's stop pin was bent and let the shaft turn freely.

I am going to use my TS-510/U (HP-608C) RF signal generator to the tweaking the IF module. Using to boatanchor piece of test equipment seems to be the right thing to do. I need a manual for this beast does any one know where I might download a copy. Ken

From sdaitch at ibb.gov Fri Jul 1 09:31:40 2005
Subject: [R-390] Tell me about Single Sideband Converters

I might disagree slightly about the CV-157 not being designed as a voice SSB converter, in fact, I'd say that was probably one of its design parameters.

John is correct in regards to the pilot carrier operation, but I'd further say that if the CV-157 were phase locked to the pilot carrier, there would be little or no frequency error.

One of the systems applications for the CV-157 was four channel ISB operation, 16 kHz bandwidth, with two 4 kHz audio channels on each sideband. And usually one of the four 4 kHz audio channels was devoted to a 16 channel AFSK tone pack. I suspect the tone pack was always one of the "inner" audio channels to eliminate a frequency translation on transmit and receive.

If this isn't readily clear, let me try to explain. The upper sideband, for instance, would be modulated with one voice channel roughly 4 kHz wide, that was not translated in frequency. The second voice channel, also roughly 4 kHz wide, was translated upwards by 4 kHz, so that in the side band, it occupied the sideband bandwidth of 4 to 8 kHz. The same for the lower side band. Since the AFSK TTY frequencies are critical, the AFSK channel would be on the lower portion of the sideband, to eliminate that 4 kHz shift. I don't recall what units were typically used for the 4 kHz shift, maybe it was a TD-97/98 combination, but the brain cells aren't working too well as I type this. Whatever the nomenclature was, they weren't normally part of the transmitter or receiver set.

When VOA ran the ISB/SSB feeders, we ran a pilot carrier, about 20 dB down from the PEP power rating of the transmitter, and our RCA SSB-3A receivers were capable of ISB reception, and used a motorized AFC system very similar to the CV-157 AFC loop. 73 Sheldon WA4MZZ

From dmetz at ntelos.net Fri Jul 1 10:21:00 2005
Subject: [R-390] OT? Dimmer buzz, solution?

While this is probably not within the parameters of heavy iron, I do have a question for the collective wisdom of this esteemed group. I have been haunted for years by lamp dimmer buzz radiated as RF that gets picked up with my basement hobby an the AM that the R-390 wants to hear. Recently, I purchased a Lutron Lamp Debuzzer Coil LDC-10-TCP in another attempt to eliminate this radiated hash. Low and behold the \$110 investment worked fantastically! Now what I want to know is how to build such an

animal for a lot less than \$110! All there is to this is a box about the size of a smaller ballast transformer with two wires. It goes in series between the dimmer and the light load. They have very specific amperage ratings , 400-600 watts, 600-1200 watt, and 1200-1920 watts depending upon the needed load range. It sure is great to now have the XYL upstairs watching TV with a dimmed light and I can listen to the DX BC band on the 390! There has to be a cheaper solution for the rest of my dimmed light circuits. 73's dave

From JMILLER1706 at cfl.rr.com Fri Jul 1 11:30:08 2005
Subject: [R-390] OT? Dimmer buzz, solution?

<http://www.lutron.com/applicationnotes/360484.pdf>

It is probably a pair of high-Q coils, such as a toroid, in series with each line that will handle the AC current, combined with filter capacitors across the line and to ground.

From JMILLER1706 at cfl.rr.com Fri Jul 1 11:32:09 2005
Subject: [R-390] OT? Dimmer buzz, solution?

Also check out this: <http://www.ethanwiner.com/dimmers.html>

From JMILLER1706 at cfl.rr.com Fri Jul 1 11:37:30 2005
Subject: [R-390] OT? Dimmer buzz, solution?

Sorry for the duplicate posts, but here's one more idea: Get the ARRL RFI Handbook. Apparently it has circuit designs. See <http://lists.contesting.com/archives/html/RFI/2000-09/msg00015.html>

"> (b) I need to know how to modify a light dimmer switch to reduce > the RF emission. Any circuit diagrams that anyone has, or can describe, I > would appreciate. How does one quite a noisy SCR? There are three primary > noise sources which I have located with DF.
>

Light dimmers & speed controllers as well as touch lamps both benefit from the use of brute force AC-line filters and ferrites added to the lines. But they don't always work. Sometimes you need to replace the devices with quieter one that has built in RFI suppression. The ARRL book recommends the AC filter and ferrite approach, using an FT-240 or FT-140 sized core with about 15 turns on it. I think 43 mix material for HF/VHF noise and #75 or 'J' mtrl for lower HF noise should be used. It may take two cores to get the noise down low enough, but then you run out of AC line so an electrician may be needed to install additional wiring. Also on dimmers you may need cores on the input and output.

In the case of touch lamps, especially ones radiating, a 1-4 Kohn resistor and a 10 microHenry choke on the sense line may help as well. Again, do these mods at your own risk or have an electrician do it to reduce your liability.

I've also found that plugging these lamps into different outlets makes the noise less resonant on some freqs and more on others. If your lucky, it'll move to a non-ham freq! "

From roy.morgan at nist.gov Fri Jul 1 12:30:43 2005
Subject: [R-390] OT? Dimmer buzz, solution?

wrote: >... haunted for years by lamp dimmer buzz radiated as RF that gets picked >up with my basement hobby an the AM that the R-390 wants to hear.

Lots of us have this problem.

> Recently, I purchased a Lutron Lamp Debuzzer Coil LDC-10-TCP in > another attempt to eliminate this radiated hash. Low and behold the \$110 > investment worked fantastically!

One Hundred Ten dollars!! YIKES!! I'm not gonna use the s****r word here but I'm tempted!

> Now what I want to know is how to build such an animal for a lot less > than \$110!

Smash it open and see what's inside. Go to Mouser looking for similar parts. Buy parts. Put together with a bit of heatshrink and be done. Estimated cost: five bucks MAX. Roy

From roy.morgan at nist.gov Fri Jul 1 12:37:35 2005
Subject: [R-390] OT? Dimmer buzz, solution?

wrote: >Also check out this: ><http://www.ethanwiner.com/dimmers.html> which page includes the following:

"lthough many low-cost power outlet strips sold at hardware and computer stores claim to include RFI filtering, in truth none of them contain filters that are really effective. You need to purchase a genuine industrial-grade RFI filter from an electronics parts supplier. Both Mouser (mentioned above) and DigiKey (800-344-4539; on the Internet <<http://www.digikey.com>><http://www.digikey.com>) sell the kind of filter I'm talking about here. I have used filters made by Corcom (sold by DigiKey) and Cornell-Dubilier with great success, and they range in price from \$25 to \$65 each, depending on their capacity in Amperes. Don't waste your time with cheaper units; buy only Series R two-stage L-C (inductor-capacitor) filters. " Roy

From wak9 at cornell.edu Fri Jul 1 12:39:01 2005
Subject: [R-390] BFO question

> BFO does not work, there is no calibration tone in the R390's audio but I can hear it from the SBA-1 side band adapter, I can see a calibration carrier in the signal strength meter on the R390. The tubes on the IF/RF module test good, if I can trust my tube tester that is.

Ken, the bfo on my unit didn't work when I got it. I could hear a very high freq tone, but it didn't change when the knob was turned. The can had the label that said don't open the can, but I figured hey, it doesn't work now, what the heck. Turns out the slug had come loose from the shaft and was just sitting in the tube. I glued it back in place and it was just fine after calibration. The chassis was bent on one back corner, so I figured it was probably dropped. If this isn't the case with yours, maybe it might help somebody else someday. Bill

From jmiller1706 at cfl.rr.com Fri Jul 1 13:55:38 2005
Subject: [R-390] OT? Dimmer buzz, solution?

You may only need to get a better quality dimmer, the ones in local stores (for \$10.00 or so) will probably not have superior RFI filtering built in....The Lutron Nova series (\$25 price range) has excellent filtering built in. I use them here.

From: <http://www.arrl.org/tis/info/touchlamp.html>

"The Lutron NOVA series uses toroidal chokes that provide a significant level of RFI suppression. I bought a Lutron model N-600, which will handle up to 600 watts of incandescent lighting. Temporarily installed in my radio shack, a generic light dimmer produced an S9+ reading at 230 kHz (an arbitrary noisy frequency). The N-600 produced a reading of S3, a difference of about 40 dB. Admittedly, this is not zero, but installing the N-600 some distance away provided a reduction in RFI that is very gratifying. Indeed, I new hear new noise sources, heretofore undetectable through the dimmer din.

You're not likely to find these dimmers at your local discount store, and they are not inexpensive. Check for the availability of these dimmers at a lighting fixture store and expect to pay about \$25 apiece for them. "

I had to order mine from an internet supplier. Be sure to specify the "thin" or low profile model. You are not likely to find them in local stores with good filtering.

From dmetz at ntelos.net Fri Jul 1 15:41:56 2005
Subject: [R-390] OT? Dimmer buzz, solution?

Actually, I have a Lutron IR remote control dimmer already installed. While I am not sure if the remote control unit does or does not have the toroidal filtering, it was about \$30, so not cheap. However, that is something to call lutron about next week. As far as hacking into this unit, not sure I want to do that. First, it works great, and is of course UL approved. Somehow , cutting it apart on a bandsaw might void that approval rating. I assume that this is something one could make from available parts from Mouser but I just was hoping to get a point in that direction without tearing this apart. What is also haunting me is that there is no ground requirement. Given that this is in series with a hot leg, it had better be well insulated to the case. Maybe the experts here can help me with that understanding. Next week I will order a non remote Nova series 600 and see if that also has the desired reduction in the hash. Thanks!
73's dave

From David_Wise at Phoenix.com Fri Jul 1 18:20:22 2005
Subject: [R-390] BFO question

I have the 608D not the 608C. For what it's worth, I can photocopy it for you. Check BAMA first; they might have one, under either the HP or the military name. LOGSA probably doesn't have it but it's worth a try too. I'm out of town right now. Remind me in a couple of weeks. 73, Dave Wise

From Flowertime01 at wmconnect.com Fri Jul 1 18:22:02 2005
Subject: [R-390] OT? Dimmer buzz, solution?

Fellows,

These lamp dimmers come in two flavors, Those with lots of RF trash and those with less RF trash.

You can use a SCR and have lots of trash. Or you can use a TRIAC and have somewhat less RF trash.

Using a TRIAC will not ensure that you do not get lots of RF trash.

To get lots of RF hash and trash turn the power on in the middle of the cycle and off at the zero crossing point. SCR perform this way. TRIAC's may also be operated this way.

To get less trash and hash turn the device on some where in the middle of the cycle and off as the device goes through zero crossing.

Needless to say a comparator to turn the device on in mid cycle and off at zero crossing is more expensive than the cheap devices.

OK a challenge to all. IF you have a quite one that you like, Open it up, and post the part number and manufacture here for everyone. If you have a noisy one please post that part number and manufacture here also. We can avoid buying one of these. Sort of a consumer report best of dimmer product if you will Roger KC6TRU

From djmerz at 3-cities.com Fri Jul 1 19:37:20 2005
Subject: [R-390] Hartley bfo FET Prod.Det.

Hi, I'm mostly thru the mechanical building part of the product detector for 390a similar to the one shown by AI2Q on this list, which has an agc circuit in addition to the detector/bfo, and just connects to the i.f. out, diode load, and agc connections on the back of the 390a. But instead of using the crystal-controlled bfo oscillator I opted to use a tapped coil bfo unit in a can salvaged from a National NC 100. In tapping the MPF102 FET bfo signal into the base of the 2N2222 buffer stage, I wonder if it's best to take the signal from the drain, much like an electron-coupled tube oscillator or from the source connection. Most circuits I find for FET oscillators take the signal from the source, analogous to cathode tap for a tube, and presumably a lower impedance coupling. Are there any opinions on why most handbook circuits show the source connection? I suppose either would work by fiddling with the various coupling impedances. I've got a week of thinking about it before I'll be able to get back to the project. Any thoughts? Best regards, Dan.

From DJED1 at aol.com Fri Jul 1 21:19:32 2005
Subject: [R-390] Hartley bfo FET Prod.Det.

"Hi, I'm mostly thru the mechanical building part of the product detector for 390a similar to the one shown by AI2Q on this list, which has an agc circuit in addition to the detector/bfo, and just connects to the i.f. out, diode load, and agc connections on the back of the 390a. But instead of using the crystal-controlled bfo oscillator I opted to use a tapped coil bfo unit in a can salvaged from a National NC 100. In tapping the MPF102 FET bfo signal into the base of the 2N2222 buffer stage."

Can't help you on the rational for where to tap off the RF, but the original oscillator circuit I used had the oscillator output from the source, and the drain was bypassed to ground at RF. So there was no choice as to where to tap off for the RF.

I'd be interested to know how you make out with your project- I provided Alex with the original circuit which he published with some modifications. I started with a variable BFO, and then last winter added the crystal oscillator per Alex's circuit. I still think there has been nothing better for SSB on the R-390A than this little SSB adapter, partly because it includes an effective AVC, and partly because it requires no mods to the radio. Of course, you have to be tolerant of mixing solid-state with our beloved tube

radio. Otherwise, a CV-157 is the right choice. I've taken some measurements of input and output voltages which may be helpful if you have any problems. I've also started working on adding a phase locked loop BFO so that the detector can be used for synchronous AM. Not done yet though, waiting for winter. Ed WB2LHI

From hwlight at sbcglobal.net Fri Jul 1 22:47:46 2005
Subject: [R-390] CV-157

Hi Bill...

I know that guy...did the same thing with me; he truly is off his meds. Bet he lives in Canada? Wayne

From CRIPS01 at MSN.COM Sat Jul 2 01:52:20 2005
Subject: [R-390] BFO question

I found a place that has originals for a very reasonable price. The problem is this place uses Paypal for payment. I do not trust Paypal they have been hacked a number of times. Fair Radio Sales has reproductions for 15 dollars I'll just get one there. I am not really sure which 608 this one is, it's top voltage is 350 mill's I understand this is how one tells these TS-520/U's apart. Ken

From Llgpt at aol.com Sat Jul 2 13:26:22 2005
Subject: [R-390] TS-352B/U Military Multimeter

A while back, someone was looking for a TS-352 Multimeter on this list.

I have one available, beautiful condition, reconditioned by the SAAD (McClellan AFB Depot) and has new hardware and feet, case is a depot re-paint. All the original leads, originally in foil packs, and the original TM. The TM is a bit worn, but fully readable.

I have installed 3 AA batteries and holder and a 9V battery and holder along with the single D cell. Works perfectly.

I would like the party who was looking for one to reply off list if you still are looking. If not, I'll offer it here first. Les Locklear

From mjmurphy45 at comcast.net Sat Jul 2 14:30:57 2005
Subject: [R-390] Hartley bfo FET Prod.Det.

Hi Dan,

This is fun stuff. I have built them both ways as well. If you want the least coupling and stability, (important if you are building a transmitter VFO and want to key something upstream without chirping) I think the source connection is the way to go.

For power, or if you want to multiply to a higher frequency, the drain is the way to go. For raw p-p voltage, use this connection into your buffer.

If you want purity, the gate is the way to go. Actually, not the gate but the tuned circuit in the gate. The tuned circuit itself can be coupled to, just like in the pre-ECO Hartley days, with a good old link on the cold side of the coil. This gives you some impedance flexibility too. It's a BFO; to hell with the buffer.
Mike Murphy WB2UID

From chacuff at cableone.net Sun Jul 3 13:56:47 2005
Subject: [R-390] Happy 4th

Greetings Group,

Wanted to wish everyone a Happy 4th. I've been reflecting on the impact the radio's we love have had on our ability to succeed in the fights for Freedom they've entered into for this country. I know many on this list own SP-600's and R-390's....and probably BC-348's, BC-610's etc. All but a small few are truly veterans. From Korea through Vietnam and probably into the Gulf War if the stories we hear are true. What a treasure! Wish they could all talk...or at least it would be nice to know where and when they had served.....

Have a Happy 4th and don't forget those that are fighting for us this very day! (whether we agree with the cause or not!) May God bless them and their families! Cecil...

From k3pid at sbcglobal.net Sun Jul 3 15:18:07 2005
Subject: [R-390] Happy 4th

Amen! K3PID Ron H.

From w5or at comcast.net Sun Jul 3 15:27:47 2005
Subject: [R-390] SAQ Annual Transmission

Anyone on this list copy SAQ? Give us a report please! Don

From ToddRoberts2001 at aol.com Sun Jul 3 16:43:25 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

Don't forget the Night of Nights Marine Morse special event on July 12, 2005. Several Coastal Marine Stations will be on the air this night starting at 1700 PDT (2000 EDT) until at least midnight PDT. KPH

KPH will transmit on 4247.0, 6477.5, 8642.0, 12808.5, 17016.8 and 22477.5kc on HF and 500 and 426kc on MF.

These frequencies have been made available through the generous cooperation of Globe Wireless, the current owner of the KPH and KFS licenses. KPH operators will listen for calls from ships on ITU Channel 3 in all bands. The Channel 3 frequencies are 4184.0, 6276.0, 8368.0, 12552.0, 16736.0 and 22280.5kc on HF and 500kc on MF.

Reception reports may be sent to: Ms. DA Stoops P.O. Box 381 Bolinas CA 94924-0381 USA

KSM

KSM will transmit on 426, 500, 6474 and 12993kc KSM will listen for calls from ships on 500kc and HF Channel 3 (see KPH listing for frequencies).

Reception reports may be sent to: Ms. DA Stoops P.O. Box 381 Bolinas CA 94924-0381 USA

WLO

WLO will transmit on 438, 500, 8514.0 and 12660.0kc WLO will listen for calls from ships on 500kc and HF Channel 3 (see KPH listing for frequencies).

Reception reports may be sent to: WLO/KLB 700 Rinla Avenue Mobile, Alabama 36619 USA Or via email to: wloradio@wloradio.com

KLB

KLB will transmit on 6411.0kc KLB will listen for calls from ships on 6276kc

Reception reports may be sent to: WLO/KLB 700 Rinla Avenue Mobile, Alabama 36619 USA Or via email to: wloradio@wloradio.com NMC

NMC will transmit on 448, 472, 500, 6383.0, 8574.0 and 17220.5kc NMC will listen for calls from ships on 500kc and HF Channel 3 (see KPH listing for frequencies).

Reception reports may be sent to: Commanding Officer ATTN: ITC Eric Simmons Communications Area Master Station Pacific 17000 Sir Francis Drake Blvd Point Reyes Station, California 94956-0560 USA

NOJ

NOJ will transmit on 8650.0, 12889.5 and 16909.7 NOJ will listen for calls from ships on Channel 3 (see KPH listing for frequencies).

Reception reports may be sent to: Commanding Officer ATTN: OSCM William Heckler US Coast Guard Communications Station Kodiak PO Box 190017 Kodiak, Alaska 99619 USA

73 Todd WD4NGG

From g4gjl at btopenworld.com Sun Jul 3 17:45:38 2005

Subject: [R-390] SAQ Annual Transmission

5 and 9 on Saturay at a little after 1230 UTC in Staines, Near Heathrow, London UK

I got a good Spectrogram capture also. Receivers: Siemens Pegelmesser D2155 PC and Soundcard with DL4YHF Spectrum LAB RACAL RA117 and VLF Converter RA37 RCA AR88D and Homebrew Converter with SA612b Gilbert cell mixer Antenna G5RV dipole at 20m height using only one leg Pete

From kgordon at moscow.com Sun Jul 3 18:31:03 2005

Subject: [R-390] SAQ Annual Transmission

Don Reaves wrote: >Anyone on this list copy SAQ?

Well, I know of a fellow on one of my other lists who did: Richard Brunner AA1P up near Boston, MA. Used an RBL and a 500 foot long wire about 8' high running N - S. Copied SAQ at 12:15 UTC loud and clear, amid some static. I'll forward his report here asap. Ken W7EKB

From shoppa_r390a at trailing-edge.com Sun Jul 3 21:31:16 2005
Subject: [R-390] Dent removal 101

My yellow striper had a corner of the front panel dented in. I slapped a couple blocks of hardwood in a vise, put that corner in, and bent it back nicely.

But I'm having more trouble with the side panels, which have been banged up on the back corners. It's not just that there's a bend, but the metal seems to have been stretched and distorted. It's like there's too much metal.

Any tricks to getting it back and flat? Hammering it would seem to me to just make it thinner. I think I can get all the screw-holes back to where they're supposed to be but I'd prefer to get the metal back to the point where, I guess, the back of the radio that nobody sees looks nice too :-).

Maybe the next thing I'll try is sandwiching it between some steel plate and seeing if I can hammer them into flattening out the aluminum sides. Tim.

From n4tua at aol.com Sun Jul 3 22:01:57 2005
Subject: [R-390] Cleaning?

Hello,

I am cleaning my new 390A and need some advise. Is the slight yellow color on some of the transformer cans and other chassis areas going to come off with polishing with never dull? Is this good? What is a good cleaning agent for a dull looking insides. I have also found a trick some may know. Some of the transformer cans were crushed down from to much fastener tightening. I made a wooden die to fit inside the can and have formed it back to original shape again. Some of the cans look as if they came with no hole for adjustments. Some one either drilled a hole or enlarged the hole rather crudely. I have cleaned these up a bit also. Any help on cleaning chassis? Thanks, Collin

From jpl15 at panix.com Sun Jul 3 22:03:28 2005
Subject: [R-390] Dent removal 101

wrote: > Any tricks to getting it back and flat? Hammering it would seem to > me to just make it thinner. I think I can get all the screw-holes > back to where they're supposed to be but I'd prefer to get the metal > back to the point where, I guess, the back of the radio that nobody > sees looks nice too :-).

A judicious application of a very hot propane torch (or better: MAPP) is called for here. you evenly heat just the 'stretched' areas, being careful not to actually melt the aluminum.... the surface will change to a grey-ish 'grainy' appearance. If this is done carefully, you will observe the metal to shrink back quite a bit. Then go after the dent again - being careful not to re-stretch the aluminum again.

Many times the 'hammer' and 'heat' routines must be repeated. I am not a professional metal worker - but I was shown this technique by one of the best vintage auto restorers in the business, and I've gotten it to work pretty well. The key is "less is more"...

> Maybe the next thing I'll try is sandwiching it between some steel > plate and seeing if I can hammer them into flattening out the aluminum > sides. >

Get a small cloth bag - or large discarded sock - fill with fine sand - use that as a backing and 'dead-blow' absorber. A cheap body-and-fender hammer, perhaps a hand-held sheet metal "dolly" will make the job go better. Harbor Frieght has this kind of gear for cheap bux. Also - I like to do radio-restoration type metalwork using an up-ended 2X4 or 6X6 as an "anvil". Cheers
John KB6SCO

From glennmaillist at bellsouth.net Sun Jul 3 22:16:00 2005
Subject: [R-390] Cleaning?

The slight yellow color on the aluminum hardware is an anodize conversion coating. The aluminum was chemically treated to protect the aluminum from corrosion by this process. This is by design and should not ce polished off. 73 Glenn WB4UIV

From hankarn at pacbell.net Sun Jul 3 23:01:49 2005
Subject: [R-390] Cleaning?

The hole in the IF can is done when you are aligning the unit as per the manual. Do not polish the chassis and cans the alodine is a protective coating, it is supposed to look dull. Hank KN6DI

From hankarn at pacbell.net Sun Jul 3 23:07:47 2005
Subject: [R-390] Dent removal 101

Tim, you are peeing upwind into a hurricane to try and get the panels straight. If you heat it like some one suggested you will remove all of the alodine.

Heating aluminum with a torch is asking for blowing a hole in it in a blink of the eye due to the low flow point of aluminum. Then you have real problems. Hank KN6DI

From jpl15 at panix.com Mon Jul 4 00:04:36 2005
Subject: [R-390] Dent removal

wrote: > Tim, you are peeing upwind into a hurricane to try and get the panels > straight. If you heat it like some one suggested you will remove all of the > alodine.

Alodining kits are available from several sources - and they're in the same average toxicity range as PC-board etch stuff, etc. I have managed to re-alodine several pieces of mine, and we do it to very large items where I work, re-furbing military aircraft ground support gear.

> Heating aluminum with a torch is asking for blowing a hole in it in a blink > of the eye due to the low flow point of aluminum.

For heavier guage aluminum and soft steels - we use an oxy-acetyline torch fitted with a 'rosebud' to spread a lot of heat over a large area. For the lighter, thinner stock we, and I, have straightened out panels that were bent, crumpled, and had holes knocked in them, using a plumber's MAPP-gas torch.

Of course if you don't keep the flame moving, and don't practise any on similar scrap pieces until you get the hang of it, then what you describe is bound to occur.

HOWEVER - when pounding the dents out of thin sheet metal, some form of annealing and re-tempering of the affected area is needed to maintain the dimensions of the affected piece, and it is common practice in all shops doing any kind of sheet-metal work, to use a torch to heat the work.

Besides, in the few hurricanes I've had the dubious 'honor' of being out in - the continuous sheets of 90-mph horizontal rainfall would tend to obfuscate the fact that one was micturating therein.... ;}

Have a great 4th y'all - let's pause in between the food and the TV to reflect a minute on what this Monday stands for - and all those who have given up their lives so I can hang out in my back yard with a burger in one hand and a brew in the other... Cheers John KB6SCO

From hwlight at sbcglobal.net Mon Jul 4 01:59:49 2005

Subject: [R-390] Metal yellowing

Try Wenol Metal Polish. Works great. Wayne

From n4buq at aol.com Mon Jul 4 09:30:52 2005

Subject: [R-390] Cleaning?

Collin,

What you describe might be either alodine coating or MFP (multi fungal protection - or something like that). The MFP coating is rather thick-looking (kind of like varnish) and is rather shiny when cleaned. Alodined surfaces stay rather dull

If it is alodine, you can have it recoated. I had this done to a couple of R390A chassis recently and they really look nice. The downside is I couldn't do the backs without losing the lettering so they don't look as good as the rest of the chassis. Good luck, Barry - N4BUQ

From shoppa_r390a at trailing-edge.com Mon Jul 4 09:59:19 2005

Subject: [R-390] Cleaning?

> The aluminum was chemically treated to protect the aluminum > [anodizing/alodyning]

It's just a single data point, but my yellow striper shows zero sign of anodizing/alodyning on the side panels. The back plate, internal plates, and modules all were alodyned/MFP'ed and have a yellow sheen or a dull yellow coating.

Is there any way to definitively identify the maker of a mainframe, as opposed to the modules? Or is it just commonly assumed that the RF deck usually stays attached to the mainframe?

One of my R-390A's seems to have had the B+ fuses retrofitted. Does this narrow down the range of possible makers/contracts? Tim.

From n4buq at aol.com Mon Jul 4 10:12:57 2005

Subject: [R-390] Blowing B+ fuse

I finally got a couple of 1/8A B+ fuses (SloBlo) and tried one of them. The radio played for about one minute and blew the fuse. I was running a 1/4A in it before this. I assume the 1/8A fuse should be sufficient and I have something leaking somewhere, right? I replaced all paper caps, but not the electrolytics (yet). I assume leaky bypass caps is the first place to look? Any other suggestions? My other R390A is a "single-fuser" so I don't know if the B+ line is pulling more than 1/8A or not. Thanks, Barry

From saglek at videotron.ca Mon Jul 4 12:19:54 2005
Subject: [R-390] Cleaning?

Tim,

The anodizing comes in two versions, what is commonly known as Clear and Gold colored. >From what I understand they are equivalents as far as protection is concerned. It would be highly unlikely if the side panels were not treated. Google anodizing and I am sure you will find all the facts about the anodizing corrosion treatment. Al

From n4buq at aol.com Mon Jul 4 12:46:31 2005
Subject: [R-390] Cleaning?

Just to clarify, the panels are alodined (or a similar process as Alodine is a brand name if I'm not mistaken). They were most likely not anodized as this makes the surface electrically non-conductive. Barry - N4BUQ

From Llqpt at aol.com Mon Jul 4 12:52:06 2005
Subject: [R-390] Cleaning?

If it has a silver look with no trace or almost no trace of alodine, it is more than likely a 67 EAC. They had the crappiest coating of alodine of all the R-390A's built. Les Locklear

From David_Wise at Phoenix.com Mon Jul 4 15:14:05 2005
Subject: [R-390] Blowing B+ fuse

I'd look at the plug-in electrolytic filter caps on the audio deck, because high leakage is a common failure mode of electrolytic caps, and because it's easy. 73, Dave Wise (SWL in Portland OR)

From n4buq at aol.com Mon Jul 4 15:27:05 2005
Subject: [R-390] Blowing B+ fuse

With the order for the fuses, I included new electrolytics. I originally figured I would replace them, but the radio seems to pretty much hum-less so I thought the old cans were in pretty good shape. I'll probably replace them and do a before-and-after current test to see if that helps. Thanks! Barry - N4BUQ

From CRIPS01 at MSN.COM Mon Jul 4 17:41:08 2005
Subject: [R-390] Cleaning?

I have noticed how thin the chromacoat is on My '67 EAC unit. That is one thing I have to say about my SP-600 it is well protected by whatever type of chromacoat was used on it. Chromacoating is easy to do except for the acid etch part of the treatment most of the time you use either acidic, or hydrochloric acid. Using these two acids is not for someone with out experience. Then there is the safe disposable of the chemicals. I am not even sure if a person can even get these chemicals without a license anyway. Ken

From CRIPS01 at MSN.COM Mon Jul 4 18:08:01 2005
Subject: [R-390] Dent removal 101

Tim, you are peeing upwind into a hurricane to try and get the panels straight. If you heat it like some one suggested you will remove all of the alodine. Heating aluminum with a torch is asking for blowing a hole in it in a blink of the eye due to the low flow point of aluminum. Then you have real problems. Hank KN6DI

Hank is right, The only thing I can think of that might work is a Planishing Hammer. However these take a great deal of skill to use. Go here: www.eastwoodco.com Ken de W7ITC

From shoppa_r390a at trailing-edge.com Tue Jul 5 04:47:41 2005
Subject: [R-390] Blowing B+ fuse

> I finally got a couple of 1/8A B+ fuses (SloBlo)

I think that the B+ fuses are supposed to be non-sloblo (fastblow). The idea is that a short/overload on the B+ should break the circuit immediately.

Incidentally both my R-390A's came to me with 2 or 3A fuses in the B+ positions. May as well have been a penny...

> [Blowing fuse = bad electrolytic filters]

Probably. Do the electrolytic cans get noticeably hot (hotter than the chassis around them at least?)

It's entirely possible for the electrolytics to still have enough capacitance to effectively filter but have so much leakage that they blow the fuse.

Also check for burnt resistors on the decks... indication that a tube is drawing way too much current.

The army manual has a good procedure for finding B+ shorts with an ohmmeter but it doesn't always show up too-much-current-when-real-power- applied faults. Tim.

From shoppa_r390a at trailing-edge.com Tue Jul 5 05:32:28 2005
Subject: [R-390] My recapping measurements

OK, I put orange drops in for every 0.01 - 0.1 uF cap in my yellow striper. I admit it.

It had a mix of makers (Stewart-Warner RF deck, EAC IF deck, Collins AF deck) and a mix of capacitors in it when I found it. The RF deck had brown beauties, the IF deck was a mix of Aerovox

yellow caps, metal Westcaps, and brown beauties, and the AF deck was yellow caps (Sprague and Aerovox) and Sprague Vitamin Q's and a few brown beauties. All looked to be original or very-consistently-wired replacements done decades ago.

I made an impromptu leakage tester out of 20 9-volts in series and a microammeter.

Every brown beauty had large leakage (milliamps in some cases, always at least 50 or 100 microamps).

Every Vitamin Q and Westcap and Aerovox cap had zero to no measurable leakage. One of the Sprague yellow caps was a dead short. I think I would've been able to measure a microamp or two if it had been there (the meter is 50microamp full scale).

The canned electrolytics on the AF deck did pretty well, leakages in the hundreds of microamps. I had expected them to do worse. I was surprised that between pin #1 and pin #7 on the 45mfd two-section electrolytic that there was several milliamps flowing there. My understanding is that there's no capacitor/no connection there!

My conclusion: replacing the brown beauties was absolutely the right thing to do, even though they didn't have any obvious cracks or similar. The westcaps and vitamin Q's might have held up another 40 (or more!) years, but who knows.

Incidentally, every un-recapped IF deck I can recall seeing (hamfests etc.) seems to have had a Vitamin Q or Westcap in the IF deck as the coupling capacitor to the mechanical filters. Has anyone actually seen a brown beauty in that position? I get the impression that the makers of the IF decks knew they needed high-quality caps in some positions and that they could get away with lower-quality caps (brown beauties) in others. (How they would've known at the time that the brown beauties would eventually develop leakage, I don't know.) Of course it's possible that the depots replaced all brown beauties in critical positions long before I ever saw the guts of an IF deck. Tim.

From shoppa_r390a at trailing-edge.com Tue Jul 5 06:04:31 2005

Subject: [R-390] My repaint success

With great encouragement from this list, I've repainted the front of my yellow striper.

As it arrived from Fair Radio the front was obviously depot-repainted already. The back of the front panel had no legends. The front had some extra holes (including diode load jack) and some extra holes for rack-mounting, some of which had been bondo-ed over.

Paint removal wasn't all that bad. I bought some stripper at home depot and with a couple of applications it had removed the paint from both the front and the back.

I then began sanding down (320, 400, 640, 800 grade) the front and the back. I used some bamboo skewers to clean out the engraved lettering. Bondo filled the extra holes and the diode load hole and text.

First paint job was not a total success. I started with Rustoleum industrial enamel primer and followed by their "forest green" industrial enamel. There was a fair amount of orange-peel effect and I was not happy.

Repeated the strip/sand procedure. Did a little more bondo-ing.

Second paint job went much better. I skipped the primer and heated the green paint in hot water before

spraying on. The result was zero orange peel and a very nice surface.

Baked in a cardboard box with 150 watts of light bulbs for a day or two. The panel got too hot to hold for more than a few seconds... I'm guessing temps of 150 or so.

Filled in the lettering with acrylic "titanium white". I brushed it into the lettering and then wiped with a paper towel. I think a rubber squeegee would've been better as sometimes the towel would remove white paint from inside the engraving, but a second application fixed it up when this happened.

The result is stunning even if not "original" appearance. The green is glossy and deep/dark. The lettering is vibrantly white.

Maybe for my next R-390A refurb I'll go with smoke gray. Or maybe candy-apple red :-).

I will also probably put a little more effort into sanding the bondo down next time. Where I filled in holes I can see a very slightly different texture to the paint. It is not at all noticeable, I only see it if I look for it. A light sanding and a second coat of paint probably would've taken care of it but I didn't want to get too much of the base coat into the engravings. Tim.

From n4buq at aol.com Tue Jul 5 09:13:55 2005

Subject: [R-390] Blowing B+ fuse

>> I finally got a couple of 1/8A B+ fuses (SloBlo) >> I think that the B+ fuses are supposed to be non-sloblo (fastblow). > The idea is that a short/overload on the B+ should break the circuit > immediately.

I figured they were all SloBlo, but maybe not. Any other comments here?

> Incidentally both my R-390A's came to me with 2 or 3A fuses in the B+ > positions. May as well have been a penny...

The reason I've been running with the 1/4A is: 1) It's what I had on hand, and 2) The older radios didn't have this fuse at all. I figured if something catastrophic occurred, the 1/4A *might* protect something, but a "penny" would have been the same as the older radios so I wasn't too worried.

>> [Blowing fuse = bad electrolytic filters]

>

> Probably. Do the electrolytic cans get noticeably hot (hotter than > the chassis around them at least?)

If I recall, the caps do get a bit warm (at least one of them). I'll do a current check with the cans and the new caps and see what difference it makes.

> It's entirely possible for the electrolytics to still have enough

> capacitance to effectively filter but have so much leakage that > they blow the fuse. >> Also check for burnt resistors on the decks... indication that > a tube is drawing way too much current. >

I didn't notice any obviously burned resistors when I recapped the decks. I could have some high values, but none looked obvious.

> The army manual has a good procedure for finding B+ shorts with an ohmmeter but it doesn't always show up too-much-current-when-real-power- applied faults. Tim.

I need to do a resistance/voltage check on all tube pins before I call this one complete. Hopefully, I can get things going with the 1/8A fuse with the electrolytic changes, but if not, I have other issues. Thanks, Barry - N4BUQ

From ghayward at uoguelph.ca Tue Jul 5 09:22:57 2005
Subject: [R-390] Blowing B+ fuse

I don't recall in your previous posts whether you have a solid state power supply or tube rectifiers. The B+ inrush with the silicon diode modification will be huge. Cheers, Gord VE3EOS

From n4buq at aol.com Tue Jul 5 09:43:44 2005
Subject: [R-390] Blowing B+ fuse

Tubes.

The fuses blew after about one minute which would further lead me to believe something like the electrolytics are the problem. Thanks! Barry - N4BUQ

From tshoppa at wmata.com Tue Jul 5 09:53:29 2005
Subject: [R-390] Blowing B+ fuse

> The B+ inrush with the silicon diode modification will be huge.

It's not so bad - the diodes don't drive filter capacitors directly, there's big filter inductors in the way. If a B+ fuse blows, it's not directly because of the solid-state PS mod. (Now it may be indirect if the extra B+ volts causes a capacitor or tube to fail shorted)

I've made measurements of AC inrush current with and without inrush-limiting thermistors, I'll see if I can post oscilloscope traces on the web somehow. Tim.

From David_Wise at Phoenix.com Tue Jul 5 10:04:48 2005
Subject: [R-390] Blowing B+ fuse

Won't matter if the SS mod was done according to spec. The official instructions add a series resistor to drop the B+ to tube-equivalent levels. This softens the inrush considerably.

Tim's right, the B+ fuses are fast-acting, not slow-blow. And they were added after either some radios burned up, or an engineer realized that they could. It's a worthwhile upgrade, especially in these latter days when the components are so far past official lifetime design specs. 73, Dave Wise (SWL in Portland OR)

From chacuff at cableone.net Tue Jul 5 14:12:32 2005
Subject: [R-390] Blowing B+ fuse

Slo-Blo's are usually used when there is an inductive load and/or to survive the much higher in-rush

current that can cause nuisance fuse blowing with standard fast acting fuses. Has the power supply been solid stated or are the tubes still present. If solid stated it may still be in-rush current along with filter leakage current that is opening it up. I would think the turn on current surge would be a good bit greater than 125 ma. in the B+ if solid stated. Much more gradual with the tubes....

Another thing...how did the fuse blow? Was it just opened up at one end of the element or was the inside of the glass plated with discolored metals indicating a sudden spike in current draw.? (should also blow the 1/4 A if that's happening though.) Just some thoughts... Cecil...

From chacuff at cableone.net Tue Jul 5 14:15:58 2005
Subject: [R-390] Blowing B+ fuse

Never mind my drivel.....I should have read on down the list. You guys have got it covered as usual.... Sorry for the extra bytes... Cecil....

From n4buq at aol.com Tue Jul 5 14:45:32 2005
Subject: [R-390] Blowing B+ fuse

The fuse was simply opened up at one end - no discolored metal plating. Assuming a slow overdraw of current. Thanks, Barry - N4BUQ

From r390a at bellsouth.net Tue Jul 5 16:29:22 2005
Subject: [R-390] R-390* registry?

At one time Tom Marcotte kept a '390A registry and someone also kept a R-390 registry.

The last address of Tom's web page comes up as no longer valid, and I can't seem to find my link to the "390 classic" list. Anyone help? Thanks Tom NU4G

From shoppa_r390a at trailing-edge.com Tue Jul 5 20:47:43 2005
Subject: [R-390] Serial number matching

Through dumb luck, one of my R-390A's bears a Stewart-Warner nameplate with serial number 624. And my other one has a Stewart-Warner RF deck with serial number 625. Out of the factory, was there any matching of serial numbers on the various subassemblies, or was it more random? Tim.

From Flowertime01 at wmconnect.com Tue Jul 5 22:19:26 2005
Subject: [R-390] Serial number matching

Tim,

Back when 68 - 75 many of the receivers had matching decks and front panel serial numbers. Some times a receiver would have decks that were off by a serial number or two. Some receivers had decks that just had not reason to the deck numbers.

We never though it made any difference. We though the numbers were stuck on the decks before the

decks were installed. We thought it was a what ever issue. Someday someone was feeling bored and matched up several whole receivers. Other days it looked like any number was OK to get the thing assembled.

Looking at your deck serial numbers should not be taken as any thing other than curiosity. Some guy will sell a matched receiver on Ebay and wax on for several extra hundred dollars for one that never went to the depot.

Having looked into a couple thousand receivers at various locations and years, I saw all kinds of number sets. Its just luck if any of the decks have the same number as the front panel tag. Roger KC6TRU

From shoppa_r390a at trailing-edge.com Wed Jul 6 06:24:28 2005
Subject: [R-390] Serial number matching

> Looking at your deck serial numbers should not be taken as any thing > other than curiosity. Some guy will sell a matched receiver [...]

Certainly, a curiosity. And it's not that either of my radios had matching modules - I was more struck by the fact that my two radios (each of which is a Heinz 51 mix!) had serial numbers that differed by only 1. Sort-of-like twins separated at birth but reunited after 4 decades.

Of course, the way R-390Aitis has taken over here, I won't be satisfied until every single R-390A has met its brethern here in my basement :-). Tim.

From courir26 at yahoo.com Wed Jul 6 08:13:03 2005
Subject: [R-390] Serial number matching

The only matched numbers I've seen are with the Fowlers. They only made five so it was not too tough to match them. Tom

From courir26 at yahoo.com Wed Jul 6 08:16:44 2005
Subject: [R-390] R-390 s.n.s here

Just wanted to step in with a correction . . . I never kept a registry (someone's website had a link to me indicating such, but that is incorrect), just a record of high s.n.s and a few other curiosities. The record is saved here: <http://www.geocities.com/courir26/CollinsRec.htm> 73 Tom

From richardmay at hotmail.com Wed Jul 6 08:38:14 2005
Subject: [R-390] Re: Serial number matching

Some time ago, I dropped the faceplate of my backup receiver to replace a defective switch. To my amazement, the RF deck was labeled "Motorola Number 1". Unfortunately, the RF geartrain faceplate had been switched somewhere down the line with an EAC deck. (I found the second serial number on the side) Goes to show you, anything is possible. 73's Richard.

From 0519352653-0001 at T-Online.de Wed Jul 6 09:50:00 2005
Subject: [R-390] Collins mechanical filter - help with identification

Folks,

I have salvaged three mechanical filter from a circuit board but cannot identify the filters themselves nor the equipment they came out of.

Can anyone help me with the characteristics of these beasts? They are marked: F450 Z1C F450 Z2C F450 V60F Any help is greatly appreciated. 73 J R "Jo" Groeger G4XXW, DK3NG, EL0AA/MM

"During times of universal deceit, telling the truth becomes a revolutionary act." George Orwell

From tshoppa at wmata.com Wed Jul 6 09:59:32 2005
Subject: [R-390] Is this the same mini-BNC connector?

Is this the same as our favorite mini-BNC connector? Seems to be making a comeback in the "wireless" world:

<http://www.tycoelectronics.com/prodnews.asp?id=686>

<http://www.trompeter.com/assets/product/PDF/250series.pdf>

<http://www.newark.com/product-details/text/catalog/80535.html>

None of the prices are as cheap as Fair's! Tim.

From n4buq at aol.com Wed Jul 6 10:28:30 2005
Subject: [R-390] Is this the same mini-BNC connector?

Sure looks like them. Any luck finding new 3TF7's? :-) Barry - N4BUQ

From jpl15 at panix.com Wed Jul 6 10:36:00 2005
Subject: [R-390] Serial matching - slightly OT

Many hundreds of years ago - I worked at a large electronic and aerospace surplus company. Yes - an alcoholic working for a brewery... ;}

While working there I got in a Nems-Clarke telemetry receiver, 100-400 MHz continuously - the model with the Mallory Inductuner and the Weco planar triode in the front end. I used it quite a bit back then (the mid 70s). Flash forward to the late 80s - I see another similar model at a ham swap, and buy it 'cause it's cheap. I put it in the rack next to it's predecessor, woo hoo.

A few years later, while moving the radios, I happen to notice that they have *consecutive serial numbers*, and in fact the first radio I got was the 'younger' one. It's interesting to think of the paths they

took from the assembly line, into service, then surplus, only to be rejoined in decades later in my shack.

Two house-moves ago I sold 'em... way too big and heavy and noisy for what they did... ObR-390: my 390A appears to be a mostly Motorola rig, but arrived in my care missing (alas!) it's rating plate.
Cheers John KB6SCO

From roy.morgan at nist.gov Wed Jul 6 11:07:07 2005
Subject: [R-390] Serial number matching

wrote: >... >Of course, the way R-390Aitis has taken over here, I won't be >satisfied until every single R-390A has met its brethern here in >my basement :-).

"The Jury is instructed to forget what this email contains after reading it."

I have an R-390/URR that may be serial number 17 (grease pencil on rear, no tag) and an R-390A with tag Collins serial no. 17 contract 375-P-54. If I remember correctly, I also have RAL/RAK pair of receivers, both serial number 17. (Don't try anything foolish. My security staff is tracking your whereabouts.) Roy

From n4buq at aol.com Wed Jul 6 11:11:56 2005
Subject: [R-390] Serial number matching

With the luck I seem to be having with my latest radio (killing the 3TF7, burning up the 1/8A fuse, etc.), I think it must have been serial number 666. Barry - N4BUQ

From andywilliams at pobox.com Wed Jul 6 11:34:20 2005
Subject: [R-390] CY-979 shock mounts

Anyone know what type of shock mounts are used with the CY-979A and where to buy a set?

From dhallam at rapidsys.com Wed Jul 6 11:34:18 2005
Subject: [R-390] Is this the same mini-BNC connector?

I'm not sure but they don't look quite the same. The connectors in the R-390A were MB series. I don't believe that is the same as mini BNC. David C. Hallam KC2JD

From roy.morgan at nist.gov Wed Jul 6 11:48:49 2005
Subject: [R-390] CY-979 shock mounts

wrote: >Anyone know what type of shock mounts are used with the CY-979A and >where to buy a set?

Andy,

Ask Mac. He sold the new CY-979 cabinets a while ago and he may have some shock mounts, or at the very least can look on a set to see the numbers. I suggest you try a place called All-Electronics in CA. <http://www.allelectronics.com> I had no luck with their search window, but send them an email. Roy

From dps4 at jun0.com Wed Jul 6 12:01:36 2005
Subject: [R-390] Is this the same mini-BNC connector?

The mini BNC is a new connector designed in the last several years to reduce the package size of the "standard BNC" The claims are 40% more connections in the same space. The Mini will not mate with the standard BNC. The standard BNC is the one designed in the 40's and used in the R390/URR. Just some info for all. 73's David Seckel W8GWI

wrote: I'm not sure but they don't look quite the same. The connectors in the R-390A were MB series. I don't believe that is the same as mini BNC. David C. Hallam KC2JD

From chacuff at cableone.net Wed Jul 6 12:19:09 2005
Subject: [R-390] CY-979 shock mounts

Fair Radio used to carry them....NOS.

From w9wis at yahoo.com Wed Jul 6 13:38:05 2005
Subject: [R-390] CY-979 shock mounts

IIRC they are 4 ea Lord HT2-35 shock mounts. Mike, W9WIS --

From CRIPS01 at MSN.COM Wed Jul 6 15:50:33 2005
Subject: [R-390] CY-979 shock mounts

Look here: <http://www.fairradio.com/mounts.htm>

From N4BUQ at aol.com Thu Jul 7 00:06:55 2005
Subject: [R-390] Tags

Roger,
Take a look at eBay item 654329141. Did the depots have these on hand when you were working on the radios? This one looks like it was designed to be either for an R390 or R390A as you could stamp an "A" in the box after the "R390". Barry - N4BUQ

From jlkolb at jlkolb.cts.com Thu Jul 7 00:25:45 2005
Subject: [R-390] Collins mechanical filter - help with identification

F450 Z1C USB filter 450 kHz carrier freq 2.7 kHz @ 2 db, 4.4 kHz at 60 db 20 kohms source and load resistance, 30 pF resonating caps 4 db insertion loss. V case.

F450 Z2C same as above, except LSB

F450 V60F AM filter, 450 kHz 5.25 kHz @ 6 db, 23 kHz @ 60 db specified. 8 db insertion loss. V case.

I have the plot of one on my web site which is probably much closer to typical.
<<http://www.jlkolb.cts.com/site/mfcurves.htm>>

When receiving mechanical filters mounted on a board, it's always good to trace out the circuitry around the filters to try to get an idea of how the filters are matched to the tubes or transistors. Information on the frequency and bandwidth of filters is fairly widespread, but information on the impedances required to properly match the filter are rather rare. John <http://www.jlkolb.cts.com>

From Lester.Veenstra at intelsatgeneral.com Thu Jul 7 07:40:24 2005
Subject: [R-390] Tags

Unable to find that item Lester Veenstra

From n4buq at aol.com Thu Jul 7 09:40:27 2005
Subject: [R-390] Tags

I can't get to eBay from work so I can't check out the number. I may have cut-n-pasted it incorrectly. I'll check tonight. Thanks, Barry - N4BUQ

From jonandvalerieoldenburg at att.net Thu Jul 7 10:28:04 2005
Subject: [R-390] Tags

Try this # 6543291418 Kind of interesting as these appear to be unused with no stampings. The R-390a plate is shorter than the R-390/URR, and they do not interchange though. -- Jon Oldenburg AB9AH

"Give a man a fish and he will eat for a day. Teach him how to fish, and he will sit in a boat and drink beer all day."

From n4buq at aol.com Thu Jul 7 10:33:29 2005
Subject: [R-390] Tags

Okay (looks like I dropped the trailing "8").

I wondered if the tags were interchangeable. I know some of the R390A plates are shorter than others and wondered if these could be used on the panels that take the longer plates. Thanks for finding the listing. (Love your tag line...) Barry - N4BUQ

From Flowertime01 at wmconnect.com Thu Jul 7 11:17:36 2005
Subject: [R-390] Serial number matching

Tim,

Once you get them all together in your basement, you can get them all properly sorted out. I think it would help their personalities. I have worked on some real confused receivers and I think having their subassemblies mixed up is part of their personality problems. Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Jul 7 11:58:44 2005
Subject: [R-390] Tags

asked, Did the depots have these on hand when you were working on the radios? This one looks like it was designed to be either for an R390 or R390A as you could stamp an "A" in the box after the "R390".

Yes, you could order replacement tags back then.

Fellows saw a need to take them home with them as keepsakes. The property book Officer would have a fit. As his property was becoming unaccountable for. So you could order a new tag. Any old speedy 4 or 5 was not about to get the paper signed off on, but the Warrant officer could get it done.

We some times altered tags. You would get two receivers from different contracts with the same serial number on the same property book. (We had lots of receivers.) So someone would stamp a letter after the serial number on one receiver.

Someone may have an altered tag of this flavor and wonder why. Roger KC6TRU

From Flowertime01 at wmconnect.com Thu Jul 7 12:13:16 2005
Subject: [R-390] Tags

Barry, Try this # 65432914 Barry,

I have no clue. My non photographic memory does not recall if that tag is a real thing. It has the look for a typical replacement tag. The kluge space after the R390 is a typical thing of close but not exact. Roger KC6TRU

From westerman at cableone.net Thu Jul 7 14:21:21 2005
Subject: [R-390] What happened to all the NOS parts?

With around 60,000 R-390s and R-390As having been manufactured, the government had to have tons of NOS parts setting in their warehouses. Were these parts sold for scrap, trashed or still in storage (hopefully) somewhere? Craig

From n4buq at aol.com Thu Jul 7 14:21:57 2005
Subject: [R-390] What happened to all the NOS parts?

I think JamminPower (Andy) has them all! Barry - N4BUQ

From Llgpt at aol.com Thu Jul 7 14:26:33 2005
Subject: [R-390] What happened to all the NOS parts?

Well, there are a lot of people with a lot of R-390, R-390A's and spare modules, parts etc. gathering dust, out there. I know of many with 12-20 receivers and spare modules etc.

My thoughts are that they will not increase much in value, the generation coming up now couldn't care less about "our" technology. Those who have lots of it should consider giving their families a break and sell while the selling is good.

I'm not looking or trying to sell, so I have no stake in my opinion. Les Locklear

From Llgpt at aol.com Thu Jul 7 14:27:07 2005
Subject: [R-390] What happened to all the NOS parts?

writes: I think JamminPower (Andy) has them all! Barry - N4BUQ

Maybe for the R-390's.....:-) Les

From jamminpower at earthlink.net Thu Jul 7 14:42:19 2005
Subject: [R-390] What happened to all the NOS parts?

I wish. What I've got is OOS - that is, OLD old stock. Or even VOOS - VERY old, old stock. James A. (Andy) Moorer

From R390rcvr at aol.com Thu Jul 7 15:01:00 2005
Subject: [R-390] Stockpile of BOS

Well, guys: I personally collect BOS, broken old stock. My favorites are main tuning knobs with broken tabs. Lots of those. Still looking for the NOS warehouse. Randy

From n4buq at aol.com Thu Jul 7 15:23:04 2005
Subject: [R-390] What happened to all the NOS parts?

I still think there's a box of 100,000 #8-36 Bristol-drive set screws somewhere besides the bottom of the ocean. Barry - N4BUQ

From roy.morgan at nist.gov Thu Jul 7 16:22:55 2005
Subject: [R-390] What happened to all the NOS parts?

wrote: >I still think there's a box of 100,000 #8-36 Bristol-drive set screws >somewhere besides the bottom of the ocean.

Oh indeed. we need to find that box!

While we are at it, does anyone have or know of a source for a 3/8 inch 32 tpi tap????

I am planning to mount some BNC connectors in the clamp fitting of Twinax connectors to make UG-whatever-it-is substitutes, for antenna connections on the R-390's. Roy

From n4buq at aol.com Thu Jul 7 16:29:44 2005

Subject: [R-390] What happened to all the NOS parts?

McMaster (www.mcmaster.com) Catalog page 2238 Barry - N4BUQ

From hankarn at pacbell.net Thu Jul 7 16:44:14 2005

Subject: [R-390] What happened to all the NOS parts?

Craig, I have at least 4 or 5 tons of parts for the R-390A from a former depot repair facility. Hank
KN6DI

From courir26 at yahoo.com Thu Jul 7 17:12:45 2005

Subject: [R-390] Tags Interchange

The early R-390A tags in fact do interchange (in size) with the R-390A. The early Collins and Motorola for sure. Tom

From courir26 at yahoo.com Thu Jul 7 17:14:50 2005

Subject: [R-390] What happened to all the NOS parts?

And you have a wife too! Tom

From ai2q at adelphia.net Thu Jul 7 17:44:20 2005

Subject: [R-390] What happened to all the NOS parts?

"Ah, where have all the parts gone? Gone to graveyards, every one. When will we ever learn? When will we ever learn?"

When I was in Vietnam in 1966, an AF sergeant called me to check out a CONEX container sitting on the tarmac in Pleiku airfield. K9BWI and myself looked it over and saw thousands of new parts, all in multi-layer MIL wrappings. These parts were for R-390As, RT-718s (KWM-2As), etc.--- and all were waiting for disposal/destruction. The entire contents of that container was slated for the trash dump.

If you think that was wasteful, it was nothing compared to the pallets of R-390As piled up sitting in the mudfield! Whatever happened to those? Vy 73, AI2Q, Alex in Maine
<http://users.adelphia.net/~alexmm/ai2q.htm>

From westerman at cableone.net Thu Jul 7 17:49:42 2005

Subject: [R-390] What happened to all the NOS parts?

Please adopt me. ;-) Craig westerman@cableone.net

From mjmurphy45 at comcast.net Thu Jul 7 19:49:50 2005

Subject: [R-390] Is this the same mini-BNC connector?

Tim,

The connector used in the R-390 is not a mini-BNC in my book. A proper BNC has a pin! The

Amphenol connector used in the R-390 has a socket instead of a center pin thus making it a "Reverse mini -BNC". Ha!

Amphenol discontinued this connector series a few years ago. Only one company still makes this connector (well sort of) It is RF Industries in California. <http://www.rfcoaxconnectors.com/>

The one that they make is 75 Ohms and will work only with RG-59 coax - unfortunately not mini-coax. They also make a bulkhead. These are compatible but are fairly useless except for test cables.. It is cheap, only a few dollars each, last time I bought some for work.

The new Mini-BNC as you have found is simply a small BNC design. The world apparently needed one more connector. It is not compatible with the R-390. Darn.. Mike Murphy WB2UID

From mjmurphy45 at comcast.net Thu Jul 7 19:54:55 2005
Subject: [R-390] Is this the same mini-BNC connector?

Here are the links to the connectors: <http://rfsearch.rfindustries.com/fshome.asp> The cable side

And the bulkheads:

<http://rfsearch.rfindustries.com/fshome.asp>

<http://rfsearch.rfindustries.com/fshome.asp>

<http://rfsearch.rfindustries.com/fshome.asp> Mike Murphy WB2UID

From mjmurphy45 at comcast.net Fri Jul 8 12:23:24 2005
Subject: [R-390] Is this the same mini-BNC connector?

Tom,

Darn; the links do not copy properly. Go back to the main site

<http://rfsearch.rfindustries.com/fshome.asp> and under specialty connectors use these part numbers: RFM-2000, RFM 2002, 2002-1, 2002-S

The name that they use is MB, like Amphenol used. MB could have meant "Mini BNC" or "Mini Bayonet". We could not get RF Industries to do any other variations on this type (like for mini-coax). Mike Murphy WB2UID

From Tarheel6 at msn.com Fri Jul 8 14:51:29 2005
Subject: Results of talking with RF Industries: re: [R-390] Is this the same mini-BNC connector?

Spoke with Darryl at RFI, who told me their minimum order was 200 of RFM-2000 (the straight connector). For smaller quantities, he referred me to Chad at Current Source.

Chad at Current Source (208-323-9692) had the RFM-2000 for \$4.45/each for quantities under 25. For 25 pieces or more, their price is \$3.34 each.

Just a thought. Are there enough people who want these connectors for us to pool an order for 25? They'll have to go to one location and then whoever receives them would reship to the others. 73's, -tom

From westerman at cableone.net Fri Jul 8 17:20:31 2005
Subject: [R-390] Judging a R-390A for potential purchase

Questions on how to buy a R-390A.

I'm my area there are never any R-390s for sale. My only options are to buy something from Fair, buy from a individual on the net or buy one via a ebay auction. Most I see on Ebay auctions are being sold by people that know nothing about what they have.

Please see this ebay auction. <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5785656186>

Description isn't very helpful and pictures are small and hard to tell condition. Looking up production history on Chuck Rippel's site tells me that there were 5 or more built by Amelco. 1962 Amelco 35064-PC-63 5 (?) Serial number is 2179, so I'm guessing Amelco made more than 5. I email the guy asking questions. This is his reply:

--
I just opened it up....It looks very very clean and complete on the inside....only a few signs of surface aging...It was obviously kept indoors...I found it in the garage of an old house that was being demolished....Dont have my digital camera or I would take more pics of the inside....

--

Given what little information there is, how does one come up with a reasonable value for this receiver? It ultimately sold for \$610. A checked receiver with replacement meters sells for \$600 from Fair. Which would be a better deal? Or is it all just a crap shoot regardless from where you get them? Thanks Craig

From R390rcvr at aol.com Fri Jul 8 17:33:52 2005
Subject: [R-390] R-390A value

Craig:

I have pursued all of the purchase avenues you discussed, and far prefer with dealing with someone off the list, or being able to see it first.

Fair is very good about standing behind their rigs, and sending parts as needed, often free, but in my humble opinion, they have gotten pricey relative to the market. Their stockpile is really dwindling, so they are in hurry to give their gear away.

I have purchased rigs off of ebay. About 50% of the time I am pleased, and 50 % disappointed. Some of the list memebbers do sell on ebay, so they can give you good descriptions, which helps. the general antique dealers, you are on your own. I have had one come to me that had been rolled around in a sand box, and put away wet. You absolutely couldn't tell from the pictures or the description.

My advice is to put out a request to the list, and see what shakes out. There are a lot of radios out there, and I think you can do better than ebay. My .02! Randy

From shoppa_r390a at trailing-edge.com Fri Jul 8 17:38:28 2005
Subject: [R-390] Judging a R-390A for potential purchase

> A checked receiver with replacement meters sells for \$600 from Fair.

A different data point from Fair: A "Used/Reparable" unit comes with no meters, a very grunged up geartrain, lotsa dirt everywhere, and some green dots indicating that Fair has swapped modules around from various units until they had a mainframe filled with working (but maybe not perfect) modules. Oh, yeah, don't forget that big yellow stripe across the front.

I'm a couple of weeks into refurbing my yellow striper, getting maybe an hour or two each morning to play with it. At \$350 it's the most fun I've had in a long time.

If your objective is to start with a working radio, \$600 or \$610 or whatever is a bargain. I would be reluctant to spend that much on a clean but unknown-condition radio without a lot of pictures and very good assurance/reputation from a seller. Fair has that good reputation automatically.

I'm wondering what to take on next... maybe a tube transmitter. Anyone here with opinions of the T-195/GRC-19? I have no personal interest in SSB modes, and it looks like it could be fun. Tim.

From redmenaced at yahoo.com Fri Jul 8 19:46:56 2005
Subject: [R-390] Judging a R-390A for potential purchase

> I'm wondering what to take on next... maybe a tube > transmitter. > Anyone here with opinions of the T-195/GRC-19? I > have no personal > interest in SSB modes, and it looks like it could be > fun.

+++++++=

Uh oh!! This ones been bitten HARD!

The T-195 is the companion transmitter for the R-392, the companion transmitter for the R-390 or the R-390A is the T-368, it's gray, or maybe the BC-610, which is a black crinkle finish.

When you get your research done come back and we'll proceed further, hopefully you can find one nearby to look at, buying one is another story. The only reason I say it this way is because you might not believe me otherwise. It's not called the Beastly-610 for nothing. T-3,.... class by itself.
http://groups.yahoo.com/group/T-368_BC-610/ Joe KG2CI

From shoppa_r390a at trailing-edge.com Fri Jul 8 21:15:59 2005
Subject: [R-390] Ceramic sockets or not?

My yellow striper has several tube sockets in pretty sorry shape. The phenolic (or whatever plastic-like insulating material it's made out of) is crumbling in at least a couple of cases. Naturally, the ones deteriorating the most are those in the least accessible locations (e.g. under the BFO, in-between shielded compartments, etc.)

I have some phenolic sockets with shield bases already. But I also see that ceramic sockets with very similar dimensions are available for a couple bucks a pop. Any opinions on the longevity/durability of these two options? I'm used to seeing ceramic sockets only where there's a lot of heat, but when the next radio's owner comes along in a couple decades I don't want him to find that the 30-year old "new" sockets I put in have turned to dust too.

The ceramic sockets with tube bases I've found are the ones in the AES catalog. From the pictures and

numbers they appear to fit in the same size holes and have similar dimensions. Tim.

From DJED1 at aol.com Fri Jul 8 21:26:31 2005
Subject: [R-390] Judging a R-390A for potential purchase

There are tradeoffs on all the possibilities. I visited Fair recently, and talked to them about their refurbished units: The good news is that they put a lot of effort into repairs for the extra couple of hundred dollars- repainting the front panel, etc. The bad news is that you're getting a blue striper, which by definition has been abused, and no original meters. Buying on eBay may get you a radio with good meters, but unknown condition, and no recourse. On the other hand, I've in general been satisfied with my eBay purchases, but I try to deal with items which have been described in good detail, and the seller has provided some assurance that the item works. At a flea market, you can at least touch and poke around the radio. I saw a half dozen R-390s at Dayton, and they seemed to be going for reasonable prices (\$450-500). Most had original meters, but I didn't explore the working condition of any of them. Of course, we've been trying for years to get members of the list to share, but there have been few offers thus far. Ed WB2LHI

From CRIPS01 at MSN.COM Fri Jul 8 21:41:10 2005
Subject: [R-390] Ceramic sockets or not?

I prefer the ceramic sockets myself they are very durable, a parts Viking two transmitter I had looked like is had been had detonated like a bomb but the ceramic sockets in it where just fine, once I cleaned all of the carbon off of them. Ken

From CRIPS01 at MSN.COM Sat Jul 9 03:01:05 2005
Subject: [R-390] Judging a R-390A for potential purchase

RE: It's not called the Beastly-610 for nothing. T-3,.... class by itself.

So true the packing crate these behemoths came in would make a for a good bachelor pad in many third world countries. 8^) If you want a true behemoth transmitter you might look around for an old commercial AM broadcast band transmitter. A friend of mine is rebuilding a Collins 20V-2 commercial transmitter it is glorious to see the glow of two 4-400 driving two more 4-400's in this monster. From what I understand you should be able to come up with one of these for less money then any of the huge AM transmitters build for the military or the Amateur radio in the 50's. Ken

From CRIPS01 at MSN.COM Sat Jul 9 03:39:08 2005
Subject: [R-390] Fw: A question

I have a Relay which is part of a PTT mod on My Viking II transmitter, This is the transmitter I have tied into My R390A. I am unable to find the spec's of this relay. It is a Miotto/Aemco 24VDC Part number 156-64C2BO Does anyone know what the latching current is for this relay I am unable to find any info on it. I have no documentation for the home brew power supply built to key the relay and it's full wave rectifier has failed. What I would like to do is power up the PTT relay with a 24VDC "wall wart" power supply I can purchase a 1000 MA unit for 20 dollars, and an 1800 MA for 30 bucks. I know I could build another similar to what is there now but powering the relay up this way would clear a transformer and the terminal strip the power supply it is build on out of the underside. Ken

From W1RC at Verizon.net Sat Jul 9 07:30:30 2005
Subject: [R-390] FS: Cover and AC Power Cord for AN/USM 159A Frequency Meter

Hi Gang:

I found this in the basement and don't need it because I don't have this piece of equipment. I can't even recall how I came to have it. If you have one of these freq meters (with the cool film strip readout) missing the cover here's your chance to pick it up. It is in very clean condition; paintwork is excellent with a couple of dime-size abrasions on the front. Rubber sealing gasket is excellent. The AC line cord is also there but the plug is missing. I'm asking \$15.00 plus postage for it; any takers? Please reply by e-mail. Tnx es 73, Michael, W1RC w1rc*@*verizon-dot-com

From k2cby at aol.com Sat Jul 9 09:56:08 2005
Subject: [R-390] (no subject)

In general, ceramic tube sockets were considered "top of the line." In addition to being used in high-voltage, high-power and high-heat locations (ie most transmitter final amplifiers), they were also used in oscillators for maximum stability because the capacitance between pins changed very little with temperature. My own 390A has none, and I have not seen any in the odd 390A modules I have picked up over the years.

"Second best" are mica-filled Bakelite. These are the medium-tan colored sockets used throughout the R-390A. They were standard for low-power RF use.

"Third best" are the injection molded black Bakelite sockets. Although these are below "standard" for the R-390 and R-390A, they are certainly suitable for any of the audio stages, the VR tube and the rectifiers. They are not recommended for RF.

Last of all are the flat "wafer sockets" made up of two layers of phenolic sheet material. These were pretty much confined to cheap, mass-produced consumer products, but the military did use this type of construction for vibrator sockets and battery connectors. Miles Anderson, K2CBY

From barry at hausernet.com Sat Jul 9 11:31:59 2005
Subject: [R-390] (no subject)

Hi Miles

That's interesting. Could it be they had another reason for going with the tan, mica-filled Bakelite -- less likelihood of cracking or something? It would seem that at least the sockets for the 6082's would be candidates for ceramic considering the heat factor, and possibly also those for the rectifiers. I don't recall if I've ever seen them there.

Odd parallel: I just had some temporary caps (not capacitors) installed at the dentist. I complained that they felt rough, not slick like previous acrylic "temps". The dentist explained that it's quartz-powder-filled -- to provide additional hardness and resistance to wear, not heat resistance, though it probably does that, too. Of course, another material -- used for permanent crowns -- is usually porcelain (ceramic).

He's got a lot of stuff that would be handy in repairing small parts, replicating knobs, etc. Unfortunately, the fee would be a tad pricey -- unless, perhaps I can infect him with VRV -- Vintage Radio Virus. (not likely, though) Barry

From mjmurphy45 at comcast.net Sat Jul 9 12:27:09 2005

Subject: Results of talking with RF Industries: re: [R-390] Is this the same mini-BNC connector?

Tom,

Kind of cool to run into a "real" connector company like RF Industries.

The connector is fairly simple in design compared to the Amphenol (a bit crude), but it is available and is reasonably priced. We used it for a mini 75 Ohm video connector on a microwave transmitter at work. It is characteristically hard to mate, but stays put.

Buy a few and try them out. Again, the RFM-2000 straight male is designed for 75 Ohm RG-59 sized cable. I suppose that somebody could figure a way to make some kind of adapter to mini-coax, though. Good luck, Mike WB2UID

From shoppa_r390a at trailing-edge.com Sat Jul 9 12:31:55 2005

Subject: [R-390] (no subject)

> going with the tan, mica-filled Bakelite -- less likelihood of cracking > or something?

I've homebrewed several doohickeys using ceramic PCB-mount tube sockets, and despite me dropping them onto the floor a couple of times they've never shown any sign of damage.

What I really like about them is that the pin sockets are much less wiggly than a typical Bakelite or phenolic socket. The PCB mount ones I have were made out of two ceramic parts: before riveting the top to the bottom, the individual pin sockets seem to have been inserted. While there's still a little bit of wiggle it's not much at all.

The downside would be that it's not possible to replace individual pin sockets. (Well, maybe I could unrivet the two halves... but that seems too much work!)

Any recommendations for places to shop for tube sockets? AES (<http://www.tubesandmore.com/>) has a very wide range, but I wonder what else is out there. I did once get some from an outfit called "The Triode Store" but I haven't looked at what else they have lately. Tim.

From N4BUQ at aol.com Sat Jul 9 14:53:11 2005

Subject: [R-390] Blown B+ Fuse - Cont'd

Last night, I finally got around to doing some testing. Hooking up a couple of meters in series (to ensure I was getting readings that agreed since neither meter is calibrated) where the 1/8A fuse goes, I observed that the system draws anywhere from 70mA to almost 100mA depending on what's going on at the time (both meters agreed within 5mA). AGC with BFO off gave the least amount of reading whereas MGC gave the most (makes sense). Also switching from SLOW, to MED (or FAST) AGC when the 2uF cap dumps its charge causes the circuit to draw considerably less current until the cap discharges. Again,

makes sense.

What I can't figure out is why a 1/8A fuse would have blown under these conditions. A fast-acting fuse might have sensed a very sudden surge that these meters would not have shown, but these are slow-acting fuses.

Has anyone done any tests to see how much current the typical B+ fuse is carrying? As I mentioned, one of the filter cans is getting just a bit warmer than the other one so it could be drawing a bit more than normal. I plan to replace these with modern equivalents and see what effect it has on the current situation (no pun intended), but I was wondering if anyone else has experimented here. Thanks! Barry - N4BUQ

From wd8kdg at worldnet.att.net Sat Jul 9 15:24:07 2005

Subject: [R-390] R-390A test equipment

Had to relate this to a R-390 or R-390A somehow. Has anyone on the list recapped an URM-25D?? Did you test any of the old caps to be able to recommend which ones are most prone to fail?

I have an URM-25D to align my R-390A and its starting to act a little strange after warming up. Did take the time to test the caps in the power supply and they were fine. Although I did think it was strange the filter caps were paper and not electrolytic. Thanks for any comments and or suggestions. Craig,

From r390a at bellsouth.net Sat Jul 9 15:58:26 2005

Subject: [R-390] OT -- New High Price for GRR-5 RX

In the subject the seller says it's new. In the description he says "like new". Previously the highest insanely high price was over \$250.

You know where it is. Item 5788266941 <http://tinyurl.com/abr2q> Tom NU4G (I have one that is "like new" that was gotten from our listowner, but I ain't gonna sell it)

From redmenaced at yahoo.com Sat Jul 9 16:45:59 2005

Subject: [R-390] R-390A test equipment

Yeah, the rectangular caps on the printed circuit board should all be suspect, especially if they are cover with goo. Joe

From westerman at cableone.net Sat Jul 9 17:40:58 2005

Subject: [R-390] New R-390 site

Had a little free time and some spare web space. Let me know what you think? <http://216.146.204.227/forums/index.php> <http://216.146.204.227> If there is enough interest I can modify this so as to be the most helpful. You are the guys with the knowledge and experiance. Tell me how to make it easier for you to share your wisdom. -- Craig westerman@cableone.net

From dwade at pacbell.net Sat Jul 9 19:09:29 2005

Subject: [R-390] AGC Troubleshooting

Good afternoon,

Got some time to look into the AGC trouble in my Motorola R-390A. First thing I wanted to do is satisfy myself that there was indeed a problem. I looked at the AGC line with a strong signal and the Calibrate sig. The most I could get was about -4.9 volts at the AGC jumper. Under no signal conditions the AGC line is about +0.15 I then took the HP-410C and looked at resistance. From the jumper to ground, I see about 350K to 400K with a strong capacitor charging characteristic (i.e. much lower resistance rising as something charges). Unplugging the RF deck doesn't change that, unplugging the IF deck I get a steady 1.8 meg to ground from the jumper. I took out the IF deck and measured resistance from pin 6 to ground, and I see about 7 meg with no charging behavior. Looking at the Pearls of Wisdom, it says I should see infinite resistance.

Looking at the schematic I see the three capacitors AGC line to ground in the 1st, 2nd and 3rd if amps (C502, C512 and C519). These seem prime suspects to me. Do you all agree, and any other components I should look at?

I didn't take any voltage measurements since the 7 pin extender socket I thought I had is actually a 9 pin. ∴. Thanks for any help. Dennis

From Flowertime01 at wmconnect.com Sat Jul 9 22:20:16 2005
Subject: [R-390] Ceramic sockets or not?

Tim,

I would install the ceramics you have and get on with enjoying your radio. Like you say they are for high heat locations. But why not use them, they could out last the rest of the receiver. Roger KC6TRU

From r390a at bellsouth.net Sat Jul 9 22:51:36 2005
Subject: [R-390] Serial number matching

You know, I just sold a fellow on the list (I forget, heck it may have been you) a Triplet model 666 VOM, I've not had an Eico 666 tube tester, nor a piece of gear that had a close enough serial number to even be the next-door neighbor of the beast. LOL Tom NU4G

From: Flowertime01 at wmconnect.com (Flowertime01@wmconnect.com)
Subject: [R-390] Judging a R-390A for potential purchase

Fellows,

Short of a real chopped up wire harness, almost any R390 or newer R390/A can be repaired. If it has not actually undergone a fire, it is likely repairable.

Over the net, ask for lots of pictures. Its worth driving over to see it and bring it home yourself. Nothing like seeing one, first hand at a swap meet. Fair Radio delivers as advertised.

If it has just been setting around, these are easiest to fix. Painted front panels are about \$150.00 Do not fret over bent metal, That is all fixable.

Consider your own skills. There is no reason to buy something you cannot fix up your self. Do not worry if you know what needs fixing in an R390. The folks here on the list will happily walk you through any problem. We been there and we have done it. But your stuck doing the work your self. You are going to have to do your own washing and soldering.

Pick a problem any problem, jump in anywhere with it on the list. We will slow you down, back you up and feed it to you step by step with the test equipment you have on hand. We will help you get to the problem part. Then you have to fix it yourself. If you think you would like to take a "project" on, R390's are great "projects" You can buy almost any thing and get it operational. Over the long haul the cost of tubes will be your biggest expence. You may do a one time tear down with, cleaning, new caps and some rework. The missing knob or meter can be costly. Mostly the issue is finding time to make the repairs.

Back in the old days, 68-75, I never saw a problem that was not located with more than a signal generator and a volt meter. Neither needed to be calibrated or very accurate. Obviously more is good, but not required. Older receivers are now presenting problems that take more thinking to solve their problems, or more careful inspection and test. But you do not need a laboratory of test equipment to support the receivers.

Over \$650.00 you better be getting a fine receiver from someone on the list or past list member who put more hours than you want to know about and love into the receiver. If you can afford it your still stealing the beast. Pay your dollars and run home with it.

\$650.00 Really good looking paint job smoked inside. (your buying a paint job)

\$500.00 Original paint and meters good working receiver.

\$450.00 Original paint lost meters good working receiver.

\$400.00 Original paint meters "If was working the last time it was powered on before the kids were

~~\$300~~.00 It is at least all there. No real obvious missing broken parts.

For things missing subtract the cost of item from Fair radio and \$100.00 for repair time. even if you are doing it your self.

Would I spend more than \$650.00 on a receiver? >From the right guys on the reflector here, In a New York Minute. Would I walk past one in a swap meet? Only when I have spent all my money. Roger KC6TRU

From r390a at bellsouth.net Sat Jul 9 23:08:50 2005
Subject: [R-390] Is this the same mini-BNC connector?

Yes, sort of. The mini-BNC we were talking about is designated "MB" and is the type found in the R-390A, while the "normal" BNC is used in the R-390.

The connector from Trompeter appears to be new design and is different from the mini-BNC found in our radios - which was the subject of the first email. The earlier MB connector was a bit smaller than the M-BNC, but the new connector has better mechanical properties and impedance characteristics.

Regarding Mike Murphy's comments on finding info on the older style connector, I think Steve Haney - of Haney's Surplus - has several small lots of prefabricated 75 ohm cable assemblies, or he did earlier this year. I bought a bundle, may have a couple extra if anyone wants. If I can find where I put them. I also need to dig up Steve Haney's email addy. Tom NU4G

From Flowertime01 at wmconnect.com Sat Jul 9 23:28:34 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

Barry,

First thought on this is a tube doing an internal short. Something flaked inside a tube and gives you an over current. So you bumped the receiver around and now it behaves.

The 1/8 amp is out after the filter supply caps. So it looks like a by pass cap in the RF- IF B+ line. And the switched RF-IF B+ Line.

If the receiver is still killing 1/8 amp fuses, put the tubes in the tester and smack them around a bit. In the past blown fuses were bad tubes. If you have this receiver all recapped, I would expect a tube is erratic.

Second though on this is a poor cap. It looks to have reformed its self for the time being. If you keep the voltage on and carefully watch the critter it looks like it will behave. If you let the receiver cool for a few days, the problem could reappear. But a tube will do the same thing to you.

It may not be the cap per say. It could be a left over grim or condensation problem. Too much current leaking off a wire to ground. Just as hard to find as a marginal tube or cap. Roger KC6TRU

From Flowertime01 at wmconnect.com Sat Jul 9 23:34:56 2005
Subject: [R-390] R-390A test equipment

Craig,

Have you taken the time to check all the tubes. Since day one those fire bottles have been problem one that has keep many a techs busy.

Then check those caps.

The power draw on the URM 25 is not big and the paper caps were good enough. Space in that box is tight and may have been a reason for the paper. Test equipment bounced around from bench to bench. The paper caps may have offered a higher "G" force rating and been considered less likely to "fall apart"
Roger KC6TRU

From N4BUQ at aol.com Sat Jul 9 23:56:03 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

That is certainly plausible. I turned the radio on its side to get at the fuse so the tubes are in a different gravitational orientation than when the fuse blew. I didn't even check the tubes before cranking this thing up and I really should do that. The leakage/short test may hav some surprises waiting for me.

I plan to try this with the fuse inline with the meters. If it blows when the circuit is drawing significantly less than 125mA, then I'm guessing a bad set of fuses. Thanks! Barry - N4BUQ

From Flowertime01 at wmconnect.com Sun Jul 10 00:04:34 2005
Subject: [R-390] AGC Troubleshooting

Dennis,

I took out the IF deck and measured resistance from pin 6 to ground, and I see about 7 meg with no charging behavior. it says I should see infinite resistance.

If you were doing this in 1970 with a TS 505 or a TS 352 on the K ohm range, 7 meg would be infinite resistance. You are likely OK on this test.

TM 11-5820-358-35 8 Dec 1961 Para 72 b. Alignment of Z503 Page 113. says AGC should be in the range of -1 to -2 volts

My mail only goes back 5 days, so I do not have your original problem with your AGC. Watch the other responses and keep asking questions until you feel you and your receiver are happy. Roger KC6TRU

From Flowertime01 at wmconnect.com Sun Jul 10 00:13:20 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

If it blows when the circuit is drawing significantly less than 125mA, then I'm guessing a bad set of fuses. Barry,

Do not be amazed, It can happen, and how are we suppose to test fuses.

The 2404 should be noted as "no problem found" "likely one time power droop" Placing FM on paper work would not reflect a proper attitude. Roger KC6TRU

From ezeran at ezeran.cnc.net Sun Jul 10 00:34:41 2005
Subject: [R-390] Ceramic sockets or not?

Tim, I would install the ceramics you have and get on with enjoying your radio. Yep! Use 'em, if ya got 'em. Can't hurt. EdZ

From pulsarxp at earthlink.net Sun Jul 10 00:43:48 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

Fuses wear out and blow for that reason besides protecting a circuit. Surges and vibration also take their toll on a fuse besides just the every day daily current flow throught the fuse. Same thing is also true about circuit breakers. Just like a light bulb, they go bad in time. Lee w0vt

From dwade at pacbell.net Sun Jul 10 00:48:45 2005
Subject: [R-390] AGC Troubleshooting

Thanks for the reply Roger.

Good point. 7 meg may not indeed be a problem. But why don't I see the 350K I saw from the AGC jumper?

So let me review why think there is a problem:

1. With all modules connected, from the AGC jumper to ground is about 350K. When the RF deck is disconnected, it remains the same. When the IF module is disconnected, it goes to about 1.8M to ground. Does this isolate it to the IF deck?
2. I don't see more than about -4.9 vdc at the AGC jumper on very strong, or the cal, signals. No signal is +0.15
3. There is distortion on strong signals.

Note that I have not re aligned the receiver yet, I still have some caps to replace in the AF deck. I'd like work on the IF deck if I need to while I have it out.

Two basic questions: Do I have an AGC problem given the measurements above? And, is it isolated to the IF deck? Dennis

From barry at hausernet.com Sun Jul 10 01:01:52 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

Lee wrote: > Fuses wear out and blow for that reason besides protecting a circuit. > Surges and vibration also take their toll on a fuse besides just the every > day daily current flow throught the fuse.

Barry mentioned that he had just put in the correct fuse (1/8 instead of 1/4 amp), though slow blow rather than the F/B that's supposed to be used.

In addition to wear and tear, defective fuses aren't unheard of. If NOS -- really old -- there could be some deterioration on the shelf, depending on storage conditions. Fuses aren't sealed. I've seen some where the glue had given out and just installing them causes one or both end caps to twist -- also some that looked corroded inside or had an awful lot of rosin showing in the end-caps where the wires are soldered. I suspect a bit of corrosion or a slight twist can affect the actual current "tolerance". And there can be some that were just made wrong/defective. I'd check another one with just one of the meters in series, since they read the same when the current was measured before. May as well put in another order for 1/8th amp fuses -- fast blows -- from another source. Barry

From r390a at bellsouth.net Sun Jul 10 01:05:14 2005
Subject: [R-390] Serial number matching

Wish I could remember who I sold that VOM to. I had it just setting unused in the original box.

I wonder how popular those two pieces of gear were, or did it make any difference to us tech types? I also wonder just *who* has a 390 or 390A's with that evil serial number??

I *do* have a gen-u-wine Collins 390 that's s/n 711, so it should bring me all sorts of good luck, right? Hah! It was the one that barked my shin a few minutes ago when I checked the serial numbers. Jumped right out at me, it did! Tom

From huffb at avalon.net Sun Jul 10 01:03:41 2005
Subject: [R-390] Cleaning Potentiometers

Hello,

I apologize if this has been discussed before but sometimes it's the simple things like this that can cause us the most trouble. What are you guys using to clean and take the noise out of carbon potentiometers? I've heard horror stories about the different brands sold for this purpose. I've even heard of the value of resistance changing after using some cleaners, this in fact has happened to me and I'm still waiting to see if it will return somewhat to what it was before cleaning. I've been told that the stuff Radio Shack sells is not good for carbon pots and that the mineral oil in it will attack the carbon element. Any thoughts? -Brad

From shoppa_r390a at trailing-edge.com Sun Jul 10 07:55:01 2005
Subject: [R-390] Cleaning Potentiometers

> What are you guys using to clean and take the noise out of carbon > potentiometers?

A new pot.

Off the top of my head, there are only 5 pots in my R-390A (local audio, line audio, limiter, carrier meter, if gain) and they're all vanilla. (OK, the limiter has a little-bit-funky switch on the back, but if that's in fine condition, it can be transplanted to a new pot maybe with a little drilling/milling).

When I do put new ones in, it's mil-spec cermet or plastic. I'm not going to claim that they'll never get noisy, but they've been damn good so far. Tim.

From g4gjl at btopenworld.com Sun Jul 10 08:10:01 2005
Subject: [R-390] Cleaning Potentiometers

Just a two cents worth comment.....

I have rebuilt 5 R390As. from the St Juliens Creek Massacre. With one exception all had dirty audio pots, which I cleaned with lubricating switch cleaner.

However one further problem is that the ohmic value of these pots increases with age (and this would apply to any set, St Juliens or not), so I got nice clean noise free pots, but still with rather raspy and poor audio.

I ended up replacing most of them with new pots of the correct ohmic value, this brought the audio back to life.

The above action was taken after replacement of the plug in electrolytics with modern fresh in-fills, which in itself brought about a marked increase in audio performance Pete G4GJL

From r390 at kaleui.net Sun Jul 10 08:47:44 2005
Subject: [R-390] Where do I begin?

OK...here's my story. About 10 years ago, I was given an R-390. What a great radio, it worked awesome, and I really love that radio. Well a few years later, signals got real weak, and then suddenly they were gone. I could hear a hiss and it would get louder as I turned up the gain, but the signals were gone. Well, as luck would have it, a divorce, a job change, and a move got in the way, but I always

lugged that radio with me knowing that "someday" I'll fix it up. Well, the day has arrived! I have a nice new home, a great shack, and now I want to get those signals back! I'm not a complete dope when it comes to working on radios, but I've never worked on the R390. I'm in the process of trying to find a manual, but in the meantime I thought I would appeal to you guys to see what sort of advice you could send my way.

By the way, one of the uses I had for the rig back when it was working good was to feed a homebrew RTTY demodulator which drove an old Model 28 RTTY machine. Hmmm I still have the demod, and the RTTY machine. Yup, I lugged those along too. So, if anyone has any advice at all, I'd be most grateful. Thanks es 73 Jim KA1EUI

From DJED1 at aol.com Sun Jul 10 10:31:54 2005
Subject: [R-390] Where do I begin?

First, are you referring to the original R-390 or the later R-390A? Second, what test equipment do you have available? This will help the list to make recommendations. Ed

From bhagen at msn.com Sun Jul 10 10:57:43 2005
Subject: [R-390] Cleaning Potentiometers

Hi Brad:

I'm with Tim on the pot problem. We use to have a product available called Quietrole that you used with an eye dropped that worked well but it seems to be long gone. Bruce Hagen

From bipi at comcast.net Sun Jul 10 11:05:06 2005
Subject: [R-390] Cleaning Potentiometers

Just a single comment on a single potentiometer on the R390A (and other old BA receivers). Chuck Rippel recommends replacing the S-meter zero pot on the IF deck with a new, ten turn, precision potentiometer of the same value. So I gave it a try, then quickly ordered 2 more, one for my 51J4 (which is installed), and one for my 51S1 which I am holding in spare for the day it starts to give me trouble. Bottom line, set your carrier meter (easily) and forget it....it does not change every time you turn on the radio. Ya, its not original, but, I kept the old ones and the improvement is well worth the trouble. 73 de Mike K7PI

From barry at hausernet.com Sun Jul 10 11:29:02 2005
Subject: [R-390] Cleaning Potentiometers

wrote: > I'm with Tim on the pot problem. We use to have a product available called > Quietrole that you used with an eye dropped that worked well but it seems > to be long gone.

Some say they use DeOxit in the pots, but that might be risky. I read of one or two cases where it dissolved the carbon material. Caig makes another product called CaiLube which is intended for pots. I've used it with good results. Of course, if the pot has drifted way off value, or if the wiper has worn a groove through the carbon, then it needs replacement.

However, I have had some success disassembling badly worn pots and adjusting/bending things to get

the wiper to contact an unworn part of the carbon comp. Sometimes it's not a matter of worn-through, but insufficient tension on the wiper. You can test them out of the receiver on an analog ohmmeter, slowly rotating the shaft and watching the meter pointer for jumps, or use a signal tracer or audio siggen and speaker, etc. Probably not worth the bother for an easily replaced pot, but for those more difficult to find, it's worth a try.

Anybody else ever do this, or am I the only one. It ain't the money ;-) Barry

From richy2 at mindspring.com Sun Jul 10 12:12:26 2005
Subject: [R-390] Cleaning pots

I usually disassemble em and clean the carbon with, hate to say this but what ever I have on hand, have used alcohol, ordinary contact cleaner etc. Clean the wiper, small drop of very lite oil on the shaft, put it back together and its as good as new.

Squarting a shot of cleaner into the pot is usually a temp fix. I don't for a minute think any contact cleaner will "eat carbon" if you read the ingredients you will find most of em have the same stuff. most pots in the 390 are high quality and worth the effort to repair. Thats my story and Iam sticking to it. Joe W2DBO

From n9zsv at cei.net Sun Jul 10 12:01:39 2005
Subject: [R-390] Where do I begin?

There is a -really- good set of video tapes about going through an R-390 available. It's advertised in Electric Radio Magazine which is itself a very valuable source of information as well as entertainment. Many good articles about rebuilding and improving all sorts of boatanchor radios and a very good classified ad section. You can look through the index for relevant issues or buy a whole set. It may become your favorite magazine as it has for me. 73 Gary

From barry at hausernet.com Sun Jul 10 12:33:37 2005
Subject: [R-390] Cleaning pots

While we're on the subject -- Joe W2DBO wrote: >I usually disassemble em and clean the carbon with, hate to say this but >what ever I have on hand, have used alcohol, ordinary contact cleaner etc.

If you have them opened and can see what you're doing, you can test whatever cleaner on a non-critical part of the carbon to be on the safe side. I personally have never dissolved the carbon. Might not require any cleaner, but just a wipe-down.

> Clean the wiper, small drop of very lite oil on the shaft, put it back > together and its as good as new.

That is if the wiper track is not badly worn. Sometimes it isn't worn through, but rough enough to continue to cause intermittents. While you have it apart, you can check for this as I previously noted. Often you can "re-track" the wiper with the pot still mostly assembled -- shaft still in place. Or you can remove the retainer and back out the shaft and wiper assembly. If the track looks good enough, don't attempt to re-track it. Make sure the tension on the wiper is adequate.

>Squarting a shot of cleaner into the pot is usually a temp fix.

Agreed. Often all you're doing is redistributing the debris and it has a way of migrating back -- if you didn't make it worse in the first place. If attempting the squirt job, my experience is that it generally takes quite a bit of cleaner and two or three treatments, allowing the stuff to drain out each time and possibly a final blast from an air can. Even then it's still unreliable because you're basically flying blind. The tendency is to prematurely conclude that the pot is not repairable.

> I don't for a minute think any contact cleaner will "eat carbon" if you > read the ingredients you will find most of em have the same stuff.

I'm going by second/third-hand reporting. It isn't the carbon, but the binder used that varies. The solvents in contact cleaners also varies. Alcohol acts differently than naphtha (in DeOxit), etc. Chances are a wide variety of solvents are OK with the pots you'll find in an R-390/R-390A. The assumption might be dicier with later vintage equipment, particularly consumer stuff.

> most pots in the 390 are high quality and worth the effort to repair. > Thats my story and Iam sticking to it.

I agree. With the kind of intense maintenance, preservation and repair that many list members do, disassembling and restoring a pot is a snap. One tip -- when replacing the cover, carefully bend back the tabs. If it's still a bit loose, rather than risk staking the tabs or resorting to extreme force, you can apply a little epoxy or other cement on the tabs to secure the cover if you like. (Generally not necessary.)

Again, it isn't the money. Replacement grade pots are often not of the same quality and involve some adjustment and messing around anyway. Often the shaft is of the wrong type -- half-shaft, split-splined, etc. or missing the locking tab (or wrong spot) which keeps the pot oriented on the panel, or shaft too long and has to be cut down, and so on. Barry

From shoppa_r390a at trailing-edge.com Sun Jul 10 14:28:50 2005
Subject: [R-390] Cleaning pots

> Replacement grade pots are often not of the same quality

Very true. But I've had excellent luck with "plastic" conductive element pots. New they're often \$7-\$10. But they are mil-spec items and are very robust... certainly beating the \$0.79 pots from the surplus places! Tim.

From dcsfree at worldnet.att.net Sun Jul 10 14:46:54 2005
Subject: [R-390] FS Central Sideband Slicer "model A"

This one has the AF amp and IF amp so all you have to do is get it close to the IF tube etc. will work on 500 kcs. very clean \$150. Dan

From N4BUQ at aol.com Sun Jul 10 14:57:32 2005
Subject: [R-390] Blown B+ Fuse - Cont'd

Fuses are new.

I put the remaining fuse inline with the amp meters. Circuit drew anywhere from 70 to 100mA and the fuse held. Perhaps a bad fuse, perhaps a bad tube. Dunno. I thumped all the tubes (except the 26Z5W's) with my finger and didn't notice any sudden jumps in current. I'm still figuring something is lurking, but if I can't get the fuse to blow, then I suppose I can let it alone. Thanks guys! Barry - N4BUQ

From drewmaster813 at hotmail.com Mon Jul 11 00:34:59 2005
Subject: [R-390] Thoughts on Pots

Hello,

Here is some of my input on the topic being bandied about...

>What are you guys using to clean and take the noise out of carbon potentiometers?

I squirt in 100% isopropyl alcohol with an eyedropper. If one treatment does not clean it, two almost always does.

A readily available source of the alky is isopropyl gasoline dryer. Get the kind that says "isopropyl" and does not call out any additives.

Alternatively, one might try using 100% pure ethanol, available at local liquor stores as "Grave's Grain Alcohol". It is not as good a solvent as the isopropanol and probably won't work, but one can then soothe the resultant frustration by drinking the ethanol :o)

>However, I have had some success disassembling badly worn pots and >adjusting/bending things to get the wiper to contact an unworn part of the >carbon comp.

I did that once with the airflow sensor on a friend's car (Mazda). The airflow sensor is a pot mechanically coupled to a spring-loaded vane in the engine's air intake. Moving the wiper to an unworn portion of the resistance element and then cleaning with isopropyl alky cured an intermittent lean mixture problem (engine sputtered) at certain RPM / load conditions.

>Anybody else ever do this, or am I the only one. It ain't the money ;-)

I'm as much or more a cheapskate than anyone else, but it was worth tinkering to escape paying about \$400 for a new airflow sensor!

>Chuck Rippel recommends replacing the S-meter zero pot on the IF deck with >a new, ten turn, >precision potentiometer of the same value.

David Wise some time ago came up with a simple mod involving adding a couple of resistors and moving a wire or two around on the pot connections. I added that to my unit and it works great; lets you keep the original pot. Search the "Pearls of Wisdom" at r-390a.net for his posting. Drew

From n4tua at aol.com Tue Jul 12 09:20:22 2005
Subject: [R-390] Gear train cleaning

Hello Fellows,

I am wanting to clean and re lubricate the 390A gear train. Are there any suggestions as far as who's approach is best? Is it worth doing? I mean doing right like KK4DF describes in his procedure. Any suggestions would be appreciated. Thank you, Collin

From tshoppa at wmata.com Tue Jul 12 09:42:45 2005
Subject: [R-390] Gear train cleaning

> Is it worth doing?

Depends on where you're starting from. On my yellow-striper, where all the gears were encased in dirt and sand, it's necessary. It'll be many hours of work the first time. Lots of little retaining rings and springs you have to be careful you don't lose. If you've never taken out your RF deck you probably need to buy a long phillips screwdriver, the bristol spline wrenches, and retaining-ring pliers. And if you tear everything apart you're probably also going to do RF bandswitch and crystal oscillator switch realignments which are another little bit of work and worry.

If you have some existing dried grease on the mechanism, you can probably do a spot cleaning more easily than tearing the whole thing down. If you have a lot of existing dried grease, you may want to tear down the whole thing just to get it shiny and clean.

If you want to do it, but cannot justify doing it on your existing clean radio, just get a yellow- or blue-striper :-) Tim.

From brookbank at triad.rr.com Tue Jul 12 10:20:28 2005
Subject: [R-390] Gear train cleaning

The way I have done several ones is to take the RF subchassis out (you must follow the manual instructions), then I take out the ferrite slugs and the cans easy job...with the unit now as mention and outside on a crate, I spray carburator cleaner at will to clean the whole gear assembly, one took 2 cans, but they do clean good, after that I clean with a oily rag all of the slats where the ferrite slugs slide on making shure that there is no deposit of grease at the bottom, also clean very good the ferrite slides (be careful not to damage the slugs themselves)., this is a good time to give the entire assembly a good cleaning, I ussualy do it with a damp cloth followed with an oily one and then a dry one. Now lubricate the gears, cams and cam followers (I use 10 oil), but be careful not to overlubricate, that cause more problems by attracting dirt, I use a seringe to make sure to reach with a small dab of oil all places, as you oil, move the gears to evenly distribute the oil.....now since you have the unit out check for the cam alignemet, correct it if out of specs and you are ready to replace unit....to me the most tedious part is to take the front panel out and then replace it. After this procedure and with the receiver being use in a normal house environment, I have never had to do it again. Goog luck.....Pat

From crips01 at msn.com Tue Jul 12 10:24:34 2005
Subject: [R-390] Gear train cleaning

There is a real interesting article in the latest ER on this subject. Ken

From Flowertime01 at wmconnect.com Tue Jul 12 12:06:15 2005
Subject: [R-390] Where do I begin?

Ah yes, the old yesterday it worked today it does not problem.

Number zero if you have an R390/A check C253 in the IF deck. If this is a brown or black plastic cap that look original, replace it NOW. If this cap shorts or leaks it kill the mechanical filters. Use a .01 600 volt orange Sprague or high quality cap.

Number one due to the hours of tube time used, all the tubes need to get checked. Likely you do not own a tube checker. So task one is to locate a shop that still has a tester you can use. Just finding a shop or parts house with a tester can be a job. Sooner or later you are going to need to check the tubes and start weeding out the weak, noisy and bad ones. Getting a set of tubes that are good will likely get you some signals back. Then you will need to get into an alignment.

Number two is to find your self one of those silly spline keys to fit all the RF slug rack, cam clamps, and knobs. A good tool store. You can grind an L wrench off solder a length of spline into a tube to make a long screwdriver tool. A once in a life time task.

Number three is to find your self a long #1 Philip screwdriver. #1 as a #2 is two fat for some spaces. Long as in to reach into all the recesses to the green screws.

See the late mail here on noisy pots and getting them cleaned. Also see the mail on cleaning up your gear train.

Have you found the Y2K manual on line? You should get a CD copy if your Internet connection is slow.

Back in 1999 the fellows did an awesome job of producing a great manual for the R390 on line and available also on CD. The work got titled The Y2K manual.

You can fix your R390 your self, No problem, If you have a voltmeter you can do a reasonable job of getting it aligned from the Calibration tones.

If you have a voltmeter, an RF signal generator and the Y2K manual, you can read and adjust your receiver back up to a great receiver.

After old tube problems, the R390/A has some sorry caps. Old age is getting the electrolytic filter caps. There are a bunch of brown or black plastic caps that fail. These just get replaced. Filter caps plug in. New ones are hard to find. You can put new caps in the old can. Put new caps in 8 pin octal tube sockets and plug those in. You can put caps in relay cases and plug those in. The brown or black caps just get replaced in circuit. New caps are smaller than the original. You will be amazed at how much space is under the deck after you get those caps all replaced.

Go read the R390 archives. Lots of good detail. Lots of dead horses to read around. After reading for a day you get some topics to read on and then sort and read by thread.

You will want to deal with the 26Z5s being replaced with diodes. The ballast tube being replaced.
Roger KC6TRU

From n4buq at aol.com Tue Jul 12 12:14:59 2005
Subject: [R-390] Where do I begin?

That should read "C553". Barry - N4BUQ

From westerman at cableone.net Tue Jul 12 13:48:39 2005
Subject: [R-390] New R-390 site

Thanks to everyone that sent emails giving their thoughts and ideas. Much appreciated.

The new URL is: <http://www.r390files.com>

and the forum is: <http://www.r390files.com/forums/index.php> Thanks Craig

From odyslim at comcast.net Tue Jul 12 22:17:15 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

Very Good. Got all of them on tape. Did anybody notice the tone from NOJ on 12889.5 ? Vintage....
Scott W3CV, Near Baltimore

From odyslim at comcast.net Tue Jul 12 22:20:14 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

BTW. Used Collins 389A # 43 1954 contract and slopers at 48 ft. Scott W3CV

From ToddRoberts2001 at aol.com Tue Jul 12 23:25:11 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

writes: Very Good. Got all of them on tape. Did anybody notice the tone from NOJ on 12889.5 ?
Vintage.... Scott W3CV, Near Baltimore

FB Scott! - So far I have heard KPH,KSM,WLO,KLB and NMC on HF, nothing on MF. However I didn't start listening until 2200EDT so don't know if there was any 500KHz activity earlier. Have you heard anything on MF? WLO should have been booming in here on the East Coast if they were on 500KHz. So far nothing heard from NOJ. 73 Todd WD4NGG

From kgordon at moscow.com Wed Jul 13 01:06:49 2005
Subject: [R-390] KPH and MF.

The last time KPH was on MF, I copied them 5 by 5. Now I hear nothing but carriers. I wish they would transmit something there. I've got the R-389 up and running. Have not heard any CW yet though. Guess I'll fire up the RBL-4... Ken W7EKB

From kgordon at moscow.com Wed Jul 13 01:22:12 2005
Subject: [R-390] KPH on 426 Khz - rolling in like gangbusters - Beautiful!

Brings tears to my eyes and a lump in my throat. Ken W7EKB

From w5or at comcast.net Wed Jul 13 01:23:47 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

Nothing heard here on 500 or the other MF frequencies in Little Rock. But most of the HF signals are 5x9 at 2300EDT. Vintage, yup. Sounded like MCW. Morse Music! Don W5OR

From kgordon at moscow.com Wed Jul 13 01:30:20 2005
Subject: [R-390] Anyone else copying MF sigs?

Anyone? I am in Moscow, Idaho. KPH is 100% copy here, and over-rides my noise. 426 Khz. Ken W7EKB

From kgordon at moscow.com Wed Jul 13 01:34:13 2005
Subject: [R-390] KPH sending press now on 426 Kc.

I am recording it... Ken W7EKB

From ToddRoberts2001 at aol.com Wed Jul 13 01:42:20 2005
Subject: [R-390] Anyone else copying MF sigs?

writes: Anyone? I am in Moscow, Idaho. KPH is 100% copy here, and over-rides my noise. 426 Khz. Ken W7EKB

That is great Ken. I have a receiver parked on 426KHz but not a trace of KPH here on the East Coast. Must be out of skip range here. I am hearing beacon RVJ on 424KHz fading up and down in the background. 73 Todd WD4NGG.

From kgordon at moscow.com Wed Jul 13 02:22:09 2005
Subject: [R-390] Re: 600MRG> Coast Stns in ID

I have been listening for the past hour to KPH on 426 Kc. Loud and clear. But what does MEBA PRESS mean? Lots of that. An incident with the Nimitz carrier group and fast support ships at 25 knots. I tuned to the other MF frequencies, and only heard KPH on 426. Not a peep out of anyone else on any other frequency.

I recorded about 45 minutes of their traffic. Receiver here is an R-389. Antenna is an end-fed wire up about 40 feet and about 75 feet long. Now I am going to bed. Ken W7EKB

From kgordon at moscow.com Wed Jul 13 02:29:04 2005
Subject: [R-390] Re: GB> Anyone else copying MF sigs?

wrote: > Rocking in here on 600m....Earlier heard KECW calling KPH on 500 as well. I> think this is the SS Lane Victory station. They were about 579 here.

I guess I should dig out that antenna multi-coupler I have here and get another receiver set up on 500

Kc. KPH is "full-quieting" now. Carrier level meter reading about -20db at the moment. I think with this R-389, that corresponds to 589 or so. Think I will go to bed now.. Gee this has been fun, though! :-
) Ken W7EKB

From djmerz at 3-cities.com Wed Jul 13 02:45:09 2005
Subject: [R-390] Fan for 390

Hi, thanks to Roy Morgan for the fan/plate design for the 390 for cooling the 6082's. I finally put it together and it fit perfectly from the template he provided. I ended up cutting the whole center section out after putting the three matching holes in, mostly because it was easier than filing the holes bigger from the 1 3/8 hole I cut. I used a 92 x 25 mm fan from Mouser, which is an inch thick, 120 volt version. Next time I'd use a 220 volt. I dropped the speed on mine by putting 1250 ohm resistor in series in a small box and the noise was reduced adequately. Another good idea from this group, thanks.
Dan

From shoppa_r390a at trailing-edge.com Wed Jul 13 05:52:03 2005
Subject: [R-390] C553 ever a brown beauty?

> Number zero if you have an R390/A check C53 in the IF dec. > If this is a brown or black plastic cap that look original, replace it> NOW.

While I fully agree with the recommendation, did they ever manufacture IF decks with C553 a brown beauty? I've always seen Sprague Vitamin Q's or Westcaps in this position in apparently original IF decks.

It's possilbe that the depots swapped out brown beauties and put in the metal-can-with-hermetic-seal caps decades ago, of course. My experience is definitely not with pristine all-original radios. Tim.

From odyslim at comcast.net Wed Jul 13 06:50:42 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

Hi Todd,

Nothing was heard on MF at 500kc. I do not have anything set up for the 426 and 438 kc freqs.

I heard all of the stations on all of the hf freqs with the exception of NOJ on 8650.0 and 16909.7 and KPH on 22477.5 I thought it was rather exciting as the op on NOJ was sending by hand and was very good. A few errors but a great fist. also heard a few of the other ops in QSO. A nice evening. Scott W3CV

From tshoppa at wmata.com Wed Jul 13 09:13:01 2005
Subject: [R-390] FM'ing with solid-stated PS

I've heard testimony (I think it was first mentioned in an Electric Radio from a decade ago but I've seen it repeated here and elsewhere) that solid-stating the power supply, with a 200-ohm series resistor, can cause FM'ing of various receiver-internal frequencies as the audio output goes up and down with strong signals and modulates the B+.

My cursory inspection of the 26Z5W curves (see e.g. <http://www.mif.pg.gda.pl/homepages/frank/sheets/087/2/26Z5W.pdf>) lead me to believe that a 26Z5W

has an effective dynamic impedance of 200 ohms. (in particular for 100mA of load current the output drops 20V.)

So my gut feeling is that if there is any FM'ing due to a solid-state-with-resistor PS mod, it's pretty much the same FM'ing that a PS with real 26Z5W's has. All my PS's were solid-stated before I ever got them, and I don't have any 26Z5W's in any event.

Did I make a mistake in my math? By my reckoning this is a half-wave bridge rectifier so at any moment only one rectifier is conducting, and there's no need to double or half the 200 ohm impedance. Are the tube curves not typical but instead worst-case? I read them as typical. Tim.

From n4buq at aol.com Wed Jul 13 10:06:03 2005
Subject: [R-390] Fuse Holders Still Needed

In case anyone knows where I can get them, I'm still looking for a half-dozen fuse holders for my R390As. Specifically, I'd like to have some of the quality that were originally installed in these radios (milspec?). I can find several type from Littelfuse, Bussman, etc., but they generally don't look quite the same as the originals. They generally have plastic nuts and are cheaper-looking in general than the originals.

I've searched all the online houses and eBay with no luck. Someone had an auction for some about a month or two ago, but I lost out :-(Thanks, Barry(III) - N4BUQ

From ai2q at adelphia.net Wed Jul 13 10:40:38 2005
Subject: [R-390] Coastal Wireless Night of Nights Special Event July 12

Yup Scott, copied 'em all here as well, and copied the special messages from KPH, too. Yes, the note on NOJ out of Kodiak was rough. However I attributed that to aurora, not a defective vintage transmitter. In any case, considering the poor propagation over the past few days, the reliable signals from NMC, WLO, KSM, NOJ, and KPH stands as testimony to their equipment and antennas. Vy 73, AI2Q, Alex in Maine <http://users.adelphia.net/~alexmm/ai2q.htm>

From Commtekman at aol.com Wed Jul 13 10:50:25 2005
Subject: [R-390] KPH and KSM

Solid copy here in Mccall, Idaho. Brought a lump to my throat and a tear to my eye. Using an R-388 at this end. Signals out of time....Bob Schaefer K6OSM Merchant Marine Radio Officer Mccall, Idaho

From brookbank at triad.rr.com Wed Jul 13 13:11:59 2005
Subject: [R-390] Mechanical Filters

Would like to exchange any 2 (your preference) of the R390A filters for a 1.4KC bandwidth and a 6.0KC bandwidth mechanical filter that are used on the 51J-4 receiver. If interested please let me know directly. Thanks in advance, Patrick

From tshoppa at wmata.com Wed Jul 13 13:18:42 2005
Subject: [R-390] Fuse Holders Still Needed

> I'm still looking for a half-dozen fuse holders for my R390As. Specifically, I'd like to have some of the quality that were originally installed in these radios (milspec?). I can find several type from Littelfuse, Bussman, etc., but they generally don't look quite the same as the originals. They generally have plastic nuts and are cheaper-looking in general than the originals.

My yellow-striper came from Fair Radio with a busted up fuseholder.... and a little plastic baggie with a pretty decent new fuseholder (and a buncha other things that I'll need as I put it all back together... knob, counter cover/glass, AC input cover, etc.) It's not an exact cosmetic match for the other fuseholders but is close, and it has a metal (not plastic) nut.

So call them and ask what they've got.

I was surprised when you said that you were having a hard time finding a fuseholder with a metal nut, but then I look in the Digikey and Mouser catalogs and they all have plastic nuts. Huh.

My other R-390A was retrofitted with the B+ fuses (I'm guessing by a military depot 40+ years ago, it has almost-but-not-quite-original looking legends for the B+ fuses), and has one black "traditional" fuseholder for the AC and two gray very-differently-styled fuseholders for B+. Tim.

From brookbank at triad.rr.com Wed Jul 13 13:24:26 2005
Subject: [R-390] Mechanical Filters

Would like to exchange any 2 (your preference) of the R390A filters for a 1.4KC bandwith and a 6.0KC bandwith mechanical filter that are used on the 51J-4 receiver, the part numbers are 526-9030-00 and 526-9009-00. If interested please let me know directly. Thanks in advance, Patrick

From g4gjl at btopenworld.com Wed Jul 13 15:46:17 2005
Subject: [R-390] KPH on 426 Khz - rolling in like gangbusters - Beautiful!

Now I know why I did not hear them on 500kc. Bit of a disappointment, that. Pete G4GJL

From jmiller1706 at cfl.rr.com Wed Jul 13 16:15:31 2005
Subject: [R-390] FM'ing with solid-stated PS

I di get about 50 Hz FM with BFO turned on when the AGC increases/decreases, or on a strong carrier when I turn the RF gain up and down. This is with audio set very low. I believe it is caused by AGC changing current drain on some of the tubes in the RF/IF stages which pulls the B+ as the plates draw more r less current. But in particular I find that the AGC control of the 1st mixer tube V207 actually pulls the 17 Mhz crystal oscillator V207. I put frequency measuring equipment on all oscillators as an experiment and measured the frequency chage of every oscillator as a function of AGC voltage. V207 appeared to be the only one that was pulled off significantly enough to be audible in the BFO beat note. Evidently the AGC control on V202 causes some change in impedance or current draw that is "seen" by the V207 oscillator and causes the crystal to be pulled slightly. I have seen this on 2 radios. In one case I was able to reduce the pulling slightly by changing V202 (6C4) for a newer tube. Jim N4BE

From DWADE at pacbell.net Wed Jul 13 18:24:46 2005

Subject: [R-390] More AGC Questions

Hi all,

In attempting to keep my sanity, I've been looking further at the IF deck I have on the bench to figure out why I might have low AC.

I discovered that my A-OK filter is dead. Could this drag the AC line down? If it did, wouldn't I see that on an ohmmeter test? The AC line in the deck doesn't show excessive leakage to ground however.

This deck is frustrating me because its not behaving like it has a problem in terms of the resistance checks I've done. Thanks for any help, Dennis

From Flowertime01 at wmconnect.com Wed Jul 13 20:49:09 2005

Subject: [R-390] Where do I begin?

Barry,

Thanks, You likely saved some one some grief and do not even know it yet Roger KC6TRU

From Flowertime01 at wmconnect.com Wed Jul 13 21:17:29 2005

Subject: [R-390] C553 ever a brown beauty?

Tim,

Barry says I got the number wrong. It should be C553.

I would never bet on what you will or will not find in a receiver. Never say never.

OK so C553 my not be one of the brown ones. The issue is to inspect the critter and get something better than the original in there. The cap value is OK. It is the voltage rating that fails. New caps being smaller than old caps, a 600 volt item fits very nice.

My cap is long past original, and I do not know for sure what was ever installed into any receiver. My lack of memory is causing me more problems than you want to know about. Maybe my speculation on the color and brand is not accurate.

Chuck Ripple did not write for years about that cap failing and killing the filters. What ever the original one in there was it was known to fail and kill filters for more than one person.

We think of most Sprague Vitamin Q's or Westcaps as being good caps and not needing replacement. But when someone ask where to start, I think some insurance for had to get expensive mechanical filters is a good first step to check that cap.

I am not saying old men should be followed blindly, but I find it hard not to respect Dave Medley and Chuck Ripple even if I can't type their names correctly. Roger KC6TRU

From N4BUQ at aol.com Wed Jul 13 22:58:00 2005

Subject: [R-390] Where do I begin?

Roger,

I kind of hated to post that. You've forgotten 10 times more about these radios than I'll ever hope to know. An experienced R390A mechanic would have known the designation, but I thought it might save the fellow from hunting for it. 73, Barry - N4BUQ

From Flowertime01 at wmconnect.com Thu Jul 14 00:52:53 2005

Subject: [R-390] AGC Problems

Dennis,

If switching over to AGC is not just plain killing the signals or you cannot tell the difference between AGC and MGC modes, you are likely OK.

You only have one receiver (yours) to listen to. If you were an O5H, 33B, 31E, or any other MOS that used the receivers and had a chance to listen to several hundred receivers, you would know when you were listening to a bad one. So your AGC questions are a wise pondering.

A full review of the subject starting from some recent post follows.

Remember first that in the MGC position, the AGC line is simply shorted to ground in the function switch. The line at ground in MGC pulls the grids of the AGC controlled tubes toward zero volts. Cathode resistors in the tube stages provide some positive cathode voltage relative to the grid voltages. AGC voltage is negative. When the AGC voltage is applied to the grids of the tubes, it drives the tube stages toward cutoff. A couple volts on the grid of a tube that is working on micro volt signals go a long way in signal reduction.

If you have no signals in either the AGC or MGC mode, you expect you have a tube stage problem and have no reason to expect it to be related to the AGC line. You trouble shoot to find the stage that is not making the grade. The found problem may be in the AGC line, but it will not be the symptom that leads to a logical troubleshooting progression.

If you have an AGC voltage in the MGC mode, you should check the wire harness and function switch. In MGC mode the AGC line is not being held to ground by the function switch.

If you have strong signals in the MGC mode you may have just one more bad item pulling the AGC line to ground. No Problem.

When you switch on the AGC you expect the negative AGC voltage to reduce the receiver gain a little bit. If you get no AGC gain reduction then you have to wonder if the AGC line is shorted somewhere and the receiver acts as if it is still in the MGC mode.

The carrier level adjust has been a sorry circuit since the day it was implemented. Unless you have changed some of the parts, to improve the performance, what ever your carrier meter shows you when switching the AGC is not a real inspirational troubleshooting step.

You likely expect you have an AGC problem when you switch to AGC and you loose all your signals. Or a lot of the signals. How does opening a line from ground, and placing almost no negative voltage on it cause a loss of so much receiver gain?

You likely expect you have an AGC problem when the receiver starts acting intermittent with gain coming and going. The receiver appears OK in the MGC mode but loses signals in the AGC mode.

Now you are not looking for a shorted item. A shorted item in the AGC line looks like MGC.

You are not looking for an open resistor. The resistors work fine in the MGC mode.

Barry - N4BUQ wrote, "When listening to a moderately strong station in the 15mc band, if I switch to AGC, the signal drops significantly from the MGC position, regardless of the AGC speed."

This may not be bad. If the signal in the MGC position is strong, the receiver is being over driven and when the AGC is switched on, the strong signal produces an AGC voltage and a resulting signal level that is smaller than the MGC level but not over driven or distorted.

However, if the receiver seems to lose lots of signals in the AGC mode, there is a problem.

If the IF gain is not set to high (-7 volts) and the receiver loses it in AGC expect a problem.

A most common AGC problem is with the mechanical filters. The AGC line crosses R507 (22K) and is filtered by C512 (5,000pf). From there the AGC voltage is applied through all four filters, all the time. If one filter is pulling the AGC voltage to ground this is a problem.

The filters may appear to have good band pass and performance so a simple check of bandwidth and sensitive with a signal generator and meter on the diode load may not find the filter problem. However this is a good first test if you have a signal generator. 200- 250 UV at 455Khz into the IF deck and rock the generator both sides of center to find the bandwidth of each filter. Note the diode load voltage for each filter and see if one of them has more loss than the others or has a very wide response.

The next step is to place a tube extender under V502. You want to look at the control grid voltage. The AGC is applied to the control grid through the selected filter. As the AGC is applied to all filters, and if a filter is sucking AGC, the "bad" filter will pull the AGC all the time.

If you have a bad filter, you would expect zero volts on the grid, as opposed to several volts negative. The TM shows the grid to only be .4 volts negative. So this test is not a real sure bet either.

Ohmmeter checks may not get you anywhere either. On one side all four filters are tied to the AGC line. If the short were near that end of a filter coil winding in one filter, all four filters would read the same meter value. Thus you have no clue which filter is bad.

Good trouble shooting practice never supported unsoldering wires just to see what will happen. Heating mechanical filter terminals is not a high item on things I would do this week.

But, if we open R507 and remove all AGC from the stage. Pull the AGC wire from the resistor and let that wire hang open. Short the end of R507 to ground, so the stage thinks it has zero volts AGC. Now review your AGC and MGC operation and retest the filter band pass with the signal generator and see how the receiver behaves. Missing AGC on one stage should give about normal performance. If all of this work has not isolated one of the filters as a candidate for concern, I

would give them a passing grade and go on to the next likely items.

Second most likely AGC problem after the filters is the bypass caps on the AGC line. Locate the green screw extractor, Bristol wrench, schematic and meter. Go down the AGC line and just meter every cap and resistor.

wrote, "With a signal generator as input and the RF gain all the way CW, I can adjust the signal generator to get -10V on the Diode Load in MGC. Switching to AGC, the Diode Load drops to about 3.4V to 4V (depending on the AGC speed position)."

This is not a problem, -10 volts on the diode load is over driven by 3 volts. This should produce lots of AGC. The balance point is where going from AGC to MGC to AGC produces no change on the diode load. This may not be -7 volts. This may also not be the optimum operating point for the IF gain adjustment setting. So we never consider what this balance voltage point may be.

Roy Morgan offered the following to help deal with leaking caps on the AGC line:

Put an ohmmeter capable of reading high resistance on the AGC line to ground (notice if it reads the same with the negative polarity on the line as with the positive polarity on the line). Then unplug each module (RF, and IF) in turn to see where you might be getting leakage. Knowing how the AGC wires run from the source in the IF module to the rear panel terminal and the AGC switch and to the RF module will help figure out where any excess leakage is.

Pull the AGC jumper off the back panel and hang an amp meter across the terminals. Observe the correct negative voltage polarity. You'll be able to detect micro amperes of leakage and normal AGC line currents. Most DMM and analog meters have low amperage ranges that will handle the AGC current range.

We do not know the current of a good AGC line so until someone makes some test and offers some values the number your meter produces is not going to help.

Will someone please make a test of AGC current and offer up the values they get?

Inquiring minds want to know.

Roy Morgan offered

(One way to measure low levels of leakage is to hook up a 9 volt battery to simulate AGC voltage with a DMM on low voltage (or current) range in series plus side to ground, negative to the AGC line. You'll be able to detect microamperes of leakage and normal AGC line currents.

Start with a cold receiver.

Dennis,

I took out the IF deck and measured resistance from pin 6 to ground, and I see about 7 meg with no charging behavior. It says I should see infinite resistance.

If you were doing this in 1970 with a TS 505 or a TS 352 on the K ohm range, 7 meg would be

infinite resistance. You are likely OK on this test.

TM 11-5820-358-35 8 Dec 1961 Para 72 b. Alignment of Z503 Page 113. says AGC should be in the range of -1 to -2 volts

Thanks for the reply Roger. Good point. 7 meg may not indeed be a problem. But why don't I see the 350K I saw from the AGC jumper? So let me review why think there is a problem: 1. With all modules connected, from the AGC jumper to ground is about 350K. When the RF deck is disconnected, it remains the same. When the IF module is disconnected, it goes to about 1.8M to ground.

Does this isolate it to the IF deck?

No not really. When you unplug the IF deck you open so many wire in the AGC line coming and going from the rear panel, front panel function switch, from the AGC diode, to AGC controlled stage, you just never know what you are checking. If you do not have a good schematic in front of you and consider what you have disconnected at any give instance of measurement, you can run your self ragged.

I don't see more than about -4.9 vdc at the AGC jumper on very strong, or the cal, signals.

OK.

No signal is +0.15

OK

There is distortion on strong signals.

OK. R390/A are known for this aspect.

Two basic questions: Do I have an AGC problem given the measurements above? And, is it isolated to the IF deck? Dennis

So we come full circle to your original question.

The part not really dealt with here is, If the AGC is killing lots of signals and is related to one of the mechanical filters, how do we determine good and bad filters.

First I will go read the archives and see what I find. I'll kick out a new post when I get there.

Give me a few days to read up.

Dennis, I would say you are likely OK with your receiver. Go on with your other troubleshooting and cleaning. If you do have an AGC problem, operating the receiver will not cause more damage. You can always operate in MGC if you think you may have troubles with the AGC. You can always come back to the problem if it is still nagging at you. Having one receiver in isolation to care for by your self is a daunting task. The military trained us guys in groups to take care of bunches of receivers together with support, and this scared the hell out of most of us. Most of the

tecks never got conformable about being repairmen. They did one four year enlistment and got out of the trade altogether. It was just not the military they did not like. They gave up electronics in general. Being a fellow willing to work on a glowing receiver puts you in a special class. Just being willing to give it a go earns you respect. Do not worry that you are working from a disadvantage. You have to start some where and you are down the road of glowing tubes. Just because some of us ran ahead and come back with tales does not make us any better. Do not let our tales worry you.

Roy Morgan added his best thoughts. Barry put in with his findings. No one has taken us to task for being way off base on this, so we are likely in the park. Roger L. Ruskowski KC6TRU

From dwade at pacbell.net Thu Jul 14 00:58:41 2005
Subject: [R-390] Re: More AGC Questions

Thanks for the responses. Some have asked what the problem was, so I'll recap my previous post.

By the way, it's the 16 Kc filter that's dead, not the A-OK :(AGC voltage on most over the air signals is around -4-5 vdc No signal voltage is about +0.15

Very strong/close BCB station generates about -10, pins the needle, and distorts.

Question 1. I do have a problem, right?

Resistance from AGC jumper to ground 350K with a capacitor charge behavior.

Unplugging the RF deck does not change it.

Unplugging the IF deck puts the jumper at 1.8 meg to ground.

Question 2. Does this isolate the problem to the IF deck?

Thinking that it does, I figured I'd see the same 350K or less to ground from pin 6 (AGC line) of the IF deck connector to ground. But no, its about 7 meg.

This is what's confusing me.

I just received my 7 pin test sockets, so if this heat ever lets up, I can take more voltage/resistance readings from V501 502 and 503.

Note that I have not realigned the radio yet, I've recapped the RF deck and am working on the IF deck. I was hoping to solve this ACG problem before going in for a full alignment. Please excuse the repletion for those who saw the previous posts. Thanks for the help. Sign me Frustrated in Carmichael, Dennis

(p.s. sorry about all the typos in the post below. Apparently I was in a bigger hurry than I thought.)

From dschilling at juniper.net Wed Jul 13 12:06:33 2005
Subject: [R-390] Ft. Devens (Was Signal Generator Impedence Questions)

I am an old ASAer and can tell you there was not a complete FLR-9 at Devens. Back in the 70's all of

the training was done on-site in Augsburg Germany. Last time I saw the FLR-9 was in the late 70's there and training continued. No idea if the site is still there today.

RDF was taught at Devens and some small tactical pieces of equipment were there. The one I remember was a circle, about 100ft dia, But age has robbed me of the exact nomenclature. The entire school was moved to Arizona and no doubt there is a museum there that would cover some of the history of Ft Devens. Sorry I can be of more help David Schilling US Army Security Agency

From JMILLER1706 at cfl.rr.com Thu Jul 14 08:09:06 2005
Subject: [R-390] AGC Problems

There is supposed to be a jumper on the rear panel terminal strip for a remote AGC line? What would happen if it was missing?

From dhallam at rapidsys.com Thu Jul 14 08:51:38 2005
Subject: [R-390] Connectors

I just received a catalog from WPI Interconnect Products. It appears that they are manufacturing a lot of the old Amphenol connector line including the R-390 power connector. Who knows how high the prices are. David C. Hallam KC2JD

From fwbray at mminternet.com Thu Jul 14 09:38:53 2005
Subject: [R-390] Press Account of KPH Event

Hi Folks,

Here's a link to a press story about Night of Nights. <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/07/13/BAGQNDN3E11.DTL&hw=kph&sn=001&sc=1000> 73, Fred KE6CD

From ToddRoberts2001 at aol.com Thu Jul 14 10:06:53 2005
Subject: [R-390] Press Account of KPH Event

Thanks for the article Fred. I didn't realize KPH was started by DeForest Wireless. Some interesting pictures in the article also. I can't quite make out the receiver used at the main operating position due to the angle of the picture. In another picture there looks like an auxiliary rack with a Watkins-Johnson 8718 or 8716 mounted and below that maybe a Kenwood R-5000 in a rack mounting kit? Would have been nice if they had maybe a Blackface R-390A in the center of the main rack! 73 Todd WD4NGG.

From stevehobensack at hotmail.com Thu Jul 14 18:46:58 2005
Subject: [R-390] 26z5w cost

The cost of the 26z5w tube seems to keep going up and up. There is a 12 volt 9 pin tube with similar internal construction, but has different pin-outs. It's time for me to make a mod. I forget the tube number? anyone know? Thanks ...Steve...N8YE

From kgordon at moscow.com Thu Jul 14 18:49:22 2005
Subject: [R-390] 26z5w cost

> The cost of the 26z5w tube seems to keep going up and up. There is a 12 volt 9 pin tube with similar internal construction, but has different pin-outs. It's time for me to make a mod. I forget the tube number? anyone know? Thanks ...Steve...N8YE

12BW4. Go here: http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm Ken W7EKB

From Flowertime01 at wmconnect.com Thu Jul 14 19:05:45 2005
Subject: [R-390] AGC Questions

Dennis,

If you have a 16K filter bad, the side effect could be a bad AGC.

The output of all the filters is tied together on one side to the AGC line. The other side of the filter outputs are switched through the band switch. The unused filters are shorted when not in use.

A known side problem with bad filters is the AGC acts funny. This depends on exactly what goes wrong in a given filter. You can have a bad filter without having an AGC problem.

Ignore the bad filter and AGC problems for a while and work on the other items you have on the list of thing you want to do.

You could open the lines to the bad filter and just let it hang. See if this changes the AGC behavior. Then every thing but the that IF band width would work for you. And you can get to the filter replacement whenever you feel the need. Roger KC6TRU.

**From Flowertime01 at wmconnect.com Thu Jul 14 19:22:56 2005
Subject: [R-390] AGC Problems**

writes: There is supposed to be a jumper on the rear panel termial strip for a remote AGC line? What would happen if it was missing?

In the R390/A, V201 the RF amp has a R234 a 1.5 meg resistor on the AGC line to ground. So with no jumper this resistor completes the circuit path for the AGC line on the tubes that have AGC on the control grid.

In MGC where the AGC line is shorted, there are other resistors in the AGC line between the grids and the short point on the function switch. There will be a small loss of receiver gain in MGC with the jumper missing. You likely may not even be able to hear the difference between jumper and no jumper with the function switch set to MGC.

In AGC, no AGC voltage is feed back to any thing, The AGC and MGC positions on the function switch will act exactly alike to you. The carrier meter will peg over when switching AGC time constants because all that circuit is before the back panel jumper. The audio will not be lost like

normal however when changing the AGC time constant, because the AGC charging time, when switched, is not being carried over the jumper and applied to the tubes.

If you did not know, you could run the receiver for years with the AGC jumper missing and never miss a thing. As much as the receivers AGC performance has been cried about, you may think your receiver is just normal. Roger KC6TRU

From N4BUQ at aol.com Thu Jul 14 21:33:01 2005
Subject: [R-390] 26z5w cost

While the cost is indeed going up, you can find them sometimes for a fairly reasonable price on eBay. I think I paid about 6 or 7 bux each plus shipping for my last set. There's a set out there now with a Buy It Now price of \$15.95.

I also bought some 12BW4s just in case the 26Z5Ws do dry up. It seems to be a very reasonable mod (aside from the evil solid state route). Barry - N4BUQ

From vk4ns599 at optusnet.com.au Fri Jul 15 01:39:19 2005
Subject: [R-390] 26z5w cost

Alltronics advertise the 26Z5 tubes at \$!0.00 each and the 12BW4 Tubes at \$2.00

WJ Ford Surplus advertise (but they say the price list is out of date) NOS 26Z5 for \$6.25 and Pulls for \$2.00 Anyone bought from them lately??? Lionel L Sharp, VK4NS

From redmenaced at yahoo.com Fri Jul 15 11:02:46 2005
Subject: [R-390] 26z5w cost

wrote: > Alltronics advertise the 26Z5 tubes at \$!0.00 each > and the 12BW4 Tubes > at \$2.00 >> WJ Ford Surplus advertise (but they say the price > list is out of date) > NOS 26Z5 for \$6.25 and Pulls for \$2.00

++++++

I've seen a lot of people advertise them that didnt' actually have them in stock. Some didn't even know they had them advertised! Joe

From n4buq at aol.com Fri Jul 15 11:07:06 2005
Subject: [R-390] 26z5w cost

I'm not sure, but I think the "mrtubz" seller on eBay must have a stash he's selling two at a time. I bought my last set from him. One arrived broken and he promptly sent a replacement. He has another set out there now They're pulls, but appear to test just fine. FWIW. Barry - N4BUQ

From kc8opp at yahoo.com Fri Jul 15 20:41:51 2005
Subject: [R-390] PTO Desicant

I have finally dug into the PTO on a R-390 that has been here in the shack for about 20 years. It has

never indicated the right freq and I am tired of remembering the offset. Overall the radio is in good shape but the PTO has been off for a long time. I measured 6.3KHz non-linearity end to end so it is time.

When I opened up the inner can I was surprised that there was not a desiccant pack. Not too bad on the inside, a bit of dirt laying around and an ugly dark grease smeared all over the corrector stack, but it should clean up nice.

What does the group think, should I put a desiccant pack inside when I put it back together? I have a few laying around that I have collected over the years and could dry them out and tie them to one of the support rods.

Thanks for any thoughts and wish me luck with the corrector stack. Done a few "A" PTO's with the screws out the front, but this is the first corrector stack adjustment. thanks for the thoughts 73's Roger KC8OPP

From RIKKA3TXR at aol.com Fri Jul 15 23:51:23 2005
Subject: [R-390] Re: R-390 Digest, Vol 15, Issue 22

My '56 r-380a had a brownie in the C553 position..I still have all the pulls in a bag..But never checked them for leakage...It's not a question, I just replaced it..Not worth the money for new filters.....I also had problems popping the fuse in the HV after the diode mod (and dropping resistor mod)...put a few ohms x 5w in series with both diodes and it stopped..RIKK...KA3TXR

From g4gjl at btopenworld.com Sat Jul 16 07:34:20 2005
From: g4gjl at btopenworld.com (Peter Worrall, G4GJL)

Date: Sat Jul 16 07:46:30 2005
Subject: [R-390] PTO Desicant

Do it! The PTOs were originally built with dessicator packs included. Ive seen some with three packs.

I presume you know the stuff can be re-activated by bakink in the oven. Watch out for the more modern bags, as they are plastic based and melt at the reactivation stage. The older paper or colth ones are the best in this respect, however they let dust particles out from chipped dessicant granules. You choose!
Pete G4GJL

From wli98122 at yahoo.com Sat Jul 16 10:36:25 2005
Subject: [R-390] AGC Problems

Roger:

Enjoyed your detailed explanation re AGC problems. I think that your logic will serve us all well when we troubleshoot our IF decks... W. Li Mercer Island

From dwade at pacbell.net Sat Jul 16 16:24:00 2005

Subject: [R-390] AGC Problem Fixed :))

Good Afternoon,

The nagging not-quite-right AGC line in my Motorola '390A has been fixed. The culprit: V509

Got out to the garage early enough to avoid the heat and took some voltage readings on the signal grids of V501, 502 and 503. All were slightly *positive* under no signal conditions. Pin 2 of V509 was also slightly positive. In my research through the Pearls (many, many thanks Wei Li), I kept seeing posts from Dr. Jerry that said in essence...positive grids are either from leaky caps or gassy tubes. I wasn't finding any strong evidence of leaky caps.

So, almost on a lark, I swapped V506 and V509. Voila!! Negative grids return. Hooked up an antenna...noticeable improvement in audio quality. The offending tube does not test gassy on my emission type tester however, although that doesn't surprise me.

So, Roger, your advice was sound..that is...go on with it and finish the radio. And I was...but after just oneeeeeee more thing to try.

Thank you all for your help. I'm sure you'll hear from me again shortly as I continue on. :) Dennis

From R390rcvr at aol.com Sat Jul 16 16:32:46 2005

Subject: [R-390] George Rancourts email

Good day: Does anyone have George's email? Thanks Randy

From CRIPS01 at MSN.COM Sat Jul 16 18:45:06 2005

Subject: [R-390] Re: [Johnson] re: Viking II better than Heathkit DX 100

Oh I see, wasn't sure, I have left these parts of my Vikings stock and I don't plan to change them. Ken de W7ITC

From r390a at bellsouth.net Sat Jul 16 19:26:42 2005

Subject: [R-390] OT - That GRR-5 went for *WHAT*??

Remember the AN/GRR-5 receiver I was fussing about last week. Someone bought it for \$550 using buy it now. <http://offer.ebay.com/ws/eBayISAPI.dll?ViewBids&item=5788266941>

Mine is in better shape and even has the canvas. And no, it's not for sale, though I may consider trading even for certain models of pre-1985 Mercedes 2-seaters. hehehe Tom NU4G

From jupete at bigpond.net.au Sun Jul 17 03:02:57 2005

Subject: [R-390] R-392 PTO end point

The Collins PTO in the R-392 appears not to be as sophisticated as those in the other R-390-Xseries. no ovens for one. The manual does not tell anything about making an end point adjustment for linearity, and haven't taken the PTO out or apart to have a look.

Anyone been this way before and can tell a story ? Incidentally those small red micas EL Menco - 50, 100 etc pf are trouble.. found a few leaky in the cal. osc. to the extent it wouldn't. Pete D . Williams

From shoppa_r390a at trailing-edge.com Sun Jul 17 15:08:42 2005
Subject: [R-390] Excessive backlash in BFO pitch control

One of my IF decks has excessive backlash in the BFO pitch control. e.g. if I'm turning to the right, it zero beats at "0", but if I'm turning to the left, the zero beat is closer to "+1".

Mechanically, I see an accordion-type coupling between the shaft and the reactor. Is this where I should be concentrating my effort, or should I be looking inside the variable inductor itself?

Alignment between all the shafts is less than peachy, too. But I cannot see how this would give more than a tiny bit of backlash. Tim.

From brookbank at triad.rr.com Sun Jul 17 15:34:43 2005
Subject: [R-390] Mechanical filters

Will like to aquire 2 or 3 defective collins mechanical filters TYPE B or TYPE F, would like to use them as covers for my type Y filters. If you can help, please contact me directly.... Thanks, Pat

From jclark6 at gmail.com Sun Jul 17 17:27:03 2005
Subject: [R-390] 2 R390-A's Carjacked my Truck and have invaded my home.

I went to the Slidell, LA. Hamfest today and 2 R390-A's Carjacked my Truck and now have invaded my home. What do I do next? This list got me interested in them so now point in the right di Imperial Electronics INC SN 302 and 307.

I have SN 307 up and reciving. SN 307 will not change megcycles with the knob. The metal collar which clamps the gear to the shaft is broken. I can change by hand. Where can I purchase a collar ? I will have to recap. Thanks Jim

If you own Collins Amp 30L-1 SN 29068 Contact me

From shoppa_r390a at trailing-edge.com Sun Jul 17 19:39:48 2005
Subject: [R-390] 2 R390-A's Carjacked my Truck and have invaded my home.

> **The metal collar which clamps the gear to the shaft is broken.**

I believe that you're talking about a "large clamp". Fair says they're out of them. But IIRC they're just a 7/16" diameter gear clamp, e.g. MSC part # 87856761 (like \$1.00). That's not a bristol spline clamp but just a regular socket-head hex.

Check the diameter. 7/16" is right for the knob clamp but might be wrong for the gear clamp.

MSC is on the web at <http://www.mscdirect.com/>. I've got at lest a few spares laying around if you

don't want to deal with the \$25 minimum order. Tim.

From N4TUA at aol.com Sun Jul 17 20:13:10 2005
Subject: [R-390] What to do now

I have discovered an interesting thing while cleaning the gear train on my Motorola 56. The split gear #59 on the drawing seems to be out of specification. This is the gear on the center bottom cam shaft. The two halves fit together fine but the snap ring will not go down into the groove. It was like that when I disassembled it and may have been built like that. Seems to have held up that way for almost 50 years. It looks like the individual gear halves are too thick. What would be the general suggestion to do here? These gears are stainless and would be hard to sand down to fit. I thought this was most interesting to find a manufacturing defect like this. Collin

From redmenaced at yahoo.com Sun Jul 17 21:03:21 2005
Subject: [R-390] What to do now

Did you happen to hone the burrs off the sides of the teeth? Where the two gear sides mate? If they don't slide against each other smoothly the burrs may make them to be too "thick". Joe

From redmenaced at yahoo.com Sun Jul 17 21:17:03 2005
Subject: [R-390] 2 R390-A's Carjacked my Truck and have invaded my home.

Do you know who you bought them from? Did you see the mysterious and ethereal Nolan Lee there?
Joe

From N4BUQ at aol.com Sun Jul 17 22:31:42 2005
Subject: [R-390] What to do now

I can't recall if this is one of the gears built like this, but if it is the kind with a collar brazed to the gear, sometimes this causes them to become slightly convex. I had this problem on a couple of split gears on my last rebuild. If they are not exactly flat, you can VERY GENTLY flatten them (they are quite soft). After doing this, these gears spun together quite nicely. Barry - N4BUQ

From jupete at bigpond.net.au Mon Jul 18 02:41:08 2005
Subject: [R-390] Filters wanted

Needed are a pair of Collins mech. filters F455Z4 and F455Z5. I believe they also go under the P/N of 526 9365 000 and 526 9364 000. They are used in 50E -6 Any directions as to where to go appreciated - be kind now ! Pete D . Williams

From mbalaw at optonline.net Mon Jul 18 08:38:31 2005
Subject: [R-390] What to do now

I have been able to find many of the precision mechanical components needed for R-309A repair at Winfred M. Berg, Inc. 499 Ocean Avenue, East Rockaway, NY 11518 Tel: 1-800-232-BERG, Fax: 1-800-455-BERG website---www.wmberg.com. They have a lot of hardware including gear

collars, oldham coupler springs, snap rings (but no 8-36 spline headed set screws that I could find). They are nice to deal with, and I have used them for years. Miles Anderson, K2CBY

From hankarn at pacbell.net Mon Jul 18 10:32:34 2005

Subject: [R-390] What to do now

I have all of the above plus more. Hank KN6DI

From r390a at bellsouth.net Mon Jul 18 13:14:32 2005

Subject: [R-390] Multiple 26Z5 sightings but HURRY

There are two listings for 26Z5WA's on Ebay. The prices shown below are Buy It Now prices <http://tinyurl.com/bhepp> (item 5789848519) \$19.95 for 2 pulls "check good" with Guarantee that covers DOA or if they check bad in your tube checker. <http://tinyurl.com/95yyc> (Item 7336745452) \$29.95 Two New Old Stock. Also with same guarantee as the guy above.

26Z5's don't last long at the Evil Auction Place so git em while the gitt'ns good. I've no connection with either seller nor either auction, but I've bought from both guys in the past with no hassle. Tom NU4G

From r390a at bellsouth.net Mon Jul 18 13:26:58 2005

Subject: [R-390] 26Z5's at W.J. Ford Surplus - nada

Just called up at WJ Ford's. He's been out for a while. Interesting thing, he said, someone called over the weekend wanting 20 or so. So that eliminates one source.

We still have the two guys on ebay who seem to have them semi-regularly, plus whoever else shows up with them, like at \$5 each.

SPEAKING of watching out on ebay, I've been looking for a type 6000 tube for my T-368. The few folks that had them wanted an arm and a leg. A fellow had some on Ebay for \$8 each, I bought 2.

The auction place isn't really that evil. Tom NU4G

From r390a at bellsouth.net Mon Jul 18 13:37:53 2005

Subject: [R-390] Excessive backlash in BFO pitch control

Try loosening the bushings both at the IF deck and the front panel to make sure there isn't any binding, then take a good look at that coupling and make sure the setscrews are tightened and there are no cracks in the body of the coupling. A crack or break can cause the shaft to turn fine one way, but not so fine the other. Tom

From hankarn at pacbell.net Mon Jul 18 13:56:51 2005

Subject: [R-390] Multiple 26Z5 sightings but HURRY

Ron, at W.J. Ford surplus says they are out of the 26Z5's Hank KN6DI

From hankarn at pacbell.net Mon Jul 18 13:59:41 2005
Subject: [R-390] 26Z5's at W.J. Ford Surplus - nada

Twas me. Hank KN6DI

From crips01 at msn.com Mon Jul 18 15:35:48 2005
Subject: [R-390] 26Z5's at W.J. Ford Surplus - nada

I ran across this site while looking for the 26Z5. Has anyone done this mod'?
http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm Ken de W7ITC

From kgordon at moscow.com Mon Jul 18 15:58:16 2005
Subject: [R-390] 26Z5's to 12BW4 mod

wrote: > I ran across this site while looking for the 26Z5. Has anyone done > this mod'?
http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm

I have. I posted that mod to the web site in question. I had to do it to an R-390 once, which I then sold through Rick Mish. He liked it well enough that when he passed the receiver on after refurbishing it, he left it in.

It works as advertised. Most of the things I have posted to that web site have been tried at least once.
Ken W7EKB

From n4buq at aol.com Mon Jul 18 17:56:37 2005
Subject: [R-390] Multiple 26Z5 sightings but HURRY

If one of the auctions is from mrtubz, I can vouch for his integrity. I ordered a set of 26Z5Ws not too long ago. One came in broken and he immediately shipped me a replacement - no questions asked. Unfortunately, he puts the tubes in a generic tube box and then in a padded mailer so that doesn't offer too much protection for them, but since he replaced the broken one, I had nothing to complain about. It is a shame to lose a good 26Z5W that way though. Barry - N4BUQ

From N4BUQ at aol.com Mon Jul 18 23:14:20 2005
Subject: [R-390] Meter Question

Gents,

The gentleman selling these sent me one with the front glass broken. After receiving it, I realized it may be a "glow-in-the-dark" meter and could be hazardous. It was sealed in a plastic bag and I put it in a glass jar with a tightly-fitting lid until I figure out what I'm going to do with it.
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5717004917>

I bought it because I wanted to measure the internal resistance in hopes that it might work as an R390A replacement. The meter movement is fs=100uA so it would require some shunting at the very least; however, if the needle is painted with radium-based paint, then I don't want to fool with it.

Is anyone familiar with these and know if they are hazardous? It has a "SEALED DO NOT OPEN" stamp and I thought that might be one clue that it might be a problem.

Yeah, I know the threat is minimal and as long as I don't lick the insides, I'll probably be okay, but I just really don't want to take the chance. Thanks! Barry - N4BUQ

From CRIPS01 at MSN.COM Mon Jul 18 23:18:04 2005
Subject: [R-390] 26Z5's to 12BW4 mod

Ok I will put this mod's in My list of work arounds. I spotted this site at work and I never have the time to look at them much. At work I have to contend with back stabbing nurses looking for a target for their knives. Ken de W7ITC

From muttman at charter.net Tue Jul 19 01:02:22 2005
Subject: [R-390] Meter Question

Steve Haney is a good guy. I bet if you contacted him he'd send you another meter. Buzz

From huffb at avalon.net Tue Jul 19 04:45:47 2005
Subject: [R-390] R390 cooling fan

Gentlemen,

This question is for those with R390's. What size 220V fan are you using to cool the regulator tubes (physical size and cfm would be helpful) and I believe I read earlier about someone having made mounting bracket specs available for this purpose. Thank you in advance.-Brad

From walqhq at yahoo.com Tue Jul 19 08:56:04 2005
Subject: [R-390] Meter Question

Barry,

I have already bought some of those meters from ATC and the internal resistance is somewhere North of 1K Ohm which means shunting will give you an internal resistance around 100 Ohms which is if memory serves me about 10 times higher than what you want.

From roy.morgan at nist.gov Tue Jul 19 11:38:25 2005
Subject: [R-390] R390 cooling fan

wrote: >Gentlemen, >This question is for those with R390's. What size 220V fan are you using >to cool the regulator tubes (physical size and cfm would be helpful)

Whatever you can find that moves air. (the fan I used was a 115 volt unit, but I suggest 220 volt ones for less noise.)

> and I believe I read earlier about someone having made mounting bracket > specs available for this purpose.

That would be me. The crude pictures and explanation are at: <http://home.comcast.net/~roysmorgan/specifically: http://home.comcast.net/~roysmorgan/ba/FanPlate.html>

The last picture is higher resolution and contains rulers so you can print it and make one of your own easily. Roy

From djmerz at 3-cities.com Tue Jul 19 11:44:11 2005
Subject: [R-390] R390 cooling fan

Brad, I used a 92 mm size fan with 35 cfm at the rated voltage. I ran it at half the rated voltage, so the flow was less. I recommend Mouser Orion fan because it worked for me, others would work I'm sure. I think Roy used the 80 mm size with flow probably around 30 cfm - I don't know whether he ran it at less than the rated voltage. I used the 92mm size because it is thinner than the 80 mm size and covers the holes a little better. His arrangement is described:
<http://home.comcast.net/~roysmorgan/ba/FanPlate.html> I think only gentle air motion is needed. Best regards, Dan.

From Flowertime01 at wmconnect.com Tue Jul 19 11:46:07 2005
Subject: [R-390] R390 cooling fan

Roy, Another nice page. You sure try to help us guys along. Thanks Roger KC6TRU

From n4buq at aol.com Tue Jul 19 11:47:36 2005
Subject: [R-390] Meter Question

That's about what I figured. I bought some meters from Leeds Electric that are 100uA full-scale and around 1K. I was hoping these might be different, but probably not. Nice meters if they fit the application, but I can pass on these. Thanks! Barry - N4BUQ

From roy.morgan at nist.gov Tue Jul 19 13:17:13 2005
Subject: [R-390] R390 cooling fan

wrote: >Roy, >Another nice page. You sure try to help us guys along.

Roger, Thanks.. glad to know that folks find it helpful.. (It's not very fancy!)

>From: >Brad, I used a 92 mm size fan with 35 cfm at the rated voltage. >... Mouser Orion fan because it worked for me, ...I think Roy used the >80 mm size with flow probably around 30 cfm -

The fan I used was a rescue item from some old computer power supply, most likely. It is about 4 or 4-1/4 inches square.

> I don't know whether he >ran it at less than the rated voltage.

No, I just hooked a lamp cord to it and plugged it in. When I make improvements to the system, I'll power it from the radio and most likely reduce the voltage, or even use a smaller fan inside the radio

mounted on a clamp-on bracket for a no-holes addition. Roy

From n4buq at aol.com Tue Jul 19 14:03:46 2005
Subject: [R-390] R390 cooling fan

Roy,

On the "new and improved" model, you should rig up a spring-loaded paddle that is in the direct path of the wind coming off the fan. Affix the paddle to the shaft on a variable resistor that replaces the ballast tube. A drop in line voltage will cause the fan to reduce its output thereby causing the paddle to move slightly, rotating the pot, decreasing the resistance, and thus keeping a constant voltage to the heaters. The opposite effect will occur when the line voltage increases. Perfect! Barry "Rube Goldberg" - N4BUQ

From n4buq at aol.com Tue Jul 19 14:09:13 2005
Subject: [R-390] R390 cooling fan

Of course, you could put a rat in one of those circular treadmills that is connected to a fan blade and the amount of food and water it would get would be proportional to the line voltage, but that'd be ridiculous, wouldn't it... Barry - N4BUQ

From westerman at cableone.net Tue Jul 19 16:03:13 2005
Subject: [R-390] Help - Shipping Insurance Claim

Just received a R-390A purchased online. Receiver was doubled boxed with foam between boxes and between inner box and receiver. Package was shipped via Airbourne. Box obviously took a very hard drop on on corner to penetrate over 10" of total foam and two boxes. See here:
<http://www.r390files.com/images/R-390A-1.gif> <http://www.r390files.com/images/R-390A-2.gif>
<http://www.r390files.com/images/R-390A-3.gif>

Not sure yet if mechanicals are damaged. How does one put a dollar value on damage like this?
Thanks Craig

From ToddRoberts2001 at aol.com Tue Jul 19 16:15:21 2005
Subject: [R-390] Help - Shipping Insurance Claim

writes: Receiver was doubled boxed with foam between boxes and between inner box and receiver. Package was shipped via Airbourne. Box obviously took a very hard drop on on corner to penetrate over 10" of total foam and two boxes. Not sure yet if mechanicals are damaged. How does one put a dollar value on damage like this?

Sorry to hear of your mishap. I don't think the receiver was packed correctly to allow the corners to become bent like that. Regardless of being surrounded by foam the receiver chassis was able to knock against something hard to cause the corners to bend inward from a knock. If the receiver was properly nestled in packing the shock during handling should have been evenly distributed around the chassis. Can you send us any pictures of the box it was packed in? Are there any punctures in the outer box? If not then the receiver was not correctly packed. It looks like with a little planning and some disassembly of the parts the bent metal can be straightened without too much trouble. 73 Todd WD4NGG.

From Llgpt at aol.com Tue Jul 19 17:01:41 2005
Subject: [R-390] Wanted: Kiwa Tuning Eye

Kiwa Electronics sold these a few years back, if you have one with manual and cables contact me. Les Locklear

From W1RC at Verizon.net Tue Jul 19 19:39:00 2005
Subject: [R-390] FS: Lot of 14 Assorted Coaxial Jumper Cables

Hi Gang:

I sorted out a big pile of assorted coaxial cable jumper cables and realized that I certainly don't need as many as I have. These are all high quality cables with BNC or PL-259 connectors on each end. Many are MILSPEC with silver-plated connectors. Definitely not junk! Some of these jumpers are double shielded cable, such as RG-142; others are RG-58, etc. Mostly 50 Ohm stuff, short lengths (8" - 18" a few longer) all useful in today's radio shack.

There are 15 cables in the lot. I'd think that \$10.00 plus postage would be a good deal for someone who needs these things. 73, Michael, W1RC

From hankarn at pacbell.net Tue Jul 19 19:43:48 2005
Subject: [R-390] R390 cooling fan

I find it very interesting that all of these units operated 24/7/365 with no problems all over the world in less than ideal operating conditions. With all kinds of operating voltages with minimum of down time in arctic, tropical, desert and you name it.

And as our lost or lurking in the sidelines Nolan Lee proved he had a rack of them running 24/7 for I think he said like 5 or 6 years with "ZERO" failures.

We still have wanna be enngginneerrss trying to re-engineer the wheel. This series of radios were designed by guys using paper graph, Drawing machines and a item that was the current computer of the day, normally called a BRAIN located in a cavity in between the ears and the keyboard was called a slide-rule. The hard drive was the educated memory bank that they were born with and nurtured to the point that in today's world people are still in AWE at how well they still work over 50 years down the road.

Nobody on any of these reflectors have any idea of how many are still in daily service.

Maybe someone can run a rack of radios with fans and variacs for 10 years and come back and prove that Nolan and the Gov. were all wrong.

Somebody please show me any product in anywhere close to the numbers made of these fine radios, made in the same time frame that still exist. That are still up and running/operating with the same reliability. Figure this one out Why not operate and enjoy the radios instead of "TTGTFSOOTBP". The last 2 letters have to do with black pepper. Hank KN6DI Here I go sliding off of my soapbox. Enjoy.

From Llgpt at aol.com Tue Jul 19 19:46:26 2005
Subject: [R-390] R390 cooling fan

Exactly Hank! <still laughing> Les Locklear

From W1RC at Verizon.net Tue Jul 19 20:07:35 2005
Subject: [R-390] FS: Lot of 14 Assorted Coaxial Jumper Cables

Hi Gang: Wow! - two replies in 15 minutes. They're gone.. Thanks for your interest, 73, Michael, W1RC

From edw488 at earthlink.net Tue Jul 19 20:45:20 2005
Subject: [R-390] Re: 26Z5's at W.J. Ford Surplus - nada (Tom Norris)

Just checked with W.J. Ford Surplus and they want 20.00 a piece for pulls (and they only have 1 in stock), they didn't reply with a price for new ones. I'll stick with diodes, or maybe try the 12BW4 mod.... Ed, N3LHB

From barry at hausernet.com Tue Jul 19 21:09:55 2005
Subject: [R-390] R390 cooling fan

Oh yeah, ya' think that's funny do ya'?

What about last night when I opened up this real clean SX-42 to check it out and got some good news.. (No, I didn't save a bundle of money on my car insurance with Geico.) Someone had recapped it -- replaced most all the waxworks caps!

Bad news? -- Here's a clue -- recapper was either misinformed or did it about 20-30 years ago.. The guy installed black beauties. OK, some were red molded plastic. Three of the black ones were split 'n bleedin'. There were two orange drops in it. H'ray ... <sigh>

Which all "shows ta' go ya'" -- You have to restore these oldies for the long haul -- 50, 100 years or more. Install at least a dozen fans and some of those thermal cooler things -- until the chassis is so cold, the filaments won't glow. Then back off by a few fans. Run the rig only often enough to make sure it still works and go easy on the knobs. Have some consideration for the poor jerk who buys the thing 40-50 years from now off e-bong for a jillion and a half rupees.

Meanwhile, I heard from somewhere that you can repair split 'n leaky black beauties with a poultice of fly poop 'n spit. I been feeding this big fat fly all day and not a speck. Y' think black pepper might work instead? Maybe black powder and a lit match - cauterize the things. Barry

From chacuff at cableone.net Tue Jul 19 21:22:01 2005
Subject: [R-390] R390 cooling fan

I've been massaging radiator stop leak into the cracks in mine....healing up nicely! Cecil...

From Llgpt at aol.com Tue Jul 19 21:23:36 2005
Subject: [R-390] R390 cooling fan

writes: I've been massaging radiator stop leak into the cracks in mine....healing up nicely!

Which works best, the gold or the silver? Floogle Hackenbush

From chacuff at cableone.net Tue Jul 19 21:23:53 2005
Subject: [R-390] Dave Medley's Email address

Anybody have Dave's email address....the davemed82@yahoo don't work no more! Hope he's doin alright... Cecil....

From chacuff at cableone.net Tue Jul 19 21:26:46 2005
Subject: [R-390] Dave Medley's Email address

Well It looks like I entered it wrong.... Lets see if that works... Sorry about that... Cecil....

From chacuff at cableone.net Tue Jul 19 21:30:02 2005
Subject: [R-390] R390 cooling fan

> Which works best, the gold or the silver?

I've been using Bar's...looks like Rat droppings in oil.... Figured that's what them ole brown and black beauties were packed with anyway... Cecil...

From pulsarxp at earthlink.net Tue Jul 19 22:25:27 2005
Subject: [R-390] R390 cooling fan

"Which works best, the gold or the silver"?"Floogle Hackenbush"

Well, with the women I know, Gold works best. Lee houston

From CRIPS01 at MSN.COM Tue Jul 19 22:47:38 2005
Subject: [R-390] Multiple 26Z5 sightings but HURRY

RE: The 26Z5W

This topic as got me wondering. It goes without saying keeping the power supply in it's original configuration is the way to go. But the Military changed out the 26Z5W's with diodes. I have been looking at solid state full wave rectifiers. These solid state modules could be mounted on a heat sink mounted on the power supply module and would be a nice looking as well as very functional change. One thing you could do is to mount the full wave rectifiers on the heat sinks which are mounted on the CPU's in computers, here you have both a heat sink and a mounted fan to cool the whole thing. You could mount this setup on the back panel of the R390 so all of the heat generated by this setup would not be radiated inside the case. Combine this with a solid state voltage regulator mounted in place of the

3TF7 I don't think you could have a better setup. These are just some thoughts on the matter. Ken de W7ITC

From huffb at avalon.net Tue Jul 19 22:47:54 2005
Subject: [R-390] Re: R390 cooling fan

To Hank, Les etc.

If heat isn't a big issue why do we worry so much about black tube shields? As for fly sh*t in black pepper, I guess that's why I don't eat black pepper.-Brad

From CRIPS01 at MSN.COM Tue Jul 19 23:45:29 2005
Subject: [R-390] Re: R390 cooling fan

When I was in the Navy cook when we opened a new package of black pepper we always dumped out on white plates and watched to see if any of it moved, if it did that meant it had weevils in it. Ken

From jshorney at inebraska.com Wed Jul 20 00:48:45 2005
Subject: [R-390] R390 cooling fan

wrote:>Maybe someone can run a rack of radios with fans and variacs for 10 years and come back and prove that Nolan and the Gov. were all wrong.

Why use fans? Here's a thought: <http://www.pcpowercooling.com/technology/optemps/index.php>

Sure it's in the context of PCs and sand, but aren't radios "electronic devices" (third paragraph)? Jim Shorney

From hankarn at pacbell.net Wed Jul 20 01:32:46 2005
Subject: [R-390] Re: R390 cooling fan

The shields all were standard silver and not black and they operated for years just fine and the biggest percentage of them still do not have black shields. My guess some nit picking eenggiinnneeriinng smart ass hole decided after 40 or so years that the Gov. should spend unknown amount of taxpayers money to cool it down maybe 10 or so degrees.

IIRC Nolan said in his 5 year test it made no difference.

Where is the actual proof of the fans or black shields making the receivers any more reliable.

Proof I mean Gov./Collins printed hard copy dated and with the appropriate numbers as a field Mod or SB. That would make TURDS a lot easier to see.Hank KN6DI

AS Sgt. Friday used to say "the facts Ma'am just the facts"

From hankarn at pacbell.net Wed Jul 20 01:44:58 2005

Subject: [R-390] Re: R390 cooling fan

fly feces is a lot smaller and does not move. Hank KN6DI

From Llgpt at aol.com Wed Jul 20 09:27:19 2005

Subject: [R-390] Re: R390 cooling fan

writes: To Hank, Les etc. If heat isn't a big issue why do we worry so much about black tube shields? As for fly sh*t in black pepper, I guess thats why I don't eat black pepper.-Brad

Aaaah, but the Military did suggest the IERC tube shields and they did replace most of them. Myself, I just tend to remove all the tube shields and not worry. Les

From n4buq at aol.com Wed Jul 20 09:42:23 2005

Subject: [R-390] Re: R390 cooling fan

So what you're saying is if the government prints it, it has to be true? Barry - N4BUQ

From n4buq at aol.com Wed Jul 20 10:33:10 2005

Subject: [R-390] Re: R390 cooling fan

Let me respond to my own post here. The sarcastic comment below makes it appear I have a basic distrust of my government which I do not. What I was trying to say is that just because there isn't an official document stating something doesn't mean it's not true. Fifty years ago, the Collins engineers used the information at their disposal and the results were what we have in the form of the wonderfully designed radios we now enjoy. The fact they have held up and performed under the most adverse of conditions attests to the fact that the design is indeed superior to other designs of the era.

That doesn't negate the fact that things have changed since then. Given the fact that certain parts are becoming increasingly difficult to find makes it necessary to seek good alternatives. The case in point is the good old 3TF7. While it's true that the function of this tube is not as necessary as it originally was, you can't simply unplug it and expect the radio to keep working so folks have sought out alternatives.

As for the present subject of cooling fans, I don't know if there is real hard evidence to support the idea that keeping the tubes make them last that much longer; however, common sense dictates that, generally speaking, the hotter you get something, the faster it will wear out and it follows that if I keep the tubes a bit cooler, then it's quite plausible that they will last longer. Given the fact that the sources for these tubes is dwindling, cooling them to try and make them last longer is a very logical thing to do.

I suppose the real thing to keep in mind is that this is just a hobby. If I want to run a hundred fans on my R390A to keep it cool, and someone else keeps a small heater next to theirs for whatever reason, what does it really matter? Sincerely, Barry - N4BUQ

From tshoppa at wmata.com Wed Jul 20 11:03:10 2005

Subject: [R-390] Help - Shipping Insurance Claim

> Not sure yet if mechanicals are damaged.

My guess is that the rig will work fine.

> How does one put a dollar value on damage like this?

It looks like the receiver was pretty much immaculate prior to damage. Valuing the immaculateness is subjective - I myself don't care much about the finer points. Others do.

The front panel dent will be the easiest to bend back. Get a big vise, clamp the corner in some wood blocks, and bend back.

The back top corner will be a bit trickier, especially if you want to eliminate all traces that it was damaged. Hammerworking this back into shape will probably leave some dings. Tim.

From brookbank at triad.rr.com Wed Jul 20 11:46:02 2005
Subject: [R-390] R-392 for trade

Will trade my R-392 in excellent condition with original speaker and power cord and home made (very good) power supply plus all documentation, for an IBM Thinkpad laptop Pentium III or 4-M. Laptop must be in very good condition and include documentation and original restore and service CD's.

If interested, please contact me directly for more specifics. Regards, Pat

From tetrode at comcast.net Wed Jul 20 13:42:58 2005
Subject: [R-390] R390 cooling fan

Jeeeeeeez Hank the guy is just putting some air across the hot regulator tubes to keep the radio cooler! May I point out that your favorite receiver the German EK-07 has a cooling fan built in. =:^0 Also Nolan didn't have R-390s, he had the much cooler running R-390As. 73 es :^) John

From drewmaster813 at hotmail.com Wed Jul 20 18:06:15 2005
Subject: [R-390] RE: The 26Z5W

wrote: >This topic as got me wondering. It goes without saying keeping the power supply in it's original configuration is the way to go. But the Military changed out the 26Z5W's with diodes.

The wording coursing through this list over the years regarding replacement of the 26Z5w's with silicon has gone something like "...virtually eliminates the possibility of a rectifier-based power supply failure..." . Greater reliability is the military's reason.

>I have been looking at solid state full wave rectifiers. These solid state >modules could be mounted >on a heat sink mounted on the power supply module >and would be a nice looking as well as very functional change. One thing >you could do is to mount the full wave rectifiers on the heat sinks >which >are mounted on the CPU's in computers <snipped>

I assume you are referring to the full-wave 2 diode rectifiers in a TO-220 like package. A full wave bridge could also be used as a 2-diode type rectifier by simply not connecting the negative lead. (Aside:

works well as a replacement for defunct selenium in car battery chargers and can be bolted to the charger's case for heatsinking.)

The rectifier current in the R-390 () B+ supply results in negligible heat production in silicon rectifiers so applied. No need for a heatsink. Regular diodes with leads can be soldered to the terminals of the original rectifier sockets.

>Combine this with a solid state voltage regulator mounted in place of the >3TF7 I don't think you could >have a better setup.

A typical linear regulator used as a replacement for the 3TF7 does require a heatsink. Some time ago David Wise developed a solid state regulator to replace the 3TF7 that did not require a heatsink. It is a sophisticated microcontroller-based digital design. Drew

From n4tua at aol.com Thu Jul 21 04:16:56 2005
Subject: [R-390] Non fitting gears

Thanks to all who have replied to my non fitting gear problem. I have decided to put the gears back together the way they have been for the first 49 years of their life and hope they hold together for at least another 49 years. I think they will since they are also held captive by the gear clamp.

I could not see any warpage or burring that would cause this misfit. Nor wrong gear placement either. The only things I could see was, 1) the gears are too thick. 2) the soldered on collar was soldered on with the collar a little bit out.
If I ever get another set of gears I plan to justify this conclusion.

Now on to the next problem.... Does anyone know the specifications for the small springs that hold the split gears tight? I have broken one quite by accident. I will either need a new one or a used replacement. Thanks, Collin

From shoppa_r390a at trailing-edge.com Thu Jul 21 06:18:11 2005
Subject: [R-390] Non fitting gears

> Does anyone know the specifications for the small springs that hold> the split gears tight?

My guess is: Slightly less than 1/8" outside diameter. Maybe 0.100". Overall length 3/8". Wire diameter seems to be 0.020".

In my brief looking around, 0.1" diameter springs made out of 0.020" wire seem to be fairly common. But not in a length as short as 3/8". I'd hazard a guess that a very workable substitute could be made by buying a longer spring, cutting it, and bending a new hook on one end.

Probably you want to replace them in pairs.

If you want to wind a spring from scratch, I had this web page pointed out to me a few days ago. It makes it look easy!

<http://home.earthlink.net/~bazillion/springs.html>

If you're going to make one, I'd make two just to do both side in a matching pair.

I have bought stock springs etc. from <http://www.mscdirect.com/> for the springs that tension the slug racks down. (Which are 3/16" OD, 1.5" overall length, 0.020" wire.) Tim.

From redmenaced at yahoo.com Thu Jul 21 11:36:56 2005
Subject: [R-390] Non fitting gears

I can get custom springs made to order, just having trouble getting that MC CHANGE detent made. Joe

From roy.morgan at nist.gov Thu Jul 21 11:51:23 2005
Subject: [R-390] Re: R390 cooling fan

wrote: >Let me respond to my own post here. The sarcastic comment below makes it appear I have a basic distrust of my government which I do not.

Barry, all, Oh, good. I was beginning to worry.

>... Fifty years ago, the Collins >engineers used the information at their disposal and the results were what >we have in the form of the wonderfully designed radios we now enjoy.

Hear, Hear. I seem to remember that the redesign of the R-390/URR into the R-390A/URR involved attention to the series regulator section and the attendant high parts failure rate.

>... Given the fact that certain parts are becoming increasingly difficult >to find makes it necessary to seek good alternatives.

The 8082 tubes in the R-390/URR are not cheap to buy normally. The fanplate I cobbled onto the side of my R-390/URR cools those tubes and the rest of the module very nicely. At least one list member has made one for his radio based on the picture I posted with rulers included.. GREAT! See: <<http://home.comcast.net/~roysmorgan/ba/FanPlate.html>>

>As for the present subject of cooling fans, I don't know if there is real >hard evidence to support the idea that keeping the tubes make them last that >much longer;

I would agree, but in the case of the R-390/URR, R-391/URR and R-389/URR, the series regulator tubes run way too hot, period. I don't need any further evidence to become motivated to put a fan on them.

>... Given the fact that the sources for these tubes is dwindling, >cooling them to try and make them last longer is a very logical thing to do.

At the risk of nudging the thread further along to deadhorsebeat-land, I have a rack mount panel with four fans in it that I plan to install in my rack of R-390A/URR's and related equipment (once I get to that project.) My theory is that modest forced air cooling will help. Roy

From roy.morgan at nist.gov Thu Jul 21 12:00:00 2005
Subject: [R-390] Non fitting gears

wrote: >>Now on to the next problem.... Does anyone know the specifications for the >small springs that hold the split gears tight? I have broken one quite by >accident. I will either need a new one or a used replacement.

Collin,

I think someone on the list has some spares. But: If you get a spring out and figure out what it's characteristics are, do this:

- 1) take apart any ball point pens you find to see if those springs would work.
- 2) Go off to your local hobby store with the broken spring and put it down on the counter in front of the store person who looks most knowledgeable. You know, the model airplane and railroad store. Warning: while you are there, do not approach the tiny nuts and bolts display, the racks of metal rods and tubes, and the paint and finishes section. If you do, you are in serious danger of spending lots more money that you had planned to.

See Small Parts, Inc, for replacements if you can't find anything. <http://www.smallparts.com/> Roy

Who couldn't stand to put the ill-mating gears back in a radio till they were fixed.

From wd8kdg at worldnet.att.net Thu Jul 21 12:10:07 2005

Subject: [R-390] R-390 Cooling Fan

Good Morning to All:

And my \$0.02 worth.....I have several hundred cryogenically treated orange drop (715 style) capacitors with years worth of refrigeration stored in them so IERC tube shields and or cooling fans are not required. Will sell these cryogenically treated, saturated in liquid nitrogen at -320 degrees F for one year, for \$10.00 each.

Will accept cash only, no paypal. Tnx, wd8kdg Craig

From roy.morgan at nist.gov Thu Jul 21 13:13:02 2005

Subject: [R-390] R-390 Cooling Fan

wrote: >>And my \$0.02 worth.....I have several hundred cryogenically >treated orange drop (715 style) capacitors with years worth of refrigeration >stored in them

Craig, Have you seen the websites that actually offer cryogenically treated audio tubes? No s**t.

Only a hundred dollars or so each. 12AX7's, 6L6's and even a pair of KT-88's if I remember right. Astounding prices.

<http://www.physicsforums.com/archive/t-59273_Cryogenically_Treated_Vacuum_Tubes.html> is a discussion <http://vacuumtubeaudio.com/cat8_1.htm> has tubes for sale <[http://www.metal-wear.com/electronics_\\$_stereos.htm](http://www.metal-wear.com/electronics_$_stereos.htm)> is an explanation from a company that does such treatments on parts. They mention reports about missile parts, electronic circuit boards, and other things that were improved by such treatments.

From my Google search, it appears that some folks who own and/or manufacture and sell firearms believe that cryogenic treatment of gun barrels and shotgun chokes improves them. This I can understand. Vacuum tubes? No, I don't understand. Roy

Whose freezer is * not* big enough for the GPT-750 transmitter, but might hold a McIntosh amplifier or two.

From robert.boyd at sdc-dsc.gc.ca Thu Jul 21 13:34:20 2005
Subject: [R-390] R-390 Cooling Fan

You've obviously been perusing the e-place too often!:)

From barry at hausernet.com Thu Jul 21 14:09:02 2005
Subject: [R-390] Non fitting gears

Hi Roy & crew,

I already recommended the ballpoint pen spring idea privately. They may not have exactly the right parametric characteristics, but .. highly available.

Have to caution against option #2 as stated. You instructed to go to the local hobby store with the broken spring. This will subject instructee to risk of ill treatment, as in Old Joke #340-299433, sub-part Q. "Home mechanic walks into auto parts store and holds up grungy, grease-dripping, cruddy broken part and says "Got any of these?". To which, slack-jawed, war-weary counter clerk hauls out a grimy box and dumps it out on the counter --- and a whole mess of dirty broken parts of the same kind spill out, as he replies "Yeah, I got a hundred of 'em."

Lesson being -- remove one of the good springs and take that to the store. But as advised, put horse blinders on first so you will not be attracted to the myriad small parts -- or worse -- become afflicted by a one or more additional expensive hobbies. Ideas may creep into your brain before you can do anything about it -- like "Gee, I could stack up the radios like buildings and run the HO layout around 'em." Or, worse yet, when you mention to the store guy that it's spring for a radio and get to talking about R-390's and the like, he will haul out the most elaborate, control 'n meter festooned piece o' gear and mosey on over to the servo's and say something like "You mean you're into radios but not RADIO CONTROL!!!!?" Let's see now, the spring is 25 cents, tum-te-tum, the Zorchmaster-8-Channel is \$799.95, the five servo's at \$89.99 a pop, the 1/8th scale B-29.... four engines. Wadditya say your credit limit is on this card? By the way, these are 3 times more powerful than your weedwacker. "

You better check the junk drawer for plastic ballpoints. Somebody mail him a couple of springs. If Collin gets infected, the rest of us will be at risk. Hmmmmm..... there are computer controlled radios -- how about radio controlled radios? Ya see.... Barry

From djmerz at 3-cities.com Thu Jul 21 14:15:12 2005
Subject: [R-390] R-390 Cooling Fan

Hi, yes I'm happy with the fan I put on my 390. About the cryo-treated tubes - yes razor blades, tools steels and other metals that rely on martensitic transformations benefit from cryo treatment to convert all

the material to the hard martensitic phase. Offhand, I know of no instance where such treatment affects the grain structure of metals, other than effecting a phase change. I don't believe such metals are used in tubes. What could possibly come from quenching a tube to cryo temperatures? Gases condense but vaporize again upon heating. Metals contract but expand again upon heating, in itself not a good idea where glass to metal seals are involved. Thermal cycling to cryo temperature is a way to weed out parts, designs and materials that may later fail and it is an accepted method for acceptance testing of some devices and materials that might need high reliability. So a tube that survives a cryo test might be superior to one that doesn't but I doubt that the cryo cycling itself improves a tube other than getting rid of the "bad" ones. But stranger things happen !! I'll stick to the ones that have set around at room temperature. Besides, I don't have any liquid nitrogen around to try it. Dan.

From tshoppa at wmata.com Thu Jul 21 14:48:37 2005

Subject: <<<SPAM>>: Re: [R-390] Non fitting gears

> I already recommended the ballpoint pen spring idea privately. > They may not have exactly the right parametric characteristics, but .. > highly available.

Major problem: ballpoint pen springs are compression, not extension springs.

May be good raw material for spring winding though. I like the stainless springs in computer keyboards better for that myself. Tim.

From wd8kdg at worldnet.att.net Thu Jul 21 15:14:01 2005

Subject: [R-390] R-390 Cooling Fan

And,..for those with more money than brains (audiophiles). I have on sale today only, pressure cryogenically treated passive parts (resistors, capacitors, etc.) for the entire audio sections of R-390As. The liquid nitrogen has been pressure pumped (trade secret) into all interior areas of these components. They are now, "Oxygen Free", and of the best audio quality available anywhere on earth.

Western Union will gladly accept your money and will wire directly to me \$\$\$\$\$.

Pleeeeeeeaaaaaaaaaasssse e-mail me today for prices, and details of payments, quantities limited.

Soooooo.....hurry while supplies last. Come now. Tnx, wd8kdg Craig

From n4buq at aol.com Thu Jul 21 15:25:53 2005

Subject: [R-390] R-390 Cooling Fan

Craig,

Quick. Go outside and take a deep breath. That oxygen-free thing is getting bigger than you think!!

Barry - N4BUQ

From wd8kdg at worldnet.att.net Thu Jul 21 16:00:37 2005

Subject: [R-390] R-390 Cooling Fan

Ok, I've had my fun for today, time to crawl back under the rock and take a deep breath. Caps and resistors might be with us for a while, tubes will get in short supply one of these days. So keep'em cool.

later.....craig,

From chacuff at cableone.net Thu Jul 21 16:58:26 2005
Subject: [R-390] R-390 Cooling Fan

I think you meant to post that to the "Audiophile" list...you know the guys that use sterling silver speaker wire. Cecil...

From W1RC at Verizon.net Fri Jul 22 15:56:41 2005
Subject: [R-390] Who Says It's Junk???

Hi Gang:

I see that there's an R-390A on ePay that is currently sitting at \$2,425.00 and it hasn't even hit the reserve price. <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5790213538> Who says it's junk!
Michael, W1RC

From jpl15 at panix.com Fri Jul 22 16:49:25 2005
Subject: [R-390] Who Says It's Junk???

wrote: > I see that there's an R-390A on ePay that is currently sitting at \$2,425.00 > and it hasn't even hit the reserve price.

Well, yes it's in great shape, nicely refurbished - but - no covers over the IF racks, no bottom cover, no Bristo wrench or screwdriver in the rear panel holder - has the original selenium rectifier, and the case is \$600 extra - he has "standing orders" for that so "don't ask".

Okay, I won't. $\$3500 + 600 =$ quite a bit for an admittedly pretty radio set. And it's not even a late-model EAC! 9 bids so far - \$2,425 as of this writing - on a \$3,500 reserve / buy-it-now. Capitalism at work..... sort of.... Cheers John KB6SCO

From r390a at bellsouth.net Fri Jul 22 17:41:04 2005
Subject: [R-390] Fwd: Refinish radio face with recessed lettering?

Allan needs folks help. Told him there were quite a few ways to do this correctly. I may not be a 390, but the folks that do refinishing here may be able to help him.

Reply to him and not me He can't be too bad a guy, he drives a Pinzgauer Tom NU4G

From r390a at bellsouth.net Fri Jul 22 17:48:46 2005
Subject: [R-390] Who Says It's Junk???

All those faults don't matter since it's being advertised as a Collins. Never mind the tag on the front that says "Stewart-Warner". It is clean and shiny though.

We could probably sell bricks with Collins tags on them if we said they came from Art's childhood home. heehee Tom NU4G "What's the reserve on that listing for the envelope of Art Collins' toenail clippings?"

From Flowertime01 at wmconnect.com Fri Jul 22 19:11:31 2005

Subject: [R-390] Re: R390 cooling fan

Fellows,

No we did not run the receivers for years with those silly silver tube shields.

We had standing paper orders to take most of those silly hot silver tube shields off.

On top of that those hot shields were a full employment opportunity for a lot of maintenance men. We sent about an hour a month just looking around in rooms to find the receivers by serial number. Then we spent some time looking into the receiver for blue glows.

Once ever six months the receiver come out of the rack and had all the tubes pushed through a tube tester.

Those radios did not just run all those years with silver tube shields. That is some new urban myth. Roger KC6TRU

From Flowertime01 at wmconnect.com Fri Jul 22 20:08:56 2005

Subject: [R-390] R-390 Cooling Fan

writes: Dan, No one said this stuff is useful. They are just selling it. Who knows what can be done for income if you do not try.

Its not like they are making medical claims. It is still legal to fleece the sheep when you can. Roger. KC6TRU

From jmiller1706 at cfl.rr.com Fri Jul 22 20:50:59 2005

Subject: [R-390] Who Says It's Junk???

What, no black tube shields? For that price I expect at least IERC shields.

From bill at iaxs.net Fri Jul 22 21:30:44 2005

Subject: [R-390] Who Says It's Junk???

He says in reply to queries that the reserve price is the same as the Buy It Now price. That's not even an auction. Bill Hawkins

From ba.williams at charter.net Fri Jul 22 21:31:41 2005

Subject: [R-390] Who Says It's Junk???

I had some email exchanges with that guy a couple of years ago regarding bogus claims on that auction

site. I was not impressed by his honesty or integrity, so my advice is to beware when dealing with him. I can't remember the exact details since time has passed, but I remember his auction name and the website that looks the same as it did back then. Barry

From Commtekman at aol.com Fri Jul 22 21:37:39 2005
Subject: [R-390] Who Says It's Junk???

I have had dealings with this guy, if you find a problem with his auction items, you pay the freight back PLUS a significant "restocking fee", in other words you are screwed. Bob

From k3pid at sbcglobal.net Fri Jul 22 22:09:28 2005
Subject: [R-390] Who Says It's Junk???

How the heck did they get the chassis so clean and with great printing? Did someone actually plate or etch the chassis and then print the various part id etc? Nice job but I don't understand how it is done! As for the cabinet, I bought one just like that from Mac last year and it looks like I can double my money hi hi... K3PID Ron H.

From laffitte at prtc.net Fri Jul 22 22:27:53 2005
Subject: [R-390] Who Says It's Junk???

I would expect IERC shields with gold plating in them! 73s Guido Santacana KP4FAR

From N4BUQ at aol.com Fri Jul 22 22:56:22 2005
Subject: [R-390] Who Says It's Junk???

Pretty radio? Indeed. Mint? No. Mint to me means indistinguishable from a brand new one. New radios did not have powder-coated front panels or anodized side panels. It does look nice, though. I've had the front panel powder-coated and the frame parts re-alodined (not anodized), but the innards aren't quite as pretty as that one.

I wouldn't pay what he's asking for it, though. Juts my 2×10^{-2} dollars. Barry - N4BUQ

From hankarn at pacbell.net Sat Jul 23 02:23:56 2005
Subject: [R-390] Who Says It's Junk???

Anyway you cut it, it is still a DEPOT DAWG!!! My EK-07 will still outdo it hands down. It came from the factory with all modules "Silver Plated" no less. And with a 2 speed transmission and the tuning is velvet smooth. Even has a built in tube checker. Hank KN6DI

From hankarn at pacbell.net Sat Jul 23 02:47:40 2005
Subject: [R-390] Who Says It's Junk???

I think he should deliver it in person to the buyer not the auction winner plus 600 for the case. It is not an auction when the buy it now and reserve are the same. Hank KN6DI

From hankarn at pacbell.net Sat Jul 23 02:53:55 2005
Subject: [R-390] Who Says It's Junk???

He is looking for a Joe Walsh or someone with deep pockets to step up to the plate. Or hoping some sucker new to the BA group will grab it not knowing that it is not mint and after reading all of the Verbage he will think he has the best in the world. Hank KN6DI

From shoppa_r390a at trailing-edge.com Sat Jul 23 07:30:49 2005
Subject: [R-390] Who Says It's Junk???

> It is not an auction when the buy it now and reserve are the same.

You might think so, but I've seen auctions that started out with BIN equal to reserve, but ended up at 3 times that price. In those cases the BIN and reserve prices were unrealistically low, and the buyers in their frenzy managed to put the price more realistic.

Yes, it sounds stupid, but so many buyers concentrate so much on "winning" the auction that they ignore all common sense. Tim.

From anchor at ec.rr.com Sat Jul 23 10:44:14 2005
Subject: [R-390] re: Refinish radio face with recessed lettering?

> I seem to remember there is a trick to refinishing face plates and > then refilling the recessed lettering with white paint, etc.

Hi Alan,

Yes, there's an easy way, works for me, many times. Take a look at my webpages: <http://www.thecompendium.net/radio/> in the SP-600 section there are a few examples, with pix of the procedure, etc. or on The Hammarlund Historian site, I think I've got it there, too. Let me know if you can't chase it down, or have any questions. 73, Al, W8UT

From r390a at bellsouth.net Sat Jul 23 11:15:28 2005
Subject: [R-390] Who Says It's Junk???

> My EK-07 will still outdo it hands down. It came from the factory with all modules "Silver Plated" no less.

Does this mean that, not too long from now, Siemens will become the new Collins?? hehe Tom "Just jealous"

From hankarn at pacbell.net Sat Jul 23 16:33:54 2005
Subject: [R-390] Who Says It's Junk???

Tom, You have it all wrong the EK-07 is by Rohde & Schwarz. I also have 2 of the Telefunken E-104

which are in the Same class as the EK-07 and R-390, Also have 2 of the Siemens E311-A which is in the same class. Hank KN6DI

From future212 at comcast.net Sat Jul 23 22:51:16 2005
Subject: [R-390] R-390A front panel meters.

Hello,

I'm new to this group. I'm going to pick up a couple of R-390A's from Fair Radio. They do not come with front panel meters. Is there anyone selling meters that will work? Thank you in advance for all of your help. 73's DW Holtman WB7SSN

From n2bc at stny.rr.com Sun Jul 24 07:37:05 2005
Subject: [R-390] R390A AGC

My R390A has an AGC problem. With no signal the AGC voltage is -0.5V (measured with an HP410C VTVM). The AGC responds properly to signals (goes more negative to a max of appx. -15V).

Resistance measurements on the AGC line look OK:

**IF strip @ J512-6 = Infinity
AGC line @ J512-4 = 482K
RF deck @ J108 = 1.82M
With P512 and P108 in place, the AGC jumper on the rear = 378K**

The only other voltage that is wrong is the IF strip suppressor grid bus, measures +3.4V should be -2.5V

I suspected Z503, I couldn't get it to peak - Output increased as I cranked out on the slug but it ran out of adjustment range before peaking. Just replaced Z503 (nasty) and have the same result.

I've gone thru 3 wholesale changes of tubes in the IF deck.

I've replaced C545, C546, C548. (I keep coming back to the AGC IF Amp area) Ideas? 73, Bill N2BC

From n2bc at stny.rr.com Sun Jul 24 08:43:10 2005
Subject: Fw: [R-390] R390A AGC

> Bill, there is a bunch of AGC information in the below link under IF DECK section. There may be some help there. There is one post that uses a 9V battery on the AGC line to read grid voltages. I had a problem with the R390A RF deck and it turned out to be a shorted Mechanical Filter input coil.

Thanks Don, I should have put more info in my original post....

I have 'lifted' the AGC line at each stage of the IF one at a time (disconnecting the appropriate

isolation R), the AGC voltage and the suppressor grid bus does not change. Also, measurements in the IF with the RF deck disconnected are unchanged.

I did the 9V battery trick too. Readings at each of the stages are appropriate.

That's why I keep coming back to the AGC IF AMP, Rectifier and Time Constant stages. Z503 will not peak, all other stages peak nicely. It seems that the gain of the AGC IF amp is low because Z503 will not peak. I suspect the reduced output is not enough to overcome the positive bias coming from the R544/R546/R545 divider string (roughly +17V if I did my Ohms law correctly). 73, Bill N2BC

From W1RC at Verizon.net Sun Jul 24 13:18:44 2005

Subject: [R-390] Re: Who Says Its Junk???

Hi Gang:

I see that my posting has generated some discussion which is good. This morning I went to check to see how Terry's auction was going and found a bit of a surprise:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5790213538>

Click on the link and you will see that the auction has been removed by eBay and is now an "invalid item".

Wonder what happened? I cannot see why eBay would remove an R-390A from the active auctions. They've been acting very strangely of late in this regard. A friend posted a shoulder patch from the Royal Canadian Mounted Police and it was removed by eBay. This wasn't even the current style either. eBay has tightened their rules regarding police badges and related official emergency equipment but most shoulder patches are still acceptable. He inquired as to why the auction was ended and was told that the RCMP asked eBay not to permit any of their official items, including patches, to be auctioned.

Any ideas????

Bob Young e-mailed me and the List asking if we thought it was worth the \$3500.00 B-I-N/reserve price. It takes at least 100 hours to restore one to this level and an hourly rate of \$35.00 for that kind of work is not unreasonable. I guess it could be worth this amount to someone who has the box and wants what looks like a super nice R-390A. Don't forget the cabinet is a Grand additional. 73, Michael

From ToddRoberts2001 at aol.com Sun Jul 24 14:06:39 2005

Subject: [R-390] Re: Who Says Its Junk???

writes: I went to check to see how Terry's auction was going and found a bit of a surprise: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5790213538> Click on the link and you will see that the auction has been removed by eBay and is now "invalid item".

That does seem unusual for a standard auction item to be removed from eBay records the next day after it supposedly ended. The seller could have declared the auction invalid - perhaps someone made him a private offer he couldn't refuse and he ended it himself? Maybe someone will write to the seller and ask what happened. 73 Todd WD4NGG

From barry at hausernet.com Sun Jul 24 14:34:22 2005
Subject: [R-390] Re: Who Says Its Junk???

> Click on the link and you will see that the auction has been removed by > eBay and is now "invalid item". >> what happened. 73 Todd WD4NGG

When a seller cancels an auction, the page is generally still there and it gives some sort of standard reason -- "The seller canceled the auction as the item is no longer available.: ... or ... " due to an error in the listing." etc. The blank page with the "invalid" business usually indicates restricted or forbidden items -- or a problem with the seller's epay (or paypal?) account. The latter can occur if the credit card the seller has provided for automatically charging the epay fees declines a charge. Also if the seller has committed some other infraction or other, I suppose epay may invalidate all of his/her auctions. That might happen if someone is selling Wehrmacht WWII gear and including Germany in the offering -- verboten. However, I would think only that auction would be terminated. There are apparently a number of "trip-wires".

I don't recall, but was this the auction that also mentioned use of the R-390A through the Gulf War and the latest one? (due to sandstorms, etc.) True or not, I don't believe epay invalidates auctions due to questionable historical factoids. They'd have to shut down too many auctions and the stockholders wouldn't be happy. (Is it OK to sell epay stock on epay? ;-)

Also don't recall anything mentioned about re-capping. Barry

From Llgpt at aol.com Sun Jul 24 14:43:49 2005
Subject: [R-390] Re: Who Says Its Junk???

writes: Also don't recall anything mentioned about re-capping.

He claimed to have used "military procedures" on rebuilding the various decks. For whatever that may be worth.....working with the Air Force daily, that alone might be worth .0002 cents. Les Locklear

"42.7% of all statistics are made up on the spot." Steven Wright

From beerbarrel at cox.net Mon Jul 25 05:53:16 2005
Subject: [R-390] ebay r390a auction...

Maybe because he was offering the case out of auction and ebay did not want to lose their fee for the 600 dollars. he stated that it was sold in the auction if the high bidder did not want it. Ebay could not collect a fee on it. Tracy

From barry at hausernet.com Sun Jul 24 15:05:55 2005
Subject: [R-390] Re: Who Says Its Junk???

>He claimed to have used "military procedures" on rebuilding the various decks. For whatever that may be worth.....

Well, we also know that one military procedure involves running them over with tanks. Another .0002 cents.

Here are a couple more Stephen Wright one liners for the road ...

"I couldn't repair your brakes, so I made your horn louder."
"The sign said "eight items or less". So I changed my name to Les."
-- Steven Wright

From jpl15 at panix.com Sun Jul 24 16:25:49 2005
Subject: [R-390] R390 (non A) on eBay

Whilst debating the merits/demerits of the previous absurdly-priced 390A (and expensive matching cabinet) a non-A went for just under \$200 with but one bid, though nearly 500 hits were registered on the page counter.

Copy says it was working when stored a few months ago - has a ding in the back, quite dusty, no tools in thier holders, but still, for \$199.97....

Couldn't help myself. ;}

Now, to figure out how to get it home, since the seller won't ship - "pick up only" in San Francisco - oh well, a pleasant day-trip away from me (Carson City.) Woo - Hoo! now I have an "A" and an "anti-A".
Cheers John KB6SCO

From chacuff at cableone.net Sun Jul 24 19:11:19 2005
Subject: [R-390] R390 (non A) on eBay

I sold one several months back as well. Nice radio worked super. Redone front panel and knobs (by previous owner) and typical problem components replaced and full alignment.(by me) Received over 1000 hits and two bids.

The R-390/URR is much more scarce, more dependable for an old radio and were a no cost spared example of period technology. One would think them to be more valuable than the typically restored "A".

I'll be listing another soon that looks very nearly as nice as the recently listed "A" that was pulled from Ebay. (I didn't refinish the side panels) It will include the correct period cabinet. All fully restored and working as it should with many NOS tubes to support it into the future...(and yes I probably have 100+ hours in it..didn't keep track) We'll see what the free enterprising market does to us..... Cecil....

From chacuff at cableone.net Sun Jul 24 19:13:57 2005
Subject: [R-390] Re: Who Says Its Junk???

I've also known of this to happen if ebay has any evidence that the owner is somehow bidding up his own auction....whether personally or by means of another member. Don't know that to be the case here but it goes on! Cecil.....

From shoppa_r390a at trailing-edge.com Sun Jul 24 19:48:56 2005
Subject: [R-390] ebay r390a auction...

> [Ebay R390A with case offered for \$600 flat, outside E-bay system] > Ebay could not collect a fee on it.

We have a winner! If pointed out to Ebay, an auction with comments like this in it will always be canceled. They also run text searches looking for stuff like this - usually catching an auction within a few minutes of start.

In the past year and a half Ebay has gotten real serious about tracking down anyone trying to business using their site but dodging final-value fees. My E-bay username used to just be my E-mail address - but they cracked down on me and made me change it, because they were convinced that it was an attempt at defrauding them their \$. Tim.

From Tarheel6 at msn.com Sun Jul 24 20:34:26 2005
Subject: [R-390] ebay r390a auction...

Fellow Anchorites,

Here's what I think. The fact that the headline read "Collins Receiver" when in fact it was a "Stewart-Warner" receiver was misleading. You didn't find out until about half-way down his text that it was a S-W. Was it a Collins designed receiver? Yes. But was it a Collins manufactured receiver? No. His lead-in and most of what he said led you to believe it was a Collins. But it wasn't. It was a S-W. My \$.02 worth. YMMV. 73's, -tom

From hankarn at pacbell.net Sun Jul 24 20:47:34 2005
Subject: [R-390] ebay r390a auction...

Anyway you look at it, it is and has been a "DEPOT DAWG" Hank KN6DI

From wc4g at knology.net Sun Jul 24 20:36:34 2005
Subject: [R-390] ebay r390a auction

Guys, What say you get away from the back fence and forget about some restored R-390A, your jealousy is showing. Instead I recommend we pitch in and help Bill Coleman N2BC fix his AGC. Look back through your deleted file and find his request. Don Heywood Charleston, SC

From jpl15 at panix.com Sun Jul 24 22:24:39 2005
Subject: [R-390] Non A questions for the experts

I have paid for, and will pick up, the R-390 I bought, in a couple of weeks. A friend and I have been looking at the pictures on the auction page, but they were assembled as a collage of several images of the radio, and thus the individual ones are too small to carry enough resolution to tell fine details.

Like the manufacturer, frinstance.

I've brought the photo into PaintShop Pro (which I'm fairly 'good' with) but there are just not enough pixels to completely read the data plate. It *looks* like the manufacturer is Westinghouse, Inc.... but my friend has a book of 390 lore and lineage, and he informs me that only Collins and Motorola made

Non As. Maybe the plate has been replaced? It *does* say "R-390/URR" and this rig was for the Navy.

Also, on the back panel, are two of those round, small/few-pinned blue connectors with a threaded boss in the middle, like a lot of the PRC and GRC radio sets used for interconnecting cables.... again I can't read the nomenclature above and below them - not having ever owned a "Non A" before I thought I'd ask their purposes..

No tools left, but the 7 and 9-pin straighteners are there. Now I can get my R-388 out to Howard Mills for refurb and still have two HF Boatanchor receivers in the shack. Cheers John KB6SCO

PS: I'll be at the Livermore, CA Ham swap on Sunday, Aug 7th - 7:00 - 11:30.... one of the better swaps left alive - It be Fun to have an Eyeball QSO with any Listmembers who might be in the area...

From CRIPS01 at MSN.COM Mon Jul 25 01:22:52 2005
Subject: [R-390] Pin straighteners

Does anyone make tube pin strengtheners anymore, I have been using ceramic tube sockets to do this but if I could get the real deal it would be nice. Ken

From n4tua at aol.com Mon Jul 25 02:20:30 2005
Subject: [R-390] R-390A restoration

Hello,

I have posted some pictures on the web of the restoration in process,
<http://hometown.aol.com/n4tua/r390a.html> <http://hometown.aol.com/n4tua/phase1.html> Hope you like.
Collin

From djmerz at 3-cities.com Mon Jul 25 02:32:38 2005
Subject: [R-390] Non A questions for the experts

John, the connectors are power on the left and remote control on the right (looking from the rear of the receiver). You'll need something to connect to the power connector to operate the radio. Maybe your seller will have the connector. I bought one from Fair Radio for about \$15 without a cord. Some guys use Molex connectors and make something up but it's nice to have something close to the original with the center attachment screw to hold it on. I haven't explored the function of the remote control connector. This is a great radio - I listen to it more than the 390a currently - never thought I'd buy one, but it was staring at me at a swapmeet so I bought it earlier this year. Best regards, Dan.

From shoppa_r390a at trailing-edge.com Mon Jul 25 06:36:03 2005
Subject: [R-390] R-390(A) patents?

Is there an index online of patents applicable to the R-390 and R-390A? Off the top of my head (well, bottom of my rig) I see my PTO has patent number 3,098,989 on it. Don't know what else is in there.
Tim.

From odyslim at comcast.net Mon Jul 25 09:33:39 2005

Subject: [R-390] Order number list?

Does anybody keep a list of the different order numbers for the 390A's? I am curious to find out how many different ones there are from all of the manufacturers. Thanks, Scott W3CV

From W1RC at Verizon.net Mon Jul 25 08:23:33 2005

Subject: [R-390] Re: Who Says Its Junk???

Cecil may have hit on it right here. It's called "shill bidding" and highly illegal. I think you get the boot from eBay if you are caught doing it. I can't see any other logical reason for the listing's disappearance. However this auction had a B-I-N and reserve set at the same amount and I suppose someone could have shill bid it up but it didn't get to the right amount before it closed so what would be the point? I am thinking that anyone seriously interested in a R-390 even in this price range would read this list and consequently why didn't Terry just advertise it here. I am sure that this is the forum and marketplace of the high-end MIL tube-based receivers.

Hey, it you have the dough and need more toys.... But I'm glad I got into these toys when nobody wanted them and they were cheap and plentiful. I remember tripping over TCS sets and other such things at flea markets in the 70s and snagging them for \$10 - \$25 at the end of the day if for no other reason than to save them from the dumpster. 73 all, Michael

From odyslim at comcast.net Mon Jul 25 09:38:04 2005

Subject: [R-390] need fast pack

Does anybody have one of the Fast Packs that Rick Mish sells. He is currently out of stock. I can pay with cash, Pay Pal or any other means. I need one quickly.... Help. Thanks, Scott W3CV

From n4buq at aol.com Mon Jul 25 10:21:19 2005

Subject: [R-390] Power cord question

Hey, guys, Which power cord should I be using for my R390A's?
http://www.vansevers.com/power_cords.html Barry - N4BUQ

From JMILLER1706 at cfl.rr.com Mon Jul 25 10:25:10 2005

Subject: [R-390] Re: Who Says Its Junk???

Is this the same guy that sells R-390 manuals on CDs? I seem to recall several years ago some discussion that he might be wanting to sell the Y2K manual on CD, which was compiled by others on a non-commercial basis, as I understand it. Anybody remember this?

From Lester.Veenstra at intelsatgeneral.com Mon Jul 25 10:33:57 2005

Subject: [R-390] Power cord question

Incredible: Are there actual buyers out there of such a low intelligence level to actually think these are worthwhile? And if they are that stupid, how did they get enough money to buy such things in the first place? Lester Veenstra

From ToddRoberts2001 at aol.com Mon Jul 25 10:36:23 2005
Subject: [R-390] NOS R-390A on the E-Place

Just saw this and looks like a real beauty. An original like-new condition R-390A out of the original box. To me this is much more desirable than a refurbished set that started life as a Depot Dawg. 73
Todd WD4NGG

From cfandt at netsync.net Mon Jul 25 10:58:58 2005
Subject: [R-390] Power cord question

Amazing. I'm absolutely incredulous. Almost speechless.

I can't find the words for people who actually buy this cr*p. And those words would not be very complimentary if ever I could find them . . . Barry, you sure are a ball buster by posting that innocent-looking question and making us go check that website!! ;-) "...mechanically tunable power cord." Indeed! What a buncha BS!

Now that I got my blood pressure up, I need to relax, dang it. Gee, thanks Barry! :-) :-) -Chris F.
NNNN

From westerman at cableone.net Mon Jul 25 11:04:42 2005
Subject: [R-390] Order number list?

Scott Not sure if this is complete or not, but it's a start.
<http://www.r390a.com/html/Ordernumbers.htm> -- Craig westerman@cableone.net

From jpl15 at panix.com Mon Jul 25 11:11:58 2005
Subject: [R-390] Power cord question

wrote: Hey, guys, Which power cord should I be using for my R390A's?
http://www.vansevers.com/power_cords.html

Ya know, there's an angel on one of my shoulders, and a devil on the other.

The Angel whispers that it's just plain WRONG to put crap over on folks like this... "stumbling blocks before the blind" and all that.

The Devil says "hey, schmuck! You ain't holdin' a gun to dere heads or nuthin! Remember P.T. Barnum.... what's wrong with a little easy money once in a while...?"

I saw a guy at a big audio trade who once (NAB) who had concocted a whole array of large-venue and location type audio and speaker interconnects and adapters - and he'd used NEMA-standard electrical distribution plugs and receptacles for the purpose.....!!!!

Poor guy couldn't understand why no one took him seriously.... one look at a speaker cable terminated in a 2-wire 15A grounded AC mains plug was enough for me... Free Enterprise: Love It / Hate It.

Cheers John

From roy.morgan at nist.gov Mon Jul 25 11:18:12 2005
Subject: [R-390] Order number list?

wrote: >Does anybody keep a list of the different order numbers for the 390A's?

Scott,

Yes. Tom Marcotte has kept a list. Tom Marcotte <courir26@yahoo.com> here it is:
<http://www.hausernet.com/r390faq/CONTRACTSL.htm>

See: <http://www.r-390a.net/> and click on "<<http://209.35.120.129/faq-manuf.htm>>Manufacturers " to get info and pictures of name tags.

> I am curious to find out how many different ones >there are from all of the manufacturers.

Information of this sort is only approximate. Tom's list is the best available. Unless you have a crystal ball. Roy

From wd8kdg at worldnet.att.net Mon Jul 25 12:14:03 2005
Subject: [R-390] NOS R-390A on the E-Place

This one is worth watching, got to wonder if the likes of a radio-mart will purchase just to resell?
later.....craig,

From BarryG at visi.net Mon Jul 25 12:38:56 2005
Subject: [R-390] Depot Dawgs

wrote: >Anyway you look at it, it is and has been a "DEPOT DAWG" > >Hank >KN6DI

I have been on this list for years, I enjoy the 390A es 390 tech talk. This is my first post, I hate the off topic stuff, but having put up with it this long, maybe you can indulge me. This has been discussed in the past, however, not recently. I worked in a Depot for 5 years, Naval Air Rework Facility (NAS Norfolk).

EVERY ITEM WE OVERHAULED HAD TO PASS THE FACTORY SPEC. PERIOD.

Were there different manufacturer's for the same item? Yes.

Did various modules from various manufacturer's end up in a different mainframe? Yes.

Did the build quality differ from vendor to vendor? Yes.

Zero defects were the stated goal at my facility, EVERY piece of gear I personally overhauled had a document with MY artisan stamp (number unique to the tech) on it. Plus, there was a SEPARATE Quality Assurance Dept. that sampled 50 to 100 percent of the output of equipment from the shop.

God forbid you got a QDR (Quality Deficiency Report) back from the customer on a piece of gear you

certified as spec.

It created a real problem for the shop and tech.

I suspect and have seen, this "DEPOT DAWG" moniker used by various morons and radio snobs over the years. Who might not have a TRUE appreciation for the depot overhaul process as I saw it.

Of course there could be one bad apple in every barrel, however, in this case THAT apple didn't spoil the bunch. To reiterate:

EVERY ITEM WE OVERHAULED HAD TO PASS THE FACTORY SPEC. PERIOD!

Barry/W3AFH (Yes another one)

P.S. Don't it was nice meeting you at Dayton this year (I was the big guy with the long hair and utter disdain for the morons and radio snobs) ;-)

From sacramento.cyclist at gmail.com Mon Jul 25 13:06:31 2005
Subject: [R-390] Power cord question

I think Barry is making a run for the Beehive Kicker title. <grin> Dennis

From richy2 at mindspring.com Mon Jul 25 13:53:33 2005
Subject: [R-390] depot dawg

Lets stop this nonsense about "depot Dawgs", some "know it alls" imply this is somehow a inferior radio. I might suggest to you that if you have a R390 and it hasn't been to the depot for repair it either is way under spec or its brand new and never used. Stop the demeaning terms!!! Joe W2DBO

From ToddRoberts2001 at aol.com Mon Jul 25 13:39:38 2005
Subject: [R-390] Depot Dawgs

Hi Barry, thanks for your comments in the R-390 list. I think most of us refer to the "Depot Dawgs" with affection as far as the R-390A's go. I can appreciate the quality control that goes into the depot repair process. I think the point was that if someone is asking \$3500 for an R-390A then it ought to be in absolutely mint condition as if it came from the factory. If it is a mix of parts from different manufacturers then it couldn't really be the same as if it was like new and came from the original factory, as far as the collectors are concerned. Of course operationally it shouldn't make any difference. Lighten up guys! 73 Todd WD4NNG

From JMILLER1706 at cfl.rr.com Mon Jul 25 13:48:53 2005
Subject: [R-390] Depot Dawgs

One of the design features (and a key government requirement) of the R- 390 series is the ability to interchange modules for repair purposes, regardless of the origin of the module. To be a "Depot Dawg" for an R- 390 then is to be an R-390 that better conforms with the original designer and government intent and expectation. It could be argued that if you do not have a depot dawg, then you have

something inferior because the full strength of the design has not yet been realized. A true R-390(a) should be able to substitute modules from different sources with no perceptable change in performance. Only until you have done that can you claim having a truly valuable 390.

From courir26 at yahoo.com Mon Jul 25 13:53:10 2005
Subject: [R-390] NOS R-390A on the E-Place

Just saw this and looks like a real beauty. An original like-new condition R-390A out of the original box.
The pics are not the best, but it looks like an EAC. Tom

From chejmw at acsu.buffalo.edu Mon Jul 25 14:00:34 2005
Subject: [R-390] Depot Dawgs

Hear, Hear, Good parting shot there Barry. Too many snobs not enough time eh? Jim WB2FCN

From beerbarrel at cox.net Tue Jul 26 04:59:42 2005
Subject: [R-390] (no subject)

<The pics are not the best, but it looks like an EAC.

Sorry if this is a dumb question but what is an eac? Tracy

From ToddRoberts2001 at aol.com Mon Jul 25 14:04:19 2005
Subject: [R-390] (no subject)

writes: The pics are not the best, but it looks like an EAC. Tom

Sorry if this is a dumb question but what is an eac? Tracy

Tracy - EAC are the initials for one of the contractors who built many R-390A's for the government. It stands for Electronic Assistance Corporation. 73 Todd WD4NGG

From barry at hausernet.com Mon Jul 25 14:22:32 2005
Subject: [R-390] Depot Dawgs

Oh no -- another Barry. Well, I guess we may be missing one or two, but there's another who also just has "Barry" as the display name, so might be helpful if you added something to it.

"Depot Dawg" is more of a realistic "term of endearment". Whether done at the depots or some time later, as you've affirmed, R-390's are modular and you're supposed to be able to swap modules around. Some have in mind the "holy grail" of R-390A's -- the one where the modules all match. From where I sit, I don't even know if all of the new receivers direct from the various manufacturers matched in the first place. (could have "borrowed" modules from other subcontractors if they needed them to complete rigs.) The "NIB" find on the e-place may well be a matching one.

Are radios with matching rubber stampings on the modules better than the majority? Probably not. It's just the rarity and novelty, I guess. Not motivating enough for me to go chasing one for a primo price.

I don't know of a single "radio snob" on the list. OK, some are opinionated. Some say that it's the original R-390 that's the "man's radio", etc., but really not coming from an elitist position.

Actually, it's pretty tricky to even set out to become an R-390A snob. What's better? Some prefer Collins made, but they are, on average, older. There is the segment that want EAC '67's or nothing. How about an all Collins with matching modules except one, an SW audio deck, vs. an EAC '67 with matching modules, but isn't working and has seen better days. Or that Collins with one mismatch vs. a Teledyne with all matching ones? There are some practical reasons to prefer the EAC '67's -- better Teflon insulated cables, etc, but not the smoothest gear train. And, going on 40 years old anyway, subject to the same rebuild caveats as all of them.

Even that NIB -- if it is really so, is way overdue for PM and is sitting there with failed caps needing replacement. Functionally, you're better off with a privately pre-owned one that's been worked on and running up to yesterday.

But, back to simpler things. The origin of the "depot dawg" term is that a radio with mixed modules is analogous to a mutt, while a radio with matching modules has some sort of pedigree. The mongrelization may have just as readily occurred long after the military, by private owners and even as you read this, somewhere in Lima Ohio, modules are being mixed 'n matched to cobble together working radios from the remains of St. Julien Creek massacre victims. They may be closer to "Franken-radios" than dawgs. But after they're purchased, cleaned up, restored and tweaked, they're as good as any.

Some still seek the matching modules pedigrees, the grails. Don't know what happens after they find 'em. Either they get really lucky or struck by lightning. Maybe that explains what happened to some of the missing list members. ;-)

To be clear, "depot dawg" is not a putdown of the depot work. Just an expression that covers the majority of the receivers, including the ones that have been professionally rebuilt at high cost.

Nobody's casting aspersions on your work at the depot -- at least I'm not. The problem we have is with the guys who ordered the tank drivers to run over and put down the other puppies.
best regards Barry

From Llgpt at aol.com Mon Jul 25 14:29:25 2005
Subject: [R-390] Depot Dawgs

Art Coalins, inventor of the coal fired, Steam Powered Radio Cedar Lake, Ohio

I could not have said it better..well, I could have in 25 words or less. But, this seems to be a "Barry" sort of thing..

From hankarn at pacbell.net Mon Jul 25 14:38:28 2005
Subject: [R-390] Re: Depot Dawgs

Barry, You may have been lurking in the shade but you missed it somewhere back down the road,

I have been on most of these list when there was only one Barry,

I do not remember anyone talking about the depot overhauls other than a couple that had some QC problems.

IIRC the term "Depot Dawg" came about in the discussion of the process that all of the, in this case RADIO's went through. Like all of the modules, parts, tags, panels and frames went on there merry way throughout the process and after be checked they all came back together, shook hands with new family members i.e. Collins, Eac, S-W etc hey lets all work together and down the road they went. My guess they all met specs at least but some of them happened to have better genetics so they performed better, less wrist power, better audio, etc. etc.

It all boiled down to some Purist wanting an all Collins, or whoever brand with matching S/N or some nitpicking category that had no bearing on the performance of the subject radio.

I do not remember anyone badmouthing any of the Techs. at any time.

Radios are just like Caddies, Rolls, Fords they all somewhere had and have and will continue to have LEMONS and I do not mean a twist with the Scotch & Water either.

So if your feelings are hurt maybe you should consider lurking until you have all of the facts, And last but not least I am not a moron as you implied about some of us that use the term DEPOT DAWG. I believe in doing things correctly and up to specs With over 20,000 hours in my flight log flying J-2 Cubs through Boeing 747's had to do something correct.

I feel you owe the list an apology. Hank KN6DI little more than .02 worth.

From odyslim at comcast.net Mon Jul 25 14:44:34 2005
Subject: [R-390] need fast pack

Hi Craig,

It is a shipping container that Rick Mish (Miltronix) designed to ship R390-XX radios. There is an outer box lined with special mil-type foam then an inner box lined again with more foam. The box passes the strict V3C shipping standard. My fast Pack has made over 20 trips through UPS and Fedex with no harm to the contents. It just so happens that Rick has sold out and I need another. Thanks, Scott W3CV

From kgordon at moscow.com Mon Jul 25 14:45:41 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

The term "depot dawg" is, to me, not a demeaning term: it is a "term of endearment". It means that the receiver in question has been loved and abused, worked on by someone who cared and brought back to life, possibly more than once.

I would much rather have a depot dawg than an NIB one. They are (usually) cheaper, and work better. I USE my receivers. I don't put them on a shelf and admire them from a distance.

Humph! "Demeaning", indeed! Let the snobs have the NIB ones; I'll take a depot dawg any day.

And anyone who actually WORKED in a "depot" has my sincerest appreciation for doing such an excellent job on our beloved "dawgs". You were the first who really cared: we've learned from people like you. Ken W7EKB

From hankarn at pacbell.net Mon Jul 25 15:00:33 2005
Subject: [R-390] Depot Dawgs

Barry #1 Well said. Hank

From roy.morgan at nist.gov Mon Jul 25 15:11:23 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

wrote: >The term "depot dawg" is, to me, not a demeaning term: it is a "term of >endearment".

Ken,

That's the way I took it.

How about another term: "Old Soldier". I have one R-390A which has apparently done so much service in knob-twisting mode that the paint and aluminum at the tuning knob have been worn down into the panel. There's a half moon shaped ring around the knob you could almost hide a dime in.

How many SIGINT signals do you think that thing tuned in over the years? This one did not sit on fleet common 24/7 for 15 years and haul in those loud broadcasts from Norfolk day in and day out.

I will not be filling and painting that panel. I feel that it deserves to be appreciated for what it has done.

> It means that the receiver in question has been loved and >abused, worked on by someone who cared and brought back to life, >possibly more than once.

About once a year, the only still-flying B-29 flies into this area (Suburban DC) for an air show or two. There is nothing in the air that sounds like a B-29. There is no other flying B-29. None. The thing was "born" just after I was, and is still flying. I wonder how many engines it's gone through? How many tires? See: <http://www.cafb29b24.org/fifi.shtml>

One of these days, I'll have both my essentially-unused EAC-67 and my oldest Collins-made R-390A side by side for a happy comparison. There's no telling which one will work the best, but I am sure they will BOTH be working just fine. that's the wonder of it for me. 73 all, Roy

From john at gumlog.net Mon Jul 25 15:36:16 2005
Subject: [R-390] NOS R-390A on the E-Place

Looks like a late modle EAC with a Cosmos ind PTO. John, W4NET

From Llgpt at aol.com Mon Jul 25 15:41:56 2005
Subject: [R-390] NOS R-390A on the E-Place

Well, that is what all the late (1967) EAC R-390A's had for a PTO. Les

From g4gjl at btopenworld.com Mon Jul 25 16:22:49 2005
Subject: [R-390] Power cord question

>> Which power cord should I be using for my R390A's?

Not until you have replaced all conductors in the signal path with oxygen-free copper, soldered them with nothing less than the recommended 99.9999% pure silver wire, and doused the entire receiver in a liberal bath of DeOxit would you notice ny appreciable difference! Pete G4GJL

From g4gjl at btopenworld.com Mon Jul 25 16:24:00 2005
Subject: [R-390] Depot Dawgs

> One of the design features (and a key government requirement) of the R- 390 series is the ability to interchange modules for repair purposes

Nice twist...I like it lots! Pete

From shoppa_r390a at trailing-edge.com Mon Jul 25 17:01:37 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

> About once a year, the only still-flying B-29 flies into this area

That B-29 has quite a history, and I'm sure many of our R-390(A)'s have quite a history, but get a load of this: The service life of existing B-52's is projected to last through nearly the year 2050.

Wow. I mean, mind-blowingly wow. The current flying B-52's are mostly from 1960-1962. Our grandkids and great-grandkids and maybe great-great grandkids will be flying these BFUF's. Tim.

From n4buq at aol.com Mon Jul 25 17:09:59 2005
Subject: [R-390] B52s (The airplane, not the rock band)

> That B-29 has quite a history, and I'm sure many of our R-390(A)'s

I hope they don't need any #8-36 x 1/4" spline-drive set screws to keep them running... Barry - N4BUQ

From hankarn at pacbell.net Mon Jul 25 17:11:50 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

Tim, They are truly BFUF's. Nice to see the wings start flying while the body is still rolling along on the ground. Hank KN6DI

From brumac at junos.com Mon Jul 25 17:12:50 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

Now Tim, what does BFUF'S stand for? Bruce

From crips01 at msn.com Mon Jul 25 17:21:01 2005

Subject: [R-390] Power cord question

WRONG!!!! Oxygen free copper is so...so....pass?. The beautiful people only have power plugs made of oxygen free gold wire, with platinum blades in the machined super hospital grade plugs. The power cord is tunable using an advanced Horawimble stewlooda magnetic field trap, which reduces the cosmic ray, and residual big bang noise by 178 db. Price on request. Ken de W7ITC

From flood at Krohne.com Mon Jul 25 17:24:33 2005

Subject: [R-390] R390(and "A") antenna question

Greetings all,

The Dawg thread is almost as dangerous as the no-code thread on the BA list. As I have fueled that fire enough already, I thought that I would ask something that has been on my mind for some time and only now, in an attempt to distract from the a.m. thread, will I ask it.

Is it bad to connect antennas to both the twinax and type C connections at the same time. One is a 300' long wire running along the top of my 6' wood fence in a three sided open-end, almost square loop. the other about 100' wire in an open ended loop in the attic (originally installed by my grandfather for the "new" Grebe Syncrophase he had in the dark days of storage batteries.) While thinking about it ,I realized there would be different issues based on the desired reception frequency and the mechanics of the "array", at that point my brain started to hurt. As far as the radio it self, have I violated one of the R390(and "A") ten commandments?

If I have asked this before, please remember that I'm now entering my mid 40's. Tease me about lost memory and tell me how it gets worse and we move on. John Flood

From BarryG at visi.net Mon Jul 25 17:30:49 2005

Subject: [R-390] Re: Depot Dawgs

wrote: >So if your feelings are hurt maybe you should consider lurking until you have all of the facts,

I promise you, my feelings are not hurt. There are some folks on the list who might not have been here since 2400 baud modems were all the rage and THEY need to know that the term you carelessly use IS a "term of endearment".

>And last but not least I am not a moron as you implied about some of us that use the term DEPOT DAWG. I believe in doing things correctly and up to specs With over 20,000 hours in my flight log flying J-2 Cubs through Boeing 747's had to do something correct.

See, that is a whole new rant in waiting. Unless you were the A&P tech and the Avionics tech you might not BE HERE to cast stones at.

>I feel you owe the list an apology.

I stand by my aspersions.

>Hank>KN6DI>little more than .02 worth. I promise, this will be MY last post on the subject.

So with your scotch and water in hand and "Deutschland? ber Alles" playing on the Gramophone in the background all the while listening to your beloved ROHDE AND SCHWARZ EK 07 take your last shot Hank. ;-) Barry/W3AFH

From mikea at mikea.ath.cx Mon Jul 25 18:11:36 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

wrote: > > About once a year, the only still-flying B-29 flies into this area

And, in a stunningly on-topic post that also deals with B-52s, I heard from a ham at Tinker AFB (B-52 refit and refurb facility) that someone there made a little boobo a some years back and fat-fingered the NSN of a tube he was ordering. Only one digit of the NSN. The first digit, he said. It got him an entire B-52G left wing, on a big flatbed semitrailer, and 2 2 cranes to lift it off.

All he wanted was a 6J6 or some such. See! I said it was on-topic.

(and then there was my friend who ordered 28 bolts for a C-130, and got asked where he wanted the boxcar, and the problem with the disk drive in the computer that monitored the stock levels at Tinker's refit facility and auto-ordered stuff when it got below the order point. I'll tell those lie^Wstories another time. Mike Andrews, W5EGO

From hankarn at pacbell.net Mon Jul 25 18:54:33 2005
Subject: [R-390] Re: Depot Dawgs

Well I am also a licensed A&P mechanic, Also held an IA Certificate for over 10 years, Avionics tech, Ex Tech Rep for Collins and Land-Air. And I restore DEPOT DAWGS with a lot of TLC involved. And I am going home and have my Scotch & Water and turn on my EK-07 and a couple of my DEPOT DAWGS. Hank KN6DI

From mjmurphy45 at comcast.net Mon Jul 25 19:06:39 2005
Subject: [R-390] Re: Who Says Its Junk???

Michael,

Police gear is sometimes also restricted due to the nature of its use. This item, for instance, is restricted and if reported would have to be pulled from E-Bay.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=7531278183&category=25399&ssPageName=WdVW&rd=1>

I know this because even though this is a relic of the early 1980's, it still is basically functional. (and yes my company made it). Mike Murphy WB2UID

From sparks at codepoets.com Mon Jul 25 19:16:38 2005

Subject: [R-390] CY-979A question

I recently located and obtained an early Collins R-390 (non-A) SN 7XX, first run 1951. It came with a Stromberg Carlson a division of General Dynamics CY-979A/URR. Government contract dated is 1958 on the nomenclature tag.

Question is: Did Collins also manufacture the CY-979A? How many others made these aluminum cabinets if others made them? Thanks in advance. 73 Tom K4NCG

From wli98122 at yahoo.com Mon Jul 25 19:31:05 2005
Subject: [R-390] Re: depot dawg

Well, this has been quite a discussion! One of my R-390A's is also an "old soldier" with that half moon rubbing above the KC knob. Although, like Corvette collectors, who look for all matching serial numbers, chances are that if you get such an animal in a R390(a) it never worked to begin with, or was never deployed and sat in a warehouse somewhere... In any case, all I ever wanted was a functional unit free of dirt, grime, and biological crud. I count myself lucky to have found three such examples, and they all operate identically. This is a great hobby. W. Li

From mikea at mikea.ath.cx Mon Jul 25 19:47:12 2005
Subject: [R-390] Re: depot dawg

wrote: > Well, this has been quite a discussion! One of my > R-390A's is also an "old soldier" with that half moon > rubbing above the KC knob

And this brings up something I've noticed in another of my passio^Whobbies: the good stuff gets used to death, while the trash survives.

In the field of historical musical instruments, the survivors from more than ~250-300 years back are in many cases presentation pieces made to look good, rather than good instruments. My last visit to the Victoria and Albert Museum's musical instrument collection reinforced this ipression: hardly any of the instruments in good condition was built for any purpose other than appearance; they're much more like mockups of real instruments than they are real instruments themselves. I mean, an ivory lute, a guitar with back and sides done in large-piece inlay, and so on.

In contrast, the obviously-built-to-be-played instruments are in really bad shape, even ratty shape, and I contend it's because they got loved -- and played -- to death.

Modern examples abound: Andr?s Segovia wore out at least three guitars, if I recall correctly, in his 60-year career of concertizing. I've worn out one myself, and the 37-year-old instrument I love and play is showing some signs of ill health and weakness -- not from abuse, but from normal use.

The old radios probably show the same sort of thing, although glass and metal have intrinsically-longer lifetimes than wood and varnish.

"Buy it new, Use it up, Make it do, Do without", as the old New-England adage goes. We're at stage three right now with many of these wonderful creatures. It'll be sad when we're in stage four. Mike Andrews, W5EGO

From westerman at cableone.net Mon Jul 25 19:57:42 2005
Subject: [R-390] NOS R-390A on the E-Place

He sent me close up pictures of front and back. Back panel has Serial NO. 6962 Front tag has Serial NO. 3336 If all original NOS, shouldn't both numbers match???? -- Craig

From hankarn at pacbell.net Mon Jul 25 20:22:57 2005
Subject: [R-390] NOS R-390A on the E-Place

Probably not. My understanding is the Military Tag was installed after the radio was an accepted item. For the purpose of inventory control for the Gov. contract. And down the line when it came back as a DEPOT DAWG the tag was removed so the panel could be refinished and then when it got accepted again the QC man reached into the box of tags and lo and behold the DAWG had a new number as it went out the door.

And that is a possible reason that the Helena Rubenstien tags were taken by the QC guys as a novelty for the girlfriend or the XYL's. Hank KN6DI Back to my S&W with my EK-07 HiHi.

From odyslim at comcast.net Mon Jul 25 20:43:52 2005
Subject: [R-390] Re: depot dawg

Has any body seen Willie Nelsons guitar? The same one he has been playing for decades. That is a site :-) Scott

From jmiller1706 at cfl.rr.com Mon Jul 25 21:28:45 2005
Subject: [R-390] NOS R-390A on the E-Place

Also, it's an EAC shown on the front tag and rear panel. DAA-B05-67-C0155. Serial numbers don't match, does that make it a depot dawg?

From redmenaced at yahoo.com Mon Jul 25 21:29:14 2005
Subject: [R-390] NOS R-390A on the E-Place

wrote: > If all original NOS, shouldn't both numbers > match????

++++++

No, probably not, but they'd be closer than that.

He didn't say it WAS NOS, he said it "appears" NOS. We gotta let him off on that one.

He doesn't seem to have a handle on E-pay search procedures though, Keywords in the text aren't searched by their engine, they mean nothing there. Joe

From Flowertime01 at wmconnect.com Mon Jul 25 22:11:38 2005
Subject: [R-390] Depot Dawgs

wrote, I think the point was that if someone is asking \$3500 for an R-390A then it ought to be in absolutely mint condition as if it came from the factory

Naw Todd,

If someone is asking \$3500.00 for an R390/A, it ain't the way it come from the factory, I think you are getting a paint job. Way to much paint for a receiver.

Really good receivers, less paint, with whole lots of hours of maintenance can be had for a lot less than \$3500.00. At this level old PT is looking for his one a minute. It ain't a crime but it is expensive entertainment.

And Barry's right, If it got out of depot it ain't no dawg.

Since when did R390's become something to look at? They are supposed to be glowing in the dark and knocking your ears off, not knocking your eyes out. Even new radios back in the 68-75 window were not good looking, My goodness Navy gray paint and other paint on stuff that would kill almost any known fungus. We were like supposed to touch that stuff every day. Roger KC6TRU

From ba.williams at charter.net Mon Jul 25 22:42:48 2005
Subject: [R-390] NOS R-390A on the E-Place

> Just saw this and looks like a real beauty. An original like-new condition > R-390A out of the original box. To me this is much more desirable than a > refurbished set that started life as a Depot Dawg. 73
Todd WD4NGG

Todd,

That is what I wrote the guy about. I remember it now. He was pretty nasty about it. Sounded like some hothead who probably gets his lights punched out on a regular basis from the way he acts. I had a few small radios like the ones he was hyping on his website, and they mostly cost around 20% of his prices. Mine all looked better too. (g) Barry

From ba.williams at charter.net Mon Jul 25 22:44:46 2005
Subject: [R-390] Re: Who Says Its Junk???

> Is this the same guy that sells R-390 manuals on CDs? I seem to recall several years ago some discussion that he might be wanting to sell the Y2K manual on CD, which was compiled by others on a non-commercial basis, as I understand it. Anybody remember this?

Folks, my previous message was meant to refer to THIS message, and not Todd's subsequent post. Sorry 'bout that. Barry

From Flowertime01 at wmconnect.com Mon Jul 25 22:47:37 2005
Subject: [R-390] R390(and "A") antenna question

John,

You can hang any antenna on your R390 any way you want. Do not fool with Mother Nature, however. If the antenna is not in use, observe good operating practice, unhook the antenna from the receiver and ground in a way that will keep your home insurance agent happy. Lighting strikes are for real.

Hooking up two antennas at once is not a real problem. The type C connection by passes the first stage of tuning. You get a wider band of signal plus noise applied from the antenna into the first RF stage. While we would expect the next stages to filter that excess out of the mix before it gets to the ear, strange things can happen. This will not hurt the receiver. you may or may not get poorer desired signal and more noise. If its not there to cause interference, of course it will not cause interference. But if some strong signal is lurking around your megahertz of choice, you could get more noise than you have to listen to.

Even when you consider the antenna impedance mismatch going into the balanced input with one wire and the other side grounded, you often get a better signal.

Signal loss through a simple knife switch is not so much you can tell the difference in your ear. A relay or simple switch between receiving antenna's works well.

Loading the signal in from the balanced input antenna with the antenna from the C connector is not a real problem. Receivers were used with this type of antenna setup at times. There is a load from the second antenna presented. If you can tell the difference in your ear with your selected signal may or may not be a healable problem.

John, do you have the Y2K manual? Do you know how to run a single ended antenna into you balanced antenna input? Roger KC6TRU over 56 and understand your memory problem.

From Flowertime01 at wmconnect.com Mon Jul 25 22:57:11 2005
Subject: [R-390] NOS R-390A on the E-Place

Craig,

The front and back number do not have to match. Most of the stuff I seen in the 68-75 years did not match.

How does any one know if its original always been together stuff? I lived with lots of them for years and who knows what the guy on the other shift was doing while I was sleeping. Who know where these receivers went through their life?

Claims like these are just so much PT looking for his quota of the day. Likely the receiver is as good as any of the rest. You looking to buy a story or a receiver? Roger KC6TRU

From eldim at att.net Mon Jul 25 23:40:31 2005
Subject: [R-390] NOS R-390A on the E-Place

Hello 390 Friends,

How are we sure that a 390 ever had to, or even went to a Depot? How much abuse did these receivers receive? In the fixed, in-place situations or duty assignments that I served in we were highly aware of taking care of our assigned equipment. That included pride in appearance as well as meeting all technical specs. In my last assignment we had our R-390A for nearly 7 years (73-80), and I don't recall

ever even having to do a Module change. In fact, I don't recall having to do anything other than replacing vacuum tubes. Of course we were an AIR FORCE Tactical Unit, and this mighty fine receiver was an authorized piece of test equipment that we used as a 'SELECTIVE VOLTMETER' for nulling out traps, searching for birdies, and listening to AFN and the ballgames. Of course our equipment consisted of mostly Airborne Transceivers configured for Tactical Ground Mobile use. We also had an FM VHF (30-79MHz) Transceiver for communication with our Army counterparts. Plus we had portable man-pack FM, HF, and UHF Transceivers for use if we needed to hoof it with the Army. Our Maintenance rear area had a Collins KWM-2A to maintain commo with our forward deployed units. We also had one in SAC (63-66) as part of our HF set-up (T-368 Transmitter) which in my 3-1/2 years don't recall any maintenance problems.

I wonder if there are any security service personnel (radio maintenance types) who would care to elaborate. They had racks of these receivers. I also can't imagine that every R-390 that went to a Depot for overhaul, required the front panel to be removed and redone. Sounds like a forest to me. Of course I can't speak for Depot Level maintenance, since I never had occasion to be assigned to one. I would think that they were mostly civilians, at least that is what the Air Force had at their depots. Back to work. You noticed I didn't say, "REWORK".73, Glen Galati, KA7BOJ

From westerman at cableone.net Tue Jul 26 03:21:26 2005
Subject: [R-390] WTB - MT-836/URR mounting base for R-392

Needing a MT-836/URR mounting base for R-392 <http://www.r390files.com/images/mt-836.gif>
Thanks -- Craig westerman@cableone.net

From g8jac at champ1.freemove.co.uk Tue Jul 26 06:31:46 2005
Subject: [R-390] WTB - MT-836/URR mounting base for R-392

I could also use one. Unfortunately, I'm in England so like gold dust here. Unless anyone knows different..... Andy G8JAC

From courir26 at yahoo.com Tue Jul 26 08:22:23 2005
Subject: [R-390] CY-979A Makers

Tom,

These are the notes I've kept on the CY-979. Some of these may have been subbed out to metal shops, not sure . . . Tag info: includes contract if known, and high s.n. seen if any. CY-979A Cabinets

Stromberg-Carlson, Division of General Dynamics, Rochester, New York
39692-PP-58 42

Stromberg-Carlson	?	822
Steelcase	? ?	
Teller Industries	? ?	
Laboy J Industries, Camden	SCDL135814C	2058
Crosley Div. of AVCO MFG. Corp.	21316-PH-56	12
Andrews Inc, Philadelphia	? ?	

Taffet Electronics, owned by W2ERJ, Milt Taffet ? ?
Barker and Williamson ? ?
Daystrom

From n9zsv at cei.net Tue Jul 26 10:42:42 2005
Subject: [R-390] WTB - MT-836/URR mounting base for R-392

wrote: >I could also use one. Unfortunately, I'm in England so like gold dust here.

I bought mine from a Jeep surplus place I think it was in Colorado. Sorry I have lost the address. It was still in the original wrap and is very heavy. You could probably find it with a Google search. It was cheap to buy but it will cost a lot to ship to England. 73 Gary

From chacuff at cableone.net Tue Jul 26 11:23:00 2005
Subject: [R-390] NOS R-390A on the E-Place

Anybody ever seen one of the EAC Rocketship radio's. One that was sold to the public directly from EAC in the late production years. I've never heard of one being seen, but I remember seeing the ads... It would be very interesting to see just what a radio that has never seen the Mil. Maintenance/Depot system looks like on the inside. Matching numbers? Built to the same Mil. Spec's? I would think it would be the standard for what one would expect a non-depot puppy to look like.

I have a couple R-390A's with all the same manufacturers modules inside...and a tag that matches but the numbers don't match...I'm not sure it's reasonable to expect they would.

I envision several assembly areas....one for each module type and would expect them to be numbered as they were built uniquely from each other. I would think final assembly of the radio would be from a stock of available, tested modules with a resulting mix of numbers.....but as has been mentioned I would expect them to be close....within a few hundred of each other.

The bottom line is...due to the excellent design of the radio it doesn't make any real difference....except that the 67 EAC with all EAC modules is the youngest of the pack. I have one of those that is close.....the audio deck is Collins if I remember correctly. It's a true DOG. It was in the pile at SJC and it did not stand up to the elements as well as the earlier radio's. The plating on the chassis and modules is thin and didn't protect the radio. What a shame!

Works pretty good but will never be pretty again! Good platform for mods testing I guess.

From chg111 at hotmail.com Tue Jul 26 11:43:31 2005
Subject: [R-390] NOS R-390A on the E-Place

Anybody ever seen one of the EAC Rocketship radio's. One that was sold to the public directly from EAC in the late production years.

I have a '55 Collins that I sent to Rick Mish & he said that it was all Collins...they used a very recognisable typeface on their stuff. He thought it might have come out of Wright-Pat because I got it from Fair-I swiped it from Phil Sellati- & They'd picked it up at the Dayton hamfest. Man, if these rigs

could talk....-Sandy G.

From courir26 at yahoo.com Tue Jul 26 11:55:48 2005
Subject: [R-390] Rocket Ship Radio Pics

I had one of these, well actually it did not have a rocket ship tag, but a special brass tag as it was presented to the EAC chairman (Robert Edwards) and that is who I bought it from.

It was labelled "THE MILLION DOLLAR RADIO" as that is what it cost to make the first one. The s.n.s were all cats and dogs, like a 29 mixed in with a 15,000 or some such thing. No matches.

Here are some pics.

<http://www.geocities.com/courir26/edtop.jpg>
<http://www.geocities.com/courir26/edfront.jpg>
<http://www.geocities.com/courir26/edbot.jpg>
<http://www.geocities.com/courir26/edback.jpg>
<http://www.geocities.com/courir26/Ed390A.jpg>

It had one shorted cap and the PTO was a bit off endpoint, otherwise it was cherry. I don't think he ever used it. One of our members on the list has it now. Tom

From shoppa_r390a at trailing-edge.com Tue Jul 26 06:20:21 2005
Subject: [R-390] NOS R-390A on the E-Place

> How are we sure that a 390 ever had to, or even went to a Depot?

A metal decal applied to the back, saying "OVERHAULED TOBYHANNA ARMY DEPOT DATE 2322"? What does 2322 translate to, anyway? Tim.

From Lester.Veenstra at intelsatgeneral.com Tue Jul 26 12:53:17 2005
Subject: [R-390] EAC Quality

When I was on active duty and the getting the last run of receivers from EAC, we all agreed that these new receivers were trouble. As I recall they had a higher failure rate, burning resistors and bad small electrolytic caps, that the previous production run receivers. Les K1YCM/3 (x CTM1)

...due to the excellent design of the radio it doesn't make any real difference....except that the 67 EAC with all EAC modules is the youngest of the pack. I have one of those that is close.....the audio deck is Collins if I remember correctly. It's a true DOG. It was in the pile at SJC and it did not stand up to the elements as well as the earlier radio's. The plating on the chassis and modules is thin and didn't protect the radio. What a shame!

Works pretty good but will never be pretty again! Good platform for mods testing I guess. Cecil...

From beerbarrel at cox.net Wed Jul 27 04:04:58 2005
Subject: [R-390] NOS R-390A on the E-Place

A metal decal applied to the back, saying "OVERHAULED TOBYHANNA ARMY DEPOT DATE 2322"? What does 2322 translate to, anyway?

Fiscal date? 322 day maybe 52, 62, 72

From tshoppa at wmata.com Tue Jul 26 13:13:55 2005
Subject: [R-390] NOS R-390A on the E-Place

2322 translate to, anyway? > Fiscal date? 322 day maybe 52, 62, 72

It's a R-390A, so can't be 52.

72 seems most likely. I don't think 82 is impossible. Even though all the modules are from the mid-60's onward, I think the mainframe may be older (it seems to have been retrofitted with B+ fuses), so maybe even 62.

As long as we're talking about dates and decals, I've got in my other radio a PTO with a Raytheon (Los Angeles, CA) decal. I believe they did not manufacture but did refurb the PTO. I've seen rigs at hamfests with Raytheon labeled PTO's too, so they probably did a lot of refurbs. What years did Raytheon do this? Tim.

From Llgpt at aol.com Tue Jul 26 13:16:21 2005
Subject: [R-390] NOS R-390A on the E-Place

writes: I've got in my other radio a PTO with a Raytheon (Los Angeles, CA) decal. I believe they did not manufacture but did refurb the PTO

The dates are usually on the Raytheon decal, at least the ones I've seen. The contract number too. Les Locklear

From beerbarrel at cox.net Wed Jul 27 04:22:38 2005
Subject: [R-390] NOS R-390A on the E-Place

I don't really keep up with the years of the different radios. I think 322 day is around Nov 18th. Maybe Nov 18th, 1972?

From courir26 at yahoo.com Tue Jul 26 14:17:18 2005
Subject: [R-390] Rocket Ship Radio Pics Website

The website is not broken, it is just that too many of you are hitting it for the free bandwidth provided by Yahoo. Wait awhile and try again. Tom

From muttman at charter.net Tue Jul 26 14:45:48 2005
Subject: [R-390] WTB - MT-836/URR mounting base for R-392

wrote: Needing a MT-836/URR mounting base for R-392

Craig,

After spending years trying to locate the MT-836 mount I decided to buy a complete GRC 19 mount (MT-851) then cut off the R-392 portion. Surplus City in Chico, CA was selling NIB GRC-19 mounts for \$35 at that time. I suggested this solution to several other R-392 owners and suddenly the price went to \$95.

The 851's show up on ePay from time to time. This one was listed twice and still didn't sell, probably due to the \$49 shipping price.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5598639426&category=1467&rd=1> The process is not quite as easy as just cutting the mount as you will have to relocate the left mounting bar. If anyone is interested I'll dig my mount out and take pics. Buzz

From n4buq at aol.com Tue Jul 26 14:50:14 2005
Subject: [R-390] OT: R-388 questions

List,

I'm pretty sure a lot of you guys have R-388's. I'm thinking of buying one and was wondering what to ask about. I understand the PTO endpoints are an issue. From what I've read, it takes surgery to fix this in an R-388 PTO. Any other known failure points I should be concerned about? Thanks! Barry - N4BUQ

From Llgpt at aol.com Tue Jul 26 15:16:48 2005
Subject: [R-390] OT: R-388 questions

writes: I understand the PTO endpoints are an issue.

There are only two kinds of R-388 pto's, good ones and bad ones. Check before buying if possible. If it is out over 8 khz, it is probably a bad one. No day to tell by serial numbers either. Les Locklear

From n2bc at stny.rr.com Tue Jul 26 15:46:06 2005
Subject: [R-390] R390A AGC troubles

Maybe my earlier posts were lost in the fan / audiophile / Depot Dawg discussions.

Observations:

- 1) Low AGC voltage (zero signal = -0.5V)
- 2) Suppressor grid bus (V504 & V508) is +3.4V, should be -2.5V)
- 3) Z503 will not peak before it's slug "tops out" in the core

I have isolated the decks, measured everything that is measurable, replaced caps. I have isolated individual IF stages and swapped tubes. All without making progress.

The more I poke, measure and isolate, the more I am convinced that the problem is in the AGC Amp stage(s) rather than out on the AGC bus.

All resistance measurements along the AGC bus are OK, voltage measurements when fed with a

separate source (9V battery) are OK.

Along the way I managed to destroy Z503 so I pulled one out of a 'cadaver' IF strip. I noted that it's slug is fairly well centered in the core. Upon replacing Z503, the 'new' one behaved the same way.... increasing stage output as the slug was cranked toward the top but it runs out of adjustment before peaking.

I fed the AGC Amp stage directly with my siggen at 450kc and Z503 will peak with the slug slightly further down in the core.

I have snuggled all the ground points in the entire IF chassis & replaced everything in the V508 stage except the tube socket.

I think I'll disassemble the gear train, polish the parts and reassemble blindfolded, that will be less frustrating! Ideas greatly appreciated 73, Bill N2BC

PS: I have no fan installed, use a plain highly oxygenated line cord, and the receiver's mixed Stewart Warner / Collins / EAC heritage is usually just a lovable as my Lab/?/Shepard best friend.

From jmiller1706 at cfl.rr.com Tue Jul 26 15:53:40 2005

Subject: [R-390] R390A AGC troubles

My old S&W had AGC problems which seemed to be centered around Z503. I remember having to work with it to eliminate a short to ground between one of its pins and the chassis. Seemed the chassis cut out for the transformer needed enlarging a bit. Another oddity that happened in the same radio was a breakdown in the center insulation of the small shielded cable carrying the diode load signal...would cause popping and loss of AGC..this doesn;t seem to be your case however.

From Llgpt at aol.com Tue Jul 26 15:54:58 2005

Subject: [R-390] R390A AGC troubles

writes: Along the way I managed to destroy Z503 so I pulled one out of a 'cadaver' IF strip replacing Z503, the 'new' one behaved the same way....

It is quite possible the "cadaver" Z-503 is a bad one too. They are a known troublesome part. If possible try a known good if deck. Maybe you have a friend close by. Les Locklear

From eldim at att.net Tue Jul 26 16:41:41 2005

Subject: [R-390] Rocket Ship Radio Pics

Hello Tom,

Tried to view the pic's but it says that the YAHOO Site is not available. Is this a tempory glitch? 73, Glen eldim@att.net

From anchor at ec.rr.com Tue Jul 26 16:50:58 2005

Subject: [R-390] OT: R-388 questions

Hi Barry,

Don't apologize for R-388's being off topic, with all the other crap that goes on here ;-) Yes, the PTO's almost always need help, but it's not a difficult or life threatening surgery, there's info on it on my webpages, ref. below. I really like working on R-388's. Let me quote from a msg I just sent abt 30 min. ago to almost the same question:

The R-388's are very nice rcvrs, tho' not as easy to cruise with as an SP-600, but at least you do know just where you are.

I've "done" 2 of them in the last 6 mo.s or so, one of mine and one for a friend. **The only capacitors that I've found to be worrisome are the HV filters (plug-in), some of the bathtubs, and a mica, C-204, the coupling cap from V-110 to the AGC ckt.** 2 other guys have had problems with it also, so take a look. It may be the sensitivity problem. **I've been into several Collins PTO's, usually they've had "vitamin Q's" (or is it D?) as bypasses, and didn't really need replacement, but I did anyway. The span fix isn't hard, and the feedback cap should be replaced.** (Your 500kc xtal in the phasing can is probably bad, mine was, and I'm still looking for a replacement, as I borrowed one from another rcvr.) - that was in response to a particular question, it's not always bad.

**You can take a look at the ones I've done, start at:
<http://www.thecompendium.net/radio/R388sn58.htm>**

I sold this rcvr a week ago to a collector who really only wanted the cabinet, and the rcvr then showed up on ebay. 73, A1, W8UT New Bern, NC

From beerbarrel at cox.net Wed Jul 27 08:24:25 2005
Subject: [R-390] NOS R-390A on the E-Place

> Sorry I meant Julian date...not fiscal date....duh me!

Fiscal date? 322 day maybe 52, 62, 72

From: r-390-bounces@mailman.qth.net
To: westerman@cableone.net; hankarn@pacbell.net; eldim@att.net

How are we sure that a 390 ever had to, or even went to a Depot?

From beerbarrel at cox.net Wed Jul 27 08:25:20 2005
Subject: [R-390] elmers!

Is there any willing r-390 elmers in the middle ga area?

From beerbarrel at cox.net Wed Jul 27 09:09:38 2005
Subject: [R-390] elmers!

<<I don't remember any, but there are some in Alabama. Any thing I can do from NYS? Joe

I appreciate the offer Joe, but I think that I need some sit down time. I'm light years behind you guys.
Tracy

From k3pid at sbcglobal.net Tue Jul 26 20:34:37 2005
Subject: [R-390] elmers!

I think you miss the point of this reflector! Among the members of this very august group lies the sum total of all R-390x information.... seriously... I doubt that you can come up with a question that won't get the full attention and respect of the group et al and if no one member has the answer, the group can come up with it by consensus! Sometimes you need to push a little to get it started.. Hi Hi

Open up your tool box and get started! Mentor? You don't need no stinking Mentor, you got us! K3PID
Ron H.

From beerbarrel at cox.net Wed Jul 27 11:48:59 2005
Subject: [R-390] elmers!

<I think you miss the point of this reflector! Among the members of this very august group lies the sum total of all R-390x information.... seriously...

Haha...that's great. When you going to get here?

From twc9198764412 at earthlink.net Tue Jul 26 22:00:04 2005
Subject: [R-390] depot dawg - demeaning !?!?! Humph!

<lurk off> How appropriate for this thread- that wonderful B-29 FIFI is a depot dawg: "(Many parts and spares also came from the other B-29s at China Lake)."

When the B-29 came to Raleigh-Durham airport a few years back I went to see it and stood in line a while to walk thru it. Lo and behold there sat a BC-348, my original boat anchor from my teen years. I just barely resisted playing with the knobs. Blew off work Monday morning to go watch it fire up and take off. Wonderful sounds; four big clouds of smoke as each engine fired.

So now I have a couple of BC-348s , keeping my R390 and R392 company- nice balanced look. (Back on topic- whew...) 73, Bruce WA4ZLK

From ghayward at uoguelph.ca Wed Jul 27 10:05:33 2005
Subject: [R-390] Re: Z503

Mine had a similar problem and unfortunately I killed the coil when I tried to fix it. The winding is potted in goo (not ukumpucky) and the ferrite is on the outside of the coil too. When I tried to get the coil apart with heat I really did it in. So, I took a honking big coil from my junk box and a small cap and rebuilt it. It peaks and the set performs at spec now. The trick was to use a big coil to get a high enough Q which determines the impedance of the parallel resonator and hence the stage gain at resonance. (big L, small C = big Q) Gordon

From ghayward at uoguelph.ca Wed Jul 27 14:30:34 2005
Subject: [R-390] Re: Z503

Hi Tom,

It should resonate at 455 kHz. The coil I used looked like one of the old loopstick variable coils for crystal radios. I think the capacitor was somewhere near 30 pF. I stuck it together and peaked it with a scope and signal generator to be sure it would work before I started the surgery on the 390A. I removed the can top, pulled out the old coil and cap, put in the new coil and cap and replaced the can top. The result looks like it was meant to be there. Then I reaped it in the radio as in the standard alignment instructions.

Remember, the Q is quite important. I did try a smaller coil that also peaked, but the Q was too low so I didn't get enough AGC action.

Gordon From n4buq at aol.com Wed Jul 27 14:50:46 2005
Subject: [R-390] R390[A?] in the movies?

Watched the movie "Airplane" (a comedy spoof of the "Airport" movies of the '70s) last evening. I noticed there is an R390/R390A in one of the control rooms. Anyone ever notice this? Is it an "A"? I couldn't tell from the glimpse. Barry - N4BUQ

From r390a at bellsouth.net Wed Jul 27 16:38:47 2005
Subject: [R-390] NOS R-390A on the E-Place

While we've fussing back and forth about the fellow calling the radio "NOS" has anyone noticed he appended his description on Monday to note that it is not so? He's also willing to make closeup photos of the rear panel and of the front tag. (think that was already mentioned)

I've got a '67, and while it is clean and all, it's not nearly as nice as this one. FWIW all my modules match.**

I agree with the crowd, I'd much rather have a nice little used radio than an older refurbished dawg, even though the dawg may have been gone over more thoroughly. Tom NU4G

**as did the Collins I sold, as do the 63 Imperial in the rack and the Amelco on the bench. Front and back match as well. Odd, I tell you.

From twc9198764412 at earthlink.net Wed Jul 27 18:03:27 2005
Subject: [R-390] R390[A?] in the movies?

Barry,

I've been meaning to ask the same thing. Got the DVD for my movie classics collection last year and went nuts trying to "freeze frame" the scenes with the cool radios. Managed to grab a few frames a few months back but never got around to any further research. I think the added info on the DVD indicated it was filmed partly at LAX, but I don't know how that collection of radios came to be. Anyway I just

found a bmp to jpg converter so I could try to post the frames I grabbed. Try this:
<http://home.earthlink.net/~twc9198764412/>

I hereby acknowledge the true genius of Jim Abrahams, David Zucker and Jerry Zucker and beg their indulgence.

P.S. sorry I don't know beans about building a web page. Used a template provided by my isp. Click on "a few grabbed frames". Bruce WA4ZLK

From sacramento.cyclist at gmail.com Wed Jul 27 18:11:42 2005
Subject: [R-390] R390A AGC troubles

I'm at work, but I don't recall that -0.5V zero signal on the AGC bus was a problem. When I finally got mine fixed (different problem though, see previous posts) the small + zero signal voltage I had been seeing became -0.4V.

What are the grids of V501, 502 and 503 doing? What do you "hear" in terms of symptoms..how does the radio sound under various signal conditions? Dennis

From n4buq at aol.com Wed Jul 27 18:14:16 2005
Subject: [R-390] R390[A?] in the movies?

Is that a 32V-* in there with the R390*? Barry - N4BUQ

From n2bc at stny.rr.com Wed Jul 27 18:31:33 2005
Subject: [R-390] R390A AGC troubles

Hi Dennis, it was my understanding that zero input signal state is around -7V.

The other measurement that is 'wrong' is the suppressor grid voltage on V504 & V508), it is +3.4V, should be -2.5V.

The voltage on the grids of the IF strip is consistent with the -0.5V. Externally, it sounds like minor overloading on strong signals. THX, Bill

From jmiller1706 at cfl.rr.com Wed Jul 27 21:13:55 2005
Subject: [R-390] R390A AGC troubles

Another thought: The antenna trimmer control shaft and gears are at AGC potential in the RF stage. The phenolic gears and washers insulate the shaft from ground. If someone over-lubricated the antenna trim gears, the lubrication oil could be forming a path to ground and shunting the AGC in the RF stage, which could create overload or poor AGC action. The shaft and gears need to be purged with a chemical cleaner like Big Bath to rid them of any oil.

From bipi at comcast.net Wed Jul 27 22:58:14 2005
Subject: [R-390] R390[A?] in the movies?

Great job! 73 de Mike K7PI

From varsdale at verizon.net Thu Jul 28 00:06:32 2005
Subject: [R-390] R390[A?] in the movies?

Yep... that is a Collins 32V-* transmitter in a rack above a Collins 75A-* receiver. To the left of that are 2 RME Receivers, 4350's (?), stacked together. Walt K5SXO

From beerbarrel at cox.net Wed Jul 27 21:44:03 2005
Subject: [R-390] Proper list etiquette

I'm looking for a radio and the fair radio sales (r-390) look like the best deal going right now. I was wondering if it is OK with the list owner to ask if anyone on the list is interested in swapping a radio. Before I post, I want to make sure that it is OK. Tracy

From chacuff at cableone.net Thu Jul 28 09:08:18 2005
Subject: [R-390] Proper list etiquette

It's been done in the past best I remember.... Fire away unless Don flags it otherwise.... Cecil..

From beerbarrel at cox.net Fri Jul 29 00:45:01 2005
Subject: [R-390] Want to swap...

Thanks for all the responses guys.

Here is what I would like to swap. I have a TV2 C/U tube tester that has been damaged. It was sitting on a pallet that was pushed into another pallet by a forklift. The tester itself is in very good condition other than the case. The case suffered some dents. If you can do a little body work, the case can be repaired. That was my intention. I will post some pics of it on my web site if anyone wishes to see it.

Here is my other offer...I have a TV7 B/U that is in very good shape. It may need calibration but that should be it. I can post pics of it too. I'm not looking for a perfect rig but I would like one that is complete. I want to get a restorable rig. I'm open to any offers. Thanks, Tracy

From KA4PRF at peoplepc.com Thu Jul 28 09:29:18 2005
Subject: [R-390] Want to swap...

Tracy,

I thought you might want to trade a Watkins Johnson 1000 for an R390A? If you're going with a tube tester only, not interested? Chuck

From rbethman at comcast.net Thu Jul 28 13:19:18 2005
Subject: [R-390] R390[A?] in the movies?

IMHO, it appears to be an "A". I "see" an ANT trim in one of the frames. BUT, as I said, "IMHO". So take it for what it is worth! Bob - N0DGN

From sacramento.cyclist at gmail.com Thu Jul 28 15:46:05 2005
Subject: [R-390] R390A AGC troubles

wrote: > it was my understanding that zero input signal state is around -7V.

Once again I'm at work without a diagram, but if memory serves me correctly, the -7 is at the Diode load terminals? The zero signal level might be different at the AGC jumper on the rear. On my Motorola, the jumper matches the IF amp grids.

> The other measurement that is 'wrong' is the suppressor grid voltage on V504 & V508), it is +3.4V, should be -2.5V.

That DOES sound weird. Have to look at the diagram. My shop has been running about 115 deg, so I've been out for a few days. I'll check mine when I can since I still have mine out on the bench.

Dennis

> The voltage on the grids of the IF strip is consistent with the -0.5V. >> Externally, it sounds like minor overloading on strong signals. >> THX, Bill > -- KG6ZI

From beerbarrel at cox.net Fri Jul 29 09:30:14 2005
Subject: [R-390] Cables...

Michael, Cables came to day and they look great... Thanks again Tracy

From ezeran at ezeran.cnc.net Fri Jul 29 00:03:52 2005
Subject: [R-390] Depot Dawgs

I worked in a Depot for 5 years, Naval Air Rework Facility (NAS Norfolk).

EVERY ITEM WE OVERHAULED HAD TO PASS THE FACTORY SPEC. PERIOD.

Zero defects were the stated goal at my facility, EVERY piece of gear I personally overhauled had a document with MY artisan stamp (number unique to the tech) on it. Plus, there was a SEPARATE Quality Assurance Dept. that sampled 50 to 100 percent of the output of equipment from the shop.

God forbid you got a QDR (Quality Deficiency Report) back from the customer on a piece of gear you certified as spec. Same process at Long Beach and North Island. EdZ

From w5or at comcast.net Fri Jul 29 00:54:28 2005
Subject: [R-390] Contact Info Query

Does anyone know the email address for the author of the July 05 Electric Radio article, Mechanically Fine Tune Your R-390A? His name is Ben Robson in Quebec.

From rocket_no9 at yahoo.com Fri Jul 29 01:49:34 2005
Subject: [R-390] Out from the shadows ...

How do you do fellas',

Mike from Mass here... Recently had the good fortune to find a squeaky clean R-390A of my own. It has an Imperial tag (ser. no. 440) yet everything else on the rig is labeled EAC. (I don't really know where to look for serial nos. on modules) As I mentioned radio is very clean; Engraved front panel is beautiful as is gear train. All WPM shields and covers present.

After careful visual inspection of radio combined w/ impression radio was taken care of, I double checked fuses and decided to fire it up. I was relieved when I heard the sounds of the airwaves bursting forth into my room. One of the first things I noticed was a fairly obvious hum and vibration from the power transformer (? largest transformer underneath) I pulled both rectifier tubes and radios output tubes but this problem persisted. Before I shut it down I took it up and down the bands; radio seemed sensitive everywhere. All functions seemed to be working too. After shutting rig down I pulled both electrolytics ... they both have seepage.

I've since received the Field and Depot Maintenance Manual which is fascinating but mostly over my head. I've browsed the Y2K manual (but haven't downloaded yet), read every post to the 390 net in the archives (probably twice:), and spent many many hours checking out what's available on the net. I've also been comparing what I've been learning, with the rig itself on the bench... it's been a blast and is really starting to make sense.

Since I'm mostly sure there's nothing tremendously wrong w/ radio my plan of action is to do the absolute minimum to the rig that'll get it up and running and safely. This includes (here's where I'd really appreciate opinions) visual inspection underneath modules, replacing electrolytics, and replacing two nasties in IF module. I'll also be putting a three prong power cord on radio and lubricating gear train.

If it isn't obvious enough to y'all I'm very new to this stuff, the only similar project I've tackled has been to completely recap an HRO-60 (mission very much accomplished... I love that National) The only test gear I own is a multimeter. I'd love some advice re- hum from transformer. If after I finish my small list of "do's" and hum is still present what's next?

Oh yeah ... I'm awaiting a recap kit and bristol wrench kit ...

Please pardon such a long post. I wanted to say hello and let everyone know where I was at and that another of these fine radios had found it's way into some caring hands. Best regards, Mike

From ai2q at adelphia.net Fri Jul 29 03:06:04 2005
Subject: [R-390] More about the SSB prod detector

<The polarity is wrong on the cap at the emitter connection on the pnp. A bypass cap (0.1 mfd) on the source resistor of the 2n3819 was omitted in your schematic. I've been in communication with Ed Newman and got a tip on reducing the 1000 ohm in the source circuit of the 2n3819 to get more agc voltage out if needed.>

Hello again Dan:

Finally got some time (it's 2 AM and I couldn't sleep) to look over my product detector circuit, and you're (almost) 100-percent correct about the circuit details. Gosh, I'm embarrassed, and a bit nonplussed, when I think about the possible souls out there who may have flushed the circuit down the proverbial tubes when the AGC amp didn't work due to my drawing errors! Did that back in the year 2000.

In any case, I have already corrected my schematic print, and hope to scan it soon and update the Web posting. I also plan on crediting you with sharp eyes and much patience, if that's okay with you.

My actual circuit certainly does have a gain-boosting source bypass cap across the 1-kohm source resistor in the FET pre-amp stage. However, as I indicated in my previous note, the rule of thumb I follow is that the reactance of the capacitor should be about a tenth of the source resistor's value (or cathode resistor in the case of a tube, or the emitter resistor in the case of a common-emitter amplifier using a bipolar transistor).

The actual cap in my circuit is a 0.01-uF Mylar type. Using the formula for reactance $X_c = 1/2 * \pi * f * C$ yields a reactance of 34.9-ohms. While that's not exactly 1/10th, it's close enough for government work, using standard parts from the junkbox. Using a 0.1-uF cap, as you note, would drop the reactance at 456-kHz to 3.49-ohms, which seems far too low. The approximate 35-ohm value is close. A 0.001 would provide 349-ohms (likely too high).

As for the polarity error on the follower stage, I can only wonder why I didn't spot that as I drew and scanned the diagram. That PNP stage could have just as easily been implemented with an NPN device, and then I probably wouldn't have made that error.

My cap is indeed inserted with the plus end at the highest point of potential, which (obviously, now) is the Vcc line. Its purpose is to ensure that the emitter is close to ground impedance (low). It probably ideally should be connected from the emitter of the PNP follower stage to ground, and then the polarity would be okay as shown, if it were drawn that way. But that's not the way I hooked it up. In any case, you want the PNP stage's emitter to have no 456-kHz energy there, thus the bypass's function. You can poke your scope probe there to verify that.

Please feel free to punt this e-mail over to Ed if you wish to. My sincere apology for your inconvenience! Regards, AI2Q, Alex .-.-.

From: AI2Q [mailto:ai2q@adelphia.net]
Subject: Re: SSB prod det. Hartley

Hi Dan:

Gosh, I haven't looked at that circuit in such a long time! The cap's polarity as shown is correct, if I recall.

You might also want to try raising the FET's drain resistance in order to see more signal swing. Do you have a scope? If so, have you measured the level of the IF signal coming in from the R-390A? Is it being amplified by the FET? These devices are quite susceptible to failure, especially from ESD during handling. Is the FET stage working? Checking that would be my first point of test Dan. == Alex

From: AI2Q [mailto:ai2q@adelphia.net] Sent: Wednesday, June 29, 2005 5:48 AM
Subject: Re: [R-390] re cost reduction ect ect

Go with your textbook circuit Dan. It sounds like a Hartley, based on your choice of a tapped coil. In that case, I think you're right; tap the output at the drain load resistor. It should work just fine.

Hint: build your circuits on small modules so that you can re-vamp them as needed. If you build everything on one board, and the oscillator, for example, doesn't work as expected, you don't have to worry about sacrificing all the other stuff on that board when you scrap your first oscillator design. Take a look at my KISS SSB rig to get an idea about what I'm talking about. QSL? Vy 73, AI2Q, Alex
.-.-.

From: AI2Q [mailto:ai2q@adelphia.net] Sent: Tuesday, June 28, 2005 7:36 PM
Subject: Re: [R-390] re cost reduction ect ect

Hi Dan:

The FET source-follower will deliver a low-Z (perhaps 1-kohm) output to feed the mixer chip, at a gain of less than unity. If you use the FET reconfigured as an amplifier you'll pick the output off the drain, but why would you want a higher level? The 1496 wants a low level (check the datasheet).

From Lester.Veenstra at intelsatgeneral.com Fri Jul 29 08:18:22 2005
Subject: [R-390] Tools for maintenance

Lester Veenstra

I am about to on pass an R-390A to a new user who will need to do some mechanical and alignment work on it.

I have the issue tools, which I will retain, so need to give a list of commercial tool sources for the untypical tools required. I am thinking in particular of the long handled Bristols needed to remove knobs and to get to clamps inside. Anyone with suggestions? Les K1YCM/3

From odyslim at comcast.net Fri Jul 29 09:02:11 2005
Subject: [R-390] Out from the shadows ...

The first thing I would do would be to return that re-cap kit. There are only 2 or 3 caps in that radio that will ever need to be changed. If anybody tells you otherwise, he is a fool.

If you don't feel like rebuilding the electrolytics, you can send your old ones to DH distributors and he will rebuild them for you for \$28.00 each. They will have a different can but will work perfectly. 1-888-604-0050. He also sells an FP type that is a really good fit for \$14.50 .Very minor soldering necessary for the FP

Before you run the radio one moment longer, pull the audio deck and replace c609. That is an absolute must. Don't use an orange drop. they don't fit well. You can go to radioshack and buy a 10uf radial electrolytic that will work just fine. If you want to be picky, call Mouser and order P/n 75-te1303.3, an 8uf 50 volt aluminum electrolytic. The previous owner may have already replaced c609. If it is bell shaped and possibly corroded, it is the original.

There are mixed feelings about the re-cap issue. Others will tell you something different. Notice paragraph one of this note.

I would go for the out of spec resistors if anything.

My flame suit and is on and delete button lubed up :-)) Scott W3CV

From tshoppa at wmata.com Fri Jul 29 09:18:36 2005
Subject: [R-390] Tools for maintenance

> I am thinking in particular of the long handled Bristols needed to remove knobs and to get to clamps inside.

McMaster-Carr part numbers:
55705A48 Screwdriver-handle 0.096 x 6 Bristol driver
7048A31 Long-arm 0.096 x 6 Bristol spline L-wrench
7048A18 Short-arm 0.096 x 6 Bristol spline L-wrench

The screwdriver handle driver is the most useful but the L-wrenches come in handy in certain circumstances.

There are some smaller spline socket screws for calibrating the PTO but those aren't so immediately necessary.

Also, don't forget some long phillips screwdrivers (#2 and #1), split-ring pliers... Tim.

From odyslim at comcast.net Fri Jul 29 09:20:40 2005
Subject: [R-390] Out from the shadows ...

oops, I meant axial in paragraph 3

From JMILLER1706 at cfl.rr.com Fri Jul 29 09:20:36 2005
Subject: [R-390] Out from the shadows ...

Absolute MUST: Replace the Filter Killer Cap. IF deck, C-553, originally .01 ufd at 300 vdc, blocks DC to the mechanical filters. It is a known weak component. If it fails, it will destroy one or more of your IF filters. Replace with a modern .01 600V orange drop. See <http://www.militaryradio.com/R390AMaintenanceTasks.pdf> and others.

From chacuff at cableone.net Fri Jul 29 09:33:56 2005
Subject: [R-390] Out from the shadows ...

Well Scott you can believe what you like but the majority of experience has been somewhat different and is well documented. If your statement was aimed at the R-390/URR you would be correct....but that's not the case with the "A".

To say there are only two or three caps that will ever need replacing is completely misleading...especially to a new and inexperienced list member.

While I don't advocate a wholesale replacement of the caps it is likely that many of the molded paper caps, be them brown or black, are electrically leaky at minimum and possibly split at the seams. While they won't kill things in the role of bypass cap and in most locations as coupling caps the few you mention will damage the mechanical filters. The others will affect the overall performance of the radio and place unnecessary load on the power supply. The trick is figuring out which ones are bad and which are not. Since it's just as easy to replace them as it is to lift one end and test them many choose to just replace them. Many also may not have the equipment to properly check the caps at their rated voltage so again changing them gets the job done.

I know I am preaching to the choir here because you have heard all this before and I'm not going to change your mind but Mike needs to understand the issues and make his own mind up as to the direction he feels comfortable with...I have no real issue with either camp....they are your radio's.

Mike the hum from the power supply is probably loose iron in transformer. The only fix may be to replace the power supply. I've read of this happening before but have never experienced it. I do agree with Scott that you need to have the filters rebuilt. You can go with his recommendations or if you would like them to look original you can send them to Chuck Rippel and he will rebuild the original cans. www.r390a.com

Or if you feel up to it you can rebuild them yourself. There is info on Chucks page and in the archives on how to do the work yourself. I am about half way through documenting that process myself and had to put it on the back burner to restore an R-390/URR. I hope to get back to that radio in the next few weeks. It's not really that hard...a little messy though!

Welcome to the group and have fun..... Cecil Acuff.....

From tshoppa at wmata.com Fri Jul 29 09:46:34 2005
Subject: [R-390] Out from the shadows ...

> Before you run the radio one moment longer, pull the audio deck and replace c609. That is an absolute must.

[C609 = the 8uF tantalum cap in the audio deck that leaks]

What's the big deal making this an absolute must? It's probably been leaking acid for a decade or two now. Electrically they work fine even when leaking. I agree it's a good thing to replace it but a little more acid dripping on the PCB won't cause any immediate damage. Worst case long term damage is cosmetic damage to the PCB... have you seen worse?

I can think of a half-dozen other bypass/coupling caps that can actually cause electrical problems (including seriously messing up bias on tubes resulting in damaged tubes, burnt up resistors, etc.) with moderate to large electrical leakage. Tim.

From redmenaced at yahoo.com Fri Jul 29 19:25:59 2005
Subject: [R-390] Out from the shadows ...

Nice catch!

I see you've been very busy with it.

First thing is to fix the filter caps, temporary is good, rip the bottoms from two OLD, no good, octal based tubes or get the bases from two "ice cube" relays. Clean them out and solder in some new electrolytic caps of the proper value, this will get the radio back up and running until you figure out what you want to do with the old filter caps. This might solve the humming problem, too. If not we'll do something different.

Next, replace the capacitor that protects the mechanical filters from B+, I think its C553 in the schematics. Use an Orange Drop or similar.

While you're waiting for more information do the resistance and voltage checks in the manual, this will give you a baseline reference for THIS particular radio when you need to do troubleshooting in the future,... or, you may find something amiss now.

Any cleaning or visual inspection you do now will get you more familiar with the radio, and lead to even MORE questions. Be careful with the pins on the plugs, they are soft brass and bend/break easily. Tighten all ground connections while you're in there, even the tube socket bolts, trust me, they're loose, look for corrosion.

Look into getting a VTVM and a URM-25D signal generator as shown in the manual. Oh, sure, there are better ones but the URM-25D is cheap and its the one used in the manual,... besides, its just as interesting as the radio!

From dsmaples at comcast.net Fri Jul 29 20:23:05 2005
Subject: [R-390] Out from the shadows ...

All: As an aside, I just finished recapping an old AM-FM broadcast-grade monitor tuner (Meissner). I didn't use the orange-drops; I chose some different axial-lead caps from ARS that were referred to on one of the lists recently. I really liked the way they went in, and the specs seem to be as good or better than the ODs in this application. The tuner sure did like them also, if the performance is any indication.

I used ODs on my 390A, but I wanted to pass this along for what it's worth. I highly recommend looking the specs over and drawing your own conclusions.

I also concur with the assessment about the need to replace the filter killer cap. It's too cheap a thing to do to not do it and not provide additional protection for the very-hard-to-find filters. That's one I won't stand on ceremony over.

As for the others, I'm not going to give an opinion. Dave WB4FUR

From beerbarrel at cox.net Fri Jul 29 23:39:30 2005
Subject: [R-390] What to buy...

Are certain manufacturers better than others? For instance, is Collins better than Motorola? Or does it really matter?

Is a 390 better than a 390a? Or is that another case of it does not really matter? Thanks for the answers, Tracy

From RLucch2098 at aol.com Sat Jul 30 11:09:38 2005
Subject: [R-390] FS: Collins R-390A Meters with Cover/Screws+ Pics!

Hi All;

These meters were removed from a Non-Working R-390A receiver that had mechanical damage. While the one Audio/Line level meter face is not the same as my EAC, it was removed as stated from the Left meter hole. Both pass the VOM, needle jump test. Both have the covers & screw as shown in the pics. Both are Simpson meters. Price for both are \$150.00ppd, Shipped priority.

Pics:

<http://www.myradioroom.com/r390linelevel1.jpg>

<http://www.myradioroom.com/r390linelevel2.jpg>

<http://www.myradioroom.com/r390siglevel1.jpg>

<http://www.myradioroom.com/r390siglevel2.jpg> Tnbx & 73.. Rich WA2RQY

From k3pid at sbcglobal.net Sat Jul 30 12:34:56 2005
Subject: [R-390] What to buy...

Now there you go starting yet another discussion over which is better :>)

Ostensibly they were all manufactured to the Mil Spec I believe was created by Collins and therefore should all be the same except for mods etc. There is however, a significant difference in the A vs non A in that the A was the result of some serious cost reduction efforts that replaced the filters with crystal filters among other things which resulted in much sharper skirts. The argument over which is "better" will go on as long as there are both version but I think most in this list will agree that there is a "softer" sound to the non-A. If you listen to AM broadcasts, the non-A might be a better choice... Ron H.
K3PID

From beerbarrel at cox.net Sat Jul 30 05:00:21 2005
Subject: [R-390] What to buy...

Thanks for taking the time to answer that question Cecil. That was very good read. I guess the fact that I don't have any experience with either model I should have asked "Which model would be better for a beginner?" That said, I think that I'm going to go ahead and get one from Dave. He is offering up a good deal on a 390.

Sandy I think you put that in perspective with your Chevy analogy. I can sure see the differences in those two body styles.

Thanks for the Links Don. Great stuff! It seems that the 390's are extremely popular. There is quite a bit of info out there.

I can say one thing about this list. It is by far one of the better radio related lists that I have been on. Thanks for the help guys. Tracy

From gregorymengell at comcast.net Sat Jul 30 16:42:40 2005
Subject: [R-390] KSM

Hello to the list. .KPH/KSM is currently transmitting CW on 426 KC 6274 12990 KC from Point Reyes /Bolinás Calif today, all day .Here is a great Target for our great R 390/ R 390A receivers.73 Gregory

From youngbob53 at msn.com Sat Jul 30 17:11:51 2005
Subject: [R-390] What to buy...

Hi Cecil,

I read your post with interest, I don't often post except to ask questions as I don't own a 390 yet, but do own a HQ-180. I noticed you said that the SP-600 was your favorite receiver and I have noticed other people saying the same thing. Why are they better than a 180 in your opinion? On paper it would seem that the 180 is the better receiver having triple conversion etc, they are on my list of wanted radios though along with several different Collins and 390A's, thanks Bob Young

From shoppa_r390a at trailing-edge.com Sat Jul 30 20:32:25 2005
Subject: [R-390] Sub 6AU6 for 6BA6?

In several places (notably VFO and BFO oscillators) in a co-workers R-390A, I notice that there's 6AU6's instead of 6BA6's. I know that the 6AU6 is a sharp cutoff pentode, and the 6BA6 is a remote cutoff pentode, and suspect that in an amp (especially AGC-controlled amp) or mixer that there'd be some change in dynamic range/AGC characteristics through such a substitution which may not be good. But in a simple oscillator, does it make much of a difference? (I know that probably the VFO has to have its endpoint adjusted, but that's true even when putting in a different 6BA6 so is "no big deal").

I grew up on Heath Collins Drake etc. gear of the 60's and early 70's (how late did they make the HW-101? Into the 80's?) that used lots of 6AU6's (sometimes 12AU6's) for just about everything it seemed like :-). Tim.

From sacramento.cyclist at gmail.com Sun Jul 31 14:44:39 2005
Subject: [R-390] First 390A Alignment prep and weak bands

Hello all,

I've reassembled my Motorola '390A after recapping the last deck (AF). I've had this radio for over 13 years, but this will be the first alignment I've ever done on it. No major components were replaced as the IF deck is a very recent EAC unit.

Equipment to be used is a Measurements Model 80 sig gen with assorted 50 attenuators, an HP-410C VTVM and an Optoelectronics frequency counter.

My intent is to align the radio to the conditions I expect to use it in, i.e. a nominal 50 ohm load fed through a balun into the balanced antenna terminals.

I've elected to use Walter Wilson's alignment procedure (<http://r-390a.us/R-390A%20Alignment%20v2.htm>) because it avoids injecting (and loading) intermediate stages during alignment and I'm much more comfortable with a procedure that doesn't call for injecting signals into stages. The one exception maybe to use the calibrator to stagger tune the IF stages as Dallas Lankford

described in the Pearls of Wisdom.

When I put the last deck in I fired it up and did a quick check with the calibrator on all bands. The signal level was fairly consistent across all bands with the 2 and 3 mc/s bands being the notable exceptions. On these bands, the calibrator was barely audible..no carrier level meter movement at all while other bands would be between 20 and 30 db. When I removed the RF deck for cleaning and recapping, I did remove the slug racks, but did not remove the slugs from the racks. I only replaced the brown beauties in the deck as I was not experiencing any sensitivity problems below 8 mc/s. Any comments, suggestions or wisdom are more than welcome. Dennis

From dathegene at hotmail.com Sun Jul 31 15:20:02 2005
Subject: [R-390] Fan for sale

Hello All,

I found a cabinet for my 390a so no longer need some of my rack accessories... Have for sale a rack mounted fan, McLean Engineering Model 2EB300A37. Very nice solidly built , 120V, double squirrel cage type fan, removable grille and filter. Would look great with Collins gear... \$50 plus actual UPS. Email me for pictures, dathegene@hotmail.com. Gene, 73 de NA0G

From shoppa_r390a at trailing-edge.com Sun Jul 31 17:00:14 2005
Subject: [R-390] First 390A Alignment prep and weak bands

> The signal level was fairly consistent across all bands with the 2 and 3 mc/s bands being the notable exceptions.

With regards to RF alignment, the bands are:

0.5-1 MC
1-2 MC
2-4 MC
4-8 MC
8-16 MC
16-32 MC

It looks like you need to check out the 2-4 MC RF section. Not just alignment but condition of the coils/caps, bandswitches, etc.

Sometimes the variable caps go shorted, other times the inductors go open-circuit, etc. The latter especially when somebody pumps a few hundred watts of RF into the front end!

Sounds like your variable IF sections are OK too. Not that they can't be topped off, but look where the problem is first. Tuning up your IF's won't make 2 and 3 MC come back. The right time to do the alignment is after you've gotten all the bands working - if you have to change out some parts then you may subtly affect the alignment of other bands.

It's vaguely possible that the crystal oscillator section for 2 and 3 MC's are both out of kilter but it seems unlikely.

And check mechanical cam alignment before suspecting any of the electronics I mention earlier! Sometimes it's as simple as the clamp for the cam in question being loose or the springs not working for that band. Tim.

From wli98122 at yahoo.com Sun Jul 31 17:25:33 2005
Subject: [R-390] Sub 6AU6 for 6BA6? (or 6AK6)

Tim:

I can not comment on your proposal..... BUT there is a published older article re 6AU6 sub for a 6AK6 as output audio, that appeared in HiFi Annual Audio Handbook by Lawrence Fleming back in the 50's. It involved dropping R614 from 560 to 220 ohms, and adding a 33K ohm screen dropping resistor. He claims that the audio output for 1.5v audio input would be 360mW as opposed to 65mW for a 6AK6. Seems to me that it'll be an interesting exercise to see if that would make any "rational improvement" over what the Collins engineers planned.

Frankly, I suspect not, and the idea of taking off the signal from the diode load jack is much more appealing for much better "hi-fi" as Chuck Rippel says.

What I eventually did was merely jumper R101 (connecting contact 6 with 8 on TB102) to gain significant increase in phone audio output with no alteration of the underlying Collins circuitry. Thanks W. Li

From paul at pdq.com Sun Jul 31 17:37:10 2005
Subject: [R-390] Out from the shadows ...

wrote: paraphrasing Cecil: ...the R-390 tends to not have the same problems with caps as the R-390A...

It is worth noting that the resistors and capacitors underneath the 6082's in the R-389, R-390, and R-391 audio decks also get fried from heat, so check your B+ and consider repairs there. Out of 4 or 5 of these decks that I've worked on, only one looked clean, the others were pretty scorched.

The cost of failure can be lower, but since the main failure mode is for B+ to go high - 280-300V on some of mine, it means you can stress a lot of the rest of the components.

Again, this is only an issue for the R-389, R-390, and R-391. Paul