R-390 Reflector June '04 Edited

From cosmo224 at execpc.com Wed Jun 2 14:10:24 2004
Subject: [R-390] Solid State Ballast 'quirks'?

Howdy,

I have a Collins 390a that has a solid state ballast replacement that I got as part of the restoration. Sometimes, while listening, the station will suddenly 'go away' and just have static. I noticed some of what appears to be 60 cycle hum in the audio. The Tuning and BFO does nil but the AF section is still working and selecting the various filters has the noticeable 'audio' so I wonder if the 'balast' cut off. I power off the radio and let it sit and sometimes the set comes back for a while then goes dead. Other times, I let the radio sit overnight and the next day all is good - SO, I know this is an intermittent - should I zero in on the solid state ballast first - I suspected that unit since the only thing that seems to go away is the tuning/bfo - any one seen this before?? Any other places to look while troubleshooting? Thanks es 73

From ham at cq.nu Wed Jun 2 19:35:42 2004
Subject: [R-390] Solid State Ballast 'quirks'?

Hi, Just about any component can be intermittent. The ballast should be pretty easy to check based on weather the filaments light up or not. If I was going to bet on the cause it would be a loose connection early on the IF strip or at the tail end of the RF chassis. The key clue being that you still have static when the signal goes away. If the intermittent is late in the IF strip then the radio just goes quiet. That does not rule out the conversion oscillators, but it includes a few more parts ...

If you have a copy of a manual (there are several on the net) they have some pretty good voltage at a point troubleshooting data in them. It's good to have a VTVM to do the measuring with. If you don't have one already they are a pretty darn cheap these days. If you use a DVM then you may have to adjust some of the numbers a bit. Another good thing to get a hold of if you don't have them already is a set of tube extenders, it makes things a lot easier to measure. You should be able to get the extenders for $20 and the VTVM for $30 if you are in a hurry or quite a bit less if you shop around. Hope that helps. Enjoy! Bob Camp KB8TQ

From roy.morgan at nist.gov Thu Jun 3 10:55:13 2004
Subject: [R-390] Solid State Ballast 'quirks'?

wrote: > ... If I was going to bet on the cause it would be a loose connection > early on the IF strip or at the tail end of the RF chassis. The key clue > being that you still have static when the signal goes away.

Troubleshooters:

Bob's comment is right on, but reveals a possible other mis-adjustment. If the IF strip is contributing much at all to the set's noise (with the RF section not working), its gain is probably set too high. See the procedure to set the IF gain on Chuck's website at http://www.r390a.com/ and specifically at: Under "Technical": "Setting the IF Gain for Maximum Performance" http://www.r390a.com/html/gain.html Note: "Terminate the antenna input" means put a resistor across the two balanced input pins of about 100 to 200 ohms.

The basic concept of this adjustment is that the radio's internal noise should come almost entirely from the first RF stage for best performance. It's common for folks to crank the IF gain adjust pot up so they get louder signals. This upsets the carefully designed balance of gain in the various stages of the radio and leads to reduced performance - particularly in small signal detection capability and in overload and cross modulation characteristics. Those who used to service these sets in military situations where small signal performance was very important report that new RF front end tubes are noisier than those with some hours on them. So if you are tweaking for best noise, use a broken-in 6DC6.

> .. It's good to have a VTVM to do the measuring with. ... for $30 if > you are in a hurry or quite a bit less if you shop around.

See this link for a Heath V-7A priced at $15. (I still have the one I built in about 1959, and it runs just fine!): http://www.af4k.com/miscpart.htm

If you want a genuine TS-505 as specified in the R-390 manuals, here is one:

>TS-505 VTVM ("http://www.w2ec.com/ts505.jpg"), includes cover and probe. >$25 plus shipping from NY 13732 > >Ray W2EC "w2ec@bmjsports.com"

These VTVM's have a meter face that is a bit harder to read than the Heath, but they are quite indestructible. By rights, no R-390 repair person should be without one for authenticity. It has been rumored that very difficult to find faults in R-390 receivers have cured themselves permanently when the TS-505 was turned on and brought to bear.

Note that this meter also has an AC/RF probe that is useful from 30 cps to 10 mc and below 40 volts RMS. The diode used is a 1N70 germanium diode, not the hard to find and expensive vacuum tube ones found in the HP 410 meter probes. If you blow it out, a modern PIN diode will likely work just fine.

By the way, the same fellow has a URM-25D that has been overhauled: >URM-25D Signal Generator ("http://www.w2ec.com/urm25d.jpg"), perfect >operational condition, with manual copy and HSN reprint of Dallas >Langford notes. All caps have been replaced per the HSN notes. >Also includes accessories as shown: ("http://www.w2ec.com/urm25dacc.jpg"). >$125 plus shipping from NY 13732 Happy troubleshooting, Roy

From w4pnt at velocitus.net Thu Jun 3 21:23:52 2004
Subject: [R-390] REFINISHED PANELS AVAILABLE

Hi R390A Collectors, I have 3 refinished one side, re-screened R390A panels for tradeout. Price $125. + postage exchange. Want pics? Let me know. Warm regards Dee

From dhallam at rapidsys.com Fri Jun 4 10:27:06 2004
Subject: [R-390] R-390 Visual Alignment

Is the visual alignment procedure for the R-390 as described in US AS ATC&S ST 32-152 a worthwhile procedure to carry out? David C. Hallam KC2JD

From kgordon at moscow.com Fri Jun 4 12:57:40 2004

Subject: [R-390] R-390 Visual Alignment

> Is the visual alignment procedure for the R-390 as described in US AS > ATC&S ST 32-152 a worthwhile procedure to carry out?

I don't know about using in with the R-390-A, but I know from experience, it is really the only way to ACCURATELY adjust the IF tuning in multi-transformer IF stages in most superhets. I have used it with a number of receivers and it always produces amazingly better results. Ken W7EKB

From bill.riches at verizon.net Fri Jun 4 16:44:36 2004
Subject: [R-390] Shipper Packing

A heads up!! When you purchase a piece of equipment from someone make sure that the seller agrees to refund your money if it arrives damaged due to poor packing and the Post Office or other carrier refuses to honor a claim because of poor packing.

I purchased a Tek 465 scope from a person that used shredded paper along with a very beat up carton. The scope took a hit on the face and bent a few controls and ruined the attenuator. The postal inspector laughed when I tried to file a damage claim. I now have an expensive parts unit. This person sells a bit of equipment - contact me off list if you wish more info. Buyer beware. 73, Bill Riches, WA2DVU

From drewmaster813 at hotmail.com Fri Jun 4 18:29:33 2004
Subject: [R-390] Re: Solid State Ballast 'quirks'?

Mike wrote: >I have a Collins 390a that has a solid state ballast >replacement that I got as part of the restoration. >Sometimes, while listening, the station will suddenly '>go away' and just have static. (snip...)

... should I zero in on the solid state ballast first - I suspected that unit since the only thing that seems to go away is the tuning/bfo - any one seen this before?? Mike,

If the ballast is causing trouble you will see that the BFO tube (V505) and the PTO tube (V701) will go dark.

If those tube heaters are dark, it is also possible that one of those tubes' heaters is thermally intermittent . Either of those tubes could be swapped into another 6BA6 socket (IF stage); failure to light (perhaps after waiting for the radio to quit) would indicate a defective tube.

Similarly, if during testing neither of those tubes goes dark in another location (and tubes taken from the IF sockets and installed at V505 and V701 do go dark), suspect the ballast.

Replacements for the ballastube are myriad and controversy-generating. For a wealth of information on the topic, go to r-390a.net Click on references, Pearls of Wisdom. Drew

From barry at hausernet.com Fri Jun 4 18:55:41 2004
Subject: [R-390] Shipper Packing

Tell me about it! Some people like to sell & ship whatever without a care about packing. Some use all

new (but inadequate) materials and charge for it. Some use trash. Before a seller ships me something delicate, I send an email describing how it should be packed. If I get "bubble wrap and peanuts" back, I then go into my routine.

Once in a while I get something like "don't worry -- I pack very well -- sent plenty of this stuff...." etc. Good packing is in the eye of the beholder, I guess.

There's another issue for many pieces of gear -- prepping the unit itself. Wobbly tubes, like 5U4's with only 5 pins of the octal? Right next to the transformer? Chassis loose in cases? Fine if it's kept rightside up and not moved. Other missing screws? Heavy transformers and chokes held down with small screws... into aluminum? (Gets dropped sideways or upside-down, heads shear off and then it's loose-cannonball-in-the-china-shop-time. Big dial glass -- loose? (Crackaroonies are in order.) Even if super packed with foam sheet, double boxed, etc. some radios are prone to damage from an "inside job". Here's an example of something otherwise innocuous:

Anyone familiar with tube type Zenith Transoceanics? A major feature affecting their value is that big clear plastic front panel. Many have developed a few stress cracks from vibration around the screws, or worse, from slamming the front door closed. The chassis are fastened to the wooden center shelf of the cabinet with just two screws. If they're missing or loose, the whole chassis can shift -- then it does a number on the panel -- through the control shaft holes or whatever. Those panels are all clear plastic -- painted in black, grey and gold on the reverse side -- (or brown, tan, gold for the leather models) -- so virtually impossible to detail out.

R-390's are more rugged, but there are plenty of opportunities. If a tube shield is not fully twisted down, a bounce will activate the spring and -- according to Mr. Murphy -- it will head straight for the ballast tube which will have no shield. If there are loose or missing screws all over the place, the H-frame can twist a bit.

Sounds like you got what I call a "beanbag" shipment there. That's when the carton is flimsy and the stuffing is inadequate. Got one of those a few years ago with an SP-600 in it. Bottom right corner of the front panel was broken right off -- and the roughly 1 inch square piece was still in the box -- so it wasn't that way before. Packed in an oblong U-Haul box with a trick/quick setup (criss-cross bottom), clearly emblazoned "for lightweight items" -- stuffed with rags. Didn't bother going to UPS claims with that one. The seller did settle privately, though. More often, one gets stonewalled or told to send the thing back -- right -- lay out double shipping and keep your fingers crossed.

Oh, there's the other thing -- well-intentioned folk who fashion themselves as crate-builders. This was an SP-600-VLF (read @RARE@). The guy put a labor of love into top and bottom plywood, with firring strips and even used a router to groove out where the front panel set in. Then he wrapped really good foam all around it and then put four steel strapping bands (nevermind plastic) around the bundle. That whole assembly went into a sturdy, but too-tall box. Built a perfect SP-600 Destructo-Wrench. SP-600 panels aren't fastened to the chassis all that well -- eight self tapping screws into stamped "combs" at the edges of the side panels. These weren't regular screws, but threaded studs with acorn nuts on the panel -- some loose. The box must have twisted a bit and the plywoods were flush with the box, so ... ripped the upper right corner of the panel forward, wrecking the crystal osc. switch -- yanked the shaft forward, breaking the wafers and rotors. So, sometimes the road to Heck is also paved with good packing intentions.
Avoid crating, unless the guy knows what he's doing (hard to tell) and it's going truck freight -- palletized. Otherwise, the crate has to be built just so and then padded and put into an oversized box with more padding -- to protect the crate, so it doesn't break and wreck the radio. Someone can be a pretty good carpenter/cabinet maker, but not really know how to crate things. Otherwise, you're putting

a stronger immovable object in close proximity to the delicate goods. It's like that game -- paper, rock, scissors or whatever -- plywood can break aluminum - and even steel on a bad day. If a good corrugated box package gets dropped a foot on its corner, it should dent and absorb the shock and compression. How about a wooden box? About a half-dozen ways to go wrong.

Finally, some parts should be braced at the strong points -- not padded over, like the front panel of a scope. I guess that one was missing it's front cover, which might have helped. Without that, it needed a block of styrofoam with indentations for the controls or similar -- like a modified foam insert from a computer case so that the front was supported by the edges. Even if heavily padded with bubblewrap or polyurethane foam, the controls can work their way through -- and sometimes, air ain't so soft, if you know what I mean.
Y'see, here I've been quiet and you got me started ... ;-) Well, keep up the ol' caveat emptor-ing. I think I've beat this dead horse enough, right? Barry

From dhallam at rapidsys.com Fri Jun 4 19:38:58 2004
Subject: [R-390] Shipper Packing

I agree that you have to be careful. It's tough to ship these heavy pieces of electronic gear. UPS says that if the packing can't withstand a fall from their conveyors, they don't want to take. I shipped a Johnson Invader once. UPS just about took the package apart to see how it was packed.

I have bought and sold things on eBay for several years now. In the beginning I used a commercial packer, who said they specialized in electronic and heavy stuff, to prepare and ship some heavy items. He told me he used foamed in place and other methods to protect the items. His foamed in place turned out to be several layers of bubble wrap. I dropped him as soon as I found out what he was doing. Now I try to stay away from things that are difficult to pack.

I bought a capacitor checker a couple of weeks ago on eBay. When I got the package from FedEx, it rattled, opened it up, and piece of broken tube fell out of the holes in the bottom of the case. The exterior was fine, but the chassis inside had broken loose. I will have to admit that the seller handled it very well. He refunded my money within a day or two and said he would file a claim with FedEx.

Companies have packaging engineers on staff to design shipping packages. Even then some things get broken. Nothing is absolutely bullet proof.

If you are buying an irreplaceable piece of equipment, you are better off to arrange for pick up.

From kgordon at moscow.com Sat Jun 5 00:00:36 2004
Subject: [R-390] R-390 Visual Alignment

> Ken, I have never heard of a visual alignment procedure for a multi-stage transformer I.F. strip. Where can I find out more about this? Thanks, yours truly, Todd Roberts WD4NGG.

For those who are not familiar with this method, it consists of using a sweep generator covering the IF frequency, and an oscilloscope, preferably with a triggered sweep and blanking on re-trace. It would also help if the o'scope had a long persistence phosphor on the screen.

For a single-conversion receiver with a 455 Khz IF, you connect the sweep generator through a DC blocking capacitor at the plate of the 1st mixer tube. Set the sweep genny frequency so that it sweeps

from 440 to 460 Khz, and set the sweep rate as slow as it will go.

Connect the output of the sweep generator also to the scope so that it controls the horizontal sweep and in synchronized with it.

Connect the vertical input of the scope to the plate of the detector tube. You may find that connection to the grid of the detector tube makes a slight difference so try it both ways. I prefer the plate. Again, I use a large value capacitor.

With the lights dimmed so you can see the trace, start your sweep generator.

When you have everything set right, you will see, on the scope screen, a visual representation of your receiver's IF passband.

If your scope doesn't blank on re-trace, you will see two images. By proper manipulation of the controls, you can separate the two traces.

Now, when you make any adjustment to any transformer in the IF strip, you will instantaneously see the effect. You may have to adjust the sweep generator amplitude until you get a large enough trace.

Once you figure out how to use this method, it is REALLY NEAT and makes perfect adjustment of IF strips really easy. I hope this helps. Ken W7EKB

From dhallam at rapidsys.com Sat Jun 5 08:22:20 2004
Subject: [R-390] R-390 Visual Alignment

John, The reference US AS ATC&S ST 32-152 in my note is the manual reference. I think it is commonly referred to as the Fort Devon or maybe Fort Monmouth procedure. I have a very old copy of this procedure. It was made on a hectograph and purple ink. I don't know if it would copy or scan. David

From Commtekman at aol.com Sat Jun 5 09:23:24 2004
Subject: [R-390] Visual Alignment

That is probably the procedure from the Army Security Agency in Fort Deven's Mass, of which I attended 44 years ago- Bob K6OSM

From ham at cq.nu Sat Jun 5 10:28:57 2004
Subject: [R-390] Visual Alignment

Hi

You can also do this with a modern network analyzer. I suspect Dave Medley was the first to take a shot at it on a 390 and report the results here on the reflector. Several others here have tried it as well.

The main problem is that the delay time / ringing through the mechanical filters is pretty long. If you think about it they are audio gizmos and you have to wait for the sound to go from one end of them to the other. That doesn't sound like much but it can easily get up to a fraction of a milisecond. In some filters it can run tens of miliseconds. What happens on your sweeper is that the display shifts so center

frequency is no longer at center screen.

There is always a temptation to speed up the sweep so you can see what's going on faster. When you do so the results you see are not as accurate as they should be.

An interesting replacement for the sweeper is a rig using a computer sound card in various configurations to generate and detect the signal. The main claimed advantage is that you can use the computer to store the results and don't have to try to figure out a couple of hertz rep rate on a P7 phosphor screen. Take Care! Bob Camp KB8TQ

From r390a at bellsouth.net Sat Jun 5 13:40:27 2004
Subject: [R-390] Visual Alignment

What is the best method of doing this? Any software packages out there for "software scopes" that aren't an arm and a leg? Tom NU4G

Ah! Glad you reminded me...someone on the GB list mentioned this method a few months ago. I'll try to research the details and post them here. It makes the process MUCH easier and, as Bob mentioned, you can save the results. I'll look it up. Ken W7EKB

From kgordon at moscow.com Sat Jun 5 17:19:47 2004
Subject: [R-390] "Visual" alignment with a computer and a sound card...

OK. I talked with one of our GB guys about this. What you need is a spectrum analyzer program like Spectogram, which is written by a ham, BTW, and a fairly decent computer with a sound card.
You then connect the sound-card's mic or line input to the output of the receiver's detector.

Using the proper settings in Spectogram, you will see a perfect representation of your receiver's passband when the receiver is hearing just band-noise. If it were me, I would use one of those simple noise- generators we used to use to align VHF pre-amps.

I will forward on to this list the message I got from Ron D'Eau Claire which talks about this in greater detail.

There are other pieces of software available on the net which work almost as well. Ken W7EKB

From kgordon at moscow.com Sat Jun 5 17:20:23 2004
Subject: [R-390] (Fwd) RE: GB> "Visual" alignment of receiver IFs...

OK, gang, here is the message I got from the GB list. Ken W7EKB

------- Forwarded message follows -------
From: "Ron D'Eau Claire" <rondec@easystreet.com>
To: "'Kenneth G. Gordon'" <kgordon@moscow.com>,
"'Old Tube Radios'" <glowbugs@piobaire.mines.uidaho.edu>
Subject: RE: GB> "Visual" alignment of receiver IFs...
Date sent: Sat, 5 Jun 2004 12:52:03 -0700

Ken, there's an excellent program called "Spectrogram" available on the internet that runs on most Windows PC's. Basically what you need is an PC running windows (95 or later), a sound card, and the ability to listen to "band noise" from your receiver I.F. strip that's been detected and presented as an audio signal to your computer sound card input. That's no problem, of course, if you are aligning a fully-functional receiver. It provides a great bandpass display showing frequency on the horizontal axis and amplitude on the vertical axis. You just align the filters for the desired bandpass characteristic you want, watching the display change in real-time.

The most recent version of spectrogram is available at: http://tinyurl.com/3922r

It's shareware with a free downloadable trial version. The current version has a timer that limits your use to 10 minutes a session (I believe it is) before you must restart the program until/unless you register it.

A version of the program that is still shareware (so you are encouraged to register it and keep the developer at his keyboard <G>) but which has no timer is available at Tom, N0SS, web site at: http://www.qsl.net/n0ss/

Scroll down the page to locate "Download Spectrogram V5.17".

Just below that link is another link: "Download Spectrogram v5.17-specific (K2) alignment docs"

That's a PDF file that was written for aligning the Elecraft K2 I.F. filters using Spectrogram. It's useful to you to see the menu setups in Spectrogram that are recommended in this application, and it shows sample displays of what you'll see.

Spectrogram is a really handy tool. I'm thoroughly spoiled after having used a signal generator and meter for so many years <G> Ron AC7AC

From BENZONR at ntsb.gov Sat Jun 5 18:03:03 2004
Subject: [R-390] FW: R-390 Digest, Vol 2, Issue 4

Gentlemen: Well, how does one properly pack an R-390A for shipment? I bought a great Motorola R-390A over the internet a couple of years ago and trooped up about 40 miles to pick it up personally. Works fine, I think, but you experts are waxing me with details on all matters concerning this fine receiver. This mailing list has actually made me afraid of the radio! Ha! I am a new user, rather than a repairer, and believe I have bit off too much, so to speak. It is too advanced for me now, and am thinking of selling it. My old BC-348 is about my speed. Any specific advice out there about how to safely crate up an R-390A? Thanks.

From ham at cq.nu Sat Jun 5 19:12:44 2004
Subject: [R-390] FW: R-390 Digest, Vol 2, Issue 4

Hi, The biggest thing to watch out for are the "wings" on the radio. The edges of the front panel, the edges of the back panel and the edges of the top and bottom of the radio are all vulnerable to damage if the radio is not tight in the box. That does not mean that you need a fancy box or exotic packing. You do need something that is dense enough to support the radio and a box that is heavy enough to take the weight. More or less, loose wadded up news paper probably isn't good enough, rolled up news paper

may be better or tightly pack wads. Normal packing peanuts won't do the trick, heavy bubble wrap works ok. Foam sheet from Home Depot usually is heavy enough to do the trick (the blue stuff not the light tan kind). The boxes U-Haul sells are to light, they shred during shipping. Plywood boxes work fine but they are overkill. Double wall military cardboard boxes are a good choice if you can get them.

UPS will tell you that you need a couple of inches of padding on all sides of a shipped item. They also have some maximum dimensions that they will ship. The USPS has a different set of dimensions and a different maximum weight. I seem to recall that UPS will go up to 150 pounds and USPS stops at 75 or 100 pounds. Not a bad thing to check on before you go to the trouble of figuring out a box.

If you want to go a little nuts then pull the power supply out and ship it in a separate box. I have never done it that way or seen it done that way. It is pretty heavy though and the idea makes some sense.

The best way to look at it is you want a stiff heavy duty box and you want to wedge the radio in the middle of it with strong stuff. If you put it in peanuts or loose stuff the radio will just pound them to dust and then rattle around inside the box. Even with a decent box the radio banging around will create trouble pretty quick.

Fair Radio probably has the most experience of anybody in packing and shipping these radios. They pack them tight in newspaper in a heavy box. Hope That Helps Bob Camp KB8TQ

From kgordon at moscow.com Sat Jun 5 22:07:23 2004
Subject: [R-390] Re: Shipping R-390s

> Gentlemen: > > Well, how does one properly pack an R-390A for shipment?

Blue (not tan) 2 1/2" thick hard foam insulation from Moscow Building Supply here in Moscow, Idaho, then a custom fitted crate built of 3/4" plywood. I use glue and deck screws for bottom and three sides, then, double the deck screws on the "front" and "top". Then cut hand-holds so that it is most likely going to be picked up only one way.

Haven't lost one yet. I've shipped SRR-11s, SRR-13s, R-390s, RALs and RAKs this way.

I charge the person to whom I am shipping it an extra $35.00, refundable on the return of the crate. So far, I haven't lost any... Ya pays yer money and ya takes yer choice. Ken W7EKB

From Commtekman at aol.com Sat Jun 5 22:25:33 2004
Subject: [R-390] Shipping R-390's

Comment on using boxes with "hand-holes". I recently received an R-388 that was shipped in a box with 'hand-holes', apparently since it was a heavy box, someone thought the handhole was a convenient location to pick it up with a forklift, of course it ruined the front of the R-388. Bob Schaefer K6OSM Mccall, Idaho

From ToddRoberts2001 at aol.com Sat Jun 5 22:53:19 2004
Subject: [R-390] Re: Shipping R-390s

I haven't had an R-390A damaged yet when it was properly double-boxed and using dense foam as

packing material. I have had good luck with styrofoam sheet in the past but dense foam sheeting is even better as it has a little more "give" and will cushion better in the event of a hard knock. First surround the radio on all sides with about 2 or 3 inches thickness of dense foam packing inside an inner box. The radio should be firm inside the inner box. Then pack this inside an outer box with another 2 or 3 inches of dense foam between all sides. It is also good insurance to use double-wall cardboard boxes for the containers, not single-wall. Also recommended to remove the power supply and ship separately to reduce weight-stress on the radio during shipping. Only problem with that is most people don't know how to pack a heavy dense object like a transformer for shipping. Best way is to get a long sheet of stiff cardboard a few inches wider than the power supply and literally roll up the power supply inside the cardboard sheet and secure it with strong tape. There should be an inch or two of overlap of cardboard around the edges of the power supply module. Then surround this with about 3 inches thickness of dense foam or 4 inches of styrofoam sheet on all sides inside a double-wall cardboard box. Make double-sure the power supply is firm inside the box. If it can shift around then it could be headed for trouble, as the heavy weight can pound around and damage styrofoam sheeting. I have found that bubble wrap is almost worthless around edges and sharp corners of heavy items. It is okay around light items like tubes but for heavy items dense foam works the best that I have seen. Noodles can work for filler between the inner box and outer box but if the box is torn or a flap opens up during shipping then the noodles can leak out leaving the radio more vulnerable to damage. Plus you have to pack very tightly with noodles to avoid having them drift around or settle to one side during shipping. That is why it is best to use dense foam. Dense foam is available in sheets of varying thickness and is easy to cut with a knife. Also best to use fiberglass reinforced shipping tape, not the cheap clear plastic tape and be generous with the tape when sealing the cardboard boxes. 73 Todd Roberts WD4NGG.

From ToddRoberts2001 at aol.com Sun Jun 6 00:45:16 2004
Subject: [R-390] Re: Shipping R-390s

writes: Where do you guys purchase these cardboard boxes to ship these heavy R-390 radios, i need some new ones. thanks

Fred
Here are some places that sell cardboard shipping boxes : www.uline.com , www.centralpack.com , www.wholesalepackaging.com . For packing foam try this place : www.foamorder.com . 73 Todd WD4NGG

From drewmaster813 at hotmail.com Sun Jun 6 06:18:48 2004
Subject: [R-390] R-390a's, they ain't scary...

wrote: >... I bought a great Motorola R-390A over the internet a couple of years >ago and trooped up about 40 miles to pick it up personally. (snip)

If one were to believe all one reads on this list about potential problems with the R-390A and relatives, one would believe that the sky was about to fall in!

Many of us are obsessive-compulsive types trying to "optimize" the radio or "fix" something that never was really broken.

Remember, the radio was designed to be serviced by some grunt having the I.Q. of a potato peel and still perform excellently. Even highly dilapidated R-390a's work very well.

When you nit-pick like the rest of us you will need psychiatric meds to cope with the radio. We pill-poppers got started out as new users just like you, except we got carried away....

Try to overcome your fears and make friends with the radio. As with any old electronics (your BC-348 included) beware those old paper and electrolytic caps. Toss your new "friend" a little oil and perhaps a tube or two once in a while and just enjoy. Drew

From barry at hausernet.com Sun Jun 6 00:10:36 2004
Subject: [R-390] Re: Shipping R-390s

wrote: <snipped> Also best to use fiberglass > reinforced shipping tape, not the cheap clear plastic tape and be generous with the > tape when sealing the cardboard boxes. 73 Todd Roberts WD4NGG.

Yes 'n no. There's filament tape and there's filament tape. The original kind which comes in 1 to 1.5 inch widths with the threads running lengthwise can cause problems. That type should be run at right angles to the seams only while the clear stuff should run along all the seams -- up the middle and the edges.
The burst strength ratings of the cartons usually assume all seams are taped. One problem -- the lengthwise filament tape can come loose at the end, then it has a tendency to form a "tail" that can get caught in the conveyor equipment. UPS doesn't like it -- but in addition to causing them some inconvenience, that tail is strong enough to get the package flung off the conveyor if it catches on something. Yes, it's a long shot, but Murphy's Law postulates that -- if in the rare event that should happen -- it will be on a hair pin turn on the 30 ft. high conveyor.

Solution -- first use some of that filament tape at 90 degrees to each seam -- two pieces on each flap and two or three pieces across the middle seam -- top and bottom. Then, do the usual with clear tape -- but get the heavier clear tape. In addition, cover the filament tape with clear, overlapping and extending well beyond it to prevent any "tails" from developing. The clear tape generally has better adhesion and doesn't tend to catch.

There is a relatively new kind of plastic tape that is similar to the clear, 2 inches wide, but has filament running in both directions -- lengthwise and crosswise. This is a good alternative and can be used by itself. That gets applied along the seams.

Another extra step that adds strength to the package -- glue the flaps down with a bit of hot melt glue -- not too much or there will be a heck of a time getting it opened. In addition to keeping the box closed it also forms a more solid top and bottom and the carton is more resistant to twisting.

Some UPS centers will refuse a carton with exposed lengthwise-filament reinforced tape. In addition, it is not suitable for running along seams. As with plain plastic tape, once it splits up the middle at one point, that's it. My 2 cents. Barry

From wewilson at knology.net Sun Jun 6 08:47:13 2004
Subject: [R-390] Re: Shipping R-390s

> I haven't had an R-390A damaged yet when it was properly double-boxed and > using dense foam as packing material.

I've also had good luck with a single box (double corrugated material) if I cut two pieces of 1/4 to 3/8 inch plywood to just fit inside the box; insert the first piece into the bottom of the box, wrap the receiver in bubble wrap or whatever, cut the dense foam padding and insert all around for a tight fit, and lay the second piece of plywood on top before sealing. The plywood is great at preventing corner damage for those boxes that "fall off" the conveyor.

BTW, FedEx Ground has not damaged anything since I switched to them a few years ago. Walter - KK4DF http://www.r-390a.us

From w5kp at direcway.com Sun Jun 6 10:39:24 2004
Subject: [R-390] Re: Shipping R-390s

Bingo! Me, too. Jerry W5KP

From bmarx at bellsouth.net Sun Jun 6 10:55:43 2004
Subject: [R-390] Re: Shipping R-390s

Me Too! FedEx is my shipping company for heavy items. The US Postal service is great for light items under 10 pounds but FedEx Ground works great for me.

My packing style is similar to Barry's. Leave nothing to chance. Assume the shipper will throw your box several feet. If you do not feel confident about your radio surviving that toss, then revise your shipping techniques. Several inches of foam around your radio in a box and then inside another box with several inches of foam. I use foam insulation material purchased at Home Depot but there are several kinds.
Bill Marx W2CQ

From barry at hausernet.com Sun Jun 6 11:59:20 2004
Subject: [R-390] Re: Shipping R-390s

Me three! Fedex is also significantly cheaper than UPS, particularly on heavier packages going longer distances. A heavy package going Coast to Coast can run $20 cheaper. They sometimes beat their scheduled delivery by a day. UPS never does and is sometimes a day late ("rescheduled") Packages seem to arive "crisper" with less signs of rough handling. But, you can still have damage if the thing isn't packed right.

Something to know about Fedex "Ground" vs "Home Delivery". While rates are about the same, there are important differences. Home delivers Tuesday to Saturday and there's a limit of 70 lbs. If you indicate "residential" as the shipping address, their website (and shipping points) will reject anything over 70 lbs. and/or the dimensional weight equivalent which is 108 inches -- same as UPS (1 X length plus girth -- which is 2X the sum of width and height). However, if you DON'T indicate residential -- even when it is a home address, it will go Ground with a limit of 130 lbs and delivery Monday-Friday. I've had plenty of "Ground" shipments come to my home -- no problem -- including a mil power supply that was right at 130 lb. limit for that service.

While UPS will pick up (for a one stop fee), I don't think Fedex has started doing that for Ground yet. You have to go to a Fedex staffed depot. Some "retailers" handle Fedex Ground, but may mark up the rates.
Their web site is pretty good in terms of finding the closest place that handles Ground/Home. There are

lots of dropoff places that only handle small express packages.

I've had as many as 4 different Fedex trucks show up in one day -- an Express letter delivery in the AM, a "Home Delivery" truck, then a "Fedex Ground" and way later in the evening, an unmarked cube van (probably subcontracted or a rental) batting cleanup.

Do get the sense that widespread experience is less incidence of damage -- even allowing for the fact that they're number two with less volume. Barry

From hankarn at pacbell.net Sun Jun 6 12:23:51 2004
Date: Sun Jun 6 12:29:40 2004

Barry and the group,

I have done this a few times and what has been suggested is/has fallen on deaf ears/blind minds. "IF IT CAN MOVE IN THE BOX IT WILL GET DAMAGED" PERIOD. I have been in the professional packing and shipping business since 1980 and have shipped 1,000s of pieces of FRAGILE equipment. My loss ratio is zilch compared to what I have shipped.

What I designed is a box that meets UPS requirements for 150 pounds. This box is a 500 pound DW test stapled carton 24x22x15 lined with polyethylene foam cut to fit the particular radio. A few of these have been shipped 5 or 6 times and still serviceable. They have been 32V-3 down to 75A series in weight with no damage.

The big problem is the cost $55.00 for the box and shipping a 13 pound box OS1 for $25.00 plus is most hams are to frugal to protect their goods and revert to peanuts or bubble pack. A question? what happens when a bubble breaks in bubble pack, you have 2 pieces os plastic rubbing together, etc. etc. Yeah I know you have all done it and lucked out.

I pack paper, bubble or soft foam in tube areas to keep them in place.

The 2" requirement is needed for the Parcel handling Union Phd's assigned to handling, as they cannot be held responsible for anything.

We also only use 3 "Kraft reinforced paper tape for sealing. Plastic tape is OK for lighter boxes. Peanuts should be illegal, although I sell over 100 bags a month to some of my customers, and in all cases they are wrapping small items in bubble then filling with peanuts.

We use UPS Worldship for processing and can process 10 to 12 shipments in the the time to do 4 or 5 using FEDEX system. In the long run I find UPS cheaper. We have had 2 inbound lost shipments on FEDEX recently and they are still not paying the shipper. 73 Hank KN6DI

From WD8SBO at att.net Sun Jun 6 12:30:31 2004
Subject: [R-390] please reset my sub to digest mode

From w5or at comcast.net Sun Jun 6 13:58:46 2004
Subject: [R-390] please reset my sub to digest mode

Will do,

BUT, everyone should have a working password now, mailed to you at your subscription address, on or about 1 June. Armed with your subscription email address, and that password, you can alter your list world at will.

From tetrode at comcast.net Sun Jun 6 14:03:08 2004
Subject: [R-390] "Visual" alignment with a computer and a sound card...

> Using the proper settings in Spectogram, you will see a perfect representation of your receiver's passband when the receiver is hearing just band-noise. <snip>

Perfect, well not quite.
Not to quibble but the above statement would be true if you were using an RF spectrum analyzer and looking at the actual 455 KC IF; then the spectrum mask would be a representation of the IF passband.

In the case of the audio soundcard analyzer you are looking at an audio spectrum which is the result of the detected IF signals, and this depends to some degree on the type of detector in use. To keep things simple what will be coming out of the sound card will be a composite of the LSB and USB power present in the IF response and there is no way to distinguish it at this point.

What this means is that if you see an unwanted dip in the audio spectrum you really can't be sure which side of the IF passband is causing it, so it's actually possible to over-compensate the wrong side of the passband response in an effort to make the detected audio response look flat on the audio analyzer. Of course if you happen to adjust the correct side of the passband to begin with then things would work out better. Perhaps by manually tuning the receiver across the calibrator signal and watching the carrier meter you could get a better idea of which side of the passband might be causing trouble and then proceed from there.

So the swept IF method of measurement is really the only accurate way to measure a passband response, as long as it is set up properly. 73, John KA1XC

From uvc at acninc.net Sun Jun 6 15:55:29 2004
Subject: [R-390] R 1247

I have a R1247 I know very little about it. I have had 390 and 390A's for years. Please advise. KB7FQR

From DCrespy at aol.com Sun Jun 6 17:34:33 2004
Subject: [R-390] Shipper Packing

Maybe I missed it, but ... I am surprised no one has mentioned separating the power supply and audio modules for shipping. Mass is not your friend when a package gets dropped (and it will be dropped). The package stops and the radio tries to keep going. The more it weighs, the harder it tries to keep going! The easiest way to get the mass down is to send the radio in three different packages. Of course the other suggestions still apply (now to 3 packages).

Also, if the radio comes with a rack cabinet, I always ask for the radio to be removed from it. The only thing holding up all that mass is the 8 #10 screws between the front panel and the cabinet. The cabinet (and likely the panel) WILL be damaged in shipment. It is almost guaranteed. 73 Harry KG5LO

From r390a at bellsouth.net Sun Jun 6 20:32:13 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

Especially for Don Reaves, or anyone else that wants to warm up their R-389's and try to dig out this signal again this year on 17.2 KC Tom NU4G

From kgordon at moscow.com Mon Jun 7 00:48:25 2004
Subject: [R-390] Shipping R-390's

> Comment on using boxes with "hand-holes". I recently received an R-388 that was shipped in a box with 'hand-holes', apparently since it was a heavy box, someone thought the handhole was a convenient location to pick it up with a forklift, of course it ruined the front of the R-388. Bob Schaefer K6OSM Mccall, Idaho

That is why I build the crates a little bigger, put a "plate" about 3 " down from the top to hold the receiver in, and put the hand-holds ABOVE that plate so that if some idiot uses a fork lift there he can't hit anything. Ken W7EKB

From mikea at mikea.ath.cx Mon Jun 7 07:38:36 2004
Subject: [R-390] Re: Shipping R-390s

wrote: > writes: > Where do you guys purchase these cardboard boxes to ship these heavy R-390 > radios, i need some new ones.

Rich Mish (Miltronics) will sell you a shipping container for an R-390. He used one to ship the R-390 he sold me, and that machine got here in flawlessly-perfect condition. I seem to recall a price of about $50, but I could be wrong. You'll still want to use cardboard tubes around the knobs on the front panel and the RF connectors on the back. Mine was shipped with all the tubes and shields in place. Mike Andrews

From barry at hausernet.com Mon Jun 7 08:13:07 2004
Subject: [R-390] Re: Shipping R-390s

One problem with buying a prefabbed shipping container -- and Hank Arney has them also --

Depending on the exact size of it, you'll pay "dimensional weight" rates of probably at least 43 lbs, and, if the length plus two times the sum of the width and height comes to 108 inches or more, you'll pay the 70 lb. rate, even though the empty container weighs a good deal less -- maybe 10-15 lbs. if the carton is really heavy-duty. That applies to UPS and Fedex Ground -- something similar applies to the USPS.

It may be well worth it, but just bear that in mind -- it doesn't go like a 10 lb. package. Barry

From barry at hausernet.com Mon Jun 7 09:03:41 2004
Subject: [R-390] Re: Shipping R-390s

Ted asked where to buy good cartons, Todd supplied a list of some packaging sellers. However, suppliers like U-Line, etc. generally require you to buy a bale of 15 or usually 25 minimum and the

bales of sizes needed for R-390's and other similar sized boatanchors have to go truck freight -- they're not UPS-able.

Here are some good choices:

-- Best is free. You cannot buy cartons of the quality that some merchandise comes in -- like large computer monitors, computer systems (not just the CPU), certain appliances. A lot of these have the hand-holes -- more about that below. The computer, appliance, office supply chains -- usually toss out the cartons for display/demo items and pay to have trash carted away, so, most are happy to give 'em to you, but you might have to stop by a few times to catch the good ones before they're tossed. You can ask for them to set some aside.

-- UPS customer centers sell good doublewall cartons for reasonable prices. I do not think these are available at UPS Stores. They probably still have the flimsy stuff they sold when they were Mailboxes Etc. Another advantage to the official UPS carton - -it says "UPS" on it and that might help in the event of a claim. There are a few UPS centers that do full blown foam in place (not the little "baggies") for a reasonable price. Don't bother asking the 800 number reps -- they know nothing about them. You'd have to stop by and "reconnoiter".

-- U-Haul does have some good doublewall cartons, though the shape mght not be ideal. Most of the cartons they sell are unsuitable. (Singly ply, lightweight, popout bottoms, intended for people packing and hand carrying their own stuff to the rented truck.) In addition, they advertise the purpose of the box on the outside -- so it should make sense - like "Appliance" or "TV-Electronics" or whatever -- not clothing, etc.
OK -- my 2 cents about hand-holes. These can help avoid "manual droppage", or can induce it, if the carton tears at the holes. Also, the center of gravity may be off -- if it was a big monitor carton which is front-heavy and the handle locations were offset from center. If you are going to preserve them -- best to reinforce with plenty of tape inside and out - -or glue some cardboard on the inside, and then, make an indented seal out of heavy poly so the box is sealed and it's more obvious that it's not intented for a fork lift fork. If in doubt, close up the handholes and seal up with tape inside and out. Barry

From uv199 at hotmail.com Mon Jun 7 09:48:31 2004
Subject: [R-390] please reset my sub to digest mode

Thanks

From w5or at comcast.net Mon Jun 7 11:16:02 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

Yes, a worthy test of receiving skills and equipment! What part of the CONUS do I have to travel to hear this station? Don

From roy.morgan at nist.gov Mon Jun 7 12:38:39 2004
Subject: [R-390] R-390 Visual Alignment

wrote: >John, > >The reference US AS ATC&S ST 32-152 in my note is the manual reference.

I have a PDF version of the manual (file name ST-32-152.pdf), and it is available at:

<http://www.r-390a.net/ST-32-152.pdf> Also, I will mail it to anyone who asks for it. The title is:

ST 32 - 152 VISUAL ALIGNMENT OF RADIO RECEIVERS R 390/URR AND R-390A/URR

USASATC&S 32-152 March 1959

Notes:
1) The title uses the word "alignment" but the word "alinement" is used in the text.
2) Figure 5-4 is supposed to be a sine wave but actually shows an S- hook shape that is not possible as a diagram of a voltage over time (But you can get the idea.)
3) Some of the information relates to non-retrace-blanked situations where the RF sweep is derived from the line voltage and is a sine wave. More modern sweep generators will be more convenient to use.
4) The majority of the procedure is for the R-390/URR (the "non-A") and a brief description of the procedure for the R-390A/URR is given, with many statements that it is the same as for the "non-A".
Roy

From r390a at bellsouth.net Mon Jun 7 15:19:05 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

Has anyone stateside actually *heard* it???? I have tried, but no luck.

From dcsfree at worldnet.att.net Mon Jun 7 15:45:52 2004
Subject: [R-390] am band

Has anyone else in the Chicago area noticed the digital signal on both sides of WIND 560? If that is the kind of interference that broadband is going to make uh oh!!!! Dan

From JMILLER1706 at cfl.rr.com Mon Jun 7 16:04:22 2004
Subject: [R-390] am band

This may be IBOC. (In Band On Channel) digital transmission. See http://antiqueradios.com/forums/Forum5/HTML/001776.html and http://www.rwonline.com/reference-room/iboc/index.shtml This is probably not BPL (Broadband Over Powerlines). When that comes, the entire HF spectrum may be blanketed in areas carrying BPL. Go to the ARRL web site to read all about it. BPL is BAD news for HF.

From roy.morgan at nist.gov Mon Jun 7 16:19:11 2004
Subject: [R-390] am band

wrote: >This may be IBOC. (In Band On Channel) digital transmission. See >http://antiqueradios.com/forums/Forum5/HTML/001776.html

The above link contains the following text, sent by al germond who's been in broadcasting for 40 years:

"Everyone who reads and participates in this Antique Radio Forum should be very concerned about IBOC because analog radio reception is the lifeblood of this great hobby. ...

Earlier this year, Chicago's WIND -- transmitting through a four tower directional array near Gary, Indiana in the Calumet District -- initiated IBOC digital broadcasting during the daytime on 560 kilocycles. So far, the FCC hasn't permitted IBOC at night though there is strong industry pressure to force the Commission to lift this ban. "

I'm hoping that both BPL and IBOC will be like the Edsel: no one will want it. Roy

From dcsfree at worldnet.att.net Mon Jun 7 16:25:11 2004
Subject: [R-390] am band

I used to able to dx ST Louis on 550 during the day! Not no more! I knew it wasn't BB I was just saying if it like this...

From ToddRoberts2001 at aol.com Mon Jun 7 20:11:07 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

writes: Has anyone stateside actually *heard* it???? I have tried, but no luck.

I was wondering the same thing. I don't know of anyone stateside who has ever claimed hearing it. They picked a terrible time of the year for a VLF transmission. In the middle of horrendous summertime static that eats up any worthwhile VLF reception. You can count on probably 60 over S9 static levels at that frequency. I'm not sure of their power level either? I was able to hear Rugby GBR on 16 KHz many years ago when they were still on the air but that was during wintertime when noise levels were low. GBR was not a very strong signal at that time either. 73 Todd Roberts WD4NGG.

From ham at cq.nu Mon Jun 7 21:22:39 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

Hi, Assuming they crank it up to full power they can run 200KW out of their rig. They are running what's basically a big motor generator set that just happens to put out a bunch of high frequency audio (17.2 KHz) instead of low frequency audio (60 Hz).

There have been reception reports from the eastern US. I have not been able to track any down from the rest of the country.

Since the speed of the motor controls the frequency they must wander around a bit by modern standards. That pretty much rules out all this computer enhanced sound card reception. You pretty much have to hear them on a real radio or not at all. Real radios forever .... Enjoy! Bob Camp KB8TQ

From saglek at videotron.ca Mon Jun 7 21:45:17 2004
Subject: [R-390] SG-25

Purchased a SG-25 Signal Generator last weekend at a local Hamfest for $15 CDN. Asking price was $20, offered 15 and he took it. Should have offered 10. I bought it with the intentions of removing the main tuning capacitor to use in a crystal radio. Fair Radio sold them at one time for this purpose. The capacitor is a high quality part, ideal for high performance crystal radio. When I opened up the unit I just did not have the heart to part out such high quality piece of test equipment.

The generator is in good condition. It operates well. O/P seems to be within spec for frequency and level. All functions work. The only problem is that after about 45 minutes of operation all modulation is lost. Could be the paper caps will change them out. I have a URM-25F which had a similar problem. After changing the caps the problem was still there. It finally turned out to be the meter diode. Found this by touching the diode lead with a hot glass rod. The modulation dropped out within a second or so. Replaced the diode and the generator has been working for about 4 years now.

I have number of questions about this unit.

1: What is the history.What are the differences, if any with AN/URM-25...? The unit is sure nice inside. Very clean but will be a problem if some caps down in the innards have to be replaced. The ID Tag has this printed on it.

Trad STANDARD SIGNAL GENERATOR MODEL SG-25 SERIAL NO. 544 TRAD ELECTRONICS CORP. ASBURY PARK N.J.

2: From what I can find out this is civilian version of the AN/URM-25, version C, D, I don't know?

3: Is there a WWW site with URM-25 history.

4: The front panel is not painted. The aluminium finish appears to be either a "silver" anodize or a clear chemical film. Similar to araldite. I would like to refinish the panel. Either redo in the original finish or paint.

5: The case is painted grey, about the same colour as the URM-25F. It is stencilled with "AN-URM-25-D". Is this the norm.

6: The signal Generator came with these accessories.

1: IMPEDANCE ADAPTOR MX-1487/URM-25D

2: IMPEDANCE ADAPTOR MX-1487/URM-25D PART OF AN/URM-25H

3: TEST LEAD CX-1363/U PART OF AN/URM-25H

4: ANTENNA SIMULATOR SM-35/URM-25D PART OF AN/URM-25H

5: CG-409/U (0' 5') (Have 2 of these. They are original with the aluminium cable marker. RG-58C/U coax.)

Comments and advice on any repair or refurbishment would be appreciated. I also need information on the reliability of paper caps in the metal tube, with the one end soldered to the case for the ground connection.
I have requested in with W.J. Ford Surplus here in Canada to rent, for thirty days, a manual. If I can't get one and any one out there needs any of the extra accessories maybe a trade could be arranged or trade for a missing accessory. That's it for now. Hope I didn't bore anybody. Al

From bill at iaxs.net Mon Jun 7 22:45:51 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

asked, "What part of the CONUS do I have to travel to hear this station?"

Well, the 389 performed best at sea. I'd recommend a ship at the 200 mile limit in the northern Atlantic. The ship should be large enough to support an LF antenna array. No problem with the ground, though. I'd ask my son, but his fishing party boat is only 55 feet and I don't think his license extends beyond fifty miles.

Know anybody with a battleship or a cruiser? Maybe one of those diseased cruise ships would let you string an antenna. Think of the publicity.

Wait a minute, there's the John W. Brown up in Baltimore, a 400 foot Liberty Ship that already has a pretty good antenna and a roomy radio shack. You'd want good weather if you can't come up with several thousand tons of ballast, though. Gotta get the center of gravity way below the center of buoyancy, don'tcha see.

If a ship isn't possible, then try the northernmost seacoast of Maine - away from noise sources, of course.

My pleasure to share these provocative ideas with you as I wait in Minneapolis for the next round of storms. Wish those Texans would quit importing their heat and humidity. Bill Hawkins

From r390a at bellsouth.net Tue Jun 8 07:25:08 2004

Guess I should get the RBL polished and running between now and then...

From JMILLER1706 at cfl.rr.com Tue Jun 8 09:29:31 2004
Subject: [R-390] am band

The BPL industry is "supposed" to only cover 2 - 80 Mhz, so in theory they will not interfere with AM band... but take your experience with IBOC and multiply it throughout the entire 2-30 HF band and you will see what BPL may be like when it starts up. The ARRL web site has some actual recordings of the noise BPL generates in the ham bands.

From tetrode at comcast.net Tue Jun 8 10:38:33 2004
Subject: [R-390] am band

I think this is what I've been hearing on WBZ 1030 Boston, it sounds like a couple of white noise sidebands on either side of the carrier. Definitely not BPL. John

From jimamos at cisco.com Tue Jun 8 15:16:13 2004
Subject: [R-390] SG-25

I bought a URM-25 C at Dayton in which the modulator didn't work. It also turned out to be one of the paper capacitors. After replacing the cap, everything worked great. It was one of the ones that was part of the oscillator function, and not a coupling capacitor. 73's Jim N8CAH

From chacuff at cableone.net Tue Jun 8 18:50:22 2004
Subject: [R-390] Re: Shipping R-390s

My experience has been just the opposite....FedEx has trashed more of my stuff than UPS. I watched in horror as the FedEx man rolled a dolly down my walkway with parts falling out all the way through a hole they had torn in a very nice box. I've had excellent results with UPS. I can't say I have ever had a piece of equipment damaged as of yet. I've shipped R-1051's all over the country...received 390's, SP-600's...no damage.

Maybe it's a regional thing....

I can tell you the key to all of it is the packing job.....if you get it packaged properly any of them can get it across the country!

I can't say I am too fond of foam in place.....the foam is not dense enough for the weight of most of the large radio's. The blue foam sheeting is the best! Cecil Acuff

From barry at hausernet.com Tue Jun 8 20:04:26 2004
Subject: [R-390] Re: Shipping R-390s

Hi Cecil & gang: > My experience has been just the opposite....FedEx has trashed more of my stuff than UPS. <snipped> > Maybe it's a regional thing....

Yes, probably -- and even down to the route level. For a couple of years, I had the same UPS driver and he was pretty good. The new guy -- I dunno -- kind of clumsy, so at some point, he may create a regional difference all his own ;-(

As for "going postal" -- some people swear by the USPS (and some people swear at it). Around here all they have are those tiny propane vans and the carriers are highly variable as to sheer strength. Some carriers are rather frail. Questionable as to how they can handle the heavy pieces.

> I can tell you the key to all of it is the packing job.....if you get it packaged properly any of them can get it across the country!

I don't know if I'd go that far, but yes, defensive packaging is the key - and then pray it doesn't fall off the high conveyor or somebody's poorly packed anvil doesn't crash into it.

> I can't say I am too fond of foam in place.....the foam is not dense enough for the weight of most of the large radio's.

There are two kinds of foam-in-place. There are the individual "baggies" that expand chemically, but are usually too small to fully envelop the piece and the stuffing is made up of several bags worth. That has its limitations. Then there's the true in-place stuff that comes out of a hose into silvery bag things. That's also highly dependent on the practitioner. Sometimes it's quite dense, sometimes lacking.
>
> The blue foam sheeting is the best!

That and polyethelene foam which I see from time to time -- probably made of recycled soft drink bottles. Supports a lot of weight and has flex-rebound to it. I don't know where to find it, though. Anybody know? (probably Hank knows). Barry

From bill at iaxs.net Tue Jun 8 22:32:08 2004
Subject: [R-390] Re: Shipping R-390s

"That and polyethelene foam which I see from time to time -- probably made of recycled soft drink bottles. Supports a lot of weight and has flex-rebound to it. I don't know where to find it, though. Anybody know? (probably Hank knows). Barry"

Got a heavy piece once packed in soft drink bottles. Heavy box lined with soft drink bottles with their caps on tight. Worked fine. Never saw another one, though. Don't drink flavored water, so haven't tried it myself. Bill

From kgordon at moscow.com Tue Jun 8 22:56:15 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

wrote: > Since the speed of the motor controls the frequency they must wander > around a bit by modern standards.

Actually, from what I have read on the subject, Alexanderson alternators incorporated a very unique, mostly mechanical, frequency control which kept them within a very few percent of their assigned frequency. I don't think drift would be objectionable even to Spectogram. > Real radios forever .... YEAH! Ken W7EKB

From w5or at comcast.net Wed Jun 9 00:08:16 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

A few years back, Al Klase posted a link to a SAQ recording, received on a WJ LF receiver and processed with a PC sound card and software. Here is that link with the details of the 'capture' and the recording.
http://www.eht.com/oldradio/awa/events/grimeton/grimeton.htm

So at least the signal is stable enough to permit that. Judging from comments received it is likely that only those on the east coast might hear it this summer, and then only if they are lucky and in a noise free listening post. In case other readers don't know what we are talking about, here is a reference.

http://www.alexander.n.se/
Good pictures of the motor/generator and antenna farm. Most of the web pages are non-English.

And, Jerry Proc's history: http://webhome.idirect.com/~jproc/radiostor/aalt.html

So, put a vlf converter on your R-390 and listen up if you are on the East coast. Be one of the few in the US to hear it. Barry Hauser, is Radio Central on Long Island marked or observed in any way? It was a former alternator site, with huge antennas. Don Reaves

From N4BUQ at aol.com Wed Jun 9 09:07:18 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

Hmmm. Looking at the spectrograph, I see "Grimeton", but it looks like the next word is "was". The text quoted in the website has "has been". Just curious. Too much time on my hands? Barry - N4BUQ

From goode at tribeam.com Wed Jun 9 13:43:12 2004
Subject: [R-390] Don Reaves - SAQ 2004-07-04

The audio recording seems to stop right at the time in question. I can't look at a picture and copy CW. By the way, it has a nice note for a station that may be moving all over the spectrum (previous stability emails). Anyone know how to get the complete audio recording? Steve, K9NG

From w4pnt at velocitus.net Sat Jun 12 17:47:34 2004
Subject: [R-390] SPECIAL R390A PANEL (6kc & 8kc)

Have you ever considered a narrower filter like 6kc & move the 8kc filter to the 16kc slot, eliminating 16kc? This means re-silk screening refinished panel that puts 6kc where 8kc position was & changed 16kc to read 8kc with same fonts as original. I have some pics of one done this way. Its pretty neet & I think I will modify my 390A this way when I restore it. That 16kc filter is much too broad & I seldom use it. But I use the 8kc a lot. And 6kc is just right for AM operation with reasonable band conditions.

Because of a request for 2 special R390A panels, I have the screen in stock to do many more this way. Cost Will be $135. for this "special", front side. Regards Dee

From r390a at bellsouth.net Sat Jun 12 22:38:53 2004
Subject: [R-390] SPECIAL R390A PANEL (6kc & 8kc)

What about also doing a small panel with the markings screened onto it? Panel you say? What is Tom talking about? Well, something similar to the blank panel the R-725 has on the selectivity position, but with a hole for the filter switch. Circular or rounded edge square, take the nut off the switch shaft and put the plate on, covering the original markings for those of us with either engraved or silkscreened panels You know how cheap some of us out here are! hehe Probably mean making another screen though. :-(Of course the $135 for an entire isn't bad. Tom NU4G

From ham at cq.nu Sun Jun 13 09:01:12 2004
Subject: [R-390] SPECIAL R390A PANEL (6kc & 8kc)

Hi, With the stock audio chassis the 16 KHz filter isn't as useful as it might be. On a radio running an improved audio chain the 16 KHz filter can be nice under the right conditions. I wouldn't use it on a crowded band though ...

The filter that really does the major work around here is the 4 KHz on AM. It's about as narrow as you can get and still get a usable signal. The real limit on what you can do is finding the old filters in the right bandpass and impedance combinations. Enjoy! Bob Camp KB8TQ

From tetrode at comcast.net Sun Jun 13 10:05:18 2004
Subject: [R-390] SPECIAL R390A PANEL (6kc & 8kc)

> Hi > > With the stock audio chassis the 16 KHz filter isn't as useful as it > might be. On a radio

running an improved audio chain the 16 KHz filter > can be nice under the right conditions.

Or when tapping of the Diode Load output to a hi-fi amp and speaker.

>I wouldn't use it on a crowded > band though ...

I like to use the 16 kc BW when monitoring 29.0 MC or so for activity, it increases the chances of hearing something if the band opens. John

From femyers at attglobal.net Sun Jun 13 10:33:23 2004
Subject: [R-390] r-390a chirping CW

Hello, I have a capehart r-390 a sn 557 that is working quite well except for a couple of problems. All bands and all filters work. There are a couple of problems though and I'm asking the learned group on this list for any quick information or ideas.

Problem #1:
Good clean CW signals chirp when heard on the 390a. It sounds like the BFO changes frequency with AGC levels. Checking the voltage at the audio module and it's a steady 150.1 volts. Haven't checked farther into it.

Problem #2:
Audio level is low but sounds good. I have to run the Local Gain control wide open to get a comfortable listening level. This problem has crept in over the past year. All tubes have been replaced. the radio has been re-capped, including the filter capacitors in the audio module. It has been aligned and the PTO is very linear after setting the end points. The rig works very well except for the above mentioned problems. I've been away for about 9 months and haven't used the rig. Am planning on getting into it again after building a set of test wire extender so I can check into voltages and signals. Just thought I'd put out the symptoms to see what advice I could gather. 73 DE AG4ND Forrest Myers

From JMILLER1706 at cfl.rr.com Sun Jun 13 18:15:20 2004
Subject: [R-390] r-390a chirping CW

I have found that replacing the first and/or second mixer tube may help the chirp. Changing AGC on the mixer seems to cause it to load down th oscillators as the AGC increases, pulling them off frequency slightly. Also could be another suspect tube, maybe an osc. tube.

From vk2abn at batemansbay.com Sun Jun 13 20:08:28 2004
Subject: [R-390] Filters

I have converted an IF module to selectable sideband by replacing the 2khz& 4khz filters with assymetrical upper7 lower side band filters that I bought for 50$ for the pair on E place ,Iused a 455.000 crystal out of the 1khz filter to crystal lock the bfo and I put a 6be6 in the bfo and converted to a product det as per HAM RADIO article it works beautifully the audio lines are switched when u turn on the BFO on the front panel and the only conversion is in the I F module ,Of which I have the odd spare ,hope this is of interest , I have three 390A rxs and they perform better on 40 meters among the broadcast stations than my late model 51S1 or my 8054A recievers

From uvc at acninc.net Sun Jun 13 22:31:21 2004
Subject: [R-390] For sale or trade

Collins 75A4 3 owners stock good + cond, for sale or trade for late model HF rig 6- Meter duplexers 7 in all trade or sale CDE 44 early style 75.00 UHF duplexers 2 sets with harnessing trade or sale Cardmatic one of the last models 18374-L2 $650.00 or trade KB7FQR Brad

From JMILLER1706 at cfl.rr.com Sun Jun 13 23:36:20 2004
Subject: [R-390] r-390a chirping CW

Another thought: Check to be sure the 150V regulator tube is firing (it's mounted on the audio module). If the VR tube is bad, the 150V line may not be held constant, and changing AGC could cause it to change as the tubes pull more/less current. I think the BFO (and maybe the PTO) is run off the 150 vold line, so if it's changing a lot the BFO would tend to "chirp". Put a VTVM on the 159 line and watch it.....

From w7itc at hotmail.com Mon Jun 14 01:30:33 2004
Subject: [R-390] LED replacements

The below link has what I think are LED replacements for the two 328's in the dial.

http://www.led.net/datasheets/Pages/fsn_nsn_qualified_based_leds/67b.htm<http://www.led.net/datasheets/Pages/fsn_nsn_qualified_based_leds/67b.htm> Kenneth A. Crips W7ITC

From w7itc at hotmail.com Mon Jun 14 01:38:26 2004
Subject: [R-390] Not sure if this was sent.

If I am not mistaken the link below has a drop in replacement for the 328's in the R390A dial
http://www.led.net/datasheets/Pages/fsn_nsn_qualified_based_leds/67b.htm<http://www.led.net/datasheets/Pages/fsn_nsn_qualified_based_leds/67b.htm> Kenneth A. Crips

From JMILLER1706 at cfl.rr.com Mon Jun 14 15:39:27 2004
Subject: Fwd: Re: [R-390] r-390a chirping CW

This has taken on an interest to me because I have two 390a's here, one is a Stewart-Warner, the other a Collins (almost). I notice a very slight "chirp" barely noticable in the SW as AGC changes. However, it was much more noticable in the Collins until I changed a mixer tube, ...it is lessened, but still noticable, maybe a tad more than the SW now (judging by ear). My theory was that the AGC was pulling on a mixer tube, which then pulled more on one of the oscillators causing it to "chirp". Changing the tube reduced it. I also observed the +250 volt line which drives the xtal oscillators and other stages, and noted a moderate change in its level as AGC changed (a change in AGC would cause all controlled tubes to pull a varying plate load from that line). The 250V line in both radios seemed to pull the same amount, but the Collins still show a little more "chirp" as AGC changed. I would guess by ear to be 20-40 Hz. Is this normal? Would be interesting to hear from ot hers... turn your BFO onto a strong, stable signal and run RF Gain up and down. ... you may notice a slight pulling in beat note. Do others note this also?

From jbrannig at optonline.net Mon Jun 14 19:34:38 2004
Subject: [R-390] r-390a chirping CW

I had a problem with a 75S-3B that drove me crazy. On CW and SSB there was distortion on the signals, AM was OK. It almost sounded like VHF aurora distortion. I checked everything.....a scope on all the oscillators..the whole works....I tore apart the product detector circuits and no luck.....I put a CV-591 in the IF chain and it was still there!!!!

Finally I changed all the tubes, AGAIN.....and it was gone.... Backtracking through the tube substitutions I discovered that the PTO was FM'ing. This did not show up on the scope because I was using a signal generator, and not an SSB or CW signal. In the end, I replaced all the components in the PTO, except the coil. So far so good.... Jim

From stevehobensack at hotmail.com Mon Jun 14 20:30:34 2004
Subject: [R-390] r-390a chirping CW

I think the recomended way to copy cw is in MGC. Does the radio chirp in MGC? (local gain high, rf gain adjusted for volume). If the set has an added product detector or audio derived agc, it shouldn't chirp. (rf gain at max, local gain adjusted for volume). You might monitor the pto canister output signal and the crystal osc output signal and see if it chirps there. 73...Steve..KJ8L

From mjmurphy45 at comcast.net Mon Jun 14 21:10:25 2004
Subject: [R-390] r-390a chirping CW

I wonder if the chirping R390A fixes bona fide chirp by undoing it? De-Chirping in effect. Of course the chirp would have to be going in the right direction - like upper side chirp and lower side chirp. MM

From w9wis at charter.net Tue Jun 15 09:15:51 2004
Subject: [R-390] OT:FS: AN/PRM-10 Grid Dip Oscillator - New

I need to thin the heard a bit again and thought I'd offer this fine instrument here on my favorite radio lists before listing it in other pastures. I imagine I'll regret selling this as it's pretty rare in this condition but....
AN/PRM-10 military grid dip oscillator. New, unissued and unused. It was still in the protective paper when I got it. All coils and operation/maintenance manual (copy) included. A few small storage markes on the heavy gasketed protective case. No dents, gouges, rust, big scratches etc... a bit of MFP still on the rubber cords which are still coiled in the paper wrapper.

This is one acknowledged to be of the finest GDO's ever made. Check information available on the 'Net. First to respond with a firm "...for sure I'll take it..." gets it. $135 shipped UPS to the lower 48 States. Mike, W9WIS

From tetrode at comcast.net Tue Jun 15 10:24:20 2004
Subject: [R-390] r-390a chirping CW

Not too unusual for radio's of this era when their RF gain is run wide open for CW copy. My GPR-90 has the same chirpy phenomena which is minimized by using SLOW AGC or eliminated by backing

down the RF gain.

Got to remember these old radio's have free-running oscillators with no buffering between them and their loads, and mostly unregulated supply voltages. Today's synthesized radios will spoil you in this respect. John

From w9wis at charter.net Tue Jun 15 12:17:56 2004

The AN/PRM-10 has been SOLD. Thanks..... wow ! I wish I had more to sell .... had lots of people wanting it. Mike, W9WIS

From w9ran at oneradio.net Tue Jun 15 23:05:01 2004
Subject: [R-390] Rack Release

If you're a rack man, this product may be of interest: http://www.rackrelease.com/

These rack fasteners are a stud that's threaded on each end, one fits the standard 10-32 rack threads and the other fits a knurled black anodized cap. You first insert the studs, then remove the caps and guide the unit into position and secure it with the caps. Neat, safe solution. Same source also sells conventional rack fasteners. 73, Bob W9RAN

From r390a at rcn.com Wed Jun 16 11:07:53 2004
Subject: [R-390] Rack Release

They have also been running these on eBay at BIN prices below their webpage 'online' price - query seller "rackrelease"

From r390a at bellsouth.net Wed Jun 16 14:11:04 2004
Subject: [R-390] "Junk" R-1051 needed

I am looking for a junk 1051, or at least a set of chains. I recently sold a fellow a 1051G, and while I checked it before it was packed to make sure it was fully operational, even photographed it in every detail before shipping, he insists "it is junk" and "the rubber belts are shot" Anyone have a set of chains? If not, anyone be willing to tell me what lengths I will need to get if I order them myself -- since I no longer have an R-1051, I don't have anything to go by. Thanks all Tom NU4G

From r390a at bellsouth.net Wed Jun 16 18:08:45 2004
Subject: [R-390] DSP 390... hmmm

Found on the boatachor list, posted by Chuck Swiger --

Now here's an idea. I use my 756 Pro to demod the IF out every now and again, but this looks like it might be fun. Tom NU4G

Date: Wed, 16 Jun 2004 17:04:27 -0400 (EDT)
Subject: R-390A to digital signal processing

Gang - Here it is, someone with an R-390A, a downconverter to ~13 kHz, pc sound card and from there on out it's all in software.

http://www.detomasi.it/en/project.html --Chuck kb4new

From femyers at attglobal.net Wed Jun 16 18:57:30 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

Hello All,

Found the problem causing the low audio in my Capehart SN 557. It was C537 that changed from a capacitor to a 33k resistor. It was in the cathode circuit of the limiter. I didn't have a direct replacement for it so put in one, temporarily, about ten times larger than the original 1800pf. Audio is great and it seems to have helped the CW chirp too, don't ask me how. Have ordered replacement capacitor of the proper size, actually a 1000 pf and an 850 pf which will be paralleled.

Now, I have a strange problem with the PTO. If I tune up from 0 to 1000, it is very linear, within a couple hundred hertz all the way. If I tune down from 1000 to 0, it is very linear, within a couple hundred hertz except at 100khz where it is suddenly about a kHz off. Going on down to 0 it is back on. If I approach the 100khz mark from about 10 kHz below, it's right on the money. If I approach it from about 10 kHz above, it's about a kHz off, low. Scratching my head for a while, I figure there must be some mechanical problem inside the PTO but can't imagine what it is unless the core is dragging on the coil and causing it to move at around the 100 kHz mark.

There is no play in the gear train or the PTO shaft coupling. When tuning at the 100 kHz mark, any slight movement of the tuning knob will cause a change in the frequency of the PTO. Any ideas? Should I just live with it? Forrest Myers

From ham at cq.nu Wed Jun 16 21:43:26 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

Hi

You don't mention who's PTO you have so this may not be exactly right for the PTO you have. The simple answer is that yes you have a simple mechanical problem with the PTO.

With the original design the PTO is linearized by a bunch of little sliders that make up a zig zag track that runs the length of the coil. There is a follower that runs along this track and it drives the compensation process. If you have a steep spot on the track around the 100 KHz point and a weak follower spring then it will run "up hill" just fine. When you come back and try to go "down hill" the compensation will not be repeatable.

On a totally unrelated note the set up of the sliders on the track was still remembered twenty years later as "the worst job they ever made me do here" by the line workers who built the Motorola PTO's .... Talk about hard to explain your hobby to somebody .... Take Care! Bob Camp KB8TQ

From BRingwoo at csir.co.za Thu Jun 17 03:59:00 2004

Subject: [R-390] Don Reaves - SAQ 2004-07-04 (Dumb question)

No R 398 :(. Planning to use a sound card with a tuned filter ahead of the microphone input + software. Dumb question - how does one set about winding the VLF coils - ? Are they just pile wound on a transformer core (leaving an air gap) like a power supply choke, or are they just like MW universal windings with lots of turns what do members suggest ? What do radios like the R 398 use ?

Sorry for the simple questions, but I suffer from dark ignorance concerning VLF. Don't even know if VLF from Grimeton will cross the equator. - Bryce

From wbreeden at tconl.com Thu Jun 17 07:20:37 2004
Subject: [R-390] Re: Rack Release

These work and look great on my R-390A and CY-979. The long stud version works best with the thick panel on the 390A. Bill - AB0FX

From femyers at attglobal.net Thu Jun 17 09:34:31 2004

Hello Bob,
Thanks for the PTO information. My PTO is a Progressitron and is extremely linear except when going up hill at around the 100 khz point. I did some more testing last night and found that it is worse than I'd thought. The worst point is at 105 khz where it is 2 khz low! Going uphill, the non linearity starts at 80 khz and gets worse up to 105 khz where it is 2 khz low. Then, at 110 khz it is fine at only 200 hz low. Remember, when tuning downhill, the linearity is just fine from 1000 to 0.

Do you know if the Progressitron PTO works the same as the Motorola?

I'm seriously thinking about taking the thing apart and looking at it. If the spring is weak, is it repairable? Thanks again. Forrest Myers

From jordana at nucleus.com Thu Jun 17 09:47:38 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

It's entirely possible that the spring is weak, but it could also be that the pivot is gummed up with dried lubricant...if the 'bend' of the wafers in the corrector stack is steep, it can cause the pinch rollers to 'open' and stay that way until some other contact cause it to close back up again and continue normally....whatever you do, don't change any of the corrector stack settings...! 73 de Jordan...

From mmdues at hal-pc.org Thu Jun 17 15:24:39 2004
Subject: [R-390] VLF question

I saw something on the following web site regarding VLF. He uses a 240uH loopstick and a 13 to 400 pF variable broadcast capacitor with a six position switch that places from 390 to 1800 pF fixed capacitors across the broadcast variable to resonate in the VLF spectrum.

Visit KE9OA's Shortwave Receivers and Other Cool Stuff at:

http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html

http://home.att.net/~n.gianakopoulos/html/active_multiband_loopstick.pdf

Regards, Marshall Dues, WB5MYO Katy, Texas

From ham at cq.nu Thu Jun 17 19:11:11 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

Hi

The PTO's are all repairable regardless of who made them. Since it's a mechanical problem it should be pretty easy to figure out. You may find a bunch of what used to be grease or you may find a spring that's past it's prime. I doubt you will find anything more complex than that.

Make sure you do a read through one of the manuals before you pull the PTO from the radio. It's not real hard but if you do it right it's a lot easier to get everything running after you drop it back in. Enjoy! Bob Camp KB8TQ

From femyers at attglobal.net Thu Jun 17 19:57:57 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

Well, today I took the PTO apart. Inside it looked like a new one. All the lubricant was still very moist and the spring on the stack follower was nice and strong. I figured out the problem but didn't fix it. It appears that the PTO was defective when manufactured and when it was linearized, it was done only while tuning uphill.

The correction stack has a very sharp bend right around the 100khz point. I checked both rollers as they passed the sharp bend and they both followed just fine. Looking closer, I noticed that there was a slight gap between the wafers in the stack. Looking even closer, I noticed that, when tuning uphill, there was so much pressure on the wafer at the peak of the bend that the wafer actually bent under the load and straightened out after the roller passed it. When tuning down hill, the wafer wasn't under much pressure at all and didn't bend at all, thus the difference in the linearity between tuning up and tuning down.

I didn't see any easy way to fix it so just put it all back together. One nice thing is that the rig still works and the linearity didn't change, whew! Guess I'll just live with it unless anyone on the list has a way to fix the problem.

I suppose, I could change the wafers such that it tuned correctly going downhill and then fill the gaps between the disks with epoxy or something so that they wouldn't bend while tuning uphill. Sounds like a lot of tedious work to me. Forrest Myers

From mikea at mikea.ath.cx Thu Jun 17 20:12:13 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

Well, the easiest way to fix the problem would be to get a "new" (to you, at least) PTO, from Fair or someone who's parting them out, or from one of the R-390/R-390A fixers. Good luck, whatever you choose to do. Mike Andrews

From fev at ciudad.com.ar Thu Jun 17 20:25:17 2004
Subject: [R-390] R390A

Hello, I bought here in Argentina a R390A manufactured by Collins. It works good, maybe not so good like I suppose it must work , but my question now is how smooth must be the tuning , in my case is a little hard and I get a little tired tuning it if I compare it with other like the TS830 or the old SX100 I have. It is posible working on it to obtain a nice tuning or it is like it is? The second problem I see or feel is that it had some play in the mechanismus to tune, is posible to adjust that or this is not posible? Maybe my question are stupid but if one of you say me that is possible to make the tuning better my sicological energie will be stronger to start with the restoration of this receiver. Thanks in advance for your comments and sorry for my not good english. 73?francisco viegener LU3eec

From ham at cq.nu Thu Jun 17 21:19:24 2004
Subject: [R-390] R390A

Hi, Compared to most radios the R-390 takes more effort to tune. The drive system for the rf and if tuning slugs creates a significant load on the tuning knob.

Lubrication and cleaning of the gear train and the tuning rack mechanisms can reduce the amount of drag. A full blown tear down of the gear train can sometimes do a lot of good. That's a lot of work. I would not recommend it if you only have one radio. Having a second one handy when you reassemble the radio is *very* useful.

There should be no noticeable backlash in the tuning system. In other words when you turn on the BFO and tune a carrier it should not have a "dead spot" when you reverse the direction of tuning.

Some apparent feel of mechanical "slop" in the tuning system is normal. The spring driven slug racks are the source of most of it.

As long as the tuning shaft from the tuning knob to the PTO is in good shape you should be able to tune a signal very well. This includes CW signals through the narrow filter. If that is a problem then I would take a look at the coupling between the PTO and the tuning shaft. There *should* be a spring on the coupling. If the spring is missing then you will have a bit of a dead spot when the tuning direction is reversed. A spring from a ball point pen can be used to do a quick fix of the problem.

An intermediate fix on the tuning system is to pull the RF deck out of the radio. You than then do a much better job of cleaning the gears and tuning racks. It's not as good as a full tear down. It is a lot less trouble than tearing the whole gear train apart.

Before you do any significant work on the radio I would recommend getting a manual and reading it carefully. There are several good ones you can download from the internet. People also sell them if you prefer a printed manual. Hope that helps .... Bob Camp KB8TQ

From ToddRoberts2001 at aol.com Thu Jun 17 22:00:56 2004
Subject: [R-390] R390A - Re: Hard Tuning

writes: Hello, I bought here in Argentina a R390A manufactured by Collins. It works good, maybe not

so good like I suppose it must work ,

One common cause of hard or stiff tuning in the R-390A is a misaligned front-panel bushing for the main tuning shaft. First remove the main-tuning kilocycle-change knob. Then take a large crescent wrench/adjustable wrench and loosen the large hex-nut that holds the tuning shaft bushing in place. Loosen it just enough so that you can turn the whole bushing freely. See if that frees up the stiff tuning. If so then re-tighten the large hex-nut to secure the bushing in place - make sure the tuning shaft still turns freely after you do this, and apply a drop or two of oil where the main-tuning shaft comes through the bushing. I have seen several R-390A's that had very stiff tuning due to a misaligned front panel bushing. After aligning the bushing the tuning became easy and smooth as silk. I believe I got some very good deals on a couple of R-390A's that had this problem but the seller didn't know how to fix it and probably thought there was something major wrong with the tuning being so stiff. This is just a starting point. There can be many causes of hard or stiff tuning but always best to check the simple things first. 73 Todd Roberts WD4NGG.

From r390a at bellsouth.net Thu Jun 17 23:14:31 2004
Subject: [R-390] Re chirping CW and low audio plus strange PTO problem.

>It's entirely possible that the spring is weak,

The spirit is willing, but the spring is weak????

Had the same problem with one of my spare PTOs a couple years ago, it was indeed the spring on mine. Tom NU4G

From pbigelow at us.ibm.com Fri Jun 18 10:19:35 2004
Subject: [R-390] R390A

Hello,

The R390a will always take a bit more effort to tune than any receiver with an encoder or a simple VFO. With some rebuild work and lubrication, the R390a can be made a bit easier to tune. The play noted during tuning could be the result of improperly set backlash gears or the oldham coupler may be worn. If the olham coupler is worn, it may be possible to reduce play by sandwiching some tough, thin, plastic wrap between the coupler and its mate, thus filling up the small gaps. Carefully adjusting the beveled gears for the Veeder-Root mechanical readout can reduce the play in that mechanism. Best regards, Paul Bigelow

From JMILLER1706 at cfl.rr.com Fri Jun 18 10:58:39 2004
Subject: [R-390] R390A

There is also a spring on the Oldham coupler, set between two posts protruding from the two halves that sandwich the coupler. If this spring is missing, backlash will be very noticeable. If the coupler is sandwiched too tightly, PTO instability can result as you tune due to excess pressure on the PTO shaft. My manual says there needs to be 1/32 inch gap between the coupler and the two sandwich halves (whatever you call them), so that the coupler is free to move slightly.

From femyers at attglobal.net Sat Jun 19 08:50:01 2004
Subject: [R-390] Mini BNC

Hello Listees, Does anyone on the list have a source for the mini BNC connectors as used in the 390a? I found a source for the rg-187, Skycraft in Orlando, but no luck on the connectors. Forrest Myers AG4ND

From terryo at wort-fm.terracom.net Sat Jun 19 14:53:30 2004
Subject: [R-390] Mini BNC

What do you need? I have a box of them I have been intending to post for while. Male-Male cables, Male-BNC to Male mini BNC cables, panel mount female, cut ends with male or female. Terry O' WB9GVB

From terryo at wort-fm.terracom.net Sat Jun 19 15:41:49 2004
Subject: [R-390] mini-BNC relays available

I also have a few mini-BNC coaxial relays. Three mini-BNC connectors (common - normally open - normally closed). They are small, about a 1-1/2" base and 1-1/2" high and I think the coils 117 VAC. These are high quality units removed from Watkins Johnson control units that handled 1 GHz signals. $5.00 each plus priority postal shipping. Best, Terry O' WB9GVB

From pmills7 at houston.rr.com Sun Jun 20 06:25:32 2004
Subject: [R-390] Manson Labs R-390A???

Saw this one on eBay and suspect it is a Manson Labs unit with wired in relays.....no tag and extra bnc fittings on the rear.....
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4673&item=5705754859&rd=1

From ham at cq.nu Sun Jun 20 09:17:33 2004
Subject: [R-390] Manson Labs R-390A???

Hi

Well it's certainly a Manson labs chassis and wiring harness. With the plate still on top of the RF deck and the angle of the photos it's a bit hard to tell if all of the Manson stuff is still in there. If you already have a Manson synthesizer but no radio I'd say go for it. If you don't have the synthesizer then it's just another R-390 with some weird wires in it ... Take Care! Bob Camp KB8TQ

From dwade at pacbell.net Sun Jun 20 11:29:57 2004
Subject: [R-390] Manson Labs R-390A???

NOT to start another shipping thread....but... I'd worry about the kind of packing I'd get for the $10.00 packing fee. Dennis

From glennmaillist at bellsouth.net Sun Jun 20 17:07:33 2004

Subject: [R-390] Manson Labs R-390A???

Someone wanted it pretty bad. It sold for the buy-it-now of $999.00 73 Glenn

From pmills7 at houston.rr.com Sun Jun 20 17:52:10 2004
Subject: [R-390] Manson Labs R-390A???

He's the fellow who bought the synthesizers from me. Now he has almost has a complete Manson setup. I say almost because the synthesizers can control two receivers so you can have a diversity setup. Phil W5BVB

From pulsarxp at earthlink.net Sun Jun 20 17:47:20 2004
Subject: Fw: [R-390]

I went to the Arlington Ham Comm in Texas yesterday and bought my third R-390A. It was a Motorola, serial # 1587. All meters are intact but the chap who sold it to me for $250 said it does not work on all bands and he didn't know what was wrong with it. He said he found it in a corporation's disposable pile. Now I have 3 of them to restore! (The other two are EAS units). The Motorola unit looks clean and the front panel is nice but not perfect. All the covers are there.

What would be the most logical reason for some bands not working? I guess crystals would be suspect and maybe switch contacts, if nobody was screwing slugs around in the unit. (I'll check to see if rack coil slugs are moving).

Also, what do you guys think of the latest Electric Radio's article (June, 2004) on improving R-390A audio? I'm thinking of trying this if I ever/when get my radios up and running,

I just ordered the two sets of Hi-Res videos on the R-390A as well as the set for the SP-600JX but they have not arrived from Hi-Res as yet. My two cap kits for my first two R390As have been sitting on the work bench for weeks now. Maybe the videos will get me going! Lee, w0vt Houston

From glennmaillist at bellsouth.net Sun Jun 20 18:10:26 2004
Subject: Fw: [R-390]

Check the input coils for the bands that do not work. I have found these to go bad, probably from a close by transmiter when they saw their first life. Hope it is this simple. 73 Glenn

From r390a at bellsouth.net Sun Jun 20 18:34:35 2004
Subject: Fw: [R-390]

Before checking if the coils are blown, make sure the slug racks move as they should. Sometimes one of the clamps that hold the gears onto their shafts can break. Think Hank Arney has the clamps if needed. Next step is to see which bands it does not work on if the slug racks are indeed moving. Crystals do go bad every now and again. Most I have found that did not receive on several bands either needed gear clamps or a good alignment. The Chuck Rippel video will painlessly step you through a complete alignment, it goes into great detail and is a good investment if you have not messed with these receivers before. Tom NU4G

From ham at cq.nu Sun Jun 20 20:00:14 2004
Subject: [R-390]

Hi, The first thing to do is to figure out *which* bands it does not work on.

If it's just random bands here and there with none of them next to each other then the crystal oscillator tube may be the problem. If it's one of two random bands then it *might* be a crystal but I have never seen more than one or two bad crystals in any one radio.

My bet would be that you will find that all the bands above or below X don't work or that all the bands between X and Y don't work.

Since some tubes are only used on some bands you can't even rule out a dead tube. II would bet you have a dead coil somewhere in there. Best bet is always the input coils. Between lightning and high power transmitters the input coils sometimes lived a short and sweet life. Next best bet is that the 17 MHz oscillator has died and everything that uses it is out.

If it's input coils there are sources for rf decks complete with all the coils in them. If you have several radios to work on it may not be a bad way to go. If it turns out only one or two coils then I suspect that you can get them here on the list for a lot less than the price of a rf deck. Take Care! Bob Camp KB8TQ

From barry at hausernet.com Sun Jun 20 21:21:50 2004
Subject: [R-390]

Hi Lee: There are a number of things that can cause a "some bands syndrome".

You need to list out exactly which bands don't work. Step through them looking for known, identifyable signals, like WWV, etc. or whatever makes sense on that band. Severe misalignment can cause some signals to turn up in the wrong places, giving the impression that a band is working. If it's a matter of totally dead bands, you can use the calibrator.

You'll should also refer to the manual's explanation of the vs. triple conversion, and the bands vs. crystal schemes for the crystal oscillator deck. You should also "walk through" the mechanical alignment process. Chuck's tapes are great, but are not stand-alone references when it comes to this detail.
Based on what bands are not working (an odd handful, vs. all those over 7 MC's, etc.) you can often "noodle out" the likely culprit. I've found as many as 3 bad crystals and each one covers more than one band. Sometimes the crystals are good, but the pins and sockets may have some corrosion or not make a tight fit. A dose of Deoxit is in order. A bad or weak tube can do it. You could have a combination of a couple of these minor problems which will render an odd bunch of bands inoperative.

While walking through the alignment, do a close eyeball inspection of the geartrain and slugracks. As someone pointed out, it can be caused by a loose or broken gearclamp. I've found that a hanging slugrack can cause all kinds of dead band patterns. When stepping through the MC bands, the slugrack tracks the cams on the upstroke, but hangs up partway down on the downstroke. It sits there and then re-synchs itself on the upstroke again. It's hard to spot at first -- work the MC's through the full range -- up and down. As the appropriate slugrack(s) are on the downstroke, watch that the cam followers (little rollers) are actually riding on the cams an not floating at some point. If one does hang, unhook the springs and carefully lift it out. Dust off the slugs -- no need to use anything on them. Blow out or swab

out the coils. Line up the slug springy-thingies -- if they are all over the place then you can gently bend the springies or use the lateral adjusters. While the rack is out of the deck, it's also good time to make sure the cam follower rollers spin freely. Drop it back in and check it without replacing the hold-down tension springs -- it should nearly work with gravity alone. If all is well, reinstall the holddown springs.

Spotting a broken or slipping clamp takes a good eye. A similar part-cycle effect can occur as with a hanging rack. The resistance on a particular gear can be low through part of its rotation and it will turn. Then it gets to a higher resistance point and slips. A relatively slight misalignment of the bandswitch can also cause a mix of dead/live bands.

So, through a combination of "noodling" - logical-deductive analysis with the manual in hand, and tinkering, as per above, you should be able to zero in on the problem. Most likely it's something simple -- once you find it. Barry

From djmerz at 3-cities.com Sun Jun 20 23:18:30 2004
Subject: Fw: [R-390]

Lee, I haven't tried the 6aq5 audio mod in the recent ER but it looks interesting and should be an improvement. I completed the earlier mod mentioned in the article which put a push-pull 6360 tube (twin tetrode) as output tube in place of one of the tubes, also an ER article. This was somewhat more complicated and works very well and is less likely to saturate the core of the small audio transformer that can fit on the chassis. I was a little surprised the recent author didn't do some sort of comparison or even mention why he didn't go with the earlier 6360 mod, but I'm guessing it was because his mod is easier to do (doesn't require changing a tube socket). His article did have the word SIMPLE in the title !! And maybe he thought a 6aq5 should be used because after all it's an audio tube whereas a 6360 is a vhf transmitter tube. I bought a second audio chassis for the mod but I haven't put my original chassis back in since - the audio is very good. Maybe the next owner will want the original so that is why I kept the chassis I got with the set in its original state. best regards, Dan

From LairdThomasN at JohnDeere.com Mon Jun 21 09:59:45 2004
Subject: [R-390] RE: LED replacements

Ken and group, Anyone tried these yet? My experience is that LED's have very directional lighting (i.e. straight out the end). May pose a problem if "side light" is needed..... Tom Laird WC9M Moline, IL.

From roy.morgan at nist.gov Mon Jun 21 11:18:40 2004
Subject: [R-390] RE: LED replacements

wrote: > >Anyone tried these yet? My experience is that LED's have very directional >lighting >(i.e. straight out the end). May pose a problem if "side light" is needed.....

Just apply fine sandpaper to the front of the LED. Roy

From mjmurphy45 at comcast.net Mon Jun 21 18:20:28 2004
Subject: Fw: [R-390]

The values in the text of article will give you a little more than a Watt on the internal R390A iron

or with a small All american 5 transformer.

The actual "final" schematic shown is for the larger transformer from AES. I did not get data on this to ER in time for publication. Note that the cathode resistor is 220 Ohms (lower that the value in the article); anyway I got 2.4 Watts out with the larger transformer. Also note that I threw in some feedback around the transformer in addition to the primary side feedback which was retained. Mike WB2UID

From drewmaster813 at hotmail.com Tue Jun 22 16:51:05 2004
Subject: [R-390] 6AQ5 audio mod

Hello all,

Reading of 6AQ5 modifications for the R-390x series leads me to relate my experience with a very simple 6AQ5 mod I did a few years ago. After hearing stories of generally short life with the stock 6AK6 it occurred to me that the beefier 6AQ5 might provide longer life.

All I did was to disconnect one of the grid leads at the tube socket and move the other grid lead to accommodate the 6AQ5's different basing. I did not alter any resistor values. Cathode current with the stock cathode resistor measured about the same as for the original 6AK6.

I contemplated lowering the cathode resistor to increase plate current and make use of the 6AQ5's greater power capability, but was concerned that increased plate current would lead to core saturation of the stock R-390a output transformer with attendant distortion and loss of low frequency response. Hence, the stock cathode resistor (network) was retained.

Results? Same gain, same maximum power output capability. The audio, however, sounds cleaner with less distortion than the stock R-390x setup.

The downside? The 450 mA heater current drain adds more heat to that lower compartment, but I did not notice a temperature increase using the highly scientific "calibrated hand" technique.

All in all, the mod works quite well, but for those wanting good sound I suggest using the diode load connection with an external amp/speaker. Some of those el cheapo amplified computer speakers sound pretty good, better than regular R-390x audio. Drew

From JGolden365 at aol.com Tue Jun 22 20:09:11 2004
Subject: [R-390] how can I get on the mailing list?

From vk2abn at batemansbay.com Tue Jun 22 21:55:08 2004
Subject: [R-390] 390a audio

I found the simplest solution was to replace the audio transformer in the local channel with a transformer out of a 51J4 [same size and mounting] then rewiring the socket for a 6AQ5 result is plenty of audio 3.5 ohms output as well as 600 , I purchased from Fair radio the transformer very reasonablly and this conversion has been trouble free for quiet a few years now and every one who hears it and knows the reciever wants to know where all the audio is comming from

From vk2abn at batemansbay.com Tue Jun 22 22:00:35 2004
Subject: [R-390] 390a Ham radio article

I have scanned the ham radio article on 390A product detectors ect into PDF format if anyone needs it send me an email

From w5or at comcast.net Tue Jun 22 23:36:30 2004
Subject: [R-390] how can I get on the mailing list?

You are on it, my man. Welcome aboard.

From w5or at comcast.net Tue Jun 22 23:54:42 2004
Subject: [R-390] 390a audio

A few years back, I bought a tall rack cabinet surplus from the FAA. Just this week I stumbled across a piece of gear that came out of that cabinet. At the time I paid it little heed, but now it looks more interesting for it is a multi-channel 600 ohm mixer, rack mounted in a 2U box. Marked Audio Mixer - Amplifier Assy Eight Channel Model No. MAA-8/600 made by G.R.M Corp in Medford NJ. My question is does anyone know about this unit or the company that made it. Some of the channels are marked as Flight Data 1, FD2, preflight, RDO.

This might make an ideal audio mixer for all the 600 ohm output receivers that need to be tamed here. No mods necessary to the R-390s. Each channel has way too many input/output pins (24) to casually reverse engineer. Anyone?

From roy.morgan at nist.gov Wed Jun 23 10:54:27 2004
Subject: [R-390] 390a audio

wrote: > ... a multi-channel 600 ohm mixer, >Each channel has way too many input/output pins (24) to casually reverse >engineer.

Well, It would be a simple matter of a few minutes with a voltmeter to find the output pins among those 24. Put a signal into the thing with a pot half way up. Then start with pin1 and measure to each of the other twenty three pins. Then mesure from pin 2 to pin three through 24, then pin three to pin 4 through 24. Soon you will fiind at least two pins that have output. If you find two pairs (likely with a common pin) the common one will be the center tap, and may or may not be grounded.

Good luck. I recently bought an uncompleted mixer with a pot and switch for each of four channels and a master, octal tube sockets, and little else. I plan to build a mixer for receivers with it. I'll feed a 1950's home brewed Williamson amplifier with triode connected 807's and a period "hi-fi" speaker. That plus a modest patch panel and I'll have a very flexible system for sound. Roy

From JGolden365 at aol.com Mon Jun 21 21:11:49 2004
Subject: [R-390] r390a balanced input connector

writes: Does anyone know the UG number for J104, the balanced input connector?

There are several different balanced connectors and adapters that will fit J104. The most useful connector/adapter as far as I am concerned is the UG-970/U. This is a right-angle adapter that connects to J104 and converts to a female SO-239 standard coax connector. There is a slight mismatch when converting from a 125 ohms balanced to 50 ohms unbalanced input but 99% of the time the difference will not be noticed. 73 Todd Roberts WD4NGG.

From vk2abn at batemansbay.com Thu Jun 24 08:14:50 2004
Subject: [R-390] Product det

I have sent the scanned HAM RADIO article to 35 respondents so far ,The circuit works well but I havnt tried the noise limiter mod ,also I have used a 12AU7 double triode prod det circuit and it works even better I mounted it in the 3TF7 socket and substituted 12BA6 tubes fer VFO&BFO this also works well I used a subminiture relay to switch the audio lines it had a 9K coil and I put 22K in series to HT When u switch off the bfo the circuit reverts to the original fer recieving AM , I had a few spare IF modules so I can unmodify it pretty easily, Kind Regards To every one

From fev at ciudad.com.ar Thu Jun 24 21:01:59 2004
Subject: [R-390] Product det

Please Bernie , send me your scanned article . Thanks, Francisco LU3EEC

From ham at cq.nu Thu Jun 24 21:35:34 2004
Subject: [R-390] r390a balanced input connector

Hi, There have been numerous threads on the 125 ohm input impedance of the 390. The simple point is that if you align the radio out of a 120 ohm generator then you will have a 120 ohm radio. If you align the radio out of a 50 ohm generator then you will have something other than a 120 ohm radio. That's not to say you will have a 50 ohm radio, just that it won't be a 120 ohm radio.

All this is even more confusing when you get into receiver design theory and they show that a low noise receiver does not general apply a matched load to the antenna. The logic goes more or less that a matched load dumps 6 db of the signal and 3 db of the thermal noise. Things get even more strange when you notice that most antennas only provide a specific matched impedance over a very narrow portion of their useful frequency range.

The bottom line seems to be that if you align the radio out of the same source impedance as the antenna you will be using then the radio works just fine. There does not seem to be any real advantage from using a 120 ohm input versus a 50 ohm input.

The only exception I can see to this is a true 120 ohm balanced input. In order to run this you would need to have 120 ohm balanced coax. I'm not at all sure what kind of balanced antenna you might have running around with a 120 ohm impedance. A full wave loop comes close but that's not a real popular antenna these days .... If you are going to do a true balanced input then there is an extra step to the alignment procedure related to properly balancing the input.

An time you connect an antenna to a radio and the output noise level in the receiver goes up, you have more sensitivity in the radio than you need. At that point you are going to worry more about things like front end selectivity and overload performance of your RF amplifier(s). Fortunately with the R-390 you

don't have to settle for two out of three, it's got it all ..... The minor differences between 120 ohm and 50 ohm inputs aren't going to change this much at all.

None of this relates to the high impedance input to the radio. It bypasses some of the front end selectivity in the radio and is generally held to be a bad thing except when you have a short run to a small whip antenna. Even in this case I'm not sure this is a real good idea. Hope this helps ... Take Care! Bob Camp KB8TQ

From roy.morgan at nist.gov Fri Jun 25 11:44:23 2004
Subject: [R-390] r390a balanced input connector

wrote: There have been numerous threads on the 125 ohm input impedance of the 390. The simple point is that if you align the radio out of a 120 ohm generator then you will have a 120 ohm radio. Bob and others,

MIL-R-13947B, 26 October 1960 RECEIVER, RADIO (RADIO RECEIVER R-390( )/URR). states:

"3.13.3 Antenna input impedance.- The rated input impedance for the balanced input circuit shall be 125 ohms. In the range from 500 kc to 16 mc, the measured input impedance shall not be less than 50 ohms nor greater than 375 ohms; for the range from 16 mc to 32 mc the measured input impedance shall be not less than 100 ohms nor greater than 700 ohms. (See 4.9)."

(This is the Military Specification that the receiver was built to. Thanks to Al Tirevold for scanning and OCR-ing this document. Available at http://www.r-390a.net/ under Documents: http://www.r-390a.net/faq-refs.htm)

I have not (yet) measured the input impedance of any R-390 receiver, but I would expect a wide variation within the above limits if the thing is even moderately well aligned.

All this is even more confusing when you get into receiver design theory and they show that a low noise receiver does not general apply a matched load to the antenna.

It was well known among VHF folks who were tuning and/or building converters and pre-amps that the tuning that gives the highest gain is seldom the tuning that gives the best signal to noise ratio. I would expect many things to be different between VHF/UHF and HF situations, among them input circuit Q, the related bandwidth, sources of noise and the relative impact from those sources, and losses in feedlines but even at HF, things are not simple.

The bottom line seems to be that if you align the radio out of the same source impedance as the antenna you will be using then the radio works just fine.

I have noticed that when using an antenna tuner to get low SWR on transmit, another setting of the tuner gives me greater signal strength on receive. It might take lots of thinking of the sort that Bob presents to sort out why.

If you are going to do a true balanced input then there is an extra step to the alignment procedure related to properly balancing the input.

As I understand it, that input coil balance adjustment is important to minimize common mode noise and RFI interference and for proper functioning of direction finding systems. That would be important

when the receivers are being used near operating transmitters or other noise sources. I have an odd direction finding receiver that has two separate coax inputs to a balanced input transformer, so there may well be some direction finding systems that need to have the input transformer well balanced.

Another item on the to do list here is to experiment with that balance adjustment to find out if it affects receiver performance (sensitivity or selectivity) when one side of the input is grounded in the way that most of us use it. Sooo many projects, sooo little time. Roy

From jordana at nucleus.com Fri Jun 25 12:00:15 2004
Subject: [R-390] r390a balanced input connector

Is this not a case of using a 600 ohm antenna and a 4:1 balun..??? 73 de Jordan....

From femyers01 at bellsouth.net Fri Jun 25 13:30:35 2004
Subject: [R-390] Non-Linear PTO

I had a problem with my Progressitron PTO where it had a bad spot right around 100khz Where it was suddenly almost 2khz off, depending on the direction of tuning. Tuning uphill, it was fine. Tuning downhill, it went bad at about 105khz and got back on track at about 80khz. Took the PTO apart and found it to be unrepairable due to the sharpness of the change in the stack at that point.

Decided to get another PTO.

Bought a junker from Fair Radio. When it arrived, I took a look at it and didn't have much hope. It was very beat up, dented and dirty. Took the outer can off to see if the dents reached the inner can and found that they didn't. The shield on Z702 was badly dented and leaning at about a 10 degree list to port. I took the cans and brackets off and gave them a good washing. Decided to to some body work on the Z702 can and got it back into fair shape. Bent the works inside the Z702 can to where they stood straight up again. Noticed that T701 had never been soldered in! Wonder how it ever worked reliably. Probably never did. Soldered T701 in. The output co-ax was in bad shape and was almost cut in two in a few places. Replaced the co-ax. Made up a test jumper cable and hooked the PTO up to power to see what would happen. Hooked a frequency counter to the output and fired it up. The PTO came up without any smoke and was on a reasonable frequency. Turned the shaft and it seemed to be very stable. Maybe it was going to work! Adjusted the PTO to put out 3.4550 mhz and powered it down. Installed the PTO in R-390 a Capehart SN #557, did the end point adjustments and it's just fine!

The linearity is within spec and seems very stable. Hope it keeps working! I'm keeping the old Progressitron for a backup but will probably never use it because of the bad spot in its tuning range. Keep em glowing, Forrest Myers AG4ND

From bmg50pa at suscom.net Fri Jun 25 18:59:54 2004
Subject: [R-390] Need a few ceramic standoffs

Hi folks, Long time since I've been here. Down to one lonely R-725. Does anyone know where I can get about a dozen ceramic standoffs like is used in the IF decks? Got a project that would benefit from them. Or if you've got some to sell email me at bmg50pa@suscom.net Thanks, Mort Denison York, PA

From pulsarxp at earthlink.net Fri Jun 25 23:51:56 2004
Subject: [R-390] HiRes R-390A and Addendum plus SP600-JX Video Tapes

I got the above tapes from HiRes a couple of days ago and have been viewing them. (I'm about halfway through). I'm glad I got them. So far I've learned a lot from them and feel more comfortable dismantling my radios after viewing the tapes. (At least I know what will not get me into trouble). I was very fearful of the gear train timing. I know this wont be a problem if I leave that in place and I can still remove the RF deck without disturbing the timing. All I have to do is note the dial frequency and keep the PTO at the same place. (Tape suggests 7.000+ which is 8.000 Mhz. Tape says even if I move the PTO I can still easily get everything synced again).

I have not viewed the SP-600-JX tapes as yet. I just started the R-390A ADDENDUM tapes. From my technical expertise and with the tapes, I think I can get through this with my 3 receivers. I think I have enough test equipment to do most things. Not all, but most. I don't think the tapes will make me an expert on these radios but they sure educated me to the point I think I can logically work on them without screwing things up and efficiently work on them. All in all I am very happy with the tapes. Would I like some things described better? Sure. Some of the verbiage could have been clearer and some of the steps were vague. You need some expertise to understand some of the vague verbiage. (For example: you are told to use grease at some points. I would have liked to have been given a brand and part number. You see a hand with a wand in the radio and you don't see the meter scale being looked at while adjusting a slug). This is OK for a tech type person, but your grandmother is not going to be able to follow the process. These tapes are not totally doing A,B, C thru X, Y, and Z without knowing the concept behind the process. You need to know what you are doing. Tuning this radio is not like building a Heathkit. All in all, I am very happy I purchased the videos. I know enough about restoring old radios to have these tapes be a big help to me in restoring my 3 R-390As. Just don't expect them to make a tech out of a person who has never worked on a radio up until now. I guess that was not their purpose anyway. Lee, w0vt

From ToddRoberts2001 at aol.com Sat Jun 26 00:38:48 2004
Subject: [R-390] Synthetic Grease For R-390A Geartrain

I have had trouble finding a local source for synthetic grease to use in the R-390A geartrain after cleaning. I found a good online source - www.oil4kids.com They have a nice selection of synthetic oils and greases under the name AMSOIL that you can order online. Their Series 2000 synthetic grease is rated even better than RedLine grease, but RedLine would be my second choice. I wouldn't consider using anything other than synthetic oil and grease when rebuilding an R-390A geartrain. 73 Todd Roberts WD4NGG.

From ham at cq.nu Sat Jun 26 10:51:33 2004
Subject: [R-390] R-390 gear train

Hi. You have pretty much all you need to do the gear trains. The video's are vital to the process (seeing it is a *lot* better than reading it). A second radio to look at as you put things back together is a very nice supplement to the pictures in the manuals. There are also some great pictures on the web that can be helpfull. The main thing that I find troublesome is getting the crystal deck timed right relative to the rf deck. It's well documented but I usually have to do it more than once to get it right.

About the only other thing you might want to pick up is one of Fair Radio's $35 rf decks. They are a good source of most of the things you will need to fix up an RF deck. The deck you get should have a full set of working rf coils and gears on it so it makes a pretty good spare part kit. Tearing one

down to bits and pieces is a great way to get a feel for what is involved in the gear train rebuild without risking a good deck from a working radio. I have bought two or three of them over the years and been happy with all of them.

The main advantage of doing a gear train rebuild is that you get the grit out of the gears. Depending on how your radios spent their life this may be more or less of an issue on your radios.You can spray all kinds of junk on an assembled gear and still not blow the crud out of them. The grit makes the anti backlash gears hang up a little. This adds a bit of slop and friction to the tuning process.

The gear train process is more or less a day to tear it down, two or three days to clean everything and maybe two days to put it back together. Depending on how much double checking you do it might take you another day or two. As far as I can see there is almost nothing you can break in the process. Sometimes the clamps that hold things to the shafts crack but a spare rf deck has *lots* of them. The only way to fail is to simply give up on putting it back together. Even if things get a bit overwhelming a week time out can do wonders .... Enjoy! Bob Camp KB8TQ

From ham at cq.nu Sat Jun 26 12:01:00 2004
Subject: [R-390] Synthetic Grease For R-390A Geartrain

Hi, One thing to be very careful about when picking lubricants is to be sure that they are compatible with each other. Lubricant's don't always play well together.

In general you will be using something like a grease, a light oil, and a couple of cleaners (including contact cleaner ...). Some people also add a heavy oil to the process. The more things you use the more odd combinations you can wind up with, but the more you can optimize the lubricant to each part of the radio.

In some cases you can get a wonderful gummy goo when you mix cleaner X with heavy oil Y. In other cases it's light oil A and grease B that creates an amazingly rugged varnish. On the other end of the process you can find a light oil that does a great job of acting as a cleaner for the grease. You may even find that none of your cleaners have any affect at all on your grease. A light oil that instantly washes the grease away may not be a real good choice ....

The solution isn't terribly complex, just try mixing a little of each of the things you plan to use. Some people add a little water to each of the mixtures just to throw in another variable. Leave them out in the air for a while and see what happens. If all is going well then apply some heat for a couple of days. Something around 120 to 150 F is a pretty good starting point. If nothing odd happens you might go up to 200 F for a few weeks. Ideally you would like nothing at all to happen to any of the chemicals or the mixes after a couple of weeks in the heat. A light bulb in a box type heater works fine for this sort of thing or a surplus lab oven.

There are actually more combinations that you might think. A little grease in a lot of light oil is a different combination than a lot of grease and a little oil. In one case you are checking the grease and in the other you are checking the oil.

Generally you find that some of the light oil evaporates and the cleaners are gone before you ever get to the heat stage. In both cases you want to be sure that there is no residue when they evaporate. If you do the test on a piece of glass this can be easy to check out.

The heavy oil and grease should hold up very well to the heat process. The thing here is to be sure that

the mixes behave the same way as the unmixed combinations. If the light oil combined with the grease turns into bubble gum after a couple of weeks then it's not a good combination.

I have never found a problem using stuff that all came from the same manufacturer and product line. I wouldn't worry a whole lot about mixing a light oil and heavy oil from the same product line with each other. Unfortunately I have yet to find a cleaner and all the other stuff from one guy that I actually like. That's where the combination can get you.

Combinations of synthetic products with "natural" compounds seem to be the most likely to have trouble. You can also find light oils that don't seem to be very well made or are actually being sold as a varnish.
The wild card in the whole process is that you may or may not be starting from scratch on your radio.I have yet to see two radios with the same set of lubricants on them. If you don't know what the previous owner used then you are more or less playing a random combination game. There is no way to know what the outcome will be. Another strong argument for tearing the whole thing down, cleaning it all and then lubricating it from scratch.

Even if you don't go with all the weeks of heat stuff simply doing the combinations and letting them sit for a couple weeks will give you a pretty good idea if there's a major problem. I would at least do this part of the process before using any combination of lubricants and cleaners. I would always check any multi manufacturer / multi product line combinations.

Sorry for the long post on a fairly simple topic .... Take Care Bob Camp KB8TQ

From k3oqf at localnet.com Sat Jun 26 12:34:11 2004
Subject: [R-390] R-390 Balanced Antenna Input

Regarding the balanced Antenna Input. Western Electric use to make WE754 Cable which was double shielded and used for the transmission of video. DB loss per 100 feet at 148 Mhz was less than 1DB.

There were two leads, white was the tip, and blue was the ring side. The connectors were made by AMP connectors, and would assume they are still available.

Using for WE754 for ham radio or unbalance, simply twist the white and blue wires together and solder. The input impedance becomes approximately 52 ohms. I thought this might be helpful to all who own R-390A receivers. Walter

From ufp at optusnet.com.au Sun Jun 27 03:30:55 2004
Subject: [R-390] David medley

Hello Folks I have been out of the loop for a while, and was wondering if anyone has Davids email address? I hope spelt his last correctly. 73's Lee.

From eldim at worldnet.att.net Sun Jun 27 03:48:08 2004
Subject: [R-390] R-390 Balanced Antenna Input

Hello Walter & Group,

Was this WE754 CABLE SHIELDED AND WHAT IS THE IMPEDANCE?

I have a balanced coaxial cable jumper that is RG-22B/U and is terminated with UG-421 Amphenol TWIN-AX male connectors. The Impedance is 95 Ohms @ 16 pfd/ft. This coax was made by I.T.&T. Federal Cable. I know that the Velocity of Propagation increases with Impedance increases. Most of our RADAR equipment used RG-62 coax when outside the waveguide environment. In all my years in the Air Force I never saw balanced antenna lines used. I may have missed some important thread explanation on the subject of the OR-390 Balanced Input, so I'm not up to speed on which produces the best results. QUESTION: On a side by side comparison with say two dipoles cut to the same frequency WITH one using balanced feed-line and the other coax, which would win out? There is an interesting coax by BELDEN 9857 (MIL-C-17F) RG-63 that is 125 ohms, 84% V.F. It has two shields (1-copper & 1 tinned copper) very low loss 1.5 db/100 ft. The center conductor is solid 22 AWG and is a copper clad steel. There are also two BELDEN 124 Ohm TWIN-AX #9271 (66%VF) & 9860 (78% VF). I haven't seen this coax and anyone with an interest can surely get all the specs from the Belden website. 73, Glen Galati, KA7BOJ

From bjarne at mjelde.net Sun Jun 27 05:23:26 2004
Subject: [R-390] R-390 Balanced Antenna Input

Being a very new (and still unexperienced) R-390A user, I may not have much to contribute to this thread. However, some may find this of interest:

Using the balanced input significantly increases sensitivity over the unbalanced input in my setting. My setting is: 550 meter beverage, coax-fed via a 1:9 transformer to a BNC connector. Monitoring the Mediumwave. When using the unbalanced input, signal recovery was noticeably lower than that of the JRC NRD-545 (which acted as a sort of "reference receiver" since the sensitivity figures of it is known, i.e. 0.4 - 0.5 uV in AM Mediumwave, 6 kHz bw, 30% mod). I monitored stations on, or just above the noise floor. When I utilized the balanced input via the UG971/U and UG636A/U, signal recovery was noticeably better than the NRD-545. I have no idea if this means that the balanced input is significantly more sensitive than the unbalanced input; however signal recovery indicate that it is indeed the case.
The short version of the above: I will never use the unbalanced antenna input for my beverages.
From The World's Northernmost DX-er Bjarne Mjelde Berlevag, Arctic Norway www.kongsfjord.no

From pmills7 at houston.rr.com Sun Jun 27 07:04:58 2004
Subject: [R-390] WTB dial drum for R-388

I need a dial drum with shaft and pully for the R-388. If someone has one from a parts unit to sell, please let me know. thanks, Phil W5BVB

From ham at cq.nu Sun Jun 27 10:24:24 2004
Subject: [R-390] R-390 Balanced Antenna Input

Hi, The performance actually is a bit harder to evaluate than simply switching between the two inputs.

To get the unbalanced input set up right you need to align the radio out of a 50 ohm generator hooked up unbalanced to the radio. In this configuration the balance tuning adjustment does not do what it is supposed to do. In addition the coils peak at a different point for a low impedance generator than they

do for a high impedance generator. Given the way the circuit is set up that's exactly what you would expect them to do.

On the balanced input you need to feed the input with a proper impedance matching network. There are examples in most of the manuals. Usually they are just a bunch of resistors rather than transformer based. Once you get the radio set up from the match network there is another step that does the balancing process. Since the matching networks are usually unbalanced to ground this isn't quite as easy as it might be.

In both cases the result still won't be a 50 or 125 ohm input impedance on the radio. The result will be the best performance you can get from a 50 ohm or 125 ohm source. The difference is a bit subtle but the resulting impedance may be a half or 2X what you would expect it to be.

If you terminate a transmission line in it's characteristic impedance then it does not much mater what length you use. If you go to an impedance that is significantly different than the characteristic impedance you want to use half wave multiples lengths of line. This works fine in a single frequency receiving setup. It gets a bit complex otherwise.

None of this came as a big surprise to the guys who designed the radio. That's why you have a nice big antenna trim control on the front panel. Since the antenna may be both reactive and at an odd impedance you can only do so much with a single control. A full blown antenna matcher will beat a single control part of the time. What's amazing is that modern radios have forgotten about all this. We have all kinds of weird knobs on a modern radio but nothing much to make it tune up the antenna on receive.
There does not seem to be any compelling argument to go to 125 ohms balanced other than to reduce the effect of noise in the shack. Matching a normal vertical or dipole to 125 ohms isn't terribly easy. Of course once you go off of the design frequency a vertical will do a bit better into a higher impedance. Getting this done with a chunk of coax between the radio and the antenna messes the whole process up to the point that the net result is hard to predict.

These days we run the 390's without upper and lower covers in place. A lot of radios have also lost the cover that goes over the RF deck. This is a great idea when it comes to cooling the radio and keeping it working for a long time. It's not as good idea in terms of shielding the radio from crud in the shack. The net result is that even though the balanced 125 ohms may help reduce the crud it's won't do as good a job as it might.

Any time you hook an antenna to a radio and the noise out of the radio goes up the antenna and not the radio is determining what is going on at the front end. As long as this is true you have more sensitivity than you need. You can still have two radios that do this and they will still hear different things. If they do it's not because one has a more sensitive front end than that other one. It's because the filters, detectors, or audio properties are different. The difference may even be a result of front end overload or distortion effects in the two radios.

One nice thing about the R-390 radios is that they give you pretty darn good sensitivity *and* front end selectivity. This is not always the case with more modern radios. Often they make some pretty major compromises in either the sensitivity or selectivity department. Of course many of them were designed for a very different mission than an R390. It's a bit tough to auto tune a R390 over telephone line that's a couple hundred miles long ....

So how does any of this relate to 50 ohms versus 125 ohms you ask .....

The front end of the radio will have different selectivity characteristics when it is driven off of 50 ohms and 125 ohms. It's not quite as simple as larger resistance = higher Q = more selectivity. In fact the truth may be exactly the opposite. You could do some analysis to see what's going on but that's more work than I'm up to on a Sunday morning. Since you don't really know what the impedance of the antenna is I'm not sure how useful the result would be.

People have constructed 50 ohm to 125 ohm transformer match networks to go from an unbalanced 50 ohm line to a 125 ohm balanced input. There have not been any reports of significantly improved on the air performance when running this kind of setup. The only observation that I have made is that the 125 ohm match seems to keep the trimmer caps on the 30 MHz end of the RF coils better in range. When you set it up with a 50 ohm input these caps often wind up at one end of their range.

Both configurations are representative of how the radios were used when in military service. f there had been a significant problem with a 50 ohm shipboard setup they certainly had the skills to put a matcher between the antenna and the radio. Bottom line seems to be that they never bothered. They did do a routine impedance sweep of the antennas so it was no secret what the impedances involved were.

I have no doubt that a setup of multiple big rhombics with combiner transformers and balanced line was a better setup than a 35 foot whip on the deck of a destroyer. That probably had a bit more to do with the antennas than it did with 50 ohms versus 125 ohms .... Of course if anyone would like to forward me the two setups for evaluation I'll be more than wiling to post the results.

Bottom line - if you happen to have a 125 ohm balanced antenna farm then by all means run 125 ohm balanced it works just fine. For the rest of us who have 50 or 75 ohm antenna farms there is no big reason to worry about it.

Once BPL comes to all our neighborhoods this will be a moot point anyway. Maybe we can use our radios as planters ... Take Care! Bob Camp KB8TQ

From stevehobensack at hotmail.com Sun Jun 27 10:50:09 2004
Subject: [R-390] aligning the balanced input

I align the balanced input by selecting two matched 68 ohm resistors. I solder them in series and push the wild ends into the balanced input connector. I attach a signal generator to the center of the two resistors, and apply a signal. There is a deep null at the balance point while adjusting the balancing trimmer. Inject only a small amount of signal. 73...Steve...KJ8L

From ham at cq.nu Sun Jun 27 14:19:19 2004
Subject: [R-390] aligning the balanced input

Hi, There is nothing wrong with the procedure you use. Provided you shield the setup and are careful about lead lengths and stray capacitance it will work and you are doing it correctly. If you want to go a little more nuts on the circuit then put a 50 ohm resistor from the center tap of the two resistors to ground. That will give the signal generator something to run into. It won't have any effect on the outcome of the test but the signal generator police will not give you a ticket next time they cruse by.

The only problems with the process are that it uses yet another custom test rig and it only makes sense on a 125 ohm balanced input radio. Since you need a 125 ohm to 50 ohm adapter to set up the balanced radio in the first place that makes two odd setups to keep track of. I have enough trouble just finding

my soldering iron from time to time .....

On a 50 ohm unbalanced radio you are going to short out the balance adjustment cap as soon as you hook up the coax. Once you short out the balance cap the tuning of the first RF circuit changes. That pretty much eliminates any benefit from doing the balance adjustment.

If you are running a true 125 ohm balanced setup then the balance cap adjustment is a very necessary part of the alignment. If you don't do it then the input simply isn't set up right.

If you use it as a 50 ohm radio tune it up as a 50 ohm radio. If it's a 125 ohm radio tune it up as a 125 ohm radio. If you are running 300 ohm balanced line into the radio then you should set it up for that. In each case the radio will run a whole lot better if you match things up. Take Care! Bob Camp KB8TQ

From polaraligned at optonline.net Sun Jun 27 19:18:17 2004
Subject: [R-390] R-390 gear train

> The gear train process is more or less a day to tear it down, two or three days to clean everything and maybe two days to put it back together. Depending on how much double checking you do it might take you another day or two.

5 to 7 days to do the RF deck! I hope you mean only a couple of hours a day! I rebuilt mine for the first time in 1 day. No problem doing so. I also spent time documenting my rebuild during that day. The rebuild can be found at: http://www.r-390a.net/R-390A-Gear-Rebuild.pdf It is a much better resource than the videos as you can print pictures of the rebuild for each step of the way. It shows detail that the videos can't. Scott

From ham at cq.nu Sun Jun 27 21:55:47 2004
Subject: [R-390] R-390 gear train

Hi, I have found that different people may work at radically different speeds on this sort of thing. A lot depends on how much time you spend around mechanical stuff.

The cleaning process will vary quite a bit depending on what you have for cleaning gear and how bad a shape your gears are in. Getting all the crud out of the teeth on a bad set of gears is usually the part that takes me the most time.

The thing you don't want to do is get a first time tear down set up with the expectation that you have failed if it takes you more than an afternoon ..... Enjoy! Bob Camp KB8TQ

From w5or at comcast.net Mon Jun 28 14:01:47 2004
Subject: [R-390] R-390 gear train

> The thing you don't want to do is get a first time tear down set up with the expectation that you have failed if it takes you more than an afternoon ..... Bob Camp

I have to laugh, and agree with this statement, Bob. Some guys do a complete bare metal rebuild of the subject device within four hours after first contact. Others take a little longer.

My projects tend to take *years* to complete, due to interruptions like work, family, wars, pestilence, etc. But completing a project you started several years ago is especially satisfying, if for no other reasons than you didn't lose any of the parts, and there aren't any screws left over. :-) Don

From N4BUQ at aol.com Mon Jun 28 15:15:00 2004
Subject: [R-390] Odd...

Funny. I hooked up an 8-ohm speaker to my R390A and it worked. Did I do something wrong?

See Ebay item number 5706433245 Barry(III) - N4BUQ

From k3pid at comcast.net Mon Jun 28 15:44:40 2004
Subject: [R-390] Odd...

Speaker terminals or headphone jack? No distortion? You'll get the audio of course but unless someone has put in a 600:8 or similar transformer on the speaker line OR if you connected to the headphone jack they might have changed the resistor network, there will be significant distortion as you try to increase the volume.

From sdman at cableone.net Mon Jun 28 16:17:41 2004
Subject: [R-390] HP 606B generator

Does anybody have HP 606B generator that's not working or junked out? I need to rebuild mine. Thanks, Sam

From r390a at bellsouth.net Mon Jun 28 16:30:05 2004
Subject: [R-390] Odd...

Gee it's a Hammond transformer too! And low priced, well so far. I'm sure it'll go for some "holy relic" value when all is said and done, being Hammond is the Collins of transformers.

Being sold by the same guy that buys the 2 for 12 dollar headphones from Fair Radio and gets $15-20 for them.... no bail-out cords either! Speaking of which, the headphone jack is *not* 600 ohms or is it, my brain ain't up to figuring out the actual impedance of that pad that connects the headphones to the local audio out. (6800 ohms in series from local out to phones, shunted to ground with 680 ohms) Hmm, maybe it is. Tom NU4G

If I tried selling headphones that way, I'd get bidders wanting 3 for a dollar.

From rbethman at comcast.net Mon Jun 28 16:46:23 2004
Subject: [R-390] HP 606B generator

Sam, What frequency range does it cover? I've got a dead HP Sig Gen in my storage shed, but can't tell you the model right now. Would take some digging. I think it goes into the 1 GHz range Bob - N0DGN

From N4BUQ at aol.com Mon Jun 28 16:58:47 2004
Subject: [R-390] Odd...

Judging by the responses, I guess I didn't make it clear that my comment was meant to have a fair amount of sarcasm injected into it. From the claims on the auction page, the guy makes it sound like you will get nothing from the R390A without a matching xfmr which isn't the truth.

Is an 8-ohm speaker a mismatch to the 600-ohm output? Yes.

Do you get great sounding audio without a matching xfmr? No.

Do you really get great sounding audio with a matching xfmr? No.

It will, however "work". I have a matching xfmr in mine right now, but before I got it, I hooked up a speaker to the 600-ohm output and got reasonable audio. I just thought the ad contained a fair amount of hype. Barry(III) - N4BUQ

From rbethman at comcast.net Mon Jun 28 17:04:57 2004
Subject: [R-390] HP 606B generator

Sam, Just went and checked. This one is an HP-612A. Goes to 1.2GHz. Sorry! Bob - N0DGN

From k3pid at comcast.net Mon Jun 28 17:18:51 2004
Subject: [R-390] Odd...Oh Crap!

I completely missed the epay reference! Sorry, I'll try to read a little more thoroughly next time before I answer. I might however take issue with your comment about not getting great audio even with a transformer. Actually I think the audio quality from the R390 (nonA) is quite good. I used one to listen to the London Symphony on the BBC and when I could get a good signal the classical music on Radio Deutsche Welle . Cheers, I'll try to pay attention! K3PID Ron H.

From dsmaples at comcast.net Mon Jun 28 17:31:03 2004
Subject: [R-390] R-390 gear train

Don: Couldn't have put it better myself! Dave WB4FUR

From sdman at cableone.net Mon Jun 28 20:05:58 2004
Subject: [R-390] HP 606B

Bryon thanks for the reply. Sounds ok, interested, how much? I am up in Texarkana, the freight wouldn't be that much. Thanks, Sam

From ham at cq.nu Mon Jun 28 22:12:44 2004
Subject: [R-390] Odd...

Hi,

Sorry I think I'll wait for the ones made by Hammond in *Canada* as opposed to the knock off's made in the USA (since last time I checked the real Hammond does not have factories down here). They sell stuff out of Buffalo but they make it all up north ....

An 8 ohm speaker works just fine with a 570 ohm resistor in series with it. It even reminds you of running an R-392 .....

If the speaker is efficient enough it doesn't take much to get a lot of sound. A nice big horn comes to mind. Of course with a decent horn you could just order up a 600 ohm driver and forget about the transformer. Enjoy! Bob Camp KB8TQ

From terryo at wort-fm.terracom.net Tue Jun 29 15:52:02 2004
Subject: [R-390] R-388 dial drum available

Someone posted a request for an R-388 dial drum. I thought I'd sold my extra but I stumbled across it looking for Mini-BNCs this morning. I also have a reprint overlay because the original decal has pealed off in several spots. Please contact me off the list

From k3oqf at localnet.com Wed Jun 30 11:52:34 2004
Subject: [R-390] Help, Looking for Ballast Tube

Hello Gentleman, Does anybody know where I can find Ballast tubes for my R-390A/URR? Sure would appreciate any advice on this. Thanks. Walter

From kc8opp at yahoo.com Wed Jun 30 14:41:07 2004
Subject: [R-390] Help, Looking for Ballast Tube

Walter, Here is something I have done to 2 of the 390's I have and seems to work FB, and a bit cheaper than a ballast tube.

Here is the link and the text about the 3TF7 sub. http://www.r-390a.us/R-390A_Modifications.htm

3TF7 Substitution Mod: (optional, recommended) Add jumpers on RT510 between pin 7 and pin 5, and between pin 2 and pin 4. This allows you to later substitute a 12BH7A tube in place of your 3TF7 if (when) it ever fails. (HSN issue 10, pages 1&2 or HSN reprints, page 1) Good luck. 73's Roger KC8OPP

From k3pid at comcast.net Wed Jun 30 16:14:16 2004
Subject: [R-390] Help, Looking for Ballast Tube

I bought a couple from "Michael C. Marx" <sndtubes@vacuumtubes.com> for $7 ea. drop him a note, I'll bet he has more. K3PID - Ron H.

From wb5hak at sirinet.net Wed Jun 30 18:56:38 2004
Subject: [R-390] Help, Looking for Ballast Tube

Has more, Ron, but the $7 has become $35!!! Mods look better alllll the time.