

## R-390 Reflector June '02 Edited

From Llgpt@aol.com Sat Jun 1 00:37:31 2002  
Subject: [R-390] Tube List For R-390 (non A)

writes: << I got an e-mail from someone who recommends also the CV-133 and the **6135** as subs for the 6C4. They're supposed to be quieter and have gold pins.

My TV-7D/U tube checker list shows the 6135, but not the CV-133. Any info out there on this?

I have heard of the **6135's**, but not the CV-133....of course, lots of british tubes will interchange with ours, but the tube books don't always show them. Les

From Barry Hauser" <barry@hausernet.com Sat Jun 1 00:47:43 2002  
Subject: [R-390] Cleaning Chassis and rebuliding -Long

Hi Pete & gang:

>This has become even longer.

Today I did some more work on the current BLUE STREAK project here. (Not the 1960s Missile Project but the St Juliens renovation!)

>A blue striper from one of the usual sources?

<snipped>

I have the rebuilt St Juliens receiver working very well, astonishingly so in fact. Especially as it was a pretty badly corroded and sand laden example from the massacre. I have been working on it on and off for about four months now.

> Ah, yes, the massacre, not a pretty sight.

I washed the IF, PSU and audio decks in hand washing soap and warm water, with plenty of pure tap water wash off, then dried them in the clothes airing cupboard for about two weeks.

>Dave Medley goes as far as to do the final rinse (before sun baking) with distilled water.

I took great care not to get the IF transformers wet, but other than that the chassis and components were all cleaned and came up beautifully. I was amazed by the amount of dirt and grit washed off into the bowl after the initial cleaning.

>Imagine if the rig was cleaned before it was shipped. You could have saved on shipping. heh heh

Last weekend I stripped the RF deck of its transformers and painstakingly dismantled and cleaned every face of every paxolin cheek in each transformer. I remember Nolan saying that he found the deposit on these surfaces to be conductive, so I didnt want to take any chances here!.

>I remember Nolan, but not that. Can anyone add to this -- is there a special coating? (BTW, anybody hear from Nolan lately?)

I used a QTIP (Cotton bud, here in UK) to clean inside each coil former and around the ceramic caps. I used methylated spirit for this work, taking care not to get too much on the coils themselves. I used a fresh cotton head for each face so as not to cross contaminate from one piece to another.

>What's another name for "menthylated spirit", or a US translation?

During the RF deck cleaning I found the wrecked 2-4MC antenna transformer. It had me foxed as I could not get at the fixing screw on that particular unit. It was obscured by debris inside the can. When I finally got the transformer off the chassis I found the remains of three slugs and the broken former lurking inside. Totally useless!

>Did you order a replacement?

The RF deck was washed with kerosene, and thoroughly cleaned. The metal was perfect under all the dirt that had built up on it. The deck is a Collins, as are most of the transformers. I re lubed the moving parts and used Moly slip, applied with a Qtip on the sliding faces and bearing surfaces of the slug racks.

>"Moly slip" sounds like the Dow Metal Assembly Paste I use. This stuff is a jelly-like charcoal gray stuff in a tube. I found that it's best applied like a polish -- rubbing in and buffing out or burnishing. The molybdenum works its way into the microscopic pits in the surface of the metal, making it more slick. I then use a very small amount of synthetic lube, like Mobil One. The combination is particularly effective, however the moly paste itself is not much of a lube just painted on. Moly treatment (burnished in) is particularly good on the cam follower slots and the cams themselves -- they're stamped and have fairly unfinished edges.

On re assembly I straightened all the slug springs. I didn't have any talcum powder to hand at the time so I have left applying talc until later, if at all.

>There's a difference of opinion on whether talc is worth it or not. Did you tweak up the adjusters on the slug racks to re-align the slugs?

A major worry was the coax relay. It was very badly tarnished and showing powdery corrosion in places. I guess that my radio had its back to the sea at St Juliens, as the rear of the set has taken the brunt of the corrosion and dust ingress.

One of the coax relay coils was open, so I decided to strip the relay, clean and rebuild, which I did today.

>Tell us how you went about that -- wire used, turns, etc.

I used Goddards Silverdip, which is a silver jewellery cleaner available from supermarkets here in UK and possibly internationally.

>I don't know if that was such a good idea, from prior threads. Sounds like the same clear liquid like Tarn-X sold here, and maybe internationally (used to be an infomercial product). Foul smelling when in use. Word was that it's too aggressive and that anything cleaned with it tends to oxidize more rapidly.

I dumped the silver parts into the liquid and scrubbed them with a toothbrush.... the Silverdip has magic

properties and restores a clean silver finish to most parts after about five minutes immersion. (BTW it is only about £2 a bottle, enough for about 4 R390s). So having rewound the magnet for the whip antenna channel and re assembled the relay parts, I now have a pretty good looking coax relay at the back of my set.

>It restores that shine by taking off the oxides, and again, word was some of the un-oxidized metal as well. That's a problem with plating. Better to use something like DeOxit. Even though it doesn't magically shine that well, if you just burnish the mating surfaces and apply some DeOxit, that generally does the trick without risking what's left of the plating.

I also changed the selenium (?) rectifier for the relay supply, as I found it had one poor leg.

>Poor thing -- I think protocol is to shoot them. ;-) Yup, they are selenium. Don't throw it down the well, though some vitamin/mineral supplements contain selenium, so I don't know...

I guess this might be why one of the relay coils has gone open in the first place. I replaced it with a silicon equivalent, using the old rectifier mounting bracket for the new one. I added a 100volt 100uF electrolytic across the dc side of the relay rectifier. I found that this reduced the hum from the relays when they are energised. A tip worth noting!

>Interested in other opinions on this -- -should this be a standard "mod".

I recapped the audio deck and added 47uF 400 electrolytics beneath the chassis to the audio decoupling components. What an incredible uplift in audio output and quality.....Definitely worth doing that on any set with 30year plus elecs in it.

>Tell us more about this. How many and where exactly? Did you reform/replace/bypass the plugins?

The EAC IF deck seems ok, so no recapping there yet except for the dc blocker before the Mechanical filters...just a precaution! I used 0.01 2kV disc ceramic as it was to hand and fitted in easily.

>Does it matter what type -- I generally use an orange drop or yellow poly tubular.

I was hoping to report the repair of the 200kc Calibrator crystal, but alas that was not to be..... The crystal was loose inside the HC6/U can, and therefore the calibrator would not lock. I opened the crystal and attempted to resolder it to its mounting posts. I used a heat gun and LMP solder. Any way, my attempt failed as the crystal now oscillates at 275kc. I guess it has cracked under the heat. I thought it was a long shot any way!

>Did you heat sink the xtal -- or is that even possible? Suggest you put the modified xtal up for auction under "@RARE@ 275 KC Calibrator Crystal". Who knows, maybe someone out there is looking for a bleep every 275?

So, in finishing the receiver is working well on all except the 2to4 MC bands, but without a calibrator. The PTO needs stretching, but I will tackle that next week. In the mean time the rig is back in my shack and I am listening to it for a while!

>Whew, I think you've done quite well. Listening? Oh, right, I almost forgot. ;-)

More updates later. >Good -- and thanks for the blow-by-blow. Barry

From Barry Hauser" <barry@hausernet.com Sat Jun 1 01:04:30 2002  
Subject: [R-390] Tube List For R-390 (non A)

> I have heard of the 6135's, but not the CV-133....of course, lots of british > tubes will interchange with ours, but the tube books don't always show them.

It's listed as a sub on this web page <http://project.llaky.fi/audiocrew/vintage/tuberef.htm>

More relevant, I also found this in a pdf file on the r-390A site: "I went through the RF deck and individually swapped out tubes with at least 6 of the same type and left the best S/n tubes in place... ( you guys should try some of the CV-133 and 6135 tubes for the mixers...!!!) P.S. the note about the above mod is from HSN no. 5 March 1984...." -- This was from Jordan Arndt

The file is at: <http://www.r-390a.net/sensitivity-alignment.pdf> That extract is a the top of page 27.  
Barry

From w9wis@charter.net Sat Jun 1 01:05:49 2002  
Subject: [R-390] Need Line on 4 kHz Filter....

I finally found the agc flaw in my radio.... a bad 4 kHz filter that shorts when it gets warmed up good.

Anyone havd a line on replacement filters ? Regards, Mike, W9WIS

From howard@cconnect.net Sat Jun 1 04:59:26 2002  
Subject: [R-390] Quick question: wire guage of tube pins

**David, the equivalent wire gage is #18 (American wire gage) or # 19 (Steel wire gage). The diameter of the miniature tube pins is .040" for reference. Hope this helps! Howard**

From andywilliams@pobox.com Sat Jun 1 18:23:52 2002  
Subject: [R-390] attn: Hank Arney

I tried to email the R-390 spreadsheet to you this morning, but the message bounced. The address I used is [hankarn@pacbell.net](mailto:hankarn@pacbell.net) Andy

From john@whimsey.com Sat Jun 1 20:50:03 2002  
Subject: [R-390] capacitor analysis

Well, I'm still thinking about which capacitors I'm tempted to pre-emptively change in my R390A so I've made a list along with their function. Maybe this will help decide what kind of capacitors would be good to use as replacements. I started out with the list on Nolan's page.

My feeling is that if a capacitor is a bypass capacitor, it's not that critical. As long as there is enough capacitance, a high enough voltage rating, and good enough quality and reliability, they could be just about anything. Orange drops are great for the small ones. Nothing wrong with them. But I think other less expensive things will also work just as well in these positions. Polyesters or even ceramics. For the

2uf paper and the 8uf tantalum, I'm likely to use big polyesters. I'd make the electrolytics polyesters too if it wasn't so expensive to do. For now, I think I'm stuck leaving them electrolytic.

The capacitors that pass signals matter more. The famous C553 IF signal capacitor is probably the most interesting case. Maybe a low-dissipation factor polypropylene like an orange drop could make an actual difference in the performance of the receiver. Maybe. My guess is that the receiver has plenty of gain, and the signal to noise ratio as well as the gain of the vacuum tubes in the signal path make much more of a difference. And since so much is at stake if this one goes bad, I think quality, and overkill in the voltage rating is the way to go. I haven't decided for sure what to do with this one, but I kinda like the idea of a 2KV ceramic here. Maybe even a 3KV.

The audio stage is very interesting as well. And I think that maybe here is where the mandate to make it cheaper really took its toll. They started out on the right foot with C531, which is in the IF deck by making it a 0.1uf. But then things went downhill. Personally, with the possible exception of C601 which is the negative feedback capacitor, I'm tempted to make them all big. At least 0.1uf. But maybe even bigger. Maybe 1.0uf polyesters if I can fit them. I might leave C601 at 0.01uf since by having poor bass response in the negative feedback, one might get better bass response by leaving it small.

So there's my 2 cents. But since I haven't actually done anything yet, I'm still very interested in other opinions. And if I've labeled any of the functions wrong, I'm interested in hearing about it too.

Here's the list:

#### Main Chassis

C101 0.22uf paper 100V bypass  
C103 50uf electrolytic 50V bypass  
C104,C105,C106,C107 .068uf paper ??? bypass

#### RF Amp

C227 0.047uf paper 100V bypass  
C256,C309 0.1uf paper 200V bypass  
C275 0.033uf paper 300V bypass

#### IF Amp

C504, C505, C517, C521, C528, C536, C538, C543, C547, C548 0.1uf paper 200V bypass  
C529, C533, C534, C541, C545 0.033uf paper 300V bypass  
C531 0.1uf paper 200V AF signal  
C549 0.01uf paper 300V AF signal  
C551 2.0uf oily paper 500V AGC time constant  
C553 0.01uf paper 300V IF signal

#### AF Amp

C601 0.01uf paper 300V AF signal (negative feedback)  
C602 0.033uf paper 300V AF signal  
C603 3x30uf electrolytic 300V bypass  
C604, C605, C607, C608 0.01uf paper 300V AF signal  
C606 2x45uf electrolytic 300V bypass

C609 8uf tantalum 30V bypass Thanks, John

From vze2gmp4@verizon.net Sat Jun 1 09:22:24 2002  
Subject: [R-390] capacitor analysis

If you change the caps to 1.0uf you might end up with some motorboating at higher volume settings. This happened to me when I did my audio mod. Switched back to .1 uf and everything was back to OK. The real bottleneck is the response of the output transformer. (among a couple of others) Try [www.zorkler.com](http://www.zorkler.com) for an audio mod in the local part of the deck. regards, Helm. WB2ADT

From jbrannig@optonline.net Sat Jun 1 21:34:20 2002  
Subject: [R-390] capacitor analysis

More 2 cents.....

Except for electrolytics, black beauties and C-553, I see no reason to replace good parts in a functioning radio. That said, after all the work to identify and remove a component, it is a false economy to replace it with a cheap substitute. I have also learned, the hard way, not to re-engineer Collins radios. Jim

From RDavis24@carolina.rr.com Sun Jun 2 01:45:01 2002  
Subject: [R-390] New R-390A owner

Hello again

I want to Thank all for the help with past messages. I was lucky enough to find two R-390A's here local. One is in very nice shape and the other needs a little work. Both are complete and have covers and meters. I have alot to learn and im looking forward to learning all I can about the R-390A. Can anyone tell me if it is possible to run a QRP transmitter and use the R-390A as a receiver? I run 5 Watts or less all the time and I would love to run the R-390A as a receiver. I have two different antennas but they are close in one point, about 3 feet. I am wondering if the 5 watts would harm the front end of the R-390A? Also is there a way I can mute the receiver of the R-390A while im transmitting. Please help if you can. Thanks Ronnie KE4VPN "One Happy R-390A Owner"

From ba.williams@charter.net Sun Jun 2 01:48:51 2002  
Subject: [R-390] Cleaning Chassis and rebuliding -Long

> I dumped the silver parts into the liquid and scrubbed them with a> toothbrush....

Yes, there was some good discussion on oxidation....maybe last year. I thin k we even debated how to clean tube pins.

I think the main point is that anything liquid will leave some film behind when it dries. Tape manufacturers recommended alcohol to clean tape heads when recorders were very primitive in the late 60's. A few layers of dried alcohol was enough to prevent recording and playback in some cases.

I always try to use a soft eraser first to burnish and clean the metal surfaces. Then, DeOxit is applied to finish up the job. If I had to use a substance to cut through crud or corrosion I would clean the metal the best I could, wipe dry, use the eraser to polish the metal surface clean, and then apply DeOxit. DeOxit is the only thing I want between metal to metal contacts. Barry

From roy.morgan@nist.gov Sun Jun 2 02:00:09 2002  
Subject: [R-390] New R-390A owner

wrote:>I want to Thank all for the help with past messages. I was lucky enough to >find two R-390A's here local. One is in very nice shape and the other needs >a little work.

You did, of course, buy BOTH of them, didn't you????

> if it is possible to run a QRP transmitter and use the R-390A >as a receiver?

Yes, of course.

> I am wondering if the 5 watts would harm the >front end of the R-390A?

No, it probably won't

>Also is there a way I can mute the receiver of the >R-390A while im transmitting.

A terminal strip on the back allows you to mute the receiver and ground the antenna input by closing an external contact. The contact carries 6.3 volts at about 40 milliamperes AC. It is labeled "Break-In". The front panel switch labeled the same must be on for this to work.

Here are the details I posted recently on this topic.

In short, during normal receive operation, the Break-In switch in the ON position a connection to ground at TB103-9 will shut off both audio channels and short the antenna connectors to ground. (With no connection to TB103-9, nothing will happen no matter what you do with the Break-In switch.)

Here are the details:

One side of the break-in relay coil is connected to the 6.3 volt filament line (AF SubChassis connector P619-10)

The other side of the break-in relay coil is connected to the Break-In Switch S-103 terminal 2 through P619-1. When the Break-in Switch is in the ON position, terminal 2 is connected to terminal 1, which goes to the Break-In terminal on the rear terminal strip TB103 -9.

If the Break In switch is in the ON position and terminal TB103-9 is grounded (with a wire to a ground terminal, or through relay contacts on a transmitter) the Break-In Relay will be energized.

When the Break-In Relay is energized it does two things:

- 1) It grounds the AF Line which is the cathode output of the audio cathode follower (V601B) and the top end of both the Line Gain and Local Gain pots. This shuts down all audio output from the receiver, both line output and local audio.
- 2) The antenna relay is energized and causes the both the balanced antenna and the Unbalanced antenna connector pins to be grounded. This disconnects the rf signal input.

Note: If the Function switch is in either the Standby or CAL position, and the Break-In Relay is de-energized, the Antenna Relay is energized which causes the both the balanced antenna and the Unbalanced antenna connector pins to be grounded. - Roy Morgan,

From jlkolb@cts.com Sun Jun 2 05:21:30 2002  
Subject: [R-390] New R-390A owner

wrote: wrote: >> if it is possible to run a QRP transmitter and use the R-390A >>as a receiver? >>>  
I am wondering if the 5 watts would harm the >>front end of the R-390A? >> No, it probably won't

The operative word here is probably. When I was a Navy radioman aboard light cruisers, we had two 500 watt HF transmitters keyed continuously. The receive antennas were at some distance from the transmitting antenna, but we could light a small florescent bulb by touching one lead to the rx antenna jack. The ET's replaced open RF coils on the R-390's with some regularity. 5 watts with close spaced antenna may not be completely safe.

>>Also is there a way I can mute the receiver of the >>R-390A while im transmitting.

Roy described the 390 break in very well, but note that it mutes the receiver completely. Using an external relay on the receive antenna to short it and disconnect the rx would have the advantage of being able to monitor your own keying with the 390. I find it hard to send CW without hearing myself send - of course, I find it hard to send CW even if I can hear my own keying :) John KK6IL

From john@whimsey.com Sun Jun 2 06:48:56 2002  
Subject: [R-390] capacitor analysis

wrote:> If you change the caps to 1.0uf you might end up with some motorboating at

This is very interesting information. It could explain some interesting behavior I got with an old Transoceanic that I did \*preemptive surgery\* on. It was one of the old ones with the waxy gooey capacitors and I was not too careful about replacing capacitors with the same values. I was fairly cavalier about replacing capacitors with larger values which usually does little harm with decoupling capacitors, but I think I did the same with the audio coupling capacitors. Although the radio worked when previously it did not, there was a little motorboating from time to time. Maybe I should go back and have a look at what I did there. Cool web site. Thanks, John

From john@whimsey.com Sun Jun 2 06:49:57 2002  
Subject: [R-390] capacitor analysis

wrote:> More 2 cents..... > Except for electrolytics, black beauties and C-553, I see no reason to > replace good parts in a functioning radio. > That said, after all the work to identify and remove a component, it is a > false economy to replace it with a cheap substitute. > I have also learned, the hard way, not to re-engineer Collins radios. > Jim

Yeah, if it ain't broke don't fix it. I agree. But there's still something flaky about my radio. So today I finally pulled it out of it's case and had a look at things. The bottom where the audio deck is was spectacular. Pristine. The gear work on the band switch stuff looked clean and things turn pretty smoothly. Maybe some lubrication would be nice, but I'm not in a hurry. Sometimes too much



lubrication is worse than too little. I took out the audio deck and it looked great. It's a 1956 Motorola, and it's amazingly clean and I could find no traces of repairs. The rectifier tubes had been replaced with solid state plugins that were nicely potted. They looked commercial. So I don't think I can bring myself to spoil it since everything looks so nice. And I don't think the problem is here anyway.

The IF deck is another story. It's pretty ugly, and to tell the truth I suspect the problem is here. When the radio flakes out, the carrier level drops. But it doesn't happen very often. And it doesn't last very long. I hate these intermittent kind of problems, they're almost impossible to find. It just feels like a capacitor somewhere to me. I could be wrong of course. The IF deck is an old Collins. There are no adjustable tuning capacitors near the mechanical filters, and one of the filters had been replaced with a Dittmore Freimuth filter. When I looked at C553, and also at Chuck Rippel's page showing how to change it, I see that although it was an original looking Vitamin-Q, it was not dressed against the chassis like he shows in his picture. So I'm thinking maybe it has already been replaced before. But I went ahead and put in a 1KV ceramic, because it's what I had, and it didn't seem to make any difference. I don't know. Maybe later I'll put in something better after I order capacitors. Or maybe I won't. I don't know why I like ceramics so much. Maybe because \*ceramic\* sounds heavy-duty. ;-) But I have a hard time paying twice as much for an orange drop than a Cornell Dublier polyester, which is what I'm leaning toward right now. You can get them in a 1KV rating. But I'm still thinking about it... Thanks, John

From jbrannig@optonline.net Sun Jun 2 10:38:40 2002  
Subject: [R-390] New R-390A owner

I use the R-390A as a second receiver with an S-line driving a 2KW amp. The receivers are fed thru an Ameco pre-amp (usually off) with 2 RX outputs. T/R switching is handled by the 32S-3 at the 100W level and MUTE is controlled by the 32S-3 T/R control line. Sidetone is built into the S-line. Using another antenna I can listen to B/C on the R-390A and transmit at the same time. Jim

From courir26@yahoo.com Sun Jun 2 13:08:47 2002  
Subject: [R-390] New R-390A owner

The five watts nearby will not harm the 390A.

The short ant connector (unbalanced) includes a neon lamp in the ant relay, so if you wanted to run any power at all, you are safe with the unbal connection.

From wewilson@knology.net Sun Jun 2 13:20:13 2002  
Subject: **[R-390] capacitor analysis**

**John,**

**I guess I don't understand what the big deal is. You can replace every paper capacitor in the R-390A plus the tantalum for about \$30 or so. And when you replace them all, you're going to invest many hours doing the replacements. If you are going to all the trouble to replace them, why worry about saving \$15.**

**Below are a few items from others that have been posted to this list previously. I hope this helps you make your decision. Just be careful not to redesign the radio too much. [-]**

1) Ceramic capacitors tend to have hysteresis and other problems. What's that mean? It means their value changes slightly with applied voltage. So their capacitance "wobbles" around applied audio and DC voltages. The high-K, high value ones also have a lot of long-term capacitance drift, up to 10% over years. None of this take away from the fact that ceramics are an excellent choice for bypassing, and RF coupling use and the low-K and NPO ceramics are excellent for use in RF tuned circuits. But for the reasons I've stated, they're not the best choice for use in an audio path.

2)

Replace bypass caps with film (any type) or ceramic (any type).

Replace coupling with film (any type) or ceramic (any type).

Replace tone controlling with film of any type.

Replace power supply filtering electrolytic with voltage rating of 100% or greater than original and 100-200% of capacitance.

Replace high stability with mica, \*polystyrene\* film, or stable ceramic (NPO or COG).

Replace temperature compensating (only if ABSOLUTELY NECESSARY) with same temperature characteristic ceramic.

Replace safety types with identical AC rating.

3) Not all poly capacitors are made equally. First there's that soft case of some, and the internal construction. Some have extended foil for extremely low inductance (Orange Drops), some don't. Some have different thickness of dielectric giving different reliability factors. The original capacitors were not extended foil and were not so effective as RF bypasses as IF bypasses. Besides I've been using Orange Drops for at least 40 years and still find them reliable. I don't know about the others that haven't been made that long.

4) I always test all replacement caps for leakage at full operating voltage and for value before I install them. I'm never had a new orange drop or CDE cap fail. I have with others. As much trouble as it is to recap something like the IF deck, there's not a shot in hell that I'd try to save a couple of dollars and use a lesser grade of capacitors. You only talking about 18 or 19 axial leaded "paper" caps. I think that the current average price on the 400 and 600V OD's from Mouser right now to totally recap the IF deck is under \$20.00. I'd spend the \$20.00 on the OD's even if the other caps were totally free.

5) Sure you can replace SOME paper capacitors with disk ceramic but you have to face some consequences. 0.1 at 400 volts is a value I've never seen in a disk ceramic. Plus the very large values in disk ceramics have a very high temperature coefficient of capacitance, negative. I've found them to lose as much as 85% of their room temperature value being close to the base of a tube. Further they have low inductance which is generally good, except that ordinary paper capacitors can be close to series resonance at 455 KHz and actually show a lower impedance in the bypass than the same capacitance (neglecting the effects of heat) in a disk ceramic.

Walter Wilson - KK4DF <http://www.knology.net/~wewilson>

From w5or@comcast.net Sun Jun 2 15:09:42 2002

Subject: [R-390] New R-390A owner

Welcome to the list, Ronnie.

QRP, CW, R-390A? You are going to be the envy of many QRPer's. Why, you might start a panic stampede to ebay and hamfests searching for R-390A receivers to get that listening edge. I can't think of

a better receiver for the purpose. The 390A will toss off your 5 watts like water on a duck's back. You could have full QSK, too, by building up a TR switch or riding the gain control a bit. Put a couple of 1N4148 diodes back to back on the antenna input.

It has been shown that a R-390A receiver is the perfect Field Day accessory to a modern computransceiver, which may suffer from frontend overload, intermod, and general desense amid typical FD locations with adjacent transmitters. Also useful for toning up the back muscles transporting it to the site. </grin> Don Reaves W5OR w5or@comcast.net R-390 list manager

From twleiper@juno.com Sun Jun 2 16:15:51 2002  
Subject: [R-390] New R-390A owner

wrote:The most important thing is to keep the AGC from having to fluctuate wildly, especially when operating CW where often the slow AGC mode is the best to use for reception. I think the best solution for your setup is to use a TR relay in reverse in front of the receiver. The relay switches your receiver input between the receiving antenna and either a dummy load or short piece of wire or rubber duckie antenna. The idea is to be able to use the R-390 as a sidetone receiver, as well as to help tune and net your transmitter, so you attenuate the transmitter signal to the "average" signal level you would be getting while receiving normally off the antenna. You would be switching between a "receiving" receiving antenna (the normal one) and a "transmitting" receiving antenna (the dummy load, short piece of wire, etc.)

Although I do not transmit, I have the same setup on my receiving antenna here to mute (and protect all my gear from) nearby lightning crashes. I made a BC band RF detector and DC amplifier that switches the relay (and receivers) over to a UHF rubber duckie (junk box item) with a off-delay of about a half second. You could just connect a diode and 10K resistor to your receiving antenna and amplify and filter the signal to drive the relay directly. Whatever, you get the idea. Tom

From andywilliams@pobox.com Sun Jun 2 16:23:26 2002  
Subject: [R-390] revised R-390 (non A) tube list available

Added a note about substituting 5814As in place of 12AU7s. Added a second worksheet with information on the series filament circuits. Email me off the list if you would like a copy of this Excel spreadsheet. Andy

From jbrannig@optonline.net Sun Jun 2 17:40:08 2002  
Subject: [R-390] New R-390A owner

Ron,  
You don't mention the kind of CW operation you are contemplating. For anything but very casual operation the R-390A needs help. A good DSP audio filter for starters. Turn off the AGC, audio near full and ride the RF gain. Forget Break-in, because the recovery time is too slow, same for monitoring CW. Even 5W will blow your ears off. Inject a sidetone oscillator in the audio chain.

With 5W a small relay can be used for antenna switching and muting.

The last problem is tuning speed. The R-390A tunes much too fast for CW (or SSB) A 5:1 vernier is a good compromise. The problem is finding one, or shimming it, to fit the undersize shaft. Jim

From jamminpower@earthlink.net Sun Jun 2 19:43:15 2002  
Subject: [R-390] New R-392 owner

I just acquired an R-392 that is claimed to be working.

Is there a "must replace" list for the R-392? I know for the R-390A, there are certain capacitors that you replace on sight before you power up the unit. Does the R-392 have any such that I should know about?

I understand that nothing in the universe is as sensitive as the R-390/A, what kind of performance should I expect from the R-392? Is it at least comparable? Thanks folks. -- James A. (Andy) Moorer

From wf2u@starband.net Sun Jun 2 20:25:17 2002  
Subject: [R-390] New R-392 owner

Andy,

As a long-time owner of 3 R-392's (I've owned one of them for about 18 years, never had to change even one tube in it), I can tell you that they're basically plug-and-play, unless a previous owner did mess it up... Due to the low voltages used in it, (24-28VDC) the components suffer much less "wear and tear" than the R-390(and A) models. I never experienced any shorted capacitors or way out resistor values in them. Performance-wise, the R-392 is a little less sensitive than the R-390 (or A).

As to "nothing in the universe is as sensitive as the R-390/A", this is not quite true. I have 3 German receivers of the same general vintage as the R-390/A (1950's and 60's), each of them has better sensitivity according to their original specifications, than the R-390/A. They are the Rohde & Schwarz EK-07, the Siemens E309a and the Siemens E311b. The increased sensitivity of the R-390/A is achieved by individually tweaking the receivers and selecting tubes (there is an article regarding those measurements and how the results were achieved). The R-392 has a very decent performance and I use it a lot on the ham bands (in conjunction with its matching transmitter, the T-195), as well as for some short-wave listening.

Good luck with yours and enjoy it. 73, Meir WF2U Landrum, SC

From Barry Hauser" <barry@hausernet.com Sun Jun 2 21:38:29 2002  
Subject: [R-390] New R-392 owner

My experience -- though not as lengthy -- agrees with Meir's. I have 5 or 6 R-392's. (One or two are usually hiding somewhere.) Maybe needed some tubes on initial delivery, some not at all.

There may be a tendency to "under-do" with these -- or maybe it's just me. Anyway, I finally got around to aligning a couple of them both of which seemed to be working OK. Quite a difference. Josh Rovero had a performance comparison between the R-390 and R-392 on his website but none of the links seem to work anymore. As I recall, they were very close. The biggest factor in actual use may be the more limited choice of bandwidths.

In one area, the R-392 wins hands down against all: Operation while submerged. Not to mention that it floats. (but panel side down, so bring your goggles and a a snorkel with an extension on it.)

When water resistance is not an issue, it may be advisable to run the radio either without its case, or at least slipped out of it about an inch for ventilation. Please don't drill any holes. Barry

From pha@pdq.com Sun Jun 2 23:35:04 2002  
Subject: [R-390] New R-392 owner

wrote:> My experience -- though not as lengthy -- agrees with Meir's. I have 5 or 6 > R-392's. (One or two are usually hiding somewhere.) Maybe needed some > tubes on initial delivery, some not at all.

One more thing I could add is this - the ones I have all seem to need more mechanical repair from heavy use or misuse than the R-390, R-391 and R-390A's I've had.

I seemed to find more broken geneva couplers, truly worn cams, broken or missing clamps, especially problems in the bandwidth switch mechanism.

Other than that, I've had only one real electrical problem, which was a shorted B+ filtering capacitor.

Like the R-390, it is tight quarters to work in - the 390-A seems to have more space and better layout. Paul

From john@whimsey.com Sun Jun 2 23:39:52 2002  
Subject: [R-390] capacitor analysis

wrote:> Mine has had a pesky AGC problem which was very intermitant. On strong > local stations all of a sudden I'd loose AGC action.... voltage would drop > on the AGC buss from -9vdc to -4-6vdc and heavy distortion until the gain > was backed off. Then it would stay like this for a while and suddenly > return to normal.

>

> Finally tracked down the problem Friday to a bad 4 Kc filter that when it > got heated up would short internally and screw-up the AGC line. When it > cooled a bit it was ok.....

I haven't measured the voltage on the AGC buss, but this is almost exactly what mine is doing. I get a drop in carrier level with a lot of distortion, and a sudden return to normal. On strong local stations. But it doesn't seem to depend on which filter I have switched in.

And thanks to everyone who has posted on the capacitor subject. Interesting food for thought. John

From jamminpower@earthlink.net Mon Jun 3 00:50:52 2002  
Subject: [R-390] OT - Need Manual for Boonton 71A-R Inductance/Capacitance meter

I got a beautiful Boonton 71A-R Inductance/Capacitance meter at the swap meet. Anybody have a manual for it? Or know where to get one? (Sorry for the OT) -- James A. (Andy) Moorner

From kc2kj@mac.com Mon Jun 3 03:07:49 2002  
Subject: [R-390] Carrier balance pot adjustment

Gentlemen,

There was a discussion a few months ago about making a few changes to the carrier pot adjustment to make it less critical and easier to set. One of the changes consisted of a resistor change and a wiring change. Can anyone provide me a copy of the messages? Thanks, Mike kc2kj

From billsmith@ispwest.com Mon Jun 3 04:35:41 2002  
Subject: [R-390] Anyone know what a 2C254 Audio Amplifier Module is?

Hi, ran across a plug-in module which looks similar in assembly to R-390 type modules. The chassis is 3-3/8" x 7" x 2" deep and is apparently held to a main chassis by two captured 10-32 screws, one at each long end of the chassis.

The module is comprised of three tubes and three transformers (input, interstage, output?) all of which are the same size. The transformers are all lined up along one side of the chassis, and the tubes are lined up along the other side. The two 6V6's are separated by an assembly of four 20mfd. oil-filled capacitors which are under a gray cover. The tubes are (1) 12SJ7 and (2) 6V6.

Underneath, a 12-pin Jones plug provides all input and output. S201 is a DPDT toggle switch (function?) and S202 is a 1-pole 6-position rotary switch with a 3/8" black round knob with a white-painted screwdriver slot in the end. Both are accessible from a rectangular slot cut in the side of the chassis.

Someone has penciled "2C254 Audio Amp" on the chassis. Any ideas? Schematic? 73 de Bill,

From plmills@attglobal.net Mon Jun 3 11:36:23 2002  
Subject: [R-390] need DOD manual site info

Hello,

I lost all my bookmarks in switching to a new computer a few weeks back. Would someone be so kind as to send me the URL for the Defense Department manual site? thanks, Phil W5BVB

From r390a@enteract.com Mon Jun 3 11:58:20 2002  
Subject: [R-390] need DOD manual site info

[http://www.logsa.army.mil/etms/find\\_etm.cfm](http://www.logsa.army.mil/etms/find_etm.cfm)

From cbscott@ingr.com Mon Jun 3 13:58:08 2002  
Subject: [R-390] Carrier balance pot adjustment

Replace it with a ten-turn wire-wound pot. Works great. Barry

From cbscott@ingr.com Mon Jun 3 14:00:29 2002  
Message-ID: <697750C28DC0474ABF279ECB3979E3730B6AD8@hq4>

<snip> Pity the guys stuck in the garage or worse. Hope Y-all had a great weekend. Mike. KD9KC El Paso,

Thanks. The utility room off the garage gets pretty warm from now until autumn. Then it gets pretty cold until about now... Barry(III) - N4BUQ

From DAVEINBHAM@aol.com Mon Jun 3 16:52:53 2002  
Subject: [R-390] A Few ReCap kits Still Available

Fellow R-390A Drivers,  
I keep getting inquiries about the availability of the ReCap kits. I am pleased to announce that I still have 2 in-the-can ReCap kits for those brave souls who wish to deal with the dreaded black ukkumpucky. I also have 6 under-the-chassis ReCap kits for those who do not want to deal with the dreaded black ukkumpucky. Kindest regards, Dave

From john@whimsey.com Mon Jun 3 18:41:20 2002  
Subject: [R-390] capacitor analysis

wrote: > > I guess I don't understand what the big deal is. You can replace every > paper capacitor in the R-390A plus the tantalum for about \$30 or so. And > when you replace them all, you're going to invest many hours doing the > replacements. If you are going to all the trouble to replace them, why > worry about saving \$15. > > Below are a few items from others that have been posted to this list > previously. I hope this helps you make your decision. Just be careful not > to redesign the radio too much. [;-)

O.K. This makes a lot of sense. I shouldn't worry about cost so much. I'll probably go with the OD's almost everywhere for their \*proven reliability\*. What still concerns me is C501, a 5000pf ceramic which is smack dab in the middle of the IF signal path. It's a shame to put something as nice as an orange drop at C553, when we have a cheapass ceramic right in front of it. Should I also replace C501 with an orange drop? Or since cost is no object, should I consider replacing both C501 and C553 with mica's (available from Mouser) which have dissipation factors that are at least an order of magnitude lower than even the mighty orange drop? Thanks, John

From David\_Wise@Phoenix.com Mon Jun 3 20:15:06 2002  
Subject: [R-390] capacitor analysis

> suspect the problem is here. When the radio flakes out, the

Does it drop on all bandwidths, or only one? On my 1954 Motorola, the level was low on 8KC. I traced it to the mica cap tuning that mechanical filter. In my 30 years (on and off) of restoring vintage radios, this was maybe my third bad one. Micas are pretty good, but you should not trust them blindly.

Those of you with newer decks with trimmers: what's the temperature coefficient? NPO, N750, something else, or unmarked? (How about the other trimmers? The manual doesn't say. It may not be important. I'll take a peek tonight.) Mouser carries a bunch of trimmers, with various TCs. If I switch over sometime, I'd rather not figure it out by hand... 73, Dave Wise

From David\_Wise@Phoenix.com Mon Jun 3 22:11:49 2002  
Subject: [R-390] Carrier balance pot adjustment

> There was a discussion a few months ago about making a few changes to > the carrier pot adjustment

to make it less critical and easier to set.

The mod you're probably thinking of is mine. I posted instructions, but I couldn't find them in a recent search of the archives. I reconstitute it here, except I can't remember the wire colors.

Get the schematic in front of you.

The original connection is, V504 cathode via R524 to meter, wiper, R537, and CW end. CCW end to ground. Other end of R537 to ground.

My connection is, V504 cathode via R524 to wiper. CCW end to ground. CW end to meter and R537. Other end of R537 to ground. Change R537 from 22 ohms to 15 ohms.

+ Smooth, almost linear adjustment range, with the operating point near midrange.

- Lower V504 gain (trivial, less than R524's 10% tolerance).
- More gain variation as you work R523 from end to end (trivial, \*less\* variation than before when near the setpoint).
- Smaller reading on MGC overload. (Unimportant, overload is yes/no, not calibrated.)

~ Smaller full-scale reading. (Intentional; mine read high before. To change it, tweak R537. Smaller value gives higher FS. 5.6 ohms is approximately original but puts the setpoint all the way CW. Still smooth though!)

Everybody seems to have an opinion as to how this should be fixed, and I'm no exception. My engineer's intuition says that this is the "sweet spot". It's how they should have done it.

I don't know how well the R-390's carrier pot works. I expect it is fairly linear, but it might have a coarse granularity. If so, you could change it to 100-ohm carbon and apply my mod, and you'd get the same good result. 73, Dave Wise

From N4ue@aol.com Tue Jun 4 01:12:20 2002  
Subject: [R-390] capacitor analysis

Yes, I meant this to go to those who like to work on the old stuff. In my note, I refer to the 75A-3. I meant the 51J-3. Big difference. ton

From john@whimsey.com Tue Jun 4 06:00:29 2002  
Subject: [R-390] capacitor analysis

wrote:> Does it drop on all bandwidths, or only one? On my 1954 Motorola, > the level was low on 8KC. I traced it to the mica cap tuning > that mechanical filter. In my 30 years (on and off) of restoring > vintage radios, this was maybe my third bad one. Micas are pretty > good, but you should not trust them blindly.

So far the symptoms are the same at 16kc, 8kc, and 4kc bandwidths. I haven't spent much time listening at 2kc bandwidth (yet). Michael Melland had suggested that it might be one of the filters themselves causing the dropout. That a short in a filter could cause a problem when listening at a different bandwidth. I was hoping to get some different symptom at some particular bandwidth if it was



something like that. For example if it's the 4kc filter shorting out, I might expect the signal to drop out completely when listening at 4kc, but that hasn't happened. It's just a decrease, not a complete dropout. I still need to test the 2kc bandwidth more though. I have noticed that the 1kc and .1kc bandwidth positions don't seem to do much in the way of narrowing the bandwidth, the signal level just decreases when I select one of these positions. Maybe this is another reason to worry about C501. I don't know. I don't really understand how this circuit works. The book says that C501 is a coupling cap when using 2, 4, 8, or 16kc bandwidths, but it's something different when using .1 or 1kc. Maybe its part of some kind of resonant circuit. Maybe it's gone out of tune. John

From BRingwoo@csir.co.za Tue Jun 4 12:55:09 2002  
Subject: [R-390] Slightly OT - Check this out

Something for your next computer ? <http://www.aopen.com/products/mb/ax4b-533Tube.htm> enjoy

From courir26@yahoo.com Tue Jun 4 14:54:03 2002  
Subject: [R-390] Search Tip to Root Out Good Stuff

Gentlemen? Here is a search tip to help separate wheat from chaff.

Ex: If you want to search for R-390A/URR only at military sites, go to google and type in:

"R-390A/URR" site:.mil (or your site could be uscg.mil usaf.mil, etc)

Likewise, to search for 51S-1 only in Japan, type "51S-1" site:.jp

If you'd like to exclude anything, just type it in your string with a - ahead of it,  
ex: To search mil sites for R-390 but exclude R-390A type "R-390" -R-390A site:.mil

Happy hunting! Let us know what goodies you root out. N5OFF

From redmenaced@yahoo.com Tue Jun 4 17:23:28 2002  
Subject: [R-390] OS-11 scope

What should I know about this scope? Is it good for anything other than RTTY? Thanks, Joe

From tbigelow@pop.state.vt.us Tue Jun 4 18:10:57 2002  
Subject: [R-390] OS-11 scope

Would probably make a nice little modulation monitor. Boomer, KA1KAQ

From R390A@r390a.com Tue Jun 4 19:56:02 2002  
Subject: [R-390] Capacitors

wrote: Walter is absolutely right. I get e-mails nearly daily about replacing capacitors wholesale. There are not that many that need replacing. Remember, unlike other Collins designs such as the 75A-4, there are no capacitors (except in the audio stages and C553) that couple the grid of one stage to the

plate of the preceeding stage. Thus, serving as plate block caps. These are under the most stress.

That problem is circumvented by design in that the R390A is largely interstage transformer coupled. They also fail and often. The problem usually first appears as a "popping" on strong signals.

Don't get to "enthusiastic" replacing parts, you may do more harm than good.

From David\_Wise@Phoenix.com Tue Jun 4 22:45:23 2002  
Subject: [R-390] capacitor analysis

> From: > So far the symptoms are the same at 16kc, 8kc, and 4kc bandwidths. I > haven't spent much time listening at 2kc bandwidth (yet).

The problem's not the filters, then.

> had suggested that it might be one of the filters themselves

Unused filters are out of circuit, unless the bandwidth switch is messed up. See the Y2K manual, page 5-48.

By the way, there's a typo on that page that could confuse your understanding of C501's role. There's a dot missing. The bottom end of C501 (which goes into Z501) also goes to V501 pin 1. In 2/4/8/16, C501 acts as a short around Y501, completely overshadowing Z501 and C520. At 1KC bandwidth, it is out of circuit. At 0.1KC, it effectively bridges R503 across R502, reducing the Q-spoiling resistance in series with C503. (C503 in series with R502 or R502||R503 is in parallel with C524 and tunes L503.) This part of the IF deck is shown correctly on page 3-13.

> I > have noticed that the 1kc and .1kc bandwidth positions don't > seem to do much > in the way of narrowing the bandwidth, the signal level just > decreases when > I select one of these positions. Maybe this is another > reason to worry > about C501. I don't know. I don't really understand how this circuit > works. The book says that C501 is a coupling cap when using > 2, 4, 8, or > 16kc bandwidths, but it's something different when using .1 > or 1kc. Maybe > its part of some kind of resonant circuit. Maybe it's gone > out of tune.

If you apply 1KC or 0.1KC bandwidth to an ordinary AM signal, the sidebands will be almost completely eliminated. The treble and midrange are gone, leaving only bass, which the R-390A's internal audio amps are very short on, so if you're listening through them, you won't hear much. If you put a hi-fi audio amp on the Diode Load output, you'll hear the bass part of the program at the same volume as before. For 1KC and 0.1KC, use CW or an unmodulated carrier and go by the carrier meter reading.

I seem to remember someone on this list finding that his L503 was open. It seems to me that that would degrade 1KC/0.1KC performance. I can't remember when I last saw a bad ceramic cap. 73, Dave Wise

From redmenaced@yahoo.com Tue Jun 4 23:02:49 2002  
Subject: [R-390] capacitor analysis

> I can't remember when I last saw a bad ceramic cap.

++++++

Ah! The cannibals here just had a TV dinner, found a ceramic cap split right in half,.... how to

describe,.... split around the circumference. One lead on each half. Joe

From Richard.McClung@Dielectric.spx.com Tue Jun 4 23:14:23 2002  
Message-ID: <OF4536926C.950B967F-ON85256BCE.007A0B61@spx.com>

I do..... It sure looked pretty for that one instance..... RICH @B> }

From billsmith@ispwest.com Tue Jun 4 23:21:47 2002  
Subject: [R-390] capacitor analysis

I found one in a Bauer AM Broadcast transmitter. I put a 'scope probe on a screen of a driver tube and found RF. Replaced the 0.01 Mfd cap and the RF went away. Tested the ceramic cap on a capacitor tester, and it didn't look all that bad. Pretty scary.

BTW, have several pre-punched paper tapes in round metal cans. Don't know what is on the tapes, but they look like they have been stored for a while. 73 de Bill, AB6MT billsmith@ispwest.com

From w5kp@swbell.net Tue Jun 4 23:53:18 2002  
Subject: [R-390] capacitor analysis

Those might be code practice tapes. I used a Navy paper tape code practice machine back in 1965 to get my code speed up for the General exam out in Norfolk, VA. It was about the size of a URM-25D, and it used paper tapes much like a 16mm projector works. Worked great, and I took and passed the General and the FCC First Class Radiotelephone the same afternoon under the stern glare of a totally humorless FCC examiner in Norfolk, and was later christened WA4YVX. I should have taken the Radar Endorsement exam also, but had not studied at all for it and was too chicken to try both it and the First Class Radiotelegraph. He wouldn't tell me my score or let me see my answer sheet, but just growled "Your licenses will come in the mail. Goodbye". Of course, I was so happy at that point that he could have kicked me a couple of times and I'd have still kept grinning.

Don't throw them away, somebody out there probably has the machine they go to. :- ) 73, Jerry W5KP

From David\_Wise@Phoenix.com Wed Jun 5 00:10:48 2002  
Subject: [R-390] capacitor analysis

> From: Unused filters are out of circuit, unless the bandwidth switch is messed up. See the Y2K manual, page 5-48.

>

> Now I'm really confused. My radio is being repaired/refurbed

Well, you're not the only one. My bad. Unused filters are not in the \*signal\* path, but they are still on the AGC line. Your diagnosis has not been disproven. If you aren't up to paying for a replacement filter, you might be able to rewire the bad one in a shunt-fed arrangement on the secondary, where a blocking cap prevents it from grounding the AGC line, and you add a resistor for grid return. The resistor could be oh I don't know maybe 100k. You'd still get noises as the filter went through its intermittent shorting regime, but the AGC would stay ok.

To check your diagnosis, I'd disconnect the filter secondary return bus from AGC and ground it. This removes AGC from the 2nd IF, so you might want to back off the RF gain during the test. If the problem goes away, you've confirmed it's a filter. Then it's a simple process of elimination. 73, dw

From ba.williams@charter.net Wed Jun 5 01:06:26 2002  
Subject: [R-390] Search Tip to Root Out Good Stuff

Tom, Good tip. Thanks. the other other Barry p.s. I didn't know any gentlemen were on this list.

From jamminpower@earthlink.net Wed Jun 5 01:23:28 2002  
Subject: [R-390] Another R-392 question

Gee, I noticed that all the tubes in this R-392 have shiney shields and not the nifty IERC shields. Should I immediately replace them all with IERC? www.jamminpower.com James A. (Andy) Moorer

From Llgpt@aol.com Wed Jun 5 01:28:29 2002  
Subject: [R-390] Another R-392 question

writes: << Gee, I noticed that all the tubes in this R-392 have shiney shields and not the nifty IERC shields. Should I immediately replace them all with IERC?

if you have 'em, use 'em..... Les

From john@whimsey.com Wed Jun 5 07:54:48 2002  
Subject: [R-390] Capacitors

wrote: > Don't get to "enthusiastic" replacing parts, you may do more harm than good.

O.K. I think this settles it. I've replaced C553. I'll leave it at that for now and proceed with caution. Thanks! John

From john@whimsey.com Wed Jun 5 08:31:02 2002  
Subject: [R-390] capacitor analysis

wrote:> By the way, there's a typo on that page that could confuse > your understanding of C501's role.

Actually I was looking at TM 11-856A page 59, but I hadn't really understood what it said. I didn't understand that C501 was basically out of the picture when using the narrow bandwidths.

> I seem to remember someone on this list finding that > his L503 was open. It seems to me that that would > degrade 1KC/0.1KC performance.

>

> I can't remember when I last saw a bad ceramic cap.

I suppose it's possible that either C520 or L503 are out of adjustment. And when I look at C520, it looks like the place where the screwdriver goes has broken off. So maybe C520 doesn't work anymore.

Well I have plenty to do. On the bright side, the intermittent fading seems to happen less and less often the more I use the receiver. Or so it would seem. Sometimes it's hard to tell with an intermittent problem. I suppose it could also be a flakey contact somewhere. I haven't done any cleaning with DeOxit yet. But I think I'll give it some more time to see if it works itself out before spraying things. I've had some bad experiences with contact cleaner. Then I'll probably try to align the thing and I'll get into the narrow bandwidth problem then. Thanks, John

From wb5hak@prodigy.net Wed Jun 5 12:49:40 2002  
Subject: [R-390] capacitor analysis

John,

I don't post much on this reflector, just soak up the "wisdom", but be very careful "spraying" DeOxit all over things. In my dealings with the older rigs, I use a syringe and pinpoint where I put DeOxit a drop at a time and have much better success. DeOxit WILL swell phenolic (bakelite, whatever you call the material in most of the switch wafers) and ruin these switches!!! The syringe also helps put just a drop in tube sockets, etc. Just an observation from experience. 73, Don, WB5HAK

From cbsscott@ingr.com Wed Jun 5 13:37:13 2002  
Subject: [R-390] capacitor analysis

<snip> BTW, have several pre-punched paper tapes in round metal cans. Don't know what is on the tapes, but they look like they have been stored for a while.

Source code for Windows 3.1? Barry(III) - N4BUQ

From tbigelow@pop.state.vt.us Wed Jun 5 16:03:50 2002  
Subject: [R-390] capacitor analysis

I'll echo exactly what Don has said, from first hand experience. The saying 'a little goes a long way' is applicable here. What I've gone to doing even on ceramic wafer switches is to take a paper towel or small cloth, wet one small area with a burst of DeOxit red, then wipe the contacts until clean. If they're in an inaccessible area you're sometimes left with having to spary, but be very careful to shield other areas. Always use the 'L' setting as it saves liquid and prevents blasting everything in sight. As well, try making a swab by wrapping the end of a long, narrow screwdriver or similar and proceed that way. Caig offers swabs, but I have good luck using Q-Tips and making my own swabs, then just spraying a bit on the ends. Same thing with paper for cleaning relays.

An order of supplies arrived last week and includes a can of CaiLube(blue can). Unfortunately the rig I'm restoring has sealed pots, but I'll use it soon on something else to get some idea how it compares to DeOxit for controls. CaiLube says it's made specifically for moving contacts/controls, lubricates and cleans.

BTW, someone mentioned having the problem of a swelled wafer switch from DeOxit and used a different chemical to remove it. Can't recall what it was - mineral spirits? Acetone? 73 de Todd/'Boomer' KA1KAQ

From jbrannig@optonline.net Wed Jun 5 16:38:10 2002  
Subject: [R-390] capacitor analysis

I have a cantankerous pot in an old Heath SWR bridge. De-oxit fixed it for a while..... Cai-lube seems to have done it...time will tell...

I use their dropper bottles....the spray gets all over.... Jim

From billsmith@ispwest.com Wed Jun 5 16:56:30 2002  
Subject: [R-390] capacitor analysis

> Source code for Windows 3.1?

Much more secret than that!

From Damon Raphael" <w7md@arrl.net Wed Jun 5 17:35:47 2002  
Subject: [R-390] capacitor analysis and DeoxIT

Caig Labs makes the DeoxIT "PEN" which oozes out a little of the goodstuff through a fiber tip and allows you to rub it onto the contacts. It works well as long as as you can reach the contact with the PEN. Damon, W7MD

From john\_finigan@yahoo.com Wed Jun 5 22:40:44 2002  
Subject: [R-390] Slightly OT - Check this out

Hmm, I wonder if this calls for a computer-rated 6DJ8... John

From tetrode@worldnet.att.net Thu Jun 6 00:52:15 2002  
Subject: [R-390] capacitor analysis--deoxit

Todd,  
that was probably me, amongst other things I treated a 390nonA IF bandwidth switches w/ the 5% Deoxit spray which got into the moving phenolic sections, then I used an alcohol based electronics cleaner from VIP automotive supply to flush it out. Then I dipped a toothpick into the Deoxit and applied it just to the electrical contacts.

I'm not sure if the phenolic actually "swells", it seems more like it "rubbed" with the Deoxit. After I flushed it out the recovery seemed instantaneous, it definitely moved better when dry.

Acetone is one of my favorite solvents but is too strong to use as a "bath" cleaner; I use a commercial pump bottle which dispenses just a little bit and then wet a Q-tip with it. Mineral spirits works good as a general cleaner, but takes longer to dry. John

From redmenaced@yahoo.com Thu Jun 6 04:01:51 2002  
Subject: [R-390] Signal tracer manual

Hi,

I have a Heathkit T-4 signal tracer and no manual for it. The BAMA site only has a partial manual of a T-3. Could someone please give me a rundown on how to operate the thing so I can fix my Gooneyset G-33? Its losing it somewhere. Thank you, Joe

From billsmith@ispwest.com Thu Jun 6 17:07:08 2002  
Subject: [R-390] Anyone know what a 2C254 Audio Amplifier Module is?

The module turns out to be the low-level audio stages of an ART-13 transmitter. The toggle switch allows use of either a carbon or a dynamic microphone. I think the rotary switch is used to preset the sidetone level, it selects one of six secondary taps on an output transformer.

The circuit is not push-pull, it turns out to be three amplifier stages in series, a 12SJ7 is a preamplifier stage. The first 6V6 with output transformer is the driver for the 811 modulators and the second 6V6 with another output transformer delivers sidetone audio.

73 de Bill

From scott" <polaraligned@earthlink.net Sun Jun 9 23:32:23 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

Hi. I just bought my first R-390A. The front panel tag says that it is a Collins Serial #1913, order # 8719-P-55. The unit is complete with original meters and is in excellent overall condition. Upon disassembly, all the modules in this unit are Teledyne from the 1963 contract. The meters have a 65-3 printed on the back of them and a lot of the pots have a 64 or 65 stamping on the back. There are also 2 B+ fuses, factory installed, in the back panel. Could this all point to a 1965 teledyne unit that had a 1955 Collins tag put on it??. The Collins tag certainly appears to be an original tag. Is there any other indicators to help me establish if this is Collins or Teledyne. It would seem strange to me to have all 6 of the modules replaced with Teledyne units of the same order number. 20 Any help would be appreciated. Thank You, Scott

From redmenaced@yahoo.com Sun Jun 9 23:57:59 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

If it walks like a,.....

And it talks like a,.....

And it smells like a,.....

Then its a Collins tag!! Or a Depot Dog. Joe

From Llgpt@aol.com Mon Jun 10 00:11:45 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

writes:<< Hi. I just bought my first R-390A. The front panel tag says that it is a Collins Serial #1913, order # 8719-P-55. The unit is complete with original meters and is in excellent overall condition. Upon disassembly, all the modules in this unit are Teledyne from the 1963 contract. The meters have a 65-3 printed on the back of them and a lot of the pots have a 64 or 65 stamping on the back. There are

also 2 B+ fuses, factory installed, in the back panel. Could this all point to a 1965 teledyne unit that had a 1955 Collins tag put on it??.

The Collins tag certainly appears to be an original tag. Is there any other indicators to help me establish if this is Collins or Teledyne. It would seem strange to me to have all 6 of the modules replaced with Teledyne units of the same order number.

Any help would be appreciated. Thank You, Scott

Welcome Scott.....What you have is commonly referred to as a "Dept Dog"..or "Dawg" if you are in the deep south.

When the R-390A's and others went to the depot for repair, the front panel nomenclature tag was removed. The modules were removed repaired and when they were re-assembled, whatever was grabbed first is what went into that particular receiver.

To see who built them and when go here..... <http://www.r390a.com/html/Ordernumbers.htm> This is a common occurrence. Les Locklear

From Llgpt@aol.com Mon Jun 10 00:12:44 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

writes: << If it walks like a,..... And it talks like a,..... And it smells like a,.....

Then its a Collins tag!! Or a Depot Dog. Joe >>

Aaaaaaah...our resident beehive kicker returns to start things up again.....:-) Les

From ba.williams@charter.net Mon Jun 10 02:08:09 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

Scott, Glad you got an A and not the non-A variant. The R-390A is universally considered a real man's radio.

Sometimes, this switched tag situation is mostly guesswork on the part of the owner. Tags were swapped in order to satisfy inventory and inspections. I have one radio that is all 1967 EAC except the Stewart-Warner tag. I was lucky enough to have swapped tags with a guy who had the 67 EAC tag and he wanted my S-W one. Maybe it was our two radios that were in the original tag swap while in service. (g) We both ended up happy. Barry

From jonandvalerieoldenburg@worldnet.att.net Mon Jun 10 04:25:22 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

> Glad you got an A and not the non-A variant. The R-390A is universally> considered a real man's radio.

Not to throw gas on a really bunch of ancient smoldering ember's - The non "A" ( R-390/URR) is the REAL mans radio. ALTHOUGH the true RADIOMAN will get a a R-390A , a few R-392's , & for sure



a R-388 and at least one HAMMARLUND SUPER PRO!!!!!! Jon AB9AH

From twleiper@juno.com Mon Jun 10 06:25:30 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

The "A" stands for "Almost"

From bill@iaxs.net Mon Jun 10 07:50:06 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

Thomas W Leiper (never one to let a sleeping dawg lie) said, The "A" stands for "Almost"

Really? I thought it stood for "Altered" as in emasculated. Bill

From cerakak@techunix.technion.ac.il Mon Jun 10 12:54:59 2002  
Subject: [R-390] manuals

Hello to all,

I am searching schematics and or manuals of:

1. NEMS CLARKE 1037 RECEIVER.
2. SCIENTIFIC ATLANTA 1710 RECEIVER.

please help, Alex

From cbscott@ingr.com Mon Jun 10 14:05:42 2002  
Subject: [R-390] Cap Request

I'm now the proud owner of my second R390A. I've examined the AF and IF decks and see the need for some capacitor work. Does anyone have any suggestions for good axial caps to replace black beauties, etc.? I did a Dave InBham cap kit for my Motorola and it works great, but some of those ODs were a royal pain to fit in place due to their being radial-leaded rather than axial.

I was hoping to find something a bit easier to work with for this radio. I don't mind the waxy type if they're good quality. Any suggestions? Thanks, Barry(III) - N4BUQ

From ba.williams@charter.net Mon Jun 10 16:10:00 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

> The "A" stands for "Almost"> Really? I thought it stood for "Altered" as in emasculated.

Awesome. Hammarlund. Barry

From tbigelow@pop.state.vt.us Mon Jun 10 16:30:30 2002

Subject: [R-390] New to list- Identifying a Teledyne unit.

I think the math works out something like

$R-390A + R-390A \times R-392 \quad R-390.$

There's another formula with the ARR-41, but it escapes me now.

You're theory on additional radios is too complex though, Jon. My theory is, fill the place up with as much as it'll hold, a few more in the garage for good harmonious balance, then go searching for the ones you need badly. Joe Foley has been practicing this approach and seems to be meeting with success.

Roy Morgan is stopping by for a visit tonight, so I'll get his input on the math equations. All I know for sure is that when I set up the rack with the R-390A in it, the rack just snickered. When I added the SP-600 it took notice, and when I put the R-390 in, it groaned and creaked, maybe cursed a few times too. de Todd/'Boomer' KA1KAQ

From ba.williams@charter.net Mon Jun 10 16:58:03 2002

Subject: [R-390] New to list- Identifying a Teledyne unit.

> I think the math works out something like>  $R-390A + R-390A \times R-392 \quad R-390.$  > There's another formula with the ARR-41, but it escapes me now.

Sounds like Reverse Polish something or another math to me. Anyways, you got it backards.

I'm sorry to hear that Roy is visiting. We all hope that you can shoo him out the door quickly before he becomes too much of a burden. Don't let him get near the kids!!! Barry

From twleiper@juno.com Mon Jun 10 17:52:12 2002

Subject: [R-390] The Mathematics of Teledyne Identification

writes:> > I think the math works out something like> >  $R-390A + R-390A \times R-392 \quad R-390.$

That is incorrect...

$R-390A + R-390A \times R-392 \quad [R-390A]R + [R-390A]R - 392$

$[R(2) - 390AR] + [R(2) - 390AR] - 392$

$2R(2) - 780AR - 392$

You can't take three from two, two is less than three... So you look at the four in the tens place... Now that's really four tens, so you make it three tens... Regroup, and you change the ten to ten ones and you add it to the two and get twelve and you take away three..that's nine.

Hooray for New Math, New who who Math... It won't do you a bit of good to learn...New Math It's so simple, so very simple... That only a child can do it!

From billsmith@ispwest.com Mon Jun 10 18:01:20 2002

**Subject: [R-390] Cap Request**

**Bob's Antique Radios. He doesn't charge shipping, just send him a check, and he sends you capacitors. They usually arrive surprisingly quickly. <http://www.radioantiques.com/index.html>**

**He sells yellow, axial tubular mylar capacitors. They are made in Japan and seem to be of excellent quality. They are of common values only, and sold in lots of 25, but at \$8.00 or less a package, they are a bargain. 73 de Bill, AB6MT billsmith@ispwest.com**

From redmenaced@yahoo.com Mon Jun 10 22:26:15 2002

Subject: [R-390] New to list- Identifying a Teledyne unit.

+++++

Search? Well, not that so much as to stand ready with the net.

Lately though it seems there is a vacuum causing any nearby radios to be sucked in this direction. A pile of very interesting old fire truck radios, one is a 1958 FM Batwing that is going to be retuned to 52.52 MHz, then I got that Gonset G-33 for \$7, no one at that auction was even the slightest bit interested in it, they wanted the pile of sandpaper that was in the lot. Joe

From Llgpt@aol.com Mon Jun 10 23:23:14 2002

Subject: [R-390] New to list- Identifying a Teledyne unit.

writes:<< The "A" stands for "Almost" >>

And, "H" stands for..... HAMMARLUND

From DAVEINBHAM@aol.com Tue Jun 11 04:18:17 2002

Message-ID: <10e.12778610.2a36c5f9@aol.com>

writes:< I was hoping to find something a bit easier to work with for this radio. I don't mind the waxy type if they're good quality. Any suggestions?

Barry the Third, You will note in my ads for the ReCap kit I say " orange drops or equivalent'. If you want easy to install capacitors ask for the "Equivalenrs " when ordering.

They are somewhat smaller than Orange Drops, have a slightly higher voltage rating and more flexible leads. I got turned on to these little goodies some years back when doing some work for NASA. I usually have them in stock as I use them in the medical stuff I make. Also I have used them in my own R-390A's.

If I said I thought they were better than Orange Drops some of the old timers on this net would want to tar & feather me so I won't say that Kindest regards, Dave

From salers@hamal.freemail.ne.jp Tue Jun 11 11:44:44 2002

Subject: [R-390] R390(non A) &SSB

Hi! How to receive SSB signal use R390?CV591? could someone tell me the Pin schematic diagram datasheet of 3TF7? 73!Xu

From scott" <polaraligned@earthlink.net Tue Jun 11 12:36:09 2002  
Subject: [R-390] Cap Request

I use Bob's caps in all my early radio and TV restorations. I have had no problems with them. Unfortunately, they are not from Japan but they are from China. I am in awe of my first R390A and I decided to order the OD cap kit from Wesley Wilson. I have a big inventory of Bob's china caps but I just can't bring myself to put them in such a grand example of Americana. Scott

From tbigelow@pop.state.vt.us Tue Jun 11 14:41:29 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

wrote: writes:> << The "A" stands for "Almost" >>> And, "H" stands for..... >> HAMMARLUND

Up this way we have a more generic, all-encompassing definition of 'H': \*HEAVY\*

And yes, not only do the R-390 series fall into this category, but so does any [Hammarlund] worth its salt! Boomer

From redmenaced@yahoo.com Tue Jun 11 19:55:46 2002  
Subject: [R-390] OS-11 Scope on that E-thingy place

For you Tittley-type type guys. Yes, its mine. In good shape, too. Do a search for OS-11.  
Joe

From RDavis24@carolina.rr.com Tue Jun 11 23:47:11 2002  
Subject: [R-390] Signal Generator wanted

Hello

I am working on building me a shop to work on my R-390A's that I picked up local. I am very pleased with both and now I want to start working on one. I need a good signal generator to do all the alignments and I have no where to look except \*bay. Does anyone have a good signal generator that could be used to align the R-390A that they want to sell? Please let me know if you have one or know where a good one is for sale. I am also looking for spare parts for the R-390A's, I know its a long shot but if anyone has any parts that they no longer need please let me know, I am trying to purchase a fair share of parts to keep my rigs running for years to come hi. I have been converted to a R-390A man now and wish I would have found the great rig sooner. Please email direct if you have anything for sale. Thanks Ronnie KE4VPN

From RDavis24@carolina.rr.com Tue Jun 11 23:53:58 2002  
Subject: [R-390] EAC question?

Hello

I have picked up a couple R-390A's and I have a question. Both have EAC tags and EAC modules but the tags are different. One has FR-36-039-N-6-00189(E) and the other has DAAB05-67-C-0155. Does anyone know the difference? I am new to this and please remember that hi. Both are in very good shape and work FB. Thanks for any help. Ronnie KE4VPN

From Llgpt@aol.com Wed Jun 12 00:02:28 2002  
Subject: [R-390] EAC question?

writes:<< One has FR-36-039-N-6-00189(E) and the other has DAAB05-67-C-0155. Does anyone know the difference? I am new to this and please remember that hi. Both are in very good shape and work FB. Thanks for any help. Ronnie KE4VPN >>

One is the order number, the other the contract number. Look closely at the tags, they will state that. Both are from the 1967 EAC contract. Les

From ka6uup@pacbell.net Wed Jun 12 03:59:35 2002  
Subject: [R-390] Re: R-390 digest, Vol 1 #238 - 12 msgs

Guys, Who is it that rebuilds electrolytic capacitors? I thought I had the info but am unable to find it. TIA Chuck ka6uup@pacbell.net

From cbsscott@ingr.com Wed Jun 12 14:27:49 2002  
Subject: [R-390] Signal Generator wanted

I have an AN-TRM1 that I'm thinking of selling. The VHF/UHF module could use some work, but the rest of it is in good shape. I used it to align my first R390A, but since then, have acquired a GenRad generator that I like better.

The AN-TRM1 is a true boatanchor (weight-wise). Most on the list seem to prefer the URM25 since that's what's called for in the manuals so you might want to hold out for one. I think Fair Radio still has some of them. 73, Barry - N4BUQ

From roy.morgan@nist.gov Wed Jun 12 21:13:37 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

wrote:> > Glad you got an A and not the non-A variant. The R-390A is universally  
> > considered a real man's radio. >>>Not to throw gas on a really bunch of ancient smoldering ember's  
- The>non "A" ( R-390/URR) is the REAL mans radio. ALTHOUGH the true RADIOMAN>will get  
a a R-390A , a few R-392's , & for sure a R-388 and at least one>HAMMARLUND SUPER PRO!!!!!!

Check,  
R-392, nope, not yet.  
Check,  
Check.

Got most of them. NOW I am looking for a Rhode and Schwartz EK-07. But in the meantime I have seen a very nice Racal RA.17 I might eventually be able to buy. Heheh Roy

From roy.morgan@nist.gov Wed Jun 12 21:06:47 2002  
Subject: [R-390] Another R-392 question

wrote: >Gee, I noticed that all the tubes in this R-392 have shiney shields and not >the nifty IERC shields. Should I immediately replace them all with IERC?

Ask yourself how hot the tubes get. With 28 volts on the plates, they may not get hot at all. Put your finger on them to find out. Roy

From roy.morgan@nist.gov Wed Jun 12 21:16:27 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

wrote:>...I think the math works out something like>R-390A + R-390A x R-392 R-390.  
>Roy Morgan is stopping by for a visit tonight, so I'll get his input on the>math equations.

The equation is good.

> ...when I put the R-390 in, it groaned and creaked, maybe cursed a few times>too.

The creaking was from the floor joists. I \*know\* they are 4 by 12 inch oak.. but you need a bit of shoring up. Maybe it's all that black Collins gear. (drool). Roy

From R390A@r390a.com Wed Jun 12 21:20:09 2002  
Subject: [R-390] RE: Caps

>Unfortunately, they are not from Japan but they are from China.

**And that's a very good reason not to purchase them....**

**I use 100% SBE Orangedrops and they not only fit fine, but are very high quality. Especially the type 716P's. They are also made in the USA, specifically, Barre, Vermont and not Nan-Chung. Antique Radio has a full assortment.**

From DCrespy@aol.com Thu Jun 13 01:16:41 2002  
Subject: [R-390] Signal Generator wanted

Ronnie,

Hollow State News had an article (...Issue 34, article by Charles Taylor) about performing the alignment with the calibrator and "off the air" signals. The only tricky part was the variable IF. I have done it in a pinch and it works. His procedure does everything except the 455 kHz (excuse me.. "kc") IF. Reprints were (used to be, may still be) available from Ralph Sanserino at : sanser@GTE.net Have fun and 73 Harry KG5LO Saline MI:

From G4GJL@aol.com Thu Jun 13 09:46:09 2002

Subject: [R-390] Signal Generator wanted

Ronnie,

I can verify that this technique works well in 2002 over here in England!

I just went through all but the 455kc alignments on my Blue Streak III project without as much as a glimmer of power on the signal generator!

In my case this was more out of laziness and inability to lift the sig gen onto the bench due to medical conditions, but I often use this method as a first pass at alignment of a rebuilt rig.

In the specific case of my 390A, I would find it hard to believe that audibly better performance could be achieved even with instruments. It sounds so great in its present state!.

Unless there has been major surgery in the final IF, I would suggest there is no likely significant improvement in performance to be had by touching the final 455kc IF, with or without instruments. Those mechanical filters define the bandwidths and shape factors very convincingly any how. 73 Pete G4GJL

From hankarn@pacbell.net Thu Jun 13 13:19:22 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

Roy,

I now have the complete FRR-33 system except the cables/plugs includes 2 R-391's also have 21 R-390-A's, 5 non A's, 1 R-389, 2 R-388's, 2 R-392's, 2- 648/R-41, R-975 and maybe a R-725, plus SP-600's, 2 JX-14, 2 -17, 2 -26 and 1 -21 plus 1- 75A-s, 75A-3 and 3 -75A-4's along with about 100 other receivers. of all makes. They are all heavy. Since I live in Earthquake Central I use them as ballast Hi.

Have one "A" just about restored which already has a new home with 14 more in line. Hank KN6DI

From cbsscott@ingr.com Thu Jun 13 14:33:02 2002  
Subject: [R-390] Clutch question

My "new" R390A has something I've not seen or heard about before. The clutch spindle has a "stop" collar on it. This is apparently designed to stop the clutch at a certain depth. Is this "stock"? I think it has the splined set screws in it which made me think it might be original equipment. I seem to recall the manual saying the knob should be set to provide a given amount of clutch travel, but I don't recall anything about a stop collar.

Has anyone seen anything like this before? 73, Barry(III) - N4BUQ

From cbsscott@ingr.com Thu Jun 13 14:46:10 2002  
Subject: [R-390] Message for Ben Loper

Ben, If you still subscribe to this list, please send me an email. I tried your old address and it bounced. Thanks, Barry(III) - N4BUQ

From G4GJL@aol.com Thu Jun 13 17:46:28 2002  
Subject: [R-390] Clutch question

My Blue Streak has that too two off 8 point bristol set screws to hold it in place. My other 4 sets dont have these. Pete G4GJL

From tbigelow@pop.state.vt.us Thu Jun 13 18:57:32 2002  
Subject: [R-390] RE: Caps

And I'm here to tell ya, they're all American workers, too. No illegals working at SBE. Too cold in winter!

The new owner of SBE is a ham(name and call escapes me), apparently a generous man. He donates bags of Orange drops to the local club for sale on their club table at hamfests.

A small town, small business keeping people employed by making something we need. doesn't get much better than that. de Todd/'Boomer' KA1KAQ

From tbigelow@pop.state.vt.us Thu Jun 13 19:08:41 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

wrote: wrote: > >...I think the math works out something like> >R-390A + R-390A x R-392 R-390. >  
>Roy Morgan is stopping by for a visit tonight, so I'll get his input on the > >math equations. > The equation is good.

Thought so. Almost makes sense too, in a heavy kinda way...

> > ...when I put the R-390 in, it groaned and creaked, maybe cursed a few times too. > The creaking was from the floor joists. I \*know\* they are 4 by 12 inch > oak.. but you need a bit of shoring up. Maybe it's all that black Collins > gear. (drool).

Well, the two snapped joists I didn't mention to you haven't gotten any worse, and I've added quite a bit more gear since. There are two more 6' transmitters in the garage, too.

The key is the Depot Dog sitting near the middle of the floor and the RAK-8 under the desk with the R-388 and 75A-3. Those are the counter-balancing weights. They keep the R-390 rack and all the other tall stuff out near the walls. Think of the ARC-5 gear as shims.

It's a previously undiscovered phenomenon where heavy things stay put because smaller ones make them hold on tight. I call it 'Grabitation'. It takes some practice, but once you get the balance right....  
Boomer KA1KAQ

From BRingwoo@csir.co.za Thu Jun 13 07:53:43 2002  
Subject: [R-390] RE: Caps



Oh-oh I put German caps in mine and sprayed the front panel a few shades off the correct Navy Grey ...  
I must be in real trouble - Bryce

From djmerz@3-cities.com Thu Jun 13 19:39:00 2002  
Subject: [R-390] 390 i.f. unit

Hi, I'm in need of R-390 (non A) i.f. chassis unit, working or restorable. Anyone know a source or potential source, thanks, Dan.

From r.tetrault@attbi.com Fri Jun 14 02:14:36 2002  
Subject: [R-390] New to list- Identifying a Teledyne unit.

Dang! Makes me think of that Groucho Marx observation to a couple that had thirteen kids, "Yeah? Well, I like a good cigar but I take it out of my mouth once in a while..."

From gwmoore@moorefelines.com Sun Jun 16 07:18:38 2002  
Subject: [R-390] Wanted: Probe for RCA WV98V VTVM..

For those lists in which this request is Off Topic, my apologies. I am, however trying to get the greatest possible contact base to try to locate a part for a RCA VTVM (Their trade name was "Senior VoltOhmyst, Type WV-98C.

The part(s) I am interested in are the DC/AC-OHMS probe and cable, RCA type WG-299E NOTE: According to the manual, Probe/Cables from WG-299A through WG299E are acceptable replacements.

In addition, if anyone has one available for sale, I would like a Crystal Diode Probe Type WG-301A

A High Voltage Probe Type WG411A or Type WG289

A Multiplier Resistor tip Type WG-206

If anyone has these for sale, I would greatly appreciate your contact here on any of the lists, or directly to my email addy gwmoore@moorefelines.com.

Once contact is made we can discuss price and shipping. Thanks to all for your assistance, and apologies again if I am off topic for any of the lists to which I posted. 73 es tnx de Greg Moore WA3IVX

From ba.williams@charter.net Tue Jun 18 02:53:54 2002  
Subject: [R-390] Yikes!!!

I was looking for old gear on a newsgroup and found this goodie:  
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item1346037635>

Ya gotta see it to believe it. the other other Barry

From lal@metrocast.net Tue Jun 18 12:52:28 2002

Subject: [R-390] Need BFO

Hello to all..

I am in need of a 455 BFO for my R-390A if anyone has one of these would you please get in touch with me. Thanks Merle W1GZS

From cbscott@ingr.com Tue Jun 18 14:00:26 2002  
Subject: [R-390] Need BFO

From Barry Hauser" <barry@hausernet.com Tue Jun 18 14:06:07 2002  
Subject: [R-390] Yikes!!!

Greetings Namesake

Have to disagree with "Yikes!!!". More of a Holy Moley!!!! or <GASP>

Unfortunately I didn't see this one in time to look at the photos and they're gone now. Must have been some custom filagree work or maybe gold plated rack handles or sumpin'. Of course, famous names don't hurt. (Soon Rick 'n Chuck will be demanding royalties, heh heh.)

Prices have been a bit loopy lately -- both up and down. Probably reflects the uncertain state of the economy. Or maybe it's the other way around -- prevailing free market pricing of boatanchors drives the economy? Y'know, like ladies' hemlines foretell the stockmarket -- or determine it -- I forget which ;-)  
Barryonekenobe

From wewilson@knology.net Tue Jun 18 15:19:23 2002  
Subject: [R-390] Yikes!!!

I saw the pictures on this one when it was posted. Absolutely gorgeous unit, fully restored by Rick Mish.

I had to recently make a similar price decision to purchase a T-368 model E transmitter. The price was higher than I expected or wanted to pay, but I had to ask myself the following question: "Are you willing to let a few hundred dollars stand in the way of purchasing a beautiful T-368 transmitter which is a late model, overhauled near the end of it's military service life, and only comes along in this condition once every few years?" The answer to that question is now obvious: <http://www.r-390a.us/T368.htm> Cheers, Walter - KK4DF

From tbigelow@pop.state.vt.us Tue Jun 18 16:30:14 2002  
Subject: [R-390] Yikes!!!

I recall seeing it. Was a nice clean unit in a mac cabinet. Clean! Out of my price range by a couple grand, but clean! ~Boomer KA1KAQ

From twleiper@juno.com Tue Jun 18 16:29:42 2002  
Subject: [R-390] Yikes!!!

You are right, a few hundred dollars is all they are worth. At the time you bought that unit I was thinking about selling my own (even later an better conditioned) model "F" for \$237.61, which was the cost to get a new space heater for my shack.

After putting 50 flyers in mailboxes and supermarkets I still didn't get any bites, even after almost 12 hours, so I decided to keep it after all. Twit Hammarlund

From w9wis@charter.net Tue Jun 18 16:37:49 2002  
Subject: [R-390] Re: [R390] Yikes...

> Of course, famous names don't hurt. (Soon Rick 'n Chuck will be demanding > royalties, heh heh.)

It won't be Rick at Miltronix..... he just completed a refurb on my Motorola and in fact it's on the way back as I write this.

Rick has ceased doing his complete restoration.... no more cosmetic work like cleaning and painting at all. The main motivation for him to cease this is that he finally realized that he was loosing his ass with all the time consuming cosmetic restoration. You couldn't really charge for the necessary time as not too many people could then afford your work. He said he'll still do complete repair and electronic restoration as the turn over is faster.... but that's it. Too bad... I couldn't even talk him into repainting my front pannel or knobs and I had the cash.

This auction is what really set him off I think. Something about \$750 for a full refurb that then gets turned around on eBay and sells for \$1900 +/-.... Mike, W9WIS

From cbsscott@ingr.com Tue Jun 18 16:48:36 2002  
Subject: [R-390] Yikes!!!

T(wit)om,

I have decided not to buy your T-368.

If you take the 368 from T-368 and add it to the even-dollar amount of your asking price, you get 605. Take the well-know number for the devil, 666, and subtract 605 and you get 61 which is the decimal part left over from your asking price. It was just too scary for me. Barry(III) - N4BUQ (Gonset)

From lexa@mail.island.net Tue Jun 18 17:24:54 2002  
Subject: [R-390] Progress?

Hi,  
Hey gang, do you want your very own "Glow in the Dark" computer? :-) Check this out,  
<http://www.aopen.com/products/mb/Pax4b-533tube1.htm> Leo QCI

From Richard.McClung@Dielectric.spx.com Tue Jun 18 17:55:39 2002  
Subject: [R-390] Yikes!!!

I know mine was; but, what was yours? (Pierson-DeLane) RICH @B> }

Just a silly post in response to another silly post. Barry

From Barry Hauser <barry@hausernet.com> Tue Jun 18 17:10:17 2002  
Subject: [R-390] Progress?

Wow, two Yikes!!! in one day.

This is either a good thing or a bad thing. What tube number does it use? Might drive the prices up. Wait a minute -- no IERC shield on it! Maybe they'll sell a "cool power" micro fan to mount on the top.

Dunno if I should run and go get one or hold off and wait for the matched pair push-pull 6V6 model.  
Barry

From tbigelow@pop.state.vt.us Tue Jun 18 18:00:55 2002  
Subject: [R-390] Progress?

Leo, you just made my day. Some of my geek friends are always putting down vacuum tube technology and using PCs/computers to illustrate their point. I'm gonna have some fun! Thanks! de Todd/'Boomer'  
KA1KAQ

From ba.williams@charter.net Tue Jun 18 19:15:43 2002  
Subject: [R-390] Progress?

Your friends sound like they need to know more about computers. The first computers were tube monsters. Hundreds of tubes! Memory was hardwired. You got out the soldering irons when you needed to change programs.

The first Atari had 16k of chip memory and used the first VLSI chip made for home computers. It ran at 1.77 MHz. Barry

From cbscott@ingr.com Tue Jun 18 19:29:08 2002  
Subject: [R-390] Progress?

Let's see..."ControlPanel->Add/Remove Programs"<click>. Nope, that didn't quite get rid of it. Files are still in the program's directory. Clean out the registry. Reboot. Load new program. Interrupt conflict. Memory address errors. Try again...

50 years later and not much has changed. The soldering iron now has a QWERTY interface. Barry(III)  
- N4BUQ

From lal@metrocast.net Tue Jun 18 21:46:22 2002  
Subject: [R-390] Question ?

Hello again..

In some things I picked up was a NIB what appears to be a crystal calibrator for some type of Military gear.

On the bottom is the following info. 250 KC OSC. 506-6215-904 MOD.2 Bailey Crystal oven code date 4/56 Uses a pair of 5749 tubes.

Wonder if anyone can tell me what radio it is made for please? Thanks.. Merle W1GZS

From tbigelow@pop.state.vt.us Tue Jun 18 23:12:35 2002  
Subject: [R-390] Progress?

Yeah, but that was all the 'past'. They're only concerned with what's now and new next week. This'll show 'em! \*evil cackle\*

From Llgpt@aol.com Wed Jun 19 00:06:21 2002  
Subject: [R-390] Yikes!!!

<< Barryonekenobe And, WHO gave you number one status?

We demand to know..... Lesnumber1,267

From RDavis24@carolina.rr.com Wed Jun 19 00:20:47 2002  
Subject: [R-390] Trade Ten Tec for Test Equipment

Hello

I am really enjoying the R-390A's that I picked up. Now I have a problem, I need some equipment to get them in top shape. I want to trade my nice Ten Tec Pegasus, with remote knob, 963 PS and LDG AT-11MP Autotuner for some good test equipment. I am looking for HP equipment to align, test, repair and trouble shoot the R-390A.

HP 8640B

HP 606B

HP 410C

HP O-Scope?

HP DVM

HP Freq Counter?

TV-2 Tube Tester

Please email direct with any items that you wish to trade. I am only a beginner and really do not know what I need hi. One thing is for sure the shop is pretty much empty right now hi. I may be interested in trading for R-390A parts, parts rigs or SSB adapters. No time to use the Pegasus anymore hi. Thanks  
Ronnie KE4VPN

From Barry Hauser" <barry@hausernet.com Wed Jun 19 00:35:02 2002  
Subject: [R-390] Yikes!!!

Hi Lesnumber 1,267-

Actually -- no one -- I "backed into" the number according to what the other two Barry-folk call

themselves, such as the other, other, or Barry III, etc. That's my story and I'm stickin' to it -- oops, sorry, that's your line. ;-) Barry (maybe non-A?)

From Llgpt@aol.com Wed Jun 19 01:04:38 2002  
Subject: [R-390] Yikes!!!

Or, HAMMARLUND

From shadow@gilroy.com Wed Jun 19 01:23:32 2002  
Subject: [R-390] Progress?

Leo .... Thanks for the info... I looked at the photos and still do not believe my eyes.. I had to look 3 times. Just unbelievable... I need to go to the Web site.. Shadow

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

From ba.williams@charter.net Wed Jun 19 01:36:58 2002  
Subject: [R-390] Yikes!!!

That was the other Barry. Barry (# 3)

From ba.williams@charter.net Wed Jun 19 01:38:08 2002  
Subject: [R-390] Yikes!!!

No, he is the witch. the other other Barry

From ivanho@c2i.net Mon Jun 17 16:04:22 2002  
Subject: [R-390] 17 june. 2002

Mailman:

I own one of those R-390's , and understand you provide some service for people like me. Could you put me on the mailing list, and give me a little info. on what is actually available here. I understand there is a fair bit of sharing of the technicality of the R-390. I am eagerly awaiting your reply. Regards Ivan Heimdal. Ivanho@c2i.net20

From ba.williams@charter.net Wed Jun 19 01:46:27 2002  
Subject: [R-390] Progress?

Well.....err.....it ain't the computer, it's the Windows. Okay, it's a little bit the computer but mostly the OS shell. The interrupts on an Intel box are a hassle. I agree. It's sort of like a computer by a comittee. This company makes this, that company makes that. Another company puts it all together. Barry

From Llgpt@aol.com Wed Jun 19 02:10:24 2002  
Subject: [R-390] Progress?

Like the McIntosh OS. Les

From Llgpt@aol.com Wed Jun 19 02:11:59 2002  
Subject: [R-390] Yikes!!!

Barry (# 3) >>

That's much better.....they try harder than number one. Les

From w5or@comcast.net Wed Jun 19 02:26:06 2002  
Subject: [R-390] 17 june. 2002

Welcome to the list, Ivan. I believe your email address is now subscribed to the R-390 list, and you should have received the welcome info. Tell us about your R-390. Don Reaves W5OR

From Jim Shorney" < Wed Jun 19 02:27:39 2002  
Subject: [R-390] 390A questions

If you guys will let a Drake man in here... :-)

I just picked up a well-used R390A that hasn't been powered in 10+ years (yes, I have a variac). I've been reading a lot of stuff on the web, and noticed several notes about the cap that shorts and destroys the mechanical filter(s). How prevalent is this? I plan to replace the cap anyway with a higher voltage rating, but I was wondering if anyone has looked into methods of protecting the filters. I was thinking, maybe a small-value pico-fuse in series with the cap? It seems at that frequency, it would have negligible effect on circuit operation. I've seen them as small as 1/8 amp, would that be small enough to blow if the cap shorted? I have no idea at this point of potential current involved, just idle speculation.

Is there an easy way to tell manufacturer and approx. age if the nameplate has been removed? Who's the guy that sells replacement nameplates? How many Jims do you have in here? 73 Jim

From mmdues@hal-pc.org Wed Jun 19 02:31:14 2002  
Subject: [R-390] Question ?

That's a Collins part number. Marshall Dues - WB5MYO

From scr-287@sbcglobal.net Wed Jun 19 02:35:52 2002  
Subject: [R-390] Question ?

Not sure, but it sounds like it could be the frequency reference module for the AN/ARC-38.  
Jack Antonio WA7DIA

From Bill Marx" <bmarx@bellsouth.net Wed Jun 19 02:34:09 2002  
Subject: [R-390] Why Yikes?

I have about that much in mine now. All Collins, some restoration and a new cabinet \$325 ....figure in some shipping \$150....I'd say its about right. If it were mine I'd be down \$50. Bill Marx W2CQ

From ba.williams@charter.net Wed Jun 19 02:51:00 2002  
Subject: [R-390] 390A questions

Jim,  
Welcome to the list....even if you own a Drake. (g)

The nametag problem is fairly common. Tags were swapped for inventory control or at depot. Hank Arney did make repro tags that were supposed to be of good quality. Maybe he will contact you if more are available.

I guess you could check the back of the chassis and see what manufacturer and contract number you find. You can check the AF deck and power supply easily for manufacturers. That will give you some idea of what components are there for starters. It was common to throw in whatever component was on the shelf at depot, so don't be surprised to find a mix of manufacturers.

I think the cap you are curious about is C553 in the IF deck. Go to <http://www.r390a.com/ProbCaps.html> and you will see this with a good pic of the location. This is Chuck Rippel's page. He did the videos on the R-390A and SP-600. You will find a lot of good info on his website.

Glad you joined the list. Let us know how this radio comes along. Barry

From twleiper@juno.com Wed Jun 19 02:18:06 2002  
Subject: [R-390] Yikes!!!

What a senseless waste of a brilliant mind...

From dallas@bayou.com Wed Jun 19 03:47:48 2002  
Subject: [R-390] The Hollow State Newsletter

The Hollow State Newsletter, with lots of reprints of good articles (original articles), about the R-390A is alive and well. Contact Ralph Sanserino for reprints information: [sanser@GTE.net](mailto:sanser@GTE.net).

From Jim Shorney" < Wed Jun 19 03:49:21 2002  
Subject: [R-390] 390A questions

Hi Barry,

wrote: >Welcome to the list....even if you own a Drake. (g)

Thanks. FWIW, I own several Drakes. Most of them glow in the dark... :-)

>Hank Arney did make repro tags that were supposed to be >of good quality. Maybe he will contact you if more are available.



I await with bated breath.

>I guess you could check the back of the chassis and see what manufacturer >and contract number you find.

Thanks for the tips. I've already gotten info that points in the direction of Collins or Motorola. On the back panel: letters 'MFP', and numbers 2194 and N20202-1. Will probably not be able to tear into it further until later next month. Just killing some time right now while Linux is fighting with my laptop in the next room...

>This is Chuck Rippel's page. He did the videos on the R-390A >and SP-600. You will find a lot of good info on his website.

Been there, done that. A wonderful site. I'm sure I will be back often.

>Glad you joined the list. Let us know how this radio comes along.

Thanks again, Barry. I'll be lurking. 73 Jim

From redmenaced@yahoo.com Wed Jun 19 03:55:41 2002  
Subject: [R-390] 390A questions

> If you guys will let a Drake man in here... :-)

++++++

Well,..... Ok, most converts are allowed but only if you go through the 12-step program, or is it pogram? Then you have to send the offending contraband, Drake, in your case, to someone else on the list.

You'll notice small referenes to certain radio manufacturers on occasion, usually taking this format: (Bendix)

These are the former owners of contraband listing the items they personally sent to other members of the list to "cleanse" themselves.

I personally do not have to do this as MY station is an R-390A with a T-368, the other stuff came along later, like: (Howard) and (Crosely, Division of AVCO) Or (Gonset)

> I just picked up a well-used R390A that hasn't been > powered in 10+ > years (yes, I have a variac).

++++++

You'll be ahead to download the R-390Y2K manual as soon as you can. It was a group effort by some members of this list to update and correct the original manual and put better pictures in it with more information.

I've been reading a > lot of stuff on the > web, and noticed several notes about the cap that > shorts and destroys > the mechanical filter(s). How prevalent is this?

++++++

Not very, but the cost of the failure is worth the time and effort to replace the capacitor.

I > plan to replace > the cap anyway with a higher voltage rating, but I > was wondering if > anyone has looked into methods of protecting the > filters. I was > thinking, maybe a small-value pico-fuse in series > with the cap? It > seems at that frequency, it would have negligible > effect on circuit >

operation. I've seen them as small as 1/8 amp, > would that be small > enough to blow if the cap shorted? I have no idea > at this point of > potential current involved, just idle speculation.

+++++

Um,..... do you have a approved Dead-Horse-Beating stick??

> How many Jims do you have in here?

+++++

Not a problem, Jim,..... but if your name had been Barry.....

Joe, (not a Barry either) designated bee-hive kicker extraordinaire!

From john@whimsey.com Wed Jun 19 04:11:15 2002

Subject: [R-390] Progress?

wrote:> The first Atari had 16k of chip memory and used the first VLSI chip made> for home computers. It ran at 1.77 MHz.

Who said Atari? The first ones came with a Combat cart which is where the ROM was and they were 2KB. Most games had 4KB of ROM but eventually there were carts with bankswitching that went up to 16KB and more. They had 128 \*bytes\* of RAM and it's one of the most difficult machines to program for ever made. Kinda like a \*real man's\* computer from a programmer's point of view. In fact to this day, a certain number of young programmers coming of age like to prove their manhood by writing a game for it. Funny, I got interested in the old radios as a way of getting away from the Atari. But \*NO\*. \*SOMEBODY\* had to bring it up. ;- ) John

From Jim Shorney" < Wed Jun 19 04:11:36 2002

Subject: [R-390] 390A questions

Hi Joe,

wrote: >Well,..... Ok, most converts are allowed but only >if you go through the 12-step program, or is it >pogram? Then you have to send the offending >contraband, Drake, in your case, to someone else on >the list.

Not on your life, buckaroo. My Drakes, er, (Drakes) are protected by a fleet of (IBM) Server 95s. Big Blue steel can stop a howitzer at 20 yards....

>These are the former owners of contraband listing the >items they personally sent to other members of the >list to "cleanse" themselves.

I'm only a 'social Draker'.

>Um,..... do you have a approved >Dead-Horse-Beating stick??

Well, er, no, but the archive search engine didn't seem to be working real well this afternoon so I figured I would just ask. Too much to do to browse through several years' worth of message headers this week. :-)

>Not a problem, Jim,..... but if your name had been >Barry.....

I could change my name just to annoy you.... >Joe, (not a Barry either)

So how many Joes are here? 73 Jim

From redmenaced@yahoo.com Wed Jun 19 04:12:53 2002  
Subject: [R-390] Trade Ten Tec for Test Equipment

These are all good choices but because of their age may need the same help the radios need, don't rule out the military surplus alternatives for your list. A URM-25 signal generator and a TV-7 tube tester may be easier to use and will have better documentation should you need to fix them. They may be more readily available, too. The HP freq counter is a bear to carry! Joe

From n4xy@earthlink.net Wed Jun 19 04:21:53 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

I'm certain most of you have seen the emails from Xu in P.R. China... today my old-but-working-well R-390 left for mainland China via US Mail / Parcel Post (surface). Net cost was \$130 shipping and I gave the packer \$50.

The "deal" is that I get a new Chinese Army HF Type 77 solid state rcvr w/many spares. I had my choice of (both NOS) tube or solid state-Xu said he felt the solid state version was much better, although physically uglier... and since I was never able to confirm that the tubes in the older tube version had EURO/US equivalents, I feel safer with the transistor unit. Both are new units, although Xu offered (and I asked him to do so) to open the sealed unit and check it out for me.

Should be 4 to 6 weeks. The transaction is supposed to work as follows: I emailed a scan of my postal receipt and he will ship the unit out sometime between now and this weekend. Let's hope it works out OK for both of us!

Cost? Well, I bought the R-390 several years ago and-though it cost a bit more than I should have spent at the time-electrically, it works FINE. Physically, it is between good and very good, and is complete with a proper-connector power cord.

For those of you who have been to my website, and may have noticed all the Chuck Rippell-rebuilt R-390-A photos in my RECEIVERS page... it ISN'T THAT UNIT. Anyway, besides the 'cost' of the R-390, the shipping by straight 'surface parcel post' was \$130. The packaging guy has ALWAYS done such good work for me-and did an EXEMPLARY job on this: building a custom cardboard (they won't allow wood-and the "girth" spec is about an R-390 chassis plus one inch all the way around, PERIOD... while you might succeed in fudging the weight, the SIZE better be OK) box that would exactly match the size specs. With foam spacers between the knobs and the cardboard walls, a layer of foam on the back between the 1/2" side/back lip and the actual rear panel; and building a custom-made top and bottom that added 2 more layers of cardboard to the edges. It was still severely under-protected, but it's the best that could be done under the no-crating rule, and the size limitations. Truth is, it could still come back. Anyway, I gave the box guy a \$50... he didn't want to take it, but that box helped at the PO, it was so well done, etc. I wish I had taken a photo. So, the total is: R-390 + \$130 + \$50. Having the really nice R-390-A... it's worth the risk... in exchange for a world-class conversation piece!!!

Photos of the Chinese Type 77 receiver are available by request. I don't want to put them on the website unless I have it in my hot little hands. By the way, it has Chinese characters everywhere, but Arabic

numerals... so... considering a receiver is practically self-explanatory, that shouldn't be a problem. Also, Xu has promised to include a translation sheet for the characters on the front panel.

Of course I'll keep the group apprised. I truly do think Xu is a straight-up guy, and am really looking forward to it. 73 <n4xy@earthlink.net>

From ba.williams@charter.net Wed Jun 19 04:45:35 2002  
Subject: [R-390] Progress?

The cartridge is ROM only. Different from the ROM and RAM in the computer. I think the carts went up to 8k and then bank switched for anything more. That is why the super cart games flickered. The flicker was the switching of ROMs. I was never into carts much except to get the data out and make boot sectors so that I could run the games from floppies.

No, those computers eventually had 128K of RAM, but with the 6502 chip it could only address 64K at any one time. This is kilobytes, not bytes. The other 64K was bank switched. This was an 8 bit CPU chip, so the math only goes to 64 something thousand (64K). You had 4K reserved for BASIC, which you could kick out if you knew how so that you really had 52K of RAM to use. I modified one 8 bit computer to have 256K and another to have 576K. You were pretty much on your own back then when it came to modifying hardware. I had to patch my DOS for the extra memory banks in 8K boundaries. I had no idea if my patches would work but they did the first try. I was terrible in hex math.

Funny, but I found 6502 programming easy. I learned ML. Trying to learn Motorola 68000 programming proved too tough. I think it had 8 data registers and 7 address registers. The last one was for the stack...I think. Plus, breaking data into words and longwords was tough enough, but mixing bytes and words did me in. You mean to tell me that you didn't like rotating bits right or left? My personal favorite was the WD fdc. Head step settle times, etc.

Learning copy protection schemes pretty easy on the Ataris. The ST was easy to learn. It's kind of a funny reminiscence to see the music CD copy protection being beaten so easily. It reminds me of the days of fuzzy sectors, elliptical tracks, data under the index hole sectors, minus tracks, branch on equals, etc. I never thought the copy protection for CDs would last long. Same old story, different centuries. Folks will never learn.

I bet you are sorry you asked now!!! one of the Barrys and I ain't saying which one

From ba.williams@charter.net Wed Jun 19 04:46:46 2002  
Subject: [R-390] 390A questions

> So how many Joes are here? > > 73 > > Jim

Too many.

From scott" <polaraligned@earthlink.net Wed Jun 19 11:00:41 2002  
Subject: [R-390] Would you buy this?

Take a look at this R-390. I figured if I get it for \$500 it would be a good deal. Now that no one else has bid I am concerned that I missed something. The last 390 went for almost \$1200. What do you

think? Scott

From scott" <polaraligned@earthlink.net Wed Jun 19 11:09:22 2002  
Subject: [R-390] Trade Ten Tec for Test Equipment

On the Freq counter, Scope and DVM I certainly would get the most modern money can buy. You want to spend more time working on this equip than using it??. The HP 606 is a nice unit. Try e-bay. As for a tube tester, If you want to spend a lot of money a Hickok 539c is a GREAT unit, and is well documented and easily calibrated. For the budget minded, you just can't beat a TV-7. Scott

From scott" <polaraligned@earthlink.net Wed Jun 19 11:32:30 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

Wow. Can you imagine being Xu and getting your hands on a 390? Like a kid at christmas. Finally a toy that will not fall apart when played with. Quite unlike my childrens toys that are all made in china and fall apart after several hours of light play. DON't handle the Type 77 too hard. Maybe don't even look at it the wrong way Ed. Can I get someone to trade me a 390 for the pile of broken chinese toys I have? Scott

From wf2u@starband.net Wed Jun 19 13:07:59 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

I bet the Chinese military radios are not like the cheapo Chinese toys which fall apart as Scott mentions. Don't forget, the toys are produced cheaply for some profit margin of the manufacturers and all the middlemen. They are made for consumers and not as something that can make the difference between life and death as in military equipment. And there is the matter of cost: there is no consideration of manufacturing costs for the military, especially in a communist state- whatever it costs to achieve the desired results, the government pays for it.

I found the Soviet military radios I collected in the last few years built like the proverbial brick \*&%#house, with quality components and exemplary functionality and I'm sure the Chinese manufactured military radios are not less functional and rugged.

By the way the Chinese Type 77 receiver is a solid state version of the Russian R209 "Krot". The R209 is an older tube model (with subminiature tubes). The frequency range, and the display of the Chinese Type 77 are identical and the general panel layout is very similar. I have the feeling that while the Russians obsoleted this model in the early 80's, the Chinese developed it further and just redesigned it with solid state devices. The tube type Chinese receiver is the clone of the original Russian R209. A number of Eastern European hams who used the R209 claim that it is an excellent receiver.

I played with one in a hamfest in Germany 2 years ago and I was impressed. If this Chinese model is anywhere near as good as the R209, then it's a nice receiver for the money/trade. 73, Meir WF2U

Sent: Wednesday, June 19, 2002 6:33 AM  
Re: [R-390] Re: R-390 <> Type 77 China trade

Wow. Can you imagine being Xu and getting your hands on a 390? Like a kid at christmas. Finally a toy that will not fall apart when played with. Quite unlike my childrens toys that are all made in china

and fall apart after several hours of light play. DON't handle the Type 77 too hard. Maybe don't even look at it the wrong way Ed. Can I get someone to trade me a 390 for the pile of broken chinese toys I have? Scott

From cbscott@ingr.com Wed Jun 19 13:48:53 2002  
Subject: [R-390] Yikes!!!

Let's see, where have I heard that before? Oh yeah, from my high-school principal. Barry(III) - N4BUQ

From Richard.McClung@Dielectric.spx.com Wed Jun 19 15:19:54 2002  
Subject: [R-390] Would you buy this?

Very interesting Grey w/black lettering front panel R-390. It looks like it will require a lot of work to get the corrosion in control. Lots of salt blooms.....What's not visible????? Looks like a good, mid-west farmboy, winter project..... RICH @B> }

From iasckids@pacbell.net Wed Jun 19 16:41:09 2002  
Subject: [R-390] Would you buy this?

Yes I would. The price is right. You have a superior DX machine in the rough, It needs some work ,but seems complete save for a few mods. A.C. receptical is not stock. tube straighteners are missing. your ballast tube has been supplanted with a resistor and your power supply solidstated. You seem to have grown an additional electrolytic cap on the left underside of the radio.A s for the claim of driving by a local radio station and getting a reading on the meter...how did he do that??? You will have a good unit if you take your time and go through it. The R 390 n is in some aspects a preferable rx to the A. 73  
Gregory Mengell BTW Dave Medley is the resident non A guru .Dave are you there?

From R390A@r390a.com Wed Jun 19 17:23:10 2002  
Subject: [R-390] RE: Yike! & Restoration Thoughts

> > Of course, famous names don't hurt. (Soon Rick 'n Chuck will be demanding royalties, heh heh.)

I thought I'd offer some comment on the restoration process as seen by one who does it. It may shed some light on the process and differences in approaching it.

> It won't be Rick at Miltronix..... he just completed a refurb on my Motorola and > in fact it's on the way back as I write this. > > Rick has ceased doing his complete restoration.... no more cosmetic work > like cleaning and painting at all. The main motivation for him to cease this is that > he finally realized that he was loosing his ass with all the time consuming > cosmetic restoration.

I don't know why, its not that hard although is \_time consuming\_. That said, I had a good friend of mine who was a Cordon-Blu educated Chef tell me once that you "first feast with your eyes then with the pallet." I took his comment to heart; how can one feel good (in this case) about a refurbished radio if it's a disappointment to look at?

I guess the difference is that Rick is running a business and does his receiver work to put bread on the table.

On the other hand, I have a very different philosophy. I want each radio to pass a personal spec rather than approach this as solely a business venture. I have what was, a new from the box R390A receiver on hand. A few of you who may have visited may have seen it. I like each receiver I complete to certainly perform like that one and also come as close to looking like it as possible. If it takes 2 weeks or a month, so be it. The unfortunate side of that is that I must keep this crazy waiting list.

The neat side is that I have people fly into our rural airport to pick their radios up or drive down. The last person who picked a radio up here was about 4 weeks ago. He left with tears in his eyes (no kidding).

> You couldn't really charge for the necessary time as not > too many people could then afford your work. He said he'll still do complete > repair and electronic restoration as the turn over is faster.... but that's it. > Too bad... I couldn't even talk him into repainting my front panel or knobs and > I had the cash.

Ricks absolutely right. Howard Mills, W3HM who does a good deal of Collins "St. James Gray" gear restorations and I once sat down and calculated what we made before taxes. It's right about \$5-\$7/hour.

And that's ok too. Howard and I both feel that it's better to return given piece of equipment back as we would personally expect rather than something less. Neither of us run "radio factories" preferring to approach the effort as an oblique kind of art, if you will. I document the repair process, the test results and supply a rather substantial booklet with each radio. I would like each owner to treat the completed radio as sort of an heirloom. Lord knows, properly done, an R390A will remain useable for several more generations.

There are phases in restoring a receiver that are a real pain in my butt. In order, they are:

Refinishing/relettering a front panel

Refinishing/re-lining the knobs

Rebuilding the filter caps (mostly 'cause the technique I use is sort of dangerous)

Building the solid state ballast tube replacement modules.

Rather than make a partial effort, I am going to maintain my level of detail and even increase it where possible. That includes things like painting knobs, replacing all the front panel hardware with new Mil-Spec Stainless, offering front panel re-paints/re-letters on engraved panels and putting new elements in those confounded filter caps. Plus all the other things that seem to eat up my evening radio time.

> This auction is what really set him off I think. Something about \$750 for a > full refurb that then gets turned around on eBay and sells for \$1900 +/-....

I can't blame him; it bugs at me at times also. However, when it's all said and done, it's not my place to try and dictate what a private owner does with his equipment. However, I won't knowingly re-do a radio or radio(s) for known "dealers"/chronic resellers, unless they represent it for their own private use. It's just "one of my things," I suppose. I remember getting a note from the "Radio Finder" about 4 years ago essentially asking me if he could be a "dealer" for my work. I declined for the reasons above.

A contrast between the level of work I choose to deliver and v/s Rick does is neither bad or good. It's just a difference in philosophy. Ricks a decent person and you don't have to wait as long to get a radio done through him. In contrast, I would never take my efforts on as full time work as I am sure my personality would quickly relegate what I do to rote work and the quality would surely suffer. However, there is a patience trying wait (which I deeply appreciate from those who endure it). Best  
Chuck Rippel,

From john@whimsey.com Wed Jun 19 17:39:16 2002  
Subject: [R-390] Progress?

Ah, we are talking about different things. I was talking about the Atari 2600 game console, which to me is their first \*computer\*. In that case, there is no ROM in the console. It has 128 bytes of memory total. All of the ROM is in the cart. But it does have a 6502 instruction set.

And no, I'm \*not\* sorry. ;-) I think it's interesting to be in a far corner of the cyberspace and find somebody with a similar interest. Actually, I think they were still making R-390A's when the 2600 came out. That's kinda interesting... And to this day, people writing games for the 2600 are unsuccessfully trying to find ways to copy protect them.

BTW, if you like you can check out my 2600 emulator here:  
<http://www.whimsey.com/z26/>

But you're on your own finding the bootleg ROM images which are illegal to possess. ;-) John

From cbscott@ingr.com Wed Jun 19 17:51:24 2002  
Subject: [R-390] Progress?

So the truth comes out! The Atari 2600 caused them to stop making the R390A. I wonder what happened to all the "Atari" R390A nametags? Barry(III) - N4BUQ (ATARI)

From Ed.Hopton@checkpt.com Wed Jun 19 17:50:20 2002  
Subject: [R-390] Progress?

Ah, the AIM-65; now there's a real 6502 machine. Oh and that's Rockwell AIM-65, as in you know... Have fun! 73, Ed N3CMI

From R390A@r390a.com Wed Jun 19 17:54:11 2002  
Subject: [R-390] R390A Problem

Hey, I am a Drake person also. My first "store bought" radio was a "C" Line. I just finished re-doing a very late model "C" Line for myself and its near factory perfect.

With regard to the blocking cap the problem does not occur every day but its very destructive when it does. I happened to me about 12 years ago and I lost a 4kc filter to it.

If you want some additional background, go on my R390A WWW Site and look at:  
<http://www.r390a.com/html/C-553.htm>

It describes the cap/filter problem in detail. Replace the original cap with a 600V .01uv SBE Orangedrop. If you don't have one, send me a 2 bucks and I'll mail you one. Orangedrops work great at 455kc and below.

You can tell who built the radio by looking at the mfg markings on the side of each module. The contract/builder history is here: <http://www.r390a.com/html/Ordernumbers.htm>



Tom Marcotte N5OFF sells generic front name plates. I am sure someone on the list has his current e-mail address. I'd enjoy an off list discussion about Drake if you get the chance. -73-

From R390A@r390a.com Wed Jun 19 17:57:20 2002  
Subject: [R-390] Oooops...

Oops, shoulda read down further. My efforts were a duplication of efforts, I think. Sorry Barry.

From n4xy@earthlink.net Wed Jun 19 18:57:54 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

I'm not too worried Scott, about the construction... just from its appearance you can see how tough the physical design is. Except maybe for strange techniques... and I'm not saying "bad"... just maybe different from the traditional Western approach to receiver design... and then make that a MIL receiver, and it could get strange. Take that knob on the front panel that appears to range from under 12V to over 220V... I have to ask Xu about that one! But all in all, as I said, what a discussion piece! 73  
<n4xy@earthlink.net>

From bsugarberg@core.com Wed Jun 19 20:34:14 2002  
Subject: [R-390] Numerology

Through Numerology, the truth can finally be revealed:

1. ATARI transposed becomes RATIA.
2. Next you list the numerical position of each letter in the alphabet:

R 18  
A 1  
T 20  
I 9  
A 1

3. You add the 1st three letters together:

$18 + 1 + 20 = 39$

4. You add the last two letters together:

$9 + 1 = 10$

5. Finally, you multiply the two final numbers from steps 3 and 4 together:

$39 \times 10 = 390$

73, Bruce Sugarberg WA8TNC

From Barry Hauser <barry@hausernet.com> Wed Jun 19 21:32:15 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

Ed wrote: ... and I'm not saying "bad"... just maybe different from > the traditional Western approach to receiver design... and then make that a > MIL receiver, and it could get strange. Take that knob on the front panel > that appears to range from under 12V to over 220V... I have to ask Xu about > that one! But all in all, as I said, what a discussion piece!

I've got an R209 MKII A or MKII (can't tell them apart). It's a pint size British green HF receiver. Probably more like an R-174/GRR-5 in purpose, but shares with that radio a multitude of power options with a knob on the front panel like that. As I recall, the R109 does 6v, 12 v, 24 plus 115 and 220 AC. Originally the thing comes with a pawl or clip affair that fits over the fuseholder and hooks into grooves in the voltage selector knob, so you can't turn it by accident after it's set up. The idea is the fuse has to be changed according to voltage, so it's like a reminder. (Mine is missing.)

So ... I guess it's not an oriental oddity. Barry

From salers@hamal.freemail.ne.jp Wed Jun 19 22:02:24 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

No, you are not right. The TYPE77 is very rugged like some Russian product, and it is not cheap in its time. yes, some of Chinese products is low quality and cheap, but 77 not so. China is becoming world factory, you are using a computer, but you should know, most of high quality main board were made in China in the world, and you will see the P4 CPU come from China very soon!

The type 77 have a small problem, few of inductors(2.2mH) often fail in early time, but it is not a big problem. the TYPE77 can be use in your life.

About my reputation, if you like, I can give a dozen name list in USA, you can ask them, or you can ask Dave Medley, I just send a very very pretty tube receiver to him(maybe some guys have been see it in Dave's home) Xu

From salers@hamal.freemail.ne.jp Wed Jun 19 22:21:48 2002  
Subject: [R-390] Re: R-390 <> Type 77 China trade

Yes, the TYPE77 is similar Krot in the panel layout, but it is different from Krot at all. it is due to Chinese TYPE70, it was design in the end of 1960s by Chinese. btw, There is a Chinese "KROT" too, it was called TYPE56 in China, it was produced in 1950s from 1970s in China. the TYPE 7\* series receiver (70 and 77) was replace it in 1970s, the TYPE56 was used in Chinese satellite project in the end of 1960s Xu

From mackeyka@mac.com Wed Jun 19 23:24:49 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Hey everyone on the list. I've been quiet for quite a while but I have a question for you all.

I am running my R-390A along side of a computer. The problem I've been having is the noise that the computer puts on the radio. I see pictures and hear lots of stories of people running computers in their shacks, so it seems that it can be done. How is it possible? I have so much noise on mine when I turn on the computer that it is impossible to use the radio. It was not such a big problem with my mac but I'm using a PC now as well and it throws the worst noise onto the radio as soon as I turn it on. This is without the monitor being on. The radio and computer are on the same outlet strip. Although the radio and computer were on different outlets for the mac, the two outlets in question are still on the same circuit.

One thing I'm thinking might be the problem, but I'm not sure is the wiring in this old house. It has the old two wire system. Would this make a difference as far as hash noise on my radio? If this is so, what am I going to have to do to fix it. I don't want to have to tear into the walls as they are plaster. Help!!!!  
K. Mackey KC9BZL (formerly KB9WSZ)

From whertel@onemain.com Wed Jun 19 23:38:25 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

I have my receivers mounted in a metal rack cabinet between my PC and monitor. All of my antenna cabling is done via coax and BNC fittings, this includes antenna couplers and transfer relays. This is good quality cable. I can detect NO noise originating from either the computer, monitor, or cabling. The cabinet is grounded to a cold-water pipe and is fed via 3-conductor ac power cabling direct from the main circuit breaker panel. Lucky? Maybe good installation practices? Wayne

From roy.morgan@nist.gov Wed Jun 19 23:49:34 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

wrote: >I am running my R-390A along side of a computer. The problem I've been >having is the noise that the computer puts on the radio.

Kim,

You can take two approaches:

- 1) Get rid of your computer, or never turn it on. This takes strength
- 2) Solve the noise problem. This may take work.

Choice 2) may involve any or all of the following:

- Put noise suppressor chokes on the computer wires
- Get a different computer
- Feed your receiver with good coax the whole way in from the antenna
- Move your antenna to a place farther away from the computer
- Rework your antenna situation so it is fed with balanced feed lines, carefully shielded, and with noise suppressors on the coax.
- Change your antenna completely to a different kind (balanced dipole or a loop instead of a vertical, for instance.)
- Ensure your electrical outlets have good ground wires
- Run the computer and radio on different power circuits
- Add a signal ground to your receiver
- Install noise suppressor outlet strips

The ARRL publishes a good book on RFI and how to cure it.. Some if it is for interference caused by your transmitted signal getting into other equipment but the techniques apply in any RFI situation. If

your case is difficult to solve, I suggest you get that book. Roy

From ba.williams@charter.net Thu Jun 20 01:25:47 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

wrote: >> I am running my R-390A along side of a computer. The problem I've been >> having is the noise that the computer puts on the radio.

There could be another answer to this. The good news is that it isn't your monitor. It could be that you just don't have enough shielding inside of your computer case. That flimsy tin metal around CDROM enclosures work pretty well. I run my Mac G-3 right next to the rack and my receive coax runs right along side of the computer. I get no noise at all. The one thing I've noticed on the G-3 is that the case has good, solid shielding on the sides, front, and back. My wife's iMac is about 3 feet away and it doesn't produce any noise either. That has a little motherboard in a tray construction that is heavily shielded.

I remember having a drive that would produce momentary hash when it would spin up to speed. That was a few computers back and I don't remember the details except that it was one drive in particular.

Maybe you can turn your case or tower some and see if the hash changes or goes away. That sometimes works well if you get out of the radiation path. Barry

From Llgpt@aol.com Thu Jun 20 01:48:30 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Same here, no noise from my iMac, Les

From ba.williams@charter.net Thu Jun 20 01:49:44 2002  
Subject: [R-390] Progress?

John,

I admire any 6502 programmer. You have to be efficient and just good to program for such a puny CPU. I am still amazed at the quality of the programs that were published for the 6502. It makes the current fare seem bloated and just sloppy. I'm sure you feel the same way and I do like your challenge to programmers regarding programming for the 2600. That is an excellent way to train would-be programmers right.

Actually, I had something before the 2600 that I wish I had never given away to a German kid. It was the Atari Super Pong game box. It was a small, battery powered console with paddles. I think you had 4 different versions of Pong on it. I bought this for a measly price back around 1977. Very few people seem to have ever seen one.

Thanks for the link to your emulator site. I will definately take a look. I'm a bit rusty on the emulators but I have many ROMs from the 2600 and Atari 800 era. I think these are free to pass around now. I was running Mac and DOS programs on my Atari ST back in 1987-89 with good results. I had to write a large DBase III database on company personnel back then before the unit got their 286 Zenith. I did it at home on the ST and used it until the computer came in. It used to make my Mac friends pretty mad to see me running their Mac software on a cheap Atari when they were paying out thousands for their Macs. I like running Windows programs on the Mac because it gets R-390A audio well. I don't have to worry about sound cards or interrupts. I just run the audio cable in and get results. I've seen people

agonize over D/A converters, sound cards, etc but it doesn't apply to my system.

Yeah, copying those ROMs to disk was probably not legal, but I enjoyed learning from the challenge. I just didn't like carts so putting them on floppy disks seemed like a good idea at the time. I had an Omnimon chip piggy backed to the 6502 that would allow me to interrupt programs and get into the editor to poke around memory, etc. You could do a lot with those things. Barry

From r390auser@cox.net Thu Jun 20 01:47:01 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Kim

A simply thing to check is the shield connections on your antenna coax fittings. When the shields work loose on the bnc's that I use I get serious computer noise. Tightening up the connection solves the problem every time. There are two computers plus a network hub and cable modem all in the radio room and in general I have very little noise. The switching power supply for the monitor is the worst and the "wake on LAN" signal from the mother board has some discrete frequency interference. It is possible for radios and computers to peacefully coexist. Good Luck, Kurt Holbrook

From jetemp@insightbb.com Thu Jun 20 01:57:50 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

A couple of years ago I installed a computer in my shack. When the computer was on it wiped out the radio frequencies. I tried all the recommended fixes and spent a lot of time wrapping cords in ferrite, etc. This helped a LITTLE, but I simply got around the problem by running the computer as little as possible.

THEN ONE DAY, a lightning surge damaged the computer. The shop replaced the computer power supply and the problem completely went away.

It appeared that the computer power supply was the problem all along. I would try to replace the power supply with a new one. They are not very expensive and might solve the problem with little effort. Jim

From kc2kj@mac.com Thu Jun 20 01:58:00 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

But that's the ticket, an iMac. Very well made.

From redmenaced@yahoo.com Thu Jun 20 03:23:18 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

> One thing I'm thinking might be the problem, but I'm > not sure is the wiring > in this old house. It has the old two wire system. > Would this make a > difference as far as hash noise on my radio? If > this is so, what am I going > to have to do to fix it. I don't want to have to > tear into the walls as > they are plaster. +++++++

Hmm,.....

So far,..... all but one of the replys to this one have dealt with grounding.

The problem here is that there is NO grounding!! Not with the old two-wire system. Tighten the coax connectors? Well, that will bond everything tighter together, but there is STILL no ground! Actually, in this case it may just make a bigger antenna for the noise to be received with.

Wayne's cabinet is connected to a cold water pipe,..... why? RF ground? The cold water pipe isn't a very good RF ground, rusty connections, is it metal all the way to the ground? Are there rubber washers in the meter connections? Is there a jumper acrossed the meter? How far does the metal pipe travel when in contact with the ground before it connects to plastic? Any rubber washered splices in the ground? Copper or steel pipe?

Kim, you need your house re-wired! Or at least your shack so the noise has a PATH to ground. Remember, this noise is a very LOW voltage you need a very GOOD connection to ground so there is NO resistance to that signal. That means BIG wire and SHORT runs.

If the walls are plaster you may be able to re-wire the first floor by mounting Wiremold boxes on the base boards. OR you could cut flush-mount boxes into the baseboards. Usually plaster walls have wide enough base boards to accomodate such a plan.

If your wiring is THAT old all the way through then you probably don't even have a ground at the panel!

Even if you have some three wire receptacles they are NOT grounded to anything!

That two-wire system has NOTHING to short out against! Except, maybe, the neutral, IF the connections in the panel are tight enough to pass enough current to blow the fuse. Got any "blue" lugs in YOUR panel? Got fire insurance?

You'd be amazed at the scary things I've torn out of old houses...

I hate old houses, just finished one and have another to do next week, the owner has NO idea what its going to cost either,..... she'll need a new service to add ANYTHING! It hasn't been worked on in 40 years! ZZZZZzzzt! POOF!! Joe

From Jim Shorney" < Thu Jun 20 03:31:25 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

>>I am running my R-390A along side of a computer. The problem I've beenhaving is the noise that the computer puts on the radio.

>

>Kim, >You can take two approaches:

>1) Get rid of your computer, or never turn it on. This takes strength

>2) Solve the noise problem. This may take work.

FWIW, I run vintage IBM PS/2 microchannel machines for ham apps. I have never had any detectable RFI on any band from them, and I've had up to four running at a time. These are the most RF-tight machines you can find. They won't run anything Win2K or newer, but the later models run Win9x/NT4 very well. Not to mention, OS/2 and Linux....

One of my favorites: <http://ohlandl.ipv7.net/>

If the PS/2 Model 95 can be called the 'Ardent tool of capitalism', then the R390A must surely be the "Ardent tool of Democracy". It's a shame IBM never built any...

From jonandvalerieoldenburg@worldnet.att.net Thu Jun 20 04:13:19 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Try to isolate wther the noise is the computer or it's monitor. If its the monitor you might try increasing the shielding. There was a post early on in this group and he had his shielded the monitor using a conductive paint that was a GE product. The computer box can be moved using extension cables and maybe additional shielding there too. Mouser has braided sheild copper "tubing" to pass cables through if nessasary also. Jon AB9AH

From w7itc@hotmail.com Thu Jun 20 04:41:33 2002  
Subject: [R-390] Progress?

How many of you remember the Sinclair ZX with it's huge 8 bit Z80A cpu clocked at 14 mhz. The "Twoer"\* Ken de W7ITC \*think lunchbox

From w7itc@hotmail.com Thu Jun 20 04:49:47 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Sounds to me like you might have a rotten switching power supply in the computer. My R390 sits about a desk width from this system (850 Duron, ChainTech mobo,) no problem. You also might check to see what the clock crystal's frequency is on the MoBo there are a number of them who's frequency fall with in the listening area we use.

From w7itc@hotmail.com Thu Jun 20 05:01:17 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

I don't know why I didn't think of this in my earlier note. I don't know how old your computer is but take a look at where I get my stuff from <http://www.aberdeeninc.com> they have bare bone systems that you can install your hard drive and such for cheap. They have a assembled and tested barebone system with a MSI motherboard an 950mhz Duron from AMD in a mid-sized 300 watt tower for 200 bucks.  
Ken

From BRingwoo@csir.co.za Thu Jun 20 07:48:54 2002  
Subject: [R-390] Ham Shack Grounding Help!!!! (Warning - sand mentioned)

In my case the the thing that made a huge difference was changing from a tube type display monitor to a small LCD monitor. Good if you suffer from allergies too. I did some experiments with an R2 rx (Yeah, I know its full of sand, but I wasn't feeling strong enough to carry the 390A around that day) - this supports what the people on the list say - the amount of hash put out by different makes of computer and monitor varies hugely. - Bryce

From pha@pdq.com Thu Jun 20 14:05:07 2002

Subject: [R-390] Progress?

What about the Cosmac ELF, the IMSAI, MITS Altair, Cromemco, the Processor Technology units (don't remember the model), the glorious Polymorphics Poly-88 (I used this one the most)? Those were the first true home computers. Who needs a CRT when you've got switches and LED's? The Sinclair was a latecomer compared to them...

Had a chance to buy a used Apple-I in 1979 (maybe 80) or so. Even though that appreciated by a a few thousand percent over the years, I still woulda been better off buying Microsoft stock. Paul

From ai2q@adelphia.net Thu Jun 20 14:38:13 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Kim:

You might also want to try using different ground wires from each piece of equipment (rig, computer, monitor, etc.) to a \*single\* ground point, as in a star pattern. Running ground lines in a daisychain fashion invites ground loop noise. Vy 73, AI2Q, Alex in Kennebunk, Maine .-.-.

From john@whimsey.com Thu Jun 20 14:54:12 2002  
Subject: [R-390] Progress?

Barry wrote,

> Actually, I had something before the 2600 that I wish I had never given away > to a German kid. It was the Atari Super Pong game box. It was a small, > battery powered console with paddles. I think you had 4 different versions > of Pong on it. I bought this for a measly price back around 1977. Very few > people seem to have ever seen one.

I've still got mine. When I look back, it's amazing how much time I wasted in the '70s playing pong. My friends had fancier stuff but that's what I had. Of course I'm not sure I'm doing much better these days. I've been listening to SWL broadcast and hearing the same news on 6 stations. I'm amazed at how little diversity there is. Even the local interest programs can sound similar. Last night China was talking about how easy it is to be an entrepreneur in their country and their mentoring program for beginners. I tune over a few KC and there is BBC talking about exactly the same thing. I guess Great Britain has a mentoring program for beginning entrepreneurs too. I also like seeing how many AM broadcast stations are playing Art Bell at the same time. That's lots of fun. But I have to admit I was hoping for more. Maybe Radio Al-Quada or something like that but I haven't gotten that lucky yet. But at least I'm getting great reception. ;- ) John

From tbigelow@pop.state.vt.us Thu Jun 20 16:55:47 2002  
Subject: [R-390] T-3 removal question

Greetings to all -

This afternoon myself and Dave Cain, W1DEC will be helping a fellow list member pick up his new (to him) T-368 transmitter. Knowing that this is no small task nor one to be taken err.....'lightly', I am soliciting comments from those of you who have recently or previously obtained a T-3 to go along with



your R-390s or just hold the house down. My experience is limited to the RF deck I wrassled into the upstairs of the carriage house after saving it from being turned into an antenna tuner and scrap metal. I have a pick-up truck, appliance dolly/hand truck, rope, and bungee cords(just in case) so we should be pretty well set for tying it up once we capture it. I'm mainly curious to know if there are any pitfalls to avoid like tubes that catch when sliding out section, or any special sequences of events we should follow. Our plan is to remove each deck from the cabinet, put the cabinet in the truck, then reinstall the decks for the trip to prevent them sliding around or being damaged in any way.

Any helpful hints will be appreciated. We're off to retrieve it in about 5 hours. Thanks - de  
Todd/'Boomer' KA1KAQ

From cbscott@ingr.com Thu Jun 20 17:03:40 2002  
Subject: [R-390] T-3 removal question

The best advice I can give is for you crate it up very securely and put it on a truck to Huntsville, AL, with my name on it. Barry(III) - N4BUQ

From chejmw@acsu.buffalo.edu Thu Jun 20 17:07:41 2002  
Subject: [R-390] Re: [T-368\_BC-610] T-3 removal question

Boomer,  
You got three guys, check to see if the tube hold down clamps are in place, if so, pull the decks starting at the RF deck then the Modulator deck then the Power supply deck. Take them to the vicinity of the truck. The power supply deck should have two guys on the HV transformer side, one guy on the opposite side. move that to the area near the truck. Then two guys can move the empty cabinet, three guys to lift it SAFELY to the truck, NO hand truck required. Put the cabinet in the rear portion towards cab of truck, then reinstall the decks starting with the Power supply, then Modulator, then RF deck, tighten the front panel screws. strap the unit securely to the transport vehicle, the tubes WON'T bounce out of their sockets, unless of course you manage to roll the truck. Good Luck, I have moved several all alone and had no problems, except the weight factor a pickup will only carry three at a time which for me meant 2 trips a while back. Jim WB2FCN

From mmdues@hal-pc.org Thu Jun 20 17:22:46 2002  
Subject: [R-390] Progress?

IMSAI??!! I dug out my NEW, NEVER BEEN USED, L@@@K, W@W, OBoy! (eBay descriptors) IMSAI-8080 computer system that has been in storage since I moved back here from Saudi Arabia in 1980. I bought this computer in 1977 before moving to the great sandbox as a substitute hobby for amateur radio because I was told ham radio was not allowed in Saudi Arabia. I got real frustrated trying to learn about computers over there because it was real new, and there were very little resources for learning computers in the desert. So, after I built the computer system, and equipped it with a lot of boards (ram, rom, video, I/O, floppy controller, etc) I became disinterested in it and stored the system after about six months, and it hasn't been used since then. This computer was NEVER brought up and used as a computing system, only as an experiment and learning tool. I simply wasn't geeky enough understand 'pootering back in those days. I also discovered that all 22 of the airplanes I was responsible for (I was the foreman of a very large oil corporation avionics lab in Dhahran) had 400 watt Collins 618T-3 autotune 2-30 Mhz SSB transceivers in them, so I was able to enjoy my favorite hobby of hamming from our Grumman G-IIIs, Fokker F-27s, DeHavilland DHC Twin Otters (twatters) Beechcraft

King Air 200s, Cessna 550 Citations, and Boeing 737s. What a hamshack, eh? I would lie like hell and say I was airborne over the Persian Gulf while on the ground in Dhahran, Saudi Arabia with a Hobart power wagon plugged into the plane!

I finally learned about computers here in the states after I bought a Radio Shack TRS-80 system, and later a PC-XT computer. Now, after about 8 or 10 computers later, I feel like getting out all the books and reels of punched paper tape programs that came with the IMSAI-8080 system and try to learn enough to get it up and running properly. (All at the break-neck clock speed of 1.8 Mhz!) If you don't remember this computer, maybe you will recall the movie War Games, with Matthew Broderick and Ally Sheedy in the early '80s where he hacked into the Air Force computer in Cheyenne Mountain. Ah, memories... Marshall Dues - WB5MYO Katy, Texas

From drewmaster813@hotmail.com Thu Jun 20 21:07:42 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Hello All,

I had a computer noise problem with an old IBM PC-XT a few years ago. I narrowed the problem down to a specific peripheral (the keyboard) by disconnecting peripherals one at a time and noting a change in noise level. The main unit turned out to be clean.

I disassembled the keyboard and used grocery bag paper to insulate the entire back side of the circuit board. I then cut a piece of aluminum foil to cover the insulated area, plus a "tail" which I wrapped around the bare cable shield braid where it entered the housing. This backplane completely eliminated the noise problem.

Simpler would have been to just try another keyboard (they are cheap and plentiful nowadays). Drew

From redmenaced@yahoo.com Thu Jun 20 23:53:55 2002  
Subject: [R-390] Re: [T-368\_BC-610] T-3 removal question

Unplug it! pull the RF deck out about 4", short all HV conductors to ground!

Reach to the rear, right-hand corner of the RF deck and unplug the cannon connector there, DON'T drop it, it may hit the 5R4's on the modulator deck.

When sliding the RF deck out of the cabinet don't tip the front down too far as the 4-400 may catch the front edge of the cabinet and break!!

When setting the RF deck down be sure to set it on something FLAT as the vacuum variable caps are close to the bottom and could be damaged. They are EXPENSIVE!!

Pull the MODULATOR deck out 4" and unplug TWO cannon connectors in the left front, this will clear all wiring on this deck. Check the coaxes going to the speech amp on the left side, mine always want to catch on the cabinet.

The power supply deck comes out the same as the modulator deck, be careful not to cause mechanical shock to the plate transformer as they can leak oil around the HV posts on the bottom.

That leaves only the blower and the antenna vacuum relay in the cabinet to be careful of.

Use some caution not to let any of the chassis twist, especially the RF deck, as this can cause brittle things to crack. Most notably the tank coil!

I can load mine into the BASAR/RV by myself but the power supply deck is really too much to lift alone.

You will, very soon, learn why heavy casters are the first order of business when bringing home a T-368! A sub-frame made of 3" channel iron is not overkill. The eight heavy handles on a T-368 are GOOD! Joe

From ba.williams@charter.net Fri Jun 21 02:16:15 2002  
Subject: [R-390] Progress?

> I've still got mine. When I look back, it's amazing how much time I wasted in the '70s playing pong. My friends had fancier stuff but that's what I had.

I think that is a good console to keep. I gave mine to a kid in the neighborhood when I lived in Germany.

I've thought about getting another 8 bit system because of the input/output joystick ports. You could control anything thru the joystick ports. I sold a stack of programming books when I got out of the 8 bit computer thing. That stack was probably 3-5 feet high of good books. I keep thinking about timers, timed recording, etc. The 6502 was so easy to program and having the input/output port made it pretty much unlimited for controlling things in a house. It would be easy to control lights in the house when we are away on trips if I still have one of those little computers. Those computers were so small you could hang them just about anywhere and they didn't take much power to run.

I was listening to Atlantic flight following last night on 8.732 USB. Very powerful Spanish chatter came on and completely wiped out the flight following. All flight following comms stopped. I guess they changed frequencies. I couldn't hear them well under the chatter so this is just a guess. Barry

From mackeyka@mac.com Fri Jun 21 04:21:53 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

I have received lots of good info that I can use to help eliminate my noise problems. I was out all day today so did not get to follow up on any of this. Yesterday however I did do one check and it did not look good. There is 60 v. from the chassis of my radio to the cold water pipe. Not good at all. I am going to get an electrician in here as soon as possible to see what we are going to have to do to fix that.

Tomorrow I will post info about the ham shack set up what computer I'm using and such, to narrow down what is going to be my best approach. One thing I'm pretty sure of; the power supply in the computer may be the culprit on the Windows machine. I get that noise even with the monitor off. On my mac system I get the noise from the monitor (it's not a mac monitor). The noise it generates if at different freqs. And I can fix it by switching monitor resolutions. But the noise from the PC is on all bands and top to bottom of the KC. Kim KC9BZL

From roy.morgan@nist.gov Fri Jun 21 04:40:56 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

wrote: >I have received lots of good info that I can use to help eliminate my noise >problems. I was out

all day today so did not get to follow up on any of >this. Yesterday however I did do one check and it did not look good. There >is 60 v. from the chassis of my radio to the cold water pipe.

Standard condition. Caused by NORMAL operation of the line filter capacitors. GROUND your radio to the cold water pipe, PLEASE. Do not use any ground fault interruptor outlets.

> Not good at >all. I am going to get an electrician in here as soon as possible to see >what we are going to have to do to fix that.

That is cused by the RADIO line filter. NOT by the electrical system in your house, except that you have ungrounded outlets. Roy

From Barry Hauser <barry@hausernet.com> Fri Jun 21 05:04:50 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Hi Kim:

That 60 volts from the chassis to plumbing is probably the leakage from the line filter caps. There was a great deal posted on this. They will cause a ground falt interrupter to trip. There are a number of workarounds, if your electrician wants to put one in your shack -- like removing the filter, etc.

The PC power supply is a likely suspect, however there are a number of other variables in PC construction:

The cases keep getting cheaper and cheaper -- imagine \$30 for an ATX case with power supply and two fans -- what can it be made of -- tin can stock complete with coating/varnish. I've seen three basic formats -- tin can frame and back with painted steel U shaped cover, same with removable sides and back, and variants with plastic sides with either thin metal shields inside or just conductive paint. You have to make sure somewhere on the mating surfaces the paint or coating was removed or masked, otherwise a panel can radiate rather than shield.

The motherboard and how it's mounted is another thing. There should be at least one metal screw making contact with a ground pad on the MB which then goes into a metal standoff. If the MB was installed only with plastic standoffs, it isn't grounded properly. Motherboards also vary -- number of layers with the better ones having ground/shield layers.

Also, the main ground point for the whole business is the PS to case connection. They usually mount with four mounting screws, but both the PS and case frame have that coating. It's possible to have a bad ground if it's just depending on the heads of those screws.

So, you might check that out -- but, sounds like you've got no real ground at all at your outlets. Your radio wouldn't tingle with 60 vac if it has a proper 3 wire power cord going into a correctly wired and grounded outlet. Be especially careful until all that is fixed -- and then still be careful after that.

You should have your whole electrical system checked out -- as the electrician will, no doubt, recommend. Barry

From djmerz@3-cities.com Fri Jun 21 06:34:52 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Roy/Kim, I can agree with the 60 v normal when there's no grounded outlet - I have pretty modern wiring in my home but one day not too long ago discovered 60 volts chassis to ground even though it should have been zero. I discovered this by rf noise associated with touching a wire from an external ground rod located outside the house to the radio chassis, and then measuring about 60 volts ac between the chassis and the ground wire. It took me awhile to discover that on the leg of my wiring where I have my radios there was no ground coming to the 3 prong outlet or to any of the several other outlets on the same circuit - easily detected by plugging in one of the circuit checker gadgets - but not so easy to remedy. Fortunately I was able to get into the junction box where the problem originated (conveniently left somewhat visible by the previous owner) and found a ground wire that was not firmly connected to the bundle of ground wires connected there. Too many connectors in an undersized wire nut and with no room to tighten it sufficiently !! I fixed that by better type of connection and the 60 volts went away. I feel safer now. I guess if one of those caps( the one on the hot side) that put the 60 v on the chassis happens to short, I'll now be saved by my circuit breaker or radio fuse rather than taking the potentially lethal current myself if I happen to be grounded. Dan.

From jbrannig@optonline.net Fri Jun 21 13:38:39 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

One should never rely on the outlet ground, there are just too many variables.....

My station ground is based on the Handbook model.

A 1/2 inch copper pipe is mounted under the desk and braid is run from the pipe to EACH piece of equipment. A heavy wire is run from the copper pipe to the earth ground system. On installation, the ground braid is connected to the chassis before the radio is plugged in.

As an additional safety feature, the Shack outlets are connected to a DPDT wall switch. In the off position, all radios are electrically dead..... Jim

From dallas@bayou.com Fri Jun 21 15:09:23 2002  
Subject: [R-390] DA-121/U Dummy Antenna

I would appreciate it if someone would tell me where there is a schematic of the DA-121/U dummy antenna (used for measuring R-390A sensitivity using the TM 11-856A method). Best regards, Dallas

From G4GJL@aol.com Fri Jun 21 15:30:57 2002  
Subject: [R-390] TS-382D/U Info needed

Does anyone know of the existence of a manual or circuit online for the captioned Audio Oscillator test set?

I need to get one going to set up CW filters for the weekend and also check the 390A filter is up to scratch. 73 Pete G4GJL

From roy.morgan@nist.gov Fri Jun 21 16:02:29 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

wrote: >Roy/Kim, I can agree with the 60 v normal when there's no grounded outlet -

The capacitors are NOT "Leaking". They are simply passing a small AC current because they are ... (guess what?) capacitors! The line filter capacitors form a voltage divider to establish half the line voltage on the chassis if the chassis is not grounded.

> pretty modern wiring in my home but one day not too long ago discovered 60 >volts chassis to ground ...there was no ground coming to the 3 >prong outlet or to any of the several other outlets on the same circuit - >easily >detected by plugging in one of the circuit checker gadgets -

Hear, Hear! for that cheap circuit checker.. No home should be without one! No one should fail to use it.

> I feel safer now.

You ARE safer now.. good for you ( and your would-be heirs.)

>I guess if one of those caps( the one on the hot >side) that put the 60 v on the chassis happens to short, I'll now be >saved by >my circuit breaker or radio fuse rather than taking the potentially lethal >current myself if I happen to be grounded.

The R-390A line filter contains two bypass caps from each line to chassis. The R-390 (Non-A) filter has, I think, three from each line to chassis. In both cases the bypass capacitors are PRIOR to the radio line fuse(es). You can get full house circuit current from the chassis if the capacitor shorts.

Most of us are to some degree "grounded" all the time.

Before I step off this soap box, just one more thing: Do not ever, repeat do not every use a fused line cord plug for any reason. It can kill you. Roy

From roy.morgan@nist.gov Fri Jun 21 16:41:51 2002  
Subject: [R-390] DA-121/U Dummy Antenna

wrote: >I would appreciate it if someone would tell me where there is a schematic >of the DA-121/U dummy antenna

Dallas, HSN Issue 23 page 2 has an article on the DA-121/U. I do not know what that article says.

Is that in the URM-25 manuals?

The normal "dummy antenna" is specified in the RMA standard from the 1930's. You may find the details in a General Radio manual for the Model 1001A standard signal generator.

On the other hand, you may be referring to the balanced dummy antenna - that I don't know much about. Roy

From djmerz@3-cities.com Fri Jun 21 17:06:53 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

Jim, I bet this is a dead horse ready to ride.... the thought of having a ground pipe under my desk or workbench conjures up the image of working on a radio while standing in the bathtub filled with

saltwater.. I offer this as a consideration, not as a criticism. I'd prefer to have a good ground where I can see it and not necessarily become intimate with it. I'm sure your system serves you well and I admire your effort in implementing it. If I had a lot of equipment in fixed locations, it might serve me. My main concern when working on anything electrical is to keep all parts of my body at a single potential and to avoid the accident of touching different parts of me to different potentials. Half of the concern is the location of ground relative to my body. The other half is keeping out of touch with the "high" potential areas. On a lot of projects on old radios, I use a fused isolation transformer so I know earth ground is not part of the equation as far as the electrical mess that is setting in front of me. Maybe I need to rethink whether your system could help me - one problem I have is getting a reliable "water pipe" type ground connection into my radio area. Dan

From jbrannig@optonline.net Fri Jun 21 17:34:50 2002  
Subject: [R-390] Ham Shack Grounding Help!!!!

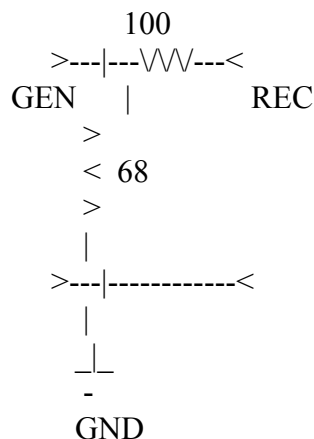
Dan,  
In the same vein.....  
The Shack ground is driven ground rods.....it serves for AC/DC and RF. The pipe is at the bottom-back of the table for convenience and cosmetic reasons.

The workbench is another story.....there I use a single cable from chassis to ground. A pipe ground would be handy for the test equipment. Additionally, I use rubber mats in the shop and the Shack is carpeted....other common sense rules apply Jim

From nryan@intrex.net Fri Jun 21 19:03:18 2002  
Subject: [R-390] DA-121/U Dummy Antenna

wrote: > I would appreciate it if someone would tell me where there is a schematic of the DA-121/U dummy antenna (used for measuring R-390A sensitivity using the TM 11-856A method). Best regards,

Hello, Dallas, I opened up my DA-121/U and found two 1/2 W 5% tolerance carbon composition resistors configured as shown:



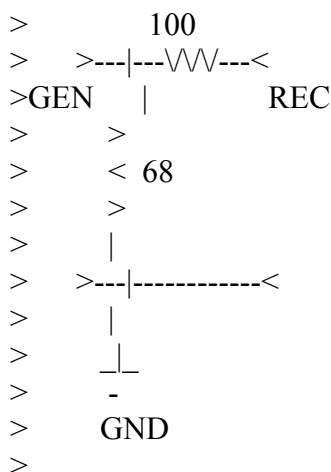
Hope this helps. 73 de Norman KG4SWM

From roy.morgan@nist.gov Fri Jun 21 19:11:36 2002

Subject: [R-390] DA-121/U Dummy Antenna

wrote: >I opened up my DA-121/U and found two 1/2 W 5% tolerance carbon >composition resistors configured as shown:

It looks to me (without doing any math) that the thing presents to the generator a 50 ohm load and to the receiver a 125 ohm load. there will be some loss in this: that is the receiver will get less than the microvolts indicated on the generator. Roy



>Hope this helps. > >73 de Norman KG4SWM

From R390A@r390a.com Fri Jun 21 22:32:01 2002

Subject: [R-390] RE: Shack Grounding

A couple of suggestions. First, install a 3 wire power cord. I use old plug-in computer power cords and cut the female end off. Make sure the black lead is attached to the side of the hash filter on the receiver that is fused. I believe its marked "B" but don't hold me to it. Remove the fuse and prove the connection with an ohm meter.

Put a ring terminal on it and hook the green ground lead under the nut that holds the terminal cover on.

While self-serving, let me suggest that I rebuild the filter caps for you. Chances are good that they are leaking badly. -73-

From theprof@texoma.net Fri Jun 21 22:38:03 2002

Subject: [R-390] Re: Ham Shack Grounding Help!!!!

The R390A is notorious for having 60 volts to ground due to the design of the line filter. Then there is the trouble of a ground versus a GROUND. Even in newer homes the ground of the electrical system is not a really solid ground. My home passed all the wiring tests and there ground back to the service entrance was solid, however, the ground used at the service entrance was not as good as the RF ground in the shack. So we have a case where the radio ground would rise up and bite a little.

The best thing is a massive ground system tied back to the service entrance ground. That is not too handy just for shortwave listening use. In that case I would make sure that the ac wiring in the house was okay (plug for electricians) and then do what I did. I run my radio through a topaz isolation



transformer and then through a variac. I use the variac to soft-start the radio and set the line voltage to 110. My grounds are all good on the bench and there is no leak from the radio (grounded chassis 3-wire plug) to the bench test equipment ground or the antenna ground. I won't trip the GFI either. 73 de Richard, KB5WLH Only one R-390A, but lots of other cr^h^h stuff...

From nryan@intrex.net Fri Jun 21 22:56:42 2002  
Subject: [R-390] RE: Shack Grounding

Hello, all,

I agree it's a good idea to verify which terminal on the R-390A's line filter gets the hot lead-- "A" or "B." In rare instances it can be reversed. So, be sure to check that the fuse post tests "hot" in each instance.

Additionally, if you use a power cable with leads colored differently from the usual white-black-green, again, verify which lead goes where by checking its three prong plug. To do so, point the plug towards the power receptacle with the ground prong downward. The left prong should be larger than the right prong. The left prong is for the neutral and the right prong is for the hot wire.

Finally, check out the power outlet receptacle with a meter or neon test lamp. Looking at the receptacle and assuming the ground is downward, the hot lead should be the right hand slot. Here is where one of those receptacle testers will come in handy. They're cheap and useful for checking out ALL your power receptacles. Whether the house wiring is new or old you may be surprised at what you find. 73 de Norman KG4SWM

From mackeyka@mac.com Fri Jun 21 23:30:37 2002  
Subject: [R-390] Re: Shack Grounding

Well, I'm getting lots of good stuff here.

My situation here fits quite a bit of what I'm hearing. First the computer is an inexpensive one with a \$30.00 ATX case. Probably have some internal ground problems there. Second, and most important at this point is the house wiring situation. No ground what so ever, I'm sure. So step one is to get the house properly wired. That in itself may (or may not) take care of a lot of the noise I get. Checking some of the other potential problems could be an unnecessary exercise in futility. Why chase down other problems that may not even exist.

I sure do dread what I'm going to hear. The house is a large two story house (plus an attic and full basement). I doubt the estimate will be \$1.50. I'll keep you all posted. Kim Mackey KB9BZL

From dallas@bayou.com Fri Jun 21 23:43:21 2002  
Subject: [R-390] DA-121/U Dummy Antenna

Yes. And if one uses a 50 ohm signal generator, and measures the R-390A sensitivity by reading the signal generator setting, the number one gets will be about 0.636 lower than the voltage across the antenna input. Here I am assuming that the signal generator is connected to the R-390A through a UG-971/U (with no impedance matching or adapter). So the method I have recommended previously is wrong too. That's really amusing. The numbers I have been getting should be multiplied by 1.57. And that does not necessarily give accurate values. What one really has to do is measure the antenna input

resistance at the frequency where one measures sensitivity.

From ai2q@adelphia.net Sat Jun 22 01:05:05 2002  
Subject: [R-390] Scope for sale

There's no need for two solid-state Tektronix oscilloscopes in my shack. As such, my Tek 7313 is for sale.

This analog storage scope works great, has terrific triggering and stability, and a bright and clean dual trace that shows the settings nomenclature on-screen.

In addition to the all solid-state 75-MHz mainframe, I have a Model 7A18 dual-trace vertical amplifier module, and a calibration plug-in. A Model 7B50A timebase module is installed. I also have a Model 7A13 differential comparator plug-in for it, as well as a spare 7B50A. I also have all the original Tektronix service manuals for each item, included.

\$250 (you pay shipping or pick it up), o.b.o., or trade for boat anchors (looking for an HRO) or antique radios and parts, or what-have-you? AI2Q, Alex in Maine

From W9RAN@oneradio.net Sat Jun 22 03:07:13 2002  
Subject: [R-390] R390 at work

Holding down a rack at WBCQ-The Planet:  
[http://www.complexvariablesstudio.com/0\\_wbcqmarine\\_update1\\_030.htm](http://www.complexvariablesstudio.com/0_wbcqmarine_update1_030.htm)

More photos of the Timtron, BCQ transmitters, microphoniums, etc  
[http://www.complexvariablesstudio.com/0\\_wbcqmarine\\_update1\\_019.htm](http://www.complexvariablesstudio.com/0_wbcqmarine_update1_019.htm) 73, Bob W9RAN

From ba.williams@charter.net Sat Jun 22 16:58:44 2002  
Subject: [R-390] R390 at work

> Holding down a rack at WBCQ-The Planet:  
> [http://www.complexvariablesstudio.com/0\\_wbcqmarine\\_update1\\_030.htm](http://www.complexvariablesstudio.com/0_wbcqmarine_update1_030.htm)

Alan Weiner strikes again. I thought he had another broadcast boat project almost completed. Barry

From ba.williams@charter.net Sat Jun 22 17:10:30 2002  
Subject: [R-390] Oooops...

> Oops, shoulda read down further. My efforts were a duplication of efforts, I > think.

Chuck, It happens often when I reply before reading every message. Besides, you gave a more thorough answer regarding the caps. Barry

From scott" <polaraligned@earthlink.net Sun Jun 23 15:08:52 2002  
Subject: [R-390] Now it is on to my 390!!

I just finished a 1948 RCA 8TS30 TV. I have posted pictures and thought some of you may be interested. Now it is on to my 390A and then the 390 non-a. The pics of the TV are posted at: <http://home.earthlink.net/~polaraligned/index.html>

I am glad that monster is off my bench!!! It makes the 390 seem small. Scott

From jamminpower@earthlink.net Sun Jun 23 16:05:47 2002  
Subject: [R-390] RE: Yike! & Restoration Thoughts

> On the other hand, I have a very different philosophy. I want each radio to pass a personal spec rather than approach this as solely a business venture. I have what was, a new from the box R390A receiver on hand.

I dunno about this, Chuck, it sound a lot like a calling to me. I always try to avoid theological discussions on this reflector . . .

We may have to sic a deprogrammer on you, although I am told there is a 12-step program for terminal boatanchor-itis. -- [www.jamminpower.com](http://www.jamminpower.com) James A. (Andy) Moorer

From jetemp@insightbb.com Sun Jun 23 19:29:44 2002  
Subject: [R-390] R-390-A fix summary

Recently, the bottom 350khz of ALL bands were found to be dead. Tuning to a point below 350khz produced an abrupt loss of signal. I confirmed that the symptoms were present above and below 8mhz, and within all the band groups defined from the coil and RF deck positions. The likely suspect seemed to be the PTO, so I put the frequency counter on the output and confirmed that the frequency abruptly disappeared below about 350khz.

I replaced the PTO tube, the symptoms disappeared, and the unit now works perfectly. Of course I will recheck the alignment after the tube burns in for awhile.

For the newbies on the list, I hope this might be helpful in the future. Jim

From krk@ix.netcom.com Sun Jun 23 19:44:30 2002  
Subject: [R-390] Re: R-390-A fix summary

Hi Jim,

Thanks for your post on this topic. I'm curious about why you replaced the tube. Did you test the PTO tube and find it bad? Or does it test good but fail in the receiver (I hate those kinds of problems)? I ask because I have a URM25F signal generator that behaves similar to your 390. Thanks, Ken

From Barry Hauser <[barry@hausernet.com](mailto:barry@hausernet.com)> Sun Jun 23 20:18:22 2002  
Subject: [R-390] Info Needed

Hi Gang: This is somewhat OT, awright -- completely OT, but Ralph Sanserino, publisher of the Hollow State Newsletter needs some documentation. Here's his request:

Need a manual or schematic for RCA US Navy CRV- 46136 Radio Receiver part of DP-12 or DP-13 Radio Equipment. Dated Jan 1940, also need schematic for CRV-20049 Power Supply.

Thank You Ralph Sanserino Please reply off list to Ralph at sanser@gte.net Thanks, Barry

From jetemp@insightbb.com Sun Jun 23 20:39:39 2002

Subject: [R-390] Re: R-390-A fix summary

I received a couple of very insightful questions.

1. Did I test the tube prior to replacement?

No, but I just tested the first tube on my Hickok 600A. The chart recommended 3300Gm. The first tube measured 2300Gm. The replacement tube measured well above 3300Gm.

2. Did I try to adjust Z-702 prior to replacement? (Suggesting that Z-702 will shift the effective distribution of the tube output in the center of the proper range, if it was originally out of range).

No I did not attempt to adjust Z-702. Perhaps the tube did not actually need replacing if the Z-702 range was off center?? I intended, but forgot, to ask the list what the purpose of Z-702 is, since I can not find an explanation in any of the pertinent manuals.

Question...

The above response to my original post suggests that Z-702 shifts the effective range of the PTO 5749 tube to a position that is more centered, if it was off center in the first place. Is this a correct assumption of the purpose of Z-702?? Jim

From w9wis@charter.net Sun Jun 23 21:46:11 2002

Subject: [R-390] CY-979/URR Mounting Bolt Size ?

Can someone tell me the size (thread/length) of the proper size screws to affix my R-390A in my CY-979/URR cabinet ?

Thanks, Michael Melland, W9WIS

From Llgpt@aol.com Sun Jun 23 22:11:02 2002

Subject: [R-390] CY-979/URR Mounting Bolt Size ?

writes:<< Can someone tell me the size (thread/length) of the proper size screws to affix my R-390A in my CY-979/URR cabinet ?

10-32 X 5/8 or 3/4 whatever you like. Les

From w4net@alltel.net Mon Jun 24 00:37:30 2002

Subject: [R-390] CY-979/URR Mounting Bolt Size ?

Micheal, The ones holding my R-390A in the CY-979 cabinet are 3/4" flat head phillips, SS with cup

washers. Hope this helps.....John Bunting, W4NET

From ba.williams@charter.net Mon Jun 24 01:06:50 2002  
Subject: [R-390] RE: Yike! & Restoration Thoughts

Andy,

I don't know about this deprogramming of Chuck. We would probably lose his web site, not to mention all of the nice radios that he does. He likes SP's too, so maybe we had better keep him just like he is.  
Barry

From redmenaced@yahoo.com Mon Jun 24 01:56:27 2002  
Subject: [R-390] RE: Yike! & Restoration Thoughts

wrote: > > I don't know about this deprogramming of Chuck.

+++++

We pretty much all of the same cult here. Like the past sage Nolan used to say, "You are not of my tribe, I must kill you." Joe

From scott" <polaraligned@earthlink.net Mon Jun 24 11:30:08 2002  
Subject: [R-390] Silver solder

Is silver solder recommended for any of the joints?

I have just re-capped the AF module. There are so many mechanical grounds in this set!! What makes it worse is the fact that the chassis is aluminum. Aluminum oxidizes and makes for poor connections. Aluminum wiring in a building is an electricians dream--lots of service work. A special compound is now required for aluminum connections. Why should this radio be different?? Boy it just looks like a lot of intermittent and hard to trace problems in the making. I am loosening all pertinent connections....applying Deoxit....then re-tightening. Would seem foolish not to while each module is on the workbench getting rebuilt. Scott

From jetemp@insightbb.com Mon Jun 24 15:05:28 2002  
Subject: [R-390] Silver solder

I have seen several recommendations for silver solder on joints in the "signal path" in the RF deck. I have not applied it, and my signal is fine, but it could improve if I take the time to do it.

On grounding points...

Many faults disguise themselves as component failure when they are in reality a component that has lost it's ground. Reestablishing the ground will cure the majority of suspicious components, in my experience.

Also, take the time to re solder joints that look suspicious. Grounding points and deterioriated solder joints are the cause of almost all faults in this radio, in my experience. Jim

From cbScott@ingr.com Mon Jun 24 15:10:16 2002

Subject: [R-390] Silver solder

Yeah, a radio designed like this probably won't last more than 50 years at the most... Barry(III) - N4BUQ

From R390A@r390a.com Mon Jun 24 17:14:23 2002  
Subject: [R-390] 12 Step Program?

The unfortunate side of 12 Steps? Is that all. Might be a plan.

From jetemp@insightbb.com Mon Jun 24 17:20:07 2002  
Subject: [R-390] URM-25D recap.

Hello to the list,

I picked up a URM-25D at Dayton this year. This unit had the typical loss of modulation described in many of the messages posted in the archives. Upon inspection, ALL the large paper caps located on the modulation board were physically wet with a slick discharge from the innards of the caps. So I obtained replacements and installed new caps as recommended in the archives. I even broke open the case and replaced all the similar paper caps located on the various internal modules, which were also wet with a discharge. Upon reassembly, all functions work as intended, and after a few hours warm up, the stability of the unit is rock solid. Now on to my question.

Question:

In the lists experience, is a recalibration necessary after recapping this unit? The frequency alignment seems to be quite good. But I am uncertain about the calibration of the voltmeter function. I have the Navy manual for the URM-25D, but am interested in tips on calibrating the voltmeter function. For instance, 2.0 volts are mentioned as an approximate value at the RF output jack. Is a RF voltmeter required for this measurement? Is this voltage a DC voltage? Any help here?

Thanks for your past support. Jim

From jmerritt2@capecod.net Mon Jun 24 19:15:30 2002  
Subject: [R-390] URM-25D recap.

Yes, an "RF" voltmeter is required here. The signal IS alternating current, not DC. All AC voltmeters have a frequency passband. The typical "panel" meter, used to measure, say, 0 to 150 volts AC will be accurate only at the 60 Hz AC power line frequency. A voltmeter used to measure, say 10 Mhz, must have a passband going up to at least that frequency. An excellent meter for this purpose is the Hewlett Packard model 410-C, which goes up to ( I think ) around 700 Mhz. The older ( and much cheaper ) model 410-B will work just fine too, if you can find one that still works properly. Chuck N1LNH

From nryan@intrex.net Mon Jun 24 20:01:20 2002

Hello, Scott,

Loosening mechanical grounds, dabbing on a bit of DeoxIT, and retightening is sufficient IMO. Look

out for varnish under fasteners. There won't be further electrolytic action unless the radio is operated in a location like St. Julian's Creek. Ordinarily the tubes' warmth will keep dampness in check.

Silver solder is useful for the RF deck, but be aware of its high melting temperature. It's sufficient simply to desolder signal path connections with a solder sucker and resolder lightly with good quality 63% tin rosin core solder. Clean off rosin right down to Teflon insulators with Q tips dipped in suitable solvent. DeoxIT the plug-in coil contacts and the tripod-like clip under the adjustable capacitors.

Do the above once every half century! :-) 73 de Norman KG4SWM

From jlkolb@cts.com Mon Jun 24 20:18:12 2002  
Subject: [R-390] URM-25D recap.

wrote:> Yes, an "RF" voltmeter is required here. The signal IS alternating current, not DC.

HP 410's are general purpose VTVM's, measuring AC and DC volts and resistance. They are fine for measuring high voltage levels such as transmitter outputs. They don't measure real low voltages however. The later models of the HP 400 series of AC voltmeters, 400E, etc, are pretty flat to above 5 MHz, and go down to 1 mV full scale on the most sensitive ranges. The other choice for low levels is the Boonton 91 or 92 series of RF voltmeters, which are both wide freq range and sensitive.

If the URM-25 output level is only set measured at a single freq, I'd use the 400E and measure it at about 1 MHz. Using a sensitive meter such as the 400E would let you check the attenuator output at several points, not just max output. John

From jbrannig@optonline.net Mon Jun 24 20:25:55 2002  
Subject: [R-390] Silver solder

The only time I used Silver Solder in a radio was to connect a BNC to a circuit board in an HT. Flexing of the antenna kept breaking the tin/lead connection, silver fixed it. With a good mechanical connection the strength of silver is unnecessary.....and the additional heat to solder it undesirable. Jim

From roy.morgan@nist.gov Mon Jun 24 20:31:17 2002  
Subject: [R-390] URM-25D recap.

wrote: >Yes, an "RF" voltmeter is required here.

URM-25 Calibrators,

I agree, but there is more.

> An excellent meter for >this purpose is the Hewlett Packard model 410-C,

Indeed it is, but what if such a thing is not available? All is not lost. Lets make some assumptions:

1) High accuracy is not required.

2) The voltmeter circuit in the URM-25 measures accurately enough for our purposed across the

frequency range of the generator.

3) If an AC meter is available that can measure well enough at a few hundred KC or even much lower, then we can use it to set the URM-25 calibration.

4) The manual for any meter that is available will give some idea of the accuracy to expect at a few hundred KC or lower.

If we can accept these ideas, then the procedure would be as follows:

1) Get whatever AC meter is available, and figure out what accuracy you can expect from it.

2) Calibrate the URM-25 with that meter.

3) Call the project done.

A couple of alternate methods come to mind:

Method A: Find some recommended AC voltage detector circuits useful at the frequencies of interest. Build one and assume the measurements are close enough. This method may well involve very few components (one diode, one resistor, one capacitor and a way to mount them), and a DC voltmeter of moderate accuracy. If a circuit reported to have good performance is duplicated carefully, the results for these purposes should be quite good enough.

Method B: Build such an AC voltage detector and mail it so someone who does have the likes of an HP 410C for calibration by comparison at some frequency(ies) of interest. Upon its return, use it to do the calibration.

Notes:

1) I seem to remember that the output calibration of the URM-25 depends on setting the signal generator section output, at the input to the attenuator, to 2 volts rms. (I believe that the GR 1001A and the HP 606 are similar.) Making an ac voltage detector that works well at 2 volts and over a limited range of low to moderate frequencies would be a rather simple job. The URM-25 output voltage specifications is based on at least the following points:

- A) Calibration of the 2 volt point is done as specified,
- B) The RF attenuator is working properly.
- C) The generator output is terminated properly.

2) Making very accurate RF voltage measurements over a wide range of frequencies is quite involved. Careful study of the specifications of the HP RF voltmeters and similar general use laboratory quality instruments will give an indication of the accuracy attainable in production equipment. A look at the following URL, which explains the RF voltage calibration services available at NIST, reveals that at 100 MC and above, peak to peak detectors can be calibrated to 1.2 percent. No one in the country can do better. (Think about that next time someone reports the sensitivity of a radio receiver to two or three significant digits.) <<http://ts.nist.gov/ts/htdocs/230/233/calibrations/Electromagnetic/Voltage.htm#534>>

3) An ac voltmeter that works well up to frequencies beyond the range of the URM-25 is simply not necessary. Roy



From jordana@nucleus.com Mon Jun 24 21:08:51 2002  
Subject: [R-390] G-8 Summit Security...

Just a note from the heart of the highest security meeting ever in Canada.... We are currently about to host the G-8 summit here, actually the majority of the meetings are in the Kananaskis, part of the Rocky Mountains. There are 3-4 hour waits at the border coming into Canada, and a large part of our city will not even have mail service on Wed- Friday.... Customs is heavy with delays and security, there are surface to air missile installations in secret locations, and regular flyovers by Hawks and Military helicopters. All downtown Mailboxes are to be removed, Man hole covers are to be sealed, and many offices downtown are going to be closed.

Apparently a large contingent of F-15's(?) and CF-104's are going to keep a 24 hour "Skywatch" over Calgary and the large area comprising the Kananaskis.... Getting to and from the Airport is pretty much impossible, and even office workers downtown have been told to dress like tourists to avoid being "targeted" as part of any of the Delegations to the G-8 summit.

Just thought you all might like to know.... I might be taking my digital camera around while I do my daily travels just in case something serious does break out.... 73 de Jordan in Calgary.....

From dmartin@visuallink.com Mon Jun 24 23:32:05 2002  
Subject: [R-390] Silver solder

Silver solder

> Also, take the time to re solder joints that look suspicious. Grounding points and deteriorated solder joints are the cause of almost all faults in this radio, in my experience.

You know, you can >read< something over and over and intrinsically accept it as valid but it's not until it happens to you, in your own experience, that you really believe it. I'd known of Jim's admonition above on deteriorated solder joints for years and always kept a low level look-out for them. It wasn't until I began to experience a rash of odd problems with my '67 EAC recently that I finally experienced it first-hand. To make a long story short, an assortment of .5-8 mHz peculiarities, including obvious AGC and sensitivity issues got me to take out the rf deck. I had no AGC at the grid of the first mixer and got infinite from the grid pin to ground. Ah. Open resistor, I thought. R208, 231 or 232 have gone open. Nope. Checking each one individually showed they were fine. Finally, after repetitive checks over and over, I had continuity all through the AGC line ... except at one terminal joining two resistors together - R231 and 232, as I recall. It was fine in and fine out, but open at the solder junction. Laid a soldering iron on it and added a touch of solder and - perfect! All was well. Funny thing is, this was my personal 390A of several years, in immaculate condition and gone over both by me and Chuck. The solder joint just opened one day. Like - that!

It >does< happen! I always understood it. Now I believe it! Dan WB4GRA

From jbrannig@optonline.net Mon Jun 24 23:35:17 2002  
Subject: [R-390] URM-25D recap.

FWIW

I've checked my URM-25 output against my HP 410-C and Tektronix scope..... various frequencies, etc. The numbers all sorta' agree....close enuf for government work...

I agree with Roy. I have a shop, not a lab. I'm more interested in relative readings than absolutes. Repeatability and comparison from a shielded controlled source, at a known resistance is important.

For example:

If a "2" on the URM-25 voltmeter produces the same output on two different receivers, they have the same gain. If a "2" at the RF stage produces the same output as a "1" at an IF stage, I have gain. The amount of gain can be worked out with a step attenuator. Whether the sensitivity is .8, .008 or .0008 is immaterial at HF because of atmospheric noise. Jim

From djmerz@3-cities.com Mon Jun 24 23:56:20 2002

Subject: [R-390] Silver solder

Hi, in case anyone was confused by the term "silver solder", as I was, I might offer some clarification. In my work experience, which was largely metallurgy, the term "silver solder" referred to a high melting copper-zinc + some silver, a brazing alloy, that melts above 1100 deg F. So I wondered where this discussion was going to go. I think this would be entirely out of the question for radio wiring connections done in place on a chassis. However, I now remember that there is an electronic "silver solder" which is basically 62/36/2 lead-tin-silver, which I assume is the beast being discussed here. It has a slightly higher melting temperature, about 372 degrees F, higher than ordinary 63/37 lead-tin which is designed to have the lowest melting point (eutectic) of 361 F for any lead-tin alloy. Minor addition of silver doesn't raise the ultimate melting temperature much and is still in the realm of temperatures that can be tolerated for on-chassis wiring. One of the cited advantages of this silver solder is better strength and less tendency to dissolve silver off contacts when a connection is made to silver-coated metal. Because it is off the eutectec composition (where everything melts at once) it will tend to exhibit a mushy melting characteristic and may be more difficult to start melting because very silver-rich regions may have formed within it depending on how slowly it was solidified the last time it was melted. For what it's worth..... Dan.

From redmenaced@yahoo.com Tue Jun 25 00:45:55 2002

Subject: [R-390] Silver solder

wrote: > Yeah, a radio designed like this probably won't last more than 50 years at the most...

++++++

Yup, lucky to get that much out of it,..... better send it to me for disposal. Joe

From ba.williams@charter.net Tue Jun 25 01:08:35 2002

Subject: [R-390] Silver solder

> DeoxIT the plug-in coil contacts and the tripod-like clip under the adjustable capacitors. > Do the above once every half century! :-) Do the tube pins too, and work them in and out of the tube socket a few times. Do all plugs. I did the pins on the crystal too. Did the antenna relay. A tiny bit of DeOxit went in the balanced antenna input plug. The change in the radio was very noticable. Barry

From Normiehall@aol.com Tue Jun 25 01:09:18 2002

Subject: [R-390] Silver solder

Hi fellow solderers,

Dan has me wondering. The most common solder sold in parts houses when I was buying same was 60/40 Ersin multicore which worked just fine for most all electronic repair and construction use. On all of our Tektronic equipment, however, we were cautioned not to use common electronic solder but the solder contained on captivated little plastic spools within the equipment. I don't recall now what its composition was but believe it may have had silver included. Does anyone have a better idea about this? 73, Norm Hall, W6JOD

From scott" <polaraligned@earthlink.net Tue Jun 25 01:32:05 2002  
Subject: [R-390] Silver solder

It does have a silver content Norm. The reason silver solder is needed is that the ceramic was made solderable by firing silver onto it. Ordinary lead solder will "eat up" the silver making it no longer solderable. The idea is that the solder is partially saturated with silver so that little of the silver from the ceramic strip will dissolve into the molten solution. There doesn't have to be a lot of silver in the solder to prevent this from happening, 3% is what Tek supplied, but overheating will still destroy the solderability. Scott

From scott" <polaraligned@earthlink.net Tue Jun 25 01:36:11 2002  
Subject: [R-390] Silver solder

Thanks Dan, I was referring to 2% silver solder in my initial post. It works just like regular solder. I can hardly tell the difference when using it. I just thought with so much silver plating in the receiver, that maybe there was a need for it on certain connections. Scott

From scott" <polaraligned@earthlink.net Tue Jun 25 01:37:38 2002  
Subject: [R-390] Silver solder

Hmmmm..... maybe I should consider touching up all joints. Good post Dan. Scott

From scott" <polaraligned@earthlink.net Tue Jun 25 01:39:17 2002  
Subject: [R-390] G-8 Summit Security...

Lucky you. I think we had one of those stupid conferences recently in NYC. Scott

From salmaniw@shaw.ca Tue Jun 25 01:49:44 2002  
Subject: [R-390] G-8 Summit Security...

wrote:>Just a note from the heart of the highest security meeting ever in Canada.... We are currently about to host the G-8 summit here, actually the majority of the meetings are in the Kananaskis, part of the Rocky Mountains.

Interesting times indeed. There has been all sorts of references to jammers (presumably of cellular frequencies) being employed by the RCMP. These are otherwise illegal in Canada. Jordan, by the way, CF-104s (Starfighter) went out of service while I was serving in Lahr, Germany in 1985/86 and were

replaced by the CF-18 Hornet. These aircraft, as well as American F-15, and more likely F-16 fighters will be giving top cover during the summit. The CF-18 is based in Cold Lake, AB, but might possibly be located a bit closer to the action at a forward operating base.....Walt.

From: ba.williams@charter.net (blw)  
Subject: [R-390] G-8 Summit Security...

> Interesting times indeed. There has been all sorts of references to jammers (presumably of cellular frequencies) being employed by the RCMP. These are otherwise illegal in Canada. Jordan, by the way, CF-104s (Starfighter) went out of service while I was serving in Lahr, Germany in 1985/86 and were replaced by the CF-18 Hornet. These aircraft, as well as American F-15, and more likely F-16 fighters will be giving top cover during the summit. The CF-18 is based in Cold Lake, AB, but might possibly be located a bit closer to the action at a forward operating base.....Walt.

I think those were the F-104F models, heavily modified by the Germans. That is why they lost the lawsuit against Lockheed because so many of them crashed.

We flew our helicopters pretty low in Germany, but those Starfighter's flew UNDER us all the time. There were too many near-misses to remember them all.

I once had to ferry an aircraft solo to Mannheim for IR painting. There was a gigantic German radar site near my flight path called Strawbasket for cross border surveillance. I would flight follow with them over the hills into the Mannheim valley. That morning, Strawbasket called me up and asked if I would like to be intercepted. I hesitantly okayed an intercept if I knew the direction and altitude of the guy. Some pilots said no to this, but these guys always took care of me on ferry flights. Strawbasket answered me and said, "your 9 o'clock, one mile out". Yikes! There was a big black line of exhaust moving right at me. This shiny black Starfighter crossed 50 feet in front of me and a bit lower. He had white checkboards painted from the nose to the exhaust down the sides of the plane. It looked like a personal jet and was beautiful. The pilot waggled his wings and kept on going. I asked a lot of German pilots about this plane and one said he thought it was a squadron commander's jet, but nobody was ever sure about it. Barry

From asolway@sympatico.ca Tue Jun 25 03:04:04 2002  
Subject: [R-390] G-8 Summit Security...

> I think those were the F-104F models, heavily modified by the Germans. That is why they lost the lawsuit against Lockheed because so many of them crashed. > We flew our helicopters pretty low in Germany, but those Starfighter's flew UNDER us all the time. There were too many near-misses to remember them all.

The "C" in the the CF-104 is the Canadian designator for the F-104. Don't know which model we had. The CF-104 was known in the RCAF as the Widow-Maker. Al VE2TAS

From hankarn@pacbell.net Tue Jun 25 03:52:40 2002  
Subject: [R-390] G-8 Summit Security...

I worked on the F-104 at GE flight test at Edwards in 56 as an ET on photo panels and FM/FM telemetry. Neat plane it was then known as "A Rocket with a man in it. After the Germans got it is when it picked up its name as a Widow Maker. My friend Bill Kelly was a Lockheed VP of sales to the

German and Italian Air force. He says that the biggest percentage of 104 deaths were German Flt Sergeants with a lot less flight experience than the Officer cadre.

The CF-104 was assembled by Canda-Air under a set aside program, very little difference between the planes. The 104F had a few mods. that were primarily in the cockpit I understand.

My friend Herman "Fish" Salmon was the test pilot on it and while firing the Gatling gun at over mach 2 it ingest casings from the shells and it came unglued at FL410. He did/was ejected and several days later was up and about but a few months before he had his act all back together. If I remember correctly they zoomed it to 102 or 104,000 feet where it stalled then flamed out and took over 50,000 feet to get a restart and in control. Not a plane for the weak hearted. HiHi. Hank KN6DI

From phil@vaxxine.com Tue Jun 25 04:18:07 2002  
Subject: [R-390] R390 value question

Gents, I need your advice.

I have been approached by someone who has a Collins manufactured R390A/URR for sale. The tag says "Collins Radio Company, Order # 8719-P-55". Serial number is 3605. The radio looks super clean and it comes with a spare tube set, including two 3TF7's.

What is a fair price for this thing ? I'm not sure that I'll take it at this point but I'm thinking about it.  
Thanks Phil

From greg\_werstiuk@msn.com Tue Jun 25 06:34:12 2002  
Subject: [R-390] Silver solder

>>As you may recall, Tektronix used white ceramic terminal blocks for component/wiring interconnect. The solder points on those terminal blocks included silver (and possible other metals) to create the bond to the ceramic. The use of "regular" solder could dilute/deplete the silver to the point of terminal block failure. - greg

It did.

From salmaniw@shaw.ca Tue Jun 25 07:12:52 2002  
Subject: [R-390] G-8 Summit Security...

wrote: >> I think those were the F-104F models, heavily modified by the Germans. That is why they lost the lawsuit against Lockheed because so many of them > crashed. >> We flew our helicopters pretty low in Germany, but those Starfighter's flew >> UNDER us all the time. There were too many near-misses to remember them > all.

>>

>>The "C" in the the CF-104 is the Canadian designator for the F-104. Don't know >which model we had. The CF-104 was known in the RCAF as the Widow-Maker.

I beg to differ, Al. I was a flight surgeon during the latter Starfighter days, and they were actually very highly respected, and NEVER called widow maker by our pilots. They in fact were a very stable platform, comfortable to fly, with a large uncluttered cockpit. It was the Germans who suffered a very

high crash rate in the early years, due to pilot error. In fact, after the first years, their loss rate was as low as the Canadian rate. God help you, though, if you lost the engine! Dan, they were built under licence by Canadair in Montreal. Many a time, I recall being in Kiowa helicopters and watching the Starfighters zooming past, seemingly oblivious to our presence!.....Walt.

From Llgpt@aol.com Tue Jun 25 11:57:29 2002  
Subject: [R-390] R390 value question

writes: << I need your advice. I have been approached by someone who has a Collins manufactured R390A/URR for sale.

\$400.....My 2 cents worth. Les

From glittle@awod.com Tue Jun 25 12:22:14 2002  
Subject: [R-390] Silver solder

The solder used by Tektronix was a silver bearing solder. It contained 2% silver. This can be bought today as 62/36/2 alloy solder. It is very close to Eutectic. The silver keeps the metalization on the ceramic terminal strips from being absorbed by the solder. The silver bearing solder is also required when you do surface mount soldering. Capacitors and resistors have metal deposited on ceramic. The silver is required to keep the ceramic to metal bond from breaking down. Ersin makes some very good solder. They used to make (may still do so) a solder called sav-a-bit. This had some copper in the alloy. Before the days of plated soldering iron tips, we had to file to tip to get its shape back after the solder induced erosion of the tip. The sav-a-bit solder was to prevent this erosion. There are many alloys of solder and many types of flux. When soldering to a circuit board, I use a water soluble flux. I never use this solder for connectors. This flux has to be washed from the connection a short time after the soldering operation, or it will cause corrosion. The more common rosin flux attracts moisture and becomes sticky trapping dust and other particles. This contaminates the joint and leads to leakage. A very bad problem in high voltage and VHF circuits. Hope that this helps a little. 73 Glenn

From Lester.Veenstra@comsat.com Tue Jun 25 12:50:00 2002  
Subject: [R-390] Silver solder

Yes, as the rationale was the silver loaded solder would not leech out the ceramic standoffs with unshaped solder cups that Tek used for component tie points. Les

From salers@hamal.freemail.ne.jp Tue Jun 25 13:13:18 2002  
Subject: [R-390] R390 VS 390A

Hi! I know that R390 is better than R390A, but the R390A with mechanical filter, I think the R390A have better selectivity than R390, is that right? and R390 can match CV591, Does V591 can match with R390? where can I find a homemade SSB adaptor for R390? Thanks in advance! Xu

From Barry Hauser <barry@hausernet.com> Tue Jun 25 13:56:18 2002  
Subject: [R-390] R390 VS 390A

Hi Xu:

wrote: > I know that R390 is better than R390A, but the R390A with mechanical > filter, I think the R390A has better selectivity than R390, is that right?

Actually, it's more of a yin-yang situation. The non-A (yin) has LC filtering, generally equivalent selectivity, but with smooth rolloff -- not as steep of course, but better for audio quality. The R-390A has steep skirts with the mech. filters, but sometimes there is ringing and lately, there seems to be a higher failure rate of the filters (as they age?). Better for SSB, but not as good for sound quality, hence designated "yang".

> and R390 can match CV591, Does V591 can match with R390?

I believe both A and non-A work with the CV-591 and the older, bigger SSB converter (CV-157?).

> where can I find a homemade SSB adaptor for R390?

You can get a solid state SSB converter, the PD-1 from Ron Hankins. Unfortunately, the links/URL's I have for him are not working. About \$100 as I recall.

**For homebrew and mods, take a look at <http://www.r-390a.net/SSB-conversion.pdf>**

Hope this helps. Barry

From w2ec@arrl.net Tue Jun 25 14:09:59 2002  
Subject: [R-390] R390 VS 390A

Hi Xu,

I agree with Barry's comments on the filters based on my own side-by-side comparisons. My personal preference in audio is the R-390 (R-391 in my case).

I use the CV-591 with both my R-391 (basically R390 equivalent) and R-390A's. Also use it with the SP-600. Ray

From R390A@r390a.com Tue Jun 25 15:41:39 2002  
Subject: [R-390] Silver Solder

Is silver solder recommended for any of the joints? Yes. I silver solder all the connections in the signal path.

I use a mating compound called Dow-3 on critical connections. It's a bit old and I am sure they have a substitute by now but it seems to have worked fine. Chuck Rippel, WA4HHG

From cbsscott@ingr.com Tue Jun 25 15:48:32 2002  
Subject: [R-390] Flux Solvent Question

On the subject of soldering, what is an appropriate solvent to use to remove excess flux? Barry(III) -

N4BUQ

From ba.williams@charter.net Tue Jun 25 16:07:52 2002  
Subject: [R-390] G-8 Summit Security...

> I beg to differ, Al. I was a flight surgeon during the latter Starfighter > days, and they were actually very highly respected, and NEVER called widow > maker by our pilots. Walt,

The Germans did call them Widow Makers. It was Kiowas that I flew in Germany. A models for the most part. Barry

From pwokoun@hotmail.com Tue Jun 25 17:15:14 2002  
Subject: [R-390] Flux Solvent Question

flux remover.... ;-)

A cheaper alternative I like is a trichloroethane spray, now getting hard to find, but still available in some auto supply stores as an electric motor and brake cleaner. I just do printed circuit boards tho, don't think sockets or connectors need it in most applications. pete kh6grt

From Richard.McClung@Dielectric.spx.com Tue Jun 25 17:36:17 2002  
Subject: [R-390] Flux Solvent Question

The GREEN alternative (and one that doesn't give nice squeaky clean results like the trichloroethane, or Freon) is to use the water soluble fluxes.... (YUCHHH!!!!) RICH @B> }

From glittle@awod.com Tue Jun 25 18:17:44 2002  
Subject: [R-390] Flux Solvent Question

Barry and the group,

It depends on the flux. Most flux that you will run into is RMA (rosin mildly activated). This can be removed with a flux cleaner specifically formulated for to job, or by denatured alcohol. This is not the 70% that you get at the drug store. You might be able to find 91% at the drug store. THis is fine. You can also get denatured alcohol at the paint department of your local store. If you get into a bind, Vodka or everclear from your local spirits shop also work fine. If the flux is unknown you mighr want to try water first. There is a noclean flux that requires special treatment to remove. If you start to see a white liquid when you apply alcohol, you have a noclean flux. Do not go any further with the cleaning unless you want to get the correct chemistry or you want to use lots of alcohol.

I usually tilt the board against something on the bench with some paper towels under the edge of the board. I then apply alcohol at the top of the board with cotton swabs. This lets the flux saturated alcohol collect on the paper towels. I continue with the alcohol bath until the board is no longer sticky. Hope this helps 73 Glenn WB4UIV

From richardlo@devax.admin.athabascau.ca Tue Jun 25 19:25:47 2002  
Subject: [R-390] G-8 Summit Security...



wrote: > The "C" in the the CF-104 is the Canadian designator for the F-104. Don't know  
> which model we had. The CF-104 was known in the RCAF as the Widow-Maker.

The Canadian CF-104 were part of the same NATO contract as the German craft so they would have been F's if the German aircraft were F's. Richard Loken

From jlkolb@cts.com Tue Jun 25 20:35:16 2002  
Subject: [R-390] R390 VS 390A

wrote:> You wrote: > > I believe both A and non-A work with the CV-591 and the older, bigger SSB > converter (CV-157?).

The CV-157 wasn't a simple product detector and audio chain like the CV-591, but designed to phase lock to a reduced level carrier transmitted along with an SSB or ISB signal. It had a motor controlled Automatic Frequency Control loop, and was larger, had more tubes, and required a lot more maintainence than the R390/390A's.

There were systems consisting of either one R-390 and one CV-159 or two of each in a cabinet (FRR38 and FRR-39?)

We used them in the Navy in the early '60's to receive multichannel RATT (RTTY) transmissions before the WRR-2 or R-1051 were available. John

From richardlo@devax.admin.athabascau.ca Tue Jun 25 20:39:22 2002  
Subject: [R-390] G-8 Summit Security...

wrote:> The Germans did call them Widow Makers. It was Kiowas that I flew in > Germany. A models for the most part.

F-104's had a reputation in Canada as a widow maker also but it is only perception, they had a loss rate that was equivelent to any other post-war fighter.

Perceptions are almost never based on reality, I recently heard a sociologist saying that surveys have found that over 50% of residents of Canadian cities think it is unsafe to walk to the corner store after dark - it doesn't matter if the city is Toronto, Montreal, Vancouver, or Moose Jaw (population: 40,000 and all of them over 90). 70% of people over retirement age think its unsafe. Richard Loken

From redmenaced@yahoo.com Tue Jun 25 22:36:36 2002  
Subject: [R-390] R390 VS 390A

Personally, I think any R-390's or related equipment headed for China should be sent in mangled pieces or booted out the door of a US Navy plane at high altitude!!

How much damage would an R-390 do to a skyscraper?

Or maybe drop it on Afghanistan,..... but, no, the Chinese aren't REALLY there, are they?

Preferrably in near proximity to any Communist/Socialist dirtbags running the gov't there.

Um,..... can someone explain to me just where the "vast untapped market" is over there? My little mind can't seem to comprehend how the workers in the factories are going to afford houses much less anything else. And since its a wonderland of forced equality EVERYONE is in the same boat so there can't be any "rich" people who can afford an R-390 or even a place to put one, much less to actually plug it in. That would be draining more than one's fair share of the rare and hard to produce electric power that could have been more efficiently used to kill evil capitalist round eyes.

Or did I miss one of the more subtle nuances of the "world's factory"? Joe

From twleiper@juno.com Tue Jun 25 22:38:43 2002  
Subject: [R-390] R390 VS 390A Plus CV-157

writes: ... > > The CV-157 wasn't a simple product detector and audio chain > like the CV-591, but designed to phase lock to a reduced level > carrier transmitted along with an SSB or ISB signal. It had > a motor controlled Automatic Frequency Control loop, and was > larger, had more tubes, and required a lot more maintainance > than the R390/390A's.

And you should hear how sweet it is when you hook up a stereo system to the two sideband outputs and enjoy fade free AM reception or tune across the band... I use mine for band cruising with an SP-600 and there is nothing like it. Tom

From redmenaced@yahoo.com Tue Jun 25 22:49:10 2002  
**Subject: [R-390] Silver Solder**

**wrote: > Is silver solder recomennded for any of the joints?**

+++++

**Now that this has been brought up,.....**

**The T-368 owners have found that the past problems with the interlocks are eliminated by the use of the same oxidation inhibitor that electricians use on aluminum wire.**

**The sintered zinc particles break through what oxidation is there and the parafin carrier keeps further oxidation from happening. May be better than De-oxit on ground connections? Joe**

From Richard.McClung@Dielectric.spx.com Wed Jun 26 00:15:37 2002  
Subject: [R-390] Silver Solder

Here at work we use ALUMA-SHIELD for all of our aluminium antenna connections.

ALUMA-SHIELD CAT # 21059 For aluminum cable connections; contains fine zinc particles which break through oxide film on cable strands upon compression of connection; assures a low resistance contact and seals out air and moisture.

Manufactured by JET-LUBE, INC.

for THOMAS & BETTS CORPORATION BRIDGEWATER, NJ 08807

RICH @B> }

From andywilliams@pobox.com Wed Jun 26 00:46:34 2002  
Subject: [R-390] G-8 Summit Security...

>Interesting times indeed. There has been all sorts of references to >jammers (presumably of cellular frequencies) being employed by the >RCMP. These are otherwise illegal in Canada.

I was at CFB Baden-Soellingen, Germany from 1986-1989 and all the CF-104s had gone to Turkey before I arrived. The only CF-104 I saw at CFB Cold Lake (93/94) was on display. Andy

From Barry Hauser <barry@hausernet.com> Wed Jun 26 00:57:17 2002  
Subject: [R-390] R390 VS 390A

wrote (among other things): > Or did I miss one of the more subtle nuances of the "world's factory"?

Well, I dunno about "subtle nuances", more like in-your-face market economics. As far as I can tell, it's like this:

Somewhere along the line, the US military-industrial complex developed some kind of amnesia thing. No sooner than something gets invented or designed, and they plumb forget how to make another one of the dinguses. This started in the late '50's and got worse and worse. Not to mention, higher incomes made it impossible to manufacture many things to sell at a price Americans would be willing to pay, ranging from consumer electronics down to simple hand tools and kitchen utensils.

Fortunately, along came the Japanese who copied our stuff and improved on it and produced mass quantities at affordable prices. Started with tin toys made out of soup cans and went from there. But, like Americans the Japanese have a tendency to get fancy from time to time, which is what they did. They gave themselves big raises, and then, they had to go for quality big time. Same thing happened there, only worse -- runaway inflation, impossible housing costs. So, they had to farm out the work to other countries -- even the U S of A, eventually.

Meanwhile, the concept of the workers' paradise started to come unglued. Wasn't glued together too well in the first place. Basic mathematical problem: If everyone's on the dole, who's picking up the tab? It's a major secret -- communism isn't a low cost economic system for "everyman", it's in reality a high-end luxury item which ultimately manifests itself in the form of country clubs, profit sharing, stock option plans, major medical insurance premiums, automobile and yacht leasing, time-sharing, co-ops and yes -- ultimately, the dreaded condominium-ism. Truth be known, Karl Marx just wanted to sell some books and retire on the royalties. But don't tell anyone. The world can't afford for every remaining communist country (what, 2 or 3?) to go completely off their trollies, not just yet anyway. It's been destabilizing enough with Russia and Eastern Europe, etc. The bugs that were held in check have been coming out of the woodwork.

So, China, with its large population, may succeed in producing most of the world's manufactured goods without exploding or getting too fancy or forgetful. And we must lend our support according to the Conehead mantra -- "consume mass quantities." We can't make the stuff ourselves any more, anyhow -- forgot how, dude ... lost the plans, man ... and who's gonna flip the burgers, etc.

OK, now what about R-390A's? Let's see, if we get just enough of them into China, what could happen?

R-390B's, or maybe R-390C's? Nice future supply of 3TF7's? Great Wall PTO's? We certainly can't make any more here. And what's more fitting? The R-390x is a cold war piece and should come from a participating country, not one that sat out the whole thing, right? Sound far fetched? Where are repro Crosley's made? Where can you have practically anything made, if you're willing to do a letter of credit and buy by the container-load?

Gotta get the hang of this New World Order thing. Keep those smokestacks smokin' Xu. They don't allow 'em around here anymore. Barry

From ba.williams@charter.net Wed Jun 26 01:20:45 2002  
Subject: [R-390] G-8 Summit Security...

Hank, I bet those were the days. Edwards was the center of the jet world back then.

I was following that lawsuit when I was in Germany. It was after I returned in 85 that I read that Germany lost due to their mods in avionics. I never read exactly how they did the modifications. Barry

From twleiper@juno.com Wed Jun 26 01:18:50 2002  
Subject: [R-390] R390 VS 390A

writes: > Well, I dunno about "subtle nuances", more like in-your-face market economics. As far as I can tell, it's like this:

[Rambling treatise on social-industrial economics, obviously written either from within a prison cell or survivalists' cabin in northern Michigan... deleted]

The only response that comes to mind is silence. Twit Hammarlund

From kd9kc@elp.rr.com Wed Jun 26 02:05:29 2002  
Subject: [R-390] G-8 Summit Security...

> > days, and they were actually very highly respected, and > NEVER called widow > > maker

Hmmmm... my buddy Reiner (obviously a German) who served many years in the German Air Force. And many times he has referred to them as Widow Makers. Dunno, no experience myself. Mike.

From DCrespy@aol.com Wed Jun 26 03:10:47 2002  
Subject: [R-390] R390 VS 390A

Xu, Both are fine radios. I notice on the list, you already have some feedback on that and on the SSB converters. If your interest is in just being able to listen to undistorted SSB, there is a simple AGC modification using just two switching diodes, that works wonders. It involves only pulling the IF deck, adding the diodes (and one capacitor, if you like.. not really needed) and making a simple adjustment. If you are interested in details let me know. 73 Harry KG5LO Saline MI :

From asolway@sympatico.ca Wed Jun 26 03:36:28 2002

Subject: [R-390] G-8 Summit Security...

To All Interested,

I was in the RCAF from 1955 to 1965 as an A/C Instrument Tech for the first 4 years and a Ground Radar Tech for the last 6 yrs. Never worked on a CF-104 but talked to many that did. They were at times referred to as widow makers by ground crew. This site and many like it tell the CF-104 history in the RCAF.

[http://members.home.nl/noor.luijkx/history/f104\\_27.html](http://members.home.nl/noor.luijkx/history/f104_27.html)

An interesting statement mentions that " about 110 CF-104/CF-104Ds were lost in accidents, out of 239 delivered--loss rate of no less than 46 percent. However it is only fair to point out that the Canadian CF-104s probably had the highest flying time of any country operating the Starfighter. At the time of retirement, average airframe times were of the order of 6000 hours as compared to 2000 hours for the Luftwaffe."

The above sure makes for some validity for the widow maker handle. Al VE2TAS

From salmaniw@shaw.ca Wed Jun 26 04:21:37 2002

Subject: [R-390] G-8 Summit Security...

wrote: However it is only fair to point out that the Canadian CF-104s >probably had the highest flying time of any country operating the >Starfighter. At the time of retirement, average airframe times were of >the order of 6000 hours as compared to 2000 hours for the Luftwaffe."

Al, and the gang, one has to look at the role the aircraft performed in the Canadian military. Initially it was a low level penetration nuclear bomber, and when Canada gave up the nuclear weapon role, then it performed the same role in a conventional bombing role. Imagine, flying at 50 meters at the speed of sound. Single engine, with no lift. Lose that engine (one of the commonest causes were bird strikes) and you became the proverbial flying brick. Very little time but to zoom up and pull the handles. Hence the overall attrition rate. There's a fantastic history of the Canadian Starfighter by an ex fighter jock, Dave Bashow (ISBN 0-919195-12-1). Couldn't put the book down. Here's what the jacket says: "....Always controversial, the Starfighter gained notariety during its career and the author deals with these aspects objectively, helping to dispel the myth of the "widow-maker".".....Walt

From ezeran@concentric.net Wed Jun 26 04:53:11 2002

Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

During the '60s I was a Navy type who used/fixed R390/390A receivers and allied TX/RX comm. gear. ( We called them ALL '390s' with no regard to suffix.) We did have comms with the Air Force, usually from Thailand, because of the on-going SE Asian festivities. It seems I heard the F104 called the 'thud' because of crashes...or was that a different airframe??? Damn...been a while since 1967 :^0 Geeze! 'Had hair and hair color back then...

From k7ais@oco.net Wed Jun 26 05:17:59 2002

Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

Ed: Sorry to butt in here.....don't know much about fighters as anything with less than six engines isn't

a \*real\* aircraft.....but wasn't the "Thud" the F-105??

You're right tho, we all had more hair back then. Brian, K7AIS

From mmdues@hal-pc.org Wed Jun 26 05:26:12 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

You are close, but the "Thud" was actually the Republic F-105 Thunderchief fighter/bomber, a 49,000 pound jet that was used out of Thailand bases in the Vietnam war. A good book on the "Thud" was Thud Ridge, by Col. Jack Broughton. He had a tape recorder wired into his ship's radio/audio system for taking notes in live combat for the book he was writing. Marshall Dues - WB5MYO

From ence-ack@rio.com Wed Jun 26 05:30:25 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

>It seems I heard the F104 >called the 'thud' because of crashes...or was that a different airframe???  
>Damn...been a while since 1967 :^0 Geeze! 'Had hair and hair color back >then... >

That would be the F105. Made by Republic who named all their fighters Thunder-something begining, I think with the P-47 Thunderbolt. Thunder-what-ever-it-was got shortened to Thud. spence

From ezeran@concentric.net Wed Jun 26 05:40:08 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

You are close, but the "Thud" was actually the Republic F-105 Thunderchief fighter/bomber, a 49,000 pound jet that was used out of Thailand bases in the Vietnam war.

Thanks for the reply! I've had a couple of replies on my missing the airframe by one(1) 104 vs 105. Been a while. 8^)

From ezeran@concentric.net Wed Jun 26 05:45:48 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

That would be the F105. Made by Republic who named all their fighters Thunder-something begining, I think with the P-47 Thunderbolt. Thunder-what-ever-it-was got shortened to Thud. spence

Hey, P-47 was the first model I ever built! I've had some other replies setting me straight on the 104/105. Kinda neat! There are other places/venues where nobody would even know what you were talking about let alone offer friendly correction.

From cerakak@techunix.technion.ac.il Wed Jun 26 12:31:32 2002  
Subject: [R-390] F104

Hello to all, Thanks God we never had the WIDOW MAKERS, the MIRAGE and F4 were better, for more : [www.iaf.org.il](http://www.iaf.org.il) alex

From scott" <polaraligned@earthlink.net Wed Jun 26 11:38:44 2002  
Subject: [R-390] Broken slugs

What is the best way to deal with broken slugs on a 390 non-a? I crazy glued a slug on a Hallicrafters SX-71 and had good results. Thanks for any input. Scott

From frledda@attbi.com Wed Jun 26 11:50:20 2002  
Subject: [R-390] F104

The German Air Force had problems with the F-104 mainly because they transformed into a low altitude bomber.

To better understand the capabilities of this aircraft, I recommend reading: Ruminations on the F-104 by Walt BJ, Zipper pilot, ret (Not by choice) <http://users.bestweb.net/~kcoyne/f104story.htm> Best Regards, Francesco Ledda

From w2ec@arrl.net Wed Jun 26 12:42:44 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

Hi Ed, The "Thud" is the Republic F-105 (Thunderchief), a dual role all weather fighter/bomber. Lots of 'Nam service! 73, Ray

From cbsscott@ingr.com Wed Jun 26 13:41:23 2002  
Subject: [R-390] Broken slugs

American Trans Coil <<http://www.atc-us.com>> used to sell brand new ones, but I don't see them on their website. Anyone know if they still sell them? Barry(III) - N4BUQ

From Barry Hauser <barry@hausernet.com> Wed Jun 26 13:46:41 2002  
Subject: [R-390] Broken slugs

> What is the best way to deal with broken slugs on a 390 non-a? I crazy glued a slug on a Hallicrafters SX-71 and had good results. Thanks for any input.

In an SX-71 the slugs don't have to move as they do in an R-390. I've had uneven results with crazy glue on things in general. I remember crazy gluing a handle back on a ceramic mug. Stuff seemed to set OK, but I'd come back a day later and the handle would be lying alongside the mug.

There are different grades of crazy glue and the hobby shop or industrial stuff is supposed to be much better than the garden variety. However, when I repair slugs, I prefer two-part epoxy. Mix it well, apply a very thin coat -- if mending a cracked-through slug, or a reasonable mini-dollup if re-attaching a springy-thingy. Gently scrape off any excess before it sets fully, so you can basically "roll" it off without taking any iron powder with it. Let it cure for a few hours. Barry

From drewmaster813@hotmail.com Wed Jun 26 15:17:43 2002

Subject: [R-390] Flux Solvent Question

Hello all,

I have found that the best solvent for rosin type solder flux is 100% isopropyl alcohol. Don't use the drugstore kind-it is 70% alcohol and 30% water, doesn't work. The most readily available source of 100% isopropyl alcohol is ISOPROPYL formula drygas from your convenience or department store. Make sure that it is the isopropyl formulation, not the regular formulation which uses methanol. Methanol doesn't work very well. Drew

From wa5jci@flash.net Wed Jun 26 14:43:14 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

I seem to recall at the ADC squadron of F-105s, all weathere interceptors, at Kincheloe, AFB they were called the Delta Dart.

Been a long time ago, so I may be thinking of something else!

Also, my introduction to the F104 was at Keesler, AFB. Saw one on the runway for takeoff. When he got off the concrete, the pilot dropped the tail and went straight up, breaking the sound barrier and then out of sight. Pretty impressive to an 18 year old kid. es 73 de Pete WA5JCI EM21jv

From w2ec@arrl.net Wed Jun 26 15:50:20 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

The Delta Dart was the F-106, derived (significant upgrade) from the F-102 Delta Dagger but very similar in appearance. Totally different appearance from F-105. 73, Ray W2EC

From wa5jci@flash.net Wed Jun 26 15:07:26 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

Yep, the F-106, been a long time! es 73 de Pete WA5JCI EM21jv

From Richard.McClung@Dielectric.spx.com Wed Jun 26 16:11:18 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

I think the F-102 was the Delta Dagger <<http://www.fas.org/nuke/guide/usa/airdef/f-102.htm>> and the F-106 was the Delta Dart <<http://www.f-106deltadart.com/>>. RICH @B> }

I seem to recall at the ADC squadron of F-105s, all weathere interceptors, at Kincheloe, AFB they were called the Delta Dart. es 73 de Pete WA5JCI EM21jv

From w2ec@arrl.net Wed Jun 26 16:16:06 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

Know what you mean, I confused an F-101 Voodoo not too long ago (had them in the 49th F.I.S in the



very early 60's) calling it an F-102. That's why I now remember what an F-102 (and F-106) is :-)

By the way, there were racks of R-390's at the base back then for the intercept people and my memory is now fuzzy enough that I don't recall if they were 390s, 390As or a mixture of both. 73, Ray W2EC

From hankarn@pacbell.net Wed Jun 26 16:44:44 2002  
Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

The Delta Dart was the F-106 by Convair. The early version was the F-102 I believe one was the Dart and one was the Dagger. Hank KN6DI

From scott" <polaraligned@earthlink.net Wed Jun 26 17:47:01 2002  
Subject: [R-390] Flux Solvent Question

Would this be a good mild solvent to wash down the module chassis with or is something else recommended? Scott

From ba.williams@charter.net Wed Jun 26 17:57:00 2002  
Subject: [R-390] Re: [R-390]\_F104\_can't \_remember

>A good book on the "Thud" was Thud Ridge, by Col. Jack

Agreed! It is a fantastic book. Barry

From nryan@intrex.net Wed Jun 26 18:17:19 2002  
Subject: [R-390] G-8 Summit Security...

Hi, Rich, XMTR was a T-368, maybe? :-) 73 de Norman KG4SWM

From richardlo@devax.admin.athabasca.ca Wed Jun 26 18:40:01 2002  
Subject: [R-390] G-8 Summit Security...

wrote: >> Man, I bet it was tight in that cockpit with a full diversity ISB setup. Imagine two R-390(\*)'s, two CV-157's, and associated paraphernalia. No problems keeping warm at high altitudes.

Alas, you are not so far from the truth as all that. When AVRO developed the long lamented CF-105 Arrow long range all weather interceptor back in the middle 50's it came out as really BIG and part of the reason for that was they needed lots of room for all the tube gear that they planned to haul around. One of the factors that killed the Arrow was the RCAF's unreasonable specifications of what that plane had to carry around up there.

Oh yes, and Dulles's horror at the idea of the Canadian socialists having an interceptor of that caliber... they would just leak the plans to the Soviets you know. Richard Loken VE6BSV

From drewmaster813@hotmail.com Wed Jun 26 22:16:22 2002

Subject: [R-390] Flux Solvent Question

Scott,

Isopropanol will certainly work for cleaning the module chassis but I've had good luck with blasts of hot water and a small paintbrush to remove the dirt. After blowing the water out with a hairdryer, I set the module about 1 ft under a 100 watt reflector fixture lamp. The module heats up to a temperature somewhat hot to the touch and I leave it that way to dry out overnight. Others on this list use WD-40 and a rag, WD-40 followed by water, or water and a mild detergent followed by a good rinse. Some even claim to have put their modules in the dishwasher. Drew

From N4ue@aol.com Thu Jun 27 01:28:05 2002

Subject: [R-390] (no subject)

I have used a conductive grease made by Nye Co. It has fantastic conductivity. It is a carbon/synthetic compound. We used it in IBM production of a round shaft / tangential contact, (both gold). Because the power supply was a constant current variety, we had lots of problems with the contacts. However, the grease fixed all those problems. Unfortunately, it's about \$60 an oz. Anybody want the part #? ron N4UE

From ba.williams@charter.net Thu Jun 27 01:33:36 2002

Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

> The Delta Dart was the F-106 by Convair. The early version was the F-102 I believe one was the Dart and one was the Dagger. Hank KN6DI

Dan,

Yep, one was made by Convair. I think the F-102 was the one with some oscillation problems in flight. They couldn't design it out. I think Pres. Bush flew the F-102 in the Air Natl Guard.

They have a Voodoo on display as you drive into Kessler AFB. Man, it is a big plane.

Got to see a Blackbird while at the U.S.S. Alabama museum. That was nice. I saw a picture of a SR-71 taking off and already a bit faster than the F-104 in afterburner right beside him. The F-104 had made a low pass for the picture. Both were only about 20 feet off of the runway! Barry

From Jim Shorney" < Thu Jun 27 01:49:57 2002

Subject: [R-390] RE: [R-390]\_F104\_can't \_remember

wrote: >>Got to see a Blackbird while at the U.S.S. Alabama museum. That was nice.

The first thing you see as you enter the Strategic Air and Space Museum south of Omaha. Quite impressive. You can just see it in the night view photo of the atrium on their front page:  
<http://www.strategicairandspace.com/home.html>

They also have a nice display of Blackbird info and trivia. IIRC, there's an F-104 in the building also. No 390's though. Anyone care to donate one? :-)

Also of interest to the current thread: [http://www.strategicairandspace.com/Restoration/restoration\\_F-105.html](http://www.strategicairandspace.com/Restoration/restoration_F-105.html) This place is a must-see if any of you are ever in the Omaha area.

From Carl.Huether@skyworksinc.com Tue Jun 25 19:02:09 2002  
Subject: FW: [R-390] Flux Solvent Question

Isopropyl alcohol is OK if the flux is reasonably fresh. For old dried on residue, acetone works well. We use both at work on microwave PC material.

The assemblers also use TECHSPRAY "AMS GENERAL DUTY FLUX REMOVER". At home I use GC "FLUX-OFF".

As with any solvent test it first as some plastics may be affected.

One thing NOT to do is use any cleaner such as Simple Green, Super Clean, Scrubbing Bubbles and the like around HV. It will result in HV breakdown, particularly on phenolics. I learned this the hard way when I tried cleaning a SB-200 power supply board. Flushing with alcohol or water didnt help since the product was absorbed into the pheonolic.

With any solvent or cleaner, have plenty of ventilation and wear gloves/eye protection as appropriate.  
Carl KM1H

From billsmith@ispwest.com Thu Jun 27 04:11:29 2002  
Subject: [R-390] Flux Solvent Question

Very interesting regarding Simple Green et. al. I have used Fantastic with good success, and ammonia with glass cleaner as a rinse on big rigs. I don't know what I used to clean (poison?) a Johnson edge-wound coil, but later tested it after I couldn't get it to resonate and found the graphite-colored insulator material was conductive. Possibly 409, Pine-Sol, or one of the bubbies you refer to below. I could measure continuity with an ohm meter. Using the original pieces as models, the three insulator bars were reproduced with lexan plastic. Must say the result looks sharp and of course works well. 73 de Bill, AB6MT billsmith@ispwest.com

From greg\_werstiuk@msn.com Thu Jun 27 07:33:15 2002  
Subject: [R-390] Silver solder

Glenn -

Thank you. Good overview of solder choices for some of our typical applications. Another good reason for using water soluble flux is the elimination of the solvent chemicals typically otherwise required. The easiest cleaning solvents were fluorocarbon based, hazardous to the environment and now banned. They also weren't so good for the plastic used in electrolytic and other capacitors. - greg

From dave\_faria@hotmail.com Thu Jun 27 13:44:52 2002  
Subject: [R-390] Fw: 6082's Question

> GM list. On Ebay there is a 390 non A. What I have a question about is there are no 6082's on the audio chasis. The seller says it works below 16mhz. I know the tubes don't affect coverage. Does anyone know what has > replaced the tubes? I own a non "A" and 6082's are getting hard to find. > Is this a mil. mod.?? Just curious. > > Thanks > Dave Faria WASTEZ  
>

From Barry Hauser" <barry@hausernet.com Thu Jun 27 13:42:35 2002  
**Subject: [R-390] Fw: 6082's Question**

**Hi Dave:**

**There are a number of ways to solid state out the 6082's. One is described and discussed in Issue #52 of the Hollow State Newsletter -- article by Dr. Johnson based on what I found in an R-391 I acquired.**

**The audio amp had also been subbed in mine -- only one tube left on the audio deck. Barry**

From roy.morgan@nist.gov Thu Jun 27 14:41:03 2002  
Subject: [R-390] Fw: 6082's Question

> > there are no 6082's on the audio chasis. ...Does anyone know what has

Dave,

Various folks have developed solid state replacements for the 6082 tubes. If there are no such tubes present in the radio, then most likely some previous owner has put in that kind of mod. Roy

From salers@hamal.freemail.ne.jp Thu Jun 27 18:21:17 2002  
Subject: [R-390] To Mr Joe Foley

Mr Jor Foley,

I did not intend to answer your message, because of the mailing list rule, but you insult my Motherland and me. I think I must to say something.

I'm so suprised at your ignorance. my nephew is 6 years old and very clever, I often tell him thing about the world, in my opinion, he knows far about U.S. than you does about China. if you have an opportunity to come to China, I'll teach you all about China patiently just as I teach my nephew. now, I simply say, it is sure that some of Chinese are no so rich that they can not afford a R-390,like not all American can afford it. but they have enough room to put in more than one R-390,our living standards is improving drameatically. In southen areas ,the quality of life there is just the same as that of Callifornia.

I'm not wealthy, only a skilled EE, although my income is very low in the eyes of some American, I can absolutely afford R-390,and I have many top line Ham radio and military radio sets(TS-950 and JST-245 and TS-830).I juse got a brand new Chinese military DSP HF receiver, it worth \$20000 in USA.(btw, it was design by Chinese. I think US Army's HF receiver is not much better than it. Do we need clone R-390? it is reall a joke!) In my house ,attic and basement,, there is enough space for me to place 300 or more R390s.Owing to low prices in China, I live no worse who earn \$6000 a month and my house is no smaller than theirs. there are numbers such white collar workers in China. Do you know

How the wealthy people live here? please to come to and look Lars vegas in US.

In the past thousands of years, China was the richest and strongest country, she was left behind in the recent one hundred years, but she is catching up with the advance countries now. Americans lived a good life for only 100 years and you should know better than to look down upon us, I'm really ashamed of your shallow and ignorant!!

Lasat year, in the South China sea, Our Air Force 's J-8II jet fighter captured your spy plane, Your Govement said it was our plane that crashed into yours, but ours saying this doesn't matter what's really important is, what your spy play did in our land ?if our spy plane fly to your land to collect intelligence, what will you do?

Many American hate Chinese because of Korea war and Vietnam War, these two Wars joined by China humiliated U.S., Maybe you are right, but I want to know, if our Army goes all the way to attack Canada and Mexico, What your Americans' response?

Chinese Govement is for Chinese,what she does can't be all liked by Americas, teh same might be said of U.S. When it come to human right problem, the improment of some of them need time, but compare with the past(Mao times), our progress is immense. Look at your situation in the 1920s,no,just in the mid 1960s when Human Right Act was not enforce. until late 1980s,your support some reginmes natorious for treading on human right (Phippines, Chile, south Africa etc.)Now, you are stili the backstage supporter of such reime of Israel, I think this is one of reason of 9.11 Attack. but don't misanderstand, I hate those terrorists too, and feel sympart with those people dying from the Attack. but you should think of this, why not China, Rusia or France? the American died for Israel!!

China is not enough strong, this is why we do not declare when your air Force bombed our embassy , althought we have weapons powerful enough to destroy the whole America. China is not a warlike country, at least compared with U.S. we won't launch a war in the place far away from China.

The development of our country is seven times faster than that of U.S. in the future decads, we'll exceed you. I think then you won't dare insult our dignity because your Govement is not a crazy.

To tell you the truth, your Govement is a good Govement to the America, because of it is a democratic Govement. I envy you. I think we will have same government in future. but you need know, not only Arabic hate your Govement but also your allied Country(for example ,Japanese, korean, and French) !!

Btw, I must to say, I'm not Comunist, and not interested in it. I'm only a EE and a crasy ham ,a boatanchor collector and home builder. these spend most of my money and time! Do you really think Chinese Govement is a commnist Govement? No!!!

I think she is like Singarpore and Lee's Govement in 1960s in south Korea !!!

I have talk too much because of Mr Joe. I 'm sorry for wasted the guys' band width and time. Sorry!

I'll not reply to any message concerning such as topics. I only talk about R-390,because I love it.

Finally, Dear Joe Foley, Why you are like a crasy against Communist party? are you a relative of "famous" notorious senator Mccarthy? I'm very interesting it!!! Please you le me know!!! 73! Xu

From Richard.McClung@Dielectric.spx.com Thu Jun 27 19:27:38 2002

Subject: [R-390] To Mr Joe Foley

WOW.....!! RICH @B> }

From wa5jci@flash.net Thu Jun 27 18:44:40 2002

Subject: [R-390] To Mr Joe Foley

Dragon,

> Lsat year, in the South China sea,Our Air Force 's J-8II jet fighter captured your spy plane,Your Govement said it was our plane that crashed into yours,but ours saying this doesn't matter what's really important is, what your spy play did in our land ?if our spy plane fly to your land to collect intelligence,what will you do?

Your hotshot fighter pilot ran into a propeller and crashed into the sea. What, you didn't see the pictures taken from our plane showing him just behind the wing? That's a hard way to "capture" our plane! Our plane was in international airspace as recognized worldwide. If your spy plane flew along our coast in international airspace, we would do the same as we do with the Russians when they test our northern defenses, trail them at a respectable distance. However, that doesn't seem likely as you have no capability to do that. Our plane declared an emergency and landed on your territory where the aircrew was taken hostage and abused, also against international law.

but I want to know,if our Army goes all the way to attack Canada and Mexico,What your > Americans' response?

Our response would most likely be astonishment! How are you going to get the army across the Pacific ocean, wade? Fly troops across to your allies in the Americas?

the American died for Israel!!

Yes, Americans also died for France, Norway, Sweden , Finland, Morroco, Italy, Afghanistan, Phillipine Islands, New Guinea, Belgium, South Korea, The Netherlands, Great Britain, the U.S.S.R. and a hundred other places and will probably do it again.

> Btw, I must to say, I'm not Comunist,

That may be true, I don't know, but you are a communist dupe. Look around the world, communism has failed. Communist China, communist Cuba and communist North Korea are the only countries where communism still controls the people with an iron fist. It looks like the North Koreans will starve themselves, the average citizen, as the communist elite live in luxury on the backs of the people. The only reason why Cuba is still under the thumb of a communist Castro is the monies sent there by the Cubans living in the U.S.A. Without that, the country would have failed years ago. As far as China, just ask those chinese who risk death to reach this country and the people confined to labor camps for their religious beliefs.

Throughout the history of communism, it has failed, with the ruling elite living in luxury, while the common people were killed by the millions and toiled without relief to support tyrants.

I did not CC this email to Dragon, as he can read it here. Pete WA5JCI

From jetemp@insightbb.com Thu Jun 27 19:51:58 2002  
Subject: [R-390] To Mr Joe Foley

OK, this started with Mr. Foley's negative, to say the least, remarks of the 25th. Now it is deteriorating into a mud slinging match that is inappropriate in this list. And before accusing me of being "disloyal" for demanding a stop to this crap think a little about live and let live. Jim Temple ENOUGH!

From r391@worldnet.att.net Thu Jun 27 19:52:29 2002  
Subject: [R-390] To Mr Joe Foley

I'm a true lurker on this list but... waugh!!!! This is far more than your usual... "I'm unhappy about \_\_\_\_\_" (fill in the blank) rant...

IMHO kinda reminiscent of pre Gorbachev "Moscow Mailbag"... 73, Ott

From scott" <polaraligned@earthlink.net Thu Jun 27 22:08:19 2002  
Subject: [R-390] To Mr Joe Foley

Oh yea. And now the Russians have informed us that the Chinese are "purchasing" and are going to move into the base that Russia abandoned in Cuba. I Can't reply to Xu's post properly because he also insulted me and my country and the language that is on the tip of my tongue is inappropriate for this list. Going to calm down. See ya tomorrow. God Bless America. And hell with the 9th circuit. Scott

From Richard.McClung@Dielectric.spx.com Thu Jun 27 22:52:56 2002  
Subject: [R-390] To Mr Joe Foley

I Pledge Allegiance to the flag of the United States of America and to the Republick for which it stands, one Nation underestimated, indivisible, with liberty and justice for the rich.

The only FREE press is the one in your garage or basement.

A free R-390(\*) and 40 acres for every man (PC speak person). RICH @B> }

From Barry Hauser <barry@hausernet.com> Thu Jun 27 22:15:06 2002  
Subject: [R-390] To Xu from America - long one.

Uh-oh -- let me see if I can help out here ...

Xu -- please understand -- Joe Foley is our resident pot stirrer. When things get too quiet on the list, it's his job to post something provocative to "get the juices flowing." This is a very dangerous job, but he's an experienced electrician -- you know, the guys who work on live circuits without pulling fuses or switching off circuit breakers.

Truth be known, Joe's gripe is not with China -- it's with us downstate New Yorkers. To understand the geo-politic of this, think in terms of North and South Korea, only worse and then look at a map of New York State. So, basically, China took it on the chin for us Big Apple people.

Time out for some on topic things of great importance ....

You wrote: >I juse got a brand new Chinese military DSP HF receiver,it worth \$20000 in USA.(btw, it was >design by Chinese.I think US Army's HF receiver is not much better than it.Do we > need clone R-390? it is reall a joke!)

No joke, Xu. Clone R-390's, pack 'em up with fresh new manuals, spares kits, inside sturdy cartons and crates and ship 'em here. If the coils are a problem, let me know -- I can set you up with a source for new manufacture.

> In my house ,attic and basement,, there is enough space for me to place 300 or more >R390s.Owing to low prices in China,I live no worse who earn \$6000 a month and my house is > no smaller than theirs.there are numbers such white collar workers in > China. Do you know How the wealthy people live here? please to come to and > look Larsvegas in US.

I don't know about the income thing, but you hit a nerve. About a year ago I visited a gentleman in New Jersey who was moving to the West Coast. He had a problem -- he would need a second moving van because of the weight of all of his boatanchors. The ground floor of his house was crammed with gear. He said it's not a good idea to plan on lots of boatanchors on a second floor of a wood frame house. So, if you have room for 300 '390's, where exactly would you put them? This is not an argumentative/rhetorical question. I have a reason for asking ;-() (No, I don't have 300 R-390's but ... )

> In the past thousands of years, China was the richest and strongest > country, she was left behind in the recent one hundred years, but she is > catching up with the advance countries now. Americans lived a good life for > only 100 years and you should know better than to look down upon us, I'm > really ashamed of your shallow and ignorant!!

I apologize for responding for Joe, but he might really be jealous (a compliment of sorts). Nobody's building factories where he lives, mostly shutting them down.

> Lsat year, in the South China sea, Our Air Force 's J-8II jet fighter > captured your spy plane, Your Govement said it was our plane that crashed > into yours, but ours saying this doesn't matter what's really important is, > what your spy play did in our land ? if our spy plane fly to your land to > collect intelligence, what will you do?

Well, Xu, this being the last true "super-power" and all, we can't allow fly-overs -- except maybe a demo flight if you want to sell any J-811's. Tell 'em to bring plenty of brochures. Also tell 'em to try not to hit other planes -- it's not exactly confidence-inspiring.

> Many American hate Chinese because of Korea war and Vietnam War, these > two Wars joined by China humiliated U.S., Maybe you are right, but I want to > know, if our Army goes all the way to attack Canada and Mexico, What your > Americans' response?

I don't agree that many Americans hate Chinese. Many Americans ARE Chinese. We absorb mass numbers of people from other countries. That's who we are, though some say not. True, we have been conditioned to hate communism, and the way it worked out in most, if not all, countries, it's not a like-able system. On the other hand, if anyone (politician) tries to mess with our Social Security system, we'll bash 'em.

> Chinese Govement is for Chinese, what she does can't be all liked by > Americas, teh same might be



said of U.S. When it come to human right problem, the improment of some of them need time, but compare with the past(Mao times), our progress is >immense. Look at your situation in the 1920s,no,just in the > mid 1960s when Human Right Act was not enforce. until late 1980s,your support > some reginmes natorious for treading on human right (Phippines, Chile, south > Africa etc.)

China is a focus of attention on the human rights issue because of its size and importance. Our government doesn't put the same pressure on other countries which we are allied with, probably because they're smaller and easier to overlook. Paraguay wouldn't make the front page. It isn't fair, but it's the way it is. China is difficult to overlook -- also because whenever you turn something over here, even if it's a souvenir picked up in Europe, it says "China" on it. Hey - ya' know -- that's why the US was resented for so many years -- big and in your face -- Coca Cola, big cars, "Made in USA", etc. all over the world.

>Now, you are stili the backstage supporter of such reime of > Israel, I think this is one of reason of 9.11 Attack. but don't > misanderstand, I hate those terrorists too, and feel sympart with those > people dying from the Attack. but you should think of this, why not > China, Rusia or France? the American died for Israel!!

We Americans have a bad noble habit of dying for a lot of different people as someone else pointed out. From what bin Laden said himself, however, it seems the 9/11 attack was more because of the US armed forces defiling the sacred land of Saudi Arabia in the process of protecting his Saudi family and Kuwait. Somehow this comes up 10 years after Desert Storm all of a sudden? Fact is, it would surprise you as to those who actually don't want the Palestinian people to have a state -- not in Israel. Don't be so sure you have it figured out. Things are not what they seem. Oh, don't forget, a fair number of Americans died for China not too long ago. China and the US were allies, once -- and again. North Vietnam was a proxy for the Soviet Union, not so much China -- and maybe not at all.

> China is not enough strong, this is why we do not declare when your air > Force bombed our embassy , althought we have weapons powerful enough to > destroy the whole America. China is not a warlike country, at least compared > with U.S. we won't launch a war in the place far away from China.

Now you're regressing to cold war mentality. It's foolish to argue or compare. Both the US and China are peace-loving countries, who can become quite warlike when needed. Real trick is to get it done with a piece of paper, or a D-cell and a piece of wire -- or maybe an 80 lb. radio.

> The development of our country is seven times faster than that of U.S. in the future decads, we'll exceed you. I think then you won't dare insult our dignity because your Govement is not a crazy.

Oh boy, Xu. Go better knock on wood or anything to get your luck back -- restore good joss. That's what Americans thought in the late 20's -- the sky is the limit. Then -- bust. We had to resort to socialism to get through, and that wasn't really working well enough -- it took a war to fix it. Capitalism -- even Chinese capitalism -- is not fail-safe. Sometimes it breaks and, don't tell anyone, but I suspect they don't know much more about fixing it than they did 80 years ago. (also, save a couple of copies of the socialism books for a rainy day.)

> To tell you the truth, your Govement is a good Govement to the > America,because of it is a democratic Govement. > I envy you.I think we will have same govement in future. but you need know, > not only Arabic hate your Govement but also your allied Country(for example > ,Japanese, korean, and French) !!

Japanese? Naw -- they like everybody. French? I think they hate everybody. But -- I really have no idea. When I was in France, they weren't nasty at all. But I was in Italy a few years ago, and a lot of the folks weren't all that friendly -- they way they're supposed to be. Not to mention that I emailed a guy in

Italy who has a website listing some manuals for sale and he didn't answer me. Now, I'm half Italian myself ... but it's really annoying when foreign people don't behave the way they're "supposed to."

> Btw,I must to say,I'm not Communist, and not interested in it. I'm only a EE > and a crasy ham ,a boatanchor collector and home builder. these spend most > of my money and time! Do you really think Chinese Govement is a commnist> Govement? No!!!

Of course, Xu, you're not typical -- like the rest of us. Boatanchor people are of a different "ilk" as they say. (Blood is thicker than water, ilk is thicker than ukkumpucky.) So what kind of Gov't is the Chinese gov't? Last time I checked it was .. nevermind.

Y'see, this is the problem of the US now. Leaders of most countries say US is the last remaining superpower, etc etc. Our whole military/intelligence/foreign policy system evolved to handle our role in the cold war. Then, the Soviet Union went out of business seemingly overnight.

Now the US is on the spot all the time. It used to be easy. What ever the Soviet Union was for, we were against. Kept the world in balance. Now, everyone looks to the US to do something, even when we're in an isolationist mood. Then we finally go and do something and get yelled at. A real super-duper no-win situation. Meanwhile, most of us are just trying to get from point A to point B and pay our bills.

> I have talk too much because of Mr Joe. I 'm sorry for wasted the guys' > band width and time.Sorry!

Ah, what's a little bandwidth between friends?

I'll not reply to any message concerning such as topics.I only talk about > R-390,because I love it.

Well, there ya' go. Even with a \$20,000 technical marvel, you love the R-390. Could never go to war against an R-390 guy.

> Finally, Dear Joe Foley, Why you are like a crasy against Communist > party? are you a relative of "famous" notorious senator Mccarthy? I'm very > interesting it!!! Please you le me know!!!

Actually, most of us are "crazy against Communist party", but as I explained, and you have confirmed, it's getting harder and harder to find one. Joe McCarthy would be very frustrated if he were alive today. Most Americans are "crazy against" him too. He was just plain crazy.

Anyway, as my father would have surely said, this New World Order thing ain't perfected yet.

Think about these:

They say Ho Chi Min approached Truman in the early 50's about having a unified Vietnam becoming the (then) 49th state of the US of A. This was reportedly ignored.

Just today, our Pledge of Allegiance was ruled unconstitutional. Soon, they won't be able to use US currency in the school cafeterias because of what's engraved/stamped/printed on it. Not too long ago, we had a problem with a president tossing his cookies, then the next guy had a problem keeping his fly zipped. The guy after him wasn't really elected, but we're gonna overlook that, unless he does something wrong and well have to throw him in jail.

Be sure to warn your nephew -- They are a friendly yet very strange eople -- and once upon a time in America, they made this great radio -- let me show you. ;-)

I think we also invented pizza, but I don't want to start an international incident. I'm not a pot stirrer -- just try to put the lid back on. Of course, you can get burned doing that, huh?

<sigh> I think I like to hear myself type and I was supposed to be doing something else. No need for flaming -- I'm gonna get punished anyway. Barry

From N4ue@aol.com Thu Jun 27 23:37:39 2002  
Subject: [R-390] (no subject)

Fellow lovers of old stuff..... The local surplus emporium has a few NIB #5829 tubes. These are subminiature, wire lead jobs. Dual diode, I believe. Worth anything to anyone? I can pick a couple up if anybody needs any. By the way, I read somewhere that Nixie tubes are getting hard to find. This place always has some old voltmeters, etc, with these tubes. Worth buying for parts? thanks, ron N4UE

From Richard.McClung@Dielectric.spx.com Thu Jun 27 23:43:29 2002  
Subject: [R-390] To Xu from America - long one.

HIP, HIP, HURRRRRRAAAAAYYYYYYYY!!!!!!!!!!!!!! Barry SAVES the day. RICH @B> }

From eldim@worldnet.att.net Fri Jun 28 01:08:52 2002  
Subject: [R-390] (no subject)

Does that Grease have a IBM Part Number or a generic PN? In any event, "BRING ON THE PART NUMBER ". I'll see if I can cross it to a military federal stock number. 73, Glen

From ba.williams@charter.net Fri Jun 28 01:19:14 2002  
Subject: [R-390] Flux Solvent Question

Simple Green? Did he say Simple Green? Did he say it? Did he really say it? Barry

From dave\_faria@hotmail.com Fri Jun 28 03:23:08 2002  
Subject: [R-390] Tnks for the 6082 comments N.T.

From dalmatians98@yahoo.com Fri Jun 28 16:01:13 2002  
Subject: [R-390] To Xu from America - long one.

This has to be one the more interesting posts I've read in a while. It shows how useful the internet can be when it is used to create understanding between people who live in different countries.

Xu, you are lucky to have electronic access to someone like Barry who is willing to take time to create good will. Barry, thank you for taking time to respond to Xu's note. Paul Goodman, K2ORC

From ody@radicus.net Sat Jun 29 00:52:22 2002  
Subject: [R-390] looking around for r390-a

Hello,

My name is Scott Bauer, W3CV from Odenton, MD. I have been dreaming of an R390-A for years and decided it was time to ask a question or 2. I am sure these have been asked thousands of times here but I just got on the list. I have seen ads from Fair Radio and was wondering if anyone can tell me of their experience with Fair Radio. I am also hoping to find out if there is a better 390-A to look for. Like one made by Amelco verses Motorola of maybe one made after a certain date. Or are all of them as good as another? I will be looking for one within a month or so and any help will be greatly appreciated.

From nryan@intrex.net Sat Jun 29 01:25:45 2002  
Subject: [R-390] looking around for r390-a

Hi, Scott,

There are R-390A's and there are R-390A's. Not so much the different makes, but the condition of the set you contemplate owning. All makes of new or repaired sets were supposed to measure up to standard before shipment. Bear in mind that, as a modular built rig, most don't have their original modules much less name tag.

Take stock of a couple of things-- your skills and your budget. A radio needing TLC costs less than a pristine one. Although you might get lucky and find a cherry unit cheap!

Fair Radio are nice to deal with. Even if you have problems with a "used, repairable" unit, they'll try to make good. Their pile is getting smaller with no more in prospect. eBay is another source, but it would be helpful if you have a buddy on this list to help assess pics and ask the right questions.

R-390A's are not showing up at hamfests with much regularity nowadays and chances of finding one on the curb in your subdivision are practically nil. (Hey, the latter happened once to Ed Z!)

So, do you like hands on work such as fixing up or homebrewing? Willing to learn? Tube stuff is lots of fun to work on compared to solid state stuff. Parts are still available one way or another. Download the Y2K manual (free) from the R-390A website. If you have the basic alignment gear (signal generator and a meter), access to a tube tester, you could become as avid as any maven on this list.

Go for it. Do a biopsy on your wallet, then throw caution to the winds! 73 de Norman KG4SWM

From ody@radicus.net Sat Jun 29 02:24:24 2002  
Subject: [R-390] looking around for r390-a

Hi Norman,

Thank you so very much for the input. I was hoping to hear nice things about Fair Radio and I will buy from them if nothing comes up local. Guess I better hurry up and get one before they are gone though. Luckily I do have access to a nice signal generator and have pretty good skills but have done very little work on tube gear. It is never too late to learn. Thanks again for the very nice input. 73, Scott W3CV

From redmenaced@yahoo.com Sat Jun 29 02:29:34 2002  
Subject: [R-390] looking around for r390-a

The 1967 contract from Electronic Assistance Corp is the newest run of them in any quantity. They will have the newest capacitors and best wiring. Best to get all EAC modules if possible.

BUT, the fact of the matter is that they aren't that available anymore, so as beggars we shouldn't be too choosy.

Don't even ask about the accompanying transmitter, the T-368, they just aren't available! Joe (Boxer Rebellion) (Flying Tigers) (Gen. Jimmy Doolittle's Raid) (Chosin Reservoir, 40,000 dead, no ammunition, no food, no medical, most froze to death)

From w5kp@swbell.net Sat Jun 29 03:27:13 2002  
Subject: [R-390] looking around for r390-a

They are available on rare occasion, Joe, but are getting pricey unless you just get lucky. I just got my Crosley-built T-368C a couple of days ago. 700 compact pounds of pure man's transmitter. Heaviest transmitter \*per cubic foot\* ever built, I suspect. Has an incredible amount of large iron packed tightly into a surprisingly small cabinet. 73, Jerry W5KP

From djmerz@3-cities.com Sat Jun 29 03:34:42 2002  
Subject: [R-390] looking around for r390-a

Scott, let me relate my limited experience. I wanted one of these for about 15 years and was delayed in my quest by buying a 392 at the urging of a very experienced ve ham who was into military stuff. I wasn't disappointed - it had all the gadgetry and worked well - but the 390a still lurked in my mind - and I finally bought one about 2 years ago - a late model EAC - I paid a little over \$400 via ebay - I know the price of a radio depends on how patient you are - hamfests around here seemed to produce a limited number and their price didn't seem to ever hit the \$200 that I always thought I'd find one for - so I lost patience even though I suspect there are a lot of these radios collecting dust, or leading a very sheltered life. I figured if it looked pretty clean and worked somewhat, I couldn't go too far wrong - fortunately I ended up with a very nice set that worked very well after I replaced a mechanical coupler to the pto and pruned a winding in that module. There's plenty of info on this set, and this reflector has some top notch contributors and savvy people, once a particular problem is identified. My experience with radios has been that each one needs something different and even an apparent basket case can be revived with knowledgeable effort- you'll probably pay a big premium to get one that is guaranteed to be fed and groomed to perform to the highest standards. In the back of my mind, I consider the 390a a modern radio compared to a lot of the radios that I have, so I didn't have any criteria from a collectors view of having an early one vs a late one. Without really knowing too much, I assumed that a later EAC model might have fewer things to fix as long as it looked cosmetically good, because the capacitors were newer and of later design. In hindsight, the front tag may or may not mean much about the various modules that are in a particular set. In mine, the front tag turned out to indicate what was inside as far as manufacturer. I have replaced only the obvious few caps so far, as recommended by the guru's of this domain. I think the only failed one I've found was the unusually physically small, big value cap in the cathode circuit of the audio unit, one of those that is reported to often be bad. I continue to be impressed with this radio. I must say that there is probably no substitute for seeing a radio up close before buying it, or second best, buying from someone you trust and can talk to. I did quite a bit of corresponding with the ebay seller before deciding to compete in the bidding. I wouldn't say he was a 390 expert but he answered my questions in an honest way. I would say his shipping expertise was marginal for a heavy radio, and the radio fortunately suffered only minor bending at the rear which I straightened. Fair Radio is a reputable place - I have no idea what you get for your buck on their 390a

sets today - if I bought one, it would only be after talking to their rep on the phone to get a better idea. I think the heartbreak of buying an older radio is finding corrosion that you didn't expect and finding it's more than superficial. The widespread pride I see from 390a owners indicates to me that the particular model or contractor may be less important than condition of the radio, though I speak from limited experience. I'll be interested to hear if there are strong opinions on this subject, good luck in your quest, Dan.

From Jim Shorney" < Sat Jun 29 04:10:26 2002  
Subject: [R-390] looking around for r390-a

wrote: >The widespread pride I see from 390a owners indicates to me that the >particular model or contractor may be less important than condition of the radio, >though I speak from limited experience. I'll be interested to hear if there are >strong opinions on this subject, good luck in your quest, Dan.

FWIW, I just bought mine two weeks ago from a local ham, virtually sight unseen. No nameplate, worn front panel, but complete. I mentioned I had been looking for one, and he made me an offer of an extra he had for a good price. I went over there with cash in hand, never having seen the radio. Did I care what shape it was in? Only to a point. What I cared about was that it was a 390a, it was complete, and I trusted the seller. Bottom line.

From scott" <polaraligned@earthlink.net Sat Jun 29 10:59:41 2002  
Subject: [R-390] looking around for r390-a

Hi Scott. (Hey, nice name).

I purchased my 390-a very recently on e-bay. It cost me \$580, but it is a really sweet one. VERY clean, intact, unaltered, original meters, cosmetically excellent. It just needs the usual re-capping. I am rebuilding this and it should look and perform like new. It is a '63 Teledyne contract. These later contracts are more desirable than earlier ones. It is impossible to tell for sure just by the label as they were often switched around. My unit came with a Collins tag. I think Fair Radio wants \$550 for their checked units so this was a pretty good deal in comparison. I got lucky as when I bought it, I knew nothing about them. You can get a good deal sometimes on e-bay but you have to be careful. I just spent \$500 on a 390 non-a and it is a piece of crap. If I had seen it in person, I would never have bought it. Ask a LOT of questions to the seller. Scott

From courir26@yahoo.com Sat Jun 29 14:25:53 2002  
Subject: [R-390] looking around for r390-a

First, all radios we made to the same specification. Short of a very few spec busts which are uncommon, and after 40 years of aging, I don't think one brand is necessarily better than the other with the possible exception of the 67 EAC. These were the newest mass produced radios, and I find more of these that have not been through a depot than other makes.

If you want to have a radio that performs well for a reasonable cost, I'd suggest you get a service manual and become acquainted with the various posts and sites which folks have built to help with alignment and service.

If you find a sound hull, it can nearly always be brought up to peak cond. with a bit of TLC. These radios are very robust and hard to break. Cheers Tom N5OFF

From pha@pdq.com Sat Jun 29 15:15:27 2002  
Subject: [R-390] looking around for r390-a

wrote: > First, all radios we made to the same specification. Short of a very few spec busts which are uncommon, and after 40 years of aging, I don't think one brand is necessarily better than the other with the possible exception of the 67 EAC.

Some differences exist, however. The slug rack rollers seemed better on earlier units. RF decks on earlier units have ceramic wafers. Someone with more general experience can tell which models have which.

Be careful to remember that there are two EAC contracts - everyone has mentioned the 67 EAC, but there was an earlier 60(?) EAC contract where there would be some differences.

But the main point is, after 40 years, they're mostly facing the same problems - leaky audio filter caps, under AF deck electrolytic cap, maybe not so not mechanical filters (recall recent thread about the goo in them).

> If you find a sound hull, it can nearly always be brought up to peak > cond. with a bit of TLC. These radios are very robust and hard to > break.

I agree 100%. They are amazingly robust - a testament to the design and manufacturing of these units.

One other thing - a dirty unit is not necessarily a bad unit - just be careful that what you're looking at isn't hiding corrosion. The best unit to spend your money and time restoring is one that will look great when you're done, and that means the least amount of corrosion and physical damage. Even in spite of corrosion and physical damage, you can still usually repair them. Paul

From Jim Shorney" < Sat Jun 29 18:14:14 2002  
Subject: [R-390] update

Had a few minutes to kill, so I pulled the IF chassis from my 'new' 390a (actually found a spline key in my toolbox that fits). It's stamped 'Motorola Inc.', SN 2362. Also stamped MOD.1 on the top of the chassis.

Can't see any smoked parts, that's good. Sniping some of the good tube shields on epay.

Caig's web site sez Deoxit has a 1 year shelf life. Has anyone noticed a decrease in effectiveness with old stuff? My bottle is a couple years old...

Think I'll flip the rig over next and see what crawls out. Won't really get cranking on this till after summer camp next month.

From Jim Shorney" < Sat Jun 29 18:59:09 2002  
Subject: [R-390] this is interesting

Found a small metal disk (washer?) about 1.25 inches in diameter laying in the bottom of the 390a. There is a wear pattern on one side near the outer edge, and a small hole in the middle where it is apparent on the other side that it was fastened to something with a screw. I can't grok where it belongs.

Anyone have a clue?

The power supply has the solid-state rectifier mod. SN 2327. Saints preserve us, it looks like all the modules in this thing may be original. Time to go out and play in the heat.

From Barry Hauser <barry@hausernet.com> Sat Jun 29 17:41:14 2002  
Subject: [R-390] this is interesting

wrote: > Found a small metal disk (washer?) about 1.25 inches in diameter laying > in the bottom of the 390a. There is a wear pattern on one side near > the outer edge, and a small hole in the middle where it is apparent on > the other side that it was fastened to something with a screw. I can't > grok where it belongs. Anyone have a clue?

Part of tuning lock or calibration clutch thingus? '390's have a number of round things with holes in the middle.

> The power supply has the solid-state rectifier mod. SN 2327. Saints preserve us, it looks like all the modules in this thing may be original.

Whoaaah! I think you're supposed to perform ritual incantations and consume special fluids. Especially as you've already mentioned saints, and so on.

>

> Time to go out and play in the heat.

Wha??? Get back in there! These are \_signs\_. Besides, it's too hot outside. (Wouldn't anything to do with She-Who-Must-Be-Obeyed?) Y'know, there are priorities involved here. Of course, if you're BBQ-ing, take a couple hrs... Barry

From jlkolb@cts.com Sat Jun 29 21:50:55 2002  
Subject: [R-390] looking around for r390-a

wrote: > But the main point is, after 40 years, they're mostly facing the same > problems - leaky audio filter caps, under AF deck electrolytic cap, maybe > not so not mechanical filters (recall recent thread about the goo in > them).

The mechanical filters with "goo" problems are only a particular series of Japanese Kokusai brand filters I haven't seen anyone report problems with decomposing foam in Collins filters although there may be problems with some of the early Collins filters in rectangular cases that used standard rubber O-rings for support.

None of this applies to the F455N series of filters used in the R-390A's. John

From redmenaced@yahoo.com Sat Jun 29 23:45:18 2002  
Subject: [R-390] looking around for r390-a

> Some differences exist, however. The slug rack rollers seemed better on earlier units. RF decks on earlier units have ceramic wafers.

+++++

Not true, Paul,



The rollers on the Motorola RF deck don't turn! They just slide, the EAC rollers roll! Also, the slug racks don't have a shaft that goes all the way acrossed like the EAC racks do. Joe

From Jim Shorney" < Sun Jun 30 01:45:01 2002  
Subject: [R-390] this is interesting

wrote: >Part of tuning lock or calibration clutch thingus? '390's have a number of >round things with holes in the middle.

Zero adjuster gizmo. Shown clearly in the nice photo in my 1956 Army tech manual.

>Whoaaah! I think you're supposed to perform ritual incantations and consume >special fluids. Especially as you've already mentioned saints, and so on.

Special fluids are an option. May have to crack that snooty French St. Remy lubricating fluid....

>Wha??? Get back in there! These are \_signs\_. Besides, it's too hot >outside. (Wouldn't anything to do with She-Who-Must-Be-Obeyed?)

That's not an issue in this house. Why do you think I have so many radios? :-)

>Y'know, >there are priorities involved here. Of course, if you're BBQ-ing, take a >couple hrs...

Just various and sundry running about town that I needed to do, along with \_finally taking in the matinee of 'Attack of the Clones'. (Funny, I dind't see ANY Asian-made PC's or non-Collins R390's in the movie...) Tonight I need to make an HSP cable for APRS and reprogram a Phoenix. Did I mention that I have eclectic interests?

Irresistable force meets immovable object: an IBM Server 95 dropped on an R390a. I don't think I'll try it, the universe will probably implode. Jeez, but I love American engineering.... 73 Jim

From ba.williams@charter.net Sun Jun 30 01:55:55 2002  
Subject: [R-390] update

> Caig's web site sez Deoxit has a 1 year shelf life. Has anyone noticed > a decrease in effectiveness with old stuff? My bottle is a couple > years old...

I dunno about this shelf life thing as DeOxit is supposed to work for years and years. This probably should be disregarded like those pesky date stamps on food. Have you ever noticed that beer doesn't have that stuff stamped on it?

Watch out for any spiders when you flip things over. All old radios have at least one resident spider somewhere. Most are dead, but you never know. (at least they don't carry the Hanta Virus) Barry

From ba.williams@charter.net Sun Jun 30 02:18:50 2002  
Subject: [R-390] looking around for r390-a

> One other thing - a dirty unit is not necessarily a bad unit - just be careful that what you're looking at isn't hiding corrosion. The best unit to spend your money and time restoring is one that will look great when you're done, and that means the least amount of corrosion and physical damage. Even in spite of corrosion and physical damage, you can still usually repair them. Paul

Paul and others,

Not trying to be contrary here as this is a good discussion, but.....

I had a very good friend buy my second R-390A at Dayton about 7 years ago. He is a downright good guy who undercharges for everything. Anyway, he is a long story that I won't get into now unless someone has seen Larry driving around in his truck with 2 trailers behind him. Last seen heading for Lima, Oh or Florida or Alabama. He is the guy who parked his rack of Collins R-390As in front of the wife's washer and dryer. She had to get him to roll it away every time she wanted to do the clothes. Anyway, Larry was very excited about this super clean one that he got for \$365. And, it was the cleanest radio I've ever seen. Every bit of it looked like it came off of the line yesterday. This radio had to have been preserved somewhere. Wire bundles were clean and shiny. Not a speck of dust could be found anywhere. Also, there was not a drop of lube on any of the gears. The best I can tell, this radio had the TMC mod done to it and it has the tapped holes on the back of the chassis for part of mod that I've seen elsewhere. It has the TMC mod tag on the front panel. It came with the Utah plate with top and bottom covers. It also came with the black meters. It has a 67 EAC chassis, power supply, and AF deck. I think the IF and RF decks are EAC too due to manufacturing looks and peculiarities when compared to everything else. Funny thing is that it had a S-W tag on the front.

I haven't done much to the radio yet. I keep putting off the work as it has major problems everywhere. Low sensitivity below 8 mHz. Calibration points are off just about everywhere. I tried to align it with a friend a few years back and it wouldn't align past the first mixer. I forget the details at this moment, but I have my notes in the manual. I figure that this one needs to be recapped everywhere and everything inspected closely.

The point is that while I appreciate the condition of the radio, it isn't ready for much at the moment. I know that it will be a good one when I'm finished with it one day. Looks were deceiving on this one. Barry

From Jim Shorney" < Sun Jun 30 02:21:11 2002  
Subject: [R-390] update  
In-Reply-To: <B943C14B.7A849%ba.williams@charter.net>

wrote: > > Watch out for any spiders when you flip things over. All old radios have at > least one resident spider somewhere. Most are dead, but you never know. (at > least they don't carry the Hanta Virus)

I actually haven't found any wildlife yet. Although I did spot what appeared to be a hair stuck under the tube socket flange of the ballast tube. A DNA analysis might prove interesting.

From ba.williams@charter.net Sun Jun 30 03:01:36 2002  
Subject: [R-390] update

> I actually haven't found any wildlife yet. Although I did spot what appeared to be a hair stuck under the tube socket flange of the ballast tube. A DNA analysis might prove interesting.

Jim, That spider is in there somewhere hard to see. Trust me. Wondering if that hair may be from a mouse..... Barry

From Barry Hauser" <barry@hausernet.com Sun Jun 30 03:02:51 2002  
Subject: [R-390] looking around for r390-a

<snipped> > And, it was the > cleanest radio I've ever seen. Every bit of it looked like it came off of > the line yesterday. This radio had to have been preserved somewhere. Wire > bundles were clean and shiny. Not a speck of dust could be found anywhere.

I've got three like that, but they weren't clean. Two work, one is missing its PTO. All have that TMC mod with the little box on the back panel with a solid state PC board in it, extra labeling on added bnc connectors, etc. They're somewhat mysterious.

> I haven't done much to the radio yet. I keep putting off the work as it has > major problems everywhere. Low sensitivity below 8 mHz. Calibration points > are off just about everywhere. I tried to align it with a friend a few years > back and it wouldn't align past the first mixer. I forget the details at > this moment, but I have my notes in the manual. I figure that this one needs > to be recapped everywhere and everything inspected closely.

This reminds me of something Dave at Fair used to tell me. Every now and then, he'd come across a really clean R-390A, but he couldn't get them to work with any degree of module swapping. I suspect the following:

1. They failed early and got put aside, or were mothballed long enough for lots of caps to go bad.
2. Faulty wiring harnesses, and again, assided.
3. "NOS/NIB" units of the fabled grail stories. But, the realities are that an original unused, untouched for 40 years R-390A is unlikely to work, and worse, will do damage to itself if powered on
4. ~~Unlikely~~ it was on the defective pile and not yet repaired when they started phasing out, or buried in the repair depot. Eventually got surplused out "as found".
5. Somebody messed around with it, scrambling the works with difficult to find wiring errors and may have even tried to align the set by "ear".
6. Attempted removal of mod.

Well, something like those. The two that I have like (with the mod) were laced with puffy white corrosion here and there. Looked bad but it cleaned up as if it were an outside job or not really corrosion. Both went operational with very little work.

I've seen a number of R105A's -- the Collins aircraft/autotune receivers -- that, inside, look like they were never used, but have odd wiring discrepancies vs. the manual and don't work.

Yup, ya' can't tell by lookin'. And, what's odder still, is a depot dog fugitive from St. Julien's Creek has a shot at WOA -- working on arrival.

But the real reason is probably this: Your's is missing it's Knights of the Templar, Guardian of the Grail dead spider. Barry

From Jim Shorney" < Sun Jun 30 03:45:26 2002

Subject: [R-390] update

wrote: >Wondering if that hair may be from a mouse.....

Way too long and thick for rodentia. My impression is a horse-hair brush used for cleaning. No other signs of infestation as of yet; the chassis is actually pretty clean.

From joefalcone@chartermi.net Sun Jun 30 03:52:24 2002

Subject: [R-390] Fair radio's R-390A

I bought my R-390A from Fair about two years ago and was very happy with it. It was a checked one, but I only paid \$400 then. Joe Falcone.

From asolway@sympatico.ca Sun Jun 30 04:27:06 2002

**Subject: [R-390] update**

wrote: > >haunta Virus)

>

> I actually haven't found any wildlife yet. Although I did spot what > appeared to be a hair stuck under the tube socket flange of the ballast > tube. A DNA analysis might prove interesting.

Jim, you might also try carbon dating. Ya might have an oldy there.

**My R-390 None A, that I got last summer had a dried or petrified bug in the RF deck It looks like what we call up here, north of the US border, a May Fly. It looks like it got zapped in mid flight. The legs are retracted and both wings are frozen in the down beat. Will encapsulate when the restoration is complete, in about 3 months. If I had good digital camera I could share this with the you.**

**One more item and it's related to the Deoxit and the problem with over application on rotary switches. I just about ruined a Yaesu FT901DM two years ago by applying to much Deoxit on the Band switch. The switch just about froze up. I sprayed it heavily and often with isopropyl alcohol over a two week period. This seemed to help. It is now just about normal. Time seems to help also. My First R-390A was under restoration and suffered the same problem on one of the front panel switches. Stopped in time before I caused to much damage.**

**I have tried all sorts of Deoxit applicators including Q-Tips, syringes, very fine artist brushes etc. All of these were to large, unwieldy or to expensive. Well this morning while taking the wife out to spend some of my hard earned money, I dropped in at a local hobby shop specializing in model trains and plastic model just to browse and kill time. What I found was something called a Microbrush. As soon as I saw it I knew that I had found the perfect Deoxit applicator. Total plastic handle length is 4 inches. Diameter about 0.125 inch with the last inch tapering down to 0.018 inch. At the tip is the brush which is molded into the tapered plastic. It is about about 0.100 in long and 0.040 in diameter. I tried it on the R-390 Harness switches and connectors. Much better and easier to use than the expensive artist brushes I have used. For tube sockets it's perfect. The brush will compress enough to fit within the rotary switch contacts. I used their Superfine size.**

**The MFR has an internet site that describes the product very well. The price is right also, 10 for \$1.75 CDN or about \$1.10 US. Your local hobby store should stock them. The North American**

**Free Trade Agreement has opened up to us Canadians a wealth of U.S. made hobby goods at fair prices. Prior to NAFTA we bought U.S made goods. The duty made prices out of reach on a lot of U.S. made hobby supplies. The pacific was our only source of reasonably priced goods. This is not a political statement but a statement of ordinary consumer satisfaction. Will climb down from the the soap box and say good night and have a good weekend. Al VE2TAS**

**From r.tetrault@attbi.com Sun Jun 30 05:10:58 2002  
Subject: [R-390] update**

**Good call Al. Anyone sell micropipettes?**

**From john@whimsey.com Sun Jun 30 05:38:13 2002  
Subject: [R-390] update**

**wrote: > Good call Al. Anyone sell micropipettes?**

**Wow, now this is a great idea! I've been trying to figure out how to lubricate the rollers without getting too much lubricant all over the place. Microliter drops. Perfect. Too bad the pipettes are so expensive. I'll just have to borrow one over the weekend from my work. John**

**From rodney\_bunt@yahoo.com Sun Jun 30 05:40:54 2002  
Subject: [R-390] update - things inside...**

**Found a few 'mud wasp' nests inside a SP-600.. Just hosed them out, let dry, good as new. Rodney VK2KTZ**

**From nryan@intrex.net Sun Jun 30 05:55:27 2002  
Subject: [R-390] update**

**wrote: > > Jim, you might also try carbon dating. Ya might have an oldy there.**

**Hi, Al and Jim,**

**Carbon dating is helpful, but remember it is unreliable on R-390\*s older than 40,000 years because most of the C-14 will have decayed. 73 de Norman KG4SWM :-)**

**From Jim Shorney" < Sun Jun 30 06:35:25 2002  
Subject: [R-390] update**

**Hi Al,**

**wrote: >I have tried all sorts of Deoxit applicators including Q-Tips, syringes, very >fine artist brushes etc.**

**I bought the bottle with the needle-tip applicator. I've noticed most folks seem to buy the spray. That didn't seem like a good thing to me. This seems to work well for getting a tiny amount just where I want**

it. My C-line and TR6 survived, anyway... :-)

>What I found was something called a >Microbrush. As soon as I saw it I knew that I had found the perfect Deoxit >applicator.

Funny, I was just in a hobby shop this afternoon, killing time before the movie. Oh well. Great tip, I'll keep my eyes open for one of those. 73 Jim

From Jim Shorney" < Sun Jun 30 06:52:11 2002  
Subject: [R-390] OT: virus check time

Guys, I've gotten two copies of 'Snow White' since I joined this list. It could very well be coincidental, but y'all may want to check your systems just in case. Source headers are as follows:

Received: from icwsignup (ppp-64-174-154-253.dialup.sntc01.pacbell.net [64.174.154.253])

Received: from icwsignup ([64.174.155.69]) by mta7.pltn13.pbi.net (iPlanet Messaging Server 5.1 (built May 7 2001))

I normally blow such things off, as I seem to get a new one every few days to a week or so apart. But to get two copies of this oldie in a short span of time seems unusual. Even more interesting, pbi.net and pacbell.net are both Pacific Bell. They both came from the same network, quite possibly the same machine. 73 Jim (Soooo glad I don't run Windows)

From walter@r-390a.us Sat Jun 29 16:49:56 2002  
Subject: [R-390] looking around for r390-a

Congratulations Jerry! T-368 transmitters are out there, but may take some digging to find one. I got mine about two weeks ago. I had to drive about 5 hours one-way to pick it up, but they are out there. I didn't say they were cheap, but they are out there if you post your desire in all the right places. I had an opportunity to buy another one about 8 months ago, which I passed up because of the 12-hour drive.

I am having a real blast with mine. Nothing but AM for me lately. Updates pics are here: <http://r-390a.us/T368.htm> Walter Wilson - KK4DF <http://r-390a.us>

From krk@ix.netcom.com Sun Jun 30 09:44:39 2002  
Subject: [R-390] Re: F104

Speaking of F104's, I finally found some of my old pictures. I was stationed at a German airbase (if I told ya I'd have to shoot me) for two years (1969-1970) and got some pictures. These are scans of prints. I can't find the negatives. The first one is a two place trainer. The bottom two are the result of an engine failure (flame out IIRC). We only lost two planes in those two years - this one and another that the pilot flew right into his target. One of the problems with F104's in the German airforce was that the term of enlistment for a German soldier was only 1.5 years. By the time they got trained and competent, they were out. As a result, maintenance was not always what it should have been. Noisy ass plane but fast. Fun to watch a launch after a major engine overhaul. They took off clean (no external tanks) and went vertical until they disappeared. I have a complete pilots manual if anyone wants to read more. I think we had F104G's. Go to <http://home.netcom.com/~krk/pics/f104pics.jpg> to see the pics.

Just to keep things sorta on topic, we had some Army guys running communications. I think they used Collins S-line stuff. They wouldn't let anyone in their shack. Every time they transmitted, I could hear it on my stereo. It was SSB (quack quack). Many more stories but so off topic... 73 Ken kb7rgg

ps - The F104 in the bottom picture was a fine machine. The base was in Westphalia. The horse is their symbol. The extra art work was not official.

From stevehobensack@hotmail.com Sun Jun 30 14:43:07 2002  
Subject: [R-390] Nice Enigma Simulator

I downloaded the "Nice Enigmal Simulator". Can anyone decypher this:

settings: (m3 enigma)

walenslage:

reflector B , left 3 , mid 2 , right 1

ringstellung:

A A A

steckerverbindungen:

ab cd ef gh ij kl mn op qr st uv wx yz

QEBM RFPU LPPQ ROPX HQRJ UVTF JRSU FYYV RULT NZZO SWTY ZLLW JEWf TURD  
JWYY

ALGP TIFD WLIS VNZP KLSN FQGY IRHO HJJA RQZC OIQW TPVB RWWd LFTI JLLJ SGKJ  
LBFX HILX CJHS UISI MZXT KSGH VFYN ZPHL UQVM YNJu JMAH RRZV QFWY

From asolway@sympatico.ca Sun Jun 30 16:25:04 2002  
Subject: [R-390] OT: virus check time

Jim and All,

I also received "Snow White" deleted it. Norton also quarantine something called "Midgets.scr or W95.hybrids. worm". This was also deleted. Know very little about viruses and less on how to handle them. Let the Norton AntiVirus handle that. Al

From Barry Hauser" <barry@hausernet.com Sun Jun 30 18:12:16 2002  
Subject: [R-390] OT: virus check time

wrote: > I also received "Snow White" deleted it. Norton also quarantine something called "Midgets.scr or W95.hybrids. worm". This was also deleted. Know very little about viruses and less on how to handle them. Let the Norton AntiVirus handle that.

I don't know if it's wise to let Norton handle everything, though ....

Mostly we've seen lots of the "klez" virus and Norton has been catching it, and a few others. The problem with some of these is that they will spread on a local area network. About a week ago, one of my people thought that's what had happened -- someone clicked on something and let the genie out of the bottle.

Caused all sorts of disruption -- disconnecting PC's from the network, running virus scans, etc. They ran a scan on one of the critical servers and it came up with the warning message that the master boot record had changed. It offered three choices, one of which was to ignore, other was to correct it or something (I wasn't there). They chose to correct it. Result: Drive trashed. Fortunately, we make frequent backups and have a spare drive or two ready to install and load up, but it was still a disruption.

They got the same message on another machine, but chose to ignore. Nothing was wrong and the scan came up clean otherwise.

So ... if you get that Master Boot Record warning, think twice about letting Norton fix it. First, it might not be broken. Second ... it may well break it for you. At this point, I don't know what caused that warning to come up and how to deal with it in the future, other than to ignore it first. Barry

From Jim Shorney" < Sun Jun 30 18:32:27 2002  
Subject: [R-390] OT: virus check time

wrote: >> I also received "Snow White" deleted it. Norton also quarantine something called "Midgets.scr or W95.hybrids. worm". This was also deleted. Know very little about viruses and less on how to handle them. Let the Norton AntiVirus handle that.

I don't know if it's wise to let Norton handle everything, though ....

Of course, the ultimate solution is to not use Windows for internet/email. This stuff just sits harmlessly in my inbox... :-) Not an option if you are on a corporate net, of course; you have to use what the MIS boys tell you to. I don't even need to use AV software; no one is writing virii for OS/2 anymore. Windows is such an easy target.

Try as they might, the computer is still not a turnkey 'idiot box'. You have to learn something about it. A good antivirus program is not an option, it is mandatory these days for the Windows platform. But that must be supplemented with a working knowledge of your antivirus of choice, and a willingness to keep it updated frequently and to read up on what virii are out there. These guys are getting frighteningly clever.

From wf2u@starband.net Sun Jun 30 18:45:41 2002  
Subject: [R-390] OT: virus check time

Solution: use a REAL operating system, like Linux or FreeBSD !

Too bad, OS/2 is a dead product - it was fairly decent, especially the Warp 4 version. As it was a terrible resource "hog", it could really perform on a modern system with oodles of RAM. 73, Meir WF2U Landrum, SC

From Jim Shorney" < Sun Jun 30 19:12:54 2002  
Subject: [R-390] OT: virus check time

wrote: >Solution: use a REAL operating system, like Linux or FreeBSD !

Been there, doing that. Check [http://www.findu.com/cgi-bin/find.cgi?nu0c\\*](http://www.findu.com/cgi-bin/find.cgi?nu0c*) - those are Linux boxen.



>Too bad, OS/2 is a dead product

Not to start an OS war here, but OS/2 is hardly dead. Warp 4 and WSeB are still supported by IBM, and eComstation is a third-party repackaged of Warp 4 with WSeB enhancements.

>As it was a terrible resource 'hog', it could really perform on >a modern system with oodles of RAM.

That is does. I do maintain an NT4 box for slumming, and a W98 partition for gaming. Warp 4 is my main workhorse.

From Llgpt@aol.com Sun Jun 30 20:30:45 2002

Subject: [R-390] OT: virus check time

writes: << So ... if you get that Master Boot Record warning, think twice about letting Norton fix it. First, it might not be broken. Second ... it may well break it for you. At this point, I don't know what caused that warning to come up and how to deal with it in the future, other than to ignore it first. Barry

The ultimate cure is to not have Windoze.....:-) Never had a glimmer of a "virus" with the iMac.  
Les Locklear

From asolway@sympatico.ca Sun Jun 30 20:51:13 2002

Subject: [R-390] OT: virus check time

Barry & All, > I don't know if it's wise to let Norton handle everything, though ....

Barry, you are right. I did treat this to lightly. Norton did try and fix it without success. Will do some reading on the subject. I am sure that a virus may not only infect my computer but a whole lot of others.

Thanks for the sound advice Al