

Here are some notes, I will make additions as needed, if you see something that needs explanation please drop me a note at k7vic@k7vic.com email.

1. Concerning the L1 bifilar choke, if you see it in the interior photo's it appears as two chokes, but it is really a single 10 amp bifilar I had that came from some dealer like rf parts or similar. I had an issue as my cathode chassis was not wide enough to facilitate putting this part into it, so I removed the ferrite rod, scored it in the center using a small pipe cutter and broke it in half, then reinserted the two pieces back into the coil windings and bent it in half making two shorter coils from one longer one.
2. The first 4 or so inches of the tubing connected to the tube cooling structure used to pump the oil through the tube, is teflon tubing to allow it to withstand the higher heat encountered as the metal structure will be hotter then the oil flowing through the cooling system.
3. Tuned Input. The values for the tuned input board are shown on the tuned input print. The variable capacitors are not always full value, that is if a  $2200\mu\text{f}$  capacitor is needed, it may be a parallel network of a  $1800\mu\text{f}$  fixed mica and a  $500\mu\text{f}$  max mica trimmer capacitor. I was able to get the fixed mica's and the mica trimmers on eBay for a good price. I found this input to work absolutely great, it is totally flat across all the bands. The 30, 40, 60 meter is tuned on 40 but is also flat on the other bands as well, same with the 15, 17 meter and the 10, 12 meter. I do not have any antennas for the warc bands at this time but have checked with my dummy load and the Amplifier works good there as well. The output trimmer for 10 meters (C2) is actually connected directly from the cathode input Capacitor C13 to ground, near the tube socket. It is in the circuit at all times on all bands, but is very low C so does not give any problems for the other bands. C13 is a parallel network made up of a  $.01\mu\text{f}$  and a  $.001\mu\text{f}$  disk ceramic capacitor.
4. Hi, it is now 9/20/17, I have been using the Amp for about two years. I had a stroke in January 2017, so for a couple of months I could not use it. About a week ago I was using it in a contest, and the plate choke went in flames, HI HI. As I have poor use of my right hand now, I decided to by a new choke. I was thinking the ameritron rfc-3 was a good choice, upon looking for one I found one at RF Parts, RFC3 Pilar Choke, 225uh, 1.5 amp, 4kv, 1.8-30 MHz. They only wanted \$24.95 plus shipping was very affordable. I also changed my blocking capacitor, this I did since I found one in junk box which was better. I had 4  $500\mu\text{f}$  in parallel first, the one I found is a sangamo mica transmitting capacitor,  $.001\mu\text{f}$  6kv @ 7.5 Amp at 1000 kc it is the G1style. I changed the photo's in the inside of the amp to show the new arrangements. I worked the amp extra hard the last few days and had no problems, and out power up a bit on the higher bands. I also updated the schematic to show new parts.
5. Hi it is now 2/8/2018--(NOTE: Originally there was only one Ameritron RFC3 plate choke, but I found there was a slight problem on 160 meters (hi plate current and low efficiency), this is now fixed by adding the second Ameritron RFC3, and a another door knob  $1000\text{pf}$   $12\text{kVdc}$  between the two chokes. The 2 chokes were mounted this way on purpose to minimize coupling between the 2 chokes.  
Changed 2/8/2018 )
6. This is a update as of 3/15/18-- I had the pump go bad and decided since I had to change the pump to change some other things as well. The pressure sensor worked but would fail sometimes and turn the amp off. Then would have to bleed the system. I got a FLOWMETER ROTAMETER Inline Flow Meter 0.5-5 GPM, from eBay for a low price, it has 1/2" NPT female threads so all I had to do was to put in a 1/2" to 3/8" barb adapter in both ends (if you go to find one of these careful most have metric threads). This does not have a switch to turn off the amp but you can read it very well. The new pump I bought is a Grundfos UPS 26-99 FC, 3-Speed 1/6 Horsepower Circulator Pump, I got from eBay for \$152.00 shipping included, this is a much better pump and at that price I ordered 2 of them to have a spare . The old pump was 1/25 HP and this one is 1/6 HP and puts out 1.5 GPM, the tube runs a lot cooler than it did before.<br><br>

When the pump went bad I lost most of my oil, luckily the leak was in the crawl space so did not make a mess. I needed more oil, so went to the power company to see if I get some more, but they don't sell it any more. I got online, and check to see where I could buy it. Well it is now so expensive I could not do that, I talked to a person that I knew at the power company and he told me the oil I had originally was the new oil they use, they do not sell it, but he told me what it was, they changed to Canola oil and I went to the store and bought some Wesson pure Canola oil, for less then \$10.00 a gallon much cheaper then the transformer oil at \$100.00 a gallons. I was always curious when this oil was yellow when I got it years ago because it did not look like the transformer oil I had seen before, the old pcb stuff. I had it checked out and canola oil was the oil I have been using all the time. That ment that I was able to just add Wesson to my system with out cleaning it all out. This is really good for us hams to build a dummy load or what you we can get Wesson pure canola oil and cost is minimal.

7. 03/14/19

I was able to get a hold of a vacuum variable capacitor to use for the loading C2.

Its a  $1200\text{pf}$  big enough for 80-10 meters but have to do some padding for 160 meters.

Got a vacuum relay 24vdc and placed C2A,  $1200\text{pf}$  made up from doorknob capacitors for the padding. The old air variable still works and am keeping it as a spare.