

From: Gerd Loch [g.loch@nt-electronics.de]  
Sent: Saturday, August 28, 2010 5:36 PM  
To: 'Isaac Weksler'  
Subject: RE: 100W\_PA\_Kit\_Documentation.zip

Hi Isaac,

it was all perfect what you have done (except the fuse in your ammeter).

For adjusting FWD and REV power you need an external power meter. The frequency should be in the 20m band. (the power indication is somewhat dependent on the frequency ☹ it is not an instrument with high accuracy).

Connect a 50 Ohm load to the PA and set the output to 50W. Adjust the FWD reading with VR3 to 50W on the display.

Connect a second 50 Ohm load parallel (or in series) to the PA. This results in a mismatching of 1:2. Adjust the SWR now with VR5 to a reading of 2.0. That completes the adjustment.

Be aware that the SWR and Power measurement is located in front of the LPF. Thus you would measure a mismatching in the LPF OR your external load.

73, Gerd

DJ8AY

-----Original Message-----

From: Isaac Weksler [mailto:iweksler@bezeqint.net]  
Sent: Saturday, August 28, 2010 5:12 PM  
To: 'Gerd Loch'  
Subject: RE: 100W\_PA\_Kit\_Documentation.zip

Gerd,

I am happy to report that I have performed the following:

1. Assembled the Hercules and installed everything into the Pandora enclosure. I had to modify the enclosure since it has been designed without any consideration for Hercules board and heat sink. I have commented on that in the openHPSDR forum. You can have a look if you're curious. I am convinced that it's design had to be modified and coordinated with you since the only amp fitting the HPSDR is yours. At least until Alex is out, which is not yet close. I'll send you pictures when I'm finished.

2. Assembled all the cables
3. Installed the Antenna Switch for which I used one of the slot covers supplied with the Pandora
4. Assembled and installed the Display Unit in the Pandora enclosure
5. Tuned the biases:
  - a. The idle current when VR1, VR6 and VR2 are at their minimum is:
    - i. Display connected: 246ma
    - ii. Display disconnected: 76ma
  - b. Adjusted VR1 and VR6 until the Q4 and Q5 biases got to 50ma each. This brought the total current to: 346ma
  - c. Adjusted the VR2 to bring the Q1 and Q2 bias 500ma. This brings the total current to: 846ma
  - d. Note: I couldn't feel the stop of the pots at all. So I had to rotate the VR2 counterclockwise with transmit on and until the ammeter reading would not decrease. It appeared the VR1 and VR6 were already at the lower limit and I had to rotate them clockwise quite a bit until the ammeter reading began to increase.
6. I connected then the RF input to Penelope, connected the RF output to the antenna thorough a Power/SWR meter. Then I blew the fuse in my ammeter because I forgot to connect the 12v directly to PA you may laugh now. It took me a few tense moments to understand what happened. But then I connected the 12v directly through the fuse and achieved up to 100W easily. I could have get more but left that for later. I used PowerSDR program to perform that in Tune transmit mode.
7. I do not know how adjust the VR3 and VR5 to get proper readings on the display. Would you please instruct me.

I hope this report is OK for you. Let me know if you want any information I may have missed.

73

Isaac 4Z1A0

From: Gerd Loch [mailto:g.loch@nt-electronics.de]  
Sent: Tuesday, August 24, 2010 5:27 PM  
To: 'Isaac Weksler'  
Subject: RE: 100W\_PA\_Kit\_Documentation.zip

Isaac,

R4 and R6 parallel to L15, L16 (Size 1206) are replaced by L4 and L6 wound on double aperture ferrites for more gain.

If the total gain is too high for you (depends on final transistors) you can also take the inductances out and replace them by two resistors 10R/2W.

I suggest you use it as is.

73, Gerd

DJ8AY

-----Original Message-----

From: iweksler@gmail.com [mailto:iweksler@gmail.com] On Behalf Of Isaac Weksler

Sent: Tuesday, August 24, 2010 3:50 PM

To: g.loch@nt-electronics.de

Subject: Re: 100W\_PA\_Kit\_Documentation.zip

Gerd,

When assembling the PA I noticed that the resistors R4 and R6 shown on the schematics and in the board assembly instructions, are not assembled on the board.

Is this normal? Please advise.

73

Isaac 4Z1A0

On Thu, Aug 19, 2010 at 08:18, Gerd Loch <g.loch@nt-electronics.de> wrote:

Isaac,

I have attached the complete documentation for the PA if I did not send it before. Please let me know if something is missing.

73, Gerd

DJ8AY

