

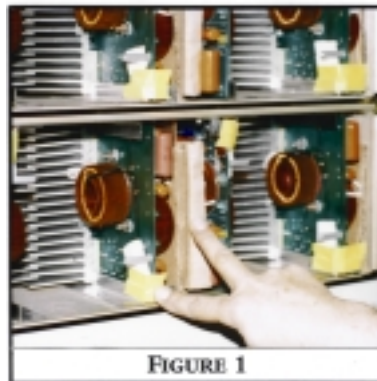


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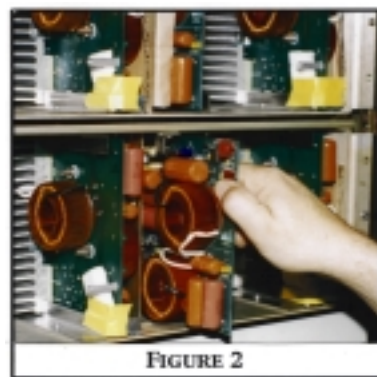
LPB OMNI Broadcast Transmitter Installation Procedure Checklist

Installation Procedure

- ❑ Remove Transmitter (and transformer if shipped separately) from Box/Crate and check for external damage during shipping.
- ❑ Remove front panel(s) from power amplifier chassis and remove foam shipping pads (See **Figure 1**).



- ❑ Reseat each power amplifier module, as they may have shifted during shipping (See **Figure 2**).



- ❑ Install all power amplifier inhibit switch Tabs (See **Figure 3**). Do not seat Tabs against Red switches at this time. Make certain that transmitter main power supply breaker is in the **OFF** position.

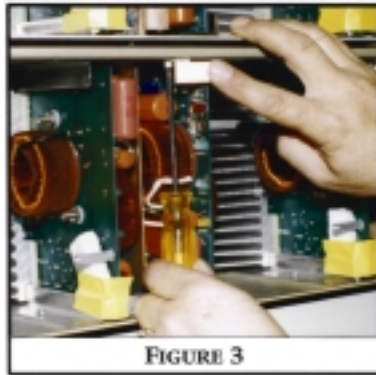


FIGURE 3

- Connect the external power cable to the transmitter.
 - A. Single (1) Phase (Red -- Black -- Green-Ground)
 - B. Three (3) Phase (Red -- Black -- Blue -- Green-Ground)
 - C. Check Voltages across phases. (208 to 220)

Recommended amperage ratings:

Transmitter	Wire Gage (CU)	Cir Breaker/Fuse
1KW	12 AWG	20 A
3KW	10 AWG	40 A
5KW	8 AWG	50 A 3 PH
10KW	4 AWG	100 A 3 PH
25KW	2 AWG (480V)	100 A 3 PH
50KW	2/0 AWG (480V)	200 A 3 PH

The 3 Phase transmitters can be wired from either “Delta” or “WYE” sources. What is important is that voltage between phases matches transformer Taps.

- Connect **RF OUT** to a Dummy Load properly tuned to the carrier frequency of your transmitter. Make sure the load is capable of dissipating the 150% power available from your transmitter.
- Unplug all connectors on the back of the Power Supply (See **Figure 4**), turn on the main Circuit Breaker (CB) and check for LEDs on the front of the Power Supply. **+16VAC, -16VAC and 24VAC LEDs should be ON.** All other LED's should be **OFF.**

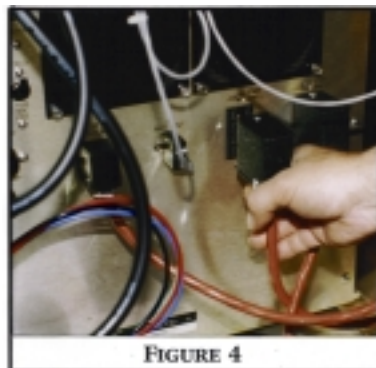
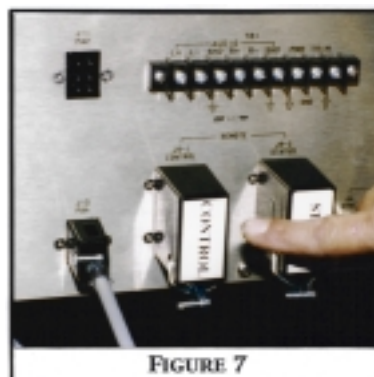
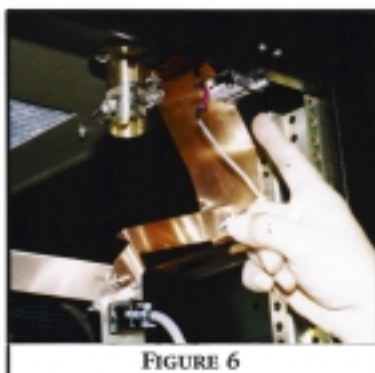


FIGURE 4

- Turn off the main CB and connect Control Panel power cable to the back of the Power Supply (**J6CNTLR**). Disconnect the PDM cable(s) from the Control Panel (See **Figure 5**).

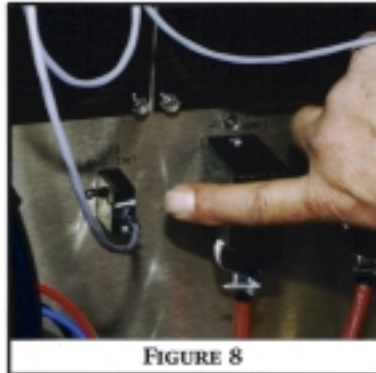


- Turn on the main Circuit Breaker and check the voltages and LEDs on Control Panel.
 - +18V should be between 20 to 24V** without the Power Amp panel(s) connected. Adjust the transformer taps if required on the low-voltage transformer.
 - VAC1, VAC2, VAC3** should all read AC main voltage on a 3-phase transmitter (208 to 220 volts). VAC2 and VAC3 are disabled on a single phase unit.
 - 300VDC** should read **Zero**.
 - Green **ENABLE, LOCK, +18VDC, -18VDC, and MONO** LED's should be **ON**. Set **POWER CONTROL** to each setting and verify that correct power LED comes on. Then set **POWER CONTROL** to **2**. The **REMOTE** LED will be **ON** only when front panel **REMOTE** switch is in the **REMOTE** position.
 - If Red **INTERLOCK** LED is **ON**, check rear door(s) to make sure that they are completely closed and the interlock switches are completely depressed (See **Figure 6**). Also check that Remote Control Plug J9 - 1 is installed (See **Figure 7**).



- Check the operating frequency with a frequency counter connected to the Frequency Port (**J7 FREQ**) on the back of the Control Panel.
- Turn on the high voltage (300VDC) by depressing the Red **ON/RESET** button. With no load it should be between 330 VDC and 350 VDC. Adjust the transformer taps if necessary. (**Refer to technical manual for instructions**).

- Press **OFF** button. Turn off the main CB and connect the Power Amp Panel power cable(s) and the Antenna Interface fan cable (if there is one) to the Power Supply (**See Figure 8**). Reconnect the PDM cable(s) between the Control Panel and Power Amp Panel(s). All interconnect cables should now be connected between power supply, controller, AIU and all power amp panels.



- Turn Power Control Selector Switch to **Setting 2**. (**See Figure 9**). Turn on the main Circuit Breaker and check the LEDs on each Power Amplifier Module.
 - A. Red **INHIBIT** LED's should be **ON**.
 - B. Green **+18 VDC** LED's should be **ON**.
 - C. Yellow **300 volt** LED's should be **OFF**
 - D. Green **RF Output** LED's should be **OFF**
 - E. All fans should be operating.



- Check the Power Amplifier Inhibit Switch operation on each Power Amplifier module by depressing the switch plunger. The Red **INHIBIT** LED should be **OFF** when the switch plunger is depressed (**See Figure 10**).

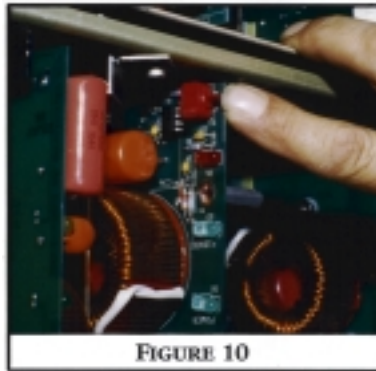


FIGURE 10

- ❑ Connect a scope to the **RF SAMPLE** connector on the back of the Antenna Interface panel.
- ❑ With all the Power Amplifier **INHIBIT** switches open (Red **INHIBIT** LED's **ON**) turn on the high voltage by depressing the **ON/RESET** button.
 - A. Yellow **300VDC** LED's will Lite on each power amplifier module.
- ❑ Check the **Manual Power Off** by depressing the **OFF** button on the controller front panel to make sure that it functions correctly. **Caution: High voltage capacitors are discharged through bleeder resistors located in the power supply. Dissipation may take several seconds.**
- ❑ Turn on the high voltage by depressing the **ON/RESET** button. Yellow **300 VDC** LED will come **ON**. While viewing the oscilloscope screen, carefully depress the Power Amplifier Inhibit Switch on one of the Amplifier Modules (See **Figure 10**). **Caution! Lethal Voltage is present on Amplifier Modules. Use Extreme Care.**
 - A. Red **INHIBIT** LED will go **OFF**
 - B. Scope will show a continuous Sine Wave. Note amplitude of waveform.
- ❑ Repeat process for each Power Amplifier Module. Each module should produce the same output RF power.
- ❑ Turn high voltage **OFF** by depressing the **OFF** button. Reposition all Power Amplifier Inhibit Switch Tabs and tighten down to hold switch plungers securely in down position. All Red **INHIBIT** LED's should be **OFF** (See **Figure 11**).

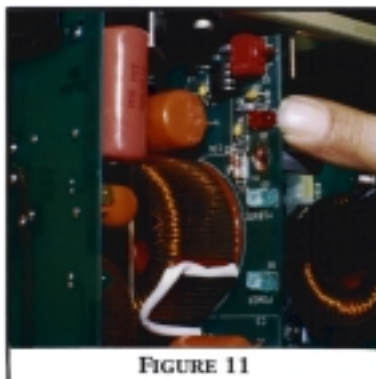
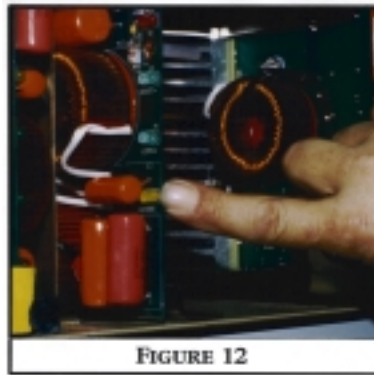


FIGURE 11

- Turn high voltage **ON** by depressing the **ON/RESET** button. All Yellow **300 VDC** LED's should be **ON** (See **Figure 12**).



- Set **FWD/REV** Toggle to **FWD** position. Set the Multimeter Selector Switch to the **300 VDC** position. While remaining in **Power Setting 2**, record the following readings from the three meters located on the controller:
 - A. Current reading on the **300VDC AMP** meter.
 - B. 300 Volt reading on the **VOLT** meter.
 - C. Forward RF Power as indicated on **RF % Power** meter.
- Turn Power Setting Selector Switch to **Power Setting 5**. Repeat the meter readings. Current and voltage readings should fall within the following ranges:
 - A. 1 KW Transmitter 3.6 to 4.2 AMPS
 - B. 2.5 KW Transmitter 9.0 to 11 AMPS
 - C. 5 KW Transmitter 18.0 to 22.0 AMPS
 - C. 10 KW Transmitter 38.0 to 46 AMPS
 - D. All transmitters' 300VDC should be in the range of 300 to 330 VOLTS
- Turn Multimeter Selector Switch to **+18VDC** and **-18VDC** positions. Readings should fall within the following ranges:
 - A. +18VDC 18 to 19 VOLTS
 - B. -18VDC 16 to 22 VOLTS
- Press **OFF** button on Controller. Turn Main Circuit Breaker to **OFF** position. Turn Power Setting Selector Switch to **Power Setting 2**.
- Disconnect Dummy Load from **RF OUT** connector and connect Antenna to **RF OUT** connector.
- Turn Main Circuit Breaker to **ON** position. Turn high voltage on by depressing the **ON/RESET** button.

- Repeat meter readings. Readings should be similar to those made into the dummy load.
- Turn **FWD/REV** Toggle to **REV** position. Reverse power reading should be less than 2% on the **RF % Power** meter (**Bottom scale on meter**).
- Replace front panels on Power Amplifier Panel(s).
- Transmitter is now ready to accept programming. Refer to technical manual for further instructions to attach audio input(s).

Should you have any questions, please contact the factory:

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