SECTION 5: 1000LA/500LA SYSTEM INSTALLATION

5.1 OVERVIEW

This section describes receipt inspection procedures, installation, and configuration of the Linear Amplifier, Switching Power Supply, and the Amplifier/Radio Interface Box. *You may solve any problems encountered while installing and configuring these units by telephoning* **Hull Electronics** at **(619) 447-0036**.

5.2 RECEIPT INSPECTION

NOTE

The following steps apply to the Linear Amplifier, Switching Power Supply, Amplifier/Radio Interface Box, and cabling. Some steps may not apply to a specific unit.

NOTE

For information on grounding requirements for the units, see the HULL Model 5150 SSB Operating Instructions.

Perform the following when removing each unit from its shipping carton:

1. Check the shipping carton for damage. If there are any signs of rough handling, save the carton for evidence. If storage is not a problem, it is recommended that the shipping carton and all padding be saved in case the unit needs to be reshipped.

2. Open the shipping carton and remove accessible padding materials from the carton.

3. Remove the unit(s) from the carton.

4. Inspect the unit(s) for any evidence of physical damage. Verify the case has not been damaged, possibly causing a short to the internal components. If there are any signs of damage, notify HULL at the above telephone number.

5. Using the appropriate screwdriver, secure any case screws that may have worked loose.

CAUTION

Do not operate any unit that has been damaged in shipment. The unit could be further damaged or may damage electrical devices connected to it.

5.3 INSTALLATION

It is recommended that the Linear Amplifier and Power Supply be installed in a standard

19" equipment rack, or the system may be ordered this way. Installation must be accomplished by qualified technician(s). **Figures 5-1** and **5-2** show front and rear views of a rack mount installation.

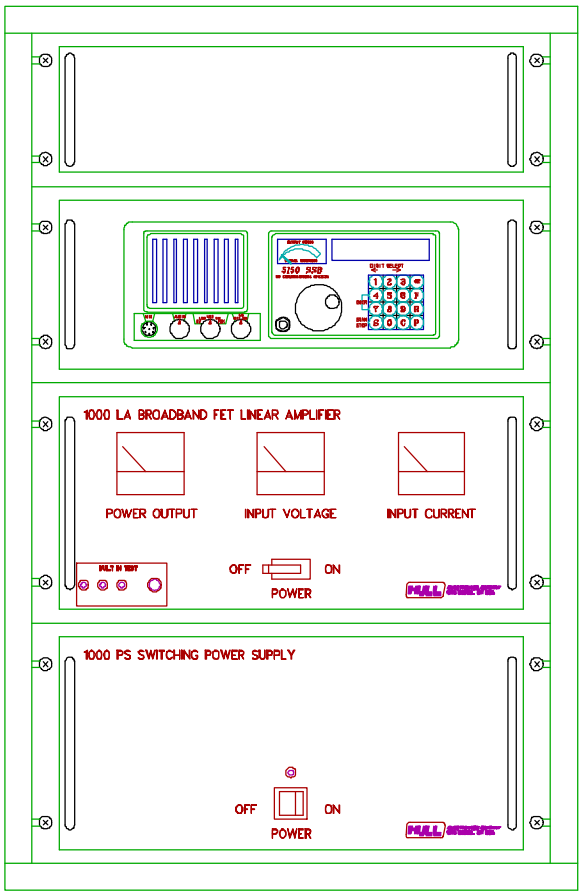

Figure 5-1. Rack Mount, Front View.

CAUTION

The Linear Amplifier or Power Supply should not be installed in a closed rack unless adequate venting is provided through the cabinet. Air intake is through the sides or top and outlet through the rear.

5.3.1 Rack Installation

To install the Linear Amplifier and Power Supply in an equipment rack, perform the following:

1. Locate an appropriate section of a standard 19" equipment rack.

2. Install the required hardware in the equipment rack for ease of unit removal.

3. Carefully slide the unit into the equipment rack.

4. Secure the unit(s) to the equipment rack using standard screws (not supplied).

5. Install the Interface Box in an area accessible by the cables running to the radio and the Linear Amplifier.

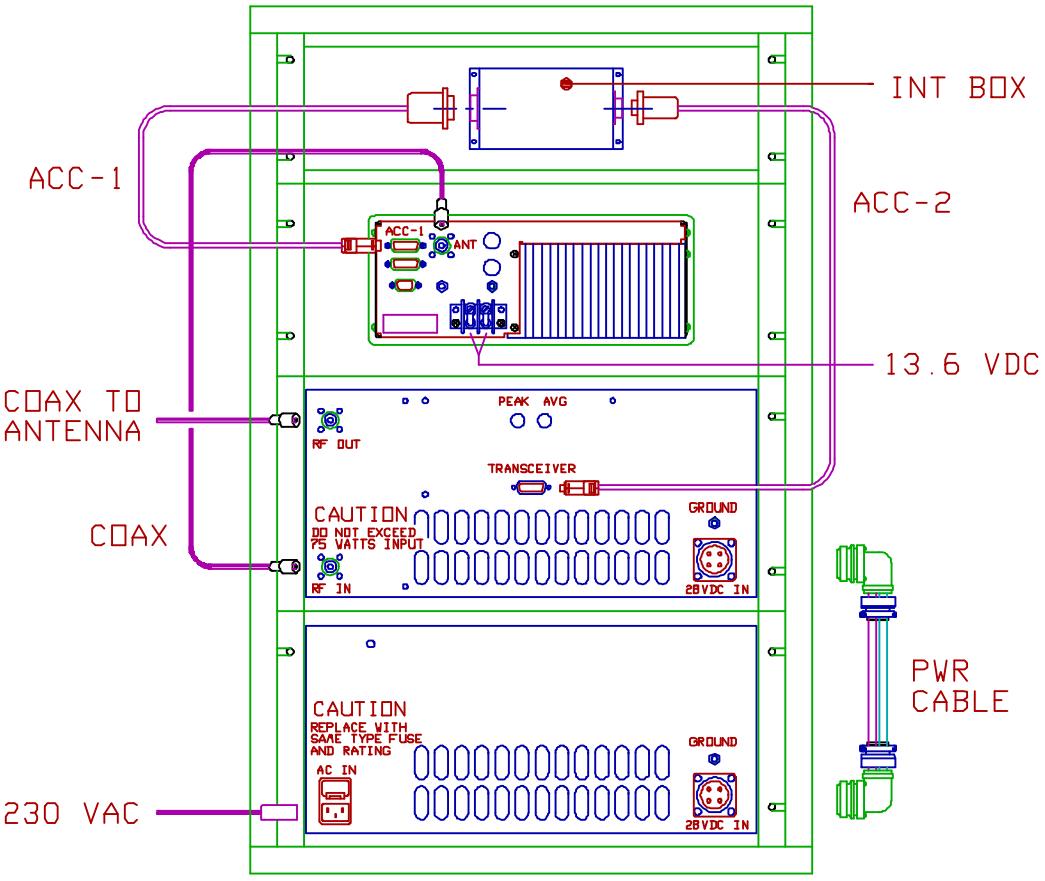

Figure 5-2. Rack Mount, Rear View.

NOTE

Ensure there is sufficient room at the rear of the equipment rack to provide access for cable installation and Linear Amplifier ALC adjustment.

6. Connect the appropriate cables to the unit(s). **Tables 5-1** and **5-2** provide informational listings of the pin connections for the Interface Cables.

5.3.2 Configuration

Linear Amplifier configuration (e.g., ALC adjustment) must be accomplished by a qualified technician. See the Linear Amplifier Technical Manual for further information.

Table 5-1.
Radio-Interface Box Connections.

Model 5150 SSB--Pin No.	Model 800 LAI--Pin No.	Signal
1	1	Shield
2	2	+12V
3	3	Key
4	4	N/C
5	5	PTT
6	6	Filter Band A
7	7	Filter Band B
8	8	Filter Band C
9	9	Filter Band D
10	10	Filter Band E
11	11	Filter Band F
12	12	N/C
13	13	XCVR ALC
14	14	N/C
15	15	N/C

Table 5-2.
Interface Box-Linear Amplifier Connections.

Model 800 LAI--Pin No.	Model 1000LA--Pin No.	Signal
1	2	Filter Band A
2	3	Filter Band B
3	4	Filter Band C
4	5	Filter Band D
5	6	Filter Band E
6	7	Filter Band F
7	1	Shield
8	8	AMP ALC
9	9	AMP PTT

SECTION 6: 1000LA/500LA SYSTEM OPERATION

6.1 OVERVIEW

This section describes the basic operating procedures for the Linear Amplifier and Switching Power Supply. Due to the simplified design of the amplifier and power supply, you, the operator, need only to occasionally monitor the Linear Amplifier Built in Test indicators and the Power Supply Power On indicator after initializing the units.

6.2 INITIALIZING THE UNITS

To initialize the units, perform the following:

1. Turn on the Power Supply via the POWER ON/OFF switch. Ensure the Power On indicator is lighted (green).

2. Turn on the Linear Amplifier via the POWER ON/OFF switch.

NOTE

One or more of the BUILT IN TEST indicators may light. In this event, press the RESET button on the Linear Amplifier and ensure the indicator(s) go out. If the indicator(s) do not go out, see paragraph 3.3.

   a. Ensure the INPUT VOLTAGE meter reads **28 VDC**.

   b. Ensure the INPUT CURRENT meter reads **0 A**.

3. Turn on the radio.

   a. Ensure the Linear Amplifier INPUT VOLTAGE meter still reads **28 VDC**.

   b. Ensure the Linear Amplifier INPUT CURRENT meter still reads **0 A**.

4. Select a frequency on the radio. You should hear the relays "clicking" in the Linear Amplifier.

5. The system is now ready for continuous operation.

6.3 BUILT IN TEST

The BUILT IN TEST section of the Linear Amplifier, shown in **Figure 6-1**, is designed to monitor the following:

- Voltage Standing Wave Ratio (VSWR).
- Linear Amplifier internal temperature.
- Balance between the amplifiers (internal) to the Linear Amplifier.

Any one of the faults will cause the Linear Amplifier to shut down. Normally, pressing the **RESET** button will reset the unit to normal operation.