

## 4.6 Setting Output Power

### 4.6.1 Setting Power Levels for Forward PAs 1- 4

1. With the system power **OFF**, connect power measuring equipment to the M1 antenna port for channels 1 and 2, and to the M2 antenna port for channels 3 and 4. Turn the power back on. Output power may be monitored using a through-line wattmeter (or a wattmeter with a built-in load) to monitor output power.
2. From the SET Main Menu, type **B <CR>** to display the Power Amplifiers Menu.

Power Amplifiers Menu		Default Values
A	Forward PA Power Step - DTC.....	0
B	Forward PA Power Step - DCCH .....	0
C	Forward PA Power Step - Hand-off .....	0
D	Forward PA Power Low Alarm Point - DTC.....	+40 dBm
E	Forward PA Power Low Alarm Point - DCCH .....	+40 dBm
F	Forward PA Power Low Alarm Point - Hand-off .....	+40 dBm
G	Reverse PA Power Set - DTC .....	+20 dBm
H	Reverse PA Power Set - DCCH .....	+20 dBm
I	Reverse PA Power Low Alarm Point - DTC .....	+15 dBm
J	Reverse PA Power Low Alarm Point - DCCH .....	+15 dBm
K	Key Forward PA .....	POWER ADJ/COMBINER TUNING
L	Key Reverse PA .....	POWER MEASUREMENT

3. Type **K <CR>** to key a forward PA.
4. Type **1 <CR>** to key PA 1 and display the forward power output as measured at the sensor.

### 4.7.1 Adjusting Power Levels for PAs 1- 4 (Continued)

5. Set the desired power level in dBm

- If using a wattmeter, record the actual power reading (note, there may be small differences between the entered power level and the actual measured power level due to tolerances of the internal power reading circuitry and the external power meter).
- The power reading at the M1 connector (for channels 1 & 2) or the M2 connector (for channels 3 & 4) should be  $+40.8 \pm 1$  dBm (12.5 watts nominal).

### 4.6.2 Setting Reverse Path Output Power (If Necessary)

The output power in the reverse direction (from booster to donor cell) is +20 dBm per channel. It is set at a much lower level than in the forward direction to prevent reuse interference with other cells that may be in the system. If the minimum received signal requirements are met for the forward direction, then by reciprocity +20 dBm per channel in the reverse direction is sufficient.



**NOTE:** Adjustment of the reverse power level is seldom needed. However, in certain installations the output level may need to be reduced.

The +20 dBm output level can be reduced with the following procedure:

1. From the SET Main Menu, type **B <CR>** to display the Power Amplifiers Menu.
2. Use selections I and J , the reverse PA power for DTC and DCCH channels.
3. Enter the desired level from +5 to +20 dBm.

Another way to remedy this situation is to install pads in increments of 10 dB between the donor antenna and the donor duplexer ANT connector. This method has the added advantage of increasing effective antenna isolation.

### 4.6.3 Setting PA Power Low Alarm Points

Note that the Power Amplifiers Menu also includes the low power alarm points. The default values are appropriate for PAs set to the factory power levels.

If the power outs have been adjusted lower than this, reduce the alarm points as well. Normally, the alarm point should be set 5 dB lower than the power reported on the terminal while keyed.

### 4.6.4 Setting Time and Report Values

The EAC-2100 keeps various statistics of calls handled by the booster and alarms that have been logged:

- Running totals of the number and duration of calls handled per board can be displayed using the DCS command.
- Incremental totals of certain call statistics can be displayed using the DCH command.
- Alarms logged since the last system reset can be displayed using the ALA command.

The EAC-2100 clock is used in updating these statistics. To set the clock and reset the report values to 0, complete the following steps:

1. At the > prompt, type **TIM** to access the clock. Enter the current date and time.
2. Type **DCH=0** to reset the Display Call History parameter.
3. Type **DCS=0** to reset the Display Call Statistics parameter.
4. Type **ALA=0** to reset the Alarm Report parameter.