

8. Using the supplied connector, tie together pins 6 and 7 of the Remote I/O connector. The amplifier will not operate without this connection or a remote switch on these pins. (See Section 2.6 for Remote I/O connection.)
9. If monitoring of the output signal is desired, connect the RF monitor cable to the BNC connector on the PA1000.
10. Connect the DC input/output cables between the PA1000 and the PS1000 as illustrated (Illustration 2-4). The connector end with the ground lead connects to the PA1000. Be sure to attach the ground leads as indicated.

Note: The power lead shield is only grounded at the PA chassis.
11. Install the covers over the DC terminals of the PA1000 and the PS1000 using hardware from the hardware kit (1/4-inch X 6-32 bolts with lock washers).
12. Connect to your AC power source by inserting the Hubble Twist-Lock connector into the female Hubble connector on the PS1000 and turn to the right until the connection locks.

2.6 Remote I/O Connection

The Remote I/O Connector on the back of the PA1000 allows remote control and monitoring of Certain transmitter functions. There are three basic *control* functions—AC on/off, RF power level adjustment, and RF down/off.

The **AC power on/off** remote control function, available at pin 7 of the Remote I/O Connector, turns DC power to the PA on when the pin is grounded.

The **RF power level adjustment** remote control function has an internal maximum limit set on the Metering and Control Board. The Local Power Adjust (R62) sets the maximum limit of RF power output. The limit is set by placing the Remote/Local switch (SW5) in the LOCAL position and adjusting the Local Power Adjust to your desired maximum limit (see illustrations 2-5 and 2-6). However, for any remote operation to work, the Remote/Local slide switch must be in the REMOTE position. Then the on-board remote RAISE and LOWER push buttons and any external remote switches attached to pins 4 and 15 of the I/O Connector can adjust

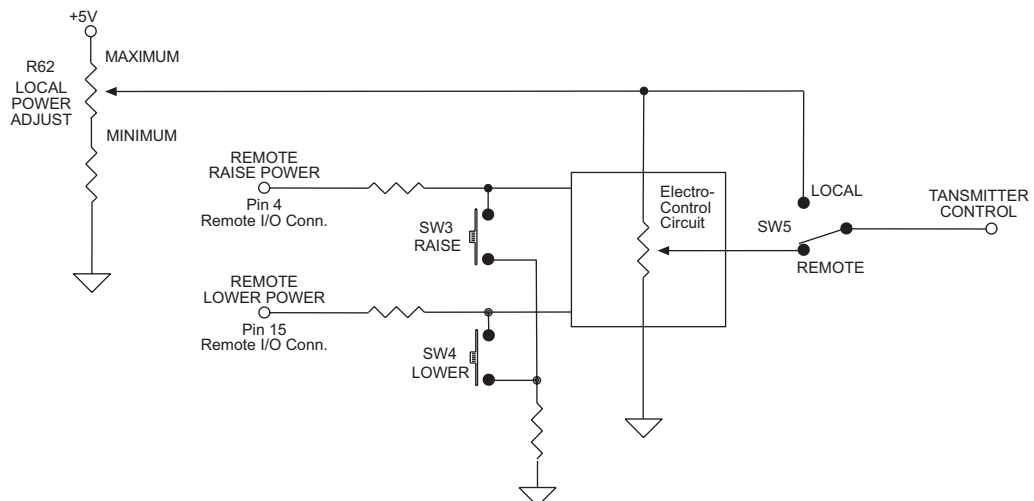


Illustration 2-5 Local and Remote Functions

the level up to that limit and down to zero. When a specific output power level is set, the Metering and Control Board controls and maintains the setting to keep the power constant. The location of the Local Power Adjust (R62), the on-board Raise and Lower switches (SW3 & SW4), and the Local/Remote slide switch (SW5) are shown below.

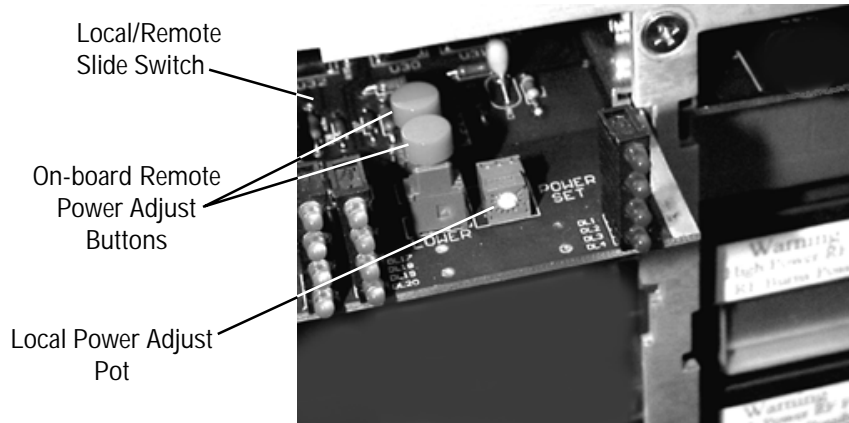


Illustration 2-6 On-board Remote Power & Related Controls

Another remote control function, available at pin 5 of the Remote I/O Connector, turns **RF down/off**. Connecting this pin to ground through a resistor allows the RF power output level of the amplifier to be reduced below the internal limit set by the Local Power Adjust pot or the remote Raise/Lower settings. However, some drive power, less than one watt, may still be present at the antenna. Depending on the resistor used, this pin can serve as a control for optional low power operation.

The remaining remote functions are for *monitoring* the various parameters of the PA1000. They are either buffered metering outputs, direct reading, or latched high/low indications. Further details of these functions are described in the pin-out table on page 2-8.

Note: *If Remote I/O controls are not used, tie pin 7 to pin 6 (GND).*

For remote I/O (Input/Output) connection, connect your remote I/O cable from your remote control location to the 25-pin (female) D-sub connector on the back panel of the PA1000. The I/O Connector on the power amplifier is described in the following diagram:

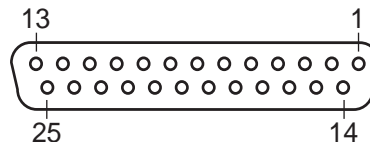
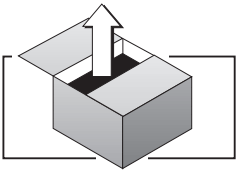


Illustration 2-7 Remote I/O connector (back panel view)

The Remote I/O Connector Pinout Table on the next page summarizes the Remote I/O pin connections.



Pin #	Function
1	PA#8 Current Monitor (a buffered metering output with 1 V = 2 A)
2	PA#7 Current Monitor (a buffered metering output with 1 V = 2 A)
3	Ground
4	Remote RAISE Power (a momentary switch, on this pin, when held low will raise the power level 10 watts every 0.5 seconds)
5	Remote RF Power Control (a resistor to ground on this pin reduces RF power output level below internal limits. See Section 2.6, page 2–7)
6	Ground
7	Remote AC Power On (a latching switch, on this pin, when held low will turn the AC power supply on)
8	Fault Summary (the voltage from this pin goes to +5 V if any fault occurs and drops below 2V when the fault goes away)
9	Ground
10	ALC (the voltage from this pin is a direct reading of automatic level control voltage, not buffered)
11	PA Temperature (a buffered metering output with 1 V = 20° C)
12	SWR (a buffered metering output with a calculated reading of standing wave ratio in VDC)
13	RF Output Power (a buffered metering output with a calculated reading of output power of 1 V = 1000 W)
14	Input Power Reference (a buffered metering output with a DC voltage representing input power)
15	Remote LOWER Power (a momentary switch, on this pin, when held low will lower the power level 10 watts every 0.5 seconds)
16	PA#6 Current Monitor (a buffered metering output with 1 V = 2 A)
17	PA#5 Current Monitor (a buffered metering output with 1 V = 2 A)
18	Ground
19	PA#4 Current Monitor (a buffered metering output with 1 V = 2 A)
20	PA#3 Current Monitor (a buffered metering output with 1 V = 2 A)
21	Ground
22	PA#2 Current Monitor (a buffered metering output with 1 V = 2 A)
23	PA#1 Current Monitor (a buffered metering output with 1 V = 2 A)
24	PA Total Current Monitor (a buffered metering output with 1 V = 20 A)
25	PA Volts (a buffered metering output with 1 V = 10 V)
Note: PA = Power Amplifier	

Remote I/O Connector Pinout Table