TUNE UP INSTRUCTIONS

PA6-1EE, PA6-1AE, PA6-1AE3, PA6-1BE, PA6-1FE

Step	Adjust	Function	Instructions
1		Set Idq of Q5, Q4 and Q6 for 1A. each with R35, R16 and R20	Short TP1 and TP2
2	C50	Driver stage input impedance matching.	Adjust for minimum input VSWR.
3	C51	Driver stage output impedance matching.	Adjust for maximum power output and best effeciency.
4	C36,C67	Final stage input impedance matching.	Adjust for optimum performance and amplifier stability.
5	C35,C68	Final stage output impedance matching.	Adjust for maximum power output best efficiency and frequency response flatness.
6	Repeat steps 2-5 (a few times if necessa-ry)	Optimization; Frequency spectrum observation.	Adjust for best performance. Observe an amplified signal and it's frequency spectrum on a spectrum analyzer at all times for any sign of oscillation, spurious emission or high harmonics.

RF Adjustments

Switch SW2, located inside the control enclosure, is set according to the particular configuration of each amplifier. An amplifier may be configured with either a 14 V or 28 V supply and with either remote (REM) or power supply controlled (PSC) automatic RF leveling control. This switch is factory set at the time of manufacturer and should not be changed. *Never turn on more than one switch at any time!*

SW2	-1	-2	-3	-4
14V / REM	on	off	off	off
28V / REM	off	on	off	off
14V / PSC	off	off	on	off
28V / PSC	off	off	off	on

The necessary adjustment procedure to change the RF power level must be done in the sequence shown as follows:

Provide a proper low-VSWR RF termination for the amplifier.

1. Place SW1 into the RUN position.
2. Apply the minimum RF drive level and adjust P3 for nominal output power.
3. Place SW1 into the TEST position and adjust P5 until the RF output drops to its lowest acceptable value.
4. Set P2 to the point at which the Low Power Alarm (LPA) indicator just begins to flash.
5. Increase the power output with P5 while watching for the LPA indicator to extin guish, and then continue until reaching the nominal output level.
6. Place SW1 back into the R U N position.
7. Set the RF drive to 3 dB below the minimum value of the input range, then adjust P1 to where the RF on (RFON) indicator extinguishes.
8. The optimum setting for this VSWR threshold adjustment is to have the alarm trigger with a 3:1 VSWR. It may, however, be set anywhere at the users discre tion. With the RF drive off, disonnect the 50 Ohm load and connect an appropri ate termination. Apply nominal drive power and adjust P4 until the SWR indicator just begins to flash.