

Palomar ELECTRONICS CORPORATION

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MODEL 150 BI-LINEAR AMPLIFIER

INSTRUCTION SHEET

FREQUENCY RANGE	26 Mhz to 54 Mhz
OUTPUT POWER	150 watts into 50-72 ohm load with 3 watts R.F. drive
INPUT POWER	13.6 VDC 35 amps transmitting, 3.2 amps standby
FUSE	40 amp AGU
DESCRIPTION	Stabel grounded grid circuitry provides a minimum transmitted power gain of 50 times throughout the tuning range. Will work on any signal of 1 watt or more. Silicon transistor preselector provides an approximate gain of 3 decibels on received signal. Automatic switching using R.F. power from your transceiver--no internal connections are required to your existing equipment. Self-contained 12 VDC negative ground power supply. Illuminated front panel meter indicates relative R.F. strength of transceiver and linear amplifier. Dependable PI output circuitry for easy tune-up.
TUBE COMPLEMENT	(1) 12JB6A (2) 8950
TRANSISTORS & DIODES	(2) 2N4048 (2) 2N2905-A (4) 1N4005 or equivalent (3) 1N914 (4) 1N4001 or equivalent

INSTALLATION

The Model 150 draws 35 amps of current when transmitting, If your vehicle's electrical system can not supply 35 amps at 13.6 volts the Model 150 can not produce its rated output of 150 plus watts. Connect the 150 directly to the battery, both positive and negative, using #8 wire or larger wire. DO NOT RELY ON THE BODY OF THE VEHICLE FOR THE NEGATIVE RETURN. Connect the fuse block assembly, supplied by Palomar, in the positive 12 volt wire, mounting it under the hood near the battery. OBSERVE POLARITY. Positive to + marked terminal and negative to - marked terminal.

REVERSING POLARITY MAY CAUSE DAMAGE TO CAR AND AMPLIFIER WIRING. Install Bi-linear amplifier where adequate air flow is available to cool tubes and transistors. DO NOT BLOCK AIRFLOW AT BOTTOM AND TOP OF UNIT.

OPERATION

Connect coaxial cable from transmitter to bottom connector and antenna to top connector. For remote operation, the switches on the Model 150 should be set as follows: on-off to off, SSB/AM to type of transmission you are using, operate-standby-receive amp off to standby. The 150 may now be turned on and off by grounding the blue wire through the use of a SPST switch mounted at the operator's position. This allows you to mount the 150 in the trunk and have control from the driver's seat. After grounding blue wire, there is a 20 second wait while the 150 tube heaters warm up. For under the dash mount, the blue wire is not used and should be rolled up and tied out of the way. The switches on the 150 will now be used and operate as follows: The on-off switch turns the heaters on and off when the operate-standby-receive amp off switch is in the standby position only. If the operate-standby-receive amp off switch is in the operate or receive amp off position the on-off switch is bypassed and the heaters will be turned on and the 150 will be ready to operate even if the on-off switch is turned off. Remember, the on-off switch's only function is to turn on the tube heaters when the operate-standby-receive amp off switch is in the standby position. The SSB/AM switch should be set to the mode you are using. The operate-standby-receive amp off switch, when in the operate position, turns the receive amp and power amp on so both will be amplified. In the standby position, the 150 does nothing but allow your transceiver to transmit and receive through without being amplified. In the receive amp position the transmit will be amplified, the receive will not. To tune the 150, proceed as follows:

Set TUNE and LOAD knobs at 12 o'clock position. Depress mike button and quickly adjust TUNE knob for maximum reading on OUTPUT meter. Adjust LOAD knob for maximum meter reading and then reset TUNE knob for maximum output. WHILE TURNING THE AMPLIFIER, DO NOT TRANSMIT FOR MORE THAN 30 SECONDS AT ONE TIME, AS IT WILL SHORTEN TUBE LIFE CONSIDERABLY. Repeat until maximum meter reading is obtained. The amplifier is now tuned properly for FM, SSB, or CW operation. AM operation will require overcoupling which is accomplished as follows: Take the load control and turn clockwise 1/4 inch. If this is not done, the transmitted audio will sound "fuzzy" or distorted.

WARRANTY POLICY

PALOMAR ELECTRONICS CORP. WARRANTS THIS EQUIPMENT AGAINST DEFECTS IN MATERIAL OR WORKMANSHIP, EXCEPT FOR TUBES, TRANSISTORS, AND DIODES UNDER NORMAL SERVICE FOR A PERIOD OF SIX MONTHS FROM DATE OF ORIGINAL PURCHASE. DO NOT SHIP TO THE FACTORY WITHOUT PRIOR AUTHORIZATION. ALL RETURNS FOR REPAIR MUST BE SENT FREIGHT PREPAID. PALOMAR ELECTRONICS CORP. WILL PREPAY THE RETURN FREIGHT. THIS WARRANTY IS LIMITED TO REPAIRING OR REPLACING ONLY THE DEFECTIVE PARTS, AND IS NOT VALID IF THE EQUIPMENT HAS BEEN TAMPERED WITH, MISUSED, OR DAMAGED.

WARNING

PALOMAR ELECTRONICS CORP. ITS REPRESENTATIVE OR AGENTS, WILL NOT BE RESPONSIBLE FOR THE ILLEGAL OR IMPROPER USE OF ITS EQUIPMENT.