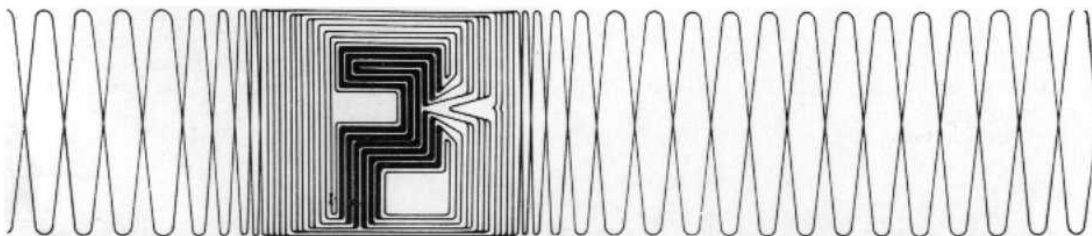
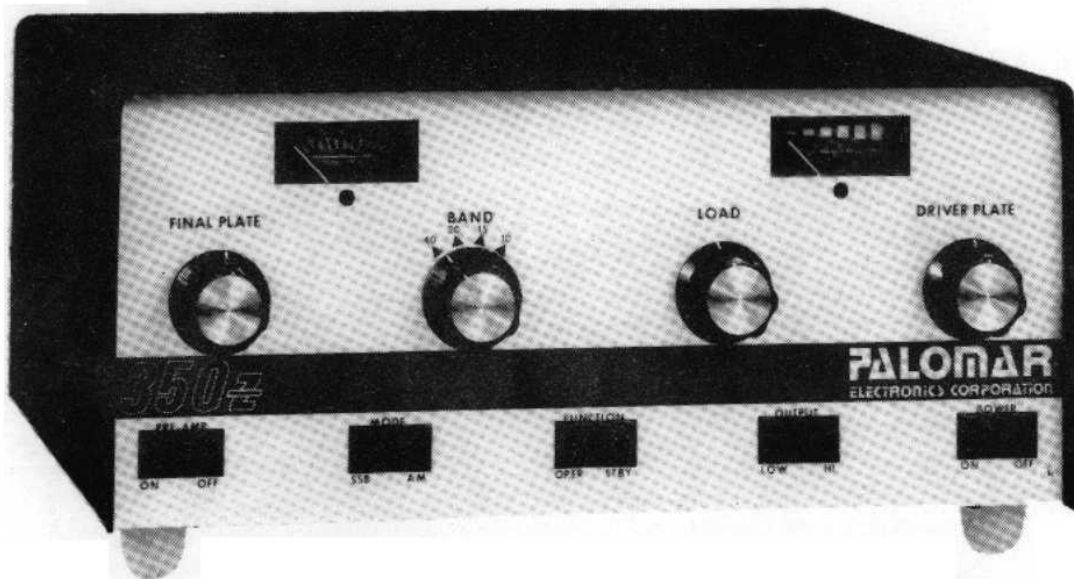


INSTRUCTION MANUAL FOR PALOMAR 350Z AMPLIFIER



PALOMAR ELECTRONICS CORPORATION

BOX 2403 · 665 OPPER STREET · EXCONDIDO, CA. 92025 · 714-746-2666

**IMPORTANT
READ BEFORE UNPACKING UNIT**

The tube complement of this amplifier contains special packing material to prevent transportation damage. Remove all packing making sure the plate connectors are securely fastened to the tubes and the tubes are seated in their sockets. The plate connectors have been removed from the plates at the top of the tubes and the amplifier will not function until they are re-connected.

WARNING

Do not use a variac or step up line transformer to increase the primary line voltage beyond nominal 117.5 volts A.C. Doing so will shorten tube life, damage unit and destroy the power transformer. Warranty will be voided on any unit found to have been operated under these conditions.

PALOMAR 350Z GENERAL INFORMATION

Frequency Coverage

- A. 7 to 7.3 MHz
- B. 14 to 14.4 MHz
- C. 21 to 21.45 MHz
- D. 28 to 29.7 MHz

Modes

AM, SSB, FM, and CW

Power Requirements

115 VAC 60 cycles
Transmit: 8.3 amps, max.
Receive: 2.6 amps

Power Supply

Internal Solid-State

Metering

Output cathode current
Front Panel Relative RF Power Output

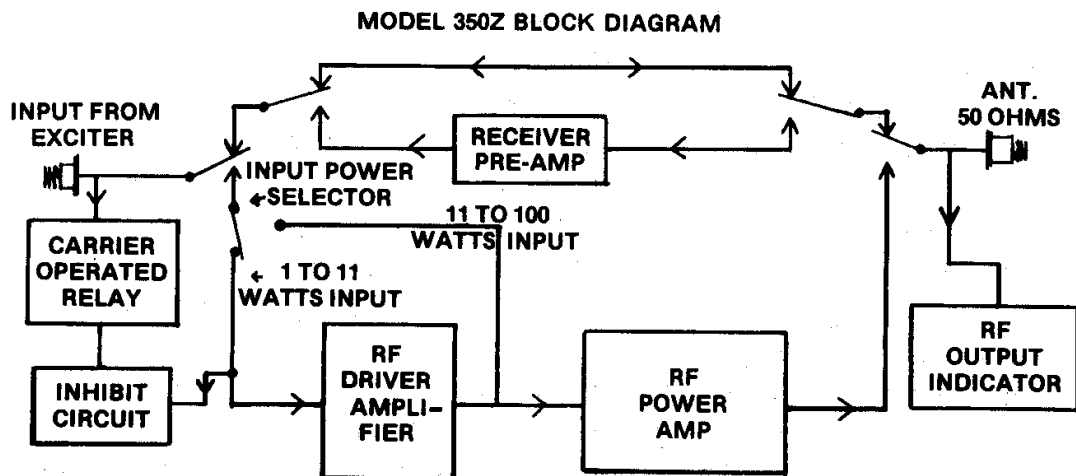
Front-Panel Controls

Tune, Band, Load, Driver, Pre-Amp (On, Off), Mode (SSB, AM),
Function (Oper, Stby), Output (Low, Hi), Power (On, Off)

Rear Panel Control

Input RF Power Selector Switch

Rear Panel Connections 117 VAC Power Plug, Antenna, Transmitter and
Ground.



350Z INSTALLATION

Operating Position

It is possible to operate the Palomar 350Z Amplifier in any position. However, for best cooling, we recommend that the amplifier be kept upright on the feet provided on the bottom cover. This allows air to flow in the bottom and around the power amplifier tubes, carrying the heat away through the holes in the top cover.

NEVER set the amplifier on the top of other equipment; doing so would allow preheated air to enter the bottom of the Palomar 350Z Amplifier. **DO NOT** operate the amplifier in a small, confined space where there is no continuous supply of cooling air. In other words, keep it out of small closets, desks or similar confined areas. If handled properly, the amplifier should give long, trouble-free service.

Connection

All connections are made to the rear of the amplifier. Connection to the driver or transceiver is made using RG58AU or RG8U 50 ohm coax. The connectors on the amplifier are S0239 coax connectors. The mating plug on the coax cable is PL259 coax connector and can be found at most radio supply houses as an off-the-shelf item.

When buying coax, it is advisable to pay a little more and get a good grade coax with a tightly woven shield. Low grade coax has poor shielding and may even cause a bad match between driver and amplifier as well as between amplifier and antenna. Coax from the Palomar 350Z Amplifier to the antenna should not be smaller than RG8U. You will find that smaller coax will be warm to the touch after long AM transmissions, indicating losses in the smaller cable.

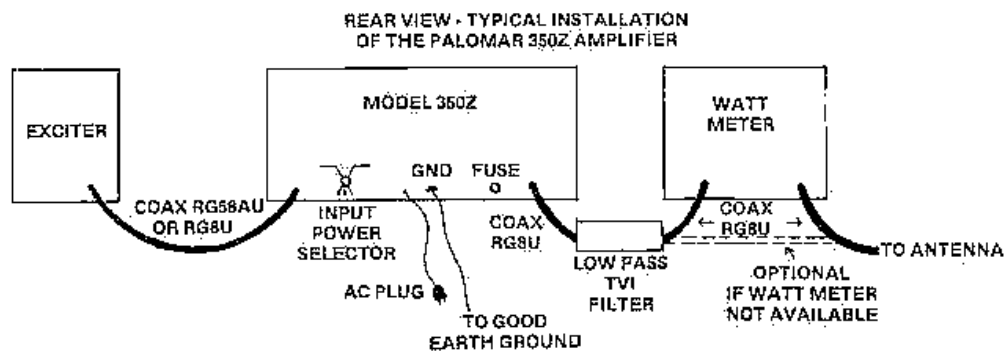
On the rear of the amplifier will be found a place to attach a ground wire. We strongly recommend a good ground connection to this point. It prevents shock hazard when touching any of your equipment, increases the efficiency of your antenna system and minimizes TVI problems. Attaching to a water pipe is not necessarily a good ground, if it is several feet from the point where the pipe goes underground. It could be some resonant length that would look like a poor or no ground at all at some operating frequencies. Galvanized pipe can be particularly bad as a ground, since corrosion at the threaded joints can cause poor or no connection to the following lengths of pipe. If your house has copper pipe with soldered joints, use this for grounding.

The closer your connection point is to the place where the pipe goes underground, the better ground you will have. #16 or #18 wire size is the minimum that should be used. In fact, 1/4 inch or larger tinned copper braid is better than wire. Never try to ground a gas line. If you don't

have a good ground available, it is possible to buy ground rods at commercial electrical supply houses that can be driven into the ground close to the location of your equipment to which you can attach your ground wire.

The final connection on the back of your Palomar 350Z Amplifier is the power cord. The plug should never be connected to anything but a standard 117 volt 60 cycle AC outlet. The cord and plug are the standard modern three-wire system incorporating a ground wire. If your electrical system does not have the third connection in the wall receptacle, adapter plugs can be found at most electrical stores.

A word of caution: Do not depend upon this ground for your system RF ground. Many feet of wire usually exist between most electrical outlets and the actual ground point making it almost useless for the RF ground while being quite satisfactory as an electrical ground.



HOOKUP

Make connections as above.

We recommend RG58AU 50-ohm coax between driver or transceiver and the coax connector marked TRANSMITTER on the back of the Palomar 350Z Amplifier. The coax should be terminated with a PL259 coax plug at the amplifier end.

The antenna should be connected with RG8U coax terminated with the same type PL259 coax plug and connected to the coax connector marked ANTENNA.

A #16 or #18 wire or braid should be connected to the terminal marked GROUND on the back of the amplifier. The shorter the distance to ground and the larger the conductor, the better ground you have. Connecting all

units together with similar wire or braid is also recommended. Lastly, plug the power cord into a convenient outlet, and hook up is complete.

FUNCTION OF REAR PANEL CONTROL

INPUT POWER SELECTOR

1 to 10 or 11 to 100 watt input configuration.

FUNCTION OF FRONT PANEL CONTROLS

PRE-AMP

In ON position will add approximately 10db of gain to received signals.

MODE

Select either mode depending on your transmitter's emission AM or SSB. For FM or CW operation use AM position.

FUNCTION

In STBY position the amplifier is bypassed, and the exciter transmits direct to the antenna. In OPERATE position the RF amplifier is activated.

OUTPUT

This feature allows reduced power operation. In LOW position the amplifier produces approximately $\frac{1}{2}$ of the available output power. **NOTE:** The amplifier must be retuned when switching from low to hi or vice versa. It is extremely important to re-peak both tune and load controls with changes in drive level.

POWER

Turns the main supply voltage on.

BAND

Select the desired frequency making sure the exciter is switched to the same frequency. The amplifier will require retuning after the band has been changed.

DRIVER PLATE

Adjusts Driver Plate circuit to resonance.

FINAL PLATE

Adjusts the P1 section of the tank circuit to resonance.

LOAD

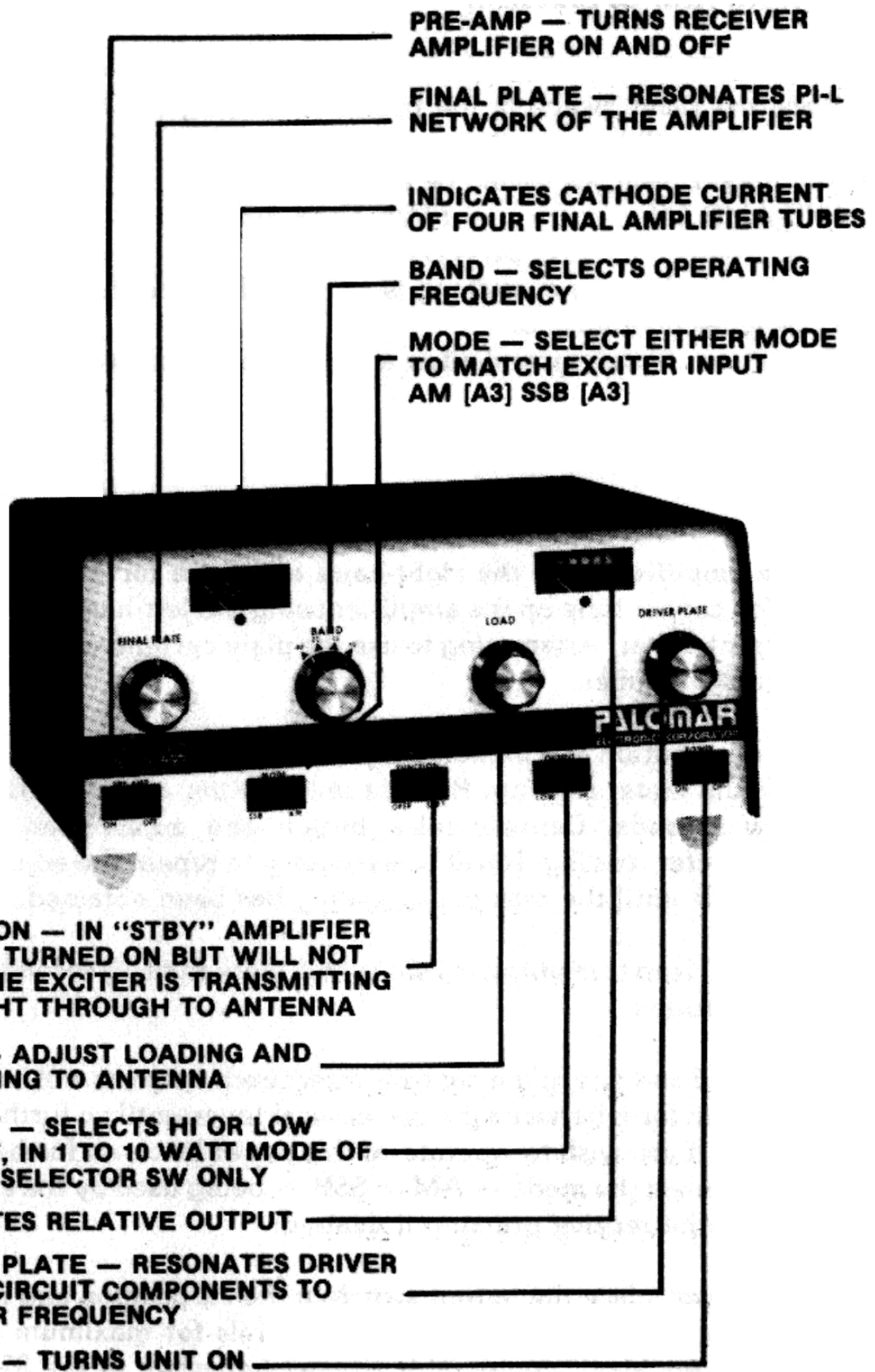
Resonates the P1-L Network portion of the tank circuit to the antenna.

METER -RIGHT

Indicates relative output. The amplifier is tuned for maximum meter reading.

METER - LEFT

Indicates cathode current of final tubes.



TUNING AND OPERATING

Place the FINAL PLATE, LOAD, and DRIVER PLATE knobs at 12 o'clock. Place the Band Switch in the position matching the band the driver or transceiver will be operating on.

The Rocker Switches should be as follows:

PRE-AMP Off	FUNCTION Stby	POWER Off
MODE Am	OUTPUT Low	

Check to make sure everything is connected as shown and instructed in Hookup Section, Page 3.

Turn Power Switch on and allow at least one minute warm-up time.

IMPORTANT!

Tune the amplifier using the right-hand or "Tune for Max" meter. You cannot tune up the amplifier using the left-hand or plate current meter. Attempting to use the plate current meter will destroy the tubes.

Depress mike button and immediately adjust driver and final plate controls for maximum meter reading. Release mike button and allow tubes to cool for a few seconds. Depress mike button and adjust load control for maximum meter reading. It will be necessary to repeat the adjusting of the three controls until the maximum reading has been obtained.

WARNING: Keep transmissions short (not more than 10 seconds) until the amplifier is tuned.

Since the load and final plate controls affect each other, it will be necessary to go back and forth between the two several times until no further increase is indicated. If you wish to operate at this power level, no further tuning is necessary. Select the mode -- AM or SSB -- being used by the exciter unit, and turn on the receive pre-amp if desired.

For high power, place the output switch in the HI position and make slight readjustments of driver, final and load controls for maximum reading on right "Tune for Max" meter. This is most important or the 350Z will not function properly.

INHIBIT FUNCTION

Basically, the inhibit circuit—which is located on a small P/C Board near the relay switching network—is a protective system against input overload to the 350Z amplifier.

It reverse biases the keying transistors to a level that causes the relays to chatter when the input circuit drive exceeds 20 watts.

By adjusting the 10K trim pot to the proper level of positive bias on the input inhibit transistor, the inhibit circuit will provide normal keying of the switching relays. This adjustment is set up at the factory for a maximum 20-watt input signal and should not be changed without consulting the factory.

If it is desired to operate the 350Z amplifier in conjunction with a higher powered exciter which produces, say, 50 to 100 watts output, the input selector switch on the rear of the 350Z **must be switched to the 11-100 position**. In this mode, the two driver tubes are turned off, preventing any RF voltage from reaching the inhibit circuit, and the carrier-operated relay circuit will function normally. If the user wishes to operate at reduced power output, he can select this option when employing a low power exciter.

It is important that the output curves be consulted for determining output power versus input drive signal.

SERVICING

Tube Replacement

It will be necessary to remove the top cover; because it will require resetting of the bias pots. The bottom will also have to be removed. Take out the two hex head black sheet-metal screws on each side and the four similar screws on the bottom. Both top and bottom covers may now be removed. It is not necessary to remove the rubber feet to get the covers off.

WARNING: Be sure power cord is disconnected from the wall receptacle, and if the amplifier has been used recently, discharge the high-voltage power supply capacitors to ground with a metallic screwdriver before trying to remove the 6LF6 tubes. The replacement tubes must be the short version similar to those included in as original equipment. Otherwise they probably will short out to the top cover when it is replaced.

6KD6 tubes can be used in the amplifier if the plate connectors are changed to the smaller size used with the 6KD6 tubes.

Before inserting the new tubes, inspect the base pins to be sure they are straight and evenly spaced. When inserting into the tube sockets, match the gap in the ring of pins on the tube base with the gap in the ring of holes in the socket. Make sure all tube pins are lined up in the center of each hole in the tube socket and the tube is pressed evenly into the socket. Moderate pressure will be required, and gently rocking the tube will assist in getting it started. Never use excessive force. You may bend a tube pin to the extent of cracking the glass, rendering the tube useless by destroying the vacuum or even breaking the tube sockets. Damage of this kind is not covered by our Warranty.

Setting Bias Driver

WARNING: Dangerous high voltage in excess of 800 VDC is present at several points in this amplifier. Only qualified persons should turn this amplifier on or attempt to make adjustments with the covers off.

The resting current in the cathode circuit of the driver is measured by the indirect method. The voltage drop across a 2 ohm 5 watt resistor is measured and the current calculated from the formula Current Equals Voltage/Resistance or $E = I \times R$, or $E = .08 \times 2$, $E = .16$ volts. This then is the voltage we are adjusting the bias pot to achieve.

Plus .16 volts is quite small so a voltmeter capable of reading voltages below 1 volt is needed.

Refer to the schematic and to Pages 15 and 20 for points of measurement. The .16 volts is measured on the driver amplifier from R13 to chassis ground. The bias adjustment to achieve the correct voltage is made by small PC type potentiometer located at one end of the power supply PC Board. This is identified at R11 on the circuit diagram and is identified on Page 20. Allow 5 minutes after first turning on the amplifier to be sure the cathodes have reached full operating temperature.

Setting Bias Output Tubes:

The same method is used for the final amplifier tubes. Again the cathode resistor is a 2 ohm 5 watt resistor. The idling current in this case is 160MA ($E = I \times R$ or $E = .160 \times 2$, $E = .32$ volts) for bias pot adjustment. Refer to schematic and to Page 20 for points of measurement. The .32 is measured from the junction of C3, R1, R2, and L1 on the final sub-chassis. See Page 15.

TROUBLESHOOTING CHART

Pilot Lights Fail to come on when power is switched on:

Check to see that power cord is connected to wall receptacle.

Check fuse.

Check pilot bulbs.

Check for power at all receptacles.

Check power cord for broken wire or unsoldered connection.

Check for faulty power switch.

Filaments fail to light but Pilot Light comes on.

Check for burned out power tube. Filament groups in series fail to light if even one is burned out. If tubes are OK, check filament circuit for broken wire or bad solder connection. Driver filaments will not come on with the Rear Panel Input Power Switch in the 11 to 100 watt position. This is normal.

Amplifier will not key when keying driver (also see inhibit instructions)

Relay buzzes or chatters. Check to see that coax from the driver goes to connector marked Transmitter and not the one marked Antenna. This condition can arise also if the power from the driver is something less than 1 watt even if the coax is connected correctly.

Unit will not key even with sufficient drive available and the coax connected correctly. Check the following:

Check for voltage when keying driver at junction of D9 and R24. This point is found on the schematic. See photo of Relay Board, Page 21. Voltage measured should be approximately plus 3 volts DC with 3½ watts of drive. Lack of voltage could be caused by a cold solder joint anywhere from the coax input to this point. Check Diodes D3 and D4 for short or open. Check voltages at all terminals of TR2 and TR3. See Voltage Chart, Page 13. Replace faulty transistors if any. Check RY1 for open coil or cold solder joint. Check for bad function switch.

Relay keys but no output from Amplifier

Measure RF voltage at C12 on power amplifier sub-chassis when keying driver. If present, skip to "No or Low Output" (from Power Amplifier Section) of Troubleshooting Chart. If no voltage is present check coax from

relay PC Board to C26 on driver amplifier board. See Photo Page 20. Check all relay connections for both RY1 and RY2 for cold solder joints. If all connections are OK, relay could not be closing or points could be corroded or burned. It is possible if care is used to remove plastic covers of the relays to burnish the contacts.

Pre-Amp does not work

The previous information pertaining to relays applies to this problem as well. RY2 does not key when Pre-Amp Switch is turned on. Check for broken wires from switch. This is easily checked as well as the operation of the switch. Measure the voltage from the ungrounded side of the switch to chassis ground. In the OFF position, the voltage is approximately plus 16 VDC. When the switch is turned on, the voltage will disappear as this point is grounded through the switch. If there is no voltage with the switch in the OFF position, check for a broken wire, bad solder joint or open RY2 coil.

Relay operates but Pre-Amp does not amplify.

Check voltages of Q1. See Page 14. Check for cold solder joints, especially the connections to the coils. They may not go through the board far enough.

Check to see if D10, D11 and D13, D14 are shorted.

Check all components in the Pre-Amp circuit.

No or low output from power amplifier

One or more 6LF6 tubes flat or burned out.

Same as above with new tubes. Check to see Output switch is in HI position. Check voltage at screens. It should be about plus 47 VDC with the output switch in the HI position. If there is no voltage at this point at all, check for short to ground open R7 Resistor or shorted Zener Diodes D1 and D2. If the voltage is excessively high, one or both Zeners could be open. Measure voltage at Control Grids. If is much over minus 17 volts, bias is probably not set correctly. See Section on Tube Replacement for Setting Bias.

DANGER: Following measurements must be made with great care. Permanent injury or death can result from accidental contact between these points and ground. Measure voltage at plate caps of 6LF6 tubes. If voltage is present, skip to next section of Troubleshooting chart. If high voltage is not present, check Parasitic Chokes for open circuit. If no voltage is present here, move to 150K Bleeder resistors. If voltage is present here, Plate Choke RFC1 is probably open. If there is no voltage at this

point, move to power supply board. If voltage is present, wire to bottom of RFC1 is broken or cold soldered. If there is no voltage, problem is in power supply board or power transformer. Check components. Check solder connections of all components including power supply transformer leads to PC Board.

If all voltages are present but no output from amplifier.

Check coax from loading coil to RY1 for short or open circuit.

Check load and tune capacitors for bent blades causing short.

Check all connections for broken or bad solder joints.

Check band switch for broken connections or bent contacts.

Check all coils and all solder connections associated with coils.

Check coupling capacitor for short or open.

Check all driver voltages and circuits.

Mode Switch does not switch in delay on SSB.

Check for faulty switch, broken or badly soldered wire from switch to PC Board and check solder connections on Relay Board.

Meters do not read when transmitting, but there is output from the amplifier.

Check for faulty meters.

Check all wiring for open or shorted connections.

Check all components on PC Board.

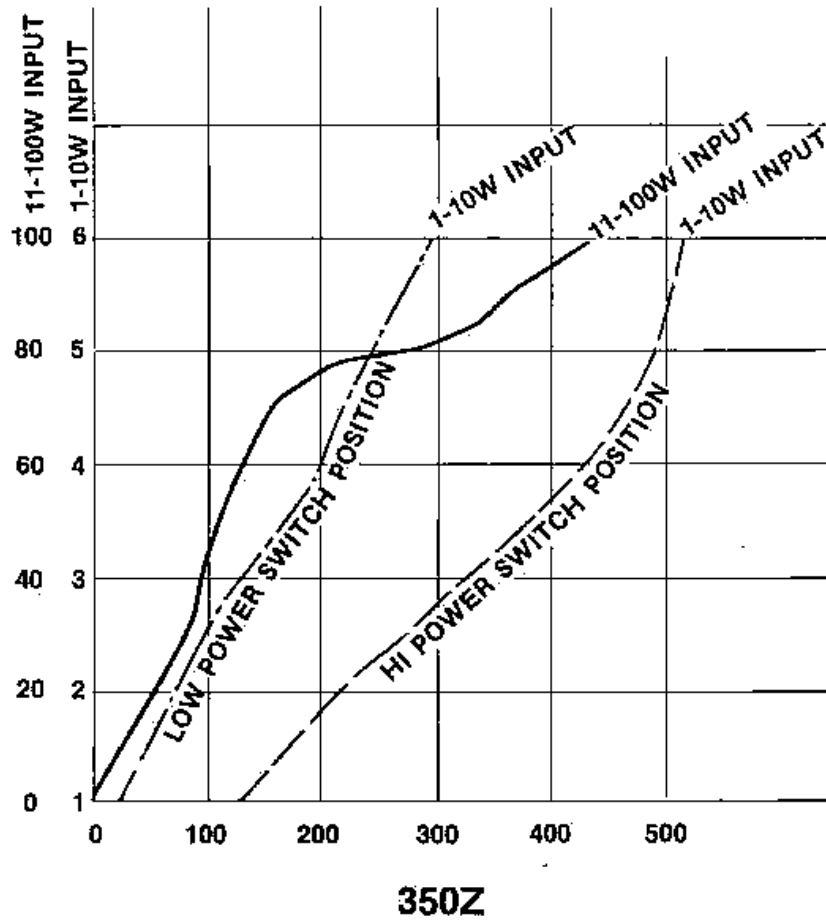
Check wire and connections on final Sub-Chassis and Antenna Connector.

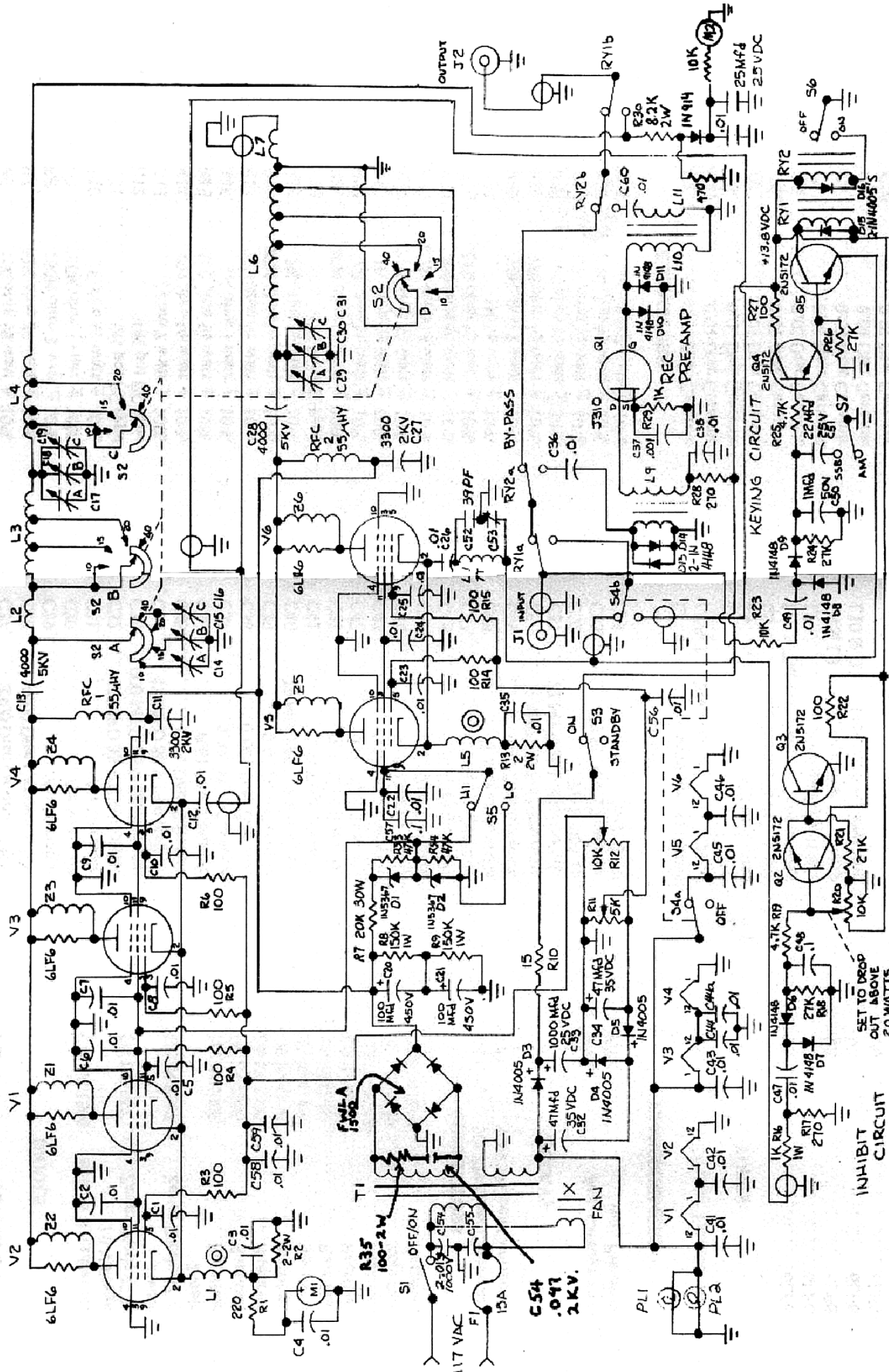
A rare problem that occurs sometimes and is very difficult to track down is the conductor material on a PC Board will crack. It is difficult to find and usually shows up as an intermittent problem. Flexing the PC Board will assist in locating the intermittent. This can be repaired by soldering a wire across the break in most cases. Loose hardware holding the boards to chassis can also cause the same symptoms.

VOLTAGE CHART

	Receive	Transmit Hi Power	Low Power
A. High Voltage	760 VDC	680 VDC	700 VDC
B. Screen Supply Voltage	94 VDC	93 VDC	93.6 VDC
C. Relay Voltage	17 VDC	13.4 VDC	13.4 VDC
D. Bias Supply Voltage	30 VDC	30 VDC	30 VDC
E. Filament Voltage	12.6 VAC	12.6 VAC	12.6
V1 6LF6 Tube			
Pin 1	6.3 VAC	6.3 VAC	6.3 VAC
Pin 2	.32 VDC	2.0 VDC	1.6 VDC
Pins 3 and 11	46 VDC	45 VDC	45.5 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	16.4 VDC	36 VDC	17.5 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	12.6 VAC	12.6 VAC	12.6 VAC
V2 6LF6 Tube			
Pin 1	6.3 VAC	6.3 VAC	6.3 VAC
Pin 2	.32 VDC	2.0 VDC	1.6 VDC
Pins 3 and 11	46 VDC	45.5 VDC	45.6 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	16.4 VDC	36 VDC	17.5 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	0	0	0
V3 6LF6 Tube			
Pin 1	12.6 VAC	12.6 VAC	12.6 VAC
Pin 2	.32 VDC	2.0 VDC	1.6 VDC
Pins 3 and 11	46 VDC	45.5 VDC	45.6 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	16.4 VDC	36 VDC	17.5 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	6.3 VAC	6.3 VAC	6.3 VAC
V4 6LF6 Tube			
Pin 1	6.3 VAC	6.3 VAC	6.3 VAC
Pin 2	.32 VDC	2.0 VDC	1.6 VDC
Pins 3 and 11	46 VDC	45.5 VDC	45.6 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	16.4 VDC	36 VDC	17.5 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	0	0	0
V5 6LF6 Tube			
Pin 1	6.3 VAC	6.3 VAC	6.3 VAC
Pin 2	.16 VDC	.48 VDC	.24 VDC
Pins 3 and 11	46 VDC	45.5 VDC	0 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	-16.4 VDC	-16.7 VDC	-21 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	12.6 VAC	12.6 VAC	12.6 VAC
V6 6LF6 Tube			
Pin 1	0	0	0
Pin 2	.16 VDC	.48 VDC	.24 VDC
Pins 3 and 11	46 VDC	45.5 VDC	0 VDC
Pins 4 and 10	0	0	0
Pins 5 and 9	-16.4 VDC	-16.7 VDC	-21 VDC
Pins 6, 7 and 8	0	0	0
Pin 12	6.3 VAC	6.3 VAC	6.3 VAC

Q1				
G	0			
S	2.2 VDC			
D	13.0 VDC			
Q2 2N5142				
E	.87 VDC	.9 VDC		
B	1.6 VDC	1.9 VDC	1.6 VDC	
C	4.7 VDC	4.5 VDC	5 VDC	
Q3 2N5142				
E	0	0		
B	.0	.9 VDC		
C	13 VDC	.1 VDC		
Q4 2N5172				
E	0			
B	0			
C	13			
Q5 2N5172				
E	0			
B	0			
C	13			





350Z

INHIBIT CIRCUIT
 SET TO DROP
 OUT ABOVE
 20 WATTS
 INPUT TO AMP

RESISTORS

R1	22 ohm 1/2 watt	± 10%
R2	2 ohm 2 watt	± 10%
R3	100 ohm 1/2 watt	± 10%
R4	100 ohm 1/2 watt	± 10%
R5	100 ohm 1/2 watt	± 10%
R6	100 ohm 1/2 watt	± 10%
R7	20K ohm 30 watt	± 10%
R8	150K ohm 1 watt	± 10%
R9	150K ohm 1 watt	± 10%
R10	15 ohm 1/2 watt	± 10%
R11	5K pot PC type	
R12	10K pot PC type	
R13	2 ohm 2 watt	± 10%
R14	100 ohm 1/2 watt	± 10%
R15	100 ohm 1/2 watt	± 10%
R16	1K ohm 1 watt	± 10%
R17	270 ohm 1/2 watt	± 10 1/2
R18	27K ohm 1/2 watt	± 10%
R19	4.7K ohm 1/2 watt	± 10%
R20	10K Pot PC Type	
R21	27K ohm 1/2 watt	± 10%
R22	100 ohm 1/2 watt	± 10%
R23	1K ohm 1/2 watt	± 10%
R24	27K ohm 1/2 watt	± 10%
R25	4.7K ohm 1/2 watt	± 10%
R27	100 ohm 1/2 watt	± 10%
R28	270 ohm 1/2 watt	± 10%
R29	1K 1/2 watt	± 10%
R30	10K ohm 1 watt	± 10%
R31	470 ohm 1/2 watt	± 10%
R32	5.6K ohm 1/2 watt	± 10%
R33	47K ohm 1/2 watt	± 10%
R34	47K ohm 1/2 watt	± 10%
R35	100 ohm 2 watt	± 10%

CAPACITORS

C1	0.01 Disc Ceramic
C2	0.01 Disc Ceramic
C3	0.01 Disc Ceramic
C4	0.01 Disc Ceramic
C5	0.01 Disc Ceramic
C6	0.01 Disc Ceramic
C7	0.01 Disc Ceramic
C8	0.01 Disc Ceramic
C9	0.01 Disc Ceramic
C10	0.01 Disc Ceramic
C11	3300 Disc Ceramic 2 KW
C12	0.01 Disc Ceramic
C13	4000 Disc Ceramic 5 KW
C14	Air Variable
C15	Air Variable
C16	Air Variable
C17	Air Variable
C18	Air Variable
C19	Air Variable

C20	100 MFD 450 V Electrolytic
C21	100 MFD 450 V Electrolytic
C22	0.01 Disc Ceramic
C23	0.01 Disc Ceramic
C24	0.01 Disc Ceramic
C25	0.01 Disc Ceramic
C26	0.01 Disc Ceramic
C27	3300 Disc Ceramic 2 KV
C28	4000 Disc Ceramic 5 KV
C29	Air Variable
C30	Air Variable
C31	Air Variable
C32	47 MFD 35 V Electrolytic
C33	1000 MFD 25 V Electrolytic
C34	47 MFD 35 V Electrolytic
C35	0.01 Disc Ceramic
C36	0.01 Disc Ceramic
C37	0.001 Disc Ceramic
C38	0.001 Disc Ceramic
C39	0.01 Disc Ceramic
C40	25 MFD 25 V Electrolytic
C41	0.01 Disc Ceramic
C41	0.01 Disc Ceramic
C42	0.01 Disc Ceramic
C43	0.01 Disc Ceramic
C44	0.01 Disc Ceramic
C45	0.01 Disc Ceramic
C46	0.01 Disc Ceramic
C47	0.01 Disc Ceramic
C48	0.1 Disc Ceramic
C49	0.01 Disc Ceramic
C50	1 MFD 50 B Electrolytic
C51	22 MFD 25 V Electrolytic
C52	39PF DM-15
C53	150 PF Mica Trimmer
C54	.047 2KV

COILS

L1	Torriod Input to Finals
L2 & 3	Tapped Coil - P1 Section, Finals
L4	L Section Finals
L5	Torriod Input to Drivers
L6	Tapped coil output of drivers
L7	Link coupling to finals
L8 & L9	Output of Rec. Pre-amp
L10 & L11	Input of Rec. Pre-amp

RF CHOKES

RFC1	Final Plate Choke
RFC2	Driver Plate Choke

PARACITIC CHOKES

Z1	Paracitic Choke V1
Z2	Paracitic Choke V2
Z3	Paracitic Choke V3

Z4	Paracitic Choke V4
Z5	Paracitic Choke V5
Z6	Paracitic Choke V6

METERS

M1	Final Plate Current
M2	Relative Output

DIODES

FWLA 1500	Bridge Rectifier for Hi Voltage
D1 IN5367	Zener Diode 47 V 2 watt
D2 IN 5367	Zener Diode 47 V 2 watt
D3 IN 4005	Rectifier
D4 IN 4005	Rectifier
D5 IN 4005	Rectifier
D6 IN 4148	Rectifier
D7 IN4148	Rectifier
D8 IN4148	Rectifier
D9 IN4148	Rectifier
D10 IN4148	Rectifier
D11 IN4148	Rectifier
D12 IN4148	Rectifier

CONNECTORS

V1	SO-239 Coax Connector
V2	SO-239 Coax Connector

RELAYS

RY1	Ant. Changeover
RY2	Rec. Pre-amp

TRANSFORMERS

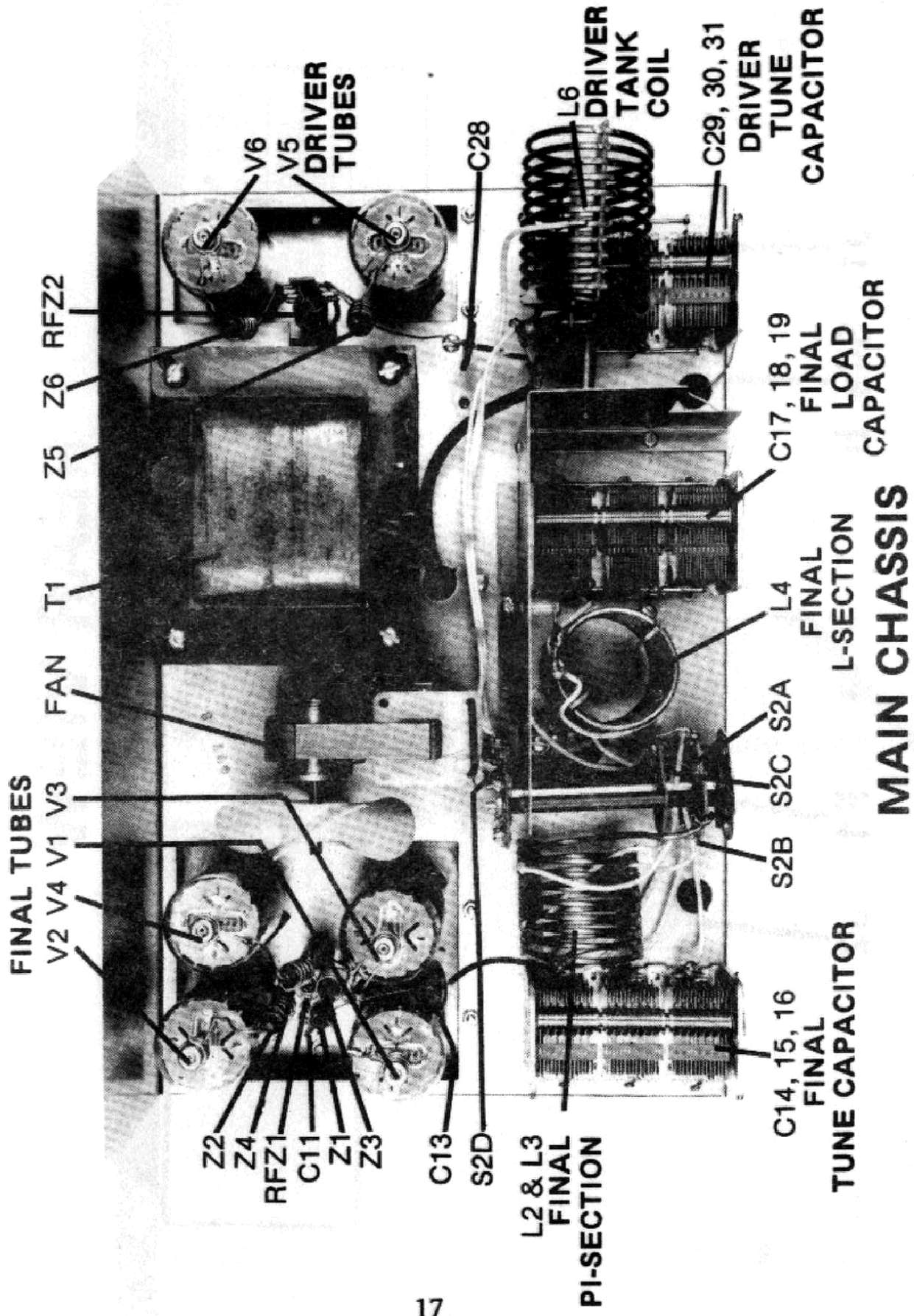
T1	Power Transformer
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TUBES

V1	6LF6
V2	6LF6
V3	6LF6
V4	6LF6
V5	6LF6
V6	6LF6

TRANSISTORS

J310	FET
Q1	2N5172
Q2	2N5172
Q3	2N5172
Q4	2N5172
Q5	2N5172



REAR VIEW

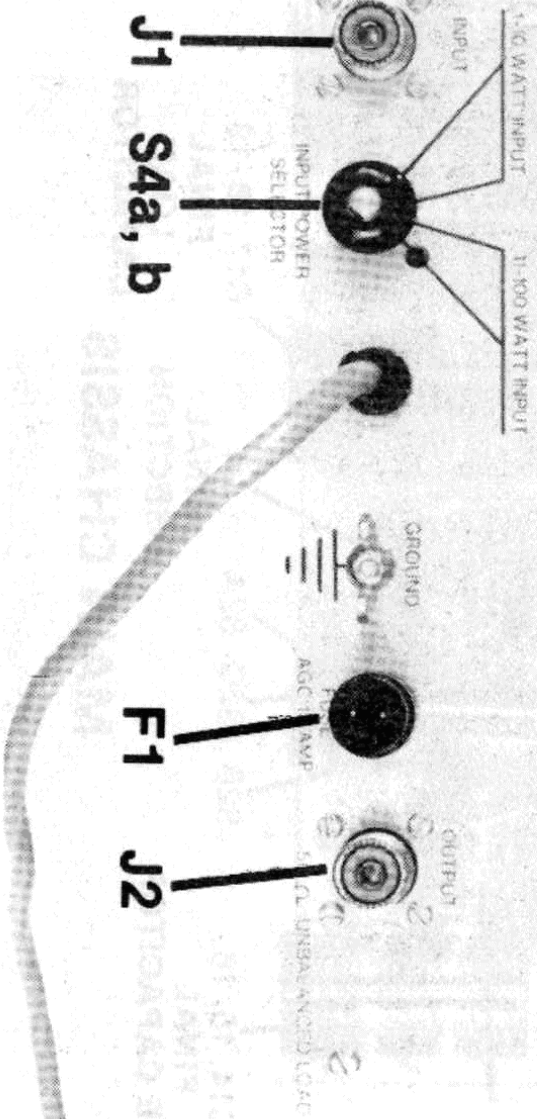
DANGER HIGH VOLTAGE

REMOVE AC PLUG
AND DISCHARGE FILTER
CAPACITORS PRIOR
TO SERVICING

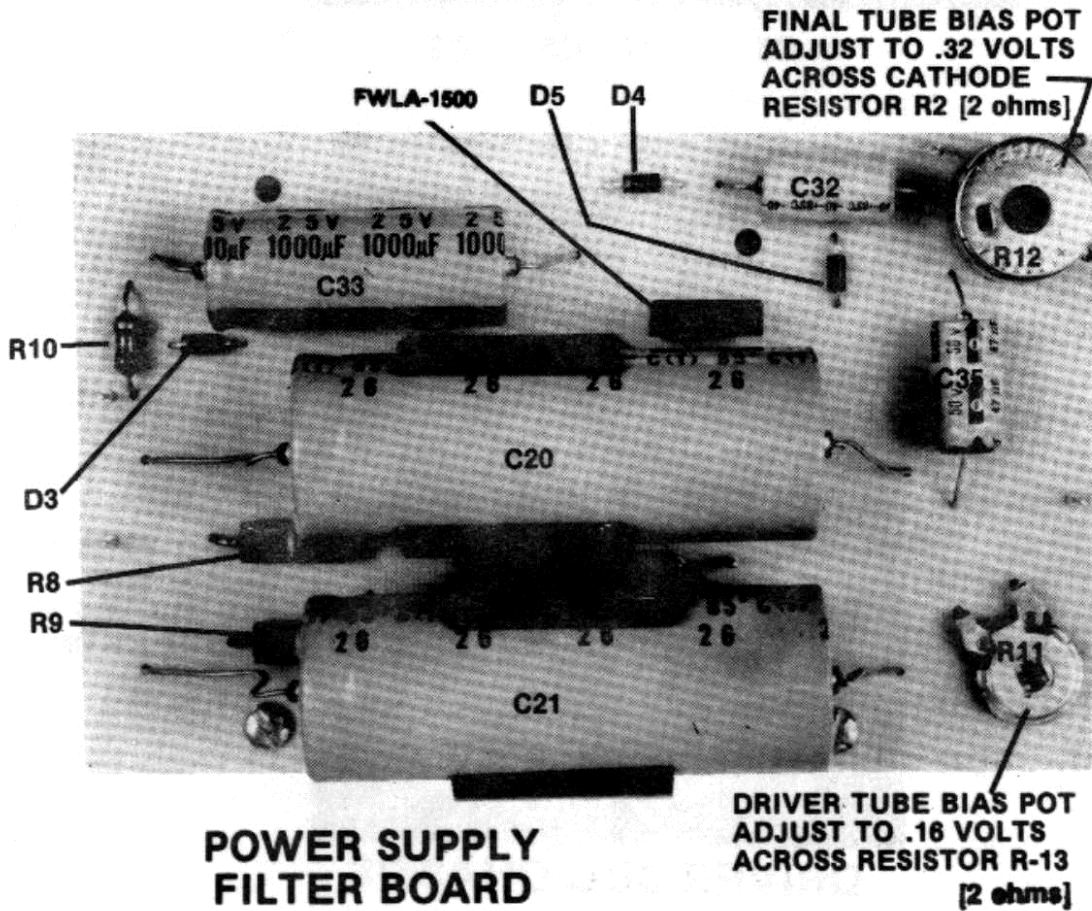
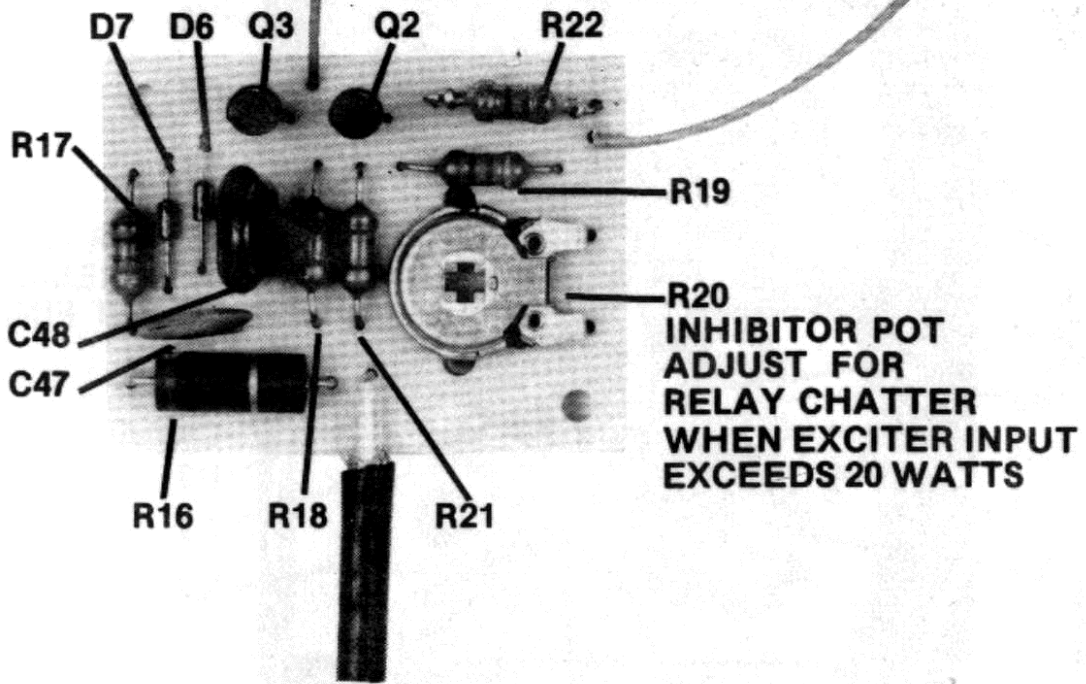
FCC REGULATIONS PROHIBIT
USE OF THIS UNIT BY CLASS
D CITIZEN RADIO SERVICE

WARNING

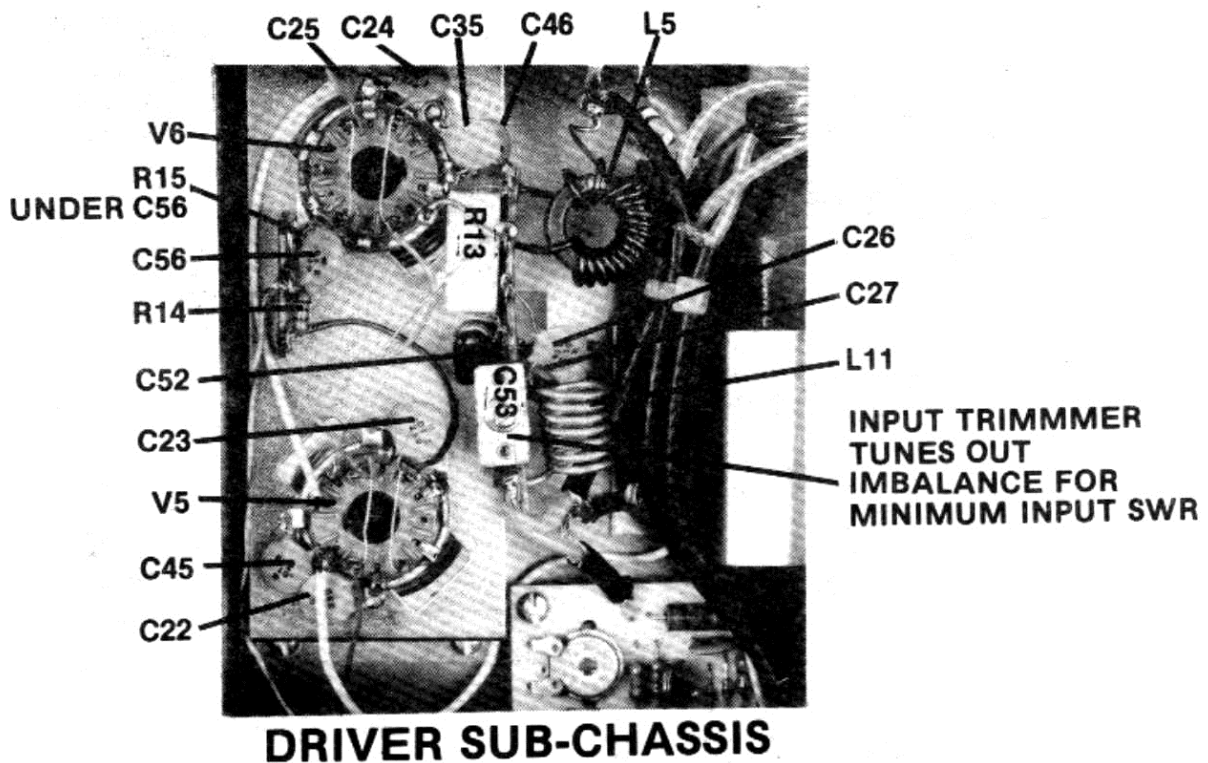
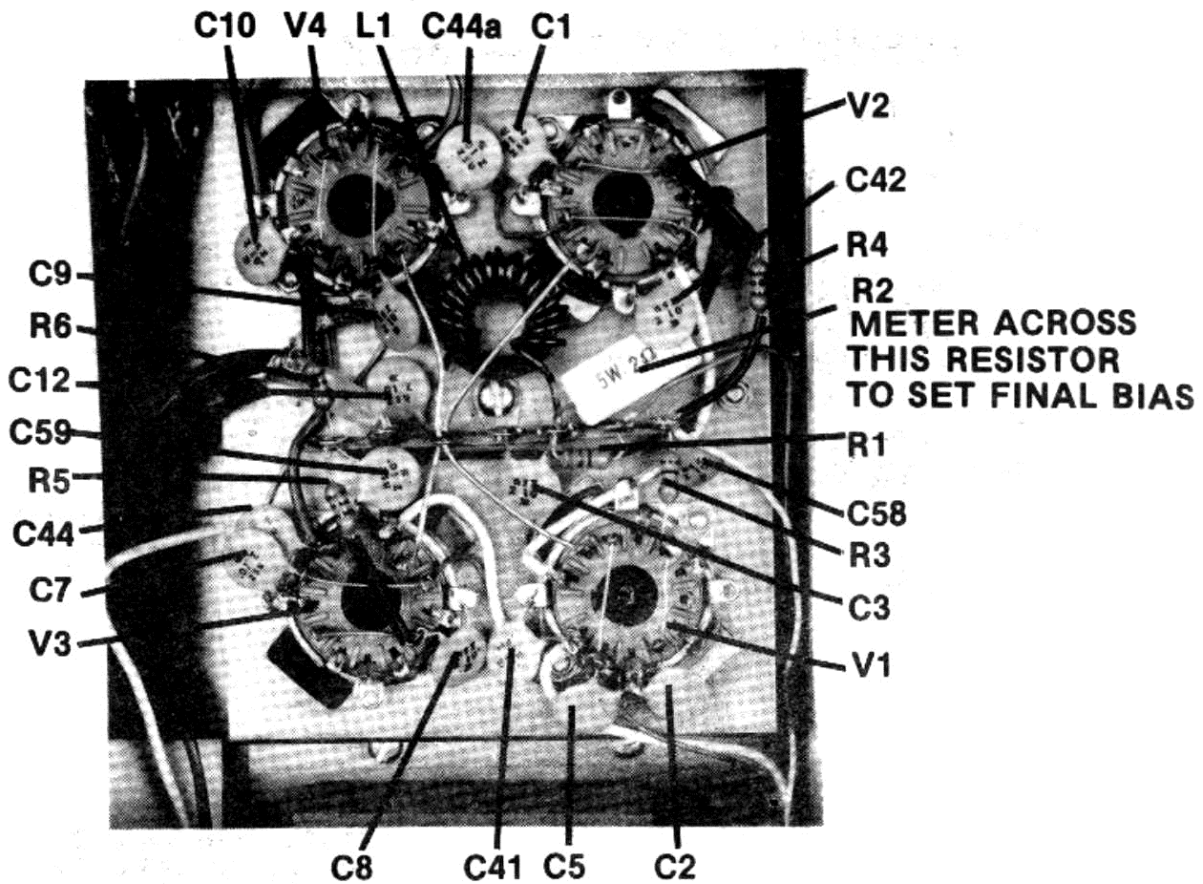
MAKE SURE THE INPUT POWER SELECTOR
SWITCH IS TURNED TO THE PROPER
POSITION PRIOR TO OPERATING.
IF MORE THAN 10 WATTS IS FED TO THE
LOW POWER POSITION AN INHERENT CIRCUIT
WILL CAUSE THE RELAY TO CHATTER.

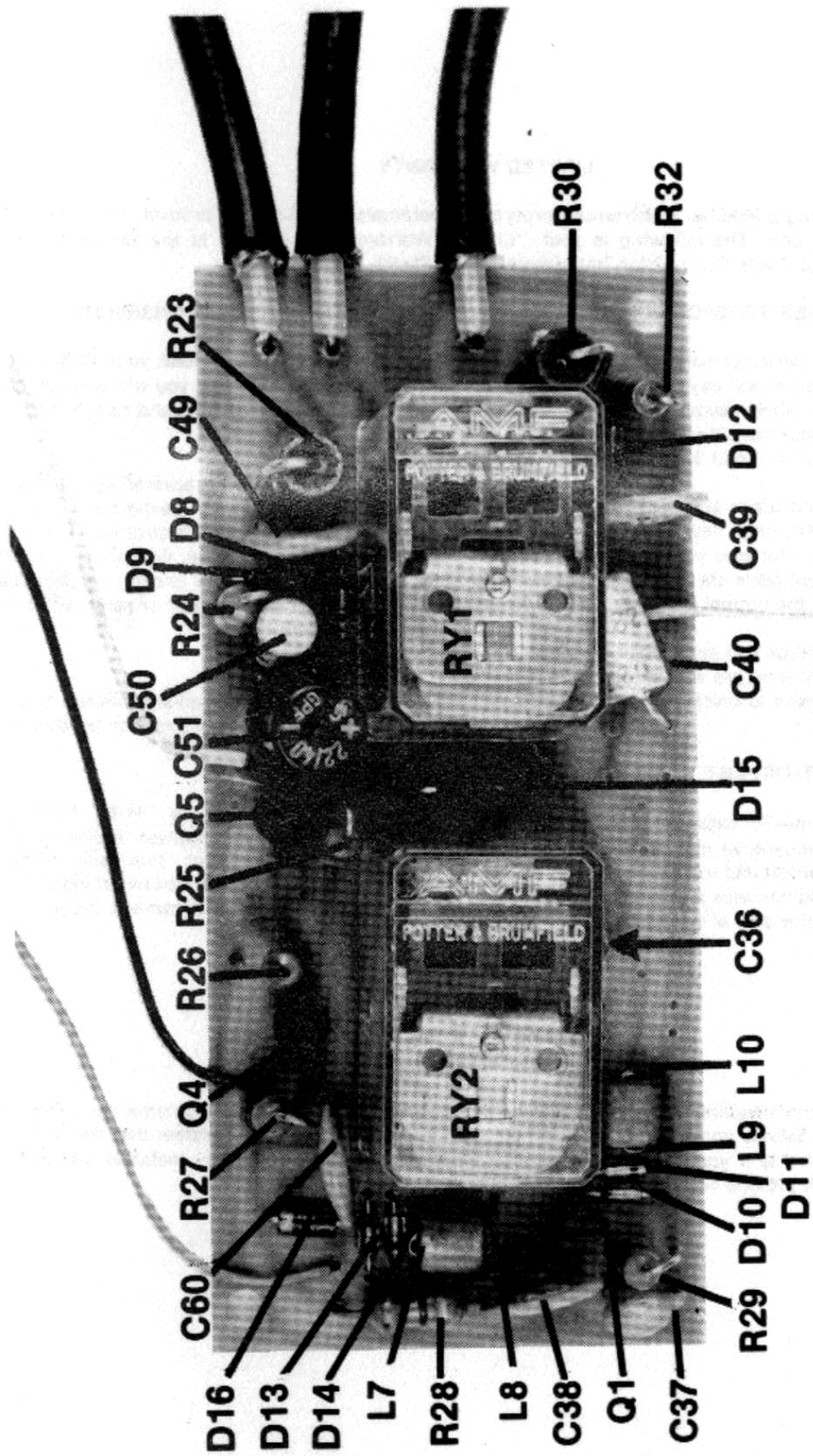


INHIBIT BOARD — 350Z



FINAL AMPLIFIER SUB-CHASSIS — 350Z





KEYING RELAY BOARD — 350Z

LIMITED WARRANTY

Thank you for selecting a Palomar Electronics Corporation (hereinafter "Palomar") product. We hope you will be pleased with this unit. The following is your "Limited Warranty" as defined in the Consumer Product Warranty and Federal Trade Commission Improvement Act. Please read it carefully.

MANUFACTURER'S RESPONSIBILITY

Service Labor—For a period of six (6) months from date of purchase, Palomar will pay for service labor supplied by Palomar when needed as a result of defective parts or workmanship. This service is offered only to owners in the U.S. and Canada.

Parts—Transistors and tubes are warranted for a period of 90 days. All other new or factory-built parts will be supplied for one year from date of purchase. Replacement parts are warranted for the remaining portion of the original warranty period.

Not Covered—Installation and installation or repair of external antenna systems are not covered by this warranty; nor is damage to unit(s) due to misuse, abuse or negligence.

IMPORTANT

Warranty Registration—To register your Model 350Z properly, it is imperative that you fill out the enclosed warranty card(s) and mail it along with a photocopy of your original sales receipt to Palomar within 30 days after the date of purchase.

OWNER'S RESPONSIBILITY

Operating Instructions—Read your Operating Instructions carefully so that you will understand the operation of your equipment and how to adjust the controls.

Warranty Service — Units covered by this warranty must be shipped at owner's expense or personally delivered to Palomar Electronics Corporation located at 665 Opper Street, Escondido, CA. 92025 for warranty service labor and replacement parts. Once repaired, the unit(s) will be returned to you at Palomar's expense.

Antenna—Operational problems caused by inadequately installed antenna systems or accessories are the owner's responsibility.

Warranty Service—Call or write Palomar in Escondido, CA at the address indicated above. Parts and service labor that are Palomar's responsibility (See Above) will be provided without charge. Other service is at owner's expense.

IMPORTANT

There will be a minimum handling charge of \$5 (\$10 if out of warranty) for any piece of equipment returned to the factory for Warranty Service and found to be in proper working condition. It is imperative that the installation instructions be adhered to if you wish to avoid unwarranted charges. When properly installed and operated, Palomar products will provide 100% customer satisfaction.