

Amp Supply Co.

Limited Warranty

Amp Supply Co. warrants to the original purchaser that this product shall be free from defects in material (except tubes and RF output transistors) or workmanship for one (1) year from the date of original purchase.

During the warranty period the Amp Supply Co. or an authorized Amp Supply Co. service facility will provide free of charge both parts (except tubes and RF output transistors) and labor necessary to correct defects in material or workmanship.

To obtain such warranty service, the original purchaser must:

- (1) Complete and send in the Warranty Registration Card.
- (2) Notify Amp Supply Co. or its nearest authorized service facility, as soon as possible after discovery of a possible defect, of:
 - (a) The model number and serial number, if any;
 - (b) The identity of the seller and the approximate date of purchase;
 - (c) A detailed description of the problem, including details on the electrical connection to associated equipment and the list of such equipment.
- (3) Deliver the product to the Amp Supply Co. or the nearest authorized service facility, or ship the same in its original container or equivalent, fully insured and shipping charges prepaid.

Correct maintenance, repair and use are important to obtain proper performance from this product. Therefore, carefully read the Instruction Manual. This warranty does not apply to any defect that Amp Supply Co. determines is due to:

- (1) Improper maintenance or repair, including the installation of parts or accessories that do not conform to the quality and specifications of the original parts.
- (2) Misuse, abuse, neglect or improper installation.
- (3) Accidental or intentional damage.

All implied warranties, if any, terminate one (1) year from the date of the original purchase.

The foregoing constitutes Amp Supply Co.'s entire obligation with respect to this product, and the original purchaser and any user or owner shall have no other remedy and no claim for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you.

This warranty gives specific legal rights and you may also have other rights which vary from state to state.

Amp Supply Co.



LA-1000

Portable Kilowatt SSB or CW QSK Amplifier

6M46
6LQ6
6YE6C

418

Amp Supply Co.

2071 Midway Drive, P.O. Box 421, Twinsburg, Ohio 44087

(216) 425-2010 • TLX 980131 WDMR

SPECIFICATIONS

Frequency coverage: 3.5--21.5 MHz amateur bands
export model includes 10
meter band.

Power input: 1000 W PEP SSB 700 W CW

QSK: full break-in CW

Drive requirements: Typically 100 W PEP

Input impedance: 50 ohm tuned-input, low pass
pi-network type

Output impedance: adjustable pi-network, matches
50-70 ohm with SWR of 2:1 or
less.

Intermodulation distortion products: In excess
of -30 dB below PEP

Power requirements: 120 VAC 50/60 Hertz
15 amps or 240 VAC 50/60
Hertz 7.5 amps

Tubes: Four 6MJ6 - included with amplifier

Dimensions: W 11" H 5.00" D 9.75"

Weight: 22 lbs.

WARNING

For proper operation of the cooling system,
the LA-1000 must be placed on a flat smooth
surface. Do not operate on a surface such as
carpeting as this will impend the air flow
through the cooling holes located in the bottom
of the chassis.

WARNING

Make no attempt to put this amplifier into
operation outside of it's cabinet. Contact with
voltages inside this amplifier can be fatal.

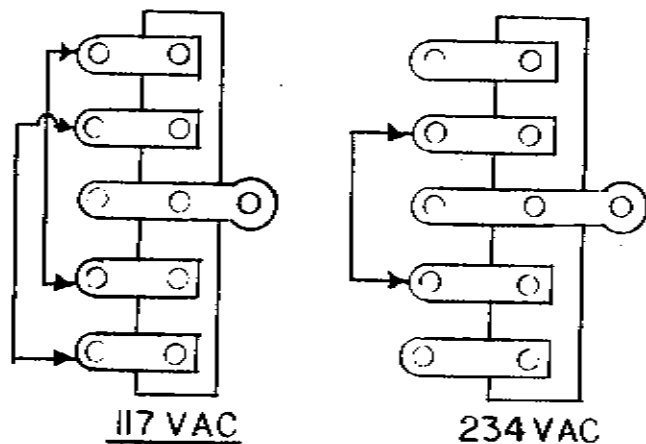
PARTS LIST

B1	Blower
C1-C3;	.01 1KV
C15-C25;	.01 1KV
C31-C34;	.01 1KV
C4-C13	#427 Trimmer Capacitors
C14	1000 uf 25v
C27	.001uf 5KV
C28-30	125uf 500v
C35	.002 5KV
C36	250pf Variable
C37	220pf DM19
C38	1100pf variable
D1	LED (Part of S2)
D2	LED (Part of S1)
D3	1N4007
D4-D11	M4G5
D12	1N3321
F1	15A Fuse
J1, J2	S0-239
J3	RCA Connector
L1-L5	Input torroid coils
L6	Tank Coil (30MHZ-14MHZ)
L7	Tank Coil (14MHZ-3.5MHZ)
PC1-PC4	Parasitic chokes
RFC1	Plate choke
RFC2	Cathode choke
RFC3	2.5mH
R1, R2	680 K $\frac{1}{2}$ w
R3-R6	100k 2w
R7-R9	500k 1%
R10	.4, 1%
R11	1ohm 1w
RLY 1	DPDT
RLY 2-5	DPST
X1	Xmit Lamp 12v
X2	Meter Lamp 12v
V1-V4	6MJ6 Tube
S1, S2	SPST Toggle
S3	DPDT Rotary
S4	Band Switch
T1	Power transformer
M1	Plate meter

NOTE

DISCONNECT UNIT FROM AC LINE

Remove either 117 VAC or 234 VAC jumper(s) before changing from one to another.



TUNING PROCEDURE

1. Plug the LA-1000 into a 117VAC source.
2. Set the Pwr/on switch to the on position. Set the STY/OPT switch to the STY positions.

ALWAYS ALLOW 3 MINUTES WARM-UP TIME BEFORE APPLYING DRIVE POWER TO THE LA-1000.

3. Set the Meter switch to the V (volts) position. The plate voltage meter should read approximately 1200 VDC.
4. Tune your exciter in the Tune or CW mode as stated in your exciter's manual.
5. Reduce CW output using the carrier or CW level control on your exciter. Unkey your exciter.

Before continuing, never keep the LA-1000 keyed for longer than 15 seconds at a time without allowing equal cool down time.

6. Preset the LA-1000 meter switch to the I (current) position. Key your exciter and begin to increase the CW carrier level until reaching approximately 300 mA on the plate current. Quickly turn the TUNE and LOAD control for maximum output on your wattmeter. Continue to increase your exciter's output until you reach approximately 600mA (.6A X 1166v = 700 watt DC input).

7. Repeat your Tune and Load controls for maximum output.

To operate SSB, tune the LA-1000 as stated above. When fully tuned in CW, simply change your exciter to SSB. No further adjustments to the LA-1000 are required.

THEORY OF OPERATION

Power Supply

After the LA-1000 has been installed according to the instructions, and power is applied, S1 is used for initial turn on. AC is applied to T1, the main power transformer, and to the fan, B1. The three secondary windings of the transformer are used to produce filament voltage (6.3v) relay control voltage (12v) and HV. The 12v DC is developed by use of a half wave rectifier. When power is applied, meter lamp X2 and LED D1 (internal part of S1) will light.

The closing of S2 allows 12 v to be applied to the relays (RL2-6) in the tuned input, the QSK module, the Xmi lamp X1 and the LED D2 (internal part of the S2)

The high voltage section is made up of 8 diodes in a bridge circuit. Each diode (D4-11) is a 3 amp 1000piv in parallel with a .01 uf capacitor (C23-30 for transient protection, and a 470 Kohm ½ w resistor (R 3-10) for equalization. For filtering, 3 125 uf @500 v capacitors (C31- are used in series. Each has a 100K ohm 2w bleeder resistor (R15-17) in parallel.

RF Operation.

When S2 is in the OPT mode, 12 v is applied to the tuned input relays, the QSK module and the transmitter light. The band switch will select a ground path for one of the tuned input relays, allowing the proper section to be plac

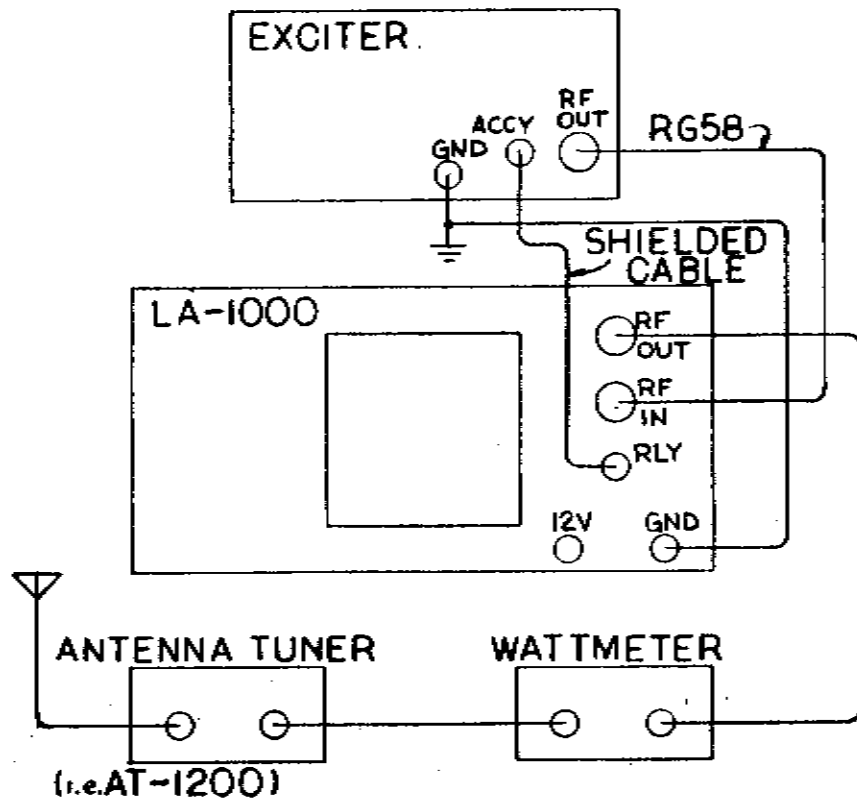
UNPACKING

in series with the RF path. When the exciter is keyed, it provides a closed circuit for the transmitter lamp and the QSK module. The QSK module in turn keys the antenna relay RL-1.

RF from the exciter flows into J1, through the proper input circuit, through C12, C13 to the cathodes of tubes V1-V4. Diode D12 provides bias for the tubes.

PC 1-4 are parasitic chokes. The RF comes from the tubes, through C35 to the tank circuit L6, L7, C36, C37. The tank is tuned for maximum transfer of RF to the antenna through J3. RFC 3 is to protect the antenna from DC potential.

INTERCONNECTION DIAGRAM



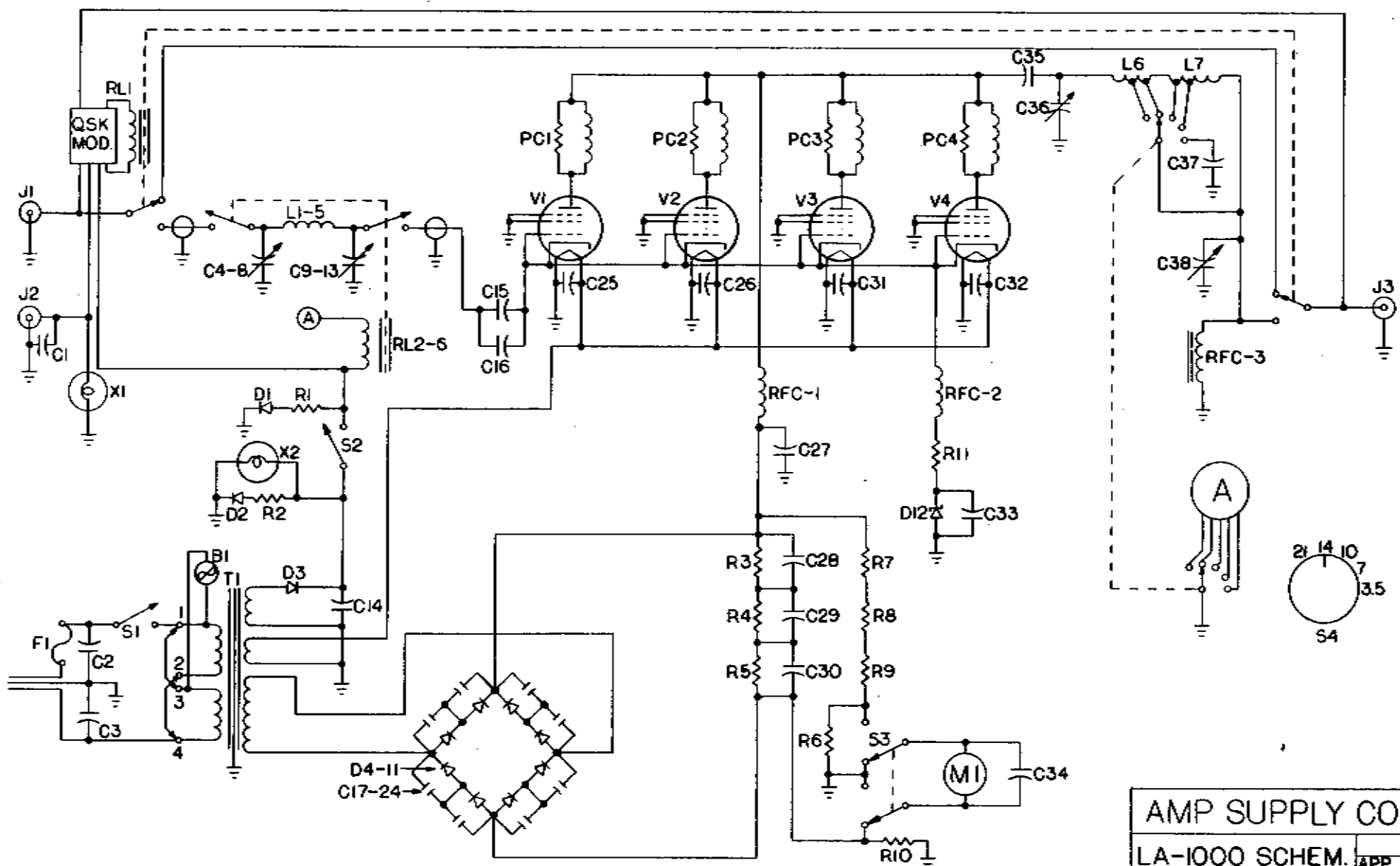
Carefully unpack the LA-1000 and examine contents for evidence of shipping damage. If any damage is discovered, notify the transportation company that delivered the equipment. Be sure to keep the carton and packing material as the transportation company that delivered the equipment will want to examine them. Keep the carton and packing even if no shipping damage occurs. Having the original carton available simplifies repacking the equipment for storage or to return it to the factory for service.

Remove the 12 screws holding the top cover in place. Remove the packing material located over the tubes and under the tuned input PC board. Install the fuse supplied which is attached to the transformer inside the amp. Replace the top cover with the vent holes near the rear.

INSTALLATION

The LA-1000 is factory wired to operate from 117VAC. If 234 VAC is desired, you will have to rewire the power transformer primary as shown below. The terminal strip is located in front of the power transformer on the chassis.

1. Position the LA-1000 so the rear and the bottom of the unit are clear of all obstructions. This will assure adequate air circulation.
2. Connect a wattmeter and a 50 ohm load to the RF output connector using RG 8u or its equivalent.
3. Connect the LA-1000 RLY connector to your exciter using shielded cable. (See interconnect diagram) The LA-1000 requires closed contacts for keying. Consult your exciter's owners manual for proper connection.
4. Connect the LA-1000 RF IN connector of the excite RF output using 50 ohm coax.
5. Connect as short a ground lead as possible from a good earth ground to the LA-1000's GND connector.



AMP SUPPLY CO.		
LA-1000 SCHEM.	APP.	
1/26/83	LA-1000-01	TOL.