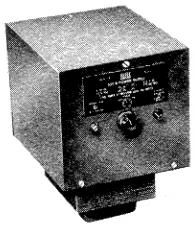
ALTEC LANSING CORPORATION

535A POWER SUPPLY

OPERATING INSTRUCTIONS



535A POWER SUPPLY

SPECIFICATIONS

Power Output:	275vdc at 275 ma. At 275ma ripple is .02v peak to peak max. 6.3vdc at 13a. At 13a ripple is 1.5v peak to peak max.
Power Input:	117v 50-60 cps 245 watts at full load.
Rectifiers:	Silicon.
Controls:	1. Power Switch 2. Circuit Breaker (Push to reset). 3. 4 Position tap switch (provides adjustment of voltage by autoformer action to accommodate 2 to 1 range of loads).
Color:	Dark Green.
Weight:	16 pounds.
Size and Mounting:	7 3/16" W x 9 5/8" H x 7" D overall. (See Fig. 1.)

DESCRIPTION

The 535A is a compact, highly reliable, DC power supply for furnishing the operating voltages to ALTEC 458A and 459A amplifiers used in conjunction with the ALTEC 250SU Console. The 535A employs silicon rectifiers in both the filament and "B" supplies.

The power supply is connected to the 250SU by means of a four foot multiple conductor cable terminated in a type S306CCT Jones plug which "mates" with a Jones receptacle in the 250SU Console.

INSTALLATION

MOUNTING

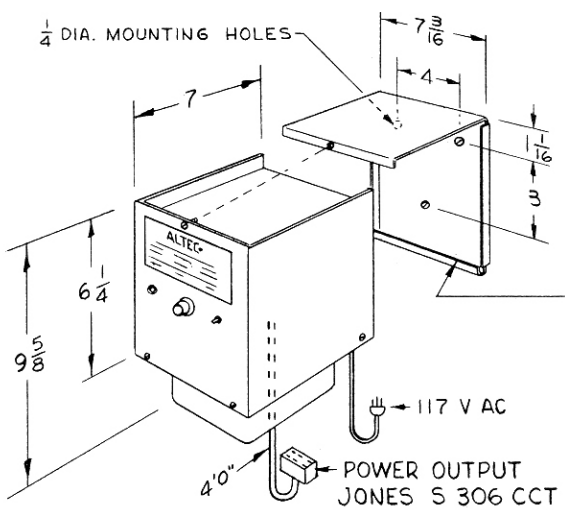
The mounting bracket illustrated in Fig. 1 forms two sides of the power supply case. It is released by removing the single screw above the nameplate and unhooking from the bottom lip of the power supply frame. The bracket should be mounted to any flat surface such as a table leg or wall, using the three holes provided, and the power supply re-attached. Although there is no restriction on mounting direction — the assembly will be found to work best when attached to a vertical surface with the transformer down.

VENTILLATION

The area immediately below and above the power supply should be clear to allow convection cooling of the assembly. In no case should the 535A power supply be mounted directly over other heat producing apparatus.

EXTENSION CABLE

Should it be necessary to increase the cable length between power supply and console large wire sizes will be required to provide full heater voltage at the amplifiers at full load current. For a 10 foot extension the heater pair should be at least #10 wire. For a 20 foot extension the heater pair should be at least #6 wire. B+ and B— leads may be #18 in all cases.



MOUNTING BRACKET

(Part of Power Supply)

1. Attach to wall, etc.
2. Hook power supply on lower lip, pivot into place and fasten with single front screw.

FIGURE 1.

ALTEC LANSING CORPORATION
A Subsidiary of Ling-Temco Electronics, Inc.

1515 S. Manchester Ave., Anaheim, Calif.
New York, Los Angeles

13443
LITHO IN U.S.A. G-F ABCDEF

GROUNDING

When used with the 250SU console "heater" minus and "B" minus leads are connected to the frame by the internal wiring of the console. *Additional grounds should not be made.*

When the 535A is used to power other assemblys one side of both high voltage and heater sections of the power supply should be grounded at one point, preferably at the mounting frame of the preamplifiers.

OPERATION

The 535A operates from 117 V 50-60 cycles and at full load draws 245 watts from the primary line. There are three controls on the front panel which are from left to right "on-off" switch, heater voltage adjustment control and circuit breaker reset button.

INITIAL ADJUSTMENT

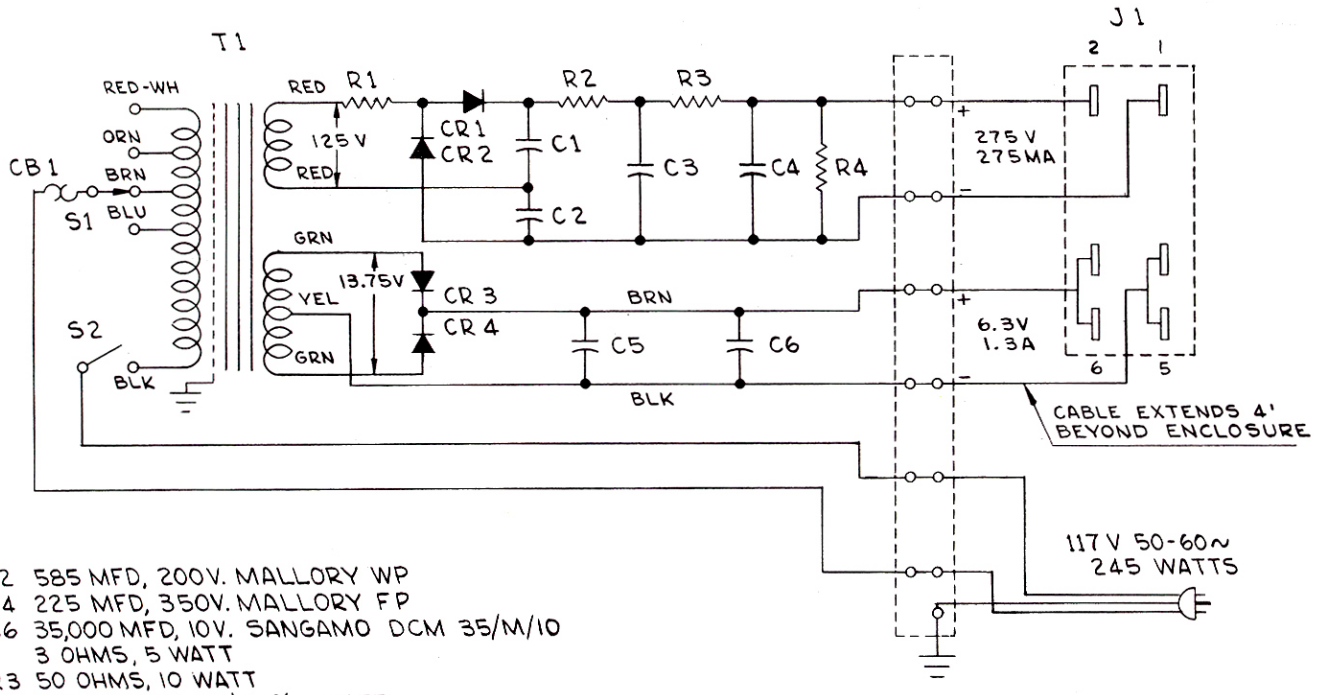
1. Connect the power supply to the load with which it is to operate.
2. Connect an accurate dc voltmeter to the heater connections *at the console or amplifier trays.*
3. Adjust the 4 position tap switch to provide a heater voltage in the range of 6.0 to 6.3 volts.
4. Check high voltage to see that it falls in the range of 250 to 300 volts. Do *not* make compensations for this voltage; the exact value is not critical.

NOTE: — When performing Step 3 if it is impossible to reduce the heater to 6.3 volts it is an indication that the heater load is less than 50% of the power supply capacity. In this event an external load resistor must be added to bring the adjustment switch within range.

CAUTION — Do not operate with high heater voltage! It will greatly reduce tube life.

SERVICING

There is very little within the 535A power supply which requires attention. Both high and low voltage silicon rectifiers have current and voltage ratings in excess of the operational requirement. The primary circuit breaker is designed to operate at 2.5 amperes and break at 3.5 amperes. Although the primary circuit handles the combined power of the two secondary loads, a short circuit on either output will operate the breaker without damaging the rectifiers. Excessive temperature or excessive load, causing excessive temperature rise, is the most damaging in terms of ultimate component life. Under normal conditions the rectifier heat sink at the top will operate at 55°C and is safe to 100°C. The air temperature within the capacitor compartment will be about 45°C and must be maintained below 65°C to realize the extended life capability of the high capacitance low voltage computer grade electrolytic capacitors used in the heater supply filter.



C1,C2 585 MFD, 200V. MALLORY WP
C3,C4 225 MFD, 350V. MALLORY FP
C5,C6 35,000 MFD, 10V. SANGAMO DCM 35/M/10
R1 3 OHMS, 5 WATT
R2,R3 50 OHMS, 10 WATT
R4 240,000 OHMS ±10% 1 WATT
CB1 CIRCUIT BREAKER, MEL-RAIN
TYPE A 2.5A OPERATE 3.5A BREAK
S1 OHMITE 111-4
T1 PEERLESS 6606
CR1,2 G.E. IN 1491 SILICON RECTIFIER
CR3,4 I.T.&T. US123AA " "
J1 JONES S-306-CCT
S2 ALTEC 12763

ALTEC LANSING
535A POWER SUPPLY

535A SCHEMATIC