

INSTRUCTION MANUAL  
FAIRCHILD MODEL 667II POWER SUPPLY  
(18 - 24V DC )



FAIRCHILD SOUND EQUIPMENT CORPORATION  
10-40 45th Avenue, Long Island City, NY  
11101

IB667II/368

## MODEL 667II POWER SUPPLY

### GENERAL

The MODEL 667II Power Supply is designed to deliver from 18 to 24V DC to power FAIRCHILD Integra I and Integra II series equipments. It has current capacity of 2 amperes. This power supply features active filtering, short circuit and overload protection, and provides excellent regulation with extremely low ripple as well as remote sensing. The voltage of the 667II is continually adjustable for any desired voltage (from 12 to 30V).

The 667II is compact and mounts into a standard FAIRCHILD 662RM rack mounting taking 5 $\frac{1}{4}$ " high by 6" in width of space. The unit is 10" deep.

### CIRCUIT DESCRIPTION

The 667II Power Supply is fed from 110V AC line. Stepdown transformer reduces the AC voltage to 27V, which is rectified and fed into an active filtering circuit. The filtering circuit consists of three transistors, a zener diode and a short circuit protection system.

When rectified, DC is fed into series regulating transistor 2N277. Voltage across the output of the power supply is sensed, amplified by 2N508 transistor, compared to a reference voltage provided by the zener, and applied to series regulator. An .11 ohm resistor in series with the output of the regulator transistor senses the current delivered to the load. Voltage drop across this resistor is fed into a short circuit protection network consisting of two series connected diodes controlling a base of the transistor 2N1183. When current exceeds two amperes, diodes start conducting cutting off the output voltage, and if short circuit occurs clamps down voltage regulator for "0" volt output.

Remote sensing is accomplished by providing separate terminals which can be connected via separate wires to the load, which is located at some distance from the power supply, and therefore compensates for losses occurring in the power lines feeding this particular load.

### INSTALLATION

Recommended mounting for the 667II Power Supply is the 662RM rack mount. The power supply may also be mounted at the bottom of the equipment rack, or in any other fashion. The position of the power supply is not critical, but pre-

caution should be exercised, however, to provide sufficient amount of ventilation for the unit when it is to be driven with a full load. Also, the power supply should be located as far away as possible from low level circuits and especially from low level input transformers!

### PERFORMANCE SPECIFICATIONS

VOLTAGE	Continually variable from 12 to 30V. (Factory preset at 18V unless otherwise specified.)
RIPPLE	Less than .25 mv rms at full load .1 mv no load
REGULATION	Better than .1% from full load to no load
CURRENT CARRYING CAPACITY	at 24V - 2 amps maximum at 18V - 2.2 amps maximum
SHORT CIRCUIT PROTECTION	Effective after current exceeds 2.2 amps
VOLTAGE REGULATION	1% maximum for line voltage variation from 90 to 120V at full load
PHYSICAL DIMENSIONS	6" wide by 5 1/4" high by 10" deep

### MAINTENANCE

The MODEL 667II Power Supply requires no specific maintenance. However, periodic physical inspection of the components in the unit would be recommended, as well as tests for ripple and voltage. Particular attention should be paid to electrolytics and printed circuit board. Some components may age with time and are subject to deterioration under high ambient temperatures (electrolytic and power resistors).

### WARRANTY & SERVICE POLICY

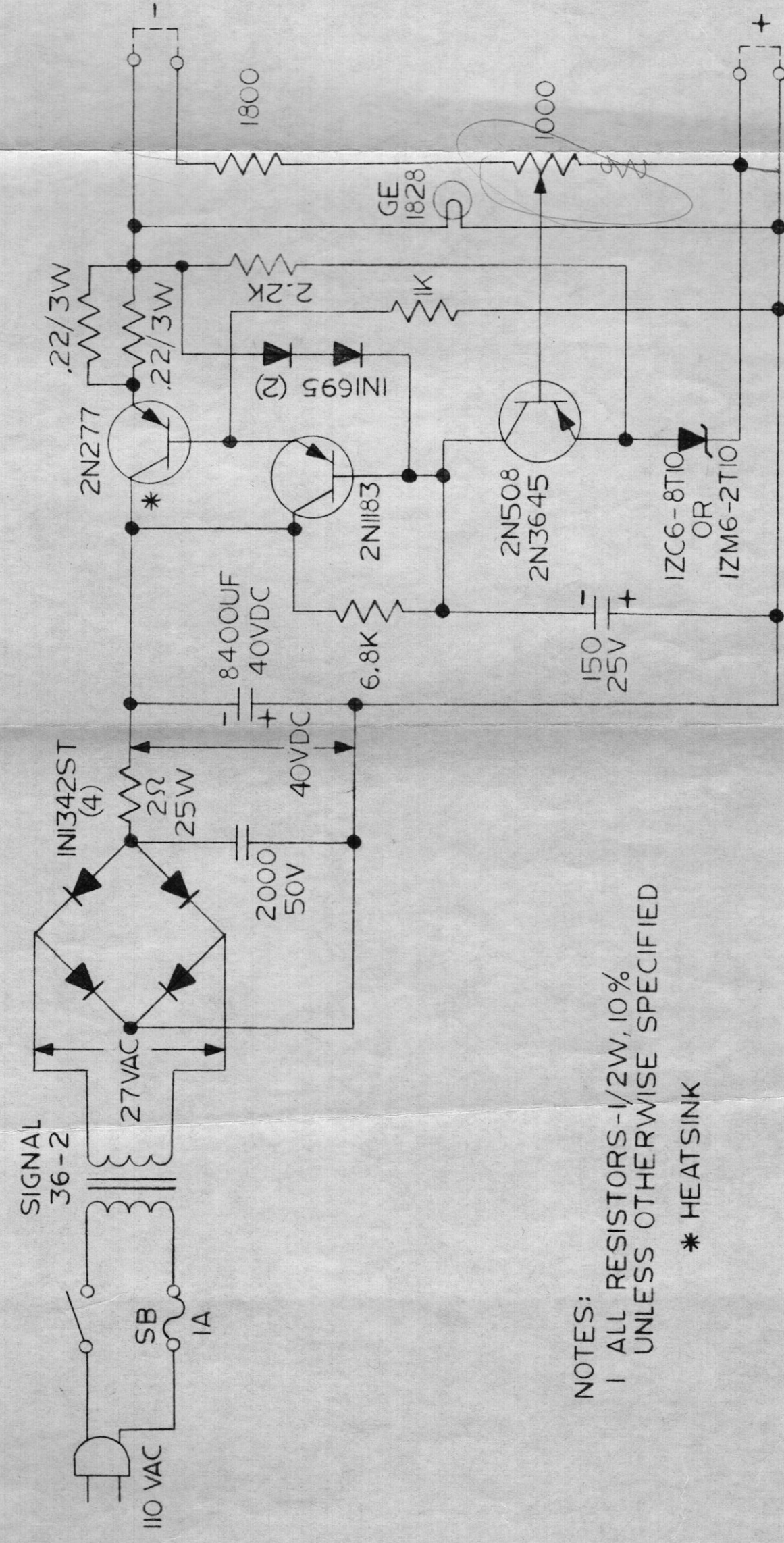
See standard warranty attached to and forming part of this manual. To validate warranty, complete and return the warranty registration card provided. When returning any piece of FAIRCHILD equipment to the factory for service, a short description of the problem encountered should be enclosed with the shipment. If there is any question on this or any other FAIRCHILD professional product, please do not hesitate to contact the factory, CUSTOMER SERVICE, FAIRCHILD SOUND EQUIPMENT CORPORATION, 10-40 45th Avenue, Long Island City, New York 11101 (212 Stillwell 4-6163).

ATTACHMENT: Schematic B96332



NUMBER  
**B-96332**  
 ISSUE: 1 1-17-68  
 ISS. 2 9-17-68  
 RESISTOR 2200  
 CHANGED TO  
 1800; CAP 300  
 CHANGED TO  
 150

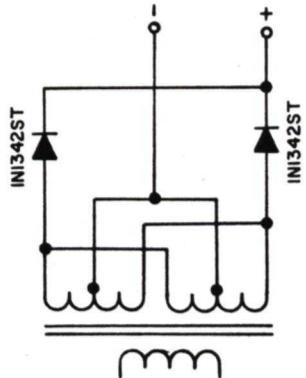
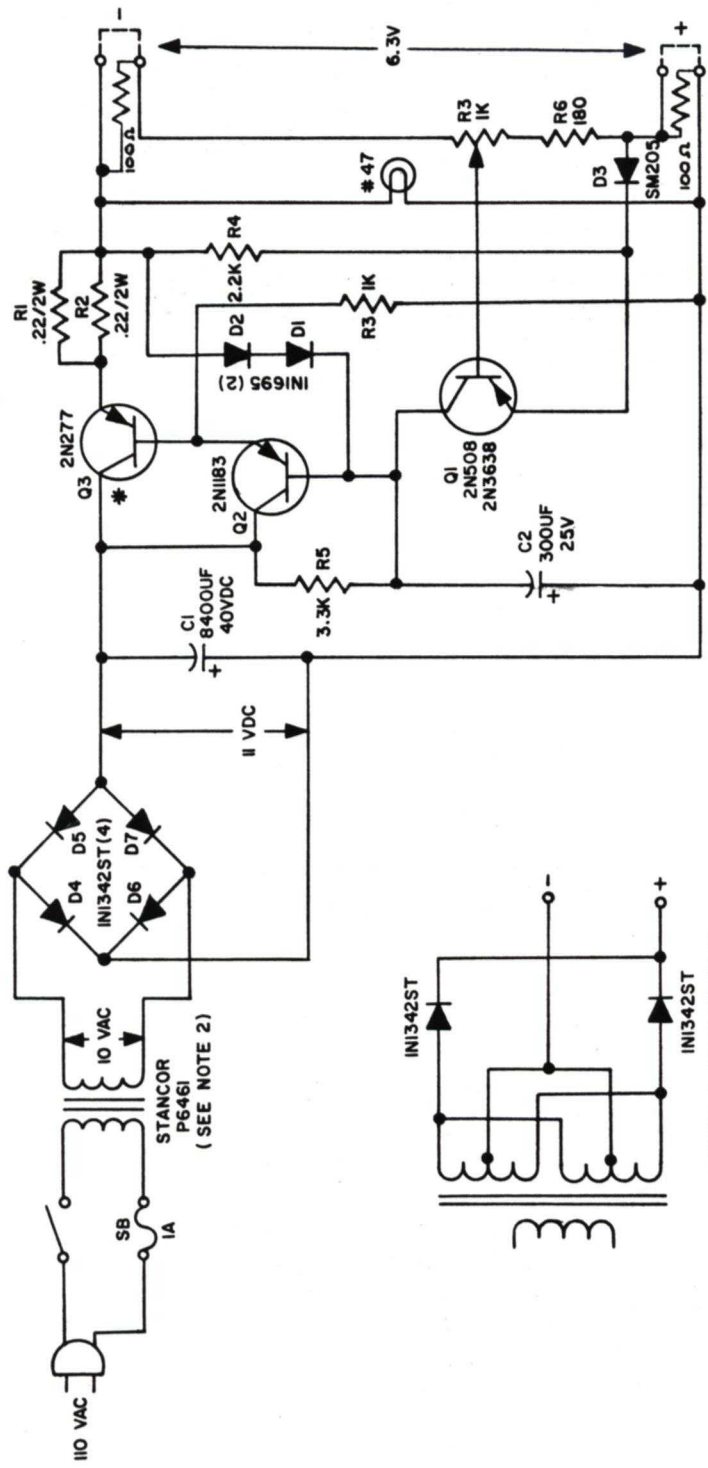
DO NOT SCALE DWG. WORK TO FIGURES.  
 TOLERANCES - UNLESS OTHERWISE SPECIFIED  
 DEC. DIMS. ± — — — — — ANGULAR DIMS. ± — — — — —  
 DRILL, PUNCH, COMMERCIAL STOCK  
 SIZES AND MANUFACTURERS'  
 TOLERANCES ARE NOT INCLUDED.  
 REMOVE ALL  
 BURRS AND  
 SHARP EDGES



NOTES:  
 1 ALL RESISTORS - 1/2W, 10%  
 UNLESS OTHERWISE SPECIFIED  
 \* HEAT SINK

SPRAGUE  
 PWR L TIC  
 36D  
 8400-40DC

REQ	DESCRIPTION	DWG NUMBER	ITEM	NEXT ASSEMBLY
	MATERIAL			
	HEAT TREATMENT			
	FINISH			
	DRAWN BY	CHKD BY	DRFTG APP	NUMBER
	ENG	PROJECT ENG	ENG APP	<b>B-96332</b>
	NAME		SCALE	
	667/II POWER SUPPLY		~	
	FAIRCHILD RECORDING EQUIPMENT CORPORATION			
	10-40 45 AVE., L. I. C. 1. N. Y.			



DETAIL A (SEE NOTE 2)

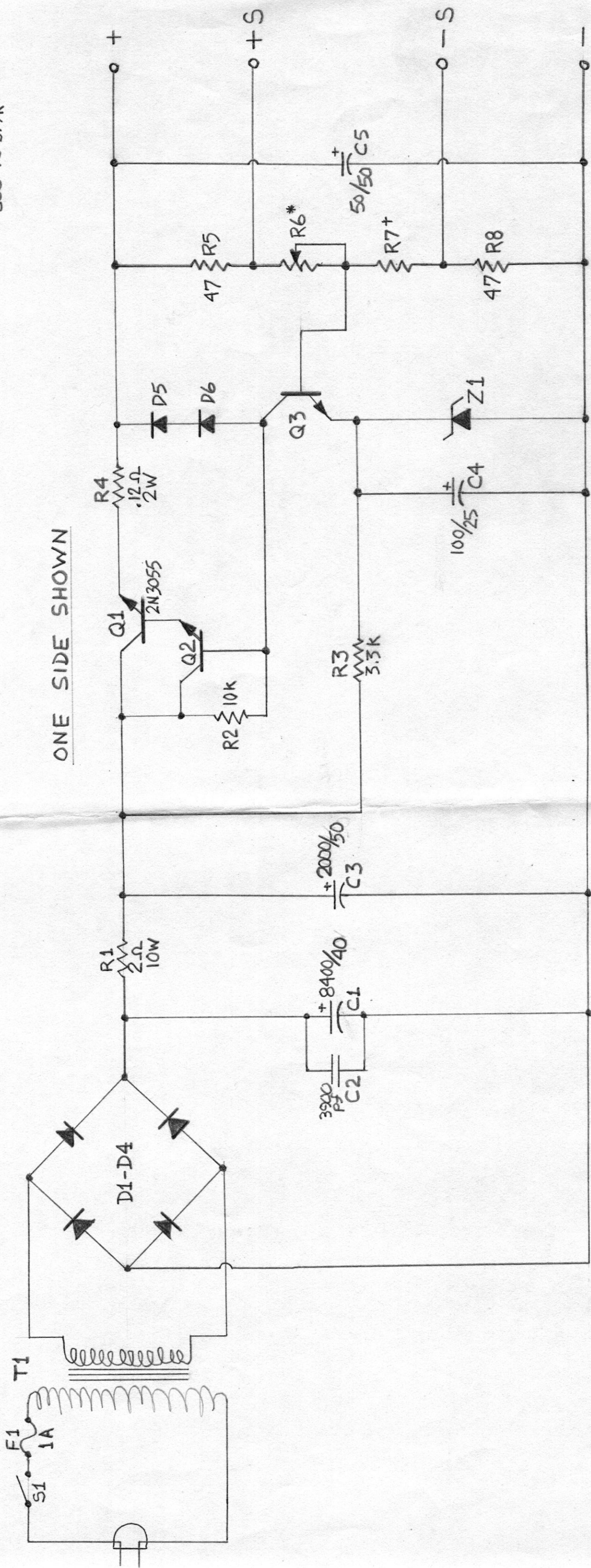
- NOTES:
1. ALL RESISTORS - 1/2W, 10 % UNLESS OTHERWISE SPECIFIED
  2. IF TRANSFORMER, SIGNAL 36-2 IS USED THE CONNECTIONS IN DETAIL "A" MUST BE FOLLOWED
- \* - HEATSINK

667DII POWER SUPPLY SCHEMATIC



\* KCBS MOD.  
2.5K NOM,

+ FACTORY SELECTED  
680 TO 3.9K



ONE SIDE SHOWN

FAIRCHILD DUAL 24 VOLT  
POWER SUPPLY  
MODEL 667 II (DUAL)