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SERVICE INFORMATION

THRESHOLD MODEL

FET-9

STEREO PREAMPLIFIER

Threshold Corporation

310 Cortez Circle

Camarillo, CA 93012

(805)383-2788 F#(805)383-2794

Cartridge Loading

The moving coil and moving magnet cartridges described above require different input load characteristics to realize their optimum performance. As a group "moving coil" cartridges are relatively insensitive to their capacitive load but each individual cartridge will work best into a specific load impedance. Conversely, moving magnet cartridge as a group are designed to work into a load impedance of 47,000 Ohms but each individual cartridge will be sensitive to its capacitive loading.

The resistive and capacitive loading of the FET nine input circuits are selected by a dip switch assembly which serves both left and right channels. The switch assembly incorporates 8 miniature switches numbered 1 through 8.

To adjust the resistive and capacitive loading of the phono cartridge, locate the miniature switch assembly on the preamplifier circuit board.

SWITCH	LOAD VALUE
all switches off	47 Kohms, 50 pf
switch 1,8 on	100 ohms
switch 2,7 on	47 ohms
switch 1,2,7,8 on	32 ohms
switch 4,5, on	100 picofarad
switch 3,6 on	200 picofarad
switch 3,4,5,6 on	250 picofarad

The value recommended for your cartridge and the termination supplied by the FET nine need not be in exact agreement to realize optimum performance because the source impedance characteristic of any cartridge contains a significant reactive component. Simply select the impedance load value nearest that recommended for the cartridge. In large measure the value you select will ultimately be the result of personal preference.

REGULATOR VOLTAGE ADJUSTMENT FET 9

Adjust all positive voltages to +17 VDC and all negative voltages to -17 VDC. Over voltage will result in sonic degradation and eventual component failure, under voltage will result in relay drop out at low line voltages. Please use an accurate line voltage appropriate for your location (within 10 % of 120, 220, or 240 VAC.).

Use ground reference marked GROUND on the drawing.

Adjust R1 reference TP 1 for _17vdc.

Adjust R2 reference TP 2 for _17vdc.

Allow the unit to stabilize for one hour and check voltages again.

TECHNICAL DATA

Phono Stage

The Threshold FET nine phono stage is a two channel, non-inverting field effect transistor circuit dedicated to amplifying audio signals from moving coil and moving magnet phonograph cartridges. It features variable gain of 40 or 60 dB at 1 KHz, and loading from 50 picofarads to 1000 picofarads and 22 ohms to 47,000 ohms.

RIAA EQUALIZATION: Passive and active topology computer designed to 0.025% accuracy. Selected precision components used in construction holds production tolerance to .25 dB.

DISTORTION: No greater than 0.02% @ 1 volt output.

NOISE: No greater than -80 dBA referenced to 1 millivolt input @ 1 KHz.

OVERLOAD: 20 volts output

CROSSTALK: No greater than -70 dB @ 20,000 Hz with 1,000 Ohm source.

OUTPUT IMPEDANCE: 420 Ohms.

High Level Stage

The Threshold FET nine high level stage is a two channel, non-inverting field effect transistor circuit dedicated to the gain and control of high level audio signals and provides inputs for five line level sources. Two tape recorders may be connected with full flexibility in routing of record and playback signals. Front panel controls consist of program selection, record signal routing, monitor signal selection, stereo/mono/reverse stereo playback mode selection, channel balance, and audio level.

BANDWIDTH: -3 dB points; 1.5 Hz and 125,000 Hz.

CROSSTALK: No greater than -75 dB @ 20,000 Hz with 1,000 Ohm source.

DISTORTION: No greater than 0.02% @ 3 volts RMS, 20 Hz to 20,000 Hz into 10,000 Ohm load.

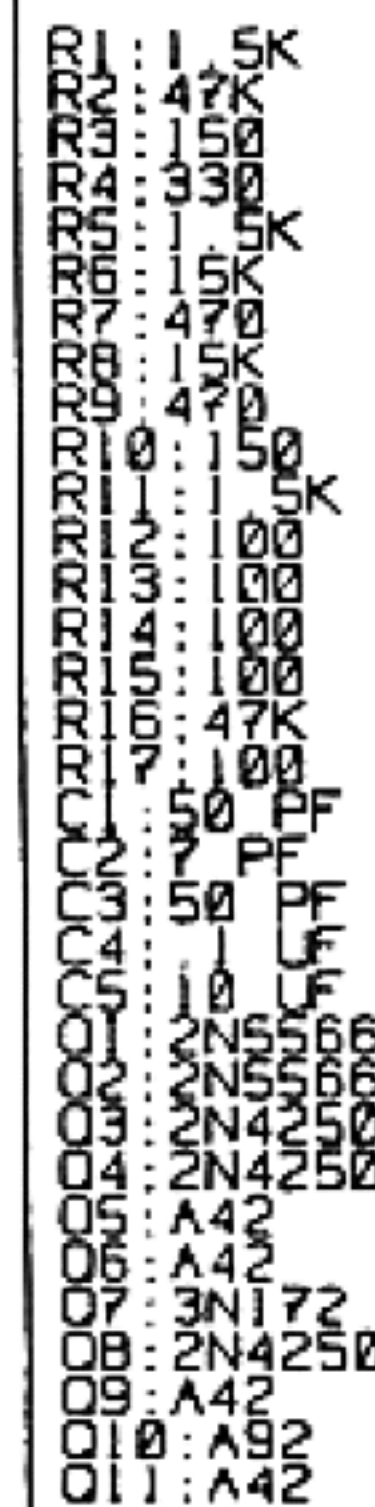
NOISE: No greater than -100 dBA referenced to 1 volt input.

GAIN: + 20 dB.

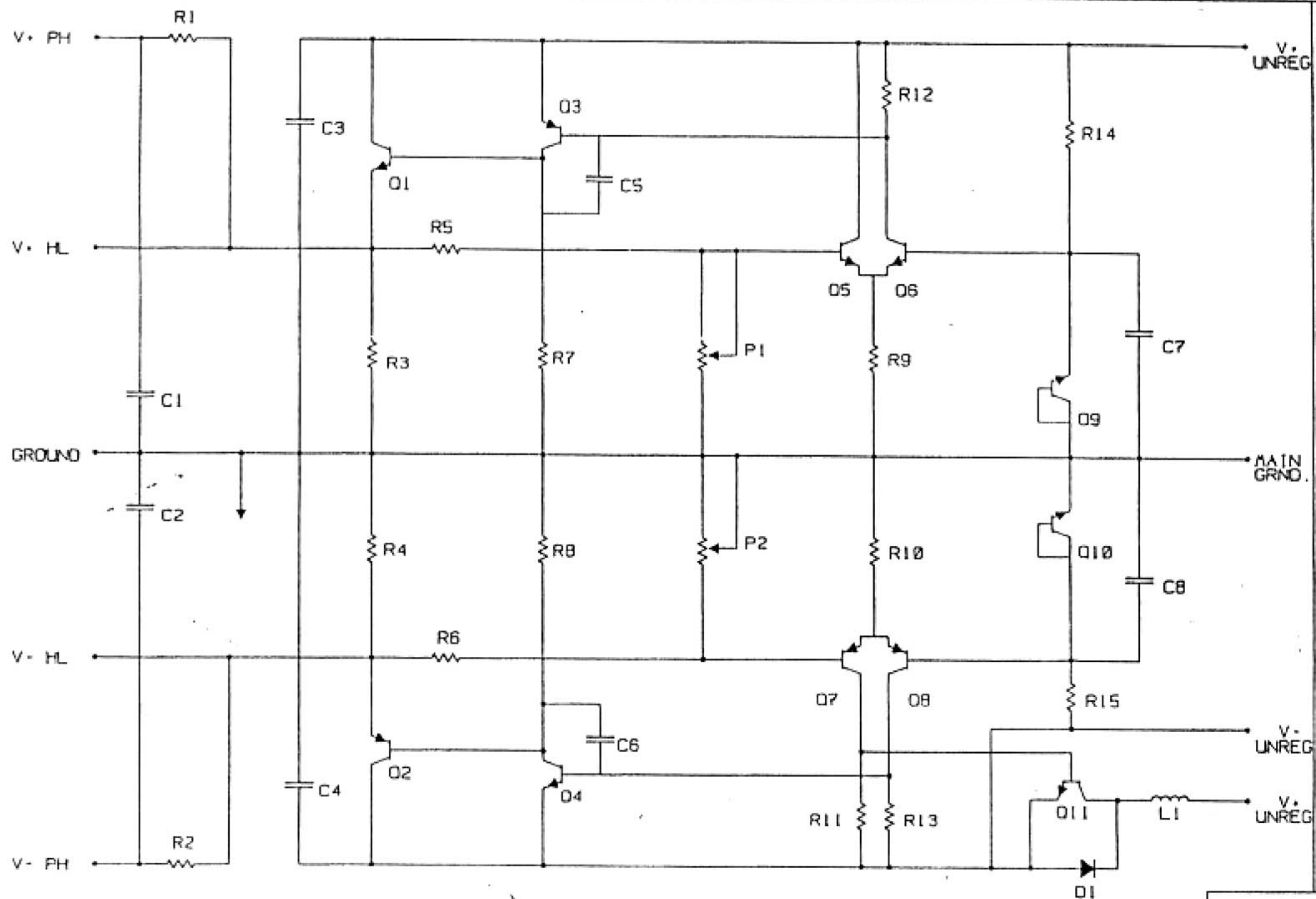
INPUT IMPEDANCE: 25,000 Ohms.

OUTPUT IMPEDANCE: 100 Ohms.

MAXIMUM OUTPUT: 20 volts.



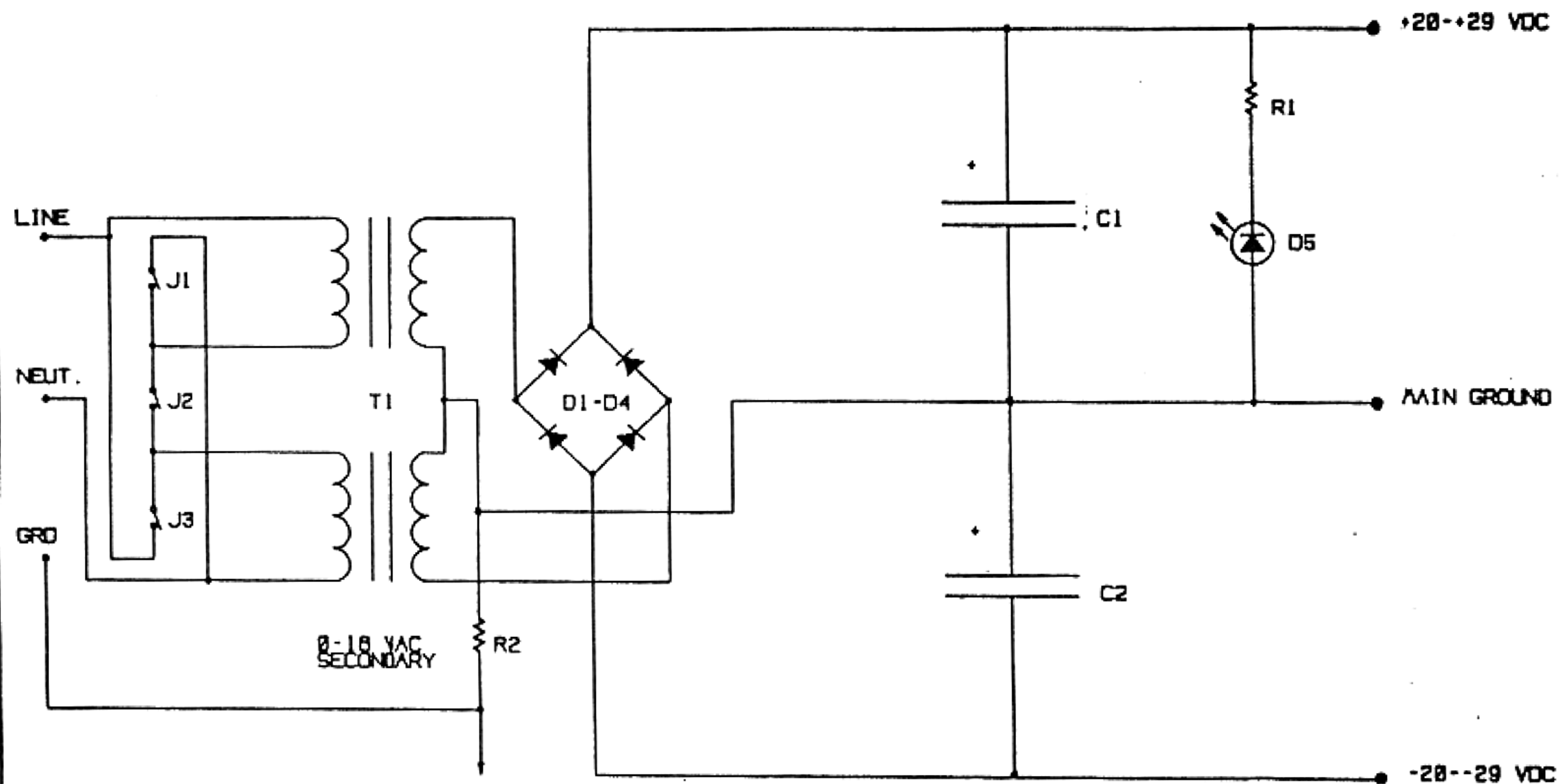
FET NINE
HIGH LEVEL SCHEMATIC



01 FT317
02 FT417
03 A92
04 A42
05 A92
06 A42
07 FT317
08 Q1
09 Q1
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99 Q1
100 Q1

ALL RESISTORS
1/4 WATT

FET NINE
REGULATED POWER SUPPLY



J1 AND J3 FOR 100-120 VAC
J2 FOR 220-240 VAC

T1: OB 6/18
D1-D4: 1N4004
D5: LED T-1
C1,2: 2100µ/35V
R1: 2.2K/.5W
R2: 10/2W

UNIVERSAL SUPPLY
ALL PREAMPS, XOVERS

THRESHOLD MODEL FET-9 STEREO PREAMPLIFIER.

1. Input wiring, switching circuit, and volume control wiring.

