

# **AUTOSWITCH™**

## **STEREO AUDIO SWITCHER + SILENCE SENSOR**

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### **DESCRIPTION**

**AutoSwitch** is a versatile stereo audio switcher and silence sensor. It can be used to manually or automatically select between two stereo audio sources. Manual source selection is controlled with a GPI contact closure or DC voltage; automatic selection is via the silence sensor. When automatic operation is used, the silence sensor monitors the "A Input" audio levels. If the level of either (or both) channels drops below the silence threshold for the delay time preset, the unit switches to the "B Input". When the A source audio returns, the unit resets and switches back to the A input. The silence threshold and time delay are adjustable for each channel. An Alarm relay output is provided to activate an external alarm or other equipment. Gain trims are provided for each audio input.

### **INSTALLATION**

Audio and control circuits for AutoSwitch are via plug-in euroblock connectors. Remove about 1/8" of insulation, insert the wires into the plugs, and tighten the screws. Be certain that no bare wires are exposed. Audio inputs may be either balanced or unbalanced; for unbalanced sources, jumper the – input to GND. For unbalanced outputs, connect to the + and GND terminals only. Do NOT short the – output to GND.

If manual control will be used to switch between A and B inputs, connect to the CONTROL connector as follows:

For GPI control (contact closure or open collector), connect to – and GND. (Open collector to –, Ground to GND.)

For control via a DC voltage, first open the unit and disconnect one end of R45, a 1K resistor. Connect the DC control signal to the + and – control inputs. BE SURE to include a current limiting resistor in series with one input lead! (For 5vdc to 12vdc, use 1K; for 24vdc, use 2K.)

AutoSwitch has an ALARM relay that activates when the silence sensor trips. Its terminals are on the CONTROL connector. The NO and C terminals close when the silence sensor trips.

### **CALIBRATION AND SETUP**

Once AutoSwitch has been installed, the audio levels and silence sensor adjustments should be calibrated.

Each audio input has a pair of level adjustments; adjust to produce the desired output level. (Unity gain is achieved when the trimpots are set to mid-rotation.) Note that the unit will default to the A source, unless manually switched to B, or unless the A audio level is below the silence sensor threshold. The GREEN LED indicates the active input.

To calibrate the silence sensor, set the SIL SEN and ALARM switches to ON.

The A source is always monitored by the silence sensor. There are separate level (LEV) and delay time (DEL) adjustments for each (L&R) channel. The YELLOW LEDs will light whenever audio falls BELOW the silence threshold. Turning the LEV trimmer clockwise INCREASES the threshold, making the silence sensor more apt to trip. Turning the LEV trimmer counter-clockwise REDUCES the threshold, making the sensor less apt to trip. Watch the yellow LEDs and adjust the LEV trimmers so the LEDs light when audio falls below the desired level.

The DELAY time trimmers determine the time the A-source audio must stay below the threshold before the silence sensor trips. Turning the trimmer clockwise increases the delay time. The normal range is from 3 sec. to 20 sec. (This range can be increased by removing R47 and R56. In this mode, the delay range will be from about 20 sec. to 35 sec.) NOTE: The shorter of the two delay settings always takes precedence: the unit will trip when the shorter of the two delays "times out". In most cases, the two delay trimmers should be set to about the same delay time.

The RED LED will indicate when the silence sensor has tripped. The GREEN LED will confirm when the B audio source is active.

**OPERATION**

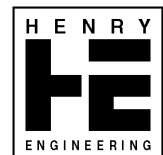
**MANUAL MODE:** To manually select between A and B source, set the SIL SEN switch to *OFF*. In this mode, a *maintained control input* will switch from the A to the B source. If there is no control input, the A source will be selected by default. The green LEDs indicate which audio source is active.

**AUTOMATIC MODE:** For automatic operation, set the SIL SEN switch to *ON*. In this mode, the silence sensor will automatically switch to the B source if the A source fails, loses a channel, or if the audio level drops below the threshold for the delay time set. The red LED indicates when the sensor has tripped; the green LEDs indicate which audio source is active. When the A source audio returns, AutoSwitch will switch back to the A source.

The ALARM switch enables the alarm relay. If it is *ON*, the alarm relay will operate when the silence sensor trips. The relay can be used to control an external alarm device or other equipment. If the ALARM switch is *OFF*, the alarm relay is disabled, although the automatic audio switching function will remain active.

**SPECIFICATIONS**

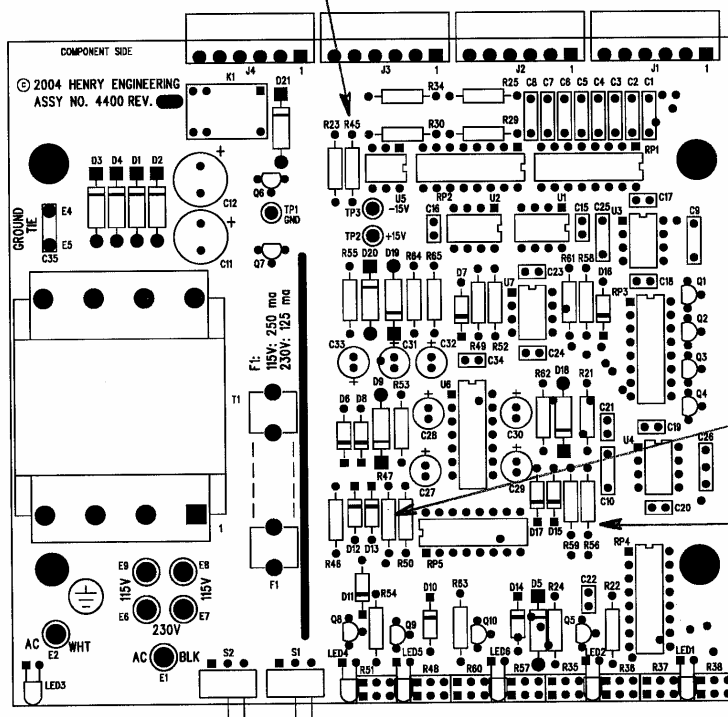
INPUT LEVEL	-6 to +4 dBu
INPUT IMPED	10K ohms bal, 5K ohms unbal
GAIN	-6 to +6 dB
OUTPUT LEVEL	+4 dBu nom, +24 dBu max
OUTPUT LOAD	600 ohms or higher per chan, bal
FREQ RESPONSE	DC to 20 kHz, +/- 0.25dB
NOISE LEVEL	90 dB below +4 dBu output
DISTORTION	.01%
MANUAL CONTROL	Maintained contact closure or 5 – 24 VDC
SILENCE SENSE LEV	10 to 40 dB below normal level
SILENCE SENSE DEL	3 – 35 seconds in two ranges
ALARM RELAY	SPDT dry contacts, 24VDC, 1A max
POWER INPUT	115/230 VAC, 50/60Hz, 3 W
APPROVAL	City of Los Angeles Elect. Test Lab
CONSTRUCTION	Steel enclosure
PHYSICAL DIMEN	5.75" w X 5.50" d X 1.60" h, 3 LBS



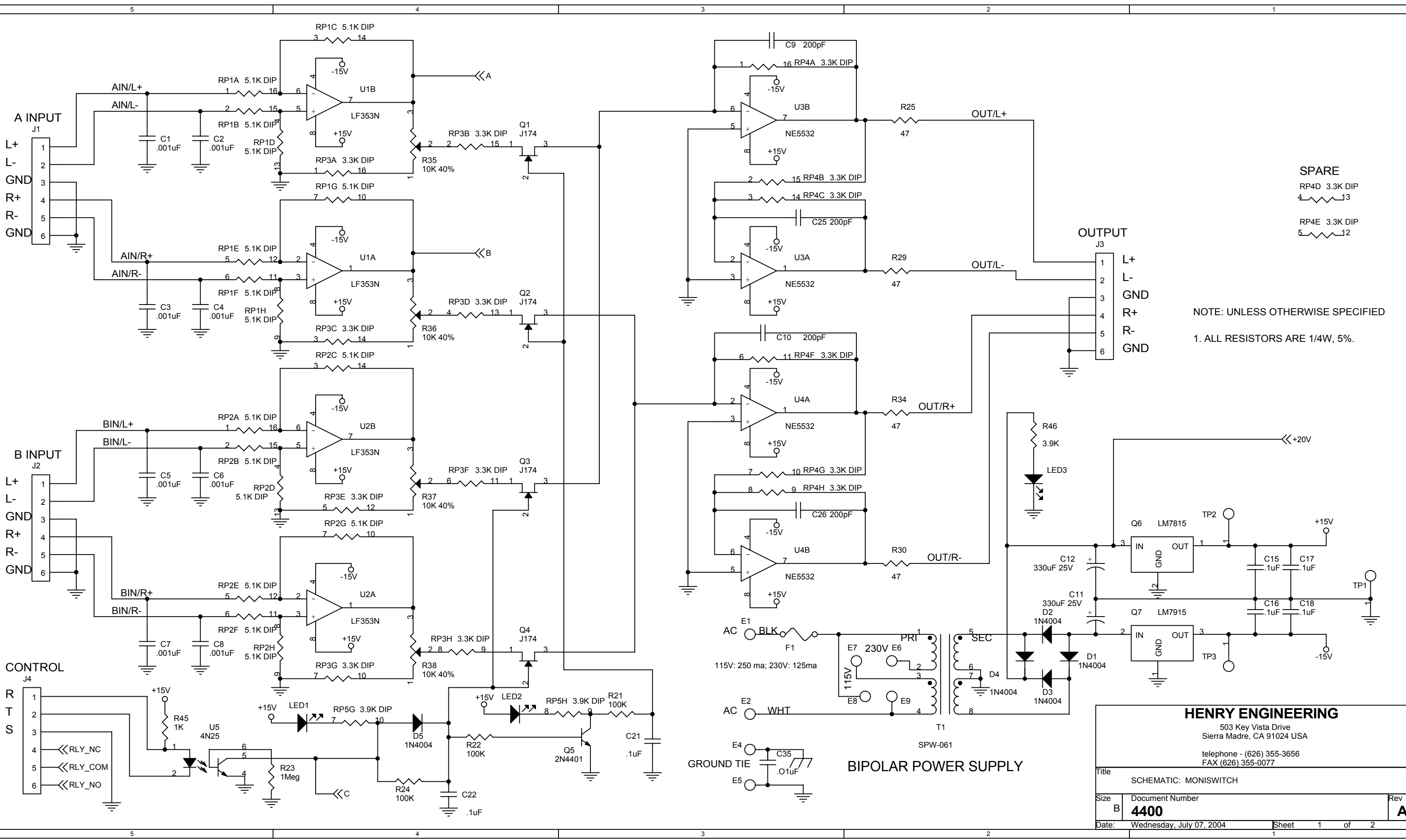
Specifications subject to change without notice.

Rev. B 9/04

**REMOVE R45 FOR DC INPUT CONTROL**



**REMOVE R47, R56 FOR EXTENDED DELAY RANGE**



SPARE  
 RP4D 3.3K DIP  
 4  
 RP4E 3.3K DIP  
 5

NOTE: UNLESS OTHERWISE SPECIFIED  
 1. ALL RESISTORS ARE 1/4W, 5%.

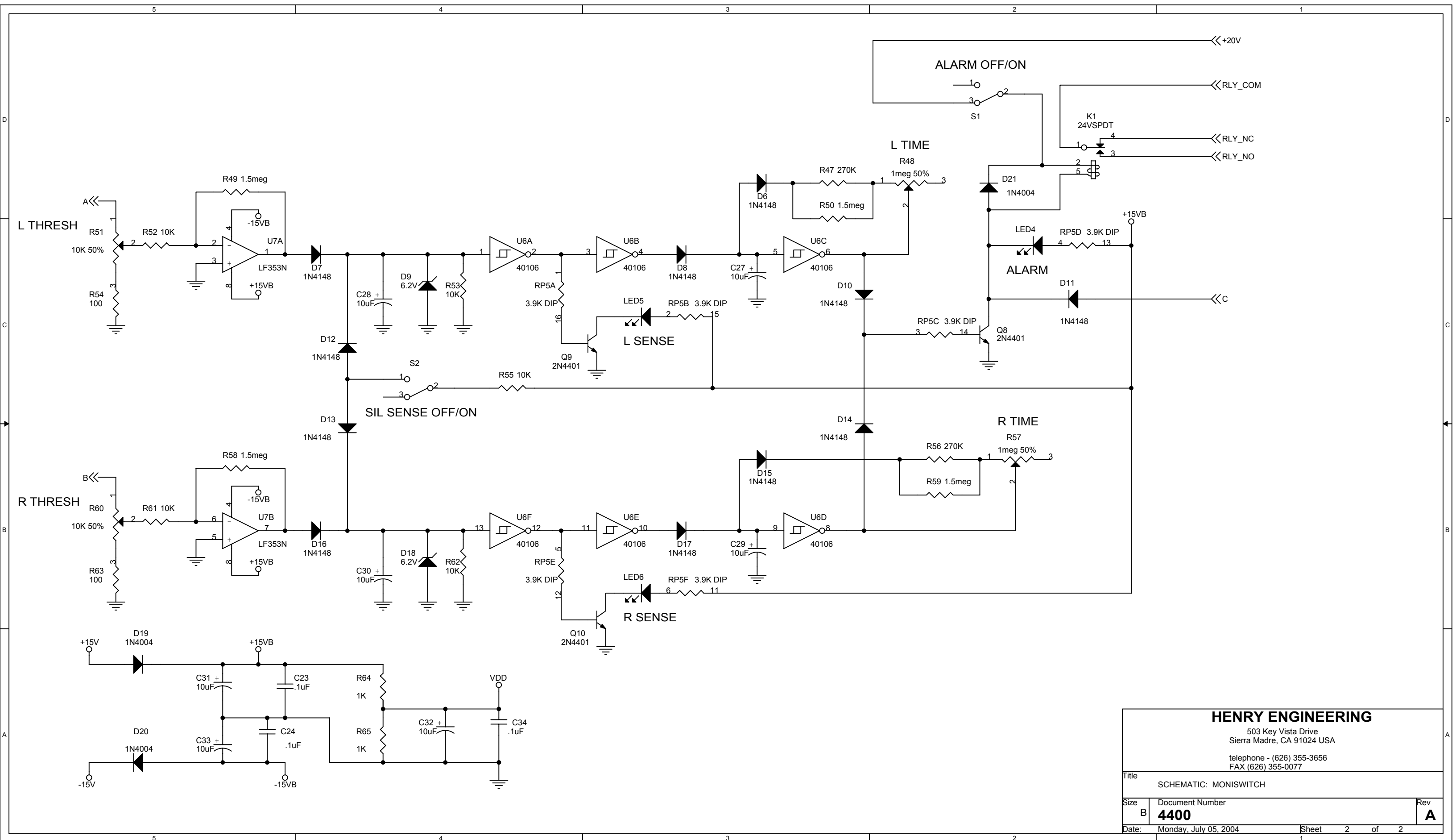
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**BIPOLAR POWER SUPPLY**



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