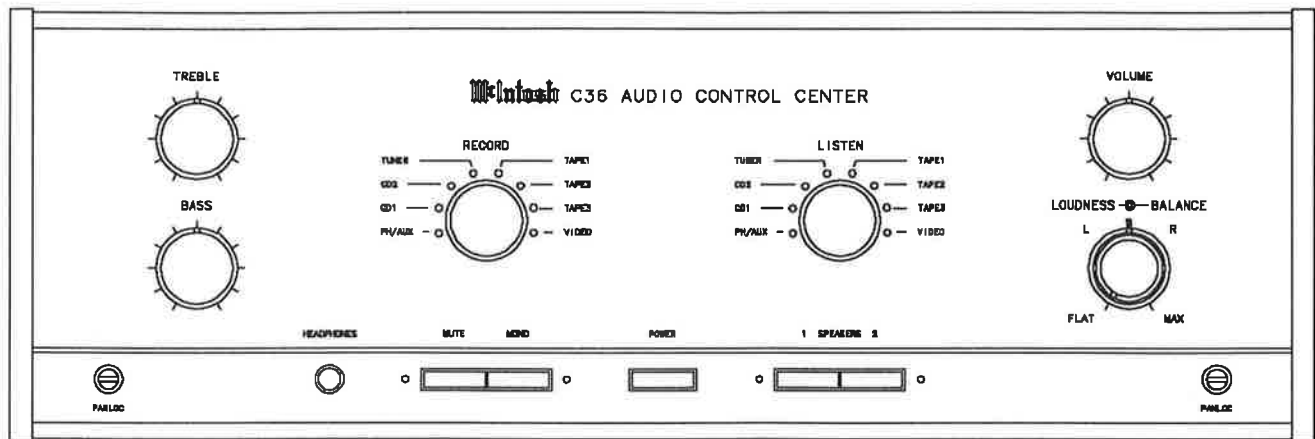


C 36

AUDIO CONTROL CENTER

For GR and GV
serial numbers



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Performance Specifications

FREQUENCY RESPONSE

+0, -0.5dB from 20Hz to 20,000Hz

RATED OUTPUT

2.5V at MAIN and SWITCHED 1 and 2 Outputs

MAXIMUM VOLTAGE OUTPUT

8V from 20Hz to 20,000Hz at MAIN and SWITCHED 1 and 2 Outputs

TOTAL HARMONIC DISTORTION

0.002% maximum from 20Hz to 20,000Hz at rated output

SENSITIVITY

Phono: 2.5mV for 2.5V rated output, (0.5mV IHF)

High Level: 250mV for 2.5V rated output, (50mV IHF)

SIGNAL-TO-NOISE RATIO, A-WEIGHTED

Phono: 90dB below 10mV input, (84dB IHF)
High Level: 105dB below rated output, (95dB IHF)

MAXIMUM INPUT SIGNAL

Phono: 90mV
High Level: 10V

INPUT IMPEDANCE

Phono: 47K ohms and 65pF Capacitance
High Level: 22K ohms

VOLTAGE GAIN

Phono To Tape: 40dB
Phono To Main: 60dB
High Level To Tape: 0dB
High Level To Main: 20dB

tone Controls

Bass and treble variable 12dB boost to 12dB cut

AC POWER OUTLETS

8 switched and 1 unswitched
Total current capacity 11.5 amperes, (1400 watts)

POWER REQUIREMENTS

120 Volts, 50/60Hz, 25 watts

MECHANICAL INFORMATION

Size: Front Panel measures 17-1/2 inches (44.5cm) wide by 5-3/8 inches (13.7cm) high. Chassis depth behind mounting panel, including clearance for connectors, is 15-1/2 inches (40cm). Knob clearance required in front of mounting panel is 1-1/2 inches (3.8cm).

Finish: Top section of front panel is glass with gold/teal nomenclature illumination. Bottom section is anodized aluminum. The chassis is black.

Mounting: Exclusive McIntosh developed PANLOC.

Weight: 14.5 pounds (6.6Kg) net, 26.5 pounds (12Kg) in shipping carton

Rear Panel

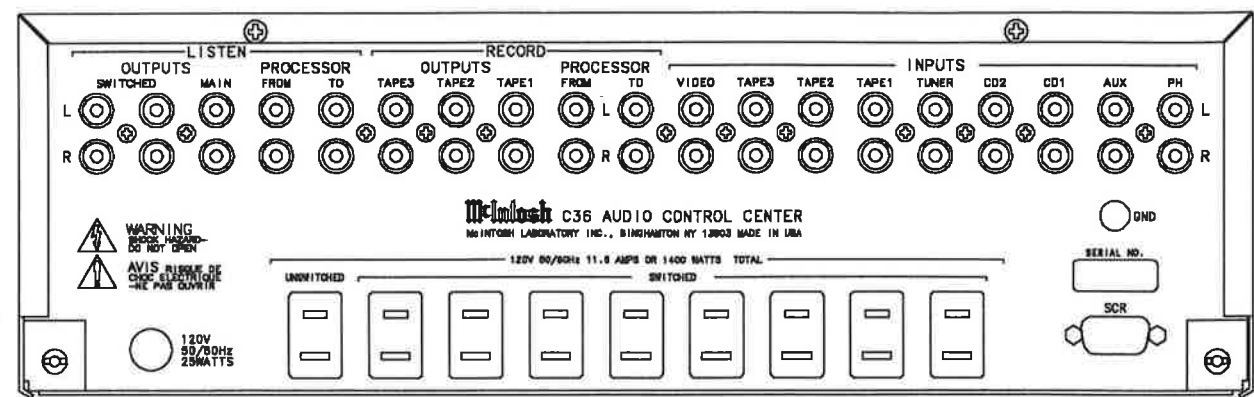


Fig. 1. Rear view

Notes

- 1. The heavy lines on the schematics denote the primary signal path.
- 2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at 120 volts, 50/60Hz.
 - b. All voltages are $\pm 10\%$ with respect to ground. A high impedance (10 megohm) voltmeter must be used.
- 3. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are in microfarads (μF).
 - c. Inductor values are in microhenries (μH).
- 4. The voltages enclosed in a box are signal voltages that are measured with a 2.5mV, 1kHz signal connected to both channels at the PHONO input jacks.

Front panel controls are set at:
BALANCE CENTER DETENT
INPUT SELECTORS PHONO/AUX
LOUDNESS FLAT
TONES CENTER DETENT
VOLUME CLOCKWISE

- 5. On PC Board Drawings, Square Pad Indicates:
 - a. Polarized Capacitors - Positive
 - b. Diode - Cathode
 - c. Others - Pin 1

WARNING:
Parts marked with the symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Section Locations

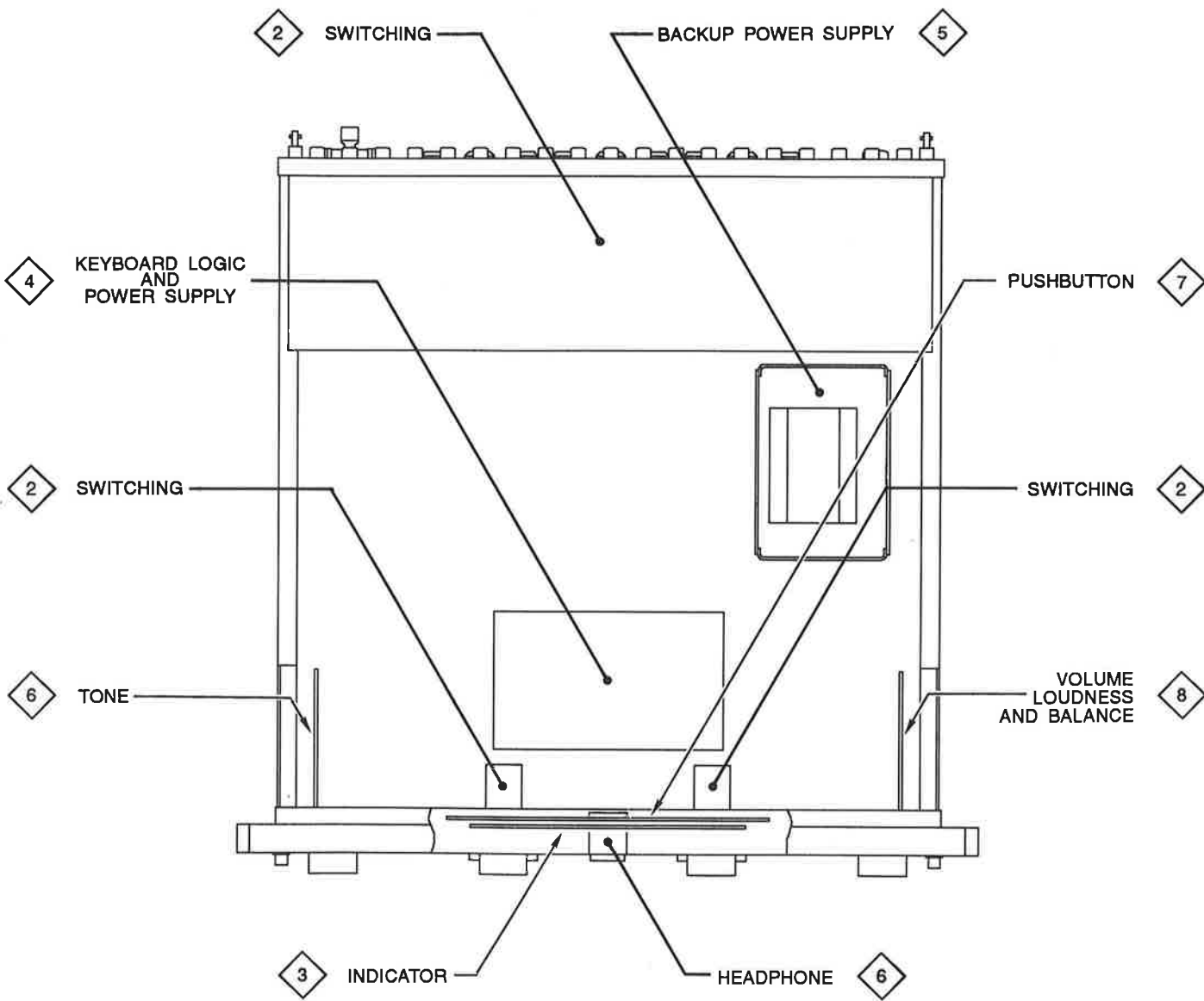
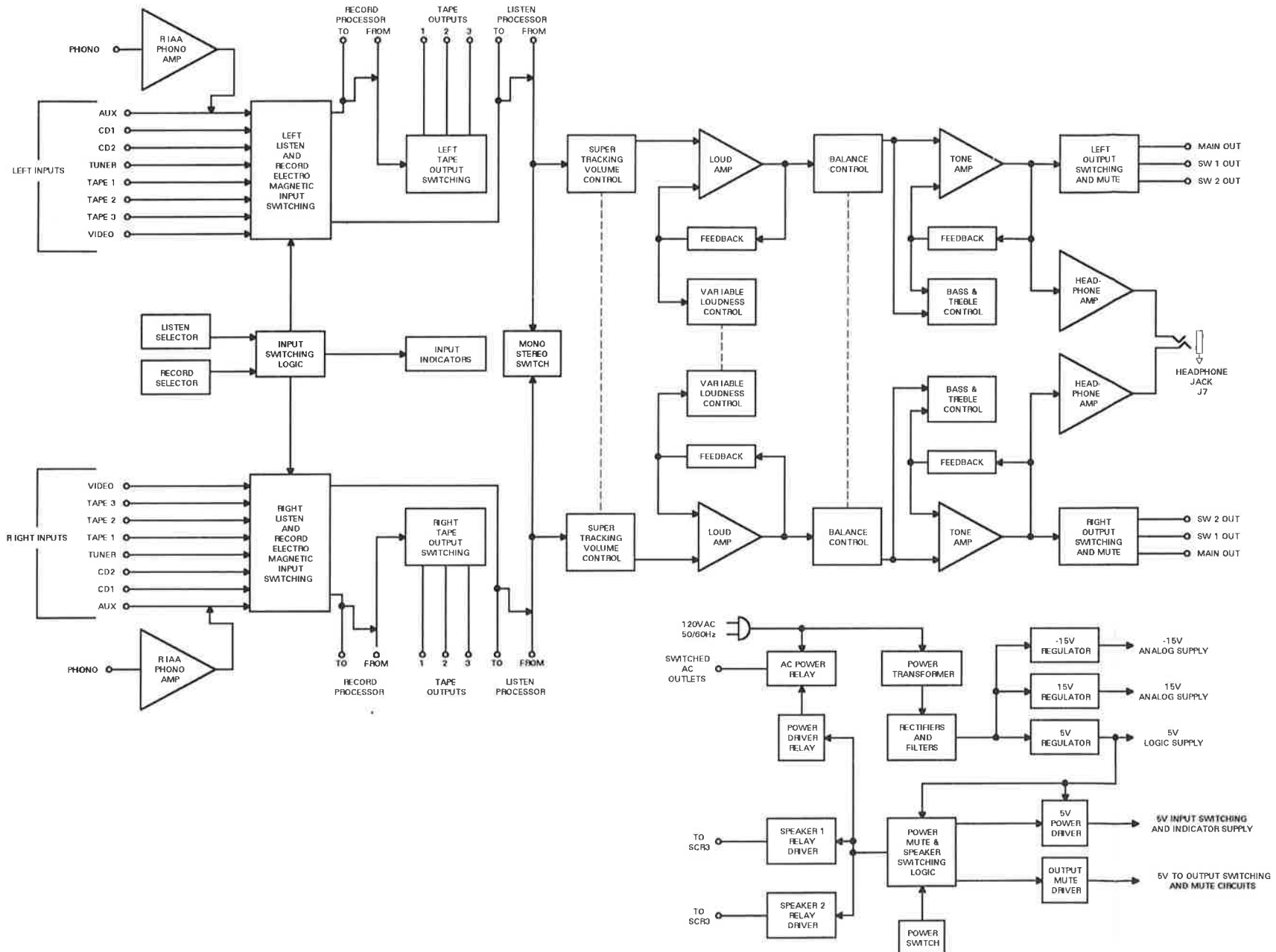


Fig. 2. Top view with cover removed

Block Diagram



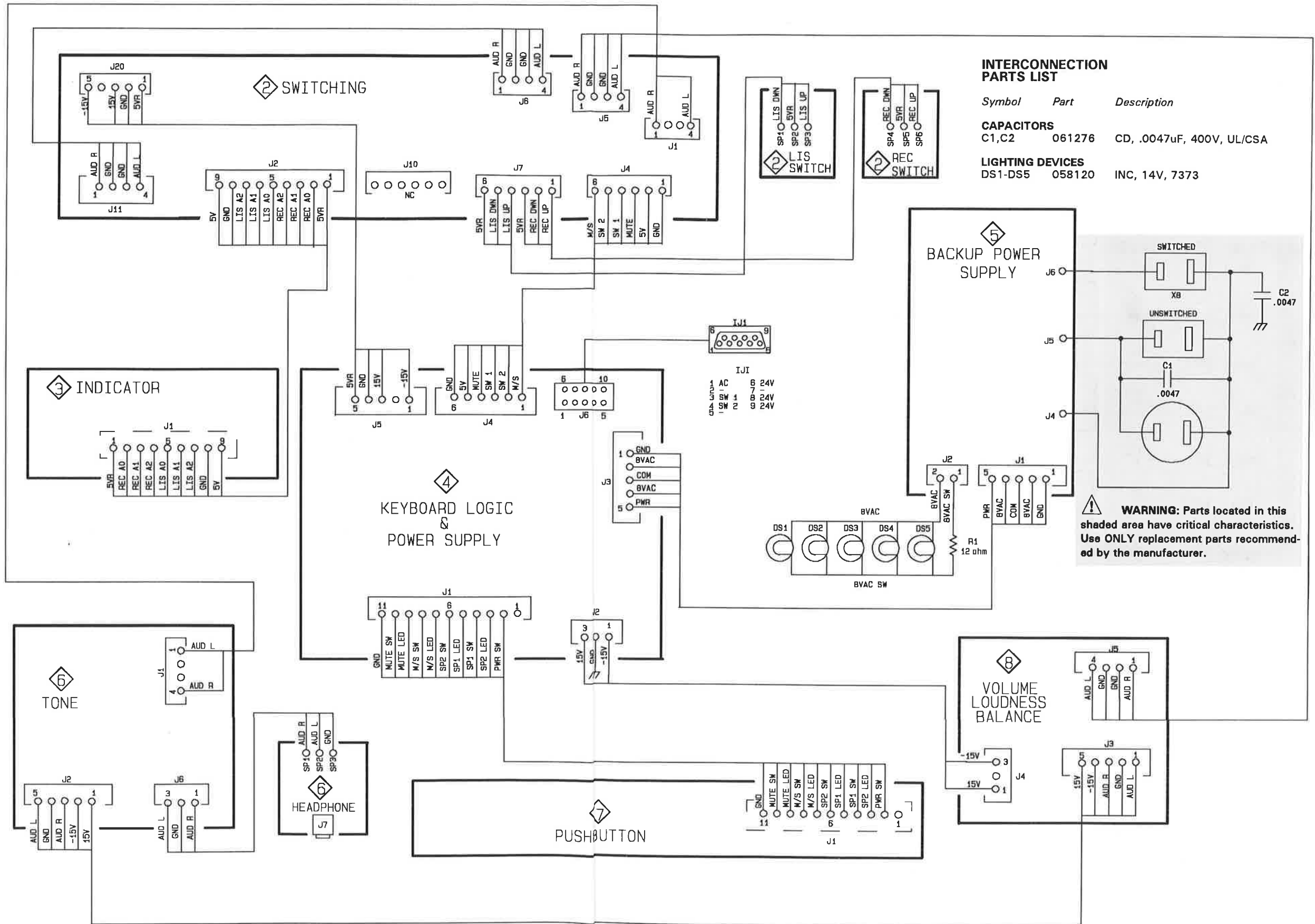
FRONT PANEL and TRIM PARTS LIST

Part	Description	Part	Description
01748500	Pushbutton, Red	04747700	Front Panel, Glass, Wide
01748600	Pushbutton, Black	04800100	Front Panel, Complete
01837500	Top Panel Rail	04800200	Front Panel, Complete, Wide
01844000	Top panel Rail, Wide	09018700	Balance Knob, Rear
01841700	Bottom Extrusion	09021500	Bass, Treble, Volume Knob
01844400	Bottom Extrusion, Wide	09021700	Loudness Knob, Front
10823200	End Cap	09022500	Record, Listen Knob
04737800	Front Panel, Glass	10401700	Knob Felt Washer, 3/4" Dia

INSTALLATION PARTS LIST

Part	Description
00350800	Panloc Shelf Bracket, Right
00350900	Panloc Shelf Bracket, Left
01721800	Plastic Foot, Secure W/100159 Screws
03967100	Mounting Template
03982800	Mounting Template, Wide
04340100	Mounting Strip
04514200	Hardware Package
10015900	Mach Screw, 10-32 x 3/4

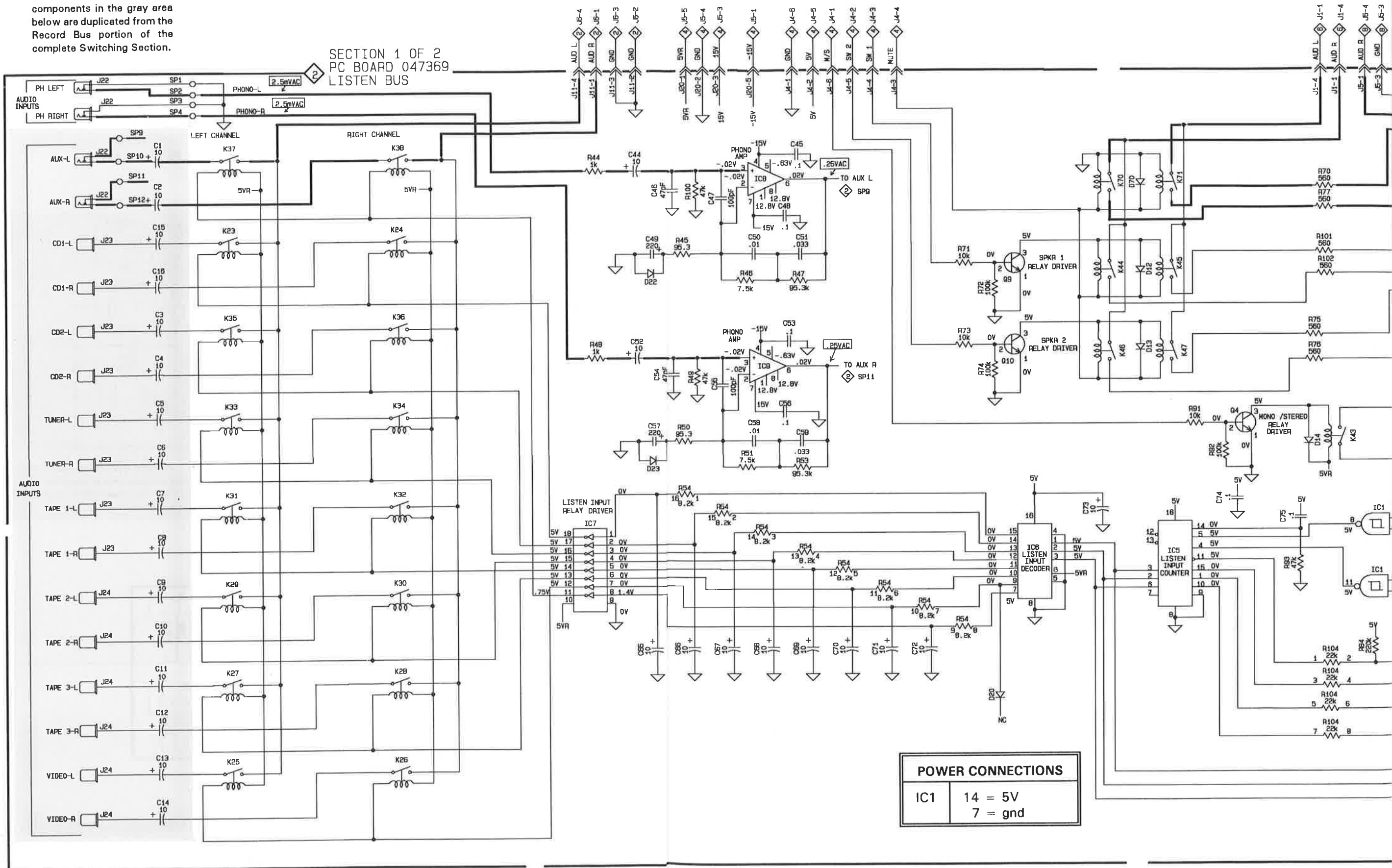
Interconnection Diagram

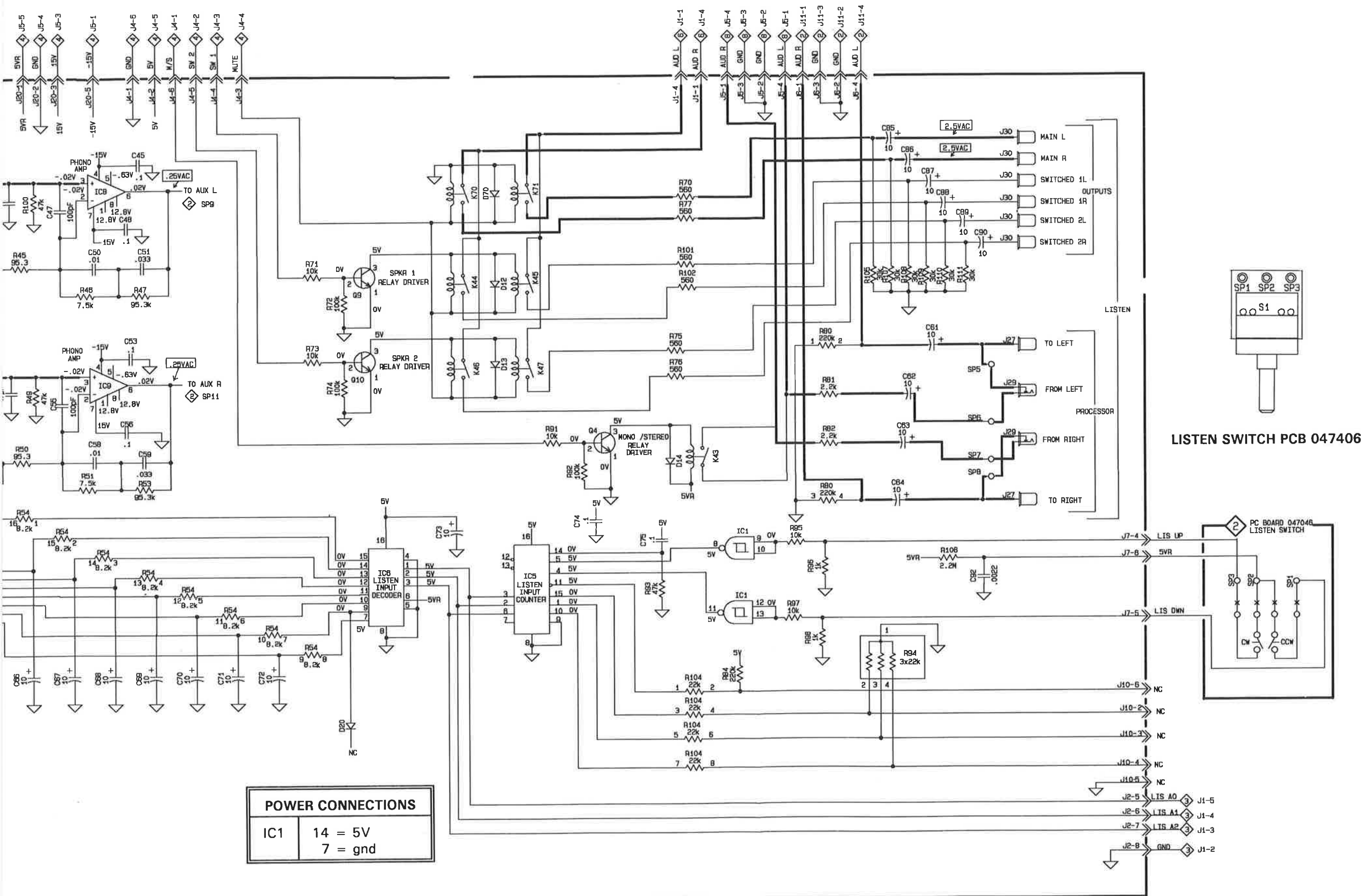


2 Switching

NOTE: For Technical clarity, components in the gray area below are duplicated from the Record Bus portion of the complete Switching Section.

SECTION 1 OF 2
PC BOARD 047369
LISTEN BUS





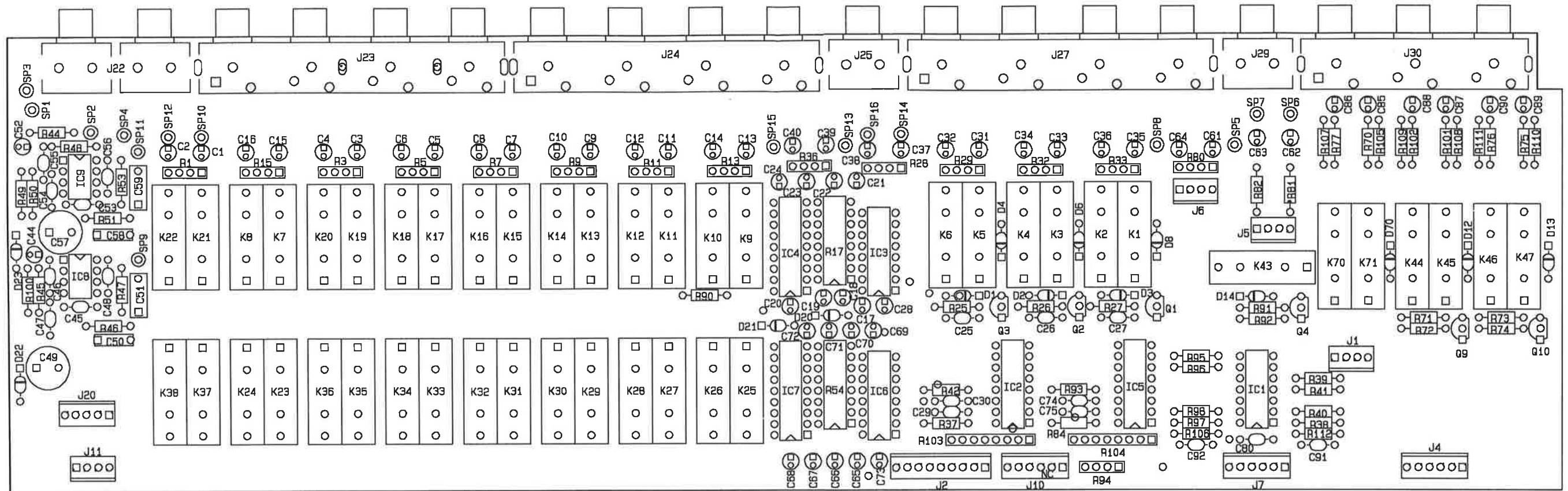
2



<i>Symbol</i>	<i>Part</i>	<i>Description</i>
DIODES		
D1-D4,D6, D8,D12-D14, D20-D23,D70	070047	SIG, 75V, 150mA, 1N4148
INTEGRATED CIRCUITS		
IC1	133192	QUAD, 2 INPUT, SCHMITT TRIGG., MC74HC132AN
IC2,IC5	133171	CMOS, Presettable Binary Up/Down Counter, 74HC193N
IC3,IC6	133170	CMOS, 1-of-8 Decoder/Latch, MC74HC237N
IC4,IC7	133169	Octal Darlington Transistor Array, ULN2801
IC8,IC9	133067	Operational Amp, Low Noise, NE5534AN
RELAYS		
K1-K38, K43-K47, K70,K71	087050	SPST, TV-15,5V, V _f B-5HU
SWITCHES		
S1,S2	146231	Input Selector Switch
TRANSISTORS		
Q1-Q3	132182	PNP, DAR, MPSA64
Q4,Q9,Q10	132223	NPN, MPS4124

Switching

2



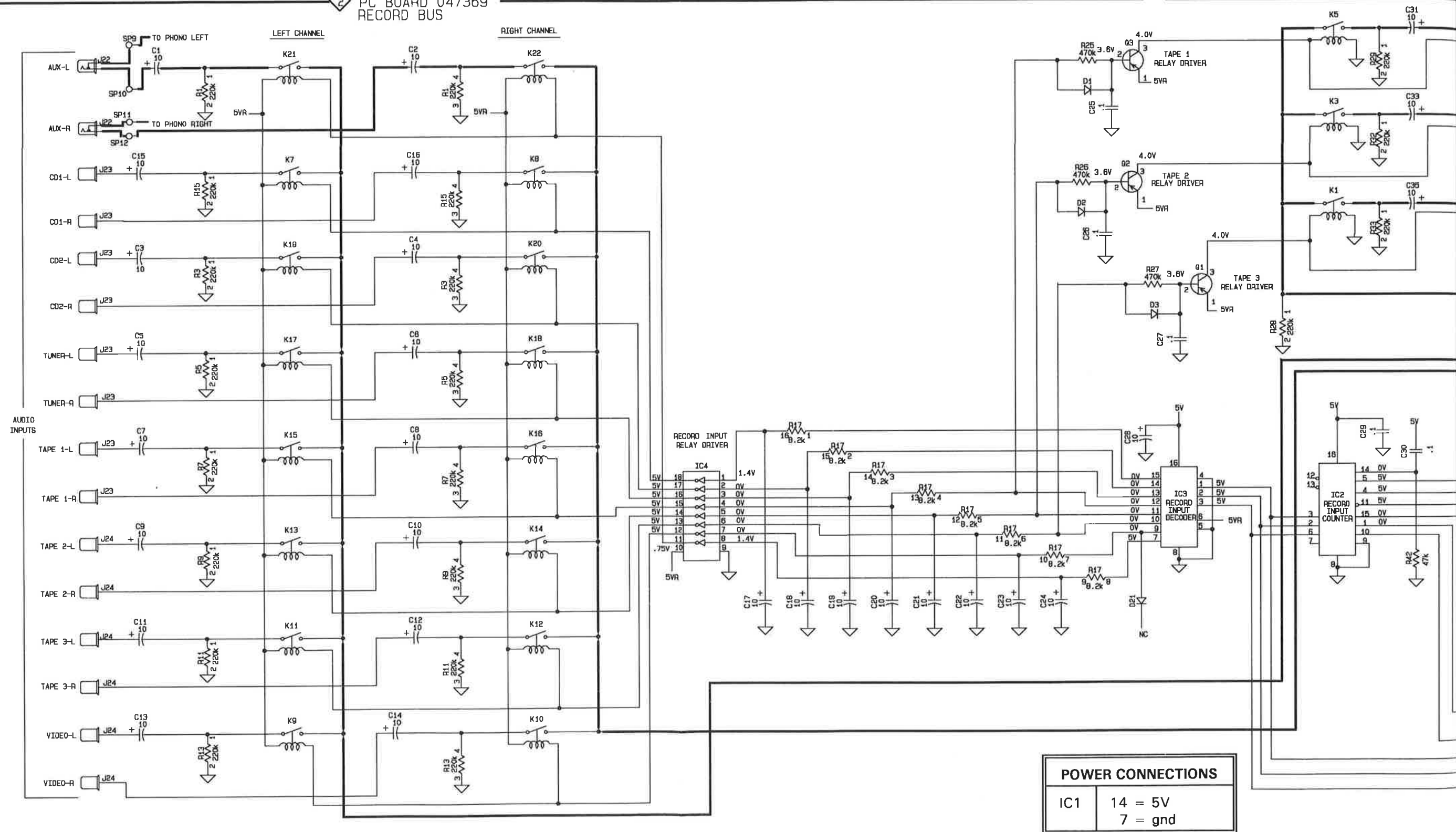
SWITCHING PCB 047369

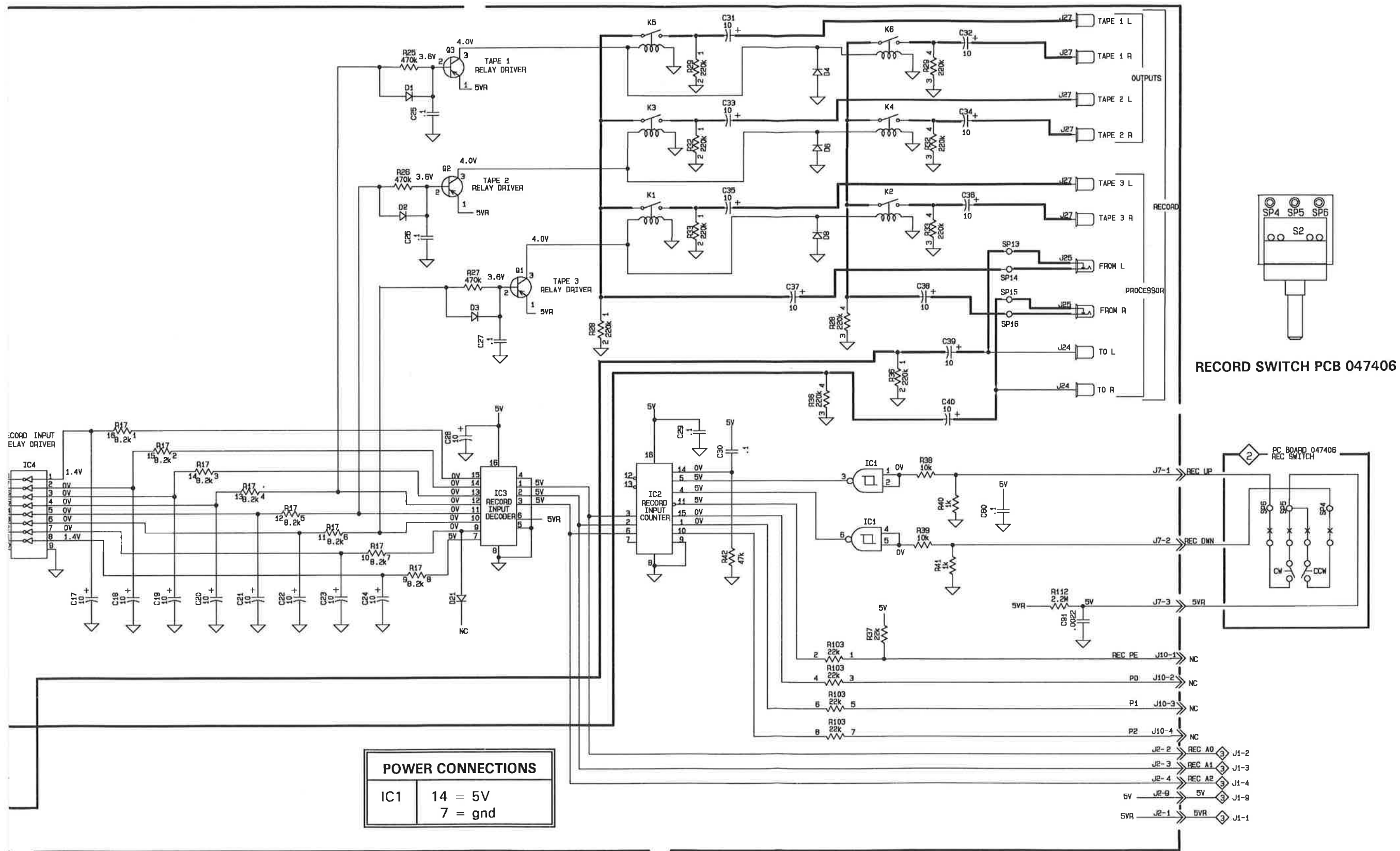
SWITCHING PARTS LIST

Symbol	Part	Description
DIODES		
D1-D4,D6, D8,D12-D14, D20-D23,D70	070047	SIG, 75V, 150mA, 1N4148
INTEGRATED CIRCUITS		
IC1	133192	QUAD, 2 INPUT, SCHMITT TRIGG., MC74HC132AN
IC2,IC5	133171	CMOS, Presetable Binary Up/Down Counter, 74HC193N
IC3,IC6	133170	CMOS, 1-of-8 Decoder/Latch, MC74HC237N
IC4,IC7	133169	Octal Darlington Transistor Array, ULN2801
IC8,IC9	133067	Operational Amp, Low Noise, NE5534AN
RELAYS		
K1-K38, K43-K47, K70,K71	087050	SPST, TV-15,5V, VFB-5HU
SWITCHES		
S1,S2	146231	Input Selector Switch
TRANSISTORS		
Q1-Q3	132182	PNP, DAR, MPSA64
Q4,Q9,Q10	132223	NPN, MPS4124

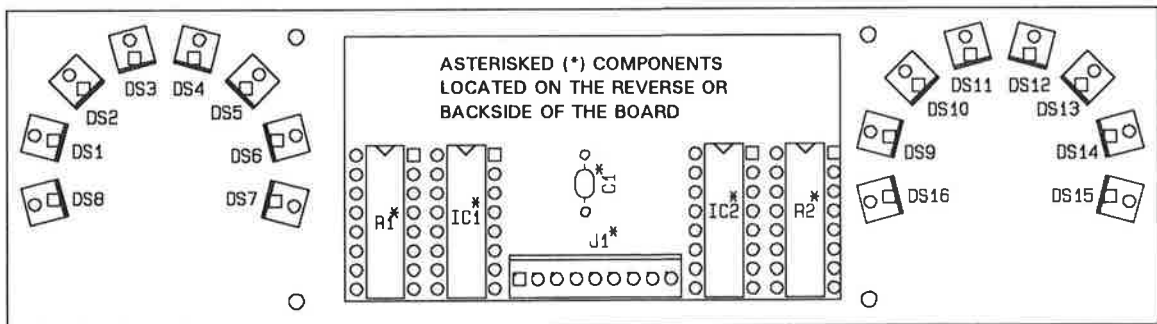
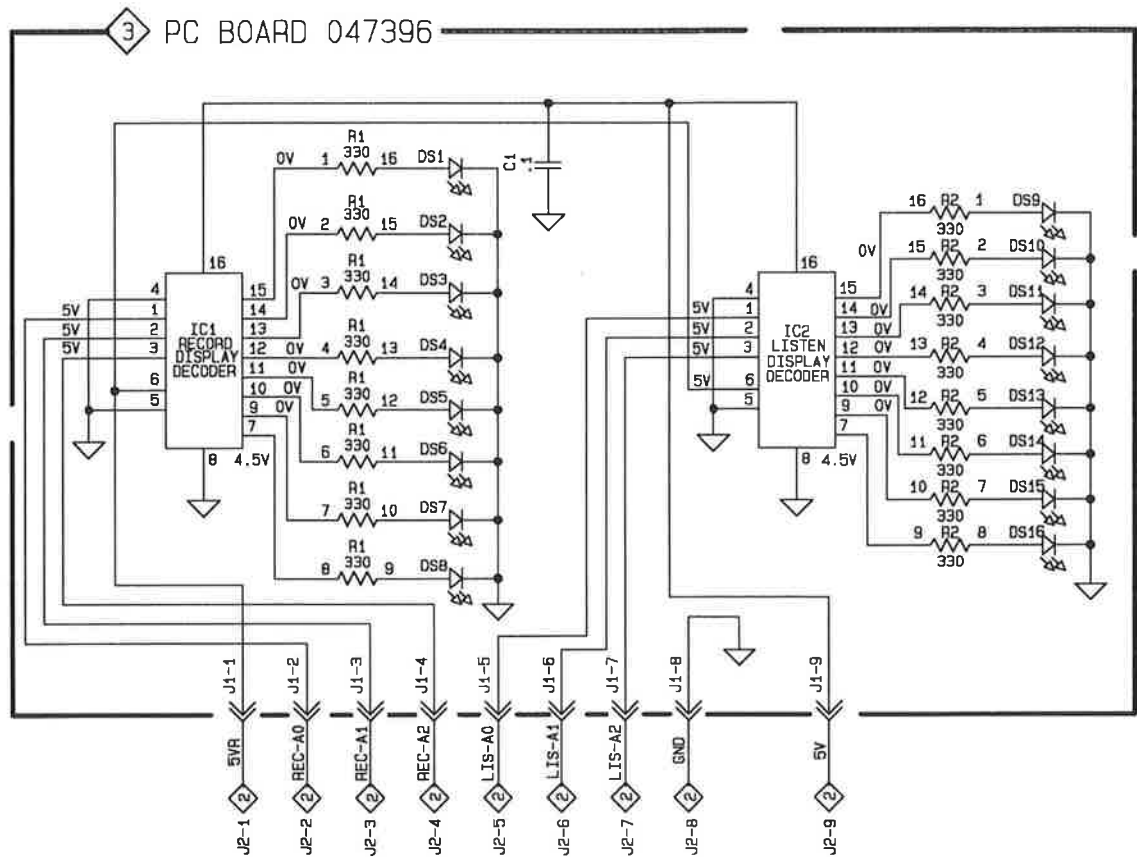
Switching 2

SECTION 2 OF 2
PC BOARD 047369
RECORD BUS





3 Indicator



INDICATOR PCB 047396

INDICATOR PARTS LIST

Symbol	Part	Description
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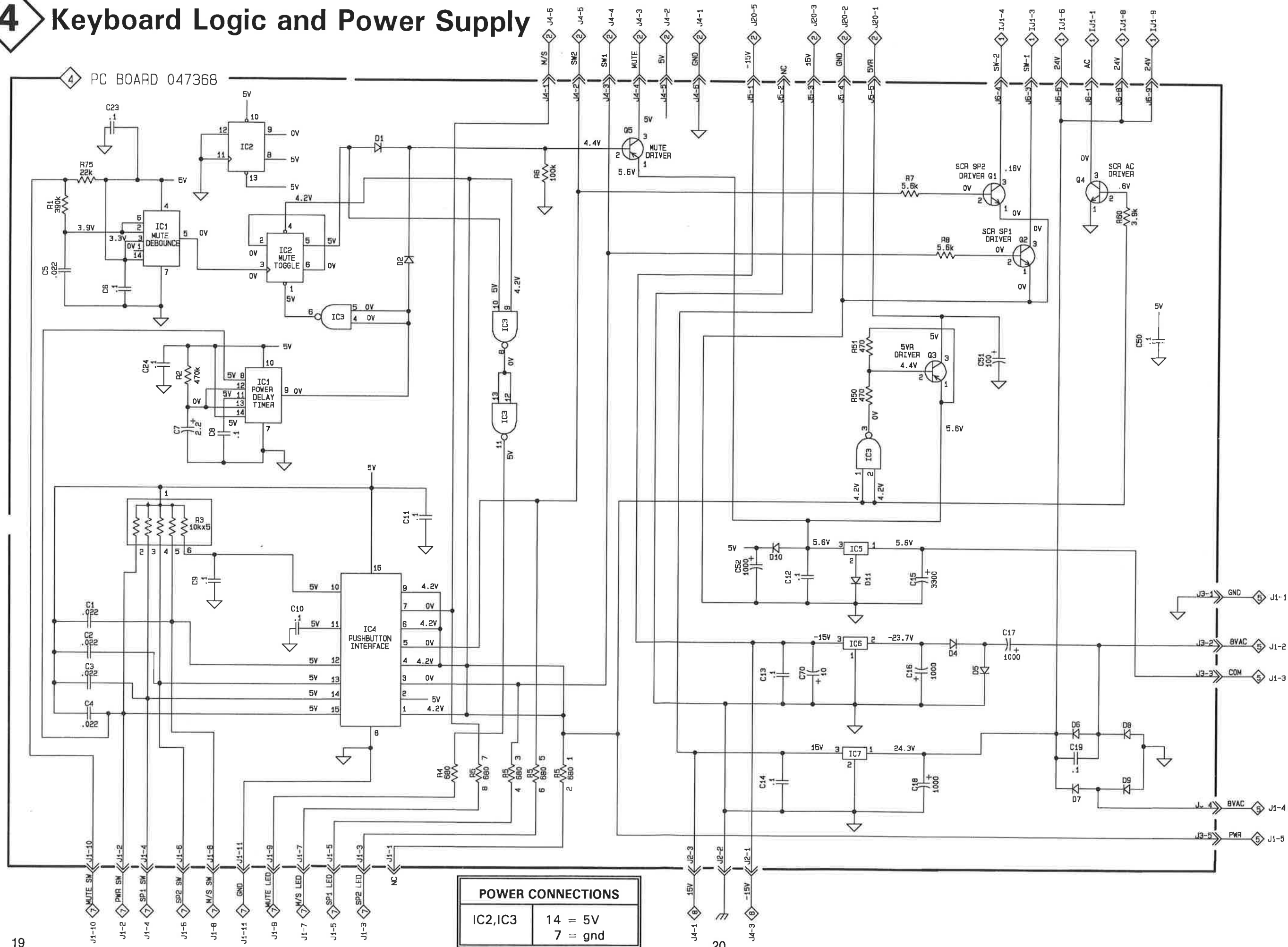
INTEGRATED CIRCUITS

IC1,IC2	133170	CMOS, 1-of-8 Decoder/Latch, MC74HC237N
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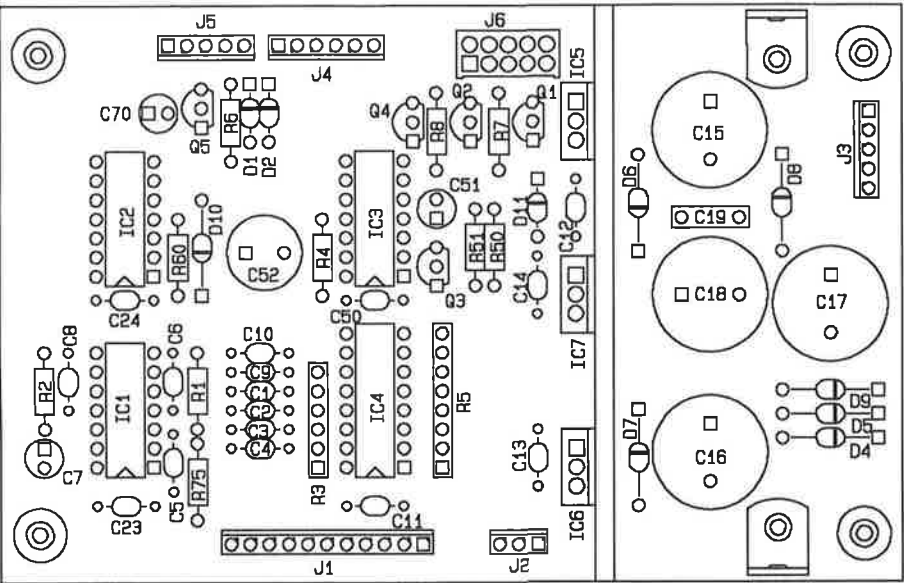
LIGHTING DEVICES

DS1-DS16	058109	LED, SBR5551SQR
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Keyboard Logic and Power Supply



Keyboard Logic and Power Supply 4

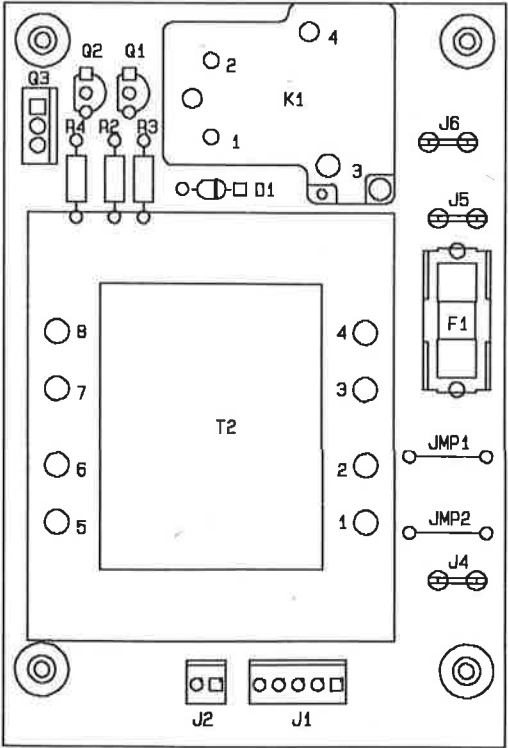
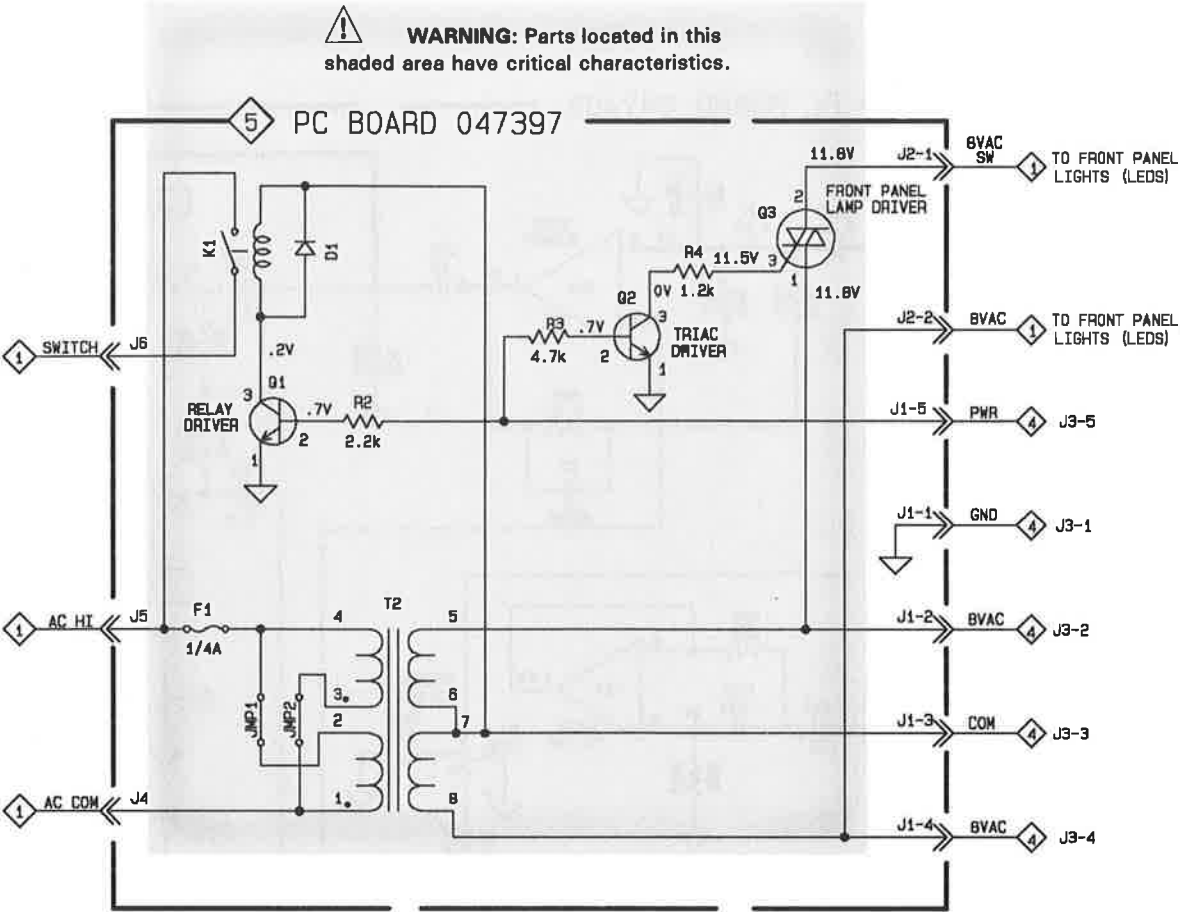


KEYBOARD LOGIC AND POWER SUPPLY PCB 047368

KEYBOARD LOGIC PARTS LIST

Symbol	Part	Description
DIODES		
D1,D2,D11	070047	SIG, 75V, 150mA, 1N4148
D4-D10	070131	RECT, 400V, 1A, 1N4004
INTEGRATED CIRCUITS		
IC1	133116	Dual Timer, NE556N
IC2	133190	CMOS, Dual D Flip-Flop, 74HC74N
IC3	133161	CMOS, Quad 2-input NAND Gate, 74HC00N
IC4	133142	Quad Cycloic Switch, TC9130P
IC5	133108	+5V Regulator, MC7805CT
IC6	133153	-15V Regulator, MC79M15CT
IC7	133154	+15V Regulator, MC78M15CT
TRANSISTORS		
Q1,Q2,Q4	132171	NPN, MPSA05
Q3,Q5	132182	PNP, DAR, MPSA64

Backup Power Supply 5



BACKUP POWER SUPPLY PCB 047397

BACK-UP POWER SUPPLY PARTS LIST

Symbol	Part	Description
DIODES		
D1	070047	SIG, 75V, 150mA
FUSES		
F1	089053	Fuse, SB, .25A, 250V
RELAYS		
K1	087054	SPST, 12VDC, JT1AE
TRANSISTORS		
Q1,Q2	132171	NPN, MPSA05
Q3	131018	Triac, 2N6070A
TRANSFORMERS		
T2	159211	Power

6> Tone



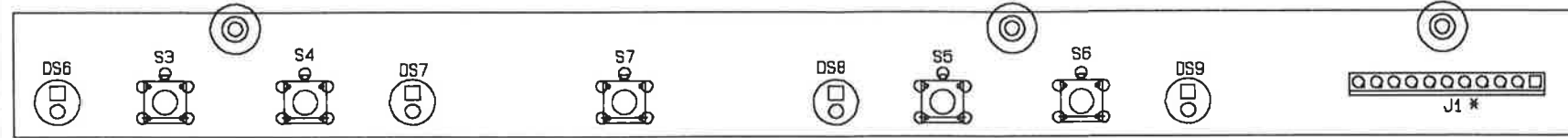
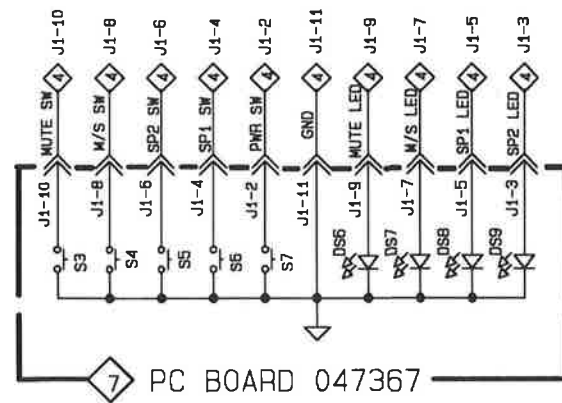
TONE PARTS LIST

<i>Symbol</i>	<i>Part</i>	<i>Description</i>
INTEGRATED CIRCUITS		
IC2	133094	Dual Operational Amp, NE5532N
IC3,IC6	133189	Operational Amp, Dual MC33178P
JACKS		
J7	117454	Headphone Jack, 1/8", PCB

POWER CONNECTIONS	
IC2,IC3,IC6	8 = 15V 4 = -15V

Pushbutton

7



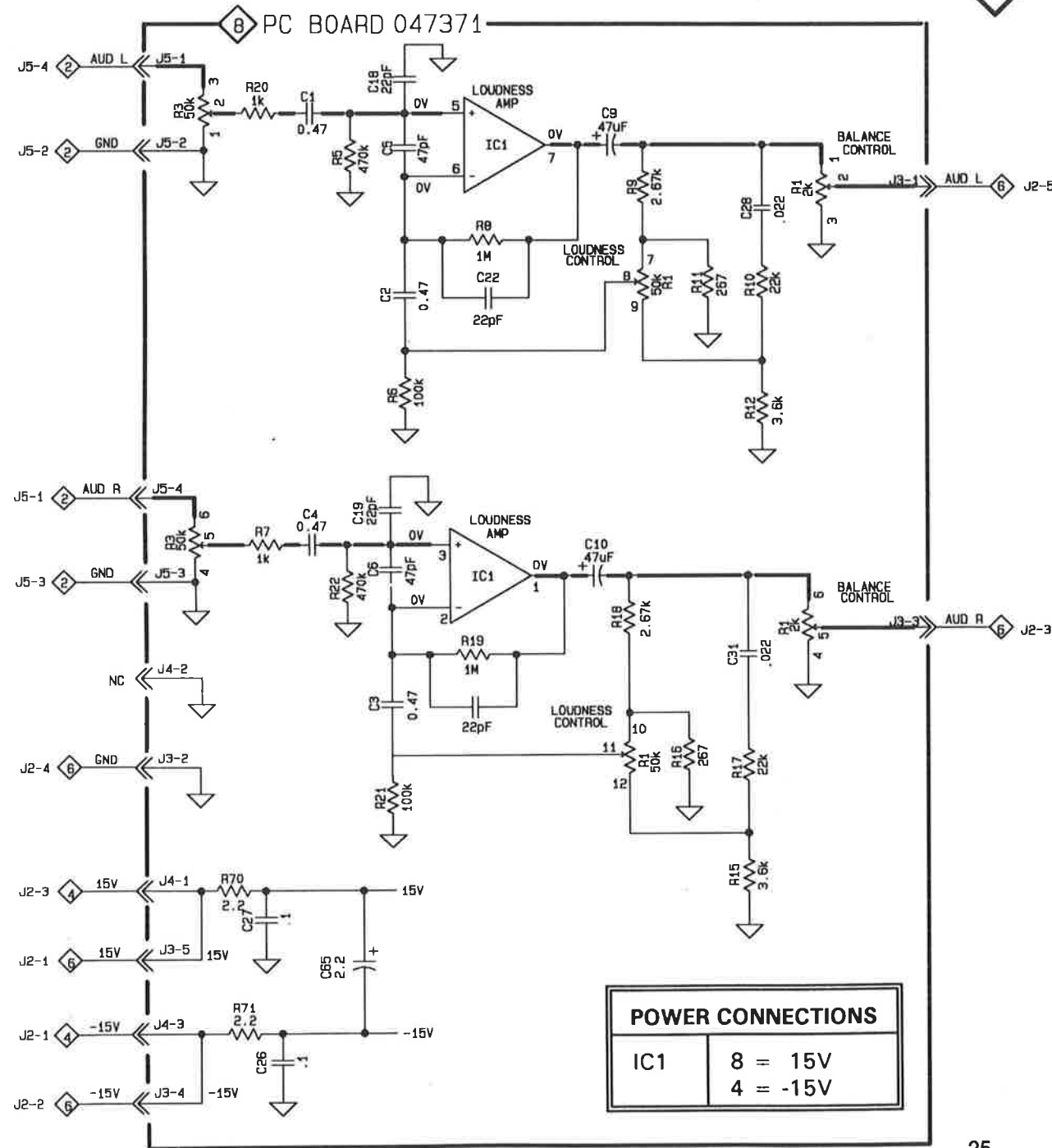
ASTERISKED (*) COMPONENTS
LOCATED ON THE REVERSE OR
BACKSIDE OF THE BOARD

PUSHBUTTON PARTS LIST

Symbol	Part	Description
LIGHTING DEVICES		
DS6-DS9	058078	LED, Red, AND 207R
SWITCHES		
S3-S7	150051	TACT, MOMENTARY

Volume, Loudness and Balance

8



VOLUME, LOUDNESS AND BALANCE PARTS LIST

Symbol	Part	Description
INTEGRATED CIRCUITS		
IC1	133094	Dual Operational Amp, NE5532N

