



CRATE

G-60 AMPLIFIER

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We would like to take this opportunity to thank you for selecting a Crate product, and to tell you of our commitment to the design and manufacture of only the finest musical instrument amplification equipment; built for you, the musician.

You have purchased one of the most innovative sound amplification devices available today. Your Crate amplifier gives you more performance features than ever before; features that you, the musician, have asked for.

Your Crate amplifier is an American product, manufactured at our factory in St. Louis, Missouri. Only the finest available components and materials are used in the manufacture of each amplifier.

All Crate amplifiers are subject to seven or more inspection and testing stops to assure you of a high quality product. The final test for each amp is conducted by a trained musician with the instrument the amp was designed for. Any unit that does not meet the standards of his discriminating ear will not be passed.

Since all Crate products are designed, developed, and manufactured through the cooperative efforts of engineers and professional musicians, the end result is a product that responds to the musician's audio requirements, and a product that will serve your needs for years to come.

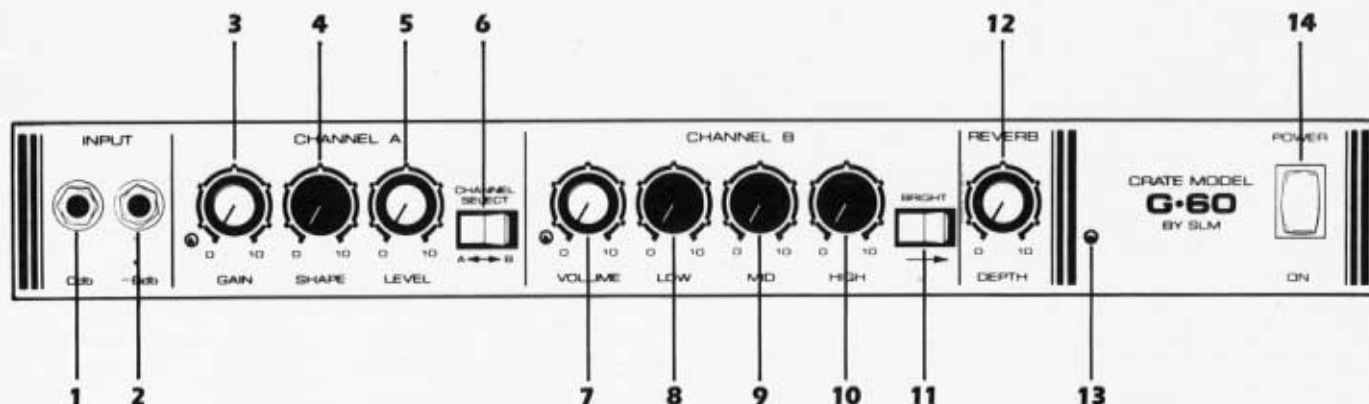
TECHNICAL SPECIFICATIONS

Output Power Rating	60 watts RMS @ 5% THD 4 ohm load—120 VAC line
Speaker Size and Rating	G-60: Custom Design 12" with 1½" voice coil Power Handling 60 watts RMS G-60/GT: Celestion G12M-70
Bass Control	30 db range @ 100 Hz
Mid Control	12 db range @ 1 KHz
Treble Control	26 db range @ 5 KHz
Bright Switch	8 db boost @ 6 KHz
Input Impedance	220K ohms/"0 db" Input 44K ohms/"-6 db" Input
Maximum Input Signal Level Accepted	4 volts, peak to peak/"0 db" Input 8 volts, peak to peak/"-6 db" Input
Total System Gain	Channel A: 92 db @ 1 KHz (Shape @ 0, Bright Switch off) Channel B: 62 db @ 1 KHz (Controls @ 10, Bright Switch off)
Signal to Noise Ratio	Channel A: 68 db—with Gain @ 10, Shape @ 0, Level @ 10 Channel B: 60 db—with all controls @ 10, Bright Switch off
Input Power Requirements	120 VAC, 60 Hz, 200 watts max
Fuse Rating and Type	2 amp, 250V internal
Cabinet Size and Weight	17½" H x 18¼" W x 9¾" D 34 lbs.

CAUTION: To reduce the risk of electric shock, do not remove chassis. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Specifications subject to change without notice.

FEATURES and FUNCTIONS



FRONT PANEL—INPUT SECTION

- 0 dB INPUT JACK:** This input accepts a standard 1/4" phone plug and is suitable for any low to line level signal source such as an electric guitar.
- 6 dB INPUT JACK:** This input also accepts a standard 1/4" jack but is padded 6 dB for hotter inputs such as tape decks or guitars with hot pickups. If both jacks are used, this input is not padded and will be equal to the 0 dB input jack.

CHANNEL A CONTROLS

- GAIN CONTROL:** This control sets the amount of gain for channel A and is used to vary the amount of distortion. Minimal distortion is achieved with this control rotated counterclockwise. A fully clockwise setting creates maximum distortion.
- SHAPE CONTROL:** This is the overall tone control for Channel A. When turned to the left, a setting with heavy emphasis on mid range is achieved. When rotated to the right, the amp creates a "fat" sound with extra boost on lows and highs.
- LEVEL CONTROL:** The overall volume of Channel A is controlled with this knob and should be used in conjunction with the GAIN CONTROL (#3).

- CHANNEL SELECT SWITCH:** This switch is used to select between Channel A and Channel B. When using the optional footswitch, this switch should be in the Channel A position.

CHANNEL B CONTROLS

- VOLUME CONTROL:** This control sets the overall listening level of Channel B. This control is independent of any setting made in Channel A.
- LOW CONTROL (Bass):** The desired amount of "Bottom" or "Warmth" may be increased or decreased with this knob.
- MID CONTROL (Mid):** The tonal qualities of the midrange are very important to a good guitar sound. This knob can "thin-out" the sound when turned down, or "fatten-up" the tone when larger amounts are used.
- HIGH CONTROL (Treble):** This knob will affect the upper harmonic range of the guitar. Boosting it sharpens or adds crispness to the sound. For additional effect, use this control in conjunction with the Bright switch (#11).
- BRIGHT SWITCH:** This switch affects the brilliance of the guitar's sound by adding additional

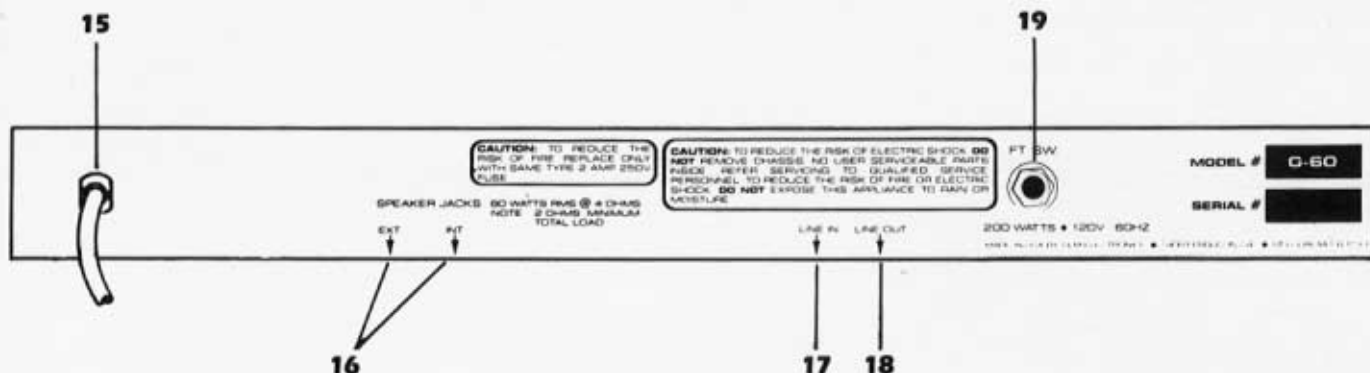
"bite" or sharpness. This switch affects both Channel A and B.

- DEPTH CONTROL (REVERB):** This control allows the player to alter the apparent acoustical qualities of a room. The sound can be altered from very "Flat" or "Dry" when the control is turned off, to that of a concert hall when used in larger amounts.

POWER

- ON/OFF LED INDICATOR:** The amplifier is on when this L.E.D. is lit.
- ON/OFF SWITCH (On):** This is a two position switch, the down position will turn the unit on, while the up position off.

FEATURES and FUNCTIONS



REAR PANEL

- 15. POWER CORD:** Be sure the amplifier is properly plugged into a safely wired AC outlet before use.
- 16. EXTERNAL SPEAKER JACKS:** This jack is used for additional speaker hookup. The G-60 external speaker jack is hooked up in parallel so adding additional speakers will lower the total load impedance of the power amp. Do not go below 2 ohms total load impedance.
- 17. LINE IN JACK:** This jack is used as a direct input to the power amp. It can be used in conjunction with the LINE OUT jack for an effect loop.
- 18. LINE OUT JACK:** This jack is used to link the G-60 to additional amplifiers or to connect the amp to a tape recorder. Simply run a cable from the output of this jack to the input of another amplifier or tape deck. External speakers cannot be hooked up to this jack.
- 19. FOOTSWITCH JACK:** This jack is to be used with the Channel Selector/Reverb footswitch. When the footswitch is in use, the front panel channel selector switch (6) should be in the Channel A position.

LIMITED WARRANTY

SLM Electronics warrants this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase to the original purchaser and is not transferable. Speakers, tubes, and meters carry a ninety (90) day warranty. This warranty is subject to the conditions, exclusions, and limitations hereinafter set forth.

Excluded from this warranty are defects caused by wear and tear, misuse, neglect, alterations and modifications, or act of nature. Such determinations will be made by SLM Electronics. Warranty is also void if:

- The original retail purchase is not made from an Authorized Crate or Audio Centron dealer;
- The serial number affixed to the product is altered, defaced or removed.

All parts costs will be borne by SLM Electronics within the warranty period. Labor costs will be covered within the warranty period according to rate schedules established by SLM Electronics. Warranty service may be done by SLM Electronics or an SLM Authorized Field Service Center. Transportation charges involved in warranty service are the sole responsibility of the purchaser.

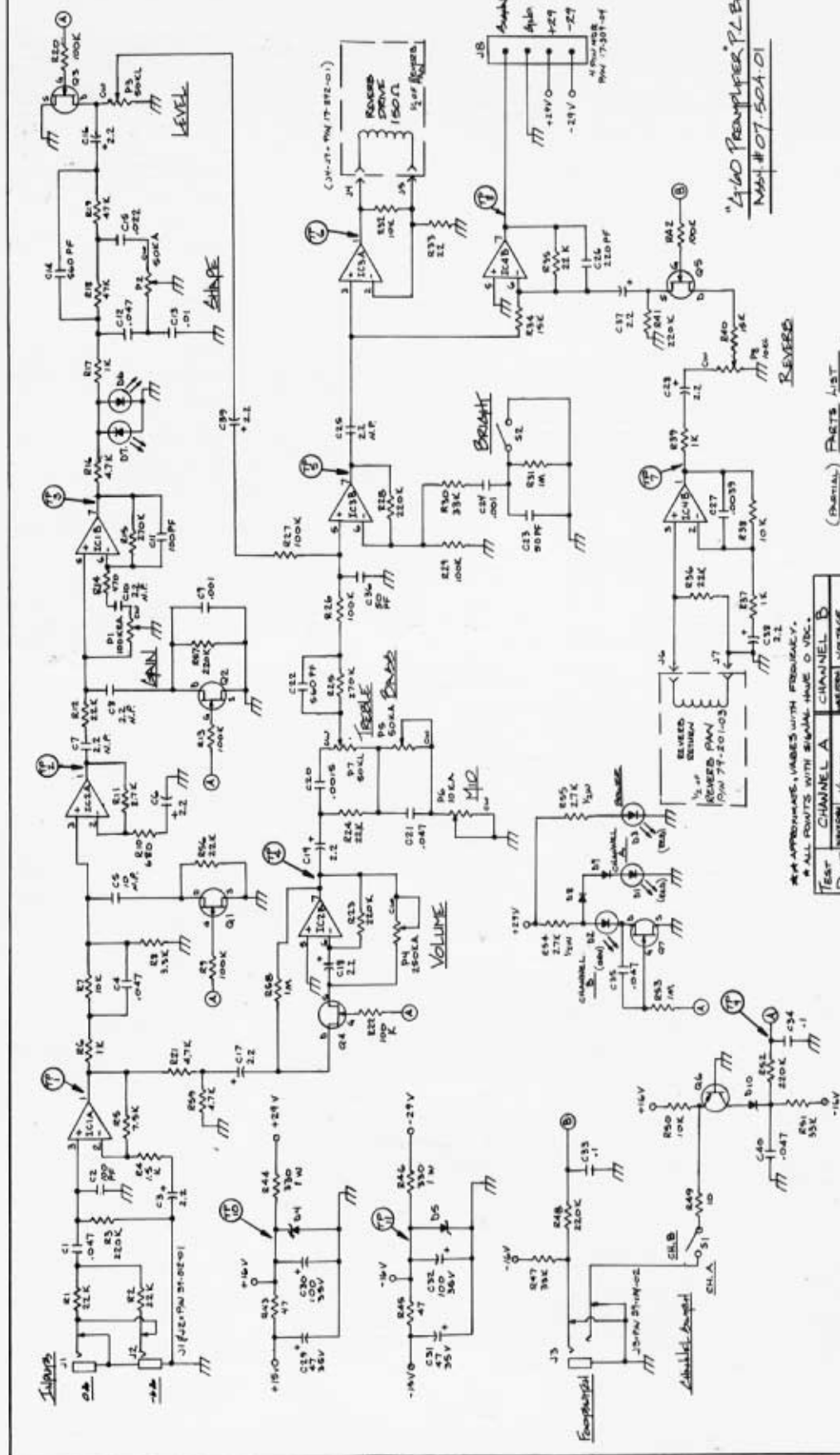
SLM Electronics warrants speakers to be free from defects in material and

workmanship for a period of ninety (90) days from original date of purchase. Speaker warranty will be subject to inspection of speaker by SLM Electronics or SLM Authorized Field Service Center. Obvious over-powering will result in warranty denial. Replacing speakers can be overloaded causing failure, SLM Electronics will replace the speaker with a speaker of some or equal type at a price one-half the then current suggested retail price of the new speaker for life, regardless of reason.

Warranty repairs may be handled by your authorized dealer, authorized SLM Service Center, or SLM Electronics. All units being returned to SLM Electronics must be accompanied with a detailed description as to needed repairs, a copy of the original sales receipt, and an SLM Electronics return authorization. SLM Electronics reserves the right to repair or replace this piece of equipment at their option.

SLM Electronics is not liable for any incidental or consequential damages resulting from any defect or failure of this instrument other than the repair of the SLM Electronics product subject to the terms of this warranty. This limited warranty gives you specific legal rights, and you may have other rights which vary from state to state. This warranty is expressly in lieu of all other agreements and warranties, expressed or implied, except as may be otherwise required by law.

SLM ELECTRONICS division of **ST. LOUIS MUSIC**
1400 Ferguson Ave. • St. Louis, MO 63133



G-60 Pre-amplifier PL Board
 Part # 07-504-01

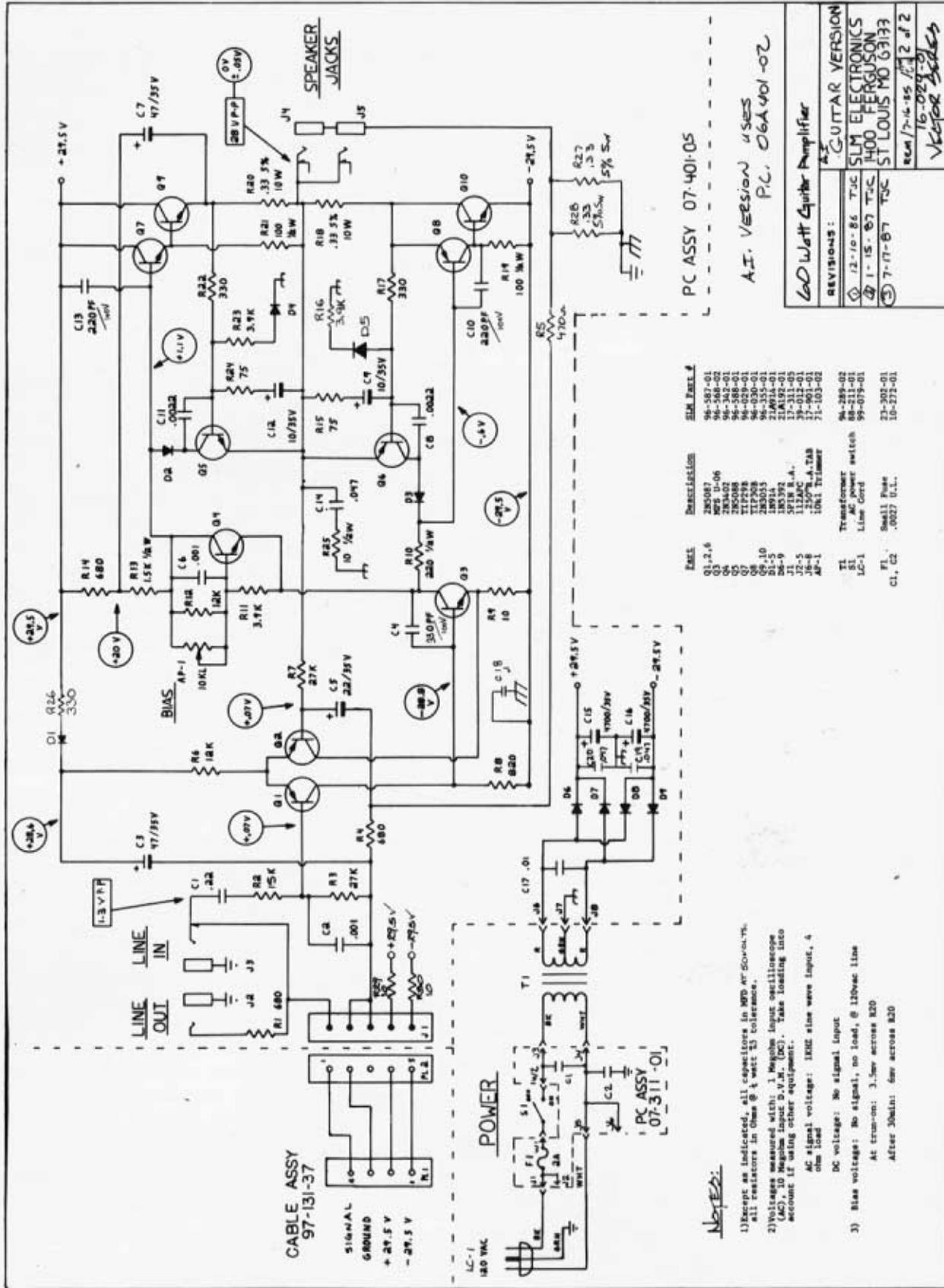
(PARTIAL) PARTS LIST

TEST POINT	CHANNEL A	CHANNEL B
1	14V P.P.	10V P.P.
2	20V P.P.	5V P.P.
3	14V P.P.	10V P.P.
4	0V	3.5V P.P.
5	1.5V P.P.	1.2V P.P.
6	20V P.P.	9V P.P.
7	50V P.P.	50V P.P.
8	2.5V P.P.	2.3V P.P.
9	-13 VDC	0 VDC
10	1600 Hz	1600 Hz
11	1000 Hz	1000 Hz

PART	DESCRIPTION	SLM PART #
Z1-4	1A 455B	37-45B-01
D1-3	2B LED ASSY	47-224-01
D2	2B LED ASSY	47-225-01
D3	2B LED ASSY	21A/45-01
D4	2B LED	21-117-01
D5	2B LED	21A/45-01
D6	2B LED	21-117-01
D7	2B LED	21-117-01
D8	2B LED	21-117-01
D9	2B LED	21-117-01
D10	2B LED	21-117-01
D11	2B LED	21-117-01
D12	2B LED	21-117-01
D13	2B LED	21-117-01
D14	2B LED	21-117-01
D15	2B LED	21-117-01
D16	2B LED	21-117-01
D17	2B LED	21-117-01
D18	2B LED	21-117-01
D19	2B LED	21-117-01
D20	2B LED	21-117-01
D21	2B LED	21-117-01
D22	2B LED	21-117-01
D23	2B LED	21-117-01
D24	2B LED	21-117-01
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D31	2B LED	21-117-01
D32	2B LED	21-117-01
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D47	2B LED	21-117-01
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D82	2B LED	21-117-01
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D93	2B LED	21-117-01
D94	2B LED	21-117-01
D95	2B LED	21-117-01
D96	2B LED	21-117-01
D97	2B LED	21-117-01
D98	2B LED	21-117-01
D99	2B LED	21-117-01
D100	2B LED	21-117-01

1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS, VOLTS, 5%.
 2) TYPICAL IC1/2, DUAL 5-15V, PWR 8-15V; IC3/4, PWR 4-15V (PWR 15V).
 3) MEASUREMENTS AT TEST POINTS ARE MADE WITH A 1 MΩ INPUT OSCILLOSCOPE UNDER THE FOLLOWING CONDITIONS: "SHIELD" & "REVERSE" OFF, "BRIGHT" OFF, ALL OTHER CONTROLS @ NO., AND CHANNEL SELECTED AS INDICATED.

G-60 PRE-AMPLIFIER P.C. BOARD
 SLM ELECTRONICS
 1400 PERGUSON
 ST. LOUIS, MO. 63133
 DRAWING No. 2 16-029-01



PC ASSY 07-401-05

A.I. VERSION USES
P.C. 06A401-02

60 Watt Guitar Amplifier

REVISONS:
 1 12-10-86 TJC
 2 1-15-87 TJC
 3 7-17-87 TJC

GUITAR VERSION
 SLM ELECTRONICS
 1400 FERGUSON
 ST LOUIS MO 63133
 rev 17-14-85 rev 2 of 2
 Vector Books

Q1, 2, 4	Q3	Q4	Q5	Q6	Q8, 10	Q9, 10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087	2N5087

RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR	RESISTOR
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22

Notes:

- Except as indicated, all capacitors in WPT are 50V or 50Vdc, all resistors in Ohms @ 1/4 watt 5% tolerance.
- Voltages measured with 1 Megohm input impedance oscilloscope (100 pF max) D.V.M. (1000 Ohm loading) - take loading into account if using other equipment.
- AC signal voltage: 1KHz sine wave input, 4 Ohm load
- DC voltage: No signal input
- Bias voltage: No signal, no load, @ 120VAC line
- At turn-on: 3.5sec across R20
- After 30min: 4sec across R20

Schematic provided for use by qualified service personnel only.