



# CRATE

## G-60 AMPLIFIER

# CRATE G-60 AMPLIFIER



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.

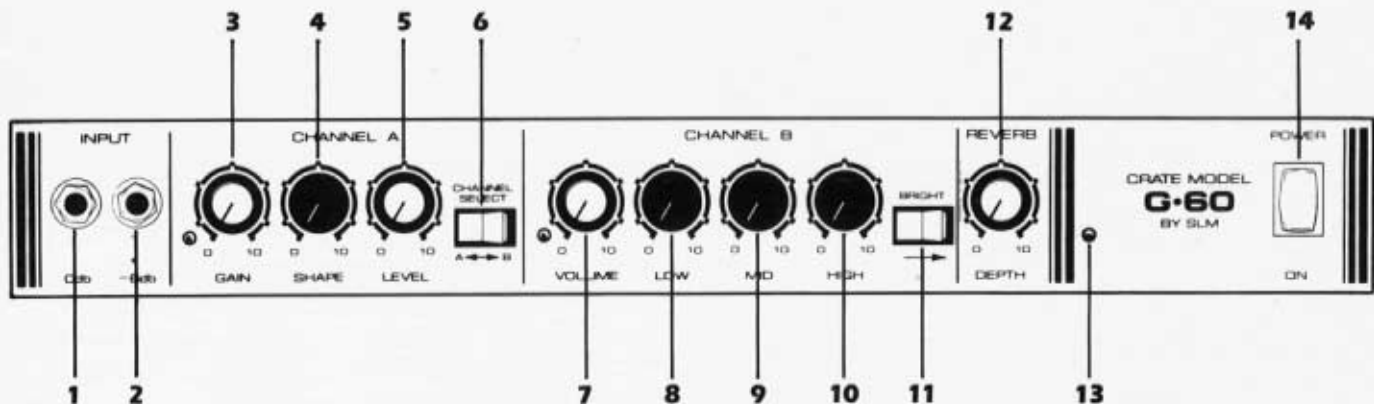
## TECHNICAL SPECIFICATIONS

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

1. **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.
2. **-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

3. **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.
4. **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.
5. **LEVEL CONTROL:** The overall volume of Channel A is controlled with this knob and should be used in conjunction with the GAIN CONTROL (#3).

6. **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

7. **VOLUME CONTROL:** This control sets the overall listening level of Channel B. This control is independent of any setting made in Channel A.
8. **LOW CONTROL (Bass):** The desired amount of "Bottom" or "Warmth" may be increased or decreased with this knob.
9. **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.
10. **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).
11. **BRIGHT SWITCH:** This switch affects the brilliance of the guitar's sound by adding additional

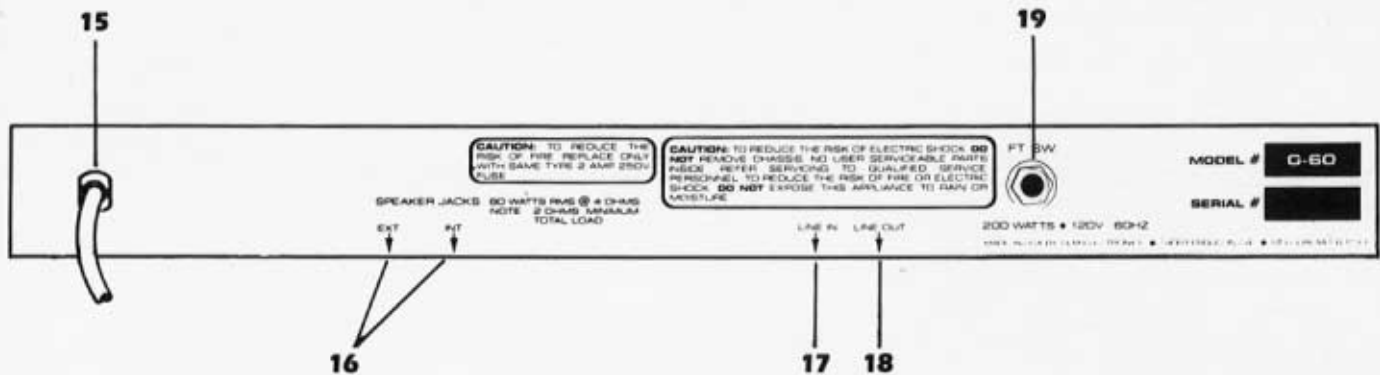
"bite" or sharpness. This switch affects both Channel A and B.

12. **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

13. **ON/OFF LED INDICATOR:** The amplifier is on when this L.E.D. is lit.
14. **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.

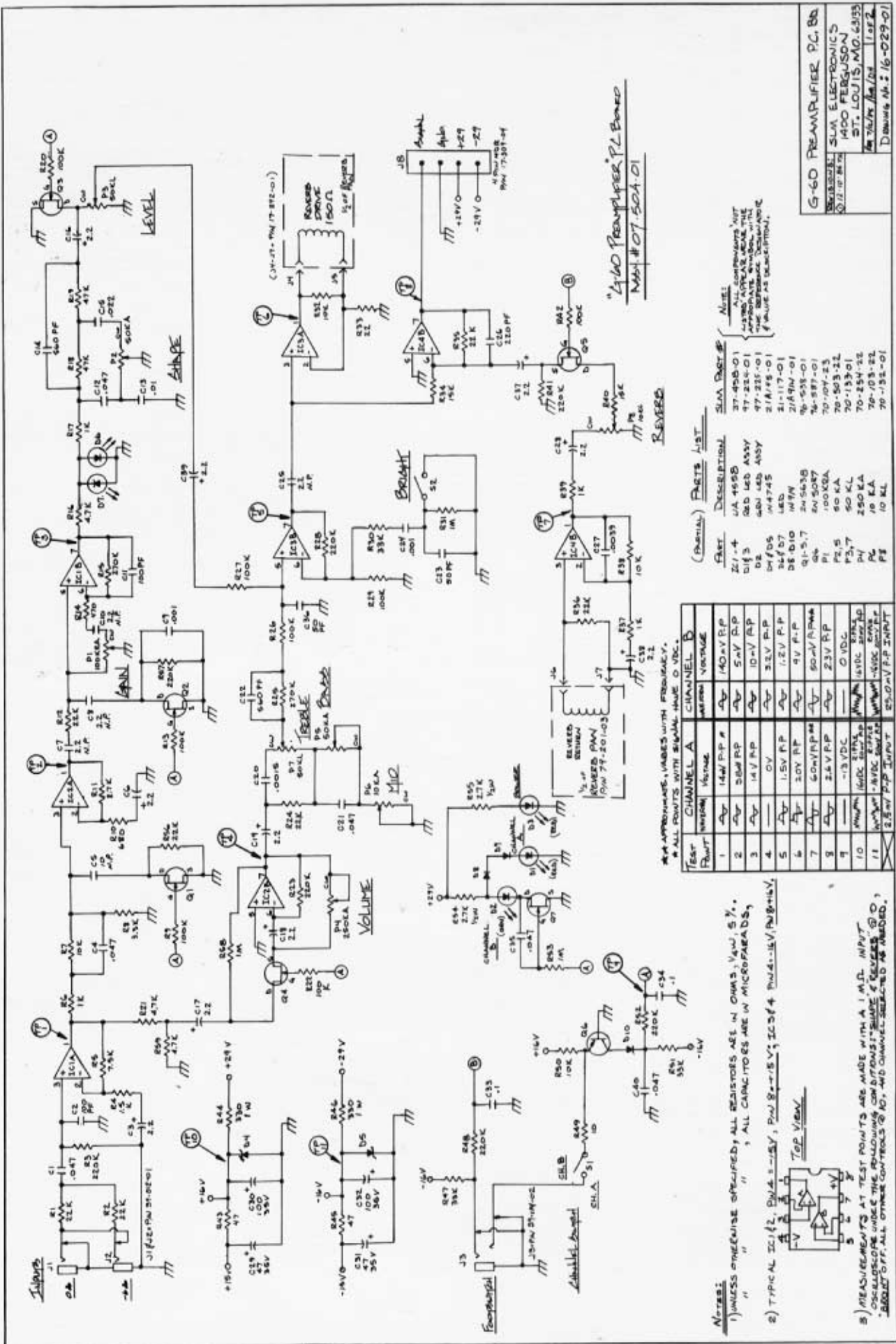
SLM Electronics warrants speakers to be free from defects in material and

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 over-loaded 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 PREAMPLIFIER P.C. BOARD**  
 DRAWING NO. 16-029-01  
 SULLA ELECTRONICS  
 1400 PERGUSON  
 ST. LOUIS, MO. 63133  
 314 767-1616

**REVERSE**

TEST POINT	DESCRIPTION	SUAM PART #
27-4	JA 495B	37-495-01
27-5	2B LED ASSY	47-224-01
27-6	2B LED ASSY	47-225-01
27-7	2B LED ASSY	27A/28-01
27-8	2B LED	21-117-01
27-9	2B LED	21A/29-01
27-10	2B LED	21-528-01
27-11	2B LED	21-529-01
27-12	2B LED	21-530-01
27-13	2B LED	21-531-01
27-14	2B LED	21-532-01
27-15	2B LED	21-533-01
27-16	2B LED	21-534-01
27-17	2B LED	21-535-01
27-18	2B LED	21-536-01
27-19	2B LED	21-537-01
27-20	2B LED	21-538-01
27-21	2B LED	21-539-01
27-22	2B LED	21-540-01
27-23	2B LED	21-541-01
27-24	2B LED	21-542-01
27-25	2B LED	21-543-01
27-26	2B LED	21-544-01
27-27	2B LED	21-545-01
27-28	2B LED	21-546-01
27-29	2B LED	21-547-01
27-30	2B LED	21-548-01
27-31	2B LED	21-549-01
27-32	2B LED	21-550-01
27-33	2B LED	21-551-01
27-34	2B LED	21-552-01
27-35	2B LED	21-553-01
27-36	2B LED	21-554-01
27-37	2B LED	21-555-01
27-38	2B LED	21-556-01
27-39	2B LED	21-557-01
27-40	2B LED	21-558-01
27-41	2B LED	21-559-01
27-42	2B LED	21-560-01
27-43	2B LED	21-561-01
27-44	2B LED	21-562-01
27-45	2B LED	21-563-01
27-46	2B LED	21-564-01
27-47	2B LED	21-565-01
27-48	2B LED	21-566-01
27-49	2B LED	21-567-01
27-50	2B LED	21-568-01
27-51	2B LED	21-569-01
27-52	2B LED	21-570-01
27-53	2B LED	21-571-01
27-54	2B LED	21-572-01
27-55	2B LED	21-573-01
27-56	2B LED	21-574-01
27-57	2B LED	21-575-01
27-58	2B LED	21-576-01
27-59	2B LED	21-577-01
27-60	2B LED	21-578-01
27-61	2B LED	21-579-01
27-62	2B LED	21-580-01
27-63	2B LED	21-581-01
27-64	2B LED	21-582-01
27-65	2B LED	21-583-01
27-66	2B LED	21-584-01
27-67	2B LED	21-585-01
27-68	2B LED	21-586-01
27-69	2B LED	21-587-01
27-70	2B LED	21-588-01
27-71	2B LED	21-589-01
27-72	2B LED	21-590-01
27-73	2B LED	21-591-01
27-74	2B LED	21-592-01
27-75	2B LED	21-593-01
27-76	2B LED	21-594-01
27-77	2B LED	21-595-01
27-78	2B LED	21-596-01
27-79	2B LED	21-597-01
27-80	2B LED	21-598-01
27-81	2B LED	21-599-01
27-82	2B LED	21-600-01

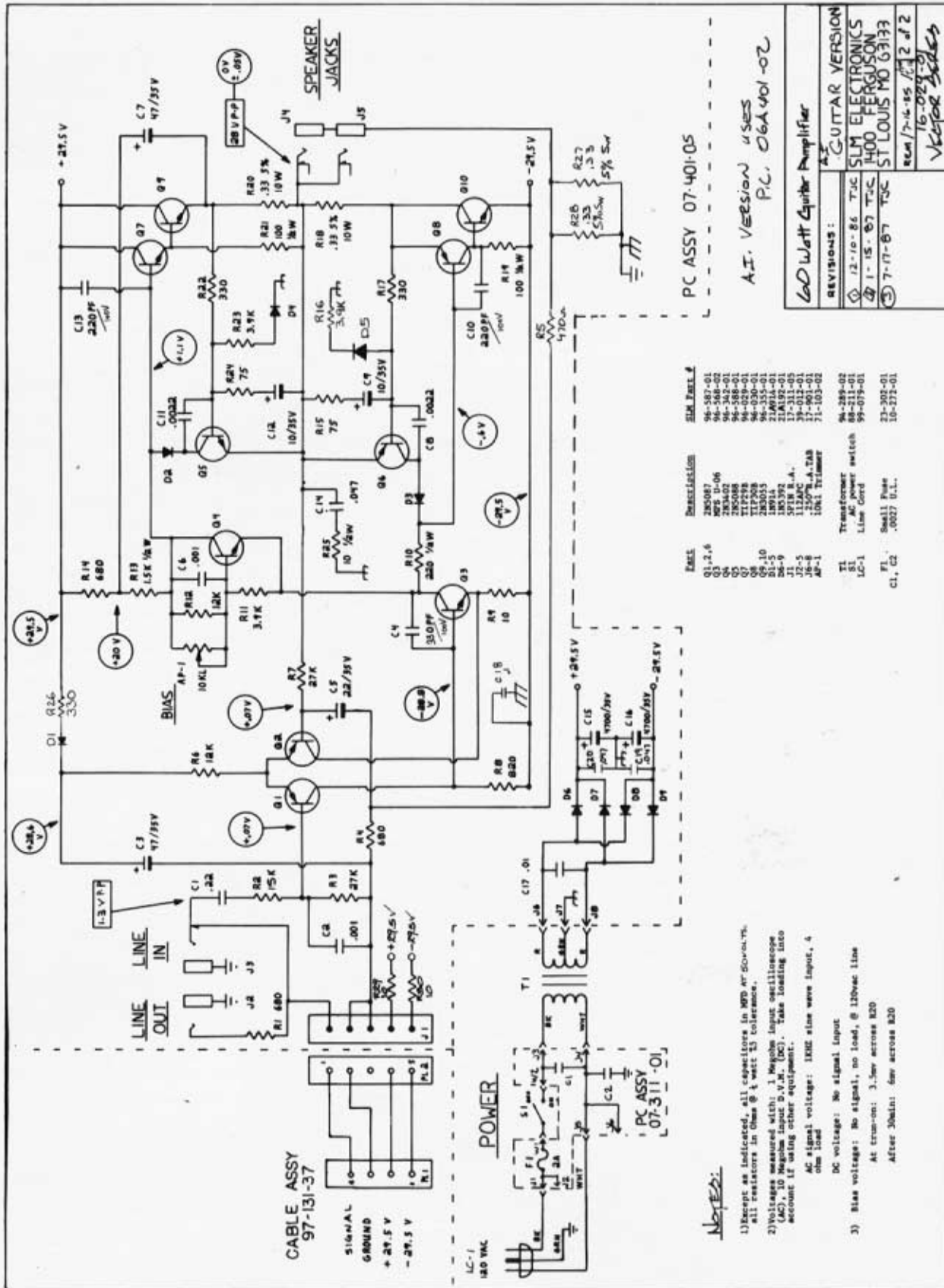
**(PARTIAL) PARTS LIST**

PART	DESCRIPTION	SUAM PART #
IC1	IC138	37-495-01
IC2	IC138	37-495-01
IC3	IC138	37-495-01
IC4	IC138	37-495-01
R1	10K	37-495-01
R2	10K	37-495-01
R3	10K	37-495-01
R4	10K	37-495-01
R5	10K	37-495-01
R6	10K	37-495-01
R7	10K	37-495-01
R8	10K	37-495-01
R9	10K	37-495-01
R10	10K	37-495-01
R11	10K	37-495-01
R12	10K	37-495-01
R13	10K	37-495-01
R14	10K	37-495-01
R15	10K	37-495-01
R16	10K	37-495-01
R17	10K	37-495-01
R18	10K	37-495-01
R19	10K	37-495-01
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R23	10K	37-495-01
R24	10K	37-495-01
R25	10K	37-495-01
R26	10K	37-495-01
R27	10K	37-495-01
R28	10K	37-495-01
R29	10K	37-495-01
R30	10K	37-495-01
R31	10K	37-495-01
R32	10K	37-495-01
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R36	10K	37-495-01
R37	10K	37-495-01
R38	10K	37-495-01
R39	10K	37-495-01
R40	10K	37-495-01
R41	10K	37-495-01
R42	10K	37-495-01
R43	10K	37-495-01
R44	10K	37-495-01
R45	10K	37-495-01
R46	10K	37-495-01
R47	10K	37-495-01
R48	10K	37-495-01
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R50	10K	37-495-01
R51	10K	37-495-01
R52	10K	37-495-01
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R64	10K	37-495-01
R65	10K	37-495-01
R66	10K	37-495-01
R67	10K	37-495-01
R68	10K	37-495-01
R69	10K	37-495-01
R70	10K	37-495-01
R71	10K	37-495-01
R72	10K	37-495-01
R73	10K	37-495-01
R74	10K	37-495-01
R75	10K	37-495-01
R76	10K	37-495-01
R77	10K	37-495-01
R78	10K	37-495-01
R79	10K	37-495-01
R80	10K	37-495-01
R81	10K	37-495-01
R82	10K	37-495-01
R83	10K	37-495-01
R84	10K	37-495-01
R85	10K	37-495-01
R86	10K	37-495-01
R87	10K	37-495-01
R88	10K	37-495-01
R89	10K	37-495-01
R90	10K	37-495-01
R91	10K	37-495-01
R92	10K	37-495-01
R93	10K	37-495-01
R94	10K	37-495-01
R95	10K	37-495-01
R96	10K	37-495-01
R97	10K	37-495-01
R98	10K	37-495-01
R99	10K	37-495-01
R100	10K	37-495-01

**REVERSE**

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	16V P.P.	16V P.P.
11	16V P.P.	16V P.P.
12	2.5V P.P.	2.5V P.P.

\*A APPROXIMATE VALUES WITH FREQUENCY.  
 \*ALL POINTS WITH SIGNAL HAVE 0 VDC.  
 \*UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS, 5%, 1/4W, 5%.  
 \*ALL CAPACITORS ARE IN MICROFARADS, 5%, 50V.  
 \*TYPICAL IC1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.  
 \*MEASUREMENTS AT TEST POINTS ARE MADE WITH A 1 MΩ INPUT OSCILLOSCOPE UNDER THE FOLLOWING CONDITIONS: "SHAPE" & "LEVEL" CONTROLS OFF, ALL OTHER CONTROLS @ NO., AND CHANNEL SELECTED AS INDICATED.  
 \*RECORD OFF ALL OTHER CONTROLS @ NO., AND CHANNEL SELECTED AS INDICATED.



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