



**CRATE**

**B-60 AMPLIFIER**

# B·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.

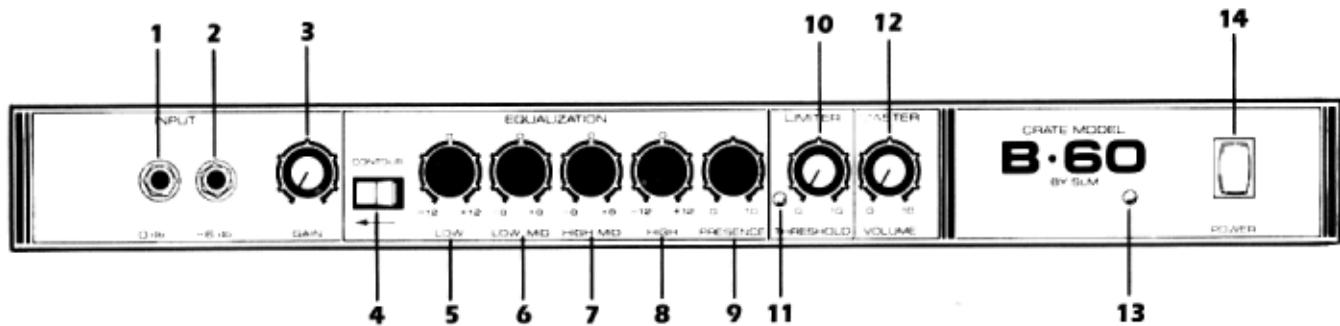
## B·60 TECHNICAL SPECIFICATIONS

|  |   |
|--|---|
| <b>Output Power Rating</b>                 | 60 watts RMS @ 5% THD<br>4 ohm load—120 VAC line                            |
| <b>Speaker Size and Rating</b>             | 15" with 1-1/2" voice coil and 20 oz. magnet<br>Power Handling 60 watts RMS |
| <b>Bass Control</b>                        | ±12 db @ 50 Hz  |
| <b>Low Mid Control</b>                     | +8 db @ 150 Hz  |
| <b>High Mid Control</b>                    | +8 db @ 500 Hz  |
| <b>Treble Control</b>                      | ±12 db @ 2 KHz  |
| <b>Presence Control</b>                    | 14 db boost @ 3 KHz   |
| <b>Contour Switch</b>                      | Special Frequency Tailoring   |
| <b>Input Impedance</b>                     | 220 K ohms  |
| <b>Maximum Input Signal Level Accepted</b> | 15 Volts, peak to peak  |
| <b>Gain @ 1 KHz</b>                        | 54 db with tones flat, Presence and Contour switches off                    |
| <b>Line Out Jack</b>                       | 2.25 volts peak to peak @ full rated output                                 |
| <b>Balanced Line Out Jack</b>              | 2.50 volts peak to peak @ full rated output with 600 ohm load               |
| <b>Signal to Noise Ratio</b>               | 76 db   |
| <b>Input Power Requirements</b>            | 120 VAC, 60 Hz, 110 watts max   |
| <b>Cabinet Size and Weight</b>             | 24-1/2" H x 20-1/2" W x 13-1/2" D 60 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

- 1. Input Jack:** This input accepts a standard  $\frac{1}{4}$ " phone plug and is suitable for any low to line level signal source such as an electric bass.
- 2. -6 dB INPUT JACK:** This input also accepts a standard  $\frac{1}{4}$ " jack but is padded 6 dB for hotter inputs such as tape decks or basses with hot pickups. If both jacks are used, this input is not padded and will be equal to the 0 dB input jack.

## EQUALIZATION SECTION

- 3. Gain Control:** This control sets the amount of gain for the pre-amp. A low output instrument or soft playing style requires high gain (5-10 setting) while a high output instrument or hard playing style requires less gain (1-4 setting). Too high a setting along with boosted equalization may cause distortion or a harshness of sound. If this is not desired, simply reduce the gain with this control.
- 4. Contour Switch:** When selected, this control cuts the midrange and boosts the high frequencies similar to traditional passive tone controls.
- 5. Low Control:** The desired amount of "Bottom" may be in-

creased or decreased with this control.

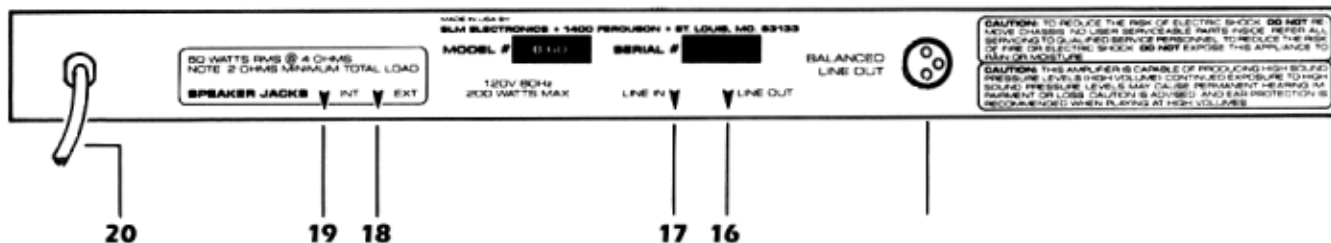
- 6. Low-Mid Control:** This control affects the high-bass and low-mid frequencies, adding "mellowness" or "warmth" when increased or "thinness" when decreased.
- 7. High-Mid Control:** Boosting this control gives the bass more "edge." Reducing this control can add to the effect of the contour switch.
- 8. High Control:** This control adds "bite" or "sizzle" to the bass when boosted. Decreasing this control and/or the high-mid control can help decrease fret buzzes and rattles.
- 9. Presence Control:** This control adds additional high frequency boost such as desired for a "popping" or "slapping" playing style.
- 10. Limiter Threshold Control:** The limiter keeps the signal from going above a given threshold (volume) as selected by this control. Increasing this control (clockwise) lowers the threshold level decreasing the level of sound (more limiting). At "0" the limiter is off. Limiting allows the player to

obtain a smooth, even sound level with more sustain. The limiter may also be used to protect the power amp from distorting by setting this control and the Master Volume (11) at "10". This allows the power amp to develop full power without clipping.

- 11. Limit LED Indicator:** This LED is lit when the signal level is above the threshold selected by the Limiter Threshold control (10).
- 12. Master Volume Control:** This control sets the overall listening level of the B-60. With the limiter in use this control allows the player to limit the output at any level at or less than full power of the unit. Gain, Limiter Threshold and Master Volume are all interactive so the player must experiment to obtain the exact effect and volume desired.

## POWER

- 13. On/Off LED Indicator:** When this LED is lit the unit is on.
- 14. On/Off Switch (Power):** The down position of this two-position switch turns the unit on and the up position off.



## REAR PANEL

**15. Balanced Line Out Jack:** This jack provides a low impedance balanced output for connecting the B-60 to an external power amplifier or mixer with balanced input. External speakers cannot be hooked up to this jack.

**16. Line Out Jack:** This jack provides a high impedance unbalanced output for connecting the B-60 to another amplifier or tape recorder. Simply run a cable from this jack to the input of another amplifier or tape deck. External speakers cannot be hooked up to this jack.

**17. Line In Jack:** This jack is used as a direct input to the power amp. Plugging into this jack dissonnects the direct (normal) connection between the preamp and power amp. The Line Out jack may be used with the Line In jack as an effects loop.

**18. External Speaker Jack:** This jack is used for additional speaker hook up. The B-60 external speaker jack is hooked up in parallel with the internal speaker jack so adding additional speakers will lower the total load impedance connected to the power amp. Do

not go below 2 ohms total load impedance.

**19. Internal Speaker Jack:** The Internal Custom Design Speaker is plugged into this jack (4 ohm load). To disconnect the internal speaker, simply unplug the cable from this jack. Another external speaker may be plugged in if the total load will still be at least 2 ohms. Total load should not be less than 2 ohms.

**20. Power Cord:** Be sure the amplifier is properly plugged into a safely wired AC outlet before use.

**WARNING: NEVER PLUG HEADPHONES INTO EITHER SPEAKER JACK — YOU COULD SUFFER PERMANENT LOSS OF HEARING OR DAMAGE YOUR HEADPHONES.**

## 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.

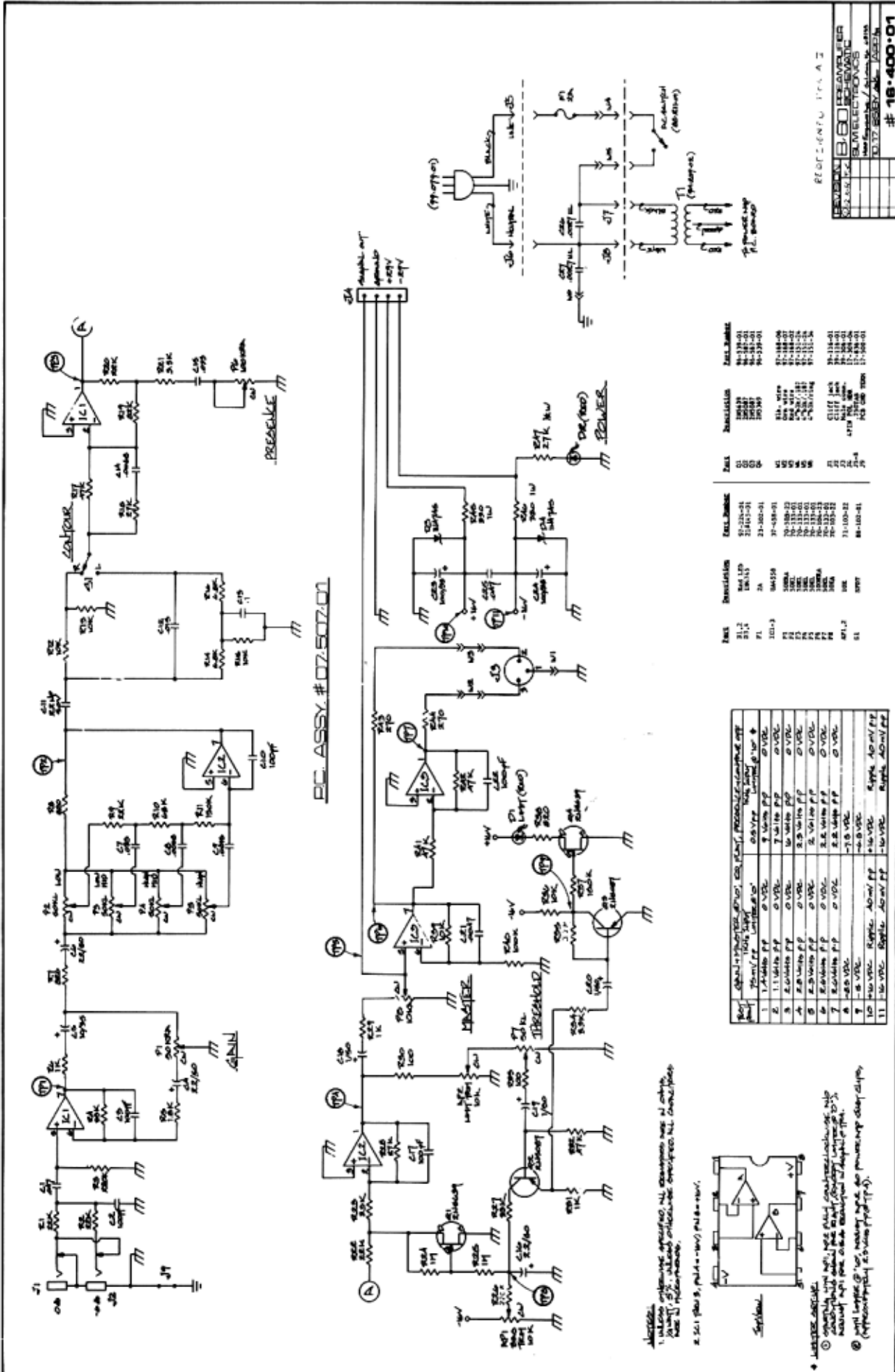
SLM Electronics warrants speakers to be free from defects in material and

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. Realizing 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.

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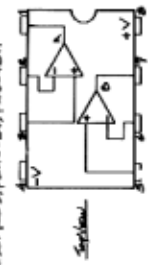
REVISED BY: B. B. HENNINGER  
 DATE: 12-15-74  
 BY: B. B. HENNINGER  
 CHECKED BY: J. W. JONES  
 DATE: 12-15-74  
 BY: J. W. JONES

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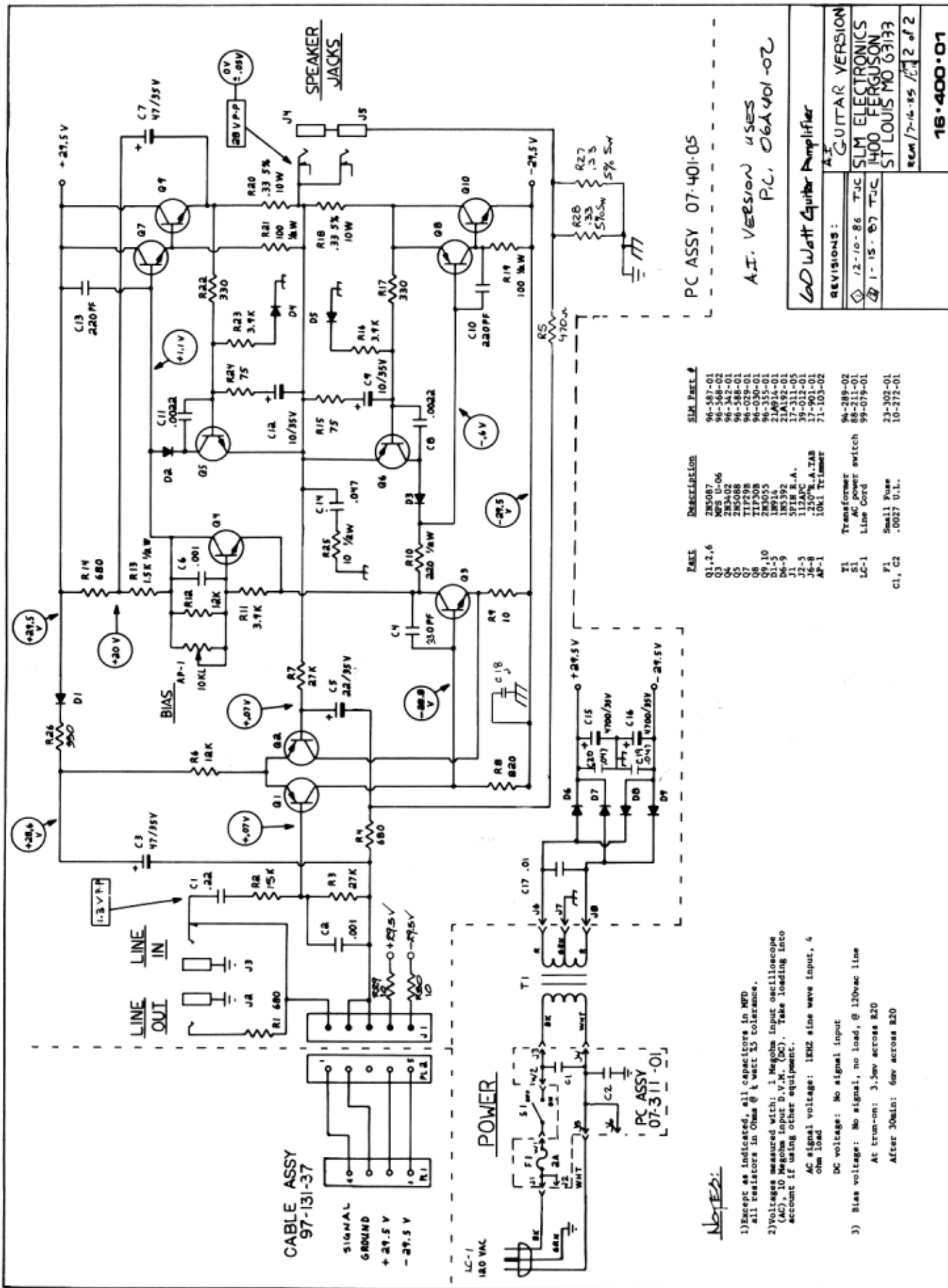
| Part | Quantity | Part Number | Notes    |
|------|----------|-------------|----------|
| 1    | 1        | IC1         | 741C1    |
| 2    | 1        | IC2         | 741C2    |
| 3    | 1        | T1          | 2N3638   |
| 4    | 1        | T2          | 2N3638   |
| 5    | 1        | T3          | 2N3638   |
| 6    | 1        | TRF         | 100-1000 |
| 7    | 1        | TRF         | 100-1000 |
| 8    | 1        | TRF         | 100-1000 |
| 9    | 1        | TRF         | 100-1000 |
| 10   | 1        | TRF         | 100-1000 |
| 11   | 1        | TRF         | 100-1000 |

| Part | Quantity | Part Number | Notes |
|------|----------|-------------|-------|
| 1    | 1        | 1.0V        | 1.0V  |
| 2    | 1        | 1.0V        | 1.0V  |
| 3    | 1        | 1.0V        | 1.0V  |
| 4    | 1        | 1.0V        | 1.0V  |
| 5    | 1        | 1.0V        | 1.0V  |
| 6    | 1        | 1.0V        | 1.0V  |
| 7    | 1        | 1.0V        | 1.0V  |
| 8    | 1        | 1.0V        | 1.0V  |
| 9    | 1        | 1.0V        | 1.0V  |
| 10   | 1        | 1.0V        | 1.0V  |
| 11   | 1        | 1.0V        | 1.0V  |

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF THE STANDARD GRADE.  
 2. SC1 (PART 2, P. 14) IS A 100-1000.



WARNING: THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID ELECTRIC SHOCK, DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.



Schematic provided for use by qualified personnel only.  
**CAUTION:** These servicing instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing other than that contained in the operating instructions. Refer all servicing to qualified service personnel.

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