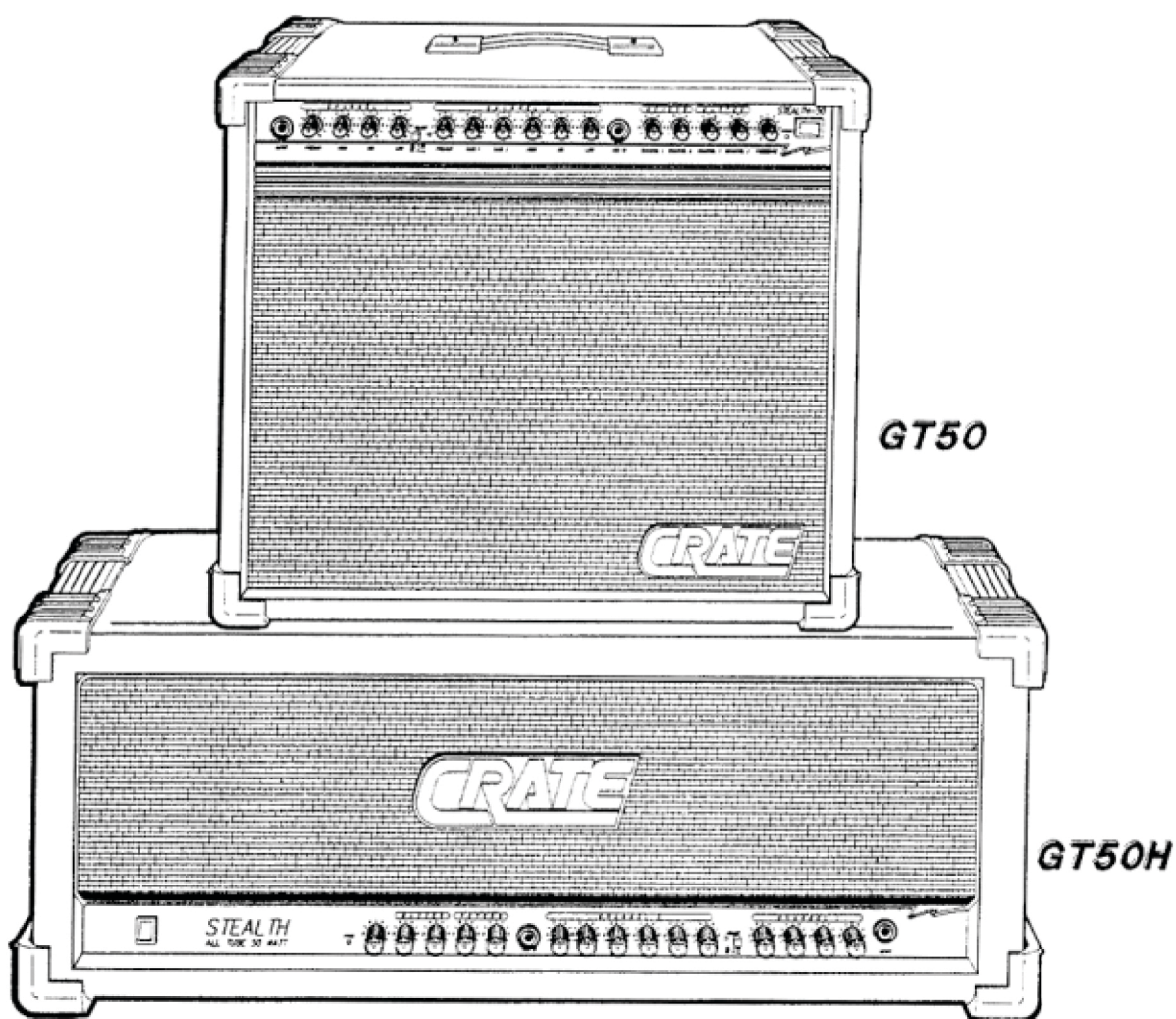


# ***CRATE***

## ***STEALTH GT50/50H GUITAR AMPLIFIER***



### ***OWNER'S MANUAL***

**Congratulations!**

You are now the proud owner of one of the newest and most feature-packed guitar amplifiers available, the Crate Stealth™ GT50/50H. Your new Stealth GT50 amplifier gives you three separate, footswitchable sound and level settings, plus separate three-band EQs, reverb and level controls for each of its two channels. No other amplifier offers you so many features and sounds, or so much value, in your choice of either a compact, portable 12" speaker combo or a full-sized amp head package.

Like all Crate products, your Stealth GT50 is proudly made in America, using only the best components. Extensive testing at the hands (and ears) of skilled technicians and musicians insures you that this amplifier is the absolute best it can be.

In order to get the most out of your new amplifier, we strongly urge you to go over the information contained in this manual before you begin playing.

And thank you for choosing **CRATE**®

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## ABOUT THE STEALTH GT50:

The Crate Stealth GT50 is an all-tube, feature-packed powerhouse of an amplifier that can give you three different sound and level settings at the touch of a footswitch. The combo package features one of Crate's 12" Custom loudspeakers in a roadworthy and attractive cabinet. The head version packs all of the features, minus the internal speaker, into a full-sized and rugged amp head.

Both versions offer 50 watts of pure 6V6 tube power and two distinctly different 12AX7 tube driven channels: one with the classic tube rhythm sounds and one offering you some of the finest lead and metal sounds of any amplifier.

Both channels feature tube preamp sections with input attenuators and three bands of EQ for total tone control. In addition, Channel 2 also gives you two separate, footswitchable Gain controls which work independently, giving you TWO levels for the 3 tube, 7 gain stage distortion channel.

An easy-access front-panel "Aux In" jack lets you connect a drum machine, tape deck, or CD player to the amp. Aux In sends the signal directly into the power amp, but also allows your guitar signal to pass from the preamp so you can "rehearse" with your source. The rear panel Effects Loop, Line Out and Extension Speaker jacks further increase your possibilities and add to the flexibility and versatility of this unique and extraordinary amplifier.

## FEATURES OVERVIEW:

*Given below is a quick overview of the GT50's features and controls:*

**All Tube Preamp and Power Amp:** Classic tube sound with Crate's legendary performance and reliability.

**Two Completely Separate Channels:** Independent Preamp levels, 3-band EQ's, Reverb and Master levels.

**Two Gain Controls:** (Channel 2) Footswitchable. Independently adjustable. Almost like getting a third channel.

**Aux In Jack:** Allows insertion of drum machine or music source. Great for practicing or performing.

**Total Footswitch Control:** Channel selection. Choice of two Gains for Channel 2.

**External Speaker Jack:** Standard 1/4" mono phone jack. Parallel connection.

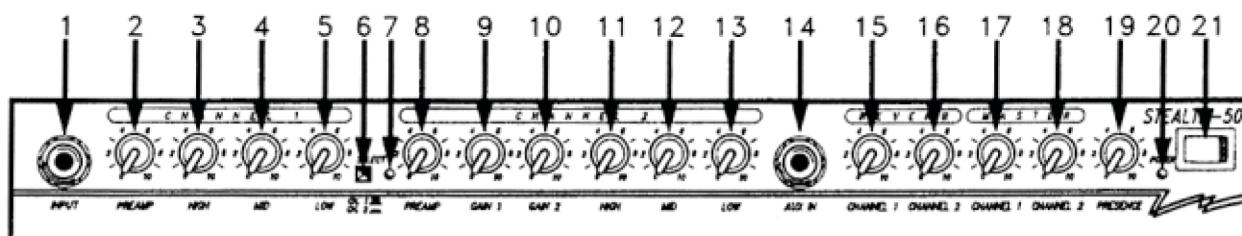
**Effects Loop:** 1/4" Line Out/Line In jacks. Allows external signal processor connection.

**Line Out Jack:** Frequency compensated to simulate speaker cabinet.

**Impedance Selector Switch:** For optimum speaker matching.

## The GT50 Front Panel:

**NOTE:** The 12"-combo unit is shown throughout this manual. The location of the controls on the GT50H amp head version are exactly mirror-imaged from those shown here.



1: **INPUT:** Connect your guitar here using a shielded instrument cable.

### Channel 1:

2: **PREAMP:** This serves as the gain control for Channel 1's preamp section, giving you total control over the volume setting and amount of tube compression. Use this control along with Channel 1's Master level control (#17). (Some suggested settings can be found on page 8.) With the control to the full-left position, no signal passes through. As you bring the control towards center you increase the signal level until in its full-right position the signal is at full strength, with a slight amount of clean tube compression.

3: **HIGH:** Adjust Channel 1's high frequency output with this control: in the center position the high frequency output will be "flat" (no boost or cut). Turning the control to the left reduces the high frequency output; turning it to the right increases the high frequency output. The High control provides up to 16dB of boost or cut at 5kHz, which allows you to adjust the crispness or the "bite" of your guitar.

4: **MID:** Adjust Channel 1's midrange output with this control: in the center position the midrange output will be "flat" (no boost or cut). Turning the control to the left reduces the midrange output; turning it to the right increases the midrange output. The Mid control provides up to 13dB of boost or cut at 316Hz, which affects the "voice" of your guitar's sound.

5: **LOW:** Adjust Channel 1's low frequency output with this control: the center position is "flat," that is, no boost or cut. Turning the control to the left reduces the low frequency output; turning it to the right increases the low frequency output. The Low control provides up to 16dB of boost or cut at 40Hz.

6: **SELECT:** Select either Channel 1 (switch in the OUT position) or Channel 2 (switch IN) with this pushbutton switch. The channel indicator LED (#7) will glow red when Channel 2 is selected, serving as a visual guide.

**NOTE:** When a footswitch is connected (see #26, rear panel) the front-panel switch will have no control over which channel is selected.

7: **LED:** This LED glows red ONLY when Channel 2 has been activated and works with the front-panel Select switch (#6) or a footswitch (#26).

### Channel 2:

8: **PREAMP:** This serves as the gain control for Channel 2's preamp section, giving you total control over the volume setting and amount of tube compression. Use this control along with Channel 2's Master level control (#18). (Some suggested settings can be found on page 8.) With the control to the full-left position, no signal passes through. As you bring the control towards center you increase the signal level and tube compression, until in its full-right position the signal is at full strength, with lots of tube preamp distortion.



**9: GAIN 1:** This allows you to add tube distortion to Channel 2's signal, creating a wide variety of sounds and levels. Use this control along with Channel 2's Preamp (#8) and Master Level control (#18). (Some suggested settings can be found on page 8.) With this control in the full-left position, the signal goes through without any added distortion or level. As you rotate the control to the right you add distortion and increase the output level of the signal, with maximum tube distortion and volume reached at the full-right position.

**NOTE: IF A FOOTSWITCH IS NOT CONNECTED TO THE AMPLIFIER, ONLY GAIN 1 IS ACTIVE: THE SETTINGS OF GAIN 2 WILL HAVE NO EFFECT ON THE SOUND OF YOUR GUITAR. (SEE #10 AND 26.)**

**10: GAIN 2:** This allows you to add another setting of tube distortion to Channel 2's signal, independently from the setting of Gain 1. The use and effects of this control on the signal are the same as those of Gain 1, IF a footswitch is being used. Otherwise the amp defaults to Gain 1 ONLY.

**NOTE: IF A FOOTSWITCH IS NOT CONNECTED TO THE AMPLIFIER, ONLY GAIN 1 IS ACTIVE: THE SETTINGS OF GAIN 2 WILL HAVE NO EFFECT ON THE SOUND OF YOUR GUITAR. (SEE #10 AND 26.)**

**11: HIGH:** Adjust Channel 2's high frequency output with this control: in the center position the high frequency output will be "flat" (no boost or cut). Turning the control to the left reduces the high frequency output; turning it to the right increases the high frequency output. The High control provides up to 12dB of boost or cut at 5kHz, which allows you to adjust the crispness or the "bite" of your guitar.

**12: MID:** Adjust Channel 2's midrange output with this control: in the center position the midrange output will be "flat" (no boost or cut). Turning the control to the left reduces the midrange output; turning it to the right increases the midrange output. The Mid control provides up to 16dB of boost or cut at 500Hz, which affects the "voice" of your guitar's sound.

**13: LOW:** Adjust Channel 2's low frequency output with this control: the center position is "flat," that is, no boost or cut. Turning the control to the left reduces the low frequency output; turning it to the right increases the low frequency output. The Low control primarily affects the tones you "feel", providing up to 16dB of boost or cut at 40Hz.

**14: AUX IN:** This stereo jack allows you to feed the output of a drum machine, tape or CD player, or other source to the input of the GT50's internal power amp. This lets you to perform or practice with a drum machine, or to play along with your favorite artists or other pre-recorded source.

**WARNING:** The Aux In jack goes directly into the power amp section of the GT50, therefore **DO NOT** plug high-level signals into this jack. Keep in mind that the signal will be fed full strength to the amp, so exercise caution and use an input pad if necessary to achieve the desired output level.

#### **REVERB:**

**15: CHANNEL 1:** Adjust the amount of reverb effect for Channel 1 with this control: in the full-left position the signal is "dry" (no reverb). As you rotate the control to the right you increase the amount of reverberation, with maximum reverb effect achieved at the full-right position. Channel 1's reverb circuitry has been designed to give a deeper, fatter reverb effect which is best suited for clean sounds.

\* \* \* *Please refer to the illustration on page 3.* \* \* \*

**16: CHANNEL 2:** Adjust the amount of reverb effect for Channel 2 with this control: in the full-left position the signal is "dry" (no reverb). As you rotate the control to the right you increase the amount of reverberation, with maximum reverb effect achieved at the full-right position. Channel 2's reverb circuitry has been designed to give a more traditional reverb effect, without as much bottom end as Channel 1, which is better suited for distortion.

**MASTER:**

**17: CHANNEL 1:** Adjust the output level of Channel 1 with this control: in its full-left position, little or no signal will pass (depending on the setting of the Preamp control). As you rotate the control to the right you increase the strength of Channel 1's signal going to the power amplifier, thus increasing the output volume. This affects the signal for the Effects Loop Send (#24), the External Speaker (#27), the Line Out (#28) and the Speaker (#29), simultaneously.

**18: CHANNEL 2:** Adjust the output level of Channel 2 with this control: in its full-left position, little or no signal will pass (depending on the setting of the Preamp control). As you rotate the control to the right you increase the strength of Channel 2's signal going to the power amplifier, thus increasing the output volume. This affects the signal for the Effects Loop Send (#24), the External Speaker (#27), the Line Out (#28) and the Speaker (#29), simultaneously.

**19: PRESENCE:** Adjustment of the high-frequency overtones and harmonics can be made with this control, in addition to the settings of each channel's High control. Turning the control to the left reduces the level of high frequency overtones; turning it to the right increases their level. The Presence control provides up to 6dB of boost or cut at 8kHz.

**20: POWER LED:** This LED glows red when you turn the GT50 on, showing you that the amplifier is activated and ready to play.

**21: POWER:** This heavy-duty rocker-type switch is used to turn the amplifier ON in the left position (GT50; up position for the GT50H), off in the right position (GT50; down for the GT50H). The Power LED (#20) works with this switch as a visual indicator.



Diagram of the back of the radio chassis showing component locations 22 through 30:

- 22: Power plug
- 23: Grounding screw
- 24: EFFECTS LOOP input
- 25: RETURN for effects loop
- 26: FOOTSWITCH
- 27: SPEED control (10 OHMS MAX, 5 OHMS MIN)
- 28: ON/OFF switch
- 29: SPEAKER (16 OHMS MAX, 5 OHMS MIN)
- 30: IMPEDANCE SELECTOR switch (10 OHMS, 5 OHMS, 80 WATTS RMS)

\* \* \* Please refer to the illustration on page 6. \* \* \*

28: LINE OUT: This supplies a pre-amplified, post-EQ signal to an external amplifier, mixing board or recording console. The jack is an unbalanced mono 1/4" type.

29: SPEAKER: For the 12" combo version, this is already connected to the internal, 8 ohm Crate speaker. For the head version, connect this jack to your speaker cabinet using a heavy-duty speaker cable - NOT an instrument patch cord. Use ONLY a speaker cabinet with an impedance of 8 ohms or higher. See the information on impedance matching under #30: Impedance Selector.

**ALWAYS USE THIS SPEAKER JACK FIRST - THEN CONNECT TO THE EXTENSION SPEAKER JACK (#27) IF AN ADDITIONAL SPEAKER IS DESIRED.**

30: IMPEDANCE SELECTOR: For the best performance and least strain on the amplifier, you MUST match the impedance of the amp to that of your speaker cabinet(s). Set the selector switch to the 8 ohm or 16 ohm position, depending on the total impedance of your speakers. The chart below can help you figure that impedance based on the following combinations of speakers connected in parallel.

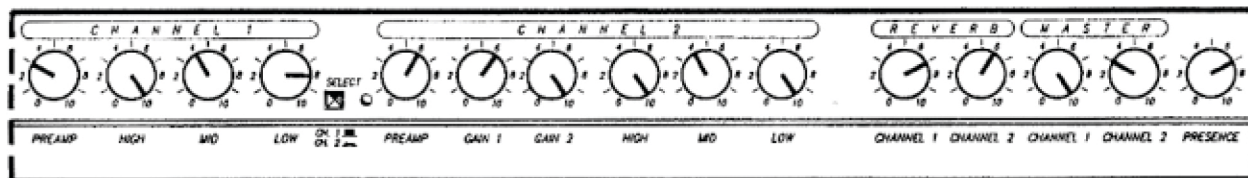
| Cab. Imp. | # of Cabs. | Total Imp. |
|-----------|------------|------------|
| 8 ohms    | 1          | 8 ohms     |
| 16 ohms   | 1          | 16 ohms    |
| 16 ohms   | 2          | 8 ohms     |



## SOME SUGGESTED SETTINGS:

### SPARKLING CLEAN:

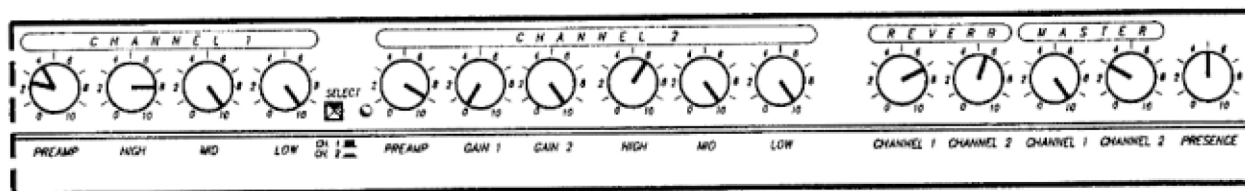
### CRUNCHY EDGE:



*Gain 2 can be set as desired for solos.*

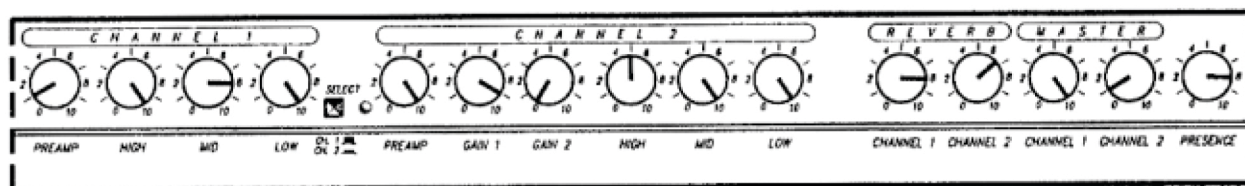
### FAT CLEAN:

### ROCK RHYTHM:

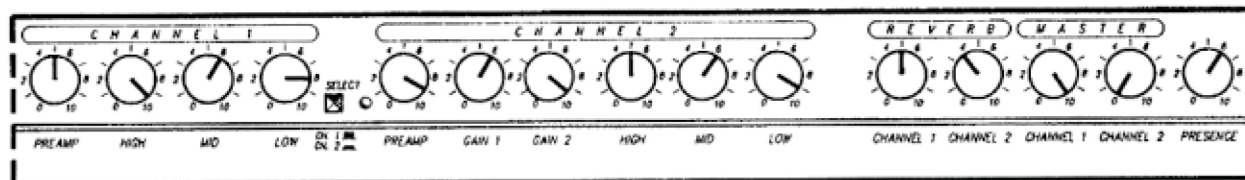


*Gain 2 can be set as desired for solos or for more distortion.*

### BEDROOM SETTINGS:

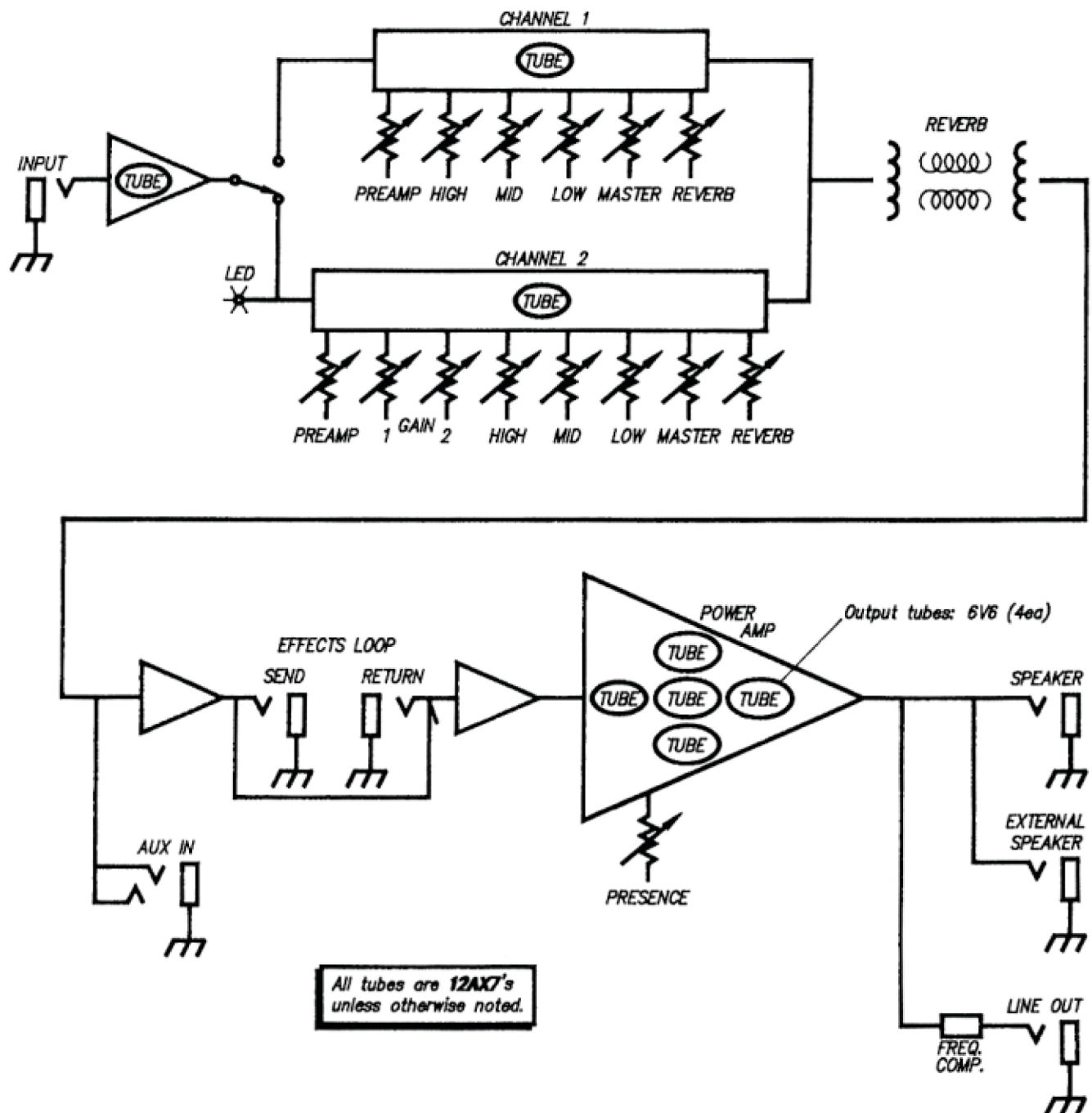


### CLUB SETTINGS:



*Gain 2 can be set as desired for solos.*

## SYSTEM BLOCK DIAGRAM:





## GT50/50H TECHNICAL SPECIFICATIONS:

|                     |                                         |
|---------------------|-----------------------------------------|
| Output Power Rating | 50 watts RMS @5% THD 8 ohm load, 120VAC |
|---------------------|-----------------------------------------|

|      |           |                           |
|------|-----------|---------------------------|
| Gain | Channel 1 | 60dB, tones at "5" @ 1kHz |
|      | Channel 2 | 78dB, tones at "5" @ 1kHz |

### Tone Control Range

|           |              |
|-----------|--------------|
| Channel 1 |              |
| Low       | 16dB @ 40Hz  |
| Mid       | 13dB @ 316Hz |
| High      | 16dB @ 5kHz  |
| Channel 2 |              |
| Low       | 16dB @ 40Hz  |
| Mid       | 16dB @ 500Hz |
| High      | 12dB @ 5kHz  |
| Presence  | 10dB @ 8kHz  |

### Signal to Noise Ratio

|           |                            |
|-----------|----------------------------|
| Channel 1 | -55dB, all controls @ "10" |
| Channel 2 | -52dB, all controls @ "10" |

|                 |            |
|-----------------|------------|
| Input Impedance | 0dB/1m ohm |
|-----------------|------------|

|                         |                 |
|-------------------------|-----------------|
| Maximum Signal Accepted | 2V peak to peak |
|-------------------------|-----------------|

### Tube Type

|           |           |
|-----------|-----------|
| Preamp    | 12AX7 (3) |
| Power Amp | 6V6 (4)   |

|                |                 |
|----------------|-----------------|
| Line Out Level | 4.5V RMS @ 1kHz |
|----------------|-----------------|

|                  |              |                      |
|------------------|--------------|----------------------|
| Internal Speaker | GT50         | GT50S                |
| Size             | 12"          | 12"                  |
| Type             | Crate Custom | Celestion Vintage 30 |
| Magnet           | 34 oz        | 40 oz                |
| Voice Coil       | 1.5"         | 1.75 "               |
| RMS Rating       | 50 Watts     | 70 Watts             |
| Impedance        | 16 ohms      | 16 ohms              |

### Size and Weight

|       |                                            |
|-------|--------------------------------------------|
| Combo | 20.25" H x 17.5" W x 10.5" D<br>45.25 lbs. |
| Head  | 11.625" H x 30.75" W x 11" D<br>38.75 lbs. |

The GT50 combo is covered with a durable black Tolex material; wipe it clean with a damp lint-free cloth to remove dirt and road film. The GT50S Celestion combo and the GT50H amp head are covered with a high-quality carpet-like material; brush clean as needed. Never spray cleaning agents directly onto the cabinet, and stay away from abrasive cleaners which could damage the finish.

*Crate continually develops new products, as well as improves existing ones. For this reason, the specifications and information in this Crate manual are subject to change without notice.*



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