GFX2200HT

GUITAR AMPLIFIER

with Channel Tracking & Digital Signal Processing

OWNER'S MANUAL

Congratulations!

You are now the proud owner of the Crate GFX2200HT guitar amplifier. This rugged amplifier combines outstanding features with serious clean and distorted sounds, with lots of power. An easy to operate DSP (Digital Signal Processing) section lets you dial in a variety of digital effects including reverbs, octave and wah-wahs – with a separate level control. Crate's unique **Channel Tracking** feature means that as you switch between channels and gains, the DSP "tracks" the changes – your DSP settings for each channel are stored and automatically recalled! The supplied three-button footswitch allows you to select channels, change the overdrive gain, and turn the DSP on and off by "remote control." The front-mounted electronic tuner allows you to tune your instrument any time the amplifier is on.

Like all Crate products, your GFX2200HT is designed by musicians and assembled using only the best components. Extensive testing confirms that this amplifier is the absolute best it can be. Crate's transferable five-year warranty protects your investment long after many other companies' warranties have expired.

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

Thank you for choosing CRATE

Contents:

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

PRECAUCION
RIESGO DE CORRIENTAZO
NO ABRA

PRECAUCION: PARA REDUCIR EL RIESGO DE INCENDIOS O DESCARGAS ELECTRICAS, NO PERMITA QUE ESTE APARATO QUEDE EXPUESTO A LA LLUVIA O LA HUMEDAD. PARA DISMINUOIR EL RIESGO DE CORRIENTAZO, NO ABRA LA CUBIERTA. NO HAY PIEZAS ADENTRO QUE EL USARIO PUEDO REPARAR DEJE TODO MANTENIMIENTO A LOS TECHNICOS CALIFICADOS.

ATTENTION
RISQUE D'ELECTROCUTION
NE PAS OUVRIR

ATTENTION: PROTÉGEZ CET APPAREIL DE LA PLUIE ET DE L'HUMIDITÉ AFIN D'ÉVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION. POUR REDUIRE D'ELECTROCUTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPRABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN QUALIFIE.

IMPORTANT SAFETY INSTRUCTIONS

- READ, FOLLOW, HEED, AND KEEP ALL INSTRUCTIONS AND WARNINGS.
- DO NOT OPERATE NEAR ANY HEAT SOURCE AND DO NOT BLOCK ANY VENTILATION OPENINGS ON THIS APPARATUS. FOR PROPER OPERATION, THIS UNIT REQUIRES 3" (75CM) OF WELL VENTILATED SPACE AROUND HEATSINKS AND OTHER AIR FLOW PROVISIONS IN THE CABINET.
- DO NOT USE THIS APPARATUS NEAR SPLASHING, FALLING, SPRAYING, OR STANDING LIQUIDS.
- CLEAN ONLY WITH LINT-FREE DAMP CLOTH AND DO NOT USE CLEANING AGENTS.
- ONLY CONNECT POWER CORD TO A POLARIZED, SAFETY GROUNDED OUTLET WIRED TO CURRENT ELECTRICAL CODES AND COMPATIBLE WITH VOLTAGE, POWER, AND FREQUENCY REQUIREMENTS STATED ON THE REAR PANEL OF THE APPARATUS.
- PROTECT THE POWER CORD FROM DAMAGE DUE TO BEING WALKED ON, PINCHED, OR STRAINED.
- UNPLUG THE APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.
- ONLY USE ATTACHMENTS, ACCESSORIES, STANDS, OR BRACKETS SPECIFIED BY THE MANUFACTURER FOR SAFE OPERATION AND TO AVOID INJURY.
- THIS APPARATUS DOES NOT OPERATE NORMALLY AND REQUIRES SERVICE WITH ANY PHYSICAL DAMAGE FROM IMPACT OR ANY EXPOSURE TO MOISTURE.
- SERVICE MUST BE PERFORMED BY QUALIFIED PERSONNEL.
- OUR AMPLIFIERS ARE CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS. CONTINUED EXPOSURE TO HIGH SOUND PRESSURE LEVELS CAN CAUSE PERMANENT HEARING IMPAIRMENT OR LOSS. USER CAUTION IS ADVISED AND EAR PROTECTION IS RECOMMENDED IF UNIT IS OPERATED AT HIGH VOLUME.

EXPLANATION OF GRAPHICAL SYMBOLS:
EXPLICACION DE SIMBOLOS GRAFICOS:
EXPLICATION DES SYMBÔLES GRAPHIQUES:

= "DANGEROUS VOLTAGE" / "VOLTAJE PELIGROSO" / "DANGER HAUTE TENSION"

= "IT IS NECESSARY FOR THE USER TO REFER TO THE INSTRUCTION MANUAL" / "ES NECESARIO QUE EL USUARIO SE REFIERA AL MANUAL DE INSTRUCCIONES." / "REFERREZ-VOUS AU MANUAL D'UTILISATION"

The Digital Signal Processor:

Crate's Digital Signal Processing (DSP) offers 16 exciting digital effects, accessible through the DSP Mode control. The effects are described as follows:

1	REV 1	small room reverb
2	REV 2	medium room reverb
3	REV 3	large room reverb
4	REV 4	concert hall reverb
5	DLY 1	short slapback + small room reverb
6	DLY 2	medium delay + plate reverb
7	DLY 3	long delay + large room reverb
8	FLNG 1	slow deep flange + reverb
9	FLNG 2	flange + reverb + delay
10	CHO 1	slow tremolo chorus + reverb
11	CHO 2	chorus + reverb + delay
12	RTRY	simulated rotating speaker effect
13	OCTV DN	adds a signal one octave lower than input
14	T-WAH	touch sensitive wah-wah effect
15	I-WAH	inverse wah-wah effect
16	DBLR	simulated second track, slightly out-of-sync

Use the DSP Mode control to access any of the 16 built-in digital effects. Use the level control to mix in the desired amount of each effect.

Channel Tracking:

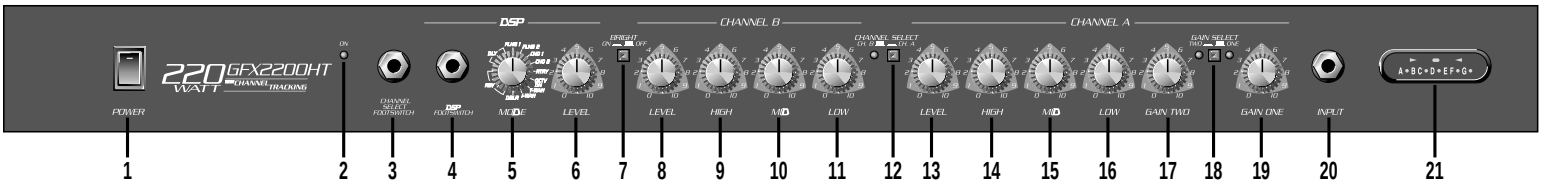
Your Crate GFX2200HT gives you the power of **Channel Tracking**! Once you select a DSP setting for each channel, Channel Tracking recalls those DSP settings automatically – without changing the DSP controls! For example:

- Select the Clean channel. Set the DSP Mode to "FLNG 1" ***(slow flange + reverb)***
- Select the Overdrive channel, Gain 1. Set the DSP Mode to "CHO 1" ***(slow chorus + reverb)*** (the setting for the Clean channel is now saved to memory)
- Select the Overdrive channel, Gain 2. Set the DSP Mode to "T-WAH" ***(touch wah-wah)*** (the setting for the Overdrive channel, Gain 1 is now saved to memory)
- Reselect the Clean channel (the setting for the Overdrive channel, Gain 2 is now saved to memory)

Now when you go back to the Clean channel, even though the DSP Mode was last set to "T-WAH," Channel Tracking automatically recalls the last setting for the Clean channel – in this example, "FLNG 1." Change to the Overdrive channel, Gain 1, and "CHO 1" is recalled. Change to the Overdrive channel, Gain 2, and "T-WAH" is recalled. That's the power of **Channel Tracking**!

(Note: Even when the power is turned off, **Channel Tracking** still retains the settings – until ***you*** change them!)

The Front Panel:



. POWER: Use this switch to turn the amplier on (top of the switch depressed) and off bottom of the switch depressed).

. ON LED: This LED illuminates when the mplifier is turned on.

. CHANNEL SELECT FOOTSWITCH: Inert the 1/4" stereo plug on the cable attached o the two-button footswitch (supplied) into his jack. This will allow you to use the ootswitch to control channel and gain selecon (Channel A - see #18).

. DSP FOOTSWITCH: Insert the 1/4" mono lug on the cable attached to the two-button ootswitch (supplied) into this jack. This will llow you to use the footswitch for on/off conrol of the selected DSP effect.

. DSP MODE: Use this control to select one f the 16 built-in digital effects. A listing of the ffects is shown on page 3.

. DSP LEVEL: Use this control to adjust the mount of the digital effect. In its fully counter lockwise position the signal will be "dry" without any effect). As you rotate the control lockwise the amount of effect increases.

CHANNEL B: The Clean Channel:

. BRIGHT: This switch, when depressed, oosts the upper frequencies of Channel B.

. LEVEL: Use this control to adjust the outut level of Channel B.

. HIGH: Use this control to adjust the high requency level of Channel B.

10. MID: Use this control to adjust the midrange frequency level of Channel B.

11. LOW: Use this control to adjust the low frequency level of Channel B.

12. CHANNEL SELECT: Use this switch to select either channel. With the switch in the out position, Channel B is selected and the adjacent LED illuminates. When the switch is depressed, Channel A is selected.

CHANNEL A: The Overdrive Channel:

13. LEVEL: Use this control to adjust the output level of Channel A.

14. HIGH: Use this control to adjust the high frequency level of Channel A.

15. MID: Use this control to adjust the midrange frequency level of Channel A.

16. LOW: Use this control to adjust the low frequency level of Channel A.

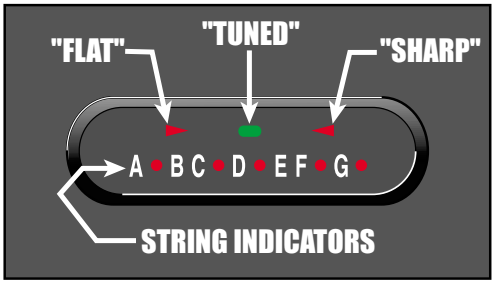
17. GAIN TWO: Use this control to adjust the amount of heavy distortion for Channel A. Gain Two produces more intense distortion than Gain One (#19) and is active when the Gain switch (#18) is depressed.

18. GAIN SELECT: Use this switch to select one of the two gain controls for Channel A (#17, #19). When the switch is depressed, gain two is selected and gain one is disabled. Both of the adjacent LEDs will illuminate. With the switch in the out position, gain one is selected. The right-side LED will illuminate. When a footswitch (#3) is used, this switch is disabled. The LEDs continue to function in the manner described.

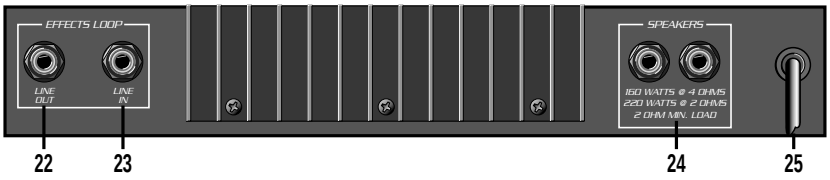
19. GAIN ONE: Use this control to adjust the amount of light distortion for Channel A. Gain One produces less intense distortion than Gain Two (#17) and is active when the Gain switch (#18) is in the out position.

20. INPUT: Use this 1/4" jack to connect your guitar to the amplifier by means of a shielded instrument cable.

21. TUNER: The tuner is active whenever the amplifier is turned on. The bottom row of LEDs correspond to the strings of your guitar. The top row of LEDs indicate which way you need to adjust each string for proper tuning. A string is properly tuned whenever the corresponding LED on the bottom row and the LED in the center of the top row are illuminated. (See detail below.)



The Rear Panel:



22. EFFECTS LOOP LINE OUT: When using an external effects processor, connect this jack to the input of the effect by means of a shielded signal cable. This jack also doubles as a source for a post-EQ, preamp signal to send your signal to a mixing board, recorder, powered monitor or external amplifier.

23. EFFECTS LOOP LINE IN: When using an external effects processor, connect this jack to the output of the effect by means of a shielded signal cable. This jack also doubles as a direct connection to the power amp, bypassing the input and preamp stages. This is useful for "slaving" a pair of amplifiers together.

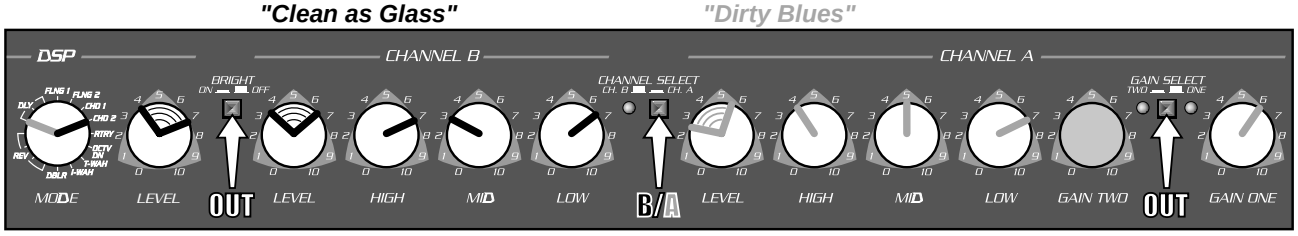
24. SPEAKERS: Use these jacks to connect the amplifier to your speaker cabinet(s) using speaker cables with mono 1/4" plugs. These jacks are wired in parallel. Make sure that the combined impedance of your speakers is equal to or greater than 2 ohms! Use the chart below to help determine parallel loads. If in doubt, ask your dealer.

CAB IMP	# CABS	TOTAL IMP
4 ohms	2	2 ohms
8 ohms	2	4 ohms
8 ohms	4	2 ohms
16 ohms	2	8 ohms
16 ohms	4	4 ohms
16 ohms	8	2 ohms

25. POWER CORD: This grounded power cord is to be plugged into a grounded power outlet, wired to current electrical codes and compatible with the voltage, power, and frequency requirements stated on the rear panel. **Don not attempt to defeat the safety ground connection.**

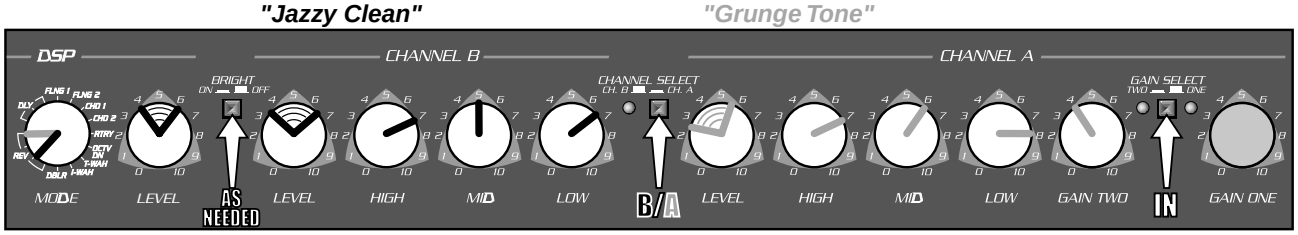
Some Suggested Settings

"Clean as Glass"



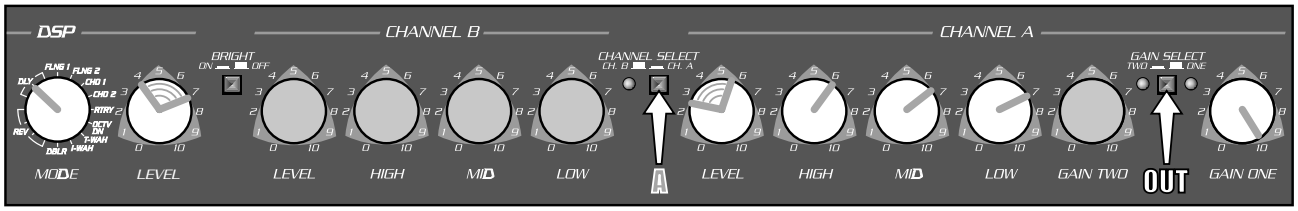
"Dirty Blues"

"Jazzy Clean"

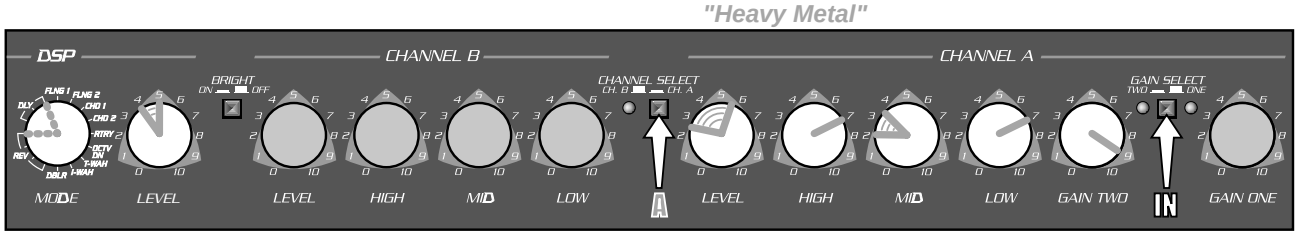


"Grunge Tone"

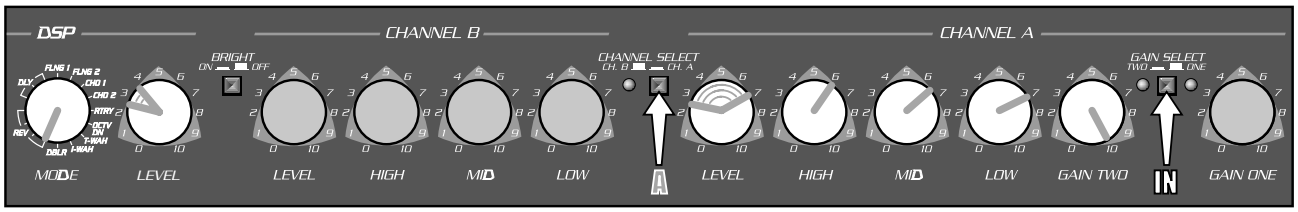
"Classic Hard Rock"



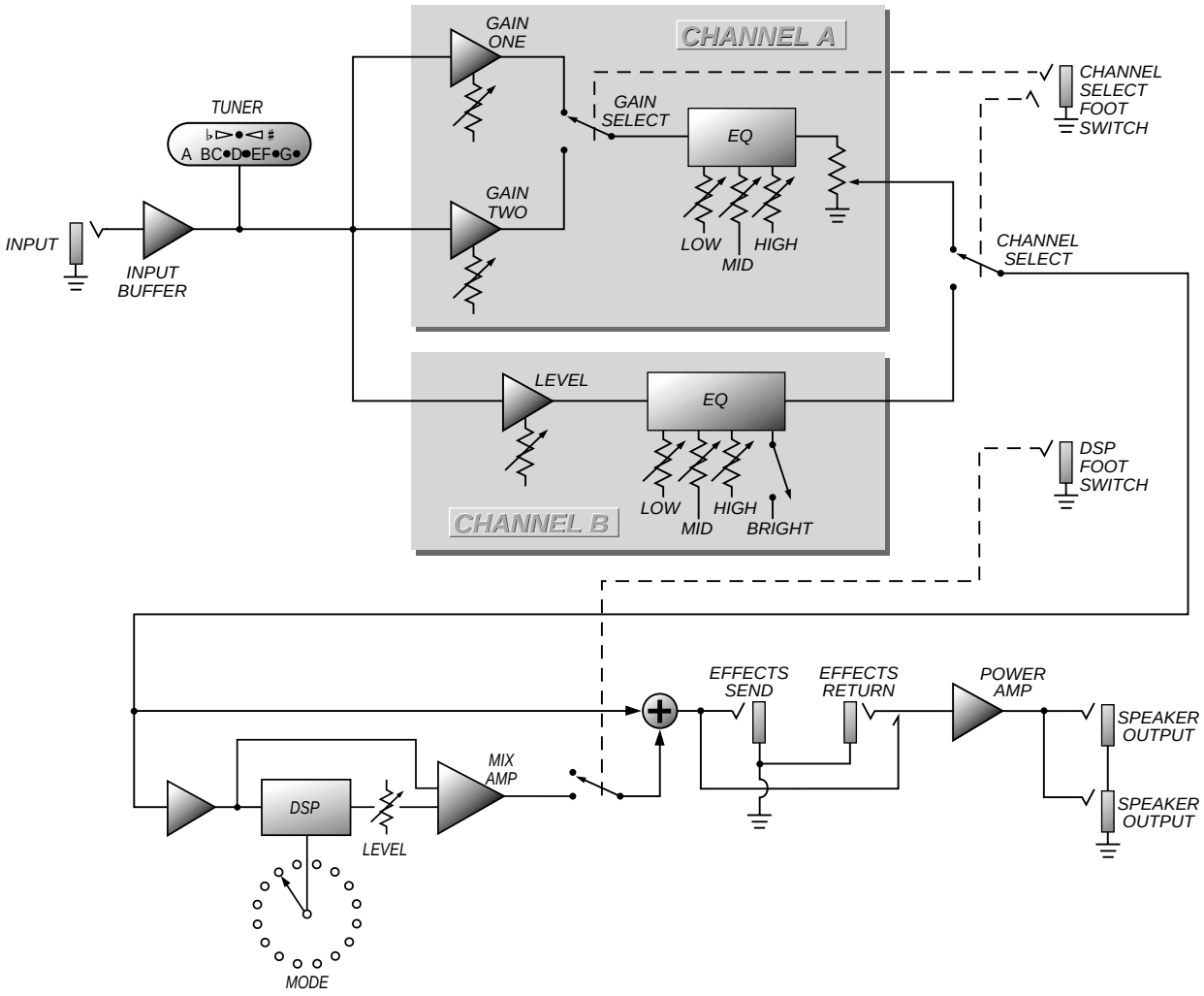
"Heavy Metal"



"Moshin'"



System Block Diagram



Declaration Of Conformity

#30, Effective 01-01-2001

Manufacturer's Name:	SLM Electronics
Production Facility:	11880 Borman Drive, St. Louis, MO 63146, USA
Production Facility:	700 Hwy 202 W, Yellville, AR 72687, USA
Shipping Facility:	1400 Ferguson Ave., St. Louis, MO 63133, USA
Office Facility:	1400 Ferguson Ave., St. Louis, MO 63133, USA
Product Type:	Audio Amplifier
Complies with Standards:	
LVD:	92/31/EEC, 93/68/EEC, & 73/23/EWG
Safety:	EN60065
EMC:	EN55013, EN55020, EN55022, EN61000-3-2, & EN61000-3-3

Supplementary information provided by your local Sales & Services Office or:
SLM Electronics - R & D Engineering
1901 Congressional Drive, St Louis, MO 63146, USA
Tel.: 314-569-0141, Fax: 314-569-0175

Technical Specifications:

Output Power Rating		160 watts RMS, 5% THD, 4 ohm load 220 watts RMS, 5% THD, 2 ohm load
Maximum Input Signal Level Accepted		8 volts peak to peak
Input Impedance		470 k ohms
Total System Gain		Channel B: 54 dB @ 1 kHz, all controls at “10”, Bright off Channel A: Gain One: 69 dB @ 1 kHz, all controls at “10” Gain Two: 86 dB @ 1 kHz, all controls at “10”
Channel B	**Low**	25 dB range @ 70 Hz
	Mid	14 dB range @ 800 Hz
	High	29 dB range @ 10 kHz
	Bright	7 dB boost @ 10 kHz
Channel A	**Low**	18 dB range @ 100 Hz
	Mid	10 dB range @ 1 kHz
	High	17 dB range @ 6 kHz
Input Power Requirements		120VAC, 60HZ, 230VA 100/115VAC, 50/60Hz, 230VA 230VAC, 50/60Hz, 230VA
Cabinet Size and Weight		11.63” H x 30.75” W x 11.63” D; 35 lbs.

The GFX2200HT is covered with a durable black Tolex material; wipe clean with a damp lint-free cloth to remove dirt and road film. 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, specifications and information in this manual are subject to change without notice.

www.crateamps.com

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