

# **GT-200 Series** Quadradrive<sup>™</sup> Amplifier



# **OWNER'S MANUAL**

### Congratulations!

You are now the proud owner of the one of the newest and most versatile guitar amplifiers available, the Crate GT-200/200H **Quadradrive™**. This flexible and compact unit features four separate, footswitchable Gain controls, with your choice of Tube <u>OR</u> Solid State preamps for either the Rhythm <u>OR</u> Lead channels. Discrete tone, Level, and Reverb controls for each channel and Crate's exclusive Tube Driven Mosfet power amp add even more flexibility and control.

Like all Crate products, your GT-200/200H is made with pride 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

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# ABOUT THE GT-200

The Crate GT-200/200H **Quadradrive™** is truly unique and versatile. With four separate Gain controls (all footswitchable), two separate channels (footswitchable) and your choice of tubes or solid state (also footswitchable), the GT-200 gives you more "sound per pound" than any other amp of its kind. Use the Solid State Rhythm preamp section for today's sound: crisp highs and a tight bass response. Use the Tube Rhythm preamp section for that vintage tube sound, from ultra-clean to a bluesy crunch. The Solid State Lead preamp section gives you all of the traditional Crate Mega-Gain hard rock sizzle and fire with lots of definition and compression. And the Tube Lead preamp section starts with a bluesy crunch and can deliver everything up to screaming, tube-driven lead distortion with plenty of sustain and total tone control.

# FEATURES OVERVIEW

Given below is a quick overview of the GT-200's features and controls:

- ✓ <u>Two Completely Separate Channels</u>: Independent Gains, 3-band EQ's, Reverb and Levels.
- ✓ Four Gain Controls: Tube Lead. Solid State Lead. Tube Rhythm. Solid State Rhythm.
- ✓ Expander Switch: Crate original. Creates a stereo-like atmosphere.
- ✓ <u>True Stereo Chorus</u>: Depth and Rate controls. Footswitchable.
- Tube Driven Mosfet Power Amplifier: Crate exclusive. No traditional solid state output devices. No chance of harsh "square wave" distortion.
- ✓ <u>Total Footswitch Control</u>: Channel selection. Tube or Solid State selection. Chorus on/off. All at the touch of a footswitch.
- External Speaker Jack: Series connection. No chance of overloading the amplifier. Standard 1/4" mono phone jack.
- Effects Loop: 1/4" Line Out/Line In jacks. Allows external signal processor connection. Allows direct connection to external power amplifier, mixer, recording console or whatever.



# THE GT-200 FRONT PANEL



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

#### LEAD SECTION

2: TUBE GAIN: This serves as the gain control for the Lead Channel's Tube preamp section, giving you control over the compression and overdrive characteristics of the GT-200's input tubes. Use this control along with the Lead Channel's Level control (#15) to create a wide variety of sounds at any volume level. (Some suggested settings can be found on page 7). 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 the tube compression, with maximum tube distortion towards the full-right position.

3. LEAD LED: This LED glows red when the Lead Channel is chosen, and along with LED #14 gives you a visual sign that the Lead Gains, tone section and Master Level are active.

4. SOLID STATE GAIN: This serves as the gain control for the Lead Channel's Solid State preamp section. Use this control along with the Lead Channel's Level control (#15) to create a wide variety of sounds at any volume level. (Some suggested settings can be found on page 7). 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 compression, reaching maximum distortion towards the full-right position.

5. CHANNEL: Select either the Lead Channel (switch in the IN position) or the Rhythm Channel (switch OUT) with this pushbutton switch. The channel indicator LEDs (#3 & 14 for Lead, #9 & 19 for Rhythm) work with this switch as a visual guide.

NOTE: When a footswitch is connected to the Channel Select footswitch jack (#36, rear panel) the front-panel switch will have no control over which preamp section is selected.

6. TUBE/SOLID STATE: Select either the Tube preamp (switch IN) or the Solid State preamp (switch OUT) for either channel with this pushbutton switch. The Tube LED (#7) works with this switch as a visual guide: it glows when the Tube section has been selected.

NOTE: When a footswitch is connected to the Channel Select footswitch jack (which also serves as the Tube/Solid State select; #36, rear panel) the front-panel switch will have no control over which preamp section is selected.

7. TUBE LED: This tube-shaped symbol glows yellow when the Tube preamp section is selected, giving you a quick visual reference as to which preamp section is active.

#### RHYTHM SECTION

8. TUBE GAIN: This serves as the gain control for the Rhythm Channel's Tube preamp section, giving you control over the compression and overdrive characteristics of the GT-200's preamp tube. Use this control along with the Rhythm Channel's Level control (#20) to create a wide variety of sounds at any volume level. (Some suggested settings can be found on page 7). 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 the tube compression, with a bluesy tube crunch coming to life as you approach a setting of "8" and thicker tube distortion in the full-right position.

**9. RHYTHM LED:** This LED glows green when the Rhythm Channel is chosen, and along with LED #19, gives you a visual sign that the Rhythm Channel is active.

**10.** SOLID STATE GAIN: This serves as the gain control for the Rhythm Channel's Solid State preamp section. Use this control along with the Rhythm Channel's Level control (#20) to create a wide variety of sounds at any volume level. (Some suggested settings can be found on page 7). With the control to the full-left position, no signal passes through. As you bring the control towards center, you increase the signal level, which stays clean all the way up to the full-right position.

#### LEAD CHANNEL

**11. LOW:** Adjust the Lead Channel's low frequency output with this control: the center position is "flat," that is, no boost or cut. By turning the control to the left you reduce the low frequency output; turning it to the right increases the low frequency output. The Low control provides up to 12dB of boost or cut centered at 100Hz.

12. MID: Adjust the Lead Channel's midrange frequency output with this control: in the center position the midrange output is "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 5dB of boost or cut centered at 1000Hz, which affects the "voice" of your guitar's sound.

**13. HIGH:** Adjust the Lead Channel'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 10dB of boost or cut centered at 5000Hz, which allows you to adjust the crispness or the "bite" of your guitar.

14. LEAD LED: This LED glows red when the Lead Channel is chosen, and along with LED #3, gives you a visual sign that the Lead Gains, tone section, and Master Level are active.

**15.** LEVEL: Adjust the output level of the Lead Channel with this control: in the full-left position there is no output. As you rotate the control to the right you increase the strength of the Lead Channel's signal going into the power amp, thus increasing the output volume. The signal level for the Line Out jack (#34, rear panel) is simultaneously affected by this control.

#### RHYTHM CHANNEL

**16.** LOW: Adjust the Rhythm Channel's low frequency output with this control: the center position is "flat," that is, no boost or cut. By turning the control to the left you reduce the low frequency output; turning it to the right increases the low frequency output. The Low control provides up to 12dB of boost or cut centered at 100Hz.

17. MID: Adjust the Rhythm Channel's midrange frequency output with this control: in the center position the midrange output is "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 7dB of boost or cut centered at 800Hz, which affects the "voice" of your guitar's sound.

**18. HIGH:** Adjust the Rhythm Channel'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 15dB of boost or cut centered at 10kHz, which allows you to adjust the crispness or the "bite" of your guitar.

**19. RHYTHM LED:** This LED glows red when the Rhythm Channel is chosen, and along with LED #9, gives you a visual sign that the Rhythm Channel is active.

**20.** LEVEL: Adjust the output level of the Rhythm Channel with this control: in the full-left position there is no output. As you rotate the control to the right you increase the strength of the Rhythm Channel's signal going into the power amp, thus increasing the output volume. The signal level for the Line Out jack (#34, rear panel) is simultaneously affected by this control.

#### REVERB SECTION

**21. LEAD:** Adjust the amount of reverb effect for the Lead Channel's signal 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.

22. RHYTHM: Adjust the amount of reverb effect for the Rhythm Channel's signal with this control: in the full-left position the signal is "dry" (no reverb), rotating the control to the right increases the amount of reverberation.

#### CHORUS SECTION

**23. CHORUS:** Select Chorus "ON" (switch in the IN position) with this pushbutton switch. The Chorus indicator LED (#27) works with this switch as a visual guide.

NOTE: When a footswitch is connected to the Chorus footswitch jack (#35, rear panel) the front-panel switch will have no control over chorus selection.

24. EXPANDER: With this switch in the IN position, our exclusive Expander circuitry is activated. This produces the effect of being in a true stereo environment with speakers on either side of you. With this effect, you can add a more "roomy" feeling to your sound.

25. EXPANDER LED: This LED glows red when the Expander circuitry is selected, giving you a visual indicator that it is active.

**26. DEPTH:** Set the intensity of the stereo chorus effect with this control: in the far-left position there will be almost no chorus; as you rotate the control to the right the amount of effect increases.

27. CHORUS LED: This LED glows green when the Chorus section is selected and gives you a visual sign that the Chorus section is active.

**28. RATE:** Set the speed of the stereo chorus effect with this control: to the left for slow, smooth "phasing" sounds, to the right for faster "vibrato" sounds.

29. POWER: This heavy-duty rocker-type switch is used to turn the amplifier ON in the left position, OFF in the right position. The channel LEDs provide a visual indicator that the unit is on.

## THE GT-200 REAR PANEL



**30.** FUSE: This protects the GT-200 against damages caused from a faulty AC power source or other problems. If the fuse blows, replace it ONLY with the same size and type 6A slo-blo fuse. If the fuse blows repeatedly, check the AC source: if it's okay, contact your Crate dealer for service information.

**31. POWER CORD:** Firmly plug the supplied heavy-duty, grounded power cord into a safely wired, grounded 120 volt, 60 cycle AC power outlet. DO NOT attempt to defeat the ground connection on this cable.

If your GT-200 was purchased outside of the United States, see the unit's rear panel for its power rating and follow the above guidelines.

**32. EXTERNAL SPEAKER JACKS:** Allow you to connect the output of the GT-200 to external speakers, placing them in parallel. Any load equal to at least 4 ohms may be connected to these speaker jacks. If more than one jack is used, the total load impedance, considering both jacks, must be at least 4 ohms. The standard internal speaker is 8 ohms. An additional 8 ohm speaker may be connected here, which would total 4 ohms. With the GT-200H (head), you may connect one 4 ohm speaker, two 8 ohm speakers, or four 16 ohm speakers, without overloading the output.

33. STEREO EFFECTS LOOP LINE IN: Connecting an external signal processor, such as digital delay or echo, can be accomplished through the Line In and Line Out jacks. Connect the OUTPUT of the external device to the Line In jack using a shielded cable with stereo 1/4" plugs. This sends the line-level signal IN to the GT-200's internal power amplifiers.

34. STEREO EFFECTS LOOP LINE OUT: This carries a preamplified, post-EQ signal to an external effects device, amplifier, mixing console or recorder. Connect the Line Out jack to the INPUT of the device using a shielded cable with stereo 1/4\* phone plugs.

**35. CHORUS FOOTSWITCH:** A single footswitch can be plugged in here to give you remote control for the Chorus ON/OFF for the unit. Connecting a footswitch here disables the front panel switch.

**36. CHANNEL/TUBE FOOTSWITCH:** A dual footswitch can be plugged in here to give you remote control for the selection of the Lead/Rhythm channels AND the Tube/Solid State preamp sections. When connected, the footswitch overrides the front panel switches for these functions.

NOTE: This is a STEREO 1/4" jack: "tip" controls the channel selection, "ring" controls the preamp section, "sleeve" is ground for both. Use only a stereo-plug equipped footswitch (such as the Crate FS-60), or a three-way footswitch (such as the Crate FS-80) to control Chorus as well - see #35.



# IF YOU HAVE A DSP MODEL ...



#### DSP SECTION

37. LEAD LEVEL: Adjust the *amount* of digital sound processing effect for the Lead Channel with this control: in the full-left position the output signal is 'dry' (no reverb or effect); rotating the control to the right increases the amount of effect.

38. RHYTHM LEVEL: Adjust the *amount* of digital sound processing effect for the Rhythm Channel with this control: in the full-left position the output signal is "dry" (no reverb or effect); rotating the control to the right increases the amount of effect.

#### DSP MODE SECTION

**39. MODE KNOB:** Select the *type* of digital sound processing effect with this control. Each channel, preamp and chorus combination will "remember" its DSP setting, allowing you to preset effects for eight different sounds. For a complete listing of the different effects and their corresponding settings, see "Using the Mode Control" on this page.

40. MODE LED DISPLAY: This display is a visual indicator of which digital sound processing setting you have chosen for the current channel/preamp/chorus combination you are in. This will change when you switch between channels and preamps and chorus ON/OFF, depending which mode you have set for the configuration.

#### ABOUT THE DIGITAL SOUND PROCESSOR

The Digital Sound Processor's 32-position Mode control allows you to instantly access the exact type of effect you want - from classic reverberation to radical 'backwards' sounds - for any of the channel, preamp or chorus settings. Use the table on this page to familiarize yourself with the locations of the many different sound effects possible from your GT-200 with DSP.

The setting of the Mode control will determine the type of effect for whichever channel/preamp/chorus combination the amp is set to at the time you adjust the Mode control. Once set, the GT-200 DSP's nonvolatile memory retains the setting until *you* reset it.

#### USING THE MODE CONTROL

Plug in your guitar and turn on the amplifier. Set Channel to Rhythm, Tube/Solid State to Tube. Now set the Mode control to "12" (medium gated reverb). Strike a chord on your guitar and listen to the sound of the effect. Press in the Channel switch to choose the Lead Channel, then set the Mode control to "26" (large hard surface echo). Strike a chord and listen to the results. Now switch back to the Rhythm Channel and strike a chord even though you haven't changed the setting of the Mode control, the amplifier "remembered" that you had programmed in setting "12" and kept the effect as you left it.

There's more: When a Chorus footswitch is used, you can program each of the four channel/preamp combinations with two Mode settings. If you want to control Digital Sound Processing ON/OFF with the footswitch, for example, set the Mode to "0" (bypass), hit the footswitch and set Mode to "5" (large bright hall). Now you have the ability to switch the DSP on and off with the footswitch. With the footswitch you have a choice of two DSP settings for each of the four channel/preamp combinations, for *the most* flexibility *and* versatility possible!

#### TABLE OF SETTINGS

The table below list each of the 32 settings of the GT-200DSP's Mode control, along with a brief explanation of each effect.

NO.	NAME	TYPE	DESCRIPTION
0	OFF	NONE	BYPASS - NO SIGNAL PROCESSING OCCURS
1	SMALL ROOM, BRIGHT	SMALL REVERB	8' x 8' empty room with hardwood floors.
2	SMALL ROOM, DARK	SMALL REVERB	8' x 8' carpeted room with up to four people.
3	SMALL HALL, BRIGHT	SMALL REVERB	20' x 40' Rehearsal Hall with wood floors, hard walls.
4	SMALL HALL, DARK	SMALL REVERB	20" x 40" carpeted Rehearsal Hall with draped walls and up to 30 people.
5	LARGE HALL, BRIGHT	LARGE REVERB	50' x 100' empty Rehearsal Hall with 20' ceiling.
6	LARGE HALL, DARK	LARGE REVER8	50' x 100' Rehearsal Hall with up to 50 friends and crew.
7	AVERAGE CLUB, BRIGHT	LARGE REVERB	500 capacity empty club, wood floors, afternoon sound check.
8	AVERAGE CLUB, DARK	LARGE REVERB	500 capacity club, wood floors, stuffed with people.
9	CONCERT HALL, BRIGHT	LARGE REVERB	5000-seat Concert Hall, hard back wall, afternoon sound check.
10	CONCERT HALL, DARK	LARGE REVERB	5000-seat Concert Hall, SRO at back wall, sold out show.
11	STADIUM	LARGE REVERB	40,000-seat round Stadium, afternoon sound check, one hundred crew and VIPs only.
12	GATED REVERB, MEDIUM	SPECIAL REVERB	Studio Effect - Engineer cuts off reverb slightly after each note. (220ms Gate)
13	GATED REVERB, LONG	SPECIAL REVERB	Studio Effect - Engineer lets note ring, then cuts it off. (350ms Gate)
14	PLATE REVERB	SPECIAL REVERB	Studio Effect - Simulates Studio Steel Plate Reverb.
15	TRADITIONAL REVERB	SPECIAL REVERB	Simulates old-fashioned multi-spring tube reverb unit.
16	SLAPBACK, SHORT	DELAY	125ms delay plus small reverb. Elvis' favorite.
17	SLAPBACK, MEDIUM	DELAY	350ms delay plus small reverb. Rockabilly special.
18	SLAPBACK, LONG	DELAY	557ms delay only. 630' travel time of sound.
19	SHORT MODERATE SURFACE	ECHO	85ms delay with 14.2% regeneration & small reverb.
20	SHORT HARD SURFACE	ECHO	85ms delay with 27.3% regeneration.
21	SHORT/MEDIUM MODERATE SURFACE	ECHO	280ms delay with 21.8% regeneration & small reverb.
22	MEDIUM SOFT SURFACE	ECHO	335ms delay with 12.5% regeneration.
23	MEDIUM HARD SURFACE	ECHO	335ms delay with 26.5% regeneration.
24	MEDIUM GLASS SURFACE	ECHO	335ms delay with 43.7% regeneration.
25	LARGE SOFT SURFACE	ECHO	485ms delay with 7.8% regeneration.
26	LARGE MODERATE SURFACE	ECHO	485ms delay with 20.3% regeneration.
27	LARGE HARD SURFACE	ECHO	485ms delay with 39.2% regeneration & small reverb.
28	INFINITE DELAY	SPECIAL EFFECT	506ms delay with over 90% regeneration.
29	THICKENER	SPECIAL EFFECT	33ms-based sound fattener at selected frequencies.
30	MULTI-TAP	SPECIAL EFFECT	Multi-thickener with some subtle delays added.
31	REVERSE	SPECIAL EFFECT	"Backwards masking" effect (number nine, number nine,).

# SOME SUGGESTED SETTINGS



# GT-200 SERIES TECHNICAL SPECIFICATIONS

Output Power Rating	80 watts/channel RMS @ 5% THD - 8 ohm load, 120VAC 100 watts/channel RMS @ 5% THD - 4 ohm load, 120VAC
Input Impedance	1M ohm
Maximum Signal Accepted	3V, peak-to-peak
Signal To Noise Ratio	
Lead Channel	
Solid State Tube	61dB 57dB
Rhythm Channel	5700
Solid State	81dB
Tube	72dB
Gain	88dB @ 1kHz, tones @ "5"
Tone Control Range	
Lead Channel	
Low	24dB @ 100Hz
Mid High	10dB @ 1kHz 20dB @ 5kHz
Rhythm Channel	ZUOD W SKIIZ
Low	23dB @ 100Hz
Mid	14dB @ 800Hz
High	30dB @ 10kHz
Line Out Level	1V RMS typical for full power output, 4V RMS max.
Driver Tube Types	12AX7 (1), 12AU7 (3)
Output Device Type	MOSFETs
Internal Speakers (GT-200 only)	12" Crate Custom-L, 80 watts, 8 ohms,
	34 oz. magnet, 1.75" voice coil
Power Requirements	100/120VAC, 60Hz, 6 amps max.
•	220/240VAC, 50Hz, 3 amps max.
Size and Weight	
GT-200	17.25"H x 27.25"W x 11"D, 57.25 lbs. (GT-200 DSP - 58 lbs.)
GT-200H	11.75"H x 30.5"W x 10.5"D, 38 lbs. (GT-200H DSP - 38.75 lbs.)

4 P

The GT-200 is covered with a durable black Tolex material; to keep the cabinet in top condition, wipe it clean with a damp lint-free cloth to remove dirt and road film. The GT-200H is covered in tough-as-nails Ozite; to clean, brush off with a furniture brush. Never spray cleaning agents directly onto the cabinet, and stay away from abrasive cleanser which could damage the finish.

Crate strives continually to develop new products, as well as find ways to improve existing ones. For this reason, the specifications and information in this Crate manual are subject to change without notice.



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