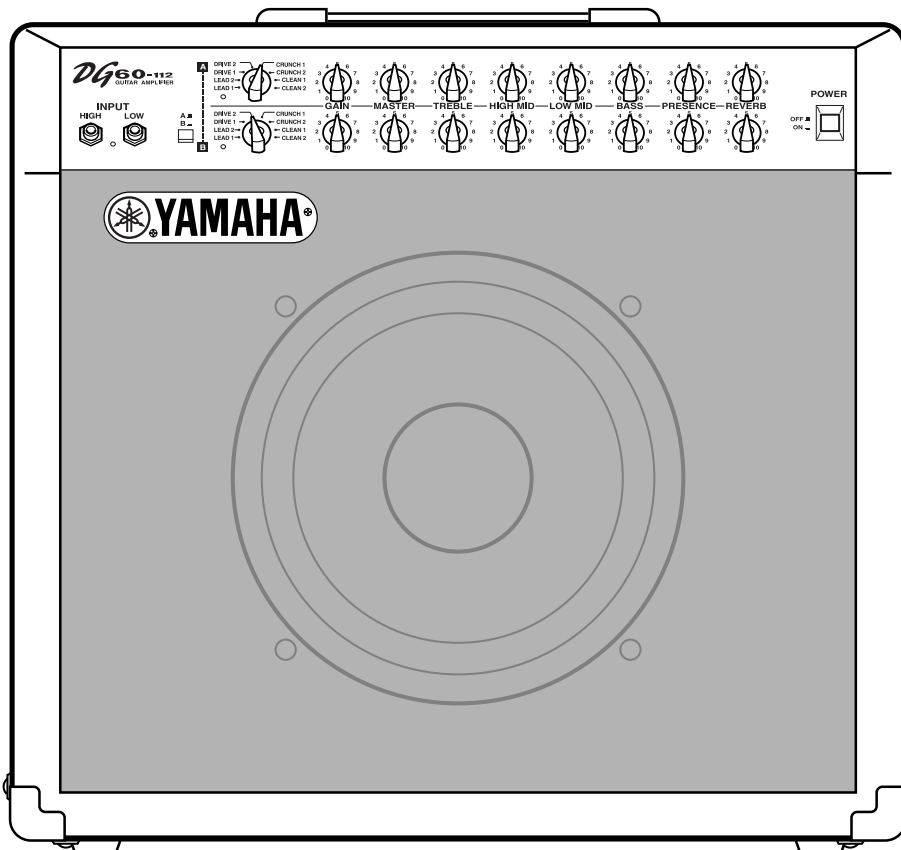




GUITAR AMPLIFIER

DG60-112

Owner's Manual



FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT:

When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE:

This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regula-

tions does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW	: EARTH
BLUE	: NEUTRAL
BROWN	: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or colored GREEN or GREEN-and-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

• This applies only to products distributed by Yamaha-Kemble Music (U.K.) Ltd.



The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol, within the equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.

IMPORTANT SAFETY INSTRUCTIONS

INFORMATION RELATING TO PERSONAL INJURY, ELECTRICAL SHOCK, AND FIRE HAZARD POSSIBILITIES HAS BEEN INCLUDED IN THIS LIST.

WARNING- When using any electrical or electronic product, basic precautions should always be followed. These precautions include, but are not limited to, the following:

- 1.** Read all Safety Instructions, Installation Instructions, Special Message Section items, and any Assembly Instructions found in this manual BEFORE making any connections, including connection to the main supply.
- 2.** Do not attempt to service this product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.
- 3.** Main Power Supply Verification: Yamaha products are manufactured specifically for the supply voltage in the area where they are to be sold. If you should move, or if any doubt exists about the supply voltage in your area, please contact your dealer for supply voltage verification and (if applicable) instructions. The required supply voltage is printed on the name plate. For name plate location, please refer to the graphic found in the Special Message Section of this manual.
- 4. DANGER-**Grounding Instructions: This product must be grounded and therefore has been equipped with a three pin attachment plug. If this product should malfunction, the ground pin provides a path of low resistance for electrical current, reducing the risk of electrical shock. If your wall socket will not accommodate this type plug, contact an electrician to have the outlet replaced in accordance with local electrical codes. Do NOT modify the plug or change the plug to a different type!
- 5. WARNING:** Do not place this product or any other objects on the power cord or place it in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.
- 6.** Ventilation: Electronic products, unless specifically designed for enclosed installations, should be placed in locations that do not interfere with proper ventilation. If instructions for enclosed installations are not provided, it must be assumed that unobstructed ventilation is required.
- 7.** Temperature considerations: Electronic products should be installed in locations that do not seriously contribute to their operating temperature. Placement of this product close to heat sources such as; radiators, heat registers etc., should be avoided.
- 8.** This product was NOT designed for use in wet/damp locations and should not be used near water or exposed to rain. Examples of wet /damp locations are; near a swimming pool, spa, tub, sink, or wet basement.
- 9.** This product should be used only with the components supplied or; a cart ,rack, or stand that is recommended by the manufacturer. If a cart, rack, or stand is used, please observe all safety markings and instructions that accompany the accessory product.
- 10.** The power supply cord (plug) should be disconnected from the outlet when electronic products are to be left unused for extended periods of time. Cords should also be disconnected when there is a high probability of lightning and/or electrical storm activity.
- 11.** Care should be taken that objects do not fall and liquids are not spilled into the enclosure through any openings that may exist.
- 12.** Electrical/electronic products should be serviced by a qualified service person when:
 - a. The power supply cord has been damaged; or
 - b. Objects have fallen, been inserted, or liquids have been spilled into the enclosure through openings; or
 - c. The product has been exposed to rain; or
 - d. The product does not operate, exhibits a marked change in performance; or
 - e. The product has been dropped, or the enclosure of the product has been damaged.
- 13.** This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

14. Some Yamaha products may have benches and/or accessory mounting fixtures that are either supplied as a part of the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using. Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

PLEASE KEEP THIS MANUAL

Thank you for purchasing a Yamaha DG60-112 Guitar Amplifier.

Originally conceived and entirely designed by Yamaha, the DG60-112 is a digital guitar amplifier that delivers powerful tube amp tone with superior stability compared to other tube amplifiers.

Equipped with 2 independent channels, each channel offers 8 different preset amp types from which you can choose and create tone with. Along with digital spring reverb that can be applied to each channel is capable of producing a wide range of tone. Foot switches connected to the foot switch jacks can be used to switch between channels and switch the reverb ON/OFF. It also features a line out jack equipped with a speaker simulator. Altogether, the DG60-112 is a versatile guitar amplifier that can be used in studio as well as live situations.

To get the best results and longest life out of your DG60-112, we recommend that you carefully read this manual, and keep it in a safe place for future reference.

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Precautions

- Avoid using your amplifier in the following locations to prevent possible damage:
 - In direct sunlight or next to heating equipment.
 - Extremely cold or hot locations.
 - Locations exposed to high humidity or excessive dust.
 - Locations subject to strong shocks or vibration.
- Before making any connections, make sure that the power on the amplifier and any external devices is switched OFF.
- To protect the speaker from possible damage, always set the MASTER knob to "0" before switching the power ON/OFF.
- When connecting a speaker to this unit make sure to turn OFF the power first.
- Do not apply excessive force to the switches and controls.
- Your Yamaha guitar amplifier is a precision musical instrument. Handle it with care and avoid dropping or bumping it.
- Operating temperatures will rise during use. Make sure the amplifier is used in a well-ventilated area. The DG60-112 should be placed in a position where there is at least 30cm (12") clearance from the wall on the sides, top and back of the amplifier.
- For safety, always remove the power plug from the AC wall outlet if there is any danger of lightning striking in your area.
- Keep the amplifier away from neon signs or fluorescent lighting to prevent noise pickup.
- To prevent damage and possibly electrical shock, never open the case and tamper with the internal circuitry.
- Never use benzene, thinner or other volatile liquids for cleaning, as these chemicals may cause damage or discoloration to the finish. Always use a dry, soft cloth to wipe off dust and dirt.

Specifications

Digital Section

Complete Digital Signal Processing
Amplification Type : Internal 8 Channel Preset
Digital Reverb (SPRING)
Speaker Simulator (LINE OUT)

Analog Section

60W Solid State Power Amp
30 cm Speaker (EMINENCE) x 1

Controller/Switch

Front Panel : GAIN, MASTER, TREBLE, HIGH MID, LOW MID, BASS, PRESENCE, REVERB, AMP select switch, for each channel (A/B), Channel select switch (A/B)
Rear Panel : EFFECT BLEND, SP MUTE switch, for each channel (A/B), EFFECT SEND/RETURN level switch

Indicator

Peak Level Display LED (Red)

Connection Jacks

INPUT HIGH/LOW, EFFECT SEND/RETURN, LINE OUT/
PHONES, FOOT SW (CH SELECT, REVERB)
: All Standard Phone Mono Jack

A/D Converter 20 bit + 3 bit floating

D/A Converter 20 bit

Sampling Frequency 48 kHz

Input Level/Impedance

INPUT HIGH: -20dBm (THRU)/1M Ω
INPUT LOW: -10dBm (THRU)/1M Ω
EFFECT RETURN: 0dBm/120k Ω

Output Level/Impedance

SPEAKER: 60W RMS/8 Ω
LINE OUT: +2dBm/47 Ω
EFFECT SEND: -2dBm/1k Ω

Power Requirements

U.S. and Canadian models : 120V, 60Hz
General model : 230V, 50Hz

Power Consumption

70W

Dimensions (W x H x D)

540 x 504 x 276 mm (21.3" x 19.8" x 10.9")

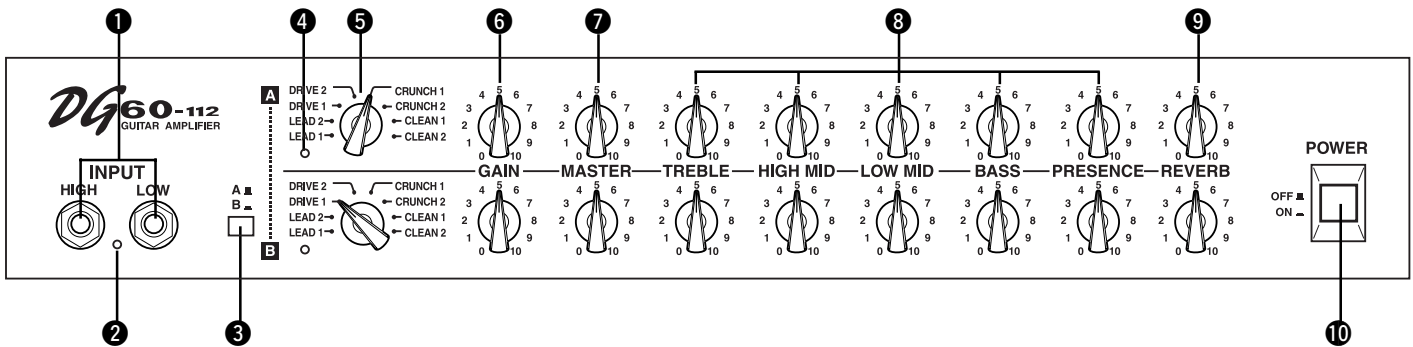
Weight

18.0 kg (39 lbs 11 oz)

* Specifications and external appearance are subject to change without notice.

The Panel Controls

■ Front Panel



The DG60-112 is a high-quality guitar amp with 2 independent channels.

You can switch between channel A (the upper row of knobs 5-9) settings and channel B (the lower row of knobs 5-9) with the switch 3 or with a foot-switch. Control knobs 5-9 for both channels A and B operate in the same manner.

1 Input Jack (INPUT HIGH, LOW)

The amplifier's input jack.

The guitar is connected to the amplifier here. Guitars with a high output should be connected to the LOW jack while guitars with a low output should be connected to the HIGH jack. If you want a clean tone we recommend connecting the guitar to the LOW jack.

* Always switch the power off before connecting the guitar.

2 Peak Indicator

This indicator is used to match the input level. The indicator lights when the peak level is exceeded.

3 Channel Select Switch

Use to switch between Channels A and B.

Press the switch to select the channel you want to use.

When Channel A (A) is selected, the amplifier will produce tone according to the settings specified by the upper row of knobs 5 - 9. When Channel B (B) is selected, the amplifier will produce tone according to the settings specified by the lower row of knobs 5 - 9.

4 Channel Indicator

The indicator lamp corresponding to the currently selected channel lights.

5 Amp Select Switch

Use to select one of the 8 internal preset guitar amp types.

With any of the amp types, basically 2 is brighter than 1.

Depending upon the control settings, as shown in "Setting Examples" on the page 8, the tone character that is possible is wider than what the amp type's name implies.

• LEAD1, LEAD2

Lead offers a tone with heavy distortion. Substantial mids provide a fat tone with excellent sustain.

• DRIVE1, DRIVE2

Drive offers a thick overdrive tone with excellent sustain similar to when the volume is fully raised on a tube amplifier. Using the tone control knobs to adjust the balance of their respective frequencies creates a wider variety of tone.

• CRUNCH1, CRUNCH2

Crunch offers expressive picking articulation and nuance. Raise the

GAIN level creates a tone similar to that natural overdrive when the volume is raised on a tube amplifier. This crisp tone is excellent for playing riffs and rhythm parts.

• CLEAN1, CLEAN2

A clean sound without distortion. Use an effect such as reverb or chorus to create a spacious sound.

6 Gain Volume (GAIN)

Use to control the amount of distortion.

Rotate the knob to the right to increase the amount of distortion.

* If the GAIN is set to "0", sound will not be produced even if the MASTER Volume is turned up.

7 Master Volume (MASTER)

Use to control the overall volume of the GAIN and tone control settings.

8 Tone Controls

(TREBLE, HIGH MID, LOW MID, BASS, PRESENCE)

Use to control the levels of their respective frequencies.

Rotate the knob to the right to increase the level of tone.

TREBLE	Controls the level of the high frequencies.
HIGH MID	Controls the level of the upper mid frequencies.
LOW MID	Controls the level of the lower mid frequencies.
BASS	Controls the level of the low frequencies.
PRESENCE	Controls the level of the frequencies higher than TREBLE.

9 Reverb Volume (REVERB)

Use to control the amount of reverb (Spring Reverb).

Rotate the knob to the right to increase the amount of reverb. If the knob is set to "0", no reverb will be produced.

Reverb can also be switched ON/OFF with a foot switch connected to the FOOT SW REVERB jack located on the rear panel.

10 Power Switch (POWER)

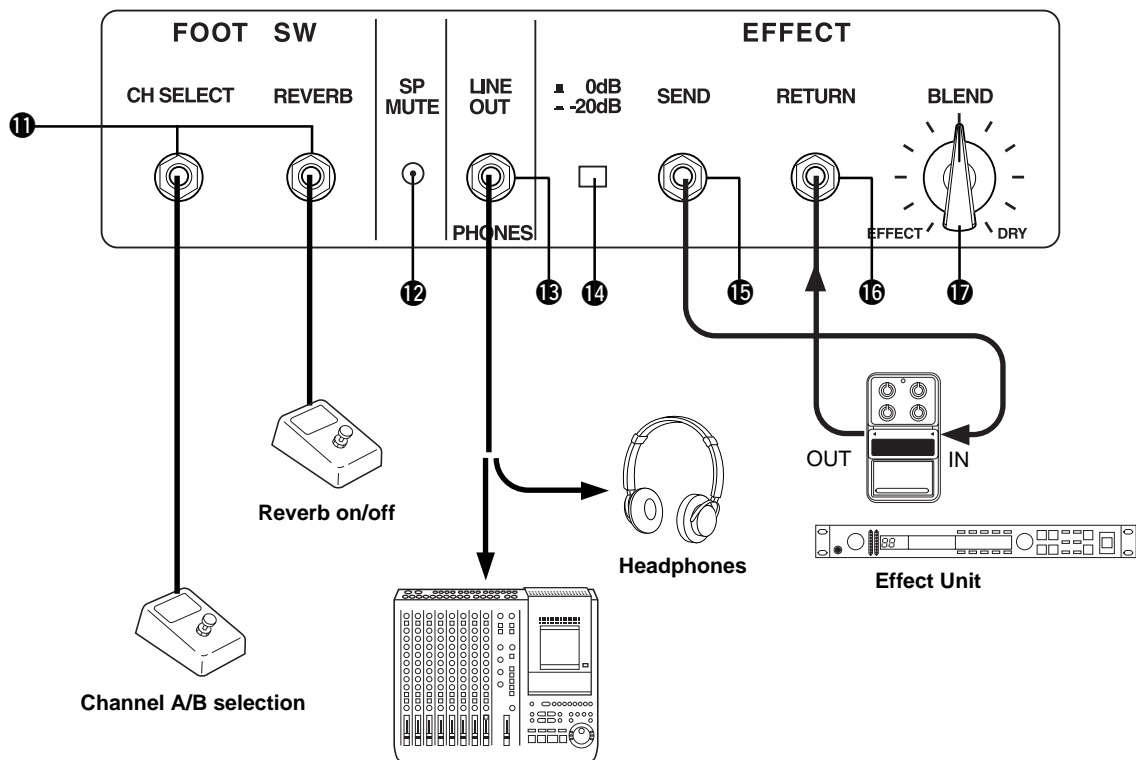
The main unit's power switch.

Press the switch to turn the amp ON/OFF.

* To protect the speakers make sure the MASTER Volume is set to "0" before you switch the power ON/OFF.

■ Rear Panel

Before making any connections, make sure that the power on the DG60-112 and any external devices is switched **OFF**.



P. A. Mixer or Recording Device

⑪ Foot Switch (FOOT SW)

The following functions can be switched with an optional foot switch (Yamaha FS1, etc.) connected to these jacks.

• Channel Select (CH SELECT)

You can easily switch between Channels A and B in the same manner as the Channel Select Switch ③ on the front panel. Step on the foot switch to switch between Channels A/B.

* When the foot switch is used, the Channel Select Switch ③ on the front panel is inactive.

• Reverb (REVERB)

You can switch the Reverb ON/OFF. Stepping on the foot switch switches the Reverb ON/OFF. When the Reverb is switched OFF, no reverb will be produced.

⑫ Speaker Mute Switch (SP MUTE)

Press the switch to mute output from the speaker. Insert a thin object inside the hole to press the switch. Use this switch in conjunction with the headphones or Line Out when you don't want sound produced by the DG60-112's speaker.

* When speaker output is muted, output to the EFFECT SEND jack ⑮ will be muted as well.

⑬ Line Out/Head Phone Jack (LINE OUT/PHONES)

Use this jack to connect directly to a mixer's line jack or use a pair of headphones. The line signal from this jack passes through a *speaker simulator.

⑭ Effect Send/Return Level Switch (0dB/-20dB)

The output level of the Send Jack ⑮ and the input level of the Return Jack ⑯ can be set to -20dB or 0dB.

⑮ Effect Send Jack (EFFECT SEND)

Connect an external effector's input jack to this jack.

* When speaker output is muted, output to the EFFECT SEND jack ⑮ will be muted as well.

⑯ Effect Return Jack (RETURN)

Connect an external effector's output jack to this jack.

⑰ Blend Knob (BLEND)

Use this knob to control the amount of signal that is received from the effect return and added to the DG60-112's amp signal. Rotate the knob toward the EFFECT side to add more effect to the tone. Rotate the knob toward the DRY side for tone without effect.

* What is a Speaker Simulator?

The speaker simulator adds the live nuance of a speaker to the line signal. When you connect the DG60-112 directly to a mixer or MTR the speaker simulator will add the acoustic characteristics of a speaker, as heard through a microphone, to the tone.

Setting Examples

To help you start enjoying the fantastic sound of the DG60-112, here are some examples of common settings. Use these as a starting point in creating your own original sounds.

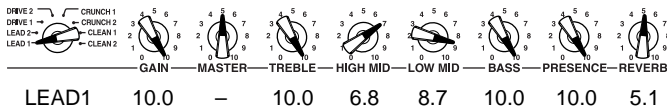
* Set the Master Volume control to a suitable level.

* The setting can be changed to suit the guitar you use. Find your optimum setting by referring to the sample settings.

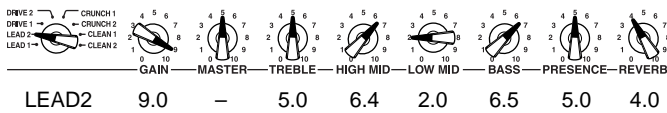
A typical distortion sound often used in British hard rock.



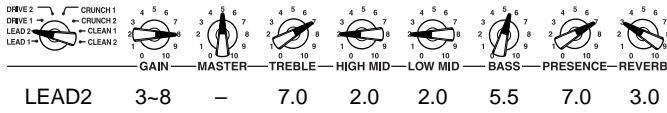
Ideally smooth lead sound for solos with sustains using the front pickup.



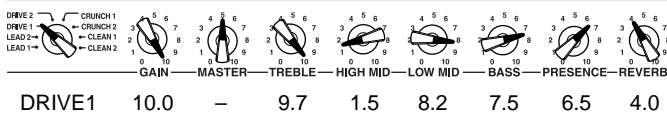
A brilliant sound suitable for hard rock and heavy metal.



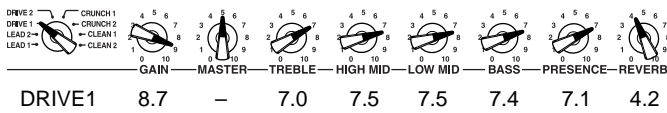
Optimum distortion for heavy riffs with the gain up, crisp overdrive with the gain down.



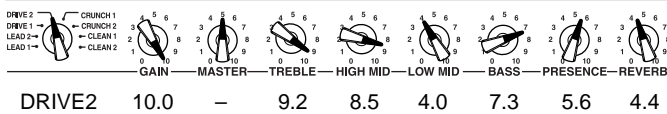
Tight overdrive sound.



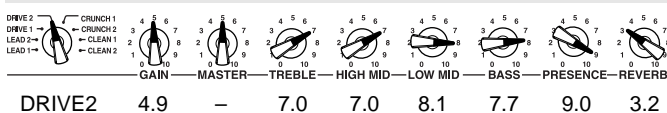
A punchy overdrive sound with rich overtones in the mid range.



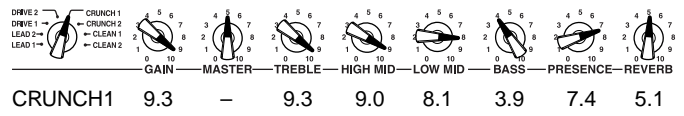
A hard overdrive sound emphasizing the low and high ranges.



Texas blues type sound with slight overdrive.



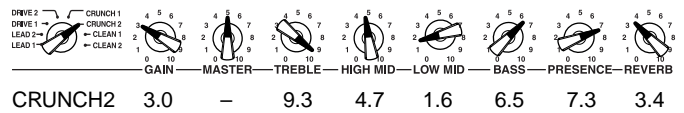
All-round crunch sound.



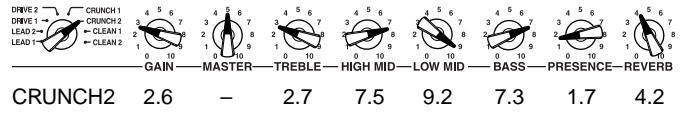
The warm and clean sound of a crunch amp. Can be used for all genres from jazz to rock.



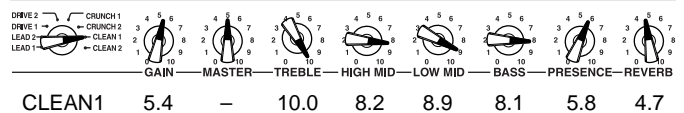
Crunch sound like a low-power vintage amp with the volume turned up all the way.



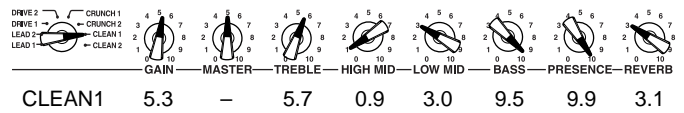
Contemporary jazz sound. Can be used to obtain a clean sound without using the CLEAN channel.



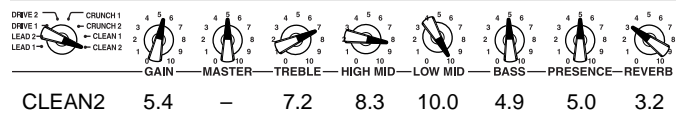
Country sound with a punch.



A rich and clean bass sound used in hard rock.



A bright, clean sound. Can be used widely in a number of scenes.



The natural, light crunch sound of a clean amp with the volume up.

