

***COSMIPREAMP***



# **Owner's Manual**

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p.2-4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.







# USING THE UNIT SAFELY

## INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

### About WARNING and CAUTION Notices






 <b>WARNING</b>	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
 <b>CAUTION</b>	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

### About the Symbols









	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

### ALWAYS OBSERVE THE FOLLOWING


#### WARNING

- Do not open or perform any internal modifications on the unit. 
- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Consult your dealer or our company. 
- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
  - Damp (e.g., baths, washrooms, on wet floors); or are 
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.
- This unit, either alone or in combination with an amplifier and headphones or speakers, 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 immediately stop using the unit, and consult an audiologist. 


#### WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.   

- Immediately turn the power off, and request servicing by your dealer or our company when: 
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.
- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 
- Protect the unit from strong impact. (Do not drop it!) 
- Batteries must never be recharged, heated, taken apart, or thrown into fire or water.   

- Never expose Battery to excessive heat such as sunshine, fire or the like. 


 **CAUTION**

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children. 


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- Never climb on top of, nor place heavy objects on the unit. 

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- Disconnect all cords coming from external devices before moving the unit. 

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- Used batteries must be disposed of in compliance with whatever regulations for their safe disposal that may be observed in the region in which you live. 

- If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions (p. 8).   

  - Carefully follow the installation instructions for batteries, and make sure you observe the correct polarity. 
  - Avoid using new batteries together with used ones. In addition, avoid mixing different types of batteries.
  - Remove the batteries whenever the unit is to remain unused for an extended period of time.
  - If a battery has leaked, use a soft piece of cloth or paper towel to wipe all remnants of the discharge from the battery compartment. Then install new batteries. To avoid inflammation of the skin, make sure that none of the battery discharge gets onto your hands or skin. Exercise the utmost caution so that none of the discharge gets near your eyes. Immediately rinse the affected area with running water if any of the discharge has entered the eyes.
  - Never keep batteries together with metallic objects such as ballpoint pens, necklaces, hairpins, etc.

# IMPORTANT NOTES

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## Power Supply: Use of Batteries

- As the unit's power consumption is relatively high, please use alkaline batteries.
- Batteries should always be installed or replaced before connecting any other devices. This way, you can prevent malfunction and/or damage to speakers or other devices.
- Batteries are supplied with the unit. The life of these batteries may be limited, however, since their primary purpose was to enable testing.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

## Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

## Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.
- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and our company assumes no liability concerning such loss of data.

## Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically write down a important data onto paper.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory once it has been lost. Our company assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, knobs, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels (especially when it is late at night).
- When you need to transport the unit, pack it in shock-absorbent material. Transporting the unit without doing so can cause it to become scratched or damaged, and could lead to malfunction.

## Main Features

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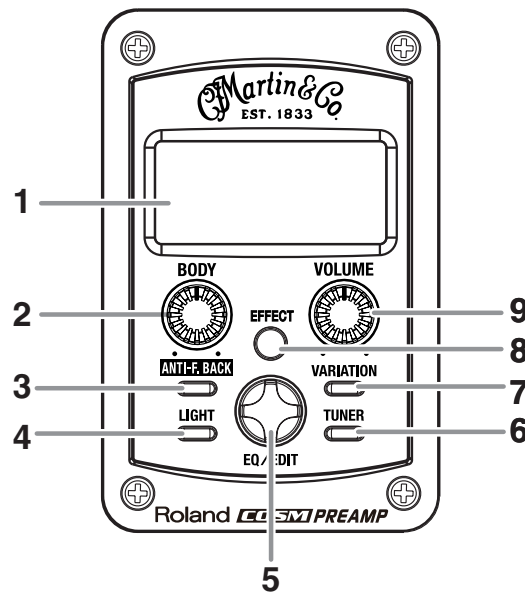
- **Acoustic modeling simulates the presence-filled sound of a real acoustic guitar**  
This system simulates the warmth of the body's sound and the glittering highs by COSM technology that tend to get lost when piezo pickups are used.
- **Built-in anti-feedback function instantly cuts unwanted feedback**  
This feature automatically detects feedback points at unnecessary frequencies and suppresses the feedback occurring at these frequencies.
- **Equipped with 7-band EQ for complete and precise sound shaping**  
The PREAMP includes the first 7-band internal preamp equalizer. This can be used in a wide range of applications, from live performance to recording.
- **Highly accurate built-in chromatic tuner allows speedy tuning**  
You can use this tuner function without having to plug in. And you can also mute output of the sound while the tuner function is being used.  
You can change the reference pitch.
- **Built-in acoustic guitar reverb effects**  
The PREAMP features internal full-fledged reverb that enables you to produce a wide range of spatial sounds, so you can lend sounds a natural airiness or add concert hall reverberation.
- **LCD display enables confirmation of operational status at a glance**  
This feature also makes setting the EQ and tuning a breeze. LED backlighting ensures visibility even on dark stages.

### **About COSM (Composite Object Sound Modeling)**

Composite Object Sound Modeling—or COSM for short—is Roland's innovative and powerful technology that's used to digitally recreate the sound of classic musical instruments and effects.

COSM analyzes the many factors that make up the original sound—including its electrical and physical characteristics—and creates a digital model that accurately reproduces the original.

## Names of Things and What They Do



### 1. LCD display

This indicates the status of the various functions and settings.

### 2. BODY knob

This knob adjusts the resonance from the body's sound as well as the mellowness and fullness of the acoustic guitar's characteristic sound.

### 3. ANTI-F.BACK (Anti-Feedback) button

With one press of this button, the PREAMP automatically detects feedback points at unneeded frequencies and suppresses any feedback occurring at these frequencies.

### 4. LIGHT button

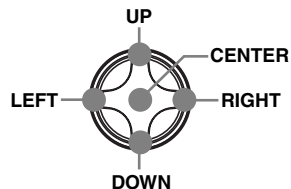
This switches the LCD backlighting on and off.

To reduce battery consumption, the PREAMP is set at turning off the power so that the backlighting is switched off after thirty seconds (the Auto Backlight Off function).

### 5. EQ/EDIT button

Use this to select and adjust parameters.

The EQ/EDIT button functions when pressed in any of five directions (CENTER, UP, DOWN, LEFT, RIGHT).



### 6. TUNER button

This switches the tuner on and off (you can also change the tuner's reference pitch).

### 7. VARIATION button

Use this to select the desired tones.

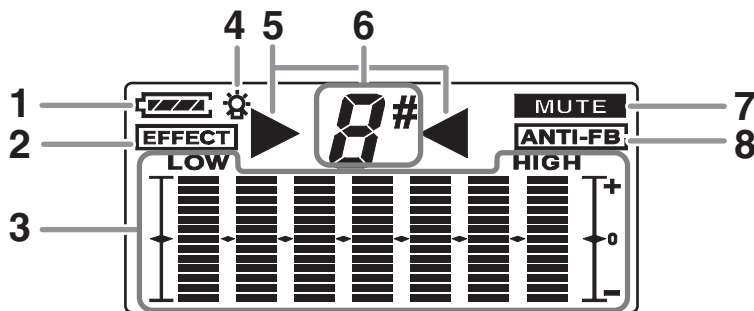
### 8. EFFECT button

Press this when adjusting the effect (reverb sound).

### 9. VOLUME knob

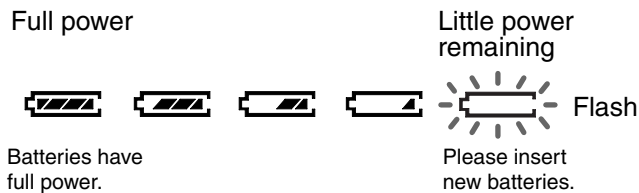
This adjusts the output volume.

## ■ Information Indicated in the LCD Display



### 1. BATTERY icon

This indicates the remaining battery power.



\* Please be aware that the battery status indication is only a standard.

### 2. EFFECT icon

This lights when the EFFECT function is in use.

### 3. EQ Display Section

This section shows the status of the EQ settings; when the tuner is in use, it displays a precision tuning guide.

### 4. LIGHT icon

This lights when the AUTO BACKLIGHT OFF function is deactivated.

### 5. TUNING GUIDE

When the tuner is switched on, this indicator lights to act as a tuning guide.

### 6. Number Display Section

This display indicates variation numbers; note names are indicated when the tuner is in use.

### 7. MUTE icon

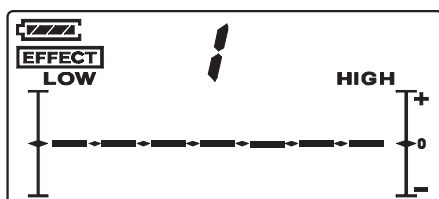
This lights when the MUTE function is in use.

### 8. ANTI-F.BACK icon

This lights when the ANTI-FEEDBACK function is operational.

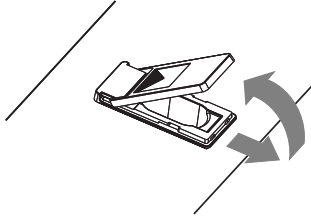
## About the Play Screen

The Play screen is the most fundamental screen of the PREAMP, and is the first screen that appears when the PREAMP is turned on (see below).



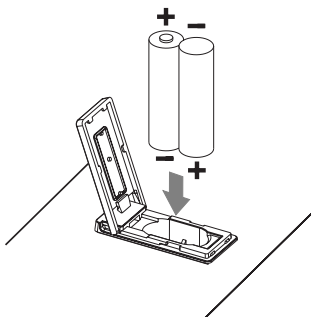
## Inserting the Batteries

1. Slide the battery cover towards OPEN, then open the compartment.



2. Place the batteries in the compartment.

Insert two AA dry cell batteries, checking the polarity to make sure that the positive and negative ends are oriented correctly.



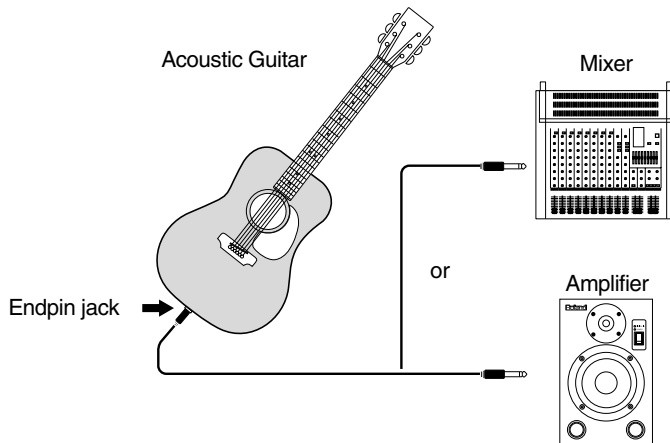
3. Close the battery cover.

### NOTE

- Remove the batteries whenever the unit is to remain unused for an extended period of time. This may cause battery fluid leakage.
- If a battery has leaked, use a soft piece of cloth or paper towel to wipe all remnants of the discharge from the battery compartment. Then install new batteries. To avoid inflammation of the skin, make sure that none of the battery discharge gets onto your hands or skin. Exercise the utmost caution so that none of the discharge gets near your eyes. Immediately rinse the affected area with running water if any of the discharge has entered the eyes.

## Making the Connections

Connect the guitar's endpin jack to your amp, mixer, or other device.



- \* The PREAMP has no power switch. The power is turned on when the connection plug is plugged into a guitar's endpin jack.
- \* Whenever connecting or disconnecting cords, be sure to have the volume for all connected equipment turned down first.
- \* To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- \* Be sure to turn down the volume completely before turning off the power. Even with the volume turned completely down, some sound may be audible as the unit is turned on; however, this does not indicate a malfunction.
- \* Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.
  - When powering up: Turn on the power to your guitar amp last.
  - When powering down: Turn off the power to your guitar amp first.
- \* This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.
- \* The backlight may light up or flash at power-up, but this does not indicate a malfunction.

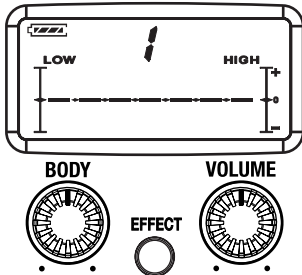


# Operation

## ■ Try Producing Some Sound

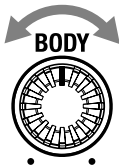
**1. When you have finished making the connections, set the knobs and EQ as shown in the figure.**

\* For information on how to make the settings for the EQ, refer to step 3 on this page.



\* Setting the BODY knob and VOLUME knob to the center position.

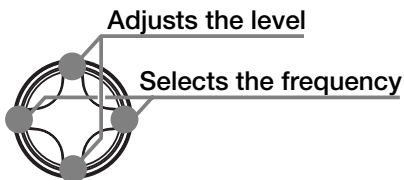
**2. Adjust the BODY knob to get the desired sound.**



**3. Adjust the EQ levels until you achieve the tone you want.**

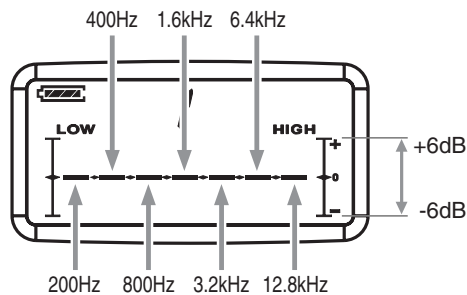
Press the EQ/EDIT button (LEFT, RIGHT) to select the frequency to be adjusted, then press the EQ/EDIT button (UP, DOWN) to adjust the level of the selected frequency.

\* Pressing the EQ/EDIT button (UP, LEFT, DOWN, RIGHT) causes the segment you're adjusting to flash. If the EQ/EDIT button is not operated again within five seconds, the EQ settings mode ends automatically.

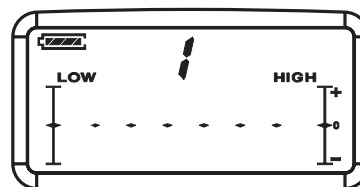


\* Starting from the left, the indicator segments correspond to 200 Hz, 400 Hz, 800 Hz, 1.6 kHz, 3.2 kHz, 6.4 kHz, and 12.8 kHz. Each EQ frequency can be cut or boost by up to 6 dB.

\* Holding down the EQ/EDIT button (CENTER) for at least one second switches off the EQ. Holding down the button again for at least one second switches on the EQ.



EQ is on



EQ is off

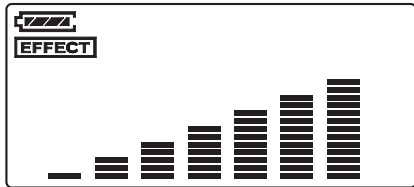
\* The results of EQ adjustment are automatically saved for respective variations.

**4. Adjust the VOLUME knob so that the output sound does not distort at maximum volume when the instrument is played vigorously.**

## ■ Adding Reverb

Applying reverb to the sound produces a natural reverberation effect.

1. Pressing the **EFFECT** button switches the **PREAMP** to the effect settings mode.
2. Press the **EQ/EDIT** button (**UP, LEFT, DOWN, RIGHT**) to adjust the manner in which reverb is applied.



Reverb Effect: Light      Reverb Effect: Heavy

Effect is on



Effect is off

\* Using the **EQ/EDIT** button to minimize the effect switches it off, and "OFF" appears in the display.

3. Press the **EFFECT** button to exit the effect settings mode.

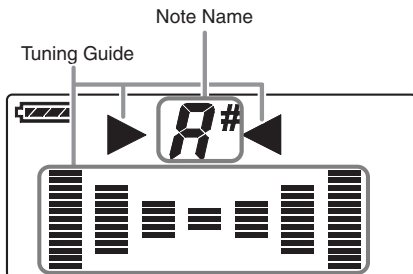
- \* When the effects are applied, the **EFFECT** icon appears in the play screen.
- \* Holding down the **EFFECT** button for at least one second switches off the effect.  
Holding down the button again for at least one second switches on the effect.
- \* When the settings mode ends, the results of effect adjustment are automatically saved for respective variations.

## ■ Tuning

The **PREAMP**'s built-in chromatic tuner function makes tuning simple.

Pressing the **TUNER** button alternately switches the tuner on and off.

### Information Indicated During Tuning



When the tuner is switched on, the note name and tuning guide are shown in the upper row of the display; the tuning guide showing the detailed pitch status appears in the lower row.

### Tuning Instructions

1. **Play a single open note on the string to be tuned.**  
The screen will indicate the note name that is closest to the pitch of the string you played.  
\* Cleanly play a single note only on the string you wish to tune.
2. **Continue tuning until the note name of the string you are tuning appears in the display.**

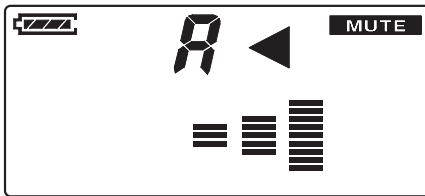
When using normal tuning

String	6	5	4	3	2	1
Note	E	A	D	G	B	E

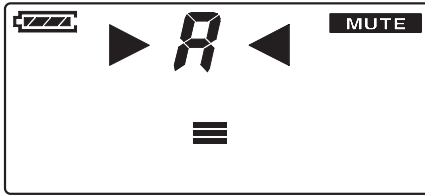
Note name display

Note	C	C <sup>#</sup>	D	D <sup>#</sup>	E	F	F <sup>#</sup>	G	G <sup>#</sup>	A	A <sup>#</sup>	B
Display	C	C <sup>#</sup>	d	d <sup>#</sup>	E	F	F <sup>#</sup>	G	G <sup>#</sup>	A	A <sup>#</sup>	b

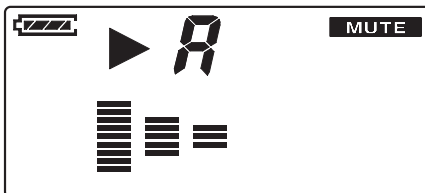
- 3. While checking the tuning guide, tune the string until the “ ≡ ” appears in the center of the guide.**



Too high



Just tuned



Too low

- 4. Repeat Steps 1-3 in tuning all of the strings.**

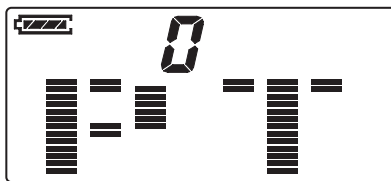
\* With the default factory settings, the output sound is muted while the tuner is in use. The MUTE icon appears in the upper right of the display when the sounds are muted. If you want to have sound be output while the tuner is on, you can switch the mute off (and on) by pressing the EQ/EDIT button (CENTER) while the tuner is activated.

### Changing the Reference Pitch of the Tuner

With the PREAMP, you can set the tuner's reference pitch to any frequency from 438 Hz to 445 Hz.

\* The tuner is set at the factory to 440 Hz.

- 1. With the play screen, hold down the TUNER button for at least two seconds to switch to the reference pitch adjustment mode.**



- 2. Use the EQ/EDIT button (UP, LEFT, DOWN, RIGHT) to change the numerals indicated in the center of the display's upper area.**

Display	8	9	0	1	2	3	4	5
Reference pitch (Hz)	438	439	440	441	442	443	444	445

- 3. Press the TUNER button to exit the reference pitch adjustment mode.**

\* Changes to the reference pitch are saved automatically when you exit the reference pitch adjustment mode.

### Using the Tuner Without Plugging In

You can use the PREAMP's tuner function even without connecting the plug to the guitar's endpin jack.

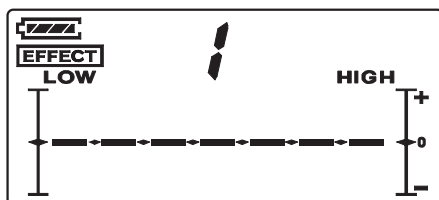
\* If the tuner function is switched on with nothing plugged in, the power will automatically be switched off after ten minutes of no operation, in order to conserve the batteries.

- 1. With the power to the unit turned off, hold down the TUNER button for at least two seconds.**
- 2. The tuner function switches on.**
- 3. Tune the strings as describe above in "Tuning Instructions."**
- 4. Press the TUNER button to turn off the power.**

## ■ Switching VARIATION (Tones)

Press the VARIATION button to switch among tone variations.

The variation number appears in the center of the display's upper area.



For information about the types of variations (tones), refer to “About the PREAMP Variations (Tones).”

## ■ Using the Anti-Feedback (ANTI-F.BACK) Function

The anti-feedback function suppresses the feedback produced by the resonance of the guitar body and other sources. This anti-feedback function can be used very effectively in live stage performances and other such environments where feedback tends to occur.

1. When the sound reaches a point where feedback begins to occur, press the ANTI-F.BACK button.
2. The feedback point is automatically detected and the feedback is suppressed.

- \* The ANTI-F.BACK icon flashes during detection of the feedback point.
- \* The ANTI-F.BACK icon remains lit while the anti-feedback function is in effect.
- \* If no input audio is detected, anti-feedback is not applied.

### Cancel the anti-feedback function.

With the anti-feedback function operational (when the ANTI-F.BACK icon is lit), hold down the ANTI-F.BACK button for at least one second to cancel the function.

## ■ Canceling the Auto Backlight Off Function

- \* To reduce battery consumption, the PREAMP is set at turning off the power so that the backlighting is switched off after thirty seconds (the Auto Backlight Off function).

Holding down the LIGHT button for at least one second switches off the Auto Backlight Off function.

The LIGHT icon appears at the upper left of the display.

Holding down the button again for at least one second reactivates the Auto Backlight Off function.

## Saved Settings

The PREAMP automatically saves the following settings when powered off (unplugged).

- Variations
- EQ
- Effects
- Muting of output audio during tuner operation
- Reference pitch of the tuner
- \* The settings won't be saved if the power cuts off because of low batteries.

## Returning to the Factory-default Settings (Factory Reset)

The process of returning the PREAMP to its factory-default settings is called a “factory reset.” This lets you restore all settings saved on the PREAMP to their factory-default values.

- \* For information about saved settings, refer to “Saved Settings.”

1. Hold down the EFFECT button while you turn on the power (insert plug).

"F" appears at the top center of the display.

- \* To cancel the factory reset, press the ANTI-F.BACK button.

2. Press the EFFECT button.

The factory reset is executed.

When the factory reset is complete, the play screen appears.

## Troubleshooting

### The power doesn't come on

- Have the batteries run down?  
Replace with fresh batteries.
- \* *The batteries included with the PREAMP are only for confirming operation of the device.*
- Is the batteries' polarity correct?  
Confirm the batteries' polarity as described in "Inserting the Batteries."
- Is the connection plug properly connected to the guitar's endpin jack?  
Check this connection as described in "Making the Connections."

### There is no sound

- Is the connection plug properly connected to the guitar's endpin jack?  
Check this connection as described in "Making the Connections."
- Is the Volume knob turned down?  
Gradually turn the VOLUME knob towards the center position to confirm the sound output.  
Follow this by adjusting the sound as described in "Try Producing Some Sound."
- Is the PREAMP in Tuner mode?  
The PREAMP is set at the factory to mute the output sound while the tuner is in use. Either press the TUNER button to return to the play screen or cancel the setting that mutes sounds while the tuner is operational.

### Sound is distorted

- Could the VOLUME knob be turned up too high?
- Could the BODY knob be turned up too high?
- Could the EQ settings be turned up too high?  
Adjust the settings as described in "Try Producing Some Sound."

## Specifications

PREAMP: COSM Acoustic Preamp

Input Impedance..... 10 MΩ

Nominal Output Level..... -20 dBu

Output Impedance ..... 1 kΩ

Controls..... BODY knob, VOLUME knob, EFFECT button, ANTI-F.BACK button,  
LIGHT button, VARIATION button, TUNER button,  
EQ/EDIT button (CENTER, UP, DOWN, LEFT, RIGHT)

Connector..... Output jack (serves also as endpin)

Power Supply ..... DC 3 V: Dry battery LR6/R6 (AA) type x 2

Current Draw ..... 80 mA (DC 3 V) \* *When the backlight is off.*  
115 mA (DC 3 V) \* *When the backlight is on.*

\* *Expected battery life under continuous use:*

*Carbon: 7 hours, Alkaline: 24 hours*

*These figures will vary depending on the actual conditions of use.*

Option ..... Owner's Manual, Dry battery R6 (AA) type (carbon) x 2

\* *The life of the included batteries may be limited, however, since their primary purpose was to enable testing. We recommend that alkaline batteries be used when replacing the batteries.*

\* *0 dBu = 0.775 Vrms*

\* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

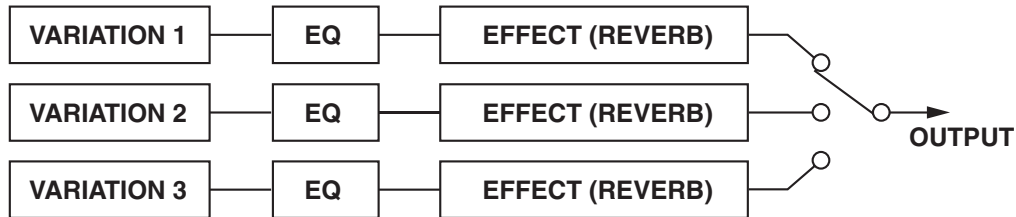
# About the PREAMP Variations (Tones)

Tones correspond to each variation number as shown below.

Variation number	Description
1	
2	
3	

## Composition of the variation

You can set the EQ and effect (reverb) of each variation.





This product complies with the requirements of EMC Directive 2004/108/EC.

For EU Countries

For the USA

## FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment. This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

## NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For C.A. US (Proposition 65)

## WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For EU Countries



**UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.

**DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit dem Hausmüll entsorgt werden.

**FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.

**IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.

**ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como está regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.

**PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.

**NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.

**DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.

**NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

**SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.

**FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.

**HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.

**PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.

**CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.

**SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.

**EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.

**LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinoti produktai neturi būti išmetami kartu su buitiniems atliekomis.

**LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produkts ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.

**SI** Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinskimi odpadki.

**GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

## 有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。

本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

### 环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。

环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。

不当的使用，将会导致有害物质泄漏的危险。

### 产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳(壳体)	×	○	○	○	○	○
电子部件(印刷电路板等)	×	○	×	○	○	○
附件(电源线、交流适配器等)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

因根据现有的技术水平，还没有什么物质能够代替它。