# BOSS

# ME-70 GUITAR MULTIPLE EFFECTS

## Owner's Manual

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. E-18) and "Important Notes" (p. E-19). 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.

## Printing Conventions and icons in This Manual

| | |
|---|---|
| Text or numerals enclosed in square brackets [ ] | Indicate buttons.<br><br>**[WRITE]**    WRITE button |
| **NOTE** | Indicates information that you should be aware of when using the ME-70. |
| **MEMO** | Indicates supplementary information about an operation. |
| **TIP** | Indicates information about a convenient operation. |
| **cf.**<br>(p. E-**) | Indicates a reference page. |

---

**COSM**

Technology that simulates existing physical structures, materials, and the like using different, virtual means is called "modeling technology."
COSM (Composite Object Sound Modeling) is a technical innovation from Roland that combines a number of such sound-modeling technologies to create even newer sounds.

English

Deutsch

Français

Italiano

Español

Português

Nederlands

* G 6 0 3 7 0 0 8 - 0 1 *

# Creating Sounds

## Making the Connections and Turning the Power On

**Guitar Amp**

**Digital Audio Player, etc.**

**Footswitch (BOSS FS-6, etc.)**

**Step 1**
Turn down the volume all the way on all equipment!

**Step 2**
Connect the equipment.

**Step 4**
Switch on the amp's power last!

**Step 3**
Insert the plug to power up the ME-70.

**Electric Guitar**

**MEMO**
You can mix stereo audio from AUX IN with the output.

**Stereo Headphones**
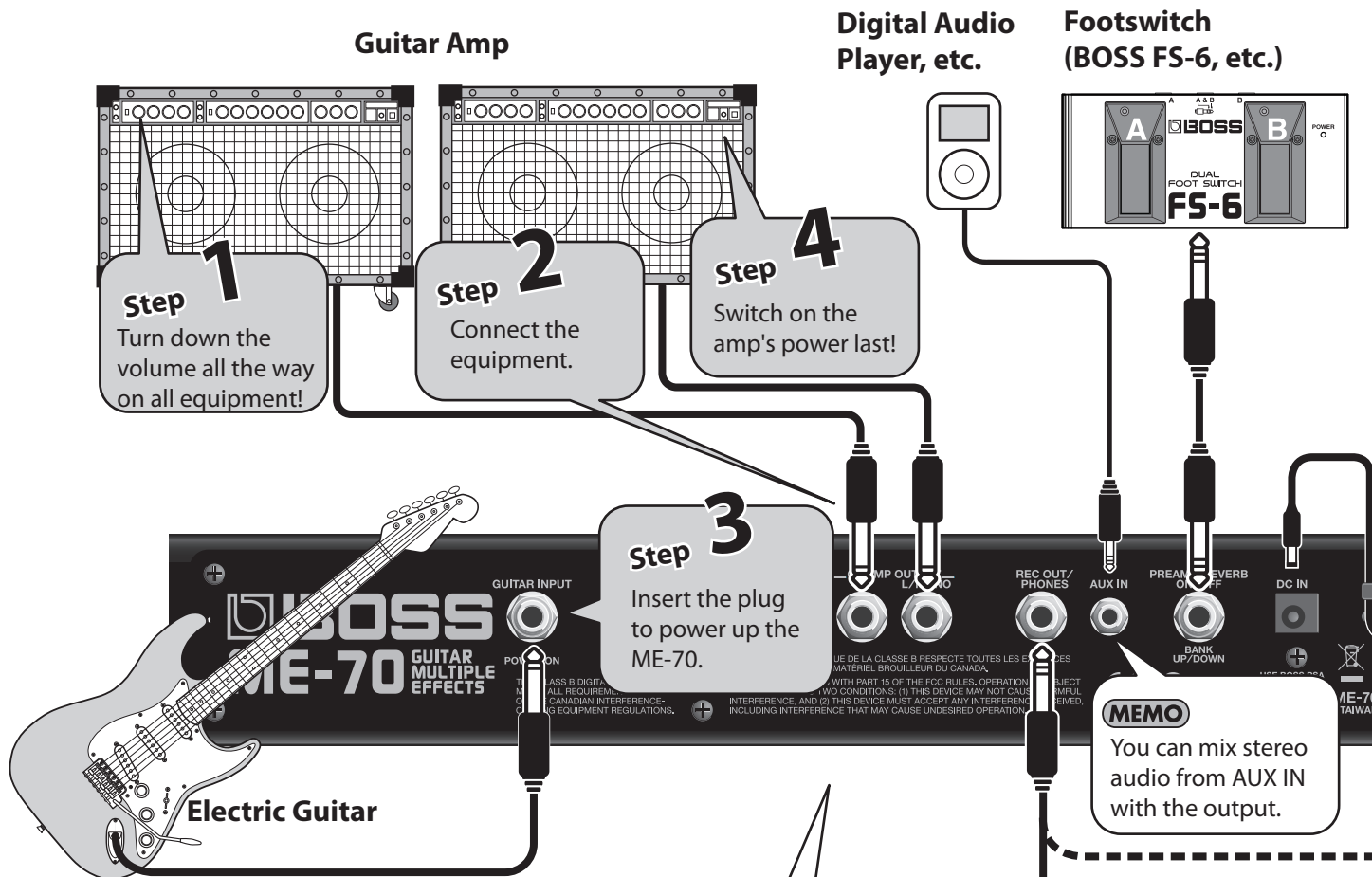
### ■The battery compartment is located on the underside.
Insert the included batteries, taking care to orient them correctly.

**NOTE**
- When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.
- 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.

**MEMO**
- Expected battery life under continuous use:  Carbon: 5 hours, Alkaline: 13 hours
  These figures will vary depending on the actual conditions of use.
- When operating on battery power only, the unit's indicator will become dim when battery power gets too low. Replace the battery as soon as possible.
- We recommend that you keep batteries installed in the unit even when you're powering it with the AC adaptor. That way, you'll be able to continue a performance even if the cord of the AC adaptor gets accidently disconnected from the unit.
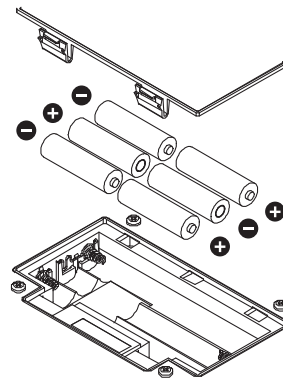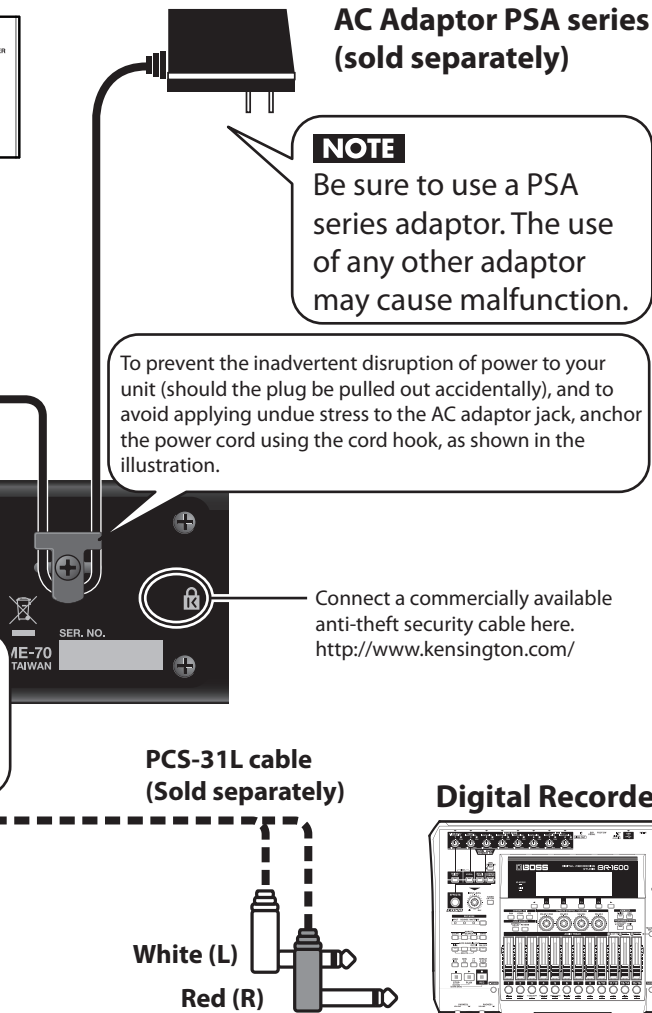
### ■Note when connecting the ME-70 to the other devices

**NOTE**
- 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.
- 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.
- Raise the amp volume only after turning on the power to all connected devices.
- 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.
- When connection cables with resistors are used, the volume level of equipment connected to the inputs (AUX IN) may be low. If this happens, use connection cables that do not contain resistors.

**MEMO**
- The ME-70 has no built-in amp or speakers. To hear sounds, you'll need to provide a guitar amplifier, stereo headphones, or other such equipment.
- For mono output, connect the cable to just the L/MONO jack.
- To send the output from the REC OUT/PHONES jack to a recorder or the like, use a special cable (PCS-31L; sold separately). If you use an ordinary guitar cable, only the left-channel audio is output.

## AC Adaptor PSA series (sold separately)

**NOTE**

Be sure to use a PSA series adaptor. The use of any other adaptor may cause malfunction.

To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration.

Connect a commercially available anti-theft security cable here. http://www.kensington.com/

## PCS-31L cable (Sold separately)

## Digital Recorder, etc.

White (L)
Red (R)

● Inserting a plug into the REC OUT/PHONES jack automatically activates the built-in guitar-amp simulator, enabling you to enjoy impressive guitar sound even with headphones.
The same effect is applied to Gt. AMP OUTPUT at this time, too.

● When you're performing using a guitar amp connected to Gt. AMP OUTPUT, disconnect the plug from the REC OUT/PHONES jack.

## Adjusting the Volume

**1. Adjust the OUTPUT LEVEL knob.**

OUTPUT LEVEL

**MEMO**

◆ Raising the OUTPUT LEVEL knob too much may result in sound distortion.

◆ When the OUTPUT LEVEL knob is centered and all effects are off, input and output are at the same level.

## Turning Off the Power

**1. Turn down the volume all the way on all equipment (this unit, the amplifier, and everything else).**

**2. Switch off the amp and other connected devices.**

**3. Unplug the guitar or other instrument connected to the INPUT jack on the ME-70.**
The power to the ME-70 is switched off.

**HINT** Should you encounter unexpected results, such as no sound being produced, check the following.

● **Are connections to other devices correctly made?**
Check the connections once more.

● **Is the volume turned down?**
Check the volume levels on any connected amp or mixer.

● **Can you hear sound through the headphones when headphones are connected?**
If you can hear sounds, it may be that there is a short in the cable used to connect the amp or other device, or perhaps a mistake in an external device's settings. Check the connecting cables and external devices once more.

● **Has the level been lowered with the expression pedal?**
Sounds are not output when the toe of the expression pedal is in the raised position while the pedal is set to function as a volume pedal (p. E-9).

Expression Pedal

English

Deutsch

Français

Italiano

Español

Português

Nederlands

# Using the Effects

All product names mentioned in this document are trademarks or registered trademarks of their respective owners.
Those companies are not affiliated with BOSS and have not licensed or authorized BOSS's ME-70. Their marks are used solely to identify the equipment whose sound is simulated by BOSS's ME-70.

## COMP/FX (Compressor/Effects)

You can select from among a wide variety of original effects, such as those that equalize the volume levels, or extend the sound without distorting it (sustain).
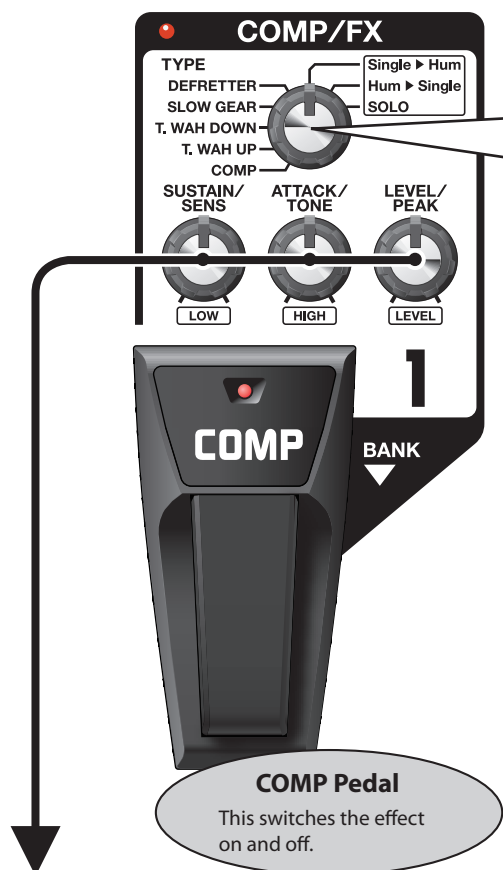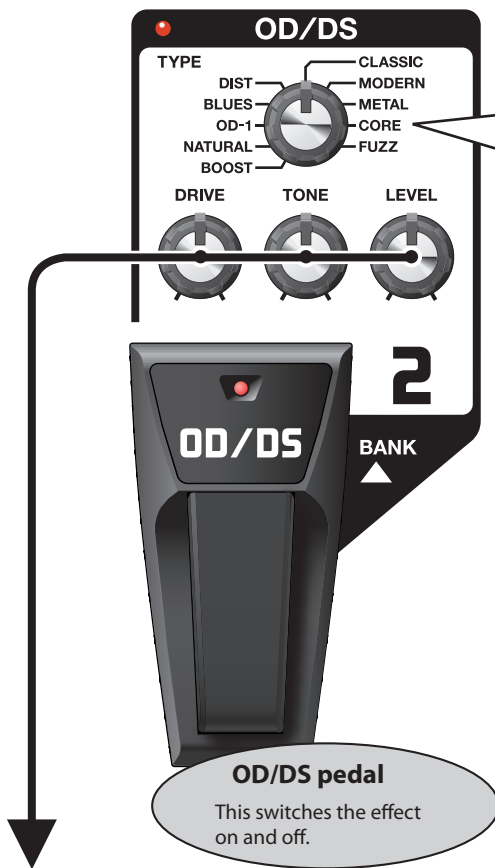
**TYPE knob**

Use this to choose the type of compressor or effect.

| | |
|---|---|
| **1: COMP** | This produces an effect that sustains the sound without distortion. It also works as a limiter to suppress loud peaks in the input signal. |
| **2: T.WAH UP** | This produces a wah effect matched to the intensity of picking. |
| **3: T.WAH DOWN** | |
| **4: SLOW GEAR** | This removes the attack portion of the signal to create violin-like sounds. |
| **5: DEFRETTER** | This simulates a fretless guitar. |
| **6: Single ▶ Hum** | This changes a single-coil sound to a humbucker sound. |
| **7: Hum ▶ Single** | This changes a humbucker sound to a single-coil sound. |
| **8: SOLO** | This produces the optimal sound for solo playing in combination with OD/DS or PREAMP. |

**COMP Pedal**
This switches the effect on and off.

| TYPE | What the controls do | | |
|---|---|---|---|
| COMP | **SUSTAIN** <br> This sets the sustain for the sound. | **ATTACK** <br> This sets the attack (onset) of the sound. | **LEVEL** <br> This sets the volume level of the effect. |
| T.WAH UP/ <br> T.WAH DOWN | **SENS** <br> This sets the sensitivity of response to the input sound. | **TONE** <br> This sets the tone (brightness) of the wah. | **PEAK** <br> This sets the intensity of the wah sound. |
| SLOW GEAR | **SENS** <br> This sets the sensitivity of response to the input sound. | **ATTACK** <br> Adjusts the time needed for the volume to reach its maximum. | **LEVEL** <br> This sets the volume level of the effect. |
| DEFRETTER | **SENS** <br> This sets the sensitivity of response to the input sound. | **TONE** <br> This sets the tone. | **LEVEL** <br> This sets the volume level of the effect. |
| Single>Hum | **LOW** <br> This adjusts the tone of the low frequency range. | **HIGH** <br> This adjusts the tone of the high frequency range. | **LEVEL** <br> This sets the volume level of the effect. |
| Hum>Single | **LOW** <br> This adjusts the tone of the low frequency range. | **HIGH** <br> This adjusts the tone of the high frequency range. | **LEVEL** <br> This sets the volume level of the effect. |
| SOLO | **LOW** <br> This adjusts the tone of the low frequency range. | **HIGH** <br> This adjusts the tone of the high frequency range. | **LEVEL** <br> This sets the volume level of the effect. |

# OD/DS (Overdrive/Distortion)

These effects add distinctive distortion or sustain.



**TYPE knob**

Use this to choose the type of overdrive or distortion.

| | |
|---|---|
| **1: BOOST** | This is a gain booster. It works well for creating distortion with a COSM preamp, or for creating punchy clean tones when used alone. |
| **2: NATURAL** | This is an overdrive sound with natural-sounding distortion. |
| **3: OD-1** | This is the sound of the BOSS OD-1. It produces sweet, mild distortion. |
| **4: BLUES** | This is a unique overdrive that faithfully reproduces the nuances of picking. |
| **5: DIST** | This is a sharp distortion with rich sustain. |
| **6: CLASSIC** | This is the sound of a vintage stack-type amp. |
| **7: MODERN** | This is the sound of a large high-gain amp. |
| **8: METAL** | This is a distortion that emphasizes the midrange. |
| **9: CORE** | This is a distortion that cuts the midrange. |
| **10: FUZZ** | This is a distortion that is distinctively rough and heavy. |

**OD/DS pedal**

This switches the effect on and off.

| What the controls do | | |
|---|---|---|
| **DRIVE** | **TONE** | **LEVEL** |
| Sets the intensity of the distortion. | Sets the brightness of the sound. | Sets the volume level for OD/DS. |

**E-5**

# MODULATION

These effects broaden, modulate, and/or pitch shift the sound.

## MODULATION

TYPE
UNI-V — TREMOLO
ROTARY — VIBRATO
FLANGER — HARMONIST
PHASER — OCTAVE
CHORUS — DELAY

RATE/ KEY   DEPTH/ HARMONY   E. LEVEL/ RESONANCE

3

**MOD**

**MOD Pedal**

This switches the effect on and off.
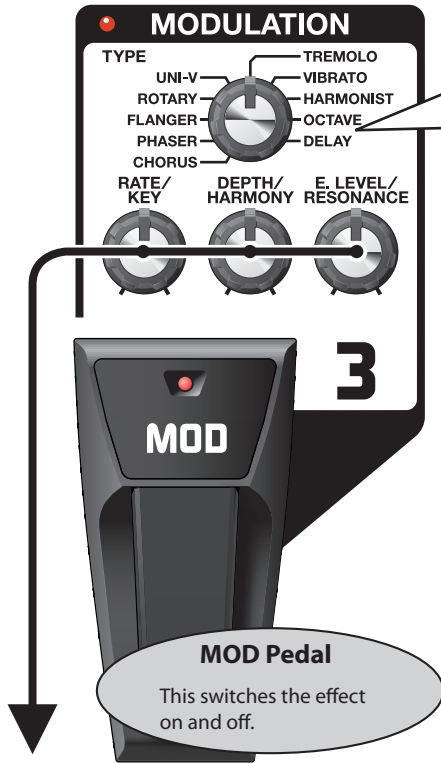
### TYPE knob

Use this to choose the type of modulation.

| | |
|---|---|
| **1: CHORUS** | This effect adds subtle wavering to transform the tone into one that is broader, thicker, and more beautiful. |
| **2: PHASER** | This effect creates a sweeping, phase-shifted sound. |
| **3: FLANGER** | This creates a modulation effect like the rising and falling sound of a jet engine. |
| **4: ROTARY** | This effect produces the sound of rotating speakers. |
| **5: UNI-V** | This models the Uni-Vibe, an effect that's part of the rock sound of the 1960s. |
| **6: TREMOLO** | This produces a retro effect through cyclical changes in the volume level. |
| **7: VIBRATO** | This produces an intense vibrato effect unobtainable with normal guitar playing. |
| **8: HARMONIST** | This creates harmonies reminiscent of twin guitars. |

**MEMO**

Play only single notes when using the harmonist effect.

| | |
|---|---|
| **9: OCTAVE** | This imparts thickness by adding sound an octave lower. |

**MEMO**

Play only single notes when using the octave effect.

| | |
|---|---|
| **10: DELAY** | This delays the sound to produce an echo-like effect. At delay times of 100 to 990 ms (milliseconds), you can use it as a secondary delay. |

| TYPE | What the controls do | | |
|---|---|---|---|
| CHORUS | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **E. LEVEL** <br> This sets the volume level of the effect. |
| PHASER | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **RESONANCE** <br> This sets the intensity of the effect. |
| FLANGER | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **RESONANCE** <br> This sets the intensity of the effect. |
| ROTARY | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **E. LEVEL** <br> This sets the volume level of the effect. |
| UNI-V | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **E. LEVEL** <br> This sets the volume level of the effect. |
| TREMOLO | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **E. LEVEL** <br> This sets the volume level of the effect. |
| VIBRATO | **RATE** <br> This sets the speed of the effect. | **DEPTH** <br> This sets the richness of the effect. | **E. LEVEL** <br> This sets the volume level of the effect. |
| HARMONIST | **KEY** <br> This sets the musical key of the song being played. <br> Ex. (E) (F#) | **HARMONY** <br> This sets the pitch of the harmony. <br> -1 Octave / Detune / 3rd / +1 Octave | **E. LEVEL** <br> This sets the volume level of the effect. |
| OCTAVE | — | **D. LEVEL** <br> This sets the volume level of the direct sound. | **E. LEVEL** <br> This sets the volume level of the effect. |
| DELAY | **TIME** <br> This sets the delay time (10 to 990 ms), in steps of 10 ms. | **FEEDBACK** <br> This set the number of repetitions for the delay. | **E. LEVEL** <br> This sets the volume level of the effect. |

**cf.**

You can control the RATE parameter using the expression pedal. For more information, read "Using Pedal FX" (p. E-9).

# DELAY

This delays the sound to produce an echo-like effect. It lets you add thickness and create complex sounds.

**DELAY**

TYPE
MODULATE — REVERSE
ANALOG — CHO + DELAY
1000–6000 ms — MOMENTARY
100–990 ms — TAP
1–99 ms — PHRASE LOOP

TIME FEEDBACK E. LEVEL

**DELAY**

**4**

BANK
SET

**DELAY pedal**
This switches the effect on and off.
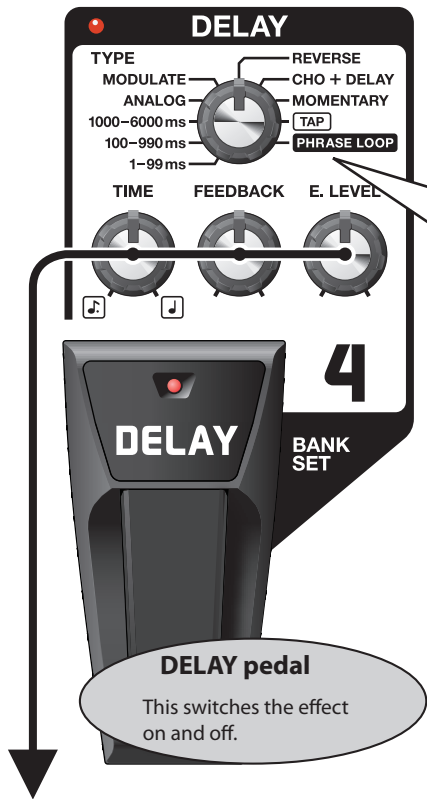
### TYPE knob

Use this to choose the type of delay.

| | |
|---|---|
| **1: 1-99ms** | This is a delay of 1 to 99 ms (milliseconds), which is ideal for a doubling effect. |
| **2: 100-990ms** | This delay has a delay time of 100 to 990 ms (milliseconds). |
| **3: 1000-6000ms** | This is a delay of 1,000 to 6,000 ms (milliseconds), which is suited to special effects. |
| **4: ANALOG** | This produces a mild analog delay sound. |
| **5: MODULATE** | This is a delay with a pleasant chorus-type effect added to the delay repeats. |
| **6: REVERSE** | This produces the effect of playback in reverse. |
| **7: CHO + DELAY** | This produces chorus and delay effects at the same time. (The settings for chorus cannot be changed.) |
| **8: MOMENTARY** | Delay is activated only while the DELAY pedal is pressed. |
| **9: TAP** | This determines the delay time by using the pedal. |
| **10: PHRASE LOOP** | This lets you record a performance and play it back repeatedly. This is useful for both live performances and practice sessions. |

**MEMO** In memory mode (p. E-10), MOMENTARY, TAP, and PHRASE LOOP pedal operations use the number pedal for the currently selected patch.

| TYPE | What the controls do | | |
|---|---|---|---|
| 1-99 ms | **TIME** Ex. 2ms / 99ms This sets the delay time in steps of 1 ms. | **FEEDBACK** This sets the number of repetitions for the delay. | **E. LEVEL** This sets the volume level of the delay sound. |
| 100-990 ms | **TIME** Ex. 120ms / 990ms This sets the delay time in steps of 10 ms. | **FEEDBACK** This sets the number of repetitions for the delay. | **E. LEVEL** This sets the volume level of the delay sound. |
| 1000-6000 ms | **TIME** Ex. 1200ms / 6000ms This sets the delay time in steps of 100 ms. | **FEEDBACK** This sets the number of repetitions for the delay. | **E. LEVEL** This sets the volume level of the delay sound. |
| ANALOG MODULATE REVERSE CHO + DELAY MOMENTARY | **TIME** Ex. 120ms / 990ms This sets the delay time (10 to 990 ms), in steps of 10 ms. | **FEEDBACK** This sets the number of repetitions for the delay. | **E. LEVEL** This sets the volume level of the effect. **MEMO** When TYPE is set to REVERSE, this adjusts the balance of direct and effect sound. |
| TAP | ♪ ♩ Ex. This sets the beat for the delay sound. **cf.** "Applying Effects in Time with the Song Tempo (Tap Tempo)" (p. E-14) | **FEEDBACK** This sets the number of repetitions for the delay. | **E. LEVEL** This sets the volume level of the delay sound. |
| PHRASE LOOP | — | — | **E. LEVEL** This sets the volume level of the phrase loop. **cf.** "Phrase Loop Play" (p. E-15) |

**cf.**
You can control the E. LEVEL parameter using the expression pedal. For more information, read "Using Pedal FX" (p. E-9).
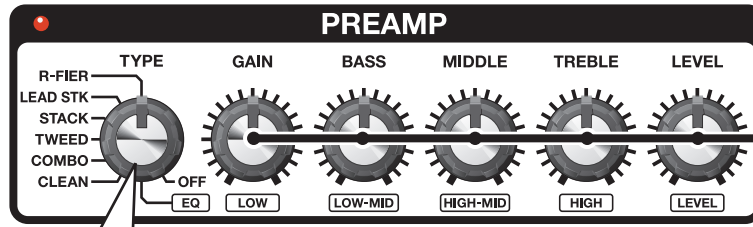
English

Deutsch

Français

Italiano

Español

Português

Nederlands

# PREAMP

This models preamp response. You can also use it as an equalizer.

**PREAMP**

| | | | | | |
|---|---|---|---|---|---|
| TYPE | GAIN | BASS | MIDDLE | TREBLE | LEVEL |

R-FIER
LEAD STK
STACK
TWEED
COMBO
CLEAN
OFF

EQ — LOW — LOW-MID — HIGH-MID — HIGH — LEVEL

## TYPE knob

Use this to choose the type of preamp.

| | |
|---|---|
| **0: OFF** | This turns off preamp modeling. |
| **1: EQ** | This is a 4-band parametric equalizer. |
| **2: CLEAN** | This is a clean sound that is smooth and warm. |
| **3: COMBO** | This is a crunch sound reminiscent of a VOX combo amp. |
| **4: TWEED** | This is a crunch sound like that of a Fender Bassman. |
| **5: STACK** | This is a sound reminiscent of 1970s Marshall amps. |
| **6: LEAD STK** | This is a high-gain lead sound. |
| **7: R-FIER** | This models a Mesa/Boogie Dual Rectifier. |

| TYPE | What the controls do | | |
|---|---|---|---|
| EQ | LOW — LOW-MID — HIGH-MID — HIGH <br><br> These adjust the volume of the respective EQ bands. <br><br> → Frequency | | **LEVEL** <br> This sets the overall volume level. |
| CLEAN<br>COMBO<br>TWEED<br>STACK<br>LEAD STK<br>R-FIER | **GAIN** <br> This sets the amount of distortion of the preamp. | BASS — MIDDLE — TREBLE <br><br> These adjust the volume of the respective EQ bands. <br><br> → Frequency | **LEVEL** <br> This sets the overall volume level of the preamp. |

# NS (Noise Suppressor)

This suppresses the noise and hum picked up by the guitar's pickup.

## NS THRES (Noise Suppressor Threshold)

**NS THRES/BANK**

◄ ▭ ▭ ►

This adjusts the effect in response to the level of noise. A value of 0 switches off the noise suppressor.

**MEMO**

Setting this higher than necessary may cause no sound to be produced when the guitar is played at low volume.

# REVERB

This adds lingering reverberations to the sound.

This adjusts the type of reverb and the size of the effect.

| | |
|---|---|
| **ROOM** | This simulates the reverberations inside a room (setting value: 0. through 49.) |
| **HALL** | This simulates the reverberations inside a hall (setting value: 0. through 49.) |

Display example

ROOM 12       HALL 49

The dot indicates that
the effect is HALL reverb.

# PEDAL FX (Pedal Effects)

This produces a variety of effects using the unit's expression pedal.
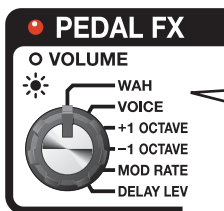
Use this to choose the type of PEDAL FX.

| | | |
|---|---|---|
| **1: WAH** | This is a wah effect. | |
| **2: VOICE** | This lets you create sounds that simulate a human voice. | |
| **3: +1 OCTAVE** **4: -1 OCTAVE** | This lets continuously vary the pitch up to one octave higher or lower than the original sound. | |
| | **MEMO** | |
| | Play single notes. | |
| **5: MOD RATE** | This lets you control the rate of the MODULATION effect. | |
| | **MEMO** | |
| | The MODULATION effect's RATE knob determines the maximum value of the range controlled with the expression pedal. | |
| **6: DELAY LEV** | This lets you control delay level when you're using the DELAY effect. | |
| | **MEMO** | |
| | The DELAY effect's E. LEVEL knob determines the maximum value of the range controlled with the expression pedal. | |

## Using Pedal FX
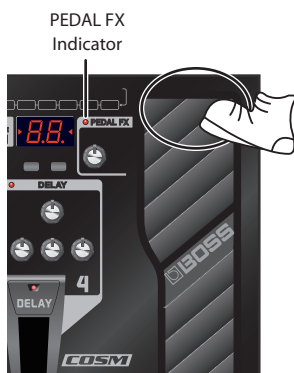
PEDAL FX
Indicator

Firmly pressing the toe of the expression pedal (while putting some weight into it) switches the function of the expression pedal.

| PEDAL FX Indicator | Explanation |
|---|---|
| Dark | Functions as VOLUME (volume pedal). |
| Lit | Functions as the effect selected using the PEDAL FX knob. |

English

Deutsch

Français

Italiano

Español

Português

Nederlands

# Saving/Calling Up and Using Tones (Memory Mode)

The ME-70 has two primary operating modes: Manual mode and Memory mode. In Manual mode, the tones are produced by the actual positions of the front-panel knobs for the various effects. In contrast, Memory mode allows you to save tone settings and recall them for later use.

## Patches and Banks

In Memory mode, a combination (or set) of effects together with a group of parameter settings is called a "patch."

A group of four patches is called a "bank," and the respective patches in a bank correspond to the number pedals.

The banks are organized into nine "user banks" that you can freely read from or write to, and nine read-only "preset banks."

In total, the ME-70 has 72 patches.



You can read from and write to these without restriction.

These are read-only. (Writing to them is not possible.)
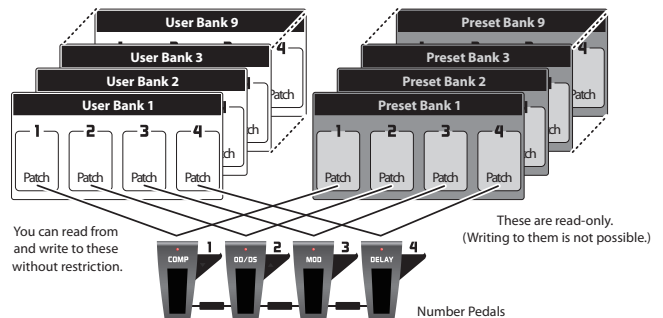
Number Pedals

## Changing Between the Manual and Memory Modes
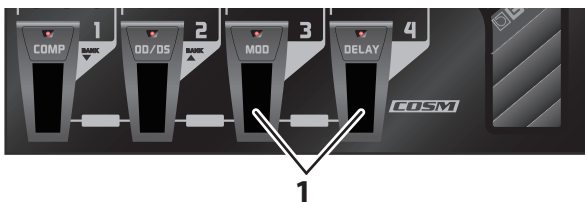


1. **Press number pedals 3 and 4 at the same time.**

2. **Each press switches the ME-70 between Manual mode and Memory mode.**

When the unit is in Manual mode, the dot at the bottom right of the display lights up. When the unit is in Memory mode, the currently selected bank number is displayed.



Manual Mode

Memory Mode (User Bank 1)

Memory Mode (Preset Bank 2)
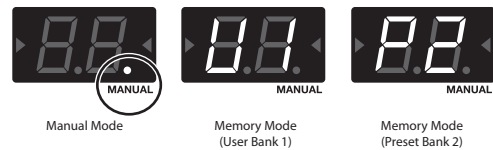
## Saving Tones (Patch Write)

This saves the control settings in a patch.

**MEMO**

- You can perform patch-write operations either in Manual mode or in Memory mode.
- Performing a patch-write operation switches the unit into Memory mode.

**NOTE**

- Until you perform a patch-write operation, switching off the power or changing patches will cause any tones you've created to be lost.
- Carrying out a write operation causes any tone already saved at the destination patch to be lost.



Pedal Indicators

1, 3    2    2
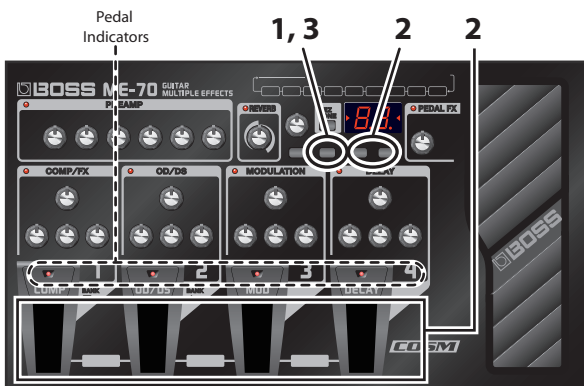
1. **Press [WRITE].**

    The pedal indicators flash.

2. **Choose the user bank and patch number where you'd like to save the patch.**

    - Choose the user bank number by pressing BANK [ ◀ ] and [ ▶ ].
    - Choose the patch number by pressing a number pedal (1 through 4).

**MEMO**

To stop the Write procedure, press [EDIT/EXIT].

3. **Press [WRITE] again.**

    The tone is saved.

**TIP**

To copy a patch, call up the patch you want to copy (p. E-11), then simply carry out a write operation. You can copy the patch by choosing a different patch number and saving it there.

# Calling Up Tones (Patches)

To switch patches, use BANK [ ◀ ] [ ▶ ] and the number pedals (1-4).
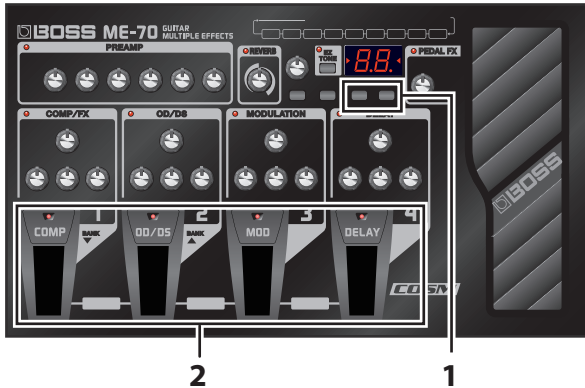


1. **Press BANK [ ◀ ] [ ▶ ].**

   Choose the bank number to which you want to switch.
   The displayed bank number flashes. (At this time, the tones are not yet switched.)

   **MEMO**

   For the bank number, you can choose a user bank from U1 through U9 or a preset bank from P1 through P9.

   **TIP**

   Pressing number pedals 1 and 2 at the same time enables bank selection using number pedals 1 and 2. After choosing the bank, you confirm the selection by pressing number pedal 3 or 4.

2. **Press any one of the number pedals from 1 through 4.**

   The unit switches to the patch with in the bank number you chose in Step 1.

   **TIP**

   When you're selecting a patch within the same bank, you can skip Step 1.

   **cf.**

   You can also switch bank numbers using a foot switch. For more information, read "Using External Foot Switches" (p. E-13).

# Changing Tone Settings (Memory Edit Mode)

In Memory mode, editing effects or changing the noise-suppressor threshold (NS THRES) is not possible.
When you want to make these changes, put the unit in Memory Edit mode.
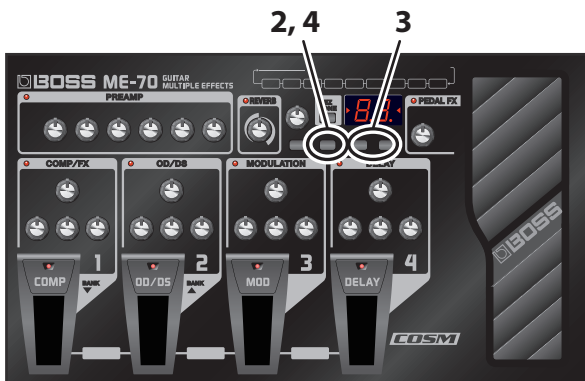


1. **Refer to "Calling Up Tones (Patches)" and call up the patch whose settings you want to change.**

2. **Press [EDIT/EXIT].**

   The unit switches to Memory mode and "Ed" appears in the display.

3. **Use the controls, pedals, and buttons to modify the tone.**

   In Memory Edit mode, in Manual mode, the number pedals switch effects on and off, and [ ◀ ] and [ ▶ ] manipulate the NS THRES parameter.

4. **Press [EDIT/EXIT].**

   The unit returns to Memory mode.

5. **If you want to save the tone whose settings you've changed, carry out a patch-write operation (p. E-10).**

   **NOTE**

   Until you perform a patch-write operation, switching off the power or changing patches will cause any tones you've created to be lost.

English

Deutsch

Français

Italiano

Español

Português

Nederlands

**E-11**

# Convenient Functions

## Creating Tones with Ease (EZ Tone)

EZ Tone is a feature for creating sounds quickly and easily by calling up saved parameter settings for each individual effect type.

The ME-70 comes from the factory with optimal settings for each effect type saved as EZ Tones. If you like, you can edit an EZ Tone and save your changes over the factory setting. This allows you to use EZ Tone to quickly call up your favorite settings for each effect type.

### Choosing (Calling Up) an EZ Tone

When EZ TONE is on, you call up the saved settings for an effect with its TYPE knob.



1. **Press [EZ TONE].**

   The EZ TONE indicator lights.

   **MEMO**
   - You can use the number pedals to switch the effects on and off, allowing you to check each effect's sound by itself.
   - To switch off PREAMP, use the TYPE knob to select OFF.

2. **Use an effect's TYPE knob to choose its EZ Tone.**

   Optimal effect parameters for the chosen TYPE value are set automatically.

   **TIP**

   After you choose an EZ Tone, you can use the effect's controls to fine-tune the sound as desired.

### Saving the Created Tone as an EZ Tone

If you edit an EZ Tone with an effect's controls, you can save the changes.
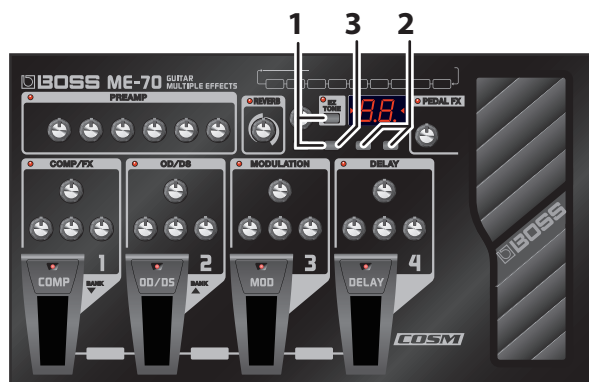


1. **Hold down [EZ TONE] and press [WRITE].**

   The indicator for the save-destination effect flashes.

   **MEMO**

   Pressing only [WRITE] commences the procedure for saving the current settings for all effects as a patch.

2. **Use BANK [ ◀ ] and [ ▶ ] to choose the effect you want to save.**

   The selection cycles through the choices in this sequence, with the current choice flashing: COMP/FX → OD/DS → MODULATION → DELAY → PREAMP → all effects → COMP/FX → ...

   **MEMO**

   When you select "all effects," you're saving the EZ Tones for every effect.

3. **Press [WRITE].**

   The edited EZ Tone is stored in memory at the location now selected by the TYPE knob.

   **NOTE**

   Performing a save operation causes any previous EZ Tone already saved at the TYPE destination to be lost.

## Checking the Values of Controls

Operations such as calling up patches or EZ Tones may result in discrepancies between the set parameters and the positions shown by the controls.

You can get the actual parameter values to appear in the display so you can check them.

1. **Hold down [EDIT/EXIT] and turn the control for the value you want to check.**

   The value of the control appears in the display for a brief time.

# Tuning the Guitar (Tuner)



1   2
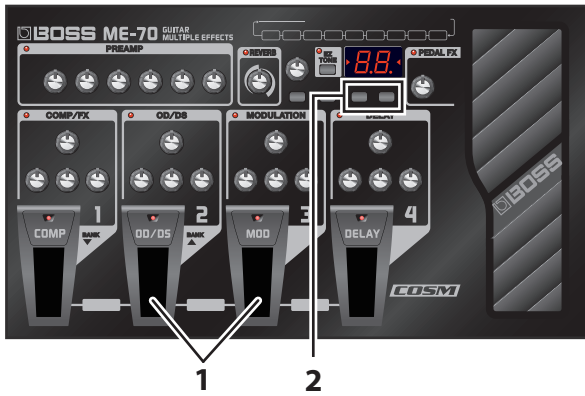
1. **Press number pedals 2 and 3 at the same time.**

   Each press switches the tuner on or off.

2. **If necessary, you can change the reference pitch.**

   When the tuner is on, you can change the reference pitch by pressing NS THRES/BANK [ ◀ ] or [ ▶ ].

   | Display | Pitch |
   |---------|-------|
   | 35–45   | 435–445 (Hz) |

   **MEMO**

   ◆ The reference pitch appears in the display for a brief time.

   ◆ The reference pitch setting is saved automatically, so there is no need to make this setting each time you tune.

   ◆ The reference pitch was set to 40 (440 Hz) when the unit was shipped from the factory.

3. **Play a single open note on the string to be tuned.**

   The name of the note closest to the pitch of the string played appears in the display.

   

   (C)   (♯sign)   (D)   (E)

   (F)   (G)   (A)   (B)
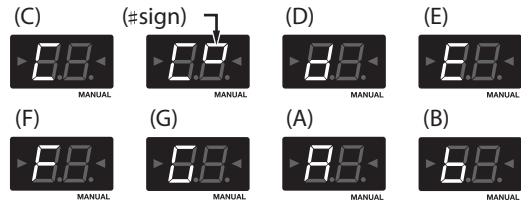
4. **Tune so that the desired pitch is displayed and both tuning guide indicators light up.**

   Tuning Guide

   

   Too low (rapid flashing)   Tuned   Too high (rapid flashing)
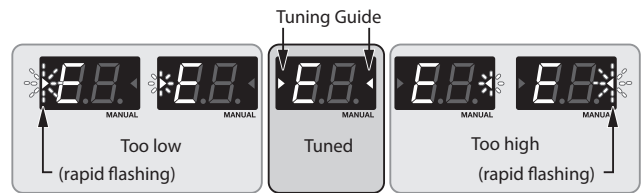
   ## Bypass Feature (BYPASS)

   In Tuner mode, the sound output is the same as the input sound, with no effects applied (bypass).
   You can use the expression pedal to control the volume.

# Using External Foot Switches

Connecting an optional footswitch (the BOSS FS-5U or FS-6) lets you carry out the following operations.

| Mode | Function |
|------|----------|
| Manual | Switches the PREAMP effect on or off<br>Switches the REVERB effect on or off |
| Memory | Bank Number Up, Bank Number Down |

**NOTE**

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume and turn off the power to all devices before making any connections. Disconnecting or connecting plugs during startup may switch the PREAMP effect or REVERB effect on or off.

If you're using an FS-5U switch, set the POLARITY switch as shown in the following.
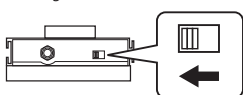
If you're using an FS-6 switch, set the MODE and POLARITY switches as shown below.



Stereo 1/4" phone cable (Commercially available item)

1/4" phone cable (monaural) (Commercially available item)

PCS-31L cable (Sold separately)

Footswitch BOSS FS-6 (Sold separately)

Red   White

Footswitch BOSS FS-5U (Sold separately)

| | DUAL FOOT SWITCH FS-6 | | FS-5U | FS-5U | FS-5U |
|---|---|---|---|---|---|
| Manual Mode | REVERB ON/OFF | PREAMP ON/OFF | REVERB ON/OFF | PREAMP ON/OFF | PREAMP ON/OFF |
| Memory Mode | Bank Down | Bank Up | Bank Down | Bank Up | Bank Up |

English

Deutsch

Français

Italiano

Español

Português

Nederlands

## Applying Effects in Time with the Song Tempo (Tap Tempo)

When the DELAY effect is set to TAP, you can set the delay's tempo by pressing a pedal in time with tempo of a song.

**MEMO**

> This section describes how to carry out the operation when in Manual mode. When you're in Memory mode, you can accomplish the same operation by using the number pedal for the currently selected patch.
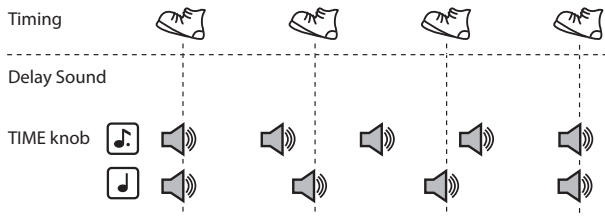


**1. Set the DELAY effect's TYPE knob to TAP.**

The pedal's indicator flashes in time with the currently set delay time.

**2. Set the TIME knob at ♪. or ♩.**

Choose the rhythm for the delay sound that's produced (dotted eighth note or quarter note).

**3. Press the DELAY pedal at least twice in time with the song's tempo.**

The timing of the delay sound is determined by the timing with which you press the pedal. The ME-70 interprets each press as a quarter-note interval, and sets the delay according to the note value set in Step 2. The pedal's indicator flashes in time with the tempo you input.

## Setting Modulation Speed and Delay Time Using the Pedals

In addition to adjusting the speed (frequency) of modulation and the delay time using the knobs, you can also set the timings you want using the pedals.



Pedal Indicators
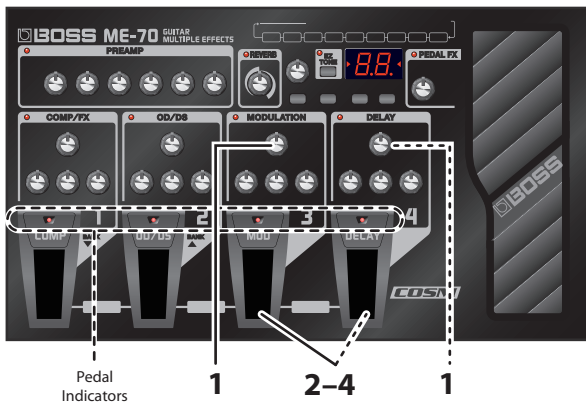
**MEMO**

> • This section describes how to carry out the operation when in the Manual mode. When you're in the Memory mode, you can accomplish the same operation by using the number pedal for the currently selected patch.
>
> • When you're in Memory mode and the MODULATION and DELAY effects are both on, you can make the setting for only the delay time.

**1. Use the TYPE knobs for the MODULATION and DELAY effects to choose the desired effects types.**

**MEMO**

> When one of the TYPE settings shown below has been selected for the MODULATION or DELAY effect, the settings described in this section cannot be made using the pedals.

| Effect | TYPE value |
|---|---|
| MODULATION | HARMONIST |
| | OCTAVE |
| DELAY | MOMENTARY |
| | TAP |
| | PHRASE LOOP |

**MEMO**

> If you wish to select TAP as the DELAY effect, use the procedure described in "Applying Effects in Time with the Song Tempo (Tap Tempo)" to set the delay time with a pedal.

**2. Hold down the MOD or DELAY pedal for at least two seconds.**

Two seconds after you begin pressing the pedal, the pedal's indicator starts to flash.

**3. Press the MOD or DELAY pedal at least twice at the speed you want.**

The speed of the effect is set by the timing with which you press the pedal. The pedal's indicator flashes in time with the modulation rate or the delay sound.

**4. Once again hold down the MOD or DELAY pedal for at least two seconds.**

The setting for the speed is completed, and the effect is turned on. The pedal's indicator stops flashing and stays steadily illuminated.

**MEMO**

> After you've finished making the settings, moving the RATE knob or the TIME knob deactivates the effect timing set using the pedal and returns priority to the knob setting.

# Phrase Loop Play

You can record up to 38 seconds of a performance and play back the recorded section over and over. You can also layer additional performances with the recording as it plays back (overdubbing). This lets you create realtime backing performances on the fly.

**MEMO**

> This section describes how to carry out the operation when in Manual mode. When you're in Memory mode, you can accomplish the same operation by using the number pedal for the currently selected patch.



Pedal Indicators

**1**    **2,3,6**    **5**



Pedal Indicator

○ Lit
● Dark
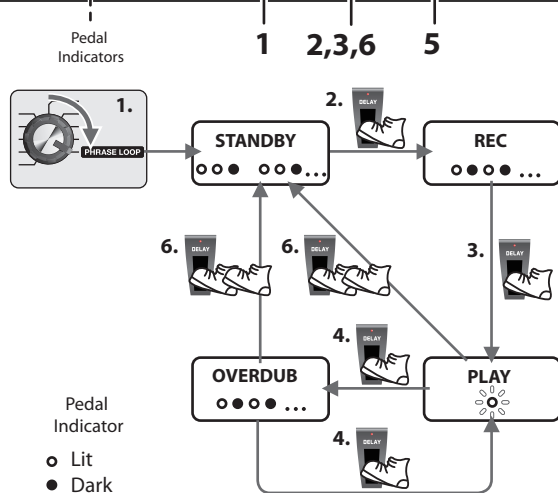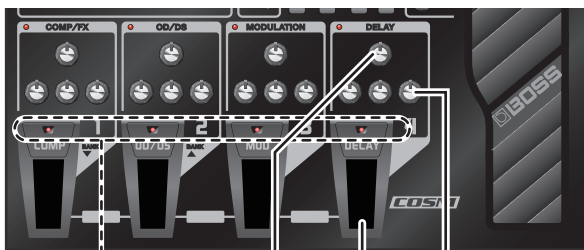
**1. Set the DELAY effect's TYPE knob to PHRASE LOOP.**

The unit goes into recording standby and the pedal's indicator flashes at a fixed interval.

**2. Press the DELAY pedal.**

Recording starts as soon as you press the DELAY pedal, and the pedal's indicator flashes rapidly.

**3. Press the DELAY pedal again.**

Recording ends. As soon as recording stops, repeated playback of what's been recorded starts, and the pedal's indicator lights continuously.

**MEMO**

> An oscillating sound may be audible with extremely short recording times.

**4. To layer additional recordings (overdubbing), repeat Steps 2 and 3.**

**MEMO**

> When you switch the DELAY effect's TYPE knob to another position or turn the power off, the recorded data is deleted.

**5. Adjust the phrase loop's volume as desired with the DELAY effect's E. LEVEL knob.**

**6. Press the pedal twice switch to stop the playback.**

The unit returns to recording standby.

**MEMO**

- Press the DELAY pedal twice within the span of one second.
- When playback ends, the recorded data is deleted.

# Making the Settings for Control Operation

When you call up patches or EZ Tones, an effect's parameters may not reflect the actual position of the control knobs. You can set how the parameters behave when the control knobs are moved in this state.



**2**    **1**    **4 3**
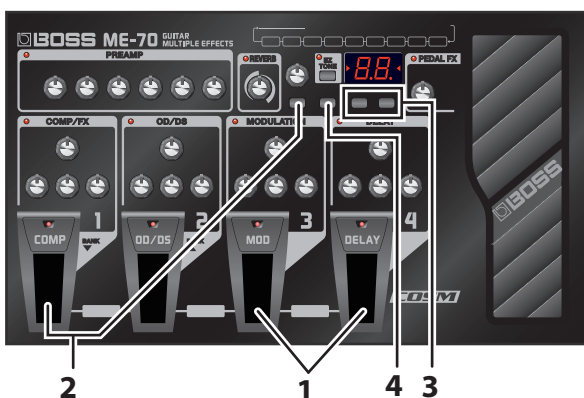
**1. Press number pedals 3 and 4 at the same time to change to Manual mode (p. E-10).**

**2. Hold down [EDIT/EXIT] and press the COMP pedal.**

**3. Use NS THRES/BANK [ ◀ ] or [ ▶ ] to select the method of control operation.**

| Display | Control operation |
|---------|-------------------|
| n0 | The value changes immediately as the knob is turned (factory setting). |
| n1 | The value changes once the knob is turned past the position corresponding to the currently set value. |

**4. Press [WRITE].**

The setting is stored in memory.

# Restoring the Factory Settings (Factory Reset)

You can restore the settings in the ME-70 (User patch, tuner reference pitch, and knob response method (p. E-15)) to the values set when the unit was shipped from the factory.

**3, 4**

**2     1**

1. **Press number pedals 3 and 4 at the same time to switch to Manual mode (p. E-10).**

2. **Hold down [EDIT/EXIT] press MOD Pedal.**
   "F" appears in the display.

3. **Press [WRITE].**
   The Tuning Guide flashes.

4. **Press [WRITE] again.**
   The display flashes and the factory reset is executed.

   **NOTE**

   Never turn off the power while Factory Reset is in progress.

# Adjusting the Expression Pedal

The ME-70's expression pedal has been set for optimal operation at the factory. However, extended use and certain operating environments can result in the pedal going out of adjustment.
If you encounter problems such as the expression pedal's ON/OFF switch not functioning or the volume pedal not fully cutting off the sound, you can use the following procedure to readjust the pedal.

**3,4,6          4**

**1     2     5     3**

**NOTE**

When operating the expression pedal, be careful not to get your fingers pinched between the movable part and the panel. In places with small children, an adult should provide supervision and guidance until the child is capable of following all the rules essential for the safe operation of the unit.

1. **Press number pedals 3 and 4 at the same time to switch to Manual mode (p. E-10).**

2. **Hold down [EDIT/EXIT] press DELAY Pedal.**
   The display shows "Pd," then "Up."

3. **Move the heel of the expression pedal all the way down, then release the pedal and press [WRITE].**
   The display shows "dn."

4. **Move the toe of the expression pedal all the way down, then release the pedal and press [WRITE].**
   A value indicating the current stiffness (sensitivity) of the expression pedal switch appears in the display.

   **MEMO**

   If the display flashes in Steps 3 or 4, press the pedal again, and then press [WRITE].

5. **Use NS THRES/BANK [ ◄ ] and [ ► ] to adjust the stiffness (sensitivity) of the expression pedal switch.**
   The lower the value, the more easily the switch will respond, even when pressed lightly.

   **MEMO**

   This is set to "5" when shipped from the factory.

6. **Press [WRITE].**
   The setting is saved in memory.

# Appendices

## Preset Patch List

| Patch Number | Explanation | PU |
|---|---|---|
| 1-1 | Rough distortion sound, good for backing. | S/H |
| 1-2 | Well sustained distortion sound, good for solos. | S/H |
| 1-3 | Crunch sound suitable for blues. | S/H |
| 1-4 | Clean sound for arpeggio. | S/H |
| 2-1 | Metal sound good for riffs. | H |
| 2-2 | Fuzz sound of the 60s with UNI-V. Speed of UNI-V effect can be changed with expression pedal. | S |
| 2-3 | Crunch sound, good for chord strokes. | S/H |
| 2-4 | Tight, clean sound, good for rhythm. | S/H |
| 3-1 | Drive sound for 70s hard rock. | S/H |
| 3-2 | Metal sound, good for single-coil pickups. | S |
| 3-3 | Rotary sound of the 70s. Speed of ROTARY effect can be changed with expression pedal. | S/H |
| 3-4 | Jazz sound, suitable for neck pickup. | H |
| 4-1 | Sweet drive sound for latin rock. Level of DELAY effect can be controlled with expression pedal. | H |
| 4-2 | This is a whimsical sound suited to 1970s progressive rock. | S |
| 4-3 | Tremolo sound, good for 60s surf rock. | S |
| 4-4 | Clean sound with T.WAH for funk. | S |
| 5-1 | Distortion sound for 80s metal. | H |
| 5-2 | This raises the pitch by an octave when the expression pedal is operated. It is suited to single-note phrases. | S/H |
| 5-3 | Crunch sound with COMPRESSOR for solos. | S |
| 5-4 | Phaser sound, good for rhythm. | S/H |
| 6-1 | Drive sound, good for punk rock. | S/H |
| 6-2 | Twin-lead-like distortion sound for single-note phrases in A minor (C major.) | S/H |
| 6-3 | 90s alternative-rock sound. | S/H |
| 6-4 | Clean sound with pedal wah, good for rhythm. | S/H |
| 7-1 | Mild lead sound for jazz-fusion. | S/H |
| 7-2 | This produces an effect like a talk box when the pedal is operated. | S/H |
| 7-3 | Slap-back echo sound for country. | S |
| 7-4 | Clean tone for 60s Liverpool sound. | S |
| 8-1 | Heavy distortion combining sound an octave lower. | H |
| 8-2 | Wild distortion with FLANGER. | H |
| 8-3 | Hard rock sound with PHASER. | H |
| 8-4 | Changes a single-coil-pickup sound to a clean, humbucker sound. | S |
| 9-1 | This tone is suited to solos that combine PEDAL WAH and DISTORTION. | S/H |
| 9-2 | Synth-like sound using SLOW GEAR. | S |
| 9-3 | This is a crunch sound that uses a dotted eighth note delay. Pressing the number pedals changes the delay time. | S |
| 9-4 | Fretless guitar sound. | S |

**MEMO**

The entries under "PU" in the chart indicate the type of pickup suited to the respective patch.

♦ S = Patch that is optimal for a single-coil pickup

♦ H = Patch that is optimal for a humbucking pickup

## Specifications

**ME-70: GUITAR MULTIPLE EFFECTS**

| | |
|---|---|
| AD Conversion | 24-bit + AF method<br>♦ AF method (Adaptive Focus method)<br>This is a proprietary method from Roland & BOSS that vastly improves the signal-to-noise (S/N) ratio of the A/D and D/A converters. |
| DA Conversion | 24-bit |
| Sampling Frequency | 44.1 kHz |
| Patch | 36 (User) + 36 (Preset) |
| Nominal Input Level | GUITAR INPUT: -10 dBu |
| | AUX IN: -18 dBu |
| Input Impedance | GUITAR INPUT: 1M ohm |
| | AUX IN: 22k ohms |
| Nominal Output Level | -10 dBu |

| | |
|---|---|
| Output Impedance | 2k ohms |
| Display | 7 segments, 2 digits LED |
| Power Supply | DC 9 V |
| | Dry Batteries (R6/LR6(AA) type) x 6<br>AC Adaptor (BOSS PSA series: sold separately) |
| Current Draw | 130 mA |
| Expected battery life under continuous use | Alkaline: 12 hours<br>Carbon: 3.5 hours<br>(These figures will vary depending on the actual conditions of use.) |
| Dimensions | 384 (W) x 229 (D) x 74 (H) mm<br>15-1/8 (W) x 9-1/16 (D) x 2-15/16 (H) inches |
| | Maximum height:<br>384 (W) x 229 (D) x 100 (H) mm<br>15-1/8 (W) x 9-1/16 (D) x 3-15/16 (H) inches |
| Weight | 3.5 kg, 7 lbs 12 oz (including batteries) |
| Accessories | Owner's Manual<br>Dry Batteries (Alkaline: LR6 (AA) type) x 6<br>Roland Service (Information Sheet) |

| | |
|---|---|
| Options | AC Adaptor: BOSS PSA series<br>Footswitch: BOSS FS-5U, FS-6 |

♦ 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.

# USING THE UNIT SAFELY

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

### About ⚠ WARNING and ⚠ CAUTION Notices

| ⚠ WARNING | Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. |
|---|---|
| ⚠ CAUTION | Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. <br> * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well as 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 modify in any way) the unit or its AC adaptor.

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never install the unit in any of the following locations.
  - 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
  - Exposed to steam or smoke; or are
  - Subject to salt exposure; or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty or sandy; or are
  - Subject to high levels of vibration and shakiness.

- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

- Use only the specified AC adaptor (PSA series), and make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

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

## ⚠ WARNING

- 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.

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The AC adaptor or the power-supply cord has been damaged; or
  - 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!)

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

## ⚠ WARNING

- 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

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.

- Always grasp only the output plug or the body of the AC adaptor when plugging into, or unplugging from, this unit or an outlet.

- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.

- 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.

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

- Never handle the AC adaptor body, or its output plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.

## ⚠ CAUTION

- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. E-3).

- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.

- 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. E-2).
  - 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.

- 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.

--- For China ---

# Important Notes

## Power Supply: Use of Batteries

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.

- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.

- The use of an AC adaptor is recommended as the unit's power consumption is relatively high. Should you prefer to use batteries, please use the alkaline type.

- 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.

- 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.

- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.
You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.

## 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.

## Repairs and Data

- 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 Roland 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 loosing important data, we recommend that you periodically write down an important data you have stored in the unit's memory on 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. Roland Corporation assumes no liability concerning such loss of data.

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.

- 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. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).

- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

English
Deutsch
Français
Italiano
Español
Português
Nederlands

# Index