

**OWNER'S MANUAL
MODE D'EMPLOI
BEDIENUNGSANLEITUNG**



SPECIAL MESSAGE SECTION (USA)

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

This Product should be used only with the components supplied or; a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE:

The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist. IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

NOTICE:

Service charges incurred due to lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES:

Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice: This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in Place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

This Product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix old batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning: Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area.

Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice: Should this Product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. if your dealer is unable to assist you, Please contact Yamaha directly.

NAME PLATE LOCATION:

The name Plate is located on the bottom of the product. The model number, serial number, power requirements, etc., are located on this plate. You should record the serial number and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

Model GW10

Serial No. _____

Purchase Date _____

Congratulations and thank you for purchasing the Yamaha GW10 Guitar Performance Effector. The GW10 is a portable and convenient multi-effect device for guitar (as well as other instruments). The high-quality effect sound and the flexible pedal control over certain parameters make the GW10 ideal for signal processing in home recording, studio, and live performance applications.

Some of the advanced features of the GW10 include:

- Three basic effect blocks, featuring Distortion, Chorus and Delay.
- Additional effect types within each block, such as Compressor, Overdrive, Crunch, Wah, Amp Simulator, Equalizer and Pitch Shifter — plus a built-in Noise Gate.
- High-quality sound in all effects, plus added benefit of having all effects integrated into one unit.
- Convenient parameter control over all effects, yet exceptional ease-of-use — you can adjust the parameters of the effect blocks much as you would on conventional pedal effects.
- Built-in Foot Controller, which not only allows for easy volume adjustment, but gives you realtime control over one of various effect parameters. It also features a switch (past the maximum point) for instantly turning selected effects on and off.
- User memory for storing up to 20 effect programs, selectable with the Pedal Switch.
- Built-in tuner, allowing you to tune your instrument without removing it from the signal chain.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

**Connecting the Plug and Cord
(YAMAHA PA-3 AC adaptor)**

IMPORTANT: THE WIRES IN MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

BLUE : NEUTRAL
BROWN : LIVE

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

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

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED. Making sure that neither core is connected to the earth terminal of the three pin plug.

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HOW TO USE THIS MANUAL **(READ THIS FIRST!!)**

You are probably eager to try out your new GW10 right away and hear what it can do, rather than have to read through a lot of instructions before you can even get a sound out of it.

Before you do anything else, however, you should read the **PRECAUTIONS** section (page 2). This tells you briefly how to care for your new GW10, how to avoid damaging it, and how to ensure long-term, reliable operation.

Next, read the **SYSTEM OVERVIEW** (page 8). This provides an important introduction to the internal organization of the GW10, enabling you to better understand its various functions and use the device to its full potential.

To actually start using the GW10, read the **GUIDED TOUR** (page 12). It guides you step-by-step in setting up your GW10, connecting it properly, and (most importantly!) getting sound out of it. The section also introduces you to the effect programs by letting you hear what they are capable of, and explains how to use some of the other main functions of the device.

The **REFERENCE** section (page 24), on the other hand, is a comprehensive guide to all functions. You won't need (or want) to read through all of it at once, but it is there for you to refer to when you need information about a certain feature or function.

The **PANEL CONTROLS AND TERMINALS** (page 4) is also mainly for reference. In general, look through this section to familiarize yourself with the controls, and refer to it when necessary.

The **INDEX** in the **APPENDICES** section (page 50) is also very helpful. It lists page numbers for virtually every function, feature, control and terminal found on the GW10, and lets you find the information you need quickly and easily.

Other parts of the **APPENDICES** section provide additional useful information: lists of the effect programs of the GW10, tips on troubleshooting (when something doesn't work as expected), and other important information.

■ USE THE CORRECT POWER SUPPLY

Power to the GW10 should be supplied only from the appropriate Yamaha AC adaptor (the PA-3 or another adaptor specifically recommended by Yamaha). Use of another adaptor may cause serious damage to the unit. Also make sure that the adaptor you have is appropriate for the AC mains supply voltage in the area where you intend to use the GW10. (The correct input voltage is marked on the adaptor.)

■ MEMORY BACKUP

The GW10 contains a special long-life lithium battery that retains the contents of the internal RAM memory even when the power is turned off. The battery should last for approximately five years from the date of manufacture. When the backup battery power becomes too low to maintain the memory contents, the MEMORY/TUNER Indicator lights “L” then “o” three times when the power is turned on.

When this happens, write down all necessary settings to a piece of paper (or on copies of the chart provided on page 48), then have the battery replaced by qualified Yamaha service personnel as soon as possible. **DO NOT ATTEMPT TO REPLACE THE BACKUP BATTERY YOURSELF!** (Keeping records of your original settings is necessary since the memory contents cannot be preserved when the battery is changed.)

■ AVOID EXCESSIVE HEAT, HUMIDITY, DUST AND VIBRATION

Keep the unit away from locations where it is likely to be exposed to high temperatures (such as direct sunlight) or humidity. Also avoid locations which are subject to excessive dust accumulation or vibration which could cause mechanical damage.

■ AVOID PHYSICAL SHOCKS

Although the GW10 has been constructed to withstand the normal rigors of stage and studio use for optimum sturdiness and reliability, avoid subjecting it to strong physical shocks (such as dropping or hitting it), since this may damage the unit. Since the GW10 is a precision-made electronic device, also avoid applying excessive force to the various controls.

■ DO NOT OPEN THE CASE OR ATTEMPT REPAIRS OR MODIFICATIONS YOURSELF

This product contains no user-serviceable parts. Refer all maintenance to qualified Yamaha service personnel. Opening the case and/or tampering in any way with the internal circuitry will void the warranty.

■ MAKE SURE POWER IS OFF BEFORE MAKING OR REMOVING CONNECTIONS

Always turn the power off prior to connecting or disconnecting cables.

■ HANDLE ALL CONNECTIONS CAREFULLY

Always be careful to connect and disconnect all cables and cords by gripping the connector itself, not by pulling on the cord.

■ **CLEAN WITH A SOFT, DRY CLOTH**

Never use solvents such as benzine or thinner to clean the unit, since these will damage the finish. Wipe clean with a soft, dry cloth. If necessary, use a soft, clean cloth slightly moistened only with water — making sure to wipe the case off again with a dry cloth.

■ **FOOT CONTROLLER**

Do not put your fingers underneath or inside the Foot Controller pedal, since some of the parts there have a lubricant or grease applied to them. Doing so may not only get your hands dirty, but also remove some of the grease necessary for smooth pedal operation.

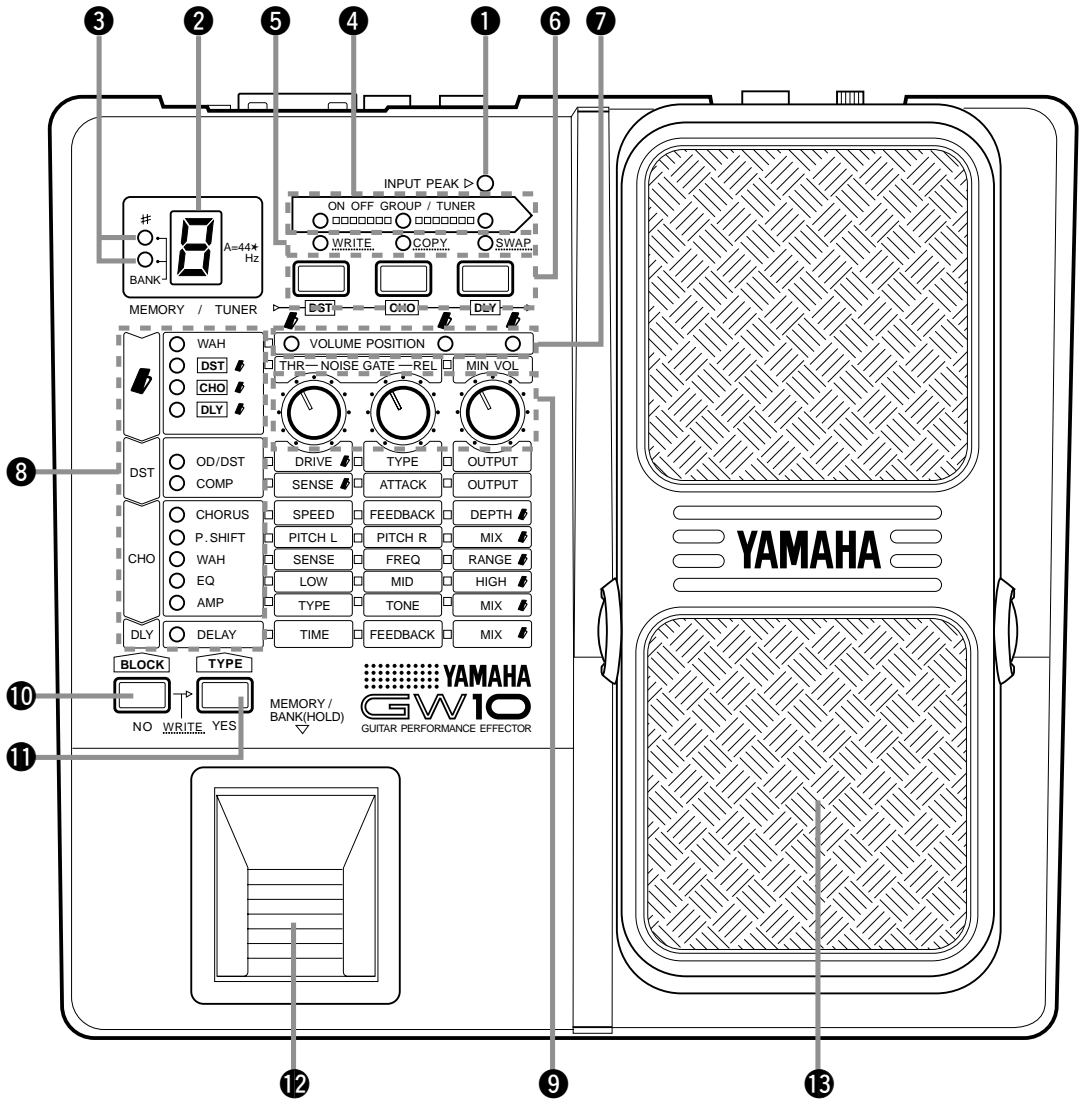
■ **ELECTRICAL INTERFERENCE**

Since the GW10 contains digital circuitry, it may cause interference and noise if placed too close to TV sets, radios or similar equipment. If such a problem occurs, move the GW10 further away from the affected equipment.

PANEL CONTROLS AND TERMINALS

This section shows and explains all of the controls and terminals of the GW10. Since the explanations below are fairly brief, you should turn to the page references given for more information on individual buttons and features. Refer to this section also as necessary when using the GW10, when you need specific information on a certain control or terminal.

■ Top Panel



① INPUT PEAK LED

For monitoring of the input signal level. (This lights intermittently at optimum level; see page 14.)

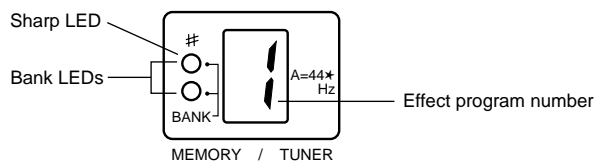
② MEMORY/TUNER Indicator

Displays the program number. (See page 10.) During Tuner operation, this displays the name of the note or string played. (See page 41.)

③ BANK LEDs / Sharp (♯) LED

Bank LEDs

The two LEDs (green and red) indicate which of the four banks of programs is selected. (See page 10.)



Sharp LED

The top LED also serves as a sharp indicator during Tuner operation (functioning along with the note name shown in the MEMORY/TUNER indicator), lighting in the case of an accidental. (See page 10.)

④ ON OFF GROUP / TUNER Indicators

These LEDs serve two purposes:

- As ON OFF GROUP indicators, they correspond to the Effect Block buttons directly below them and light to indicate which effect blocks can be turned on and off with the Foot Controller. (See pages 19, 35.)
- As TUNER indicators (during Tuner operation), they show whether the input signal is in tune or not; when all three indicators light simultaneously, the signal is in tune. (See page 41.)

⑤ WRITE, COPY, SWAP LEDs

These LEDs serve two purposes:

- As WRITE/COPY/SWAP indicators, they flash when the respective Write, Copy, or Swap operation is active. (See pages 37–39.)
- In normal operation, these are effect block indicators, and correspond to the Effect Block buttons directly below them and light to indicate which effect blocks are on. (See page 18.)

⑥ Effect Block / Group Set / Utility Buttons

These buttons serve three purposes:

- In normal operation, they correspond to the three effect blocks (Distortion, Chorus, and Delay) and are used to turn those effect blocks on and off. (See pages 18, 24.)
- Also, in normal operation, they are used to set the on/off group for the effect blocks (which effect blocks will be turned on/off by pressing the Foot Controller). (See page 25.)
- In Write, Copy, and Swap operations, they are used to select the respective utility operation. (See pages 37–39.)

7 VOLUME POSITION Indicators

When the Foot Controller is used as a volume pedal, one of these lights to indicate the position of the volume pedal in the effect chain. (See page 33.)

8 Effect Type Indicators

These light to indicate the selected effect type in the effect block (or the selected parameter category in the Foot Controller block, indicated by the Foot Controller symbol). Only one of these in each block can be selected at a time. (See pages 21, 25, 26.) When one of these indicators flashes, the respective parameters can be edited. (See pages 20, 26.)

9 Parameter Dials

For adjusting the three parameters of a selected effect. The parameters in a single column correspond to the dial in that column.

10 BLOCK / WRITE NO Button

This button serves several purposes:

- In normal operation, this is used to select effect blocks for editing. (See pages 20, 25, 26.)
- When this is held down for a couple of seconds (until all LEDs go out), it calls up the Tuner operation. Pressing it during the Tuner operation returns to normal operation. (See page 41.)
- When this is held down and the **TYPE** button is pressed, it calls up the Write, Copy, and Swap operations. (See pages 37–39.)
- During Write, Copy, and Swap operations, this is used to cancel the respective operation. (See pages 37–39.)

11 TYPE / WRITE YES Button

This button serves several purposes:

- In normal operation, this is used to select effect types for editing. (See pages 21, 25, 26.)
- Also, in normal operation (when no LEDs are flashing), this is used to advance through the effect program numbers. (See pages 10, 11, 24.)
- In Tuner operation, this is used to adjust the tuning standard for the note A above middle C (from 440 to 445). (See page 41.)
- When this is pressed while the **BLOCK** button is held down, it calls up the Write, Copy, and Swap operations. (See pages 37–39.)
- During Write, Copy, and Swap operations, this is used to execute the respective operation. (See pages 37–39.)

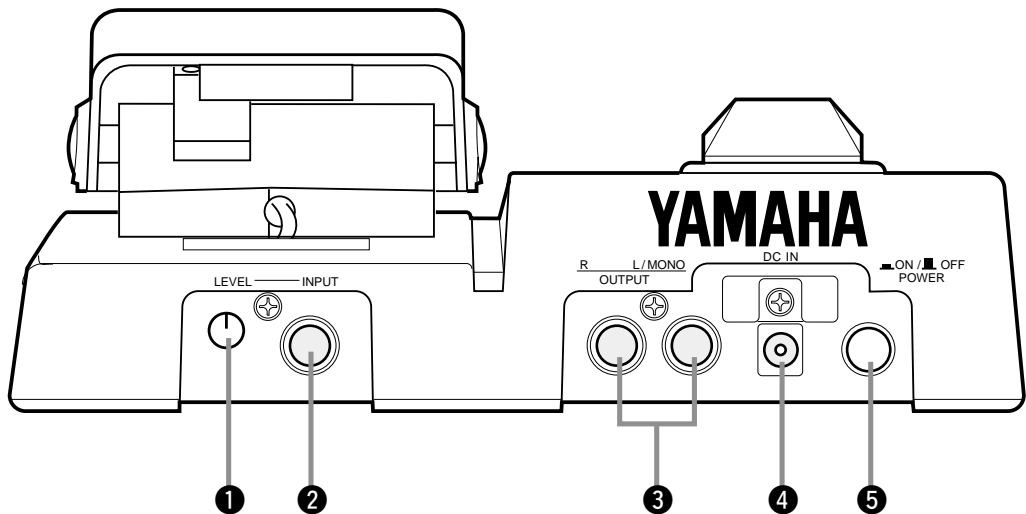
12 MEMORY/BANK Pedal Switch

- In normal operation and in Write, Copy, and Swap operations, pressing this steps through the effect program numbers. Holding the switch down advances through the bank numbers. (See pages 10, 24.)
- During Tuner operation, pressing this returns to normal operation. (See page 41.)

13 Foot Controller

For continuous control over volume or a selected effect parameter. When pressed firmly beyond the maximum, this turns selected effect blocks on or off. (See pages 19, 25.) Pressing this firmly beyond the maximum and holding it down for a couple of seconds (until all LEDs go out) calls up the Tuner operation. (See page 41.)

■ Rear Panel



① INPUT LEVEL Control

For adjusting the level of the input signal. (See page 14.)

② INPUT Jack

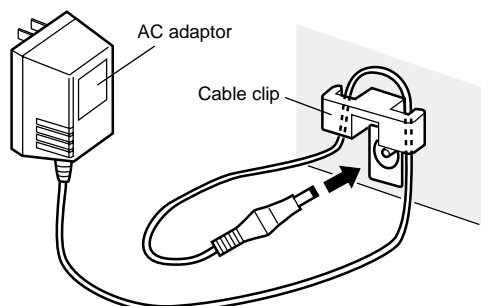
For connection of an instrument (guitar, bass, etc.). (See pages 12–13 for more information on input/output connections.)

③ L/MONO and R OUTPUT Jacks

For stereo or mono output of the instrument sound. Connect both of these to the corresponding left and right channels of your stereo amplification system to take full advantage of the stereo effects of the GW10. For mono operation, connect your system only to the L/MONO jack; this provides a mono mix of the instrument sound when the R OUTPUT jack is not connected.

④ DC IN Terminal

For connection to the AC adaptor.



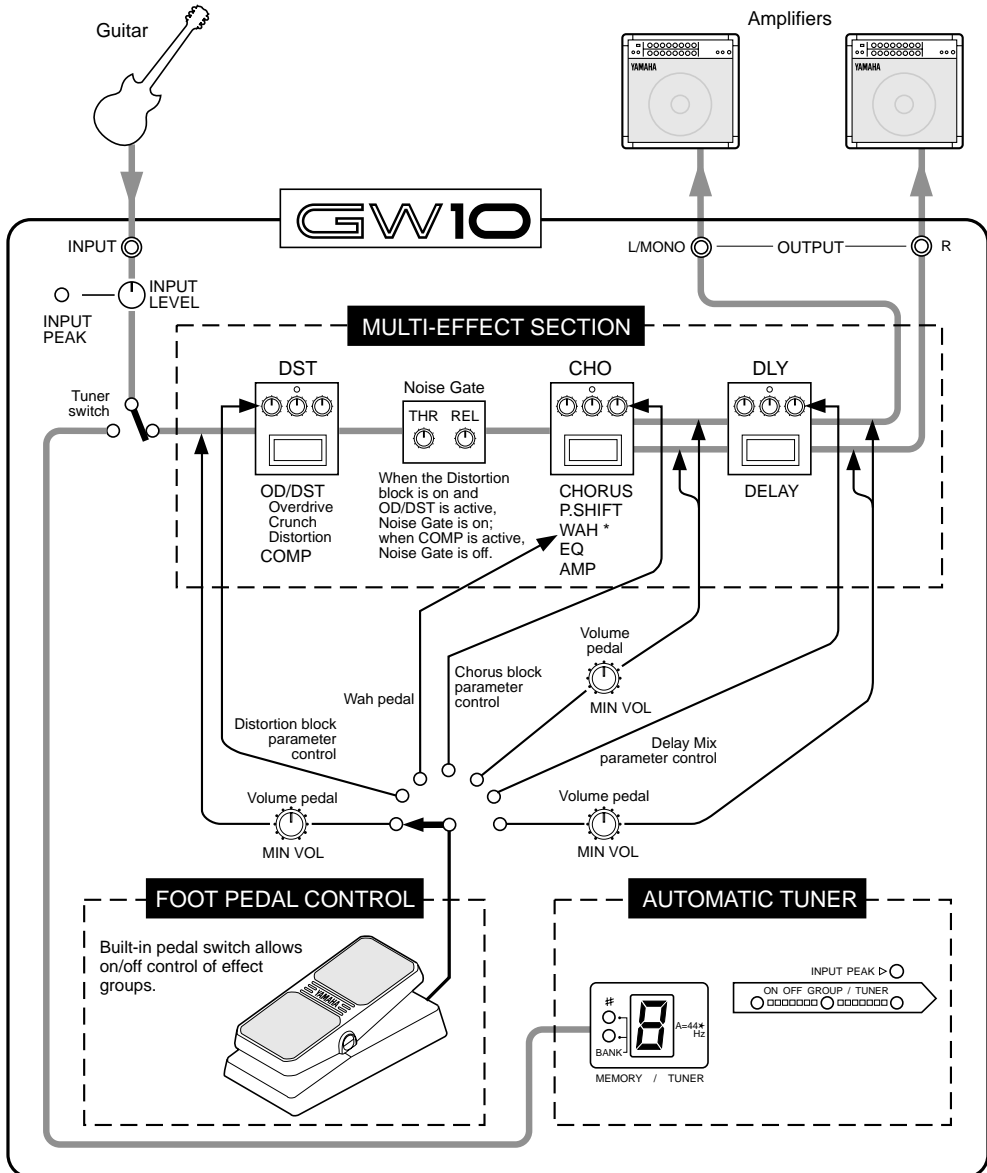
⑤ POWER ON/OFF Switch

SYSTEM OVERVIEW

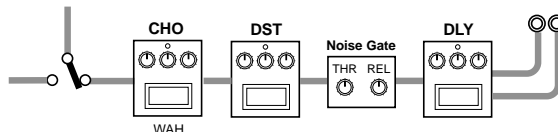
This section provides a brief overview of the GW10 — the basic structure of its various functions and the memory system. Once you gain a general understanding of the internal workings of the GW10 as given here, you'll have the tools for taking full advantage of its features.

■ GW10 Internal Structure

The diagram below shows the internal system of the effects and other functions of the GW10.






* When Wah is selected in the Chorus block and the OD/DST is active, the order of the effects changes as shown here:



■ The Effect Structure of the GW10

Keep in mind as you use the GW10 that the structure of its effects is basically in a four-part hierarchy: 1) **Effect programs**, 2) **Effect blocks**, 3) **Effect types**, and 4) **Effect parameters**.

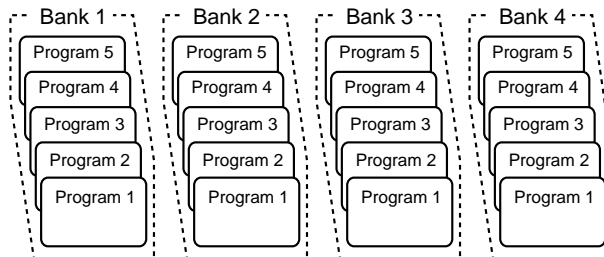
An **effect program** is made up of three **effect blocks** and a Foot Controller block, all of which can be used simultaneously. A **block** includes one or more **effect types**, one of which can be used at a time. And each **effect type** (except Noise Gate) is made up of three **parameters**, which allow you to set the sound of the effect. The logic of this structure is reflected in the panel layout, with effect blocks, types and parameters printed in a matrix from left to right.

| Effect Blocks | Effect Types | Effect Parameters* | | |
|---------------|---|---|--|---|
| | |  |  |  |
| DST | OD/DST (Overdrive/ Crunch/Distortion) | DRIVE | TYPE | OUTPUT |
| | COMP (Compressor) | SENSE | ATTACK | OUTPUT |
| CHO | CHORUS | SPEED | FEEDBACK | DEPTH |
| | P.SHIFT (Pitch Shift) | PITCH L | PITCH R | MIX |
| | WAH | SENSE | FREQ | RANGE |
| | EQ (Equalizer) | LOW | MID | HIGH |
| | AMP (Amp Simulator) | TYPE | TONE | MIX |
| DLY | DELAY | TIME | FEEDBACK | MIX |

(* arranged in columns corresponding to their controlling parameter dials)

■ Memory Structure

The 20 effect programs of the GW10 are organized in four banks, each with five programs.



To select an effect program:

- 1 Make sure that the GW10 is in normal operation. (In other words, make sure that the Tuner function or the Write/Copy/Swap operations are not active.) To return to normal operation, press the **BLOCK**(NO) button or simply turn the power off and on again. In this condition, some LEDs will be lit, but none will be flashing.

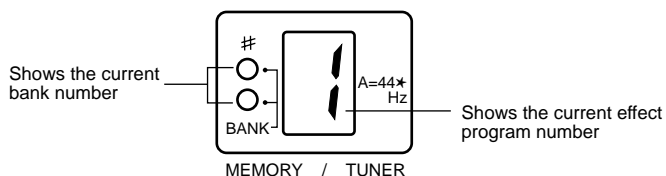
NOTE ■ Alternatively, you can exit the Tuner function by pressing the **MEMORY/BANK** Pedal Switch or the Foot Controller. ■

- 2 Advance through the various effect programs by pressing the **MEMORY/BANK** Pedal Switch or the **TYPE**(YES) button.

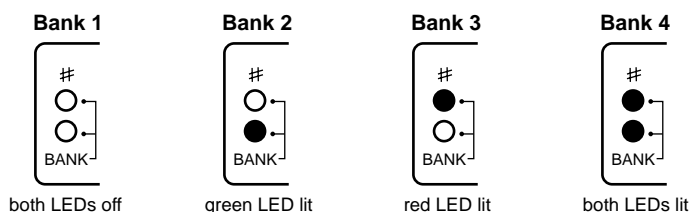


Each press of either of these advances to the next effect program.

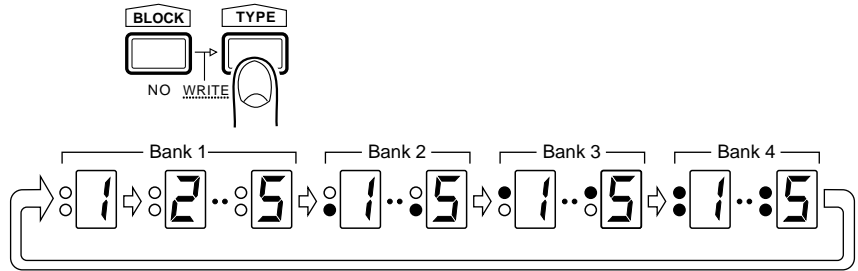
The selected effect program number appears in the MEMORY/TUNER indicator and the bank number is indicated by the BANK LEDs.



The four banks are indicated by the LEDs as shown below. (For instructions on how to select different banks, see step #3 below.)

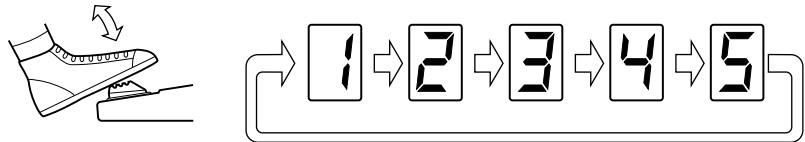


When using the **TYPE** (YES) button, the effect programs and banks are selected in order. After the last effect in a bank is selected, the GW10 advances to the first effect in the next bank, as shown here:



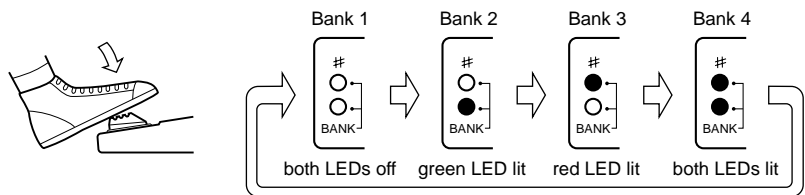
After reaching the last effect program, the GW10 “wraps around” to return to the first effect program.

When using the **MEMORY/BANK** Pedal Switch, only the effect programs of the currently selected bank are selected in order.



After reaching the last effect program, the GW10 “wraps around” to return to the first effect program in the bank.

- 3** To select a different bank number with the **MEMORY/BANK** Pedal Switch, hold down the Pedal Switch until the desired bank is shown.



As with effect program selection, after the last bank is selected, the GW10 “wraps around” to return to the first bank.

● Bank/Program Indications

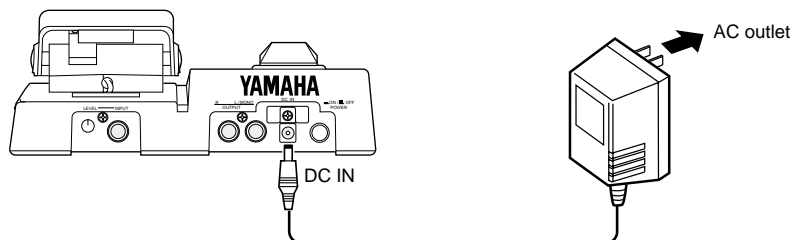
| | | | | | | | | | | |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bank No. | 1 | | | | | 2 | | | | |
| Program No. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Display | ○ 1 | ○ 2 | ○ 3 | ○ 4 | ○ 5 | ○ 1 | ○ 2 | ○ 3 | ○ 4 | ○ 5 |
| Bank No. | 3 | | | | | 4 | | | | |
| Program No. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Display | ● 1 | ● 2 | ● 3 | ● 4 | ● 5 | ● 1 | ● 2 | ● 3 | ● 4 | ● 5 |

Guided Tour

SETTING UP AND PLAYING YOUR GW10

Once you've taken your GW10 out of the box and are ready to use it, you'll have to make a few connections and follow some simple instructions on setting it up.

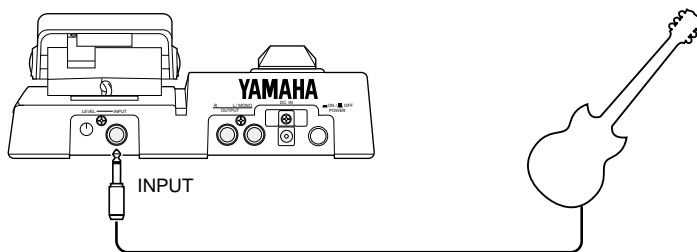
- 1** First, make sure that the power switch on the GW10 is off before making ANY connections.
- 2** Plug the DC output cable from the power adaptor into the DC IN terminal on the rear panel, then plug the adaptor into a convenient AC outlet.



The cable clip located next to this terminal helps to prevent accidental unplugging of the power supply during use. Wrap the adaptor cord firmly around the clip (see the Rear Panel illustration, page 7).

CAUTION! ■ Do not attempt to use a different AC adaptor with the GW10. Also, be sure to check whether the rated voltage is appropriate. (See the precaution "USE THE CORRECT POWER SUPPLY" on page 2.) ■

- 3** Plug your instrument into the INPUT jack on the rear panel.



For the sake of these instructions, we'll assume you're using an electric guitar; however, most any electronic instrument can be used.

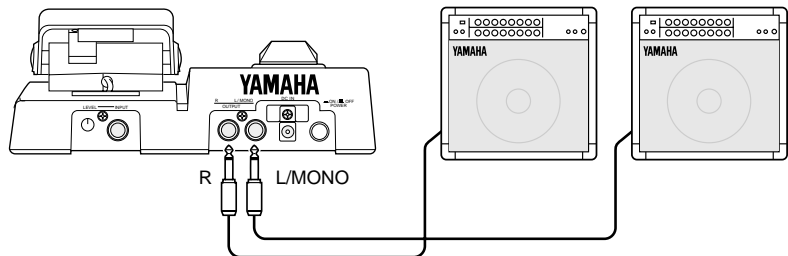
NOTE ■ You should be careful if you are connecting a synthesizer or electronic keyboard; generally their output level is much higher than that of a guitar and the input level, as well as the volume control on the keyboard, should be turned down accordingly (see step #4 below). ■

- 4** Connect the GW10 output or outputs to your amplifier/speaker system. Before you do this, however, make sure that the power on the system is first turned off and all volume controls are set to zero — this includes the guitar controls, the INPUT LEVEL and the Foot Controller on the GW10 itself, and the volume on the connected amp (or mixing console).

NOTE ■ To set the INPUT LEVEL on the GW10 to the minimum, turn the control all the way counterclockwise. ■

Two example connection systems are shown below. Use the one which most closely resembles your own system.

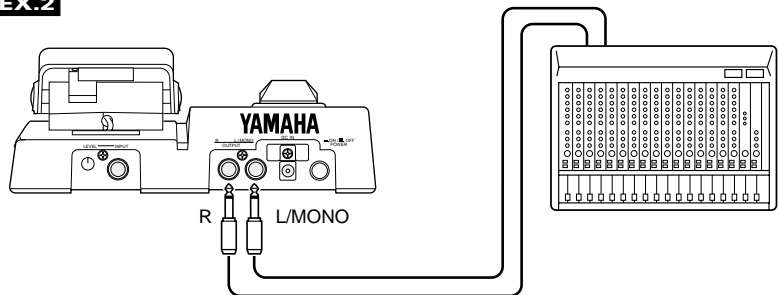
EX.1



Here, the left and right outputs of the GW10 are sent to two separate guitar amps.

If you are using a single guitar amp, connect it to the L/MONO OUTPUT jack.

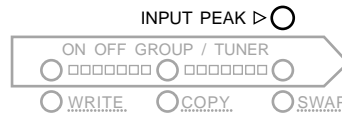
EX.2



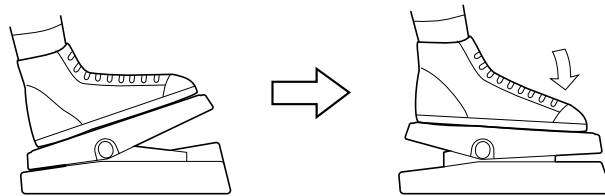
In this system for studio recording applications, the left and right channels of the instrument/effect sound go into separate mixer channels. For best results with this setup, use the Amp Simulator effect in the Chorus block (see page 30).

- 5** Turn on the power of all the equipment, starting with the GW10, and turning on the connected amplifier last.

-
- 6** While playing your guitar, bring up the level on your guitar and adjust the INPUT LEVEL control on the rear panel of the GW10. Increase the level slowly as you play the guitar while looking at the INPUT PEAK LED on the panel. When you play your guitar the loudest, the indicator should light intermittently.



- 7** Next, slowly bring the volume up with the Foot Controller on the GW10.



- 8** Now that you've properly set the level on the GW10, slowly bring up the other volume controls to suitable levels — starting with the amp.

If you've followed all these instructions carefully, you should now be able to hear your guitar sound processed by the effects of the GW10.

THE EFFECTS OF THE GW10

The GW10 is equipped with a comprehensive set of effects designed specifically for the guitar player. You can switch these effects on and off as needed and adjust them quickly and easily from the panel controls.

There are three groups or “blocks” of effects — Distortion, Chorus and Delay — plus a special Foot Controller block that includes a Noise Gate effect and the Foot Controller settings. The Distortion block includes Crunch, Overdrive and Compressor effects, while the Chorus block also features Pitch Shift, Wah, Equalizer, and Amp Simulator effects.

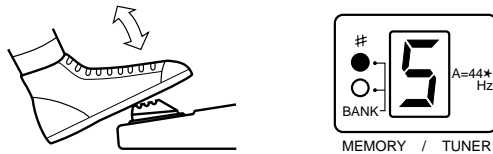
(Refer to the EFFECTS AND PARAMETERS section, page 27, for more detailed descriptions and explanations of these effects.)

With these three effect blocks, used individually or simultaneously, the GW10 has all you need to augment your sound, whatever the application. Plus, flexible effect bypass (on/off) functions give you even more realtime control over the sound.

PLAYING WITH THE PRESET EFFECTS

Now that you've set up your GW10 and are ready to use it, let's try playing with some of the preset effects. (If you haven't already done so, read through the **SYSTEM OVERVIEW** section on pages 8–11 for information on the basic structure of the GW10 and how to select effect programs.)

- 1** First, try playing with a bright chorus effect. Use the **MEMORY/BANK** Pedal Switch to select bank 3, program number 5. (Hold down the Pedal Switch to select the desired bank, and press it repeatedly to advance to the proper program number; see pages 10–11.)



NOTE ■ For this and the other examples that follow, make sure that the Foot Controller is at or near the maximum position, to ensure proper volume. ■

- 2** Now, try a heavy distortion sound. Use the **MEMORY/BANK** Pedal Switch again, this time selecting bank 2, program number 1.



- 3** Next, let's call up an interesting delay effect. Use the **MEMORY/BANK** Pedal Switch to select bank 1, program number 3.
- 4** Before going on to the next section, try exploring some of the other effect programs of the GW10. Look through the Preset Effect Program list on page 44 for more information about the programs, and play with a few of them to hear how they sound.

USING THE FOOT CONTROLLER TO CHANGE THE SOUND

The Foot Controller is one of the most convenient and flexible features of the GW10. It not only allows you to control volume, but also lets you continuously change certain effect parameters as you play. The examples below should give you a taste of what the Foot Controller functions can do for your sound.

- 1** Let's use one of the volume functions of the Foot Controller first. Select bank 4, program number 3.
- 2** Bring the Foot Controller to the maximum position and play your guitar. This is the maximum volume and is ideal for playing a solo.
- 3** Now, stop playing and bring the pedal all the way to the minimum position, then start playing again.

Notice how the volume of the sound changes to a level suitable for backing parts. As you can see, the Foot Controller is an easy and instant way to change from one volume setting to another.

- 4** Next, let's use the Foot Controller to change the sound in realtime. Select bank 1, program number 2.

As you play your guitar, slowly rock the pedal back and forth. Listen to the "wah-wah" effect in the sound as you move the Foot Controller.

- 5** Finally, select bank 3, program number 2.

In this example, set the Foot Controller first to the minimum position and play your guitar. As you continue playing, slowly bring the pedal to the maximum position. Notice how a rich, natural chorus effect gradually blends in with the sound as you press the pedal toward the maximum.

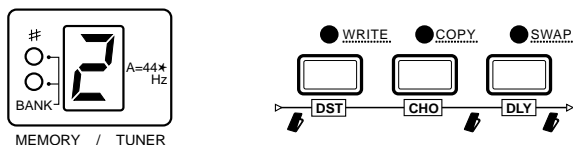
As you can see, the Foot Controller is an extremely versatile and powerful performance tool, giving you broad control over the sound as you play, without forcing you to take your hands from your instrument.

Look again through the Preset Effect Program list on page 44, noting which programs take advantage of the Foot Controller functions, and try playing with a few of them to hear how they sound.

TURNING SPECIFIC EFFECTS ON AND OFF

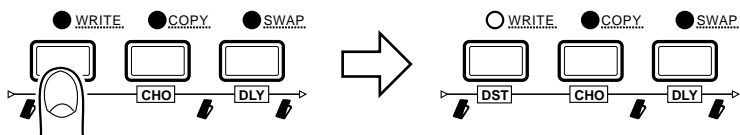
Since the sound of an effect preset is actually made up of three different effects, you can make distinct changes in the sound by turning individual effect blocks on and off.

- 1 For this example, select bank 1, program number 2. This effect program has Distortion, Wah, and Delay.



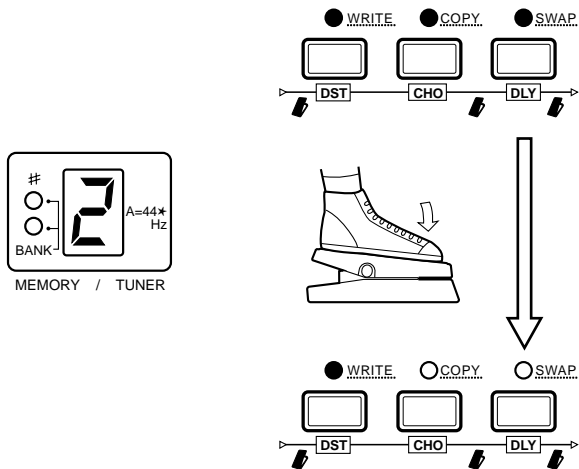
The LEDs above all three Effect Block buttons (**DST**, **CHO**, **DLY**) should be lit, indicating that all effects are active. Play your guitar and listen to the sound of effect program.

- 2 Press **DST** to turn off the Distortion block. (The LED will turn off.)

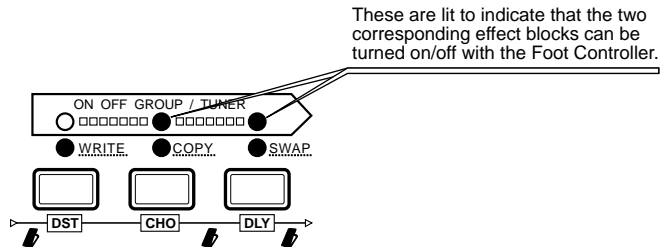


Now, play your guitar again and hear how the sound has changed. Try pressing **CHO** and **DLY** as well, seeing how turning the effect blocks on and off affects the overall sound.

- 3 In this effect program, you can also use the Foot Controller to simultaneously turn both the Chorus and Delay blocks on or off. Push the Foot Controller down to its maximum setting, then firmly press it once. The CHO and DLY LEDs will turn off, indicating that the two effect blocks are off.



Depending on the preset selected, the Foot Controller turns different groups of effect blocks on and off. You can instantly check which effect blocks are enabled for this function by looking at the green ON OFF GROUP LEDs above the Effect Block buttons. For example, in bank 1, program number 2, the ON OFF GROUP LEDs above CHO and DLY are lit.



NOTE ■ Be sure to press the Foot Controller down firmly when using this function; the effect block or blocks may not be properly turned on or off if the Foot Controller is not pressed down all the way. ■

CHANGING THE SOUND OF THE EFFECTS

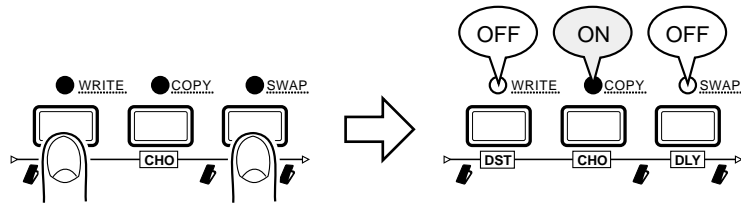
The GW10 makes it extremely easy to adjust or change the sound of the effects. As you saw in the section **TURNING SPECIFIC EFFECTS ON AND OFF** above, you can easily change the sound by turning the effect blocks on and off. In this section, you'll learn how to change the effect type and use the parameter dials to change effect settings.

CAUTION! ■ If you wish to save the changes that you make here, be careful not to press the **MEMORY/BANK** Pedal Switch while making changes. If you do, the next effect program will be called up, erasing all settings you had made to that point. ■

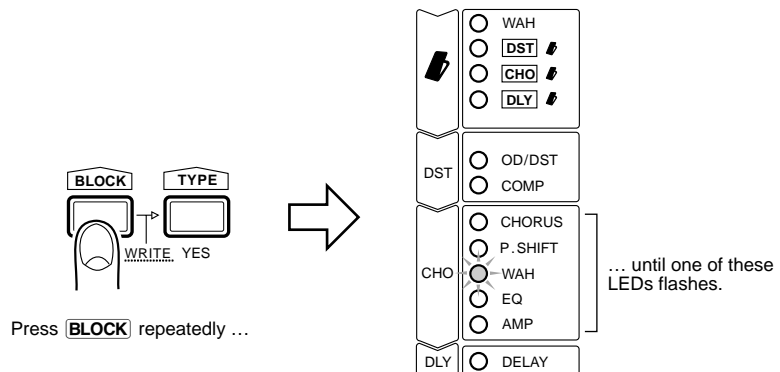
- 1 Select an effect program with the **MEMORY/BANK** Pedal Switch. Since you'll be completely changing the settings, any effect program will do.

NOTE ■ Even though creating and saving your own effect program erases the original factory preset program, you can restore that particular factory preset program. Refer to **RESTORING FACTORY PRESET EFFECT PROGRAMS** on page 40 for details. Keep in mind, however, that restoring the factory preset program will irretrievably erase the effect that you created. For this reason, you should always make a written record of the settings you make (see page 48), so that you can reprogram the effect later if necessary. ■

- 2 Next, make sure that the Distortion and Delay blocks are turned off. If you recall from the last section, you can do this by pressing the **DST** and **DLY** buttons so that their LEDs turn off. Also, make sure that the Chorus block is on.

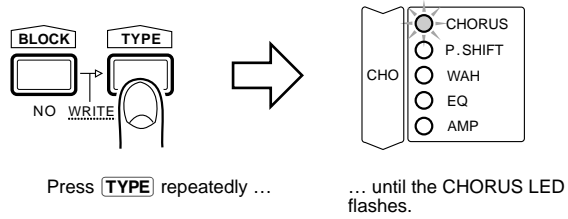


- 3 Press the **BLOCK** button repeatedly until one of the effect type LEDs in the Chorus (CHO) block flashes.



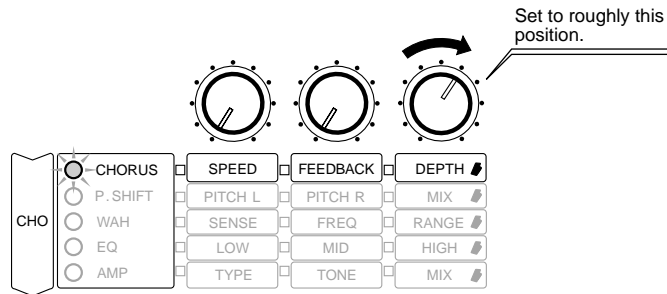
You've now selected the Chorus block for editing.

- 4** Press the **TYPE** button repeatedly to select an effect type. For this example, select Chorus. (The CHORUS LED will flash.)



You've now selected the Chorus effect for editing.

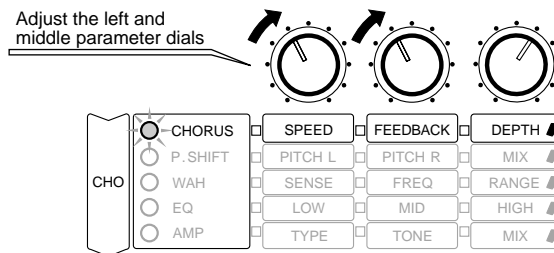
- 5** Before making any other settings, make sure that the right parameter dial is turned to at least the halfway position or higher.



While the CHORUS LED is flashing, this dial controls the Chorus Depth parameter. (The matrix on the panel clearly shows the effect/parameter/parameter dial relationship; notice that DEPTH is in the same row as the flashing CHORUS LED, and in the same column as the right parameter dial.)

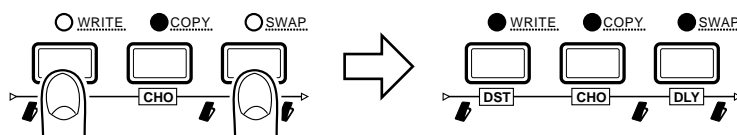
This step is necessary since you may not be able to hear any changes made to the other two parameters if Chorus Depth is not set to a high enough value.

- 6** While playing your guitar, try adjusting the left and middle parameter dials. These control the Chorus Speed and Feedback, respectively.



Adjust the right parameter dial as well, to “fine-tune” the sound.

7 Now, use the Effect Block buttons (**DST** and **DLY**) to turn the Distortion and Delay effects back on.



Play your guitar again and listen to the changes as you turn these effects on again. As you listen to how they affect the overall sound, you can continue to adjust the Chorus settings to further fine-tune the sound. If you wish, you can even select the Distortion and Delay effects and edit them as well.

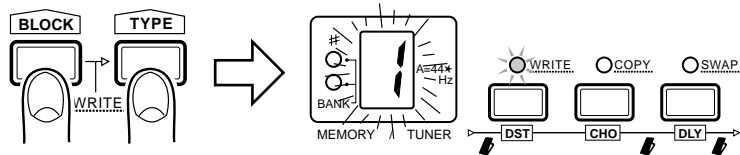
NOTE ■ *In some cases, undesirable feedback or noise may result if you adjust the value of a parameter while playing your guitar. In general, adjust a parameter, then play your guitar to hear the change in the sound.* ■

When you've adjusted the sound to your satisfaction, you may wish to save it for future recall. You can either copy the settings down on paper (using a copy of the Blank Effect Parameter Chart on page 48) or go on to the next section and save the settings to the GW10's memory.

SAVING AN EFFECT PROGRAM

Now that you've created your own original effect program, you will want to save the settings to a program number, so that you can recall your new effect program in the future. (For more information on saving effect programs and other matters relating to memory, see SYSTEM OVERVIEW on page 8.)

- 1 If you've continued from the last section and have new settings you want to save, hold down the **BLOCK**(NO) button, then press **TYPE**(YES).

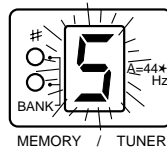


- 1) Simultaneously hold **BLOCK** (NO) down...
- 2) ...and press **TYPE** (YES)

The program number in the MEMORY/TUNER indicator and the WRITE LED both flash to indicate that the GW10 is ready to write the settings to memory at the selected program number.

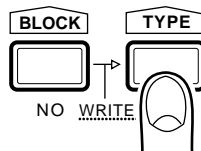
NOTE ■ All LEDs may temporarily go out while holding down the **BLOCK**(NO) button. This is normal and should be no cause for concern. However, if you lift up on the **BLOCK**(NO) button, the LEDs may stay off. If this happens, simply press **BLOCK**(NO) again, and start all over with step #1 above. ■

- 2 If you want to save the settings to a different program number, use the **MEMORY/BANK** Pedal Switch to select another bank and program number. (See pages 10–11.) (The BANK LED(s) and MEMORY/TUNER indicator flash.)



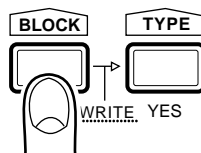
NOTE ■ The **TYPE**(YES) button CANNOT be used here to change the effect program number; its only use is in step #3 below. ■

- 3 To actually save the new settings, press **TYPE**(YES).



Press **TYPE** (YES) to save the settings.

To cancel the operation and continue editing, press **BLOCK**(NO).



Press **BLOCK** (NO) to cancel the operation.

Reference

This section of the manual explains briefly, yet completely, all of the features and functions of the GW10. Refer to it when you need information about a specific feature or function.

SELECTING EFFECT PROGRAMS

OPERATION

- 1** To select one of the four banks, press and hold the **MEMORY/BANK** Pedal Switch, then release it when the desired bank number is shown in the BANK LEDs.
- 2** Press the Pedal Switch (or the **TYPE**(YES) button) once to advance to the next effect program number. The current effect program

number is shown in the MEMORY/TUNER indicator.

(For more information on the bank/program configuration of the GW10 and the selection of effect programs, see pages 10–11 in SYSTEM OVERVIEW.)

TURNING EFFECT BLOCKS ON AND OFF

You can change the sound of an effect program by turning any of its three effect blocks on or off. This can be done either by using the panel buttons or the Foot Controller.

Using the Panel Buttons to Turn Effect Blocks On and Off

OPERATION

Press the Effect Block button (**DST**), (**CHO**), or (**DLY**) corresponding to the effect block you wish to turn on or off. The button's red LED is lit when the effect block is on, and goes out when the block is turned off.

Using the Foot Controller to Turn Effect Blocks On and Off

The Foot Controller can be used to instantly turn pre-assigned effect blocks on and off. The green ON OFF GROUP LEDs above the Effect Block buttons indicate which effect blocks are assigned for this. For example, if the green LEDs above **CHO** and **DLY** are lit, the Chorus and Delay blocks can be turned on or off with the Foot Controller. (For instructions on how to set the on/off group, see “Assigning Effect Block On/Off Groups” below.)

OPERATION ➤

Push the Foot Controller down to its maximum setting, then firmly press it once. The selected effect block or blocks (along with their LEDs) will appropriately turn on or off.

Assigning Effect Block On/Off Groups

OPERATION ➤

To set which effect blocks are to be turned on and off with the Foot Controller, press and hold the appropriate Effect Block button(s) (**DST**, **CHO**, or **DLY**) corresponding to the effect block or blocks you wish to turn on or off. Hold the button or buttons for about one second, or until the green LEDs above the selected Effect Block buttons light.

NOTE ■ *At least one of these LEDs will always be lit in normal operation, meaning that at least one block will always be assigned for on/off control with the Foot Controller. However, you can disable this on/off switching entirely; see **DISABLING THE EFFECT ON/OFF SWITCHING OF THE FOOT CONTROLLER**, page 35. ■*

CHANGING THE EFFECT TYPE

OPERATION ➤

- 1 Press **BLOCK** repeatedly until the desired block is selected. (One of the effect type LEDs in the block will flash.)
- 2 Press **TYPE** repeatedly until the desired effect type is selected. (The selected effect type LED in the block will flash.)
- 3 Write (save) the new setting to memory, if desired. (See **SAVING AN EFFECT PROGRAM** on page 37 for details.)

EDITING EFFECT PARAMETERS

The effect programs of the GW10 can be easily “tweaked” or edited with the convenient parameter dials.

CAUTION! ■ Be careful NOT to press the **MEMORY/BANK** Pedal Switch at any time during editing. Doing so will switch to the next preset and erase all settings you had made to that point. ■

OPERATION

- 1 First, turn off all effect blocks (using the Effect Block buttons; see page 24), except for the one you wish to edit.

Doing this lets you clearly hear only the effect you wish to edit.

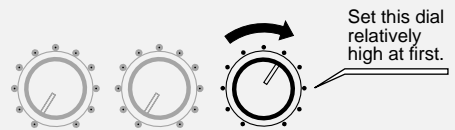
NOTE ■ One possible exception to this guideline is the Amp Simulator effect, changes to which are easier to hear when Distortion is also on. ■

- 2 Select the effect you wish to edit. Use **BLOCK** to select the desired effect block, then **TYPE** to select the desired effect type. (The LED of the selected effect will flash.)
- 3 While playing the connected instrument, adjust the parameter dials. The relevant parameters are in the same row as the flashing effect LED. For example, if you wish to edit the MID parameter of the Equalizer effect, the EQ LED should be flashing and you should adjust the middle parameter dial.

NOTE ■ In some cases, undesirable feedback or noise may result if you adjust the value of a parameter while playing your guitar. In general, adjust a parameter, then play your guitar to hear the change in the sound. ■

For information about each of the effects and their parameters, refer to the section **EFFECTS AND PARAMETERS** on page 27.

HINT ■ In general, when editing an effect, you should turn up the right parameter dial to a relatively high setting before adjusting the other two.



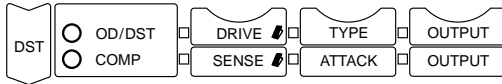
Doing this ensures that any changes you make with the other dials will be fairly noticeable. This technique particularly applies to effects whose third parameter is Output or Mix, since these parameters directly affect the level of the effect sound. ■

- 4 While editing, turn one or both of the other effects back on to hear how the changes you've made affect the overall sound. If you like, select those effects and edit them as well.
- 5 You can also make changes to the Foot Controller: selecting the controllable parameter or volume pedal position, and setting the Minimum Volume. (See pages 33 and 34.)
- 6 Write (save) the new settings to memory, if desired. (See **SAVING AN EFFECT PROGRAM** on page 37 for details.)

EFFECTS AND PARAMETERS

This section briefly explains each of the effect types and their parameters. For information on how to select effects and edit them, see the sections **SELECTING EFFECT PROGRAMS** (page 24), **CHANGING THE EFFECT TYPE** (page 25) and **EDITING EFFECT PARAMETERS** (page 26).

DISTORTION BLOCK



The Distortion block features the following effects: Overdrive, Crunch, Distortion, and Compressor.

Overdrive/Distortion (OD/DST)

Drive

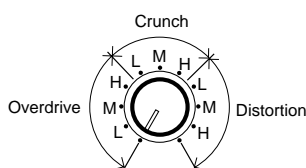
Determines the intensity of the Overdrive, Crunch or Distortion sound. The higher the value, the greater the distortion.

HINT ■ For best results, set the Drive parameter roughly between the 12:00 and 3:00 positions. ■

Type

Determines the type of distortion effect: Overdrive, Crunch, or Distortion. Overdrive recreates the warm, natural sound of a tube amp being overdriven. Crunch is a rich distortion effect ideal for power chords and Rock'n'Roll. Distortion is a hard, more metallic distortion sound, and is excellent for screaming lead lines.

The positions from minimum to roughly 10:00 correspond to Overdrive, from about 11:00 to 1:00 corresponds to Crunch, and from about 2:00 to maximum corresponds to Distortion. Within each effect is also three separate settings: Low, Mid, and High.



A definite change in the sound can be heard when crossing the “line” between two separate types or settings.

Output

Determines the output level of the Distortion sound.

HINT ■ This should be set to an appropriate value to avoid sudden jumps or drops in level when switching the effect on and off. ■

Compressor (COMP)

The Compressor is especially effective for guitar since it smooths out the “peaks” and “valleys” in the sound. Compression “squashes” the dynamic range of the signal, making loud signals softer and soft signals louder. Normally, the Compressor limits signals of widely varying loudness to a dynamic range more suitable for use with the other effects. For this reason, compression is effective on guitar in smoothing out the level differences caused by uneven picking technique.

Sense

Determines the threshold level of compression. Compression is applied to signal levels above the Sense point, while signals below this point are unaffected. The minimum setting virtually allows the entire signal to pass without being compressed (minimum compression), while the maximum setting applies compression to the entire signal (maximum compression).

Attack

Determines the amount of time it takes for compression to begin after an input signal is detected. Longer attack times (when dial is turned toward maximum) let through more of the natural attack of the input signal.

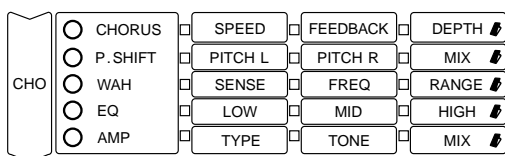
Output

Determines the level of the Compressor sound. Settings past the 12:00 position are used for boosting the overall signal to an appropriate level, since compression effectively lowers the level of the sound.

HINT — ABOUT THE OUTPUT LEVEL ■ Since the Output parameter of the Distortion block determines the loudness of the overall sound, the Distortion block is placed first in the effect chain (except when the Wah effect is used; see illustration in the SYSTEM OVERVIEW section on page 8). In general, you should set Output so

that the level of the sound is constant, even when turning the Distortion block on and off. If the Output parameter is set too high or low, you may get unwanted sudden jumps or drops in the level of the sound when turning Distortion on and off. Moreover, if Output is set to the minimum, you won't get any sound at all. ■

CHORUS BLOCK



The Chorus block features a wide range of modulation and tone control effects, including Chorus, Pitch Shift, Wah, Equalizer, and Amp Simulator.

Chorus

Chorus uses modulation of the pitch and separation of the signal into stereo to greatly enhance the sound, generally making it richer, fatter and warmer.

Speed

Determines the speed of the pitch modulation. Settings higher than around 4:00 produce very high speed modulation for special effects.

Feedback

Determines the amount of Chorus signal that fed back again to the Chorus input. Higher values result in a stronger, flanger-like sound.

Depth

Determines the depth of the pitch modulation, or how widely the pitch is varied.

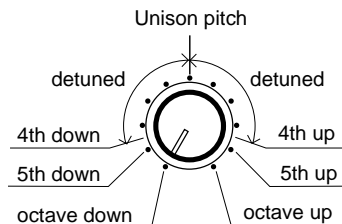
Pitch Shift

Pitch Shift lets you change the pitch of the sound, up to an octave above or below the pitch of the input signal. Since the effect is stereo, you can set the

amount of pitch shift independently for the left and right channels, creating three separate pitches (including the original direct signal). One application for this would be to create a natural, spacious stereo chorus effect in which the left and right pitches are detuned slightly relative to the direct sound. Other applications include setting the pitch shift to an octave below or above (to make a six-string guitar sound like a twelve-string), or setting the pitch to other intervals (such as a fourth or fifth) to create instant harmonies and fill out the sound.

Pitch Left (PITCH L)

Determines the amount of pitch shift for the left channel, up to one octave above or below the input pitch. The 12:00 position on the dial corresponds to unison pitch, while the pitch can be continuously detuned between the 9:00 and 3:00 positions. Fixed pitch shifts are available past those positions: an octave down at 7:00, a 5th down at 8:00, a 4th down at around 9:00, a 4th up at around 3:00, a 5th up at 4:00, and an octave up at 5:00.



Pitch Right (PITCH R)

Determines the amount of pitch shift for the right channel, up to one octave above or below the input pitch. (The settings are the same as in Pitch Left above.)

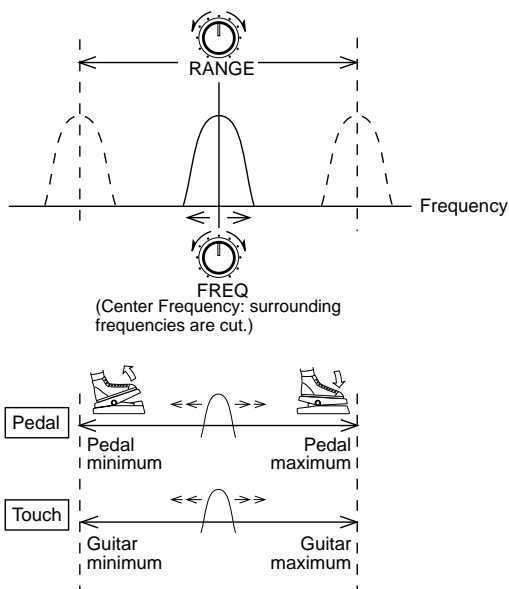
Mix

Determines the level of the Pitch Shift sound. The minimum setting corresponds to 0%, or no

Pitch Shift output (only the original sound is heard). The midpoint setting corresponds to 50%, or an equal mix of the original direct sound and the Pitch Shift output. The maximum setting corresponds to 100%, or no original sound output (only the Pitch Shift sounds are heard).

Wah

Wah is a filter sweep effect that, as its name implies, produces a “wah” type sound. Two different Wah types are available: Touch and Pedal. Touch lets you vary the sweep of the filter according to the input level (how hard or loud you play) while Pedal lets you “play” the Wah effect with the Foot Controller. The Touch type is normally active; to select Pedal, make sure WAH is enabled in the Foot Controller block. The illustration below shows how the various parameters and two types are related.



Pedal, the movement of the Foot Controller determines the movement of the isolated frequency across the set range.

Touch, the level of the guitar signal determines the position of the isolated frequency within the set Range. When the level of the guitar is low, the isolated frequency remains around the minimum frequency of the set Range. As the guitar level increases, the isolated frequency moves further toward the maximum.

The Wah effect employs a movable band pass filter to create the filter sweep or filter emphasis effect. Frequencies on either side of the center frequency (set in the Frequency parameter) are cut or filtered out, isolating the center frequency. This frequency band is then moved across the specified frequency range (set in Range), as shown in the Pedal and Touch portions of the graph above.

HINT — About the Wah Types (Touch and Pedal)

The Touch type lets you control the Wah effect by the level of the input signal (or how hard you play). In Touch, the filter sweep (or “wah” sound) starts at the beginning each time it is triggered. Touch is normally active when you select the Wah effect.

The Pedal setting lets you sweep the filter manually with the Foot Controller. This setting is available only when WAH has been selected in the Foot Controller block. If the WAH LED in the Foot Controller block is already lit, the Pedal type is active.

To change between the two types, press **BLOCK** until one of the Foot Controller block LEDs flashes, then press **TYPE** to either select WAH (for Pedal type) or another parameter’s LED (for Touch type).

Sense

Determines how sensitive the Wah effect is to the instrument input. (Not available for Pedal Wah operation.) The higher the value, the more sensitive the trigger of the Wah effect becomes to low level signals; the movement of the band pass filter responds to even slight level changes.

HINT For best results, when playing a solo or a line, try setting Sense to a high value; when performing backing or rhythm parts, try setting Sense to a low value. (This is because playing a single string results in a lower level than playing all six strings.)

Frequency (FREQ)

Determines the center frequency of the band pass filter. The Wah effect sweeps this isolated portion below and above the center frequency, over a specific frequency range determined by the Range parameter. (See illustration at left.)

Range

Determines the width of the frequency sweep, or how far the sweep extends above and below the center frequency. Higher values create a more pronounced “wah” sound. (See illustration at left.)

Equalizer (EQ)

The Equalizer effect provides fine tone control over the sound with a three-band equalizer.

Low

Determines the amount of boost or cut applied to the low frequencies. The 12:00 position corresponds to flat response or no equalization.

Mid

Determines the amount of boost or cut applied to the midrange frequencies. The 12:00 position corresponds to flat response or no equalization.

High

Determines the amount of boost or cut applied to the high frequencies. The 12:00 position corresponds to flat response or no equalization.

HINT ■ Take care when using maximum levels; distortion could result, especially when all parameters are set to the maximum. ■

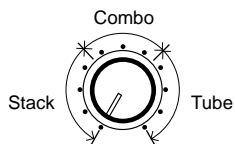
Amp Simulator (AMP)

This effect realistically reproduces the characteristic sound of a guitar amplifier, and provides a natural sound for direct recording purposes when not using an external amplifier. When using an amplifier, it also provides a convenient way to change the sound characteristics of that amplifier. Amp Simulator is particularly effective when used with one of the Distortion effects.

Type

Determines the type of amplifier that is simulated: Stack, Combo, or Tube. Stack recreates the powerful sound of a huge amp/speaker setup, Combo recreates a compact amp cabinet, and Tube recreates the warm sound of a tube amplifier.

The positions from minimum to roughly 10:00 correspond to Stack, from about 11:00 to 1:00 corresponds to Combo, and from about 2:00 to maximum corresponds to Tube.



A definite change in the sound can be heard when crossing the “line” between two separate types.

Tone

Determines the degree to which high frequencies are cut or boosted. Turning the parameter dial counterclockwise decreases the high frequencies, while turning it clockwise boosts them.

Mix

Determines the level of the Amp Simulator effect. The minimum setting corresponds to 0%, or no Amp Simulator output (only the original signal is heard). The midpoint setting corresponds to 50%, or an equal mix of the original direct signal and the Amp Simulator output. The maximum setting corresponds to 100%, or no original signal output (only the Amp Simulator effect is heard).

HINT ■ For direct recording purposes, a setting of 100% is recommended. ■

DELAY BLOCK



Delay

The Delay effect allows you to add delayed, echo-like repeats to the original sound. Subtle use of Delay helps in creating a sense of space and depth in the sound — especially since this is a stereo delay effect. Generally, it is an effective way to bring the sound to life and make it sound more natural. Delay can also be used for special applications, such as creating rhythmic repeats in the sound.

The Delay effect of the GW10 also has a special Doubling feature, which adds two slightly delayed repeats to the original signal, and outputs them separately in the left and right outputs (as shown in the Delay Parameters illustration at right). The Doubling sound is too fast to be heard as a distinct delay, but instead adds depth and fullness to the direct sound, giving the impression of more than one instrument being played.

Delay has been placed last in the effect chain of the GW10, since it is most often used to reproduce the echoes and ambience that follow a sound when heard in an actual performance environment.

Time — Range: 5 - 660 ms

Determines the time between delayed repeats of the main delay. Very short delays make it possible to make one instrument sound like two separate instruments. Slightly longer delays can be used for creating slap-back echo or a reverb-type effect. Longer times are used for special effects, like creating long echoes or steady rhythmic pulses.

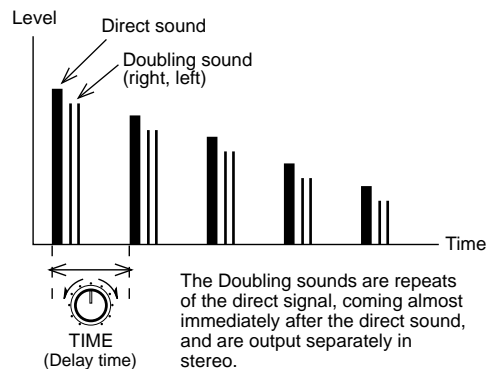
Feedback

Determines the number of the delayed repeats and the level of the doubling sound. As shown in the illustration above, settings between 7:00 and 8:00 result in only the direct and Doubling sounds being heard. Settings between 8:00 and

9:00 add a single delayed repeat without Doubling. Settings between 9:00 and 12:00 repeat the delay and Doubling a few times, while for higher values the repeats carry on almost indefinitely. The repeat sounds gradually decay to silence, and the time it takes for them to decay is also controlled by Feedback.

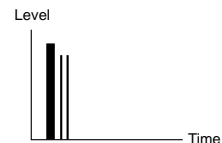
Mix

Determines the level of the Delay sound. The minimum setting corresponds to 0%, or no Delay output (only the original signal is heard). The maximum setting corresponds to 50%, or an equal mix of the original direct signal and the Delay output.



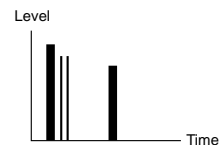
■ When Feedback = 7:00 - 8:00

When Feedback is set to roughly the minimum position (7:00 - 8:00), only the direct sound and the Doubling delay are heard.



■ When Feedback = 8:00 - 9:00

When Feedback is set to roughly between 8:00 and 9:00, the direct sound (plus Doubling) and a single delayed repeat of only the direct sound is heard. (in this case, the repeat sound does not include Doubling.)



■ When Feedback = 9:00 - maximum

Feedback settings greater than 9:00 add multiple delayed repeats at gradually decreasing volume.

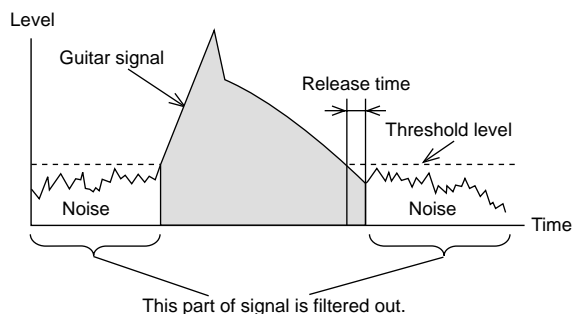
NOISE GATE

Noise Gate is a separate effect that is placed between the Distortion block and the other two blocks, and is used to eliminate any noise or hum in the signal when the instrument isn't being played. All signals below the Threshold point are filtered out, thus cutting off the noise. Noise Gate is active only when the Distortion block is also active and one of the distortion-type effects has been selected (Overdrive, Crunch, or Distortion); when Compressor is selected, the Noise Gate is off.

To adjust the Noise Gate parameters, select the Foot Controller block with the **BLOCK** button, then use the two parameter dials below NOISE GATE.

Threshold

Determines the sensitivity of the noise gate, or how loud an input signal is required to open the gate (letting the signal through). The higher the value, the louder the signal needs to be to open the gate. For optimum operation, Threshold should be set just above the level of the noise; setting it too high may cause notes to be cut off too abruptly.



Release

Determines the time of the decay, from when the input signal crosses the Threshold point. (Since this control introduces subtle changes to the sound, some experimentation may be necessary; also see Hint below.)

HINT ■ *Achieving the best results with the Noise Gate may take some experimentation. When Release is set too close to the minimum and the Threshold setting is not low enough, the noise may come back in soon after the sound dies out, creating an unnatural sounding decay. When Release is set too close to the maximum, the noise may remain too long and sound as if it is gradually increasing in volume. For optimum results, avoid the extreme settings (especially in Release) and use low-to-median values. ■*

FOOT CONTROLLER OPERATIONS

The Foot Controller of the GW10 can be used as a volume pedal or as a realtime controller for specific effect parameters. Moreover, when used as a volume pedal, it can be placed in one of three positions in the effect chain, and be given a minimum volume setting other than zero (for when you need to easily change between two different volume settings).

The Foot Controller also features a switch (just beyond the maximum setting) for turning selected effect blocks on and off.

Volume Pedal Control — Volume Position and Minimum Volume

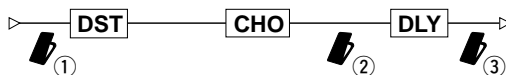
The Volume Position feature lets you specify the point in the effect chain at which the volume pedal control is placed.

Minimum Volume can be set to a level somewhere between no sound at all and maximum volume, letting you use the Foot Controller to easily move between two volume settings. For example, if you set the Minimum Volume to a level somewhat less than maximum, you can instantly change from a solo level to a backing level by bringing the Foot Controller up to the minimum position.

OPERATION

- 1 First, press **BLOCK** repeatedly until the Foot Controller block is selected. (One of the LEDs in the Foot Controller block will flash.)
- 2 To set the Volume Position for the Foot Controller, press **TYPE** repeatedly until the desired position is selected. (The selected VOLUME POSITION LED will flash.)

Three positions are available: ① **DST** — just before the Distortion block, ② **CHO** — following the output of the Chorus block, and ③ **DLY** — following the output of the Delay block or at the end of the effect chain.

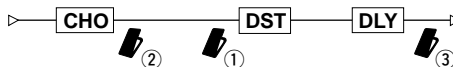


If ① **DST** is selected, the Distortion sound can be controlled with the Foot Controller.

If ② **CHO** is selected, the Foot Controller can be used to control the Distortion and Chorus sound, even to the point of taking out Distortion and Chorus at the minimum position but leaving the Delay sound.

If ③ **DLY** is selected, the entire sound level is controlled with the Foot Controller.

■ When Wah is selected in the Chorus block and the OD/DST is active, the order of the effects changes as shown here:



- 3 To set the Minimum Volume, lift up on the Foot Controller so that it is at the minimum position and play the connected instrument, adjusting the right parameter dial (corresponding to MIN VOL) until you reach the desired Minimum Volume.
- 4 Write (save) the new settings to memory, if desired. (See SAVING AN EFFECT PROGRAM on page 37 for details.)

Parameter Control

The Foot Controller can be used to continuously change an effect parameter in realtime, as you play. One of nine different parameters can be selected: Wah Filter Sweep, Distortion Drive, Compressor Sense, Chorus Depth, Pitch Shift Mix Balance, Wah Range, Equalizer High Gain, Amp Simulator Mix Balance, or Delay Mix.

OPERATION

- 1** To select the parameter for Foot Controller control, press **[BLOCK]** repeatedly until the Foot Controller block is selected. (One of the LEDs in the Foot Controller block will flash.)
- 2** Press **[TYPE]** repeatedly until the appropriate effect category (WAH, DST, CHO, or DLY) is selected. (The LED of the selected category will flash.)

The chart below shows the effect blocks and parameters that correspond to the four effect categories.

| | | |
|------------|--|---|
| WAH | | Wah Filter Sweep |
| DST | Overdrive/Distortion Compressor | Drive Sense |
| CHO | Chorus Pitch Shift Wah Equalizer Amp Simulator | Depth Mix Balance Range High Gain Mix Balance |
| DLY | Delay | Mix |

(Refer to the section EFFECTS AND PARAMETERS on page 27 for more information about these parameters.)

NOTE ■ The “parameter” Wah Filter Sweep is not actually included among the three parameters of the Wah effect. In fact, it is not a parameter at all; it is a special control for moving the Frequency of the Wah effect across the set Range. (See page 29 for more information on the Wah effect.) ■

- 3** Play the connected instrument and try using the Foot Controller to control the selected parameter. (When the Foot Controller is enabled for parameter control, the corresponding parameter knob is disabled.) The Foot Controller changes the value of the selected parameter over its entire range.

NOTE ■ Depending on the parameter and program you’ve selected, very fast movement of the Foot Controller may result in some undesirable noise. ■

NOTE ■ If you’ve assigned the Foot Controller to control a parameter and move it while turning off that parameter’s effect block, the Foot Controller will function as a volume pedal (in the position following Delay and the Minimum Volume setting will be active). Thus, if you move the Foot Controller, not being aware that the block is off, the sound may be different from what you expect. ■

- 4** Write (save) the new settings to memory, if desired. (See SAVING AN EFFECT PROGRAM on page 37 for details.)

Effect Block On/Off Control

The Foot Controller can also be used to instantly turn a selected effect block (or blocks) on and off. The green ON OFF GROUP LEDs above the Effect Block buttons indicate which block or blocks have been enabled for this function.

To turn the selected effects on or off, push the Foot Controller down to its maximum setting, then firmly press it once.

To select the effect blocks for on/off switching with the Foot Controller, press and hold down the appropriate Effect Block button(s) for about one second, until the green ON OFF GROUP LED above the button lights. Any or all effect blocks can be selected.

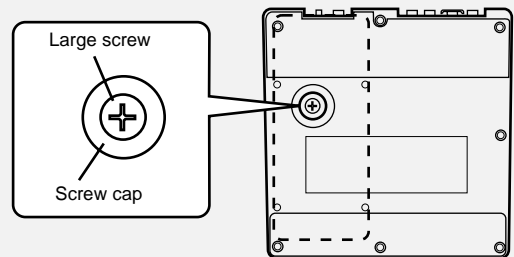
■ DISABLING THE EFFECT ON/OFF SWITCHING OF THE FOOT CONTROLLER

The GW10 features a “hidden” switch for disabling effect block on/off control with the Foot Controller. Doing this also gives you increased range in the Foot Controller operation. Normally, the Foot Controller range stops not at the absolute maximum, but at the point where spring pressure starts. By disabling on/off control, the Foot Controller range can be extended to cover up to the absolute maximum.

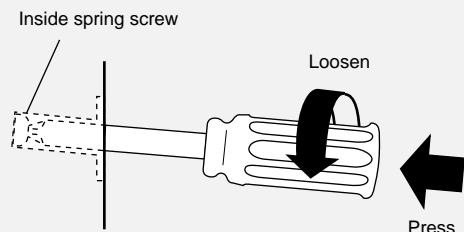
NOTE ■ *Disabling the effect on/off control here also disables Tuner on/off control with the Foot Controller. However, an alternate method for turning on the Tuner function is available; see the Hint on page 41. ■*

To disable both the mechanical spring and the effect block on/off control:

- 1** Turn the power off.
- 2** Turn the GW10 upside down, and use a Phillips screwdriver to take out the large screw on the back plate.
- 3** With the screw out or sufficiently loosened, use a slotted screwdriver to pry out the plastic screw cap.



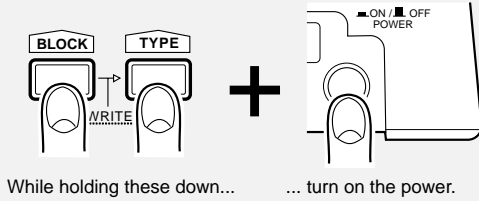
- 4** Using a Phillips screwdriver with a shaft long and thin enough to fit into the opening, carefully loosen the spring screw inside the GW10, turning it in a counterclockwise direction.



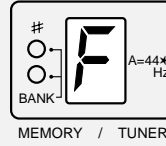
Be careful to press down hard enough on the screw, making sure that the driver is securely in the slots of the head as you loosen it, in order to avoid stripping the head.

5 Replace the screw cap and large screw.

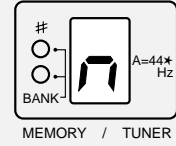
6 Finally, set the GW10 to Full Range mode to disable effect block on/off switching. To do this, turn on the power while simultaneously holding down both the **BLOCK**(NO) and **TYPE**(YES) buttons.



The MEMORY/TUNER indicator displays the current setting.



Full Range mode
(effect block switch is disabled).



Normal mode
(effect block switch is enabled).

Repeat step #6 above to switch back to Normal mode. To re-enable the mechanical spring, take the screw cap off again and turn the inside spring screw clockwise until it is tight. This returns the spring pressure on the Foot Controller to normal.

SAVING AN EFFECT PROGRAM (WRITE OPERATION)

Once you've edited an effect program to your satisfaction, you should save the settings to a program number, so that you can recall your new effect program in the future.

OPERATION

- 1** After making the desired parameter settings, simultaneously hold down the **BLOCK**(NO) button and press **TYPE**(YES). (The MEMORY/TUNER indicator, BANK LEDs and WRITE LED all flash.)
- 2** If desired, select the bank number and effect program number to which you wish to save the new settings by using the **MEMORY/BANK** Pedal Switch. (See pages 10–11.) If you want to use the same preset number, skip this step.

NOTE ■ The **TYPE**(YES) button CANNOT be used here to change the effect program number; its only use is in step #3 below. ■

- 3** To actually save the new settings, press **TYPE**(YES). To cancel the operation, press **BLOCK**(NO).

Pressing **BLOCK**(NO) returns to the program that you've been editing. The settings are stored temporarily, and you can continue editing the program.

HINT ■ Even if you have properly saved your new settings to a program, you should also write down those settings on a piece of paper or on a copy of the Blank Effect Parameter Chart (on page 48) to avoid the possibility of losing them later, should you decide to edit over the same program. ■

COPY AND SWAP OPERATIONS

The GW10 has two convenient operations that allow you to manage the effect programs: Copy and Swap. These operations let you organize the effect programs of the GW10 and put them in any order you wish, so that you can call up the right effect programs easily in succession onstage or in the studio.

Copying One Effect Program to Another Program Number

The Copy operation copies the settings of one program number to another program number. The program at the destination is erased and replaced with the copy.

Before copying:



After copying:



The program that was copied is now at two different numbers; the other program is lost from memory.

OPERATION

- 1 Simultaneously hold down the **BLOCK**(NO) button and press **TYPE**(YES). (The MEMORY/TUNER indicator, BANK LEDs and WRITE LED all flash.)
- 2 Press the **COPY** button. (The COPY LED will now flash.)

- 3 Select the destination bank number and program number with the **MEMORY/BANK** Pedal Switch. (See pages 10–11.)

NOTE ■ The **TYPE**(YES) button CANNOT be used here to change the effect program number; its only use is in step #4 below. ■

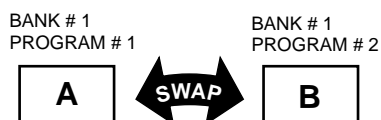
- 4 To actually copy the program to the destination, press **TYPE**(YES). To cancel the operation, press **BLOCK**(NO).

Pressing **BLOCK**(NO) returns to the previously selected program. If you were previously editing a program, the edited settings have been stored temporarily. Pressing **TYPE**(YES) executes the copy operation and erases the settings stored in the edit buffer. If you wish to retain these settings, use the Write operation (page 37) to save the settings to an effect program number, before executing the Copy operation.

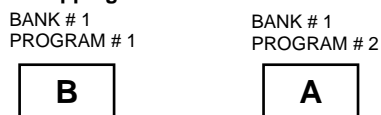
Swapping One Effect Program with Another

The Swap operation simply exchanges two selected programs, swapping the data of one program number for that of the other.

Before swapping:



After swapping:



OPERATION

- 1 Select a bank number and program number with the **MEMORY/BANK** Pedal Switch. (See pages 10–11.)
- 2 Simultaneously hold down the **BLOCK**(NO) button and press **TYPE**(YES). (The MEMORY/TUNER indicator, BANK LEDs and WRITE LED all flash.)
- 3 Press the **SWAP** button. (The SWAP LED will now flash.)
- 4 Select the other program number (and bank number, if desired) with the **MEMORY/BANK** Pedal Switch.
- 5 To actually swap the two programs, press **TYPE**(YES). To cancel the operation, press **BLOCK**(NO).

NOTE ■ The **TYPE**(YES) button CANNOT be used here to change the effect program number; its only use is in step #5 below. ■

Pressing **BLOCK**(NO) returns to the previously selected program. If you were previously editing a program, the edited settings have been stored temporarily. Pressing **TYPE**(YES) executes the swap operation and erases the settings stored in the edit buffer. If you wish to retain these settings, use the Write operation (page 37) to save the settings to an effect program number, before executing the Swap operation.

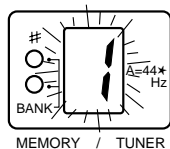
RESTORING FACTORY PRESET EFFECT PROGRAMS

If you've erased one or more of the factory preset effect programs by replacing it with one of your own creation, you can use this function to restore the original preset or presets.

NOTE ■ Remember that restoring a factory preset program will irretrievably erase whatever effect that you created and stored to the corresponding effect program number. For this reason, you should always make a written record of the settings you make (using a copy of the *BLANK EFFECT PARAMETER CHART* on page 48), so that you can reprogram the effect later if necessary. ■

OPERATION

- 1 Simultaneously hold down the **MEMORY/BANK** Pedal Switch and turn the power on. (The currently selected effect program number flashes.)



- 2 Select the bank and program number of the effect you wish to restore. Do this normally, holding down the **MEMORY/BANK** Pedal Switch to change the bank, and/or pressing it repeatedly to change the program.
- 3 Press the **TYPE**(YES) button to restore the factory preset program, or press **BLOCK**(NO) to cancel and return to normal operation.
- 4 Repeat steps #2 and #3 above to restore other programs, if desired.

The Tuner function allows you to quickly and accurately tune your guitar without having to disconnect it from the GW10. It also temporarily cuts off the sound, so that you can tune it silently and inconspicuously during a performance.

Tuning the Pitch of the Connected Instrument

OPERATION

- 1 With your toes, press down firmly on the Foot Controller — as far as the pedal can go — and hold it there a couple of seconds until all the LEDs of the GW10 go out, and only the MEMORY/TUNER indicator is lit (indicating the current standard pitch).

Release the Foot Controller and all display indications will go out. This indicates that the Tuner function is now active.

HINT ■ If you have disabled the switching function of the Foot Controller, you can use the **BLOCK** button instead to activate the Tuner function. Simply hold down the **BLOCK** button until all the LEDs of the GW10 go out. ■

- 2 Play a single note on your instrument (an open string, in the case of a guitar).

The note name appears in the MEMORY/TUNER indicator. Accidentals (sharps) are indicated by the Sharp (♯) LED. How close the note is to being in tune is indicated by the ON OFF GROUP / TUNER LEDs, as shown below.

No input signal, or input signal is too low to be read.



Pitch is flat.



Pitch is sharp



Note is in tune.

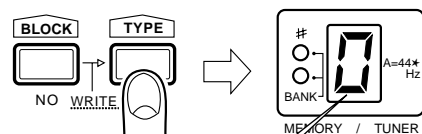


- 3 Let the note ring out consistently, and tune the instrument so that all three indicators are lit continuously.
- 4 Continue with other notes (the other strings on your guitar) until the instrument is in tune.
- 5 Return to normal operation by pressing the **BLOCK** button or the **MEMORY/BANK** Pedal Switch, or by pressing down fully with your toes on the Foot Controller.

Changing the Standard Pitch of the Tuner Function

The Tuner is set to tune to a standard pitch of A = 440 Hz. However, this can be raised to as high as 445 Hz. The pitch setting made here is memorized by the GW10 even when the power is turned off.

To change the standard pitch, press the **TYPE**(YES) button.



| | | |
|------------|------------|------------|
| 0 : 440 Hz | 1 : 441 Hz | 2 : 442 Hz |
| 3 : 443 Hz | 4 : 444 Hz | 5 : 445 Hz |

The pitch value is indicated briefly in the MEMORY TUNER indicator; "0" corresponds to 440, "1" to 441, "2" to 442, and so on up to 445. The current standard pitch value is also shown briefly when pressing the Foot Controller down to activate the Tuner.

Appendices

TROUBLESHOOTING

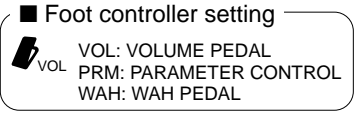
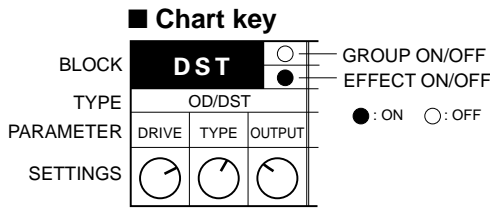
Even though the GW10 is exceptionally easy to use, it may occasionally not function as you expect it to. Note that the problems covered here are not malfunctions of the GW10.

| PROBLEM | POSSIBLE CAUSE AND SOLUTION |
|---|--|
| The instrument (guitar) sound cannot be heard. | <ul style="list-style-type: none">• Check that all connections have been properly made and that all levels have been appropriately set (including the INPUT LEVEL control on the rear panel and the Foot Controller).• Check that the Output parameter of the Distortion block is set to an appropriate level.• Make sure that the Tuner is not active. (See Tuner operation step #5, page 41.) |
| The effect sound cannot be heard or is nearly inaudible. | <ul style="list-style-type: none">• Check all of the above points (for when the instrument sound cannot be heard).• Check that the desired effect blocks are turned on (LEDs are lit).• Check that the Mix, Depth and Range parameters of the Chorus and Delay blocks are set to appropriate levels. |
| The sound is too loud or the effect sound is abnormal or unexpected. | <ul style="list-style-type: none">• The guitar level is too loud (the INPUT PEAK LED is lit continuously). Set the input level of the GW10 and the output level of the guitar appropriately. (See pages 13, 14).• In general, remember that the parameters within an effect interact with and depend on each other. If you are using more than one effect, try each effect block separately, checking and adjusting all parameters in the effect until you get the sound you want.• If there is too much distortion or noise, check:<ul style="list-style-type: none">• That the Drive and Output parameters of the Distortion block are set to appropriate levels.• That the Equalizer gain controls (Low, Mid and High) have not been set too high.• That the Mix parameters of the Chorus and Delay blocks are set to appropriate levels.• That the Noise Gate settings are appropriate.• Also check your connected amplifier. If you are getting too much distortion, check that the GW10 is connected to the clean channel and not to the distortion channel. |

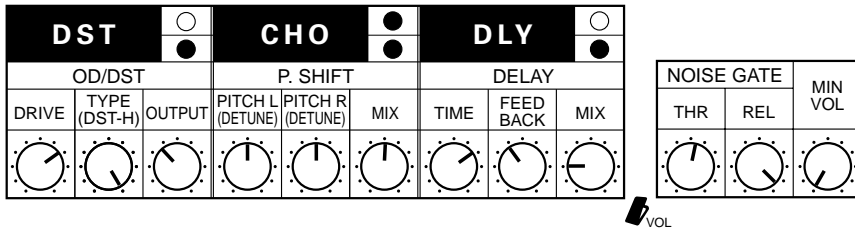
| PROBLEM | POSSIBLE CAUSE AND SOLUTION |
|---|---|
| <p>The effect sound doesn't change, even when the parameter dials are adjusted.</p> | <ul style="list-style-type: none"> • Make sure that the effect in question is enabled. • This may happen when the Foot Controller is used for parameter control; the controlled parameter's parameter knob is disabled. |
| <p>The Foot Controller doesn't have any effect on the sound.</p> | <ul style="list-style-type: none"> • If you are using the Foot Controller to control volume, make sure that the Minimum Volume has not been set to the maximum. If it has been, moving the Foot Controller will not change the volume of the sound. (See page 33.) • If you are using the Foot Controller to change an effect's parameter (such as Wah or Chorus Depth), make sure that the effect block of the parameter to be controlled has been turned on; otherwise the Foot Controller functions only as a volume pedal. (See third note on page 34.) |
| <p>The Write, Copy or Swap operations cannot be selected.</p> | <ul style="list-style-type: none"> • Make sure that you first hold down the BLOCK(NO) button, then press the TYPE(YES) button. |

PRESET EFFECT PROGRAM / PARAMETER LIST

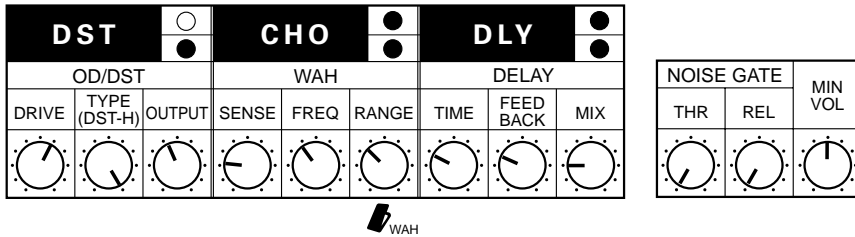
This list shows the preset effect programs of the GW10 and their settings, along with a short description of each program. The Chart Key below indicates how the chart is to be read.



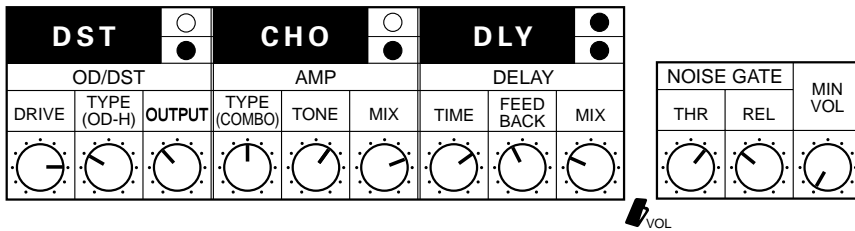
No. 1 - 1 : Versatile, all-purpose Distortion with good response to picking techniques. Can be used for backing parts as well as solos.



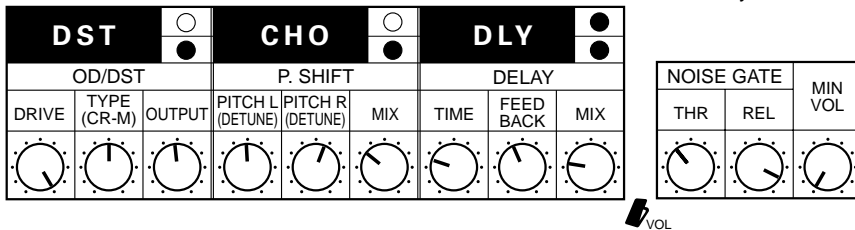
No. 1 - 2 : Combination of Distortion and Pedal Wah.



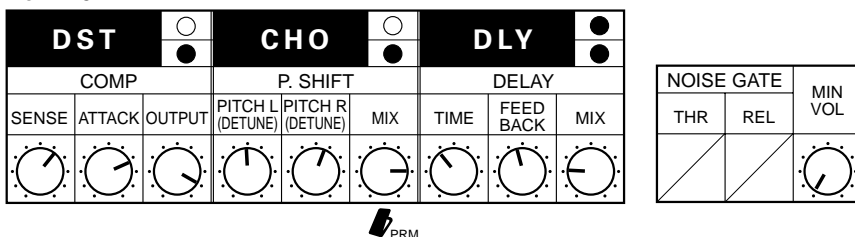
No. 1 - 3 : Crisp American rock sound, good for backing parts if Delay is bypassed.



No. 1 - 4 : Versatile Crunch distortion sound for use in various music styles.



No. 1 - 5 : A tight Chorus sound, without excessive pitch detuning. Ideal for enhancing arpeggios.



No. 2 - 1 : British rock sound, with a powerful lower end.

| | | | | | | | | | | | |
|------------|--------------|--------|-----------------------|------------|-----|------|-----------------------|------------|-----------|-----|----------------------------------|
| DST | | | <input type="radio"/> | CHO | | | <input type="radio"/> | DLY | | | <input checked="" type="radio"/> |
| OD/DST | | | | EQ | | | | DELAY | | | |
| DRIVE | TYPE (DST-H) | OUTPUT | | LOW | MID | HIGH | | TIME | FEED BACK | MIX | |
| | | | | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

VOL

: Progressive rock sound updated for the 90's. For best results, set the Foot Controller to roughly the midway position.

| | | | | | | | | | | | |
|------------|--------------|--------|----------------------------------|-------------------|------------------|-----|-----------------------|------------|-----------|-----|-----------------------|
| DST | | | <input checked="" type="radio"/> | CHO | | | <input type="radio"/> | DLY | | | <input type="radio"/> |
| OD/DST | | | | P. SHIFT | | | | DELAY | | | |
| DRIVE | TYPE (DST-H) | OUTPUT | | PITCH L (PITCH-5) | PITCH R (DETUNE) | MIX | | TIME | FEED BACK | MIX | |
| | | | | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

PRM

No. 2 - 3 : Overdrive ideal for R&B music.

| | | | | | | | | | | | |
|------------|-------------|--------|-----------------------|--------------|------|-----|-----------------------|------------|-----------|-----|----------------------------------|
| DST | | | <input type="radio"/> | CHO | | | <input type="radio"/> | DLY | | | <input checked="" type="radio"/> |
| OD/DST | | | | AMP | | | | DELAY | | | |
| DRIVE | TYPE (OD-H) | OUTPUT | | TYPE (STACK) | TONE | MIX | | TIME | FEED BACK | MIX | |
| | | | | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

VOL

No. 2 - 4 : Ideal for rhythmic chops and backing parts using a single pickup.

| | | | | | | | | | | | |
|------------|--------|--------|-----------------------|--------------|------|-----|----------------------------------|------------|-----------|-----|----------------------------------|
| DST | | | <input type="radio"/> | CHO | | | <input checked="" type="radio"/> | DLY | | | <input checked="" type="radio"/> |
| COMP | | | | AMP | | | | DELAY | | | |
| SENSE | ATTACK | OUTPUT | | TYPE (COMBO) | TONE | MIX | | TIME | FEED BACK | MIX | |
| | | | | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

VOL

No. 2 - 5 : All-purpose flanging sound, good for both arpeggios and solos.

| | | | | | | | | | | | |
|------------|--------|--------|-----------------------|------------|-----------|-------|----------------------------------|------------|-----------|-----|----------------------------------|
| DST | | | <input type="radio"/> | CHO | | | <input checked="" type="radio"/> | DLY | | | <input checked="" type="radio"/> |
| COMP | | | | CHORUS | | | | DELAY | | | |
| SENSE | ATTACK | OUTPUT | | SPEED | FEED BACK | DEPTH | | TIME | FEED BACK | MIX | |
| | | | | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

VOL

No. 3 - 1 : Hard-edged Distortion, ideal for screaming solos.

| | | | | | | | | |
|------------|--------------|--------|--------------|------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | AMP | | | DELAY | | |
| DRIVE | TYPE (DST-H) | OUTPUT | TYPE (COMBO) | TONE | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

: This program has a fat Distortion sound, and lets you change the character of the Chorus

No. 3 - 2 with the Foot Controller.

| | | | | | | | | |
|------------|--------------|--------|------------|-----------|-------|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | CHORUS | | | DELAY | | |
| DRIVE | TYPE (DST-M) | OUTPUT | SPEED | FEED BACK | DEPTH | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

No. 3 - 3 : Rich sound ideal for rock 'n' roll, but can be used in various styles.

| | | | | | | | | |
|------------|-------------|--------|-------------|------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | AMP | | | DELAY | | |
| DRIVE | TYPE (OD-L) | OUTPUT | TYPE (TUBE) | TONE | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

No. 3 - 4 : Versatile clean sound, good especially for jazz guitar.

| | | | | | | | | |
|------------|--------|--------|--------------|------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| COMP | | | AMP | | | DELAY | | |
| SENSE | ATTACK | OUTPUT | TYPE (COMBO) | TONE | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

No. 3 - 5 : A luscious, all-purpose Chorus effect with a spacious sound.

| | | | | | | | | |
|------------|--------|--------|------------|-----------|-------|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| COMP | | | CHORUS | | | DELAY | | |
| SENSE | ATTACK | OUTPUT | SPEED | FEED BACK | DEPTH | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |

No. 4 - 1 : This program adds a second pitch one octave below, creating a thick, fat sound.

| | | | | | | | | |
|------------|--------------|--------|-----------------|------------------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | P. SHIFT | | | DELAY | | |
| DRIVE | TYPE (DST-H) | OUTPUT | PITCH L (-OCT.) | PITCH R (DETUNE) | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |



No. 4 - 2 : Crunch distortion sound that responds well to various picking techniques.

| | | | | | | | | |
|------------|-------------|--------|--------------|------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | AMP | | | DELAY | | |
| DRIVE | TYPE (CR-L) | OUTPUT | TYPE (STACK) | TONE | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |



No. 4 - 3 : An Overdrive effect good for everything from blues to fusion.

| | | | | | | | | |
|------------|-------------|--------|------------|-----|------|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | EQ | | | DELAY | | |
| DRIVE | TYPE (OD-M) | OUTPUT | LOW | MID | HIGH | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |



No. 4 - 4 : Moving the Foot Controller here results in an unusual, special effect sound.

| | | | | | | | | |
|------------|-------------|--------|------------------|------------------|-----|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| OD/DST | | | P. SHIFT | | | DELAY | | |
| DRIVE | TYPE (CR-H) | OUTPUT | PITCH L (DETUNE) | PITCH R (DETUNE) | MIX | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |



: This Wah effect lets you change the character by the strength of your picking. Good for rhythmic chops using a single pickup.

| | | | | | | | | |
|------------|--------|--------|------------|------|-------|------------|-----------|-----|
| DST | | | CHO | | | DLY | | |
| COMP | | | WAH | | | DELAY | | |
| SENSE | ATTACK | OUTPUT | SENSE | FREQ | RANGE | TIME | FEED BACK | MIX |
| | | | | | | | | |

| | | |
|------------|-----|---------|
| NOISE GATE | | MIN VOL |
| THR | REL | |
| | | |



Memory 20 effect programs (factory-set/user-programmable)

Effect Blocks/Types

● Distortion Block

Overdrive/Crunch/Distortion

Compressor

● Chorus Block

Chorus

Pitch Shift (Pitch range = ± 1 octave)

Wah

Equalizer

Amp Simulator (Stack/Combo/Tube)

● Delay Block

Delay

Effect Functions

Effect program selection (with **MEMORY/BANK** Pedal Switch or **TYPE** button)

Group or individual on/off (with Foot Controller, Effect Block buttons)

Minimum volume (with Foot Controller)

Parameter control (with Foot Controller)

Tuner Function

Built-in chromatic tuner, with adjustable standard pitch (440–445 Hz; in 1-Hz steps)

Display MEMORY/TUNER indicator, with 7-segment LED and BANK LEDs (top LED also functions as Sharp LED); INPUT PEAK LED; other LEDs x 21

Input Jack/Control

INPUT jack; INPUT LEVEL control

Output Jacks

L/MONO, R jacks

Other Controls, Fittings

POWER switch, DC IN jack, AC adaptor cable clip

Power Supply

YAMAHA PA-3 AC adaptor (or another YAMAHA-recommended adaptor)

Dimensions (W x D x H)

229mm x 213mm x 69mm (9" x 8-3/8" x 2-3/4")

Weight 2.0 kg (4 lbs., 7 oz.)

* Specifications subject to change without notice.

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

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Serial No. _____

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(Gerät, typ, Bezeichnung)

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