

# **GFX-4**

## **GUITAR EFFECTS PROCESSOR**

### **Operation Manual**

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# Safety Precautions/Usage Precautions

## Safety Precautions

In this manual, symbols are used to highlight warnings and cautions for you to read so that accidents can be prevented. The meanings of these symbols are as follows:



**Warning**

This symbol indicates explanations about extremely dangerous matters. If users ignore this symbol and handle the device the wrong way, serious injury or death could result.



**Caution**

This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the device the wrong way, bodily injury and damage to the equipment could result.

Please observe the following safety tips and precautions to ensure hazard-free use of the GFX-4.

### • Power requirements



**Warning**

- The GFX-4 is powered by the supplied AC adapter .
- To prevent malfunction and safety hazards, Do not use any other kind of AC adapter.
- When using the GFX-4 in an area with a different line voltage, please consult your local ZOOM distributor about acquiring a proper AC adapter.

### • Environment



**Caution**

Avoid using your GFX-4 in environments where it will be exposed to:

- Extreme temperature
- High humidity or moisture
- Excessive dust or sand
- Excessive vibration or shock

### • Handling



**Caution**

Since the GFX-4 is a precision electronic device, avoid applying excessive force to the switches and buttons. Also take care not to drop the unit, and do not subject it to shock or excessive pressure.

### • Alterations



**Caution**

Never open the case of the GFX-4 or attempt to modify the product in any way since this can result in damage to the unit.

### • Connecting cables and input and output jacks



**Caution**

You should always turn off the power to the GFX-4 and all other equipment before connecting or disconnecting any cables. Also make sure to disconnect all cables and the AC adapter before moving the GFX-4.

## Usage Precautions

### • Electrical interference

For safety considerations, the GFX-4 has been designed to provide maximum protection against the emission of electromagnetic radiation from inside the device, and protection from external interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves should not be placed near the GFX-4, as the possibility of interference cannot be ruled out entirely.

With any type of digital control device, the GFX-4 included, electromagnetic interference can cause malfunctioning and can corrupt or destroy data. Care should be taken to minimize the risk of damage.

### • Cleaning

Use a soft, dry cloth to clean the GFX-4. If necessary, slightly moisten the cloth. Do not use abrasive cleanser, wax, or solvents (such as paint thinner or cleaning alcohol), since these may dull the finish or damage the surface.

Please keep this manual in a convenient place for future reference.

# Introduction

Thank you for selecting the **ZOOM GFX-4** (simply called the "**GFX-4**" in this manual). The GFX-4 is a sophisticated Guitar Effects Processor with the following features.

## ● **Versatile array of effects**

The Variable Architecture Modeling System (VAMS) adapts the internal configuration of the unit to achieve exactly the desired sound. The GFX-4 includes vintage effects such as famous overdrive, distortion, compressor, and phaser sounds of the seventies and eighties, as well as ultra-modern processing functions. Up to eight effects can be freely combined for simultaneous use.

## ● **Great choice of distortion sounds**

In addition to traditional guitar amplifier characteristics, the GFX-4 uses modeling technology to duplicate the sound and operation feel of celebrated compact distortion effects. Well-proven combinations such as booster + distortion or compressor + overdrive can be established quickly and easily. By combining distortion effects with the built-in amp and cabinet simulator, you can get optimum sound also for line out recording.

## ● **Designed to get the best out of any guitar**

The ACTIVE NORMAL switch provides quick and precise impedance and level matching for any guitar. Whether you have a passive pickup or use an active pickup or integrated preamp, your instrument will sound its best.

The OUTPUT MONO jack uses analog bypass with a mechanical switch, so that the output in bypass mode is not subject to any kind of digital signal processing.

## ● **Simple and intuitive operation**

Thanks to three FX panels, the GFX-4 can be operated like a series of compact effects. Foot switches are convenient for turning effects on and off, and sound parameters can be adjusted quickly with rotary controls. The Easy Edit function is a snap to use also during a performance. With the GFX-4, playing your instrument and editing the sound is one seamless operation.

## ● **Extensive patch library**

A combination of effects can be assigned a name of up to six characters and stored as a patch in the memory of the unit. There are 60 user patches (4 groups x 5 banks x 3 patches) which can be freely rewritten, plus 60 preset patches that make the unit ready to use right out of the box. The possibilities are almost endless.

## ● **Great for use on stage**

The GFX-4 incorporates an expression pedal that can serve as real-time effect controller or volume pedal. The easy-to-read 6-character display and 2-character indicator make it easy to check patch names and settings at a glance, which is helpful during a live gig.

In order to get the most out of this sophisticated product, please read this manual carefully before use.

We recommend that you keep the manual at hand for future reference.

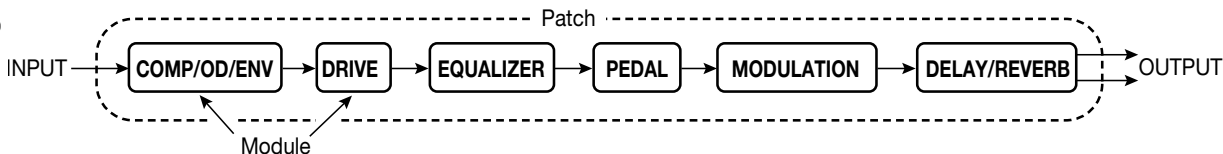
# Terms Used in This Manual

This section explains some important terms that are used throughout the GFX-4 documentation.

## ● Module

A "module" is a section that works like a stand-alone compact effect device for tailoring certain aspects of the sound. In the GFX-4, you can use the six modules

COMP/OD/ENV, DRIVE, EQUALIZER, PEDAL, MODULATION, and DELAY/REVERB as well as the ZNR (Zoom Noise Reduction) + AMP SIM (Amp Simulator) simultaneously.



## ● Effect types and parameters

Within each effect module, there are various effect types which are specific processing functions. The various settings of the currently selected effect type are called parameters. By selecting an effect type and varying the parameters, you can create a new effect.

The mode is used for switching patches and for editing the currently selected patch.

### • Manual mode

This mode lets you switch modules on and off, operating the unit in the same way as a compact effect with the knobs and foot switches on the FX panels.

## ● Patch/group/bank

Effect module combinations and effect parameter settings are stored in memory as "patches". The GFX-4 can hold a total of 120 patches. These are divided into 60 user patches which are read/write, and 60 read-only preset patches. Both the user patches and preset patches are divided into four groups (A, b, C, d). Each group has 5 banks numbered from 0 - 4, and each bank has 3 patches. To use a patch in the GFX-4, you first call up the bank and then use the three foot switches 1 - 3 to select the patch.

### • Store mode

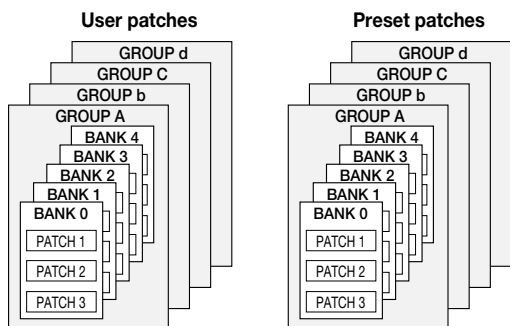
This mode serves for storing patches edited in program mode or manual mode in the memory of the unit. It also allows changing the store positions of user patches.

### • Bypass/mute mode

When the GFX-4 is in the bypass condition, effect processing is temporarily turned off and only the original sound is heard. In the mute mode, all sound is turned off and the built-in chromatic tuner can be used.

### • Special mode

This mode serves for making amp simulator and ZNR settings, patch name and patch level settings, and for returning the GFX-4 to the factory default condition.



## ● RTM (real-time modulation)

The RTM function allows use of the expression pedal to adjust DRIVE, MODULATION, or DELAY/REVERB module parameters or the volume in real time. For example, you might use the pedal during a performance to vary the reverb mix balance or adjust wah intensity with your foot.

The module, effect type, and parameter, as well as the parameter change direction can be set separately for each patch.

## ● Modes

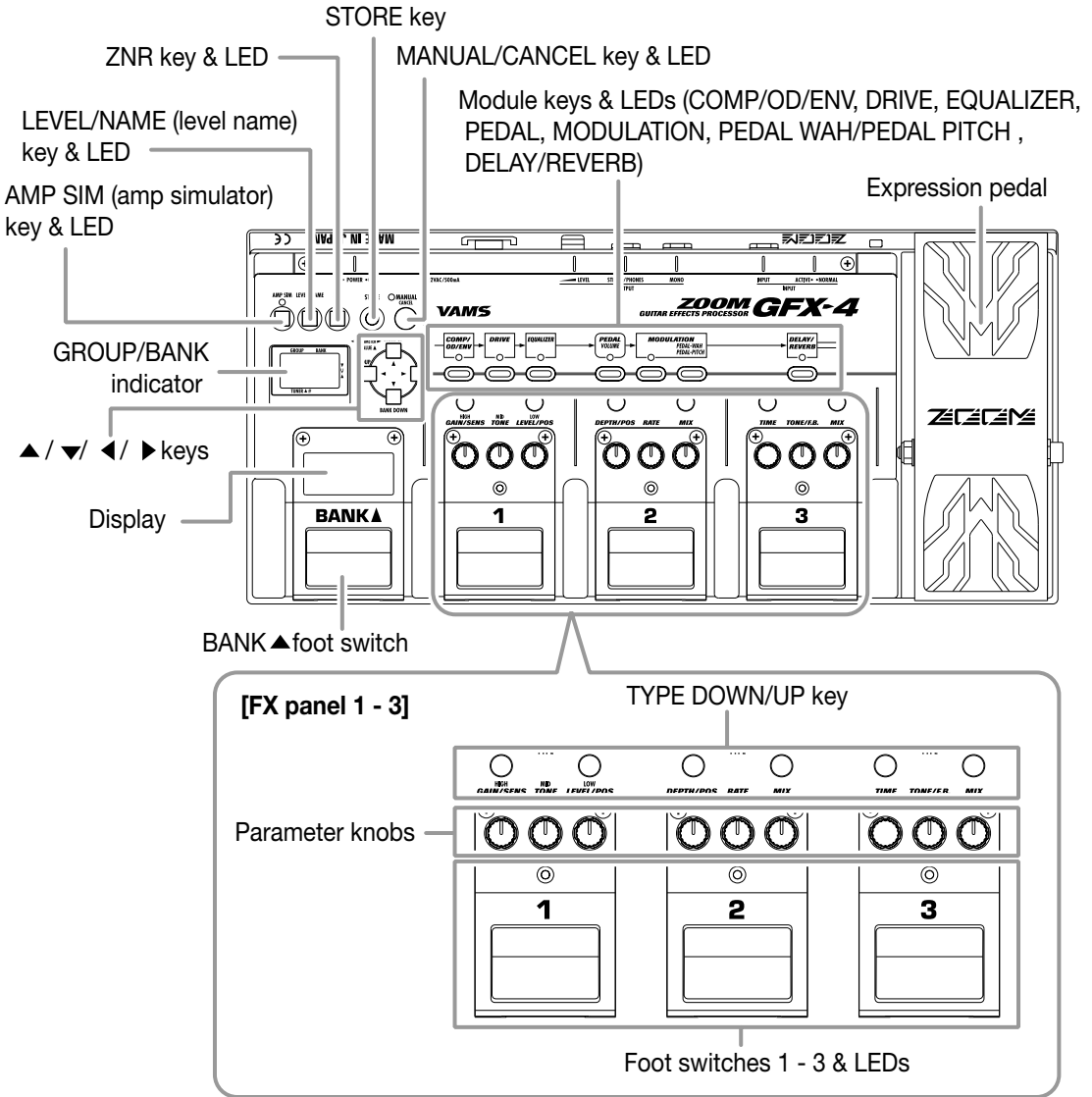
Operation of the GFX-4 is divided into five main modes, as listed below.

### • Program mode

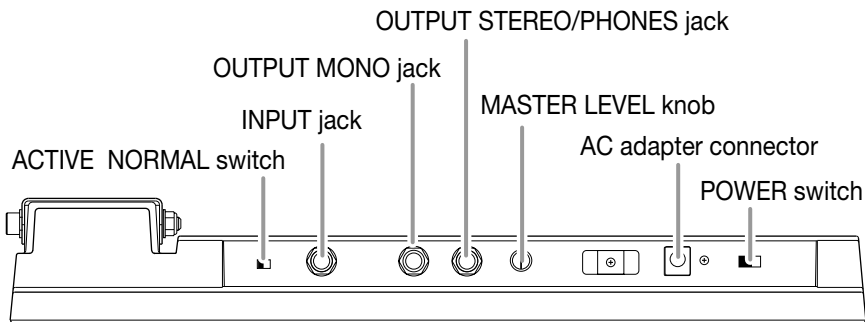
This is the basic operation mode of the GFX-4. The unit is always in this mode after power is turned on.

# Controls and Functions

## Top Panel

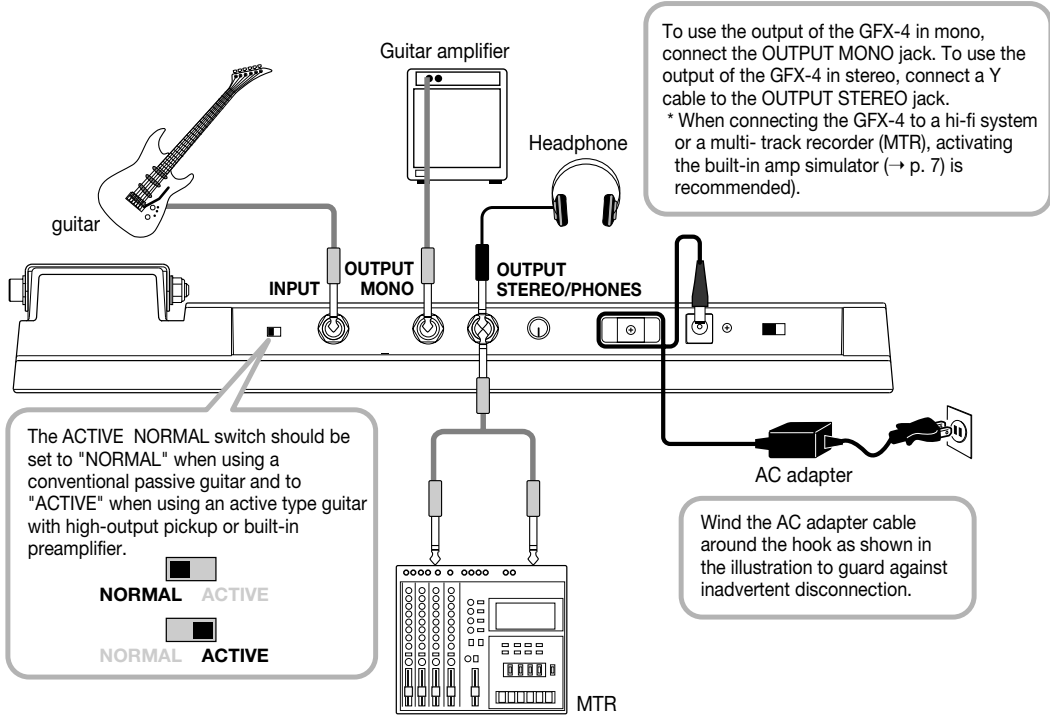


## Rear Panel



# Getting Connected

## Guitar amp/instrument connection

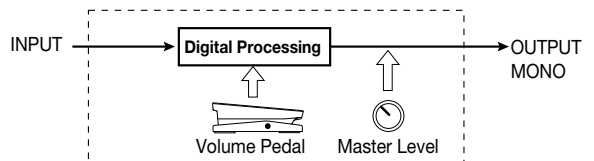


## About the Mono Output

The GFX-4 has two output jacks labeled OUTPUT STEREO and OUTPUT MONO. When the OUTPUT MONO jack is used, a mechanical relay switch operates in bypass mode, which results in true bypass (analog bypass where the signal is not subject to any kind of digital processing).

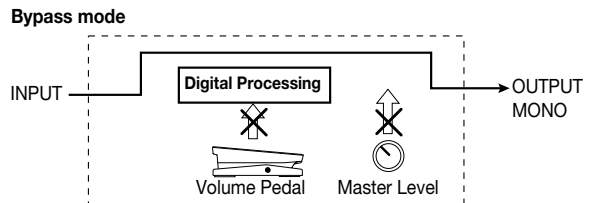
### ■ When using effects

The OUTPUT MONO jack supplies only the left-channel signal. This is suitable for example for connection to a guitar amp or another effect device.



### ■ When using Bypass

When the GFX-4 is in bypass mode, the analog input signal appears unchanged at this jack, due to the action of a switching relay. (This means that there is absolutely no sound quality change caused by digital processing.) Note that the expression/volume pedal and the MASTER LEVEL knob have no effect on the signal in this condition.



When wishing to use the volume pedal and master level control also in bypass mode, use the OUTPUT STEREO jack.

# Preparations

## Power Up

1. Verify that the AC adapter, instrument, and amplifier are correctly connected to the GFX-4.
2. Turn the system on in the order GFX-4 → amplifier.
3. While playing your instrument, adjust the volume control on the amplifier, the level control of the instrument, and the MASTER LEVEL knob of the GFX-4 to a suitable position.

## Using the Amp Simulator

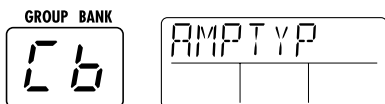
When the GFX-4 is connected to a hi-fi system or multi-track recorder (MTR), set up the amp simulator to match your preferences.

1. Immediately after turning on the GFX-4, press the AMP SIM key.



The AMP SIM key LED lights up, showing that amp simulator setup is possible.

2. Use the ◀ / ▶ keys to call up the indication "AMPTYP" on the display, and use the ▲ / ▼ keys to select the amp simulator type.



The following AMPTYP settings are available.

oF: Amp simulator is turned off. (CABTYP and CABDPT parameters are also inactive.)

Cb: Conventional combo amp simulation

bC: Bright combo amp simulation

St: Stack amp simulation

The current setting can be checked on the GROUP/BANK indicator.

3. Use the ◀ / ▶ keys to call up the indication "CABI" on the display, and use the ▲ / ▼ keys to select the cabinet simulator type.



The following CABTYP settings are available.

oF: Cabinet simulator is turned off. (CABDPT parameter is also inactive.)

C1: Combo amp cabinet (12" speaker x 1)

C2: Combo amp cabinet (12" speaker x 2)

St: Stack amp cabinet (10" speaker x 4)

WL: Simulates the sound of a stacked array of St type cabinets.

4. Use the ◀ / ▶ keys to call up the indication "CABDPT" on the display, and use the ▲ / ▼ keys to adjust the intensity of the cabinet simulator effect.

The setting range is 0 - 10. Higher values result in stronger cabinet sound.



5. When the setting is complete, press the STORE key two times.

The amp simulator setting is stored. This setting applies to all patches.

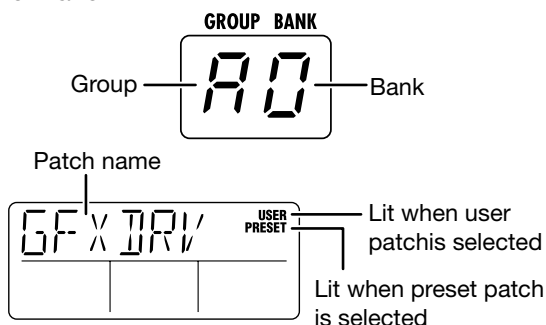
# Operation Guide 1 Selecting Patches for Playing

In the factory default condition, the memory of the GFX-4 contains 60 rewritable user patches and 60 read-only preset patches. This section shows you how to select patches while playing your instrument. Try it out for yourself, to see what the GFX-4 can do.

## 1 Turn on the power

Turn power on in the order GFX-4 → amp/playback system.

The GFX-4 automatically goes into program mode. In this mode, the display and the GROUP/BANK indicator show the following information.

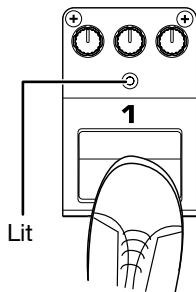


## 2 Select the patch

To switch patches within the same bank, simply press one of the foot switches 1 - 3 whose LED is not currently lit.

In program mode, foot switches 1 - 3 serve for patch switching.

The LED of the foot switch corresponding to the current patch is lit.

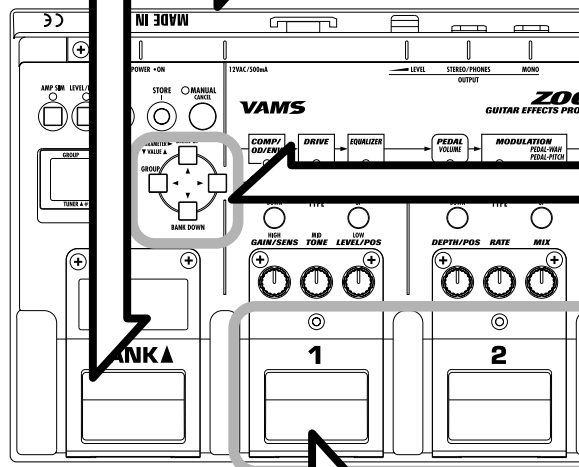


**NOTE**

When the GFX-4 is in manual mode (MANUAL key LED lit), foot switches 1 - 3 turn the various modules on and off.

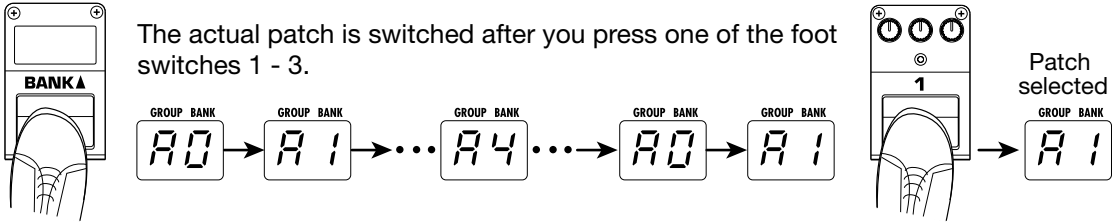
## 3 Select the bank

To choose a patch from a different bank, use the **BANK ▲** foot switch to select the bank and then use foot switches 1 - 3 to select the patch.





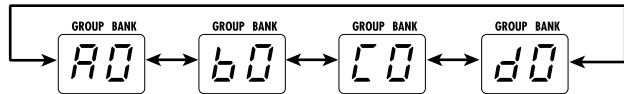
For example, when group A is currently selected, the BANK ▲ foot switch will move through the banks as follows: A0 → A1 → A2 → A3 → A4 → A0 etc.



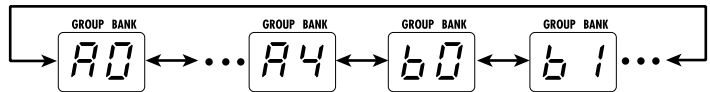
## 4 Select the group

To switch to a different group, use the ◀/▶ keys or the ▲/▼ keys.

Each push of the ◀/▶ keys switches groups in the order user patches A ↔ b ↔ C ↔ d followed by preset patches A ↔ b ↔ C ↔ d.



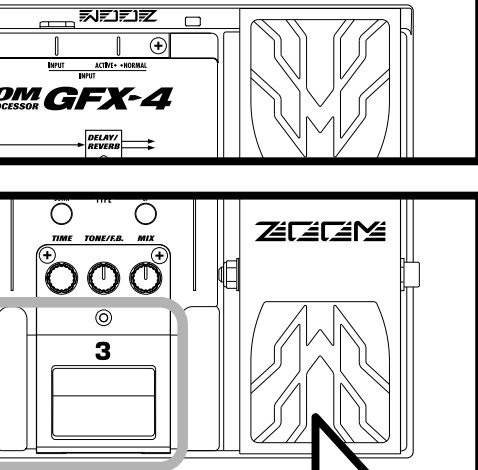
Each push of the ▲/▼ keys switches banks and groups in the order A0 ↔ A1 ↔ A2 ↔ A3 ↔ A4 ↔ b0 ↔ b1 etc. (Switching between user patches and preset patches is not carried out.)



**NOTE** In either case, the actual patch is switched only after you press one of the foot switches 1 - 3.

## 5 Use the pedal

The built-in expression pedal of the GFX-4 lets you adjust the volume or effect parameters in real time. Move the pedal while playing your instrument to try out some of the possibilities.



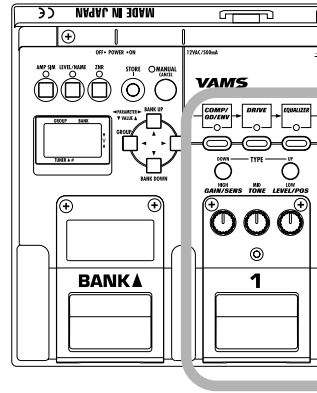
# Operation Guide 2 Editing Patches

The GFX-4 allows you to edit patches both in program mode and manual mode.

In program mode, the display will revert to its original condition about 5 seconds after the last editing operation was performed. In manual mode, the display remains unchanged after the last editing operation.

In manual mode, the foot switches 1 - 3 can be used to switch effects on and off.

To activate manual mode, press the MANUAL key in program mode.

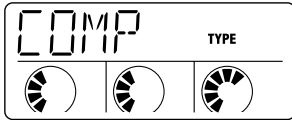


## 1 Select module to edit

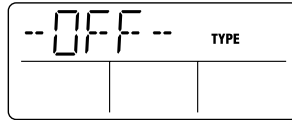
Use the module keys to select the module that you want to edit.

The LED of the selected module flashes in red. The display shows the following information.

When module is on



When module is off



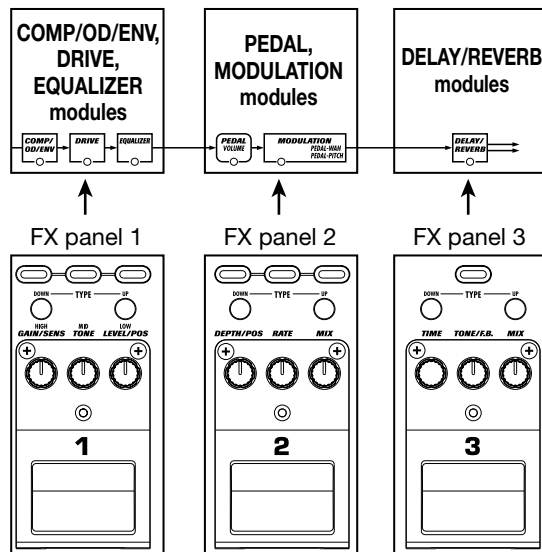
When a module is set to off, it cannot be edited. Turn the module on first.

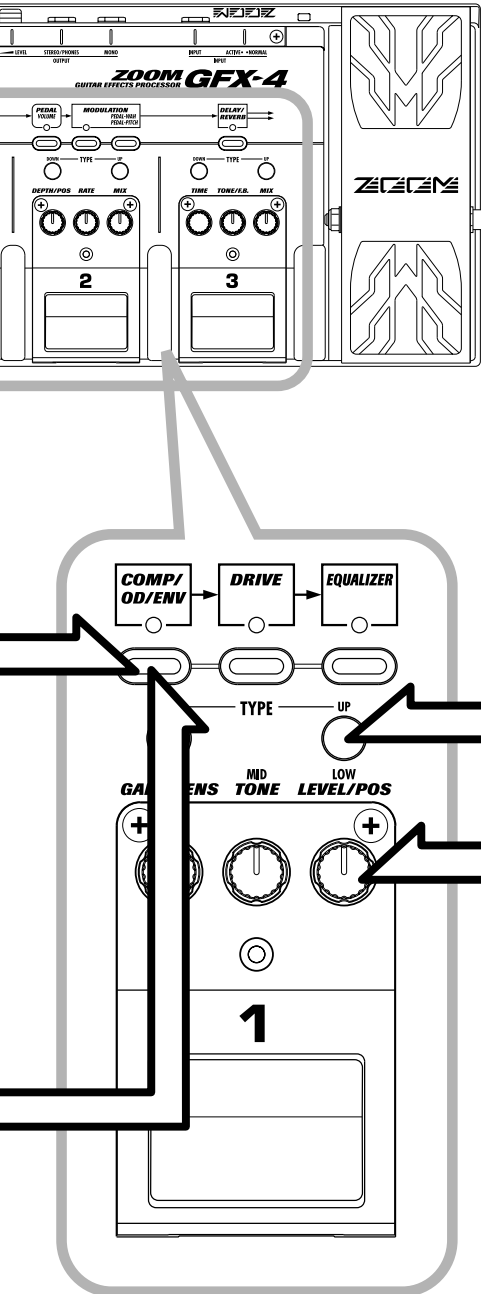
## 2 Switch effect modules on and off

To toggle the selected module between on and off, press the FX panel key corresponding to that module.

In manual mode, module on/off switching can also be performed with foot switches 1 - 3.

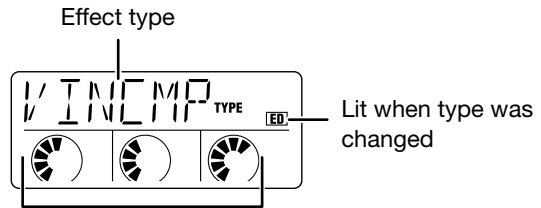
The modules are assigned to FX panels 1 - 3 as shown at right.





### 3 Select the effect type

To switch the effect type in the selected module, use the **TYPE DOWN/UP** keys in the FX panel of the module.



Approximate setting of parameters 1 - 3

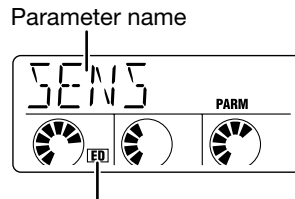


When the **EQUALIZER** module is selected, only one effect type is available. Therefore the **TYPE DOWN/UP** keys are inactive.

### 4 Edit the effect parameters

To edit the parameters of the selected module, use the three knobs on the FX panel corresponding to the module.

Which parameters are assigned to the knobs depends on the currently selected module and effect type.



Lit when parameter only was changed



Any changes that you make here are only temporary. When you select a different patch in program mode, the settings will revert to the original condition. If you have made changes you wish to keep, you must store the patch (→ p. 12).

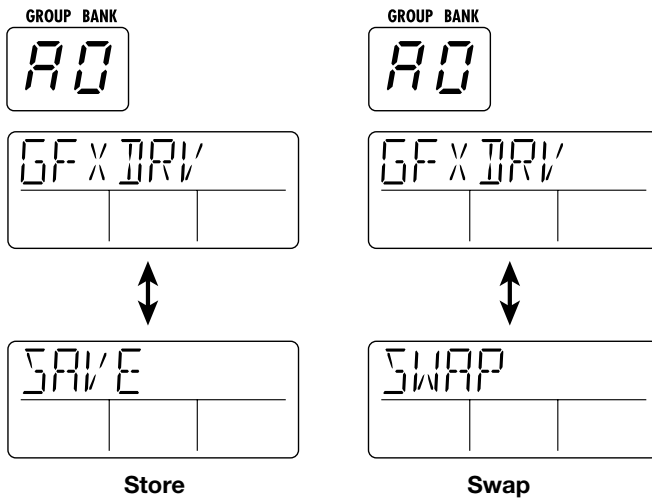
# Operation Guide 3 Storing/Swapping Patches

Unless you store an edited patch in the memory of the unit, the changes you have made will be lost when you select another patch. Don't forget to store the patch when you want to keep your changes.

## 1 Switch the GFX-4 to store mode

In program mode or manual mode, press the **STORE** key.

The name of the currently selected patch and the indication "SAVE" or "SWAP" are shown alternately on the display. The GROUP/BANK indicator shows the group/bank that will be used as a target for storing or swapping.

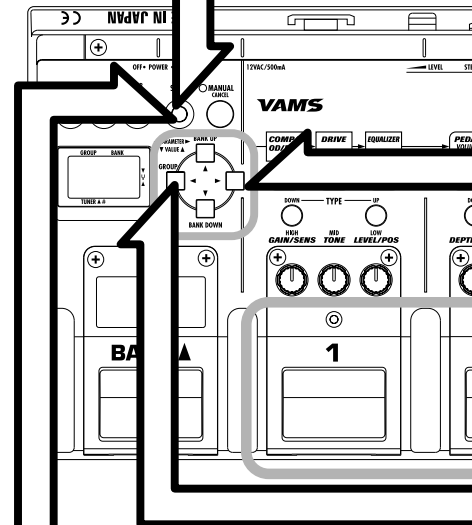


Preset patches are read-only and cannot be overwritten. If the store mode is activated while a preset patch is selected, the user patch with the same group/bank/patch number is automatically selected as store target.

When "SWAP" is selected, data are changed as follows.

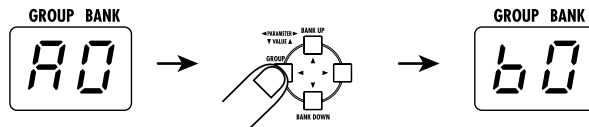
Store target patch data → original patch number

Currently selected patch data → Store target patch number

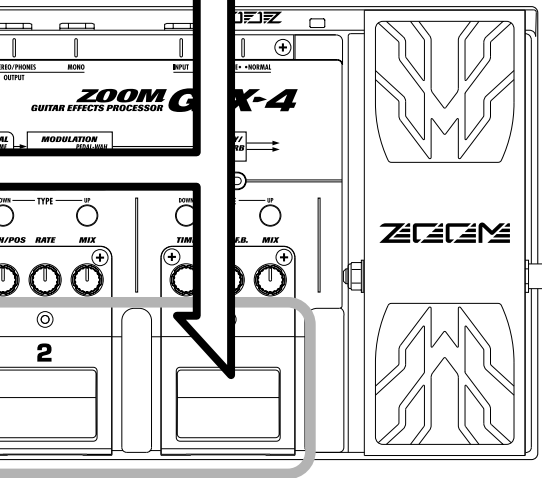


## 2 Select the store target patch

Use the ◀/▶/▲/▼ keys, and foot switches 1 - 3 to select the group, bank, and patch number that is to be used as a store target.



It is also possible to use the BANK ▲ foot switch to select the store target bank.



## 3 Select whether to store or swap the patch

Use the ◀ key.

Each push of the ◀ key toggles between the "SAVE" (store) and "SWAP" setting. Select the desired action.



If the original patch was a preset patch, the "SWAP" setting is not available.

## 4 Carry out the store/swap process

Press the STORE key once more.

The store/swap process is carried out and the unit reverts to the same condition as before the store mode was activated. When wishing to cancel the process, press the MANUAL/CANCEL key instead.

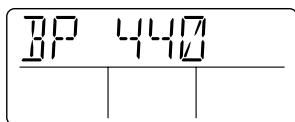
# Operation Guide 4 Using the Tuner (Bypass/Mute) Function

The GFX-4 has a built-in auto-chromatic tuner for guitars. To use the tuner function, the built-in effects must be bypassed (temporarily turned off) or the unit must be muted (original sound and effect sound turned off).

## 1 Set the GFX-4 to bypass (mute)

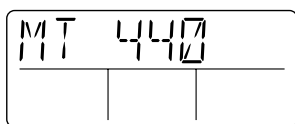
When the GFX-4 is in program mode, press and release the foot switch of the currently selected patch (the switch whose LED is lit).

Pressing and immediately releasing the foot switch sets the unit to the bypass condition, and the indication "BP 440" is shown on the display.



When GFX-4 is in manual mode, press and immediately release BANK ▲ switch.

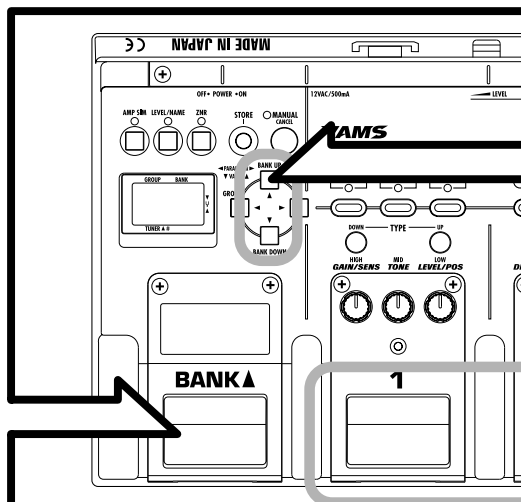
Pressing and holding the foot switch for more than 1 second sets the unit to the mute condition, and the indication "MT 440" is shown on the display.



When GFX-4 is in manual mode, press BANK ▲ switch for about 1 second.



While the GFX-4 is in bypass mode, the expression pedal cannot be used as a volume pedal for the guitar OUTPUT MONO jack.



## 2 Tune your guitar

Play the open string you want to tune, and watch the GROUP/BANK indicator.

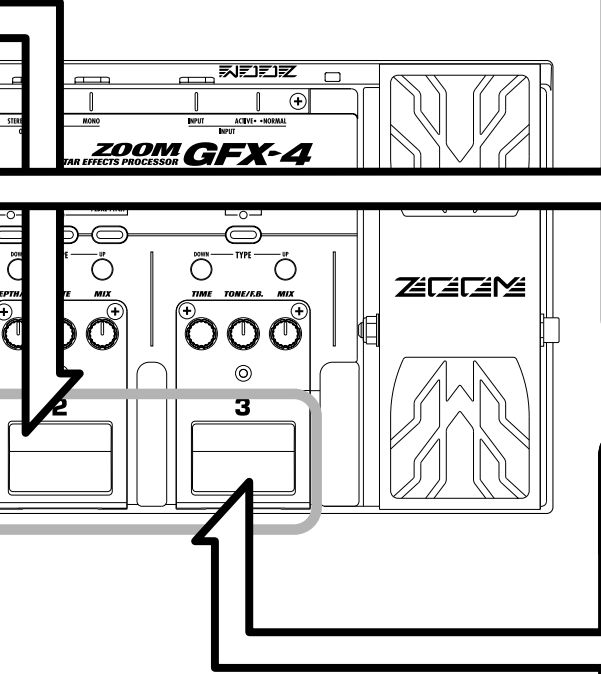
The GFX-4 automatically detects the pitch and the indicator shows the note which is closest to the current pitch.



For tuning, always play a single note. If you play a chord, the pitch will not be detected correctly.



A = A	D = d	G = G
A# = A.	D# = d.	G# = G.
B = b	E = E	
C = C	F = F	
C# = C.	F# = F.	



### 3 Adjust the reference pitch of the tuner

Use the ▲/▼ keys.

After the GFX-4 is turned on, the tuner reference pitch is always "440" (center A = 440 Hz). If desired, you can change the reference pitch in 1 Hz steps over the range from "435" (center A = 435 Hz) to "445" (center A = 445 Hz).



The reference pitch is reset to "440" when the unit is turned off and on again.

### 4 Return to program mode

When tuning is completed, press any foot switch.

The GFX-4 returns to the program mode.

When the GROUP/BANK indicator shows the desired note, perform fine tuning while watching the display.

GROUP BANK  
F#

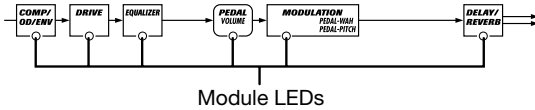
Pitch is high	Pitch is correct	Pitch is low
Indication turns faster the more the pitch is off.		

# Editing Operations

This section describes the various editing operations that can be carried out with the unit.

The basic steps for patch editing are as follows.

1. While the GFX-4 is in program mode, select the patch you want to edit.



The module LEDs show the status of each module within that patch.

## COMP/OD/ENV, DRIVE, EQUALIZER module LEDs



Module LED status	Module on/off status	FX pedal 1 assignment
Lit red	On	Yes
Lit green	Off	Yes
Lit orange	On	No
Out	Off	No

- HINT** COMP/OD/ENV, DRIVE, and EQUALIZER share the FX pedal 1 which can be assigned to any of these modules. However, when the assigned module is off (module LED lit in green), operating the FX pedal 1 only switches module on or off.

## MODULATION, DELAY/REVERB module LEDs

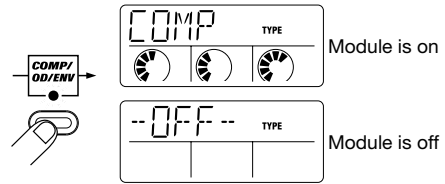


Module LED status	Module on/off status
Lit red	On
Out	Off

- HINT**
- The MODULATION and PEDAL modules share the FX pedal 2. Normally, the FX pedal 2 controls the MODULATION module, but when the PEDAL module is selected as operation target, the FX pedal 2 controls the PEDAL module. The PEDAL module LED is flashing.
  - The FX pedal 3 is permanently assigned to the DELAY/REVERB module. It always controls the DELAY/REVERB module.

2. Press one of the module keys (COMP/OD/ENV, DRIVE, EQUALIZER, PEDAL, MODULATION, DELAY/REVERB) to select the target module.

The LED of the selected module flashes, and the display shows the name of the effect type selected for that module (if the module is on), or "-OFF-" (if the module is off).



3. To toggle the selected module between on and off, press the module key of the corresponding FX panel again.



- HINT** You can also switch between on and off by pressing the module key of the module whose LED is flashing.

- NOTE** The PEDAL module serves for making expression pedal settings. It is not a regular effect and can therefore not be turned off.

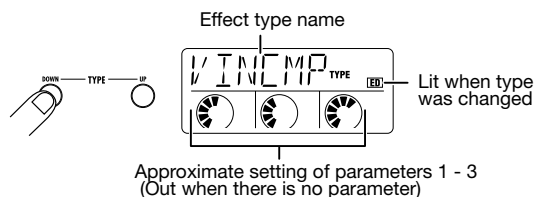
4. To switch the effect type of the selected module, use the TYPE DOWN/UP keys on the corresponding FX panel.

For example, when switching a module from on to off, the module LED changes from flashing red to flashing green.

The assignment of FX panels 1 - 3 to the modules is as follows.

- FX panel 1: COMP/OD/ENV, DRIVE, EQUALIZER module
- FX panel 2: PEDAL, MODULATION module
- FX panel 3: DELAY/REVERB module

The name of the currently selected effect type is shown on the display.







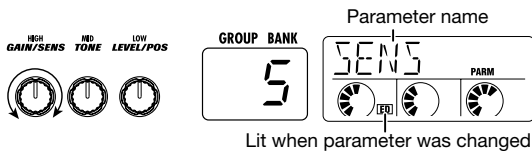
- Unlike other modules, the EQUALIZER module has only one effect type. Therefore pressing the TYPE DOWN/UP keys has no effect. (The display shows only EQUALIZER "HIGH".)
- When a module that is currently set to off is selected, the effect type and parameter cannot be changed.



For the effect types PDLWAH (pedal wah) and PDLPIT (pedal pitch) in the MODULATION module only, it is possible to directly call up the editing display by pressing the PEDAL WAH/PEDAL PITCH key. For details, see page 26.

### 5. To set the effect parameters of the selected module, operate parameter knobs 1 - 3 of the corresponding FX panel.

The display shows the most recently edited parameter name, and the GROUP/BANK indicator shows the value of the parameter.



You can also use the ◀/▶ keys and ▲/▼ keys to select the effect type and alter the parameter value. The ◀/▶ keys serve to bring up the effect type or parameter 1 - 3, and the ▲/▼ keys serve to adjust the value.

### 6. Use the module keys to select another module and adjust the effect type/parameter value and on/off setting in the same way.

### 7. When editing is completed, store the patch as required.



If you call up another patch in program mode without storing the current patch, any editing changes will be lost.

## Operation Differences of Manual Mode and Program Mode

When the MANUAL key is pressed while the GFX-4 is in program mode, the unit switches to manual mode. (Pressing the key again switches back to program mode.)

In manual mode, the foot switches 1 - 3 on the FX panels serve to turn modules on and off. This lets you change the sound of the currently selected patch in a way similar to using a compact effect.

Operation differences in manual mode and program mode are listed below.

	Manual mode	Program mode
<b>Module LED Display GROUP/BANK indicator</b>	Module LED of last edited module flashes and display shows parameter name/effect type name. GROUP/BANK indicator shows parameter value.	Module LED indication of last edited module, display and GROUP/BANK indicator function are the same as in program mode, but display reverts to program mode initial display after about 5 seconds.
<b>Foot switches 1 - 3</b>	Switch respective module on and off	Switch patches
<b>To activate bypass (mute) mode</b>	Press BANK ▲ switch	Press foot switch of currently selected patch number (LED lit)

# Setting the Patch Level and Patch Name

When a patch has been completed, you can give it a name of up to six characters, and adjust the patch level (the final output level for each patch).

1. In manual mode or program mode, press the LEVEL/NAME key.
2. Use the ◀▶ keys to bring up the indication "PATLVL" on the display.

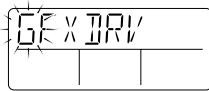
This display allows setting the final patch level in the range from 1 - 50. (A patch level setting of 40 means that the input level and output level are equal.) The current setting is shown on the GROUP/BANK indicator.



3. Use the ▲▼ keys to adjust the patch level.

4. Use the ◀▶ keys to bring up the patch name on the display.

This display allows changing the patch name. The flashing character is the one that is currently selected for editing.



5. Use the ◀▶ keys to select the character to be edited, and change the character with the ▲▼ keys. The following alphanumeric characters and symbols are available.

(Space)	'	<	>	*	+	-	/	0	1	2	3
(Space)	'	(	)	*	+	-	/	0	1	2	3
4	5	6	7	8	9	<	=	>	@	A	B
4	5	6	7	8	9	<	=	>	@	A	B
[	]	E	F	G	H	I	J	K	L	M	N
C	D	E	F	G	H	I	J	K	L	M	N
P	Q	R	S	T	U	V	W	X	Y	Z	
O	P	Q	R	S	T	U	V	W	X	Y	Z

6. When the patch level and patch name have been set, press the LEVEL/NAME key.

The GFX-4 returns to the previous mode. If required, store the patch (→ p. 12 - 13).



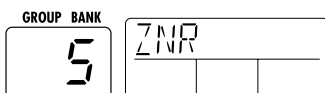
If you call up another patch in program mode without storing the current patch, any editing changes will be lost.

# Setting the ZNR Threshold

The GFX-4 incorporates the ZNR (ZOOM Noise Reduction) circuit which is highly effective in minimizing noise in playing pauses. You can set the ZNR threshold individually for each patch.

1. In manual mode or program mode, press the ZNR key.

The indication "ZNR" appears on the display, and the current setting (oF, 1 - 10) is shown on the GROUP/BANK indicator.



2. Use the ▲▼ keys to adjust the ZNR threshold (sensitivity).

Choose the value which yields the best noise reduction without causing the sound to be cut off abruptly. The setting "oF" means that ZNR is turned off.

3. When the threshold has been set, press the ZNR key once more.

The GFX-4 returns to the previous mode. If required, store the patch.



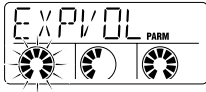
If you call up another patch in program mode without storing the current patch, any setting changes will be lost.

# Using the Expression Pedal (RTM function)

The GFX-4 has an integrated expression pedal that can be used to adjust the volume or effect parameters in real time. This function is called RTM (Real Time Modulation). This section explains how to make RTM settings and use the function.

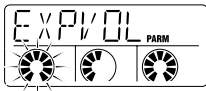
## 1. Select the patch for which you want to make RTM settings, and press the PEDAL module key in manual mode or program mode.

The PEDAL module display is shown. This module serves for making expression pedal settings.



The RTM setting can be made in manual mode or program mode. However, if the PEDAL module key is pressed in program mode, the unit reverts to the original condition if no control is operated for 5 seconds.

## 2. Use the pedal module key to bring up the indication "EXPVOL" on the display.



This display lets you make settings for using the expression pedal as a volume pedal and for selecting the function of the assignable switch built into the expression pedal.

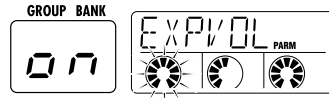
## 3. Use knobs 1 - 3 of FX panel 2 to set the following parameters.

- Parameter Knob 1 .... EXPVOL  
Determines whether the expression pedal is used as a volume pedal in this patch. You can select "oF" (off) or "on".
- Parameter Knob 2 .... MINVOL  
When the "on" setting is selected with knob 1, you can set the minimum volume (the volume when the pedal is fully raised) with this knob. The setting range is 0 - 9.
- Parameter Knob 3 .... EXP-SW  
The expression pedal incorporates an assignable switch (electronic switch that is toggled between on and off when the pedal is fully depressed). This knob lets you select the function of the switch from the following two options.

0: Toggle RTM controlled module on/off status

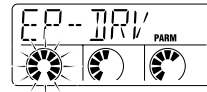
1: Switch between program mode and manual mode

Depending on which knob is operated, the parameter name appears on the display and the current setting is shown on the GROUP/BANK indicator.



To use the expression pedal as volume pedal in bypass mode, the stereo output of the GFX-4 must be used. If the mono output is used (playback system connected only to the OUTPUT MONO jack), the expression pedal does not function as a volume pedal, regardless of the EXPVOL parameter setting.

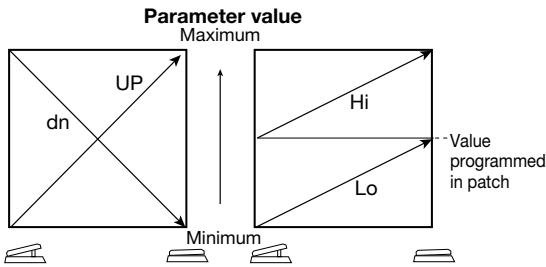
## 4. Use the pedal module key to bring up the indication "EP-DRV" on the display.



This display allows you to select the effect module to be adjusted in real time with the pedal. RTM control is possible for the DRIVE, MODULATION, and DELAY/REVERB modules. (Several modules can be selected.)

## 5. Use knobs 1 - 2 on the FX panel 2 to set the following parameters.

- Parameter Knob 1 .... EP-DRV  
Determines whether to control the DRIVE module with the expression pedal in real time. You can select "oF" (off) or "on".
- Parameter Knob 2 .... EP-MOD  
Determines whether to control the MODULATION module with the expression pedal in real time. You can select "oF" (off), "UP", "dn" (down), "Hi" (high), or "Lo" (low).  
When a setting other than "oF" is selected, operation is as follows.



When the effect type of the MODULATION module is PDLPIT (pedal pitch) or PDLWAH (pedal wah), the "Hi" setting has the same effect as "UP" and "Lo" has the same effect as "dn".

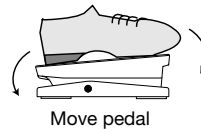
- **Parameter Knob 3... EP-D/R**  
Determines whether to control the DELAY/REVERB module with the expression pedal in real time. You can select "oF" (off), "UP", "dn" (down), "Hi" (high), or "Lo" (low).  
When a setting other than "oF" is selected, operation is the same as for EP-MOD.

**6. Make sure that modules selected in step 5 are set to on. If required, switch the effect type used in the module.**

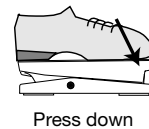
The parameter controlled by RTM depends on which effect type is currently selected for the module. For details, see the section "Effect Types and Parameters".



For example, you may select the DRIVE and MODULATION modules for RTM control and store the patch with one module set to on and the other set to off. If you then select the module on/off function for the assignable switch, the module controlled by RTM is switched every time you push the expression pedal fully down.



When you push the expression pedal fully down, the assignable switch performs the selected function (switching between program mode and manual mode or toggling the module on/off status).

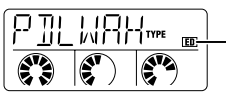


## PEDAL WAH/PEDAL PITCH Key

Among the effect types that can be controlled by RTM, the two effect types PDLWAH (pedal wah) and PDLPIT (pedal pitch) in the MODULATION module have a special key.

**1. In manual mode or program mode, press the PEDAL WAH/PEDAL PITCH keys.**

The PEDALWAH/PEDAL PITCH key are shortcut keys for quickly adjusting pedal wah or pedal pitch. With each push of the key, the edit display for "PDLWAH" and "PDLPIT" is displayed alternately.



Lit when type has changed

**2. To use the pedal wah effect, select the "PDLWAH" display. To use the pedal pitch effect, select the "PDLPIT" display.**

When one of these is selected, the patch setting automatically becomes as follows.

- MODULATION module = ON
- MODULATION module effect type = PDLWAH or PDLPIT
- UP if RTMSET display EP-MOD parameter = oF

**3. If required, use the parameter knobs on FX panel 2 to set the effect parameter.**

The effect parameter setting procedure is the same as for regular editing. (For information on effect parameters, see page 21.)

**4. If required, store the patch, and then return to program mode.**

When you now operate the expression pedal, the pedal wah or pedal pitch effect is applied.

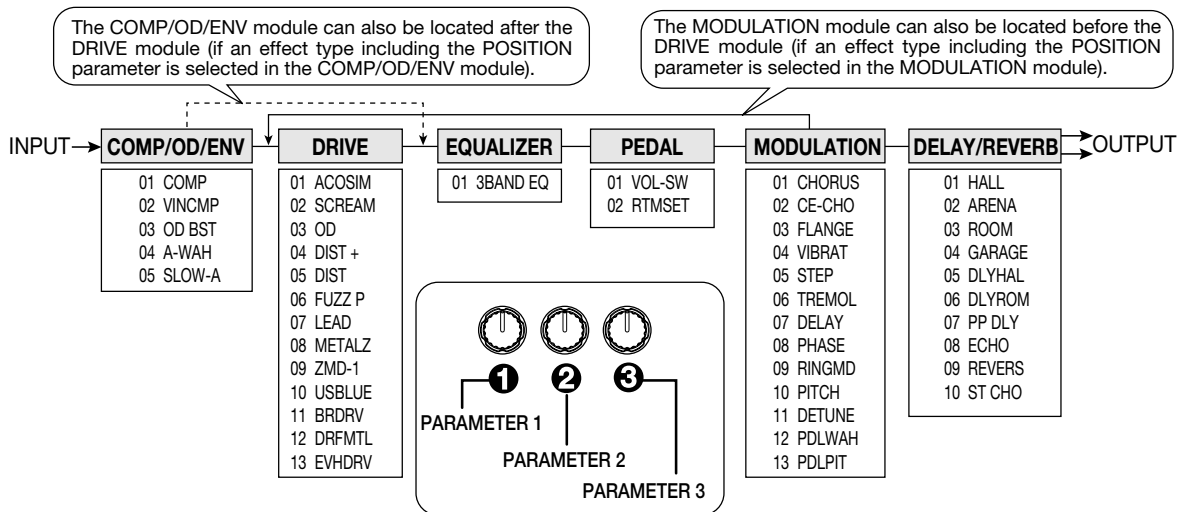
# Effect Types and Parameters

In this section, the effect types and parameters in all modules are listed and explained.

⚡ This mark indicates that the parameter can be controlled with the RTM function.

## About Modules and Effect Types

The illustration below shows the modules in the patches of the GFX-4, and the effect types that can be selected within each module.



### COMP/OD/ENV

## COMP/OD/ENV module

Contains effect types such as compressor, booster, envelope (auto wah, slow attack etc.).

TYPE 1 COMP (Compressor)			
This is a compressor which keeps the level within a certain range by attenuating high-level signals and boosting low-level signals.			
<b>1 SENS</b>	1 - 10	<b>2 ATTACK</b>	1 - 10
Adjusts the effect depth.		Adjusts the time interval between picking a string and the onset of the effect.	
		<b>3 LEVEL</b>	1 - 10
		Adjusts the output level of the module.	
[Compressor operation]			
<p>Original sound</p>		<p>Compressor</p>	
TYPE 2 VINCMP (Vintage Compressor)			
This is a compressor which attenuates high-level signals and boosts low-level signals.			
<b>1 SENS</b>	1 - 10	<b>2 TONE</b>	0 - 10
Adjusts the effect depth.		Adjusts the sound character.	
		<b>3 LEVEL</b>	1 - 10
		Adjusts the output level of the module.	
TYPE 3 OD BST (Overdrive/Booster)			
Overdrive sound that works great also as booster.			
<b>1 GAIN</b>	1 - 4	<b>2 TONE</b>	0 - 10
Adjusts the gain.		Adjusts the sound character.	
		<b>3 LEVEL</b>	1 - 10
		Adjusts the output level of the module.	

**TYPE 4 A-WAH (Auto Wah)**

This is an auto wah effect which varies the effect depth according to the picking intensity.

<b>1 SENS</b> -10 – -1, 1 – 10	<b>2 RESO</b> 1 – 10	<b>3 POSI</b> bF, AF
Adjusts the sensitivity. Positive values shift the peak upwards and negative values shift it downwards.	Adjusts the prominence of the wah effect.	Selects the COMP/OD/ENV module and DRIVE module connection sequence. The following two settings are available. bF: COMP/OD/ENV → DRIVE AF: DRIVE → COMP/OD/ENV

**TYPE 5 SLOW-A (Slow attack)**

This effect adds a soft attack to each note, depending on the picking intensity.


<b>1 TIME</b> 1 – 10	<b>2 CURVE</b> 1 – 4	<b>3 POSI</b> bF, AF
Adjusts the transient rate of the sound.	Adjusts the transient curve of the sound.	Selects the COMP/OD/ENV module and DRIVE module connection sequence. The following two settings are available. bF: COMP/OD/ENV → DRIVE AF: DRIVE → COMP/OD/ENV

**DRIVE****DRIVE module**

This module contains mainly distortion type effects such as Fuzz and Overdrive simulating conventional compact effects. In addition, the module also features preamp effects and an acoustic guitar simulator.

**TYPE 1 ACOSIM (Acoustic Simulator)**

Changes the sound of an electric guitar to resemble that of an acoustic guitar.

<b>1 TOP</b>  1 – 10	<b>2 BODY</b> 1 – 10	<b>3 LEVEL</b> 1 – 10
Higher values for this parameter result in a stronger acoustic guitar character.	Higher values for this parameter result in stronger instrument body sound.	Adjusts the output level of the module.

**TYPE 2 SCREAM (Scream)**

Simulates a vintage overdrive that was extremely popular in America as a booster.

**TYPE 3 OD (Overdrive)**

Simulates the "classic" overdrive tone.

**TYPE 4 DIST + (Distortion +)**

Simulates a vintage distortion unit that pioneered distortion sound.

**TYPE 5 DIST (Distortion)**

Hard distortion British "Stack Style".

**TYPE 6 FUZZ P (Fuzz π)**

Vintage "60's" fuzz simulation, rough distortion and superb tone.

**TYPE 7 LEAD (Lead)**

Parallels the "ZOOM" lead guitar sound, modern with outstanding drive.

**TYPE 8 METALZ (Metal Z)**

Simulates intense Heavy Metal dual gain distortion.

**TYPE 9 ZMD-1 (ZOOM Metal Driver 1)**


Ultra high gain, metal super distortion, over the edge.

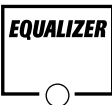
**TYPE 10 USBLUE (US Blues)**

Full range vintage amp distortion, picking intensity varies the overdrive.

**TYPE 11 BRDRV (British Drive)**

The "British Invasion" vintage tube sound that started it all.

<b>TYPE 12 DRFMLT (DRF Metal)</b>		
Simulates an amp tailor-made for thrashers. The strong distortion goes great together with humbucker pickups.		
<b>TYPE 13 EVHDRV (EVH Driver)</b>		
Simulates a signature amp that has received praise from guitars the world over.		
<b>1 GAIN</b>  1 – 30	<b>2 TONE</b> 0 – 10	<b>3 LEVEL</b> 1 – 10
Adjusts the distortion intensity.	Adjusts the sound character.	Adjusts the output level of the module.



## EQUALIZER module

This module is a 3-band equalizer for adjusting the tonal character of the sound.

<b>TYPE 1 3BAND EQ (3-band equalizer)</b>		
<b>1 HIGH</b> -12 – 12	<b>2 MID</b> -12 – 12	<b>3 LOW</b> -12 – 12
Adjusts boost/cut in the high frequency range.	Adjusts boost/cut in the medium frequency range.	Adjusts boost/cut in the low frequency range.



## PEDAL module

This module contains the settings for the expression pedal on the unit.

**NOTE** Because the PEDAL module is not an effect, it cannot be set to off.

<b>PAGE 1 VOL-SW (Volume/Assignable Switch Settings)</b>		
Determines whether the expression pedal is used as a volume pedal, and determines which function is assigned to the assignable switch.		
<b>1 EXPVOL</b> oF, on	<b>2 MINVOL</b> 0 – 9	<b>3 EXP-SW</b> 0, 1
Determines for each patch whether the expression pedal is assigned to volume control.	Determines the minimum volume setting when the expression pedal is assigned to volume control. (This is the volume when the pedal is fully raised.)	Determines for each patch the function that is assigned to the assignable switch. The following two settings are available. 0: On/off switching of module to which RTM is assigned 1: PRESET group program mode/manual mode switching

<b>PAGE 2 RTMSET (RTM Settings)</b>		
Using the RTM function, the DRIVE, MODULATION, or DELAY/REVERB module can be controlled with the expression pedal.		
<b>1 EP-DRV</b> oF, on	<b>2 EP-MOD</b> oF, UP, dn, Hi, Lo	<b>3 EP-D/R</b> oF, UP, dn, Hi, Lo
Determines whether to control a DRIVE module parameter in real time with the expression pedal. When the effect type ACOSIM is selected, the TOP parameter is adjusted. When another effect type is selected, the GAIN parameter is adjusted.	Determines whether to control a MODULATION module parameter in real time with the expression pedal. For details on operation when various settings are selected, see page 19.  <b>NOTE</b> <ul style="list-style-type: none"> <li>• Which parameter can be controlled with the pedal is preset for each effect type.</li> <li>• When PDLWAH (pedal wah) or PDLFIT (pedal pitch) is selected as effect type for the MODULATION module, operation of HI is equal to UP and Lo is equal to dn.</li> </ul>	Determines whether to control a DELAY/REVERB module parameter in real time with the expression pedal. For details on operation when various settings are selected, see page 19.


Effect Types and Parameters

# MODULATION module

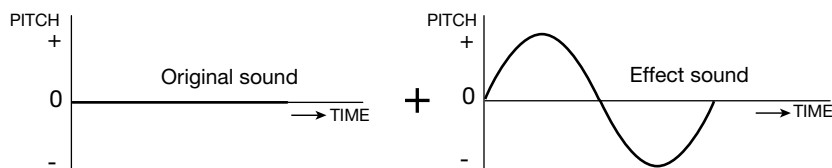
This module contains modulation effects such as chorus, flanger, pitch shifter, etc.

## TYPE 1 CHORUS (Chorus)

Chorus effect with clear sound.


<b>1 DEPTH</b> 0 – 50	<b>2 RATE</b> 1 – 50	<b>3 MIX</b>  0 – 50
Adjusts the effect depth.	Adjusts the modulation rate.	Adjusts the effect sound mixing ratio.

### [Chorus operation]



## TYPE 2 CE-CHO (CE Chorus)

Simulates a vintage analog chorus characterized by warm, full-bodied sound.

<b>1 DEPTH</b> 0 – 50	<b>2 TONE</b> 0 – 10	<b>3 MIX</b>  0 – 50
Adjusts the effect depth.	Adjusts the effect sound character.	Adjusts the effect sound mixing ratio.


## TYPE 3 FLANGE (Flanger)

This effect produces a unique, undulating sound.

<b>1 DEPTH</b> 0 – 50	<b>2 RATE</b>  1 – 50	<b>3 RESO</b> -15 – 15
Adjusts the effect depth.	Adjusts the modulation rate.	Adjusts the character intensity. Negative values result in effect sound with reversed phase.


## TYPE 4 VIBRAT (Vibrato)

This is a vibrato effect that periodically varies the pitch.

<b>1 DEPTH</b> 0 – 50	<b>2 RATE</b>  1 – 50	<b>3 BAL</b> 0 – 50
Adjusts the effect depth.	Adjusts the modulation rate.	Adjusts the mixing balance between effect sound and original sound. Higher values result in stronger effect sound.


## TYPE 5 STEP (Step)

This is a special effect with step-like filter characteristics. The cutoff is varied in discrete steps at a constant rate, resulting in a sample-and-hold type effect.

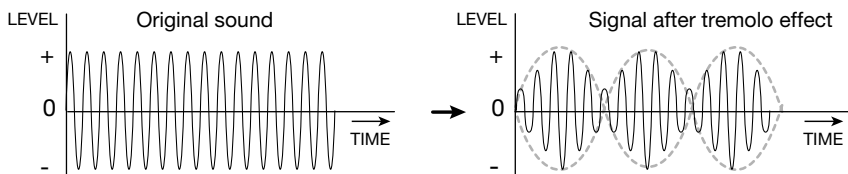
<b>1 DEPTH</b> 0 – 50	<b>2 RATE</b>  1 – 50	<b>3 FB</b> 0 – 50
Adjusts the effect depth.	Adjusts the modulation rate.	Adjusts the feedback amount.

## TYPE 6 TREMOL (Tremolo)







This effect periodically varies the level of the sound.

<b>1 DEPTH</b> 0 – 50	<b>2 RATE</b>  1 – 50	<b>3 CLIP</b> 0 – 10
Adjusts the effect depth.	Adjusts the modulation rate.	Higher values result in clipped modulation signal waveform, which emphasizes the modulation.

### [Tremolo operation]







<b>TYPE 7 DELAY (Delay)</b>		
This is a delay effect with a maximum delay time of 500 milliseconds.		
<b>① TIME</b> 1 – 50	<b>② FB</b> 0 – 50	<b>③ MIX</b>  0 – 10
Adjusts the delay time in 10-ms steps.	Adjusts the feedback amount. Higher values result in an increased number of delayed sound components.	Adjusts the effect sound mixing ratio.
<b>TYPE 8 PHASE (Phaser)</b>		
Simulates a phaser with silky smooth sound not attained by other models.		
<b>① POSI</b> bF, AF	<b>② RATE</b>  1 – 50	<b>③ COLOR</b> 1 – 4
Selects the connection position of the MODULATION module. The following two settings are available. bF: Before the DRIVE module AF: After the EQUALIZER module	Adjusts the modulation rate.	Selects the character of the phase sound.
<b>TYPE 9 RINGMD (Ring Modulation)</b>		
This effect applies amplitude modulation to the input signal, resulting in a metallic sound character.		
<b>① POSI</b> bF, AF	<b>② FREQ</b>  1 – 50	<b>③ BAL</b> 0 – 50
Selects the connection position of the MODULATION module. The following two settings are available. bF: Before the DRIVE module AF: After the EQUALIZER module	Determines the frequency of the modulation signal.	Adjusts the mixing balance between effect sound and original sound. Higher values result in stronger effect sound.
<b>TYPE 10 PITCH (Pitch Shifter)</b>		
This effect varies the pitch in the range from 1 octave down to 2 octaves up.		
<b>① PIT</b> -12, -11... -1, 1, 2... 12, 24	<b>② TONE</b> 0 – 10	<b>③ BAL</b>  0 – 50
Adjusts the pitch shift amount in semitone steps.	Adjusts the effect sound character.	Adjusts the mixing balance between effect sound and original sound. Higher values result in stronger effect sound.
<b>TYPE 11 DETUNE (Detune)</b>		
This effect mixes a slightly pitch-shifted component to the original sound, resulting in a chorus effect with only slight modulation.		
<b>① DEPTH</b> -10...-1, 1...10	<b>② TONE</b> 0 – 10	<b>③ MIX</b>  0 – 50
Adjusts the effect sound detuning extent.	Adjusts the effect sound character.	Adjusts the effect sound mixing ratio.
<b>TYPE 12 PDLWAH (Pedal Wah)</b>		
Simulates a typical pedal wah with changing effect and feeling according to the pedal angle.		
<b>① POSI</b> bF, AF	<b>② FREQ</b>  1 – 50	<b>③ LEVEL</b> 1 – 50
Selects the connection position of the MODULATION module. The following two settings are available. bF: Before the DRIVE module AF: After the EQUALIZER module	Adjusts the wah center frequency.	Adjusts the volume level.

**TYPE 13 PDLPIT (Pedal Pitch)**

This is a pitch shifter controlled by the pedal.

<b>1 POSI</b>	bF, AF	<b>2 TYPE</b>	1 – 10	<b>3 TONE</b>	0 – 10
Selects the connection position of the MODULATION module. The following two settings are available. bF: Before the DRIVE module AF: After the EQUALIZER module		Selects the pedal pitch type.		Adjusts the effect sound character.	

**[Pedal pitch type]**

TYPE		
1	± 0 cent	-100 cent
2	± 0 cent	+1 octave
3	± 0 cent	+2 octave
4	± 0 cent	-1 octave
5	± 0 cent	-2 octave
6	Doubling	Detuned sound + original sound
7	-1 octave + original sound	+1 octave + original sound
8	-700 cent + original sound	+500 cent + original sound
9	-∞ (0 Hz) + original sound	+1 octave
10	-∞ (0 Hz) + original sound	+1 octave + original sound

**■ PEDAL WAH/PEDAL PITCH key**

For the effect types PDLWAH (pedal wah) and PDLPIT (pedal pitch) of the MOD module only, there is a special key to call up the edit screen.

Pressing the PEDAL WAH/PEDAL PITCH key in manual mode or program mode toggles the unit between the PDLWAH and PDLPIT edit screens.

When PDLWAH or PDLPIT is selected, you can adjust the effect parameters with the knobs of FX panel 2. In this case, the following settings are established automatically.

- MODULATION module = ON
- MODULATION module effect type = PDLWAH or PDLPIT
- UP if RTMSET display EP-MOD parameter = oF

**DELAY/REVERB****DELAY/REVERB module**

This module contains various echo effects such as delay and reverb.

**TYPE 1 HALL (Hall)**

This is a reverb effect which simulates a medium-size concert hall.

**TYPE 2 ARENA (Arena)**


This is a reverb effect which simulates a large arena.

**TYPE 3 ROOM (Room)**

This is a reverb effect which simulates a small room.

**TYPE 4 GARAGE (Garage)**

This is a reverb effect which simulates a garage with a high amount of early reflections.


<b>1 REVTIM</b>	1 – 30	<b>2 TONE</b>	0 – 10	<b>3 REVMIX</b>	 0 – 50
Adjusts the reverb time.		Adjusts the effect sound character.		Adjusts the effect sound mixing ratio.	

**TYPE 5 DLYHAL (Delay Hall)**

This is a combined delay + hall reverb effect.

**TYPE 6 DLYROM (Delay Room)**

This is a combined delay + room reverb effect.


<b>1 DLYTIM</b>	1 – 50	<b>2 DLYMIX</b>	 0 – 50	<b>3 REVMIX</b>	0 – 50
Adjusts the delay time in 10-ms steps.		Adjusts the delay sound mixing ratio.		Adjusts the reverb sound mixing ratio.	

## TYPE 7 PP DLY (Pingpong Delay)

This is a pingpong delay effect with a long delay time (maximum 2 seconds).

## TYPE 8 ECHO (Echo)

This is a warm sounding delay effect with a long delay time (maximum 2 seconds).

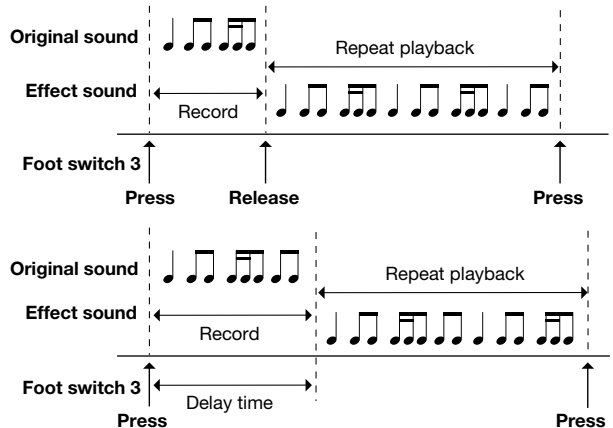
<b>1 DLYTIM</b> 1 - 99, 1.0 - 2.0	<b>2 FB/HLD</b> 0 - 50, Hd, HS	<b>3 DLYMIX</b>  0 - 50
Adjusts the delay time in 10-ms steps up to 1 second. Above that, adjustment is in 100-ms steps.	0 - 50: Adjusts the delay feedback amount. Hd: Causes the effect to operate as hold delay. HS: Causes the effect to operate as hold delay with seamless function.	Adjusts the delay sound mixing ratio.

### Hold Delay

By selecting PP-DLY or ECHO as the effect type in the DELAY/REVERB module and setting parameter 2 to "Hd" or "Hs", a patch can use the hold delay function where the foot switches serve to control recording and playback of a phrase.

- Select the above type of patch in manual mode and press foot switch 3 to start recording.
- When foot switch 3 is released or the delay time set as parameter 1 has elapsed, recording terminates, and repeat playback of the recorded phrase starts automatically.
- Pressing foot switch 3 during repeat playback stops playback.

### [Hold Delay]



### Seamless Delay (Patch delay)

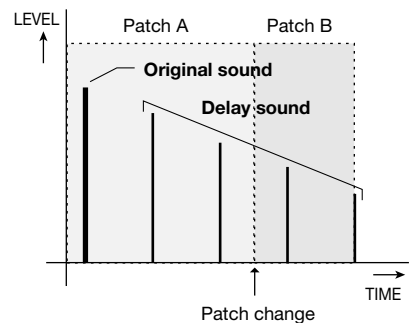
Using the seamless delay function causes the delay sound from the immediately preceding patch to be heard still after switching patches.

The seamless delay function of the GFX-4 can be used when both the patches (before and after switching) fulfill all of the following conditions:

- (1) REV/DLY module = ON
- (2) REV/DLY module effect type = PP-DLY or ECHO
- (3) Delay time = Max. 1 second


When both the patches (before and after switching) have the REV/DLY module ON and the FB/HLD parameter set to "HS", the hold delay function can be used as seamless delay. In this case, the recorded phrase continues to be repeated also after the GFX-4 is returned to program mode and the patch is switched during repeat playback. To force an end to the hold delay function after a patch change, set the unit to the bypass condition.

### [Seamless Delay]




## TYPE 9 REVERS (Reverse)

This is a special delay effect where the effect sound seems to be rotating in reverse.

<b>1 DLYTIM</b> 50 - 99, 1.0 - 2.0	<b>2 FB</b> 0 - 50	<b>3 DLYBAL</b>  0 - 50
Adjusts the delay time in 10-ms steps up to 1 second. Above that, adjustment is in 100-ms steps.	Adjusts the delay feedback amount.	Adjusts the delay sound mixing ratio.

## TYPE 10 ST CHO (Stereo Chorus)

This is a stereo chorus effect with clear sound and a wide spread.

<b>1 DEPTH</b> 0 - 50	<b>2 RATE</b> 1 - 50	<b>3 CHOMIX</b>  0 - 50
Adjusts the effect depth.	Adjusts the modulation rate.	Adjusts the chorus sound mixing ratio.

# Other Functions

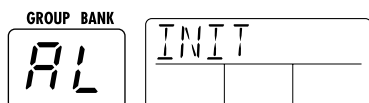
This section contains information about special functions such as how to return the GFX-4 to the factory default condition and how to readjust the expression pedal.

## All Initialize

The All Initialize function is a special function that lets you reset the GFX-4 to the condition in which it was originally shipped. When All Initialize is performed, all settings of the unit including all user group patches are returned to the default condition.

1. Turn power to the GFX-4 on while keeping the STORE key depressed.

The display shows "INIT".



2. Press the STORE key once more.

All Initialize is carried out. If All Initialize was carried out, the unit automatically returns to the program mode.

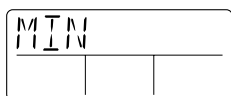
Note that when All Initialize is executed, the contents of all patches stored by the user will be overwritten (erased). When wishing to cancel All Initialize, press the MANUAL/CANCEL key before step 2.

## Adjusting the Expression Pedal

The expression pedal of the GFX-4 uses a highly reliable optical sensor mechanism. The pedal is adjusted for optimum operation at the factory, but it can be readjusted as follows if required.

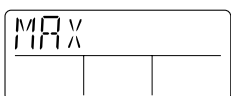
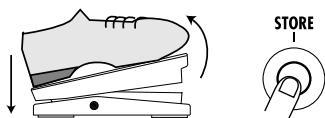
1. Hold down the PEDAL module key while turning on power to the unit.

The indication "MIN" appears on the display.

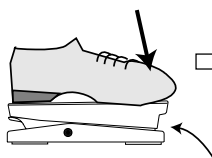


2. With the expression pedal fully raised, press the STORE key.

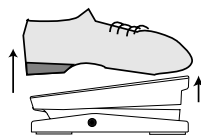
The display indication changes to "MAX".



3. Push the expression pedal fully down and then lift your foot off the pedal (the pedal goes back a little). Press the STORE key at this point.



Push strongly, so that pedal touches here



When foot is lifted, pedal returns slightly



Press STORE key

The adjustment is completed, and the unit returns to the program mode.

# Troubleshooting

Symptom	Check	Remedy
No sound or very low volume	• Is suitable AC adapter connected, and power switch set to ON?	⇒ Make connections as described in "Getting Connected" and turn power on.
	• Is instrument connected correctly to INPUT jack and playback equipment to OUTPUT jack?	⇒ Make connections as described in "Getting Connected".
	• Is shielded cable defective?	⇒ Try using another cable.
	• Is amplifier turned on? Are level controls for instrument and amplifier set to proper values?	⇒ Turn amplifier on and adjust volume to proper level.
	• Is GFX-4 set to mute condition?	⇒ Cancel the mute condition.
	• Is MASTER LEVEL knob turned down?	⇒ Set MASTER LEVEL knob to proper position.
	• Is expression pedal raised?	⇒ For some patches, the expression pedal controls the volume. Set it to a suitable position.
Bypass (mute) mode cannot be activated	• Has unit been switched between program mode and manual mode?	⇒ Switch function is different in program mode and manual mode. Select correct mode.
Volume does not change when expression pedal is operated in bypass mode	• Has expression pedal been set to function as volume pedal?	⇒ Assign volume control function to expression pedal as described on page 19 and set minimum volume.
	• Is mono output used (playback system connected only to OUTPUT MONO jack)?	⇒ With a mono connection, the expression pedal cannot be used to control the volume. Connect the playback system to OUTPUT STEREO jack.
Expression pedal on/off switching is not performed properly	• Readjusting the pedal may correct the problem.	⇒ Readjust pedal, as described on page 28.
Oscillation occurs	• Is high-gain distortion effect used together with compressor/booster effect or EQUALIZER?	⇒ Reduce parameter values of high-gain module (gain, tone, level).

# Specifications

Effect programs	44 (42 effects + ZNR + Amp Simulator)	Outputs	Mono output Standard phone jack (mono) x 1 (nominal output level -10 dBm, output impedance 10 kΩ or higher) Combined line/headphone output Standard phone jack (stereo) x 1 (maximum output level +4 dBm, output load impedance 10 kΩ or higher)
Effect modules	6 + ZNR + Amp Simulator	Display	Original LCD (with backlight) 2-digit, 7-segment LED
Patch memory	USER 3 patches x 5 banks x 4 groups = 60 (read/write/store) PRESET 3 patches x 5 banks x 4 groups = 60 (read only) Total 120 patches	Power requirements	12 V AC, 500 mA (from supplied AC adapter AD-0008)
Sampling frequency	40 kHz	Dimensions	397 mm (W) x 183 mm (D) x 60 mm (H)
A/D conversion	20-bit 64-times oversampling converter	Weight	1.4kg
D/A conversion	20-bit 128-times oversampling converter		* 0 dBm = 0.775 Vrms * Design and specifications subject to change without notice.
Input	Guitar input Standard phone jack (mono) x 1 (nominal input level -10 dBm)		
Pickup select	Normal Input impedance 510kΩ (pickup type = passive) Active Input impedance 20 kΩ (pickup type = active)		

# Patch List

GROUP	BANK	PATCH	NAME	DEMO
A	0	1	GFXDRV	Powerful distortion sound.
		2	ODROCK	Boost sound with over drive effect.
		3	STDCHO	Useful chorus sound.
	1	1	HEAVY	Heavy base distortion sound.
		2	FUSION	Vintage comp and phase effect combined sound.
		3	PDLPIT [PEDAL-PITCH]	Hard distortion with pedal-pitch effect.
	2	1	MTLDLY	Metal sound with delay effect.
		2	COOLWA [PEDAL-WAH]	Vintage pedal-wah clean sound.
		3	TEXAS	Over drive sound for "blues-man".
	3	1	WAHDST [PEDAL-WAH]	Distortion sound with pedal-wah effect.
		2	BLUES	Good for blues playing.
		3	FUNKY	Funky auto-wah sound.
4	1	LABACK	Good for riff playing.	
	2	STRUM	Acoustic guitar simulated for strum play.	
	3	RNGDRV	Lead sound with ring modulation effect.	
GROUP	BANK	PATCH	NAME	MODELING
b	0	1	BOTTOM	Heavy fuzz sound with chorus effect.
		2	NIRVRN	High gain grungy sound.
		3	SMOOTH	Smooth chorus clean sound.
	1	1	CMB335	Like Larry's "room".
		2	C-GROV	Doobie's American rock sound.
		3	OCTAVE	Clean sound with octave effect.
	2	1	FUZRVS [PEDAL-WAH]	Fuzz drive sound, with pedal-wah and reverse effect.
		2	X-ROCK	Metal sound, pedal controls pitch-shifter mix.
		3	OLDCUT	For clean cutting sound.
	3	1	PANAMA	Eddie's famous driven sound.
		2	HVYLOW	Boost sound with high gain distortion effect.
		3	NUANCE	Real amplifier sound.
4	1	BRNWTR	Modern Fuzz tone.	
	2	SNAKE	Hard rock sound.	
	3	ROCKER	Distortion sound for standard rock style.	
GROUP	BANK	PATCH	NAME	STANDARD / ARTIST
c	0	1	BZ-TAK	Tak's wah tone.
		2	VAIDRV	Vai's driven sound.
		3	CHODRV	Distortion sound with chorus effect.
	1	1	VAI-LD	Vai's lead sound.
		2	GARY	Gary's lead sound.
		3	ZAK	Zak's auto-wah sound.
	2	1	SCOHEN	Lead sound for Jazz/fusion style.
		2	PATONE	Clean tone for jazz play.
		3	JAZZOD	Over drive sound for jazz play.
	3	1	LUKIE	Luke's all-round sound.
		2	SUMMER	Message in a "sound".
		3	SATCH	Like Satch's "ALIEN".
4	1	LA-STD	LA studio sound simulation.	
	2	BMSTEP	Zoom original step effect sound.	
	3	EVH2	Eddie's famous hard driven sound.	
GROUP	BANK	PATCH	NAME	VARIATION
d	0	1	HMSOLO [PEDAL-PITCH]	Distortion sound with pedal-pitch effect.
		2	MARK2	Combo AMP style sound simulation.
		3	UKTONE	Old UK-style sound.
	1	1	VISUAL	Chorus driven sound.
		2	ROCKAB	Rockabilly sound.
		3	ALPTRM	Clean sound with tremolo effect.
	2	1	RICH	Rich distortion sound.
		2	CONTRY	Crunch sound for Country blues style.
		3	CATHED	Slow attack sound for lead play.
	3	1	TRIBAL	Classic chorus with distortion sound.
		2	WORMMY	Box style cabinet clean sound.
		3	MELOW	Detune chorus clean sound.
4	1	DRVIBE	Drive sound with vibrato effect.	
	2	JET	Standard jet sound.	
	3	ROBOT	Robot voice sound with pick-noise play.	

\* ZNR(Zoom Noise Reduction) parameter in each patch should be adjusted for optimum matching the with your guitar.  
 \* In the factory default condition, the contents of the user patches and preset patches are the same.  
 \* RTM (Real Time Modulation) assigned for all-patches.

# Creating Your Own Sound

This section gives some pointers on how to get optimum performance from the unit. Use these hints as starting points to explore the GFX-4 capabilities to the max.

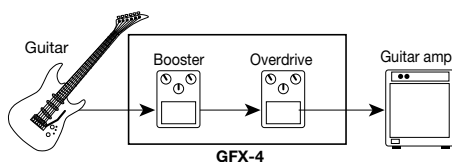
- **Compact distortion 2-stage sound**

This is a frequently used setting for playing a solo with the same sound character as the backing, but with more distinct, solid sound.

Normally, the first stage will provide OD distortion with moderate gain and high level, and the second stage will be used to create the main distortion.



Take care not to apply excessive distortion, because this setting places a considerable load on the circuits and can lead to oscillation.



**[Sample Patches]**

A02: ODR0CK

Example for booster + overdrive combination

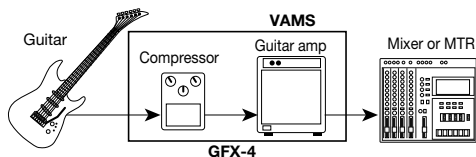
A11: HEAVY

Example for booster + high-gain distortion combination

- **Technique for obtaining detailed distortion using a compact effect and tube amp**

This kind of setup is frequently used by professional guitarists to further increase the distortion from the guitar amplifier.

The GFX-4 makes it easy to duplicate this setup, because the unit also features famous guitar amplifier sounds. The technique can be applied also when not playing at loud levels, such as during MTR recording. The amp simulator will be useful in such cases.



**[Sample Patches]**

A01: GFXDRV

This uses light compression to extend sustain. Enhances playing through a stack amp.

A23: TEXAS

Setting example for the sound of a famous late blues guitarist from Texas. Adds punch to a combo amplifier.

- **How to make optimum use of effect connection sequence**

The sonic impression created by an equalizer type

effect such as wah differs greatly, depending on whether it is inserted before or after the distortion in the signal path. When inserted before the distortion, it emphasizes the point on which distortion is applied. When inserted after the distortion, equalization acts upon the entire sound.

The GFX-4 provides 2 effects in the COMP/OD/ENV module and 4 effects in the MODULATION module for which the connection point can be switched.

**[Sample Patches]**

C01: BZ-TAK

Setting example for inserting wah as equalizer before distortion

C33: SATCH

Setting example for inserting phaser as equalizer before distortion

- **Using vintage effect sounds**

The sound of many vintage effect devices still is very attractive also in the digital age. Mastering the use of such sounds will help you find your individual style. For best results, avoid excessive distortion and let the sound character of the selected device speak for itself.

**[Sample Patches]**

A12: FUSION

This is a vintage compressor and phaser sound.

A22: COOLWA

Setting example for a vintage pedal wah sound

b02: NIRVRN

Setting example for obtaining modern sound with a vintage distortion effect

b21: FUZRVS

Setting example for a combination of vintage fuzz + vintage wah + reverse-rotation delay

- **Expression pedal secrets**

The expression pedal of the GFX-4 incorporates a nifty feature called assignable switch (see page 19).

The switch can be used to toggle between program mode and manual mode. This enhances your flexibility during a performance, because in manual mode, it is possible to turn separate compact effects on and off with the foot switches. For example, you can use the feature to turn a modulation effect on and off or control other the sound in other ways offered by manual mode.

**[Sample Patch]**

C23: JAZZOD

May be used also in manual mode only.



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