





# **OPERATION MANUAL**

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## Introduction

Thank you for selecting the **ZOOM PLAYER 2100** (called 2100 in this manual). The 2100 is a multi-effects unit with the following features:

### Versatile effects

The 2100 has 33 versatile effects. You can combine up to seven effects. In particular, the 2100 offers thirteen distortion effects (for the DIST module) for discerning guitarists, including Clean, Distortion, Acoustic simulator, etc. It also features an Amp simulator and ZNR (ZOOM Noise Reduction).

### Abundant preset patches

You can use up to 60 patches, including 30 PRESET patches and 30 USER patches.

### 32-second Sampler function (Quick guide → See page 12.)

ZOOM has developed a "Sampler" function that allows you to record a phrase up to 32 seconds long from a CD and play back the data at lower speeds. This function also plays data without changing the pitch at lower speeds and improves tonal quality. You can also record your own performance as a one-man jam session. This can be of great help in your guitar education.

### Customize/Jam play (Quick guide → See page 8 – 9.)

The 2100 features a [FUNCTION] switch to which you can assign a function. The following four functions are available :

- 1. Bank Down mode: Switches to one bank number lower.
- 2. Manual mode: Switches each effect on and off during performance.
- 3. Control mode: Enables you to use the RTM function.
- **4.Jam Play mode**: Allows you to use three basic samplers that can be recorded for up to five seconds simultaneously.

## 

Connecting an optional foot pedal FP01/FP02 or using the [FUNCTION] switch enables you to adjust the following parameters in real-time :

- 1. Volume control
- 2. COMP/WAH module effects
- 3. Pedal Pitch Shifter in the MOD module
- 4. Delay in the MOD module (Sound-on-sound)

## Flexible use for performance (Quick guide → See page 5.)

The patches you create at home might sound completely different in the studio at high volume. Don't worry. It is easy to correct the sound. You can adjust the gain of the distortion effects, the reverberation of the reverb effects, and the presence without changing the patch parameters.

## Great support on the stage (Quick guide → See page 7.)

The 2100 has an auto chromatic tuner for guitars, which can be used on stage easily.

Please read this manual carefully so you can understand the functions of your 2100 and to ensure optimum performance and reliability for an extended period of time.



## **Glossary**

This section describes the terminology for the 2100 used in this manual.

#### ■ Effect module

An effect module is an effect that processes or adds effects to a sound, such as compact-type effects including compressor and delay. You can combine up to seven effect modules in the 2100.

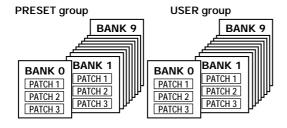
The diagram at the bottom of this page shows the signal flow through the effect modules in the 2100.

#### ■ Patch / Group / Bank

A "patch" is a unit of memory to which you store and from which you recall effect settings. That is, a "patch" is a combination of up to seven effect modules and stores the parameter settings of those effect modules.

You can store a patch in one of two groups: rewritable USER group and read-only PRESET group. Each group can store up to 30 patches. A total of up to 60 patches can be stored in the 2100.

You recall any three patches as a set and use foot switches 1–3 on the front panel to switch among these three patches. This combination set of three patches is called a "bank." The USER group and the PRESET group have ten banks (0–9) each.



#### ■ Effect type and parameters

Each effect module of the 2100 offers multiple effects, called "effect types." You can select one effect type for each effect module.

"Parameters" are settings that you can modify. The parameters on the 2100 include:

- Effect parameters: These parameters determine the intensity and the signal flow of each effect module.
   The effect parameter settings will be stored for each patch individually.
- Patch parameters: These parameters determine the settings independently of each effect module and include the final level and the ZNR setting of a patch. The patch parameter settings will be stored for each patch individually.
- Global parameters: These parameters are shared by all patches globally. Changes to the global parameters do not take effect when you switch between patches. They take effect when you turn off the power to the unit.

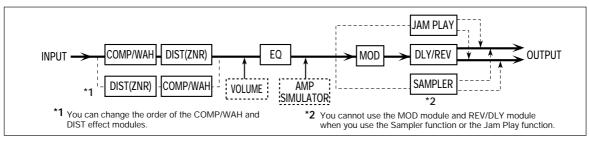
#### ■ Mode

The 2100 operates in five modes:

- Play mode: Allows you to select patches and use the effects during performance.
- Manual mode: Allows you to turn the modules on and off during performance.
- Edit mode: Allows you to edit the effect parameters and patch parameters of the currently-selected patch.
- Store mode: Allows you to store the edited patch into memory or move a patch to another memory location.
- Special mode: This mode offers a special function that allows you to reset the internal settings and all patches in the USER group (or a particular patch in the USER group) to the factory default settings.

#### ■ RTM

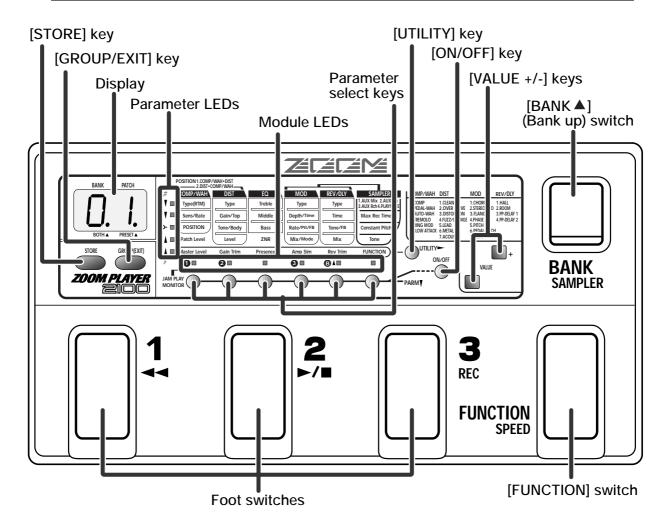
RTM is an acronym for Real-time Modulation. It is a function that enables you to change a particular effect parameter or volume setting using the [FUNCTION] switch on the front panel or an optional foot pedal FP01 or FP02.



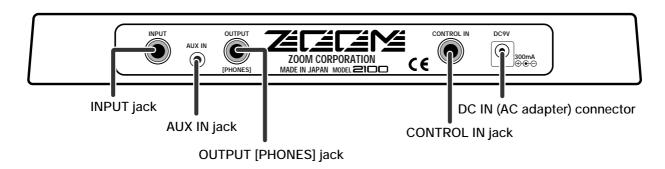


# **Names and Functions**

## Front panel

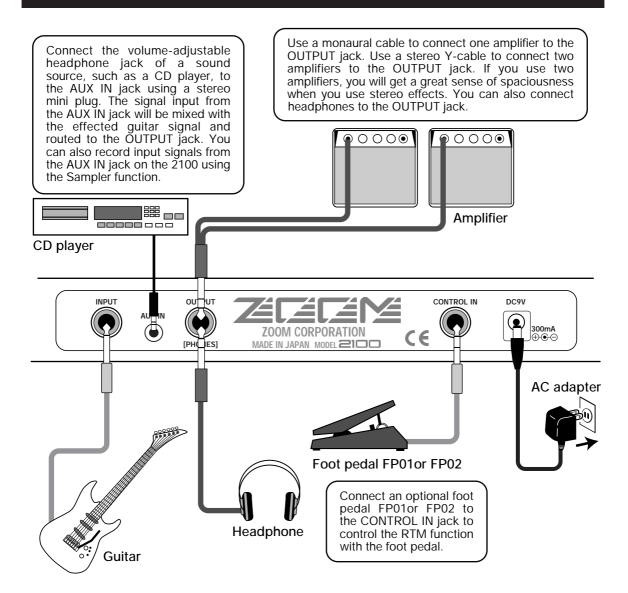


## Rear panel





## Connections



## Preparing for performance

Follow the steps below to turn on the power to the equipment and adjust the volume level.

- Make sure that the power to the amplifier is turned off, and lower its volume knob to the minimum level.
- 2 Turn on the power to the 2100.
  Insert the AC adapter into the AC outlet. The power to the 2100 is turned on automatically.
- 3 Turn on the power to the amplifier.

While playing the instrument, adjust the volume of the instrument and the amplifier to the optimum level.

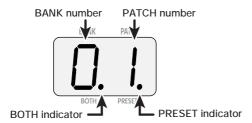


# Listening to a patch

When you turn on the power to the 2100, it automatically enters Play mode. This section describes the panel display in Play mode and how to select a patch.

## Panel display in Play mode

The display and LEDs on the panel indicate the following information in Play mode:

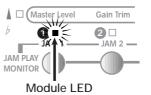


- BANK number: The number of the currently-selected bank (0–9) appears.
- PATCH number: The number of the currentlyselected patch (1-3) appears.
- BOTH indicator: This indicator indicates the currently-available group. When a dot (.) lights up, you can use both the USER group and the PRESET

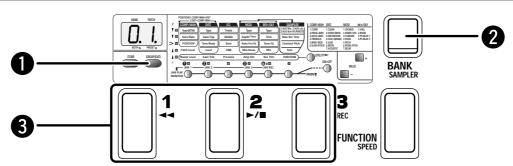
group. When the dot is turned off, you can use either one of these groups.

- PRESET indicator: This indicator indicates the currently-selected group. When a dot (.) lights up, it indicates that the PRESET group has been selected.
   When the dot is turned off, the USER group has been selected.
- Effect module on/off:

If a particular effect module is turned on for the currently-selected patch, the corresponding module LED on the panel lights up.



## Selecting a patch



## Use the [GROUP/EXIT] key to select the desired group.

Pressing the [GROUP/EXIT] key repeatedly will change the group in the following sequence:

While the USER group is selected:

Available 
$$S2 \rightarrow D2 \rightarrow D2 \rightarrow D2$$

PRESET BOTH USER

While the PRESET group is selected:





When you switch the groups from USER to PRESET or from PRESET to USER, the bank number will flash.

## ② Use the [BANK▲] switch to select the desired bank.

Pressing the [BANK •] switch once increments the bank number by one and selects the bank. The bank number flashes.



- Pressing the [BANK▲] switch does not change the patch. The patch will be changed in the next step.
- You can use the [FUNCTION] switch to decrement the bank number. (See page 8.)

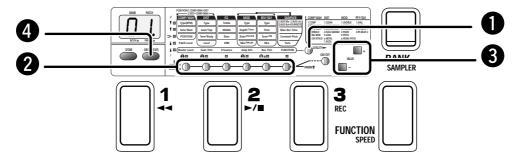
## 3 Use the foot switches 1–3 to select the desired patch.

The bank number stops flashing, and the new patch is selected.



## Adjusting the volume level and tonal quality according to the acoustic environment.

The 2100 features global parameters that enable you to adjust the master level and the degree of distortion applied to all patches on a global scale. Use these parameters to adjust the volume level and tonal quality to suit the characteristics of the instruments, amplifiers, and the acoustic environment.



### 1 Press the [UTILITY] key in Play mode.

The [UTILITY] key is used to access the global parameters that are shared by all patches.

Use the parameter select keys to choose the desired global parameter.

The LED of the currently-selected global parameter flashes.

### 3 Use the [VALUE +/-] key to edit the value.

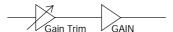
The following parameters are adjustable in the specific range:

#### ■ Master Level

Enables you to set the final volume level of the 2100 in the range of 1 through 30.

#### ■ Gain Trim

Enables you to set the intensity of distortion (the input gain of the gain parameter) when you use a distortion effect (type 2–6) for the DIST module. This parameter is set to "7" when you turn on the power to the unit.





Make fine adjustments according to the acoustic environment and the guitar being used.

#### ■ Presence

Enables you to adjust the tonal quality of the presence in the range of -12 to +12.

#### ■ Amp Sim (Amp Simulator)

You can apply the amp simulator effect (to simulate the unique characteristics of a guitar amplifier). Select from the following:

- oF (off): The amp simulator effect is turned off.
- Co (combo): This effect simulates the sound produced by a 100W combo amplifier.
- bC (bright combo): This effect simulates the bright sound produced by a 120W amplifier that emphasizes the high range.
- St (stack): This effect simulates the sound produced by a stack amplifier with four speakers stacked up.

#### ■ Rev Trim (Reverb Trim)

Enables you to set the input gain of the reverberation (mix) of the effects used for the REV/DLY module in the range of 1 through 10. This parameter is set to "7" when you turn on the power to the unit.





Adjust this parameter according to the acoustic environment of the performance.

#### **■** FUNCTION

#### (The function of the [FUNCTION] switch)

Enables you to assign a function to the [FUNCTION] switch. Refer to page 8 for more information on the assignable functions and the operation of the [FUNCTION] switch.

## When you finish setting the global parameters, press the [GROUP/EXIT] key.

The 2100 enters Play mode.



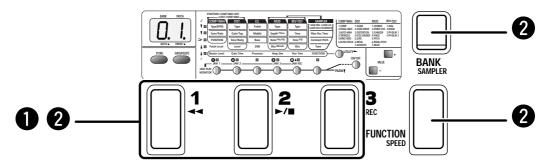
The global parameter settings are not affected even if you switch the patches. These parameters are reset when you turn off the power to the 2100.

As an exception, however, you can store the "AmpSim" and "FUNCTION" settings. To store these settings, select the desired patch and follow the steps for the store operation (see page 11).



## Temporarily turning the effects off (Bypass)

You may turn off all the effects in the patch, and output only the dry instrument sound. (This is called the "Bypass function.") This function is useful when you wish to check the intensity of the effects.



- 1 Press and immediately release the foot switch with the same number as the currently-selected patch in Play mode (the number shown on the right of the display).

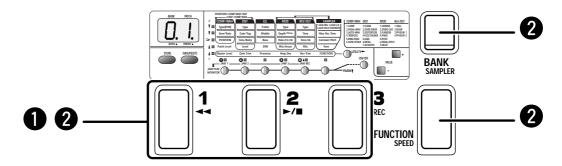
  The effects are bypassed, and the dry instrument sound is output. At this time, the display indicates " ¬P" for a while, then indicates " ¬ ".
- HINT

At this point, you can tune the instrument using the Tuner function, if necessary. (See page 7.)

- ② To cancel the Bypass function, press one of foot switches 1–3, the [BANK▲] switch, or the [FUNCTION] switch (unless the "Ct" function is assigned to the [FUNCTION] switch).
  - When you press the [BANK ] switch or the [FUNCTION] switch, the patch selected before you used the Bypass function is restored.

## Temporarily muting the sound output from the 2100

You may temporarily mute the sound output from the 2100. (This is called the "Mute function.") This function is useful when you wish to tune your instrument quietly on the stage.



- for a second or longer, press and hold the foot switch with the same number as the currently-selected patch in Play mode (the number shown on the right of the display).
  - The output from the 2100 is muted. The display indicates "  $\prod E$ " for a while, then indicates "  $\dots$ ".
- HINT

At this point, you can tune the instrument using the Tuner function, if necessary. (See page 7.)

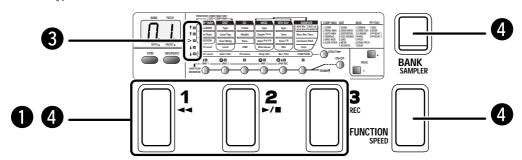
2 To cancel the Mute function, press one of foot switches 1–3, the [BANK▲] switch, or the [FUNCTION] switch unless the "Ct" function is assigned to the [FUNCTION] switch.

When you press the [BANK ] switch or the [FUNCTION] switch, the patch selected before you used the Mute function is restored.



## Tuning the guitar (Auto Tuner function)

The 2100 features a chromatic Auto Tuner function. The Auto Tuner function is enabled when the 2100's Bypass or Mute function is turned on.



Press the foot switch with the same number as the currently-selected patch in Play mode to turn the Bypass or the Mute function on.

The display changes from "  $\square P$  " (or "  $\square E$  ") to " ".

$$\boxed{P} \rightarrow \boxed{-}$$
 or  $\boxed{P} \rightarrow \boxed{-}$ 



If you wish to tune the instrument quietly on the stage, the Mute function is useful.

Pluck the string to tune without pressing the frets.

The name of the note that is closest to the sound pitch appears on the display. Tune the guitar while checking the note name.

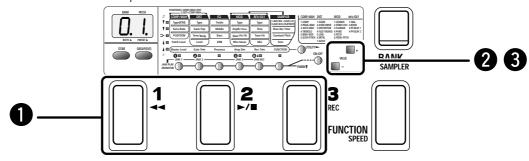
When the desired note name appears on the display, make fine adjustments until the center parameter LED lights up.

When you finish tuning, press one of foot switches 1-3, the [BANK▲] switch, or the [FUNCTION] switch (unless the "Ct" function is assigned to the [FUNCTION] switch.)

The 2100 returns to normal Play mode.

## Fine-tuning the reference pitch of the tuner (Calibration)

You may calibrate the frequency of the center "A" as the reference of the internal tuner. This function is useful when you wish to tune the guitar to the pitch of a sound source you cannot tune, such as a CD or acoustic piano.



Press the foot switch with the same number as the currently-selected patch in Play mode to turn the Bypass or the Mute function on.

Press either one of the [VALUE+/-] keys.
The current reference pitch value appears on the

display for a while.

**3** While the value is indicated on the display, use the [VALUE+/-] keys to adjust the reference pitch.

You can set the reference pitch in the range of 35 (435Hz) through 45 (445Hz).

When you turn on the power to the 2100, the reference pitch is always reset to 40 (440Hz).

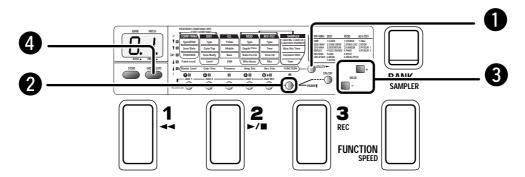


# Using the [FUNCTION] switch

You can define the function of the [FUNCTION] switch on the front panel of the 2100. This section explains how to assign and use the function.

## Selecting the function of the [FUNCTION] switch

One of four functions can be assigned to the [FUNCTION] switch, depending on the application.



- Press the [UTILITY] key in Play mode or Edit mode.
- 2 Press the right-most parameter select key.
- **3** Use the [VALUE+/-] key to select a function. The following four functions are available:

#### bd (Bank Down)

When you assign this function to the switch, pressing the [FUNCTION] switch in Play mode causes the bank with one number lower to be recalled. (This is the reverse operation of the [BANK \*\*] switch.) This function is useful when you need to switch banks frequently during performance.

#### Mn (Manual)

When you assign this function to the switch, using the [FUNCTION] switch enables you to toggle between Play mode and Manual mode. In Manual mode, you can use foot switches 1–3 and the [BANKA] switch to turn the effect module in its entirety on and off.

In Manual mode, the following modules are assigned to foot switches 1–3 and the [BANK▲] switch:

Switch: Corresponding module

Foot switch 1 COMP/WAH

Foot switch 2 DIST

Foot switch 3 MOD [BANK▲]switch REV/DLY



- You can also turn the module on and off by pressing and holding the parameter select key. You can use this method either in Play mode or Edit mode.
- You cannot turn the EQ module on and off using the foot switches. Use the parameter select key.

#### Ct (Control)

When you assign this function to the switch, operating the [FUNCTION] switch enables you to control the RTM function that changes a given effect parameter or volume setting in real-time. See page 14 for more information on the RTM function.

#### JP (Jam Play)

When you assign this function to the switch, operating the [FUNCTION] switch enables you to turn on and off the basic samplers (the Jam Play function) that can record up to five seconds of data. See page 9 for more information on the Jam Play function.

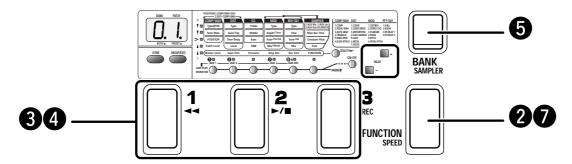
#### 4 Press the [GROUP/EXIT] key.

The 2100 returns to Play mode. The function selection for the [FUNCTION] switch will reset to the previous setting unless you store the patch. If you wish to store this setting, store the patch. (See page 11.)



## Using the basic samplers (Jam Play function)

The 2100 features a Jam Play function that records and plays phrases of up to five seconds each to and from three independent basic samplers, as well as the Sampler function that records up to 32 seconds of data.



Assign the Jam Play function ("JP") to the [FUNCTION] switch.

See page 8 for information on how to assign the function. If necessary, store the patch.

Press the [FUNCTION] switch in Play mode.
" JP " flashes on the display and the basic

samplers 1-3 enter record standby mode.



3 While playing the instrument, press and hold one of the foot switches 1–3 to start recording, and release the switch to finish recording.

While the Jam Play function is turned on, foot switches 1–3 function as the record/playback buttons for the basic samplers 1–3. If you press one of the foot switches while the basic sampler is in record standby mode, any performance that transpires while you are holding down the switch is recorded to the basic sampler. Releasing the foot switch will stop the recording.



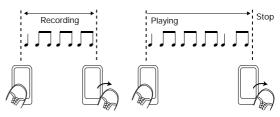
You cannot record signals input from the AUX IN jack while you are using the Jam Play function. To record signals input from the AUX IN jack, use the Sampler function (see page 12).

Each one of basic samplers 1–3 can record up to five seconds of performance. If you press and hold the foot switch for more than five seconds, the 2100 will automatically end the recording and start playing back.

4 To play back the performance recorded in the basic sampler, press the corresponding foot switch (1–3).

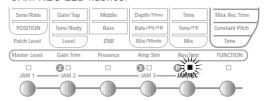
The 2100 plays the recorded performance as long as you are holding down the foot switch. When you release the foot switch, playback will stop.

#### Recording and playing Jam Play



To re-record your performance, or to record data to another foot switch, press the [BANK▲] switch.

The 2100 enters record standby mode, and the JAM REC LED flashes.



- 6 Follow steps 3 4 described above to record and play.
- **7** Press the [FUNCTION] switch to return to Play mode.



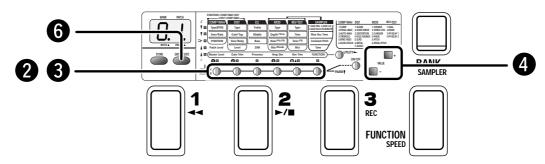
When the 2100 returns to Play mode, the performance data recorded in the basic sampler will be erased.



# Modifying tonal color of patches (Using Edit mode)

In Edit mode, you can modify the effect parameters in the patches and the patch parameters to create the desired patches, and change the settings of the global parameters. This section describes the operation in Edit mode.

## Modifying the parameter settings



- 1 Select a patch to edit in Play mode (in either the USER group or the PRESET group).
- Press and immediately release the parameter select key that corresponds to the module you wish to edit.

The 2100 enters Edit mode, in which you can change the parameter settings.

The information shown below appears on the panel in Edit mode.

3 Press the parameter select key repeatedly to select a parameter to edit.

To select a parameter in the module, press the same parameter select key repeatedly. The parameter LEDs will flash in sequence.



The global parameters are listed on the bottom of the parameter list printed on the front panel. Use the [UTILITY] key to select a global parameter.

4 Use the [VALUE+/-] key to modify the value.

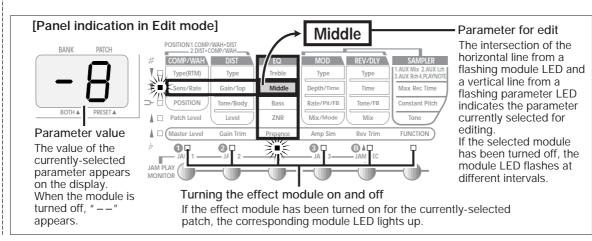
Pressing the [VALUE +] key once increments the value by one, and pressing the [VALUE -] key once decrements the value by one. Pressing and holding down one of these keys and pressing the other key will change the value rapidly.

- **5** Repeat steps **2 -4** above to edit the other parameters.
- 6 When you finish editing, press the [GROUP/EXIT] key.

The 2100 returns to Play mode.

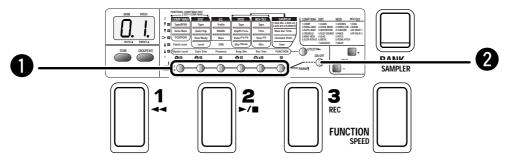


This parameter modification is temporary. All parameters will be reset to their original values when you select another patch in Play mode, unless you store the currently-selected patch. (The global parameters will be reset when the power is turned off.) See page 11 for information on storing patches.





## Turning an effect module on and off



- 1 In Edit mode, use the parameter select key to select the module to turn on and off.
- 2 Press the [ON/OFF] key.

The corresponding module is turned on or off.



• Instead of the parameter select keys, you can use foot switches 1-3 or the [BANK▲] switch to turn the effect module on and off.



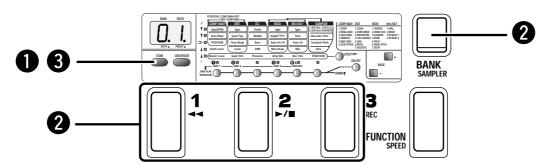
In step 1 you can also press and hold the parameter select key for more than one second to turn the selected module on and off. The parameter select key of the SAMPLER module, however, is a special key used to enter Sampler mode, and cannot be used to turn other modules on and off.



The module on/off setting is stored as part of the corresponding patch.

## Storing and copying a patch

When you select another patch, the edited patch is reset to its pre-edited status, unless you store the patch into memory. If you have created a favorite patch, be sure to store it. You can also make a copy of an existing patch by storing it in a different location. If you copy the patches for the same song into the same bank, it is much easier and quicker to switch between the patches during performance.



Press the [STORE] key in Play mode or Edit mode.

The 2100 enters store standby mode.

2 Use the [BANK▲] switch and foot switches 1-3 to select a copy destination patch.

If you do not specify the destination, the original bank number and the patch number will be automatically selected.



You cannot store the patch in the PRESET group. If a patch from the PRESET group is selected before you perform step 1, pressing the [STORE] key will automatically select patch "01" of the USER group. Select the desired bank number and patch number.

3 Press the [STORE] key again to store (copy) the patch. If you wish to cancel the store operation, press the [GROUP/EXIT] key instead.

The patch is stored and the 2100 returns to Play mode.



- When you execute the store (copy) operation, the patch in the destination will be erased and cannot be recovered. You can, however, revert any patch or all patches in the USER group to their factory default settings. (See page 20.)
- You can also use the [VALUE+/-] keys to select the copy (store) destination.

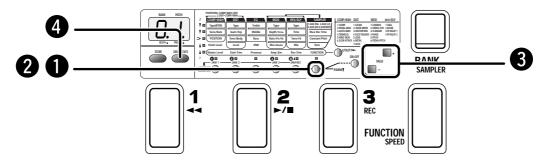


# **Using the Sampler function**

The 2100 features a Sampler function that allows you to record and play up to 32 seconds of data. Using this function, you can record your performance or other sound sources, such as a CD player, input from the AUX IN jack, and play back the data. If you also use the Pitch Revision function, you can play the recorded data at slower speed without affecting the pitch. This is useful for practicing phrases from the recording.

## Preparing to use the Sampler function

Before using the Sampler function, you need to select a recording source and set the maximum recording time.



Press the right-most parameter select key in Play mode.

The 2100 enters Edit mode. The SAMPLER is selected for editing.

Press the same parameter select key repeatedly to select the desired parameter to edit.

You can select the following parameters for the SAMPLER:

- Parameter 1: Selecting an input source Select a recording source from the following:
  - 1: AUX Mix: L/R channel signals input from the AUX IN jack are mixed and recorded.
  - 2: AUX Lch: Only L channel signal input from the AUX IN jack is recorded.
  - **3**: AUX Rch: Only R channel signal input from the AUX IN jack is recorded.
  - 4: PLAYNOTE: Only the instrument signal input from the INPUT jack is recorded. If you select this source, you cannot change the playback speed.
- Parameter 2: Maximum recording time
  Select a recording mode for the Sampler function.
  You can select "16" (maximum 16 seconds) for high quality recording, or "32" (maximum 32 seconds) for longer recording.

#### ■ Parameter 3: Constant Pitch

The 2100 has a Constant Pitch function that keeps the same pitch even if the playback speed of the Sampler function is changed. Use this parameter to turn the function "on" (Constant Pitch = on) or "oF" (Constant Pitch = off).



The Pitch Correct function uses a special pitch shifter, and may cause the pitch to fluctuate. If the sound is difficult to hear, turn the Constant Pitch parameter off.

#### ■ Parameter 4: Tone (Tonal correction)

This parameter enables you to adjust tonal quality of the Sampler playback sound in the range of -10 to +10. If you set a value from -10 to -1, the low range will be cut. If you set a value from 1 to 10, the high range will be cut.

- 3 Use the [VALUE +/-] key to set the parameter value.
- When you finish setting all parameters, press the [GROUP/EXIT] key to return to Play mode.

If you wish to keep these settings, store the corresponding patch. (See page 11.)

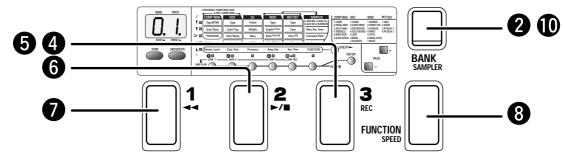


The parameters of the Sampler function are global parameters shared by all patches.



## Using the Sampler function

This section describes how to use the Sampler function, using an example of recording a sound source, such as a CD player or a cassette recorder, connected to the AUX IN jack.



Select 1 (AUX Mix) as an input source for the Sampler function.

See page 12 for information on how to select this option.

② If you press and hold down the [BANK▲] switch in Play mode for more than one second, the Sampler function is turned on and " ¬[ " flashes on the display.



You can also use the following methods to turn the Sampler function on.

- Press the right-most parameter select key in Edit mode to select the SAMPLER module, and use the [ON/OFF] key to turn the module on.
- · In Play mode or Edit mode, press and hold down the right-most parameter select key for more than one second



and MOD module + REV/DLY module simultaneously.

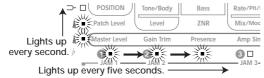
3 Play back the sound source connected to the AUX IN jack.



Adjust the volume level of a connected CD player or other input sound until you obtain the maximum level the does not distort the sound.

4 Press the foot switch 3 (REC) to start recording.

When you press foot switch 3, recording starts immediately. At this time, you can check the current recording time by the parameter LEDs and the module LEDs



Press foot switch 2 to finish recording.

When you press foot switch 2, recording ends immediately. The 2100 displays "Pd" and starts playback.

Press foot switch 2 (►/■) to stop playback.

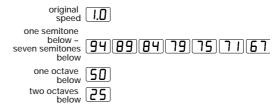
When you press foot switch 2 again while playback is stopped, the 2100 plays the recording from the beginning.

To rewind the played data, press foot switch 1 (◄◄) during playback.

Pressing foot switch 1 rewinds the data. This is useful when you wish to listen to a certain phrase over and over.

To change the playback speed, press the [FUNCTION] switch.

Pressing the [FUNCTION] switch repeatedly changes the playback speed. You can check the current speed on the display.





If the Pitch Revision function of the SAMPLER module is turned off, the pitch changes as shown above. If the Pitch Revision function is turned on, only the playback speed changes, but not the pitch.



If PLAY NOTE has been selected as a recording source, you cannot change the playback speed.

- Repeat steps 3 5 if you wish to record again.
- To quit Sampler mode, press and hold down the [BANK▲] switch.

Pressing the [BANK ] switch for a second will cause the 2100 to enter Play mode. At this time, the recorded data will be erased, and the MOD module and the REV/DLY module are enabled.



# **Using the RTM function**

RTM (Real-time Modulation) is a function in which operating the [FUNCTION] switch or an optional foot pedal FP01 or FP02 during performance will change the effect parameter settings and the volume level in real-time.

### Assign the Ct (Control) function to the [FUNCTION] switch.

Refer to page 8 for information on how to assign the function.

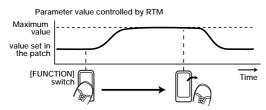
## While playing the instrument in Play mode, press the [FUNCTION] switch.

According to the settings of the currentlyselected patch, certain effect parameter values and the volume level are manipulated.

The following elements can be controlled via the [FUNCTION] switch.

#### 1. Real-time control of the COMP/WAH module

As you operate the FP01 or FP02, certain parameter values of the COMP/WAH module change. This control is effective only when an effect type with a " c " indication shown on the left of the display has been selected for the COMP/WAH module (the effect type that can be RTM-controlled). (See page 15.) The type of parameters varies depending on the selected effect type.



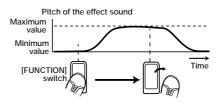
#### 2. Sound-on-sound (See the diagram below.)

The "Sound-on-sound function" adds sound while looping the delay sound. This function is turned on and off via the [FUNCTION] switch or the FP01. This is effective only when "7" (DELAY) is selected as the effect type of the MOD module and the FB parameter is set to " $5_{.0}$ ". (See page 18.) When you press and hold down the [FUNCTION]

switch, the Sound-on-sound function is turned on and the performance data is added to the delay sound of looping playback. Use the Time (delay time) parameter to set the interval of the looping playback.

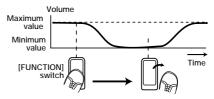
#### 3. Pedal Pitch Shifter

With the "Pedal Pitch Shifter" effect, the pitch of the effect sound changes as you operate the [FUNCTION] switch. This is effective only when "6" (PEDAL-PITCH) is selected as the effect type for the MOD module. (See page 18.)



#### 4. Volume

When all the effects described above are disabled, the volume level changes as you operate the [FUNCTION] switch.

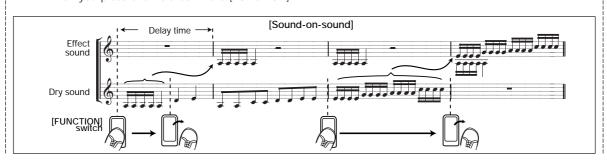




You can use effect 1. and 2., or 1. and 3. simultaneously. If the Bypass function is turned on, effect 4. is automatically enabled.



If the FP01 or FP02 is connected to the CONTROL IN jack of the 2100, operating the [FUNCTION] switch will not generate any effect, even if the switch function is assigned Ct (Control).





## Effect type and parameters

This section explains all available effect types and parameters on the 2100.

- Patch parameters have (P) attached to the names. Global parameters have (G) attached to the names. You
  can change the patch parameter and global parameter settings any time, regardless of the on/off status of the
  effect modules.
- If the parameter name includes (←RTM), it means that the parameter can be RTM controlled if the corresponding effect type has been selected.



Some parameters may not have any settings, depending on the effect types selected for the effect modules. These parameters will be skipped when you switch parameters within the same module.

## COMP/WAH (compressor/wah)

This module includes compressor and wah effects. This module is also used to set the patch level (a patch parameter) to adjust the level of the entire patch.

Parameter 1	1 / c1: COMP	2 / c2 : PEDAL-WAH	3 / c3 : AUTO-WAH	4 / c4 : TREMOLO	5 / c5 : RING MOD	6 / c6 : SLOW ATTACK
Parameter 2	Sens <b>(←RTM)</b> A0 – A9, b0 – b9	Sens <b>(←RTM)</b> 1 - 30	Sens <b>(←RTM)</b> d0 – d9, U0 – U9		Rate (←RTN 1 – 30	A)
Parameter 3	POSITION 1, 2					
Parameter 4	Patch Level <b>(P)</b> 1 – 30					

### Parameter 1 Type (RTM)

Select the desired effect type for the COMP/WAH module. The setting of parameter 2 changes according to the selected effect type. If you select an effect type with "c" prefixed to the value, you can control parameter 2 using the RTM control.

Type: 1/c1 COMP (compressor)

Type: 2/c2 PEDAL WAH (pedal-wah)

Type: 3/c3 AUTO WAH (auto-wah)

Type: 4/c4 TREMOLO (tremolo)

Type: 5/c5 RING MOD (ring modulator)

Type: 6/c6 SLOW ATTACK (slow attack)

#### ■ Type: 1/c1 COMP (compressor)

This effect restricts the attack to make the sound level even. If you select "c1," parameter 2 can be controlled via RTM.

#### ■ Parameter 2: Sens (←RTM)

This parameter specifies the depth of the compression effect and how fast it becomes effective. The effect of type "b" (shown in the left column) is applied more quickly. The numeric value in the right column specifies the depth. RTM controls the depth within the same effect type ("A" or "b").

#### ■ Type: 2/c2 PEDAL WAH (pedal-wah)

If you select "2," you can obtain a unique tone with a boosted mid range. If you select "c2," you can use the [FUNCTION] switch and an optional foot pedal FP01 as a wah pedal.

#### ● Parameter 2: Sens (←RTM)

This parameter specifies the frequency range emphasized by the wah effect.

#### ■ Type: 3/c3 AUTO WAH (auto-wah)

This effect produces wah effects. The intensity of the effect varies depending on how hard you pluck the strings. If you select "c3," parameter 2 can be controlled via RTM.

#### ● Parameter 2: Sens (←RTM)

This parameter specifies the sensitivity and the direction of changes in the emphasized frequency range of the auto-wah effect. The emphasized frequency range moves toward the lower frequencies when the setting is between "d0" – "d9," and moves toward higher frequencies when the setting is between "U0"—"U9." The value on the right specifies the sensitivity of the effect. RTM controls the sensitivity of the effect in the same direction.

#### ■ Type: 4/c4 TREMOLO (tremolo)

The tremolo effect changes the volume level cyclically. If you select "c4," parameter 2 can be controlled via RTM.

■ Parameter 2: Rate (←RTM)

This parameter specifies the speed of the tremolo.

#### ■ Type: 5/c54 RING MOD (ring modulator)

The ring modulator creates a metallic sound. If you select "c5," parameter 2 can be controlled via RTM.

#### ■ Parameter 2: Rate (←RTM)

This parameter specifies the modulation frequency.



#### ■ Type: 6/c6 SLOW ATTACK (slow attack)

This effect slows the attack of each tone to simulate a violin technique. If you select "c6," parameter 2 can be controlled via RTM.

■ Parameter 2: Rate (←RTM)

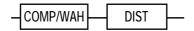
This parameter specifies the attack speed.

## ■ Parameters shared by effect types 1–6 and c1–c6

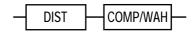
#### Parameter 3: POSITION (position)

This parameter specifies the order of the connection of the COMP/WAH effect module and the DIST effect module.

1: The COMP/WAH effect module is followed by the DIST effect module.



2: The DIST effect module is followed by the COMP/WAH effect module.



#### Parameter 4: Patch Level (P)

This patch parameter adjusts the overall volume of the patch.

## DIST (distortion)

This module includes distortion-type effects, such as distortion and over drive.

Parameter 1	1A / 1b : CLEAN	2A / 2b : OVER DRIVE	3A / 3b : DISTORTION	4A / 4b : FUZZ / GRUNGE	5A / 5b : LEAD	6A / 6b : METAL	7 : ACOUSTIC
Parameter 2		Gain 1 – 30				Top 1 – 10	
Parameter 3	Tone 0 – 10						Body 1 – 10
Parameter 4		Level 1 – 16					

#### Parameter 1

Select the desired effect type for the DIST effect module from the following seven types. Parameters 2 and 3 change according to the selected effect type. Effect types 1–6 provide two variations (A/B) to produce different effects.

Type: 1A/1b CLEAN (clean)

Type: 2A/2b OVER DRIVE (over drive)
Type: 3A/3b DISTORTION (distortion)
Type: 4A/4b FUZZ/GRUNGE (fuzz/grunge)

Type: 5A/5b LEAD (lead)

Type: 6A/6b METAL (metal)

Type: 7 ACOUSTIC (acoustic)

#### ■ Type: 1A/1b CLEAN (clean)

This effect type produces a clean sound.

**1A (FAT CLEAN):** Produces a firm sound with emphasized mid and low ranges.

**1b** (BRIGHT CLEAN): Produces a bright sound with an emphasized high range.

#### Parameter 3: Tone

This parameter adjusts the tonal quality of the high range.

#### ■ Type: 2A/2b OVERDRIVE (overdrive)

This is an overdrive effect.

2A (VINTAGE OD): Produces a sound with a vintage amplifier flavor.

**2b (OVERDRIVE):** Produces a thick, solid sound with plenty of sustain.

#### Parameter 2: Gain

This parameter sets the amount of distortion.

#### Parameter 3: Tone

This parameter adjusts the tonal quality in the high range.

#### ■ Type: 3A/3b DISTORTION (distortion)

This is a distortion effect.

3A (VINTAGE DIST): Produces a dry distortion

3b (DISTORTION): Produces a wet distortion sound.

#### ■ Type: 4A/4b FUZZ/GRUNGE (fuzz/grunge)

This fuzz effect produces a wild distortion.

4A (FUZZ):

Produces a 60's retrospective fuzz tone.

4b (GRUNGE)

Produces a stimulating, contemporary fuzz sound.

- Parameter 2: Gain
- Parameter 3: Tone

#### ■ Type: 5A/5b LEAD (lead)

This effect is suitable for a lead guitar.

5A (LEAD):

Sound with an edge in the mid range suitable for lead quitar.

#### 5b (VINTAGE LEAD):

Produces a solid, powerful sound with a vintage amplifier flavor.

- Parameter 2: Gain
- Parameter 3: Tone

#### ■ Type: 6A/6b METAL (metal)

This effect type is most suitable for a heavy metal sound.



#### 6A (METAL):

Produces a contemporary heavy metal sound. 6b (STACK METAL):

Produces the powerful sound of a large, fully-driven amplifier.

Parameter 2: GainParameter 3: Tone

#### ■ Type: 7 ACOUSTIC (acoustic)

This effect changes the electric guitar sound to an acoustic guitar tone.

#### Parameter 2: Top

This parameter adjusts the high range, emphasizing the string reverberation unique to acoustic guitars.

#### Parameter 3: Body

This parameter adjusts the low range, emphasizing the reverberations of the guitar body.

#### ■ Parameters shared by effect types 1–7

#### Parameter 4: Level

This parameter sets the output level of the module.

## **EQ** (Equalizer)

The equalizer of the 2100 boosts and cuts the high, mid, and low ranges individually. This module is also used to set ZNR (a patch parameter).

Parameter 1	Treble -12 – 12
Parameter 2	Middle -12 – 12
Parameter 3	Bass -12 – 12
Parameter 4	ZNR <b>(P)</b> oF, 1 – 10

#### Parameter 1: Treble

This parameter boosts and cuts the high range. The range to be boosted and cut when a clean-type effect is selected for the DIST module is different from the range when a distortion-type effect is selected.

#### Parameter 2: Middle

This parameter boosts and cuts the mid range.

#### Parameter 3: Bass

This parameter boosts and cuts the low range.

#### ● Parameter 4: ZNR (P)

This patch parameter adjusts the sensitivity of ZNR (Zoom Noise Reduction). Try to set a higher value if possible, as long as the tone decays naturally. If you select "oF" (off), ZNR is disabled.

## MOD (Modulation)

This modulation effect module includes chorus, pedal pitch shifter, etc.

Parameter 1	1 : CHORUS	2 : STEREO CHO	3 : FLANGER	4 : PHASE	5 : PITCH	6 : PEDAL- PITCH (RTM)	7 : DELAY
Parameter 2	Depth 0 - 10					Time 1 – 99,1.0 – 6.0	
Parameter 3		1	Rate I – 50		Pit -12 – dt – 12		FB <b>(←RTM)</b> 0 - 10, S.o
Parameter 4		/lix - 30	Mode A0 - A9, b0 - b9	Mode A0 - A9, b0 - b9	Mix 0 – 30	Mode 1 – 16	Mix 0 – 30

#### Parameter 1

Select the effect type for the MOD effect module from the following seven types. The type of parameters 2 and 3 changes depending on the selected effect type.

Type: 1 CHORUS (chorus)

Type: 2 STEREO CHO (stereo chorus)

Type: 3 FLANGER (flanger)
Type: 4 PHASE (phaser)
Type: 5 PITCH (pitch shifter)

Type: 6 PEDAL-PITCH (pedal pitch shifter)

Type: 7 DELAY (delay)

#### ■ Type: 1 CHORUS (chorus)

This monaural chorus produces a thick sound.

#### Parameter 2: Depth

This parameter sets the depth of the chorus effect.

#### Parameter 3: Rate

This parameter sets the modulation speed.

#### Parameter 4: Mix

This parameter sets the amount of the effect sound to be mixed.

#### ■ Type: 2 STEREO CHO (stereo chorus)

This stereo chorus adds spaciousness.

- Parameter 2: Depth
- Parameter 3: Rate
- Parameter 4: Mix



#### ■ Type: 3 FLANGER (flanger)

This flanger effect creates a swell with a character, like a jet engine.

Parameter 2: Depth

Parameter 3: Rate

#### Parameter 4: Mode

This parameter sets the pre-delay time and the feedback amount of the flanger effect. Setting a value between "A0" – "A9" makes the pre-delay time short, and setting a value between "b0" – "b9" makes the pre-delay time long. The value on the right specifies the feedback amount.

#### ■ Type: 4 PHASE (phaser)

This phaser effect gives a swell to the sound by adding the effect sound with the cyclically-shifted phase to the dry sound

Parameter 2: Depth

Parameter 3: Rate

#### Parameter 4: Mode

This parameter specifies the number of phaser stages and the amount of resonance. Setting a value between "A0" and "A9" selects the four-stage phaser, and setting a value between "b0"—"b9" selects the eight-stage phaser. The value on the right specifies a resonance amount that emphasizes the character of the effect.

#### ■ Type: 5 PITCH (pitch shifter)

This effect shifts the pitch of the effect sound within the range of  $\pm 1$  octave.

#### Parameter 3: Pit

This parameter specifies the range of pitch shift in semitone steps.

#### Parameter 4: Mix

This parameter specifies the mix balance of the effect sound. (With a setting of 15, the mix ratio is 1:1. A value of 30 specifies that only the pitch shift sound will be heard.)

#### ■ Type: 6 PEDAL-PITCH (pedal pitch shifter)

With this effect, the [FUNCTION] switch and an optional foot pedal FP01 or FP02 can be used as a pedal pitch shifter.

#### Parameter 4: Mode

Select the method of pitch shift from the following 16 modes. The minimum and maximum values of the pitch shift (controlled by the [FUNCTION] switch and the FP01 or FP02) vary with the mode selection.

Mode	Pedal up 🚄	Pedal down 🚍		
1.	–100 cents	dry		
2.	dry	-100 cents		
3.	doubling	detune + dry		
4.	detune + dry	doubling		
5.	0 cent	+1 octave		
6.	+1 octave	0 cent		
7.	0 cent	-2 octaves		
8.	-2 octaves	0 cent		
9.	-1 octave + dry	+1 octave + dry		
10.	+1 octave + dry	-1 octave + dry		
11.	-700 cents + dry	+500 cents + dry		
12.	+500 cents + dry	-700 cents + dry		
13.	-∞ (0Hz) + dry	+1 octave		
14.	+1 octave	-∞ (0Hz) + dry		
15.	-∞ (0Hz) + dry	+1 octave + dry		
16.	+1 octave + dry	-∞ (0Hz) + dry		

#### ■ Type: 7 DELAY (delay)

This delay effect creates a delay time of up to six seconds.

#### Parameter 2: Time

This parameter specifies the delay time. A value can be set between "1" (10msec) and "99" (990msec) in 10msec steps, or "1.0" (1 second) and "6.0" (6 seconds) in 100msec steps.

#### ● Parameter 3: FB (←RTM)

This parameter specifies the feedback amount of the delay sound. If you set this parameter to "S.o," you can use the [FUNCTION] switch or an optional foot pedal FP01 or FP02 to use the "Sound-on-sound" function. (See page 14.)

#### Parameter 4: Mix

This parameter specifies the mix balance of the effect sound.

## REV/DLY (Reverb/Delay)

This effect module includes reverb and ping-pong delay.

Parameter 1	1 : HALL 2 : ROOM		3 : PP-DELAY1	4 : PP-DELAY2		
Parameter 2		me · 30	Time 1 – 1.0			
Parameter 3		one · 10	FB 0 – 10			
Parameter 4	Mix 0 – 30					

#### Parameter 1

Select the desired effect type for the REV/DLY effect module from the following four types. The type of parameters 2 and 3 changes depending on the selected effect type.

Type: 1 HALL (hall reverb)

Type: 2 ROOM (room reverb)

Type: 3 PP-DELAY1 (ping-pong delay 1) Type: 4 PP-DELAY2 (ping-pong delay 2)



#### ■ Type: 1 HALL (hall reverb)

This reverb effect simulates reverberation in a concert hall, creating warm acoustics.

#### Parameter 2: Time

This parameter specifies the length of reverberation (reverb time).

#### Parameter 3: Tone

This parameter adjusts the high range of the effect sound.

#### ■ Type: 2 ROOM (room reverb)

This reverb effect simulates reverberation in a room, creating bright acoustics.

- Parameter 2: Time
- Parameter 3: Tone

#### ■ Type: 3 PP-DELAY1 (ping-pong delay 1)

This ping-pong delay effect pans the delay sound left and right.

#### Parameter 2: Time

This parameter specifies the delay time in 10msec steps. The setting range is 1 (10msec) through 1.0 (1 sec).

#### Parameter 3: FB

This parameter specifies the feedback amount of the delay sound.

#### ■ Type: 4 PP-DELAY2 (ping-pong delay 2)

This ping-pong delay effect creates a long delay of up to 10 seconds.

#### Parameter 2: Time

This parameter specifies the delay time in 100msec steps. The setting range is 1 (100msec) through 1.0 (10 sec).

Parameter 3: FB

#### ■ Parameter shared by effect types 1-4

#### Parameter 4: Mix

This parameter specifies the mix balance of the effect sound.

## SAMPLER (Sampler)

In this module, you can make basic settings regarding the Sampler function of the 2100 (see page 12). The parameters included in this function are global parameters applied to all patches.

Parameter 1	1.AUX Mix 2. AUX Lch 3.AUX Rch 4.PLAYNOTE <b>(G)</b>
Parameter 2	MAX Rec Time <b>(G)</b> 16, 32
Parameter 3	Constant Pitch (G) on, oF
Parameter 4	Tone <b>(G)</b> -10 – 10

Parameters enabled during recording

Parameters enabled during playback

See page 12 for more information on the parameters.



If you turn the SAMPLER function on in Edit mode, the 2100 enters record standby mode. Set the parameters while the SAMPLER module is turned off.

## Other global parameters

Global parameters applied to all patches are listed at the bottom of the parameter list printed on the front panel of the 2100. Use the [UTILITY] key to select the desired parameter if you wish to edit a global parameter.

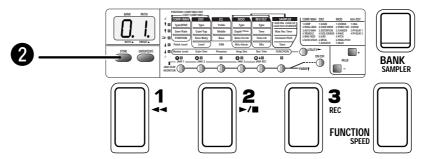
Master Level	Gain Trim	Presence	Amp Sim	Rev Trim	FUNCTION
1 – 30	1 – 10	-12 – 12	oF, Co, bC, St	1 – 10	bd, Mn, Ct, JP

See pages 5, 8, and 9 for more information on the parameters.



# Resetting the 2100 to the factory default condition

The All Initialize and Factory Recall modes are special modes used to reset the 2100 to the factory defaults. All Initialize mode reverts all global parameters and patches in the USER group to the factory default settings. Factory Recall mode reverts only particular patches in the USER group to the factory default settings.



- Press and hold down the [STORE] key, and turn on the power to the 2100.
  - "AL" appears on the display.
  - \* Using All Initialize mode → Proceed to the next step.
  - \* Using Factory Recall mode → Use the [BANK▲] switch and foot switches 1-3 to select patch(es) in the USER group you wish to reset to the factory settings.
- 2 Press the [STORE] key again.

All Initialize or Factory Recall is executed. When All Initialize is complete, the 2100 automatically returns to Play mode.



All patches stored by the user will be erased when you execute All Initialize. To cancel All Initialize/Factory Recall, press the [GROUP/EXIT] key before step ②.

# **Troubleshooting**

Symptom		Check		Action
		Is the AC adapter connected correctly? Is the power turned on?	$\Diamond$	Follow the instructions in the "Connections" section and turn on the power to the 2100.
		Is the guitar connected to the INPUT jack correctly? Is the amplifier connected to the OUTPUT jack correctly?	$\Diamond$	Follow the instructions in the "Connections" section and make the connections correctly.
		Are you using an appropriate shielded cable?	$\Diamond$	Change the shielded cable and try again.
No sound, or the volume is very low		<ul> <li>Is the power turned on to the connected amplifier?</li> </ul>	$\Diamond$	Turn on the power to the connected amplifier.
volume is very low	7	Is the volume of the guitar or the amplifier raised to an appropriate level?		Raise the volume to the optimum level.
		Is the Mute function turned on?		Cancel the Mute function.
		Is the master level lowered?		Adjust the master level. (See page 5.)
		• Is the volume level controlled via the FP01or FP02 (option) foot pedal lowered?		Operate the FP01 or FP02.
No sound from the CD player connected to the AUX IN jack.		Is the volume level of the CD player set correctly?		Set the volume level of the CD player to the optimum level.
Patches cannot be		• Is the 2100 in Manual mode?	$  \updownarrow \rangle$	Press the [FUNCTION] switch to set the 2100 to Play mode.
changed.	\>	Is the 2100 in store standby mode or All Initialize standby mode?	$\Diamond$	Press the [STORE] key to execute the function, or press the [GROUP/EXIT] key to quit standby mode and return to Play mode.



# **SPECIFICATIONS**

◆ Effect programs: 33 (31 effect types + Amp Simulator + ZNR)

◆ Effect modules: 5 modules + Amp Simulator + ZNR

◆ Sampler module: 32 or 16-second recording time selectable

Variable playback speed Variable playback pitch

Sampler input source selectable AUX IN: (1) Mixed/(2) Lch/(3) Rch (Guitar In: (4) PLAY NOTE)

<MOD module and REV/DLY module cannot be used at the same time.>

◆ Patch memory capacity: USER: 10 banks x 3 = 30 (Can be written and stored.)

PRESET: 10 banks x = 30

Total: 60 patches

◆ Sampling frequency: 31.25kHz

◆ A/D converter: 20-bit, 64-times oversampling

◆ D/A converter: 20-bit, 128-times oversampling

◆ DSP: ZOOM original ZFx-2

♦ Input: Guitar input (standard monaural phone jack

(Rated input level: -20dBm, Input impedance:  $470k\Omega$ )

♦ AUX IN: Mini phone jack/stereo (Input impedance: 10kΩ)

◆ Output: Combined line/headphone output (standard monaural phone jack)

(Max. output level: +6dBm/Output load impedance:  $10k\Omega$  or more)

◆ Control connector: For optional FP01 or FP02

◆ Display: 2-digit, 7-segment LED

♦ Power requirements: 9VDC, center minus 300mA (from supplied AC adapter)

◆ Dimensions: 276(W)x145(D)x40(H)mm

♦ Weight: 550g

 $^*$  0 dBm = 0.775 Vrms

\* Design and specifications subject to change without notice.



### **USAGE AND SAFETY PRECAUTIONS**

#### **USAGE AND 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 2100.



#### Power requirements

The 2100 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 2100 in an area with a different line voltage, please consult your local ZOOM distributor about acquiring a proper AC adapter.



#### • Environment

Avoid using your 2100 in environments where it will be exposed to:

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



#### Handling

Since the 2100 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

Never open the case of the 2100 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

You should always turn off the power to the 2100 and all other equipment before connecting or disconnecting any cables. Also make sure to disconnect all cables and the AC adapter before moving the 2100.

#### **Usage Precautions**

#### • Electrical interference

For safety considerations, the 2100 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 2100, as the possibility of interference cannot be ruled out entirely.

With any type of digital control device, the 2100 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 2100. 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



#### **ZOOM CORPORATION**

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