

# Multi-Effects Processor



# **OPERATION MANUAL**

Thank you very much for purchasing the **ZOOM B3** n.

Please read this manual carefully to learn about all the functions of the **Ba** so that you will be able to use it fully.

Keep this manual in a convenient place for reference when necessary.

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# Usage and safety precautions

### **Safety Precautions**

In this manual, symbols are used to highlight warnings and cautions that you must read to prevent accidents. The meanings of these symbols are as follows:



Something that could cause serious injury



Something that could cause injury or Caution damage to the equipment.

#### Other symbols



Required (mandatory) actions

Prohibited actions

### Warning

#### Operation using an AC adapter



O Do not do anything that could exceed the ratings of outlets and other electrical wiring equipment.

#### **Alterations**

Never open the case or attempt to modify the product.

### 

#### Product handling

- Do not drop, bump or apply excessive force to the unit.
- Be careful not to allow foreign objects or liquids to enter the unit.

#### Operating environment

- O Do not use in extremely high or low temperatures
- O Do not use near heaters, stoves and other heat sources.
- O Do not use in very high humidity or near splashing water
- O Do not use in places with excessive vibrations.
- O Do not use in places with excessive dust or sand

#### AC adapter handling

- When disconnecting the AC adapter from an outlet, always pull the body of the adapter itself.
- During lightning storms or when not using the unit, disconnect the power plug from the AC outlet.

#### Connecting cables with input and output jacks

- Always turn the power OFF for all equipment before connecting any
- Always disconnect all connection cables and the AC adapter before moving the unit.

#### Volume

O Do not use the product at a loud volume for a long period of time.

### **Usage Precautions**

#### Interference with other electrical equipment

In consideration of safety, the Ban has been designed to minimize the emission of electromagnetic radiation from the device and to minimize external electromagnetic interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves could result in interference if placed nearby. If this occurs, place the Ban and the other device farther apart.

With any type of electronic device that uses digital control, including the B3n, electromagnetic interference could cause malfunction, corrupt or destroy data and result in other unexpected trouble. Always use caution.

#### Cleaning

Use a soft cloth to clean the panels of the unit if they become dirty. If necessary, use a damp cloth that has been wrung out well. Never use abrasive cleansers, wax or solvents, including alcohol, benzene and paint thinner.

#### Malfunction

If the unit becomes broken or malfunctions, immediately disconnect the AC adapter, turn the power OFF and disconnect other cables. Contact the store where you bought the unit or ZOOM service with the following information: product model, serial number and specific symptoms of failure or malfunction, along with your name, address and telephone number.

#### FCC regulation warning (for U.S.A.)

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

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

#### For EU Countries



**Declaration of Conformity** 

## Introduction

### More advanced user interface

We have made the stompbox-style user interface developed for our G series even more advanced. Using the three displays, you can easily check effect parameters and effect chains.

## **Detailed emulations of amp and cabinet characteristics**

The **Ban** delivers studio-quality sound with precise emulations of circuit operations and bass amp characteristics along with cabinets modeled using impulse responses.

### **Download new effects and patches**

Our free **Ban** Effects/Patch Manager software for Windows and MacOS allows you to regularly download new effects and patches created by ZOOM. For detailed information, see the ZOOM website (http://www.zoom.co.jp/downloads/).

## Terms used in this manual

### **Patch**

The **B3** can store up to 150 patches with effect parameter settings and ON/OFF states.

### Bank

A set of three patches is called a "bank".

### Unit

Each "Unit" combines a Display, 4 parameter knobs and a foot switch.

### Large effect

An effect that uses multiple units is called a "large effect".

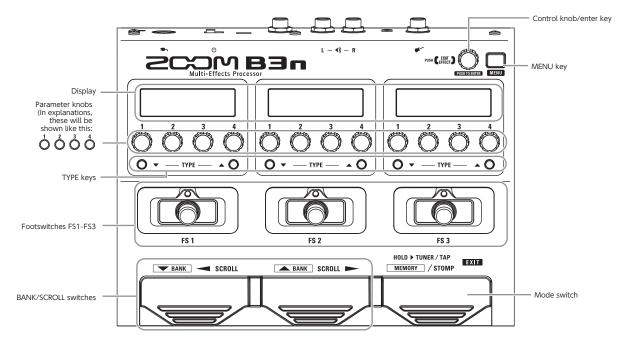
\* A printed list of effect parameters is not included with the **B3n**.

Please download a copy from the ZOOM website. 

http://www.zoom.co.jp/

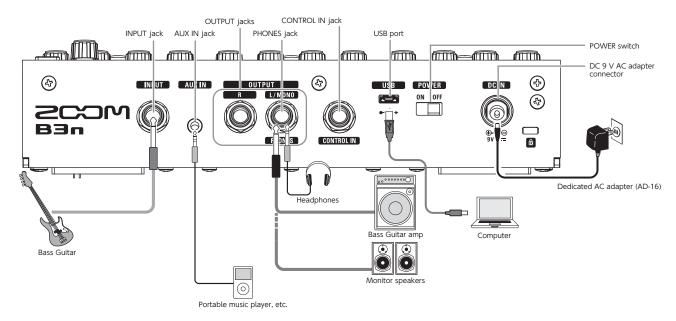
Part names Part names

### Front panel



### Rear panel

4



5

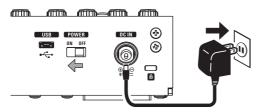
# **Turning the power on**

## To turn the power on

• Lower the amplifier's volume all the way.



• Connect the AC adapter before setting the POWER switch to ON.





• Turn the power of your guitar amplifier or PA system on and raise its volume.



## Using the eco setting

When eco mode is ON, the **Ban** will automatically turn off if it is not used for 10 hours.

# **Display information**

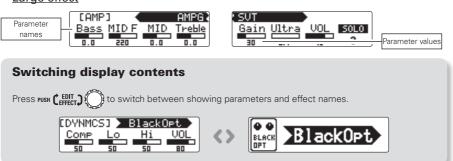
## Display in STOMP mode

In STOMP mode, you can turn effects ON/OFF and change effect types.

#### Standard effect



### Large effect



## Display in MEMORY mode

In MEMORY mode, you can change patches and banks.

again to return to the original screen.



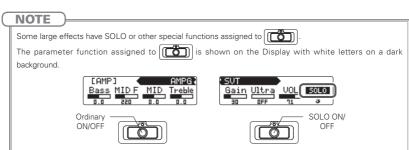
# **Adjusting effects**



## Turning effects ON/OFF

- Press
- This turns that effect ON/OFF.





# Selecting effect types

- Press TYPE ▲ ○.
  - V
- This changes the effect type.



### NOTE

The **Ban** allows you to combine up to 7 effects in whatever order you like. If limits on the processing capability or the number of units used are exceeded, a "PROCESS OVERFLOW" warning will appear and effects will be bypassed. To end bypassing, delete some effects or change their types.



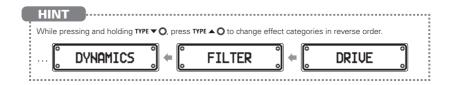
# Selecting effect categories

While pressing and holding TYPE ▲ ①, press TYPE ▼ ②.



• The category name will appear and the effect will be changed to the first effect type in the category.

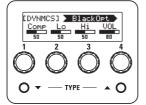


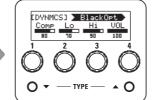


### **Adjusting effects**

## Adjusting parameters

• Turn 0, 0, 3 and 0.





#### HINT

- · Parameter adjustments are saved automatically.
- When AUTO SAVE is set to OFF, a parameter saving screen will appear when you try to change patches.
   (→P19)

### NOTE

Set Time, Rate and other effect parameters to musical notes to sync them to the tempo. (→P42)

# Scrolling effect displays

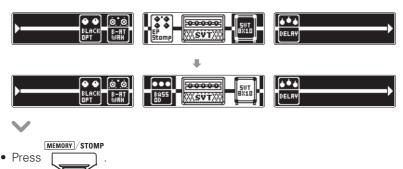
• Use and to scroll the screen.







• Press repeatedly to scroll the effect displays.



## Adding effects

- Press to open the MENU screen.
  - V
- Turn to select ADD.

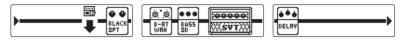


NOTE

If 7 effects are already in use, ADD will not be shown.



• Press to open the ADD screen.



### **Adjusting effects**

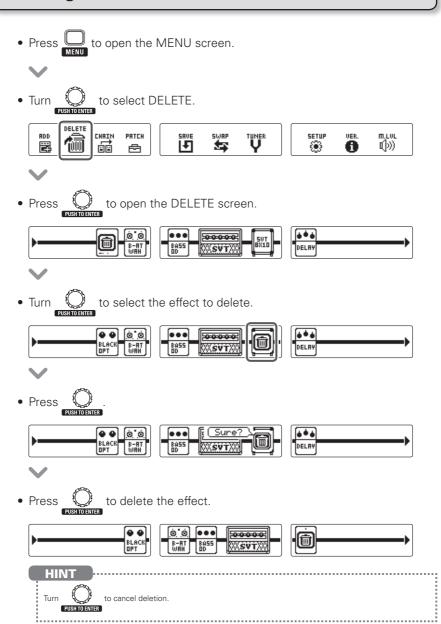
• Turn PRINTERNES to select where the effect will be added.



- V
- Press to confirm where the effect is added.
  - V
- A cable will be added to the Display.
  - V
- Press ▼ TYPE ▲ to select the effect type.



## **Deleting effects**



13

### **Adjusting effects**

• Press MENU

# Changing the effect order

• Press to open the MENU screen.

V

• Turn to select CHAIN.



V

• Press to open the CHAIN screen.



V

• Turn to select the effect to swap.

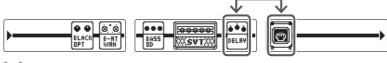


V

• Press to confirm the effect to swap.



• Turn to swap with the next effect in the chain.





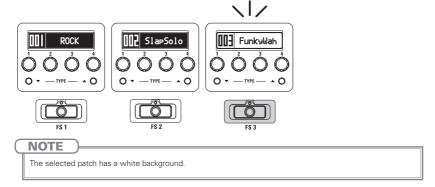
# **Using patches**



## Selecting patches

### **■** Switching patches

- Press or Fs 3
- This changes the patch.



## ■ Switching banks

- Use FANK and ABANK
- This changes the bank.



- Press and hold to change banks continuously.
- See P24 for information about the preselect function that enables changing to banks with distant numbers.

## Setting independent patch parameters

### **■** Entering patch setting mode

• Press to open the MENU screen.

V

• Turn to select PATCH.



V

• Press to open the PATCH screen.



### ■ Adjusting patch levels

• Turn to select LEVEL.



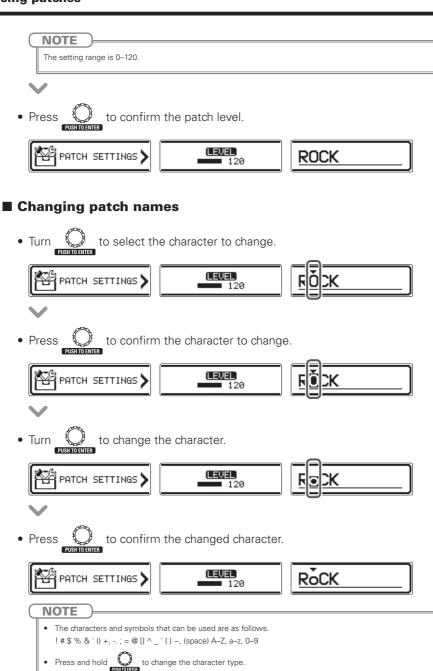
• Press O...



• Turn to set the patch level.



### **Using patches**



### **■** Ending patch setting mode

• Press MENU

## Saving patches

• Press to open the MENU screen.



• Turn to select SAVE.





Press to open the SAVE screen.

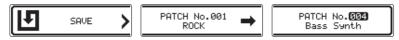
PUSHTOENTER

TO OPEN THE SAVE SCREEN.

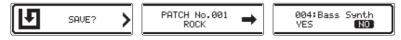


V

• Turn to select where the patch will be saved.



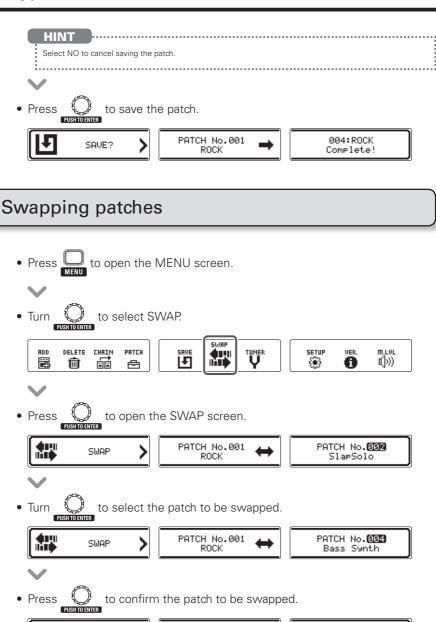
Press to confirm where the patch will be saved.



• Turn to select YES.



### **Using patches**

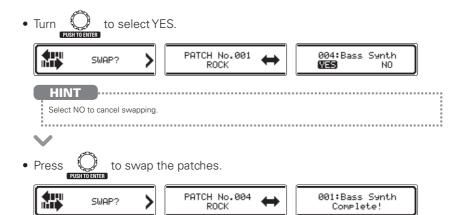


PATCH No.001

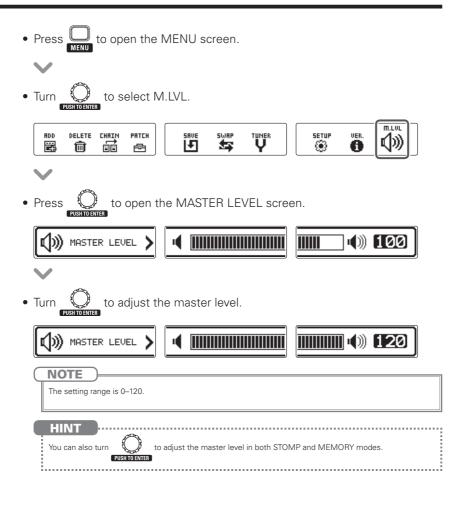
ROCK

SWAP?

004:Bass Synth

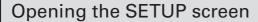


# **Adjusting the master level**



# **Changing various settings**

Change various settings on the SETUP screen.



Press to open the MENU screen.
 Turn to select SETUP.

RDD DELETE CHRIN PRICH

SRUE SWRP TUMER

SETUR



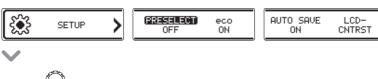
• Press to open the SETUP screen.



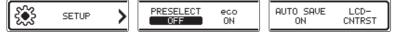
## Setting the preselect function

Turn PRESELECT ON to enter standby when the bank is switched, allowing you to press a foot switch to confirm the patch change.

On the SETUP screen, turn \_\_\_\_\_\_ to select PRESELECT.



• Press O...



• Turn to set PRESELECT to ON/OFF.



Press
 To confirm the preselect setting.

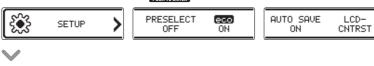


## Setting the eco mode

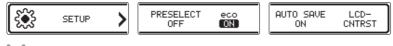
When eco mode is on, the **Ban** will automatically turn off if not used for 10 hours.

rs.

• On the SETUP screen, turn \_\_\_\_\_\_ to select eco.



• Press O



• Turn to set eco to ON/OFF.



Press to confirm the eco mode setting.



## Setting the auto save function

Enable parameters to be saved automatically.

On the SETUP screen, turn to select AUTO SAVE.





• Press Output Push to enter







LCD-

CNTRST

(AUTO SAVE)

ON



Turn \_\_\_\_\_ to set AUTO SAVE to ON/OFF.







#### NOTE

When set to OFF, no patch or effect parameters will be saved automatically.



Press to confirm the auto save setting.







### Note about switching patches

When AUTO SAVE is set to OFF, if you try to switch patches after changing any parameters, a message will appear asking to save the parameter changes.

To save changes to parameters before switching patches, select YES. (→P19)

To discard changes to parameters before switching patches, select NO.

## Adjusting the display contrast

 On the SETUP screen, turn
 PUSHTOENTER to select LCD CNTRST. PRESELECT OFF AUTO SAVE ON eco SETUP ON (UNIT1) UNIT2 8 UNIT3 to select a display to adjust its contrast. (UNIT2) UNIT3 UNIT1 to confirm the display. UNIT2 UNIT3 UNIT1 to adjust the contrast. UNIT1 UNIT2 UNIT3 10 **NOTE** The setting range is 1-13. to confirm the contrast setting. (UNIT2) UNIT1 UNIT3

# Using the tuner

## Activating the tuner

• Press and hold in STOMP or MEMORY mode.





• Press or FS2



The BYPASS sound is output when the TUNER is active.



No sound is output when the TUNER is active.



• This opens the TUNER screen.



## Tuning a bass guitar

• Play the open string that you want to tune and adjust its pitch.

#### **Chromatic tuner**

The name of the nearest note and the pitch accuracy are shown.



#### Other tuners

The number of the nearest string and the pitch accuracy are shown.



## Closing the tuner

• Press when the TUNER screen is open.

## Changing the tuner settings

### ■ Opening the TUNER SETTINGS screen

• Press to open the MENU screen.







### ■ Changing the standard pitch of the tuner

• On the TUNER SETTINGS screen, turn to select CALIBRATION. [CALIBRATION] TYPE FLAT TUNER SETTINGS BASS b×0 CALIBRATION TYPE FLAT TUNER SETTINGS > BASS 440Hz b×0 to change the standard pitch. TYPE CALIBRATION FLAT TUNER SETTINGS > BASS bx0 **NOTE** The setting range is 435-445 Hz for middle A. to confirm the standard pitch of the tuner. (CALIBRATION) TYPE TUNER SETTINGS > BASS 442Hz b×0 when the TUNER screen is open to change the standard pitch.

### **■** Changing the tuner type

• On the TUNER SETTINGS screen, turn to select TYPE.



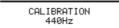


CALIBRATION 440Hz













to select the tuner type.







#### **CHROMATIC**

The chromatic tuner shows the nearest pitch name (semitone) and how far the input sound is from that pitch.

#### **Tuner type**

Display	olay Meaning	String number/Note name					
Display		LB	4	3	2	1	НС
BASS	Standard tuning for bass guitars, including those with 5 or 6 strings	В	Е	Α	D	G	С

"LB" is the low B string and "HC" is the high C string.



to confirm the tuner type.

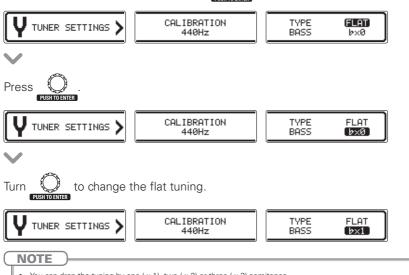


CALIBRATION 440Hz



## ■ Using flat tuning

On the TUNER SETTINGS screen, turn to select FLAT.



- fou
- You can drop the tuning by one (x1), two (x2) or three (x3) semitones.
  - Drop tuning is not possible when the TYPE is set to CHROMATIC.



• Press to confirm the flat tuning setting.



# **Using rhythms**

## Selecting a rhythm

• Press to change to STOMP mode.



• Use ○ ▼ TYPE ▲ ○ to select RHYTHM for the desired unit.



#### NOTE

One RHYTHM can be selected per patch.

## Playing a rhythm

• Press for the unit using the rhythm effect.



• The rhythm starts playing.



#### HINT

- During rhythm playback, you can switch between STOMP and MEMORY modes.
- If you change a patch during rhythm playback, the rhythm will stop.

## Stopping a rhythm

• During rhythm playback, press for the unit using the rhythm.



• The rhythm stops.



## Setting rhythms

### **■** Selecting rhythm patterns

• Turn of for the unit using the rhythm.



### ■ Adjusting the rhythm tempo

• Turn of for the unit using the rhythm.



#### NOTE

- The setting range is 40–250 bpm.
- This tempo setting is used by every effect, rhythms and the looper.

### ■ Adjusting the rhythm volume

• Turn for the unit using the rhythm.



# **Using the looper**

## Selecting the looper

• Press to change to STOMP mode.



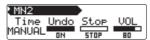
Use ○ ▼ TYPE ▲ ○ to select a LOOPER for the desired unit.

### 1-unit looper



#### 2-unit looper





#### NOTE

- There are 4 types of loopers: 1-unit mono, 2-unit mono, 1-unit stereo and 2-unit stereo.
- · One LOOPER can be selected per patch.

## Recording, playing and clearing phrases

### **■** Recording phrases

• Press for the first unit in the LOOPER.



• This starts recording.





Recording stops and loop playback starts.

#### If the recording time is set to "MANUAL"

Loop playback will start when you press again or when the maximum recording time is reached.

### If the recording time is set to a musical note

Loop playback will start when the set recording time is reached.



#### HINT

- See P39 for how to set the LOOPER recording time.
- During phrase recording and playback, switching to MEMORY mode will not interrupt it.

#### NOTE

- · During rhythm playback, recording will start after the precount.
- Changing a patch will stop phrase recording and playback. Moreover, this will delete the phrase recording
  data.
- During rhythm playback, quantization is enabled so even if the recording ending time is not exact, the loop will automatically be adjusted so that loop playback stays in time.
- · Changing the tempo of a RHYTHM during loop playback will erase the recorded phrase.

### ■ Overdubbing a recorded phrase

• During loop playback, press for the first unit in the LOOPER.





### ■ Stopping loop playback

#### With 1-unit looper

• During loop playback, press twice for the unit using the looper.





• This stops the playback.



### Using the looper

### With 2-unit looper

• During loop playback, press for the second unit in the LOOPER.







• This stops the playback.





### **■** Deleting phrases

### With 1-unit looper

• When loop playback is stopped, press and hold the looper.





This deletes the phrase.



### With 2-unit looper

• When loop playback is stopped, press for the second unit in the LOOPER.







• This deletes the phrase.





## Setting the looper

### ■ Setting the looper recording time

• Turn of for the unit using the looper.



#### NOTE

- The setting options include MANUAL and 1-64 quarter notes.
- The recording time for the mono looper is from 1.5 to 80 seconds (40 seconds when UNDO is ON).
- The recording time for the stereo looper is from 1.5 to 40 seconds (20 seconds when UNDO is ON).
- · Settings that will not fit in the recording time will be adjusted automatically.
- · Changing the recording time will delete the recorded data.

### **■** Setting the UNDO function

• Turn for the unit using the looper to set it to ON/OFF.



#### NOTE

When UNDO is ON, the recording time will become as follows.

- · Mono looper: 40 seconds
- · Stereo looper: 20 seconds

### **Using the UNDO and REDO functions**

If UNDO is ON, you can undo the last overdub. You can also use the REDO function to restore the phrase that the UNDO function deleted.

#### With 1-unit looper

To undo an overdub, press for one second during playback. To restore the deleted phrase, press for one second again.

#### With 2-unit looper

To undo an overdub, press for the first unit twice during playback. To restore the deleted phrase, press for twice again.

### ■ Setting how loop playback stops

 $\bullet$  Turn  $\overset{3}{\circ}$  for the unit using the looper.



#### **STOP**

Stop playback immediately.

#### **FINISH**

Play to the end and then stop.

#### **FADE OUT**

Stop after fading out.

### ■ Adjusting the looper volume

• Turn for the unit using the looper.



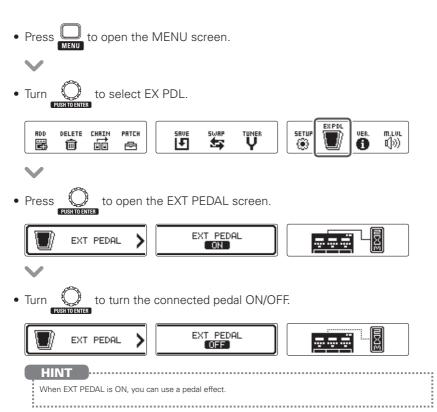
The setting range is 0-100.

# **Using the pedal**

# Using a connected pedal

### ■ Setting up the connected pedal

You can set a pedal effect to be assigned to the connected pedal.



# Using the tap tempo function

Loopers, rhythms, delays and some modulation effects can be synchronized to the tempo.

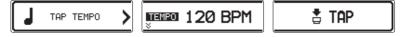


## Enabling tap tempo

• Press and hold in STOMP or MEMORY mode.

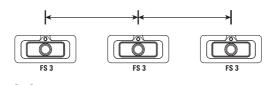


• Press to open the TAP TEMPO screen.



## Setting the tempo

Press at least twice at the desired tempo.



• This sets the tempo.



## Ending tap tempo setting

• Press when the TAP TEMPO screen is open.

## Restoring default settings and patches

While pressing set the POWER switch to ON.

Turn statement to select YES.

FILL INITIALIZE

Are you sure?

YES NO

HINT

Select NO to cancel initialization.

Press to initialize.

"Complete!" will appear on the display when initializing completes.

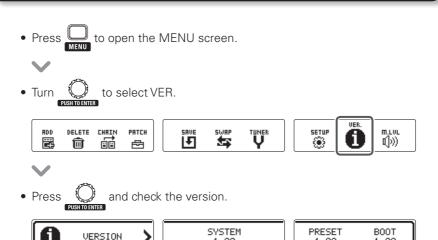


HINT

Executing the All Initialize function will restore all the settings of the **B∃n**, including its patches, to factory defaults. Do not use this function unless you are certain that you want to do this.

# **Updating the firmware**

# Checking the firmware version



1.00

1.00

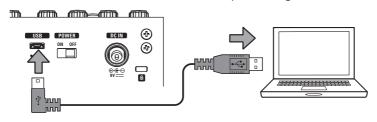
1.00

## Updating the firmware

#### ■ To download the latest firmware

Visit the ZOOM Website (http://www.zoom.co.jp/).

• Connect the **B3n** to a computer using a USB cable.





• While pressing both and F51 and F52, set the POWER switch to ON.



 Launch the version update application on your computer, and execute the update.



• "Complete!" will appear on the display when updating completes.



Set the POWER switch to OFF.



# **Troubleshooting**

#### No sound or very low volume

- Confirm that the POWER switch is set to "ON".
- Check the connections (→P4-5).
- Adjust the patch level (→P17).
- Adjust the master level (→P22).
- If you are using the expression pedal to adjust the volume, adjust the pedal position until the volume level is suitable.

#### There is a lot of noise

- Check shielded cables for defects.
- Use only a genuine ZOOM AC adapter.

#### An effect is not working

 If limits on effect processing capacity, the number of units or the amount of resources used are exceeded, effects will be bypassed and the following message will appear (→P9).

PROCESS OVERFLOW

#### Expression pedal does not work well

 Confirm the setting of the connected pedal (→P41).

# **Rhythm List**

No.	PatternName	TimSig
1	GUIDE	4/4
2	8Beats1	4/4
3	8Beats2	4/4
4	8Beats3	4/4
5	16Beats1	4/4
6	16Beats2	4/4
7	16Beats3	4/4
8	Rock1	4/4
9	Rock2	4/4
10	Rock3	4/4
11	ROCKABLY	4/4
12	R'n'R	4/4
13	HardRock	4/4
14	HeavyMtl	4/4
15	MtlCore	4/4
16	Punk	4/4
17	FastPunk	4/4
18	Emo	4/4
19	TomTomBt	4/4
20	Funk1	4/4
21	Funk2	4/4
22	FunkRock	4/4
23	JazzFunk	4/4

24	R&B1	4/4
25	R&B2	4/4
26	70s Soul	4/4
27	90s Soul	4/4
28	Motown	4/4
29	HipHop	4/4
30	Disco	4/4
31	Pop	4/4
32	PopRock	4/4
33	IndiePop	4/4
34	EuroPop	4/4
35	NewWave	4/4
36	OneDrop	4/4
37	Steppers	4/4
38	Rockers	4/4
39	Ska	4/4
40	2nd Line	4/4
41	Country	4/4
42	Shuffle1	4/4
43	Shuffle2	4/4
44	Blues1	4/4
45	Blues2	4/4
46	Jazz1	4/4

PatternName

No.	PatternName	TimSig
47	Jazz2	4/4
48	Fusion	4/4
49	Swing1	4/4
50	Swing2	4/4
51	Bossa1	4/4
52	Bossa2	4/4
53	Samba1	4/4
54	Samba2	4/4
55	Breaks1	4/4
56	Breaks2	4/4
57	Breaks3	4/4
58	12/8 Grv	12/8
59	Waltz	3/4
60	JzWaltz1	3/4
61	JzWaltz2	3/4
62	CtWaltz1	3/4
63	CtWaltz2	3/4
64	5/4 Grv	5/4
65	Metro3	3/4
66	Metro4	4/4
67	Metro5	5/4
68	Metro	

# **Specifications**

	22.		
Effect types	80 types		
Number of simultaneous effects	7		
Number of user patches	150		
Sampling frequency	44.1 kHz		
A/D conversion	24-bit with 128x oversampling		
D/A conversion	24-bit with 128x oversampling		
Signal processing	32-bit		
Frequency characteristics	eristics 20-20 kHz +1 dB, -3 dB (10 kΩ load)		
Display	128×32 dot-matrix LCDs (3)		
Input INPUT	Standard monaural phone jack Rated input level: -20 dBu		
	Input impedance(line) : 470 k $\Omega$		
AUX IN	Stereo mini jack Rated input level: -10 dBu Input impedance(line) : 10 kΩ		
Output R	Standard monaural phone jack Maximum output level: $+5$ dBm (with output load impedance of 10 k $\Omega$ or more)		
L/MONO/PHONES	Standard stereo phone jack (combined line/headphone) Maximum output level: Line +5 dBm (with output load impedance of 10 k $\Omega$ or more) Headphones 15 mW +15 mW (into 32 $\Omega$ load)		
Equivalent input noise	119 dBu		
Noise floor (residual noise)	–100 dBu		
Control input	l input FP02 input		
Power	AC adapter DC 9 V (center minus plug), 500 mA (ZOOM AD-16)		
Dimensions	B3n 181 mm(D) X 234 mm(W) X 58 mm(H)		
USB	USB MIDI USB Micro-B		
Weight	<b>B∃n</b> 1.28 kg		
Options	otions FP02 expression pedal		

<sup>• 0</sup> dBm=0.775 Vrms



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