ZOOM®

ARQ
Aero RhythmTrak
AR-96

Operation Manual

Contents

Usage and Safety Precautions

Safety Precautions

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

⚠ Warning	Something that could cause serious injury or death
⚠ Caution	Something that could cause injury or damage to the equipment

Other symbols used

❗	An action that is mandatory
🚫	An action that is prohibited

⚠ Warning

Operation using an AC adapter
- ❗ Never use any AC adapter other than a ZOOM AD-14.
- 🚫 Do not do anything that could exceed the ratings of outlets and other electrical wiring equipment
- 🚫 Connect the AC adapter only to an AC outlet that supplies the rated voltage required by the adapter.

Operation using the rechargeable battery
- ❗ Always use a ZOOM BT-04 rechargeable battery.
- ❗ Carefully study warning indications on batteries before use.
- ❗ Always keep the battery cover closed during use.

Alterations
- 🚫 Do not open the case or modify the product.

⚠ Caution

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
- 🚫 Do not use in extremely high or low temperatures.
- 🚫 Do not use near heaters, stoves and other heat sources.
- 🚫 Do not use in very high humidity or where it could be splashed by water.
- 🚫 Do not use in places with frequent vibrations.
- 🚫 Do not use in places with much dust or sand.

AC adapter handling
- ❗ When disconnecting the power plug from an outlet, always pull on the plug itself.
- ❗ Disconnect the power plug from the outlet when the unit will not be used for a long time and whenever there is lightning.

Connection cables and input/output jacks
- ❗ Always turn the power OFF for all equipment before connecting any cables.
- ❗ Always disconnect all connection cables and the AC adapter before moving the unit.

Volume
- 🚫 Do not use at a loud volume for a long time.

Usage Precautions

Interference with other electrical equipment
In consideration of safety, the **AR-96** has been designed to minimize its emission of electromagnetic waves and to suppress interference from external electromagnetic waves. 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 **AR-96** and the other device farther apart.
With any type of electronic device that uses digital control, including the **AR-96**, 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 exterior of the unit if it becomes dirty. If necessary, use a damp cloth that has been wrung out well to wipe it.
If the Ring Controller surface becomes dirty, wipe it with a soft damp cloth that does not shed fibers.
Never use abrasive cleansers, wax or solvents such as alcohol, benzene or paint thinner.

Breakdown and 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 breakdown or malfunction, along with your name, address and telephone number.

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For optimal performance

The **AR-96** uses Bluetooth LE wireless communication for communication between the Ring Controller and the Base Station. Communication at up to 10 meters is possible in an unobstructed indoor space. If interference from electromagnetic waves or other causes prevent good communication, try the following.

- Bring the Ring Controller and the Base Station closer together.
- Move any obstacles between the Ring Controller and the Base Station.
- Stop unnecessary 2.4GHz transmissions or move interfering devices (including the following) further away.
  - WiFi access points
  - Smartphones and other devices that use WiFi
  - Microwave ovens
  - Audio monitors, lighting controllers and other devices that communicate at 2.4GHz

Warnings and requests regarding safe battery use

Carefully read the following warnings in order to avoid serious injuries, burns, fires and other problems caused by leaking, heat generation, combustion, rupture or accidental swallowing.

⚠ DANGER

- ⊘ Do not charge the lithium-ion battery (BT-04) in any way other than using the **AR-96** and an AD-14.
- ⊘ Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- ⊘ Do not disassemble the battery, put it in fire, or heat it in a microwave or conventional oven.
- ⊘ Do not leave the battery near a fire, in strong sunlight, inside a vehicle that has become hot or in similar conditions. Do not recharge in conditions like these.
- ⊘ Do not carry or store the battery with coins, hairpins or other metal objects.
- ⊘ Do not allow the battery to be wet by any liquid, including water, seawater, milk, soft drinks or soapy water. Do not charge or use a battery that is wet.

⚠ Warning

- ⊘ Do not hit the battery with a hammer or other object. Do not step on it or drop it. Do not otherwise impact or apply force to the battery.
- ⊘ Do not use the battery if it becomes deformed or damaged.
- ⊘ Do not remove or damage the outer seal. Never use a battery that has had all or part of its outer seal removed or a battery that has been torn.

Recycling request

Please recycle batteries to help conserve resources. When discarding used batteries, always cover their terminals and follow all laws and regulations that are applicable to the location.

Usage and Safety Precautions (continued)

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

C E   **Declaration of Conformity**

Disposal of Old Electrical & Electronic Equipment (Applicable in European countries with separate collection systems)

Products and batteries that have been marked with the symbol of a crossed-out wheeled waste bin must not be disposed of with household waste.
Old electrical/electronic equipment and batteries should be recycled at facilities that are able to process them and their byproducts.
Contact the local government for information about nearby recycling facilities. Conducting recycling and waste disposal properly helps conserve resources and prevents harmful impacts on human health and the environment.

For U.S.A. and CANADA

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

For CANADA

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation du débit d'absorption spécifique (DAS).

Label is located at the bottom of the unit.

The contents of this document and the specifications of the product could be changed without notice.

Introduction

Thank you very much for purchasing a ZOOM Aero RhythmTrak **AR-96**. The **AR-96** has the following features.

• Loop-shaped controller

The loop shaped Controller makes inputting loop sequences intuitive.

• Ring Controller with 3 rows of 32 pads and 5 rows of 32 LEDs

During step input, you can use the 3 rows of pads to input 3 instruments at the same time. In addition, the multicolor LEDs allow you to see the input status of up to five instruments at a glance.

Furthermore, each pad row can be used separately for real-time input, allowing diverse performance options.

• Ring Controller can be removed from Base Station

The Ring Controller can be removed from the Base Station to perform with it in hand. You can now realize entertaining performances in ways that are not possible with conventional rhythm machines.

•Accelerometer built into the Ring Controller

You can control effect parameters by tilting the Ring Controller. Enjoy a new feeling of controlling sound with your body.

• Automatic detection of the grip area

The grip area setting function can prevent misoperation when holding the Ring Controller during performances.

The position can be set easily when holding it in the most comfortable position.

• The Ring Controller and Base Station connect with Bluetooth LE

The Ring Controller and Base Station connect wirelessly using Bluetooth LE. Power consumption is low, so use for long periods of time is possible.

In addition, the Ring Controller can be independently connected to Mac computers and iOS devices to be used as a multifunction MIDI controller.

• Built-in sound sources can be edited in various ways

The sounds included in the **AR-96** have various setting parameters that increase their tonal ranges.

Each of the sound parameters can be set easily on an icon-based editor screen.

In addition, each KIT can use the sounds of up to 33 instruments (16 simultaneous voices), allowing the creation of rich musical pieces.

• More than 400 PCM sound sources and 70 synthesizer oscillator types built-in

From the rich selection of sound sources, you will be able to find sounds that fit your image of the music you want to make.

The sounds are organized by categories so you can find them quickly.

• Various creation modes

Create music using different modes for different purposes. Build patterns one step at a time in STEP mode. Perform patterns in INST mode. Arrange patterns you have made into complete pieces of music in SONG mode. Assign captured audio to pads and perform with them in LOOPER mode.

• Use up to five effects simultaneously

You can use an insert effect on individual instruments, as well as global filter, delay, reverb and master effects at the same time. This vastly increases sound design possibilities.

• Inputs for electronic instruments and audio devices

You can perform while listening to the input from a connected device and capture input sounds to use as loops.

• Loading of audio files possible

You can use a computer to save WAV files on an SD card and load them for use as loops. (An SD card (not included) is required.)

• Headphone output independent from other outputs

The second stereo output allows you to output a metronome just to the headphones, for example.

Explanation of terms

Pattern

This is a short musical part of several bars. The **AR-96** has preset patterns that cover a variety of musical genres.

Song

This is a combination of multiple patterns that form a single musical piece.

Step

These are the smallest parts of patterns. Input sounds in steps when inputting a sequence.

Sequence

A sequence combines the data for the various scales and tones used for the sounds in the melodies and rhythms in the patterns.
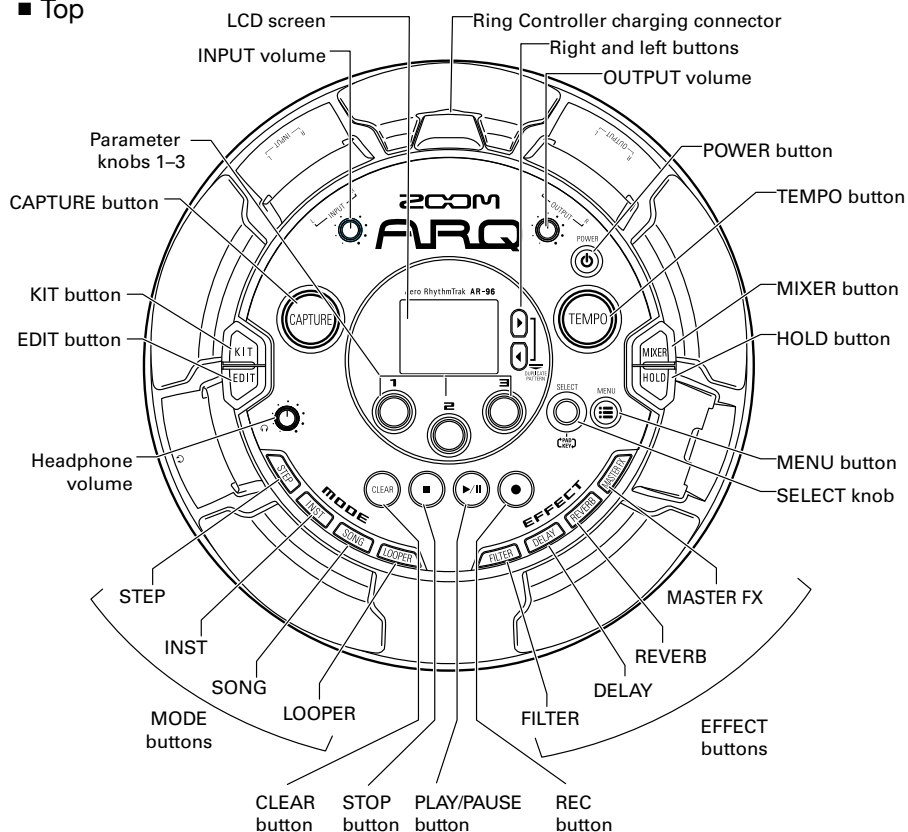
KIT

This is a set of sounds, which can include drum sets, percussion instruments, basses and synthesizers, for example. By changing the KIT, you can easily use sounds that suit different musical genres and applications. The **AR-96** has preset kits organized by genre.

Overview

Names of parts

Base Station

■ Top

- LCD screen
- INPUT volume
- Ring Controller charging connector
- Right and left buttons
- OUTPUT volume
- Parameter knobs 1–3
- POWER button
- CAPTURE button
- TEMPO button
- KIT button
- MIXER button
- EDIT button
- HOLD button
- Headphone volume
- MENU button
- SELECT knob
- STEP
- MASTER FX
- INST
- REVERB
- SONG
- DELAY
- LOOPER
- FILTER
- MODE buttons
- EFFECT buttons
- CLEAR button
- STOP button
- PLAY/PAUSE button
- REC button

Names of parts (continued)

■ Left side

INPUT jack

Headphone jack

■ Right side

OUTPUT jack

External power jack

USB jack

SD card slot

Names of parts (continued)

Ring Controller

(Side)
△ button
▽ button

SETUP button

GRIP button

Pads

Charging connector

(Bottom)
DELAY button
FILTER button

(Bottom)
MASTER FX button
REVERB button

POWER button

STOP button
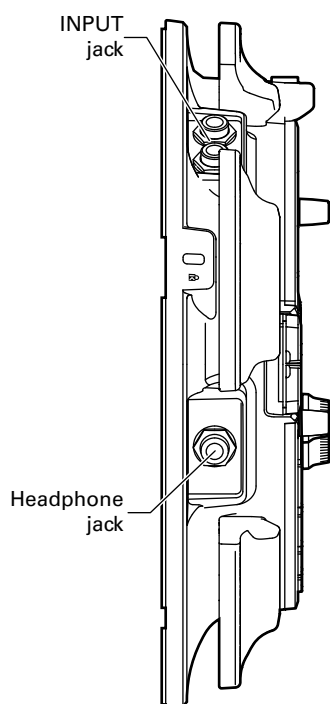
(Side)
PLAY/PAUSE button
REC button
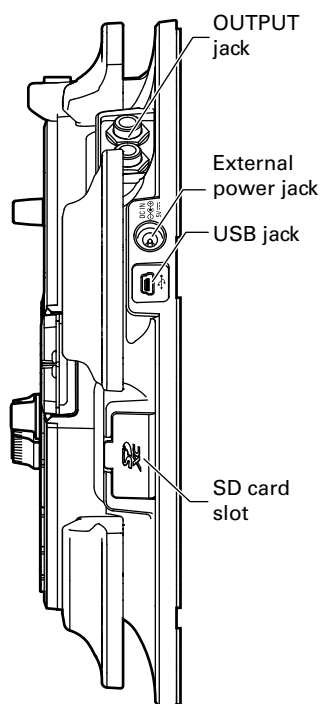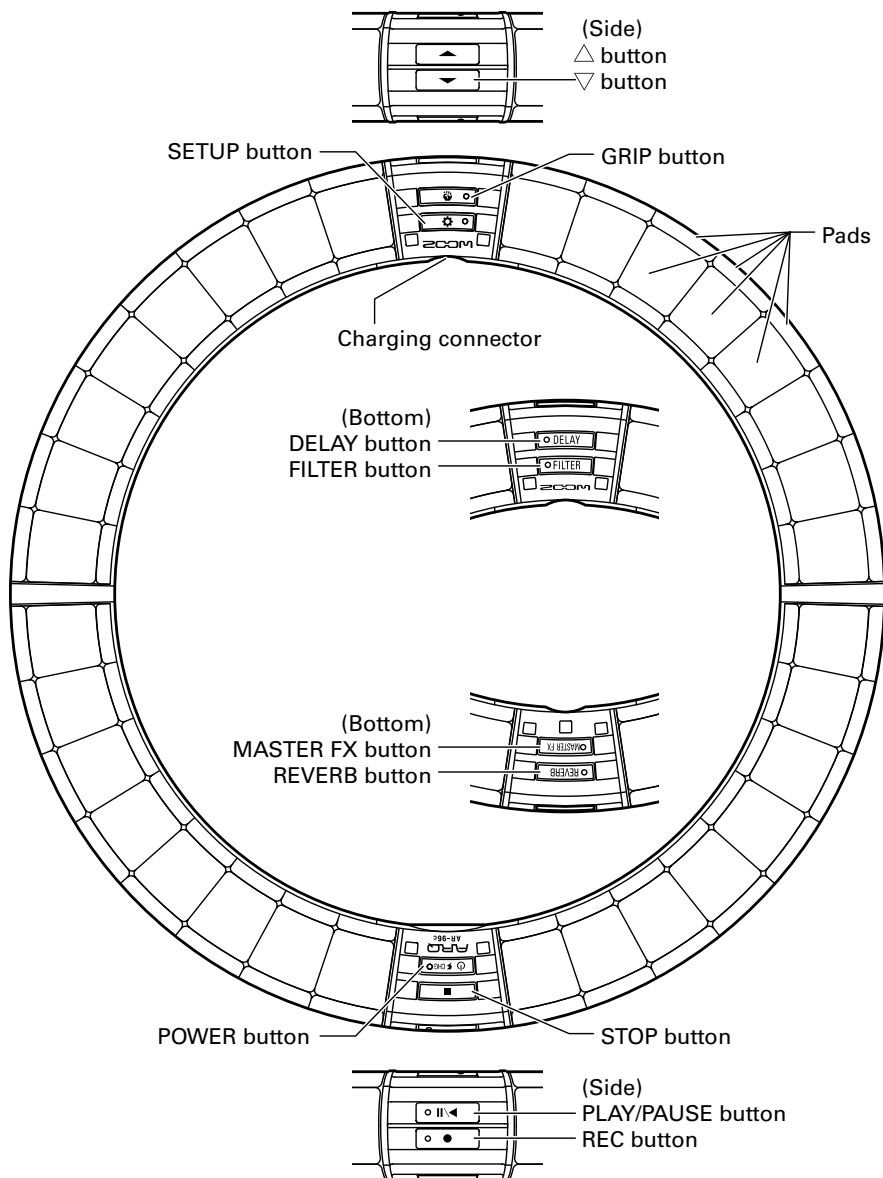
HINT

- You can use the Ring Controller keys for the same operations as the Base Station keys.
- The Ring Controller ⬍ corresponds to the Base Station ◎ⅉ.

Using the AR-96

The **AR-96** consists of a Base Station and a Ring Controller.

Ring Controller
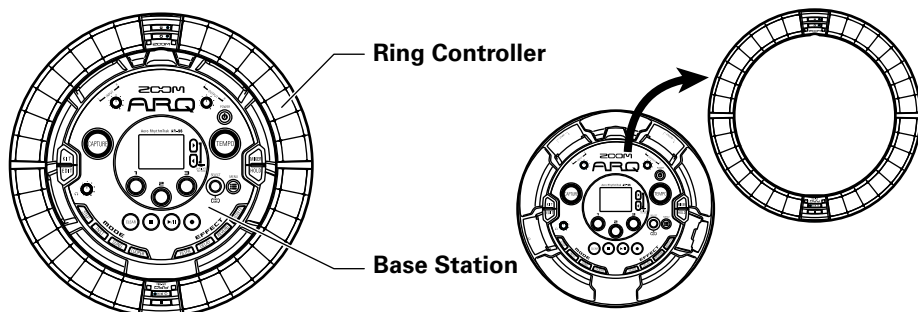
Base Station

With the Base Station, you can edit tones, create songs and save them, for example. Use the Ring Controller for input when creating songs.

Since the Ring Controller can be detached from the Base Station, you can hold it in your hand and play it like an instrument. You can also connect it wirelessly to a Mac computer or iOS device and use it as a MIDI controller. (→ P. 108)

The Ring Controller includes an LED matrix with 5 rows of 32 blocks (3 rows with pads and 2 rows for display only). Placing a two-dimensional matrix on the surface of a three-dimensional hoop enables confirmation and operation of all steps in a compact form.
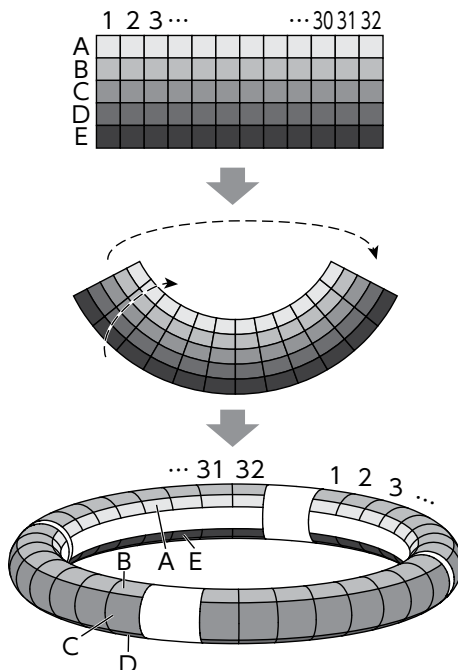
Ring Controller overview

The **AR-96** Controller surface has 5 ring-shaped areas. The top, side and bottom rings each have 32 pressure-sensitive pads. Using these pads, you can input and edit songs and perform in real-time, for example.

Top inner ring
LED indicators
(no input)

Bottom inner ring
LED indicators
(no input)

Top ring
Pressure-sensitive
pads for input

Pad locations

Side ring
Pressure-sensitive
pads for input

Bottom ring
Pressure-sensitive
pads for input
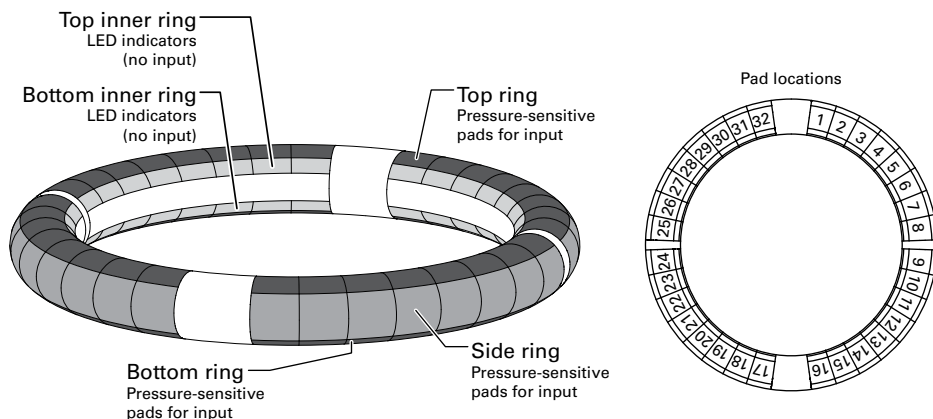
Assignment of functions

Various functions are assigned to the Ring Controller rings and pads according to the operation status and mode.

Example: In STEP mode PAD layout, the rings display 5 different instrument sequences (3 when set to Guideline display), and each pad and indicator corresponds to a step between 1 and 32.

Step
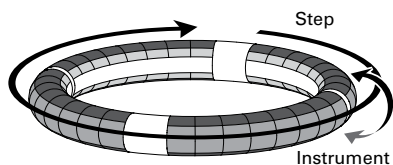
Instrument

Example: In INST mode PAD layout, each pad controls 1 of 32 instruments with each ring assigned to a different parameter setting.

Instrument

Ring parameters
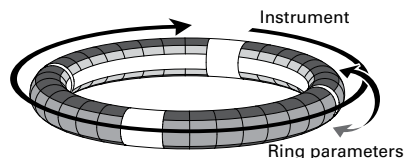
HINT
Since input procedures differ for each mode, see the explanation pages for each operation for details.

Guideline

In STEP mode, the LEDs of the top and bottom inner rings can light for each beat to assist in step recording.
See "Setting inner ring display" (→ P. 96) for setting instructions.
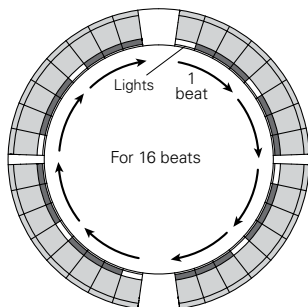
Playback position

When Guideline mode is active, the LEDs of the top and bottom inner rings light green at the step currently playing during playback of patterns and songs, for example.
In addition, in INST mode and during other real-time input, the LEDs light red.
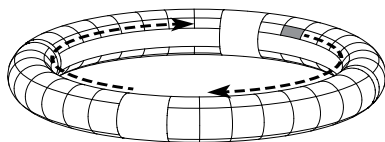
Grip area

You can set a grip area that does not respond to touch in order to prevent pads from being pressed unintentionally when using the Ring Controller separately from the Base Station. You can set the grip area range as you like.
For details about how to set this, see "Grip area setting" (→ P. 103).
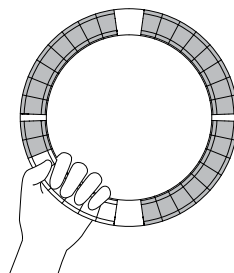
Turning the Ring Controller over

If you turn the ring controller over and place it so that the side with the power key and the side with the effect keys are reversed, the functions assigned to the rings and the display of LEDs will be reversed top to bottom. Moreover, the direction of movement will also be switched. As a result, when the Ring Controller is viewed from above, movement will always be clockwise and the top ring will always be on top when you use it.
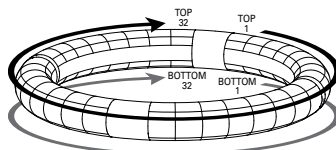
Use the same way even when turned over

NOTE

If the grip area has been set, turning the ring controller over will not reverse assignments or the direction.

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Connecting other devices

Audio source for
capturing recordings

Mixer, audio system or
other playback equipment

INPUT

OUTPUT

AC adapter

Headphones

AR-96

Computer
(USB connection)
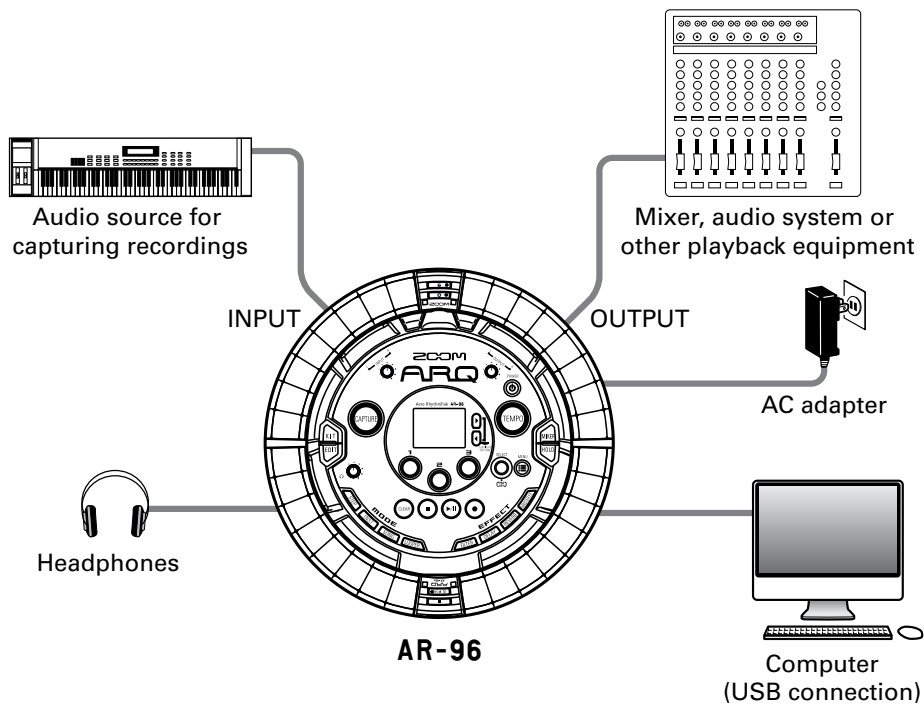
Switching modes

With the **AR-96**, you can create patterns and combine multiple patterns to create songs.

Editing with the **AR-96** mainly uses the following four modes. By switching between these modes, you can alternate between creating patterns and creating songs.
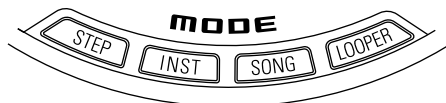
The two modes for creating patterns are STEP and INST.

· In STEP mode, you can record instrument sounds one step at a time to create patterns.
· In INST mode, and you can record a performance as a pattern by playing the pads in real-time.

Use SONG and LOOPER modes to create songs.

· In SONG mode, create songs by playing and changing patterns in real-time and recording the results.
· In LOOPER mode, use audio data captured from the input of devices connected to the INPUT jacks, patterns and songs, as well as WAV files loaded from SD cards, for example, as materials to build looper sequences and create songs.

Pattern creation
Create and save patterns

STEP mode
Create patterns by inputting one step at a time

INST mode
Record patterns by playing in real time

SONG mode
Combine patterns that have already been made to create songs

LOOPER mode
Create songs using loops from other songs, captured external input and PCM audio files

Song creation
Combine patterns and other sources to create songs

Instrument overview

The **AR-96** can use up to 33 sound sources in a single KIT. Each of these is called an instrument and produces sound from waveform data, such as a drum hit, or from the built-in synthesizer. You can choose from hundreds of types of sounds and assign ones you like to each instrument.

In STEP or INST mode, press $\overset{\text{SELECT}}{\circledcirc}$ to switch between the two following types of instrument sound sources. Up to 16 sounds can be generated simultaneously in either layout.

PAD layout	In this mode, you can assign and play different instruments to as many as 32 pads. In addition to being useful for playing drums, you can also assign the synthesizer to instruments.
KEY layout	Use this mode to use a musical scale to play one instrument. The pads become like a keyboard in a musical scale order. The Ring Controller LEDs light white for white keyboard keys and blue for black keyboard keys. The scale can also be set to major or minor, for example.
	This is useful for playing synthesizer parts, but can also be used to play snares and other percussion instruments with a musical scale.

Assignments of instruments to the Ring Controller are different for STEP and INST modes as well as for PAD and KEY layouts.
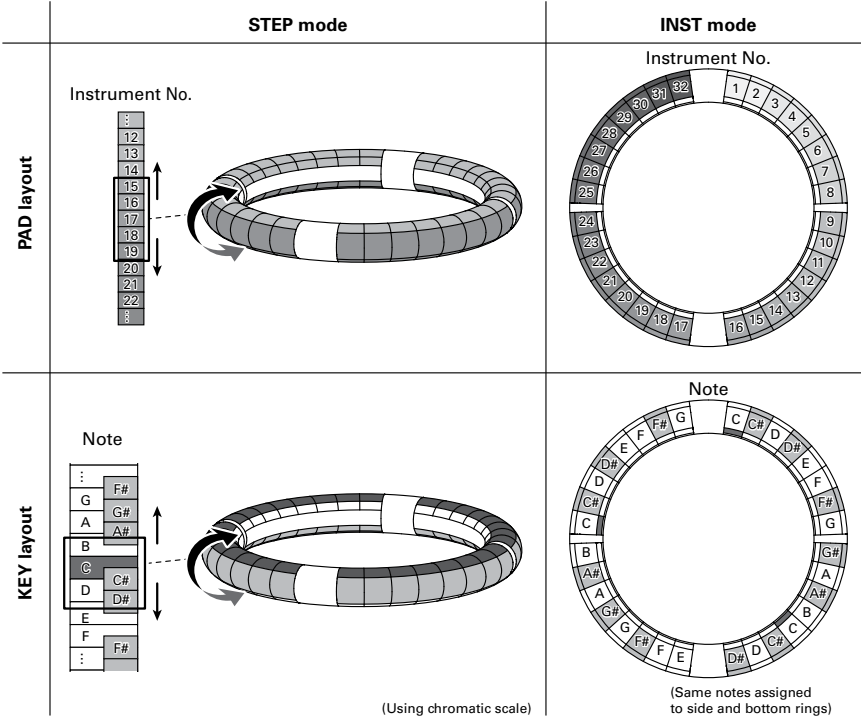
Preparations

Turning the power on and off

Base Station power

1. Connect the included AC adapter to the Base Station.
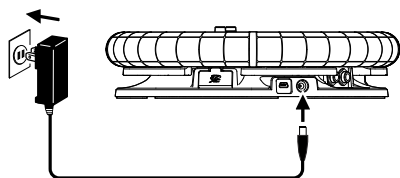
2. Press and hold ^{POWER} � on the Base Station.

3. Press and hold ^{POWER} ⓑ to turn the power OFF.

HINT

When the Ring Controller is asleep and connected to the Base Station, turning the Base Station power ON/OFF will also turn the Ring Controller ON/OFF.

NOTE

Use the AC adapter to power the **AR-96** even when it is connected to a computer or other device by USB.

Ring Controller power

■ Charging the Ring Controller

1. Place the Ring Controller on the Base Station.
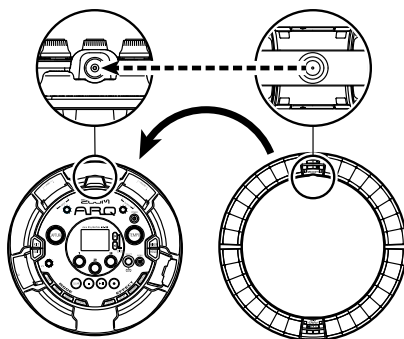
Align their charging connectors before placement.
Charging will start and the Ring Controller ⬡ LED will light.

Charging (Power off or asleep)	Red
Charging during use	Orange
Using battery (Remaining battery charge at least 12%)	Green
Using battery (Remaining battery charge less than 12%)	Blinking green

Turning the power on and off (continued)

■ Putting the Ring Controller to sleep

When the Ring Controller is charging, the power will not turn OFF. Instead, it will go to sleep.

1. ◯ CONTROLLER Press and

hold [⏻ ⚡CHGO].

....

2. ◯ CONTROLLER Press and hold

[⏻ ⚡CHGO] to wake it from sleep.

■ Turning the Ring Controller OFF

To turn the Ring Controller OFF, follow these steps when it is not charging.

1. ◯ CONTROLLER Press and hold

[⏻ ⚡CHGO] for at least 7 seconds

when not charging.

....

2. ◯ CONTROLLER Press and hold

[⏻ ⚡CHGO] to turn the power on.

Loading an SD card

■ Loading and removing SD cards

1. Turn the power off.

....

2. Open the SD card slot cover on the

Base Station.

....

3. Insert the SD card into the slot.

To eject an SD card:
Push the card further into the slot and
then pull it out.
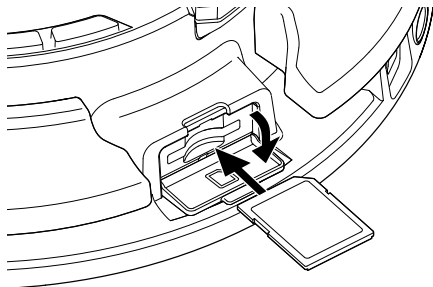
NOTE

• If no SD card is loaded in the **AR-96**, cap-
tured data cannot be saved and patterns and
songs that are created cannot be backed up.

• When inserting an SD card, be sure to insert
the correct end with the top side up as
shown.

• Before using SD cards that have just been
purchased or that have been formatted on
a computer, they must be formatted by the
AR-96.

• SD card formatting instructions (→ P. 99)

Character input screen use

Text box

Keyboard

Number of input characters/ total possible

abc selected

#+= selected

ABC selected
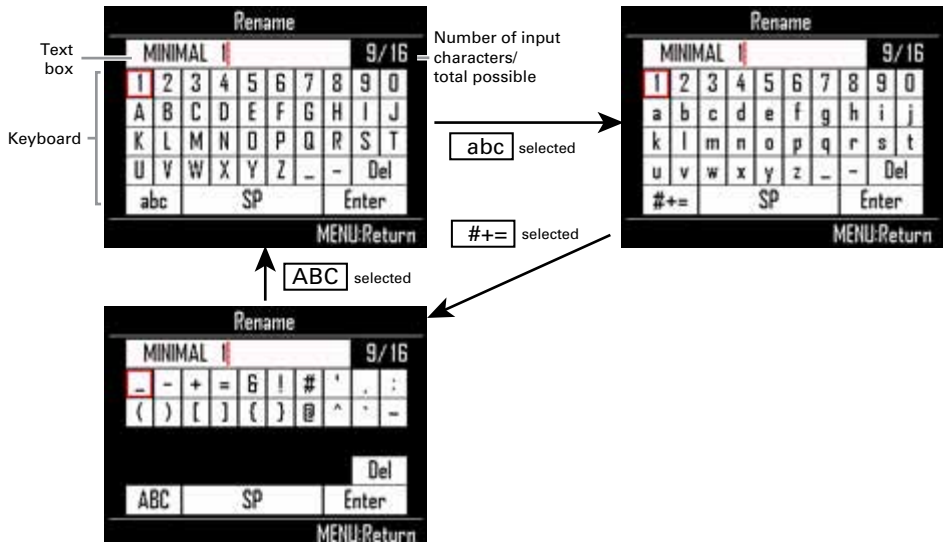
■ Editing operations

Move cursor in text box:	Use
Select character:	Turn
Confirm character:	Press
Complete editing:	Move cursor to "Enter" and press
Cancel editing:	Press

HINT

- The following characters can be used.
  (space) ! # & ' ( ) + , - 0 1 2 3 4 5 6 7 8 9 ; =
  @ A B C D E F G H I J K L M N O P Q R S T
  U V W X Y Z [ ] ^ _ ` a b c d e f g h i j k l m n
  o p q r s t u v w x y z { } ~
- Some characters might not be usable depending on the item being input.

INST mode

INST mode overview

You can tap pads to perform as you like. You can also record performances in real-time to create patterns.

In this mode, each pad around the Ring Controller corresponds to a single instrument (PAD layout) or note (KEY layout).

PAD layout — Instrument
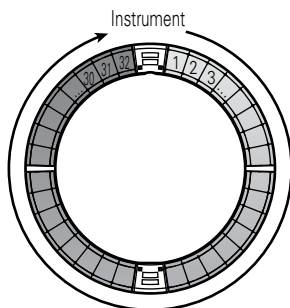
KEY layout — Note
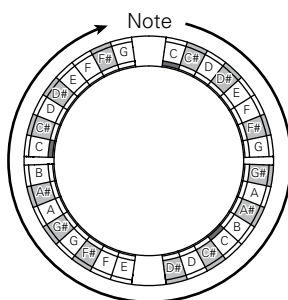
The same notes are assigned to the side and bottom rings

Different parameter settings are assigned to top, side and bottom rings, so they can be used for different tones. (→ P. 82)

Same instrument — Different parameters
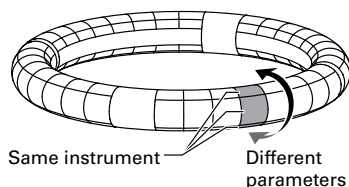
Pattern creation in PAD layout:

After starting real-time input, tap pads for an instrument to input it.

The pattern will start loop playback, and you can overdub as many times as you like.

Real-time input (loop playback)
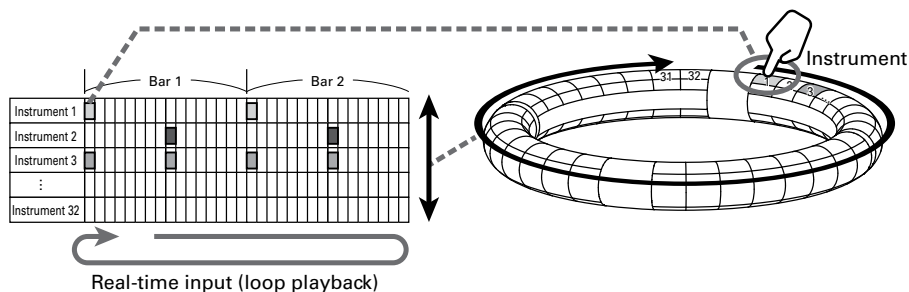
INST mode overview (continued)

Pattern creation in KEY layout:

After starting real-time input, tap pads for notes to input them.

The pattern will start loop playback. When set to polyphonic, you can overdub as many times as you like. (→ P. 84)

Real-time input (loop playback)

Screen overview

■ PAD layout

Sequencer status
● : Stopped during input
▶ : Playing during input
▶ : Playing
❚❚ : Paused
❚❚ : Paused during input
☐ : Stopped

Pattern name
Pattern number
KIT name
Input pad ① oscillator name
Input pad ② oscillator name
Input pad ③ oscillator name

Bar number
Beat number
Tempo

Use SELECT to change the range shown on the display

Parameter names and setting values

■ KEY layout

Instrument oscillator name

Lowest note assigned to pads

22

Operation procedure

Enter INST mode

Press [INST] to enter INST mode.

▼

Select a pattern

Use to select a pattern number.

▼

Select a sound set

Press [KIT], and use SELECT to select a sound set (kit) that suits the pattern being made.

You can press [EDIT] to edit the sounds.

▼

Check the instruments

Play the pads to listen to the sounds of the input instruments. The inner ring LED lights for the last tapped pad, and the name of the instrument and its parameters appear on the display.
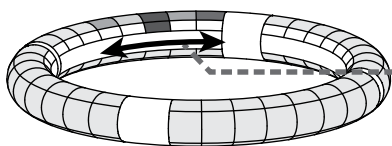
To use KEY layout for input, press to change the mode.
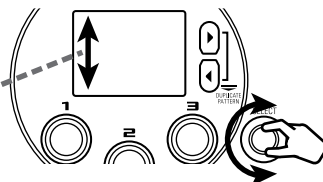
You can also use SELECT to check the instruments.

▼

Start input

Press (●) to enter standby, and press (▶ⅠⅠ) to start real-time input.

▼
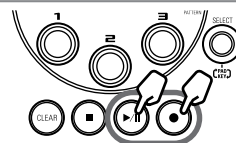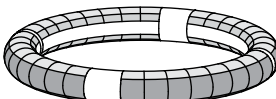
Operation procedure (continued)

▼

Start real-time input

In PAD layout:
Tap the pads of the instrument to input it in time with the looping pattern that is playing back.

Input in real time

Bar 1   Bar 2

Instrument 1
Instrument 2
Instrument 3
⋮
Instrument 32

Instrument
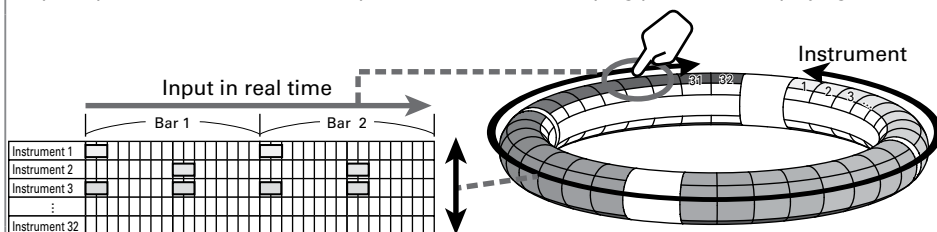
In KEY layout:
Tap the pads of notes to input them in time with the looping pattern that is playing back.

Bar 1   Bar 2

⋮
D
C#
C
⋮

▼
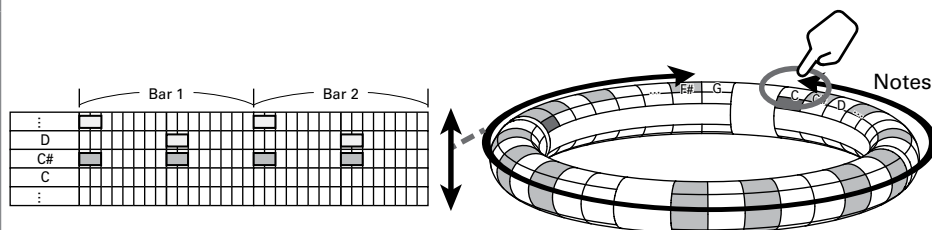
End input

Press (■) to end real-time input.
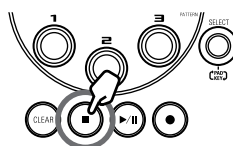
Preparations

■ Enter the mode

1. Press INST.

■ Select a pattern

Select a pattern to use for input.

1. Use 🔼🔽 to select a pattern.

The name of the selected pattern appears on the display.

HINT

• If a pattern is in the middle of playing back, the pattern will change after the current measure. The name of the pattern will blink until it changes.

24

Operation procedure (continued)

■ Select sounds

Select a set of sounds (KIT) according to genre or use and assign them to all the instruments.

1. Press ⌂(KIT).

This opens the KIT list.

. . . .

2. Use ⌀(SELECT) to select a KIT,

and press ⌂(KIT).

The loads the selected KIT and assigns its sounds to each instrument.

HINT
• You can also edit the sounds. (→ P.77)

■ Set the tempo

1. Press (TEMPO).

The tempo setting appears on the display.

. . . .

2. Use ⌀(SELECT) to set the tempo.

The tempo can be set from 40.0–250.0 BPM in 0.1BPM increments.

HINT
You can also press (TEMPO) repeatedly at the desired tempo to set it (in quarter notes).

Real-time pattern input

Input a pattern

■ Input a pattern

1. Press ⊙.

⊙ lights, showing that recording standby has started.

....

2. Press ⏵⏸.

This starts the precount.

HINT
- Changing the type of precount (→ P. 30)
- You can press ⊙ during pattern playback to start input. In this case, there will be no precount.

....

3. ⊙ **CONTROLLER** Tap the pad for the

instrument to be input.

Play along with the metronome.

Instrument →
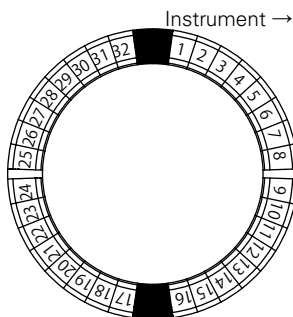
HINT
- By setting quantization, input can automatically be corrected if it varies from the rhythm. (→ P. 96)
- Changing the metronome settings (→ P. 30)

....

4. Press ⊡ to end input.

This ends recording.

HINT

Press ⏵⏸ to pause recording.

Press ⊙ to stop recording but continue playback. You can tap pads at this point to check the sounds.

■ Key repeat

By using key repeat, you can quickly input a step repeatedly.

1. ⊙ **CONTROLLER** Tap a pad while

pressing 🛡HOLD on the Base Station.

The tapped pad will be input repeatedly. The key repeat settings are shown on the display.

....

2. Turn ⊙ⵊ SELECT to change the key repeat

speed.

....

3. Release 🛡HOLD to end key repeat

input.

■ Play the pattern

1. Press (►Ⅱ).

Playback starts and (►Ⅱ) lights.

2. Press (►Ⅱ) again to pause.

Playback pauses and (►Ⅱ) blinks.

3. Press (■) to stop playback.

(►Ⅱ) becomes unlit when playback stops.

■ Clear part of a pattern

1. Press (►Ⅱ).

The pattern plays back.

2. Press and hold (CLEAR).

(CLEAR) will blink.

3. ⊚CONTROLLER While the part you

want to clear is playing back, press

the pad for the instrument to clear.

The performance data will be deleted
while the pad is being pressed.

4. ⊚CONTROLLER Stop pressing the

pad when playback of the part you

want to clear has stopped.

5. Release (CLEAR) to stop clearing.

Quickly copying patterns

This function copies the contents of the pattern you are editing to a different pattern and switches to editing that pattern. This allows you to easily create pattern variations.

1. Press both ⊖⊘ at the same time.

This opens the Duplicate Pattern screen.

2. Use ⊚ to select the copy desti-

nation pattern, and press ⊚.

If the copy destination pattern is not empty, a confirmation screen will open.

3. Use ⊚ to select Yes,

and press ⊚.

This copies the pattern and switches to editing that pattern.

Real-time pattern input (continued)

Making KEY layout settings

When the Ring Controller is in KEY layout, you can make the following settings.

1. Press [EDIT].

....

2. Use 🎛 to select the Scale/Key/
Range block.

....

3. Use ①, ② and ③ to change
these settings.

■ Changing the scale (Scale)

You can change the type of scale used by the Ring Controller.

· Turn ① to change the value.

You can select from the following.
Chromatic, Major (Ionian), Harmonic Minor, Melodic Minor, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian, Super Locrian, Major Blues, Minor Blues, Diminished, Com Dim, Major Pentatonic, Minor Pentatonic, Raga1 (Bhairav), Raga2, Raga3, Arabic, Spanish, Gypsy, Minor Gypsy (Hungarian Minor), Egyptian, Hawaiian, Pelog, Hirojoshi, In-Sen, Iwato, Kumoi, Miyakobushi, Ryukyu, Chinese, Whole Tone, Whole Half, 5th Interval

■ Changing the key (Key)

You can change the root key (tone) used.

· Turn ② to change the value.

You can select from C, C#, D, D#, E, F, F#, G, G#, A, A# and B.

■ Changing the note range (Range)

You can change the Ring Controller note range.

· Turn ③ to change the range.

NOTE

The Ring Controller layout also changes according to this setting.

Clearing patterns

Completely clearing an instrument

1. Use 🔘 to select the instrument

to clear.

> ⚪ CONTROLLER Use 🔼 to show
>
> the instrument you want to clear on
>
> the top ring of the Ring Controller.

2. Press (CLEAR).

This opens the CLEAR screen.
Press (CLEAR) again to cancel.

HINT

You can also turn 🔘 on the CLEAR screen to
select the instrument to clear. Select "All Instruments" to clear the entire sequence.
In KEY layout, notes will be cleared. Select
"All Notes" to clear the entire KEY layout
sequence.

---

3. Press 🔘.

A confirmation message appears.

4. Use 🔘 to select Yes,

and press 🔘.

This clears all programmed steps for the
selected instrument.

Other settings

Metronome settings

Make settings related to the metronome that plays back as a guide during recording.

1. Press ⓔ.

2. Use ⓞ to select METRONOME, and press ⓞ.

This opens the METRONOME settings screen.

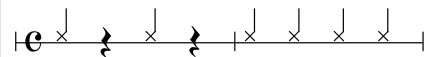**3.** Use ⓞ to select menu items and ⓞ to confirm them.

Press ⓔ to move up one level in the menu.

■ Setting the precount (Precount)

· Use ⓞ to select the precount.

Select Off, 1–8 or Special.

HINT

When Special is selected, the count will sound as follows.

■ Setting the sound (Sound)

· Use ⓞ to select the metronome sound.

The sounds that can be selected are Bell, Stick, Click, Cowbell and Hi-Q.

■ Setting the pattern (Guide Click)

· Use ⓞ to select the metronome pattern.

Set the frequency that the metronome sounds in intervals per bar. The interval can be set to 1/16, 1/8, 1/4 or 1/2.

■ Setting the volume (Volume)

· Use ⓞ to set the metronome volume.

The volume can be set from 0–10.

■ Select the output used
(Output Routing)

· Use ⓞ to select the metronome output destination.

Select PHONES, OUTPUT or PHONES + OUTPUT.

Other settings (continued)

Making pattern settings

1. Press (≡) MENU.

2. Use (◎) SELECT to select PATTERN
SETTING, and press (●) SELECT.

This shows the PATTERN SETTING
screen.

3. Use (◎) SELECT to select menu items and
(●) SELECT to confirm them.

Press (≡) MENU to move up one level in the
menu.

■ Setting the number of steps (Last Step)

By changing the number of steps, you can
change the length of the pattern as a whole.

· Use (◎) SELECT to set the total number of steps in
the pattern.

This can be set between 1 and 32.

■ Setting the swing

· Use (◎) SELECT to set the amount of swing
(rhythmic groove).

Swing can be set up to ±50%.

■ Setting the step length (Beat)

· Use (◎) SELECT to set the length of one step.

Set the length of one step as a division of a
musical measure.

Beat can be set to 32, 16, 16Tri or 8Tri.
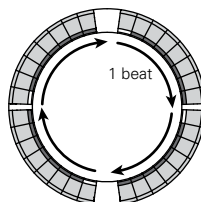
When Beat = 32
8 steps = 1 beat
1 cycle = 1 bar
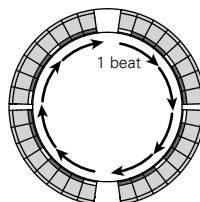
When Beat = 16
4 steps = 1 beat
1 cycle = 2 bars
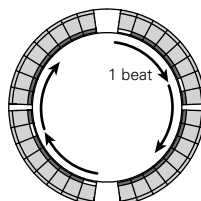
When Beat = 16Tri
6 steps = 1 beat
1 cycle = 1 bar
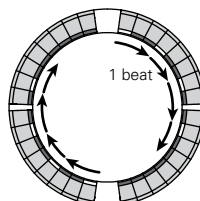
When Beat = 8Tri
3 steps = 1 beat
1 cycle = 2 bars

HINT

The Beat setting determines the number of
bars per cycle around the Ring Controller.

STEP mode

STEP mode overview

In STEP mode, you can create patterns by inputting them one step at a time.
In this mode, each pad around the Ring Controller corresponds to a single sequential step.
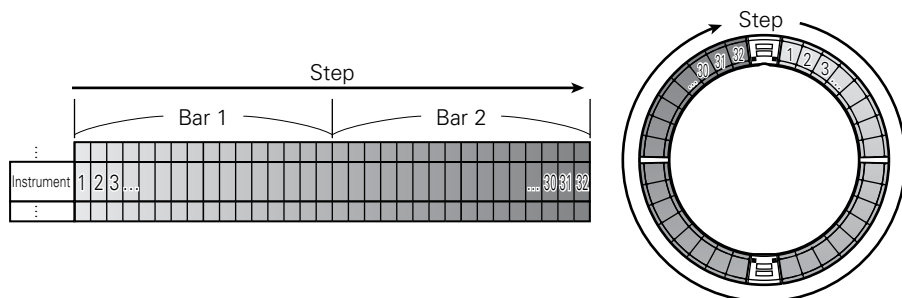
Since the Ring Controller rings are divided into 32 steps, you can input up to two musical bars (①) at a time (when the smallest step is a 16th note).
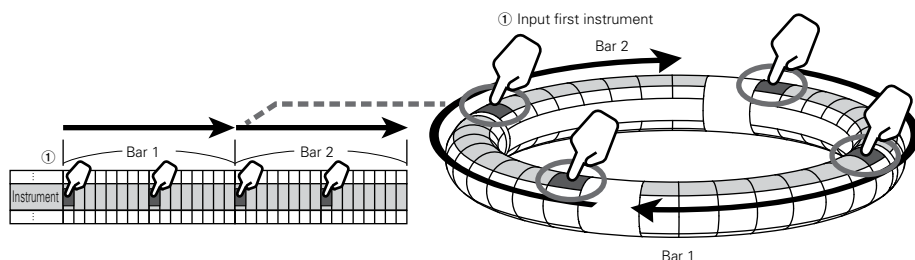
STEP mode overview (continued)

In PAD layout:

The 5 rings (3 when set to Guideline display) on the Ring Controller each show a different instrument. You can use ⬤ SELECT to change which instruments are shown by which rings (②).

Since multiple instruments can be shown by the Ring Controller, you can check instruments that have already been input as you input the next instrument (③).

Instrument display

③ Input next instrument

Bar 1   Bar 2

③

Instrument

② Change display
Move the instrument input first to the side ring
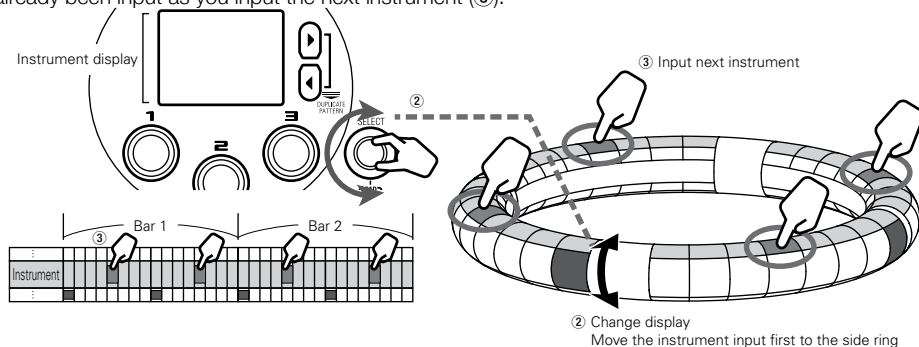
In KEY layout:
You can use ⬤ SELECT to select the note input.

Note display

Change notes

33

Screen overview

■ PAD layout

Sequencer status
▶ : Playing during motion
   sequence recording
▶ : Playing
❚❚ : Paused
❚❚ : Paused during motion
   sequence recording
☐ : Stopped

Pattern name ————

Pattern number ————

Bar number ————

Beat number ————

KIT name ————
Side ring
oscillator name ————

Top ring
oscillator name ————

Top innter ring ————
oscillator name*

Tempo ————

♦ 001: MINIMAL 1   ☐ 1-1
KIT : MINIMAL   ♩ 128.0

02 2Step RS

01 EDM Kick

32 Kit808 Tom

Filter Freq	Reverse	Pitch
64 Hz	-	-2.00

1   2   3

Parameter names and setting values

■ KEY layout

♦ 001: MINIMAL 1   ☐ 1-1
KIT : MINIMAL   ♩ 128.0

C#2

Saw   C3

B2

Filter Freq	Resonance	Pitch
64 Hz	50	±0.00

Side ring
note name ————

Top ring
note name ————

Top inner ring
note name* ————

*Not shown on Ring Controller when Guideline display active

34

Operation procedure

Enter STEP mode

Press 〈STEP〉 to enter STEP mode.

▼

Select a pattern

Use 🔘 to select a pattern number.

▼

Select a sound set

Press 〈KIT〉, and use 🔘 SELECT to select a sound set (kit) that suits the pattern being made.

You can press 〈EDIT〉 to edit the sounds.

▼
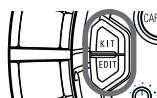
Select the instrument to input

Use 🔘 SELECT to select the instrument to use for input from the 32 instruments. That instrument moves to the top ring of the Ring Controller.
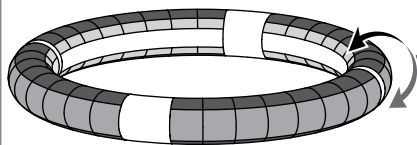
② The instrument color shown on the ring moves   ① Use 🔘 SELECT to select the input instrument
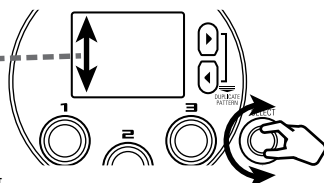
To use KEY layout for input, press 🔘 SELECT to change the mode.

▼

After finishing, switch to a different instrument

Step input

Tap pads to input the sound at those points.
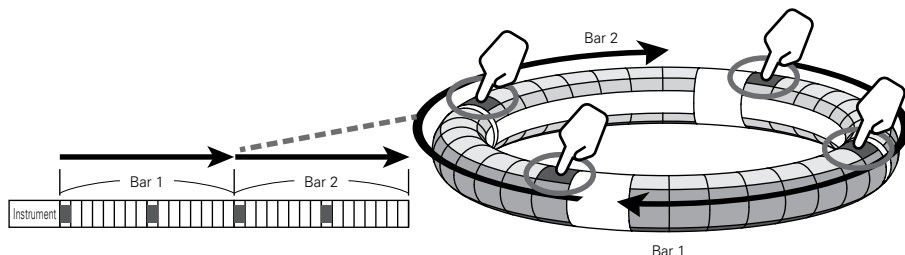
Bar 2

Bar 1   Bar 2

Instrument

Bar 1

35

Operation procedure (continued)

Preparations

■ Enter the mode

1. Press STEP.

■ Select a pattern

Select a pattern to use for input.

1. Use 🔼🔽 to select a pattern.

The name of the selected pattern appears on the display.

■ Select sounds

Select a set of sounds (KIT) according to genre or use and assign them to all the instruments. (→ P. 25)

Pattern step input

Input a pattern

■ Select an instrument

1. Use ⊙ⱼ to select the instrument to input.

The instrument to be input appears in the middle of the display.

> ⚪ **CONTROLLER** The input instrument is shown by the top ring of the Ring Controller.

■ Input a pattern

1. ⚪ **CONTROLLER** Tap the pad for the step to be input.

The LED for the tapped pad will light in the instrument color.
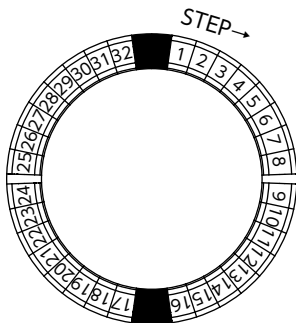
HINT

You can set the pads to be velocity sensitive and respond to how hard they are tapped.
(→ P. 104)

---

2. ⚪ **CONTROLLER** To clear an input step, tap the pad again.

The step will be cleared and the LED will become unlit.

■ Play the pattern

1. Press ▶Ⅱ.

Playback starts and ▶Ⅱ lights.

---

2. Press ▶Ⅱ again to pause.

Playback pauses and ▶Ⅱ blinks.

---

3. Press ▪ to stop playback.

▶Ⅱ becomes unlit when playback stops.

Pattern step input (continued)

Changing the pitch

In KEY layout, you can change the pitches of notes input.

1. Turn 🔘 when KEY layout is

active.

This changes the pitch.

Changing note lengths

You can change input note lengths.

1. ⊙ CONTROLLER Press and hold the

pad for the step to be input.

The pressed pad will blink.

Blinking

. . . .
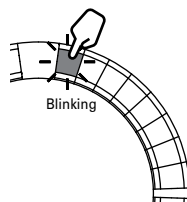
2. ⊙ CONTROLLER Tap the pad where

you want the note to stop playing.

This changes the note length.

Dimly lit
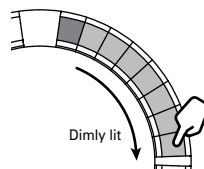
HINT

The steps included in the length of the changed note light dimly.

NOTE

The note length cannot be changed if the LOOP item is × in the oscillator list (→ P. 117).

Pattern step input (continued)

Key repeat

By using key repeat, you can quickly input a step repeatedly.

1. Press and hold [HOLD].

The key repeat settings are shown on the display.

2. Turn ⊙ (SELECT) to change the key repeat speed.

Set as a fraction of a musical measure.
The interval can be set to 1/32, 1/16, 1/8, 1/4 or 1/2.

3. ⊙ CONTROLLER Tap a pad while pressing [HOLD].

Steps will be input repeatedly around the ring starting with the tapped pad.

Clearing patterns

Completely clearing an instrument

1. Use ⌾ to select the instrument

to clear.

> ⊙ CONTROLLER Use ⇕ to show
>
> the instrument you want to clear on
>
> the top ring of the Ring Controller.

2. Press (CLEAR).

This opens the CLEAR screen.
Press (CLEAR) again to cancel.

HINT

- You can also turn ⌾ on the CLEAR screen
to select the instrument to clear. Select "All
Instruments" to clear the entire sequence.
- In KEY layout, notes will be cleared. Select
"All Notes" to clear the entire KEY layout
sequence.

---

3. Press ⟳.

A confirmation message appears.

4. Use ⌾ to select Yes, and press

⟳.

This clears all programmed steps for the
selected instrument.

Other pattern settings

Set the tempo

Set a suitable tempo. (→ P. 25)

Pattern management

Motion sequences

You can change the sound quality and effect parameter settings of each instrument while playing back a created pattern and record these changes in real time.

These recorded changes will be saved as a part of the pattern and re-created during playback.

HINT

If you manually change parameters during pattern playback, parameters recorded in a motion sequence will be ignored.

Recording motion sequences

1. Select the pattern for which you want to record a motion sequence.

....

2. Press and hold ⊙.

⊙ blinks, showing that standby has started.

....

3. Press ⊙.

⊙ lights and pattern playback starts after the precount.

....

4. Use effect keys and change parameters, for example.

These changes will be recorded as a motion sequence.

Effect settings (→ P. 89)

Parameter settings (→ P. 90)

HINT

- Recording starts from the moment that a parameter is operated and stops after completing one complete loop from that point.
- If a parameter that has already been recorded is recorded again, the new data will overwrite the old.

....

5. Press ⊙ or ⊙ when done recording.

HINT

Parameter type changes are not recorded.

Motion sequences (continued)

Erasing motion sequences

1. Select the pattern for which you

want to erase the motion

sequence.

....

2. Press (≣).

....

3. Use ⊚〗 to select PATTERN

SETTING and ⊚ to confirm it.

....

4. Use ⊚〗 to select Erase Motion

and ⊚ to confirm it.

....

5. Use ⊚〗 to select the parameter to

erase, and press ⊚.

This opens a confirmation screen.

....

6. Use ⊚〗 to select Yes,

and press ⊚.

This clears the selected parameter.

Pattern list management

Use the pattern list to load, copy and clear individual patterns, for example.

Pattern management

1. Press 🔘.

----

2. Use 🔘 to select PATTERN LIST, and press 🔘.

----

3. Use 🔘 to select a pattern for management, and press 🔘.

This opens the pattern menu.

----

4. Use 🔘 to select menu items and 🔘 to confirm them.

Press 🔘 to move up one level in the menu.

■ Load patterns (Select)

· Press 🔘.

Load the selected pattern from the pattern list.

HINT

If a pattern is in the middle of playing back, the pattern will change after the current measure.

■ Copying patterns (Copy)

· Press 🔘.

This opens a screen for selecting the copy destination pattern.

· Use 🔘 to select the copy destination pattern, and press 🔘.

This opens a confirmation screen.

· Use 🔘 to select Yes, and press 🔘.

This copies the contents of the pattern selected previously over the destination pattern that was just selected.

■ Erasing patterns (Erase)

· Press 🔘.

This opens a confirmation screen.

· Use 🔘 to select Yes, and press 🔘.

Patterns selected from the list can be erased.

■ Changing pattern names (Rename)

· Press 🔘.

This opens the character input screen.

· After editing the pattern name, select Enter, and press 🔘.

This changes the pattern name.

HINT

Character input screen use (→ P. 20)

SONG mode

SONG mode overview

In SONG mode, you can combine multiple patterns that you have created into one complete song.
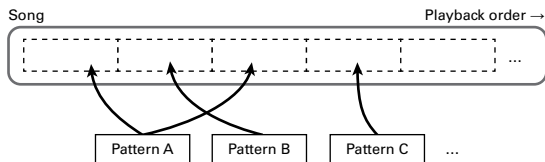
From all the patterns, a range of 96 patterns is assigned to the pads (32 each on top side and bottom rings). You can press ⬓ to change the assigned range in ring units. Playing a pad starts playback of its assigned pattern.
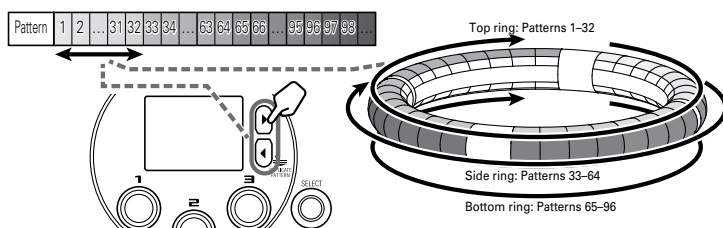
After completing preparation, start real-time input and tap pads to play their patterns.

Screen overview

Song sequence name

Song sequence number

Pattern number
and pattern name
during playback

Input pad ① pattern name

Input pad ② pattern name

Input pad ③ pattern name

Sequencer status
▶ : Playing during input
▶ : Playing
❚❚ : Paused
☐ : Stopped

Bar number

Beat number

Tempo

Use ⊙ to
change the range
shown on the
display

01: Song 01

└001: DUBSTEP 4

002 AMBIANT ELECTR

001 DUBSTEP 4

032 MINIMAL 3

■001-1

♩128.0

Launch	Level	Quantize
Trigger	100	1

①

②

③

Parameter names and setting values

46

Operation procedure

Enter SONG mode

Press [SONG] to enter SONG mode.

▼

Select a song

Press (≣) MENU to open the song sequence list, and use (○) SELECT and
(○) SELECT to select a song

▼
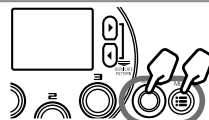
Select a pattern to play

Tap a pad or use (○) SELECT to change the selected pattern and select the pattern to play.

▼
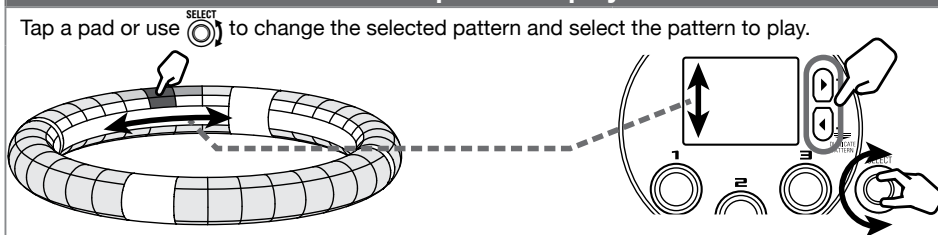
Start input

Press (●) to start real-time input.

▼
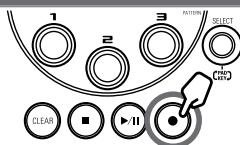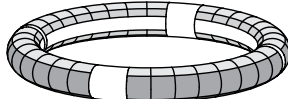
Create a song

Tap pads for patterns to play them and add them to the song in real time.

Realtime recording

Song

▼
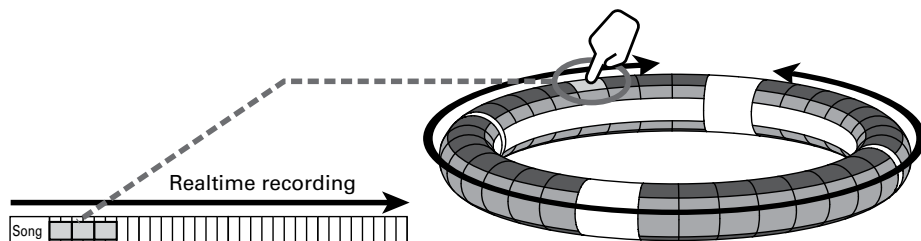
End input

Press (■) to end song input.

Operation procedure (continued)

Preparations

■ Enter the mode

1. Press `SONG`.

■ Select a song

Select a song to input.

1. Press ⊜.

. . . .

2. Use ⊙ˀ to select SONG

SEQUENCE LIST, and press ⊙.

This opens the song list.

. . . .

3. Use ⊙ˀ to select a song, and

press ⊙.

This opens the song menu.

. . . .

4. Use ⊙ˀ to select Select,

and press ⊙.

This loads a song.

Song creation

Selecting patterns

1. Use ⟰ to show the range that includes the patterns to record on the Ring Controller.

From all the patterns, a range of 96 patterns is assigned to the pads.
Press ⟰ to shift pattern assignments one ring at a time.

Top ring: patterns 1–32
Side ring: patterns 33–64
Bottom ring: patterns 65–96

Top ring: patterns 33–64
Side ring: patterns 65–96
Bottom ring: patterns 97–128
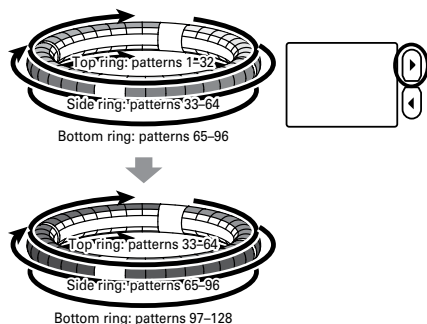
2. Use ◉ to select a pattern.

> ⭕ CONTROLLER Use ⬍ to select a pattern to use.

The name of the selected pattern appears on the display.

HINT

- By tapping the Ring Controller pads, you can select patterns and listen to them at the same time.
- Press 🖊 when a pattern is selected to open the setting screen for that pattern. (→ P. 86)

Real-time input

1. Press ⦿.

This starts the count.

- -

2. ⭕ CONTROLLER Tap a pad to select a pattern to record.

The tapped pad will light according to the pattern animation type setting (→ P. 86).

HINT

- If no animation has been set, the tapped pad will light white.
- If even a single animation has been set, the tapped pad will show the animation, and it will light with the pattern color.
- What happens after a pattern completes playing depends on the ◉ pattern playback method setting (→ P. 53).

- -

3. ⭕ CONTROLLER Play other pads to record their patterns.

HINT

- The timing of pattern changes depends on the pattern quantize and pattern playback method settings (→ P. 53).
- The maximum number of measures in a song is 999. Song creation will stop when this number is reached.

- -

4. Press ⦿ when done recording.

This ends song creation.

Song creation (continued)

Playing back songs

1. Press (▶ll).

This starts song playback.

Pads will light during playback according to the pattern animation type setting (→ P. 86).

HINT
- If no animation has been set, pads will light white during playback.
- If even a single animation has been set, the pads will show the animation during playback, but they will light with the pattern color.

2. Press (▶ll) to pause.

(▶ll) will blink.

Press (▶ll) again to resume playback.

3. Press (∎) to stop playback.

Playback stops, and the playback position returns to the beginning.

Clearing all patterns

1. Press (CLEAR).

A confirmation message appears on the display and (CLEAR) lights.

2. Use (◎) to select Yes.

This clears all the patterns.

Managing the song sequence list

Managing the song sequence list

1. Press (≣).

---

2. Use ⓞ to select SONG

SEQUENCE LIST, and press ⓑ.

This opens the song sequence list.

---

3. Use ⓞ to select a song to

manage, and press ⓑ.

This opens the song menu.

---

4. Use ⓞ to select menu items and

ⓑ to confirm them.

Press (≣) to move up one level in the menu.

■ Erasing songs (Erase)

• Press ⓑ.

This opens a confirmation screen.

• Use ⓞ to select Yes, and press ⓑ.

This erases the selected song.

■ Copying songs (Copy)

• Press ⓑ.

This opens a screen for selecting the copy destination song.

• Use ⓞ to select the copy destination

song, and press ⓑ.

This opens a confirmation screen.

• Use ⓞ to select Yes, and press ⓑ.

This copies the contents of the song selected previously over the destination song that was just selected.

■ Changing song names (Rename)

• Press ⓑ.

This opens the character input screen.

• After inputting the song name, select Enter,

and press ⓑ.

This changes the song name.

HINT

Character input screen use (→ P. 20)

51

Song settings

Setting tempo synchronization

Set whether each pattern uses its own tempo setting or all patterns use the same tempo when playing a song.

1. Press (≡).

2. Use ○ to select SONG SETTING, and press ○.

This opens the song setting screen.

3. Use ○ to select Tempo, and press ○.

This opens the Tempo setting screen.

4. Use ○ to select the synchronization type, and press ○.

Song: Use the same tempo for everything.
Pattern: Use each pattern's tempo.

Setting the time signature

Set the time signature used when a song is playing back.

1. Press (≡).

2. Use ○ to select SONG SETTING, and press ○.

This opens the song setting screen.

3. Use ○ to select Time Signature, and press ○.

This opens the Time Signature setting screen.

4. Use ○ to select a time signature, and press ○.

This can be set to a value between 1/4 and 8/4.

Mixing

1. Press (MIXER).

This opens the Mixer Screen.

You can set send effects and levels for audio input through the INPUT jacks.

HINT
Mixer (→ P. 92)

Song settings (continued)

Making pattern settings

■ Setting the pattern playback method

You can set what happens after a pattern plays back.

1. Select a pattern.

. . . .

2. Use ◎ to change the playback method.

> One Shot: The pattern plays once and stops.
> Trigger: The same pattern will loop continuously until you select the next pattern or press the STOP key.
> Toggle: Tapping the pad alternately starts and stops pattern playback. When a pattern is stopped, silence will continue to be recorded.

■ Setting pattern levels

1. Select a pattern.

. . . .

2. Use ◎ to change the value.

■ Setting pattern quantization

1. Select a pattern.

. . . .

2. Use ◎ to change the quantization.

HINT

Quantization is applied in the following situations.

• When the pattern is switched (the quantization of the latter pattern is used)
• Toggle is stopped

■ Setting pattern pad colors

Set on the EDIT screen. (→ P. 86)

■ Setting the LED animation type.

Set on the EDIT screen. (→ P. 86)

■ Setting the LED animation timing

Set on the EDIT screen. (→ P. 86)

Capturing (recording)

Capture overview

The **AR-96** can capture (record) audio it is playing back and audio input through its INPUT jacks in every mode.

The contents of WAV files saved on an SD card can also be added as captured materials.

You can use captured audio in LOOPER mode.

Capture external input

Capture output audio

Patterns, songs, looper sequences

Add audio files
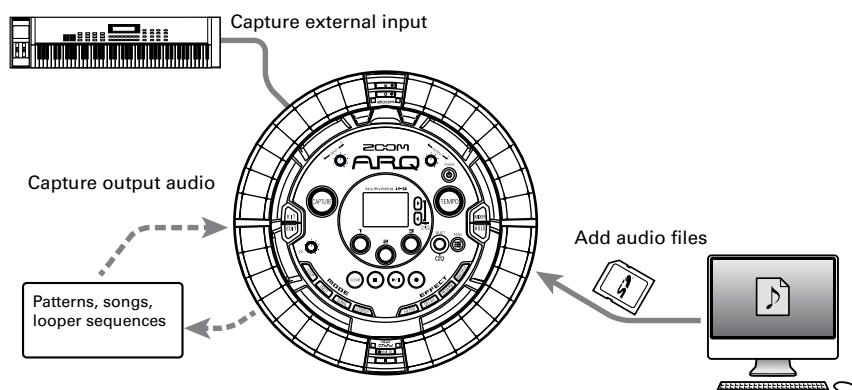
HINT

Up to 96 captured recordings can be added.

NOTE

Captured audio data is saved on the SD card. Be aware that you will not be able to use the captured recordings if you remove the SD card or replace it with a different SD card.

Screen overview

Stereo/mono

Capture time

Capture time guidelines (shown when auto stop active)
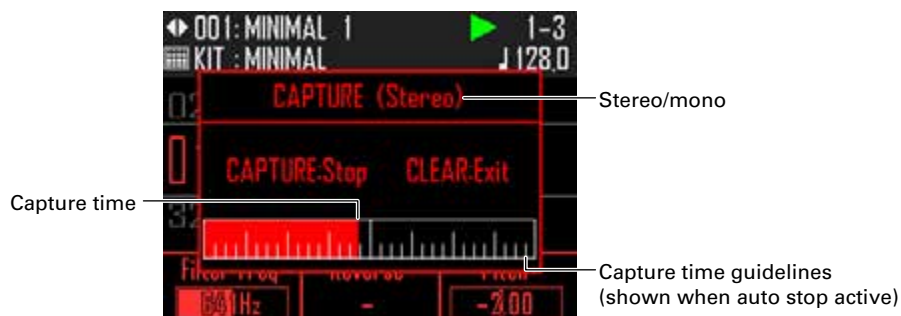
Operation procedure

Select the capture mode

Select the mode according to the material that will be captured.

· To capture patterns and songs, with or without external input,
  use Audio Input + Internal Sound.

· To capture only external input, use Audio Input.

Play the material to capture

Play a pattern or song, for example, that you want to use as a captured recording.

You can also capture audio sources input through the INPUT jacks, and load audio files saved on SD cards.

External input

Audio files

Play patterns, songs, etc.
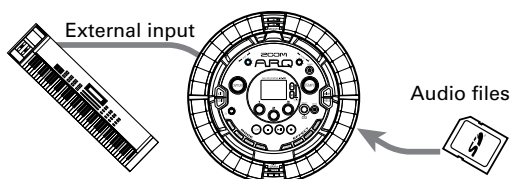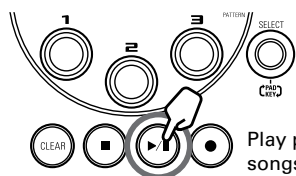
Start capturing

Press (CAPTURE) to start capturing.
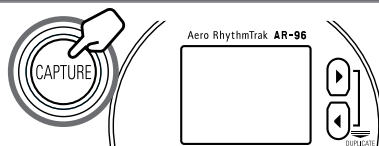
Stop capturing

Press (CAPTURE) again to stop capturing.

On the setting screen that appears after capturing stops, you can set the range used by the looper, for example.
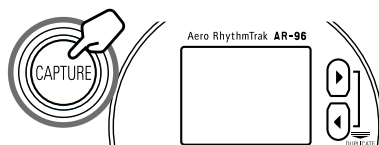
Save

Press (≡) to save the captured audio.

Set the name and number of the captured audio on the screen that appears.

Capturing audio

Select the capture mode

Select the type of audio to capture.

1. Press ⓘ.

2. Use ◎ to select CAPTURE, and press ⓘ.

3. Use ◎ to select Mode, and press ⓘ.

> Audio Input + Internal Sound mode: Capture internal sound sources, including patterns and songs. You can also capture a mix of these sounds with sounds input through the INPUT jacks.
>
> Quantization settings can be used with this mode.
>
> Audio Input mode: Capture only sound input through the INPUT jacks.
>
> A click sound is played that can help when capturing a performance using an external audio source.
>
> Precount and guide click sound settings can be used with this mode.

Capturing internal sound sources

> **HINT**
>
> Audio Input + Internal Sound mode must be selected to capture internal sound sources.

1. Play a pattern or song, for example, that you want to capture.

> **HINT**
>
> By inputting audio through the INPUT jacks at the same time, you can capture a mixed recording of both sound sources.

2. Press ⓒ.

> The capture screen opens, and capturing starts.

> **HINT**
>
> - Up to six minutes can be captured at one time.
> - If a quantize value is set, the timing of pressing ⓒ will be automatically adjusted. (→ P. 61)
> - Turning effects ON/OFF and changing their parameters will be recorded while capturing.

3. After the audio has been captured, press ⓒ.

> You can adjust the captured recording and save it on the Capture Setting screen that opens. (→ P. 57)

Capturing audio (continued)

Capturing external input

HINT

Select Audio Input mode when you want to capture only the external input without mixing it with patterns and songs.

1. Connect the instrument or other audio device that you want to use to capture recordings to the Base Station INPUT jacks.

HINT

If the external input is a mono audio source, check the external input Stereo/Mono setting. (→ P. 95)

·····

2. Start playing the connected equipment, and press (CAPTURE).

The capture screen opens, and capturing starts.

HINT

· Setting a precount can make start timing easier. (→ P. 61)
· Setting a guide click can make it easier to play in time. (→ P. 62)

·····

3. After the audio has been captured, press (CAPTURE).

You can adjust the captured recording and save it on the Capture Setting screen that opens.

Adjusting and saving captured audio

1. When capturing audio ends, the capture setting screen opens.

The captured recording begins loop playback.

Start point ——— ——— End point

Start point time   End point time   Reverse playback setting

HINT

· Press (▶II) to pause and resume playback.
· Press (■) to stop playback and reset the playback position to the beginning of the loop.
· Press a pad on the Ring Controller to start playback from the corresponding point. The entire ring corresponds to the length between start and end points.
· The playback position lights according to the position of the captured audio during playback.

·····

2. Use ①, ② and ③ to edit the captured audio.

① Start point: Change the starting point of the captured audio.

② End point: Change the ending point of the captured audio.

③ Reverse playback: Change the playback direction of the captured audio.

Changing these settings will immediately affect the playback sound.

·····

57

Capturing audio (continued)

3. Use 🎚 to change the page.

Looper playback mode   Pitch   Quantize

---

4. Use ⊙ to set the looper playback mode.

One Shot: The captured recording plays once and stops.

Toggle: Tapping the pad alternately starts and stops playback of the captured audio.

Gate: The captured audio plays back in a loop while the pad is being pressed. Playback stops when it is released.

---

5. Use ⊙ and ⊙ to make other settings.

⊙ Pitch: Change the pitch of the captured audio.

⊙ Quantize: Set the timing of switching when using the looper as a note length (bar division). This can be set to OFF, 1/32, 1/16Tri, 1/16, 1/8Tri, 1/8, 1/4, 1/2, 1 or 2.

---

6. Press (TEMPO) and use ⊙ to set the tempo of the captured audio.

---

7. Press (☰).

This opens the save screen.

---
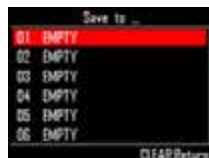
8. Use ⊙ to select the number where the captured recording will be saved.

---

9. Press (☉).

The capture name editing screen opens.

> **HINT**
> • Character input screen use (→ P. 20)
> • Only uppercase English letters, numbers and "_" can be used.

---

10. After editing the name of the captured audio, select Enter, and press (☉).

The captured recording will be saved to the selected list number.

> **HINT**
> Capturing can be canceled while in progress by pressing any MODE button or (CLEAR).

Loading audio files

Adding WAV files to the capture list

WAV files saved on an SD card can be added as captured recordings.

1. Save WAV files to be added in the "Capture" folder in the "AR-96" folder of the SD card.

HINT

Files that meet the following conditions can be added as captured audio.
- WAV format files that contain 44.1kHz/16-bit PCM audio
- Playback time is 6 minutes or less
- File name is no more than 8 total English letters and numbers

If the WAV file contains Logic format tempo information, that information can be read.

2. Load the SD card into the Base Station, and turn the power ON.

3. Press ⓪.

4. Use ⓪ to select CAPTURE, and press ⓪.

5. Use ⓪ to select Capture List, and press ⓪.

The Capture List opens.

6. Use ⓪ to select the number where the captured recording will be saved, and press ⓪.

7. Use ⓪ to select Register, and press ⓪.

This opens the list of files on the SD card.

8. Use ⓪ to select the file to add, and press ⓪.

After the selected audio file has been assigned to the capture number, the Capture Setting screen opens. (→ P. 57)

HINT

The captured audio will have the same name as the original file. However, the name will appear abbreviated if the original name contained characters other than English letters and numbers or exceeded 8 characters in length.

9. Adjust the captured audio, and press ⓪.

Making capture settings

Setting the auto stop function

You can set capture to automatically stop a set time after starting.

1. Press (≣).

----

2. Use (◉) to select CAPTURE, and press (◉).

----

3. Use (◉) to select Auto Stop, and press (◉).

----

4. Use (◉) to select the timing, and press (◉).

Select Off or 1–32 quarter notes.

HINT

If Auto Stop is set to any value other than OFF, the time display will show guides during capture.

Switching between stereo and mono

Captured audio can be saved as stereo or mono.

1. Press (≣).

----

2. Use (◉) to select CAPTURE, and press (◉).

----

3. Use (◉) to select Stereo/Mono, and press (◉).

----

4. Use (◉) to change the setting, and press (◉).

Select Stereo or Mono.

Setting the quantization

When capturing a pattern that is playing back, the timing of button presses can be quantized.

HINT

Quantize can be used when Audio Input + Internal Sound mode is selected.

1. Press 📋.

2. Use ⟳ to select CAPTURE, and press 🖱.

3. Use ⟳ to select Quantize, and press 🖱.

4. Use ⟳ to select the quantization value, and press 🖱.

Set the input adjustment timing as a fraction of a musical measure (note value). This can be set to OFF, 1/32, 1/16Tri, 1/16, 1/8Tri, 1/8, 1/4, 1/2 or 1.

Precount setting

A precount can be played before capturing starts.

HINT

• Precount can be used when Audio Input mode is selected.

• This setting only applies to capturing.

1. Press 📋.

2. Use ⟳ to select CAPTURE, and press 🖱.

3. Use ⟳ to select Precount, and press 🖱.

4. Use ⟳ to select the count, and press 🖱.

Select Off, 1–8 or Special.

Making capture settings (continued)

Setting the guide click

A guide click sound can be played while capturing.

HINT

The Guide Click can be used when Audio Input mode is selected.

---

1. Press (≣).

....

2. Use (◯) to select CAPTURE, and press (◉).

....

3. Use (◯) to select Guide Click, and press (◉).

....

4. Use (◯) to select the click interval, and press (◉).

The interval can be set to 1/2, 1/4, 1/8 or 1/16.

Managing captured recordings (Capture List)

Using the capture list to manage captured recordings

1. Press (≣).

2. Use ◎ to select CAPTURE, and press ⦿.

3. Use ◎ to select Capture List, and press ⦿.

The capture list screen opens.

4. Use ◎ to select the captured recording to work with, and press ⦿.

The capture menu opens.

5. Use ◎ to select menu items and ⦿ to confirm them.

Press (≣) to move up one menu level.

■ Removing files from the Capture List (Unregister)

· Press ⦿.

This opens a confirmation screen.

· Use ◎ to select Yes, and press ⦿.

The selected captured recording is removed from the Capture List.

HINT

Even if captured recordings are removed from the Capture List, their audio files are not deleted from the SD card.

■ Copying captured recordings (Copy)

· Press ⦿.

The capture copy destination screen opens.

· Use ◎ to select the capture copy destination, and press ⦿.

This opens a confirmation screen.

· Use ◎ to select Yes, and press ⦿.

The audio file assigned to the capture number selected earlier is copied to the destination number.

■ Changing the names of captured recordings (Rename)

· Press ⦿ to open the capture name input screen.

· Input the captured recording name, and select Enter.

This changes the captured recording name.

HINT

Character input screen use (→ P. 20)

LOOPER mode

LOOPER mode overview

In LOOPER mode, you can combine patterns and songs that have already been created, input from the INPUT jacks, WAV files and other captured audio into a single song as a looper sequence.
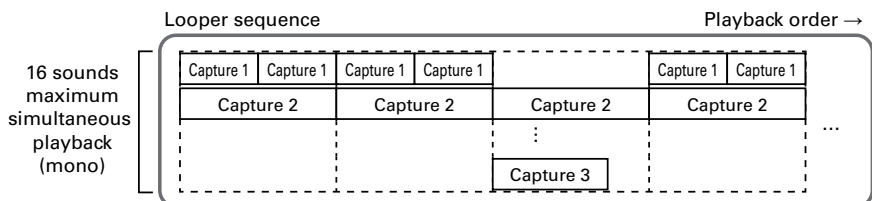
Each of the top, side and bottom rings of the Ring Controller can have 32 captured recordings assigned to it. Playing a pad starts playback of its assigned captured recording.
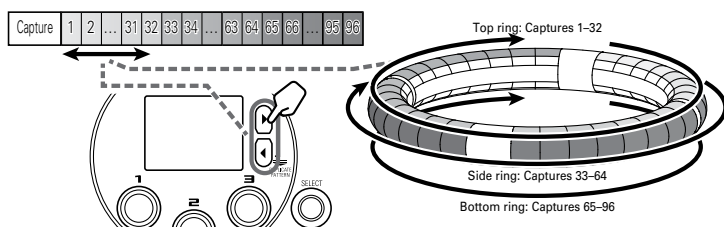
After completing preparation, start real-time input and tap pads to play their captured recordings. Up to 16 captured mono recordings can be played back at the same time.
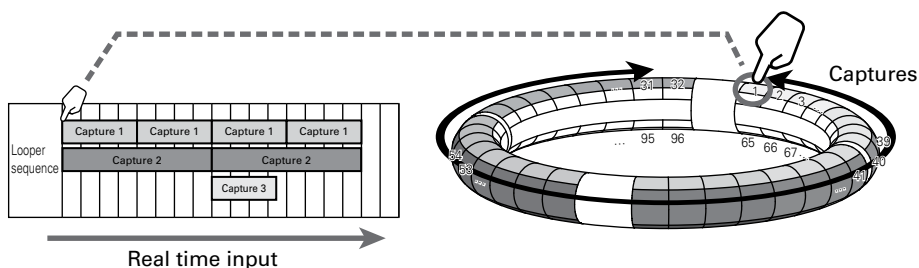
HINT
See "Captured recordings" (→ P. 54) for how to create captured recordings.

LOOPER mode overview (continued)

Screen overview

Looper sequence name

Sequencer status
▶: Playing during input
▶: Playing
❚❚: Paused
☐: Stopped

Bar number

Beat number

Looper sequence number

01: ALONE   ☐ **001-1**

♩ **128.0** — Tempo

Input pad ① capture name — **003 DUB_PAD**   120.0

Input pad ② capture name — **002 DUB_BASS**   **120.0**

Input pad ③ capture name — **001 DUB_BEAT**   120.0

Launch	Pitch	Quantize
◀ Toggle ▶	±0	◀ 2

Use ◎ to change the range shown on the display

Parameter names and setting values

Operation procedure

Enter LOOPER mode

Press [LOOPER] to enter LOOPER mode.

Select the looper sequence

Press (≡) to open the looper sequence list, and use (◎) and (◎) to select a loop sequence.
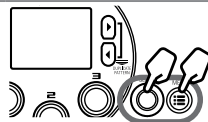
Select captured audio for playback

Tap a pad or use (◎) to change the captured audio for playback.
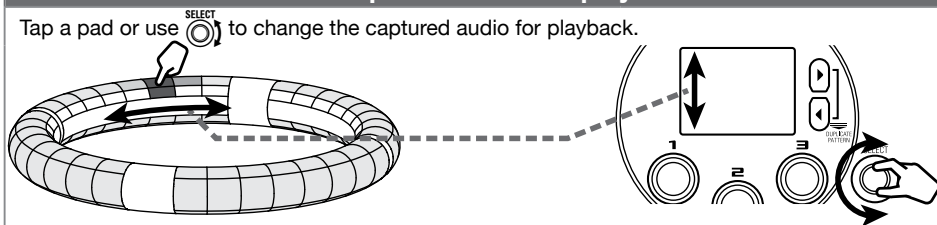
Start input

Press (●) to start real-time input.
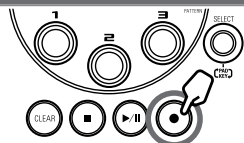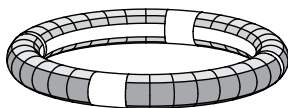
Create a looper sequence

Tap pads for captured recordings to play them and add them to the sequence in real time.
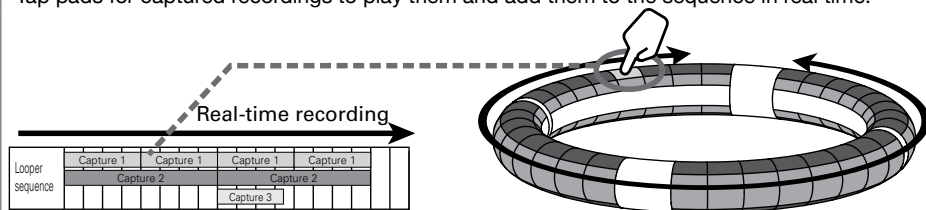
Real-time recording

Looper sequence		Capture 1	Capture 1	Capture 1	Capture 1		
			Capture 2		Capture 2		
				Capture 3			

End input

Press (■) to end looper sequence input.

CLEAR
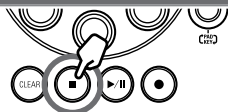
Operation procedure (continued)

Preparations

■ Enter the mode

1. Press (LOOPER).

■ Selecting the looper sequence

1. Press (≣).

- -

2. Use ⟳ to select LOOPER

SEQUENCE LIST, and press ⟳.

The looper sequence list appears.

- -

3. Use ⟳ to select a looper

sequence, and press ⟳.

- -

4. Use ⟳ to select Select,

and press ⟳.

This selects a looper sequence.

Creating looper sequences

Adding captured audio to a looper sequence

1. Use ⏏ to change the capture assignments on the Ring Controller.

Press ⏏ to shift capture assignments one ring at a time.

Top ring: captures 1–32
Side ring: captures 33–64
Bottom ring: captures 65–96

Top ring: captures 33–64
Side ring: captures 65–96
Bottom ring: captures 1–32
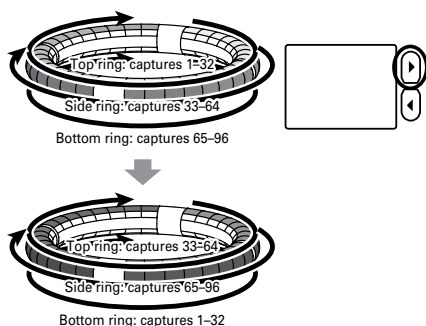
2. Use ◎ to select the captured recording.

> ◎ **CONTROLLER** Use ⬍ to select the captured audio to use.

The name of the selected capture appears on the display.

HINT
- By tapping the Ring Controller pads, you can select captured recordings and listen to them at the same time.
- Press 🖉 when a capture is selected to open the setting screen for that capture. (→ P. 87)

3. Press ⏺.

This starts the precount. After the precount, looper sequence recording will start.

4. ◎ **CONTROLLER** Tap the pad that corresponds to the number you want to capture.

The tapped pad will light according to the capture animation type setting (→ P. 88).

HINT
- If no animation has been set, the tapped pad will light white.
- If even a single animation has been set, the tapped pad will show the animation, and it will light with the capture color.
- Up to 16 captured mono recordings can be played back at the same time.
- What happens after captured recording playback completes depends on the capture playback mode setting (→ P. 70).

5. ◎ **CONTROLLER** Play other pads to add their captured recordings.

HINT
The timing of when captured recordings start playback depends on the quantize setting (→ P. 70).

6. Press ⏹ when done recording.

This ends looper sequence recording.

Playing back looper sequences

1. Press (▶❙❙).

This starts looper sequence playback.
Pads will light during playback according to the pattern animation type setting
(→ P. 88).

HINT

- If no animation has been set, pads will light white during playback.
- If even a single animation has been set, pads will show the animation during playback, but they will light with the capture color.

---

2. Press (▶❙❙) to pause.

(▶❙❙) will blink.
Press (▶❙❙) again to resume playback.

---

3. Press (■) to stop playback.

Playback stops, and the playback position returns to the beginning.

Clearing entire looper sequences

1. Press (CLEAR).

A confirmation message appears on the display and (CLEAR) lights.

---

2. Use (◎) SELECT to select Yes, and press (◉) SELECT.

All the contents added to the looper sequence will be cleared.

Setting looper sequences

Making capture settings

■ Setting the capture playback method

You can set what happens after a captured recording plays back.

1. Select a captured recording.

....

2. Use ◎¹ to change the playback method.

> One Shot: The captured recording plays once and stops.
> Toggle: Tapping the pad alternately starts and stops playback of the captured recording.
> Gate: The captured recording plays back in a loop while the pad is being pressed. Playback stops when it is released.

■ Setting the pitch of the captured recording

1. Select a captured recording.

....

2. Use ◎² to change the pitch.

■ Setting capture quantization

1. Select a captured recording.

....

2. Use ◎³ to change quantization.

HINT

Quantization is applied in these situations.
- When playback of captured audio starts
- When Gate or Toggle stops

Making additional capture settings

Make additional capture settings on the EDIT screen.

■ Setting the capture level
Set on the EDIT screen. (→ P. 87)

■ Setting the capture synchronization
Set on the EDIT screen. (→ P. 87)

■ Setting the capture tempo
Set on the EDIT screen. (→ P. 87)

■ Setting the send effect
Set on the EDIT screen. (→ P. 87)

■ Setting the capture pad color
Set on the EDIT screen. (→ P. 88)

■ Setting the LED animation type.
Set on the EDIT screen. (→ P. 88)

■ Setting the LED animation timing
Set on the EDIT screen. (→ P. 88)

■ Checking information about captured recordings
Check on the EDIT screen. (→ P. 88)

Setting looper sequences (continued)

Setting the time signature

Set the time signature used when a looper sequence is playing back.

1. Press 📖.

....

2. Use ⭕ to select LOOPER SET-TING, and press ⭕.

This opens the looper setting screen.

....

3. Use ⭕ to select Time Signature, and press ⭕.

This opens the Time Signature setting screen.

....

4. Use ⭕ to select a time signature, and press ⭕.

This can be set to a value between 1/4 and 8/4.

Mixing

1. Press ⌂.

This opens the Mixer Screen.

You can set send effects and levels for audio input through the INPUT jacks.

HINT
Mixer (→ P. 92)

Managing looper sequences

Managing looper sequences

1. Press (≣).

2. Use ⊙ to select LOOPER SEQUENCE LIST, and press ⊙.

The looper sequence list appears.

3. Use ⊙ to select a looper sequence to manage, and press ⊙.

This opens the looper sequence menu.

4. Use ⊙ to select menu items and ⊙ to confirm them.

Press (≣) to move up one level in the menu.

■ Erasing looper sequences (Erase)

• Press ⊙.

This opens a confirmation screen.

• Use ⊙ to select Yes, and press ⊙.

This erases the selected looper sequence.

■ Copying looper sequences (Copy)

• Press ⊙.

This opens a screen for selecting the copy destination looper sequence.

• Use ⊙ to select the copy destination looper sequence, and press ⊙.

This opens a confirmation screen.

• Use ⊙ to select Yes, and press ⊙.

This copies the contents of the looper sequence selected previously over the destination looper sequence that was just selected.

■ Changing looper sequence names (Rename)

• Press ⊙.

This opens the character input screen.

• After editing the looper sequence name, select Enter, and press ⊙.

This changes the looper sequence name.

HINT

Character input screen use (→ P. 20)

Kits (sound sets)

KIT overview

The KIT function allows you to manage sounds assigned to instruments as a single set.

By changing the kit, you can easily use sounds that suit different musical genres and applications. Kits can include drum sets, percussion instruments, basses and synthesizers, for example.

The **AR-96** has preset kits that suit a variety of genres. Moreover, you can customize the contents of presets freely and create new kits from scratch.

Screen overview

KIT list

KIT name

KIT number
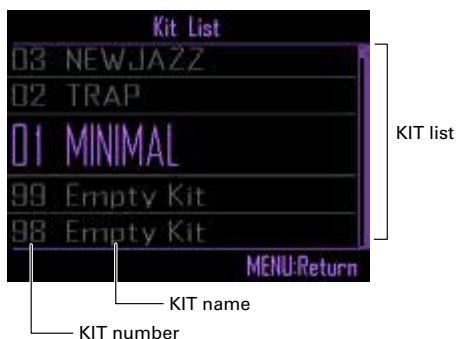
Using kits

Selecting kits

The sounds used in the selected pattern can be changed to a different kit.

1. Press ⌂.

This opens the Kit List.

···

2. Use ⊚ to select a kit.

This changes the kit sounds.

HINT

Press ▶Ⅱ to hear the pattern with the kit just selected.

···

3. After selecting the kit to use, press

⌂.

This changes the kit used by the pattern.

HINT

To change the sound added to a kit, use the EDIT screen (sound editing) functions (→ P.77)

Managing kits

Managing kits

1. Press $\boxed{\text{KIT}}$.

This opens the Kit List.

2. Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select a kit to manage, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to confirm it.

Press $\overset{\text{MENU}}{\textcircled{\text{☰}}}$ to return to the Kit List.

■ Copying kits (copy)

This copies the contents of a kit to another kit.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select the kit to copy, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens the kit functions menu.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select Copy, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens the Kit List.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select the copy destination kit, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens a confirmation screen.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select Yes, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This copies the kit.

■ Erasing kits (Erase)

This clears the contents of a kit.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select the kit to erase, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens the kit functions menu.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select Erase, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens a confirmation screen.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select Yes, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This clears the contents of the kit, leaving it in an initialized state.

■ Changing kit names (Rename)

The names of kits can be changed.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select the kit to rename, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens the kit functions menu.

- Use $\overset{\text{SELECT}}{\textcircled{\text{O}}}$ to select Rename, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This opens the character input screen.

- After editing the name of the kit, select Enter, and press $\overset{\text{SELECT}}{\textcircled{\text{O}}}$.

  This changes the kit name.

HINT

Character input screen use (→ P. 20)

Setting the pad split

To make input easier when using it handheld, you can change the total number of instruments assigned to all the pads.

NOTE

This function can only used in INST mode.
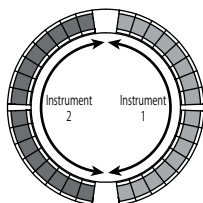
Instrument Range
set to 2

1. Press [KIT].

- -

2. Use ⊙ to select the kit to

change, and press ⊙.

This opens the kit functions menu.

- -

3. Use ⊙ to select Pad Split,

and press ⊙.

This opens the Pad Split setting screen.

- -

4. Use ⊙ to select the pad split

value, and press ⊙.

Set the number of instruments assigned to all the pads. This can be set to 1, 2, 4, 8, 16 or 32.

HINT

When Pad Split is set to any value other than 32, you can use ⊙ to change the range of the instruments shown on the Ring Controller.

76

Editing (EDIT)

Editing overview

Use the EDIT screen to edit sounds.

Edit sounds when STEP mode or INST mode is active.

The EDIT screen has the following block structure.

Oscillator → Noise → Insert Effect → Filter → Level/Pan → Send Effect

LFO 1   LFO 2

Level EG   EG

Scale/Key/Range (KEY layout only)

Ring Parameter
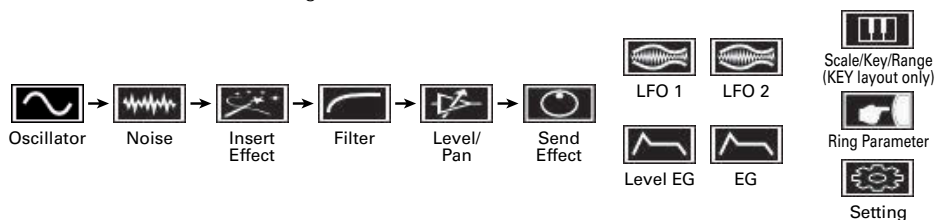
Setting

The EDIT screen has the following settings in SONG and LOOPER modes.

SONG mode

LED Setting

LOOPER mode

Level/Sync → Send Effect → LED Setting → Information

Screen overview

Page 1

Instrument number
Instrument name

Selected block

Block icons

Selected item name
(use ⊙ to change)

Parameter names and setting values

Page 2

Send Effect

Delay Send   Reverb Off

Page 3 PAD layout

Ring Parameter : Off

Page 3 KEY layout

Scale / Key / Range

Scale Chromatic   Key -   Range C3-C5

77
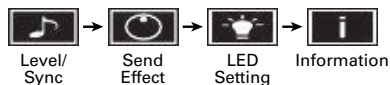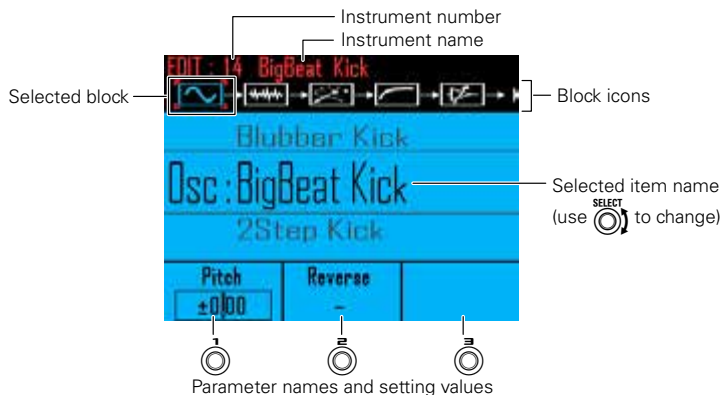
Editing sounds

Starting editing

1. Use ⏸ to select a pattern, and ⦿⟩ᴿᴱᴸᴱᶜᵀ

to select the instrument to edit,

and press 🄴ᴰᴵᵀ.

This opens the EDIT screen.

> ⦿ CONTROLLER When editing in
>
> INST mode, you can tap a pad to
>
> change the instrument being edited.
>
> Instrument numbers
>
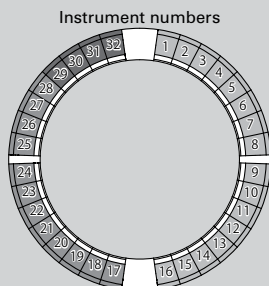
Common operations for each block

■ Changing setting items and parameters

1. Use ⏸ to select the block to

change.

This opens a block menu.

. . . .

2. Use ⦿⟩ᴿᴱᴸᴱᶜᵀ to change the setting

value and ⦿①, ⦿② and ⦿③ to

change parameter values.

Press ⦿ᴿᴱᴸᴱᶜᵀ to show the submenu (if there

is one). Use ⦿⟩ᴿᴱᴸᴱᶜᵀ to select and change its

setting values, and press ⦿ᴿᴱᴸᴱᶜᵀ to confirm .

HINT

See "EDIT menu parameter list" for block menu
details. (→ P. 117)

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Editing sounds (continued)

Insert effect block settings

You can use up to 4 insert effects at the same time.

■ Selecting effect types

1. Open the block menu.

2. Use ⊚ to select the effect type.

This sets the effect type.

HINT

See the "Effect list" appendix for details about insert effects. (→ P. 122)

NOTE

If 4 insert effects are already in use, it will not be possible to select an effect.

In this case, a message will appear showing which instruments are using effects. You can turn off unneeded effects and try again.

■ Changing the insert effect position

1. Open the block menu, and press ⊚.

2. Use ⊚ to select Position, and press ⊚.

This opens the setting screen.

3. Use ⊚ to set the position, and press ⊚.

Select Before Filter or After Filter .

LFO block settings

■ Changing the type and destination

You can change the LFO type and its destination.

1. Open the block menu.

2. Use ⊚ to change the LFO type.

3. Use ⊚ to select the destination.

This sets the destination.

■ Changing the stepper

You can edit how modulation is applied as you like. This can only be used when Type is set to Stepper.

1. Open the block menu.

2. Use ⊚ to select Stepper, and press ⊚.

3. Select STEPPER EDIT,

and press (⊙) **SELECT**.

This opens the Stepper Edit screen.

Modulation strength

Step time axis
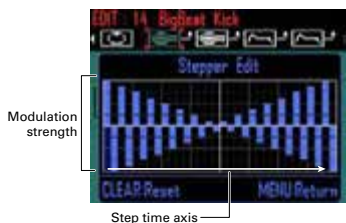
4. Use (⊙) to select the step to change.

5. Use (⊙) **SELECT** to change the step value.

This sets the step value.

■ Changing the pulse width

You can change the pulse width as you like. This can only be used when Type is set to Pulse.

10% of cycle   90%

Pulse cycle

Pulse width = 10%   Pulse width = 90%
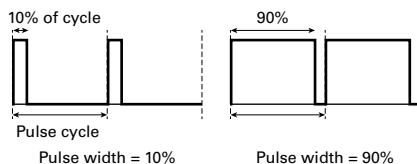
1. Open the block menu.

2. Use (◎) to select Pulse,

and press (⊙) **SELECT**.

3. Use (⊙) **SELECT** to select Pulse Width,

and press (⊙) **SELECT**.

4. Use (⊙) **SELECT** to select the pulse width,

and press (⊙) **SELECT**.

This sets the pulse width.

Editing sounds (continued)

Envelope generator block settings

■ Changing the destination

You can change the destination of the envelope generator.

1. Open the block menu.

....

2. Use ⊙ to select the destination.

This sets the destination.

■ Setting the depth

This sets the envelope depth.

1. Open the block menu,

and press ⊙.

....

2. Use ⊙ to select Depth,

and press ⊙.

....

3. Use ⊙ to set the depth.

This can be set from −100 to +100.

Editing sounds (continued)

Ring parameter block settings

■ Changing ring parameters

Different parameter settings can be assigned to top, side and bottom rings of the Ring Controller, so they can be used for different tones.

1. Open the block menu.

2. Use ⟲(SELECT) to select the parameter to set.

Select from Pan, Pitch, Level and Off.

3. Use ⟲(1), ⟲(2) and ⟲(3) to change these settings.

To adjust the parameters, use ⟲(1) for the top ring, ⟲(2) for the side ring, and ⟲(3) for the bottom ring.

Setting block settings

■ Setting instrument colors

You can set the color used for an instrument by the display and the ring controller LED when in PAD layout.

1. Open the block menu.

2. Use ⟲(1) to change the color.

You can select from 32 colors. Select Auto to have the color set automatically.

HINT

- If both the oscillator and the noise generator are OFF, the instrument will have no color (unlit).
- If the oscillator is OFF but the noise generator is ON, the color will be set to yellow-green.

■ Setting the LED animation

You can set the LED animation used when pads are played.

1. Open the block menu.

2. Use ⟲(2) to select the animation to use.

The animation can be set to Off, Moire, Firework, Cross, Circulation or Rainbow.

Editing sounds (continued)

Off

Lights spread in a gradation

Moire

Lights spread left and right

Firework

Side ring lights

Cross

Light travels clockwise

Circulation

Rainbow lights spread clockwise

Rainbow
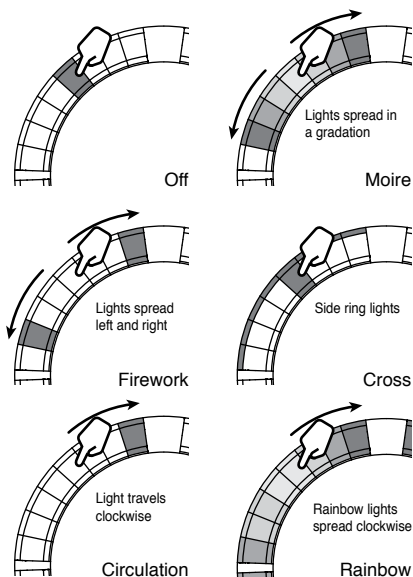
■ Mixer group settings

The instruments can be added to three mixer groups.

HINT

The following instrument assignments are set by default.

Mixer group 1: kick drums

Mixer group 2: drums other than kick drums

Mixer group 3: other sounds

1. Press [EDIT].

. . . .

2. Use 🎛 to select the Setting block.

. . . .

3. Use ◎ to select a mixer group.

Select Off or 1–3.

This assigns the instrument to the mixer group.

HINT

- Each mixer group can be identified by its color. 1: red   2: green   3: blue
- You can also use the Group Mixer to assign instruments to groups by tapping pads. (→ P. 93).

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Editing sounds (continued)

■ Setting Mono/Poly

This sets whether only a single sound (mono-phonic) or multiple sounds (polyphonic) are output when multiple pads are pressed at the same time when the Ring Controller is in KEY layout.

1. Open the Setting block menu when the Ring Controller is in KEY layout.

....

2. Use $\overset{1}{\circledcirc}$ to select the output type.

Select Mono or Poly.

■ Setting the glide

This sets how gradually the instrument sound changes when the Ring Controller is in KEY layout.

HINT

This parameter only works when the output is also set to Mono.

1. Open the Setting block menu when the Ring Controller is in KEY layout.

....

2. Use $\overset{2}{\circledcirc}$ to set the glide value.

This can be set from 0 to 100.

Editing sounds (continued)

■ Changing MIDI channels

You can change the channel that receives MIDI messages sent from connected USB devices.

1. Open the block menu, and press 🔘SELECT.

----

2. Use 🔘SELECT to select MIDI Mapping, and press 🔘SELECT.

This opens the setting screen.

----

3. Use 🔘SELECT to select Channel, and press 🔘SELECT.

This opens the setting screen.

----

4. Use 🔘SELECT to select the channel received.

This sets the channel received.

■ Changing MIDI note numbers

You can set the note number range that corresponds to MIDI messages sent from connected USB devices.

1. Open the block menu, and press 🔘SELECT.

----

2. Use 🔘SELECT to select MIDI Mapping, and press 🔘SELECT.

This opens the setting screen.

----

3. Use 🔘SELECT to select Note, and press 🔘SELECT.

This opens the setting screen.

----

4. Press 🔘SELECT to select the START note number setting, and use 🔘SELECT to set it.

This sets the START note number.

----

5. Press 🔘SELECT to select the END note number setting, and use 🔘SELECT to set it.

This sets the END note number.

SONG mode EDIT screen

The following settings can be made with the SONG mode EDIT screen.

LED Setting block

■ Setting pattern pad colors

1. Select a pattern.

. . . .

2. Press 🎛️[EDIT].

. . . .

3. Use ◎¹ to change the color.

■ Setting the LED animation type.

1. Select a pattern.

. . . .

2. Press 🎛️[EDIT].

. . . .

3. Use ◎² to change the animation type.

The animation can be set to Off, Moire, Firework, Cross, Circulation or Rainbow. (→ P. 82)

■ Setting the LED animation timing

1. Select a pattern.

. . . .

2. Press 🎛️[EDIT].

. . . .

3. Use ◎³ to change the animation playback timing.

Set the repetition timing as a fraction of a musical measure (note value). The interval can be set to 1/8, 1/4, 1/2, 1 or 2.

LOOPER mode EDIT screen

The following settings can be made with the LOOPER mode EDIT screen.

Level/Sync block

■ Setting the capture level

1. Select a captured recording.

· ·

2. Press [EDIT].

The EDIT screen for the selected capture opens.

· ·

3. Use 🎛 to move to the Level/Sync block.

· ·

4. Use ◎ to change the level.

■ Setting the capture synchronization

Set whether the playback speed of the captured audio is synchronized with the looper sequence tempo.

NOTE
To use the synchronization setting, the tempo must be set correctly for each capture.

1. Select a captured recording.

· ·

2. Press [EDIT].

The EDIT screen for the selected capture opens.

· ·

3. Use 🎛 to move to the Level/Sync block.

· ·

4. Use ◎ to change the synchronization setting.

On: Synchronize capture to tempo.
Off: Do not synchronize capture to tempo. Play it at recorded speed.

■ Setting the capture tempo

Set the tempo of the captured recording.

1. Select a captured recording.

· ·

2. Press [EDIT].

The EDIT screen for the selected capture opens.

· ·

3. Use 🎛 to move to the Level/Sync block.

· ·

4. Use ◎ to change the tempo.

This can be set from 40.0 to 250.0.

Send effect block

■ Setting send effect

1. Select a captured recording.

· ·

2. Press [EDIT].

The EDIT screen for the selected capture opens.

· ·

3. Use 🎛 to move to the Send Effect block.

· ·

4. Use ①, ② and ③ to set each effect to Send or Off.

LED Setting block

■ Setting the capture pad color

1. Select a captured recording.

2. Press [EDIT].

The EDIT screen for the selected capture opens.

3. Use ↕ to move to the LED Setting block.

4. Use ① to change the color.

■ Setting the LED animation type.

1. Select a captured recording.

2. Press [EDIT].

The EDIT screen for the selected capture opens.

3. Use ↕ to move to the LED Setting block.

4. Use ② to change the animation type.

The animation can be set to Off, Moire, Firework, Cross, Circulation or Rainbow. (→ P. 82)

■ Setting the LED animation timing

1. Select a captured recording.

2. Press [EDIT].

The EDIT screen for the selected capture opens.

3. Use ↕ to move to the LED Setting block.

4. Use ③ to change the animation playback timing.

Set the repetition timing as a fraction of a musical measure (note value). The interval can be set to 1/8, 1/4, 1/2, 1 or 2.

Information block

■ Checking information about captured recordings

1. Select a captured recording.

2. Press [EDIT].

The EDIT screen for the selected capture opens.

3. Use ↕ to move to the Information block.

On this screen you can check the name, length and size of the file.

Effects

Effects overview

Global filter, delay, reverb and master effects can be applied to the playback of patterns, songs and looper sequences.

Screen overview

Name of selected
effect type

Parameter names and setting values
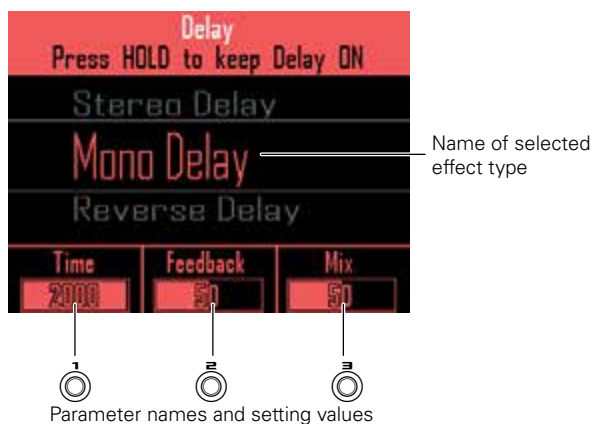
Effect types

FILTER
This enables the global filter.

DELAY
This enables the delay.

REVERB
This enables the reverb.

MASTER FX
You can select one of a variety of effects as the master effect that is applied to all output.
The parameters that can be set depend on the type of effect.

HINT

See the "Effect list" appendix for details about effect parameters. (→ P. 122)

Using effects

Turning effects ON/OFF

1. During pattern, song and looper sequence playback, press and hold `FILTER`, `DELAY`, `REVERB` or `MASTER FX` for the effect you want to use.

The effect is turned on only while the button is being pressed.

> ⊙ CONTROLLER Press the button for the effect you want to use. When using the Ring Controller, just pressing it will hold the effect.

HINT
- Multiple effects can be turned on at the same time In this case, information about the effect turned on last appears on the display.
- When an effect is on, its Ring Controller effect button LED lights.

2. To hold an effect, press `FILTER`, `DELAY`, `REVERB` or `MASTER FX` while pressing `HOLD`.

The effect will stay on even after its button is released.

HINT
Multiple effects can be held at the same time

3. To stop holding an effect, press its button (`FILTER`, `DELAY`, `REVERB` or `MASTER FX`) while pressing `HOLD`.

> ⊙ CONTROLLER Press the button for the effect you want to stop holding.

Changing effect types

1. During song playback, press `FILTER`, `DELAY`, `REVERB` or `MASTER FX` for the effect type you want to change.

The type of the selected effect appears on the display.

2. Use ⊙ SELECT to change the effect type.

Changing parameters

1. Press `FILTER`, `DELAY`, `REVERB` or `MASTER FX` for the effect you want to change.

The parameters of the selected effect appear on the display.

HINT
When multiple effects are being held, press the button of the effect you want to change.

2. Turn ⊙¹, ⊙² and ⊙³ to change the parameters you want.

Other settings

Controlling parameters with the Ring Controller

You can use the Ring Controller's accelerometer to control up to 3 effect parameters. Parameters can be changed by waving, tilting and otherwise moving the Ring Controller.
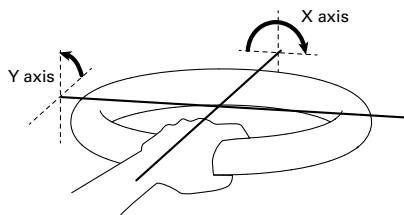
NOTE
- This can be used when the Ring Controller grip area has been set. (→ P. 103)
- The grip area determines the directions of the X and Y axes.
- Do not hit the Ring Controller with excessive force.

■ Assigning parameters

1. Press 📋.

. . . .

2. Use ⊚ to select PATTERN SET-TING (STEP or INST mode) or LOOPER SETTING (LOOPER mode), and press ⦿.

. . . .

3. Use ⊚ to select Accelerometer, and press ⦿.

This opens the setting screen.

4. Use ⊚ to select the Type for parameter 1–3, and press ⦿.

. . . .

5. Use ⊚ to select the effect type, and press ⦿.

. . . .

6. Use ⊚ to select the Axis for parameter 1–3, and press ⦿.

Press ⦿ to turn the X or Y axis on or turn both off.

HINT
- The same effect parameter cannot be assigned to multiple Type settings.
- Multiple Type settings can be set to the same axis.

■ Using the Ring Controller to control effects

1. Remove the Ring Controller from the Base Station.

. . . .

2. Set the Ring Controller grip area.

Setting the grip area (→ P. 103)

. . . .

3. To control the parameters of an effect, press the key for that effect to turn it on and tilt the Ring Controller.

The effect parameters will change according to the angle and direction.

Mixer

Mixer overview

The audio from the external inputs can be adjusted. In INST and STEP modes, the levels of each instrument in the mix can also be adjusted.

Screen overview

Selected block — Block icons

Parameter names and setting values

Using the Ring Controller

Mixer group display

Instrument

Muted/soloed instruments

In KEY layout, tapping any pad has the same effect
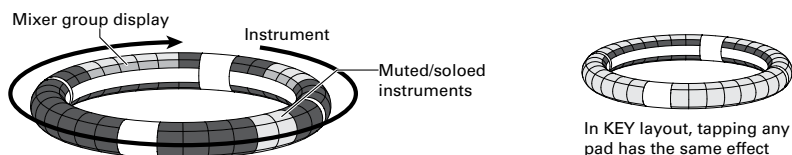
The pads on the rings correspond to 32 instruments. After selecting mute or solo on the display, you can turn muting or soloing ON/OFF by tapping the pads.

In addition, group colors will light on the pads of each ring for grouped instruments.

When mixing in KEY layout, you can tap any pad to conduct the same operation.

Starting mixing

1. Press 🔲 when the pattern to mix is selected or playing back.

This opens the MIXER screen.

> **HINT**
>
> IN SONG and LOOPER modes, you can adjust send effects and levels for audio input through the INPUT jacks.

Using the mixer

Group mixer

You can group multiple instruments and adjust their levels together.

■ Mixer group settings

1. Use ⊟ to select the Group Mixer block.

----

2. ⊙ CONTROLLER Tap the pad for an instrument to change its mixer Group setting.

HINT
- Each mixer group can be identified by its color.

  1: red   2: green   3: blue
- Pads for instruments that are not assigned to a mixer group appear yellow.

■ Adjusting mixer group volumes

1. Use ⊟ to select the Group Mixer block.

----

2. Turn ⊚, ⊚, or ⊚ to adjust the volume of that mixer group.

This adjusts the volume of that mixer group.

HINT
The maximum volume values of the mixer group will be the volumes set for each instrument.

Muting

You can mute just the selected instrument.

1. Use $\frac{0}{0}$ to select the PAD Mute block.

2. ⊚ CONTROLLER Tap the pad for the instrument to be muted.

The instrument for the tapped pad will be muted.

In KEY layout, you can tap any pad to mute the instrument.

HINT

Muted instruments appear as follows.
- PAD layout: top, side and bottom rings unlit
- KEY layout: top and bottom inner rings lit yellow

3. ⊚ CONTROLLER To end muting, tap the muted pad again.

The instrument for the tapped pad will be unmuted.

HINT

If instruments are grouped, you can mute all the instruments in a group at the same time.

Soloing

You can solo the playback of just the selected instrument.

1. Use $\frac{0}{0}$ to select the PAD Solo block.

2. ⊚ CONTROLLER Tap the pad for the instrument to be soloed.

Only the instrument for the tapped pad will be played back.

In KEY layout, you can tap any pad to solo the instrument.

HINT

Soloed instruments appear as follows.
- PAD layout: top, side and bottom rings lit
- KEY layout: top and bottom inner rings lit blue

3. ⊚ CONTROLLER To end soloing, tap the soloed pad again.

The LED for the tapped pad will become unlit, and that instrument will be soloed.

HINT

If instruments are grouped, you can solo all the instruments in a group at the same time.

Using the mixer (continued)

Using INPUT send effects

1. Use ⊖ to select the Send Effect (Input) block.

. . . .

2. Use ◯¹ and ◯² to set each effect send to Send or Off.

Adjusting external input

1. Use ⊖ to select the Audio Input block.

. . . .

2. Use ◯¹ to adjust the INPUT Level.

Setting the external input to stereo or mono

Make the following settings if an audio source with mono output is connected to the external input.

1. Connect a mono cable to the left INPUT jack.

. . . .

2. Press ⌂.

. . . .

3. Use ⊖ to select the Audio Input block.

. . . .

4. Use ◯² to select the type of external input.

Stereo: Receive the left and right channel inputs as a stereo audio signal
Mono (Lch): Receive the left channel input as a mono audio signal

System settings

Changing various settings

Settings related to unit operation and other features can be made.

1. Press ⬚.

----

2. Use ⬚ to select SETTING, and press ⬚.

This opens the setting screen.

----

3. Use ⬚ to select menu items and ⬚ to confirm them.

Press ⬚ to move up one level in the menu.

■ Setting the quantization (Quantize)

· Use ⬚ to select the quantization value.

Set the input adjustment timing as a fraction of a musical measure. This can be set to OFF, 1/32, 1/16Tri, 1/16, 1/8Tri, 1/8, 1/4, 1/2 or 1.

HINT

This affects motion sequences and real-time input in INST mode, for example.

■ Setting inner ring display (Inner Ring LED)

· Use ⬚ to select what the inner ring of the Ring Controller shows.

Select Instruments (instrument display) or Guideline (guideline display).

■ Setting the clock mode (Clock Mode)

Set whether the internal clock or an external clock is used when connected to other MIDI devices by USB.

· Use ⬚ to select the clock mode.

Select Internal or External USB.

NOTE

When External USB is selected, songs and looper sequences cannot be recorded.

■ Setting the display brightness (LCD Backlight)

· Use ⬚ to set the brightness of the Base Station display.

Select Low, Mid or High.

■ Show the software versions (Software Version)

· Use ⬚ to show the software versions.

Changing various settings (continued)

■ Restoring default settings
  (Factory Reset)

· Press ⓢ to restore the **AR-96** Base Station

  to its default settings.

  A confirmation message appears on the dis-
  play, and then the settings are restored to
  their factory defaults.

NOTE

Restoring settings to their defaults will erase
everything you have created including pat-
terns and songs. Save them to an SD card in
advance if you do not want to lose them.
Backing up data (→ P. 98)

Backing up data

Data utilities

You can back up the data for patterns, songs, captured audio, looper sequences and kits that you created to an SD card all at once. When restoring data, you can load all the data at once or choose only some data to load.

1. Press ⓔ.

2. Use ⓞ to select DATA UTILITY, and press ⓢ.

This opens the DATA UTILITY screen.

3. Use ⓞ to select menu items and ⓢ to confirm them.

Press ⓔ to move up one level in the menu.

■ Backing up data (Backup)

- Press ⓢ to open the data name input screen.

- Input the data name, and select Enter.

  This backs up to the data.

NOTE

WAV format audio files used for captured recordings are not backed up.

HINT

- The default backup file name is "DATAxxxx. ARD" ("xxxx" is a 4-digit number).
- Character input screen use (→ P. 20)

■ Loading data (Load)

- Press ⓢ to open the backup data list screen.

- Use ⓞ to select data in the list, and press ⓢ to open the load selection screen.

  All: Load all data

  Kit List: Load all kit data

  Pattern List & Song List: Load all pattern and song data

  Capture List & Looper List: Load all capture and looper data

- Use ⓞ to select data to load, and press ⓢ.

  This opens a confirmation screen.

- Use ⓞ to select Yes, and press ⓢ.

  The data will be loaded from the SD card.

NOTE

When you load data, the contents on the **AR-96** are overwritten.

■ Erasing all data (Erase List)

You can erase all the data for patterns, songs, captured audio, looper sequences and kits.

- Press ⓢ to open the selection screen for data to be erased.

  All: Erase all data

  Kit List: Erase all Kit List data

  Song List: Erase all Song List data

  Looper List: Erase all Looper List data

  Pattern List & Song List: Erase all Pattern List and Song Sequence List data

  Capture List & Looper List: Erase all Capture List and Looper List data

- Use ⓞ to select the data to erase, and press ⓢ.

  This opens a confirmation screen.

- Use ⓞ to select Yes, and press ⓢ.

  This erases all the data.

SD card management

Checking SD card open space

1. Press 📋.

. . . .

2. Use ⊙ to select SD CARD,

and press ⦿.

. . . .

3. Use ⊙ to select SD Card

Remain, and press ⦿.

This shows the amounts of space used and open on the SD card.

SD Card Remain
0%   50%   100%

3.59GB / 3.67GB

MENU Return

Formatting SD cards

1. Press 📋.

. . . .

2. Use ⊙ to select SD CARD,

and press ⦿.

. . . .

3. Use ⊙ to select Format,

and press ⦿.

A confirmation message appears.

Format

Format SD Card.
Are you sure?

Yes   No

MENU Cancel

. . . .

4. Use ⊙ to select Yes,

and press ⦿.

This formats the SD card.

NOTE

- Before using SD cards that have just been purchased or that have been formatted on a computer, they must be formatted by the **AR-96**.
- Be aware that all data previously saved on the SD card will be deleted when it is formatted.

SD card management (continued)

Testing SD card performance

You can test whether an SD card can be used with the **AR-96**. A basic test can be done quickly, while a full test examines the entire SD card.

■ Quick testing

1. Press (≡).

. . . .

2. Use (◎) to select SD CARD, and press (◉).

. . . .

3. Use (◎) to select Performance Test, and press (◉).

. . . .

4. Use (◎) to select Quick Test, and press (◉).

This will start the quick SD card test.

. . . .

5. The test completes.

The result of the evaluation will be shown.

■ Full testing

1. Press (≡).

. . . .

2. Use (◎) to select SD CARD, and press (◉).

. . . .

3. Use (◎) to select Performance Test, and press (◉).

. . . .

4. Use (◎) to select Full Test, and press (◉).

The amount of time required and a confirmation message appears.

. . . .

5. Use (◎) to select Yes, and press (◉).

This will start the full SD card test.

. . . .

6. The test completes.

The result of the evaluation will be shown.

NOTE

Even if a performance test result is "OK", there is no guarantee that writing errors will not occur. This information is just to provide guidance.

SD card management (continued)

SD card folder structure

```
┌──┐      ┌──┐         ┌──┐          ┌─┐      PCM audio files
│SD│ ──── │  │ ─────── │  │ ──────── │♪│      for capture
└──┘      └──┘         └──┘          └─┘
AR-96_SD   AR-96       Capture       PCM file
                                     CPTR0001.WAV

                                     ┌─┐
                                     │♪│
                                     └─┘
                                     CPTR0002.WAV
                                        ⋮

                      ┌──┐          ┌─┐       User data files
                      │  │ ──────── │ │
                      └──┘          └─┘
                      Data          DATA0001.ARD

                                    ┌─┐
                                    │ │
                                    └─┘
                                    DATA0002.ARD
                                       ⋮
```
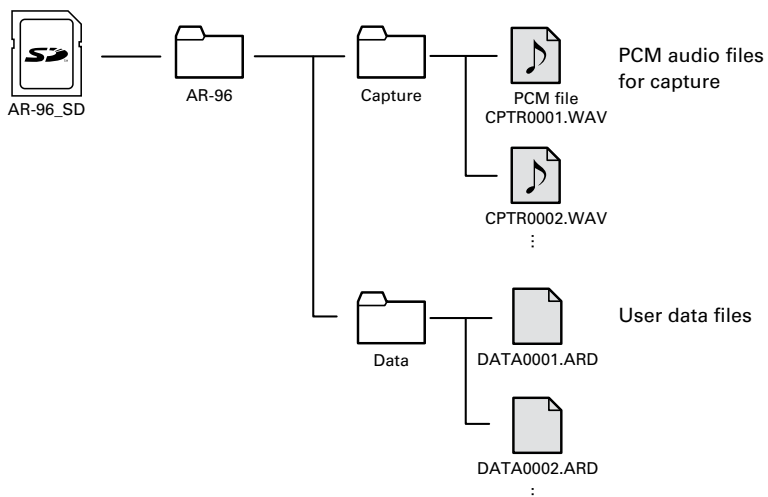
Ring Controller settings

Ring Controller and Base Station connection and disconnection

The Ring Controller and Base Station connect through wireless communication using Bluetooth LE.

Making setting connections is necessary when, for example, connecting a Ring Controller and Base Station that were not originally in the same set.

■ Connecting

1. Press 🔘.

. . . .

2. Use 🔘 to select CONTROLLER, and press 🔘.

. . . .

3. Use 🔘 to select Device List, and press 🔘.

A list of Ring Controllers that can be connected will appear.

HINT

The number of bars in the icon shows the strength of the connection.

. . . .

4. Use 🔘 to select the Ring Controller to connect, and press 🔘.

The selected Ring Controller will be connected and all its lights will flash blue.

■ Disconnecting

1. Press 🔘.

. . . .

2. Use 🔘 to select CONTROLLER, and press 🔘.

. . . .

3. Use 🔘 to select Device List, and press 🔘.

The list of Ring Controllers will appear. A white square will appear next to the connected Ring Controller.

. . . .

4. Use 🔘 to select a connected Ring Controller, and press 🔘.

The Ring Controller will be disconnected and all its lights will flash red.

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Setting the grip area

1. ⊙ CONTROLLER Press [👊 ○].

All the Ring Controller LEDs will light blue.

---

2. ⊙ CONTROLLER Grasp the area to

set as the grip area.

The pads in the grasped range blink white.

The pads at the same positions on the top and bottom rings are also affected.
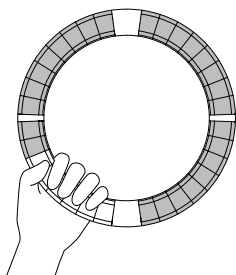
HINT
If a grip is not detected for 30 seconds, detection will automatically cancel.

---

3. ⊙ CONTROLLER Press [👊 ○].

The LED lighting of the Ring Controller returns to its previous state, except the LEDs in the grip area become unlit showing that they will not respond to use.

HINT
When the grip area is set, the [👊 ○] LED will light.

■ Disabling the grip area setting

1. ⊙ CONTROLLER Press [👊 ○].

All the Ring Controller LEDs will light blue.

---

2. Place the Ring Controller on the

Base Station.

---

3. ⊙ CONTROLLER Press [👊 ○].

This disables the grip area setting, making all pads usable again.

HINT
If automatic grip cancellation (→ P. 104) is ON, the grip area will automatically be canceled when the Ring Controller is placed on the Base Station.

Ring Controller settings (continued)

Ring Controller function settings

In this section, we explain setting items that can be used when connected to the Base Station.

> **HINT**
>
> Using the Ring Controller for MIDI control
> (→ P. 108)

1. Press ⓔ.

2. Use ⓞ to select CONTROLLER, and press ⓑ.

3. Use ⓞ to select Setting, and press ⓑ.

This opens the Ring Controller Setting screen.

4. Use ⓞ to select menu items and ⓑ to confirm them.

Press ⓔ to move up one level in the menu.

■ Setting the LED brightness (LED Brightness)

- Use ⓞ to select LED brightness.
  Select Low or High.

■ Automatic grip cancellation (Auto Grip Off)

You can turn automatic grip cancellation ON or OFF.

- Use ⓞ to set automatic grip cancellation.
  Select Off or On.

■ Velocity (For AR-96 > Velocity Curve)

This sets the pad sensitivity.

- Use ⓞ to set the pad sensitivity.

  Low: Low sensitivity
  (playing strength affects velocity little)
  Mid: Standard
  High: High sensitivity
  (playing strength greatly affects velocity)
  Max: Velocity is always maximum regardless of playing strength

■ Aftertouch (For AR-96 > After Touch)

You can turn aftertouch ON or OFF.

- Use ⓞ to set the aftertouch.
  Select Off or On.

■ Aftertouch threshold (For AR-96 > After Touch Threshold)

Set how easily aftertouch is activated.

- Use ⓞ to set the aftertouch threshold.
  Low: Aftertouch activates easily
  Mid: Standard
  High: Aftertouch does not activate easily

■ Accelerometer sensitivity (For AR-96 > Accelerometer Sensitivity)

This sets the accelerometer sensitivity.

- Use ⓞ to set the accelerometer sensitivity.
  Low: Low sensitivity (less response to incline changes)
  Mid: Standard
  High: High sensitivity (responds even to slight incline changes)

Ring Controller settings (continued)

■ Setting functions with the Ring Controller

You can also use the Ring Controller pads to set its functions.

• ○ CONTROLLER Press ⬚⚙○.

The Ring Controller enters setting mode and the pads function as setting keys.

Automatic grip cancellation

BLE mode

Accelerometer sensitivity

Aftertouch threshold

LED brightness

Aftertouch

Velocity
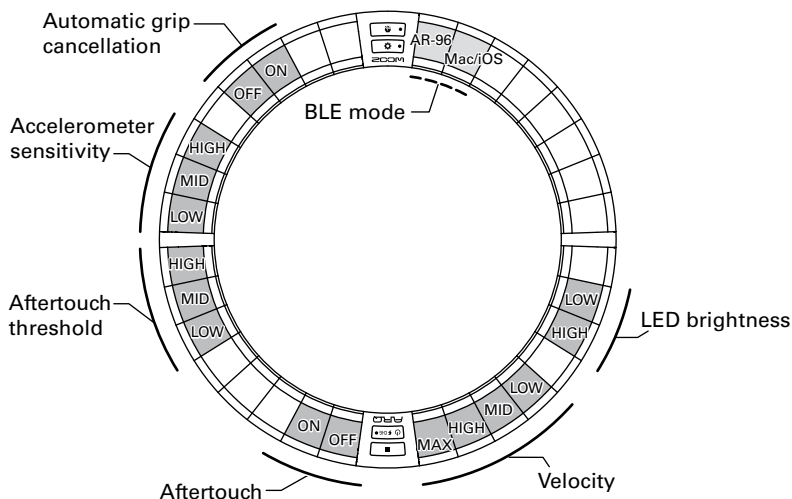
Changing the Ring Controller battery

Change the battery if it begins to run out of power quickly or cannot be charged.

NOTE

Always use a ZOOM BT-04 rechargeable battery.

■ Removing the battery

1. Remove the cap from the back of

the Ring.

The cap Is below the [○MASTER FX].

Ring Controller bottom
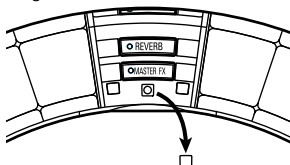
2. Remove the screw under the cap.

Use a Phillips head screwdriver to remove the screw.

3. Pull the battery holder out.
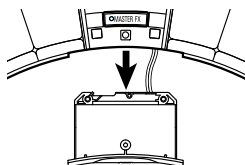
4. Disconnect the cable connector

that connects the battery and the

battery holder.
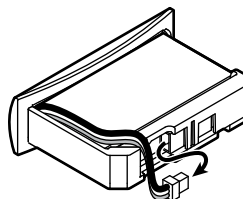
5. Remove the battery from the

battery holder.

■ Installing a battery

1. Put the battery into the holder.

2. Connect the battery and battery

holder with the cable.

– (Black)
+ (Red)
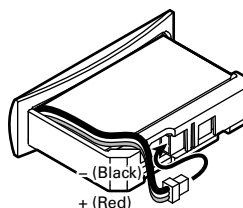
3. Install the battery holder in the

Ring Controller.

4. Tighten the screw and replace the

cap.

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Updating the firmware

The product firmware can be updated to the latest version.

An update file for the latest version can be downloaded from the ZOOM website (www.zoom.co.jp).

Updating the Base Station

1. Copy the file for updating to the root directory on an SD card.

---

2. Insert the SD card into the card slot. Then, while pressing $\overset{\text{MENU}}{\textcircled{\equiv}}$, press and hold $\overset{\text{POWER}}{\textcircled{\textcircled{}}}$.

This opens an update confirmation screen.

---

3. Use $\overset{\text{SELECT}}{\textcircled{\bigcirc}}$ to select Yes, and press $\overset{\text{SELECT}}{\textcircled{\textcircled{}}}$.

NOTE

Do not turn the power off or remove the SD card during the update. Doing so could cause the **AR-96** to become unstartable.

---

4. After the update completes, press and hold $\overset{\text{POWER}}{\textcircled{}}$ to turn the power off.

Updating the Ring Controller

If you connect a Ring Controller that is using old firmware to a Base Station, an update alert will appear on its display.

If this occurs, follow the procedures below to update the Ring Controller.

1. ⊙CONTROLLER While pressing and holding ▶\Ⅱ∘ , press ⏻ ⚡CHG∘ .

The Ring Controller will start in update mode, and an update screen will appear on the Base Station.

NOTE

Confirm that the pad next to ⏻ ⚡CHG∘ is lit blue. If it lights purple, connect the Ring Controller and the Base Station. (→ P. 102)

---

2. Use $\overset{\text{SELECT}}{\textcircled{\bigcirc}}$ to select Yes, and press $\overset{\text{SELECT}}{\textcircled{\textcircled{}}}$.

The update progress screen opens on the Base Station.

---

3. ⊙CONTROLLER After the update completes, press and hold ⏻ ⚡CHG∘ to turn the power off.

NOTE

Confirm the update result with the color of the pad next to ⏻ ⚡CHG∘ .

· Update completed successfully: Green

· Update failed: Red

If the update failed, try again from step 1.

MIDI controller

Using the Ring Controller for MIDI control

The **AR-96** Ring Controller can be connected independently to a Mac/iOS device and used as a MIDI controller.

MIDI controller settings
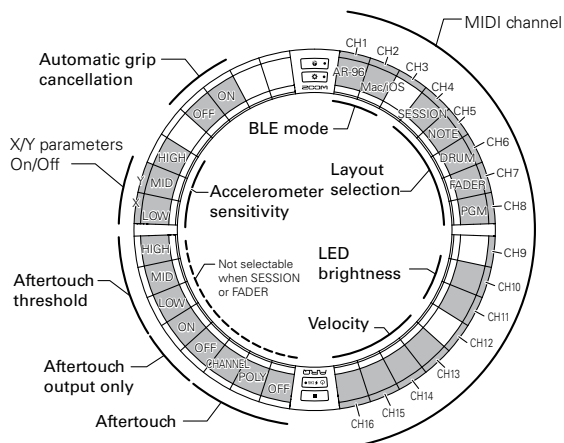
■ BLE mode

Select the device to be connected to the Ring Controller.

AR-96: This is the normal mode. It connects to an **AR-96** Base Station. (→ P. 102)

Mac/iOS: This allows you to connect the Ring Controller directly to a Mac or iOS device and use it as a MIDI controller.

■ Layout selection

Set the MIDI message layout of the Ring Controller.

For details about each layout, see "MIDI controller layouts" (→ P. 110).

■ MIDI channels

Set the combination of MIDI channels for the Ring Controller to use.

CH 1–11 (12–16 are fixed for session layout)

■ X/Y parameter On/Off

Set whether or not the accelerometer values of the X and Y axes are output.

■ Aftertouch

Set the aftertouch type.

OFF: No aftertouch

POLY: When multiple pads are pressed simultaneously, they are each treated independently

CHANNEL: The same value is output for the entire MIDI channel

■ Aftertouch only output

Only aftertouch MIDI messages are output.

HINT

• These settings can also be made by pressing ⓜ̲ on the Base Station and using the CONTROLLER>Setting>For Mac/iOS item.
• For velocity and other setting items in common with the **AR-96**, refer to "Ring Controller settings" (→ P. 102).

Connecting with Mac/iOS devices

Using Bluetooth LE, you can connect the Ring Controller directly to a Mac or iOS device, and use it as a MIDI controller.

NOTE

To use this function, turn the Base Station power OFF or disconnect from it (→ P. 102).

■ Switching the Ring Controller mode

1. ○ **CONTROLLER** Press [✿ ○].

This puts the Ring Controller into setup mode.

2. ○ **CONTROLLER** Tap the pad for Mac/iOS BLE mode.

This puts the Ring Controller into Mac/iOS mode.

■ Connecting with a Mac

1. Open the Audio MIDI Setup application on the Mac

2. Select Window in the menu bar, and then Show MIDI Window.

This opens the MIDI Studio window.

3. Double-click the Bluetooth icon.

This opens the Bluetooth Configuration screen.

4. Click "Connect" for the Ring Controller shown in the list.

When connection succeeds, all of the LEDs will blink blue on the Ring Controller.

NOTE

If connection fails, open the System Preferences and click the × next to the Ring Controller in the list of Bluetooth devices before trying again.

■ Connecting with iOS devices

1. Launch an app that supports MIDI over BLE on the iOS device.

2. On the app Settings screen, conduct Bluetooth connection.

When connection succeeds, all of the LEDs will blink blue on the Ring Controller.

HINT

For app setting procedures, see the manual for that app.

MIDI controller layouts

When using the Ring Controller for MIDI control, you can select from five types of pad layouts.

Layout types

■ SESSION layout

This layout is designed for use with the Session View of Ableton Live. You can use it to play clips and scenes and use it to control volume, panning and send effects, for example.

■ NOTE layout

This layout distributes notes on the pads like piano keys.

Use ⇕ to change the octave.

■ DRUM layout

This layout is designed for use with drum racks in DAW software.

The pads on 1/4 of each ring correspond to one drum rack section.

Use ⇕ to raise or lower groups of note numbers.

■ FADER layout

This lets you use the Ring Controller as faders. The pads on half of each ring function as a single fader.

■ PROGRAMMER mode

This mode allows you to program each pad and its LED lighting as you like.

HINT

For details about MIDI messages sent and received in each mode, see "Ring Controller MIDI messages" (→ P. 124).

Selecting layouts

1. ⭕ CONTROLLER Press [⚙ ○].

This puts the Ring Controller into setup mode.

....

2. ⭕ CONTROLLER Tap the pad for one

of the modes.

SESSION
NOTE
DRUM
FADER
PGM (program)
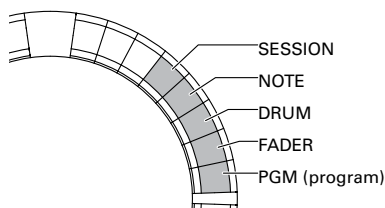
This changes the Ring Controller layout.

....

3. ⭕ CONTROLLER Press [⚙ ○].

This ends setting mode.

Other functions

Accelerometer

You can use the Ring Controller accelerometer to send MIDI messages.

> **NOTE**
> - This can be used when the Ring Controller grip area has been set. (→ P. 103)
> - The grip area determines the directions of the X and Y axes.
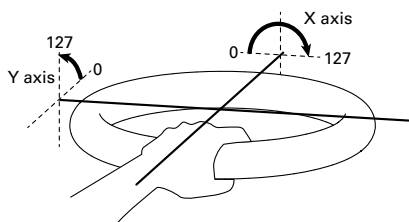
MIDI messages sent

X axis: Control Change 85, 0–127
Change occurs in a range from level (0°) to upside down (180°).
Y axis: Control Change 86, 0–127
Change occurs in a range from level (0°) to vertical (90°).

■ Turning the accelerometer ON/OFF

1. ⃝ **CONTROLLER** Press ⬚ MASTER FX .

The MASTER FX LED lights, and the accelerometer turns ON.

2. ⃝ **CONTROLLER** Press MASTER FX again to turn the accelerometer OFF.

The MASTER FX LED becomes unlit, and the accelerometer turns OFF.

Restoring default settings

1. ⃝ **CONTROLLER** While pressing

⬚ ✿ ○ , turn the Ring Controller on.

This enables factory reset mode.

2. ⃝ **CONTROLLER** Tap the pad with a blinking LED.

This restores the Ring Controller to its default settings, and turns the Ring Controller off automatically

■ Restoring default settings from the Base Station

You can use the Base Station to restore the Ring Controller to its factory default settings.

1. Press 🔘.

2. Use 🔘 to select CONTROLLER, and press 🔘.

3. Use 🔘 to select Setting, and press 🔘.

4. Use 🔘 to select Factory Reset, and press 🔘.

This opens a confirmation screen.

5. Use 🔘 to select Yes, and press 🔘.

This restores the Ring Controller to its factory default settings.

Troubleshooting

If you think that the **AR-96** is operating strangely, check the following items first.

■ **There is no sound or it is very quiet**
- Confirm that the power is ON.
- Check the connections
- Adjust the levels of the instruments
- Adjust mixer group levels.
- Confirm that it is not muted.
- Check the headphone and OUTPUT volume levels.

■ **There is a lot of noise**
- Confirm that nothing is wrong with the shielded cable.
- Use a genuine ZOOM AC adapter.

■ **Effects are not working**
- Confirm that the effect is properly assigned to an instrument.
- Effects are only enabled when their individual keys are being pressed. Use [HOLD] to keep an effect enabled even after releasing its key.

■ **The Ring Controller does not work well**
- Confirm that the power is ON.
- Confirm its connection with the Base Station.
- Adjust the pad sensitivity.
- Confirm the grip setting.
- If using it as a MIDI controller, check the Mac or iOS device settings.

Product specifications

Base Station

Inputs	INPUT L/R	Connector type	Standard mono phone jacks (unbalanced)
		Input gain	+10 to −65 dB
		Input impedance	50 kΩ
Outputs	OUTPUT L/R	Connector type	Standard mono phone jacks (unbalanced)
		Output impedance	200 Ω
	PHONES	Connector type	Standard stereo phone jacks 20mW × 2 (into 32Ω load)
		Output impedance	10 Ω
Dynamic range			ANALOG IN (AD): 92 dB typ (IHF-A) PHONE OUT (DA): 102 dB typ (IHF-A) MAIN OUT (DA): 106 dB typ (IHF-A)
Recording media			16MB–2GB SD cards, 4GB–32GB SDHC cards, 64GB–128GB SDXC cards
MIDI IN/OUT			USB MIDI or MIDI over Bluetooth LE
Power			5V 1A AC adapter
Power consumption			Base Station: 1.25 W maximum When powering Ring Controller: 4.5 W maximum (including charging current)
External dimensions			260.0 mm (D) × 260.0 mm (W) × 64.0 mm (H)
Weight (main unit only)			990 g
Display	LCD		2.0" full-color LCD (320×240)
Interface	USB 2.0 (standard USB MIDI)	Supported operating systems	Windows 7 (SP1 or later), Windows 8 (including 8.1) or later, Windows 10 Mac OS X 10.8 or later
		Minimum specifications	Chipset that includes USB 2.0 as standard, Intel Core i3 or faster CPU
	MIDI over Bluetooth LE	Transmission speed	31.25 kbps (±1%) maximum
		Latency (with Ring Controller)	5–12.5 ms

Ring Controller

MIDI IN/OUT			MIDI over Bluetooth LE
Sensors			PAD pressure sensors, 3-axis accelerometer
Power			Lithium polymer rechargeable battery (DC4.2V maximum voltage, 3.7V nominal voltage, 450mAh 3.7V capacity), direct supply from Base Station
Power consumption			When using battery: 2 W maximum
Recharging time			About 2.5 hours
Battery operation time			About 4.5 hours when LED brightness is Low About 2.5 hours when LED brightness is High (differs according to use conditions)
External dimensions			280.5 mm (D) × 280.5 mm (W) × 33.5 mm (H)
Weight (main unit only)			540 g
Trigger pads		Number of pads	96
		Velocity curves	4 types
Interface	MIDI over Bluetooth LE	Supported iOS devices	iPad devices running iOS 8.0 or later
		Supported Macs	Mac OS X 10.10.5 Yosemite or later MacBook, iMac and Mac pro series computers that support BLE transmission
		Transmission speed	31.25 kbps (±1%) maximum
		Latency (with Base Station)	5–12.5 ms
		Latency (iOS and Mac OS)	16.25–20 ms

Appendix

Preset pattern list

	Pattern No.	Pattern name
GENRE 1	1	DEEPHOUSE
	2	PROGRESSIVE
	3	NEW TRAP
	4	HARD DANCE
	5	NEW REGGAETON
	6	TECHNO
	7	DUBSTEP
	8	TRIPLETS
	9	NEW JAZZ
	10	EURODANCE
	11	DRUM N BASS
	12	MINMAL
	13	HIPHOP
	14	TRIBAL
	15	LA BEAT
	16	AFROBEAT
	17	ELECTRO
	18	TRANCE
	19	BROKENBEAT
	20	KUDURO
	21	WORLD
GENRE 2	22	NEW EU DANCE
	23	ELECTRIC HOUSE A
	24	ELECTRIC HOUSE B
	25	TECH HOUSE A
	26	TECH HOUSE B
	27	TECH HOUSE C
	28	STAR GATE
	29	FILTER HOUSE A
	30	FILTER HOUSE B
	31	TRIBAL HOUSE A
	32	TRIBAL HOUSE B
	33	EURO HOUSE
	34	HOP HOUSE
	35	AMBIENT TECH A
	36	AMBIENT TECH B
	37	PSY TRANCE A
	38	PSY TRANCE B
	39	REPEAT A
	40	REPEAT B
	41	MELODIC TECHNO A
	42	MELODIC TECHNO B
	43	TRIBAL TECH
	44	BIG TECHNO
	45	SPRINGY TECH
	46	TECH STEP A
	47	TECH STEP B
	48	DREAMING A
	49	DREAMING B
	50	TRIBAL A
	51	TRIBAL B
	52	SAY YEAH A
	53	SAY YEAH B
	54	SAMPLING BEAT A
	55	SAMPLING BEAT B
	56	FUTURE GROOVE A
	57	FUTURE GROOVE B
	58	FUTURE TRIBE
	59	WHEREHOUSE

	Pattern No.	Pattern name
SONG	60	CHILL OUT A
	61	CHILL OUT B
	62	AMBIENT BEAT A
	63	AMBIENT BEAT B
	64	DUBSTEP BEAT A
	65	DUBSTEP BEAT B
	66	AMBIENT STEP A
	67	AMBIENT STEP B
	68	AMBIENT TRAP A
	69	AMBIENT TRAP B
	70	LOW DOWN
	71	TRAP
	72	BIG TRAP
	73	HARD TRAP
	74	SLAP TRAP
	75	ELECTRO TRAP
	76	BELL TREES
	77	LIGHT MACHINE
	78	OLD SCHOOL
	79	ELECTRO HIPHOP
	80	OG
	81	BIG REVERB
	82	HARD N BASS
	83	DRUM N BASS A
	84	DRUM N BASS B
	85	FAST STEP A
	86	FAST STEP B
	87	MOVING BASS
	88	SESSION
	89	JAZZY STYLE
	90	ACO REGGAETON
	91	REGGATON
	92	LOW KICK A
	93	LOW KICK B
	94	AFRO TECH
	95	AFRO HARD TECH
	96	YAY
	97	DISCO 1
	98	DISCO 2
	99	DISCO 3
	100	DISCO 4
	101	DISCO 5
	102	DISCO 6
	103	DISCO 7
	104	DISCO 8
	105	DISCO 9
	106	DISCO 10
	107	DARK WAVE 1
	108	DARK WAVE 2
	109	DARK WAVE 3
	110	DARK WAVE 4
	111	DARK WAVE 5
	112	DARK WAVE 6
	113	DARK WAVE 7
	114	DARK WAVE 8
	115	DARK WAVE 9
	116	DARK WAVE 10
	117	FOOTWORK 1
	118	FOOTWORK 2

	Pattern No.	Pattern name
SONG	119	FOOTWORK 3
	120	FOOTWORK 4
	121	FOOTWORK 5
	122	FOOTWORK 6
	123	FOOTWORK 7
	124	FOOTWORK 8
	125	FOOTWORK 9
	126	FOOTWORK 10
	127	BKLYN TECHNO 1
	128	BKLYN TECHNO 2
	129	BKLYN TECHNO 3
	130	BKLYN TECHNO 4
	131	BKLYN TECHNO 5
	132	BKLYN TECHNO 6
	133	BKLYN TECHNO 7
	134	BKLYN TECHNO 8
	135	BKLYN TECHNO 9
	136	BKLYN TECHNO 10
	137	DODGE 1
	138	DODGE 2
	139	DODGE 3
	140	DODGE 4
	141	DODGE 5
	142	DODGE 6
	143	DODGE 7
	144	BOUNCE 1
	145	BOUNCE 2
	146	BOUNCE 3
	147	BOUNCE 4
	148	BOUNCE 5
	149	BOUNCE 6
	150	BOUNCE 7
	151	BOUNCE 8
	152	BOUNCE 9
	153	TECHNO 1
	154	TECHNO 2
	155	TECHNO 3
	156	TECHNO 4
	157	TECHNO 5
	158	TRAP A 1
	159	TRAP A 2
	160	TRAP A 3
	161	TRAP A 4
	162	TRAP A 5
	163	TRAP B 1
	164	TRAP B 2
	165	TRAP B 3
	166	TRAP B 4
	167	TRAP B 5
	168	REGGAETON 1
	169	REGGAETON 2
	170	REGGAETON 3
	171	REGGAETON 4
	172	REGGAETON 5
SAMPLE	381	PLAIN 1
	382	PLAIN 2
	383	PLAIN 3
	384	PLAIN 4

Preset kit list

	KIT No.	KIT name
GENRE 1	1	DEEPHOUSE
	2	RAINBOW
	3	TRAP LIGHTING
	4	HARD DANCE
	5	4 SPLIT
	6	TECHNO
	7	DUBSTEP
	8	EDM LIGHTING
	9	NEW JAZZ
	10	4 RED COLORS
	11	4 BLUE COLORS
	12	MINIMAL
	13	HIPHOP
	14	SNAKE
	15	TRIPLE SAW
	16	AFROBEAT
	17	ELECTRO
	18	TRANCE LIGHTING
	19	BROKENBEAT
	20	KUDURO
	21	KALIMBA
GENRE 2	22	NEW EU DANCE
	23	ELECTRIC HOUSE
	24	TECH HOUSE
	25	STAR GATE
	26	FILTER HOUSE
	27	TRIBAL HOUSE
	28	EURO HOUSE
	29	HOP HOUSE
	30	AMBIENT TECH
	31	PSY TRANCE
	32	PHASED SNARE
	33	MELODIC TECHNO
	34	WORLD
	35	BIG TECHNO
	36	SPRINGY TECH
	37	TECH STEP
	38	DREAMING
	39	FUNKY
	40	DEEP DARK

	KIT No.	KIT name
GENRE 2	41	FUTURE GROOVE
	42	FUTURE TRIBE
	43	WHEREHOUSE
	44	CHILL OUT
	45	AMBIENT BEAT
	46	DUBSTEP BEAT
	47	AMBIENT STEP
	48	AMBIENT TRAP
	49	LOW DOWN
	50	TRAP
	51	HARD N BASS
	52	ELECTRO TRAP
	53	BELL TREES
	54	ELECTRO HIPHOP
	55	OG
	56	AMBIANT
	57	DRUM N BASS
	58	SESSION
	59	ELECTRIC JAZZ
	60	ACO REGGAETON
	61	REGGAETON
	62	LOW KICK
	63	AFRO TECH
	64	AFRO HARD TECH
	65	YAY
SONG	66	DISCO
	67	DARK WAVE
	68	FOOTWORK
	69	BKLYN TECHNO
	70	DODGE
	71	NYC
	72	TECHNO SONG
	73	TRAP SONG
	74	H & N SONG
	75	HARD REGGAETON
SAMPLE	76	HALF AND HALF
	77	TOUCH A PITCH
	78	STEP MASTER
	79	PLAY A KICK!

EDIT menu parameter lists

■ Oscillator block

Selection type

Selection knob selection
Type
See the Oscillator list

Oscillator list

Category	Wave name	LOOP	No.
Kick	2Step Kick	○	1
	BigBeat Kick	○	2
	Blubber Kick	○	3
	BreakBeat Kick	×	4
	Breaks Kick	×	5
	Classic Kick	○	6
	Cyber Kick	○	7
	DeepDark Kick	×	8
	DeepHouse Kick	○	9
	Disco Kick	×	10
	D&B Kick	×	11
	Dubstep Kick	×	12
	EDM Kick	○	13
	Electro Kick	○	14
	EuroBeat Kick	○	15
	EuroDance Kick	○	16
	EuroTrance Kick	○	17
	FrenchHouse Kick	○	18
	Funk Kick	×	19
	Hardcore Kick	×	20
	HardHouse Kick	○	21
	HardTechno Kick	×	22
	HipHop Kick 1	○	23
	HipHop Kick 2	○	24
	Oldschool Kick	○	25
	HR&HM Kick	×	26
	Jazz Kick	×	27
	Jungle Kick	×	28
	Kicker Kick	○	29
	Berlin Kick	○	30
	D Kick	○	31
	Muted Kick	×	32
	Lounge Kick	×	33
	MainRoom Kick	×	34
	Minimal Kick	○	35
	NuDisco Kick	×	36
	ProgHouse Kick	○	37
	R&B Kick	○	38
	Reggae Kick	○	39
	Reggaeton Kick	×	40
	Rock Kick	×	41
	Sub Kick	○	42
	Synth Kick	○	43
	Techno Kick	×	44
	TechHouse Kick	○	45
	Kit707 Kick	×	46
	Kit808 Kick	×	47
	Kit909 Kick	○	48
	Trap Kick	○	49
	TrapMe Kick	×	50
	TribalHouse Kick	○	51
Snare	2Step RS	×	1
	2Step Snare	×	2
	BigBeat RS	×	3
	BigBeat Snare	×	4
	Breaks RS	×	5
	Breaks Snare	×	6
	Chicago Snare	×	7
	DeepHouse Snare	×	8
	DeepHouse RS	×	9
	D&B RS	×	10
	D&B Snare	×	11
	Dubstep RS	×	12
	Dubstep Snare 1	×	13
Snare	Dubstep Snare 2	×	14
	EDM Snare	×	15
	EDM RS	×	16
	Electro RS	×	17
	Electro Snare	×	18
	EuroBeat RS	×	19
	EuroBeat Snare	×	20
	EuroDance RS	×	21
	EuroDance Snare	×	22
	EuroTrance RS	×	23
	EuroTrance Snare	×	24
	FlashBulb Snare	×	25
	Future Snare	×	26
	Garage Snare	×	27
	Hardcore RS	×	28
	Hardcore Snare	×	29
	HardHouse RS	×	30
	HardHouse Snare	×	31
	HardTechno RS	×	32
	HardTechno Snare	×	33
	HH Snare	×	34
	HipHop RS	×	35
	HipHop Snare	×	36
	HR&HM RS	×	37
	HR&HM Snare	×	38
	Jazz RS	×	39
	Jazz Snare	×	40
	Jazz Brush	×	41
	Jungle RS	×	42
	Jungle Snare	×	43
	MainRoom Snare	×	44
	Minimal RS	×	45
	Minimal Snare	×	46
	NuDisco RS	×	47
	NuDisco Snare	×	48
	ProgHouse RS	×	49
	ProgHouse Snare	×	50
	R&B RS	×	51
	R&B Snare	×	52
	Reggae RS	×	53
	Reggae Snare	×	54
	Reggaeton RS	×	55
	Reggaeton Snare	×	56
	Rock RS	×	57
	Rock Snare	×	58
	Gangsta Snare	×	59
	South Snare	×	60
	TechHouse RS	×	61
	TechHouse Snare	×	62
	Kit707 Snare	×	63
	Kit808 Snare	×	64
	Kit808 RS	×	65
	Kit909 Snare	×	66
	Kit909 RS	×	67
	Trap RS	×	68
	Trap Snare	×	69
	TribalHouse RS	×	70
	TribalHouse Snare	×	71
	UK Snare	×	72
	Vintage Snare	×	73
Clap	Building Clap	×	1
	ClasRave Clap	×	2
	Dance Clap	×	3
	Disco Clap	×	4
Clap	D&B Clap	×	5
	Breaks Clap	×	6
	Electro Clap	×	7
	Techno Clap 1	×	8
	House Clap 1	×	9
	HipHop Clap	×	10
	Minimal Clap	×	11
	House Clap 2	×	12
	Techno Clap 2	×	13
	NY Clap	×	14
	Reggae Clap	×	15
	Short Clap	×	16
	SlapVerb Clap	×	17
	Step Clap	×	18
	Thug Clap	×	19
	Kit707 Clap	×	20
	Kit808 Clap	×	21
	Kit909 Clap	×	22
	Trance Clap	×	23
	Trap Clap	×	24
Hihat	Berlin CloseHH	×	1
	Berlin OpenHH	×	2
	Chicago Hi-Hat	×	3
	ComputerNoise	×	4
	DeadLeaser Hat	×	5
	Disco CloseHH	×	6
	Disco OpenHH	×	7
	Dance CloseHH	×	8
	Dance OpenHH	×	9
	D&B CloseHH	×	10
	D&B OpenHH	×	11
	Breaks CloseHH	×	12
	Breaks OpenHH	×	13
	Electro CloseHH	×	14
	Electro OpenHH	×	15
	Techno CloseHH	×	16
	Techno OpenHH	×	17
	Feedback Hat	×	18
	Garage Hat	×	19
	GlitchTick Hat	×	20
	HardHouse Hat	×	21
	Standard OpenHH	×	22
	HipHop CloseHH	×	23
	HipHop OpenHH	×	24
	House CloseHH	×	25
	House OpenHH	×	26
	Minimal CloseHH	×	27
	Minimal OpenHH	×	28
	HR&HM CloseHH	×	29
	HR&HM OpenHH	×	30
	Jazz CloseHH	×	31
	Jazz OpenHH	×	32
	London Hat	×	33
	Milano Hat	×	34
	NY Hat	×	35
	Paris Hat	×	36
	R&B CloseHH	×	37
	R&B OpenHH	×	38
	Reggae CloseHH	×	39
	Reggae OpneHH	×	40
	Rock CloseHH	×	41
	Rock OpenHH	×	42
	Short Hi-Hat	×	43
	Kit707 CloseHH	×	44

Category	Wave name	LOOP	No.
Hihat	Kit707 OpenHH	×	45
	Kit808 CloseHH	×	46
	Kit808 OpenHH	×	47
	Kit909 CloseHH	×	48
	Kit909 OpenHH	×	49
	Trance CloseHH 1	×	50
	Trance OpenHH 1	×	51
	Trance CloseHH 2	×	52
	Trance OpenHH 2	×	53
Cymbal	Short Crash	×	1
	Long Crash	×	2
	Splash Cymbal	×	3
	Disco Crash	×	4
	Disco Ride	×	5
	Dance Crash	×	6
	Dance Ride	×	7
	D&B Crash	×	8
	D&B Ride	×	9
	Breaks Crash	×	10
	Breaks Ride	×	11
	Electro Crash	×	12
	Electro Ride	×	13
	Techno Crash	×	14
	Techno Ride	×	15
	HipHop Crash	×	16
	HipHop Ride	×	17
	House Crash	×	18
	House Ride	×	19
	Minimal Crash	×	20
	Minimal Ride	×	21
	HR&HM Crash	×	22
	HR&HM Ride	×	23
	Jazz Crash	×	24
	Jazz Ride	×	25
	R&B Crash	×	26
	R&B Ride	×	27
	Reggae Crash	×	28
	Reggae Ride	×	29
	Standard Ride	×	30
	Rock Crash	×	31
	Rock Ride	×	32
	Kit707 Crash	×	33
	Kit707 Ride	×	34
	Kit808 Crash	×	35
	Kit909 Crash	×	36
	Kit909 Ride	×	37
	Trance Crash	×	38
	Trance Ride	×	39
Tom	80's Tom	×	1
	Acoustic Tom 1	×	2
	Acoustic Tom 2	×	3
	DoubleElectro Tom	○	4
	FrenchHouse Tom	×	5
	Ind. Tribe Tom	×	6
	Industry Tom	×	7
	Long Tom	×	8
	NewWave Tom	×	9
	Noise Tom	×	10
	Synth Tom	○	11
	Kit707 Tom	×	12
	Kit808 Tom	×	13
	Kit909 Tom	×	14
	Vintage Tom	×	15
Percus-sion	BellTree	×	1
	Bottle	×	2
	BrightData	×	3
	Cabasa Hit	×	4
	Cabasa Shake	×	5
	Castanets	×	6
	CementClick	×	7
	Clave	×	8
	Conga Open	×	9
	Conga Close	×	10
	Conga Slap	×	11
	Cowbell	×	12

Category	Wave name	LOOP	No.
Percus-sion	Darbuka	×	13
	Davul Chember	×	14
	Davul Dum	×	15
	Davul Kasnak	×	16
	Davul Tek	×	17
	Djembe	×	18
	Droplet	×	19
	GlitchClave	×	20
	Hi-Bongo	×	21
	Lo-Bongo	×	22
	Hi-Timbales	×	23
	Lo-Timbales	×	24
	Hi-Agogo	×	25
	Lo-Agogo	×	26
	IDM Prec.	×	27
	LongGuiro	×	28
	ShortGuiro	×	29
	LongWhistle	○	30
	Maracas	×	31
	MouthPop	×	32
	MuteCuica	×	33
	MuteSurdo	×	34
	MuteTriangle	×	35
	OpenCuica	×	36
	OpenSurdo	×	37
	OpenTriangle	×	38
	OrganicPrec.	×	39
	Lo-Pop	○	40
	Hi-Pop	○	41
	PlasticLid	×	42
	Quijada	×	43
	Quijada Hit	×	44
	RimPercussion	×	45
	Riq Doum	×	46
	Riq Pa	×	47
	Riq Tak	×	48
	Shaker 1	×	49
	Shaker 2	×	50
	Shaker Hit	×	51
	ShortData	×	52
	ShortPercussion	×	53
	ShortWhistle	×	54
	Snap	×	55
	SquishyZap	×	56
	Sticks	×	57
	SynthPercussion	○	58
	Tabla Ge	×	59
	Tabla Ke	×	60
	Tabla Na	×	61
	Tabla Te	×	62
	Jingle	×	63
	Tambourine	×	64
	Timpani	×	65
	Kit808 Cowbell	○	66
	Vibraslap	○	67
	WindChime	×	68
	WoodBlock	×	69
Voice	Ai-Low House	×	1
	Hey Trap	×	2
	Female Oh	×	3
	Male Oh	×	4
	Oh Garage	×	5
	Technologic Vox	×	6
	U DeepHouse	×	7
	VocalStab	×	8
	Yah Dubstep	×	9
	Male Ahaa	×	10
	Male Ahaaw	×	11
	AncientWisdom	×	12
	Male Baaa	×	13
	Male Che	×	14
	Male ComeOn	×	15
	Male Doh	×	16
	Male Doo	×	17
	Female Aan	×	18

Category	Wave name	LOOP	No.
Voice	Female Ah	×	19
	Female Am	×	20
	Female Haa	×	21
	Female Ho	×	22
	Female On	×	23
	Female So	×	24
	Female Yo	×	25
	Female Your	×	26
	Ghostly	×	27
	Male Haa	×	28
	Male Hey 1	×	29
	Male Hey 2	×	30
	Male Nahh	×	31
	Male Ohooo	×	32
	Male Paa	×	33
	Male Wao	×	34
	Male Whoo	×	35
Synth Basic	Saw	*	1
	Square	*	2
	Pulse	*	3
	Sine	*	4
	Triangle	*	5
	Saw + Square	*	6
	Saw + Pulse	*	7
	Saw + Sine	*	8
	Saw + Triangle	*	9
	Sine + Triangle	*	10
	Saw Harmony	*	11
	Square Harmony	*	12
	Pulse Harmony	*	13
	Sine Harmony	*	14
	Triangle Harmony	*	15
	Dual Saw	*	16
	Dual Square	*	17
	Dual Pulse	*	18
	Dual Sine	*	19
	Dual Triangle	*	20
	Triple Saw	*	21
	Triple Square	*	22
	Triple Pulse	*	23
	Triple Sine	*	24
	Triple Triangle	*	25
	Oct Saw	*	26
	Oct Square	*	27
	Oct Pulse	*	28
	Oct Sine	*	29
	Oct Triangle	*	30
	Ring Saw	*	31
	Ring Square	*	32
	Ring Pulse	*	33
	Ring Sine	*	34
	Ring Triangle	*	35
	Ring Dual Saw	*	36
	Ring Dual Square	*	37
	Ring Dual Pulse	*	38
	Ring Dual Sine	*	39
	Ring Dual Triangle	*	40
	Ring Oct Saw	*	41
	Ring Oct Square	*	42
	Ring Oct Pulse	*	43
	Ring Oct Sine	*	44
	Ring Oct Triangle	*	45
	FM Saw	*	46
	FM Square	*	47
	FM Pulse	*	48
	FM Sine	*	49
	FM Triangle	*	50
	FM Dual Saw	*	51
	FM Dual Square	*	52
	FM Dual Pulse	*	53
	FM Dual Sine	*	54
	FM Dual Triangle	*	55
	FM Oct Saw	*	56
	FM Oct Square	*	57
	FM Oct Pulse	*	58

Category	Wave name	LOOP	No.
Synth Basic	FM Oct Sine	*	59
	FM Oct Triangle	*	60
	Sync Saw	*	61
	Sync Square	*	62
	Sync Pulse	*	63
	Sync Sine	*	64
	Sync Triangle	*	65
	Sync Dual Saw	*	66
	Sync Dual Square	*	67
	Sync Dual Pulse	*	68
	Sync Dual Sine	*	69
	Sync Dual Triangle	*	70
Synth-Bass	AngerBass	○	1
	DeepBass	○	2
	DubstepDirtBass	×	3
	FlatRicBass	×	4
	GarageFatBass	×	5
	ParisBass	○	6
	PulseButtonBass	×	7
	SubspenseBass	○	8
	VoiceBass	×	9
	WarmSawBass	○	10
SynthFx	AirCloud	○	1
	Alarm	○	2
	AlienWarning	×	3
	Arpness	×	4
	BeatBang	×	5
	BlackStar	×	6
	BottleVox	×	7
	Closer	×	8
	CompuBlip	○	9
	DangerZone	×	10
	ElectricSwipe	×	11
	EpicAir	×	12
	ForcedAir	×	13
	Lazer 1	×	14
	Lazer 2	×	15
	Lazer 3	×	16
	LazerGun	×	17
	MarsInvaders	×	18
	MazG	×	19
	NoiseFloor	×	20

Category	Wave name	LOOP	No.
SynthFx	Revange	×	21
	SawDown	×	22
	Shreakback	×	23
	SirenFX	×	24
	Spacer	○	25
	StarGate	×	26
	TrapBounce	×	27
	TunyPluck	×	28
	Twister	×	29
	U Tone	○	30
	WideFive	○	31
	X Scape	×	32
SynthHit	1980sAnalog5ths	○	1
	ClubChord	×	2
	DecadeChord	×	3
	DubstepStab	×	4
	EdgeOfStab	○	5
	EDM MinorChord	×	6
	EDM Stab	×	7
	FadeChord	×	8
	FatMash	○	9
	FatPad	×	10
	FluteSpaceLead	×	11
	FutureSax	×	12
	LeadChord	×	13
	LeadChordRave	×	14
	LeadDirt	×	15
	LeadDrop	×	16
	LegacyChord	×	17
	LowTech	○	18
	MetalicPad	○	19
	PartyChord	×	20
	PlasticTube	○	21
	PumpChord	×	22
	RaggaTone	○	23
	RaveLead	○	24
	RaveStabLead	×	25
	SimpleChord	×	26
	StringBreath	×	27
	SubyChord	×	28
	SyncLift	×	29
	TechChord	×	30

Category	Wave name	LOOP	No.
SynthHit	TightAnalog5ths	○	31
Instrument Basic	AltoSax	○	1
	AcousticBass	○	2
	AcousticGuitar	○	3
	Bell	×	4
	BrassEnsemble	×	5
	Clav	×	6
	ElectricPiano	○	7
	E.Bass Finger	○	8
	E.Bass Pick	○	9
	E.Bass Slap	○	10
	ElectricGuitar	○	11
	DistGuitar	○	12
	GuitarFeedback	×	13
	Kalimba	×	14
	MajorPartials	×	15
	MetalBell	×	16
	MinorPartials	○	17
	MutedStab	×	18
	OldMovieMinor	×	19
	Organ 1	○	20
	Organ 2	○	21
	Piano	○	22
	StringsEnsemble	×	23
	TenorSax	○	24
InstHit	Brass Hit 1	×	1
	Brass Hit 2	×	2
	Cluster	×	3
	E.Guitar 1	×	4
	E.Guitar 2	×	5
	Hammond	×	6
	Orchestra Hit	×	7
	Piano Hit	×	8
	PianoJazz Hit	×	9
	Pulse	×	10
	SlideOrgan	×	11
	Strings Hit	×	12

*Built-in oscillator;

▫▫▫not sample-based

Block menu

Menu item	Setting value
Type List	See the Oscillator list
Pulse Width	1–99

■ Noise block

Selection type

Selection knob selection
Type
Off, White, Pink

Parameters

Parameter 1	Parameter 2	Parameter 3
Level	–	–
0–100	–	–

EDIT menu parameter lists (continued)

■ Insert effect block

Selection type

Selection knob selection
Type
See the Effects list Insert effects (→ P. 122)

Parameters

Parameter 1	Parameter 2	Parameter 3
See the Effects list Insert effects (→ P. 122)		

Block menu

Menu item	Setting value
Position	Before Filter, After Filter

■ Filter block

Selection type

Selection knob selection
Type
LPF [-12dB], LPF [-24dB], BPF [-12dB], BPF [-24dB], HPF [-12dB], HPF [-24dB], Peaking Filter, Off

Parameters

Parameter 1	Parameter 2	Parameter 3
Frequency	Resonance	Level
20 Hz–20,000 Hz	0–100	0–100

■ Level/Pan block

Parameters

Parameter 1	Parameter 2	Parameter 3
Level	Pan	–
0–100	L100–Center–R100	–

■ Send effect block

Parameters

Parameter 1	Parameter 2	Parameter 3
Delay	Reverb	–
Off, Send	Off, Send	–

■ LFO 1·and 2 blocks

Selection type

Selection knob selection
Destination
Pitch (applies to Osc), Level (Osc), Level (Noise), Filter Freq (applies to Filter), Level (Amp), Pan, Effect Param

Parameters

Parameter 1	Parameter 2	Parameter 3
Rate	Depth	Type
1–100, ♪ (Type 1)	0–100	Saw, Square, Pulse, Sin, Tri, Random S&H, Stepper, After Touch

Note: See Tempo sync parameters for details about ♪ setting values. (→ P. 123)

EDIT menu parameter lists (continued)

Block menu

Menu item	Setting value
Stepper Edit	Edit on the Stepper Edit screen (→ P. 79)
Pulse Width (only when parameter 3 is set to Pulse)	1–99

■ Level EG block

Parameters

Parameter 1	Parameter 2	Parameter 3
Attack	Decay/Release	Sustain
0–100	0–100	0–100

■ EG block

Selection type

Selection knob selection
Destination
Off, Pitch, Level (OSC), Level (Noise), Filter Freq, Pan, Effect Param

Parameters

Parameter 1	Parameter 2	Parameter 3
Attack	Decay/Release	Sustain
0–100	0–100	0–100

Block menu

Menu item	Setting value
Depth	–100–+100

■ PAD block (KEY layout only)

Parameter 1	Parameter 2	Parameter 3
Scale	Key	Range
See "Changing the scale" (→ P. 28)	C, C#, D, D#, E, F, F#, G, G#, A, A#, B	C-1–F3…C7–C8 (C)–B-1–E4…B7–C8 (B)

■ Ring parameter block

Selection type

Selection knob selection
Type
Off, Pan, Pitch, Level

■ Setting block

Parameters (in PAD layout)

Parameter 1	Parameter 2	Parameter 3
LED Color	LED Animation	Mixer Group
Color selection	Off, Moire, Firework, Cross, Circulation, Rainbow	Off, Group 1, Group 2, Group 3

Parameters (in KEY layout)

Parameter 1	Parameter 2	Parameter 3
Mono/Poly	Glide (only when Mono selected)	–
Mono, Poly	0–100	–

Block menu

Menu item	Setting value
MIDI Mapping	Channel: 1–16, Note: C-1–F#9

Effects lists

■ Insert effects

| Category | Type name | Parameter 1 | Parameter 2 | Parameter 3 |
		Parameter name/setting value	Parameter name/setting value	Parameter name/setting value
Distortion	BitCrush	Bit	SMPL	Balance
		4–16	0–50	0–100
	Distortion	Gain	Tone	Level
		0–100	0–100	0–100
Modulation	Chorus	Depth	Rate	Mix
		0–100	1–50	0–100
	Phaser	Rate	Color	Mix
		1–50, ♪ (Type 1)	4STG, 8STG, inv 4, inv 8	0–100
	Flanger	Depth	Rate	Mix
		0–100	0–50, ♪ (Type 1)	0–100
	Ring Modulator	Frequency	Tone	Balance
		1–50	0–10	0–100
Filter	3Band EQ	Low	Mid	Hi
		−12 to +12	−12 to +12	−12 to +12
	TalkFilter	Decay	Type	Balance
		0–100	iA, UE, UA, oA	0–100
	Sub Bass	Frequency	Mix	–
		30–250	0–100	–
Dynamics	Pumper	Depth	Rate	–
		0–100	♪ (Type 3)	–
	Compressor	Sense	Attack	Tone
		0–10	Slow, Fast	0–10

Note: A maximum of 4 insert effects can be used at the same time.

■ Global filter

| Type name | Parameter 1 | Parameter 2 | Parameter 3 |
	Parameter name/setting value	Parameter name/setting value	Parameter name/setting value
LPF [-12dB], LPF [-24dB], BPF [-12dB], BPF [-24dB], HPF [-12dB], HPF [-24dB], Peaking Filter	Frequency	Resonance	Level
	20 Hz–20,000 Hz	0–100	0–100

■ Delay

| Type name | Parameter 1 | Parameter 2 | Parameter 3 |
	Parameter name/setting value	Parameter name/setting value	Parameter name/setting value
Mono Delay	Time	Feedback	Mix
	1–2000, ♪ (Type 2)	0–100	0–100
Stereo Delay	Time	Feedback	Mix
	1–2000, ♪ (Type 2)	0–100	0–100
Reverse Delay	Time	Feedback	Mix
	10–2000, ♪ (Type 2)	0–100	0–100

■ Reverb

| Type name | Parameter 1 | Parameter 2 | Parameter 3 |
	Parameter name/setting value	Parameter name/setting value	Parameter name/setting value
Hall, Room, Plate	Decay	Tone	Mix
	1–30	−12 to 6	0–100

Note: See Tempo sync parameters for details about ♪ setting values. (→ P. 123)

Effects lists (continued)

■ Master effects

Category	Type name	Parameter 1	Parameter 2	Parameter 3
		Parameter name/setting value	Parameter name/setting value	Parameter name/setting value
Distortion	BitCrush	Bit	SMPL	Balance
		4–16	0–50	0–100
	Distortion	Gain	Tone	Level
		0–100	0–100	0–100
Modulation	Chorus	Depth	Rate	Mix
		0–100	1–50	0–100
	Phaser	Rate	Color	Mix
		1–50, ♪ (Type 1)	4STG, 8STG, inv 4, inv 8	0–100
	Flanger	Depth	Rate	Mix
		0–100	0–50, ♪ (Type 1)	0–100
	Ring Modulator	Frequency	Tone	Balance
		1–50	0–10	0–100
	Wah	Frequency	–	–
		1–50	–	–
	AutoPan	Rate	Width	Clip
		0–50, ♪ (Type 1)	0–10	0–10
Filter	Isolator	Low	Mid	Hi
		0–100	0–100	0–100
	3Band EQ	Low	Mid	Hi
		−12 to +12	−12 to +12	−12 to +12
Delay	Reverse Delay	Time	Feedback	Hi Damp
		10–2000, ♪ (Type 2)	0–100	0–10
Dynamics	Limiter	Threshold	Ratio	Release
		−24 to 0	1–54, ∞	0–10
	Compressor	Threshold	Ratio	Attack
		−24 to 0	1–26	0–10
Time manipulation	Glitter	Type	Complex	Mix
		1–8	0–100	0–100

· Only one master effect can be used by the unit at the same time.

· See Tempo sync parameters for details about ♪ setting values.

■ Tempo sync parameters

When ♪ appears for a parameter or effect, it is a value that can be linked to the tempo.

Type 1	Type 2	Type 3
32nd note	16th note	32nd note
16th note	Quarter note triplet	16th note
Quarter note triplet	Dotted 16th note	Quarter note triplet
Dotted 16th note	8th note	Dotted 16th note
8th note	Half note triplet	8th note
Half note triplet	Dotted 8th note	Half note triplet
Dotted 8th note	Quarter note	Dotted 8th note
Quarter note	Dotted quarter note	Quarter note
Dotted quarter note	Half note	Dotted quarter note
Half note	3 quarter notes	Half note
3 quarter notes	4 quarter notes	3 quarter notes
4 quarter notes	⋮	4 quarter notes
⋮	8 quarter notes	
19 quarter notes		
20 quarter notes		

Ring Controller MIDI messages

■ Ring Controller key numbers

The pads on the Ring Controller are assigned different key numbers. These key numbers are expressed as a combination of Column and Row.

Ring direction (column)
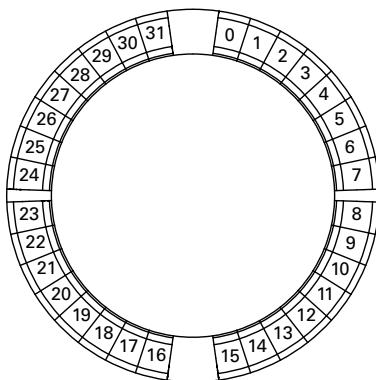
When viewed from top (side with ARQ logo)

Circumference direction (row)
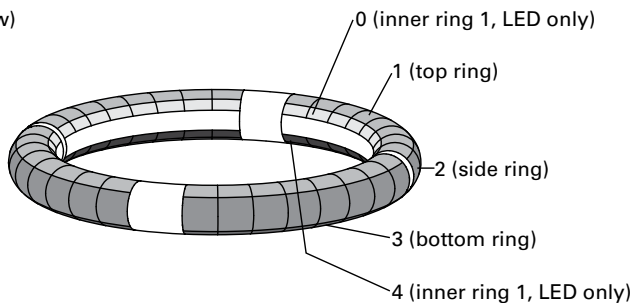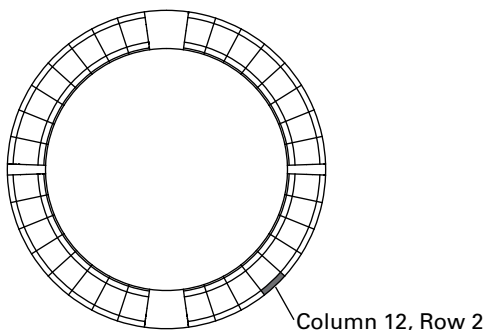
0 (inner ring 1, LED only)

1 (top ring)

2 (side ring)

3 (bottom ring)

4 (inner ring 1, LED only)

Example: 12x2

Column 12, Row 2

■ Session layout

This layout is designed for use with the Session View of Ableton Live.

You can use the Ring Controller to play clips and scenes and to control volume, panning and send effects, for example.
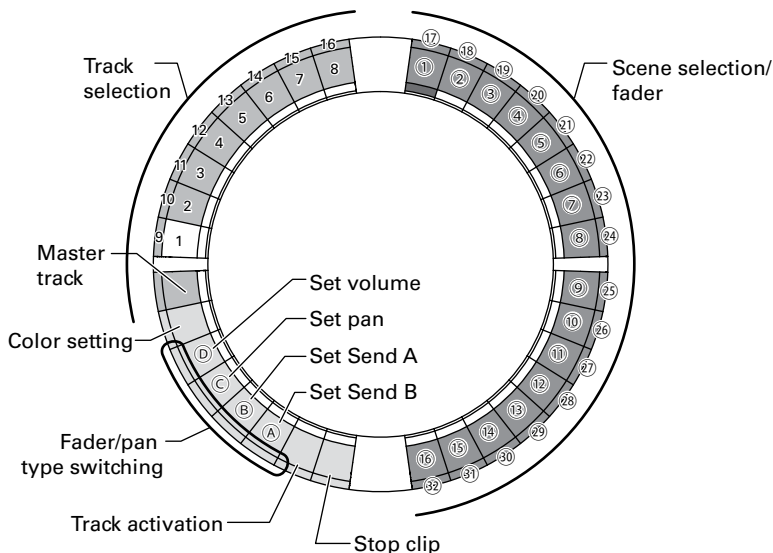
Track selection

You can select tracks 1–16 and the master track. Selected tracks light white.

Setting colors

You can set the Ring Controller LED colors.

1. Press a side ring pad to change the top ring LED color.
2. While pressing a top ring pad, press a pad for a track, a scene or volume, for example, to change its color.

Setting volume, pan and sends A and B.

You can set the volume, panning and send effects for the selected track. (Ⓐ–Ⓓ in the illustration.)

Switching between fader and pan types

Operation of the right side of the Ring Controller can be set independently to fader type or pan type for setting volume, pan and sends A and B.

Fader type lights green and pan type lights orange.

Track activation setting

You can switch the selected track between being active and muted. When active, the LED is bright. When muted, the LED is dim.

Stopping clips

You can stop playback of the clip on the selected track.

Scene selection and fader/pan

While pressing a pad to set volume, pan or send A or B, these pads function together as a fader or pan control. At all other times, they select scene numbers. (①–㉜ in the illustration.)

> **HINT**
>
> The functions above are a setting example.

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Ring Controller MIDI messages (continued)

Track Number	Track Select/Stop/Active			Clip Launch		Fader/Pan Control	
	MIDI Channel	Note Number (Select, Stop, Active)	MIDI Channel	Note Number (①–㉜)	MIDI Channel	Control Change Number (Ⓐ, Ⓑ, Ⓒ, Ⓓ)	
1	12	0, 17, 18	16	0–31	16	3, 9, 14, 15	
2	12	1, 19, 20	16	32–63	16	20, 27, 28, 29	
3	12	2, 21, 22	16	64–95	16	30, 31, 35, 41	
4	12	3, 23, 24	16	96–127	16	46, 47, 52, 53	
5	12	4, 25, 26	15	0–31	15	3, 9, 14, 15	
6	12	5, 27, 28	15	32–63	15	20, 27, 28, 29	
7	12	6, 29, 30	15	64–95	15	30, 31, 35, 41	
8	12	7, 31, 32	15	96–127	15	46, 47, 52, 53	
9	12	8, 33, 34	14	0–31	14	3, 9, 14, 15	
10	12	9, 35, 36	14	32–63	14	20, 27, 28, 29	
11	12	10, 37, 38	14	64–95	14	30, 31, 35, 41	
12	12	11, 39, 40	14	96–127	14	46, 47, 52, 53	
13	12	12, 41, 42	13	0–31	13	3, 9, 14, 15	
14	12	13, 43, 44	13	32–63	13	20, 27, 28, 29	
15	12	14, 45, 46	13	64–95	13	30, 31, 35, 41	
16	12	15, 47, 48	13	96–127	13	46, 47, 52, 53	
master	12	16, 49, 50	12	96–127	12	3, 9, 14, 15	

■ NOTE layout

This layout arranges notes on the pads like piano keys.

You can use ⬍ to change the octave.

		Row							
	0	1/2/3 (common)							4
		▼×2	▼×1	At startup	▲×1	▲×2	▲×3	
	0	20	32	44	56	68	80	
	1	21	33	45	57	69	81	
	2	22	34	46	58	70	82	
	3	23	35	47	59	71	83	
	4	24	36	48	60	72	84	
	5	25	37	49	61	73	85	
	6	26	38	50	62	74	86	
	7	27	39	51	63	75	87	
	8	28	40	52	64	76	88	
	9	29	41	53	65	77	89	
	10	30	42	54	66	78	90	
	11	31	43	55	67	79	91	
	12	32	44	56	68	80	92	
	13	33	45	57	69	81	93	
	14	34	46	58	70	82	94	
Column	15	35	47	59	71	83	95	
	16	36	48	60	72	84	96	
	17	37	49	61	73	85	97	
	18	38	50	62	74	86	98	
	19	39	51	63	75	87	99	
	20	40	52	64	76	88	100	
	21	41	53	65	77	89	101	
	22	42	54	66	78	90	102	
	23	43	55	67	79	91	103	
	24	44	56	68	80	92	104	
	25	45	57	69	81	93	105	
	26	46	58	70	82	94	106	
	27	47	59	71	83	95	107	
	28	48	60	72	84	96	108	
	29	49	61	73	85	97	109	
	30	50	62	74	86	98	110	
	31	51	63	75	87	99	111	

Example: Pad at Column 12, Row 2 (when MIDI channel 1 selected)

The note number is 56 (38h) and the MIDI channel is 1 (00h).

· When this pad is tapped, "90h" (Note on/MIDI ch), "38h" (Note Number) and the velocity are transmitted. The pad also lights yellow when it is tapped.

· This pad will also light yellow if "90h" (Note on/MIDI ch), "38h" (Note Number) and a velocity are transmitted to the Ring Controller.
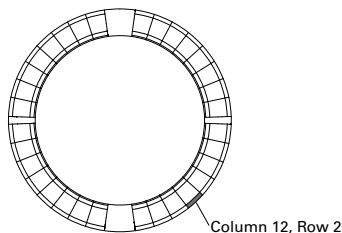
Column 12, Row 2

■ DRUM layout

This layout is designed for use with drum racks in DAW software. The pads on 1/4 of each ring correspond to one drum rack section.

You can use ⬍ to move groups of note numbers in the column direction.

Column	Row									
	0	1/3 (common)	2	1/3 (common)	2	1/3 (common)	2	1/3 (common)	2	4
		▲×2		▲×1		At startup		▼×1		
0		52	56	36	40	20	24	4	8	
1		53	57	37	41	21	25	5	9	
2		54	58	38	42	22	26	6	10	
3		55	59	39	43	23	27	7	11	
4		60	64	44	48	28	32	12	16	
5		61	65	45	49	29	33	13	17	
6		62	66	46	50	30	34	14	18	
7		63	67	47	51	31	35	15	19	
8		68	72	52	56	36	40	20	24	
9		69	73	53	57	37	41	21	25	
10		70	74	54	58	38	42	22	26	
11		71	75	55	59	39	43	23	27	
12		76	80	60	64	44	48	28	32	
13		77	81	61	65	45	49	29	33	
14		78	82	62	66	46	50	30	34	
15		79	83	63	67	47	51	31	35	
16		84	88	68	72	52	56	36	40	
17		85	89	69	73	53	57	37	41	
18		86	90	70	74	54	58	38	42	
19		87	91	71	75	55	59	39	43	
20		92	96	76	80	60	64	44	48	
21		93	97	77	81	61	65	45	49	
22		94	98	78	82	62	66	46	50	
23		95	99	79	83	63	67	47	51	
24		100	104	84	88	68	72	52	56	
25		101	105	85	89	69	73	53	57	
26		102	106	86	90	70	74	54	58	
27		103	107	87	91	71	75	55	59	
28		108	112	92	96	76	80	60	64	
29		109	113	93	97	77	81	61	65	
30		110	114	94	98	78	82	62	66	
31		111	115	95	99	79	83	63	67	

Example: Pad at Column 12, Row 2 (when MIDI channel 1 selected)

The note number is 64 (40h) and the MIDI channel is 1 (00h).

· When this pad is tapped, "90h" (Note on/MIDI ch), "40h" (Note Number) and the velocity are transmitted. The pad also lights yellow when it is tapped.
· This pad will also light yellow if "90h" (Note on/MIDI ch), "40h" (Note Number) and a velocity are transmitted to the Ring Controller.

Column 12, Row 2
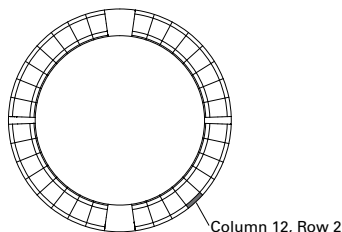
■ FADER layout

This lets you use the Ring Controller as faders. The pads on half of each ring comprise a single fader. The transmitted MIDI messages are Control Change (number and specified value). You can change the amount of time until the specified value is reached according to the velocity when pressing the pads.

Control Change number

Column	Row				
	0	1	2	3	4
0					
1					
2					
3					
4					
5					
6					
7		24	25	26	
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23		23	22	21	
24					
25					
26					
27					
28					
29					
30					
31					

Value

Column	Row		
	0	1–3 (common)	4
0		127	
1		123	
2		114	
3		105	
4		96	
5		87	
6		78	
7		69	
8		59	
9		50	
10		41	
11		32	
12		23	
13		14	
14		5	
15		0	
16		0	
17		5	
18		14	
19		23	
20		32	
21		41	
22		50	
23		59	
24		69	
25		78	
26		87	
27		96	
28		105	
29		114	
30		123	
31		127	

HINT

When the velocity is 127, it takes 20 milliseconds for the specified value to be reached.
When the velocity is 1, it takes 2 seconds for the specified value to be reached.

Example: Pad at Column 12, Row 2 (when MIDI channels 1 and 2 are selected)

The Control Change number is 25 (19h) and the MIDI channel is 1 (00h).

· When this pad is tapped (gently) with a velocity of "b0h" (Control Change/MIDI ch), "19h" (Control Change Number) and the "value" start to be transmitted. For two seconds, this message will be continuously transmitted as the value changes. Transmission will stop when the value reaches 23. The pads at Row 2, Column 12–15 will also light pink.

Column 12, Row 2

· The Row 2, Column 12–15 pads will also light pink if "b0h" (Control Change/MIDI ch), "19h" (Control Change Number) and "17h" are transmitted to the Ring Controller.
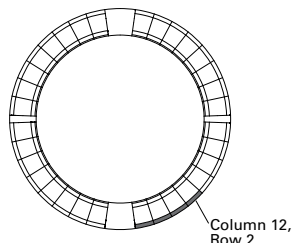
■ PROGRAMMER mode

This mode allows you to program the LED lighting of each pad as you like.

		Row				
		0	1	2	3	4
Column	0	0	0	32	64	32
	1	1	1	33	65	33
	2	2	2	34	66	34
	3	3	3	35	67	35
	4	4	4	36	68	36
	5	5	5	37	69	37
	6	6	6	38	70	38
	7	7	7	39	71	39
	8	8	8	40	72	40
	9	9	9	41	73	41
	10	10	10	42	74	42
	11	11	11	43	75	43
	12	12	12	44	76	44
	13	13	13	45	77	45
	14	14	14	46	78	46
	15	15	15	47	79	47
	16	16	16	48	80	48
	17	17	17	49	81	49
	18	18	18	50	82	50
	19	19	19	51	83	51
	20	20	20	52	84	52
	21	21	21	53	85	53
	22	22	22	54	86	54
	23	23	23	55	87	55
	24	24	24	56	88	56
	25	25	25	57	89	57
	26	26	26	58	90	58
	27	27	27	59	91	59
	28	28	28	60	92	60
	29	29	29	61	93	61
	30	30	30	62	94	62
	31	31	31	63	95	63
		2	1	1	1	2
		MIDI Channel				

Example: Pad at Column 12, Row 2 (when MIDI channels 1 and 2 are selected)

The note number is 44 (2ch) and the MIDI channel is 1 (00h).

· When this pad is tapped, "90h" (Note on/MIDI ch), "2ch" (Note Number) and the velocity are transmitted.

· This pad's LED will also light in the color corresponding to the velocity if "90h" (Note on/MIDI ch), "2ch" (Note Number) and a velocity are transmitted to the Ring Controller.

The LEDs of the top and bottom inner rings respond to MIDI channel 2.

· The LED of the pad at Column 0, Row 0 will also light in the color corresponding to the velocity if "91h" (Note on/MIDI ch), "00h" (Note Number) and a velocity are transmitted to the Ring Controller.

130
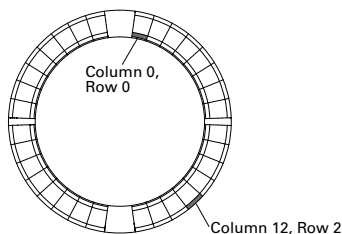
■ LED color designation

The pad LED colors can be changed according to transmitted velocity values.
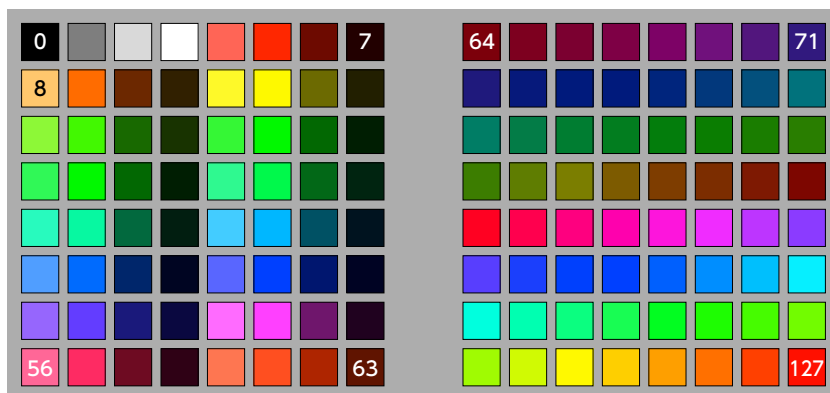
Example: In PROGRAMMER mode if you send "90h" (note on/MIDI channel), "2ch" (note number) and "88"(velocity) to the Ring Controller, the LED shown in the illustration will light green (color number 88).

Lit green
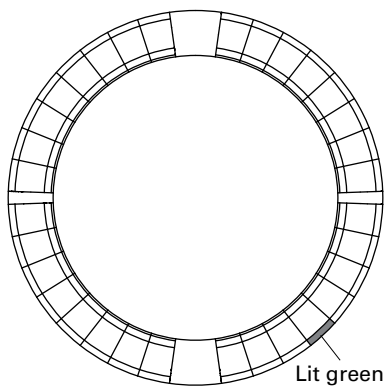
Ring Controller MIDI messages (continued)

■ LED control

MIDI messages can be used to control the Ring Controller LEDs.

· Palette mode: Select colors from the color palette.

· RGB mode: Select colors by specifying R (Red 0–127), G (Green 0–127) and B (Blue 0–127) values.

· To turn an LED off, send a velocity of 0 or a note off message.

Lighting an LED at a specific position (key number designation, pallet mode)

Sys-Ex – F0h 52h <n> 6Fh 62h 0Ah <row> <column> <color> F7h

n:	Sys-Ex MIDI channel
row:	Row number (0-4)
column:	Column number (0-31)
color:	Color palette number (0-127)

Lighting an LED at a specific position (key number designation, RGB mode)

Sys-Ex – F0h 52h <n> 6Fh 62h 0Bh <row> <column> <Red> <Green> <Blue> F7h

n:	Sys-Ex MIDI channel
row:	Row number (0-4)
column:	Column number (0-31)
Red, Green, Blue: 0-127	

Lighting pads at the same position on each ring (pallet mode)

Sys-Ex – F0h 52h <n> 6Fh 62h 0Ch <column> <color> F7h

n:	Sys-Ex MIDI channel
column:	Column number (0-31)
color:	Color palette number (0-127)

Lighting all LEDs on one ring (pallet mode)

Sys-Ex – F0h 52h <n> 6Fh 62h 0Dh <row> <color> F7h

n:	Sys-Ex MIDI channel
row:	Row number (0-4)
color:	Color palette number (0-127)

Lighting all LEDs (pallet mode)

Sys-Ex – F0h 52h <n> 6Fh 62h 0Eh <color> F7h

n:	Sys-Ex MIDI channel
color:	Color palette number (0-127)

■ Function buttons

Control changes are assigned to the function buttons.

Button	Number
UP	68h
DOWN	69h
DELAY	6ah
FILTER	6bh
STOP	6dh
PLAY	6eh
REC	6fh
REVERB	70h
MASTER FX	71h

· The DELAY, FILTER, STOP, PLAY, REC and REVERB buttons on the Ring Controller do not have special functions assigned to them. You can use these buttons to control DAW software.
· If a control change message is received from DAW software, the LED of the corresponding button will light.

MIDI implementation charts

■ Base Station

```
[Aero RhythmTrak]                                          Date: 10.June.2016
Model:AR-96 Base Station      MIDI Implementation Chart    Version :1.00
```

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	x x	1-16 x	
Mode	Default Messages Altered	1 x ******************	1 x	
Note Number	True voice	x ******************	x	
Velocity	Note ON Note OFF	x x	o v = 1 - 127	
After Touch	Key's Ch's	x x	o v = 1 - 127	
Pitch Bend		x	x	
Control Change		x	x	
Prog Change	True#	x ******************	x	
System Exclusive		x	x	
System Common	Songpos Song Sel Tune	x x x	x x x	
System Realtime	Clock Command	o o	o o	
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	x x x x	x x x x	
Notes				

```
Mode 1: OMNI ON,  POLY      Mode 2: OMNI ON,  MONO          o: Yes
Mode 3: OMNI OFF, POLY      Mode 4: OMNI OFF, MONO          x: No
```

MIDI implementation charts (continued)

■ Ring Controller

```
[Aero RhythmTrak]                                              Date :  9.June.2016
Model:  AR-96 Ring Controller     MIDI Implementation Chart         Version:1.00
```

Function ...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1, 2 1-16	1, 2 1-16	
Default Mode Messages Altered	x x ******************	x x x	
Note Number True voice	0-127 ******************	0-127 ******************	
Velocity Note ON Note OFF	o 9n, V=1-127 o 8n, V=0	o 9n, V=1-127 o 8n, V=0	
After Key's Touch Ch's	o an, V=1-127 o dn, V=1-127	x x	
Pitch Bend	x	x	
Control Change	o 85, 86 102, 113	o x 102, 113	Accelerometer Key LED
Prog Change True #	x ******************	x x	
System Exclusive	o	o	
System Song Pos Common Song Sel Tune	x x x	x x x	
System Clock Real Time Commands	x x	x x	
Aux Local ON/OFF Messages All Notes OFF Active Sense Reset	x x x x	x x x x	
Notes			

```
 Mode 1: OMNI ON,  POLY        Mode 2: OMNI ON,  MONO          o: Yes
 Mode 3: OMNI OFF, POLY        Mode 4: OMNI OFF, MONO          x: No
```

ZOOM