AR-96 Firmware V2.0 Update

This guide provides you with an outline of the new features, functions, and enhanced user interface that are included with AR-96 Firmware 2.0.

Overview

The new 2.0 firmware is designed to improve the operation of AR-96 by:

a) Introducing changes to the user interface on the LCD screen;
b) Simplifying the access to parameters with 3 Knobs and Cursor buttons;
c) Making new functions available on both Base Station and Ring Controller.
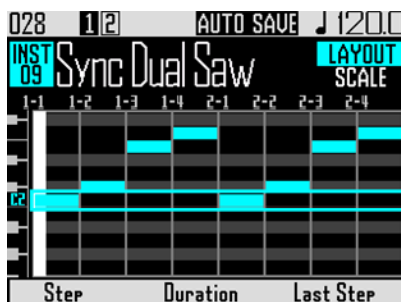
User interface enhancements

Graphics and instrument icons are now refined and resized to better fit the LCD screen and offer a more intuitive user experience when playing and recording on AR-96.

Changes to Four operation MODEs

1. STEP MODE

- Sequence of each pattern is shown as Piano Roll or Drum Map by switching alternately on SELECT Knob
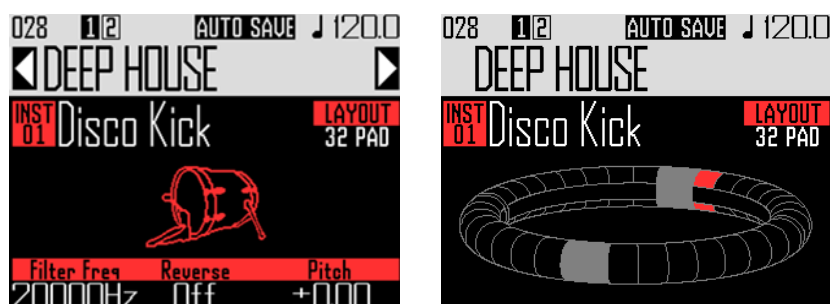- Step and Duration of notes is instantly defined by real-time access through Knobs

Piano Roll	Drum Map

2. INSTRUMENT MODE (INST)

- Larger instruments icons and names are displayed on LCD when tapping on each Pad of the Ring Controller
- Sound selection is made easier by using the SELECT knob as an instrument on each Pad. Each Pad is easily and seamlessly visible on the LCD and Ring Controller
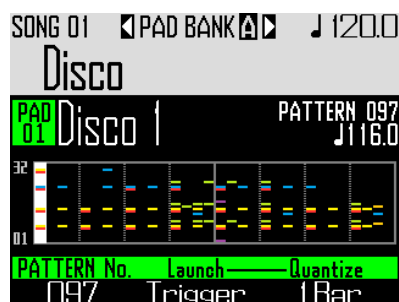
Instrument views

3. SONG MODE

- Information view is enhanced with Song + Pattern/Kit name and memory location
- Ring Controller is enabled for real-time playing over Song

Song view

4. LOOPER

- Captured WAV files are now assignable to each Pad by scrolling manually through memory locations

Improvements to Settings and Editing

KIT

- Number of available Kits is increased to 384
- Each Pattern can have its own assigned Kit and no longer shared with different Patterns
- Enhanced view with Pad Layout Edit option and Instrument Listing
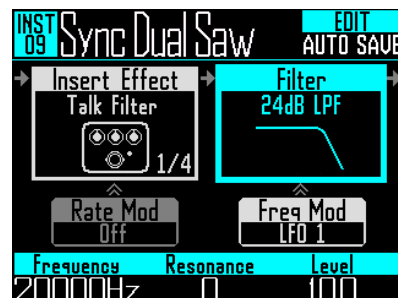
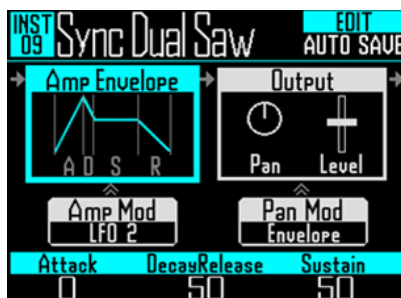| Pad Layout	Inst Listing

EDIT

- Re-designed graphics allow for intuitive use of the SELECT knob when choosing sound parameters
- Destination is increased to more parameters from 2x LFO, 1x Envelope, and Aftertouch

Sound Edit views

MIXER

- Access to the mixing configuration is now instantly accessible on Pads with MUTE, SOLO, and Group MIX selections
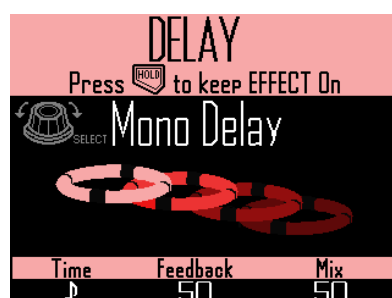

CAPTURE

- An improved graphics interface with a Waveform display helps you visualize the captured sound or music phrase
- Above the Waveform, there is also a timeline ruler which allows you to zoom into different components of the sample
- Assigning a captured (recorded) audio file to an **Instrument Pad** or **Looper** is faster and easier
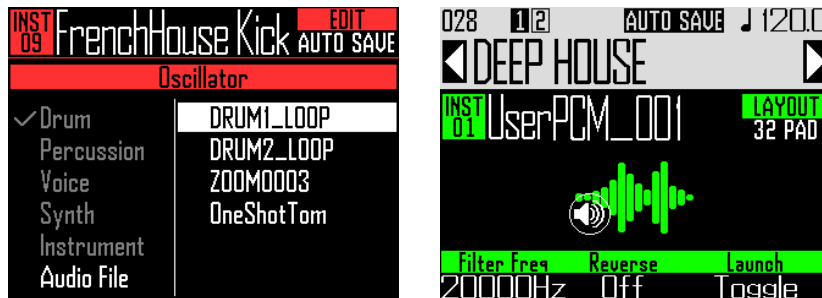

EFFECT

- Re-design of graphics interface with visual icons of Effects
- Instant access to Effect types and real-time control of parameters
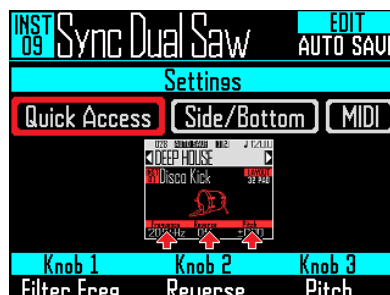
New Functions

Adding Original Sound Sources

- A new Sampler function allows for captured sound to be used as an additional sound source. These new sound sources can be edited with Filer, ADSR envelope, and LFO modulation.
- WAV files from your own sound libraries can also be imported (via SD card) as new sound sources for the internal Oscillator
- Supports mono and stereo sample resolutions of up to 16-bit or 24-bit/44.1 kHz
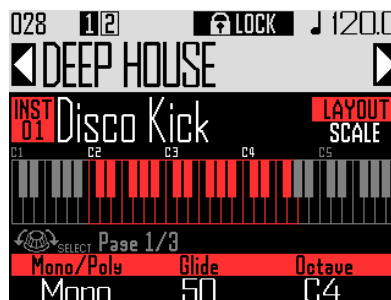

Assign + Control of Sound Parameters

- Visualize and edit all sound parameters instantly on the LCD by pushing the EDIT button and scrolling through windows
- The settings window allows you to assign 3 of your favorite parameters for real-time control with the rotary knobs

Scale Keyboard

- Each sound can be played chromatically on the Ring Controller. By pushing the PAD KEY button, sounds can also be visualized on a 32-scale keyboard on the ARQ's LCD screen.
- Playing and recording bass and melodic parts is now simple and intuitive

Arpeggiator

- Instantly access standard, polyphonic, and sequential Arpeggiator functions by pushing the HOLD button
- The Ring Controller can control the notes and repeat rates of the Arpeggiator

Music Bar length

- Pattern sequences can now be up to 8 bars in length and are no longer limited to just 2 bars
- Sequencing musical phrases can be achieved within the same Pattern

Accelerometer

- The Ring Controller function can now expand to access every sound parameter of each instrument (such as Filter Frequency) in combination with Effects
- Can also control note and rate of Arpeggiator
- The Accelerometer control can be stopped and resumed seamlessly while you're gripping the Ring Controller

Auto Save

- You now have the option to save changes automatically while editing a Pattern or a Song

Auto Grip Mode

- The Ring Controller now enters Grip mode automatically when removed from the Base Station, so the "Grip" button is no longer required

USB-MIDI

- The MIDI OUT function now allows you to send MIDI notes to an external device using the internal PAD sequence
- Any action generated with Pads, Knobs, Buttons, and the Ring Controller's X/Y motion can be sent out as MIDI messages
- The new USB-MIDI functionality enables you to use the AR-96 as an input controller to record to DAW software

Editing Software

- The new AR-96 Editor lets you control all main functions from your Mac or Windows computer.
- For easy editing, the overview on the main screen shows you the Pad layouts on the Ring Controller, Piano or Drum Roll Map, and all sound parameters

AR-96 Editing Software

Quick Comparison Chart AR-96 V1.01 vs V2.0

	AR-96 1.01	AR-96 2.0
User interface		
INST Mode	Text-based user interface.	LCD shows larger instrument icons and scrolling of Pad position – by SELECT knob or Pad tapping.
(Pattern name)	Small in size.	Enlarged - clearly visible on LCD.
STEP Mode	Same as INST mode.	Changed to Piano Roll and Drum Map view and editing with 3 function Knobs.
SONG Mode	Text-based user interface. You can't operate any function during SONG sequence playback.	Enhanced view with Pattern name and Piano Roll. You can play an instrument during SONG sequence playback.
LOOPER Mode	Need to assign WAV files to the "CAPTURE list". There is only one setting for WAV file assignment. (16-bit/44.1 kHz only)	Easy to assign WAV files to each Pad. Added settings for WAV file assignment (16- or 24-bit/44.1 kHz mono or stereo supported).
KIT	Only used for selecting or copying a KIT.	Enhanced with Pad Layout edit. KIT copy / erase INST copy / erase / swap functions.
EDIT	Text-based with small icon user interface. Three modulation (2x LFO, 1x Envelope) destinations only.	Enhanced with better graphics of sound parameters and intuitive use of SELECT Knob. Destination increased to 6 parameters.
CAPTURE	Need to assign WAV files to the "CAPTURE list". Only for LOOPER mode.	Added graphics interface with waveform, sound editing, and zooming function. Captured audio can be assigned to both instruments and LOOPER mode very quickly.
MIXER	Use of mixer required pre-setting in "Mixer Group".	MUTE, SOLO, and MIX functions.
EFFECT	Text-based user interface.	Re-design of graphics interface with visual icons of effects.

	AR-96 1.01	AR-96 2.0
New Function		
Auto Save	N/A	Can select ON/FF when editing sequence.
Auto Grip Mode	N/A	Ring Controller enters Grip mode automatically when taken from Base Station.
Sound source	Internal sounds only.	Can add original WAV files to internal OSC and edit with Filter, ADSR envelope, LFO modulation.
Sound parameters	Fixed parameters: Filter Freq, Pitch and Reverse in main LCD.	Now assignable in main LCD and by motion of Ring Controller.
Number of KIT(s)	99. Each Pattern required to share same KIT as others.	Increased to 384.Now each Pattern can have its own KIT assigned.
Scale keyboard	1 Scale keyboard only.	32-sound instrument can be played on Scale keyboard layout.
Arpeggiator	N/A	Standard, polyphonic, sequential
Music Bar length	Limited to 2.	Extended to 8 – easier to create pattern/sequence.
Accelerometer	Filter, Delay and Reverb control.	Can control every sound parameter of each instrument, Arpeggiator rate and note, Filter, Delay and Reverb. Accelerometer control can quit or resume while gripping Ring Controller.
USB-MIDI	MIDI clock only.	MIDI OUT function allows to send out MIDI notes from internal sequence + any action generated on Pads, Knobs, Buttons, X/Y motion as MIDI messages. Can use ARQ as input controller to record in to DAW software.
Software Editor	N/A	Can control all main functions from Mac/Windows software. Overview on main screen can include Pads layout on Ring, Piano Roll, Scale Keyboard and sound parameters for editing.

	AR-96 1.01	AR-96 2.0
DISCONTINUED Function/Setting (no longer in use)		
	Pattern Level (SONG mode)	N/A
	"Audio Input Level" (MIXER menu)	N/A
	Insert Effect "Before/After"	Now set as "Before"
	"Stepper Edit" (LFO)	N/A
	"Ring Parameter Top"	N/A