SINGULAR SOUND

AEROS

loop studio

Manual

Firmware 5.0.3

Table of Contents

Introduction

Welcome to your Aeros Loop Studio. Get ready to take full advantage of your new looping powers!

The Aeros is a looper pedal with the powerful ability to have both parallel and sequential looping modes at the same time.

There are two main modes on the Aeros, 2x2 and 6x6. 2x2 and 6x6 refer to the song parts x tracks, or how many song parts there are and how many tracks are in each part.

In 2x2, you have 2 parallel tracks in each of 2 parts. In 6x6, you have 6 parallel tracks in each of 6 parts.

By using MIDI, you can greatly expand upon the Aeros' abilities and even integrate it with other products, like our own BeatBuddy and MIDI Maestro.

Consider yourself an official Aerosnaught!

IMPORTANT NOTE: The Aeros uses 9v, center negative, 300 mA power. It is recommended to always use the Power Supply that was included with the Aeros to prevent unwanted noise and damage. It is also recommended to give the Aeros a dedicated power supply instead of powering it on a 'daisy chain' with other pedals to prevent unwanted noise. If you still get unwanted noise, please see the General Technical Information section.

Front

Play/ Stop All

Wheel

Left Button 1

Middle Button 2

Right Button 3

Back

MIDI In

Main In

Main Out

Power
9v

EXP IN

MIDI Out

Left

USB

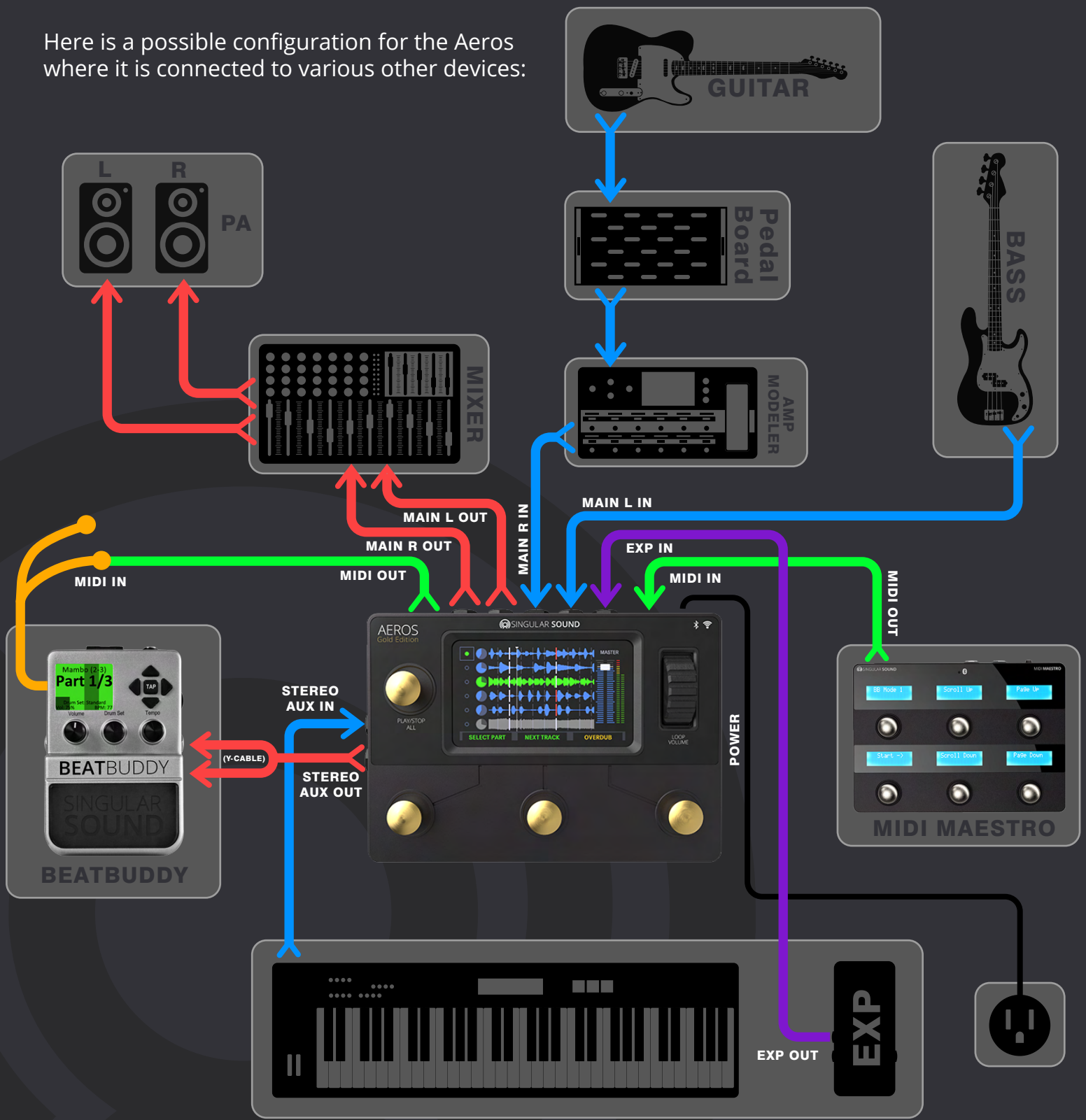
Stereo Aux In/Out

SD Port

Right

Power Switch

Here is a possible configuration for the Aeros where it is connected to various other devices:



Touchscreen and Hands Free

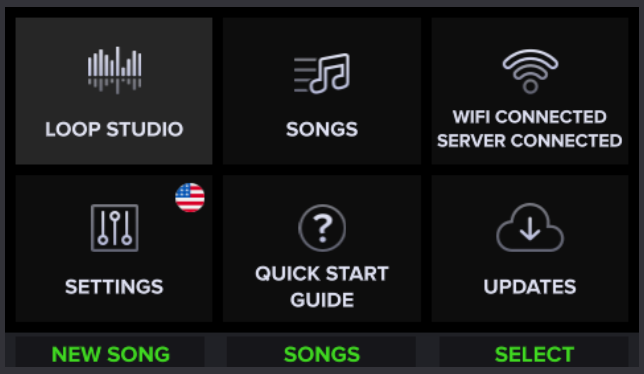
The Aeros can be navigated using the touchscreen or by using the wheel and physical buttons to navigate hands free.

To choose an option using the touch screen, just tap it. To scroll on a page, slide your finger up or down on the screen, like on your phone. The touchscreen does not support multi-touch.

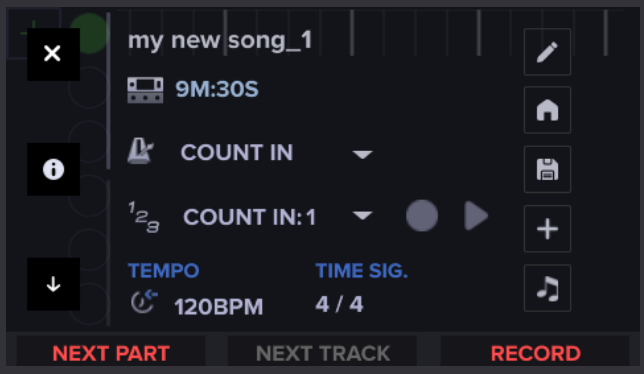
Alternatively, you can use the wheel to change the current on-screen selection and use the right Aeros button to interact with the selection. The left-bottom button cancels the action or returns to the previous page. The middle button behavior varies depending on the page and context.

The tap behavior of the physical buttons will always be shown on the screen above the corresponding button. These on screen labels can also be tapped using the touch-screen.

The Aeros Screens



Home Screen



Loop Studio Screen

Home Screen

This is the screen you will see when first starting up the looper after the boot up sequence.

On this screen you will find the modules which give you access to all the other main screens on the Aeros. Use the wheel to change the current selection and choose the selection with the right Aeros button. You can also tap the touchscreen to choose a module. The modules include: Loop Studio, Songs, WiFi, Settings, Quick Start Guide, and Updates.

You can press the bottom left button to create a New Song based on last saved song settings, and use the middle button to go to the Songs screen.

Loop Studio Screen

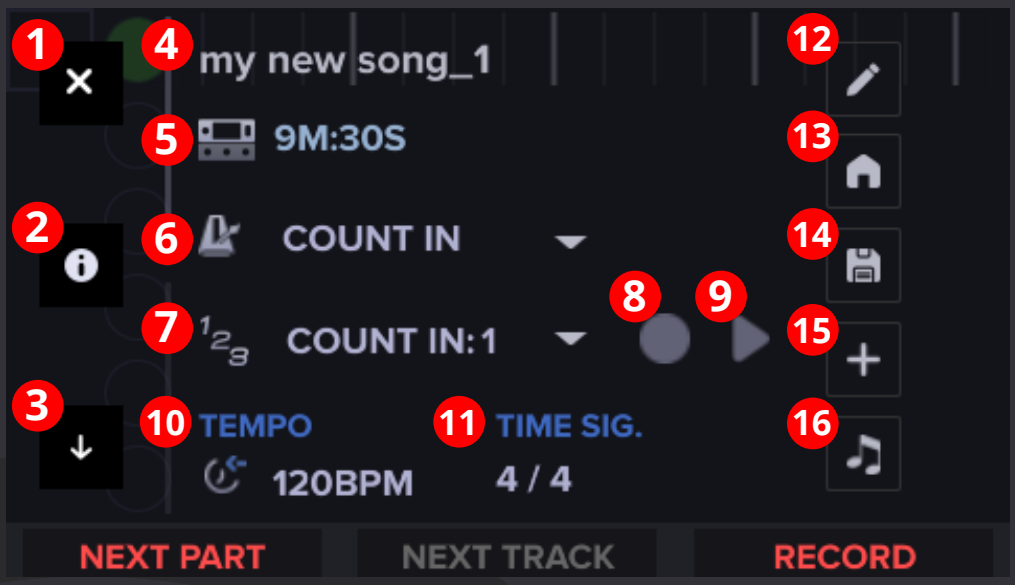
The Loop Studio screen is where you will be doing all your looping.
Once a song is loaded, all of the open song's info is shown on the Song Dashboard.
Close the Song Dashboard at any time by pressing the 'X' at the top left of the screen.

You can control the Aeros looping functions using the 4 buttons and the wheel.

To learn more about controls in a 2x2 song, go to pg. 37.

To learn more about controls in a 6x6 song, go to pg. 42.

The Aeros Screens



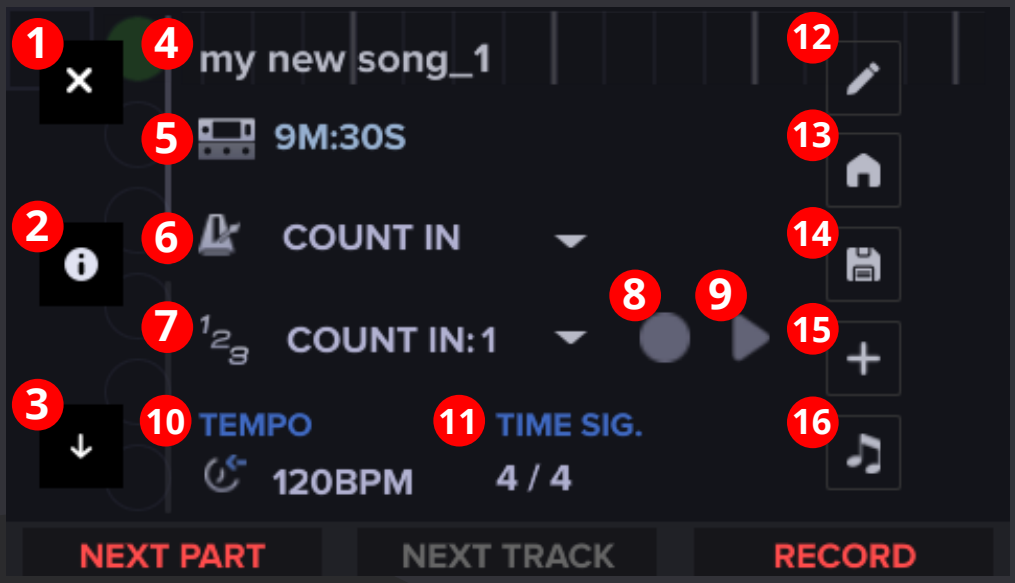
Song Dashboard

Song Dashboard page 1

1. Close Song Dashboard
2. Loop Studio info
3. Open page 2 of Song Dashboard
4. Song name
5. Time left - Shows how much time is left to record in the currently open song
6. Click dropdown menu - Sets when the click plays. Use the touchscreen to open the dropdown menu and select an option. The options are On, First Track, Count In, and Off. This can be found in the device Behavior settings (read more on pg.62)
7. Count in dropdown menu - Use the touchscreen to open the dropdown menu and select an option. You can choose any number from 0-99. If set to 0 measures, there will be no count in. This can be found in the device Behavior settings (read more on pg.62)
8. Count in Record behavior - Sets how the count in will behave when a recording is started from a stopped state. Tap the icon using the touchscreen to cycle through the three options: Off, On, and First Track Record. This can also be set in the device Behavior settings. (Read more on pg. 62)

Cont. on next page...

The Aeros Screens



Song Dashboard page 1

9. Count in Playback behavior - Sets how the Count in will behave when playback is started from a stopped state. Tap the icon using the touchscreen to cycle through the two options: Off and On. This can also be set in the device Behavior settings. (Read more on pg. 62)
10. Tempo - Displays the current BPM of the song, the clock icon has three states: Receiving, Transmitting, and neither. The tempo value can be edited in the Song Settings. When this setting is red, this means there is a tempo mismatch of the song's set tempo and the MIDI tempo it is receiving (read more about tempo mismatches on pg. 133).
    a. When receiving MIDI clock, the arrow points inward toward the clock.
    b. When sending MIDI clock, the arrow points outward away from the clock.
    c. When neither sending or receiving MIDI clock there is no arrow.
11. Time Signature - This can be edited in the Song Settings. A song can have multiple time signatures, one per part (read more on pg. 58).
12. Edit Song
13. Home screen
14. Save song
15. Create new song
16. Songs - Open the Songs screen within the currently open Album

The Aeros Screens

Song Dashboard page 2

1. Return to page 1 of Song Dashboard.
2. MIDI Mode - Displays the current MIDI Mode setting, the options are Receiver or Transmitter. This can be set in the device MIDI settings (read more on pg. 69) or using the hands free slideout menu.
3. MIDI In: Start behavior - Sets how the Aeros will behave when it receives a MIDI Start command.
4. MIDI In: Start Record - Sets whether the Aeros starts recording the first track in a song part any time it receives MIDI Start command while stopped.
5. MIDI In: Start Playback - Sets whether the Aeros starts playback any time it receives MIDI Start command while stopped.
6. MIDI Output - Displays the MIDI Output setting, the options are Merge, Out, Thru, and Off (read more on pg. 69).

Hands Free Slideout Menu

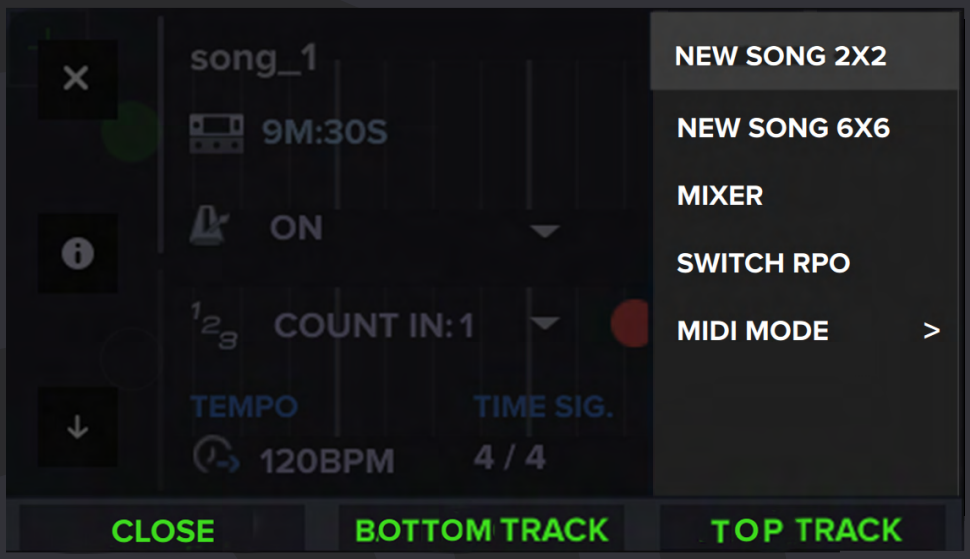
When in the Loop Studio, you can open the hands free slideout menu by pressing and holding the bottom-left button. The slideout menu is a quick and easy way to edit settings and send commands. There are two slideout menus: Playing and Stopped.

When the slideout menu is open, you can use the wheel and buttons to interact with it.

The slideout cannot be engaged when recording or overdubbing. If a recording or over-dub is started, the slideout will close automatically.

Read more about hands free settings on pg. 65.

2x2 Slideout Menu



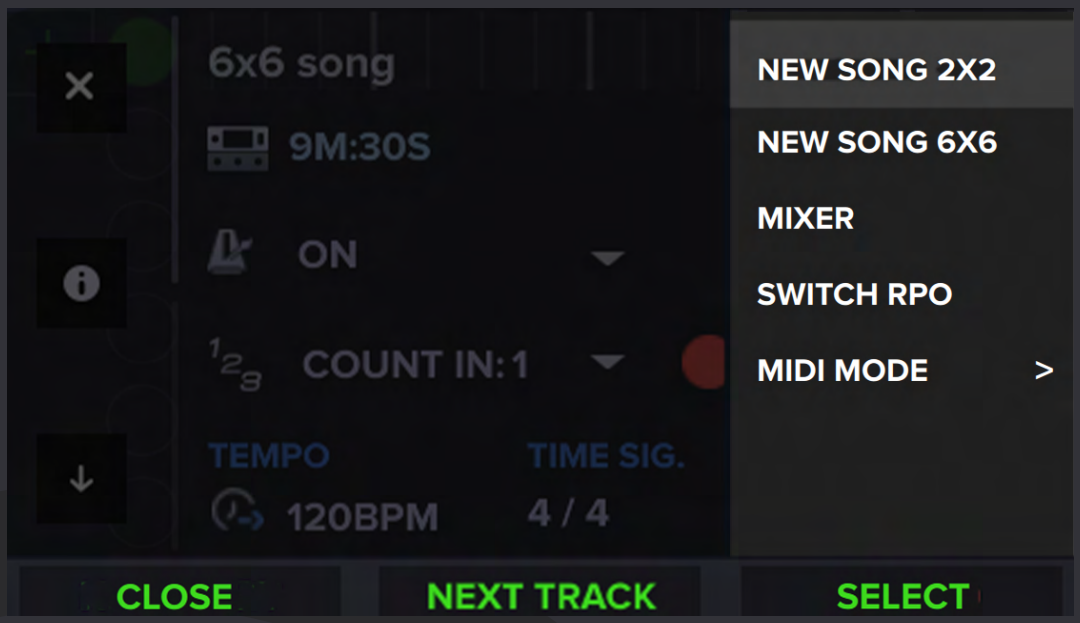
In 2x2, the button actions from left to right are Cancel, Bottom Track, and Top Track.

Cancel - Closes the slideout menu.
Bottom Track - Sends command to bottom track
Top Track - Sends command to top track

If the command is not track specific, like Save, both buttons will do the same thing.

Learn more about 2x2 controls on pg. 37.

6x6 Slideout Menu



In 6x6 , the button actions from left to right are Cancel, Next Track, and Select.

Cancel - Closes the slideout menu.
Next Track - Selects the next track
Select - Sends command to selected track

Learn more about 6x6 controls on pg. 42.

Disabling the Slideout

Prior to version 5.0.0, holding the bottom left button would open the mixer. This is no longer the case. Instead, this will open the hands free slideout menu. You can open the mixer using the hands free slideout.

Note: If you remove the mixer options from the slideout when editing it, you will not be able to open the mixer.

To open the mixer directly instead of the slideout menu, you can disable the Playing or Stopped slideouts in the device Hands Free settings (read more on pg. 65).

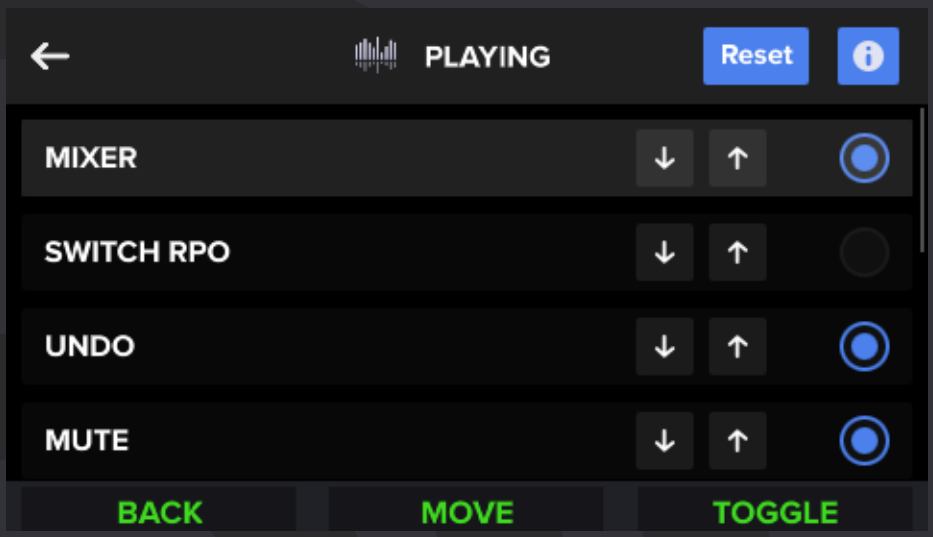
Keep Selection

This setting makes it so that the slideout menu option you had sent last is automatically selected when the slideout menu is brought out again. If disabled, the option at the top of the menu is always selected when slideout menu is opened.

You can find this in the Hands Free settings, read more on pg. 65.

Editing the Slideout Menu

The individual options in the slideout menu can be edited (reordered or shown/hidden) in the device Hands Free settings (read more about Hands Free settings on pg. 65). You can find this screen by going to Settings > Hands Free and choose either one of the edit slideout options.



Here you can also set whether the slideout menu will close automatically every time you send a command or if it stays open until it is closed.

There two methods to change the order of the slideout menu options:

1. Use the touchscreen to tap on either the up or down arrow buttons next to each option. This will move the specific slideout menu option up or down by one.
2. Press the middle Aeros button, 'Move', while selecting a slideout menu option. Once you press move, use the wheel to change the option's position, when you are done press the middle button, 'Finish', to stop moving the option and confirm the new position. This can be canceled by tapping the bottom left Aeros button before confirming.

To toggle whether the option is showing or hidden on the slideout menu:

1. Tap the option's corresponding blue circle on screen
2. Use the right Aeros button, 'Toggle', while selecting the desired slideout menu option.

Here are the options for each state:

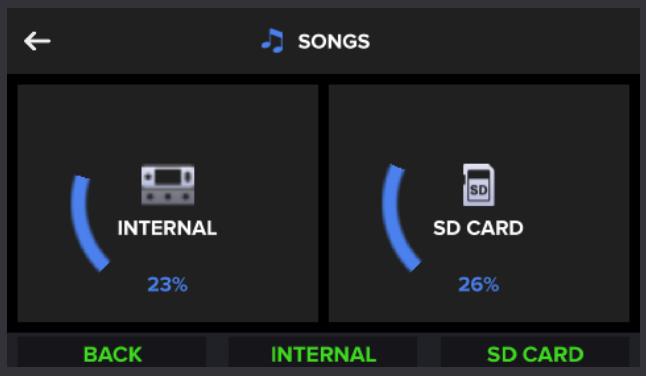
Playing

- Mixer
- Switch RPO/ROP
- Undo
- Mute
- Reverse
- Solo
- Fade To Mute
- Lock Track
- Unlock Track
- Sleep Screen

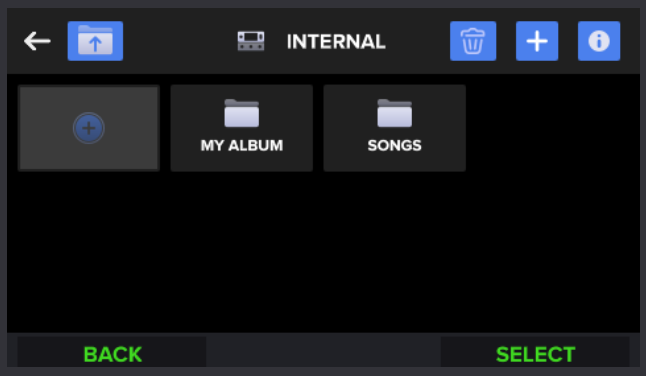
Stopped

- Save Song
- Clear Song
- Delete Last Part
- Open Album
- New Song 2x2
- New Song 6x6
- Mixer
- Switch RPO/ROP
- MIDI Behavior
- Lock Track
- Unlock Track
- Copy Song
- Home
- Song Settings
- Previous Song
- Next Song
- Sleep Screen

Songs Screen



Memory Devices



Albums

Memory Devices

Choose the memory device you would like to open. You can use the middle button to open the internal memory and the right Aeros button to open the SD card, or you can use the touchscreen. Tap the back arrow or press the bottom left Aeros button to return to the previous screen.

The small blue percentage value shows how much memory you have used in each device.

Albums

Once you choose a memory device, you will enter Albums. Your internal memory should already have an album called “Songs” there automatically. You will have to create the first album on your SD card if you are using it for the first time (MDOS Fat32 formatting is necessary, class 10 is recommended).

If you have previously recorded material when updating into 5.0.0, converting will create an album “Songs” with all SD card songs moved inside of it. Read more about version 5.0.0 formatting and conversion on pg. 29.

Use the Aeros wheel to change the current selection. The currently selected album will be a lighter grey than other albums. To open the selected album hands free, tap the right Aeros button.

To edit an album name, tap the middle Aeros button ‘Edit’. This will pop up a keyboard on the touchscreen.

If you tap or select the blank album with a + sign, this will create a new album and ask you to name it.

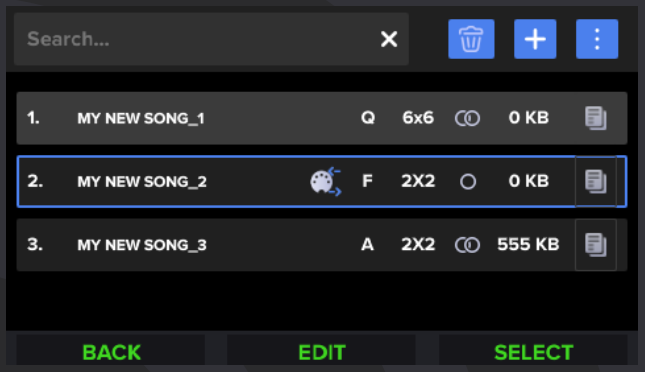
Albums Toolbar

To create an album, tap the blue and white plus sign in the toolbar.

Delete the currently selected album by tapping the trash icon in the toolbar.

To return to the Memory Locations screen use the “Up a level’ icon. 

Songs



Once you choose an album you will enter the Songs screen showing all songs within the album.

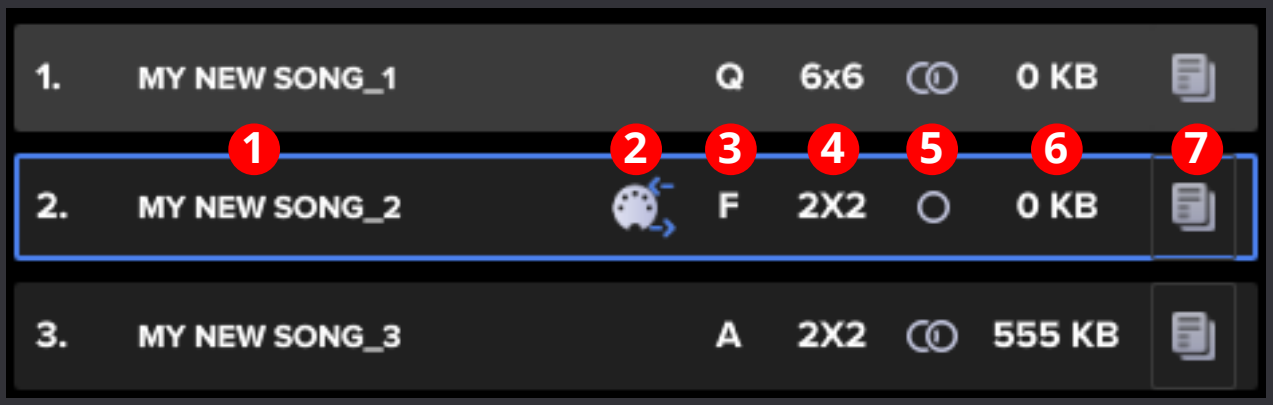
Your internal memory should already have a song called “song_1” there automatically.

You will have to create the first song on your SD card if you are using it for the first time. If you updated into 5.0.0 with previously recorded material, it should have been moved to the album ‘Songs’ in the corresponding memory location after converting. (Read more about updating into version 5.0.0 on pg 27.)

Use the Aeros wheel to change the current selection. The currently selected song will be a lighter grey than other songs in the list. To open the selection, tap the right Aeros button.

To edit a song name, tap the middle Aeros button ‘Edit’.

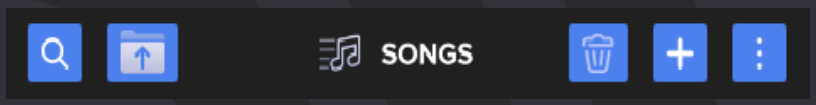
Song Details



The list of songs will show the following details for every song:

1. The song name
2. MIDI Song Select and or MIDI Out Control enabled (hidden if off)
   a. Read more about the song settings on pg. 56
3. Q for quantized, F for freeform, A for Auto
4. 2x2 or 6x6
5. Mono or Stereo
6. The memory used by the song
7. Song notes
   a. Press this icon with your finger to open the song notes for the specific song. You can enter relevant information here (such as which BeatBuddy beat was used with the song) using the Aeros keyboard.

Songs Toolbar



Search for a song by name in the current album.

Delete the currently selected song by tapping the trash icon in the toolbar or by selecting Delete from the hands free slideout menu.

To return to the Albums screen use the “Up a level” icon.

To create a new song, tap the blue and white plus sign in the toolbar using the touchscreen

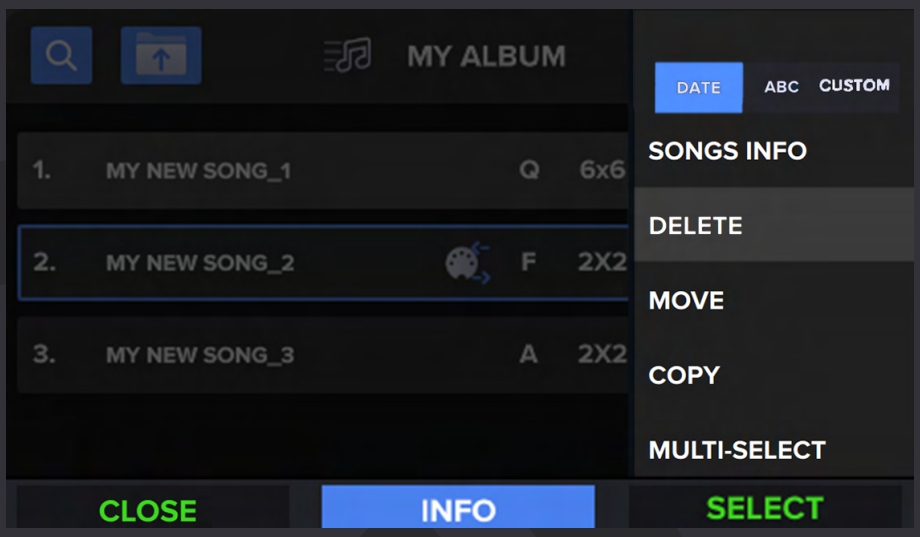
Tap the 3-dot icon to bring up the slideout menu.

Songs Slideout Menu

The slideout menu gives you the ability to access settings that are not on-screen otherwise

To bring up the hands free slideout menu in the Songs screen, hold the bottom-left Aeros button or tap the 3-dot icon in the Songs toolbar.

Note that there is no slideout menu in the Albums screen.

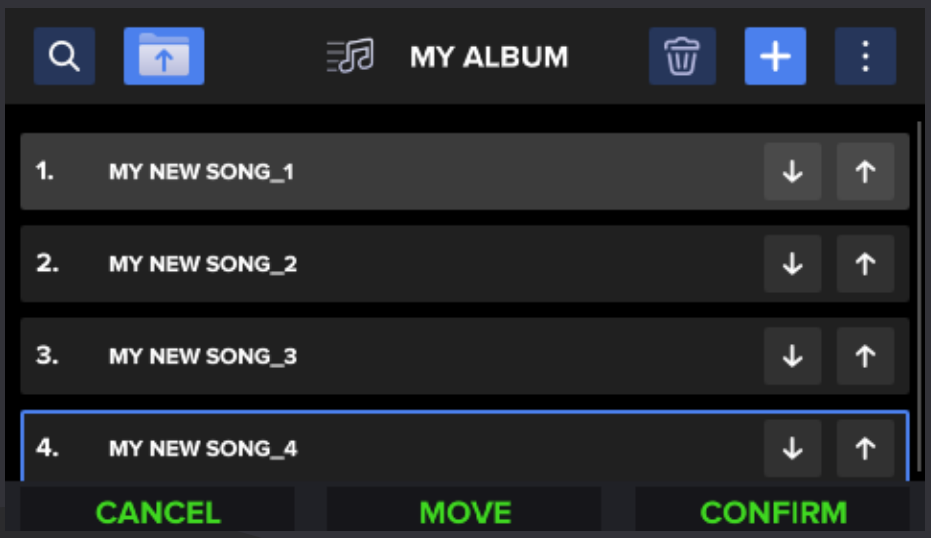


Using the slideout you can:

- Set the song order (Date, alphabetical, custom)
- Reorder songs (if set to custom)
- Access info
- Delete songs
- Move songs
- Copy Songs
- Set up multiselect

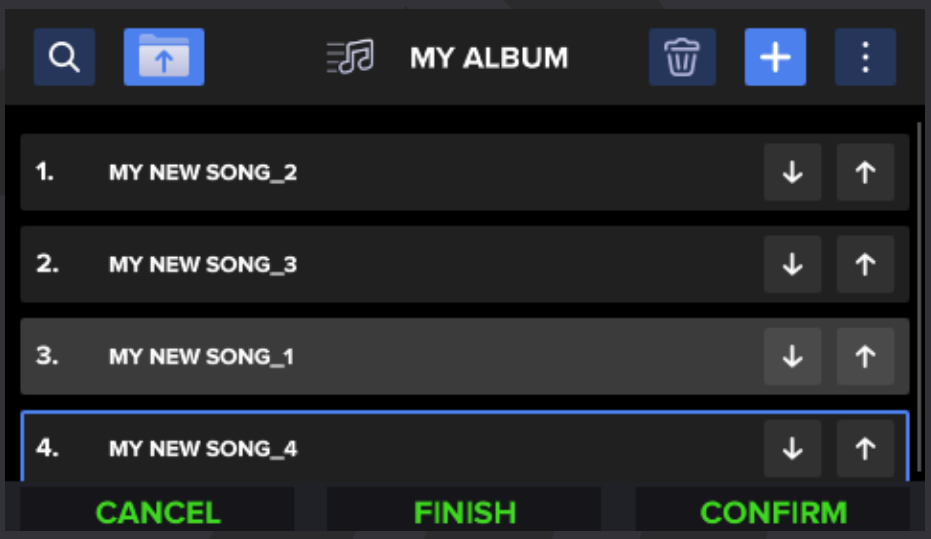
Use the middle button to read info on the selected slideout menu option. Use the right button to choose the selected slideout menu option. Use the bottom left button to close the slideout and cancel any selection if there is one.

Reorder Songs



If the Album order is set to 'Custom', the Reorder songs option will be available. This order will be recalled once set to custom again even if you choose to organize songs by date or alphabetical order.

While highlighting the 'Reorder Songs' option, press the right Aeros button to start moving songs. You can also tap the 'Reorder Songs' option using the touchscreen to enable it.



There are two methods to change the order of songs in the album:

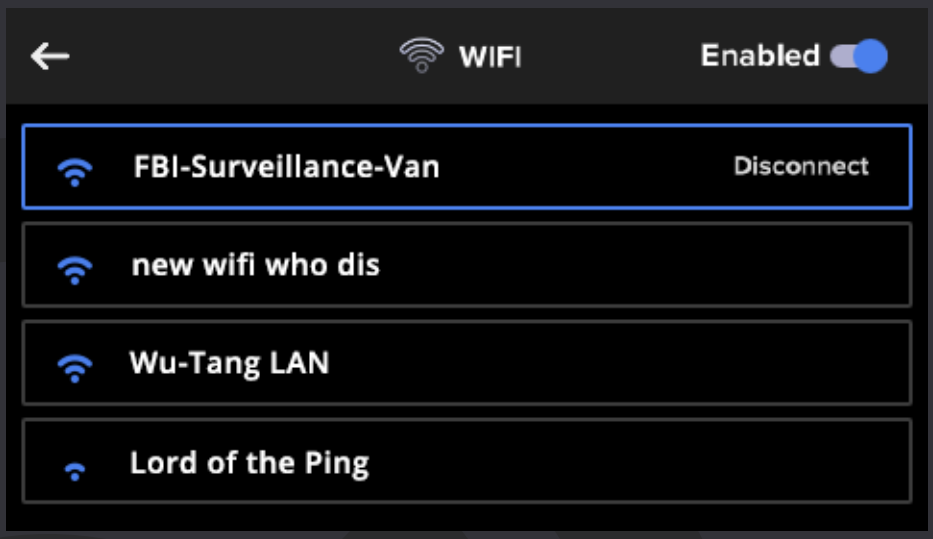
1. Use the touchscreen to tap on either the up or down arrow buttons next to each song. This will move the specific song up or down by one.
2. Press the middle Aeros button, 'Move', while highlighting a song. Once you press move, use the wheel to change the song's position, when you are done, press the middle button, 'Finish', to stop moving the song and confirm the new position. This can be canceled by tapping the bottom left Aeros button before confirming.

Hidden Hands Free Features

If you hold down the right Aeros button while selecting a song it will engage multi-select mode.

While multiselect mode is enabled, you can tap the middle Aeros button to Move a song or multiple songs. If you hold down the middle Aeros button, the selected song(s) will start the copy process.

WiFi Screen

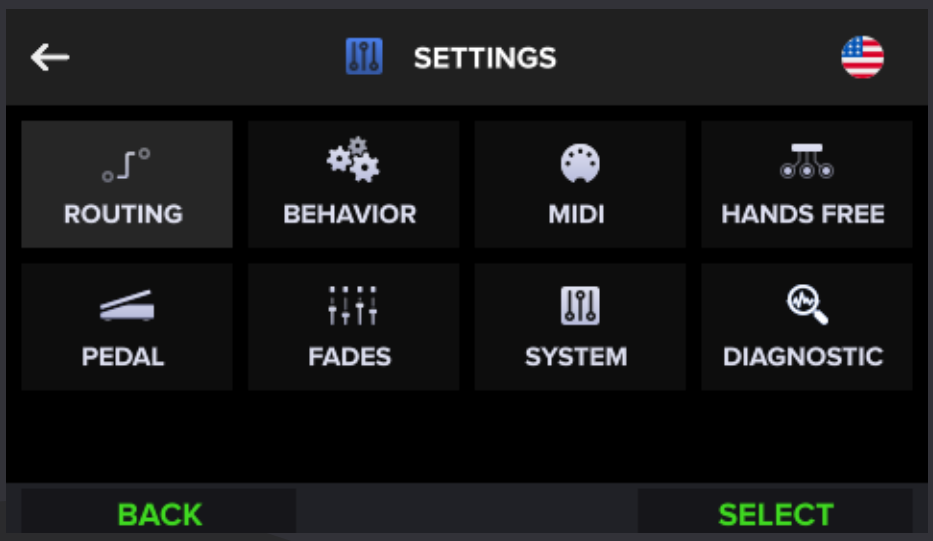


Connect to your WiFi to receive update notifications when they become available and to download the update via WiFi.

You do not need to be connected to WiFi to use the Aeros as intended.

Tip: Want to know your Aeros IP address? Simply tap the WIFI header five times (5x) and it will show. It will hide once you leave the WIFI page and return to it.

Settings Screen

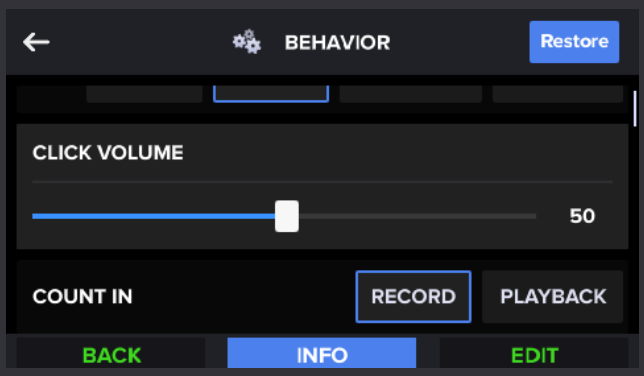


We have Organized all the Device settings into categories:

- Routing
- Behavior
- MIDI
  - MIDI IN
  - MIDI Out
- Hands Free
- Pedal
- Fades
- System
- Diagnostic

All settings are now accessible hands free! Use the wheel and interact with the currently highlighted option using the right Aeros button. Read on to learn more!

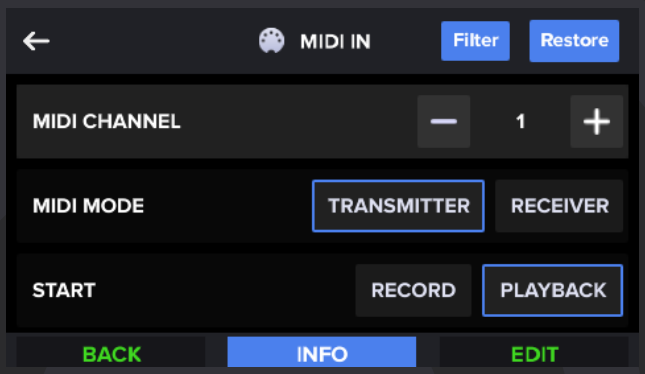
Edit Settings Hands Free

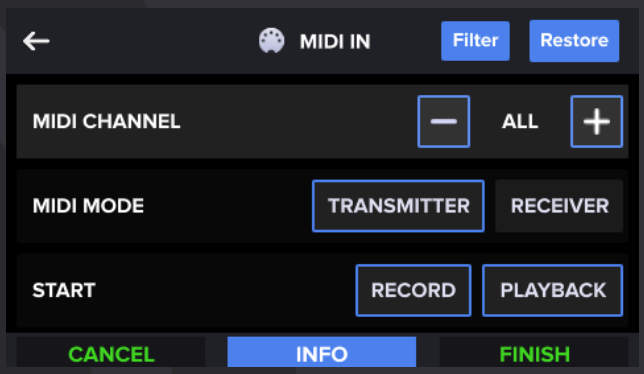


Slider

Any slider settings will allow you to 'Edit' the value with the right Aeros button to activate the slider. Then using the wheel, you can set any value. Tapping the bottom left Aeros button will cancel the change and tapping the right button will confirm it

Integers





The same is true for any settings that have +/- integers like the Time Signature song setting.

INFO

Tip: Tap the middle button over any selection in the settings pages to get info on the setting.

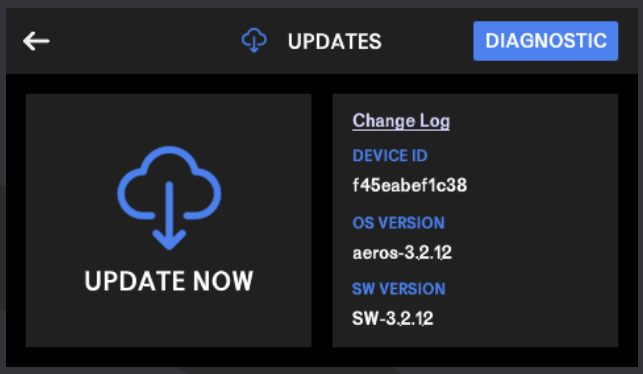
Read more about the specific settings on pg. 52.

Quick Start Guide

The Aeros has a full quickstart guide loaded in, which you can reference at any time.

But nothing beats the manual, am I right?

Updates Screen



If a firmware update is available via WiFi, either the Update Now button will light up and be clickable and/or a pop up will notify you and ask if you want to update.

Once the update has downloaded, the Aeros will do a “checksum” (or a doublecheck) that the file it downloaded matches the one it grabbed from the internet.

The checksum is finished once you see a green, clickable box that says “Reboot”. Either press the button or manually reboot your Aeros to start the update.

Your action is required here to successfully start the update once it has downloaded successfully.

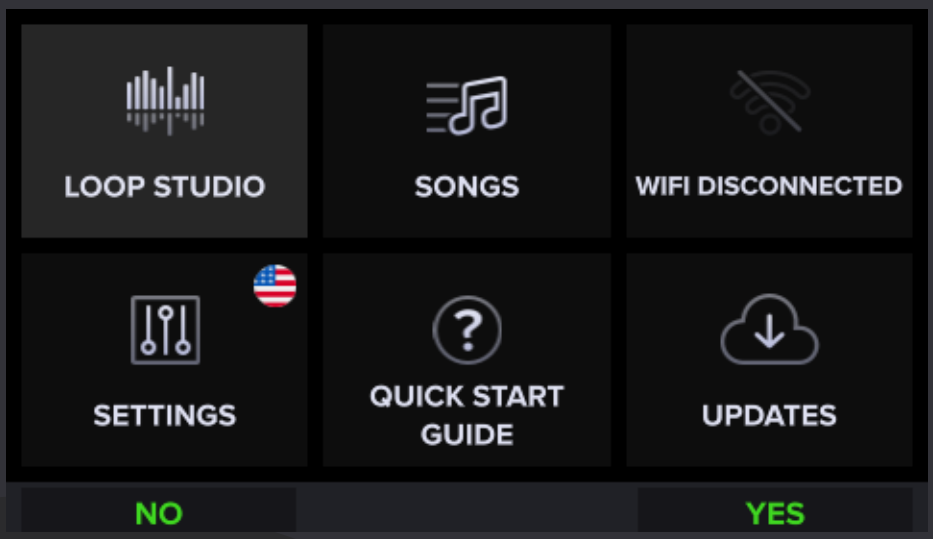
Remember that there are two wait periods when updating using WiFi: One while downloading the update file and second while waiting for the update to install. Please do not turn off your Aeros until it has installed the downloaded file.

If there is an issue, the Aeros will ask you to retry the download.

You can also access the Diagnostic screen from here. Read more about the Diagnostic screen on pg. 133.

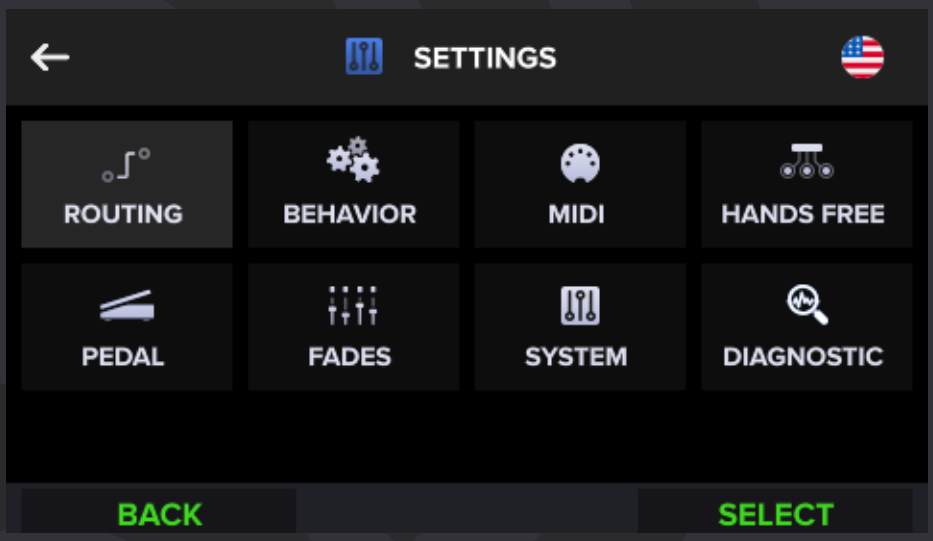
Having issues? Read more about troubleshooting and reporting bug on pg 133.

Language



After turning on the Aeros, select the lower-left menu option, “Settings”. In the top right of the settings page you will find a small map icon, tap the icon to bring up the Languages page showing the 7 current language options:

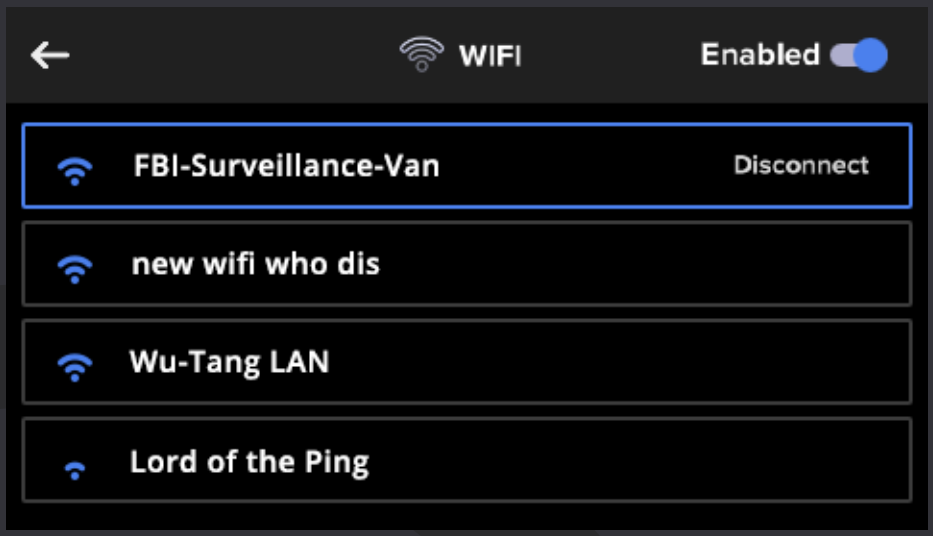
- English (default)
- French
- Spanish
- Italian
- Japanese
- Chinese
- German



WiFi

We know you're itching to hop into the Loop Studio, but please do this first:

1. Connect to your Wi-Fi
2. Check for updates (once the Aeros is connected to WIFI on power up, it should notify you of a new available live version)



Try remaining connected to Wi-Fi whenever possible to ensure you have all the latest improvements and features. We're constantly improving the firmware, and there may be a new version available at the time you set up your Aeros. *Having issues? Read pg. 133 in the General Tech Information section for troubleshooting info.*

Updating

There are multiple ways to update the Aeros firmware. Read on in this section to understand updating as well as the conversion process when updating into 5.0.0 or later from a version 4.3.1 or prior.

WiFi Updates

While connected to WiFi, the Aeros will let you know with a pop up that a new version of the firmware is available to download. This check for a new firmware happens every time you boot the Aeros and will check again every 10 seconds while turned on.

Once you request the update, the Aeros will start to download the update. Please make sure to be in a location with a good wifi connection. Try fiddling with the exact spot and directioning of the Aeros if you seem to be missing a nearby router.

Tip: If you have trouble connecting to the router, try using your phone's hotspot to connect the Aeros to the internet.

Typically this download should take about 1-2 minutes.

Once it downloads, the Aeros will first run a checksum (double check) of the download file and verify it downloaded the right file. Then, once complete, you can hit the Reboot button to finalize the process.

The update process takes about 10 minutes, please do not turn off or disconnect the Aeros or you will have to restart the download process.

Please note that the progress may stay at the 99% mark for several minutes, it is not stuck, just allow it time to finish. If your update is taking longer than 20 minutes, please reach out to support@singularsound.com.

Manual Update with SD

You can also update/downgrade the Aeros firmware using an SD card (MDOS Fat32 formatting is necessary, class 10 is recommended. Your SD card can be a maximum of 32GB.

Note: Your SD card CANNOT be a micro-SD in a converter, micro-SD cards DO NOT function on the Aeros.

Check out this easy video on how to do the manual SD update.

Simply download the aeros firmware .bin file and edit the name (usually something like "aeros-5.0.0.bin" to be "aeros.bin" before adding it to your SD card.

Then, you have two choices:

1. Power off your unit, insert the SD card, and power the unit back on, the Aeros will update automatically before start-up. WARNING DO NOT insert the SD card and then turn off the Aeros, as this corrupts the update file.
2. (If on 3.0.0 or later) Insert the SD card, go to the downloads menu and hit the update button once it lights up. The Aeros will ask if you want to update, select "Yes". If the Aeros is ON while inserting the SD card, a pop-up to update will appear if you're on the main menu or updates screen. Select "yes" to update.
    a. If the manual update option 1 is not working, this may be a solution. If neither option works, please contact support@singularsound.com

Updating to version 5.0.0 (or later)

If you are currently on a version earlier than 5.0.0 and you have previously recorded material stored on your Aeros' internal memory and/or the SD card, **you should read the following instructions to ensure a smooth update process.**

We have updated the file system, the metafile, and more in this version. You will not be able to open songs recorded or altered in 5.0.0 using any previous version. If you open a song recorded on a previous version and record to it with version 5.0.0, it may also no longer work in previous versions.

For this reason, when first loading the new 5.0.3 firmware, you will see a pop-up that asks you to either convert your existing songs or not. If you are unsure, hit NO to prevent conversion. Before converting, please back up your music if you haven't already (read ahead in this section for instructions of how to do this.

Watch this video by Joe Vitale on all the updates and features in 5.0.0

To manually update to Aeros Firmware 5.0.3:

1. Download the 5.0.3 update file here and place it on your SD card
2. Rename the 5.0.3 update file to “aeros.bin” once it is on your SD card.
3. Insert the SD card into the Aeros SD card slot while the Aeros is off, and turn the Aeros on. The Aeros will take about 10 minutes to update.

Easy steps to back up content quickly after updating to 5.0.0 (or later)

1. Once the update is complete and the Aeros boots the first time, you will see a pop-up asking you to convert your songs, press “NO”.
   a. If you have not backed up your content yet, **DO NOT HIT “YES”, THIS COULD CORRUPT** your content if you choose to downgrade back to a version older than 5.0.0
2. Turn OFF your Aeros and remove the SD card
3. Connect your Aeros to your computer via USB and turn the Aeros on
4. Find the Aeros internal memory in your file explorer/Finder app
5. Drag and drop all contents into a backup folder of your choosing on your computer
6. (optional) For songs saved to the SD card: While still connected via USB, Insert your SD card into the Aeros SD card slot to access it from the computer, and follow the same process

Backing up pre-5.0.0 update

If you wish to backup your songs before upgrading to 5.0.0, you will need to move the internally stored songs to the SD card to enable you to transfer them to your computer.

In all Aeros versions 4.3.1 and prior there is no way to connect the internal memory to your computer. You can move the songs on the Aeros internal memory individually to the SD card pretty quickly by using the Songs List in 4.3.1: In the Songs List, tap the SD card icon to move the songs that are saved to internal memory to the inserted SD card.

Conversion

The Aeros in 5.0.0 or later has folders within both the SD card and the Internal Memory called Albums

- On converting, all your existing songs present when booting up the firmware for the first time will be automatically moved into the new 'Songs' folder (within the 'Albums' folder) in each memory device (SD, Internal)
- If your SD card is empty, it will be formatted for the new firmware on boot up

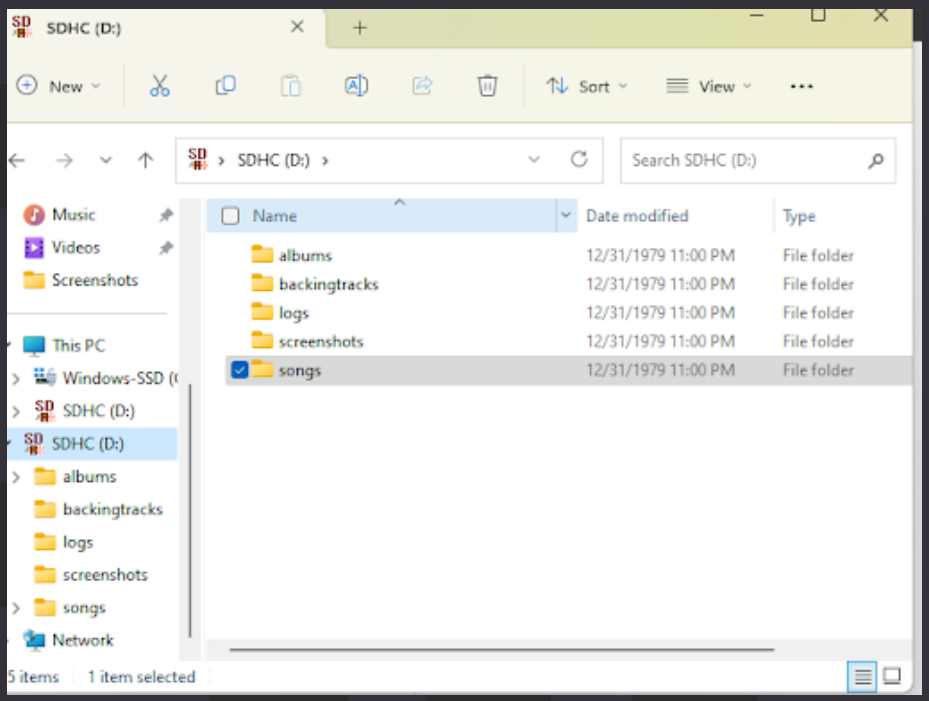
To avoid losing material in the case of corruption post conversion, we have left all your old Meta files in their original place in the file structure.

Read more about the Aeros filesystem on pg 140 in the General Tech Information section.

How to Find Old Meta Files

On your SD Card/Internal memory when connected to a computer, you will see a folder called “Songs”. This is the old “Songs” folder, the new one will be nested inside the “Albums” folder.

You may want to create a backup of this old folder on your computer. **Only copy the Songs folder on the root** (the first layer/page) of your memory device when viewing in your computer’s file explorer app. Place the old Songs in a folder on your computer with a name to the tune of “Old Aeros Meta files”. They are very light, and should not cause any burden on your computer’s memory.



“Repairing” A Song to have the Old Meta File (Downgrading)

To use a song in 4.3.1 again after converting it to 5.0.0 (or later) format, you must identify the names of the songs that you are going to be “repairing”.

Make sure you are viewing the same song folder in both your computer and memory devices (Aeros internal/SD card). You may want to have two windows, one with the current SD Card/Internal Memory in 5.0.0 format and the other with the old meta files.

Simply move all the corresponding .wav files from the 5.0.0 Song folder into the old Song folder. This should “fix” the song for use in 4.3.1 post converting.

Plugging an instrument into the Aeros:

The Aeros has two ¼" (6.35mm) Inputs. You can record in stereo or in mono. The two ¼" (6.35mm) outputs function in the same way.

The Aeros also has a stereo Aux In audio input that you can plug an additional instrument into. To record from this source, see the main settings. You must use a TRS (tip-ring-sleeve) cable to achieve a stereo input signal.

The Aeros does not have phantom power or pre-gain for microphones. This means you may need a microphone preamp to adjust the microphone signal level — any preamp will work.

Signal levels:

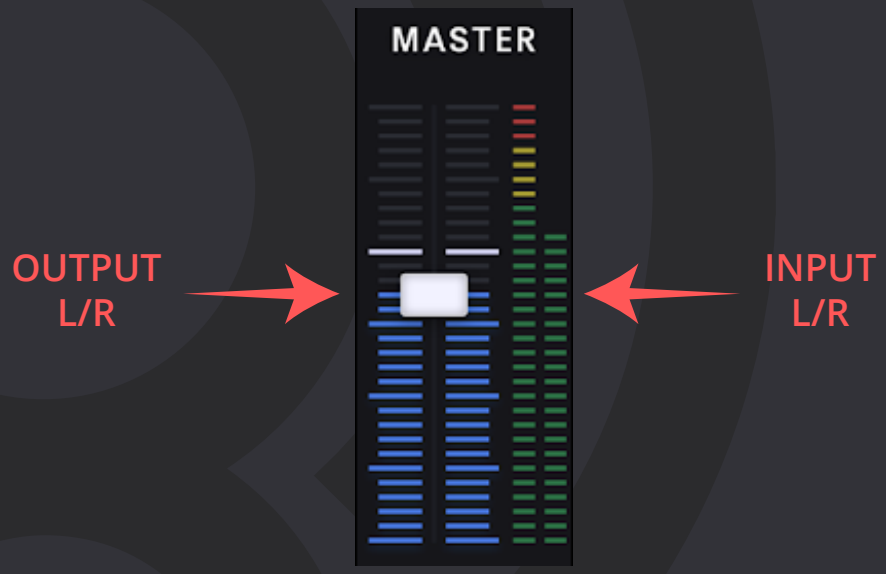
Before you start recording, play your instrument(s) at the loudest expected level in the Loop Studio.

The signal meter is on the right side of the Loop Studio screen.

The best level is mostly green with some peaks in the yellow. If the signal reaches the red level, this means the input is clipping, turn down your instrument to prevent this.

The volume wheel only controls the Loop Playback level, not the input level.

You can set what inputs are displayed on the meter in the Routing Settings (pg. 60). The meter can show either the Main inputs or the Aux In.

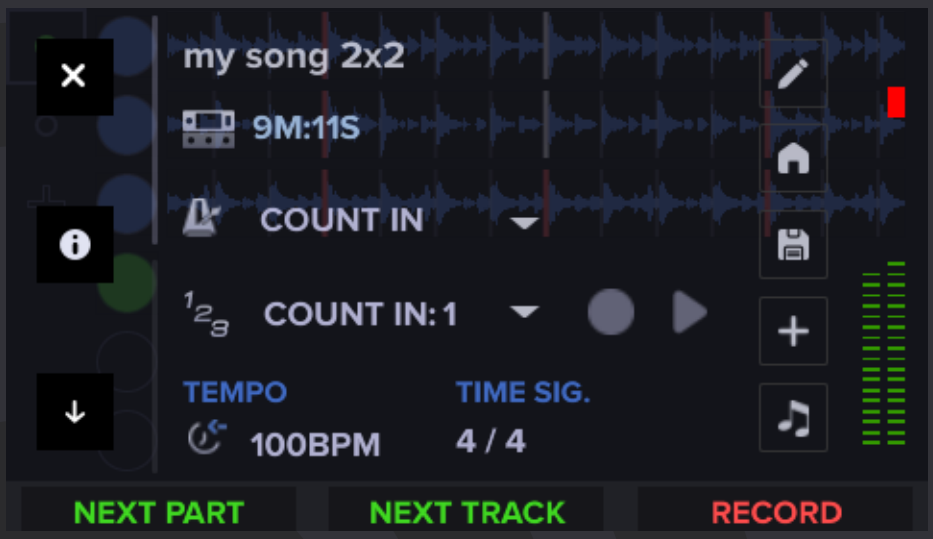


Clipping

If the input level signal is too loud (0dBFS or louder), the Aeros input meter will clip. Clipping creates an unpleasant sound that degrades the audio signal that was recorded, preventing the playback from sounding as it should. To avoid clipping, turn down your instrument signal before it reaches the Aeros. A healthy signal typically sits in the green part of the meter and has “peaks” (loud parts) touching the yellow.

Turning the volume down on the Mixer cannot fix clipping if it happens while recording, the faders are not affecting the input signal.

The Aeros will keep the clipping symbol onscreen for 3 seconds after the peak was detected.



There are many ways to start a new song:

- The Aeros will always reload the last open song once it is powered on. Go to the **Loop Studio screen** to open the song. When you open your Aeros for the very first time, Song_1 will already be created.
- On the **Home screen**, press the left-bottom Aeros button to start a new song based on the parameters of the last edited song.
- In the **Songs screen**, tap the blue plus sign icon to create and set the parameters for a new song
- In the **Loop Studio screen:**
  - Press the plus sign to create and set the parameters for the new song
  - Using the **Stopped Hands Free Slideout Menu** (read more pg. 11), choose either the New 6x6 or New 2x2 option to create a 6x6 or 2x2 song with the same settings as the last edited song.

When you create a new song from scratch you are taken to the Song Settings screen. Once you have chosen all your relevant settings, hit 'Save' in the top right of the screen to create the song with those settings.

Read more about song settings on pg. 56.

Settings can always be edited after creating the song, but some settings cannot be edited after recording to the song. To edit these settings for a song that has been recorded to, you must first clear all tracks (Hold Play Stop All or access on the hands free slideout) which is ***not undoable.***

The following settings can be edited after recording (without clearing all tracks):

- Song Name
- Loop decay
- Loop Decay Rate
- Count in
- MIDI Song Select
- MIDI MSB Bank
- MIDI PC
- MIDI Out Control
- MIDI MSB Out
- MIDI LSB Out
- MIDI PC Out

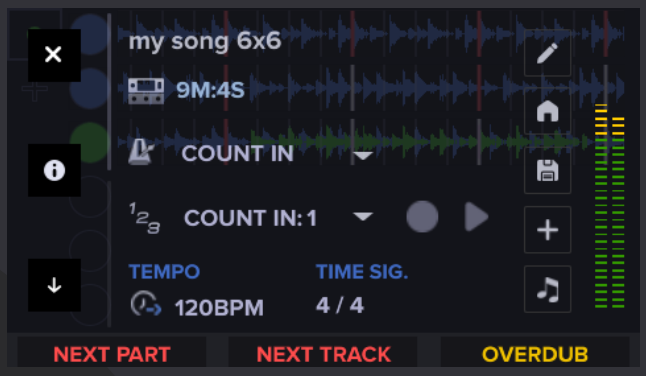
2x2 vs 6x6

The Aeros has two main modes for looping: 2x2 and 6x6

2x2 and 6x6 refer to the song parts x tracks, or how many song parts there are and how many tracks are in each song part.

In 2x2, you have 2 parallel tracks in each of 2 song parts. In 6x6, you have 6 parallel tracks in each of 6 song parts.

Each mode has a different command layout:



To read more on the specific controls in 2x2 go to pg. 37. To read more on the specific controls in 6x6 go to pg. 42.

In 2x2, there are enough buttons to control each track independently. The right button controls the top track, the middle button controls the bottom track, and the bottom left button can switch between the two song parts.

In 6x6, however, there are not enough physical buttons to control all tracks and song parts as easily. Instead, you will first select a track or song part and then perform an 'action' (playback, record, overdub, etc) on it.

Some notable differences in 6x6 are:

- The right button affects the currently selected track
- The middle button toggles through the recorded tracks and the first empty track one by one.
  - By default, the Aeros will cue/start a recording when an empty track is selected during playback. This is to allow for faster recording when switching to a new track. This can be turned off using the Next Track Record setting (read Behavior settings pg. 62)
  - *Tip: To avoid starting a recording on an empty track, tap the next track button twice quickly to cancel the recording in the empty track and select track 1 again on the second tap.*
- The bottom left button toggles through the existing parts and the first empty part one by one. To switch to a selected part, you must send a command to start the transition.
  - You can tap the right or middle button to start the transition when a song part other than the currently open song part is selected.
    - *Tip: If the song part you are changing to has tracks recorded in it already (not an empty song part) then the right button will only start playback and the middle button will start recording a new track.*
  - A transition can be started with several MIDI commands (read more about MIDI commands on pg. 102)
  - This default behavior can be changed to automatically switch parts just like in 2x2 using the Auto Song Part Change (6x6) Behavior setting. (Read more about Behavior settings on pg. 62)

6x6 offers creative versatility with 36 individual tracks across the 6 parts to play with, but 2x2 offers a simpler approach. There is a natural tradeoff between the two modes and they can each provide benefits in different scenarios, we encourage you to try both out!

For beginners, we do suggest trying out 2x2 before playing with 6x6!

Quantized vs Freeform

The Aeros can record audio in two main modes: Quantized mode and Freeform mode

In Quantized mode it starts and stops loops on the lines of a grid that uses tempo (BPM) and measures (the number of beats in a measure set by the time signature). This synchronizes track lengths to each other based on the grid. Quantized mode records in units of measures, so, for example, if you press the Track button while recording in the middle of a measure, it will continue recording until the end of the measure. All tracks will begin and end on a measure line.

In Freeform mode there is no grid (no tempo, time signature, or measures) so the tracks start and stop wherever you press the Track button.

In both modes, you can turn on the Sync Tracks song setting (read more about song settings on pg. 56.) to synchronize either the start and length or only the length of tracks. This makes it easier to make loops that will play in sync and not lose relative start points as the loops play over extended periods.

Autoquantize

A third mode, Auto, will allow you to get the best of both worlds. You will start in a song part that resembles a freeform song (no tempo or measures), and the Aeros will quantize the first track you record using an algorithm based on the start and end point of the recording (read more about Autoquantize on pg. 76). Once the first track is quantized, the song will behave like Quantized mode.

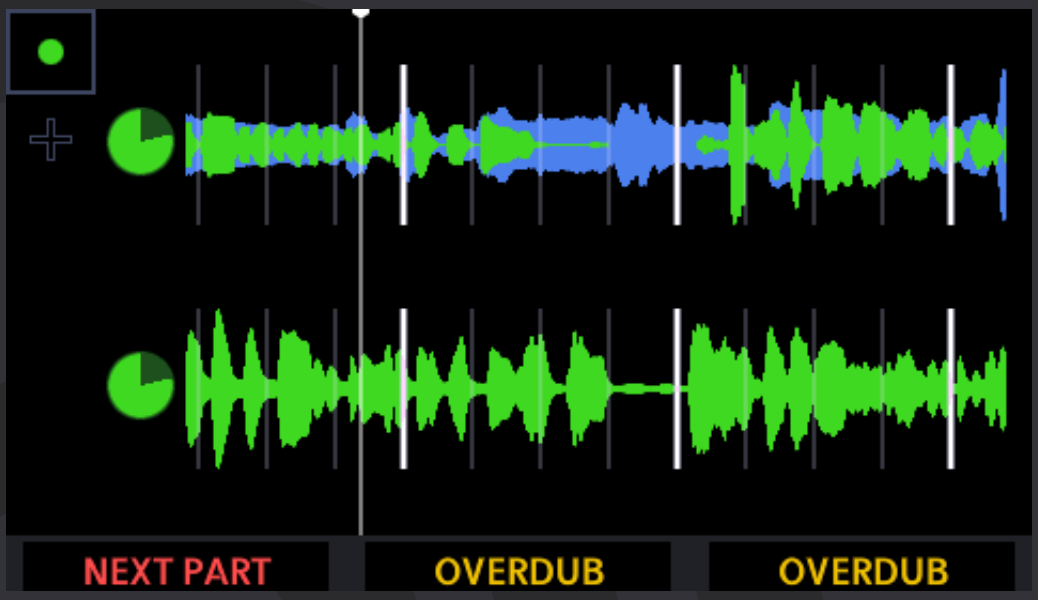
When using Autoquantize while the Aeros is set to MIDI Transmitter (master) the Aeros can send MIDI Start, Stop, transition, and clock commands to a connected MIDI device. Read more about MIDI and using the Aeros as MIDI Transmitter on pg. 76.

In 2x2, you have two song parts each with two parallel tracks, for a total of four unique tracks.

Track 1 and 2

The Bottom Track (center Aeros button) and Top Track (right Aeros button) are controlled by their respective footswitches. The buttons have two possible modes: RPO (record, play, overdub) and ROP (record, overdub, play). This can be set in the Behavior Settings menu (see Settings pg. 62). RPO is the default setting.

ROP mode is preferred by some soundscape artists in order to capture the 'tails' of loops (usually reverb or echo etc) by starting the overdub immediately (or at the next measure/sync point) when the button is pressed.



RPO Single Tap

- Record (if track is blank)
- Play back recording
- Overdub
- Play back overdub

ROP Single Tap

- Record (if track is blank)
- Overdub
- Play back overdub

Double Tap

Mute (happens Immediately, End of Measure or End of Loop. See pg 64 for mute settings)

- Single tap to unmute
- If Mute / nmute Fade is enabled in the Fades Settings (pg 67), the track will fade out and then mute or unmute and fade in. These volume changes are animated in the mixer.

Hold

- Undo most recent layer
  - Continuing to hold will undo the second layer (if it exists)
  - If you have undone all layers, single tap to overwrite (re-record) track
- Redo most recently undone layer
  - Continue to hold to redo overdub (if it exists)
- (While recording) Cancels and undoes the recording on the current track. If Sync Length is on (see Song Settings pg. 56) Aeros will add silence to meet the length rules. If in Quantized mode, the track will undo and add silence until the next measure. If in Freeform mode it will undo the track immediately.

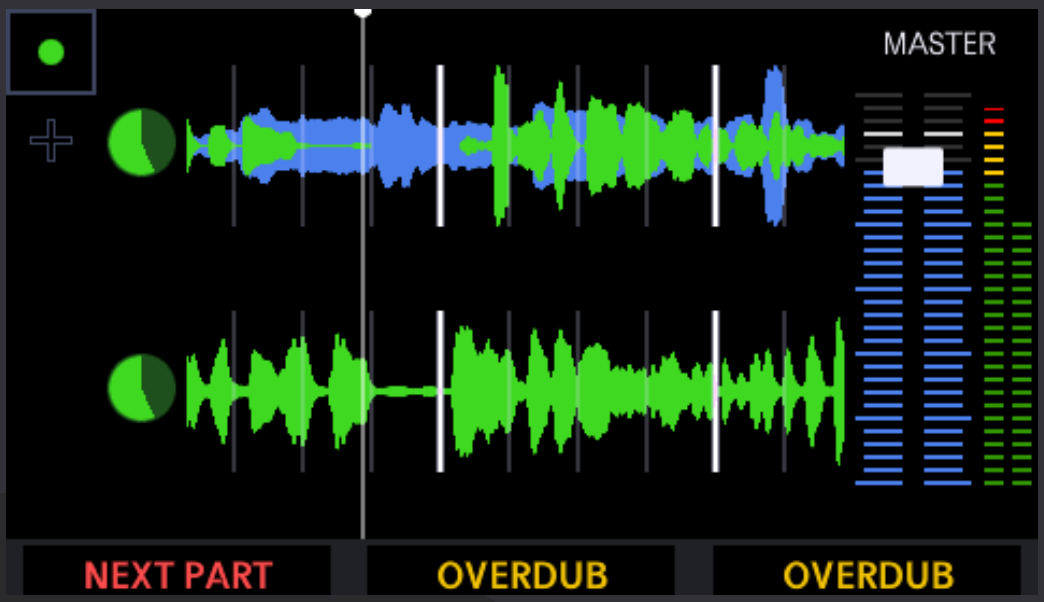
Overdubs

Overdubs are additional layers of recordings on top of the original track. You can have unlimited stacked overdubs, but recording each new overdub layer will merge the previous overdub to the base layer. So you can have at most two layers per track -- your base layer and your most recent overdub layer. For each track, the most recent overdub is merged with the base layer when the song is saved. This frees up internal memory.

The overdub layer will continually record within the same overdub session, it will not automatically make new overdub layers at every loop seam. To start a new overdub layer, you must start overdubbing again by pressing the Track button.

Please note: The single overdub layer does contribute to total memory used in a song. Read more about overdubs in General Technical Information pg 136.

Next Part



Play/Stop All

Single Tap

- Stops playback of all tracks.
  - You can choose in the Behavior Settings (Stop Song) whether it stops immediately, at the end of the measure (default), or at the end of the longest loop in the song part.
  - If a stop is cued, you can tap the right Aeros button to fade out the song while it stops.
- Resumes playback of all tracks.
- If the Fade In and/or the Fade Out setting (See Fades Settings pg 67) are enabled, the tracks will Fade In when starting playback or Fade out when stopping, respectively.

Double Tap

- Immediately stops playback of all tracks, regardless of setting.

Hold

- Delete all tracks and song parts and starts the song over. If Clear Song Confirmation (settings > behavior settings) is on then there will be a pop-up to confirm clearing the tracks.
  - This is not undoable

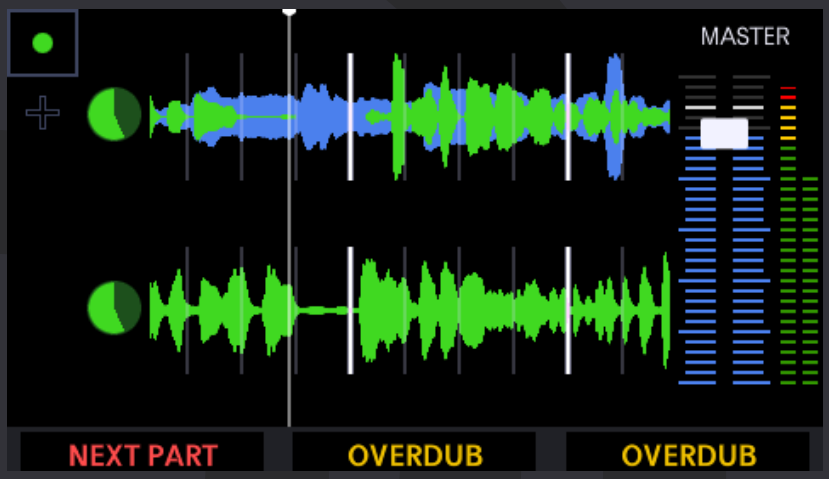
Press/Release

In the Behavior Settings, set whether the Play/Stop All button reacts on the press or on the release of the button. (Settings > Behavior > Play/Stop All) Press is more immediate, however, if set to Press, holding the button to delete all tracks while stopped will start playback of the song for a few seconds before the delete command is enacted.

You can avoid this by using the hands free slideout menu Clear Song option (read more about the hands free slideout on pg. 11).

Aeros Wheel

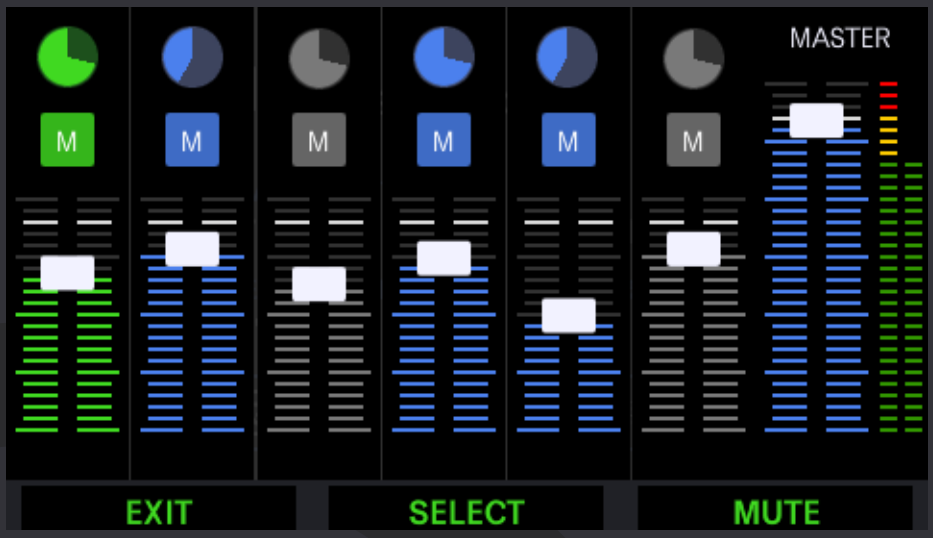
Use the wheel to control the master loop playback volume at any time in the loop studio or scroll through selections on any page, including the slideout menu when it is open. You can also use an expression (EXP) pedal to control the volume, read more about how to calibrate your expression pedal on pg. 81.



The thin bars on the right show the L and R input volume levels. If the bars are red you are clipping and you should lower the volume of your instrument.

In the Mixer

You can use the volume wheel to control the relative volume levels of each track. Use the middle button to switch the current selection to the next track.

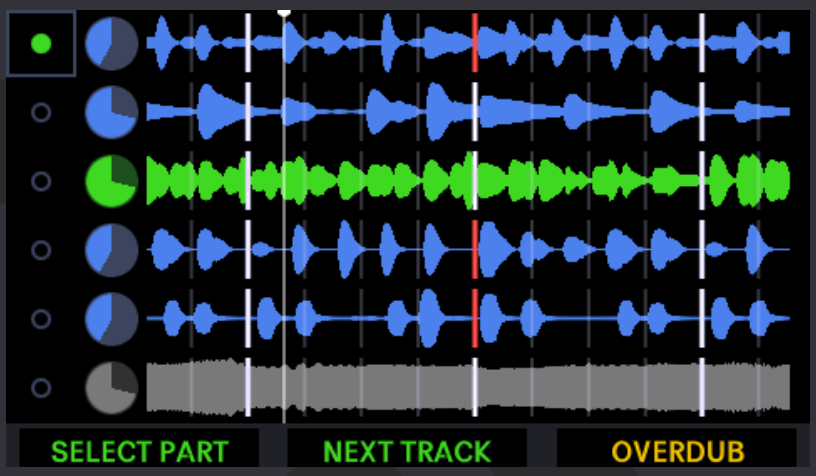


If no tracks are muted, selecting the master track from the mixer view will give the option to “Mute All”. If at least one is muted, the option will be to “Unmute All”.

In 6x6, you have six song parts each with six parallel tracks for a total of 36 unique tracks.

Track Button

The Track button (lower right) executes actions on the selected track or song part. Selected items are indicated by a green color. The Track button has two possible modes: RPO (record, play, overdub) and ROP (record, overdub, play). This can be set in the Device Settings menu (see Behavior Settings pg. 62). RPO is the default setting.



RPO Single Tap

- Record (if track is blank)
- Play back recording
- Overdub
- Play back overdub

ROP Single Tap

- Record (if track is blank)
- Overdub
- Play back overdub

Double Tap

- Mute (happens Immediately, End of Measure or End of Loop. See pg 64 for mute settings)
  - Single tap to unmute
  - If Mute / Unmute Fade is enabled in the Fades Settings (pg 67), the track will fade out and then mute, or unmute and fade in. These volume changes are animated in the mixer.

Hold

- Undo most recent layer of selected track
  - Continue to hold to undo the second layer (if it exists)
  - If you have undone all layers, single tap to overwrite (re-record) the track
- Redo most recently undone layer of selected track
  - Continue to hold to redo undone overdub (if it exists)
- (While recording) Cancels and undoes the recording on the current track. If Sync Length is on (see Song Settings pg. 56) Aeros will add silence to meet the length rules. If in Quantized mode, the track will undo and add silence until the next measure. If in Freeform mode, it will do so immediately.

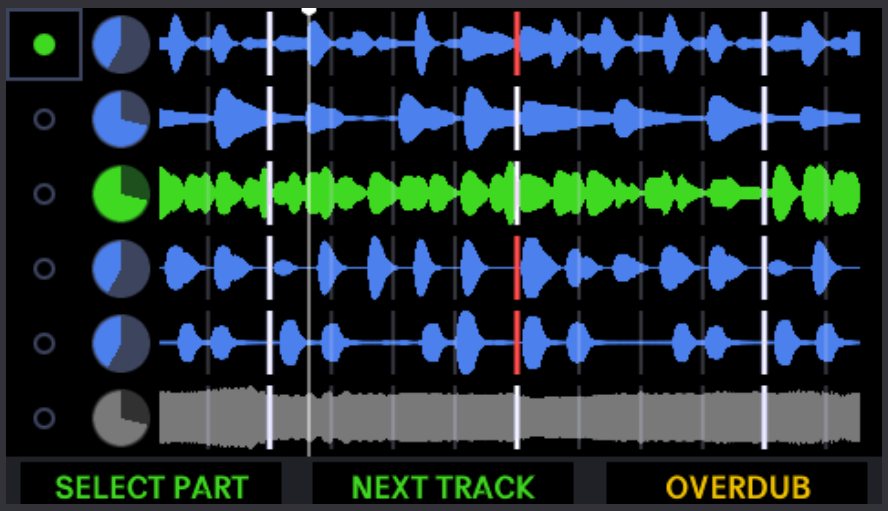
Overdubs

Overdubs are additional layers of recordings on top of the original track. You can have unlimited stacked overdubs, but recording each new overdub layer will merge the previous overdub to the base layer. So you can have at most two layers per track -- your base layer and your most recent overdub layer. For each track, the most recent overdub is merged with the base layer when the song is saved. This frees up internal memory.

The overdub layer will continually record within the same overdub session, it will not automatically make new overdub layers at every loop seam. To start a new overdub layer, you must start overdubbing again by pressing the Track button.

*Please note: The single overdub layer **does** contribute to total memory used in a song. Read more about overdubs in General Technical Information pg 136.*

Next Track



Single Tap

Selects next track

- If selecting an empty track, it will automatically start/cue a new recording by default. To turn off the automatic start of a recording when the empty track is selected, disable the Next Track Record setting in the Behavior Settings (read more about this setting on pg. 62)

Select Part

Single Tap

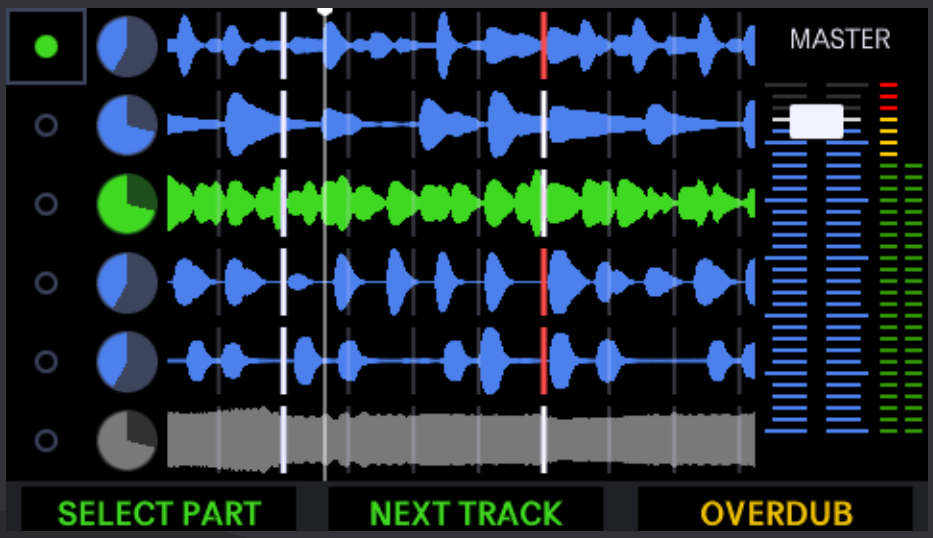
Selects next song part

- Press the Track button to change to the selected song part.
- If the selected song part has no previous recording (it is a new song part, as indicated by the "+" sign), pressing the Track button will begin a new recording on that song part.
- If the selected song part already has a recorded track, the Track button plays back the song part.
- To automatically switch parts in 6x6 (like in 2x2) by only tapping the Next Part button, enable the Auto Song Part Change (6x6) setting in the Behavior Settings (read more on pg. 64)
  - This will automatically start transitioning to the selected part instead of requiring you to first select a part and then start the transition using the Track button

Hold

- Opens the hands free slideout menu by default. Read more about the slideout menu on pg. 11.
  - To open the mixer instead (like the Aeros did in versions 4.3.1 and prior), disable the slideout menus in the Hands Free settings (read more on pg. 65).

Play/Stop All



Single Tap

Stops playback of all tracks.

- You can choose in the Main Settings whether it stops immediately, at the end of the measure or at the end of the longest loop (default) in the song part.
- If stop is cued, you can tap the right Aeros button to Fade out the song while it stops.

Resumes playback of all tracks.

- You can select different song parts and tracks while the song is stopped.
  - Note: Pressing the Track button while the Aeros is stopped will start overdubbing or recording the selected track

If the Fade In and/or the Fade Out setting (See Fades Settings pg. 67) are enabled, the playback of all tracks will Fade in when starting or Fade out when stopping, respectively.

Double Tap

- Immediately stops playback of all tracks on second tap, regardless of setting.

Hold

Delete all tracks and song parts and start the song over. If Clear Song Confirmation (settings > behavior settings) is on then there will be a pop-up to confirm clearing the tracks.

- This is not undoable

Press/Release

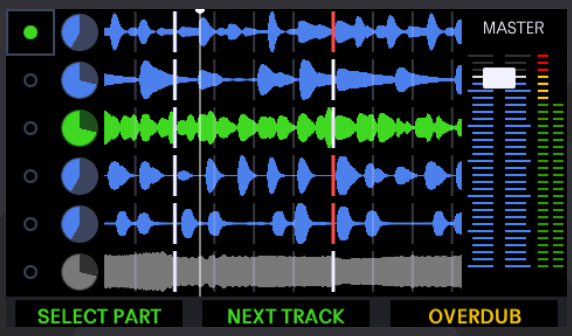
In the Behavior Settings, use the Play/Stop All setting to decide whether the Play/Stop All button reacts on the press or on the release of the button.

Press is more immediate, however if set to Press, holding the Play/Stop All button to delete all tracks while stopped will start playback of the song for half a second before the delete command is enacted. You can avoid this by using the Clear Song option in the hands free slideout menu (hold the bottom left Aeros button to open), or by using MIDI (CC:42 value 0)

Aeros Wheel

Use the wheel to control the master loop playback volume at any time in the loop studio or scroll through selections on any page, including the slideout menu when it is open.

Note: You can also use an expression (EXP) pedal to control the volume, read more about how to calibrate your expression pedal on pg. 81.

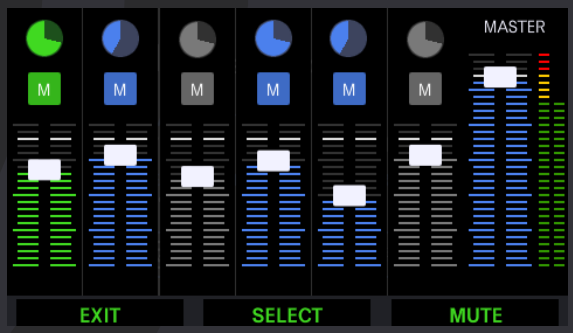


The thin bars on the right show the L and R input volume levels. If the bars are red you are clipping and should lower the volume of your instrument.

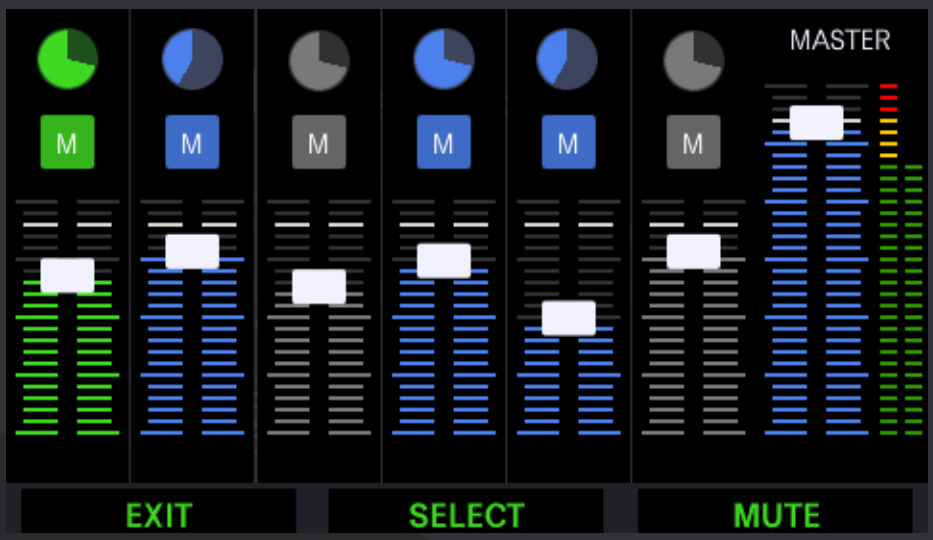
Note: You can set whether the Main in or the Aux in signal levels are showing on the input meter in the Routing Settings (read more on pg. 60)

In the Mixer

You can use the volume wheel to control the relative volume levels of each track. Use the middle button to switch the current selection to the next track.



To open the mixer, select the Mixer option from the hands free slideout menu (hold the bottom left Aeros button to open the slideout).

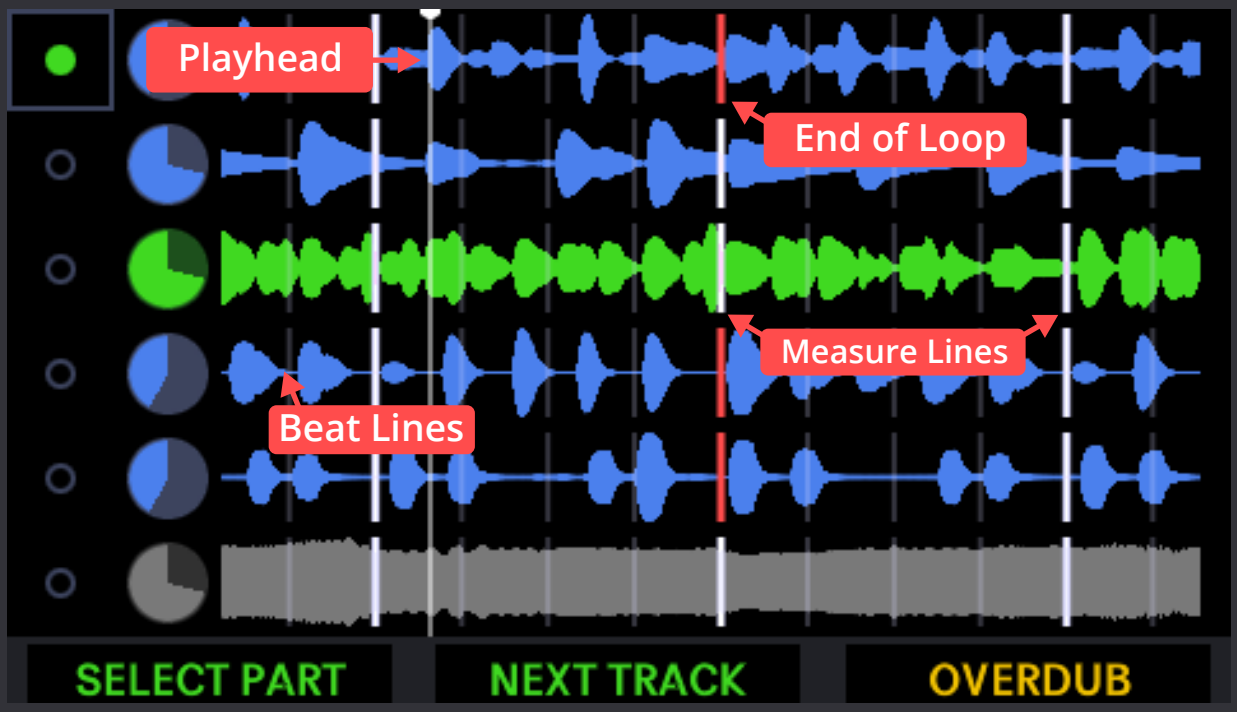


Tracks in the current song part will be visible, ordered from left to right. You can touch the screen to adjust their relative volumes or mute individual tracks.

You can also mix hands-free: Select tracks with the middle button and adjust the relative volumes with the volume wheel or expression pedal. Mute or unmute with the right button. Exit the mixer hands-free by pressing the bottom-left button. The same track you have selected in the Loop Studio screen will be selected when you open the mixer. Opening the mixer does not stop the song.

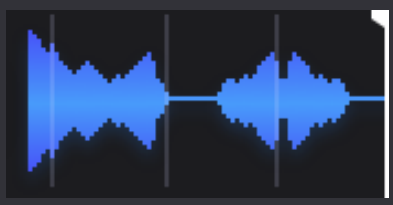
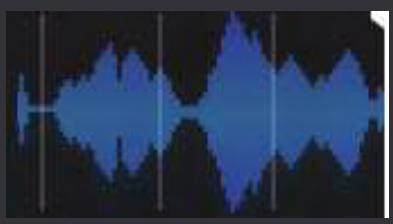
Note: The fader head will turn blue when placed at 0dB.

TIMING



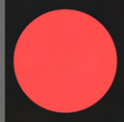
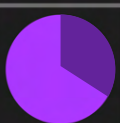
Playhead	Where you currently are in the loop. In quantized mode, flashes on each beat and flashes brighter on each measure.
Beat	Each beat is shown by a thin white line (only in quantized mode)
Measure	Each measure is shown by a thick white line (only in quantized mode)
End of Loop	The end of the loop is shown by a thick red line

TRACK WAVEFORMS

	Red waveform: Currently recording new track.
	Green waveform: Currently selected layer.
	Blue waveform: Layer is currently playing, but is not selected.
	Yellow waveform: Currently recording over-dub.
	Gray waveform: Muted track.
	Faded waveform: Layer is undone. Undone layer can be brought back or overwritten.
	Purple Waveform: The track is currently reversed

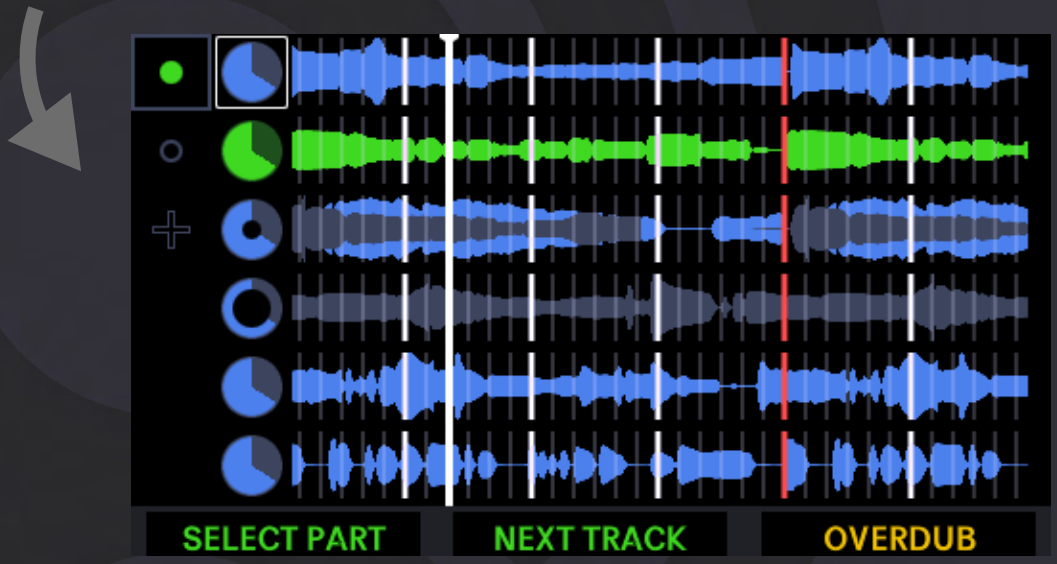
TRACK CLOCKS

Time Remaining —  — Amount Played

	**Solid Red Circle:** Track is currently recording. Will show number of measures currently recorded in quantized mode.
	**Green clock:** Currently selected track
	**Blue clock:** Track is currently playing, but is not selected
	**Yellow clock:** Track is being overdubbed
	**Gray clock:** Entire track is muted
	**Clock with green outline:** Track is currently selected while also in another state
	**Clock with small hole:** This track has a layer that is undone. The undone layer can be brought back or overwritten
	**Clock with big hole:** The base layer of the track has been undone and can be redone or the entire track can be completely overwritten with a new length
	**Track with white border:** This track is locked
	**Flashing red outline:**.If the Aeros is set to stop or change parts at the end of loop (see Behavior Settings pg. 62) the longest track in the part will have a solid red outline around its clock until the stop or change of part happens. **Solid red outline:** Indicates the base track while recording (current longest track in a song part) if Sync Length setting is enabled (see pg. 56). This is to show which track is setting the length rules.
	**Purple Track Clock:** The track is currently reversed.

SONG PART ICONS

	**Square box:** Currently playing song part
	**Green dot:** Currently selected song part
	**Flashing Green dot:** Song part transition cued
	**Hollow dot:** Unselected existing song part
	**Plus sign:** Select to start new song part
	**Flashing red plus sign:** new song part is cued and will start recording soon



Please notice that you can set your preferred language at the top of the settings screen, tap the flag icon to set a new language! Learn more in the Setting up For the First Time section *pg 24*.

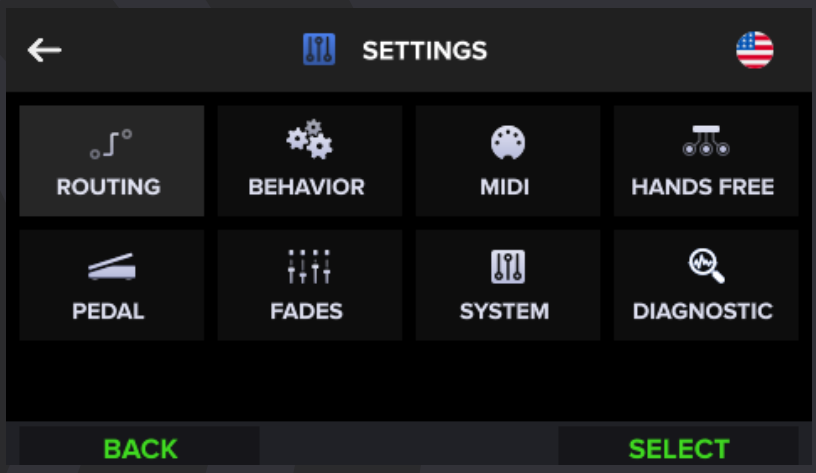
The Aeros has a wide variety of settings that can make the Aeros change its behavior to best fit your playing style and equipment configuration.

The settings can be divided into two main categories.

1. Song settings are settings that are saved to a single song. Once you record using song settings, you cannot change them. This is accessed through the edit icon in the Loop Studio screen.

    a. Song settings you can change after recording include:
        - Song name
        - Loop Decay
        - Loop Decay Rate
        - Count in
        - MIDI Song Select
        - MIDI Out Commands

2. Device settings can be changed at any time, and will apply to every song. This is accessed through the Settings icon in the home screen.
    a. Device Settings are further divided into 8 categories:
        - Routing
        - Behavior
        - MIDI
        - Hands Free
        - Pedal
        - Fades
        - System
        - Diagnostic

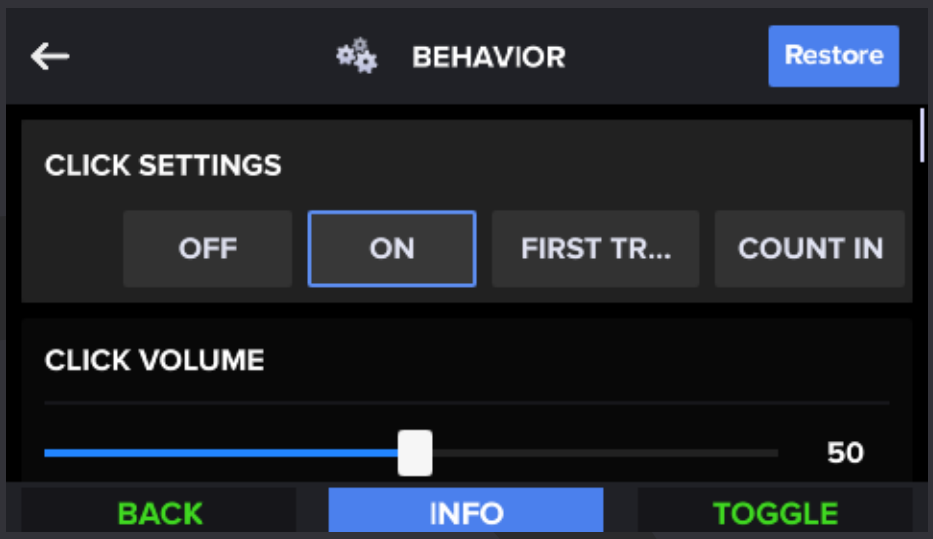


Access Settings Hands Free

Settings Info

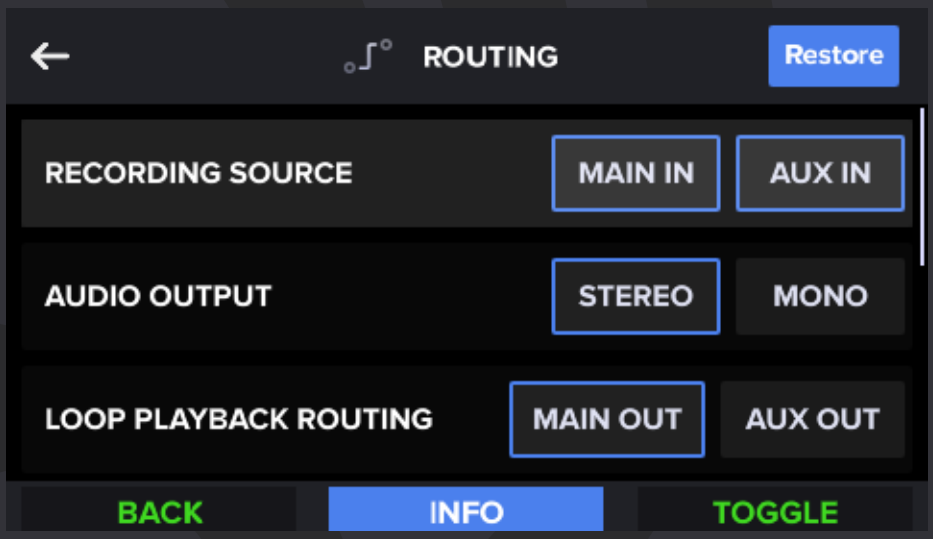
INFO - Tap the middle button over any selection in the settings pages to get info (help text) on the setting.

Edit a Setting

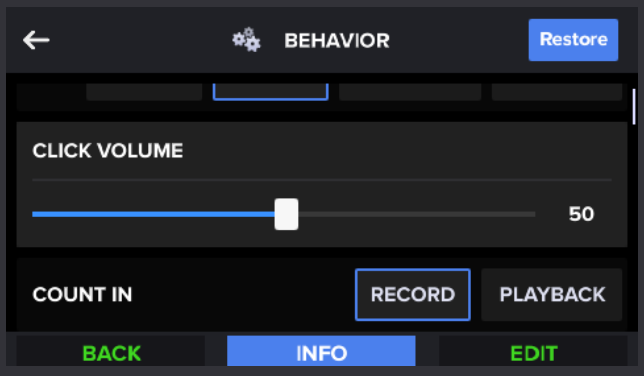


Settings with multiple options can be toggled by pressing the right Aeros button while selecting the setting.

This will scroll through all possible options of the setting if multiple options are possible, like when setting the input routing, for example.

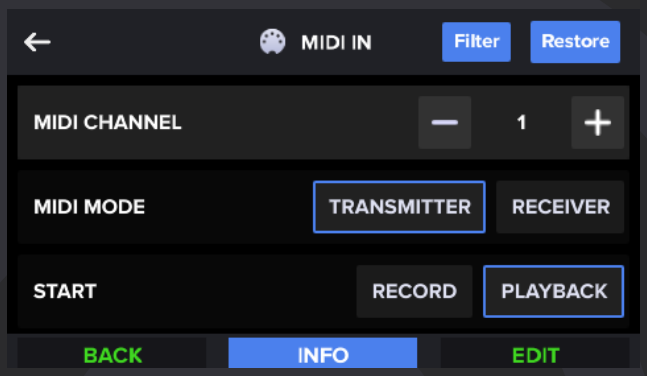


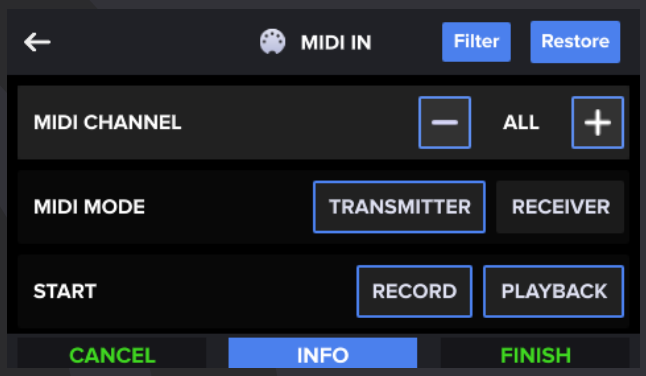
Slider



To edit a slider hands free, tap the right Aeros button to activate the slider. Then using the wheel, you can set any value. Tap the bottom left Aeros button to cancel the change or tap the right button will confirm it.

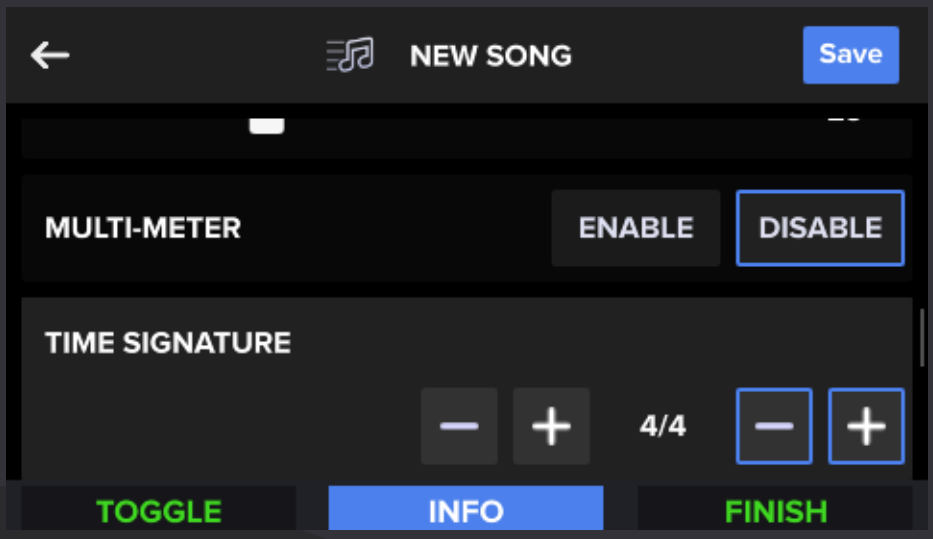
Integers





To edit a +/- setting hands free, tap the right Aeros button to activate the setting. Then using the wheel, you can set any value. Tap the bottom left Aeros button to cancel the change or tap the right button will confirm it.

Time Signature (Hands Free)



In the Song settings, you can edit the time signature hands free, although the behavior is slightly different. You can use the right Aeros button to start editing the values. Then, use the wheel to scroll through all possible values.

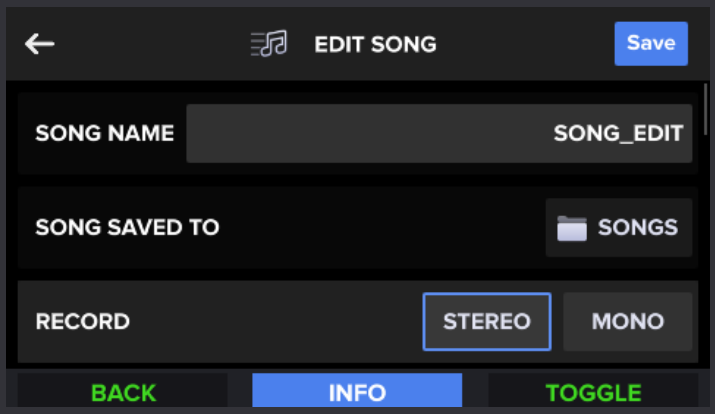
To toggle from the numerator to the denominator, use the middle Aeros button.

Once you are done editing, hit the right Aeros button again to confirm the values.

The numerator can be anything from 1-32 and the denominator can be 2, 4, 8, and 16.

Lastly, remember to press save using the touchscreen to make a song setting take effect

Song Settings



Song saved to
Displays name of the album the song is saved to

Record
Sets whether the song is recorded in mono or in stereo.
Note: If you have a stereo signal and you set the Aeros to Mono, then both L/R signals will be combined into a mono signal which plays back in both L/R Outs. This can cause a jump in audio level. If you have a mono signal and you set the Aeros to stereo, the left input will only record to the left channel and will only play back out of the left channel, the same goes for the right input and output.

Parts X Tracks
Sets how many song parts and how many tracks are inside each of the song parts (song parts X tracks). In 2x2, you have 2 song parts with two parallel tracks in each part. In 6x6, you have 6 song parts with 6 parallel tracks in each part.

Sync Tracks
The Aeros will designate the current longest track in Quantized/Auto mode or the shortest track in freeform as the base track. The base track will decide the behavior of the other tracks around it.

Sync Length:
After the first track is recorded, all tracks will be forced to be proportional to the length of the base track. In Quantized mode, all tracks will be forced to be any whole number multiple (x2, x3, x4, Etc) or whole number unit fraction (1/2, 1/3, 1/4, 1/5, Etc) of the base track.

For example, if the base track is 12 measures long, other tracks will be forced to be either 1, 2, 3, 4, 6, 12, 24, 36, etc. measures long depending on when the end recording/start playback command is received. In freeform, all tracks will be whole number multiples of the base track (no fractions allowed).

A new track recording can be started at the beginning of the next measure in Quantized mode or immediately in Freeform so this feature only affects when recording stops and playback begins.

Sync Start and Length:
In addition to the Sync Length rules above, after the first track is recorded in the song part, all new recordings will begin at the next start of the longest track loop in the song part.

Song Grid Mode

Sets whether the Aeros records to a grid. You have three options: Freeform, Quantized, and Auto (Autoquantize).

Freeform: The tracks do not record to a grid, all tracks are able to start and stop recording freely at any point. By using this mode together with the Sync Tracks setting, you can synchronize track length, start, and/or stop points to one another.

Quantized: The tracks record to a grid based on measures in a specific tempo and time signature. This also gives you the ability to count in and more easily synchronize the Aeros with an external device that sends or receives MIDI Clock. All loops begin or end at the start/end of a measure.

Auto: Stands for Autoquantize, this means the track tempo is calculated automatically after committing the first recording in a specified time signature. This creates a quantized grid to record other tracks to.

If you know how many measures you want your recording to be, you can set a custom length (from 1-16 measures), read more in the Set Length setting.

If Set Length is set to Auto, the measures will be determined by the algorithm and will fall within the range set in the Auto BPM Range song setting. If Set Length is a predetermined amount, the BPM calculation is only limited to the BPMs available on the Aeros (40-300BPM)

Song Part Tempo

Sets whether the song tempo is Global, meaning all song parts will have the same tempo, or if the tempo will be different in each song part (Multi).

Tempo

Sets the beats per minute, BPM, of the song. When the Song Part Tempo setting is set to Multi, you will have up to six options, one for each song part.

Loop Decay

When enabled, the base layer's gain will decay by a set amount (%) every time a new overdub layer is created.

The amount of decay can be adjusted using the Loop Decay Rate setting. The best behavior is at about 20% to 40% deca y.

Warning: Loop Decay is a destructive process, the original WAV file gain will not be saved once decayed. We suggest copying or backing up any songs you wish to decay to not lose or degrade previous layers of recordings.

Loop Decay Rate

The rate at which the base layer decays every time a new overdub layer is created. If set to 50%, the base layer will decay by 50%, or become half as loud. If set to 75% the base layer will decay by 75% and will now be 1/4 as loud. If set to 100% the layer will decay completely and will no longer be audible.
Best behavior is at about 20% to 40% decay.

Multimeter

Sets whether the song will have the capacity to have multiple time signatures, one per song part. If enabled, you will be able to set time signatures for all available song parts, up to 6.

Time signature

Sets the song's time signature
The left number (numerator) is how many beats there are in a measure, the right number (denominator) decides which note gets the beat (4 = quarter note gets the beat, 8 = eighth note gets the beat, etc.)

If Multimeter is enabled, you will have up to 6 options, one for each song part.

Global Set Length

When enabled, the Set Length setting affects all song parts. When disabled, each part is set individually. This is an Autoquantize setting

Set Length

Sets the length in measures of the recording you are intending to autoquantize. This can be any number between 1 to 16 or to Auto.

If set to Auto, the algorithm will automatically decide the amount of measures of the recording between 1, 2, 4, 8, and 16 measures, the tempo will be based on the Auto BPM Range setting. If set to Per Part, you will have up to 6 options, one for each song part.

Auto BPM Range

Sets the range for the possible Tempos of an autoquantized song part. This setting is only relevant if Set Length is set to 'Auto'.

Count In (#)
Sets how many measures of count in before the Aeros begins either recording, playing back, or both. The count in behavior can be controlled from the Click & Count In device settings menu or from the Loop Studio Song Dashboard using the record and playback icons next to the Count In setting. If this is set to 0, any other Count In settings will be ignored and there will be no count in.

MIDI Song Select
The song can be set to open when the Aeros receives an MSB (CC:0 value 0-127) command followed by PC (program change value 0-127) command. The values you set will decide what values open the song.

MIDI MSB Bank
Sets what MIDI MSB bank command will open the Aeros song. MSB is represented by CC:0 value 0-127. MIDI Song Select must be enabled.

MIDI PC
Sets what PC (program change value 0-127) command will open the Aeros song. The PC command must be preceded by an MSB command to open the song. MIDI Song Select must be enabled.

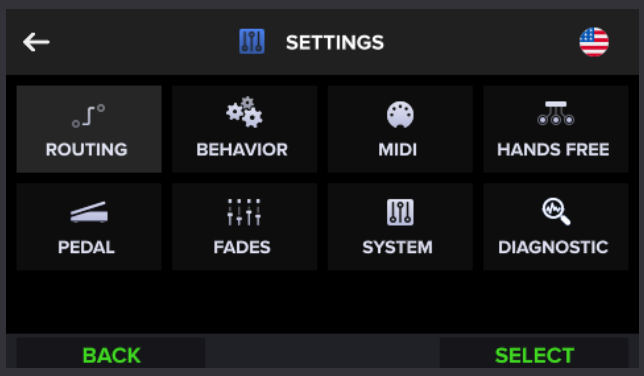
MIDI Out Control
An Aeros song can be set to send any combination of MSB, LSB and/or PC commands when it is opened. The values you set will decide what values are sent when the song is opened. This is useful for controlling song specific settings on other devices.

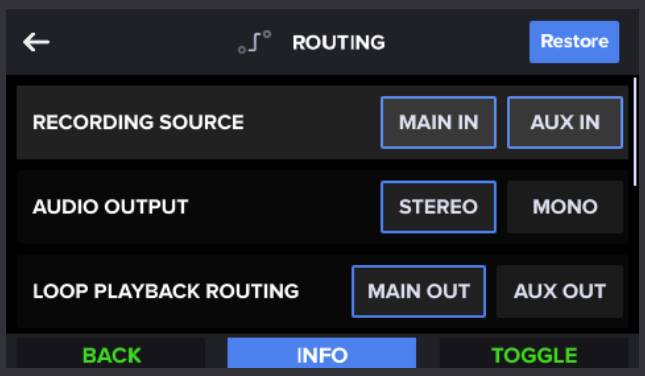
MIDI MSB Out
Sets what MIDI MSB bank command will be sent to the MIDI Output when the Aeros song is opened. MSB is represented by CC:0 value 0-127. MIDI Out Control must be enabled. This can be left blank to not send an MSB command.

MIDI LSB Out
Sets what MIDI LSB bank command will be sent to the MIDI Output when the Aeros song is opened. LSB is represented by CC:32 value 0-127. MIDI Out Control must be enabled. This can be left blank to not send an LSB command.

MIDI PC Out
Sets what PC (program change) command (0-127) will be sent to the MIDI Output when the Aeros song is opened. MIDI Out Control must be enabled. This can be left blank to not send a PC command.

Device Settings





Routing

Recording Source
Choose which input will be recorded. You may select either one or both.
Main In is the default setting.

Audio Output
Sets whether the Aeros output plays back in stereo or in mono.

Note: If set to Mono, stereo audio plays back summed (added) to mono from each output (Warning: Stereo monitoring, like with headphones, when set to mono can cause audio to seem twice as loud because the entire signal is sent out both the left and right channels instead of splitting it between them)
Stereo is the default setting

Loop Playback Routing
Sets where the Loop Playback audio will be routed
You can select either one or both of these options.
Main Out is the default setting

Main Input Routing
Sets where the live sound being sent into the main input is going to be routed.
You may select one, both, or neither.
You may not want to hear the main input in the case that you are routing your signal to an amp or speaker/recording system separately at the same time that you record the audio to the Aeros. This will also prevent phase issues you may experience from having the same signal in multiple places. For example, the live signal may be intended for your guitar amp, and the Aeros Loop Playback will come out of another amp in your setup.
Main Out is the default setting

Aux In Routing
Sets where the live sound being sent into the aux input is going to be routed.
You may select one, both, or neither. This is very helpful to route a signal that you do not want the audience to hear through the Aeros into another system.

You may not want to hear the aux input in the case that you are routing your signal to an amp or speaker/recording system separately at the same time that you record the audio to the Aeros. This will also prevent phase issues you may experience from having the same signal in multiple places.

- For example, the live signal may be intended for your guitar amp, and the Aeros Loop Playback will come out of another amp in your setup.

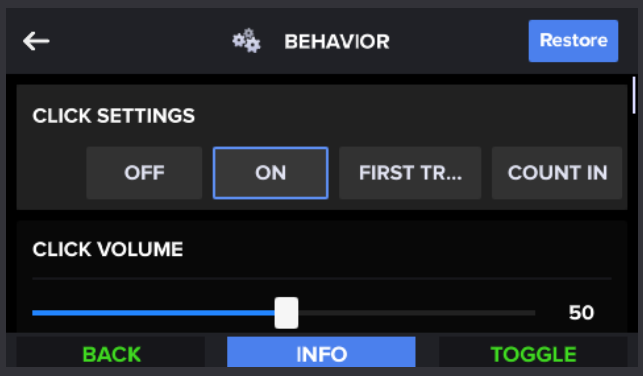
Aux Out is the default setting

Click Routing
Sets where the click (metronome) sound will be routed. You may select one, both, or neither.

If the click is not routed anywhere it will not be audible. This is a great way to send the Aeros internal metronome to a personal monitor or to another band member's monitor without the audience hearing it.
By default neither is selected.

VU Meter Source

Sets which live input signal (Main Input/Aux Input) will feed the VU meter that is shown in the Loop Studio. Only one of the two signal options can be used at a time.
Main Input is the default setting



Behavior

Click Settings
Sets when the click is played.

On - Click will play at all times
First Track - Click will only play while recording the first track of a song part
Count In - Click will only play during the count in (if any)
Off is the default setting

Click Volume
Sets the volume of the click
50 is the default value

Count In
Sets when the count in happens. You can select either, both, or neither. If neither is selected, count in is off.

Playback - If only Playback is selected, the count in will only play if playback begins without starting a recording.
Record - If only Record is selected, the count in will only play if the user records to a track from a stopped state. The exception to this case is if the Count In (1st Track) setting is enabled, then only the first track will have a count in when starting to record from a stopped state.
Record and Playback - If both Record and Playback are selected, the count in will play any time the Aeros is started from a stopped state.
Neither - Count in never plays
Off is the default setting

Count In (1st Track)
If Count In (1st Track) is On, the Aeros will only count in when recording to the first track in an empty part. This setting can only be changed if Count In is set to Record.

Cancel Recording
If this mode is on, tapping the Play/Stop All button while recording or overdubbing will make the currently recording Track or layer become an undone track.

This is useful to quickly cancel recordings if you make a mistake without having to hold the Action button to undo. If the setting is off, pressing the Play/Stop All button while recording/overdubbing will stop playback (according to the stop song setting) and will commit the recording/overdub.
Off is the default setting

Stop Song
Sets when the Aeros stops playback after pressing the Play/Stop All button or receiving a MIDI Stop command.

End of Loop - Playback will stop at the end of the longest loop in the currently playing song part
End Of Measure - Playback will stop at the end of the current measure. Freeform songs will stop at the end of the longest loop in the song part.
Immediate - Playback will stop immediately in both freeform and quantized songs
End of Measure is the default setting

Change Song Part
Sets when the Aeros changes song parts after starting a transition

End of Loop - The part will change at the end of the longest loop in the currently playing song part
End Of Measure - The part will change at the end of the current measure. Freeform songs will change parts at the end of the longest loop in the currently playing song part.
Immediate - The part will change immediately in both freeform and quantized songs
End of Measure is the default setting
Warning: If Aeros is synced to a Master Clock device as receiver and is set to change parts immediately, this may cause a desync

Auto Song Part Change (6x6)
If On, selecting a new song part with the Select Part button will immediately start transitioning to that song part, no second button press is required. When off, changing song parts in 6x6 mode requires 2 steps, first selecting the Song Part with the Select Part button, and then pressing the Record/Play/Overdub (RPO) button.

The On setting is only recommended when you have the 'Change Song Parts' setting set to 'End of Loop' so you have enough time for the song part to change.
Off is the default setting

Mute/Unmute Track
Sets when the Aeros tracks will mute/unmute after receiving a Mute/Unmute command

End of Loop - The track will mute/unmute at the end of the loop
End Of Measure - The track will mute/unmute at the end of the current measure. Freeform tracks will mute/unmute at the end of the loop.
Immediate - The track will mute/unmute immediately
End of Measure is the default setting

Play/Stop All Button
Sets whether the Play/Stop All button sends the Play and Stop commands on the Press or on the Release.
Press is the default setting

Track Button Mode
Sets the order of actions of the TrackButton (Record, Play, Overdub button) when it is tapped multiple times.

RPO - Record, Play, Overdub
ROP - Record, Overdub, Play (this mode is preferred by soundscape looping artists to help capture the 'tails' of loops once a recording is committed)
RPO is the default setting

Auto Record
If enabled, the Aeros action button will now 'Arm' and 'Disarm' tracks instead of starting the recording when tapped. The recording will begin once your input signal meets the audio threshold. When the audio is loud enough to pass the threshold, you will trigger a recording on an armed track from a stopped state.
You can set the threshold in the Auto Record Threshold setting
Off is the default setting

Auto Record Threshold
Sets the threshold for the input level in decibels full-scale (dBFS). When the threshold is met, an armed track will start recording/overdubbing from a stopped state.
-40 is the default setting

Clear Song Confirmation
Sets whether a warning dialog will confirm before you clear a song in the Loop Studio. Clearing a song is not undoable.
On is the default setting

Next Track Record (6x6)
Sets whether the tracks in 6x6 will cue/start a recording if they are selected while empty (On) or if recordings must be started manually after selecting an empty track (Off).
On is the default setting

Next Part Record
Sets whether the Aeros will always cue a recording when switching parts or not. When off, a recording is only cued when transitioning to an empty song part.
Off is the default setting

Hands Free

The Slide Out Menu is a hands free menu that you can use in the Loop Studio screen by holding down the bottom left Aeros button. It has two states: Playing and Stopped. You can edit the order and the number of commands shown for each state independently.

Playing Slideout Menu
Enables/Disables the playing Slideout Menu. If disabled, the Aeros will open the Mixer instead if you press and hold the bottom left Aeros button during playback.

Enabled is the default setting

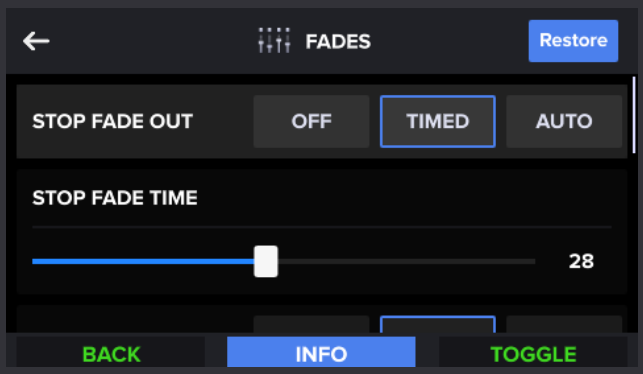
Stopped Slideout Menu
Enables/Disables the stopped Slideout Menu. If disabled, the Aeros will open the Mixer instead if you press and hold the bottom left Aeros button.

Enabled is the default setting

Keep Selection
Sets whether the last selected command in the hands free menu remains selected when the slide-out is reopened. If Off, the command is always reset to the top of the list when reopened.
On is the default setting

Edit Playing Slideout Menu
Edit the order and contents of the Playing Hands Free Slideout Menu in the Loop Studio
The Hands free Slideout Menu is engaged by holding the Aeros bottom left button.

Edit Stopped Slideout Menu
Edit the order and contents of the Stopped Hands Free Slideout Menu in the Loop Studio
The Hands free Slideout Menu is engaged by holding the Aeros bottom left button.



Fades

Stop Fade Out
Sets whether there will be a Fade out to stop every time the Aeros is stopped. If Stop Song is set to immediate there will not be a fade.

Off - No fade out
Timed - The fade out will happen for a specific amount of seconds before stopping. This is set in the following setting, Stop Fade Time.
Auto - The fade will happen while stopping. The fade time follows the Stop Song behavior setting (End of Measure, End of Loop).
Off is the default setting

Stop Fade Time
Sets the amount of time a fade to stop will take before stopping
5 seconds is the default value

Start Fade In
Sets whether there will be a fade in every time the Aeros playback is started

Off - No fade in
Timed - The fade in will happen for a specific amount of seconds before reaching full volume. This is set in the following setting, Start Fade Time.
Auto - The fade in will happen for the duration of the longest loop.
Off is the default setting

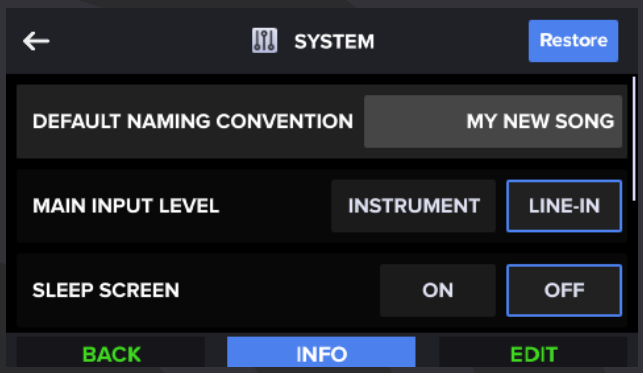
Start Fade Time
Sets the amount of time a fade in will take before reaching full volume
5 seconds is the default value

Mute/Unmute Fade
Sets whether there will be a fade in and out every time a track is muted or unmuted. If Mute/Unmute is set to immediate there will not be a fade.

Off - No fade
Timed - The fade will happen for a specific amount of seconds before completing. This is set in the two following settings, Mute Fade Time and Unmute Fade Time.
Auto - The fade will follow the Mute/Unmute behavior setting. (End of Measure, End of Loop).
Off is the default setting

Mute Fade Out Time
Sets the amount of time a fade out will take before muting
5 seconds is the default value

Unmute Fade In Time
Sets the amount of time a fade in will take before reaching full volume
5 seconds is the default value



System Settings

Default Naming Convention
Sets the default name that songs will automatically use when they are created. This makes it easier to auto-name songs as you'd like with less typing!

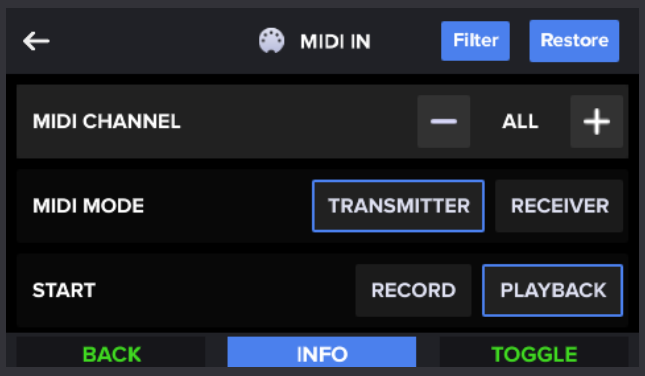
For example, if Default Naming Convention is 'PickleRick', the new songs will be called PickleRick_1, PickleRick_2, PickleRick_3, etc

Main Input Level
Sets the input impedance. Use Line input for Line-level sources and Instrument Level for Bass, Guitar, Keyboard and other unbalanced instrument level signals. *Instrument Level is the default setting*

Sleep Screen
Sets the Aeros screen to go to sleep, pressing any button or tapping the touch screen will wake the screen.

Screen Brightness
Adjusts the screen's brightness.
8 is the default setting

MIDI



MIDI In

MIDI Channel
Sets the MIDI Channel that the Aeros is listening to. Choose either All or any individual MIDI channel (1-16).

All is the default setting

MIDI Mode
If set to Transmitter (master), the Aeros will send its own internal clock, time signature, Start, Stop, and Transition commands to the MIDI Output. These behaviors can be individually turned off in the MIDI Out Settings. The Aeros will ignore the incoming clock but will still respond to incoming CC commands that are not filtered.

If set to Receiver (slave), the Aeros will respond to the incoming MIDI clock and all CC, PC, and time signature commands. The Aeros will not send any commands or clock it generates itself in this state. Individual CC commands can be filtered in the MIDI In filter settings.

Receiver is the default setting

Start
Sets how the Aeros responds to a MIDI Start message. The options are Record and Playback. You can choose one, both, or neither, though at least one is recommended

If set to only Record, when receiving MIDI Start, the Aeros will begin recording to the 1st track in an empty part. If at least one track is recorded to the part, playback/recording will not start.

If set to only Playback, when receiving MIDI Start, the Aeros will begin playback. If playback is enabled and you are in an empty quantized part, the Aeros will begin to 'scroll' in the empty part.

If set to both Record and Playback, when receiving MIDI Start, the Aeros will start a recording if the part is empty or will start playback if at least one track is recorded to.

If neither is enabled, the Aeros will never start to record or playback when receiving MIDI Start

Record and Playback are both enabled by default

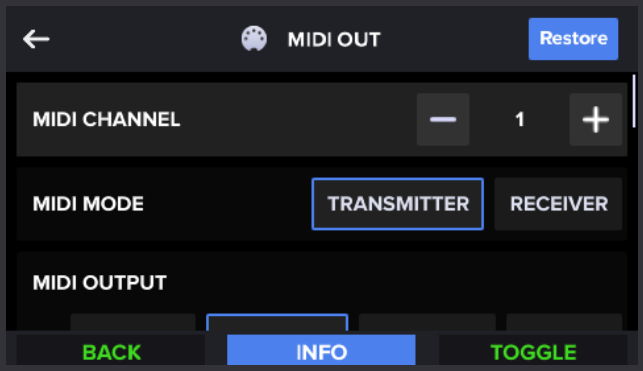
Filter Page

Filter MIDI CC
This Sets whether incoming MIDI CC commands are filtered (ignored)

You can filter none, all, or a custom selection

If set to Custom, you can choose specific CC commands to filter (ignore)

None is the default setting



MIDI OUT

MIDI Channel
Sets the MIDI Channel that the Aeros MIDI commands to. Choose any individual MIDI channel (1-16).

Channel 1 is the default setting

MIDI Mode
If set to Transmitter (master), the Aeros will send its own internal clock, time signature, transition, Start and Stop commands to the MIDI Output. These behaviors can be individually turned off in the MIDI Out Settings. The Aeros will also ignore the incoming clock but will still respond to any incoming CC commands that are not filtered.

If set to Receiver (slave), the Aeros will respond to the incoming MIDI clock and all CC, PC, and time signature commands. The Aeros will not send any commands or clock it generates itself in this state. Individual CC commands can be filtered in the MIDI In filter settings.

Receiver is the default setting

MIDI Output
This sets what the behavior of the Aeros MIDI Output will be. Note that some MIDI Output types only work in either Receiver or Transmitter mode, the Aeros will automatically switch the MIDI Mode accordingly.

MIDI Out - Only sends commands generated by the Aeros, no commands received from the MIDI input are sent to the MIDI output. Only works if the Aeros is set to Transmitter.

MIDI Merge - Sends any MIDI commands received from the MIDI input as well as any commands generated by the Aeros to the MIDI Output. Only works if the Aeros is set to Transmitter

MIDI Thru - Sends any MIDI commands received from the MIDI input, but does not send any commands generated by the Aeros to the MIDI Output. Only works if the Aeros is set to Receiver.

Off - No MIDI messages are sent to the Aeros MIDI Output. Only works if the Aeros is set to Receiver.
MIDI Thru is the default setting

Clock Sync
Sets whether the Aeros (while set to Transmitter) sends MIDI Clock and when it will be sent

Always On - Always sends MIDI clock to the MIDI Output even when not playing back
While Playing - Only sends out MIDI clock during playback
Off - Never sends MIDI Clock
Always On is the default setting

Time Signature
Sets whether the Aeros (when set to Transmitter) sends Time signature messages and what type of message is sent. Time signature messages are sent every time a song is opened, about every 3 seconds while a song is stopped, and every time a new time signature is set.

Sysex - Sends a custom Time Signature Sysex message to the MIDI Output
CC:103 - Sends a custom CC:103 value (corresponding to the current time signature) to the MIDI Output. See manual for specific values for each time signature.
Off - The Aeros will not send any Time Signature messages
Sysex is the default setting

Transition
Sets whether the Aeros (when set to Transmitter) will send a Transition command to the MIDI output every time the Aeros transitions to a new part. The Aeros will send a CC:113 command with a value that corresponds to the part number you are transitioning to followed by a CC:113 value 0 command to complete the transition.

On is the default setting

RPO Command
If On, this sends a CC41 value 100 command to the MIDI output every time a track changes its recording state (Recording, Playing, Overdubbing). This would allow controlling recordings on a second Aeros while using a MIDI connection.

Off is the default setting

Start
Sets whether the Aeros sends MIDI Start to the MIDI output every time the Aeros starts from a stopped state. This will apply for both recording and playback.
The Aeros can be set to delay sending the MIDI Start command until after the first recording in a part is committed when starting from stopped (Start: 1st Recording).

The reason for this was to improve the behavior in Autoquantize mode and to allow the Aeros to record and commit the first track in a part before the drums (e.g. the BeatBuddy) are started.

On is the default setting

Start: 1st Recording
Sets when the Start command is sent while recording the first track in a part. The Aeros must be set to Transmitter (Master) and the Start command must be enabled in the MIDI Out settings page for this to work.

If set to Rec Start, the Aeros will send a real-time MIDI Start command to the MIDI Output when the first recording starts. If set to Rec Commit, the MIDI Start command will be sent once the first recording completes and playback begins. This is useful to switch on when using Autoquantize mode.

Rec Start is the default setting

Midi Out: Stop
Sets whether the Aeros sends MIDI Stop to the MIDI output every time the Aeros stops playback.

The Aeros can be set to send MIDI Stop every time the Aeros Transitions to an empty part (Send Stop at Empty Part).

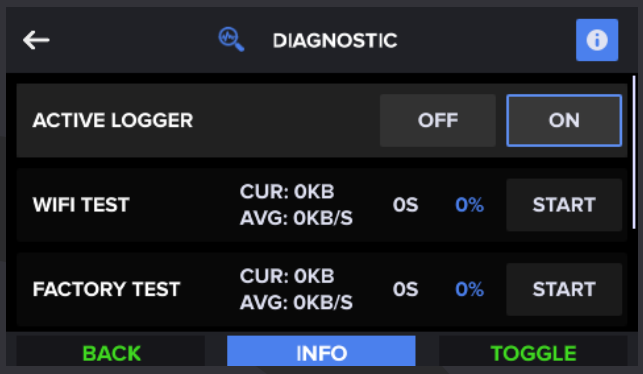
The reason for this is to improve the behavior in Autoquantize mode when autoquantizing multiple parts. This allows the Aeros to stop the Beatbuddy and commit the first track in a part before the drums (e.g. the BeatBuddy) come back in at the newly set tempo. This can work even if Autoquantize is not engaged, though it is not suggested

Enabled is the default setting.

Send Stop At Empty Part
Sets whether the Aeros will send a MIDI Stop command every time a recording begins in an empty part. The main reason you would want to turn this on is if your Aeros is set to Autoquantize mode.

This setting will help stop the receiving device (e.g. the BeatBuddy) every time a new recording is started. The reason for this is that you probably don't want any drums to play if you are recording a new part with Autoquantize enabled (because the tempo has not yet been set).

Off is the default setting



Diagnostics

Diagnostics
This page handles various tests usually performed by the factory, but some may be useful if you need to troubleshoot any issues on your Aeros. Read more about each test or feature by tapping the middle Aeros button to read the info text.

Active Logger
This is a new logging system that is available starting with version 4.0.0 and vastly improved upon in 5.0.0. This logger records all events that the looper undergoes and is intended to help us diagnose issues that are hard to replicate. This system can only be used if there is an SD card inserted into the Aeros. The Aeros will force a reboot to turn this on. Due to increased CPU usage, using the Active Logger may degrade audio performance.

WiFi Test
Press Start to download a test file that will report the speed of your Aeros' connection to the internet. Take note that on average the Aeros should report about 500-2000kbps.

Factory Test
This is a factory test, it will not work outside of the factory. Please ignore.

Bluetooth Test
This is a factory test
Requires a phone or device capable of sending a Bluetooth scanning signal. Any Bluetooth scanner app should work. As soon as the app or device is actively scanning, the Aeros should pass the test once the Start button is pressed.
Note: If you have a MIDI Maestro, and it is nearby and in pairing mode, this counts as a scanner signal and the Aeros will pass the test.

MIDI Test
This is a factory test
Requires one male to male 5-pin MIDI cable that is connected to both the MIDI In and MIDI Out ports of the Aeros, forming a MIDI loop. Do not connect any other devices to the MIDI chain, the Aeros should only connect to itself. Once connected properly, the Aeros should pass the test once the Start button is pressed.

Autoquantize

Turn on Autoquantize mode by choosing the 'Auto' option in the 'Song Grid Mode' song setting when creating a new song or editing an empty one. A song can either be Quantized, Freeform or Auto. Read more about song settings on pg. 56.

Autoquantize mode will create a quantized song out of a freeform recording you make live. It does this on the fly!

The Aeros uses an algorithm to define the tempo of the recording you just made based on the start and stop point of your recording.

If you know how long your first track in the song part will be, you can use the 'Set Length' setting to decide how many measures the recording will be quantized to. This makes it possible to get a tempo within the 40-300BPM range. Set length can be a maximum of 16 measures.

If you do not know how many measures long your first track in the song part will be, make sure to have Set Length on Auto. If set to Auto, the Aeros will quantize your track to be either 1, 2, 4, 8, or 16 measures in a Tempo range that you can set yourself. To set the Tempo Range use the 'Auto BPM Range' setting. The most common setting is 80-160BPM.

If the Multi-tempo song setting is enabled (read more about the Song Part Tempo song setting on pg. 57), you will set the Aeros to Autoquantize the first track of every part. If it is disabled, the Aeros will only Autoquantize the first track of the very first part and all other tempos in the other song parts will be based on that first song part tempo calculation.

Autoquantize as Transmitter

You can use the Aeros as the MIDI Transmitter (MIDI Master) while in an autoquantized song to control a device, like the BeatBuddy, to start playing back as soon as the track recording is started or committed and the Tempo (BPM) is set.

This makes for a very cool effect where you can come up with an idea on the fly and your drummer already knows the tempo and song form! We suggest setting Start: 1st Recording to Rec Commit (Settings > MIDI >MIDI Out) to send the MIDI Start command once the recording is committed.

To send MIDI Stop every time the Aeros changes to an empty song part you can enable the 'Send Stop at Empty Part' setting in the MIDI Out settings (Settings > MIDI > MIDI Out). You may want to do this to stop any drums or playback devices while you record a new autoquantized track in a new part. You likely would not want to hear the drums until your track has been recorded and the new tempo is set in the new song part.

Auto Record

Starts your recording from a stopped state once the input audio signal meets a specific threshold. This is useful if you are having trouble starting to play at the same time that you are pressing the Aeros record button.

When this setting is on, the Aeros Track button will say “Arm” instead of “Record” while stopped. This works for overdubbing from a stopped state too. Press the button to Arm the Aeros and play your instrument to begin recording/overdubbing. Press the Track button again to disarm the track and prevent recording. There is no effect on the recording/overdubbing behavior during playback.

Set the Auto Record threshold in the Behavior Settings to control what audio level triggers recording.

Note: If you are using Auto Record and have the Aeros set to receiver and it is following the BeatBuddy’s clock, you should set MIDI Start (MIDI In > Start) to neither record or playback. This way, when the BeatBuddy sends the MIDI Start command, it does not start recording on the Aeros.

Auto Record Next Track

In 6x6, the Aeros is set to automatically start a recording in an empty track once it is selected using the Next Track button or MIDI command (CC:41 value 103) by default.

Disable this in the Behavior settings to turn off the automatic recording function in 6x6 when selecting an empty track. Instead, you will have to manually start a recording with the Track button once the empty track is selected.

Auto Song Part Change (6x6)

In 6x6 mode, the Aeros requires the user to select the part and then tap the Track button to initiate the transition by default. This was done to allow users to choose which part of the 6 possible parts they would like to switch to.

To change the song part in 6x6 just like the song parts in 2x2 (with a one tap to transition), enable Auto Song Part Change. The parts work like the tracks in 6x6, when selecting an empty part, a recording will be cued in the empty part.

If you tap Next Part again while there's a pending transition to an empty part, the first part will be selected again and transitioned to.

Keep pressing the Next Part button to toggle through the song parts sequentially. The Aeros will not actually transition until it reaches the sync point (immediate, end of measure, end of loop).

It is suggested that you set the Change Parts Behavior setting to End of Loop to get the most out of the Auto Song Part Change (6x6) setting - that way you have time to select different parts before the transition occurs. (Read more about Behavior settings on pg. 62.)

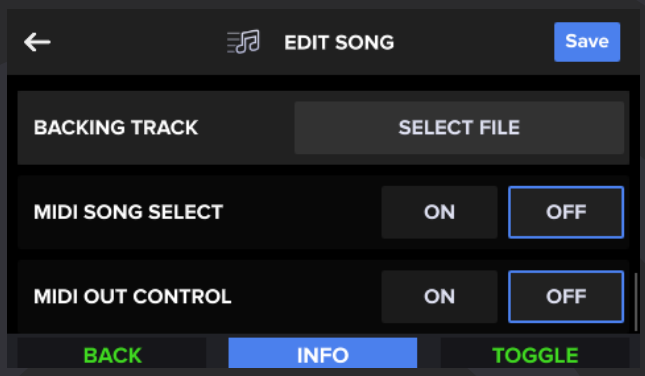
Backing Tracks

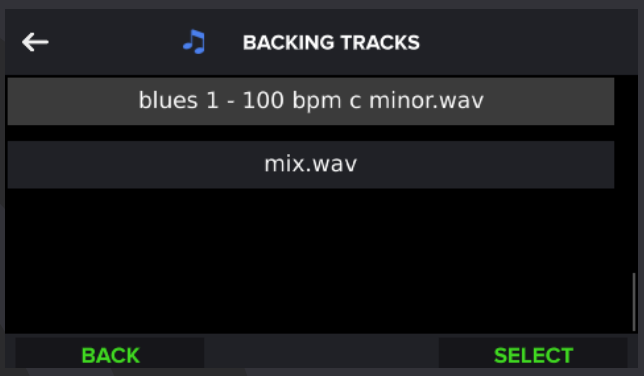
Once you boot the Aeros with the SD card inserted for the first time, it will reformat the empty SD card or ask you to convert existing files. To learn more about converting songs to 5.0.0 format, read pg. 29.

Once formatted, the SD card will have a Backing Tracks folder called “backingtracks”, which you can drag and drop your files into.

The Aeros will only support .wav (PCM) files that are 44.1kHz and 24bit. They can be mono or stereo.

To import a file, you must be in an empty freeform song part or create an empty song that is in freeform mode (we plan to make backing tracks compatible with Autoquantize and Quantize mode soon). If you wish to import multiple tracks per part, you must turn Sync Tracks off. If you wish to have sync tracks on, you can only import one backing track per part into the first track.





Backing tracks must be loaded sequentially starting with the first track in the song part.

Keep in mind that the Aeros needs the last 360 samples of an audio file to create crossfades, if you import a backing track, the last ~8ms (or 360 samples) will be used to create the crossfade.

You may want to manually add 360 samples to your backing tracks using your DAW if you are using multiple parts with backing tracks.

How to Load a Backing Track:

1. Click the pencil icon to edit the song
2. Make sure you have Song Grid Mode set to freeform. If you want to import multiple backing tracks per part, you must have the Sync Tracks setting off.
   a. *Note: You cannot change the Song Grid Mode to freeform and then load the file, first change the setting, hit save, open the edit screen again, and then start importing tracks.*
3. Scroll down and select Load File with your finger on the touchscreen
4. Choose a file from the list using the touchscreen. This can also be done using the wheel to change the selection and the right Aeros button to choose an option.
5. Once selected, you will return to the song settings screen, click Save in the top right to load in the backing track.
6. Repeat steps 3-5 to load multiple backing tracks into a song part
   a. *Note: If you want to import multiple backing tracks per part, you must have the Sync Tracks setting* ***off before you start importing.***

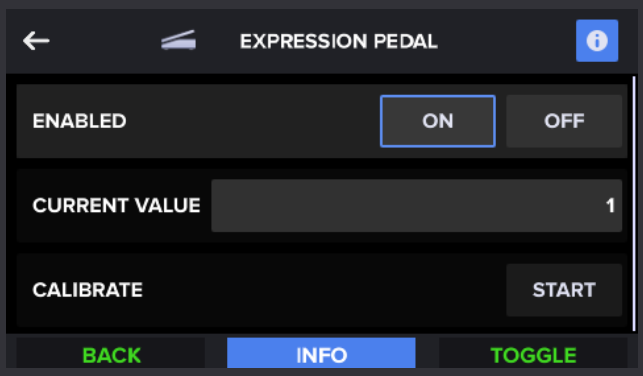
Delete last Part

While Aeros is stopped on the Loop Studio Screen, press and hold the bottom left Aeros button to open the hands free slideout menu.

Use the wheel to scroll to the Delete Last Part option, and tap the right Aeros button to select 'Delete Last Part'

⚠ **This is not undoable.**

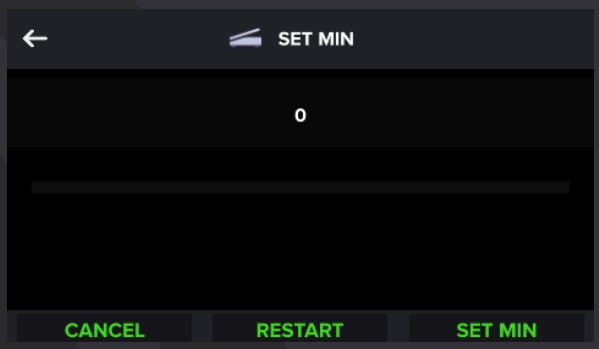
Expression (EXP) pedal setup

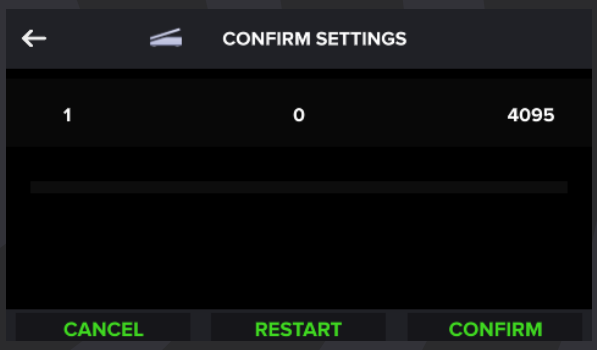


The bar in the top half of the screen shows the current EXP pedal value

Tap “Calibrate” on-screen (or use the right Aeros button) and follow the steps on-screen to set up your connected EXP pedal.

1. Hit calibrate
2. Set the maximum value (pedal all the way down)
3. Set the minimum value (pedal all the way up)
4. Hit ‘Confirm’ to accept changes, hit ‘Recalibrate’ to start over on step 2, or hit ‘cancel’





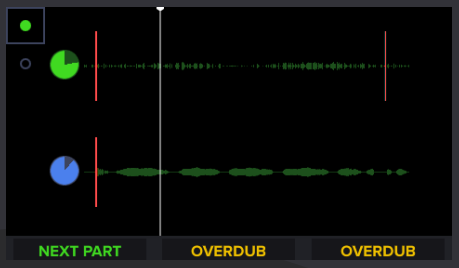
Note: You must connect the EXP pedal with a TRS (stereo) ¼” cable

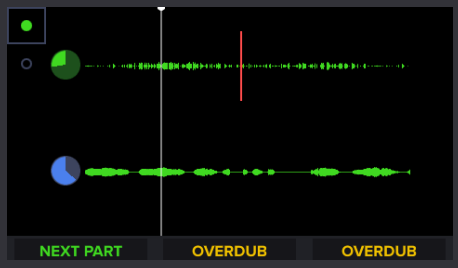
The EXP pedal controls the Aeros Main volume.

Fades

The Aeros can fade in/out the whole song or individual tracks. Fading in/out a track and fading in/out the master volume of the song are different and are enabled separately in the Fades settings.

While Fading in/out a song's master volume, the waveform of all tracks will appear dimmer until fully faded in/out. The same will happen for track muting but only to the affected track's waveform.





Read more about the Fades settings menu on pg. 67

Fade in/Out Song

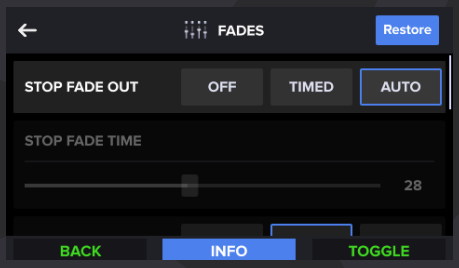
To fade in the master volume when starting a song from stopped, set Start Fade In to either Timed or Auto in the Fades settings menu.

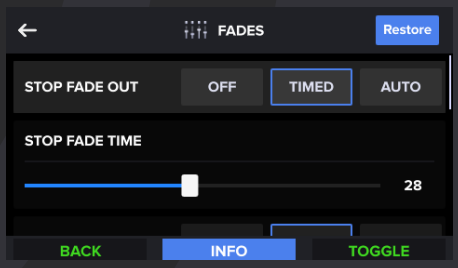
To fade out the master volume when stopping a song, set Stop Fade Out to either Timed or Auto in the Fades settings menu.

If a fade is canceled, the volume will go back up to full volume or fade back out. Sending the opposite fade command while a fade is ongoing sounds pretty cool!

If you change the master volume while a fade to stop is occurring, the Stop will still take effect but the volume will stay at the level where it was interrupted. If you change the master volume while fading in, the fade will stop and the volume will stay where you set it manually.

Additionally, if Fade is on while stopping a song, the Aeros buttons will show new options: Cancel stop and Cancel Fade





Fade in/Out Tracks

Tracks fade in/out if the Mute/Unmute Fade setting is enabled. Once enabled, muting a track will fade it out and unmuting a track will fade it in.

The track will fade out and then mute if currently unmuted and the Track button is double tapped or a mute MIDI command is received.

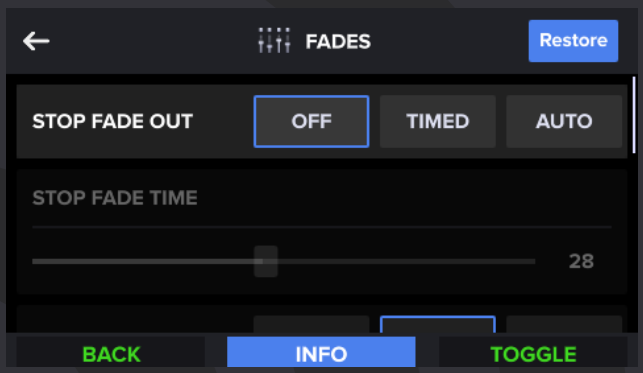
The track will unmute and fade in if currently muted and the Track button is tapped or an unmute MIDI command is received.

- You can watch how pretty this is in the mixer screen! The Aeros has some animation going on at the track level while the fade in/out process is happening!

If you change the track's volume while a fade is occurring, the Mute will still take effect but the volume will stay at the level where it was interrupted.

If a fade is canceled, the volume will go back up to full volume or fade back out. Sending the opposite fade command while a fade is ongoing sounds pretty cool!

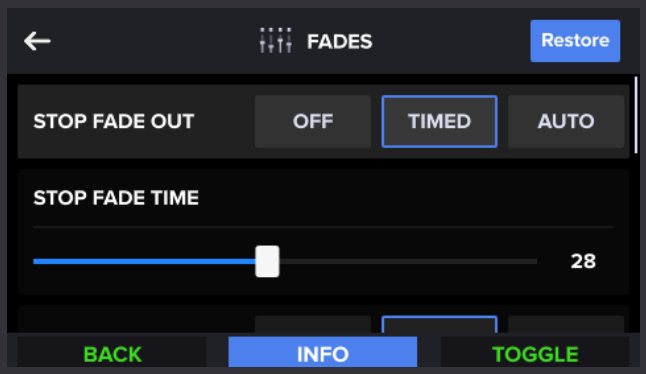
Fade Time



Fade settings are their own category in the settings menu, you can set start, stop and mute/unmute fades to a custom time (1-60s) independently. Set to 'Timed' to choose a value from 1-60 seconds. Read more about Fades settings on pg 67.

If set to Auto:

- The Start will fade in according to the longest loop in the current part
- The Stop and Mute/Unmute fades will follow the Stop and Mute/Unmute (respectively) Behavior setting for length (End of Measure, End of Loop, Immediate)



If the Fade setting is off or set to auto, you will not be able to edit the Fade Time, it must be set to 'Timed'.

To edit the Fade Time hands free, select the slider option with the wheel, tap the right Aeros button, and use the wheel to move the slider. Press the right Aeros button to confirm or the bottom left button to cancel the edit.

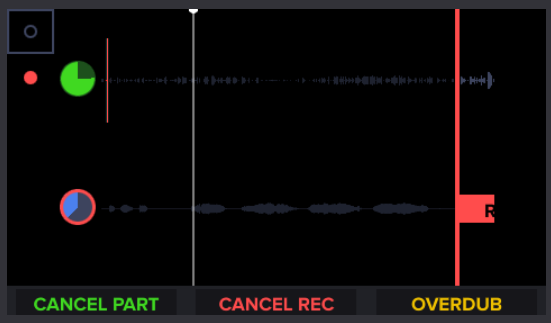
Read more about using the Aeros Hands Free on pg 6.

Off-screen Actions

The Aeros can cue actions like record, mute, stop, reverse and others to happen later in time. If the event is on-screen, you will see an 'event banner' showing you where it will occur.

Here is an upcoming Stop All banner:

Here is an upcoming recording banner:



Sometimes, the event won't take place on-screen and you have to wait for the event banner to appear on screen, we will call this an 'off-screen action'.

Off-screen actions will have a small timer letting you know when the event banner will come on-screen.

A small bar with the same color as the upcoming event banner will fill from bottom to top along the height of the track. For example, if you set a long track to mute at the end of the track, you will see a gray bar rising on the right side of the track until the mute banner appears on-screen.

Color Coding

Green - Playback start, Unmute
Red - Recording
Yellow - Overdub
Purple - Reverse
Grey - Mute
White - Stopping song, Transitioning

Locked Tracks

Lock a track to have it play back in all song parts.

This is useful, for example, if there will be a beat or rhythm that you want continuously present in all song parts.

Lock Track Logic
All changes made to the track will be made to that track in every part. This includes additional overdubs, the volume, the mute state, the undo state, and the reverse state.

You can pre-lock your tracks in an empty song to plan which tracks will lock.

In 2x2, you can lock the top track. In 6x6, you can lock up to 5 tracks. You must lock tracks in order.

Tracks can only be locked/unlocked in the first song part, they cannot be locked or unlocked after the second song part has been recorded to.

How to Lock a Track
Press and hold the bottom left Aeros button to open the hands free slideout menu. Use the wheel to scroll to the 'Lock Track' option, tap the right Aeros button to lock the currently selected track.

How to Unlock a Track
Press and hold the bottom left Aeros button to open the hands free slideout menu. Use the wheel to scroll to the 'Unlock Track' option, tap the right Aeros button to unlock the currently selected track.

The track must currently be locked to be unlocked, you cannot unlock tracks out of order (in 6x6 you must unlock the last track first. So if you have 3 tracks locked, you have to unlock track 3 before unlocking track 2 and 1). Once part 2 is recorded to, you will no longer be able to unlock the locked tracks in the song.

Loop Decay

The Loop Decay will lower the volume of the track's base layer every time a new overdub is started by the amount set in the Decay Rate. You can find both these settings in the Song Settings. Read more about song settings on pg. 56.

If you set the decay rate to 50%, the base track volume will be lowered by 50% when an overdub is started. If you set the decay rate to 100%, the base track will decay by 100% (or be totally silent) when an overdub is started.

This is a destructive audio process. The decay process cannot be reversed. It is recommended that you save and/or copy a song before adding loop decay to it to avoid decaying and losing any old recordings.

The Loop decay will only engage when a new overdub layer is started, the loop decay **does not** apply at every loop seam. You must start a new overdub manually with the track button for loop decay to take effect.

The decay rate cannot be changed without stopping audio and saving the song.

MIDI Song Select

You can open an Aeros song using MIDI. Learn more about MSB and LSB on pg. 105.

How to set up a song with MIDI Song Select on the Aeros

First, the user must open the song, and edit the song settings (click the pencil icon in the Loop Studio Dashboard or use the hands free slideout option.

There are three relevant settings: MIDI Song Select and the MSB and PC setup. First, you must enable MIDI Song Select. Once enabled, the user can set which MSB (0-127 bank and which PC command (0-127) will be required to open the song.

By using a MIDI device, like the MIDI Maestro or the BeatBuddy, capable of sending CC:0 (MSB bank + PC commands in a sequence, you can open that song at any time.

How to open a song with MIDI Song Select

Step 1: Set a song to respond to a specific set of MSB and PC commands. Read how to do this above. Remember, MSB is represented by the CC command CC:0, the value decides which MSB bank is activated. For example, CC:0 value 4 is MSB 4.

Step 2: Set your MIDI controller to send a CC:0 (MSB command set with a value between 0-127. In some devices MSB commands are sent differently, refer to your MIDI controller's manual for more information on sending MSB commands.

Step 3: Next, set your MIDI controller to also send a PC command with a value between 0-127. This should be sent after the MSB command, if sent before the MSB command, it will not work.

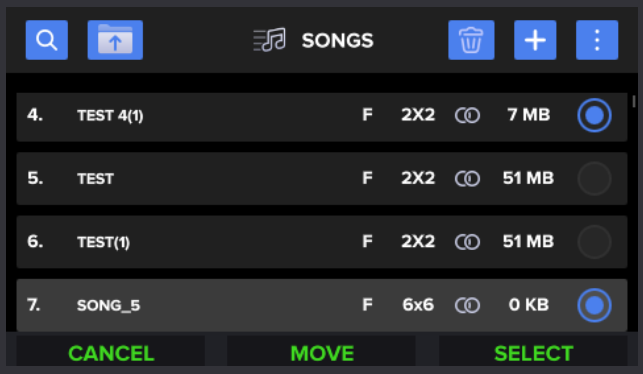
Step 4: Send both the MSB and PC commands (in that order to a MIDI channel the Aeros is currently listening to. Make sure the Aeros song you are trying to open is set to the same MSB and PC values you are sending.

Step 5: Your song will open.

Multiselect, Move, Copy, and Delete Songs

Multiselect

When in the Songs screen, inside any album, you can now multiselect the songs to move, copy, or delete multiple songs in the album at once.



To multiselect songs, either:

1. Press the 3-dot icon in the toolbar to open the slideout menu and choose 'Multiselect'. Then, use the right Aeros button or your finger on the touchscreen to select multiple songs. To use the touchscreen to multiselect, tap in the empty circle icon.
2. Press and hold the right Aeros button to allow multiselect and also select the currently highlighted song.

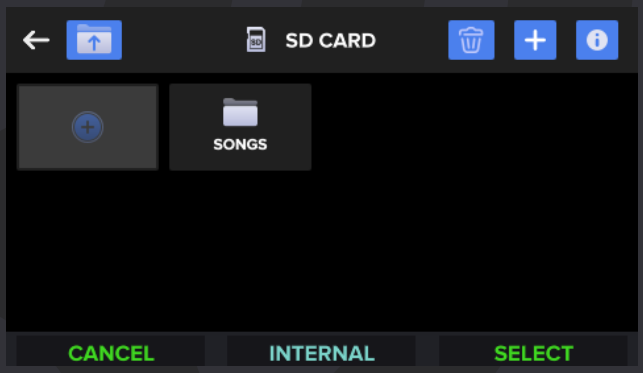
Once selected, you can move, copy, or delete all songs at once.

Move

There are two ways to move a song:

1. Within an album, in the Songs screen, use the wheel to highlight a song or select multiple songs (multiselect). Press the 3-dot icon to bring out the slideout menu and choose the 'Move' option using the wheel and the right Aeros button.
2. While in multiselect mode, press the middle Aeros button to move all selected songs.

The currently open song cannot be moved. Once you have started moving songs, you will see a screen that looks just like the Albums screen.



Select the Album that you wish to move the selected song(s) to by tapping it on-screen or using the wheel and the right Aeros button.

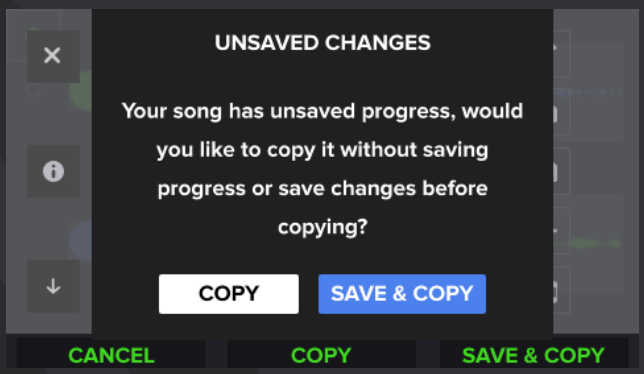
Tap the middle Aeros button to toggle the memory location between the Internal and SD Card memories.

Tap the bottom left Aeros button to cancel at any time.

Copy

There are three ways to copy a song:

1. Within an album in the Songs screen, use the wheel to highlight a song or select multiple songs (multiselect). Press the 3-dot icon to bring out the slideout menu and choose the 'Copy' option using the wheel and the right Aeros button.
2. While in multiselect mode, press and hold the middle Aeros button to copy all selected songs.
3. While in the Loop Studio, use the bottom left Aeros button to bring up the slideout menu. Then, scroll to the Copy Song option and use the right Aeros button to choose the option. Once copied, the Aeros will automatically open the copy.
    - Note: Unsaved progress will not be copied, and will be lost if not saved before copying.
    - If unsaved progress is detected, a pop up will ask you if you wish to cancel, only copy, or save and then copy
    - This is the only way to copy the currently open song



Delete

Songs and Albums can be deleted in the Songs screen. This is not undoable. The currently open song cannot be deleted.

To delete a song, highlight it using the wheel or use multiselect to select multiple songs. Then, tap the three-dot icon to open the slideout menu and use the wheel to scroll to the 'Delete' option. Use the right Aeros button to select the option. You can also select this using the touchscreen.

Multi-Time Signature/Tempo

You can have songs with either multiple tempos (one per part), time signatures (one per part), or both!

These settings can be found in the Song Settings within the Loop Studio. Read more about song settings on pg. 56.

Multiple Time Signatures

To turn on multiple time signatures, go to the Song settings (in the Loop Studio tap the pencil icon or use the slideout menu to select 'Song Settings') and enable the 'Multimeter' setting.

Multimeter is a fancy way of saying that there are multiple time signatures in a song. (Not to be confused with polymeter, or multiple time signatures happening at once, which is not possible on the Aeros)

There can only be one time signature per part. Once Multimeter is enabled you will be able to set all possible parts to their own time signature.

Multiple Tempos

To turn on multiple tempos, go to the Song settings (in the Loop Studio tap the pencil icon or use the slideout menu to select 'Song Settings') and set 'Song Part Tempo' to Multi.

Once Song Part Tempo is set to Multi you will be able to set all possible parts to their own tempo. If set to Multi while the Song Grid Mode is set to Auto, you will be able to Autoquantize every first track of an empty part.

Read more about Autoquantize on pg. 76.

Mute and Undo

There are different ways to stop a track from playing back: Mute and Undo

Muting or undoing tracks will make it so you can no longer overdub to them until unmuted or redone. Muting will mute the entire track. You can either undo only the overdub layer or both layers.

Undoing tracks is the best way to delete and re-record unwanted material.

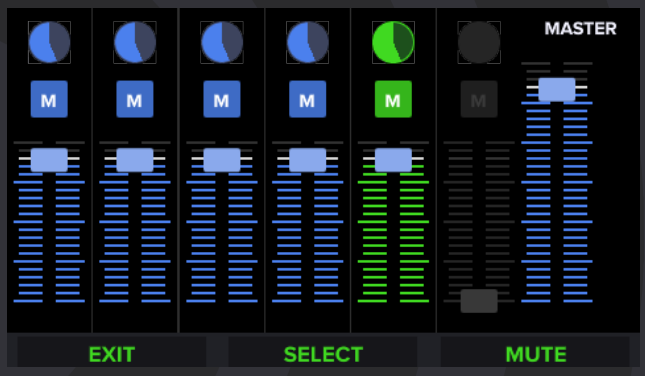
Mute

Double tap the Track button (see Double Tap in 2x2 on pg. 38 or Double Tap in 6x6 on pg. 42) to mute the track. The track will mute following the Mute/Unmute setting in the Behavior settings (Immediate, End of Measure, End of Loop, find out more on pg. 63.)

You can also mute by using a MIDI mute command, CC:38 (See MIDI commands for values, pg. 117).

Muting while stopping
If the Aeros is set to stop and does not stop immediately, a mute command sent after the stop command will still take effect following the mute settings (Immediate, End of Measure, End of Loop, find out more in Behavior settings pg. 62).

If the mute command is sent before the stop command, it will still take effect in the current part before stopping. Double tapping the Play / Stop All button to stop playback immediately will cancel the set up mute command.



Another mute command can also be found in the Mixer page, the rightmost button mutes and unmutes the selected track. Using the touchscreen, the clickable “M” found on each track will mute/unmute the corresponding track when tapped by your finger. This mute is immediate regardless of Mute Setting.

You can verify the mute state by looking at the waveform and the track clock. Muted waveforms and track clocks are displayed in grey.

When selected, the muted track's clock will have a green circle around it 

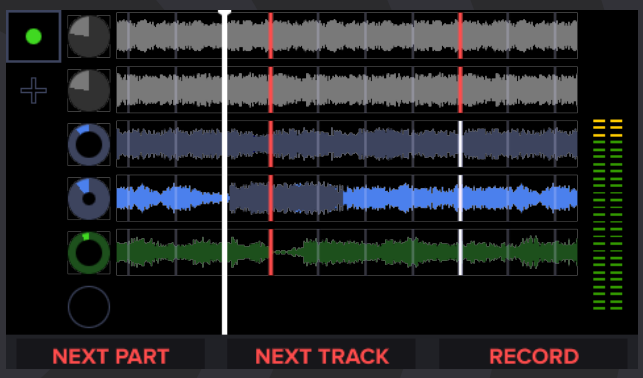
Undo

Press and hold the Track button (see Hold in 2x2 on pg. 38 or Hold in 6x6 on pg. 43) to undo the track.

A track on the Aeros can have up to 2 layers at any time: The base layer and the overdub layer.

To undo both layers, you must hold the Track button twice as long: First it will undo the overdub layer, then it will undo the base layer. To only undo the overdub layer, stop holding down the track button once the overdub layer is undone.

You can verify the undone state by looking at the waveform and the track clock. Undone waveforms look faded and grey, and undone track clocks have two states: Fully undone and half undone.



When selected, the undone track's clock will have a green circle around it 

Undone Track Logic:

Undone layers that are re-recorded to are trashed by the Aeros, this is similar to deleting an unwanted track or overdub layer.

- If the undone layer is an overdub layer, then recording another overdub trashes the undone overdub layer.
- If both the base and overdub layers are undone and you re-record, then both the undone base layer and the undone overdub layer are trashed. In this case you can re-record the track to a new length if you wish.
- If the overdub layer is undone and the song is saved or closed without saving it will not be kept, and will be trashed.

If a track is fully undone, then it will behave as though the track is empty (in most cases).

One exception is that an undone track will not automatically start recording after receiving the Next Track command in 6x6, first you must select an undone track and hit 'Record' on the Track button to start the re-recording.

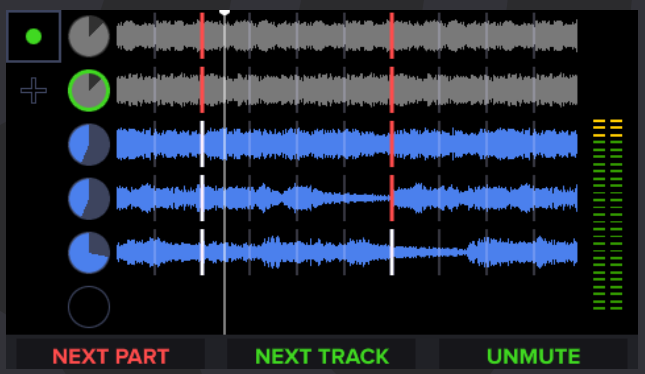
Redo
Press and hold the Track button (see Hold in 2x2 on pg. 38 or Hold in 6x6 on pg. 43) to redo an undone track.

A track on the Aeros can have up to 2 undone layers at any time: The base layer and the overdub layer.

To redo both layers, you must hold the Track button twice as long: First it will redo the base layer, then it will redo the overdub layer. To only redo the base layer, stop holding down the track button once the base layer is redone.

To redo the overdub layer only, your base layer must be currently active (not undone) and there must be an undone overdub layer on top of it. Hold the track button to bring the overdub layer back.

You can verify the undone state by looking at the waveform and the track clock. Undone waveforms look faded and gray, and undone track clocks have two states: Fully undone and half undone. A small hole in the track clock means just the overdub layer is undone. A large hole in the track clock means both layers are undone.



Rerecord
When a track is fully undone, you can rerecord and trash the undone recording. To re-record an overdub, undo the overdub and then start a new overdub.

Rerecording cannot be undone. To retrieve a track that was recorded over, the song must have been saved before it was rerecorded. You can reload the song to retrieve the original recording.

Note: This is the only way to delete a track (as opposed to undo, which is temporary) without clearing all tracks or deleting the last song part. Clearing all tracks or deleting the last song part will permanently delete material even if that material was previously saved. This is because Clearing all tracks or deleting the last song part will automatically save the song and overwrite the previous version.

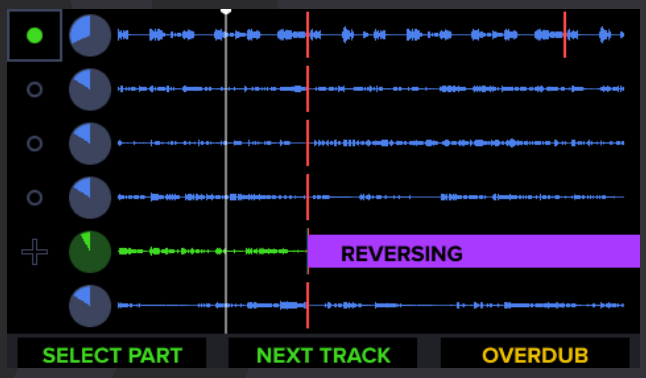
Reverse

The Aeros can reverse individual tracks

Reversing can be done at any time while playing back. If currently recording or overdubbing, sending a reverse command will commit the recording immediately/at the next sync point and reverse it.

Reversed tracks cannot be overdubbed on top of, you can only overdub to a track that is not reversed. Tracks with overdubs already recorded can be reversed.

You can verify the reverse state by looking at the waveform and the track clock. Reversed waveforms and track clocks are purple.



When selected, the Reversed track's clock will have a green circle around it 

There are multiple ways to reverse a track:

- Using the hands free slideout menu
  1. Press and hold the bottom-left Aeros button to bring out the Hands Free slideout
  2. Use the wheel to scroll to the 'Reverse' option and tap the right Aeros button to reverse the currently selected track.
  3. The reverse action will take place at the beginning of the track (loop seam)
     - Remember that you cannot open the slideout menu while recording or overdubbing. Read more about the slideout menu on pg 11.
     - This means to reverse a currently recording/overdubbing track you have to send a MIDI reverse to reverse and commit it, you cannot use the slideout menu.
- Send MIDI CC:46 Value:0 to reverse or unreverse the currently selected track
- Send MIDI CC:46 value 1-6 to reverse the corresponding track #
  - For example, CC:46 value 1 will reverse and un-reverse track 1

The Aeros dynamically recalls saved audio in a way that frees up RAM every time you save the song.

To better explain:

Dynamic Read is an audio loading mechanism that frees up a substantial amount of memory in the RAM. By only loading upcoming sections of audio files into the RAM rather than the entire audio file in advance, the Aeros is able to dramatically increase how much audio can be recorded in a song.

With this system a user can max out a specific track at 19 minutes (mono), and still have memory to record more after saving the song. This works because when the song is saved, the recording is transferred from the RAM to the internal memory or SD card and only the upcoming sections of the tracks are kept loaded in the RAM. Essentially, the amount of time left to record on the next track is calculated dynamically based on how many tracks have been recorded.

Optimized maximum total song recording time: 10 hours mono (4 hours stereo) in 6x6, and approximately 97 minutes mono (approximately 47 minutes stereo) in 2x2

Please Note: The internal memory of the Aeros can store up to 3 hours of Mono (1.5 hours stereo). Songs with more recording time than that must be stored on a 32 GB Class 10 SD card.

Audio Memory Usage
In the RAM, the Looper has space for 1140 seconds (19 minutes) of mono audio. However, there is non-audio data that must also be saved to RAM.

There are two ways that space is used: Playback Memory and Recording Memory.

Recording Memory
This includes recordings, overdubs and unsaved recording/overdub layers.

After a song is loaded, Recording Memory is 0 seconds.
Every time a song is saved, Recording Memory resets to 0 seconds.

Playback Memory

Start of Tracks Memory
Contains the first 10 seconds of all the tracks in the song.

The start of a track is set where the loop seam is in the song part. When the loop seam position changes, this buffer has to reload. The reload occurs when the user changes song parts.

It allows users to quickly change song parts without loading the full tracks.

Memory Usage Calculation :

Memory used (s = [Number of saved tracks in song] x 10s

Live Playback Tracks Memory
Contains the currently playing sections of each track of the current song part.

The sections have a duration of 9 seconds and are dynamically loaded during playback.

The sections are reused between song parts and are used only for saved tracks and not for recorded tracks that are not yet saved.

Memory Usage Calculation :

Memory used (s = [Maximum number of saved tracks per part in song] x 9s

Note: Memory Usage can only change after saving a song.

You can find a Memory Calculator here.

We go from the basic to very complex topics, feel free to read, skim, or totally avoid this section!

You can greatly expand upon the abilities of the Aeros by adding MIDI to your setup. MIDI can mean a lot of things, as you will read in the rest of the MIDI and the Aeros section.

To summarize:

- The Aeros can be receiver (slave) to another device and follow incoming clock
- The Aeros can be transmitter (master) and send out its own internal clock and commands
- The Aeros will respond to MIDI commands that can change its behavior
- The Aeros can filter and turn off what commands it receives and sends

Basics

What is MIDI?

MIDI (Musical Instrument Digital Interface) is the digital language that musical equipment uses to communicate. By using MIDI, the Aeros can be synchronized with one or more other MIDI enabled devices like our BeatBuddy or MIDI Maestro pedals.

MIDI is a universal language, the Aeros should work with any MIDI enabled device.

What is a MIDI Transmitter?

A MIDI Transmitter, or MIDI Master, usually sends MIDI Clock for synchronization as well as typical Start and stop commands.

The Aeros can be configured to send a lot of different commands that may suit different playing styles and allow you to make the most out of your Aeros within your integrated equipment setup.

Read more about the Aeros Transmitter behavior on pg. 112.

What is MIDI Clock?

MIDI clock is a timing reference signal used to synchronize pieces of musical equipment together. It sets the tempo Beats Per Minute (BPM). It runs at a rate of 24 pulses per quarter note (ppqn) . This means that the actual speed of the MIDI clock varies with the tempo of the clock generator (transmitter). It is broadcast via MIDI to ensure that several MIDI-enabled devices (such as the BeatBuddy, Aeros, and MIDI Maestro stay in sync).

What is a MIDI Receiver?

A MIDI receiver, or MIDI slave, receives and responds to incoming Start and Stop commands as well as incoming MIDI Clock.

The Aeros can be set to respond to and filter its MIDI inputs. Read more about Aeros Receiver behavior on pg 106.

What is a daisy chain?

A daisy chain is a group of linked devices connected in a sequence using MIDI.

Note: You need 2 standard male to male 5-pin MIDI Cables to connect all three devices.

A transmitter (master device will send MIDI commands from the MIDI Out port and a receiver (slave device will accept that signal through the MIDI In port.

For example, Device A MIDI Out is connected to Device B MIDI In, then Device B MIDI Out is connected to Device C MIDI In, and so on.

The MIDI Messages start on Device A (the transmitter and get sent down the chain. It cannot be sent the other way around (from B back to A.

The Aeros can be transmitter (master at the beginning of the chain or can work at any point of the MIDI chain as a receiver (slave) as well. Read more about this on pg. 106.

MIDI controllers, like the MIDI Maestro, can be ahead of the Aeros in a daisy chain even if the Aeros is set to transmitter.

MIDI Mapping

MIDI mapping defines how a MIDI device behaves when it receives a specific MIDI command. The Aeros has MIDI Mapping for its own behaviors. Check out this sheet with all Singular Sound MIDI commands.

You can also find all MIDI commands for the Aeros listed in the manual starting on pg. 117.

MIDI Instrument

A MIDI Instrument is a device that communicates using the MIDI protocol. This means that it sends and/or receives information using the structure, timing, and mechanisms defined in the MIDI standard. For example, almost all electronic pianos meet this description.

MIDI information can be sent through different methods, most commonly a 5 large pin MIDI cable, a small 5 pin MIDI cable, USB cable, TRS connector, or Bluetooth.

What is a MIDI Channel?

A MIDI Channel is a way to separate MIDI commands so that they only affect the intended device.

Each device in the MIDI daisy chain can be set to listen to a specific MIDI channel and ignore MIDI commands sent on other channels.

Although most devices have the option to listen on all channels — this is sometimes called OMNI — each MIDI command is sent through only one channel at a time.

The exceptions are MIDI Start, Stop, and Clock, these are typically sent across all channels by a transmitter (master) device.

The Aeros can send and receive commands on any of the 16 channels.

Commands Relevant to the Aeros

CC (Continuous Control)

A MIDI message that can have a value range from 0-127 (128 total values). Each CC command usually relates to a specific operation like volume control, muting, soloing, etc. There are 128 possible CC commands from CC:0 to CC:127.

- Each value can have a different outcome, depending on the listening MIDI device's MIDI mapping.
- For example, CC:40 value 1 could unmute a track and CC40 value 0 could mute that track (this depends on what CC# and values the receiver (slave) device uses for muting).

PC (Program Change)

Also known as a Patch Change, it is a MIDI message that changes a patch preset on the listening device. There are 128 possible PC commands (0-127). Unlike CC commands, PC commands do not have additional values.

- For example, a MIDI keyboard may have several patches, or sounds, for different instruments like Acoustic Piano, Electric Piano, Marimba, etc. On this device, PC:0 could represent a patch like Acoustic Piano, and PC:1 could represent a patch like Electric Piano, so on and so forth.

The Aeros uses PC commands to do MIDI song select, read on in this MIDI section to learn more.

Real-time commands

Start
Typically the MIDI transmitter (master) in a daisy chain will send a Start command at the synchronization point to all MIDI Channels.

This will synchronize the listening devices and is critical to using the Aeros with another playback device.

The Aeros can send and receive MIDI Start. Read more about MIDI settings on pg. 69.

Stop
Typically the MIDI transmitter (master) in a daisy chain will send a Stop command to all MIDI Channels once it is stopped.

This will stop all devices immediately and is critical to using the Aeros with another playback device.

The Aeros can send and receive MIDI Stop. Read more about MIDI settings on pg. 69.

Time Signature

The Aeros has unique ways of receiving and sending Time Signature commands.

Sysex
By default, the Aeros will send a custom message (the same it can receive) to allow a listening device to adjust to the Aeros outgoing time signature command.

The command looks like this:

(All values in hex)

2/4: F0 - 7F - 7F - 03 - 02 - 04 - 02 - 02 - 18 - 08 - F7
3/4: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 02 - 18 - 08 - F7
4/4: F0 - 7F - 7F - 03 - 02 - 04 - 04 - 02 - 18 - 08 - F7
5/4: F0 - 7F - 7F - 03 - 02 - 04 - 05 - 02 - 18 - 08 - F7
3/8: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 03 - 18 - 08 - F7
6/8: F0 - 7F - 7F - 03 - 02 - 04 - 06 - 03 - 18 - 08 - F7

MIDI CC:103
The Aeros can also be set to send Time Signature as a CC command.

The Aeros will send the following commands for a corresponding time signature:
Time signature - Value:

Time Signature	Value
1/4	1
2/4	5
3/4	9
4/4	13
5/4	17
6/4	21
7/4	25
1/8	2
3/8	10
5/8	18
6/8	22
7/8	26
9/8	34
12/8	46
21/8	82
1/2	0
2/2	4
3/2	8
4/2	12
1/16	3
2/16	7
3/16	11
4/16	15

MSB and LSB

Fair Warning, this gets a little bit complicated, we tried to translate this into something humans can understand. You do not need to fully understand this to use Aeros song select, but it may be helpful... or make it worse.

MSB (Most Significant Bit) and LSB (Least Significant Bit) commands allow for a greater variety of commands to be sent while still using a value set that is limited from 0-127 (All MIDI messages — except Pitch Bend [PB] — have 128 possible values associated with them).

Think of MSB and LSB as an extension to the limit of having 128 values for a MIDI message. There are 128 (0-127) LSB commands for each of 128 (0-127) MSB commands. That means you have a total of 16,384 banks just from the MSB and LSB.

The MSB Bank command is activated and set using CC:0 and the same goes for the LSB Bank command which uses CC:32, **this is a standard for MIDI devices.**

MSB and LSB commands are sometimes a sequence of 3 MIDI messages. Two CC commands which have both the CC message itself and the value associated, and an additional PC command which actually makes the change on the receiver (slave) MIDI unit.

Much like the Aeros, the Singular Sound BeatBuddy needs a PC command to be sent afterwards in order to use CC:0 (MSB) and C:32 (LSB) to open songs. Read more about how the Aeros behaves using MSB and LSB on pg. 88.

To read more about MIDI, check out our MIDI Maestro Manual!

Aeros as Receiver

When the Aeros is set to Receiver (slave, it will automatically respond to incoming MIDI clock to synchronize to an external device.

For example, you could use the BeatBuddy to control the Aeros tempo and time signature as well as when it starts, stops, and transitions. In this example the BeatBuddy is the transmitter.

MIDI Channel

The Aeros can be set to listen to all channels, or to any individual channel (1-16. By default the Aeros listens to All MIDI channels.

Using the Aeros as Receiver

To use the Aeros as MIDI Receiver (slave, make sure to set the Aeros MIDI Mode setting to Receiver.

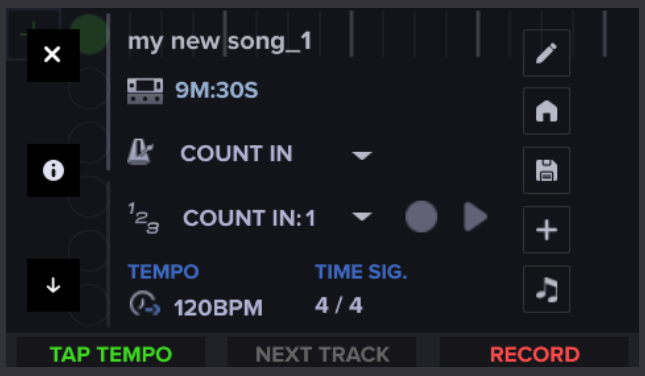
This can be done a few ways:

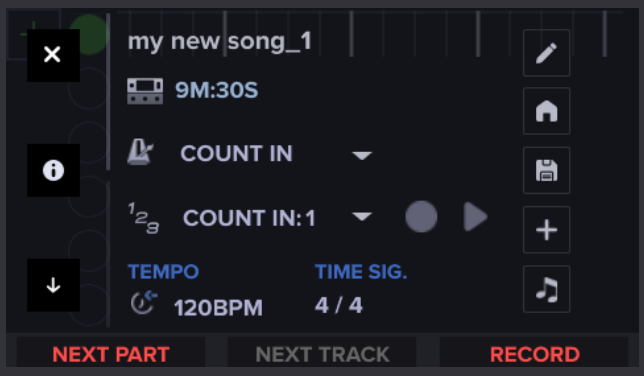
- In the Home screen, go to Settings > MIDI > MIDI In and set the MIDI Mode: Receiver
- In the Home screen, go to Settings > MIDI > MIDI Out and set the MIDI Mode: Receiver
- Inside the Loop Studio, hold the bottom left button to bring out the slideout menu, and select the 'MIDI Behavior' option. Then select one of the two Receiver options (Rcv + Off or Rcv + Thru).
  - The reason for this is that the Aeros can only be Transmitter if MIDI Output is set to Out or Merge
  - This provides a quick way to change both settings hands free and within the Loop Studio!

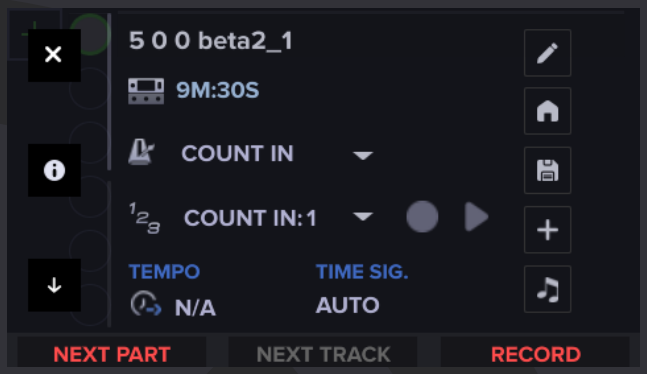
Connect your Aeros to a MIDI Sync capable device (like the BeatBuddy) to receive and follow incoming MIDI clock. The MIDI clock along with the MIDI Start and the MIDI Stop commands sent by the BeatBuddy are critical for the Aeros to remain in sync with the transmitter (master device it is connected to.

Connect the MIDI Out port of the Transmitter device to the Aeros MIDI In port using a standard 5 pin MIDI cable.

On the Aeros itself, check out the Loop Studio Song Dashboard Tempo clock icon to verify if MIDI clock is being received (read more about the Loop Studio Song dashboard on pg. 8). It will show the clock icon with a small arrow pointing inward if the MIDI clock is being received. If there is no arrow, the MIDI clock is not being received by the Aeros







You must already be set to Receiver for this to work.

There could be multiple devices before the Aeros in the MIDI chain. For example, when using the Aeros and BeatBuddy with the MIDI Maestro.

The MIDI Maestro acts as master device to the BeatBuddy and the Aeros Loop Studio

MIDI Maestro

IN

MIDI CABLES

MIDI OUT

OUT

MIDI IN

(MIDI Adapter)

The BeatBuddy acts as master to the Aeros Loop Studio

Footswitch+

Aeros Loop Studio

Note: You need 2 standard male to male 5-pin MIDI Cables to connect all three devices.

Filtering

The Aeros can filter any MIDI commands it receives and is meant to respond to. Once filtered, a command will be ignored. You can filter the Start, Stop, Clock, Time Signature, PC commands, and CC commands.

You can either filter all CC commands or filter a custom set of individual CC commands.

Some devices can send out commands that can affect your Aeros if it is connected to them in a MIDI chain. You may want to filter a command if it is causing your Aeros to misbehave when it is received

Song Dashboard MIDI Settings

Some MIDI settings can be seen on the Song Dashboard in the Loop Studio screen, to learn more about the Song Dashboard go to pg. 8.

1. MIDI Mode - Displays the current MIDI Mode setting, the options are Receiver or Transmitter. This can be set in the device MIDI settings (read more on pg. 69) or using the hands free slideout menu.
2. MIDI In: Start behavior - Sets how the Aeros will behave when it receives a MIDI Start command.
3. MIDI In: Start Record - Sets whether the Aeros starts recording the first track in a song part any time it receives MIDI Start command while stopped.
4. MIDI In: Start Playback - Sets whether the Aeros starts playback any time it receives MIDI Start command while stopped.
5. MIDI Output - Displays the MIDI Output setting, the options are Merge, Out, Thru, and Off (read more on pg. 71).

Transitions

When the Aeros is Receiver, it can respond to incoming MIDI Transition commands (read more about the MIDI commands on the MIDI command list on pg. 117) It requires two commands (CC:113 value 1-6 and CC:113 value 0) sent in a sequence to work correctly.

In 2x2, the Aeros will select a song part when it receives the corresponding CC:113 command (value 1 and 2). CC:113 value 1 chooses part 1 and CC:113 value 2 chooses part 2. Once the Aeros receives the CC:113 value 0 command the transition will happen at the next sync point (end of loop, end of measure, immediate; see Behavior Settings pg. 62).

In 6x6, the Aeros will select a song part when it receives the corresponding CC:113 command (values 1-6). CC:113 value 1 chooses part 1 and CC:113 value 2 chooses part 2, so on and so forth. Once the Aeros receives the CC:113 value 0 command the transition will happen at the next sync point (end of loop, end of measure, immediate see Behavior Settings pg. 62).

Transitions and the BeatBuddy
When the BeatBuddy is Transmitter (master), the BeatBuddy will send a CC:102 command as soon as the song part switches on the BeatBuddy.

In 2x2, the Aeros will immediately switch to the opposite part (Transition from part 1 to part 2 or from part 2 to part 1) when it receives the CC:102 command.

In 6x6, the Aeros will immediately switch to a part when receiving the CC:102 command only if a song part other than the currently open song part is selected.

Tempo and Time signature

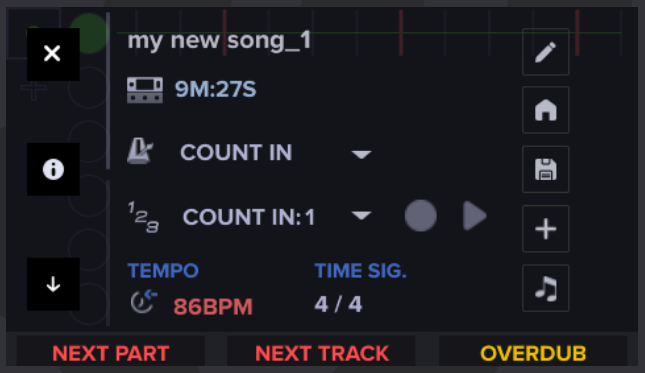
Note: Tempo or time signature can only be set by MIDI before recording to the song part.

The tempo and time signature in an empty song part will automatically update as it receives MIDI clock and Time Signature commands if the Aeros is the MIDI Receiver.

A BeatBuddy or second Aeros acting as Transmitter (master) could control the Aeros and synchronize all aspects of the song's quantization to maximize the experience of a full band playing along with you!

Expand your Aeros with MIDI to explore the full potential of a MIDI capable looper setup.

Desync
If the song part is already recorded to, you can create a desync by changing the tempo of the device sending the clock to the Aeros so it is different from the tempo that the Aeros track was recorded to. If the incoming tempo is different than the internal tempo, the Tempo on the Loop Studio Song Dashboard will be red.



Recording while a Tempo mismatch is happening can result in corruption of the Aeros song part and may require you to delete the part to de-corrupt it. Playing a track back at the wrong tempo will also have adverse effects and the loop audio will eventually drop out. Read more about tempo mismatch in the General Tech Information section on pg. 133.

Another potential for desync is if the Aeros and the transmitting device are not using the same time signature. Unless matched up well (which is mathematically possible for any two time signatures), this could cause transitions to start misbehaving and causing non-musical behavior. Or maybe you want to explore and make experimental music in polymeters! Try it out!

Resync Algorithm

Drift is a common occurrence in loopers that sync to another device. Drift occurs naturally when two clocks are running together in parallel. There are minor differences in clock timing over time even if they started at the same place. The Aeros avoids this by always resyncing at every measure, so it will stay in time and will not lose count!

LFZ and MIDI

The Loop Forgiveness Zone (LFZ) is a 300ms window after the loop seam which allows users to trigger Transition and Recording actions “late”.

We have found that users typically are late to tap the button by a few milliseconds when trying to do actions “on the beat” or “on the one”. This small zone allows the user to not fear they will trigger an action too late and mess up a transition or miss the cue for a track to start recording.

MIDI commands will respect the LFZ like any other transition or record command.

If currently recording to a track and you want to record to another subsequent track, the loop forgiveness zone is 600ms.

Aeros as Transmitter

MIDI Channel

The Aeros can be set to send commands to any individual channel (1-16). By default the Aeros listens to All MIDI channels and sends on MIDI channel 1. Sysex and real time commands (like clock, time signature, and Start/Stop) are sent on all channels.

MIDI Thru, Merge, and Out

Devices can vary on how MIDI data is sent along a daisy chain. There are four main hardware routing options that are typically available: MIDI Thru, MIDI Merge, MIDI Out, and Off. These only affect the behavior of the MIDI Output on the device.

- MIDI Thru - The device passes all MIDI commands received from the MIDI In port to the MIDI Out Port. The device does not send out its own generated MIDI commands.
- MIDI Merge - The device sends MIDI commands it generates and all MIDI commands it receives from the MIDI In port to MIDI Out port. (Like the MIDI Maestro, which is always set to Merge)
- MIDI Out - The device only sends the MIDI commands it generates to the MIDI Out port.
- Off - No commands are sent from the MIDI Out port

Some devices may have internal settings for MIDI routing. Others have dedicated MIDI Thru ports. Refer to your device's manual for specifications on MIDI routing.

Using the Aeros as Transmitter

To use the Aeros as MIDI Transmitter (master), make sure to set the Aeros MIDI Mode setting to Transmitter.

The MIDI Maestro acts as master device to the BeatBuddy and the Aeros Loop Studio

MIDI Maestro

IN

MIDI CABLES

MIDI OUT

OUT

MIDI IN

(MIDI Adapter)

The BeatBuddy acts as master to the Aeros Loop Studio

Footswitch+

Aeros Loop Studio

Note: You need 2 standard male to male 5-pin MIDI Cables to connect all three devices.

This can be done a few ways:

- In the Home screen, go to Settings > MIDI > MIDI In and set the MIDI Mode
- In the Home screen, go to Settings > MIDI > MIDI Out and set the MIDI Mode
- Inside the Loop Studio, hold the bottom left button to bring out the slideout menu, and select the 'MIDI Behavior' option. Then, select one of the two Transmitter options (Trns + Merge or Trns + Out).
  - The reason for this is that the Aeros can only be Transmitter if output is set to Out or Merge
  - This provides a quick way to change both settings hands free and within the Loop Studio!

When the 'MIDI Mode' is set to Transmitter (MIDI master), the Aeros will send its own internal clock, time signature, transition, Start and Stop commands to the MIDI Output. These behaviors can be individually turned off in the MIDI Out Settings (Settings > MIDI >MIDI Out). When in MIDI Transmitter Mode, the Aeros will also ignore and block any incoming MIDI clock but will still respond to any incoming CC commands that are not filtered.

Additional optional MIDI Out behaviors:

- Sending a command every time a track recording, playback, or overdub starts
  - Settings > MIDI > MIDI OUT > RPO Command
- Sending MIDI Start at the start of the recording or once it commits
  - Settings > MIDI > MIDI OUT > Start: 1st Recording
- Sending Stop every time you transition to an empty part (works well for Autoquantize if multi-tempo song parts are used)
  - Settings > MIDI > MIDI OUT > Send Stop at Empty Part

Song Dashboard MIDI Settings

Some MIDI settings can be seen on the Song Dashboard in the Loop Studio screen, to learn more about the Song Dashboard go to pg. 109.

1. MIDI Mode - Displays the current MIDI Mode setting, the options are Receiver or Transmitter. This can be set in the device MIDI settings (read more on pg. 69) or using the hands free slideout menu.
2. MIDI In: Start behavior - Sets how the Aeros will behave when it receives a MIDI Start command.
3. MIDI In: Start Record - Sets whether the Aeros starts recording the first track in a song part any time it receives MIDI Start command while stopped.
4. MIDI In: Start Playback - Sets whether the Aeros starts playback any time it receives MIDI Start command while stopped.
5. MIDI Output - Displays the MIDI Output setting, the options are Merge, Out, Thru, and Off (read more on pg. 71).

Transitions

When the Aeros is Transmitter, it can send MIDI Transition commands (read more about the MIDI out commands on the MIDI command list on pg. 117). It sends two commands (CC:113 value 1-6 and CC:113 value 0) in a sequence.

In 2x2 after the transition starts, the Aeros will send the corresponding CC:113 command for the song part (CC:113 value 1 for part 1 and CC:113 value 2 for part 2) once the Aeros gets to the last measure of the transition. It will send the CC:113 value 0 command immediately before the transition happens to ensure the listening device transitions correctly.

- The CC:113 value 1 or 2 command will be sent immediately if the transition is happening in less than one measure (the next measure).

In 6x6 after the transition starts, the Aeros will send the corresponding CC:113 command for the song part (values 1-6) once the Aeros gets to the last measure of the transition. It will send the CC:113 value 0 command immediately before the transition happens to ensure the listening device transitions correctly.
The CC:113 value 1-6 command will be sent immediately if the transition is happening in less than one measure (the next measure).

Tempo and Time signature

Note: Tempo or time signature can only be set by MIDI before recording to the song part.

The Aeros will send tempo and time signature when it is MIDI Transmitter. These can be disabled in the MIDI Out settings.

A BeatBuddy or second Aeros acting as Receiver (slave) could be controlled by an Aeros set as Transmitter to synchronize all of the aspects of the song's quantization and maximize the experience of a full band playing along with you!

Expand your Aeros with MIDI to explore the full potential of a MIDI capable looper setup.

Aeros MIDI IN COMMANDS

MIDI CC (IN): Below are the Commands that the Aeros responds to when received by the MIDI IN port

CC Number and Categories	Command Name	Value	Action
CC:0	Bank (Song folder) Select MSB	[0-127]	When the MSB bank (0-127) is selected and is followed by a PC command, this opens an Aeros song.
CC:33	Save	0	Saves the currently open Aeros song if a change was made since last saved and the Aeros is currently stopped
CC:34 New Song	New 2x2 Song	0	Starts a new 2x2 song (same settings as previously loaded 2x2 song) and enters the Loop Studio
	New 6x6 Song	1	Starts a new 6x6 song (same settings as previously loaded 6x6 song) and enters the Loop Studio
CC:35 Navigate to Screen	Song List	0	Goes to Songs List (if already in Songs List screen, is ignored)
	Loop Studio	1	Goes to Loop Studio screen (if already in Loop Studio screen, is ignored)
	Home	2	Goes to Home Screen
	Device Settings	3	Goes to Device Settings Screen
	Updates	4	Goes to Updates Page

Continues on next page...

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:36 Songs List Controls	Scroll Down	0	Scroll down list (songs list, or otherwise if relevant)
	Scroll Up	1	Scroll up list (songs list, or otherwise if relevant)
	Select	2	Select currently highlighted item in song list
	Delete Song from list	3	Starts the deletion confirmation dialog to delete a song in the Songs List **KNOWN ISSUE v4.1.2: The Aeros does not have a pop-up confirmation or cancellation MIDI command, the user would still have to use the physical buttons on the Aeros to confirm/ cancel a deletion dialog**
	Top of List	6	Goes to the top of the Songs List immediately
	Bottom of List	7	Goes to the bottom of the Songs List immediately
CC:37 Undo / Redo	Undo/Redo Selected (Top layer)	0	Undo/Redo currently selected track's top layer (6x6 mode)
	Undo/Redo Track (Top layer)	1-6	Undo/Redo track's top layer (track # = value #)

Continues on next page...

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:38 Mute	Mute All	0	Mutes all tracks
	Mute/ Unmute Track	1-6	Mutes/Unmutes track depending on current state (track # = value #)
	Mute Track	11	Mute Track 1, follows the global Mute Settings
		12	Mute Track 2, follows the global Mute Settings
		13	Mute Track 3, follows the global Mute Settings
		14	Mute Track 4, follows the global Mute Settings
		15	Mute Track 5, follows the global Mute Settings
		16	Mute Track 6, follows the global Mute Settings
	Unmute Track	21	Unmute Track 1, follows the global Mute Settings
		22	Unmute Track 2, follows the global Mute Settings
		23	Unmute Track 3, follows the global Mute Settings
		24	Unmute Track 4, follows the global Mute Settings
		25	Unmute Track 5, follows the global Mute Settings
		26	Unmute Track 6, follows the global Mute Settings

Continues on next page...

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:38 Mute (cont.)	Mute EOL	31	Value 31: Mute Track 1 at End of Loop (EOL)
		32	Value 32: Mute Track 2 at EOL
		33	Value 33: Mute Track 3 at EOL
		34	Value 34: Mute Track 4 at EOL
		35	Value 35: Mute Track 5 at EOL
		36	Value 36: Mute Track 6 at EOL
	Unmute EOL	41	Value 41: Mute Track 1 at EOL
		42	Value 42: Mute Track 2 at EOL
		43	Value 43: Mute Track 3 at EOL
		44	Value 44: Mute Track 4 at EOL
		45	Value 45: Mute Track 5 at EOL
		46	Value 46: Mute Track 6 at EOL
	Mute EOM	51	Value 51: Mute Track 1 at End of Measure (EOM)
		52	Value 52: Mute Track 2 at EOM
		53	Value 53: Mute Track 3 at EOM
		54	Value 54: Mute Track 4 at EOM
		55	Value 55: Mute Track 5 at EOM
		56	Value 56: Mute Track 6 at EOM
	Unmute EOM	61	Value 61: Mute Track 1 at EOM
		62	Value 62: Mute Track 2 at EOM
		63	Value 63: Mute Track 3 at EOM
		64	Value 64: Mute Track 4 at EOM
		65	Value 65: Mute Track 5 at EOM
		66	Value 66: Mute Track 6 at EOM

Continues on next page...

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:38 Mute (cont.)	Mute Immediately	71	Value 71: Mute Track 1 Immediately
		72	Value 72: Mute Track 2 Immediately
		73	Value 73: Mute Track 3 Immediately
		74	Value 74: Mute Track 4 Immediately
		75	Value 75: Mute Track 5 Immediately
		76	Value 76: Mute Track 6 Immediately
	Unmute Immediately	81	Value 81: Unmute Track 1 Immediately
		82	Value 82: Unmute Track 2 Immediately
		83	Value 83: Unmute Track 3 Immediately
		84	Value 84: Unmute Track 4 Immediately
		85	Value 85: Unmute Track 5 Immediately
		86	Value 86: Unmute Track 6 Immediately
	Unmute All	127	Unmutes all tracks, follows global mute settings
CC:39 Solo and Stop	Solo	1-6	Solos track (track # = value #). This behaves like a XOR solo function, only one track can be soloed at a time in a given song part.
	Unsolo	127	Un-solos track, this unmutes all other tracks in the song part
	Stop Immediately	0	Stop all playback immediately

Continues on next page...

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:40	Record New Part	0	Begins or sets up a recording in the next empty part available, if there are no empty parts left in the song it is ignored
CC:41 Record, Play, and Overdub	Record New Track	0	Begins or sets up a recording on the next available empty track, if no tracks are left to record to in a part, it will be ignored. In 6x6, if a new part is selected, this command will start or set up a recording in the new part. If recording to the last track in a part, sending this command will commit the current recording. If there is an undone track and all other tracks are recorded to, this command will record to the next available undone track in order.
	Commit Recording	20	This commits any current recording or overdub and goes into playback mode
	RPO Selected	100	Record/Play/Overdub on selected track (6x6)
	RPO 1	101	Record/Play/Overdub on Track 1
	RPO 2	102	Record/Play/Overdub on Track 2
CC:42	Clear Song Immediately	0	Clears the song (deletes all tracks) with no confirmation when the looper is stopped and in the Loop Studio screen. Note: You CANNOT undo this action.
CC:43 Start/ Stop Song		0	Stop
		1	Start
		2	Cancel Stop
		127	Stop Immediately

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:45 Song Settings	Set RPO	0	Sets the Action buttons in 2x2 and 6x6 to Record, Play, Overdub. This means that the Aeros will first start/set-up playback and then give the option to overdub. If recordings can be committed immediately, the Aeros will enter playback once the action button is pressed.
	Set ROP	1	Sets the Action buttons in 2x2 and 6x6 to Record, Overdub, Play. This means that the Aeros will first start/set-up an overdub and then give the option to commit the overdub and playback. If recordings can be committed immediately, the Aeros will begin overdubbing once the action button is pressed.
CC:46 Reverse	Reverse selected (6x6) /last used 2x2	0	Reverses the currently selected track
	Reverse Track x	1-6	Reverses the track number that corresponds to the value number (track # = value #)
CC:102	Transition Immediately	0-32	Changes song parts in 2x2 immediately. In 6x6, it will change song parts if a different song part than the one currently playing is selected. *Please note: This command overrides the 'Change Parts: End of Loop' setting.* This command is sent by the BeatBuddy by default when it changes parts. If currently recording, the Aeros will respect any Sync rules and/or finish the measure (in quantized mode).

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:113 Transition	Transition to Selected Part	0	Starts transition to the currently selected part in 6x6. This command is used in conjunction with CC113 values 1-6, 126, and 127 to allow toggling through parts before starting the transition.
	Change Part	1-6	Selects the part according to the value number sent (part # = value #). The Aeros will not transition until it receives CC113 value 0 (shown above). If using the BeatBuddy, the CC:102 command will change the part to the selected Aeros part immediately. If the part doesn't exist in the song, the Aeros will ignore the command. This command cannot start the Aeros from a stopped state.
	Change Part (Aeros Only)	101-106	Value 101-106: Begin the transition to part (part # = value # minus 100, so value 102 is part 2) according to the Change Part setting (Immediately/End of Measure/End of Loop). If the part doesn't exist in the song, the Aeros will ignore the command. This allows you to send a single on-press command for changing parts. This also allows you to switch the part on the Aeros without switching parts on the BeatBuddy (which ignores values 101-106) when they are on the same channel and being controlled by a MIDI controller. This command can start the Aeros from a stopped state.
	Cancel Transition	125	Cancels any pending transition

MIDI CC (IN) cont.

CC Number and Categories	Command Name	Value	Action
CC:113 Transition (cont.)	Previous Part	126	In 2x2, this will start the transition to the previous part. In 6x6, this will toggle through the available parts from bottom to top. To switch to the selected part, the user must send CC113 value 0 to start the transition.
	Next Part	127	In 2x2, this will start the transition to the next part. In 6x6, this will toggle through the available parts from top to bottom. To switch to the selected part, the user must send CC113 value 0 to start the transition.
CC:127	Screenshot	127	Will save a screenshot of the current Aeros screen to the SD card. Note: Must have SD card inserted in Aeros.

MIDI Song Select

CC Number and Categories	Value	Action
MSB + PC	MSB value 0-127	The Aeros can open any song using a combination of MSB and PC commands
	PC value 0-127	Pay close attention this is a brain twister: MSB stands for Most Significant Bit, it is a concept used in MIDI that allows a user to do all sorts of things like change parameters, change banks, and—in the Aeros' case—song select. MSB is not a traditional MIDI command, it is actually activated by using a CC:0 (Control Change) command, the value decides which MSB bank is chosen. So, CC:0 value 4 represents MSB bank 4. PC (Program Change) is another type of MIDI command typically used in conjunction with MSB and/or LSB commands. LSB (Least Significant Bit; CC:32 values 0-127) is not relevant to the Aeros, but is relevant to the BeatBuddy's song select scheme. It is often also used without an MSB (CC:0) and/or LSB (CC:32) command, but that is not the case for the Aeros. The Aeros requires the user to send an MSB + and a PC command—in that order—to open a song. First, the user must open the song, and edit the song. Then, you will find the MIDI song Select enabled setting. Once enabled, the user can set which MSB (0-127) bank and which PC command will be required to open the song. Then, using a MIDI controller capable of sending CC:0 (MSB) + PC commands in a sequence, you can open that song at any time.

Sysex

Command Name	Action
Start (Sysex Real Time)	Starts the Aeros depending on the MIDI Start setting. If the part is empty and MIDI Start is set to record, the Aeros will record on the first track. If the song part is empty and the MIDI Start setting is set to only playback, the Aeros will enter a 'scrolling' mode in the empty part.
Stop (Sysex Real Time)	Stops playback immediately
Time Signature:	Time Signature is sent by BeatBuddy whenever a song is loaded as a Sysex midi message and repeatedly every 3 seconds. The Aeros will set it's own internal time signature when receiving these commands if the song is empty. (All values in hex) 2/4: F0 - 7F - 7F - 03 - 02 - 04 - 02 - 02 - 18 - 08 - F7 3/4: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 02 - 18 - 08 - F7 4/4: F0 - 7F - 7F - 03 - 02 - 04 - 04 - 02 - 18 - 08 - F7 5/4: F0 - 7F - 7F - 03 - 02 - 04 - 05 - 02 - 18 - 08 - F7 3/8: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 03 - 18 - 08 - F7 6/8: F0 - 7F - 7F - 03 - 02 - 04 - 06 - 03 - 18 - 08 - F7

MIDI Out Commands

CC Number and Categories	Value	Action
MIDI Start		If MIDI Start is enabled, the Aeros (as transmitter) sends MIDI Start to the MIDI output every time the Aeros starts from a stopped state. This will apply for both recording and playback. The Aeros can be set to delay sending the MIDI Start command until after the first recording in a part is committed when starting from stopped (Start: 1st Recording). The reason for this was to improve the behavior in Autoquantize mode and to allow the Aeros to record and commit the first track in a part before the drums (e.g. the BeatBuddy) are started.
MIDI Stop		If MIDI Stop is enabled, the Aeros (as transmitter) sends MIDI Stop to the MIDI output every time the Aeros stops playback. The Aeros can be set to send MIDI Stop every time the Aeros Transitions to an empty part (Send Stop at Empty Part). The reason for this is to improve the behavior in Autoquantize mode when autoquantizing multiple parts. This allows the Aeros to stop the Beatbuddy and commit the first track in a part before the drums (e.g. the BeatBuddy) come back in at the newly set tempo. This can work even if Autoquantize is not engaged, though it is not suggested
Transition		If Transition is on, the Aeros (when set to Transmitter) will send a Transition command to the MIDI output every time the Aeros transitions to a new part. The Aeros will send a CC:113 command with a value that corresponds to the part number you are transitioning to followed by a CC:113 value 0 command to complete the transition.

MIDI Out Commands

CC Number and Categories	Value	Action
RPO		If RPO command is on, the Aeros (as transmitter) sends a CC41 value 100 command to the MIDI output every time a track changes its recording state (Recording, Playing, Overdubbing). This would allow controlling recordings on a second Aeros while using a MIDI connection.
Time Signature (Sysex)		Time signature - Value: 1/4 - 1 2/4 - 5 3/4 - 9 4/4 - 13 5/4 - 17 6/4 - 21 7/4 - 25 1/8 - 2 3/8 - 10 5/8 - 18 6/8 - 22 7/8 - 26 9/8 - 34 12/8 - 46 21/8 - 82 1/2 - 0 2/2 - 4 3/2 - 8 4/2 - 12 1/16 - 3 2/16 - 7 3/16 - 11 4/16 - 15

MIDI Out Commands

CC Number and Categories	Value	Action
Time Signature (CC:103)		Time Signature is sent by Aeros whenever a song is loaded as a Sysex midi message and repeatedly every 3 seconds. The Aeros, for example, will set it's own internal time signature when receiving these commands if the song is empty. (All values in hex) 2/4: F0 - 7F - 7F - 03 - 02 - 04 - 02 - 02 - 18 - 08 - F7 3/4: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 02 - 18 - 08 - F7 4/4: F0 - 7F - 7F - 03 - 02 - 04 - 04 - 02 - 18 - 08 - F7 5/4: F0 - 7F - 7F - 03 - 02 - 04 - 05 - 02 - 18 - 08 - F7 3/8: F0 - 7F - 7F - 03 - 02 - 04 - 03 - 03 - 18 - 08 - F7 6/8: F0 - 7F - 7F - 03 - 02 - 04 - 06 - 03 - 18 - 08 - F7

Your Aeros Loop Studio has built in plug and play functionality with the BeatBuddy, our hands free drum machine pedal. There are two ways to connect them to each other. Either with the BeatBuddy as Transmitter (master and the Aeros as Receiver (slave or with the Aeros as Receiver and BeatBuddy as Transmitter.

Aeros as Receiver, BeatBuddy as Transmitter

To use the Aeros as MIDI Receiver or 'slave', you'll need a standard 5 pin MIDI cable, the BeatBuddy MIDI Adapter, and a BeatBuddy. Plug the 5 pin MIDI Cable in the "OUT" port for the BeatBuddy MIDI Adapter cable, and the "IN" port on the Aeros.

Make sure you have updated your BeatBuddy to the latest firmware (at least 3.8.0 or later. At this point your pedal is good to go.

However, if you have changed your MIDI settings on your BeatBuddy, please check that the Next Part (CC-102 command is enabled. This can be done by going to the BeatBuddy settings (push drum set and tempo knobs down at the same time and select: Main Pedal > MIDI Settings > MIDI-OUT > Next Part (CC-102, and select "Enable".

The BeatBuddy (with default settings will automatically set the tempo (BPM and time signature on the Aeros.

In both 2x2 and 6x6 (with default settings, starting the BeatBuddy with an intro will trigger the looper to start on the first beat of the main rhythm part after the intro fill is played. This can be configured in the BeatBuddy's MIDI settings to also start on the first beat of the intro if you prefer, by changing the BeatBuddy setting located at Main Pedal > MIDI Settings > MIDI-OUT > Start.

Additionally, with default settings, the looper will stop playing/recording at the end of an outro fill and/or when the BeatBuddy is paused. This can be changed to stop the Aeros either when the BeatBuddy is paused only, or only when the BeatBuddy finishes the outro fill. That setting is located on the BeatBuddy at Main Pedal > MIDI Settings > MIDI-OUT > Stop.

In 2x2, transitioning to the next song part with the BeatBuddy will cause the Aeros to switch song parts at the end of the BeatBuddy's transition.

In 6x6, you'll need to manually select which song part you wish to transition to using the looper's bottom-left button, and then transition using the BeatBuddy. After which, the looper will switch to the selected song part at the end of the BeatBuddy's transition.

The Next Part (transition) and Stop commands (outro, pause) from the BeatBuddy will override the Change Song Part/Stop Song setting if it is set to "End of Loop", so Aeros will not wait until the end of the loop to change parts or stop the song when it receives these commands, that way it stays in sync with the BeatBuddy.

At any point in both 2x2 and 6x6 you can use the Aeros to transition as you would normally, to keep the BeatBuddy rhythm the same while the song part changes on the Aeros. Additionally, adding fills and accent hits with the BeatBuddy has no effect on the Aeros' loops, giving you the ability to vary the drums while the Aeros continues to play.

Please note: *the Aeros does not allow the tempo to be changed or fluctuate while recording or playing back a recorded song. The incoming tempo must match the Aeros song tempo or this will cause a mismatch which causes a desync. Read more about mismatches in the General Technical information section* *pg 133**.*

Aeros as Transmitter, BeatBuddy as Receiver

To use the Aeros as MIDI Transmitter or 'master', you'll need a standard 5 pin MIDI cable, the BeatBuddy MIDI Adapter, and a BeatBuddy. Plug the 5 pin MIDI Cable in the "IN" port for the BeatBuddy MIDI Adapter cable, and the "OUT" port on the Aeros.

In both 2x2 and 6x6, starting the Aeros will start the BeatBuddy once the Aeros starts.

By default, the BeatBuddy starts with an intro fill. To start with the main beat (recommended), disable the intro on the BeatBuddy (to disable the intro fill go to Main Pedal > Intro in BeatBuddy settings).

Stopping the Aeros will stop the BeatBuddy once the Aeros stops playback.

If you wish to keep the intro on, we recommend turning count in on your looper on, and setting it to the same number of measures as your beat's intro so that the start of the BeatBuddy's main rhythm section and your loop are synced. Using an intro that has pickup notes/measures can cause desynchronization, please ensure the intro uses full measures.

Switching song parts on the Aeros will trigger the BeatBuddy to switch to the corresponding song part. If the Aeros switches to part 2, the BeatBuddy will switch to part 2. The Aeros will send the transition command at the start of the last measure of the loop to allow the BeatBuddy transition to start near the end of the loop, which sounds more musical.

Fills, stops, accent hits, and pauses with the BeatBuddy will have no effect on the Aeros' loops in this scenario.

Please note that if you stop or pause the BeatBuddy while the Aeros is playing, you will need to stop the Aeros, and then start them both at the same time by starting the Aeros again.

Troubleshooting

MIDI Desync - Tempo Mismatch

The Aeros is built to record and playback at only one tempo at a time. An empty Aeros song part will change its tempo according to the incoming tempo from an external clock, but this does not work if the Aeros song part is already recorded to or is currently being recorded to. If there is a global tempo (read more about song settings on pg. 56 in a song, all song parts will follow the 1st part's tempo.

If the Aeros' internal tempo does not match the incoming external tempo, when the Aeros is playing back or recording, there will be a tempo mismatch causing a desync. This will prevent the Aeros audio from playing back correctly and can result in audio dropouts. Recordings made during a desync are likely corrupted and cannot be played back correctly afterwards.

To avoid this, make sure the external tempo is matching the internal tempo. If using the BeatBuddy, make sure the BeatBuddy Sobriety setting is set to default (Sober, as the tempo fluctuations can cause this to happen.

The Aeros tempo on the Song Dashboard in the Loop Studio screen will display in Red if the internal tempo of the currently loaded song does not match the incoming tempo from an external clock (like the BeatBuddy.

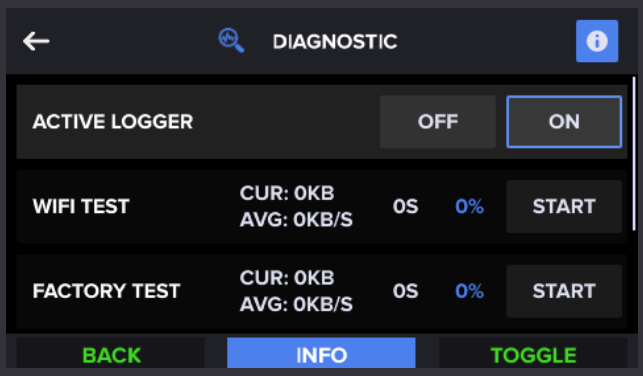
WPA3 security issues (WiFi)

Aeros Not Connecting to Your Wi-Fi Network Using WPA3 security? Here's the workaround:
SOLUTION (as described by an Aeros user:

Set up guest wifi network - If you don't already have a guest network set up, you'll need to set that up on your wifi router.
Set the guest wifi network's security option to "WPA2" - For my router, the setting is "WPA2-PSK [AES]". It may be slightly different on your router, but should start with "WPA2". Your WiFi6-enabled router should allow you to keep your primary network secured using WPA3 and your guest network secured using WPA2.
Connect the Aeros Loop Studio to your guest wifi network.

Diagnostics

Having download issues? Try the WiFi diagnostic test. You can find this by pressing the "Diagnostic" button on the Updates screen. Once on the diagnostic screen, press "Start" on the WiFi test to download a test file that will give us some idea of the speed and connectivity your Aeros is experiencing.



Take note that on average the aeros should report about 500-2000kbs

Report your errors to our forum! Or email us at support@singularsound.com

Active Logger
This logger records all events that the looper undergoes and is intended to help us diagnose issues that are hard to replicate. This system can only be used if there is an SD card inserted into the Aeros. To turn on the Active Logger go to the Updates Page, then to the Diagnostics Page. On the Diagnostics Page there is a toggle button at the top right of the page, turn this on to start the Active Logger. The Aeros will force a reboot to turn this feature on.

If this feature is off, the Aeros' logging system will work as it did previously: When an SD card is inserted, boot-up data as well as any data from a crash will be saved in a log file on the SD card. These events will also be logged when the Active Logger is on.

Note: This Logger does use some memory when active, due to this reason you may experience less than perfect audio quality when it is on. This Active Logger is by default off, only turn it on when trying to catch a bug that is hard to reproduce.

Important: Logs are not saved forever, a log will be saved from the previous 4 power cycles, but if you turn the Aeros off and on again 5 times after that, that log will be lost. Only the current power cycle and previous 4 power cycle logs are kept. Please send logs to support@singularsound.com along with a video and/or a description of the bug.

If you'd like to learn more about useful information you could give us to better help you, please read this post on bug reports.

MIDI and Bluetooth Self Test
These are tests meant for internal testing and testing done by the factory, if you'd like to try them here are the steps:

MIDI Self test
Requires one male to male 5-pin MIDI cable that is connected to both the MIDI In and MIDI Out ports of the Aeros, forming a MIDI loop. Do not connect any other devices to the MIDI chain, the Aeros should only connect to itself. Once connected properly, the Aeros should pass the test once the MIDI Self Test button is pressed.

Bluetooth Self Test
Requires a phone or device capable of sending a Bluetooth scanning signal. Any Bluetooth scanner app should work. As soon as the app or device is actively scanning, the Aeros should pass the test once the BT Self Test button is pressed.

- *Note: If you have a MIDI Maestro, and the MIDI Maestro is both nearby and in pairing mode, this counts as a scanner signal and the Aeros will pass the test.*

Other Technical Information

Loop Seam
The beginning and end point of a loop, where it restarts. The loop seam is visually noted with a thick red line in the Loop Studio tracks.

Crash Log
If your Aeros crashes while using an SD card, the Aeros will save a log of that crash to the SD, which you can email as a zipped (compressed) file to support@singularsound.com. This will help us understand what happened, and work to fix the issue.

Overdubs
Shown in yellow, overdubs are recordings that are “on top” of a previous recording on the same track. Unlimited overdubs enable you to create layers and depth in your loops without worrying about memory restrictions.

- Overdubs do take up memory. The memory used will not exceed the amount of memory used to record on that corresponding base track (they are the same length). Keep in mind that an overdub cannot have more than one layer active at a time, you could essentially loop an overdub layer over a base track forever if there is memory available for one full overdub layer.

This is similar to what other loopers call “stacks”. You always have two layers of memory to work with for each individual track: The base layer and the latest overdub layer. If the current selected track already has an overdub, overdubbing again will merge the previous overdub layer with the base layer. Once an overdub is merged, it cannot be unmerged. If you undo only the overdub layer and keep the base layer, recording another overdub will replace the undone layer.

- When adding a new overdub, there is one exception to the current overdub layer being merged to the base layer:
  - If the overdub layer is activated again before the track’s loop has started over, the written overdub layer will be reactivated and the new overdub audio will continue to be written in the same overdub layer.
  - Basically, you need to wait a whole revolution of a track’s loop before you can make a new overdub layer that will merge the previous overdub layer.

SD Card Specs
The Aeros is compatible with SD card size (4-32GB), class 10 is recommended for faster loading speed.

On Screen notifications
The Aeros will display MIDI commands it has received that are switching settings On or Off.

Currently this only works for switching ROP mode to RPO mode and vice versa.

Recording time per song

19 min (mono) in a new song with no recorded audio.

- Once a user saves, this total recording time allowed is recalculated.
- The recording time available changes dynamically based on how many tracks are in the song and how many tracks are in the part with most tracks.
- Because of the way the Aeros works, even if you record the maximum time, it is still possible to always have some audio memory free to overdub after saving.
- Read more about this in the Song Mgmt and Memory section (pg. 97)

Recording storage

Internal 3 hours mono, 1.5 hours stereo recording time and up to 48 hours mono, 24 hours stereo storage when using a 32 GB SD card.

The Aeros Song Folder (on SD

The Song folder (found inside the Albums folder) will include the WAV files separated by input and by part and the .meta file that allows the Aeros to use the WAV files. The .meta file is hidden and must be unhidden in most cases to be seen. Deleting / altering the .meta file can make the WAV files in the song folder unreadable by the Aeros, this must be avoided or all saved song data could be lost, meaning the Aeros will not show the song when the SD card is inserted.

Sound Quality

32-bit floating point processing, 24-bit recording, 44.1kHz sample rate, professional DACs, < 3ms latency, and 20hz – 20kHz range

Digital dry through bypass

Aeros does not affect the pass through audio quality, but the Aeros must be powered on to pass through audio.

Loop Forgiveness Zone (LFZ

If you press the button to start or end recording within 300 ms after the measure line, Aeros will consider that you meant to press the button on the measure line that just passed. This is for the comfort of players who are used to pressing a button 'on beat' instead of in advance of the measure line - most people miss the intended beat by a fraction of a second. Please note that starting a loop late will leave a visual "hole" in the beginning of the loop waveform, however the audio is captured in the loop.

Noise

With some specific combinations of equipment and electrical systems, a hum may occur due to a 'ground loop'. This can be removed using a hum eliminating device such as the Behringer MicroHD HD400 Ultra-Compact 2-Channel Hum Destroyer or Mpow Ground Loop Noise Isolator

Cross fades

The Aeros records an extra ~8ms (360 samples) of fade out material for every recorded track to allow for clean crossfades between song parts when transitioning and to avoid pops on the loop seam.

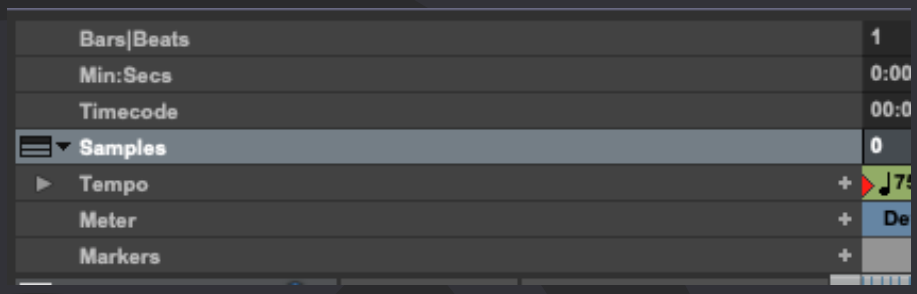
Exporting WAVs via SD

When a song is saved to the SD card, the WAV files will be present in a folder with the same name as the song on the Aeros. The WAV files can be extracted from the folder for use within a DAW. *NOTE: The Aeros adds **360 samples/frames in 44.1kHz** to every loop in order to improve fade out popping. In order to use the loops as heard on the Aeros, you must remove the 360 samples from the **end** of the WAV file.*

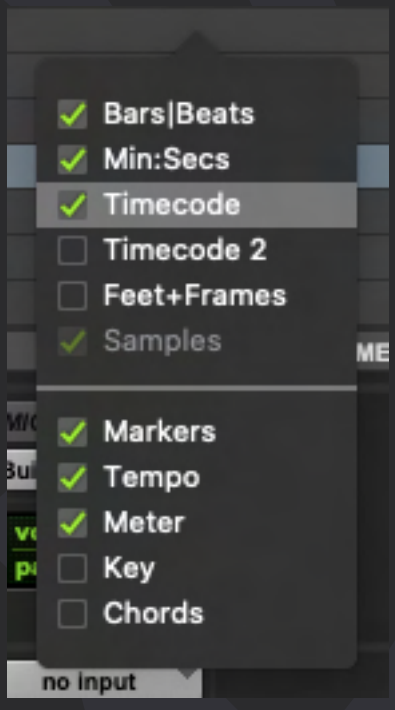
Cutting 360 samples from your files:

In Pro Tools:

Make sure your Pro Tools session has a sample rate of 44.1kHz. Then, set the main timeline to be based on samples.



If you do not see the samples timeline, you may need to activate it to make it visible.



With the grabber tool, select the audio clip(s) you wish to cut the samples from. Then reference the Transport to see the length of the selection in samples. Simply take note of the start and end points of your selection, and remove 360 from the endpoint.

For example:
My audio is 120,000 samples long (this may seem long but remember there are 44,100 samples every second). I do some quick math to find out my start point would be 120,000 - 360 which is 119640 samples. So I set my start point to be 119,640 samples. I can check my work by confirming the selection length is 360 samples. Then, simply delete the selection from the clip.

Another method for cutting the audio files is explained by a user on the forum here.

USB access to Internal Memory

You can access the internal memory of the Aeros on your computer through the USB port, making backing up your songs an easy process.
To access the internal memory: With the Aeros powered OFF, connect it to your computer via USB and then power the Aeros ON.
Do not connect the Aeros while powered ON or the memory will not be accessed until it is rebooted
To access the SD card, insert it in the SD card slot before turning the Aeros on while it is connected to your computer via USB.

Mixer Volume Faders

Each volume fader has a fader head, the position of the fader head tells you the added/reduced gain level of the current selected track. At 0dB, the track's volume is not being changed, the fader head will be blue at 0dB.

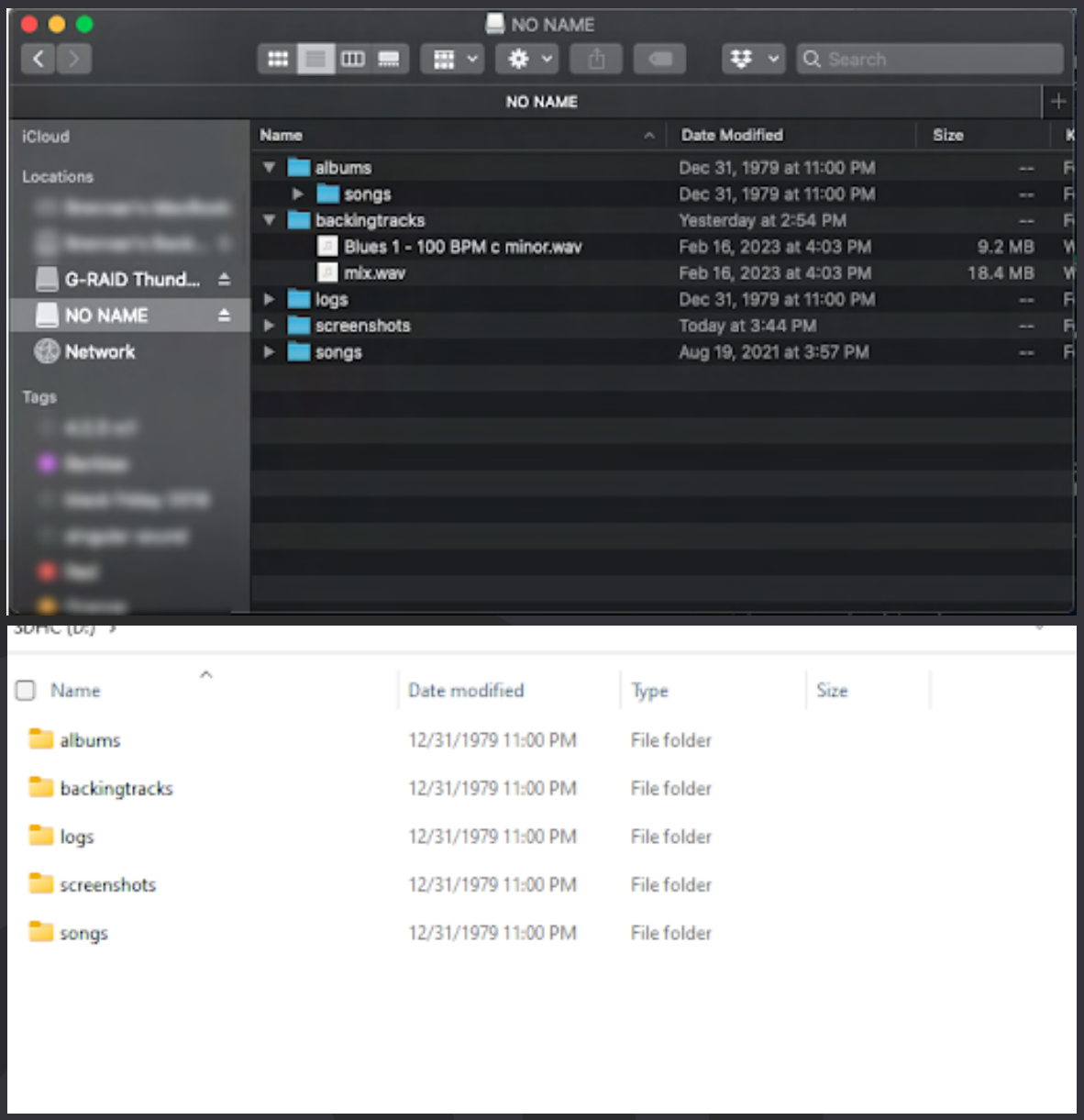
- If using the volume wheel, the fader head will "stick" at 0dB for 4 ticks of the volume wheel in the same direction or 800ms of delay between "sticking" to 0dB and moving the volume wheel again. If you reach 0dB and change directions on the wheel, it will not "stick".
- If using the touchscreen, the fader head will snap to the 0dB line if within ±3dB from 0dB. The fader can move by increments of 0.25dB when using the fader wheel, each tick is ±0.25dB

File Structure

The Aeros internal and SD have a specific file structure on the root (first) layer of the memory.

The structure is as follows:

- 'Albums' - Contains all the individual Album folders
  - 'Songs' - Contains all the individual song folders.
  - Within each song folder you will find the meta file and the wav files that belong to the song.
    - A song folder on the SD and Internal memory is seen by the Aeros as a song file.
    - Wav files have a naming convention as follows:CH-X-SP-Y-T-Z
      - CH stands for channel, SP stands for song part, T stands for track. X, Y, and Z represent variables.
      - The left channel is represented by A, the right channel is represented by B, if set to mono all files will be channel A.
      - Y represents what song part the audio file is in, this can be any value from 1-6.
      - Z represents the track # the audio file belongs to, this can be any value from 1-6.
    - For example, the left channel audio file in part 2 and track 6 would be called CHASP2T6.
    - Another example, the right channel audio file in part 5 and track 4 would be called CHBSP5T4.
  - The meta file is hidden, show hidden elements to see it
  - Altering anything inside this folder can corrupt your song and prevent the Aeros from being able to open the song or play it back.
- 'Backingtracks' - This folder will be available on your SD card, you can add backing tracks here to be able to load them into your songs
  - .wav files must be 44.1kHz and 24 bit (PCM)
- 'Logs' - This folder contains all logs from the Aeros on this folder in your SD card.
  - Logs are created at every boot
  - A crash log is created if the Aeros crashes
  - If the Active logger is on, the logs will contain more information (read more about the active logger in the diagnostics settings pg. 74)
- 'Screenshots' - This folder contains all screenshots taken of the Aeros screen
  - You can take a screenshot using the MIDI Command CC:127 value 127 (read about MIDI commands on the Aeros on pg. 117)
- 'Songs' - This may or may not be on your memory device, it is the old songs folder from version prior to 5.0.0. It will only be there if you converted songs from a version prior to 5.0.0.
  - Inside you will find all the song folder files with no .wavs (they were moved to the 'Songs' folder inside the 'Albums' folder)
  - Please read the Updating to version 5.0.0 section on pg. 27 to read more.



File structure on Mac and Windows

Specs

I/O
two 1/4" (6.35 mm) inputs, two 1/4" (6.35 mm) outputs, one 1/4" (6.35 mm) stereo aux input, one 1/4" (6.35 mm) stereo aux output.

Input Impedance
Switchable between 1MΩ (Instrument) and 50kΩ (Line level)

Output impedance
~615Ω

Frequency Response
The Aeros Loop Studio's main output has a Frequency response of -0.3dBV / +0.8dBV with an input of -1dBV over a bandwidth of 20Hz to 20kHz.

SNR
The Aeros Loop Studio's main output can produce an output signal with a SNR value of 95dB into a load as low as 3kΩ with an input signal of 0dBV (1Vrms) at 1kHz.

THD
The Aeros Loop Studio can provide an output signal of roughly 0dBV (1Vrms) at 1kHz ***with a 1% THD+N over a bandwidth of 22Hz to 20kHz into a 3kΩ load.***

Power
9v (center negative), 360mA

Touchscreen dimensions
4.3" (109 mm) touchscreen color display

Dimensions
7.8" x 5.6" x 2.2" (198 x 142 x 56 mm)

Weight
2lbs 4oz (936 g)

Construction
Aluminum construction with chip resistant black coating.

Version 5.0.3

- Loop Studio:
  - **Stopped screen redesign** with quick-access controls and info
  - **Added hands free slideout menu** to use functions while stopped or playing. Hold bottom left button to activate slideout menu. Menu options are different depending whether Aeros is stopped or during playback. Options can be edited and rearranged in Settings
  - **Added offscreen progress bars** on right of screen for pending track actions
- Added **songs list redesign** with support for multiple albums for better organization
- **Added backing tracks** (import system). Please Note: Imported WAV files must be 44.1 kHz and 24 bit (PCM)
- **Added auto-quantize mode:** Allows you to record the first track in a song part in freeform, and the Aeros will calculate and set the Tempo BPM based on the loop length. Time signature must be set in advance
- **Added per-part tempo and time signature in song settings:** Enables different song parts to have different tempo and time signatures
- **Added auto-record mode:** When enabled, while Aeros is stopped, you arm a track by pressing the Aeros footswitch button, but recording only starts when the input signal reaches the set threshold (adjustable in settings)
- **Added Loop Decay:** Lowers the volume of previous audio layers with each additional overdub. Decay level adjustable in song settings
- **Added MIDI Transmitter (Master) Mode:** When enabled, Aeros sends out MIDI clock, Start/Stop, Transition and Time Signature commands. Individual commands can be turned on/off in settings
- **Added MIDI message filtering:** Enables which MIDI commands it follows or ignores
- **Added support for additional MIDI commands:** See manual or forum post for details
- Added German language support
- **Settings redesign:** Added categories for easier organization
- Enabled Settings screen to be used hands free with the wheel and footswitch buttons
- Added setting for screen brightness
- Added many additional settings: See manual or forum post for details
- Added improved logging for debugging purposes
- **Added sleep mode:** Turns off the screen while keeping Aeros powered on. Access through hands free slide out menu
- **Added USB access** to internal and SD storage
- Added Open next song (CC:43 value 10) / previous song (CC:43 value 20) MIDI commands to open the next / previous song in the current album.
- Added warning when low on disk storage space
- Reduced recording time from 20 minutes mono / 10 minutes stereo to 19 minutes mono / 9.5 minutes stereo to make room for new features
- Finalized Translation

Bug Fixes:

- Playback audio pops improved
- Optimizations for smoother audio/visual performance
- Fixed text translations (for languages other than English) that were not fitting on-screen correctly. (If you notice a translation that cannot be fully seen or could be improved upon please report/suggest on the forum or to support@singularsound.com)

Version 4.3.1

Added Clipping indicator: When audio input clips, the input meter will appear for 3 seconds
Added Expression pedal volume control and calibration in diagnostics screen

Bug Fixes:

- Song select MIDI Messages now work on the home screen
- Scroll wheel now scrolls through pop up text
- While Aeros is stopped, receiving MIDI CC 113 will change the part without starting playback
- Fixed audio merge problem caused by Reverse f eature

Version 4.2.4

- **Added language options to settings page** (English, French, Spanish, Italian, Japanese and Chinese)
- **Added settings for fade in/out** on unmute/mute and start/stop
- **Added reverse audio capability** (triggered by MIDI command CC:46, Value:0 is currently selected track or Value: track #)
- **Added MIDI command "Next Track" (**CC:41, Value:103)
- **Added setting to configure VU (volume) meter** to display Main In or Aux In
- Show firmware version on wifi update

Bug Fixes:

- Disable BPM modification when MIDI sync ON
- Fixed vanishing track issue
- Fixed CC:113 to only select part
- Fixed 2x2 Track #2 being recorded first causing isues
- Aeros count in not working if receiving clock but gets no start command
- Aeros losing sync with BeatBuddy over time intermittently
- Committing the recording using CC:46 in the forgiveness zone breaking sync
- Things recorded in stereo do not play back out of the right ear once they are saved
- Tempo reset to 200 instead of keeping previous value when switching Freeform/Quantized
- Program number should say Program Change (PC)

Version 4.1.5 Changelog

Bug Fixes:

- CC:113 values 1-6 now only select part and require CC113 value 0 to start the transition, this is the same logic as in previous versions to 4.0.2
- Improved click and loop playback bug when opening the mixer and receiving external clock

Version 4.1.2 Changelog

- Major expansion of MIDI capabilities (refer to manual pg 117. for details)
- Improved synchronization system with BeatBuddy

Bug Fixes:

- The Aeros now fully responds to CC102, the BeatBuddy's transition message.

Version 4.0.2 Changelog

- Added a help info pop-up to the Recording Time counter in the Loop Studio

Bug Fixes:

- Fixed potential issues for songs that have locked tracks
- Fixed a crash when song_1 cannot be created on the SD card at startup
- Fixed slower loading of song (now is the same speed as 3.5.1)

Version 4.0.0 Changelog

- **Dynamic Read Memory System: Maximum song recording time has been extended from 20 Minutes (mono) to up to 10 Hours!** See Manual for full details.
- **You can only record up to 20 minutes before Saving is required.** Recording time is regained after saving song
- Display 'Recording Time' remaining in the Loop Studio screen (while stopped) instead of 'Memory Used'
- **MIDI command CC41 value 20 triggers 'Play current track'**, this commits any current recording or overdub and goes into playback mode
- **MIDI command CC42 value 0 clears the song** (deletes all tracks) with no confirmation when the looper is stopped and in the Loop Studio screen. ***Note: You CANNOT undo this action.***
- **Updated system font** for clearer text
- **Added active log system to diagnostics page.** This will record details of the state of the Aeros in a file saved to the SD card to help with investigation of bugs. If you are experiencing any bugs, turn this feature on and insert an SD card. After experiencing the bug, send the log file to support@singularsound.com along with a description of the bug.

Bug Fixes:

- Cancel recording is now working if 'Play/Stop All Button' is set to release
- MIDI Clock Jitter improvements with tempos higher than 190BPM
- Mute/Unmute logic now has the same logic as Change Song Part and Stop Song with 'end of measure' setting
- Set up mutes will now be enacted if the song transitions to another song part or stops while the mutes are pending
- Polished the redo animation when redoing both layers in the forgiveness zone
- Waveform not displaying R input channel when Aeros set to stereo

Version 3.5.1 Changelog

- **Optimized memory usage of track recording.** Now, up to 20 minutes of mono audio (10 minutes stereo) can be recorded in a track.
- **Improved visual waveform gain system** for more consistent relative waveform display sizes
- **Added a new notification when an update is available on server**, check is done periodically when Aeros is not used
- **Added a new setting "Cancel Recording" to allow user to undo recording while recording or overdubbing by pressing Play/Stop All button** (recording and overdubbing will be undone). This is very useful for when a mistake is made and you wish to redo the recording.

Bug Fixes:

- Fixed song naming with mixed upper-case and lower-case issues. Songs can now only be named using Uppercase letters.
- Change Part in loop forgiveness zone with locked tracks, tracks drop out
- Next Track record command sent "on the beat" (loop forgiveness) causing audio desync when using the BeatBuddy
- Previous version song files showing song part icons incorrectly
- Changed when undo is done while in quantized mode from end of measure to immediately. If necessary, adds silence to track to meet sync length rules.

Firmware 3.4.2 Changelog

- **Add acceleration to the volume wheel to make large volume changes easier** (moving volume wheel faster has a larger effect on volume changes)
- **Factory reset added** to bottom of settings page (Erases All Content and Settings)
- **Don't reset lock tracks settings when clearing a song of recordings.** Allows starting same song over again faster
- **Block all Midi commands except : CC34, 35, 36, 85 and 127 when outside Loop studio.** Prevents unwanted playback when not in Loop Studio
- **Leave Loop Studio with a long press on play/stop button** (when song is empty)
- **Tap touchscreen to select track in mixer without moving volume slider.** This prevents unwanted volume changes when selecting a track. To move volume slider with the touchscreen, tap the slider a second time and drag it to the desired level
- **Low memory warning**

Bug Fixes:

- Error handling when memory is full
- Upcoming tracks not showing in count-in
- Count-in UI labels
- Count-in with midi clock logic
- Overdub/rec drop delay not working at low bpm
- Some button presses are ignored
- Footswitch buttons event logic
- Volume wheel snaps to 0 dB for 800ms when going up
- Increase volume slider 0 dB snap range to ±3 dB
- UI not syncing when record is canceled
- Toggling of pending overdub while transitioning part

Firmware 3.3.0 Changelog

- **Better volume control**
  - Volume can now be set to exactly 0 dB
  - Volume slider knob at 0 dB is light blue instead of white
  - Volume slider snaps to 0 dB (at ±2 dB)
  - Volume wheel more precise (0.5 dB increments)
  - Volume wheel buffer zone at 0dB (ignores up to 4 ticks, active for up to 800ms)
- **Song loading time optimization**
  - Removed smoothing filter on waveform
  - Modified the loading animation
- **Uncouple 'change song part' and 'stop' settings**
- Bug fixes: Various improvements to undone track logic

Firmware 3.2.12 Changelog

Locked tracks: A locked track will continue to play even when a song part is changed. There are two ways to lock a track: On the touchscreen, press the track clock circle. You will see a white square appear around the circle, indicating that the track is locked. To lock a track hands-free, in the mixer page, hold down the lower-left button to change the command of that button to "lock". Tap the button (not hold) to lock the selected track. To revert the lock track command back to the 'Exit Mixer' command without locking a track, hold the lower left button down again.

- **Locked track rules: In 2x2, you can only lock the top track. In 6x6 you can lock up to 5 tracks and you can only lock a track if the tracks before it are locked.** You can only lock tracks before recording a second song part. If tracks are locked before recording them, you must record all locked tracks before changing song parts. You can only unlock a track if the tracks after it are not locked and you have not recorded a second song part. While STOPPED with the empty part icon (+) selected, you cannot toggle through locked tracks, the selected track is the next empty track in this new part.
- **Pressing the last bottom track circle on the touchscreen opens the mixer page.**
- **Allow clearing the last part of a song when the looper is stopped by pressing the song part dot on the left side of the touchscreen.**
- **Operating system upgrade for improved WiFi connection stability**
- **Added user download test in Diagnostics screen**
- **Added error handling and Cancel button when downloading firmware from Wifi**
- **Lock user in Update page while downloading to prevent errors**

Bug Fixes

- Fixed tempo rounding by using floating-point instead of integer
- Fixed tempo shift when MIDI start from BB is used
- Fixed pending recording on next part getting canceled when switching song parts with both BeatBuddy and MIDI Maestro
- Fixed double tap muting when overdub is undone
- When stopped and selecting a part that already has tracks recorded, the next empty track is automatically selected

Firmware 3.1.18 Changelog

- **Added MIDI command responsiveness** for compatibility with MIDI Maestro Aeros Mode (see manual or forum for full list of supported MIDI commands)
- **Added MIDI IN/OUT Channel Select setting**
- **All track actions are now on down-press of the button for more accuracy.** This includes, record, re-record (on an undone track), overdub, play, mute, cancel mute, unmute, cancel unmute
- **Made Next Part command (lower left button) on down-press** (not release) while recording for more precise recording in freeform with 2x2 mode
- **Added Main Setting: Track Track button RPO/ROP.** This allows the track action sequence to either be Record/Play/Overdub (default) or Record/Overdub/Play which is useful for soundscape artists to capture the 'tails' of loops by going directly into overdub after recording
- **Base track for Sync Length setting is now the shortest track** in the song part instead of the longest in freeform mode for additional flexibility
- **Added system to limit audio by hard clipping** when merging audio to prevent distortion
- **Refactored crossfade system** to remove audio pops on audio recording 'edges' in all cases (applies to newly recorded songs)
- **Added sorting by date or title in songs menu** (current sort type saved in memory for next use)
- **Added SD card update dialog** when card is inserted and contains update file (aeros.bin)
- **Allow fast tap on RPO button when recording or overdubbing** toggles between overdub and play
- **Allow undo while recording with hold command** of track button or undo midi command. For quantized songs undo will happen at end of measure. If sync length setting is on, silence is added to the track to make it the proper length.

Bug Fixes:

- Allow saving settings from song edit screen
- Fixed move song to SD crash. Prevent moving of currently loaded song
- Fixed not having clicks in count-in when Aeros is a slave
- Fixed sync start setting following undone track when it is the only track in the song part. Now a new sync start point will be set when redoing the only track
- Removed extra midi tick when starting the looper which was throwing off the sync with certain time signatures
- Fixed solo on empty tracks
- Fixed scrolling song list with wheel
- Fixed click track during count-in
- Fixed MIDI record track when next part is pending
- Fixed MIDI mute/unmute while recording or overdubbing
- Fixed reload of song parameters when MIDI tempo or time signature changes
- Fixed audio pop caused by second overdub layer
- Fixed audio drop and sync issues caused by triggering playback or redo during forgiveness period
- Fixed audio files lost if powering off unit less than 1 second after saving song
- Fixed save to internal memory crash
- Fixed audio pop in freeform ROP
- Fixed MIDI record new track and new part when stopped
- Fixed mixer volume saving when volume is changed by scrolling
- Allow record new track MIDI command while transitioning to a new song part

Allow pending mute/unmute to take effect when they occur during a stop

Firmware 3.0.0 Changelog

- **Added quick start guide**
- Added cross fade on loop seams and quick fade in/out on start/stop to prevent audio pops
- You can now Undo with a hold command while overdubbing
- **Saving/managing songs on SD card is now available in song edit screen and song list screen** (Maximum SD card size supported is 32 GB)
- **Songs are now sorted in song list by last loaded order** (all SD card stored songs will be below internal memory stored songs in the song list screen after bootup)
- Songs can now be renamed again when editing song
- Added Memory Used to Stopped Screen: This is how much of the currently loaded song memory has been used (up to 20 minutes mono recording time available per song). Saving the song will merge the overdubs and free up more memory. This is not the total stored memory of all songs (which can be expanded with the SD card)
- Added low memory and out of memory warning dialog, shown for 5 seconds (can be dismissed with PLAY/STOP or lower left button)
- A**dded Sync tracks feature (start / length) in song settings:** Sync Start forces all tracks to start in the same place. Sync length will force all tracks to be a ratio of the longest track in the song part (indicated with a red circle around the track clock while recording) to keep all tracks in sync with each other. See the help text next to these settings for details
- **Added track offsets:** If sync start is off, the Aeros will now keep the relative differences between the start points of tracks after the Aeros is stopped or changes song parts
- **Added global setting: Change song parts/Stop song:** Immediate/End of Measure, End of Loop. This controls when song parts change and when Aeros stops playback after pressing the Stop All button. If End of Loop is enabled, song parts will change and playback will stop at the end of the longest loop in the currently playing song part, and you will see a blinking red circle around the longest loop track clock while this is happening. If the [Immediate/EOM] option is selected, Freeform songs will change/stop immediately and Quantized songs will change/stop at the End of Measure. The Next Part and Stop MIDI commands override this setting, so changing parts/stopping with the BeatBuddy will cause the Aeros to respond immediately to keep both units in sync.

- **New Setting:** Mute Immediately, End of Measure, End of Loop. This is for muting a track with a double tap. Muting in the mixer screen is always immediate.
- **Added "Mute All" option to mixer screen when no tracks are muted**
- Aeros now resets mixer volume levels to neutral after clearing a song by holding down Play/Stop ALL button
- **New Setting:** Record songs in Mono/Stereo (set when starting a new song)
- **New Setting:** Play audio in Mono/Stereo (main settings)
- **New Setting:** Play/Stop All button on press/release. Previously this button was active on release, it is now active on press, which makes it more immediate, but will cause a small amount of sound to be played when holding it down while stopped to clear a song. You can change it with the setting
- Next Track button in 6x6 mode now works on downpress instead of release
- Enabled single note time signatures (1/4, 1/8) so songs can be quantized to the beat instead of the measure
- **Tap tempo now follows time signature note type instead of always quarter notes**
- Reduced forgiveness lag from 500ms to 300ms. This is the time of a button pressed after the measure line triggering at the passed measure line.
- Allow Main Input to not be routed anywhere. This was requested by users who use a mixer going into the Aeros and want to prevent a 'phasing' effect.
- **Song is now only loaded when entering loop studio screen upon boot up to prevent long boot up time**
- Refactored Audio block processing for additional stability
- **Made Play/Stop All button work as exit from all screens**
- Click is now audible in both main out and aux out during Count In
- Added Screenshot function: MIDI message CC127:127 will save a screenshot to the SD card
- New system to create log files on the SD card if Aeros crashes/freezes. In the rare case that the Aeros crashes, please email the crash log files to support@singularsound.com

Bug Fixes:

- Close loop at forgiveness point: Audio will be captured during the forgiveness period (up to 300 ms) and added to the loop to prevent loop 'holes' when pressing the button shortly after the measure line. (NOTE: The waveform in this section will not be visible but the audio is present)
- Limit keyboard input to numbers and letters for first character of song name, to prevent empty song bug
- Allow spaces in song name
- Automatically delete transient overdub when muting with double tap
- Muting with double tap will now not merge the overdub and base layer
- Mixer now has track selected that was selected in loop studio
- Fixed cancel recording on undone track making the measure lines disappear
- Stability improvements on song parts. Fixed BeatBuddy next part crash.
- Fixed crash when saving long songs
- Fixed save button not working bug
- Fixed song with no name being created bug
- Fixed lost audio tracks after renaming song
- Fixed crash caused by touching the screen while deleting song
- Fixed: Cue recording with Next Track in 6x6 while recording and then cancel cue caused currently recording track to stop recording
- Fixed Click Track Lag

2.13.2 Changelog:

- Added basic cross fade on loop seams and fast fade in/out on start/stop to prevent audio 'pop' when making big audio transitions

Bug Fixes:

- Bug that cut off parts of recorded loops
- Bug that kept last song from being saved properly

2.13.1 Changelog:

- **Aeros will now start at the End of Measure** if receiving MIDI Clock
- **Added Setting** to control what Aeros does when it receives **MIDI Start Command: Record, Playback**
- **Removed measure number in track clock** during count in

KNOWN BUG: All the startpoints of the loops get aligned when Aeros is stopped, even if they were not aligned when recorded. (This bug is also present in previous non-beta firmware versions and should be fixed soon)

Firmware 2.12.2 Changelog:

- **Added Freeform mode** (see known bug below)
- **Re-sync system:** Aeros now follows BB midi clock. This corrects any 'wavers' in the master MIDI clock to resync the beginning of the Aeros loop playback to the beginning of the measure.
- Made recording measure **count number in track clock bigger** for easier visibility
- **Added Line-in impedance setting. Sets the input sensitivity:** Instrument level (1M Ohms impedance) vs Line level (50k Ohms impedance) Instrument level is about 10% more sensitive than Line level.
- **Added more WiFi statuses** in the home screen to indicate if internet and server connection are successful.

Bug Fixes

- Fixed signature 2/4 not accepted
- Fixed info box message for "click after recording first track"
- Fixed recording count starting at 1 during a cue of recording.

KNOWN BUG: When using freeform, all the startpoints of the loops get aligned, even if they were not aligned in the first place.

Firmware 2.11.1 Changelog:

- **Added undo/redo** while the Aeros is stopped
- **Added scrolling through pages** (such as song list) with Volume Wheel
- **Added button navigation** for scrolling and selecting songs in song list
- **Added measure count number** in track clock while recording a new track
- **Added setting to turn off click after first track** has been recorded
- **Added automatic save of song parameters** when creating/editing a song .New songs will automatically start with the last settings used
- **Extended master volume display time** to 3 seconds after no movement of Volume Wheel
- **Added automatic save of song parameters when creating/editing a song.** New songs will automatically start with the last settings used
- **Added image integrity verification during boot up to detect corrupted software.** This should prevent the bug where 6x6 does not work and songs can't be saved

Bug Fixes:

- Fixed when the 6th track is muted and song part change command unmutes it instead of changing song part
- Undo is now recognized as a change and activates the save song button
- Count-in now only active when recording the first track in an empty song part
- Fixed song title, time signature and tempo not being updated to the Stopped screen

2.10.0 Changelog:

- **New Stopped screen:** When the song is stopped, a new screen is displayed. This includes info about the song, the input signal meter (useful to test your instrument's signal level before recording to avoid clipping), and buttons to edit the song, go to the home screen, start a new song, and save the current song.
- **Changed to Manual Save:** Previous versions of the firmware saved the song automatically every time the song was stopped. This caused some delay as the song was being saved so the Aeros could not be started again immediately. With the new manual save system (you must press the save button on the stopped screen to save the song), you get to choose when the song is saved. Saving a song merges all overdubs with the base tracks, which frees up more memory for more recording in the song.
- Added pop-up when attempting to exit Loop Studio screen without saving changes (changes are still present, but could be lost if another song is loaded or device shut down)
- **New track clock graphics:** Undo overdub vs undo entire track. If only the overdub layer is undone, the track clock will have a small hole. If the entire track is undone, the track clock will have a large hole. You can undo and redo both layers by holding down the RPO (Record/Play/Overdub) button – first the overdub will undo (if it exists), then continue to hold to undo the base layer. Hold and continue to hold to redo.
- **Increased next track forgiveness** to 1.5 seconds: If you tap the next track in 6x6 mode and accidentally start recording a new track, tapping it again within 1.5 seconds will delete the accidentally recorded track and move you to track 1.
- **Changed the active song part to have a blue square around it:** Previously, the currently playing song part was missing a blue square while the non-playing song parts all had blue squares around them. This new design is easier to see.
- **Added 0.5 second forgiveness lag for End of Measure commands:** Now if you miss the end of measure by 0.5 seconds or less when recording or changing song parts, Aeros will behave as if you triggered the command on the End of Measure that you missed. This allows you to trigger commands on the End of Measure line, without having to worry that you'll miss it.
- **Fixed 6x6 cancel recording:** When using a count-in to record in 6x6, the 'Cancel Record' command was not working. This has been fixed.
- **Fixed white lines location in mixer** that show the neutral position of the volume sliders.
- Temporarily removed the capability to edit the name of a song, since this was causing the audio files to be deleted. Song name edit capability will be enabled once this bug has been fixed.
- **Added saving of undo state: If you undo a track, it will remain undone, even if you save the song and load it again later. Undone overdub layers will be deleted.**
- **Fixed bug:** When stopping Aeros during recording (instead of pressing 'Play' to capture the loop), only the first measure was captured. Now the entire recording is captured.
- **Restored master volume to default** neutral level after loading a new song. Previously master volume was at the level it was last set to.
- **Added Wifi Status** on Home Page so you can quickly see if you're connected to Wifi.
- **Added Unmute All button** command when master volume is selected in mixer

If you find a bug in the firmware, please report it to us by emailing us at support@singularsound.com

Crash Log: If your Aeros crashes while using an SD card, the Aeros will save a log of that crash to the SD, which you can email as a zipped file to support@singularsound.com. This will help us understand what happened, and work to fix the issue.