



AEROS

loop studio

Manual
Firmware 4.3.1

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INTRODUCTION

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

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.

There are three ways to navigate your Aeros: The touch screen (just like your smartphone), the wheel, and the footswitches.

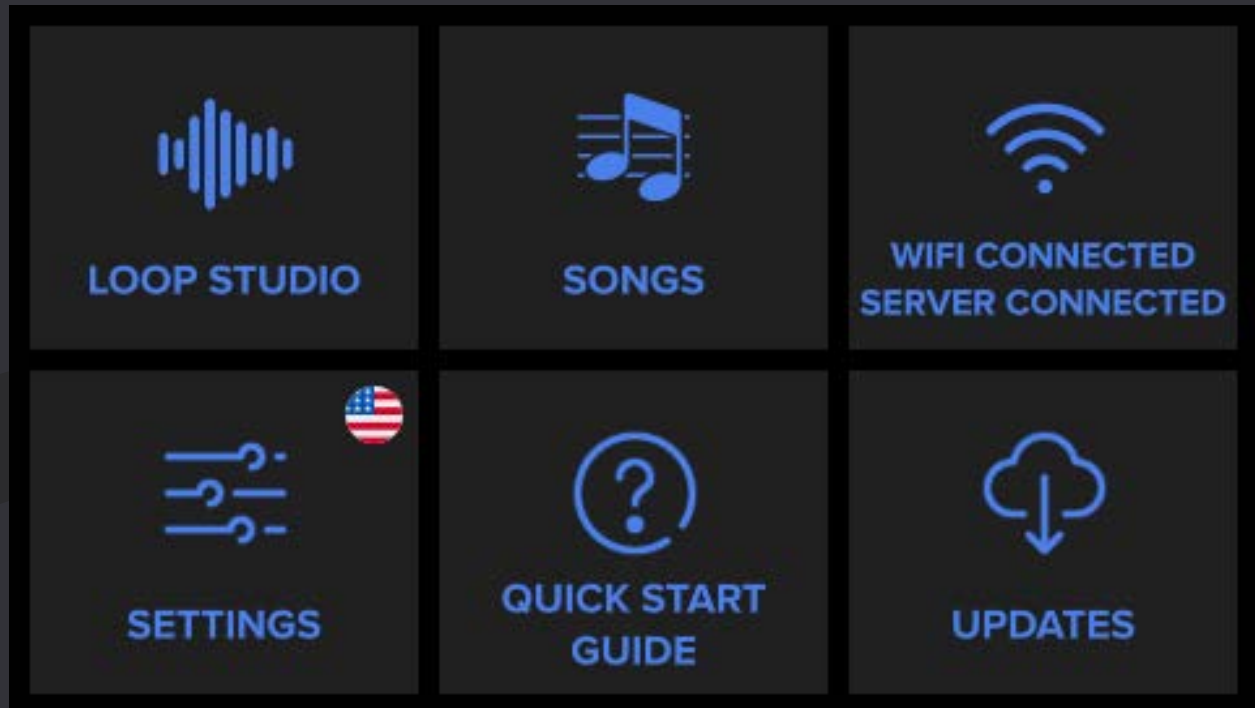
You can always tell what the three bottom footswitches do by reading the on-screen labels — this will come in handy when looping! The PLAY/STOP ALL footswitch and the VOLUME WHEEL do not change functionality during playback.



Note: The on-screen labels only show the single press commands. Hold commands and double tap commands do not change, and therefore do not need labels. These commands are discussed in “2x2 Controls” and “6x6 Controls”.

HOME SCREEN

When you turn on your Aeros, you will start in the Home Screen. From here you can access different areas.



LOOP STUDIO - Where masterpieces are created. It will load your last saved song automatically.

SONGS - Load your saved songs, either from internal memory or an SD card.

WIFI - Connect to your wireless internet network.


SETTINGS - Change settings that are applied Aeros-wide (to all songs).

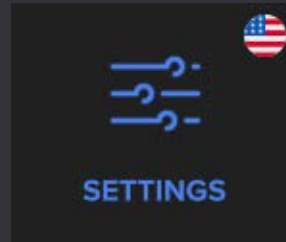
QUICK START GUIDE - Familiarize yourself with the basics.

UPDATES - Check here to see if we've released new features. You must be connected to WiFi internet.

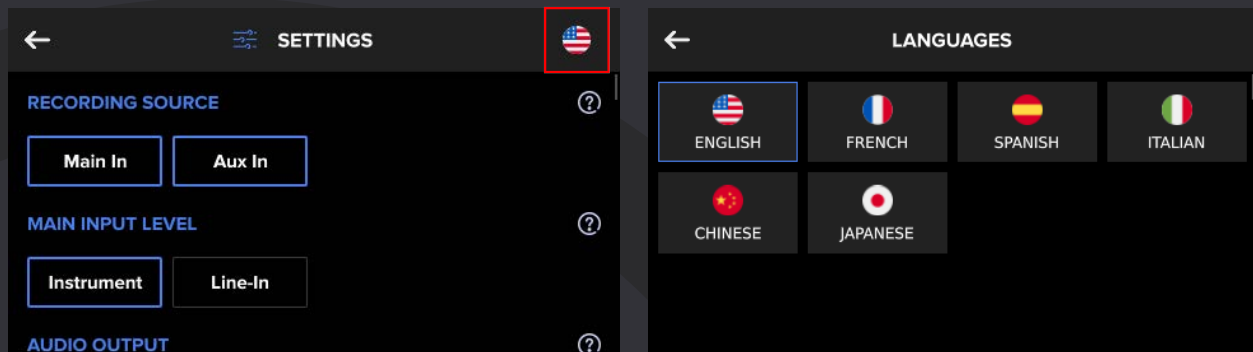
Choose a language!

After turning on the unit, 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 6 current language options:

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

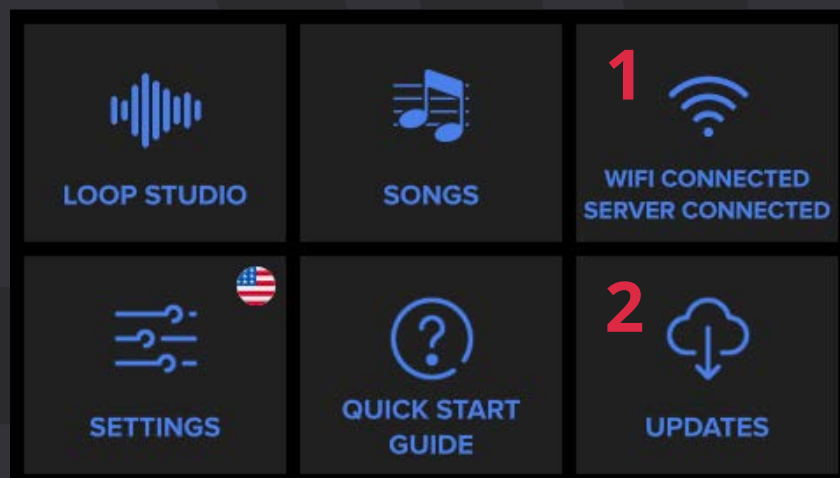


Note: this is available as of version 4.2.4.



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.50](#) in General Tech Information for troubleshooting info.*

You can also update/downgrade the Aeros using an SD card (MDOS Fat32 formatting is necessary, class 10 is recommended). **Note: Your SD card CANNOT be a micro-SD in a converter, micro-SD cards DO NOT function on the Aeros.** Your SD card can be a maximum of 32GB. Simply download the aeros_x.x.x.bin file and edit the name to be "aeros.bin" before adding it to your SD card. Then, you have two choices:

1. Power off your unit, insert the SD, and power the unit back on, the Aeros will update automatically before start-up. WARNING DO NOT insert the SD, then turn off the Aeros, as this corrupts the update file.
2. (If on 3.0.0 or later) Insert the SD, go to 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, a pop-up to update will appear if on the Main menu or updates screen, select "yes" to update.

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.

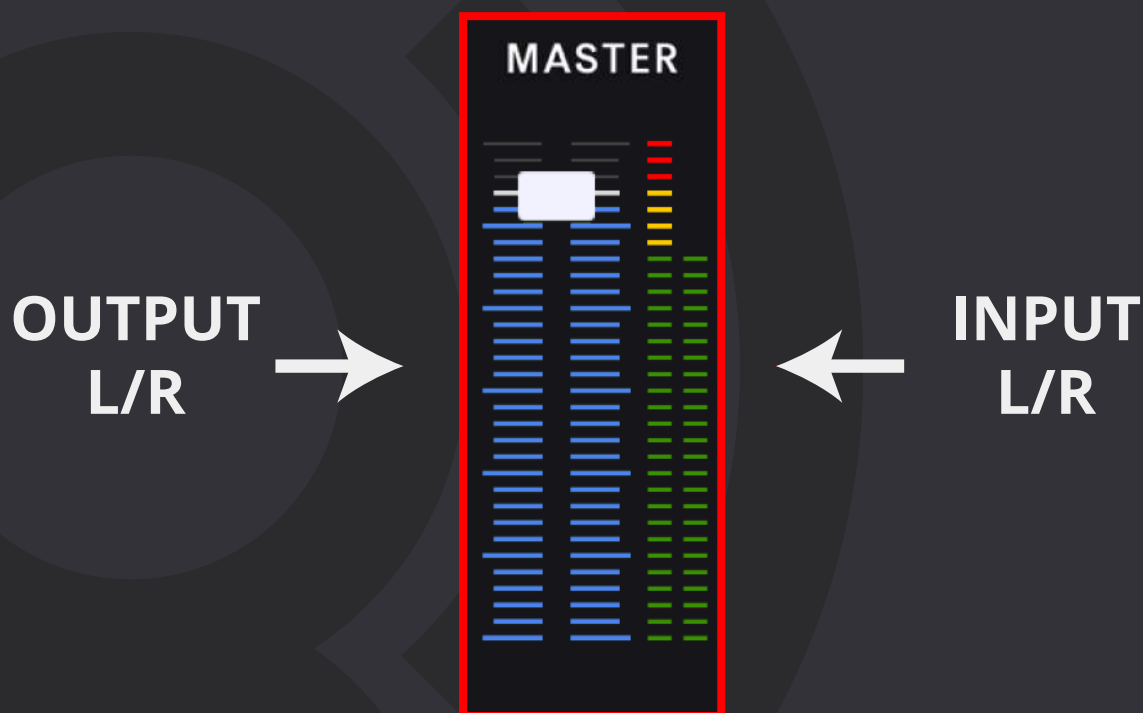
The Aeros also has a stereo Aux In audio input that you can plug an additional instrument into. To record from this source, see the main settings. You must use a TRS (tip-ring-sleeve) cable to achieve a stereo input signal.

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

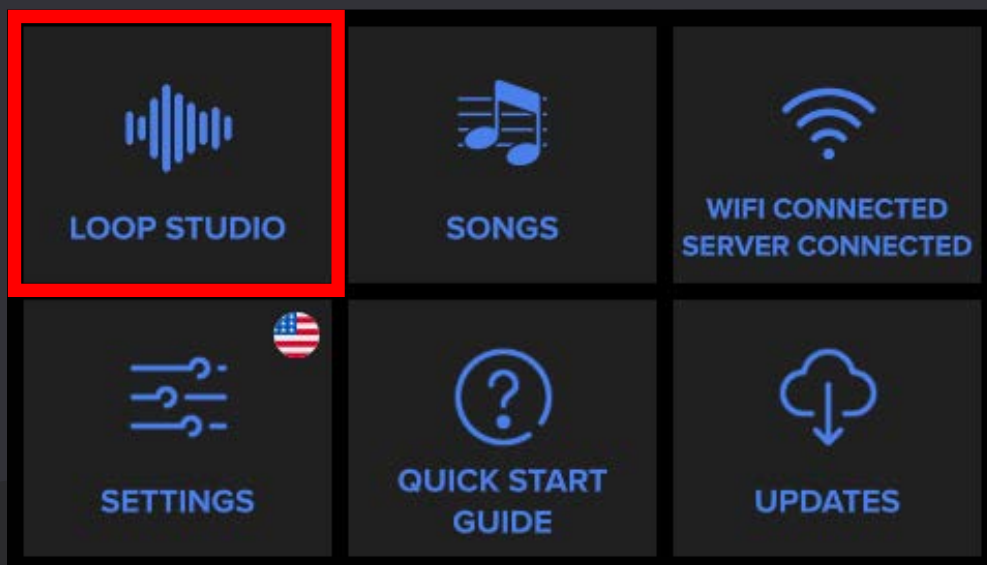
Signal levels:

Before you start recording, play your instruments at the loudest expected level in the loop studio. The signal meter will appear on the right side. If the signal reaches the red level, turn down your instrument to prevent clipping. The volume wheel only controls the output level, not the input level.

You can set what inputs are displayed on the VU in the Device Settings ([pg.27](#)). The VU meter can show either the Main inputs or the Aux In.



To start looping, press the Loop Studio icon or press the Play/Stop All button from the main menu.



Your last saved song will load automatically. (If you have no saved songs, a new empty song will be loaded).

STOPPED SCREEN

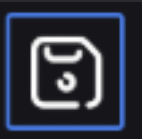


When you go to the Loop Studio, your song will be stopped. From here you can use the footswitches to record a new track or resume playback (if you already have tracks recorded in this song). We discuss these options in [2x2 Controls \(p. 12\)](#) and [6x6 Controls \(p. 15\)](#).

You can also press the icons on the screen to do the following:



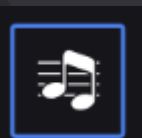
Edit Song (including any of the song-specific settings)



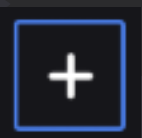
Save Song



Home Page

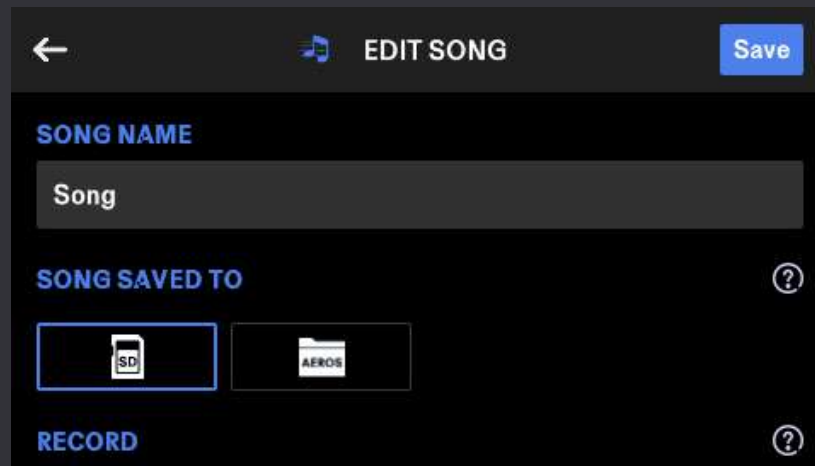



Song List



New Song

NEW SONG PAGE

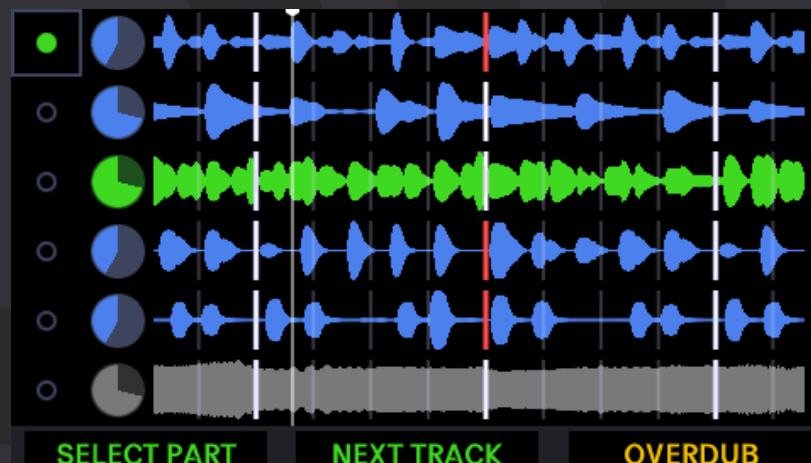


There are many settings available when creating a new song, press the  icon on the far-right for an explanation of the setting. We discuss these options in the [“SETTINGS”](#) section of this manual. The default settings work for most people, and you can start looping right away without changing anything if you wish.

Here's some information to start you out:

The Aeros Loop Studio is the first looper pedal to allow parallel tracks (loops that play at the same time as each other) and **song parts** (groups of parallel tracks that you can switch between.)

Parallel tracks are represented by clocks and waveforms, and song parts are represented by dots. The song part and track that is currently selected will be indicated by the color green.



There are two basic modes you can loop with: 2x2 and 6x6.

- In 2x2, you have two song parts each with two parallel tracks, for a total of four unique tracks.
- In 6x6, you have six song parts each with six parallel tracks, for a total of 36 unique tracks.



The controls are different when using 2x2 and 6x6.

In 2x2, each parallel track has its own footswitch, and a single press on the Select Part button changes song parts, whereas in 6x6, you must first select the track or song part before you perform an action. It's a small trade-off tied to the amount of unique tracks you have available.

We recommend you try both modes and see what fits your style, or master both to get the most out of your Aeros in any situation!

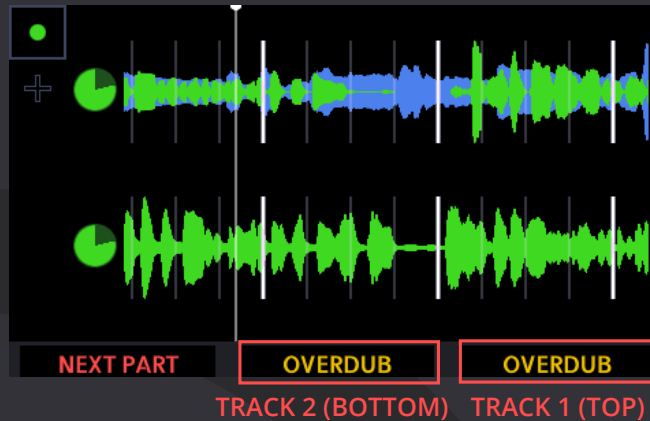
In 2x2, you have two song parts each with two parallel tracks, for a total of four unique tracks.

TRACK 1 and TRACK 2

Track 1 and Track 2 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 Device Settings menu (see Settings [pg.29](#)). RPO is the default setting.

RPO SINGLE TAP:

- Record (if track or song part is blank)
- Playback recording
- Overdub
- Playback overdub



ROP SINGLE TAP:

- Record (if track or song part is blank)
- Overdub
- Playback overdub

DOUBLE TAP:

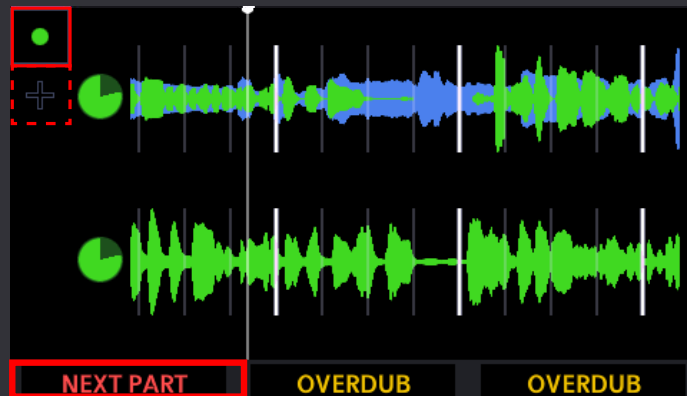
- Mute (happens immediately, End of Measure or End of Loop. See [pg.30](#) for mute settings)
 - Single tap to unmute
 - If Mute / Unmute Fade is enabled in the Device Settings ([pg.27](#)), the track will fade out and then mute or unmute and fade in. These volume changes are animated in the mixer.

HOLD:

- Undo most recent layer
 - Continue to hold undo second layer (if it exists)
 - If you have undone all layers, single tap to overwrite track
- Redo most recent layer
 - Continue to hold to redo overdub (if it exists)
- (While recording) Cancels and undoes the recording on current track. If Sync Length is on (see Song Settings [pg.25](#)) Aeros will add silence to meet the length rules. If in quantized mode, the track will undo and add silence at 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 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. *Please note: the single overdub layer **does** contribute to total memory used in a song. Read more about overdubs in General Technical Information [pg.50](#).*

NEXT PART



SINGLE TAP:

- Changes between song parts. If the song part already has a recorded track in it, it starts playback of the next part; otherwise, it starts recording.

HOLD:

- Opens the Mixer

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.
- Resumes playback of all tracks.
 - You can select different song parts and tracks while the song is stopped. Pressing the Action button will start overdubbing or recording the selected track.
- If the Fade In and/or the Fade Out setting (See Device Settings [pg.27](#)) are enabled, the track will Fade in when starting or Fade out when stopping, respectively.

DOUBLE TAP:

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

Hold (when stopped) :

- Delete all tracks and song parts and start the song over.

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

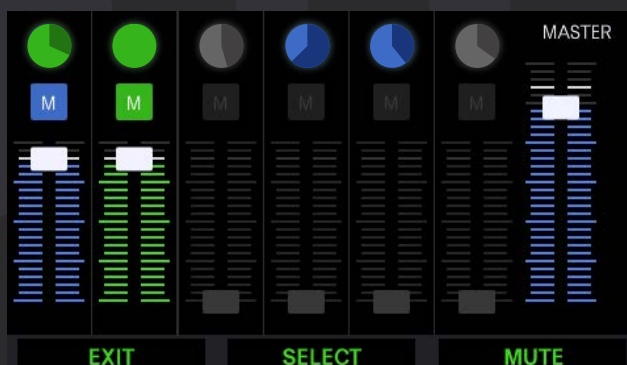
VOLUME WHEEL

Use the volume wheel to control the master output volume at any time. This can also be done using an expression (EXP) pedal, read more about how to calibrate your pedal on [pg.50](#) in the General Technical Information section.



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.



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

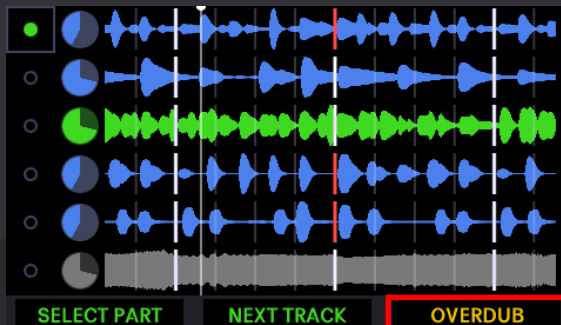
In 6x6, you have six song parts each with six parallel tracks, for a total of 36 unique tracks.

TRACK BUTTON

The Track Button (lower right) executes actions on the selected track or song part. Selected items are indicated by 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 Settings [pg.29](#)). RPO is the default setting.

RPO SINGLE TAP:

- Record (if track or song part is blank)
- Playback recording
- Overdub
- Playback overdub



ROP SINGLE TAP:

- Record (if track or song part is blank)
- Overdub
- Playback overdub

DOUBLE TAP:

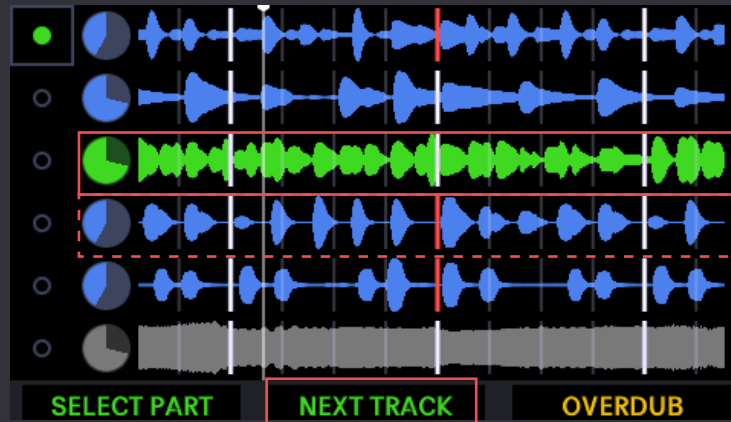
- Mute (happens Immediately, End of Measure or End of Loop. See [pg.30](#) for Mute settings)
 - Single tap to unmute
 - If Mute / Unmute Fade is enabled in the Device Settings ([pg.27](#)), the track will fade out and then mute or unmute and fade in. These volume changes are animated in the mixer.

HOLD:

- Undo most recent layer
 - Continue to hold undo second layer (if it exists)
 - If you have undone all layers, single tap to overwrite track
- Redo most recently undone layer
 - Continue to hold to redo overdub (if it exists)
- (While recording) Cancels and undoes the recording on current track. If Sync Length is on (see Song Settings [pg.25](#)) Aeros will add silence to meet the length rules. If in quantized mode, the track will undo and add silence at the next measure, if in freeform mode it will do so immediately.

Overdubs: You can have unlimited stacked overdubs, but 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. *Please note: the single overdub layer does contribute to total memory used in a song. Read more about overdubs in General Technical Information [pg.50](#).*

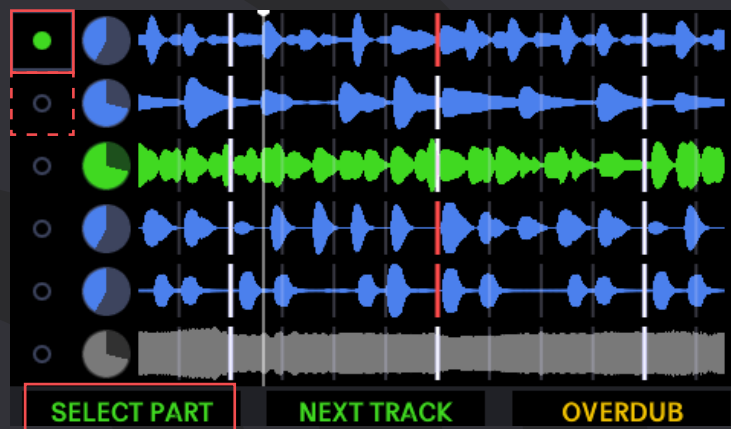
NEXT TRACK



SINGLE TAP:

- Selects next track
 - If selecting an empty track, it will automatically start/cue a new recording.

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 the song part.

HOLD:

- Opens the Mixer

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.
- Resumes playback of all tracks.
 - You can select different song parts and tracks while the song is stopped. Pressing the Track Button will start overdubbing or recording the selected track.
- If the Fade In and/or the Fade Out setting (See Device Settings [pg. 27](#)) are enabled, the track will Fade in when starting or Fade out when stopping, respectively.

DOUBLE TAP:

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

HOLD (when stopped) :

- Delete all tracks and song parts and start the song over.

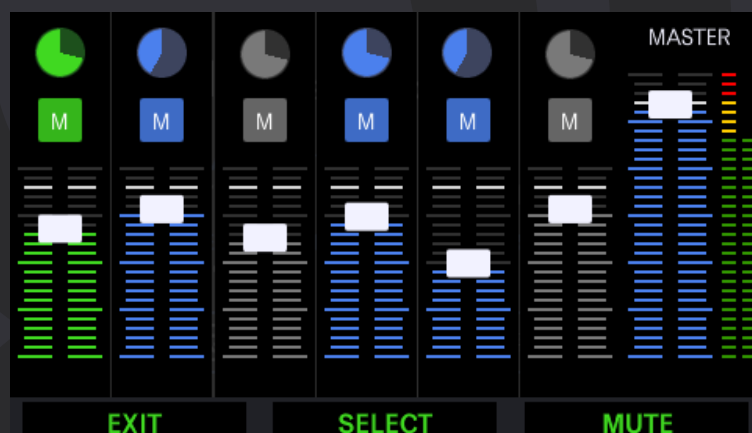
PRESS/RELEASE: In Main Settings, set whether the Play/Stop All button reacts on the press or on the release of the button. Press is more immediate, however, holding to delete all tracks while stopped will start playback of the song for a few seconds before the delete command is enacted.

VOLUME WHEEL

Use the volume wheel to control the master output volume at any time. This can also be done using an expression (EXP) pedal, read more about how to calibrate your pedal on [pg.50](#) in the General Technical Information section.

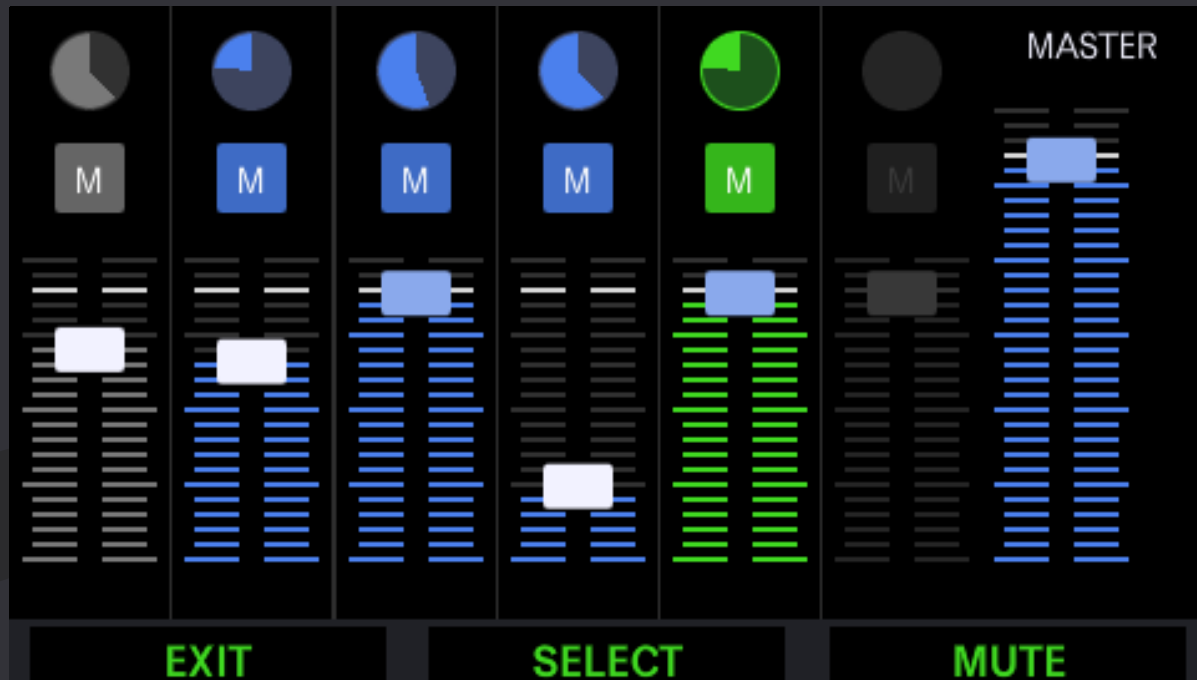


The thin bars on the right show the L and R input volume levels. If the bars are red you are clipping and should lower the volume of your instrument.



In the Mixer: You can use the volume wheel to control the relative volume levels of each track.

To open the mixer, hold the NEXT PART button or tap on the last track clock on the Loop Studio screen.



Tracks in the current song part will be visible, ordered from left to right. You can touch to adjust their relative volume or mute individual tracks. You can also mix hands-free: select tracks with the middle button and adjust the relative volume with the volume wheel. Mute or unmute with the right button. Exit 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.

LOCKED TRACKS

A locked track will continue to play even when a song part is changed. Any change you make to this Locked Track will be shown in all parts, which means overdubs, undo/redo, mute, volume changes, rerecords, and pretty much any change that you can make to a track will be shown in all parts on that same track.

Tracks can be pre-locked, meaning the tracks can be locked before actually recording.

There are two ways to lock a track

- On the touchscreen, press the track clock circle from either the mixer or the Loop Studio screen. You will see a white square appear around the circle, indicating that the track is locked.
- To lock/unlock 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.
- You cannot lock tracks using the touchscreen if the current song part is not selected or while transitioning to a different song part.

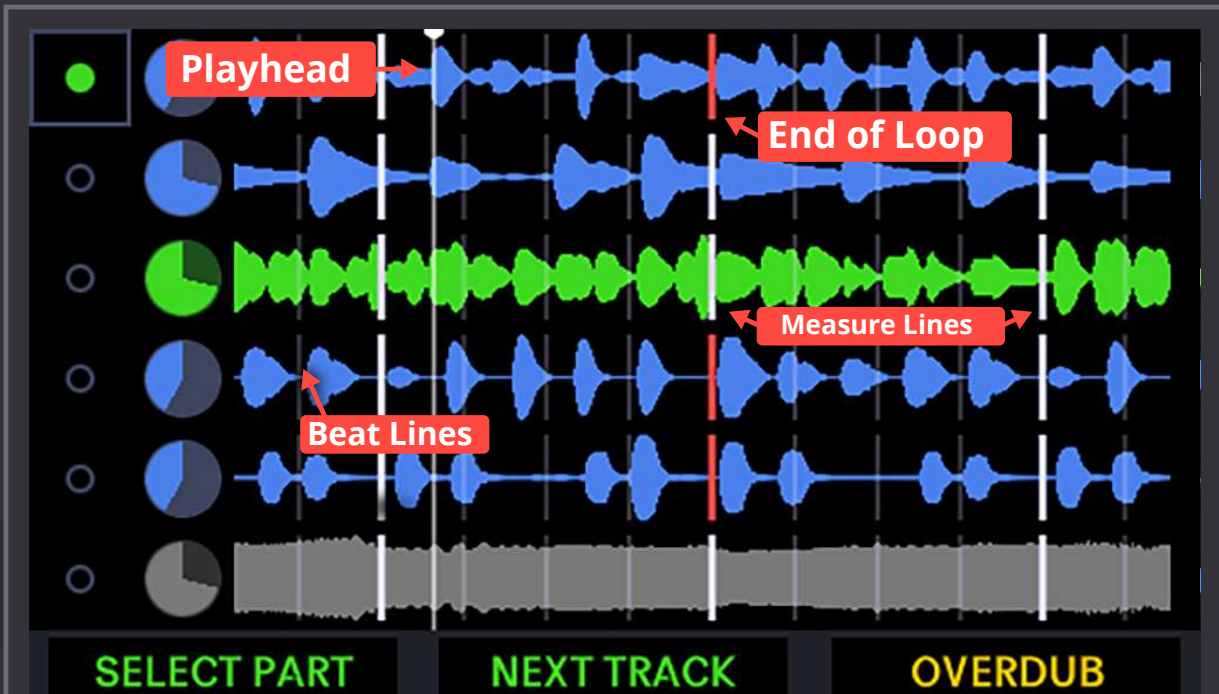


In this image, the Aeros has the top track, Track 1, locked. That means it will be in every song part. All changes made to the track will be reflected in every part of the song.






Closeup of locked track clock.

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







	<p>Red Waveform: Currently recording new track</p>
	<p>Green Waveform: Currently selected layer</p>
	<p>Blue Waveform: Layer is currently playing, but is not selected</p>
	<p>Yellow Waveform: Currently recording overdub</p>
	<p>Gray Waveform: Muted track</p>
	<p>Faded Waveform: Layer is undone. Undone layer can be brought back or overwritten</p>
	<p>Purple Waveform: The track is currently reversed</p>

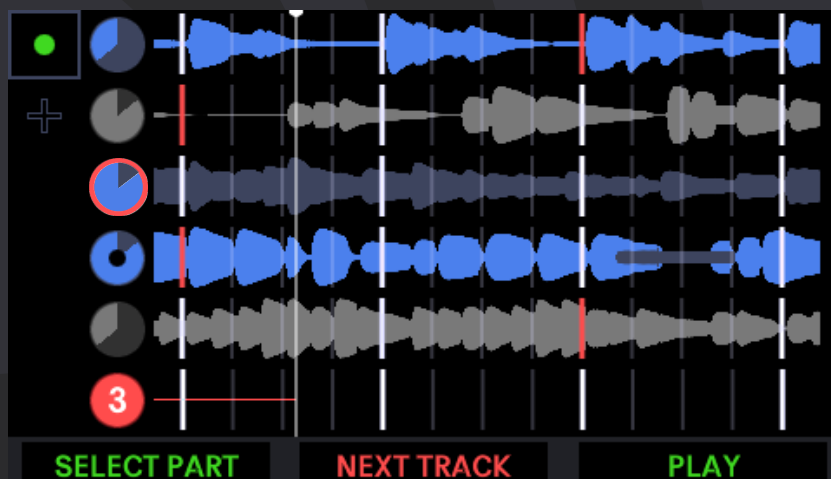
TRACK CLOCKS

Track Clocks show how much time has elapsed in one loop. The Shaded portion of the Track Clock represents the part of the loop that has already played, the lighter portion represents the time remaining in the track.

	Solid Red Circle: Indicates the base track while recording (current longest track in a song part) if Sync Length setting is enabled see pg.26 . This is to show which track is setting the length rules.
	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 a hole: This track has a layer that is undone. Undone layer can be brought back or overwritten.
	Clock with a 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.
	Clock 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 Device Settings pg.27) 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.26). 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 on [pg.5](#).

The settings are divided into two categories.

1. **Song settings** are settings that are saved to a single song. Once you record using song settings, you cannot change them. The exceptions are editing the song name, the location saved, and count in settings. This is accessed through the edit icon in the loop studio screen.
2. **Main settings** can be changed at any time, and will apply to every song. This is accessed through the Settings icon in the home screen.

SONG SETTINGS

Song Name: Edit the name of your song at any time.

Song saved to: Save this song to either the internal memory of the Aeros or to an SD card. (Max SD card size is 32GB)

Record: Sets how the audio will be recorded to the Aeros.

- Mono: Both Left and Right Audio inputs are summed (combined) into mono audio, doesn't affect live monitoring/playback from Aeros.
- Stereo: Audio is separated into L/R channels of recorded audio, doesn't affect live monitoring/playback from Aeros.

Number of tracks: How many song parts and parallel loops in each song part there are. 2x2 gives you 2 song parts with 2 parallel tracks each. 6x6 gives you 6 song parts with 6 parallel tracks each. 2x2 gives you immediate access to the tracks and song parts, while in 6x6 you need to select a track or song part before you activate it.

Sync Track Features

- Definition: “Base Track”: The current longest loop in the song part when in Quantized mode. In Freeform mode (non-quantized), the base track is the shortest loop in a song part.
- Sync Length: After 1st 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 given. 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 & Length: In addition to the Sync Length rules above, after 1st track is recorded in a song part, all new recordings will begin at the next start of the longest track loop in the song part.

Quantize to measure: Starts and ends recording at the beginning/end of the measure. This requires a BPM and time signature setting (With BeatBuddy connected [MIDI Sync On], BPM and Time Signature will be set automatically). If this is off, song will be in Freeform (non-quantized) mode. This only refers to quantization of the start and end of loops to the measure, the Aeros does not alter recorded audio and correct it to be in time.

Time Signature: The left number is how many beats in a measure, the right number decides which note gets the beat (quarter notes, eighth notes, etc.)

Tempo: Speed of the song. How many beats per minute (BPM).

Count in: How many measures of clicks before the Aeros begins recording. Count in is only active when recording the first track in a song part while Aeros is stopped.

MIDI Song Select: Turn this ON to allow MIDI song selection and set the MSB (CC:0) and PC commands that will open this song.

- Sending the command when a song is open will cause this song to reload.
WARNING: you would lose any unsaved content if you did this! This is a convenient way to delete all changes since you last saved the song
- The LSB (CC:32) layer is ignored for better integration with the BeatBuddy

DEVICE SETTINGS

The following settings are found in the Settings menu which can be accessed from the Main Menu start up screen. All default settings will be marked with an asterisk ().*

Recording source: Selects which input is recorded. You may select one or both:

- Main In*
- Aux In

Device Language (upper right hand side of screen): Sets the system language, the Aeros must reboot to finalize the change in language.

- English*
- French
- Spanish
- Italian
- Japanese
- Chinese

Audio Output: Sets whether audio is monitored in Stereo or in Mono.

Note: There must be at least one recording source.

Main Input Level: Sets the impedance for the inputs. Instrument level is about 10% more sensitive than Line level.

- Instrument (1M Ohms impedance)*
- Line in (50k Ohms impedance)

Audio Output: Sets whether audio is monitored in Stereo or in Mono.

- Mono: Audio plays back summed into mono from each output channel. (**Warning:** Stereo monitoring, like with headphones, when using this setting will cause audio to seem twice as loud because the entire signal is sent out both left and right channels, instead of splitting it between them)
- Stereo: Audio plays back split in L/R channels.*

Loop playback routing: Selects where the Loop Playback is sent. You may select one or both:

- Main Out*
- Aux Out

Note: The loop playback must be sent to at least one output.

Main input routing: Selects where the live sound going into the Main Input is sent. You may select one, both, or neither (the ability to use neither was requested by users who use a mixer going into the Aeros and want to prevent a 'phasing' effect):

- Main Out*
- Aux Out

Aux In Routing: Selects where the live sound going into the Aux In is sent. You may select one, both, or both:

- Main Out
- Aux Out*

Click Routing: Selects where to send the Click track. You may select one, both, or neither (default):

- Main Out
- Aux Out

Click after recording first track: Determines if click will playback always or only while recording the first track in each song part. If setting is off will only be audible on first recording pass (Note: if click isn't routed to either output you won't hear it).

- On*
- Off

Tip: By routing the click to the Aux Out, you can connect a separate speaker to the Aux Out so you only hear the click while the audience hears the Main Out.

Click Volume: How loud the click track is played. (Default value is 50)

VU Meter Source: Selects which input is used by the VU meter

- Main Input
- Aux Input

MIDI IN Start: Sets how the Aeros responds to a MIDI Start message, you can choose one, both, or neither, though at least one is recommended.

- Record (only will record if there is no tracks present in the song part)*
- Playback (will start playback if there are tracks present in the song part)*

Cancel Recording: If enabled, this setting allows the user to cancel the current recording or overdub by pressing the Play / Stop All button. This is helpful to quickly undo a track while recording using only one tap instead of holding the Track ROP button. The layer of the current recording will be immediately undone so a re-recording can be initiated immediately by using the track's (RPO/ROP) button.

Stop Song: This controls when the Aeros stops playback after pressing Stop All. If End of Loop is enabled, playback will stop at the end of the longest loop in the song part. If End of Measure is enabled, Freeform songs will stop at the end of the longest loop in the song part, and Quantized songs will stop at the end of the measure. If Immediate is enabled, both Freeform and Quantized songs will stop immediately.

- Immediate
- End of Measure*
- End of Loop

Stop Fade Out: This enables volume fade out after a Stop event is queued. The volume will decrease until the stop occurs. Read more about fades on [pg.55](#).

- On
- Off*

Start Fade In: This enables a volume fade in after a Start event. The volume will increase until the End of MEasure or End of Loop depending on the Stop Song setting. Read more about fades on [pg.55](#).

- On
- Off*

Change Song Part: This controls when the Aeros song parts change after a transition is initiated. If End of Loop is enabled, the song parts will change at the end of the longest loop in the song part. If End of Measure is enabled, Freeform songs will change parts at the end of the longest loop in the song part, and Quantized songs will change parts at the end of the measure. If Immediate is enabled, both Freeform and Quantized songs will stop immediately.

- Immediate
- End of Measure*
- End of Loop

Mute/ Unmute Track: Sets when the Mute/Unmute command (double tap to mute, single tap to unmute) will be triggered after being given. Muting from the mixer screen will always be immediate. If no tracks are muted, selecting the master volume from the mixer view will give the option to “Mute All”. If at least one track is muted, the option will be to “Unmute All”.

- Immediate: Immediately triggers the mute/unmute on a track once mute command is applied.
- EOM (End Of Measure): Waits to trigger muting/unmuting until the end of the currently playing measure.*
- End of Loop: Waits to trigger muting/unmuting until the end of the loop.

Mute / Unmute Fade: This enables volume fade out when queuing a mute event and fade in when queuing an Unmute event. The volume will decrease until the Mute event occurs or increase until the Unmute event occurs. Read more about fades on [pg.55](#).

Play/Stop All Button: Sets whether Play/Stop All Button responds to the press or the release of the button.

- On
- Off*
- Press: Play/Stop All responds to commands as soon as you press the button, 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.*
- Release: Play/Stop All responds to commands as soon as you release the button.

Track Button Action: Chooses the order of commands when pressing the Track Button.

- RPO: Record, Play, Overdub*
- ROP: Record, Overdub, Play (this is preferred by soundscape looping artists to capture the 'tails' of loops)

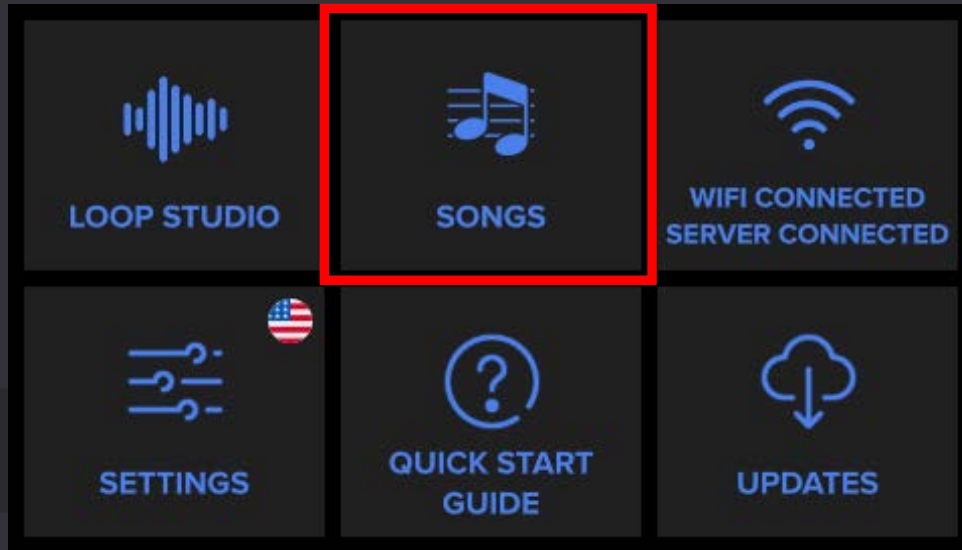
MIDI IN Channel: Sets the MIDI channel that the Aeros is listening to. Choose either All or an individual MIDI channel (1-16). Default is All channels.

MIDI OUT Channel: Sets the MIDI channel that the Aeros sends MIDI commands on. Choose from MIDI channels (1-16). Default is channel 1.

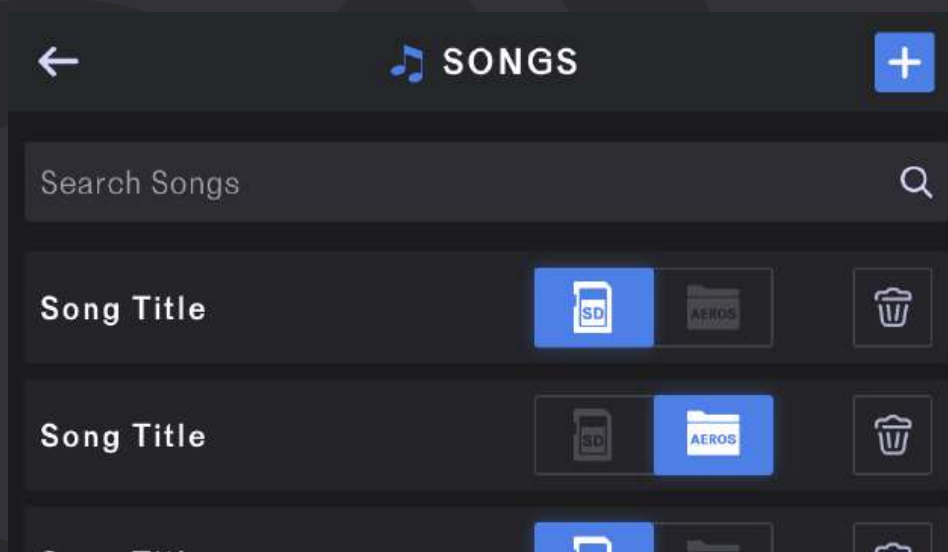
Hit "Restore Default Settings" to reset Aeros to factory global settings.

Loading Songs

In the Home Screen, you can find your songs by pressing the Songs icon.



You can scroll through your songs, search for them in the search bar, or start a new song by tapping the “+” icon in the upper-right corner.



Tap any song to load it. You will find yourself back in the Loop Studio with the song you chose.

Managing Files

Songs that are stored in the internal memory of the Aeros will be indicated by the blue Aeros folder icon. Songs that are stored in an SD Card (if that SD card is currently inserted into your Aeros) will be indicated by the blue SD Card icon.

You can move your songs between internal memory and an SD card by tapping the icon of where you want to save your song.

To delete a song, tap the Trash Can icon (the currently open song cannot be deleted from the Songs List).

Exporting Files

Exporting WAVs via SD: When a song is saved to SD, 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 36 samples from the **end** of the WAV file.*

Read more about this in the General Technical Information section on [pg.50](#).

Memory

As of v4.0.0, the Aeros has a new method of recalling and using saved audio which we call Dynamic Read. Basically, 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 a new audio loading mechanism that has freed 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 new system a user can max out a specific track at 20 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.

How Aeros worked before:

Aeros would load a song to the RAM (internal memory). The memory used in RAM was composed of all the tracks in the open song along with all synchronization point data as well as live waveform rendering data. This system limited the total recording time to a maximum of about 20 minutes of mono audio per song.

How Aeros works now:

Audio Memory Usage

In the RAM, the Looper has space for 1200 seconds (20 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.](#)



Your Aeros Loop Studio has built in plug and play functionality with the BeatBuddy, our hands-free drum machine pedal. Currently the Aeros can be controlled by the BeatBuddy (BeatBuddy is 'Master', Aeros is 'Slave'). We will be implementing the Aeros as Master capability in a future update.

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 MIDI Cable in the "OUT" port for the BeatBuddy breakout 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 should be good to go.

However, if you have changed your MIDI settings on your BeatBuddy, please check that the Next Part (CC-12) command is enabled. This can be done by going BeatBuddy settings (push drum set and tempo knobs down at the same time) and select: Main Pedal > MIDI Settings > MIDI-OUT > Next Part (CC-12), and select 'Enable'.

The BeatBuddy (with default settings) will automatically set the tempo (BPM) and time signature on the Aeros. PLEASE NOTE: The time signature is only sent from the BeatBuddy when you first load a song on the BeatBuddy. So if you start a new song on the Aeros, you will need to change the song on the BeatBuddy for the time signature to be sent.

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 ends playing the drums. 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 the 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. Read more about mismatches in the General Technical Information section on [pg.50](#).

The Aeros (as of firmware 3.1.18) can respond to several MIDI messages that enhance the player experience. As of 4.1.2, we have added a greater number of MIDI commands, which can be found [here](#). Notice that the Aeros and BeatBuddy each have their own sheets on the online document.

This version also had a complete refactor of the MIDI engine to support a greater variety of commands and higher complexity of usage. This is not a noticeable change, but has greatly increased our MIDI expansion capacity for the future.

The Aeros default is set to respond to MIDI messages sent on ALL channels. This can be changed in the Device Settings menu (See Device Settings [pg.27](#)). You have the choice of the Aeros listening to all channels, or to an individual channel (1-16).

Aeros passes through all MIDI commands it receives in the MIDI In port to the MIDI Out port, this is known as MIDI Thru.

The Aeros, as of v4.1.2 has the capacity to use MIDI Song Select messages. This means the Aeros can open any song using a combination of MSB and PC commands. This is how that works:

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.

A PC command can be 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.

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).

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

By using a MIDI controller capable of sending CC:0 (remember, this represents the general MIDI 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 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.

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: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

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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 #)

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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

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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

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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

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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

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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. <i>Please note: This command overrides the 'Change Parts: End of Loop' setting.</i> 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).

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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

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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	<p>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.</p> <p>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.</p> <p>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.</p> <p>The Aeros requires the user to send an MSB + and a PC command—in that order—to open a song.</p> <p>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.</p> <p>Then, using a MIDI controller capable of sending CC:0 (MSB) + PC commands in a sequence, you can open that song at any time.</p>

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

Currently, the Aeros does not generate it's own MIDI clock or MIDI commands. This feature is coming soon. You can currently set the Aeros MIDI OUT channel from 1-16, however the feature won't do much right now.

WIFI UPDATES AND TROUBLESHOOTING

MIDI Desync - Tempo Mismatch

The Aeros is built to record and playback at only one tempo. An empty Aeros song will change its tempo according to the incoming tempo from an external clock, but this does not work if the Aeros song is already recorded to or is currently being recorded to. 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.

WIFI UPDATES AND TROUBLESHOOTING

WPA3 security issues

[Aeros Not Connecting to Your Wi-Fi Network Using WPA3 security? Here's the workaround:](#)

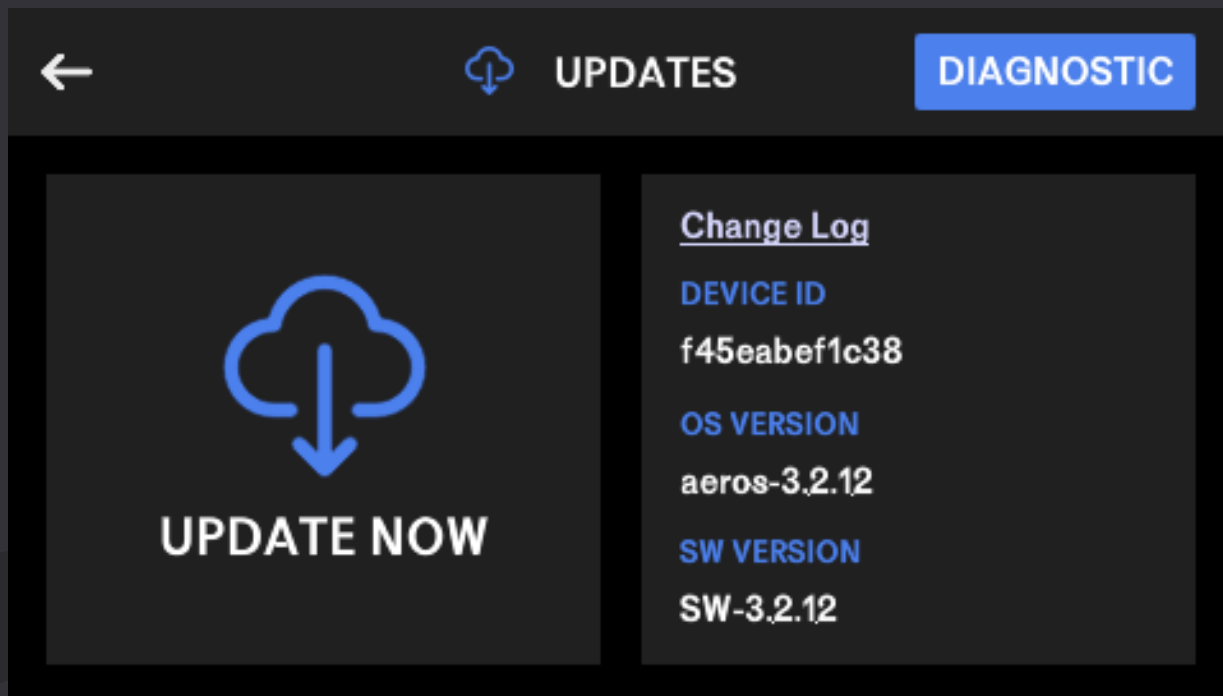
SOLUTION (as described by an Aeros user):

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.

Downloading Firmware



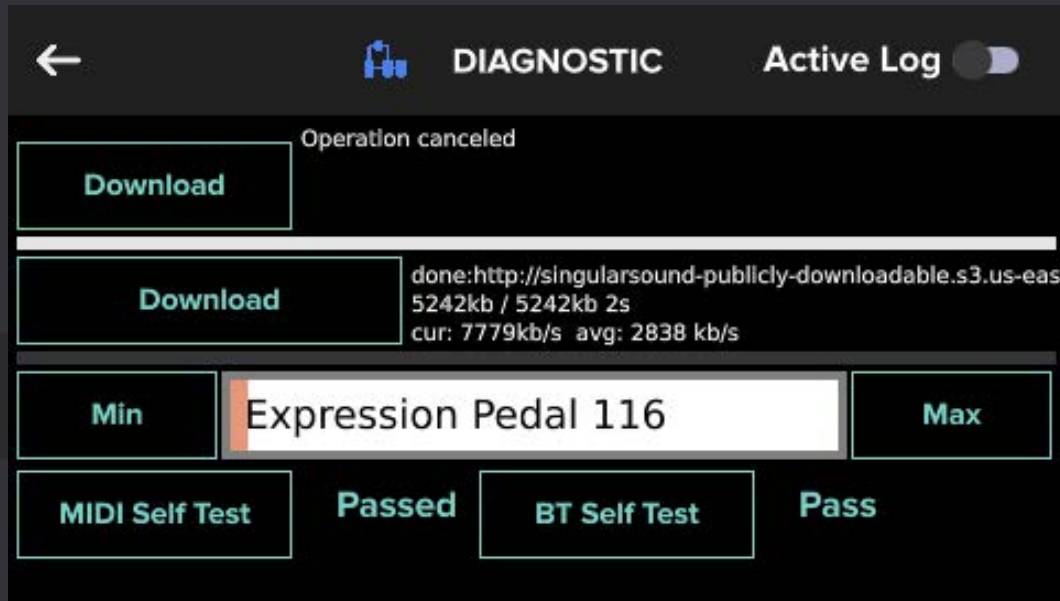
If a firmware update is available via WiFi, either the Update Now button will light up and be clickable and/or a pop up will notify you and ask if you want to update. Once the update has downloaded, the Looper will do a "checksum" (or a doublecheck) that the file it downloaded matches the one it grabbed from the internet. The checksum is finished once you see a green, clickable box that says "Reboot". Either press the button or power cycle your looper 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 update file and one while waiting for the update to take place.

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

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 "Download from Singul" to download a test file that will give us some idea of the speed and connectivity your Aeros is experiencing.



Some possible HTML Error codes are as follows:

- **Host not found** = Error 404, file not found
- **Connection refused** = Server is down or not found
- **Connection closed** = Connection was lost during transfer (closed by server)
- **Socket operation timed out** = Timeout on the communication (slow connection)
- **Proxy requires authentication** = Could be a WIFI setup issue
- **Host requires authentication** = Should not happen since our host does not require authentication
- **Data corrupted** = Could be due to faulty WIFI
- **Unknown protocol specified** = Should not happen
- **SSL handshake failed** = SSL error, could be certificate issue
- **Too many redirects** = The website keeps being redirected between different addresses in a way that will never complete.
- **Insecure redirect** = Related to HTTPS or SSL
- **Error transferring** = also a file not found issue on server

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.

[Report your errors to our forum!](#) Or email us at support@singularsound.com

Expression Pedal Calibration

You can also calibrate the expression (EXP) pedal on this screen. To do so, set the pedal to its maximum (all the way down) and press Max, then set to its minimum (all the way up) and press Min.

Active Logger

This is a new logging system that is available starting with version 4.0.0. 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. 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 power on, but if you turn the Aeros off and on again, that log will be lost. Only the current power cycle and previous 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 manufacturer, 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, if the MIDI Maestro is in pairing mode, this counts as a scanner signal and the Aeros will pass the test.

OTHER TECHNICAL INFORMATION

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.

- The overdub layer is only as heavy as a base layer of the same length, recording many revolutions of overdubs will not add to the total memory used.
- Overdubs do take up memory, the memory used cannot exceed the amount of memory used to record on that corresponding base track. 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 that will merge the previous overdub layer.

Muting: Muting in the Loop Studio can be done in the following ways:

- With a double tap of an Action button (see Double Tap in 2x2 on [pg.12](#) or Double Tap in 6x6 on [pg.15](#))
- By using a MIDI mute command. If the Aeros is set to stop and does not stop immediately, a mute command sent after will still take effect following the mute settings (see Device Settings [pg.27](#)). If the mute command is sent before the stop command, it will still take effect. Double tap to stop immediately will cancel the set up mute command.
- Another immediate 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.

Fading: The Aeros can fade in/out the whole song or individual tracks as of version 4.2.4. The mechanisms for fading in/out a track and fading in/out the song are different and are enabled separately.

- To fade in the master volume when starting a song from stopped, turn on Fade In in the songs settings menu.
- To fade out the master volume when stopping a song, turn on Fade Out in the songs settings menu, this will follow the Stop settings if not immediate (End of Measure/End of Loop).
- Tracks use the current mute logic to allow for new behaviors: Fade out to mute and Unmute to fade in. This will always follow the mute behavior (End of measure/End of loop) which is set in the Device Settings menu.
- The track will fade out and then mute if currently unmuted and the Action Button is double tapped or a mute MIDI command is received
- The track will unmute and fade in if currently muted and the Action 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 master or track volumes while a fade is occurring, the Stop/Mute will still take effect but the volume will stay at the level where it was disturbed.
- If cancelled, the volume will go back up to full volume. Sending the opposite fade command while a fade is ongoing sounds pretty cool!
- 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 Fade Settings on [pg.29](#).

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 layer are undone and you re-record, then both the undone base layer and the undone overdub layer are trashed.
 - 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 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. First you must select an undone track and hit 'Record' on the Action button to start the re-recording

Lock Track Logic: A locked track will play back identically in all parts. All changes made to the track will be made to that track in every part. 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. Tracks can only be locked/unlocked in the first song part, they cannot change state once more than one song part has been recorded to. Learn more about this on [page 20](#).

Reversing: The Aeros can reverse individual tracks as of version 4.2.4

- 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.
- Reversing is only possible using MIDI at this time (we are working on a new hands-free system to do this and more without an external MIDI controller). Stay tuned!
- CC:46 Value:0 reverses the currently selected track, and the value # reverses the corresponding track # (CC:46 values 1-6).
- For example, CC46 value 1 will reverse and un-reverse track 1
- 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.
- Track clocks and waveforms for reversed track are *Purple*.



Deleting Last Part: While Aeros is stopped on the Loop Studio Screen, using the touchscreen, you can tap on the Song Part circle of the last song in the current open song. This will pop up a dialog to delete the last part, hit "Yes" to confirm. Note: This is NOT undoable and will delete the .wav files present in this song part.

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

Recording time per song: 20 min (mono) in a new song with no recorded audio.

- Once a user saves, this total recording time allowed is recalculated.
- The number changes dynamically based on how many tracks are in the song and how many tracks are in the part with most tracks.
- It is theoretically possible for Aeros to record up to 10 hrs (mono) in a 6x6 song and 97 min (mono) in a 2x2.
- Because of the way the Aeros works, it is now possible to always have some audio memory free to overdub after saving.
- Read more about this in the Song Mgmt and Memory section.

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

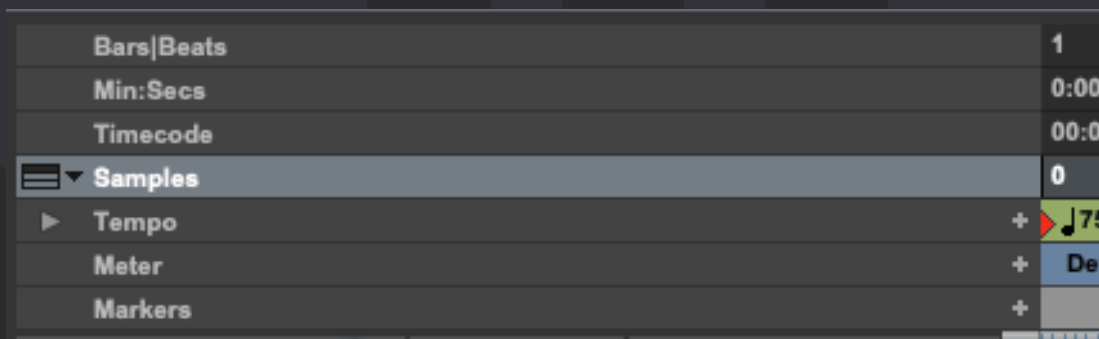
The Aeros Song Folder (on SD): The Song folder will include the WAV files separated by input and by part and the .meta file that allows the Aeros to use the WAV files. The .meta file is hidden and must be shown in most cases to be seen. Deleting / altering the .meta file can make the WAV files in the 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 is inserted.

Exporting WAVs via SD: When a song is saved to SD, 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.

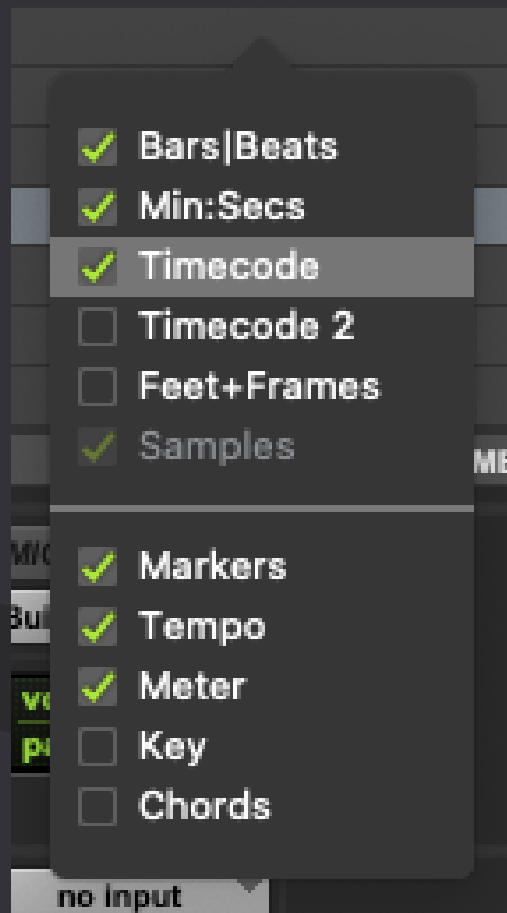
Cutting 360 samples from your files:

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 119,640 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](#).

Sound Quality: 32-bit floating point processing, 24-bit recording, 44.1kHz sample rate, professional DACs, <3 ms 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.

External expression pedal: This is intended as an alternative to using the volume wheel. Please note that this function is not yet available in the current firmware and will be provided in a future update.

Loop Forgiveness Period: 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 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.

Requires Male to Male standard 5 pin MIDI Cable for connecting to the MIDI Maestro. Aeros requires a Male to Male MIDI Cable as well as MIDI Breakout Cable for connecting to the BeatBuddy

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: 8ms fade out and crossfade between song parts is done automatically to prevent sound 'pops' if audio is recorded over the loop seam.

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 for 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 ± 3 dB from 0dB.
- The fader can move by increments of 0.25dB when using the fader wheel, each tick is ± 0.25 dB.

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.

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 $1\text{M}\Omega$ (Instrument) and $50\text{k}\Omega$ (Line level)

Output impedance: $\sim 100\Omega$

Power: 9v (center negative, 360mA)

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)

Aluminum construction with chip resistant black coating.

Firmware 4.3.1 Changelog:

- **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 feature

Firmware 4.2.4 Changelog:

- **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 issues
- 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)

Firmware 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

Firmware 4.1.2 Changelog:

- Major expansion of MIDI capabilities (refer to manual [pg 37](#). for details)
- Improved synchronization system with BeatBuddy

Bug Fixes:

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

Firmware 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)

Firmware 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

Firmware 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 cancelled
- 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

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.

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- **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

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 Action 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 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,
- **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

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

Firmware 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

Fixed:

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

Firmware 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.

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

Firmware 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.