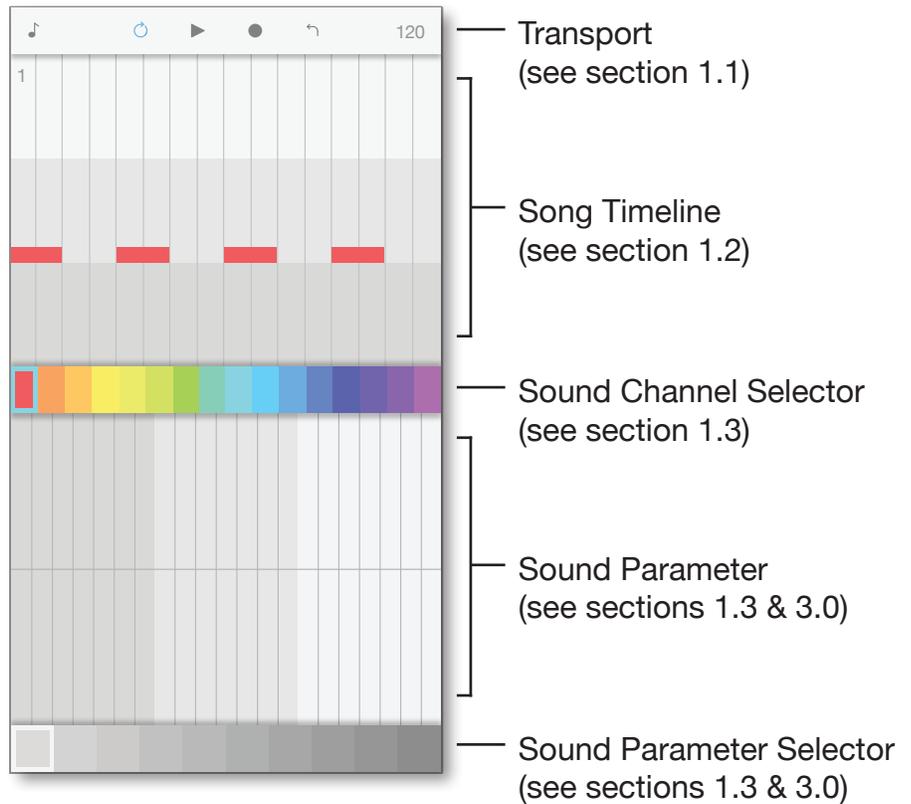pulse

Contents

Introduction

Pulse is a music sequencer with deep editing capabilities.

On the surface is a minimal interface, thoughtfully laid out to keep your inspiration flowing. Below the surface is a complex audio processing engine capable of deep sound manipulation.

Please review the following guide to maximize your experience with Pulse.

Main View

Transport
(see section 1.1)

Song Timeline
(see section 1.2)

Sound Channel Selector
(see section 1.3)

Sound Parameter
(see sections 1.3 & 3.0)

Sound Parameter Selector
(see sections 1.3 & 3.0)

PLEASE NOTE:
Images shown throughout this manual show iPhone formatting. iPad formatting will slightly vary from what is shown.

IMPORTANT:
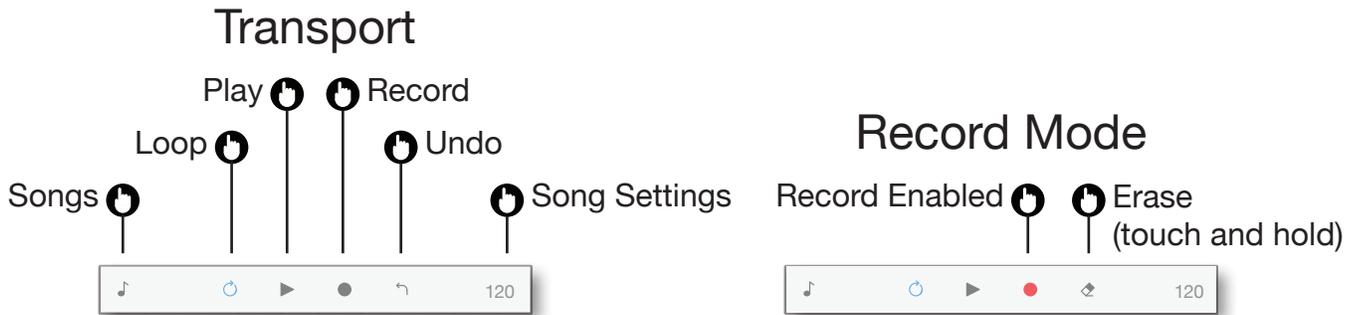**For best experience please disable 3D Touch.**
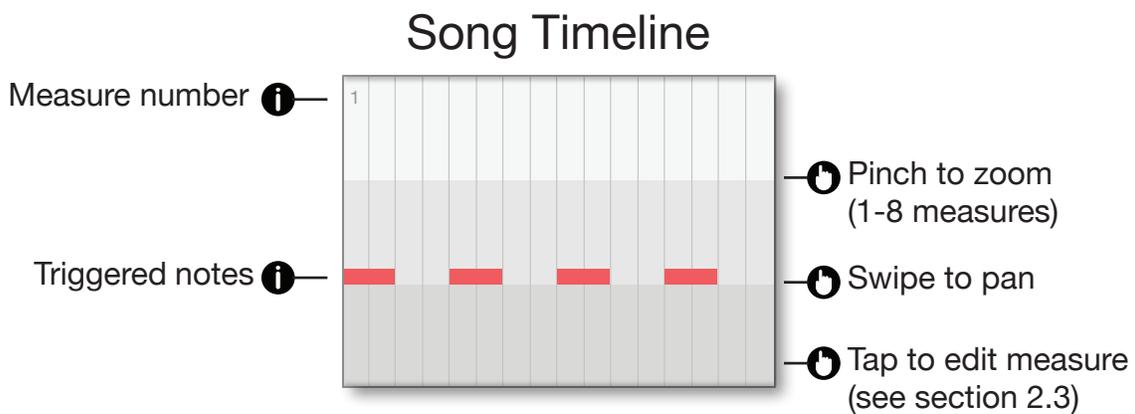
Settings > General > Accessibility> 3D Touch

1.1 Transport Controls

The transport controls consist of standard transport controls, a song menu and song settings menu.

Transport

Songs · Loop · Play · Record · Undo · Song Settings

Record Mode

Record Enabled · Erase (touch and hold)

1.2 Song Timeline

The song timeline displays the current sound notes in color and other sound notes in gray. The song timeline also displays the current quantize grid settings (number of steps per measure and swing percentage).

Song Timeline

Measure number

Triggered notes

Pinch to zoom (1-8 measures)

Swipe to pan

Tap to edit measure (see section 2.3)

1.3 Sound Controls

Choosing a sound channel is done by tapping or swiping the colored ribbon going across the center of the screen.

Below the sound channel selector is the current sound parameters. The sound parameters can be navigated by tapping or swiping the gray ribbon going across the bottom of the screen.

Sound Channel Selector

Pull down to expand
Edit Mode

Tap or swipe to select
sound channel

Sound Parameter

Touch the sound parameter
area to play notes or change
sound settings

See sound parameter section
for details on each parameter

Sound Parameter Selector

Tap or swipe to select
sound parameter

2.1 Edit Mode - Note

By dragging the sound channel bar down, you can edit any parameter in detail.

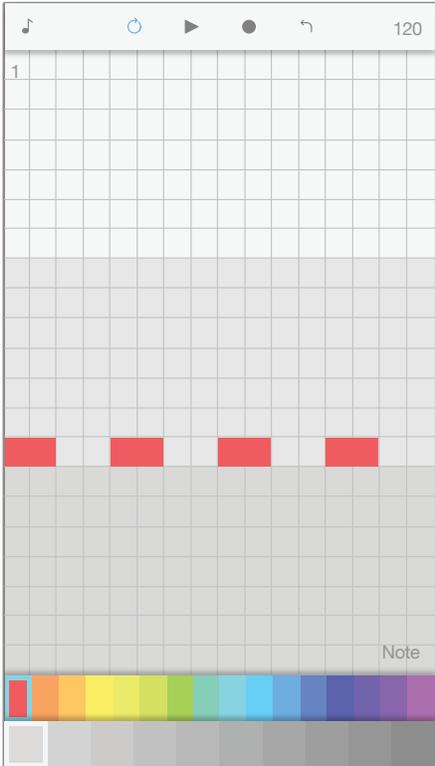When the NOTE parameter is selected, you are in NOTE EDIT MODE.

In NOTE EDIT MODE there is a number of note edit actions:
Add note - Tap the grid
Remove note - Tap an existing note
Change note length and velocity - Touch and hold, then drag existing note (NOTE PARAMETER IS SELECTED)
Move note - Touch and hold, then drag existing note (MOVE PARAMETER SELECTED)

Measure number

3 octave range

Quantized grid
(see section 4.0)

1 Measure shown

Tap to add note

Touch and hold note,
then slide left or right
to change length

Tap note to delete

Swipe to pan

Note

Tap label to switch
parameter

Note
Add / Delete notes
Change note length
Change note velocity

Move
Add / Delete notes
Move notes

2.2 Edit Mode - Parameter

By dragging the sound channel bar down, you can edit any parameter in detail.

When any parameter other than NOTE parameter is selected, you are in PARAMETER EDIT MODE.

In PARAMETER EDIT MODE there are three parameter edit actions:
Add parameter override - Tap the grid at the value you want
Remove parameter override - Tap an existing parameter override
Switch parameter to edit - Tap parameter label

100% line   ⓘ

parameter grid is always 32 steps per measure   ⓘ

50% line   ⓘ

   Tap to add or delete parameter override

0% line   ⓘ

   Tap label to switch parameter

Start

120

1
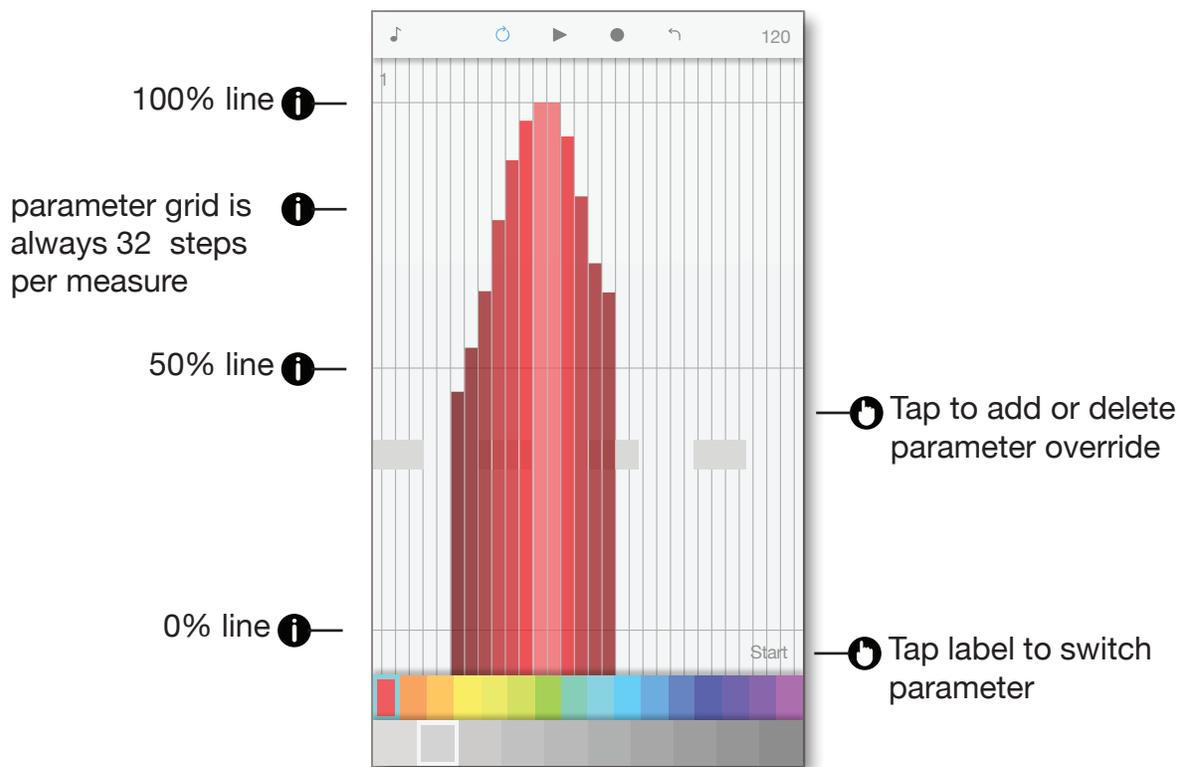
2.3 Edit Mode - Song

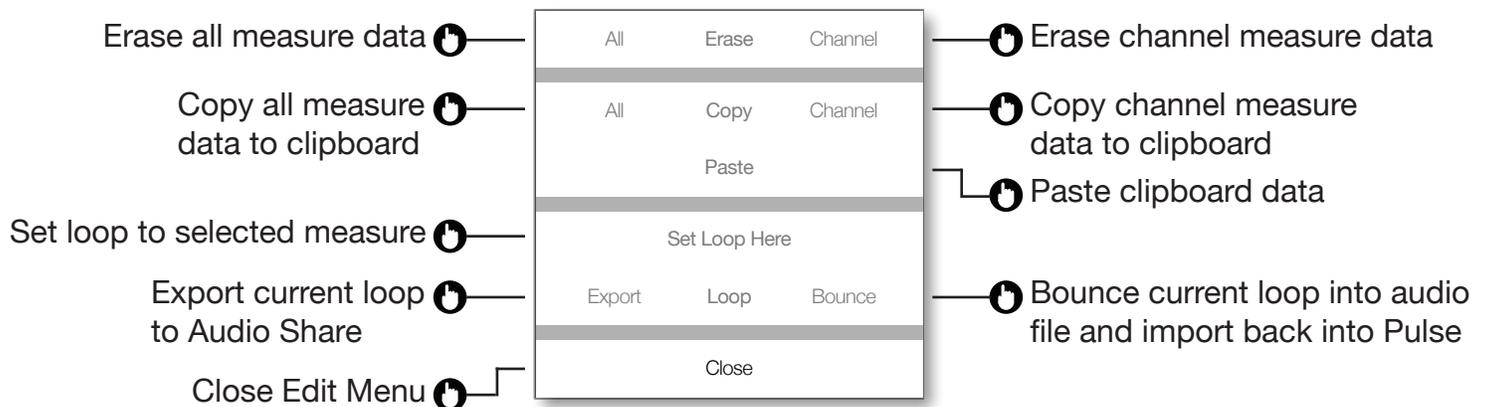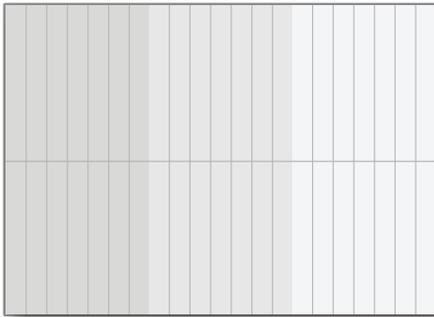By pinching the song timeline to view more than one measure, you can edit entire measures at a time. Editing song measures is done by tapping any measure to display the edit options.

Measure numbers ⓘ —

Slide start or end loop points

Swipe to pan

Tap measure for edit options

1-8 Measures shown ⓘ —

♪   ↻   ▶   ●   ↩   120

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
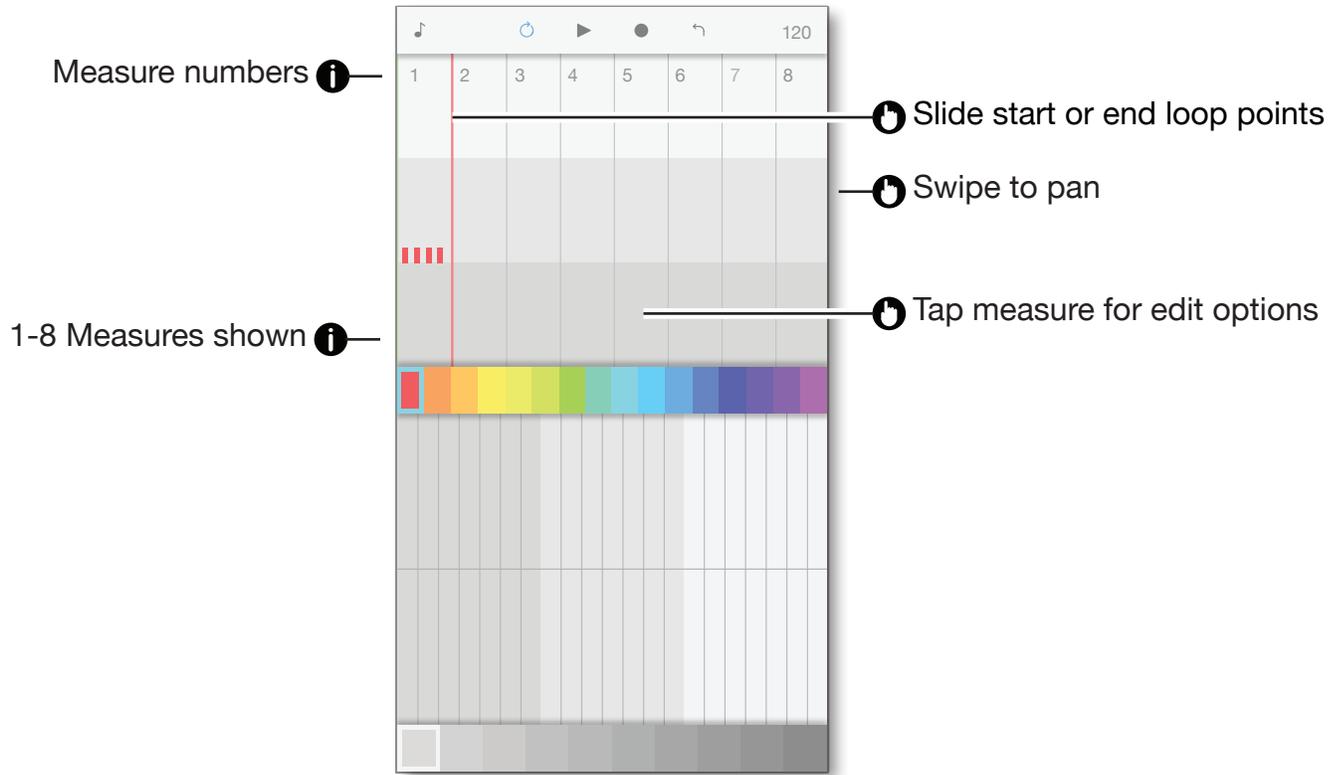
With the measure edit options, you can set a new loop point or copy, paste, erase notes.

Erase all measure data 🖲 — | All | Erase | Channel | — 🖲 Erase channel measure data

Copy all measure 🖲 — | All | Copy | Channel | — 🖲 Copy channel measure
data to clipboard   data to clipboard

Paste — 🖲 Paste clipboard data

Set loop to selected measure 🖲 — Set Loop Here

Export current loop 🖲 — | Export | Loop | Bounce | — 🖲 Bounce current loop into audio
to Audio Share   file and import back into Pulse

Close Edit Menu 🖲 — Close
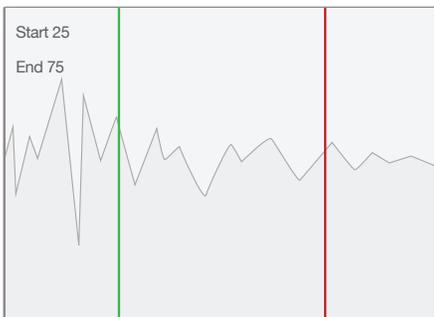
3.0 Sound Parameters

Note

The note parameter is where you can play your sounds. There are 3 octaves. Sounds are polyphonic so you can play as many notes at once as you want.

Sounds are louder closer to the horizontal center-line. Above the line sustains the notes played. Below the line retriggers the notes played according to the TEMPO SETTINGS quantize settings.

The key and scale played are changed in SETTINGS (see section 4.0).
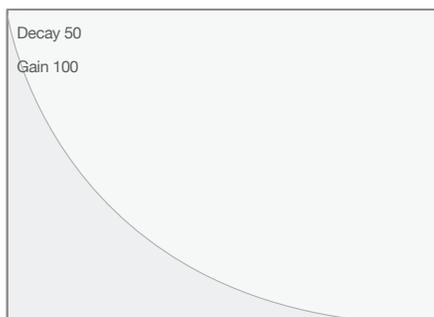
Waveform

Start 25

End 75

The wave parameter allows you to set the start and end time of sound playback. If the end time is on the left of the star time, the sound will play in reverse.
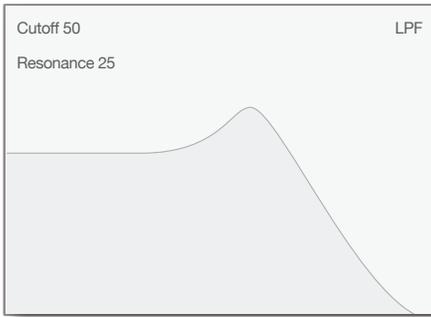
Swipe the top half of the wave to change the start time.

Swipe the bottom half of the wave to change the end time.

Amplifier

Decay 50

Gain 100

The amplifier controls the loudness of the triggered sound over time. Decay sets the speed at which the sound fades out. Gain sets the initial level of the sound.
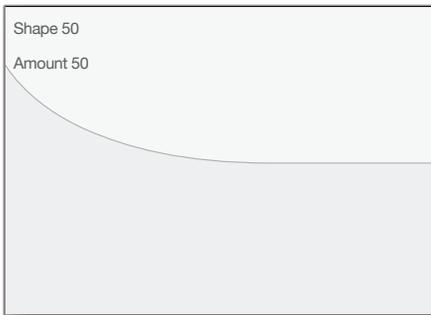
3.0 Sound Parameters

|	
Cutoff 50	LPF
Resonance 25	

Filter

The filter changes the tone of the sound. Pulse has three filters available: Low Pass, High Pass, & Band Pass.

See the FILTERS section for more details.

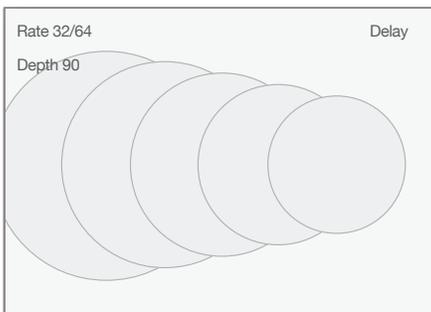| |
|---|
| Shape 50 |
| Amount 50 |

Filter Envelope

The filter envelope changes the filter cutoff frequency over time. This allows you to create tonal variations in each triggered note.

Mix 100	Distortion
Amount 50	
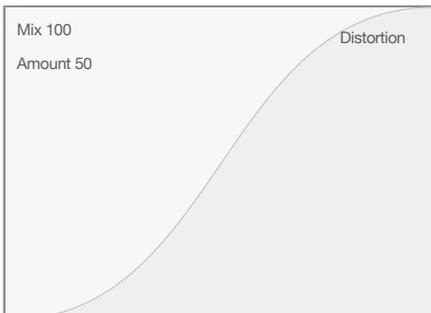
FX 1

FX1 is a waveshaping effect which includes Distortion, Lo-Fi, & Foldback

See the FX1 section for more details.

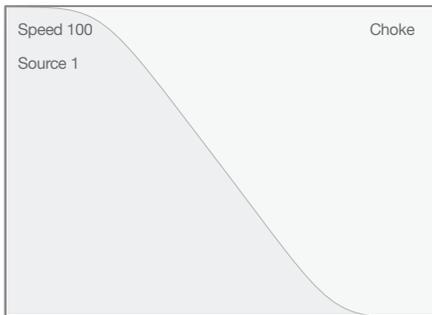|	
Rate 32/64	Delay
Depth 90	

FX 2

FX2 is a time-based effect which includes Delay, Flanger, & Chorus.

See the FX2 section for more details.

# 3.0 Sound Parameters

Dynamics

> Speed 100
>
> Source 1
>
> Choke

Choke mutes a sound when the source sound is triggered. Typically used on percussion such as hihats to prevent the sound from over-lapping.

Pump squashes a sound when another sound is triggered. Pump is a triggered filter / compressor.

Speed is the rate of the dynamic envelope. Source is the input channel which triggers the dynamic envelope.

TIP: Make a sound monophonic by setting the choke source channel to the same sound channel number.

Reverb Send

> Tone 50
>
> Amount 75
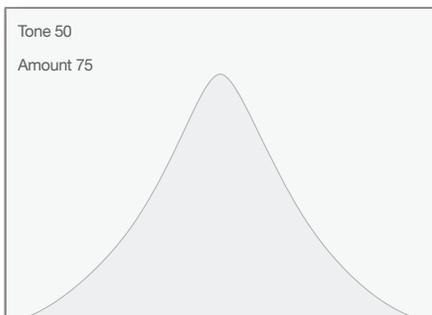
Reverb send allows you to send a portion of the channel audio to the master reverb. The tone and amount of the channel audio can be controlled. Lower tone values increase the pre-delay of the sound being sent to the reverb.

Mixer

> Pan Center
>
> Volume 70
>
> Mute
>
> Solo
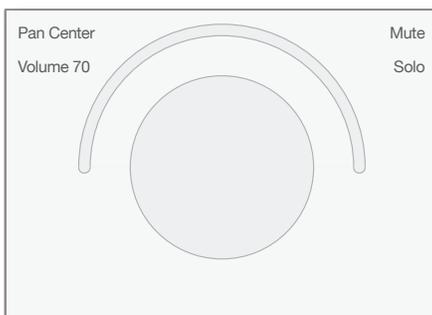
The mixer controls the final channel volume and left-right balance. This is also where you mute and solo sounds.

3.1 Filters

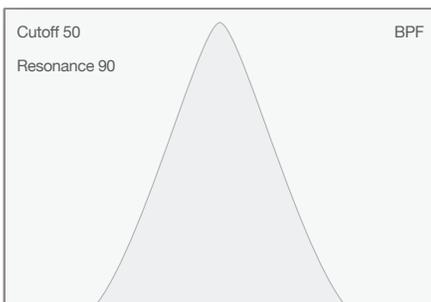| Cutoff 50	LPF
Resonance 25	
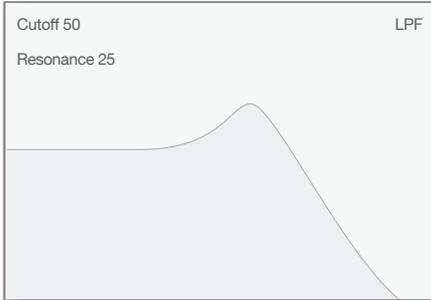
LPF

LPF (low pass filter) removes sound above the cutoff frequency while allowing sound below the cutoff frequency to pass through. Resonance boosts the volume of the cutoff frequency with a ringing effect.

Cutoff 50	HPF
Resonance 25	
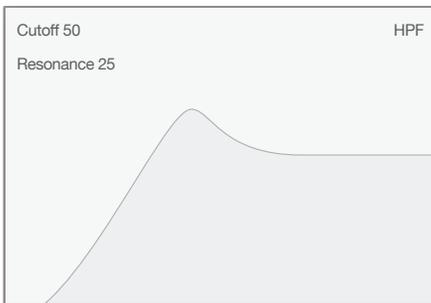
HPF

HPF (high pass filter) removes sound below the cutoff frequency while allowing sound above the cutoff frequency to pass through. Resonance boosts the volume of the cutoff frequency with a ringing effect.

Cutoff 50	BPF
Resonance 90	

BPF

BPF (band pass filter) removes sound above and below the cutoff frequency while allowing sound at cutoff frequency to pass through. Resonance boosts the volume of the cutoff frequency with a ringing effect.
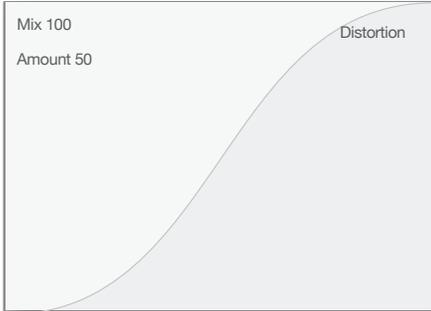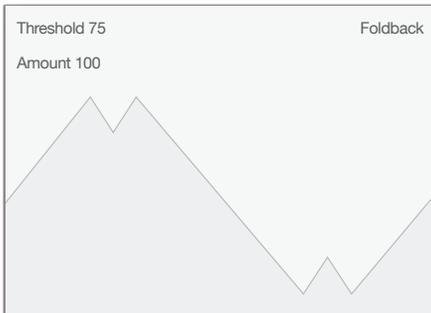
3.2 FX1

Mix 100

Amount 50

Distortion

Distortion

Distortion boost the input signal while saturating the output to avoid hard clipping.

Threshold 75

Amount 100

Foldback

Foldback

Foldback distortion folds a waveform at the threshold value. If the fold is still past the threshold value, it will fold again and again until the final output is within the threshold value.

Rate 15

Depth 75
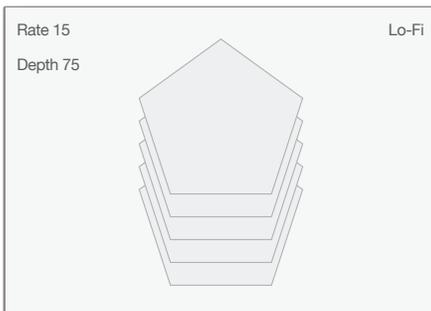
Lo-Fi

Lo-Fi

Lo-Fi (low fidelity) reduces the digital sample rate and bit depth of the channel audio.

3.3 FX2

Rate 32/64
Depth 90
Delay
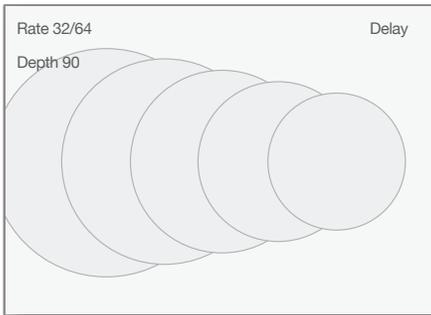
Delay

Delay is an echo effect. The delay rate is always in sync with the current BPM.

Rate 32/64
Depth 50
Flanger
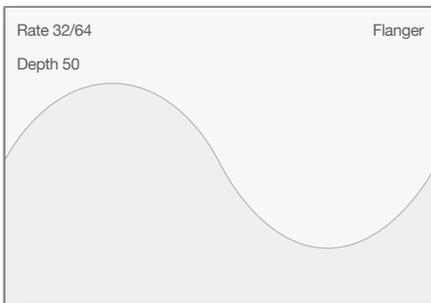
Flanger

Flanger is a ringing metallic like effect. The flanger rate is always in sync with the current BPM.

Rate 64/64
Depth 100
Chorus
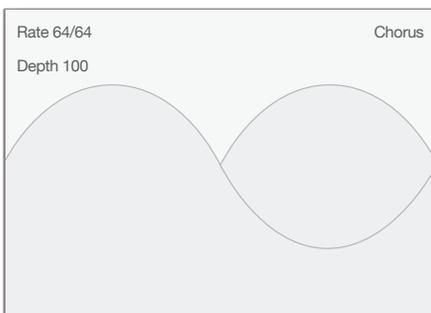
Chorus

Chorus is a doubling type effect which produces a lush swirly sound. The chorus rate is always in sync with the current BPM.

4.0 Song Settings
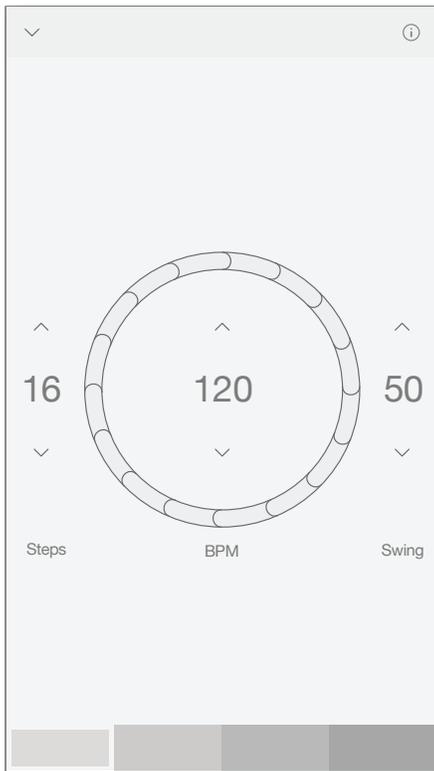
Tap to learn more about Pulse

YouTube

Online Manual

Email Support

Close
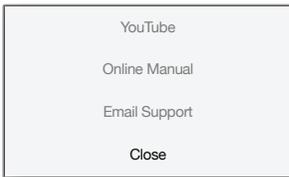
Tempo

The tempo setting allows you to control the number of steps per measure, the beats per minute, and the swing.

The step and swing parameters will only affect newly created notes and will not affect previously created notes.

16   120   50

Steps   BPM   Swing

Tap or slide to change setting

Key & Scale

Key C

Scale Ionian
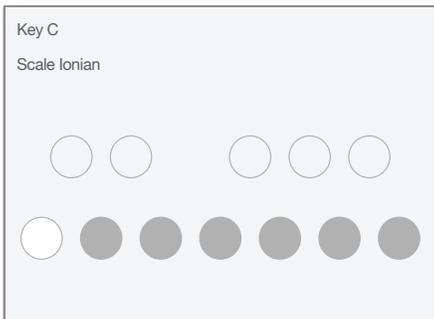
The key and scale are both displayed on the chromatic keyboard representation. Changing the key or scale will change all notes in the song to fit within the current key and scale constraints.

Reverb

Shape 50

Size 50
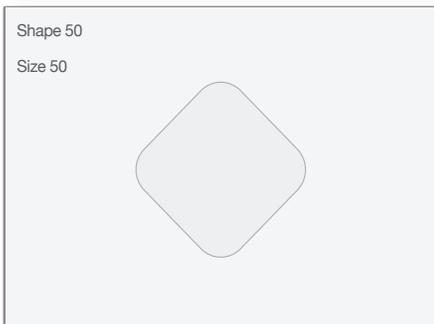
Reverb adds depth and distance to your song while spatially grounding your sounds. The size makes the reverb tail longer while the shape affects the reverb tone.

5.0 Song Menu

Lock / unlock song

Export song

New / Copy song

˅		🔒	⬆	+
Song 1				🔒
Song 2				
Song 3				
Song 4				
Song 5				

Select song

Swipe left to delete

The song menu is where you can manage all of your song files. From this menu you can lock or unlock a song, export a song to multiple formats, and more.

Tap a song to select, then tap again to load.

The currently loaded song is automatically saved whenever you open the song menu.

Exporting the song allows you to save and share your song with others. Pulse will export an audio file until no audio is playing in your song.
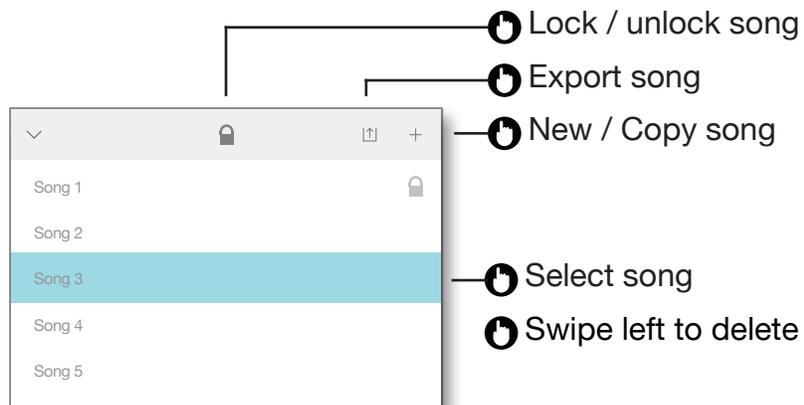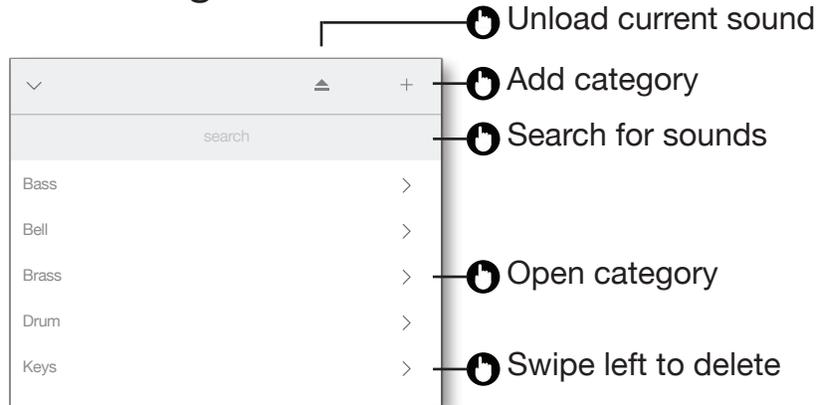
AudioShare - Copy song to AudioShare clipboard as high quality uncompressed data.

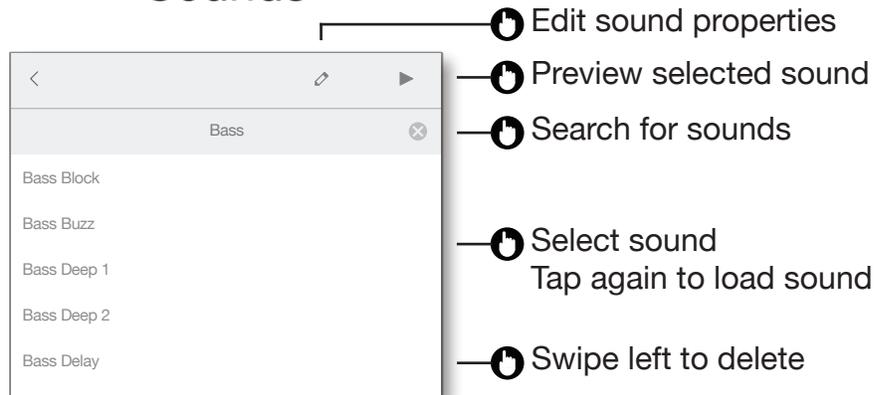Email Audio - Email song as medium quality compressed audio .mp4 format.

Email Song - Email song project file. The project file contains the song sequence and all sounds used in the song. This option is ideal for backing up your songs or sharing them for others to remix.

6.0 Sound library

Categories

⟳ Unload current sound

⟳ Add category

⟳ Search for sounds

⌄	⏏	+
search		
Bass		›
Bell		›
Brass		›
Drum		›
Keys		›

⟳ Open category

⟳ Swipe left to delete

Sounds

⟳ Edit sound properties

⟳ Preview selected sound

⟳ Search for sounds

‹	✎	▶
Bass		⊗
Bass Block		
Bass Buzz		
Bass Deep 1		
Bass Deep 2		
Bass Delay		

⟳ Select sound
Tap again to load sound

⟳ Swipe left to delete

Sound Properties

⟳ Preview selected sound

⟳ Zoom into waveform

Name : Synth Bass
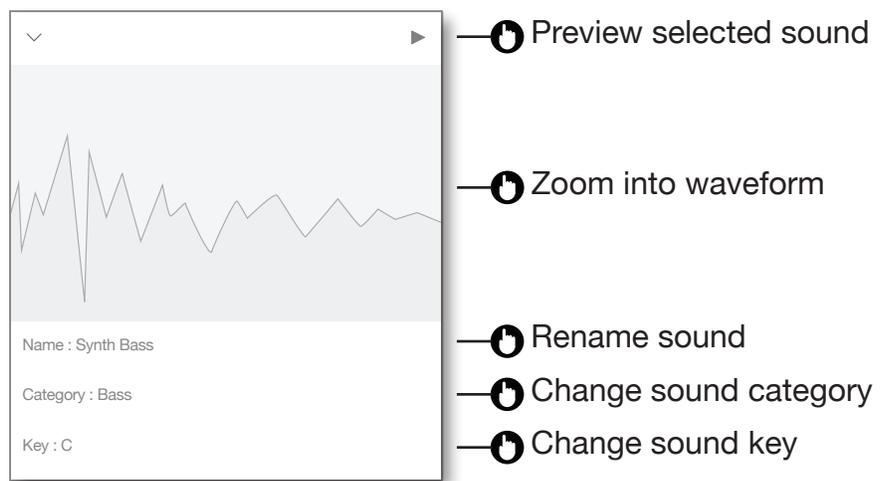
Category : Bass

Key : C

⟳ Rename sound

⟳ Change sound category

⟳ Change sound key

Please note: Setting a sound key to DRUM will make the sound always play at normal pitch at root note position, regardless of what key is set for the song. This allows drum sounds to retain their original pitch. DRUM will also play the entire sound regardless of note length.

7.0 Actions

7.1 Load a Sound

Touch and hold sound channel color

Tap category or search

⌄	⏏	⬇	+

search	
Bass	›
Bell	›
Brass	›
Drum	›
Keys	›
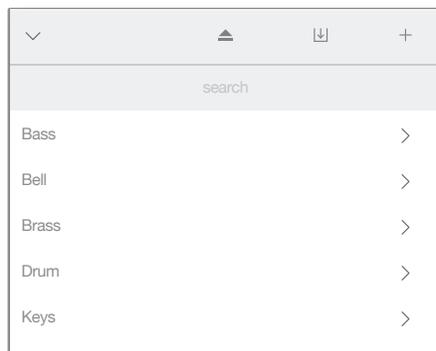
Tap sound to select and preview

‹	✎	▶	

Bass	⊗
Bass Block	
Bass Buzz	
Bass Deep 1	
Bass Deep 2	
Bass Delay	
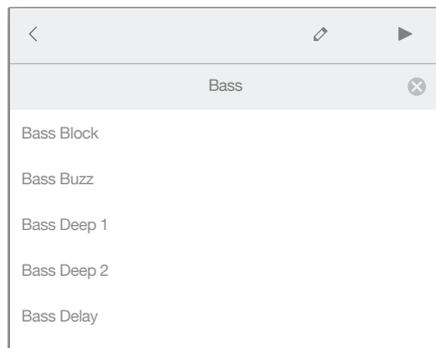
Tap selected sound again to load

7.0 Actions

7.2 Play Notes

Select sound

Select Note parameter

Touch note widget

7.3 Record Notes

Select sound

Select Note parameter

Tap Play button then tap Record button

Touch note widget

7.0 Actions

7.4 Erase Notes in Record Mode

Select sound with note data

Select Note parameter

Tap Play button then tap Record button

Touch and hold erase button to erase notes

7.5 Erase Automation in Record Mode

Select sound with automation data

Select parameter

Tap Play button then tap Record button

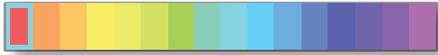Touch and hold erase button to erase automation

7.0 Actions
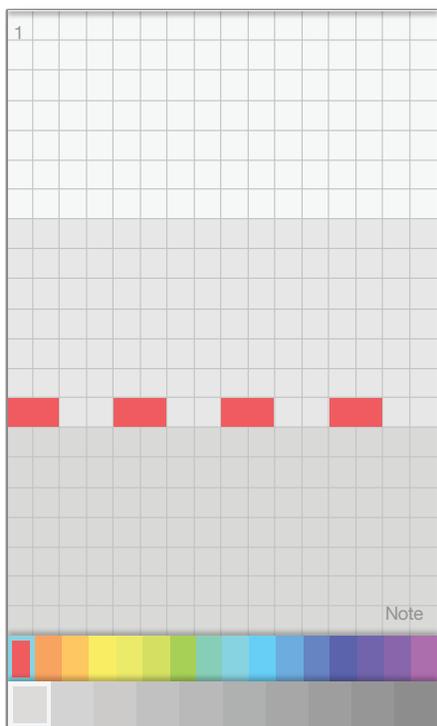
7.6 Draw Notes on the Grid

Select sound

Select Note parameter

Drag sound channel selector down to reveal grid edit mode

Tap grid to draw notes

Tap note to erase

Touch and drag note up or down to change velocity

Touch and drag note left or right to change length

Tap Note label at bottom right corner of screen to move notes

7.0 Actions

7.7 Change Sound Parameter

Select sound

Select any sound parameter

Touch parameter widget

Cutoff 50   LPF
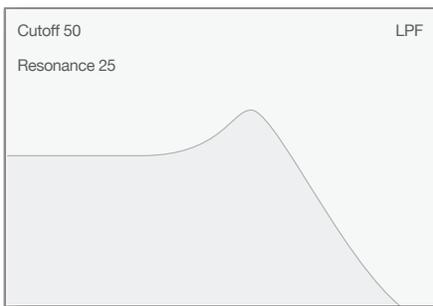
Resonance 25

7.8 Record Sound Parameter Changes

Select sound

Select any sound parameter

Tap Play button then tap Record button

♪   ↻   ▶   ●   ↩   120

Tap parameter setting to record (ex. Cutoff or Resonance)

Cutoff 50   ⓘ 100% line

Resonance 25

                                   ⓘ 50% line

                                   ⓘ 0% line
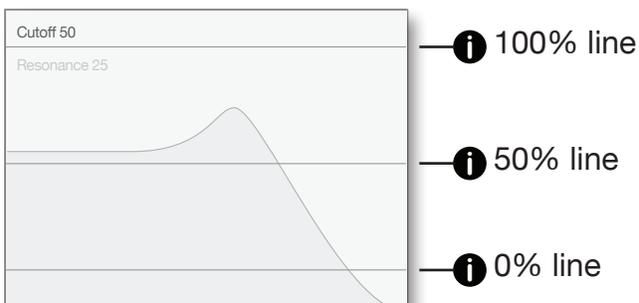
Touch and drag vertically within parameter area to record automation

7.0 Actions

7.9 Draw Sound Parameter Changes on the Grid

Select sound

Select any sound parameter

Drag sound channel selector down to reveal grid edit mode

Tap grid to draw sound parameter changes

7.0 Actions

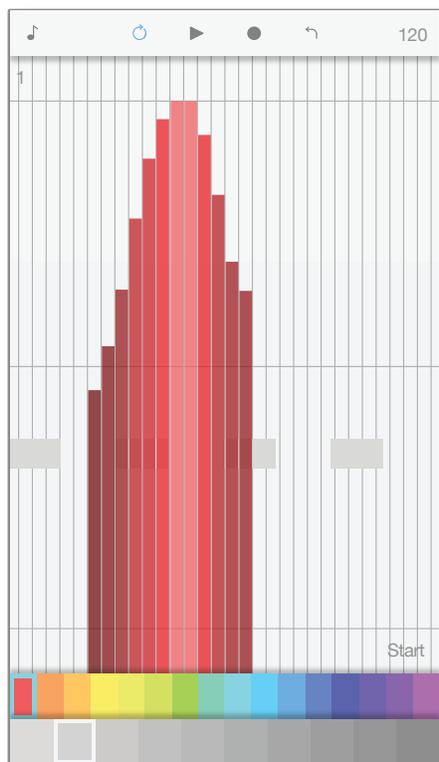## 7.10 Loop 1 Measure

Tap measure you want to loop

Tap Set Loop Here button

All	Erase	Channel
All	Copy	Channel
	Paste	
	Set Loop Here	
Export	Loop	Bounce
	Close	
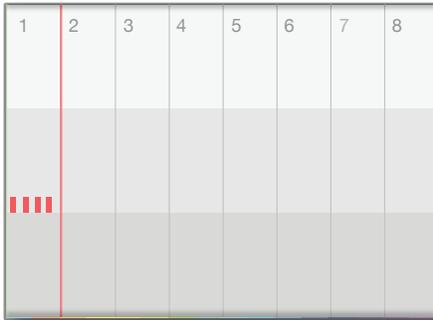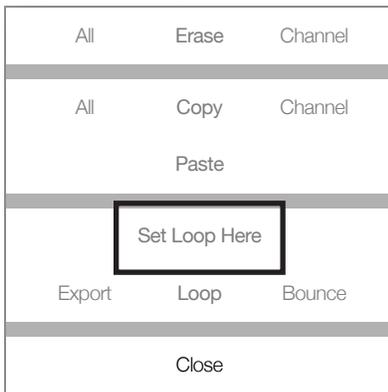
7.11 Loop More Than 1 Measure

Make sure Loop button is enabled

Touch and drag start and end loop lines to desired positions
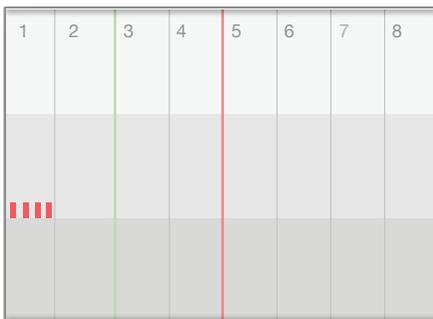
7.0 Actions

7.12 Edit Measure

Tap measure you want to edit

Tap Copy, Paste, or Erase

All	Erase	Channel
All	Copy	Channel
	Paste	
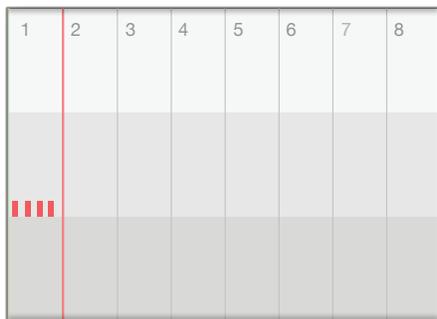
Set Loop Here		
Export	Loop	Bounce
	Close	
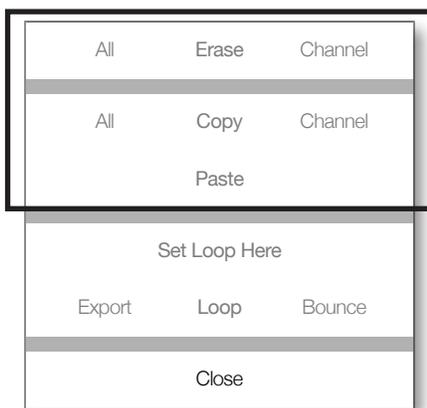
7.13 Mute / Solo a sound

Select sound

Tap Mixer parameters

Tap Mute or Solo button

Pan Center	Mute
Volume 70	Solo
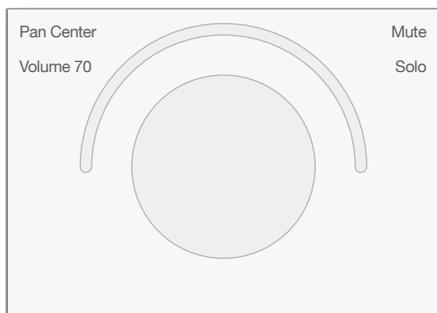
7.0 Actions

7.14 Import a sound with AudioShare

Please note: Importing a sound with AudioShare requires the AudioShare application

In the AudioShare application:
Choose sample to export to Pulse
Tap export button
Tap "Copy to Pulse" option

7.15 Import a Sound with Email

Please note: Compatible sample files are - wav, aif, caf, & m4a

In the Email application:
Open email containing sound file
Touch and hold sound file attachment
Tap "Copy to Pulse" option

In the Pulse application:
Open sound browser
Go to Imported category
Find imported sound
Edit sound settings if necessary (name, category, & key)

7.16 Import a Song with Email

In the mail application:
Open email containing song file
Touch and hold song file attachment
Tap "Copy to Pulse" option

In the Pulse application:
Open song library
Tap song to load

7.17 Export a Loop with AudioShare

Move start and end loop points to desired loop
Tap any measure
Tap Loop Export button

7.0 Actions

7.18 Bounce a Loop back into Pulse

Move start and end loop points to desired loop
Tap any measure
Tap Loop Bounce button
Find Loop in **Imported** sound category
Load loop as sound

7.19 Email a Song as Audio

Tap Song Menu button
Tap Export Button
Tap Email Audio

Please note: Pulse will export all measures with sounds playing

7.20 Share a Song

Tap Song Menu button
Tap Export Button
Tap Email Song

7.21 Receiving MIDI

Connect MIDI controller or app
Each sound channel number connects to the same MIDI channel number.
Pulse will record MIDI notes and velocity values, unquantized from the internal sequencer.

7.22 Sending MIDI
Connect MIDI device or app
Each sound channel number outputs to the same MIDI channel number.
Pulse will transmit MIDI notes and velocity values.

8.0 Specifications

Compatibility

Audiobus 2	https://audiob.us
AudioShare	http://kymatica.com/Software/AudioShare
AUM	http://kymatica.com/Software/AUM
CoreMIDI	
Inter-App Audio	

Input / Output

Import sound files via AudioShare
Export audio song file via AudioShare
Export loops via AudioShare
Bounce loop back into Pulse
Record and transmit MIDI data
Import / Export audio files via email
Import / Export song files via email

Scales

Ionian	Spanish
Dorian	Gypsy
Phrygian	Arabian
Lydian	Egyptian
Mixolydian	Hawaiian
Aeolian	Bali Islan Pelog
Locrian	Miyakobushi
Major Blues	Ryukyu
Minor Blues	Wholetone
Diminished	Minor 3rd
Combination Diminished	3rd Interval
Major Pentatonic	4th Interval
Minor Pentatonic	5th Interval
Raga Bhairav	Octave Interval
Raga Gamanasrama	Chromatic
Raga Todi	

MIDI CC

CC values are only sent. Received MIDI CC values are applied to current parameter.

CC	Description
7	Mix Level
9	Amp Gain
10	Mix Pan
12	Shape X
13	Shape Y
14	Wave Start
15	wave End
20	Filter Env Decay
21	Filter Env Amount
22	Time X
23	Time Y
24	Dynamic X
71	Filter Resonance
72	Amp Decay
74	Filter Cutoff
90	Reverb Tone
91	Reverb Amount