



Music Studio

Version 2.10

User Manual

Music Studio is available on the App Store
for all iPhone, iPod Touch and iPad models with iOS 8.0 or later



Table of Contents

Quick Start Guide	6
Playing on the keyboard and pads	6
Recording a song	7
Audio tracks and recording	8
Writing notes	9
Performance considerations	10
External Hardware	11
Audio recording accessories	11
MIDI hardware	11
FAQ (Frequently Asked Questions)	12
Additional instruments	12
Installing	13
Functionality	13
Keyboard and Drum Pads	15
Keyboard	15
Scrolling and resizing	15
Key velocity	15
Keyboard Menu	16
Play button	16
Pause button (iPad only)	16
Loop button	16
Record button	16
Undo button	16
Display	16
Metronome button	16
Tempo Button (iPad only)	16
Keyboard layout button	16
Drum pads button	17
LiveTools button	17
Pitch wheel button	17
Accelerometer button	17
Sustain button	17
Chord buttons	17
Keyboard layout mode	18
Octave buttons	18
Fullscreen button (iPhone only)	18
Keyboard map	18
Keyboard rows button (iPhone only)	18
Key label button (iPhone only)	18
Drum pads	19
Pad edit button	19
Drum pad edit mode	19
Playhead mode	20
Rewind button	20
Transport buttons	20

Navigation map	20
Marker buttons	20
Wave editor	21
Wave editor menu	22
Record button	22
Load button	23
Save button	24
Delete file button (iPad only)	24
Display and ruler	24
Selection buttons	24
Trim button	24
Delete button	25
Insert silence button	25
Reverse button	25
Normalization button	25
Fade buttons	25
Audiobus	26
Inter-App Audio	27
Instruments	28
Instrument list	28
User section	28
Volume fader	28
Offset fader	28
Attack fader	29
Release fader	29
Keyboard row selector	29
Preview button	29
Keep attack/release times (iPad only)	29
Sampler	30
Workflow	30
Sharing instruments	31
Sample list	32
Import button	32
Record button	32
Edit button	32
Delete button	32
Settings button	33
Auto Ranges button	33
Looping samples	33
Tracks	34
Track list	34
Track view switch	34
Scrolling and selecting	34
What is a track?	34
Track screen menu	35
Zoom buttons	35
Tempo button	35
Ruler	35
Markers	36
Add bar button	36
Track Editor	37
Track list icons	37
Note area	38
Rearranging tracks and changing the color	38
Filter tracks	38
Add track buttons	38
Mute button	38

Solo button	38
FX button	39
Edit button	39
Duplicate button	39
Delete button	39
Pan knob/fader	39
Volume fader	39
Bar Editor	40
Selecting	40
New selection button	40
Change selection button	40
Clipboard (copy and paste)	40
Move button	40
Duplicate button	41
Repeat button	41
Transpose button	41
Volume button (iPad only)	41
Quantization button	41
Edit button	41
Delete button	41
Bar insert/cut button	41
Piano roll editor	42
Piano roll view	42
New selection button	42
Change selection button	43
Draw button	43
Move button	43
Duplicate button	44
Repeat button (iPad only)	44
Length button	44
Volume button	44
Quantize button	44
Delete button	44
Quantization popup	45
Note buttons	45
Dotted button	45
Triplet button	45
Quantize note lengths	45
Soft (quantize 50%)	45
Effects	46
Effect routing	47
Tips and tricks	47
Reverb	48
Delay	49
Equalizer	50
Filter	51
Resonance and frequency panel	51
Snap back	51
Filter type	51
Filter accelerometer control	51
Phaser	52
Amplifier	53
BitCrusher	54
Compressor	55
Limiter	56
StereoWidener	57
Projects	58

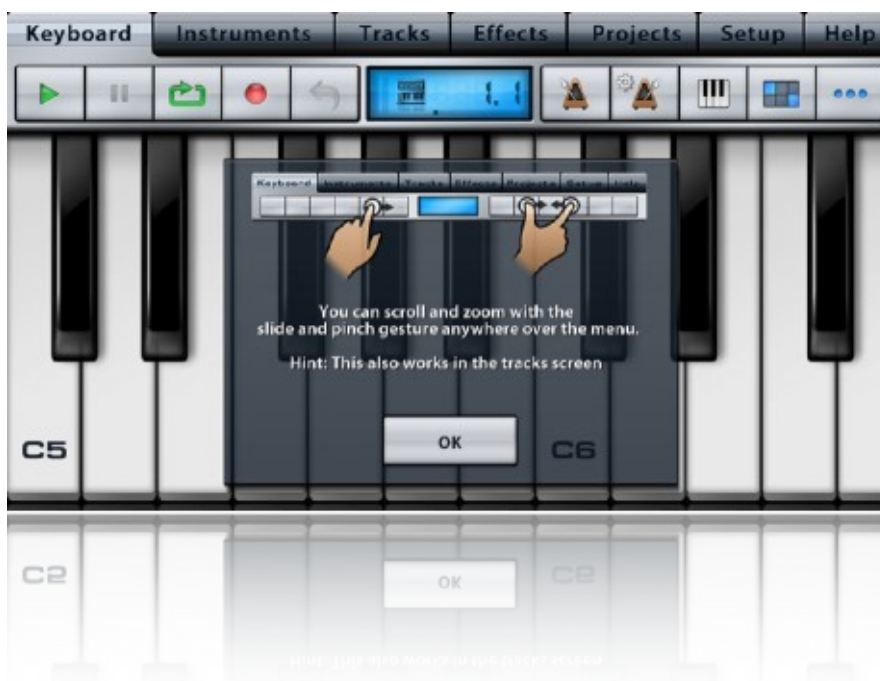
File list	58
Beats	58
New project button	59
Load button	59
Save button	59
Delete button	59
Append button (iPad only)	59
Transfer files to full version	59
Export	60
Share	61
Compress (zip) checkbox	61
AudioCopy	61
SoundCloud	61
Files	62
Apps & More	62
Rename	62
Server	63
iTunes File Sharing	64
Setup	65
General setup	65
Polyphony	65
Lock interface orientation	65
Continuous playhead movement	65
Keep attack/release times (iPhone only)	66
Bluetooth / AirPlay	66
Background audio	66
Keyboard setup	67
Snap to white keys	67
Allow touches between black keys	67
Allow touches on key borders	67
Key label language	67
Velocity control	67
Mod wheel instead of pitch wheel (iPhone only)	67
Auto quantization	67
Transposition	67
Pitch	68
Pitch bend semitones	68
Pitch bend sensitivity	68
Pitch bend accelerometer control	68
Pitch bend record mode	68
Accelerometer setup	69
Threshold	69
Reactivity	69
Calibration	69
Metronome setup	70
Volume	70
Pan	70
Style	70
Count in	70
MIDI setup	71
MIDI out for muted tracks	71
Send MIDI Clock	71
MIDI Thru	71
Keyboard split point	71
Ports & Channels button	71
Send params button	71
MIDI panic button	71

MIDI ports & channels popup	72
Troubleshooting Guide	74
Four steps to resolve most issues	74
Installing does not work	74
My purchased instruments do not appear on my second device	74
Audio recording does not work	74
The Instruments tab is greyed-out	74
Audio stuttering occurs	75
Some notes are not played back	75
The audio output sounds noisy	75
The server does not work	75
Version history	76
Version 2.0	76
Version 2.0.1	76
Version 2.0.2	76
Version 2.0.3	77
Version 2.0.4	77
Version 2.0.5	77
Version 2.0.6	77
Version 2.0.7	77
Version 2.0.8	77
Version 2.1	78
Version 2.2	78
Version 2.2.1	78
Version 2.3	78
Version 2.3.1	79
Version 2.4	79
Version 2.4.1	79
Version 2.5	79
Version 2.5.1	79
Version 2.5.2	80
Version 2.6	80
Version 2.6.1	80
Version 2.6.2	80
Version 2.6.3	80
Version 2.6.4	80
Version 2.6.5	80
Version 2.7	80
Version 2.7.1	81
Version 2.8	81
Version 2.9	81
Version 2.10	81
Limitations of the Lite version	82

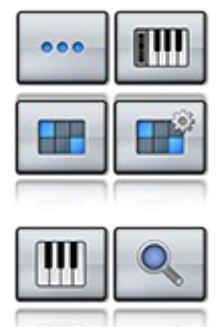
Quick Start Guide

Playing on the keyboard and pads

You can adjust the size and position of the keyboard by making a slide or pinch gesture anywhere on the menu bar. This also works in the [Tracks screen](#).



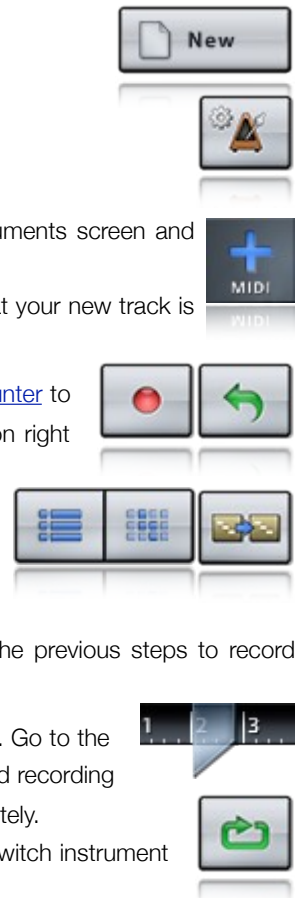
- Select the instrument of your choice from the Instruments screen and adjust the [attack/release faders](#) to change the fade in/out times.
- Back in the Keyboard screen, tap the “...” button on the right to toggle the [LiveTools](#) menu. It contains a switch for the pitch bend wheel (and filter wheel on the iPad) and assignable chord buttons.
- The blue [pads](#) button switches to chord pads if you selected an instrument, or drum pads if you selected a drum kit. The pad edit mode allows you to rearrange, add and delete pads, and to assign different chords or drum kit samples to each pad.
- In the keyboard view on the iPhone, tapping the keys button brings up a [menu](#) for switching to 2 keyboard rows, changing the key labels, and a keyboard map which allows you to position the keyboard with a single tap. On the iPad, these buttons are always visible.
- Go to the Effects screen and play around with the [reverb](#) and [delay](#) settings. Adjust the reverb type and size to simulate a specific room. High quality reverb sounds better but may introduce playback stuttering on older devices. Many synths sound great with a delay set to 1/8 and dotted.



Recording a song

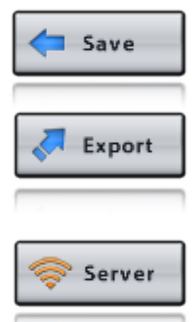
Follow these steps to create a song from scratch.

- Open the Projects screen and tap the New button to create a new project.
- Double tap the [Beats](#) folder, find a beat of your liking and double tap to load it.
- In the [Tracks screen](#) you will see one or more tracks containing the beat you just loaded. If it's too slow or too fast, tap the [tempo button](#) to change the tempo and signature of the song.
- Select the empty track (or tap the "+ MIDI" button to create a new one), then go to the Instruments screen and select your instrument of choice.
Note: The Keyboard and Instruments screens always apply to the active track, so make sure that your new track is selected.
- In the Keyboard screen (or maybe you switched to pads), tap the record button, wait for the [counter](#) to hit 1.1 and start playing. Hit the record or the stop button if you're done, or hit the [undo](#) button right away if you made a mistake and want to re-record.
- Switch to the Tracks screen to review what you just recorded. To repeat your melody or beat, tap the [bar editor button](#) in the upper right corner, select the bars you just recorded and tap the repeat button in the bottom menu several times.
- Switch back to the track editor and tap the "+ MIDI" button to create a new track. Repeat the previous steps to record something on this track.
- Let's assume that your song has a duration of 20 bars and you want to start recording at bar 10. Go to the Tracks screen where you'll notice 2 [markers](#) on the [ruler](#). Move the left marker to the 10th bar and recording will always start from there. Tap the loop button to loop the area between the two markers indefinitely.
Hint: Enable the loop button prior to recording to create a loop. You can even add tracks and switch instrument to record a complex loop in one go.
- Tune the [reverb](#) in the Effects screen, try out the [delay](#) effect and maybe play around with the other effects. Adjust the limiter's gain fader so that the decibel meters barely hit the red areas for the loudest part of your song.



Save and share your project:¹

- To save your song, tap the Save button in the Projects screen and enter a song name.
- Select your song in the file list and tap the [Export](#) button. Choose AAC to create a compressed audio file which you could [share](#) via email, Dropbox, iCloud Drive or SoundCloud. You can also export to WAV and share it with other apps on your device via AudioCopy. Or export to MIDI to create a .mid file which can be opened with DAW or music notation software on your computer.
- [iTunes file sharing](#) (or the [WiFi Server](#)) can be used to transfer your song (or any exported file) to your computer. It is recommended that you regularly backup your songs (.xms files) this way.



¹ Unavailable in Music Studio Lite, only available in the full version

Audio tracks and recording

There are 4 ways to fill an audio track:

- Record with a microphone or any iOS compatible audio interface. Song and metronome playback and input monitoring are available during recording.
- Import a song from your iPod library
- Import an existing audio file. Supported formats: wav, mp3, ogg, AAC (m4a)
- AudioPaste from other apps on your device

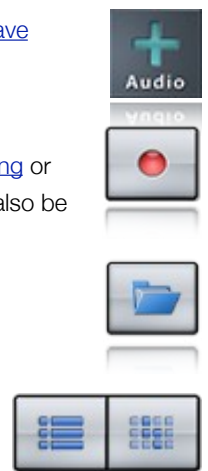


Note that an audio track can only be linked to one audio file. Opening another file in the wave editor will link it to the selected audio track. Editing in the wave editor always changes the original audio file in the *Audio* folder, unless you tap the “[Save as](#)” button to save it under a new name. This improves the workflow by not having to save and type filenames every time you change an audio file.



Follow these steps to add an audio track to your song:

- Go to the [Tracks screen](#) and tap the “+ Audio” button at the bottom of the track list, which will open the [wave editor](#).
- In the wave editor menu, tap either the [Record](#) button for microphone recording
- or the [Open](#) button on the right, which will present you with the other options. You can use [iTunes file sharing](#) or the [WiFi server](#) to copy audio files from your computer to the *Audio* folder in Music Studio. Audio files can also be opened from Mail and Safari directly with Music Studio.
- Use the bottom menu in the wave editor to select and modify parts of the audio file.
- In the Tracks screen, the track you just created has been filled with an audio region.
Tip: Double tapping an audio track takes you right to the wave editor.
- [Switch](#) to the [bar editor](#) to move, duplicate, repeat, quantize or delete audio regions. In other words, the bar editor treats audio regions as if they were notes.
- If you want to load the song in Music Studio on another device, in addition to the .xms file all the .wav files used in the song need to be present. To simplify the transfer, a song can be [exported](#) as a zip file which contains the .xms and all the linked .wav files from the *Audio* folder.

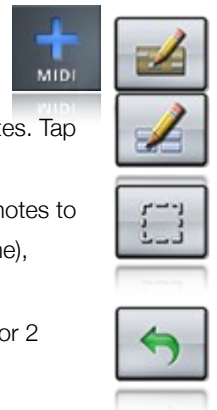


Writing notes

Notes can be drawn and edited in the [piano roll editor](#), where they are represented as blocks.



- In the Tracks screen, tap the “+ MIDI” button to create a new (MIDI type) track.
- Double tap the track or tap the Edit button to enter the [piano roll editor](#).
- Tap the [Draw](#) button and select the desired note length. Move the crosshair and tap OK to draw a few notes. Tap the OK button in the lower right corner when you’re done.
- By default, all notes are selected and every edit operation will modify all notes. Draw a rectangle over the notes to select a few of them, then try out the buttons in the bottom menu: move, duplicate, length, velocity (volume), quantize and delete.
- The [undo](#) button in the top menu is handy if you made a mistake. To redo, tap and hold the undo button for 2 seconds and tap *Redo*.



Quantization

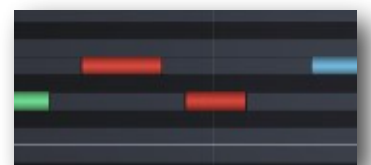
It’s very hard to play in perfect timing. Notes you played on the keyboard will often be off by a fraction of a beat, that’s where [quantization](#) comes in handy. It’s best to try out different quantization parameters (1/8, then 1/16, maybe 1/32) and hit the undo button if you are not satisfied with the result.

Red notes

Congruent notes, i.e. notes that are placed at the same position and have the same length, are displayed red in the piano roll editor. In most cases they are unwanted and should be deleted because they result in the note being played back with increased volume.

Tip: Legato

If you want a melody to sound legato, increasing the [release time](#) in the Instruments screen is often faster than changing the length of all notes.



Performance considerations

The more complex your song gets, the more processing power Music Studio requires. This can lead to audio stuttering on older devices, which can be counteracted. These factors have the most impact:

- **Polyphony**

Lower the polyphony in the general settings. While a 2013 device can easily cope with 32 or 128 voices at a time, a 2009 device would have to be restricted to playing no more than 16 voices simultaneously in order to prevent stuttering.

- **Reverb quality**

Set it to low on older devices, and to high before you export a song to wav or AAC format.

- **Release time**

In order to keep the polyphony low, reduce the release time of the tracks as much as possible on older devices. For example, an guitar playing a fast riff with 1 second release time can drive up the polyphony to 32 or 64. Lowering the release time to 0.1s has a positive impact on performance with almost no impact on quality, depending on the music of course.

- **Animations**

Disabling the animations in the [general setup](#) can improve the performance. The setting *Continuous playhead movement* should be enabled only on last generation devices.

External Hardware

This is an overview of most of the external audio and MIDI hardware supported by Music Studio.

Note: Always check if the hardware you are going to purchase is compatible with your iOS device and its Lightning or Dock connector, and with the iOS version installed.

Audio recording accessories

Music Studio supports all class-compliant (= CoreAudio compatible) audio interfaces made for iOS devices.

MIDI hardware

There are 4 ways of utilizing Music Studio's MIDI input & output:

1. Apps that are CoreMIDI or Virtual MIDI compatible

2. Keyboard controllers made for iOS

Here are a few examples, but Music Studio is compatible with all CoreMIDI compatible keyboards:

- Line 6 Mobile Keys
- iRig Keys, iRig Keys Pro

3. MIDI interfaces made for iOS

Connect the interface's MIDI IN port to your keyboard's MIDI OUT port, vice versa.

Music Studio supports all CoreMIDI-compliant MIDI interfaces made for iOS devices.

Here are a few examples, but Music Studio is compatible with all CoreMIDI compatible devices:

- Yamaha i-MX1
- Line 6 MIDI Mobilizer
- iRig MIDI, iRig MIDI 2

4. Apple USB adapter

There's a Lightning to USB adapter for new devices and a "Camera Connection Kit USB adapter" for the dock connector on older devices. USB keyboards with low USB power requirements can be directly connected to the adapter.

Alternatively, MIDI-to-USB adapter cables can be used to connect any MIDI keyboard via Apple's USB adapter to the iPad.

FAQ (Frequently Asked Questions)

For support-related discussions, visit the forum at the [Music Studio website](#).

Additional instruments



Where can I purchase additional instruments?

Tap the Shop icon in the bottom left corner of the instrument screen. Instruments are in-app purchases, they are not available directly in the App Store or in iTunes. Browse through the available purchases and tap the preview button to listen to a short demo. When the prices are retrieved from the App Store, the buy buttons will appear. The following options are available:

- All-in-one package
It contains all the available instruments. Owners of the all-in-one package will automatically receive all new instruments added to the shop in the future.
- Classic / Band / Electro / World package
These packages include each of the 4 individual category's instruments. Owners of a category package will automatically receive all new instruments added to this category in the future.

How do I restore my purchased instruments or get them on my second device?

Simply enter the shop and tap the *Restore* button in the upper right corner, enter your iTunes username and password that you made the purchase with in the past, and wait for the instruments to appear in the instrument list. This process can take up to a few minutes depending on your internet connection (WiFi recommended).

Note: Your credit card won't be debited twice for the same product. If you tapped the *Buy* button of an item that you already bought on another device, it will be a free download.

Installing

I want to install the app on my second device. Do I have to pay for it again?

No, if you open the App Store on your device and search for Music Studio, a cloud icon will indicate that you already purchased it and that it will be a free download. Just make sure that you are logged in with the same Apple ID that you used to purchase Music Studio in the first place.

Do I lose my songs if I remove the app from my device?

Yes, if you tap and hold the app icon and tap X to remove the app, all files and settings associated with this app are deleted. Even if you sync the app back from iTunes onto your device, it will be a fresh install and your files won't be restored. In order to save your songs, transfer them to your computer with the iOS Files app, [iTunes file sharing](#) or the [WiFi Server](#)

Note: Restoring your device from the Restore menu in iTunes will restore all your app data (e.g. Music Studio songs) too, along with a reinstallation of iOS and all other apps. You will however lose all the data that you created on your device after the restore point was created by iTunes (sync).

Why is the app size so large?

Studio-sampled instruments require a lot of space. We decided not to trade quality for app size.

Music Studio is a 700MB download. During the installation, roughly 1.7GB of free space is required. After the installation it takes up about 1GB on your device. It comes with all the instrument data, purchasing instruments only unlocks them, so there are no additional downloads when you purchase a pack.

Functionality

Can I connect my external audio or MIDI device?

See the [quick start guide](#) for a list of compatible devices.

Can I record my electric guitar/bass or vocals?

Yes, but an external microphone or an audio interface for iOS is recommended. Music Studio even lets you record both at the same time if you have a stereo audio interface for iOS.

However, it doesn't have an amp/box model effect for guitars. The distortion effect is only meant for synths. For guitar recording, it is recommended to record the output of your amp, or use another app with amp models as an Audiobus effect or AudioCopy/AudioPaste the recording made in another app into Music Studio for editing and sequencing.

How do I get my song into iTunes?

- [Export](#) your song to AAC format.
- Transfer the resulting .m4a to your computer with [iTunes file sharing](#) or the [WiFi server](#).
- Drag the file from a Finder (or Windows Explorer) window into the *Library* section (top left) of the iTunes window to add it to your library.
- Sync your device (maybe you need to edit the music sync settings in iTunes) to transfer the song into the iPod app.

How do I get my project into a desktop DAW?

A project's MIDI tracks can be exported as MIDI (.mid) files which can be read by almost any desktop DAW or scoring software. You can also export each track as a wav file and add it as an audio track in another DAW:

- [Export](#) your song to MIDI format.
- [Export](#) your song to WAV format and enable "Save tracks separately" to mixdown every track as a wav file.
- Transfer the resulting .mid and .wav files to your computer with [iTunes file sharing](#) or the [WiFi server](#).
- Import those files in your desktop application.

How do I transfer files to Music Studio?

A [list of the supported file types](#) can be found in the Projects section. There are 4 ways to copy a file into Music Studio's folders:

1. [iTunes file sharing](#) is the simplest method to quickly copy files from your computer to Music Studio and vice versa. The disadvantages are that a computer is required and that folders can only be copied as a whole.
2. The [WiFi server](#) requires that your second device, which can be a computer or any mobile device, is in the same WiFi network. It allows you to browse Music Studio's folders and to download, upload (= import) or delete any number of files to or from any folder.
3. Supported file types can be opened from other apps (Mail, Safari, Dropbox etc.) with Music Studio. Some apps have a dedicated share button, others (like Mail and Safari) require you to tap and hold the file, then select "Open with" and tap Music Studio. The file will be copied into Music Studio's [Inbox folder](#).
4. Audio files can be transferred between apps via [AudioCopy](#) and [AudioPaste](#). Music Studio can also import audio files from your [iPod music library](#).

iOS does not have an open file system and thus no Finder or Explorer type app. Every app has its own closed (sandboxed) folder that no other app has access to, except for the 4 methods described above.

How to maximize the sound quality of the instruments?

To get the most out of the high quality studio-recorded instruments, use earphones, headphones or external speakers. Most instruments are designed for a specific tonal range, an E-Bass sounds as unreal in the 4th octave as a flute in the lowest octave. Some instruments also benefit from a higher or lower release time.

- Wind and brass instruments sound best with a low release time and a large reverb.
- A great effect for synths is to set the delay to 1/8th and dotted.
- String instruments sound best with a medium attack time (around 0.5s) and a high release time.
- Guitars, plucked and percussion instrument can be played *one-shot* with a high release time of about 1s.

If I select and edit bars in the bar editor, why are some notes ignored?

Selected notes are colored dark blue. If you select a bar but a note starts a few ticks earlier than this bar, it will not be selected. If possible, quantize the track, thereby aligning the notes to simplify further editing.

Why can't I play all the keys C1 to C8 of an instrument?

Many instruments are limited in their tonal range. For Music Studio's keyboard, the range is extended as far as possible, but it is limited because the sound would be awkward or of poor quality outside of this range. This especially concerns orchestral instruments.

Why are the drum kit's sounds arranged in such a strange way?

This "strange way" is called the "General MIDI Level 1 Percussion Key Map". It is commonly used on nearly every hardware keyboard/synthesizer to retain full MIDI compatibility.

Keyboard and Drum Pads

Keyboard

Music Studio features a 85-key clavier capable of handling up to 5 simultaneous touches (10 on the iPad). Not every instrument has the full tonal range, hence the number of playable octaves varies from instrument to instrument.

If you are uneasy with the way the keys react to your touch input, the [keyboard setup](#) offers some handy preferences.

Scrolling and resizing

The keyboard position and width can be adjusted via the scroll and pinch gestures. Either tap the [keyboard layout button](#) or simply do the gesture on the top menu bar: move one finger left or right to slide the keyboard, pinch with two fingers to adjust the key width.



Key velocity

In the keyboard setup, enable [Velocity](#) to control the note volume with the touch position, the [accelerometer](#) or the [mod wheel](#).

Keyboard Menu

Play button

The play button toggles playback of the song. Stop rewinds to the left [marker](#).



Pause button (iPad only)

The pause button simply pauses playback and doesn't rewind.



Loop button

Tap the loop button to toggle looping the song (or more precisely, the area between the [markers](#)).



Record button

The record button start or stop a new recording. Tap it, then wait for the counter to hit 1.1 (this is called [count-in](#)) and start playing. Hit the record or the stop button if you're done, or hit the undo button right away if you made a mistake and want to re-record.

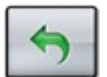


Note: recording is always done on the selected track. To record with another instrument on top of your current song, create a new track, select it and record.

Undo button

The undo button deleted the notes you just recorded, or reverts the song to the state prior to the last edit.

Tip: Hold the undo button for 2 seconds to display a popup with the possible undo/redo actions.



Display

The LCD contains gain bars to indicate the volume, the icon of the selected track's instrument and the position of the playhead within the song. The number format is measure-dot-beat, so "7.2" means that the playhead is in the 2nd beat of the 7th bar (measure). The small dot on the bar below the numbers also indicates the playhead position. Tap the display it to enter the [playhead mode](#).



Metronome button

Tap the metronome button to toggle the metronome during playback or recording. Its state is remembered separately for playback and recording. Per default, the metronome is enabled only during recording. Metronome volume and style can be set in the [metronome setup](#).

iPhone only: tap and hold the metronome button to bring up the tempo popup.



Tempo Button (iPad only)

The tempo button brings up the [tempo popup](#) where the song tempo and signature can be set.



Keyboard layout button

On the iPad, this button has a zoom icon because the [keyboard layout mode](#) allows you to scroll and zoom the keyboard. On the iPhone, the keyboard layout mode also holds the keyboard rows and key label settings, hence the keys in the icon.



Drum pads button

The pads button toggles between keyboard and drum or chord pad input. See the section about [drum pads](#).



LiveTools button

The LiveTools menu contains the pitch wheel, sustain and chord buttons.



Pitch wheel button

On the iPad, both the pitch bend wheel and the mod wheel are always visible. On the iPhone, there is only space for one wheel and there is an option in the [keyboard setup](#) to switch between pitch and mod wheel.

The pitch bend wheel's range can be set in the Setup screen.

The mod wheel controls the [filter effect](#), but can be set to control the keyboard velocity in the [keyboard setup](#).



Accelerometer button

The accelerometer button is located below the pitch bend wheel. It toggles the accelerometer input, which can be recorded too. By default, it enables the [pitch bend effect](#) (and disables the pitch bend wheel in turn). Tilt your device to bend the pitch of the currently played notes. The [filter effect](#) can also be configured to react to the accelerometer.



Sustain button

The sustain button in the LiveTools menu holds all the keys that are currently pressed until it is released again. It simulates the right pedal of a grand piano.

Note: MIDI CC64 events are not recorded, but the note lengths are increased if you use the sustain button during recording.



Chord buttons

Each chord button can be configured to not only play chords, but any number of notes at once. Touch a chord button to play it like a key.

To assign a chord, tap the SET button, then tap one of the chord buttons. The keys assigned to this chord button are highlighted blue. Tap a key to assign or remove it from the chord. When you're done, tap the set button again.

To clear a chord, tap the SET button, then tap and hold a chord button. A popup will appear asking if only the selected or all chord buttons should be cleared.

Tip (iPad only): if chord pads are enabled, tap a chord pad (with SET enabled) to assign it to the selected chord button.



Keyboard layout mode

Tap the [button with the keys](#) to enter the keyboard layout mode, where the keyboard rows can be scrolled and resized anywhere on the screen.

Octave buttons

The left and right octave buttons quickly scroll the keyboard one octave (12 semitones) down or up.



Fullscreen button (iPhone only)

Tap the fullscreen button to switch to the full screen keyboard mode. Sliding and pinching in the top portion of the screen scrolls and resizes the keys. Tap the button in the upper right corner to exit the fullscreen mode.



Keyboard map

The map illustrates which part of the keyboard is currently visible.

Slide or tap it to quickly scroll the keyboard.



Keyboard rows button (iPhone only)

Tap the keyboard rows button to toggle between one and two keyboard rows.

See [this section](#) about the track created for the lower keyboard row.

On the iPad, this button is always visible in the Keyboard screen's menu bar.



Key label button (iPhone only)

The key label button allows you to select one of the 4 key label modes: off, C only, all keys labeled, and colored key

On the iPad, this button is always visible in the Keyboard screen's menu bar.



Drum pads

Depending on the instrument selected, the pads either play drum samples or chords.

Pad edit button

The pad edit button makes all the pads wiggle. Tap and move a pad to rearrange the pads, or tap the X in the corner of a pad to remove it. The Plus button in the lower right corner adds a new pad, until the maximum number of pads is reached.



Drum pad edit mode

If a drum kit is selected, each pad will play a different sample of the kit. Tap a pad to display the list of samples, where the ones that are already mapped to a pad are greyed out.

Chord pad edit mode

If an instrument (as opposed to a kit) is selected, each pad plays a chord. Tap a pad and the bottom menu indicates the chord's key, octave, quality and inversion. These parameters can be configured arbitrarily.

Tip (iPad only): if the LiveTools menu with the [chord buttons](#) is visible, tap the SET button in the menu, tap a chord button, then tap a pad to assign its chord to the selected chord button.



Playhead mode

The playhead mode can be accessed by tapping on the display in the Keyboard or Track screen menu. It allows you to adjust the position of the playhead and to set the markers. Use the controls in the bottom menu or simply slide your finger anywhere on the screen to adjust the position of the playhead.



Rewind button

Rewinds the playhead to the left song marker. Tap it a second time to rewind to the beginning of the song.



Transport buttons

Rewind and forward the playhead position by exactly 1 bar (measure).



Navigation map

Tap or slide on the map to position the playhead anywhere in the song. The song markers are depicted by yellow lines, the areas outside the markers are darkened. The map also displays the current track's notes as white dots and lines.



Marker buttons

Tap a marker button to set the left or the right song [marker](#) to the current playhead position. The markers must be at least 1 bar apart.



There are several reasons why markers are handy:

- Recording always starts at the left marker, which makes punch-in recording possible.
- The loop button loops the section between the markers.
- When you export a song into wav or AAC format, you can choose to only export the range between the markers.

Wave editor



The wave editor can be entered by double tapping an existing or adding a new audio track in the [track list](#). It is also used for editing samples in a [user instrument](#).

There are 5 ways to fill an audio track:

- Record with a microphone or any iOS audio accessory
- Record other [Audiobus](#)-compatible apps running in the background ²
- Import a song from your iPod library
- Import an existing audio file. Supported formats: wav, mp3, ogg, AAC (m4a)
- AudioPaste from other apps on your device

An audio track can only be linked to one audio file. Opening another file in the wave editor will link it to the selected audio track. Editing in the wave editor always changes the original audio file in the Audio folder, unless you tap the “Save as” button to save it under a new name. This improves the workflow by not having to save and type filenames every time you change an audio file.

² Unavailable in Music Studio Lite, only available in the full version



Wave editor menu

The menu buttons to the left to the display (for playback and undo) and the zoom buttons are the same as in the [Keyboard screen](#). The loop button toggles looping, but in the [sampler](#) mode it toggles the loop markers to set the looped sample range.

Record button

Tap the record button to open the audio recording popup for recording a wav file into the *Audio* folder.



Supported hardware

See the [list of compatible hardware](#).

Filename textfield

By default, a file name that doesn't exist yet in the Audio folder is displayed. Tap it to change the name of the file you are going to record.

Input levels

Tap anywhere on the input level bars to reset the clipping indicators. The red clipping indicators light up if the stereo input level bars hit full gain. This means that clipping has occurred and there probably will be a clipping noise in the recorded file.

Note: Only the levels of the first 8 input channels are displayed.

Input gain fader

The input gain fader is visible on top of the input levels only if your iOS device has input gain support or if the connected audio device offers input gain adjustment. Decrease the gain to avoid clipping, or increase it if the volume of your recordings is too low.

Monitoring

Input monitoring outputs the input audio signal before and during audio recording. There are 2 modes:

- **No effects** skips the effect bus and directly outputs the raw input signal.
- **Track effects** routes the incoming audio signal through the effect bus of the selected track. This way you can listen with headphones to what you sing or play before and during recording, exactly as it will sound on the track.

Note: To prevent feedback, input monitoring is only available if headphones or an external microphone are connected.

Note: Monitoring is not available if [Audiobus](#) input is selected.

Channels

With the internal microphone, only mono is available. If an external microphone or CoreAudio device with more than 1 channels is connected, the following options are available:

- Mono L/R: The left or right mono channel.
- Stereo: Records both channels into one stereo file.
- 2-24 mono files: Records all the available mono channels simultaneously into separate mono files.
- 2-12 stereo files: Records pairs of 2 mono channels simultaneously into stereo files.
- [Audiobus](#): Every Audiobus input app is recorded to a separate stereo track.³
- Inter-App Audio: A second menu appears where you can select all recordable IAA apps that are installed on your device. For more information read the chapter about Inter-App Audio.⁴

Play song during recording

Listening to the song during recording is essential for singing or playing along. Situations where you wouldn't enable this checkbox are if you start your song with an audio recording, or if you record snippets which will be used in multiple songs independently of the tempo.

Metronome button

Enable the metronome button to listen to the metronome during recording.

Note: If [count-in](#) is enabled in the metronome setup, it will kick in during audio recording too.

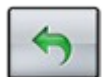


Record button

Tap the record button to start and stop audio recording.

Tip: Keep an eye on the input levels. Increase the distance to the microphone or decrease the input gain if they reach 100%.

Tip: If you want to trash the recording and re-recording, tap the undo button right after recording to delete the file.



Load button

The load audio file popup presents you with 3 options:

- **Audio folder**

The *Audio* folder holds all your audio recordings and can also be browsed in the [Projects screen](#).

You can use [iTunes file sharing](#) or the [WiFi server](#) to copy audio files from your computer to the *Audio* folder in Music Studio.

Audio files can also be opened from Mail and Safari directly with Music Studio.



³ Unavailable in Music Studio Lite, only available in the full version

⁴ Unavailable in Music Studio Lite, only available in the full version



• iPod library

All the songs you synced with iTunes or downloaded from the iTunes Store are stored in the iPod library. Tapping the OK button shows the contents of your iPod library. Importing the file from the compressed format into the wav format can take up to a few minutes on older devices.

• AudioPaste

The AudioCopy clipboard allows you to copy and paste audio material between apps that have AudioCopy support. The AudioCopy app (available on the App Store) lets you manage the clipboard.

• Files

Audio files can be imported from the iOS Files app, which accesses local files, as well as iCloud Drive and other cloud services like Dropbox.

Save button

To save the current audio file under a new name, tap the save button and enter a file name. The original audio file will remain unchanged.

Tip: In many cases, enabling the **“Save selection only”** checkbox is more handy than using the trim button.



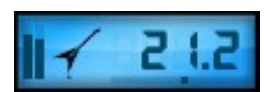
Delete file button (iPad only)

The delete button removes the current audio file from the *Audio* folder permanently. Undo is not possible after this action.



Display and ruler

Tap the display or the ruler to change the units between seconds and measures (= bar.beat).



Selection buttons

Tap the leftmost selection button and slide over an area in the wave form to select it. Use the markers on the ruler to adjust the selection, or tap one of the other two selection buttons to extend the selection to the beginning or the end of the audio file.



Trim button

The trim button cuts the areas outside of the selection away from the audio file.



Delete button

The delete button cuts the selected area from the audio file.



Insert silence button

Place the playhead at the point where you wish to insert silence, by moving your finger on the ruler. Then tap the insert silence button and enter the length in seconds.

Tip: tap and slide your finger on the display to quickly adjust the length of the silence.



Reverse button

The reverse button reverts the selected area of the audio file, so that it sounds backwards when played back.



Normalization button

Normalization modifies the audio file's volume to that the peak is at the desired percentage of the maximum volume.

Here are a few examples:

- Normalizing a quiet recording to 100% will boost its volume without clipping the wave form.
- If a quiet recording contains a spike that has a peak value of 100%, normalizing to 100% won't change the file.
- Normalizing to 50% will set the peak to 50% of the maximum available volume. Repeating this procedure won't change the file because the peak will already be at 50%.



Limiters (soft knee)

The limiter checkbox becomes available at a percentage of over 100%, where clipping would occur. Applying a soft knee limiter prevents clipping (crackling), but it introduces some artefacts that reduce the quality of the audio file.

Fade buttons

Tapping the fade in or out button unfolds a sub menu with 3 choices for the gradient: slow, linear, or fast.

The two most common cases are fading in the beginning and fading out the ending of an audio file. Try out the different gradients and tap the undo button in between.



Audiobus⁵

Audiobus is an iOS app (available on the App Store) that enables app-to-app audio and MIDI routing between iOS apps that support Audiobus. Music Studio can send and receive audio and MIDI to and from other apps, through Audiobus. For more information see <http://www.audiob.us>



Music Studio is an Audiobus input and an output:

- When used as an audio input, an Audiobus output app can record Music Studio's stereo audio output. Music Studio provides 2 play and rewind buttons in the Audiobus panel which can be accessed from other Audiobus apps.
- When used as an audio output, other Audiobus ports (= apps) can be recorded to separate stereo tracks. The Audiobus option is available in the channel menu of the wave editor's recording window. In this mode, Music Studio automatically shows the recording window, preselects Audiobus and enables the metronome and song playback during recording.



As an output, Music Studio provides a record buttons in the Audiobus panel which can be accessed from other Audiobus apps.

The input levels of all Audiobus apps are summed and displayed in the level metering bars. Input monitoring for Audiobus tracks is not available (the background app's sound is audible anyway).

- When used as MIDI input or output, other MIDI connections (to hardware or other apps) are not available in Music Studio because all the routing is done by Audiobus.

Audio workflow example:

- Launch the Audiobus app
- Select 2 input apps and launch them
- Select Music Studio as the output app and tap to launch it
- Switch to one of the input apps
- In the Audiobus panel, tap the Music Studio icon, then tap the record button to start recording
- Play something in the app, then switch to the other input app and play something too
- In the Audiobus panel, tap Music Studio's record button again to stop recording
- Switch to Music Studio to view and edit your recording

⁵ Unavailable in Music Studio Lite, only available in the full version

Inter-App Audio⁶

Inter-App Audio (IAA) was introduced by Apple in iOS 7.0. It provides universal audio routing across apps. It's not as reliable as Audiobus, but IAA doesn't require a separate app, in other words it's free. There are 4 kinds of Inter-App Audio apps:

• Hosts

Music Studio is a host, it can record and utilize other IAA node apps.

• Generators

Generators produce audio can be recorded onto audio tracks. Many IAA instruments can also be recorded as if they were generators. Examples are drum machines or apps that don't feature a keyboard.

To record an IAA generator app in Music Studio, add an audio track, tap the Record button and select "Inter-App Audio" instead of "Mono" as input source. A second menu appears where you can select all recordable IAA apps that are installed on your device.

• Instruments

IAA instruments receive MIDI from the host (Music Studio) and produce audio output. All installed instrument apps are listed in the Inter-App folder in the Instruments screen. They can be assigned to MIDI tracks the same way as internal instruments.

• Effects

Effect apps process audio signals. All installed IAA effect apps can be selected as track, send or global effects.

Known limitations and issues

- An IAA app can only be connected once. For example, it's impossible to assign an IAA effect app twice in the same project.
- Connection problems can occur if connected apps always remain in the background, due to a bug in iOS. To prevent this, Music Studio automatically switches to any IAA app that you manually connect to. To prevent connection problems, manually tap the icon of every IAA app used in a project after loading the project. This way, iOS displays every IAA app once and connection issues won't occur.
- If the connection to an IAA app cannot be established, quit all audio apps (press the home button twice and swipe the apps up), launch Music Studio and then connect the IAA app again. Don't launch other IAA apps manually before launching Music Studio.

⁶ Unavailable in Music Studio Lite, only available in the full version

Instruments



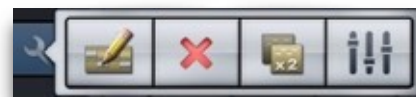
Instrument list

Change the selected track's instrument by tapping an instrument from the scrollable list. Tap a folder in the left list to filter the instrument list by category, to view your “User” instruments (see the next chapter), to view installed Inter-App Audio instrument apps (see the chapter about Inter-App Audio) or to access the in-app instrument shop.

User section

Tap the User folder to display all your custom instruments and the Create (+) button in this section to add a new instrument with the [sampler](#). A small edit icon sits in the right column next to the selected user instrument. It displays a menu with four buttons:

- **Edit:** enters the [sampler](#) screen.
- **Delete:** removes the instrument from the list and from the [Instruments folder](#). Be careful, this action cannot be undone.
- **Duplicate:** creates a copy of the selected instrument.
- **Save parameters:** saves the current positions of the offset, attack and release faders as defaults for this instrument.



Volume fader

The volume fader sets the current track's gain from 0% to 100%. It has the same function as the volume fader in the [track editor](#).

Offset fader

The attack offset is the point in the sample where playback begins when a note is triggered. Imagine how a piano would sound without the loud attack at the beginning. Moving the offset fader to 10% cuts away the beginning (i.e. the first 10%) of the sample and you will hear a very strange piano sound. This can be very useful for transforming a slow synth into a lead sound, or cutting the attack of any instrument.

Attack fader

The attack fader sets the attack time in seconds, which is the fade-in time, i.e. how long it takes for the instrument to reach its maximum volume. Use longer attack times for soft sounds like strings and synth pads.

Release fader

Set the release time in seconds with the release fader. It's the fade-out time, i.e. how long the sound fades out after a note is released. Use longer release times to simulate legato or one-shot for drum kits and percussive instruments.

Keyboard row selector

Tap the lower row to switch to 2 keyboard rows. This selector then allows you to switch between the rows to select different instruments for the upper and lower keyboard row.

See [this section](#) about the track created for the lower keyboard row.

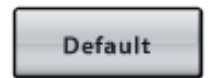


On the iPad, a lock beside the keyboard row selector indicates if the two keyboard rows are linked. If the lock is closed, the settings (instrument, volume, attack and release time) of both keyboard rows will be held in sync. Every change you make will affect both rows (meaning two tracks).

Default button

The default button resets the four faders to the instrument's default preset.

Note: If "Keep attack/release times" is disabled, this button is automatically pressed each time you select an instrument.



Preview button

Tap the preview button multiple times to hear different notes played with the current instrument.



Keep attack/release times (iPad only)

Enable the *Keep attack/release times* checkbox to freeze the state of said faders while browsing the instrument list. If this checkbox is disabled and you select an instrument from the list, its default attack and release time will be applied.

On the iPhone, this setting can be found in the [general setup](#).

Sampler



Workflow

The sampler's purpose is to create custom instruments or kits from existing audio files or from audio recordings. A few usage examples:

- Sample another iOS app that supports AudioCopy: record a few notes in the other app, AudioCopy them and AudioPaste them into the sampler.
- Create a kit consisting of vocal samples or noises that you record directly in the sampler with a microphone. Your sounds can be triggered with the [drum pads](#).
- Sample your guitar or bass by recording a few notes with an [audio interface for iOS](#) (e.g. Apogee Jam or iRig) or a microphone.
- If you already have audio files or an instrument or a kit, you can transfer them into Music Studio and load them into the sampler. Many websites offer royalty-free samples. WAV, MP3, OGG, M4A and ZIP files can be directly opened from Safari or Mail with Music Studio.

Follow these steps to create an instrument:

1. Tap the User folder in the Instruments screen.
2. Tap the + Button at the end of the list.
3. Enter a name and select the instrument or the kit icon, then tap OK.
4. Select a key which you want to assign a sample to. You can of course always move the sample to another key later.
For kits it is recommended to start at C2 and fill the keys upwards without gaps.
For instruments, it is vital that the key matches the sample's pitch. If you are going to record a high D, select D5 for example. If you are going to load an audio file that plays a low F, select F1 or F2.

5. Tap [import](#) or [record](#) to add a sample.
6. Repeat steps 4 and 5 for every sample that you want to add.
7. When you are finished adding the samples, tap the [Auto Ranges](#) button.
8. To test your instrument, switch to the Keyboard screen.
9. To edit a sample in the [wave editor](#), double tap it.
10. Tap the Done button to exit the sampler and return to the instrument list.

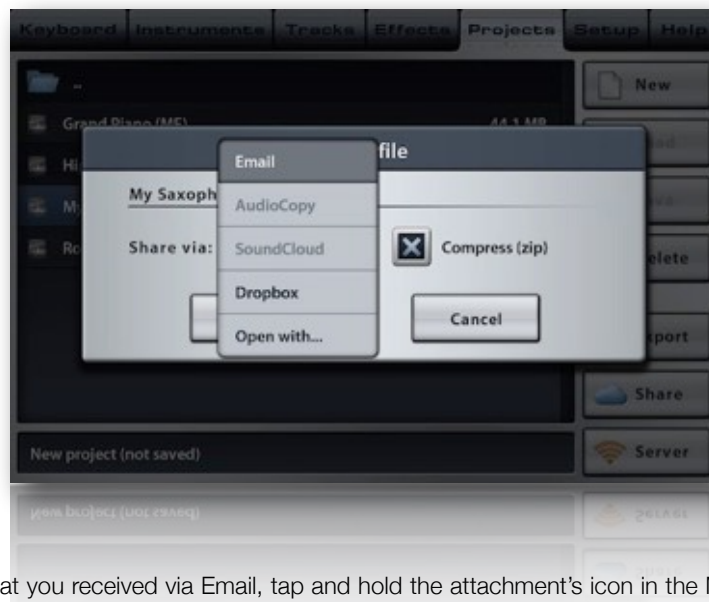
Consider these guidelines to decide the number of samples to add to an instrument:

- In theory you could only add 1 sample for the whole instrument. However, the sound quality suffers when you play a key that is far away from the base key on the keyboard. Depending on the instrument it is recommended to use a minimum of 1 sample every 2 octaves, or up to 3 samples per octave.
- Consider the size of your samples. Smaller instruments load faster. Big instruments may not be loadable at all on older devices. You can see your instrument's size by selecting it in the [Instruments folder](#) in the Projects screen.
- It is good practice to keep your instrument's size under 15mb. Adding samples, several seconds in length, for every single key is definitely too much. For a kit consisting of very short samples, having 5 octaves full of (60) samples is okay.
- Keep in mind that a mono sample only takes up half the space of a stereo sample of the same length. Always cut your samples to the minimum length required.

Sharing instruments

All of your instruments are stored as .instr files in the [Instruments folder](#). There are several options of sharing instruments with other users:

- Select the instrument in the Projects screen, tap [Share](#), select Dropbox or Email. It is recommended to enable the *"Reduce the file size (zip)"* checkbox to reduce the amount of uploaded data.
- Or use [iTunes File Sharing](#) to save the whole *Instruments* folder to your computer.
- Or use the [WiFi server](#) to access the *Instruments* folder in a browser on another device in the same WiFi network. If it's another iOS device, you can open instrument files with Music Studio directly from within Safari.



To open an instrument file that you received via Email, tap and hold the attachment's icon in the Mail app and select "open with Music Studio". If another user shared an instrument with you by giving you access to his Dropbox folder, install the Dropbox app and tap the share button to open the .zip or .instr file with Music Studio.

Sample list

The sample list is a vertical keyboard, where every row represents a key that you can assign a sample to. Every sample has the following parameters:

- **Base key**

This is the row that you tapped before loading or recording the sample. When the base key is played on the keyboard, the sample is played with its original pitch. The base key can be moved by tapping and sliding the move icon vertically.

- **Key range**

The key range defines the range of the keyboard where the sample is triggered. It can be modified by moving the key range buttons vertically. The key range is indicated by the colored area in the right section of the sample list and is written in the sample's row. It is recommended to use the Auto Ranges button to automatically set all the key ranges. For kits, the key ranges are not important unless you deliberately want to pitch a sample. Key ranges of two samples can overlap.

Let's take for example a sample that has C3 as the base key and a key range from G2 to F#3. When a key within this range, but other than the base key is played on the keyboard, the sample's pitch is changed. In theory you could only add 1 sample for the whole instrument. However, the sound quality suffers when you play a key that is far away from the base key on the keyboard.

- **Volume**

Adjust every sample's volume with the volume bar so that all samples have the same volume relative to each other. If the range of the volume bar is insufficient, double tap the sample and use the [wave editor](#) to modify the volume.

- **Loop range**

See the section [Looping samples](#).



Import button

Double tap an empty row in the sample list or tap the import button to bring up the import popup. It allows you to select an audio file from the *Audio* folder or to AudioPaste a sample that was AudioCopied with another app. This popup window is identical to the one in the [wave editor](#), the only difference being that the iPod library option is not available in the sampler.



Record button

Tap an empty row in the sample list and tap the record button to bring up the [recording popup](#), which is identical to the one in the wave editor. The recorded audio file will be placed in the *Audio* folder (as a backup) where it will remain unchanged even if you edit it in the sampler or remove it from the instrument.



Edit button

Double tap an existing sample or tap the edit button to enter the wave editor. When you are done editing the sample, tap the Sampler tab again and your edits will be applied to the sample in the instrument.

Note: If you loaded an audio file from the *Audio* folder as a sample, the original file will not be modified.



Delete button

Select a sample in the sample list and tap the delete button to delete it from the instrument.

Note: If you loaded an audio file from the *Audio* folder as a sample, the original file will be left in place.



Settings button

Tap the settings button to bring up a popup window where you can edit the instrument's name and icon. The icon also defines the instrument's type: chromatic instrument (e.g. a piano) or kit (e.g. a jazz drum kit or a set of vocal samples). The type determines if the [chord pads](#) (chromatic instrument) or the [drum pads](#) (kit) are displayed in the keyboard screen's pad mode.



Auto Ranges button

Adjusting all your sample's key ranges properly can be time consuming. The auto ranges button does the work for you by automatically setting every sample's key range. For example, if one sample has the base key C3 and the other G3, the middle of the space between samples is between D#3 and E3. The auto ranges button will set the first sample's upper range to D#3 and the second sample's lower range to E3.



Looping samples

Tap the loop button in the wave editor to toggle the loop markers which define the range of the sample to be looped. A short crossfade is automatically applied when a looped sample is played, to avoid crackling noises and ensure a smooth transition from the loop-out to the loop-in point.



Tracks

Track list



Track view switch

This is the most important button in the Tracks screen. It switches between the [track editor](#) and the [bar editor](#). These two editing modes are the key to Music Studio's fast and easy editing workflow.



The [track editor](#) is designed to edit whole tracks and mix the song by setting the volume, pan and the effect bus.

Use the [bar editor](#) for quick, bar-wise editing of the song. Select a range of bars (measures) and move, duplicate, repeat, transpose, quantize or delete it.

Scrolling and selecting

Analogous to the Keyboard screen, sliding and pinching on the menu bar scrolls and zooms the song.

Only one track can be selected at a time. The keyboard will play this track's instrument, the record button will record on this track, and all the changes you make in the Instruments screen will apply to it. You cannot delete the first track, the maximum number of tracks is 127. If you switch to [two keyboard rows](#), a separate track for the lower row is created (more on this topic [here](#)).

What is a track?

Think of a track as one instrumentalist in a band or an orchestra. It holds recorded notes, one instrument and some parameters. There can be multiple tracks with the same instrument but different parameters (like volume, pan, attack and release time, effect

bus, color).

Note: A recorded note places 2 events on a track: key-down and key-up (also called note-on and note-off). The position of an event is stored with a resolution of 48 ticks per beat, which equals to 192 ticks per bar at a signature of 4/4, meaning that the shortest note can be a 1/192th.

Track screen menu

The menu buttons to the left to the display, and the LCD featuring the playhead mode, are the same as in the [Keyboard screen](#).

Zoom buttons

On the iPhone, the zoom button toggles the zoom mode, where the view can be scrolled and resized anywhere on the screen. Tap or slide on the map at the bottom to quickly position the view. The map also displays the markers as yellow lines.



On the iPad, there are 3 zoom buttons for zooming in, out and fully out with one tap.



Tempo button

The tempo button brings up the tempo popup where the song tempo and signature can be set.



Tap or hold the +/- buttons to change the tempo in the range of 40 to 240 bpm (beats per minute) with a precision of 0.1 bpm. A faster way to set the tempo is to **tap and slide** the value on the display. An alternative tempo input method is to tap the **Tap Tempo** button with the desired tempo at least two times. Hold down the **Preview** button to hear a metronome preview of the current tempo and signature. The **signature** can be set to a value between 2/4 and 7/4. Most songs have a signature of 4/4, meaning that 1 bar has 4 beats (i.e. the length of 4 quarter notes).

The tempo is also displayed to the left of the ruler. Double tap it to open the tempo popup.



Ruler

The numbers and the vertical lines on the ruler indicate the measures (bars). The short vertical lines are the beats within each bar. The ruler also holds the playhead (white vertical line) and the two markers. Slide anywhere on the ruler to position the playhead. As you scroll the playhead left/right, a preview of the current position of the playhead is played back.



Markers



The left and right song makers are located on the ruler and can be moved. The markers must always be positioned at least 1 bar apart from each other. An alternative method for positioning the markers is via the [playhead mode](#).

There are several reasons why markers are handy:

- Recording always starts at the left marker, which makes punch-in recording possible.
- The loop button loops the section between the markers.
- When you export a song into wav or AAC format , you can choose to only export the range between the markers.

Add bar button

The plus icon appears on the right side of the screen if the ruler is scrolled to the end of the song. Tap it to extend the song by one bar.

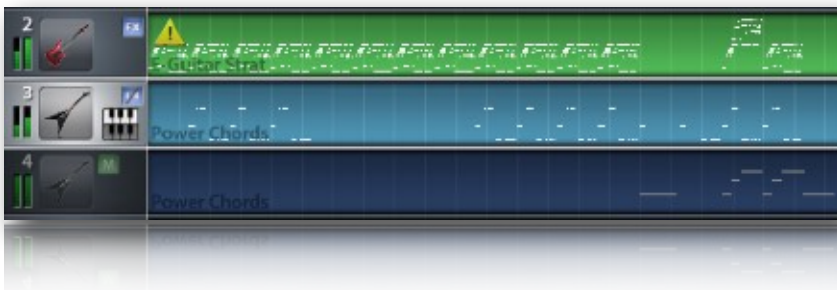


Track Editor

Tap the left side of the [track view switch](#) or the Tracks tab to display the track editor. It is designed to edit whole tracks and mix the song by setting the volume, pan and the effect bus.



Track list icons



Each track contains a number of icons:

- **Volume bars**

The output gain sent to the left and right channels is indicated by the green volume bars, allowing you to see the volume and pan for each track at one glance. If the pan is centered, both bars have the same height.

- **Track number and instrument icon**

- **Mute / Solo / FX** icons (see below)

- **Keyboard row icon**

The row icon is only visible if 2 keyboard rows are enabled, indicating which keyboard row the track is assigned to. If you switch to [two keyboard rows](#), a separate track for the new row will be created. Selecting a track will always assign it to the upper row. However, the track assignment of the lower row cannot be changed. If you [switch back to one row](#), the lower row's track will be deleted if nothing has been recorded on it.

- **Warning triangle**

The yellow warning sign indicates that some notes on the track are outside the instrument's note range. Tap it to see more

information. Notes outside the range will be played back but may sound atypical for this instrument, since every real instrument has a limited range of playable notes.

Note area

Notes are displayed as white lines and dots in the note area of each track.

Tip: Double tap any region of a track to enter the piano roll editor.

Orange notes

[Congruent notes](#), i.e. notes that are placed at the same position and have the same length, are drawn orange in the track list. In most cases they are unwanted and should be deleted because they result in the note being played back with increased volume.



Rearranging tracks and changing the color

Tap and hold a track's instrument icon for 1 second. A box will appear, instructing you to slide vertically to move the track or horizontally to change the track's color.

Note: The order of the tracks is especially important if an external MIDI hardware is connected and the [MIDI IN or OUT channel](#) is set to *TRACKS*.

Filter tracks

Filter tracks appear only if a [filter effect](#) is set as a track, send or global effect. To record filter automation, move the crosshair in the filter effect window during recording. The 2 lines represent the cutoff frequency and the resonance. Muting a filter track prohibits it from being played back, allowing you to experiment with new filter settings.

Add track buttons

The add MIDI track and add audio track buttons are located at the end of the track list:

- A *MIDI track* is a track with an instrument assigned where notes can be recorded onto.
- An *audio track* holds a wave form (a .wav file). Tapping this button takes you to the [wave editor](#) where you can record from microphone, import from the iPod library, AudioPaste, or open an audio (wav/mp3/ogg/AAC) file.

These buttons are not visible if the limit of 127 tracks is reached.



Mute button

The mute button mutes the selected track, thereby excluding it from playback. Muted tracks are darkened and are indicated by the mute icon.



Solo button

If one or more tracks are soloed, all the other tracks will be excluded from playback.



FX button

The FX button opens the effect panel for the selected track, where the track's effects, send effects and global effects can be configured. See the Effects chapter for more details.



Edit button

Tap the edit button with a piano track selected to enter the [piano roll editor](#), or with an audio track selected to enter the [wave editor](#).



Tip: Double tapping a track has the same effect as tapping the edit button. The piano roll editor will also zoom in on the area you double tapped.

Duplicate button

The duplicate button places a copy of the selected track directly beneath it, thereby copying its parameters and recorded notes. If an audio track is duplicated, the linked .wav file is also duplicated and renamed, e.g. *RobotVoice.wav* to *RobotVoice 2.wav*, so you can edit one track's wave form without affecting the other one.



Delete button

The delete button shows a popup with the options to delete or clear a track.

- **Clear** deletes all of the track's content (notes or audio regions) but leave the track in the list.

Note: Since an audio track must always have at least one audio region, the first one will remain even if you clear the track.

- **Delete** removes the track from the list. If it contains pitch bended notes, a checkbox for clearing only the pitch bend data appears.



Pan knob/fader

The pan knob (or pan fader on the iPad) controls the track's stereo pan. Touch it and move your finger left or right to change the selected track's pan. The LCD displays the current value (left is -127, center is 0, right is +127). You can also inspect the changes by looking at the [volume bars](#) to the left of the track icon.

Volume fader

The volume fader displays and sets the track's volume. Its function is identical to the Instruments screen's [volume fader](#). The LCD displays the current value, ranging from 0 to 100%.

Bar Editor

Tap the right side of the [track view switch](#) to display the bar editor. It is designed for quick, bar-wise editing of the song. Select any number of bars (measures) and move, duplicate, repeat, transpose, quantize or delete them.



Selecting

In contrast to the track editor, tracks cannot be selected in the bar editor and the currently selected track is not highlighted. Tapping a track's instrument icon selects all bars of the track.

New selection button

The left of the two selection buttons clears the current selection and starts a new one. Tap it, then draw a rectangle on the note area in order to select bars. Selected bars are highlighted.

Tip: tap a track's instrument icon to select the whole track.



Change selection button

The second selection button adds or subtracts bars from the existing selection. Tap the button, then tap an unselected bar to add it to the selection, or a selected bar to deselect it. Tap a track's instrument icon to (de)select the whole track.



Clipboard (copy and paste)

The clipboard holds a selection of bars which is retained even if another project is loaded. To copy bars from one song into another, make a selection, then tap and hold until the copy button appears. Tap copy, load the other song and go to the bar editor again. Tap and hold where you want to paste the contents of the clipboard, then tap the paste button.

Note: the clipboard buttons won't show up if an audio region is selected.



Move button

In the move mode, the selected bars can be dragged around. The song length will increase if you move bars past the end of the song.

The **snap** button, located to the left of the OK button, aligns the selection to bars if enabled, and allows free movement if disabled, which is especially handy for adjusting the position of audio regions.



Duplicate button

Tapping the duplicate button copies the selected bars and selects the new ones which can be moved around immediately. The copied notes will appear [orange](#) until they are moved, because they are congruent (identical) with the originals.

Note: Not moving the new notes will cause them to be played back with increased volume.



Repeat button

The repeat button copies the selected bars and automatically moves them to the right so that they start where the selection ended. The song length is automatically increased if the new notes reach past the song end.



Transpose button

The transposition menu contains semitone and octave buttons to de- and increase the selected note's keys by one semitone or octave. An octave equals 12 semitones. The [LCD](#) displays the number of semitones currently transposed.



Volume button (iPad only)

On the iPad, the volume button's function in the bar editor is identical to the one in the [piano roll editor](#).



Quantization button

Tap the quantization button to bring up the [quantization popup](#) for aligning the selected notes on a grid.



Edit button

Tap the edit button with a piano track selected to enter the [piano roll editor](#), or with an audio track selected to enter the [wave editor](#). This button is disabled if the selection encompasses more than one track.



Delete button

The delete button deletes the notes in the selected bars.



Bar insert/cut button

In the bar insert/cut mode, whole bars can be inserted and cut across all the tracks. Tap anywhere in the note area to select a bar of the song, which is highlighted in red.

The **cut button** deletes all notes in the selected bar and cuts it out, i.e. shifts all later notes one bar to left and decreases the song length by 1 bar.

The **insert button** inserts an empty bar to the left of the red highlighted area. This means that the song length is increased by 1 bar and all notes to the right of the line are shifted one bar to the right.



Piano roll editor

Double tap on a piano track in the [track editor](#), or tap the [edit button](#) in either the track or the bar editor to enter the piano roll editor.



Piano roll view

In contrast to the track and the bar editor, the piano roll editor displays only one track. The [ruler](#) is still the same, but the vertical axis now represents keys. The bright and dark stripes in the background make it easy to see if a note is on a white or a black key. White horizontal lines between the B and C keys mark the octaves. Notes are displayed as blocks, the color indicates the volume (velocity) from violet (silent) to green (default) to orange (loudest).

Vertical zoom

Slide and pinch on the mini keyboard to scroll and zoom vertically. Tap the zoom button (to the right of the LCD) to bring up vertical zoom buttons on top of the mini keyboard.

Red notes

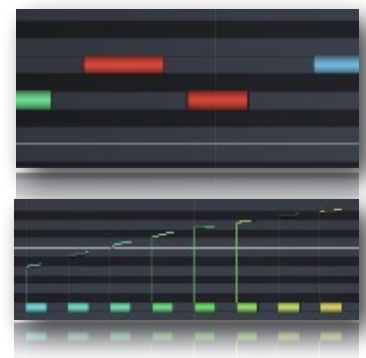
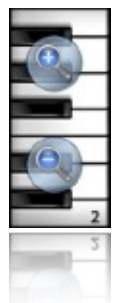
Congruent notes, i.e. notes that are placed at the same position and have the same length, are displayed red in the piano roll editor. In most cases they are unwanted and should be deleted because they result in the note being played back with increased volume.

Pitch bend

Pitch bend is indicated by a line for each note block. Pitch bend can be recorded with the pitch bend wheel or the accelerometer. However, once recorded it cannot be edited. To re-record pitch bend for existing notes, select the overwrite recording mode in the Pitch section of the Setup screen.

New selection button

By default, all notes are selected and every edit operation will modify all notes. Tap the left selection button and draw a rectangle over the notes to select a few of them. Selected notes are highlighted and the note range of the whole selection is displayed in the [LCD](#).



Change selection button

Tap the second selection button and draw a rectangle over the notes to add or subtract notes from the existing selection.



Draw button

Tap the draw button to enter the draw mode where notes can be drawn by moving a crosshair and tapping OK.



The note beneath the crosshair is the one which will be created if you press the OK button. Move the crosshair to the desired location and tap OK (next to the crosshair) to create the note. The song length can be increased by dragging the crosshair past the song end. Press the rightmost button in the menu to exit the draw mode. The menu contains the following buttons:



The selected note button defines the length of the note to be drawn.



Tap the dotted note button to increase the note length by 50%.



The quantization button snaps the crosshair to a raster defined by the selected note button.



Move button

In the move mode the selected notes can be dragged around horizontally and vertically.

The menu contains the following buttons:



The selected note button defines the raster on which the movement is aligned or snapped to.



The OFF button disables quantization and allows for (almost continuous) movement with 1/192th precision.



Tap one of the the lock buttons to lock horizontal or vertical movement, which is very handy if you intend to transpose or position only.



iPad only: The octave down/up buttons move notes down or up by 12 semitones.



Duplicate button

The duplicate button copies the selected notes and selects the new ones which can be moved around immediately. The copied notes will appear red until they are moved, because they are [congruent](#) (identical) with the originals. Note: Not moving the new notes will cause them to be played back with increased volume.



Repeat button (iPad only)

The repeat button copies the selected notes and automatically moves them to the right so that they start where the selection ended. The song length is automatically increased if the new notes reach past the song end.



Length button

The buttons in the note length menu have the same functions as in the [draw mode](#). Either tap a note button to set the length of all selected notes, or move your finger horizontally in the note area to de- or increase the length.



Volume button

Tap the volume button and move your finger vertically in the note area (or move the fader below) to change the note's velocity (meaning volume).



The menu contains buttons and faders for more precise velocity editing:

- The average button on the left averages the velocities of all the selected notes and applies it to them.
- The gradient button toggles the velocity gradient mode, in which the two faders set the first and the last note's velocity.

The [LCD](#) displays the average velocity of the selected notes, or the velocity range in gradient mode, ranging from 0 to 127 (default is 100). The note color indicates the volume from violet (silent) to green (default) to orange (loudest).

Quantize button

Tap the quantization button to bring up the [quantization popup](#) for aligning the selected notes on a grid.

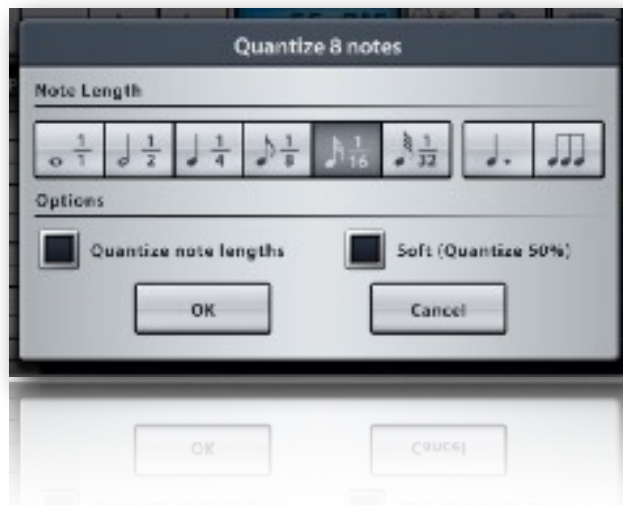


Delete button

Deletes the selected notes.



Quantization popup



Quantization is the most important step after recording because it corrects the timing. If the quantization raster (resolution) is one quarter note, every selected note is moved to the nearest raster point in a 1/4 note raster. Finding the right raster is crucial, therefore you might want to try out different settings and tap undo in between.

For example, if you played a fast melody and quantized it to 1/4, the timing will be ruined - in this case, just tap the undo button and try again with a higher resolution like 1/16. On the other hand, quantizing notes with a high resolution might not correct all timing errors you made when recording them.

Note buttons

Set the quantization raster (or resolution) by selecting a note. In practice, low resolutions like 1/4 are the right choice for slow notes. 1/16 fits most melodies, while at 1/32 you will only notice the difference if you recorded fast notes (like a fast drum pattern) or if the song tempo is very low.



Dotted button

The dotted note button increases the quantization raster by 50%. For example if the 1/8 note button and the dotted button are enabled, the quantization resolution is 1/6 of a bar.



Triplet button

The note triplet button treats the notes as triplets, meaning that the raster interval is multiplied by 2/3. This is good for swing and Jazz style melodies. Naturally, dotted and triplet cannot be enabled at the same time.



Quantize note lengths

Quantized note lengths means that every note's end point will be quantized too. This is especially handy if you want to achieve legato.

Soft (quantize 50%)

Soft quantization is good for keeping a human touch to the recording. It shifts every note by only 50%, keeping it slightly off the perfect timing.

Effects

Both the *Effects* tab and the *Tracks* tab's FX panel show all track, send and global effects.

The *Effects* tab has a track selector in the upper left corner. Swipe it horizontally to change the track. Track and Send FX always refer to the selected track.

In addition to Music Studio's effects, all installed Inter-App Audio effect apps are listed in the effect selection menus. Read the chapter about Inter-App Audio for more information.



Effect routing

Effects (FX) can be configured in the Effects tab or by tapping the FX button in the Tracks tab. There are 3 kinds of effects:

- **Track effects**

Also called insert effects, track effects apply only to one track. There are 5 such effect slots per track.

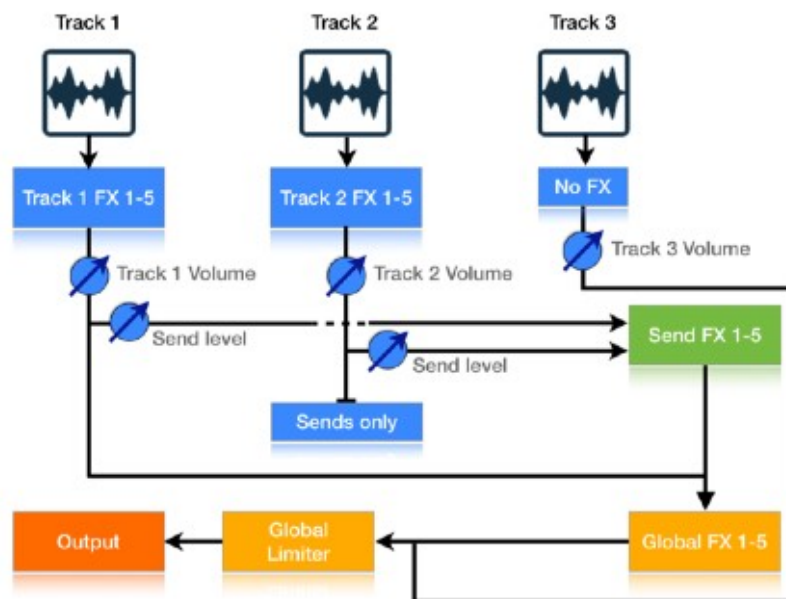
- **Send effects**

The 5 send effect slots are on 1 send bus that is common for all tracks of a project. The send level can be set for each track separately, but the level is for all send effects on the send bus (there are no separate send levels for each of the 5 slots).

Example: The send bus contains a reverb. A track's send level is set to 50% which means that in addition to the normal track output, 50% will be routed through the reverb. Note that this also makes the track louder (100% dry + 50% reverberated).

- **Global effects**

At the end of the signal chain, the 5 global effects and the global limiter are applied.



The signal chain is illustrated in the image above:

- Track effects are applied first, unless the **No-FX** button is enabled (track 3 in this example).
- The track's volume is multiplied.
- The result is routed to the global effects, unless the **Sends only** button is enabled (track 2 in this example).
- Additionally, the result is also multiplied with the track's send level and routed to the send effects.
- The send bus mix is routed to the global effects.
- The last global effect is the fixed global limiter which prevents clipping.
- **No-FX** tracks are routed directly to the global limiter, bypassing all send and global effects.

Tips and tricks

- Save CPU processing power by only using 1 reverb as a send effect that is shared by all tracks.
- A disabled effect doesn't require any processing power.
- Use the global effects for mastering, for example with the equalizer, compressor, or StereoWidener.
- Delay, compressor, filter, phaser and BitCrusher are useful to change the sound of a specific track.
- The order of the effects has an influence of the resulting sound.
- Some effects (e.g. equalizer) are not useful as send effects for most songs, because the dry signal (without send effects applied) is routed to the global effects anyway. Think of the send effects as a parallel signal chain which adds to the mix. Adding an equalized signal to the non-equalized dry signal doesn't make much sense in most cases, whereas adding a reverberated signal to the dry signal is useful because reverb is a time dependent effect.

Reverb

Reverb simulates a room of a certain type (hall / canyon / room) and size. Reverb is best used as a send effect. Each track has its own send level, which in this case would set the amount of reverb for the track. Reverb is the most CPU intensive effect. Having only 1 reverb send effect that is shared by all the tracks saves processing power compared to using multiple reverbs as track effects. If reverb is assigned as a send effect, its mix is automatically set to 100% wet because the dry signal is routed to the global effects anyway.

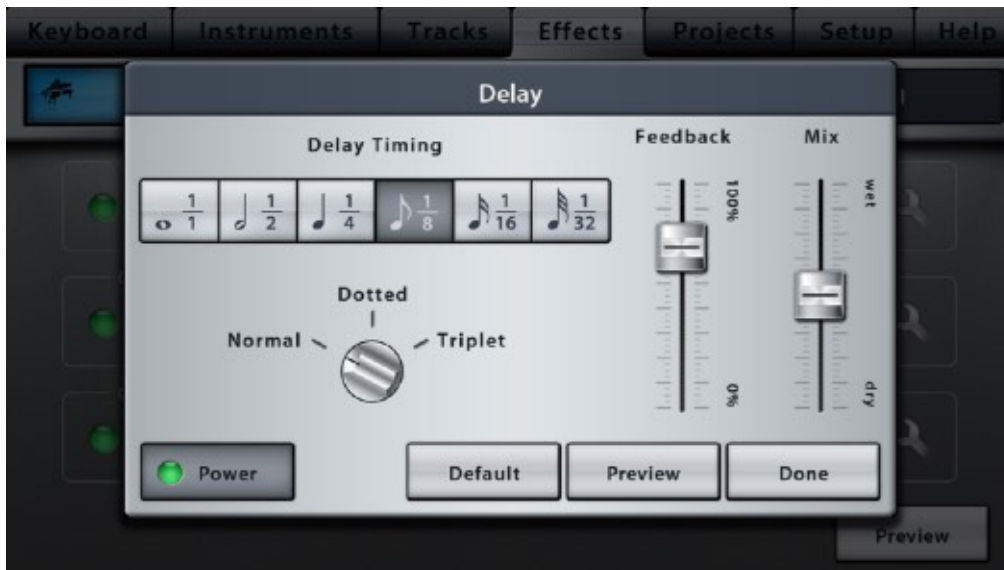


Reverb has the following parameters:

- **Style:** Each reverb style uses a different algorithm, thus the size fader has a different effect for each style.
- **Quality:** In technical terms, as you lower the quality, the reverb algorithm stays the same but the number of filters used in the reverberation filter chain decreases.
Tip: Reverb requires a lot of processing power. If audio stuttering occurs during playback, decrease the reverb quality.
- **Size:** Controls the size of the sound space. In larger spaces, the reverb is audible for a longer period of time. The total size also depends on the selected style, e.g. the largest room reverb is smaller than the largest canyon reverb.
- **Brightness:** Lower brightness gives the impression of a darker room (using a low pass filter), while maximum brightness leaves all the high frequencies in the reverb.
- **Stereo:** Stereo spread results in the perception of stereo wideness of the reverb space. In technical terms, this fader sets the delay between the reverb reaching the left and the right channel.
- **Mix:** The mix fader controls the proportionality of the dry sound (the original sound without the effect applied) and the wet sound (the effect's result).

Delay⁷

The delay effect repeats the original sound in a certain time interval set by the timing buttons/switch and the song tempo. The result is then fed back into the delay, resulting in many repetitions.



- **Delay timing:** The selected note length will define the time interval of the delay, together with the song tempo. Dotted timing is 50% longer, triplet timing is 33% shorter.
- **Feedback:** Low feedback limits the effect to just one audible repetition, high values increase the total delay duration.
- **Mix:** The mix fader controls the relation of the dry sound (the original, without the effect applied) and the wet sound (the effect's result).

⁷ Unavailable in Music Studio Lite, only available in the full version

Equalizer⁸

The 3-band equalizer has fixed frequencies at 800Hz and 5kHz. Tap or move anywhere in the 3 areas to set the gain of bass, middle and treble tones. The range is -10dB to +10dB, the volume is automatically adapted to avoid clipping.



⁸ Unavailable in Music Studio Lite, only available in the full version

Filter

The filter effect is a resonant low-, high-, or band-pass filter. The cutoff frequency and the resonance can be set by moving the crosshair, or by tilting the device if the accelerometer is enabled. The [filter track](#) in the track list holds the recorded events, which can be edited in the [bar editor](#).



Resonance and frequency panel

The crosshair indicates the current values of the cutoff frequency (x axis) and the resonance (y axis). Move the crosshair to change the values. This can also be performed during recording.

Beware: high resonance values may lead to unpleasantly loud and high tones.

Snap back

If snap back is enabled and the crosshair is moved, it snaps back to its original location when you lift your finger from the screen.

Filter type

The filter type defines how the cutoff frequency influences the sound.

- **Lowpass:** All frequencies above the selected cutoff frequency are dampened (attenuated).
The sound remains unchanged if the crosshair is in the lower right corner.
- **Highpass:** The effect behaves inverse to the lowpass. All frequencies below the selected cutoff frequency are dampened.
The sound remains unchanged if the crosshair is in the lower left corner.
- **Bandpass:** Frequencies above and below the selected cutoff frequency are dampened.
The sound remains unchanged if the crosshair is at the bottom center.

Filter accelerometer control

If the [accelerometer](#) is enabled, tilting it in any direction changes the cutoff and the resonance.

The **axis** can be set to X, Y or X+Y. For X or Y axis, both the frequency and the resonance change if the device is tilted in the selected axis. In X+Y mode, tilting along the x axis changes the cutoff frequency, while the y axis changes the resonance. Starting from the centered position, all 4 quadrants are symmetrical, i.e. tilting the device to the far left has the same effect as the far right. With the **sensitivity** set to low, the device needs to be tilted almost 90 degrees to achieve the maximum effect. At high sensitivity, small movements are sufficient to set the filter values to their maximum.

Phaser⁹

The phaser effect creates a peak in the frequency spectrum and modulates its position with a low frequency oscillator (LFO) to create a sweeping effect. It is often applied to guitar, electric piano and synth pad sounds.

The phaser effect has the following parameters:

- **Rate:** The speed of the sweep, i.e. of the LFO.
- **Depth:** The amount of wet (effected) signal output.
- **Feedback:** The intensity of the effect, i.e. the height of the peaks.
- **Frequency 1 & 2:** The frequency range in which the peak moves.



⁹ Unavailable in Music Studio Lite, only available in the full version

Amplifier¹⁰

The amplifier simulates overdrive by clipping the sound. It has 2 parameters:

- **Overdrive:** The overdrive fader controls the amount of distortion, i.e. the input gain for the amplifier.
- **Style:** The amplifier style defines the mathematical function, resulting in a different timbre.

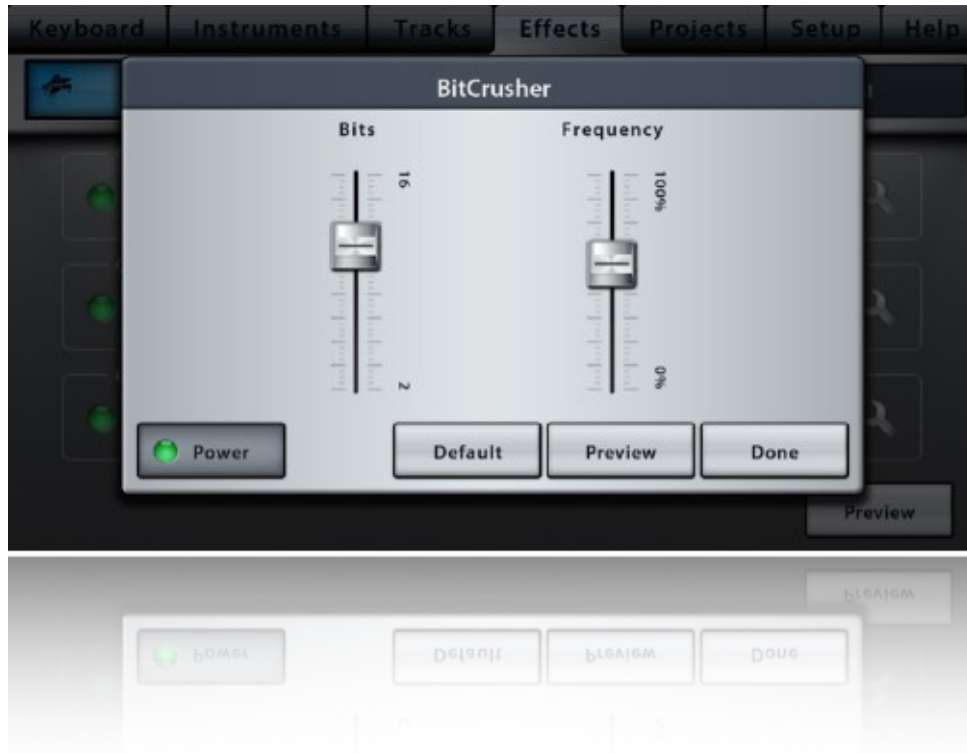


¹⁰ Unavailable in Music Studio Lite, only available in the full version

BitCrusher¹¹

The BitCrusher effect produces a lo-fi distortion (i.e. a quantization noise) by reducing the resolution of the audio data. It intentionally emulates early digital audio gear or the sound of vintage video games.

- **Bits:** Audio data is reduced from 32 bit (2^{32} possible values) to 2-16 bit (value range of 2^2 to 2^{16} , respectively).
- **Frequency:** Controls the sample rate reduction which degrades the audio quality. High frequencies are lost at lower frequencies.



¹¹ Unavailable in Music Studio Lite, only available in the full version

Compressor

The compressor effect reduces the dynamic range by quieting loud signals. The resulting signal's amplitude is compressed to a smaller value range. The result can be optionally amplified (with the output fader) to increase the perceived overall loudness.

- **Threshold:** The compression kicks in if the signal's amplitude exceeds the threshold.
- **Ratio:** sets the amount of gain reduction. A ratio of 4:1 means that if the input level is 4dB over the threshold, the output signal level will be 1dB over the threshold.
- **Attack:** sets how quickly the compressor acts, i.e. how fast it starts decreasing the volume when the threshold is reached.
- **Release:** sets how quickly the compressor stops reducing the volume when the input signal falls below the threshold.
- **Output:** Because the compressor is reducing the level of the signal, it is practical to amplify it again with the output fader. High values might result in clipping (crackling noise).



Limiter



Clipping occurs if after adding up all the track's and effect's signals results in an absolute value greater than 1.0. The limiter prevents clipping by applying a smooth mathematical function to keep all numbers in the -1.0 to +1.0 range. The limiter's fader controls the slope of this function. High values may lead to unwanted distortion artifacts, low values may not produce the desired volume. Set the master gain fader so that the decibel meters barely hit the red areas for the loudest part of your song.

StereoWidener¹²

The stereo image of the mix can be enhanced or narrowed with the StereoWidener effect. Move the two microphone icons farther apart to increase the separation between left and right panned signals. Be careful not to overdo the effect. Move the two microphone icons closer together to narrow the field or even create mono output (= the same signal on the left and the right channel). A factor of 1.0 means no change.

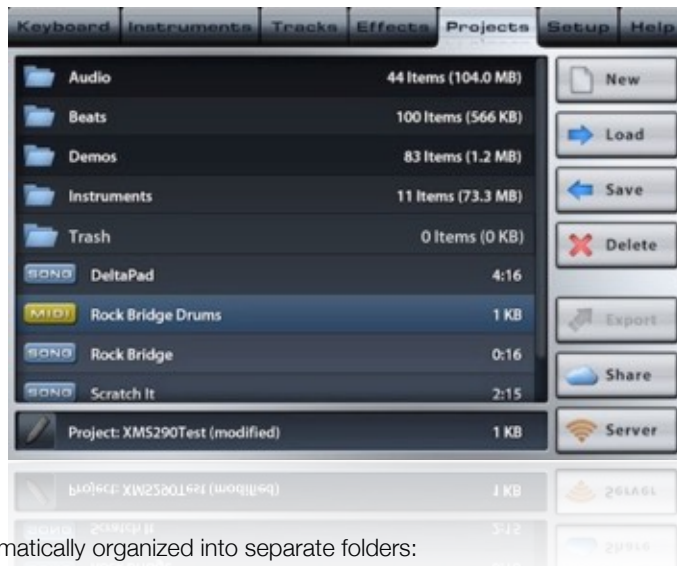


¹² Unavailable in Music Studio Lite, only available in the full version

Projects

File list

The file list displays the type, name and length (or size) of every file and folder. Select a file to view its details (date, size) in the area below the list. Double tap a file or a folder to open it.



Different types of files are automatically organized into separate folders:

- The **Audio** folder contains all your [recorded](#), [imported](#) and [exported](#) audio files. Tapping an audio file immediately triggers a preview, which simplifies the process of finding the file you are looking for. Audio files are automatically moved into this folder.
- The **Beats** folder contains the preset and user created beats, see the the chapter on [beats](#) below.
- The **Demos** folder is read-only and holds the factory demo projects and instrument demos (if instruments were purchased).
- The **Instruments** folder contains all the user instruments which are also listed in the Instruments screen's *User* section. Deleting an instrument here also removes it from the Instruments screen and vice versa.
- The **Trash** folder contains all deleted or overwritten files, with date and time appended. The Load button turns into a Restore button, that moves the file back to its original location.

Music Studio supports the following file types:

- **xms**: Music Studio project
In Music Studio, songs are referred to as projects. They are stored in the .xms file format, a custom and small format for Music Studio which cannot be opened with any other software. It contains the tracks, song parameters, effect settings, keyboard layout, metronome and some user interface settings. Preferences from the Setup screen are **not** stored in the project.
- **beat**: Music Studio beat, see the the chapter on [beats](#) below.
- **wav, mp3, ogg, m4a** (AAC): audio files
- **mid, midi**: MIDI file
- **instr**: Music Studio instrument
An instrument file stores all the samples and parameters of an instrument, like the sample mapping, loop points and volumes.
- **zip**: compressed archive

Beats

Beats contain one or more loop-able drum tracks which can be appended to a song. Tapping a beat immediately triggers a preview, which simplifies the process of finding the beat you are looking for. Tap the save button in the *Beats* folder to save the current song's drum tracks as a beat.

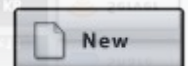
If the current song is empty, loading a beat applies its tempo and reverb settings and enables loop playback and recording. Otherwise, a popup lets you choose between appending the beat tracks to the current song and replacing all the current drum tracks with the beat's tracks.

In practice, beats are great to start a song with, and are also handy for trying out different rhythms for an existing song. When appending a beat to an existing song, you may want to use the [bar editor's](#) repeat button to manually loop (extend) the beat to the duration of the song.



New project button

Tap the *New* button to create a new project. This action will remove all current all tracks and reset all effects, keyboard and drum pad settings.



Load button

Select a file and tap the load button (or simply double tap the file) to open it:

- Loading an **xms** file dismisses your current project. If the project requires instruments which are not present in your instrument list (i.e. not purchased), they are substituted by the closest matches from the available instruments and a popup informs you about that.
- When a MIDI (**.mid**) file is loaded, it's track's General MIDI program numbers are matched with Music Studio's instruments.
- Loading an **audio file** adds a new audio track to your song. The file is also moved into the *Audio* folder if it's not already there.
- Loading an **instr file** adds the instrument to the *User* section in the Instrument screen and places a copy of the file in the *Instruments* folder.
- Zip files are decompressed and any audio files contained in it are moved to the audio folder upon tapping the load button.



Save button¹³

To save the current project, tap the *Save* button and enter the desired file name.



Delete button

Tap the delete button to move the selected file into the Trash folder.

When the Trash folder is opened and a file is selected, the Delete button permanently removes the file. Tap and hold it to empty the Trash folder.



Append button (iPad only)

This button appends a song (.xms), MIDI (.mid), beat or an audio file to the current project.



Transfer files to full version¹⁴

If you purchased the full version, you might want to copy your song and all the files in the *Audio* folder from Music Studio Lite to the full version on the same device. Tap the "Transfer files to full version" button, then tap the Music Studio icon.

¹³ Unavailable in Music Studio Lite, only available in the full version

¹⁴ Only available in Music Studio Lite

Export¹⁵



Select a project or a wav audio file and tap the *Export* button to convert it to a different file format.

Note: Not the current song but the selected file is exported! The selected file will be loaded, exported, and your current project will be loaded again.



The following export options are available for projects:

- **MIDI**

MIDI (.mid) files can be opened by most DAW and scoring applications on any platform. The MIDI format stores the notes and track and song parameters. It is small because it doesn't store any audio data, but that also means that it will sound different on every device and software.

Exported MIDI files are format 1 files, i.e. each track is written into a MIDI track on a separate MIDI channel. Instruments are translated to closely match the GM (General MIDI) standard voices. Pitch bend is always compressed to the default MIDI range of +/- 2 semitones.

- **WAV**

The format of an exported wav file is 44kHz 16bit stereo. The polyphony is automatically set to 128 during export.

If the **Apply markers** checkbox is enabled, only the range between the left and the right [marker](#) is exported.

Enable **Save tracks separately** to create a separate file for each track.

Tip: Before exporting to WAV or AAC format, save the song with the [reverb](#) quality set to high.

- **AAC**

Choose AAC to create a compressed .m4a file which is best suited for sharing via email or SoundCloud due to its small file size compared to wav files. Lower bit rates reduce the file size but also reduce the quality.

- **ZIP**

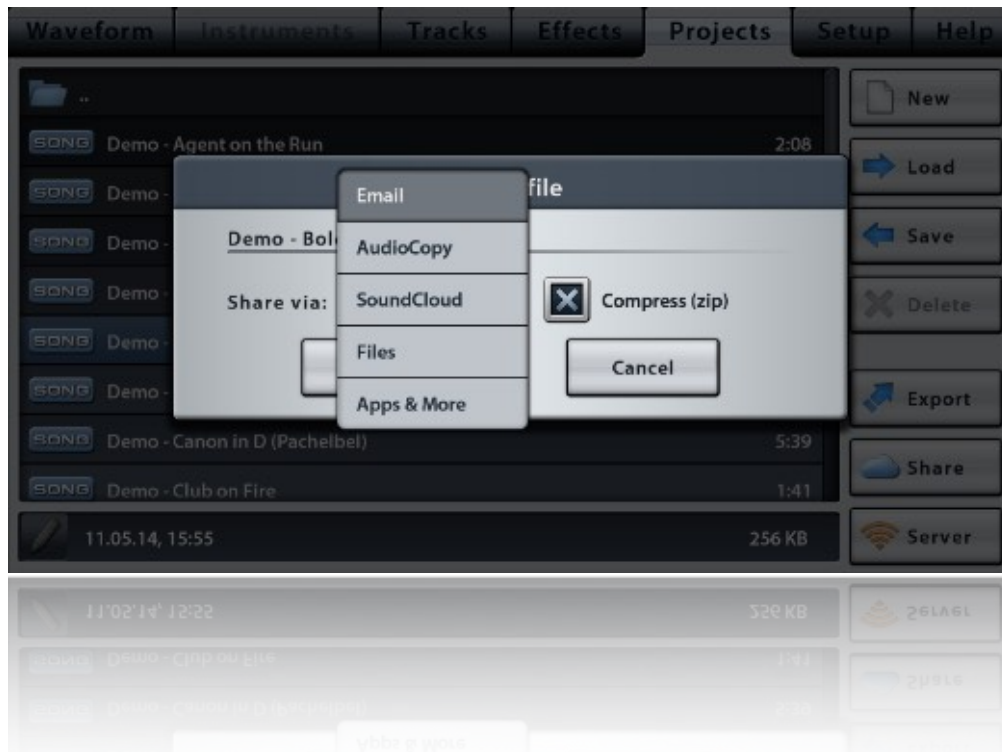
The selected .xms file and all the .wav audio files it uses are archived to a zip file. This simplifies the process of transferring a song with audio tracks to your computer or another device.

For .wav audio files, only the AAC export option is available.

¹⁵ Unavailable in Music Studio Lite, only available in the full version

Share¹⁶

Select a file and tap the *Share* button to send it by email, upload it to iCloud Drive, Dropbox, Google Drive, AirDrop or to open it with another app. Audio files can also be shared with other apps on your device via Sonoma AudioCopy or uploaded to SoundCloud.



Note: Email is limited to a file size of 20 MB (WiFi), or 5MB if you are connected to a cellular network.

Tip: Export your project or wav file to the compressed AAC format before emailing or uploading it to SoundCloud.

Tip: WiFi is recommended for emailing and uploading files.

Compress (zip) checkbox

Compressing the file is available for email, Files and Apps & More sharing. If a project is selected, a zip file containing the .xmls and all the .wav files that it uses will be created.

AudioCopy

Audio files can be made available to other apps installed on your device which support Sonoma AudioPaste. AudioCopy acts as a clipboard that can hold a number of audio files from different apps.

SoundCloud

SoundCloud is an online platform that allows musicians to upload and share their compositions. In order to upload a song to SoundCloud, you will need to log in with your account or create a new one. To log in with a different account, log out first by tapping the SoundCloud account name.

¹⁶ Unavailable in Music Studio Lite, only available in the full version

Files

The iOS Files app provides import and export from and to iCloud Drive, local files, or other cloud services like Dropbox. In Music Studio, Files is the only sharing option that allows import and export. When you select Files, a dialog window asks you if you want to import a file, or export the selected file. If you are logged in to your iCloud account on your device, iCloud Drive is your personal space for storing files in the cloud that are synced across all your devices.

Note: Dropbox can also be accessed from the Files window, if the Dropbox app is installed. Tap Locations, select More and enable Dropbox.

Note: Importing Instruments (.instr files) from Files is not possible at this time, due to an iOS limitation.

Apps & More

Select this option to be presented with a list of apps installed on your device that can open the selected file type. Tap an app to transfer the selected file and switch to it.

AirDrop and other iOS sharing options like iCloud, Dropbox and Google Drive can also be accessed in this dialog.

Rename



The rename button in the bottom left corner allows you to change a file's name.

Be careful when renaming WAV files in the Audio folder, they might be used by songs and renaming (or deleting) might result in empty audio tracks.

Note: Instruments can only be renamed in the Sampler under Settings.

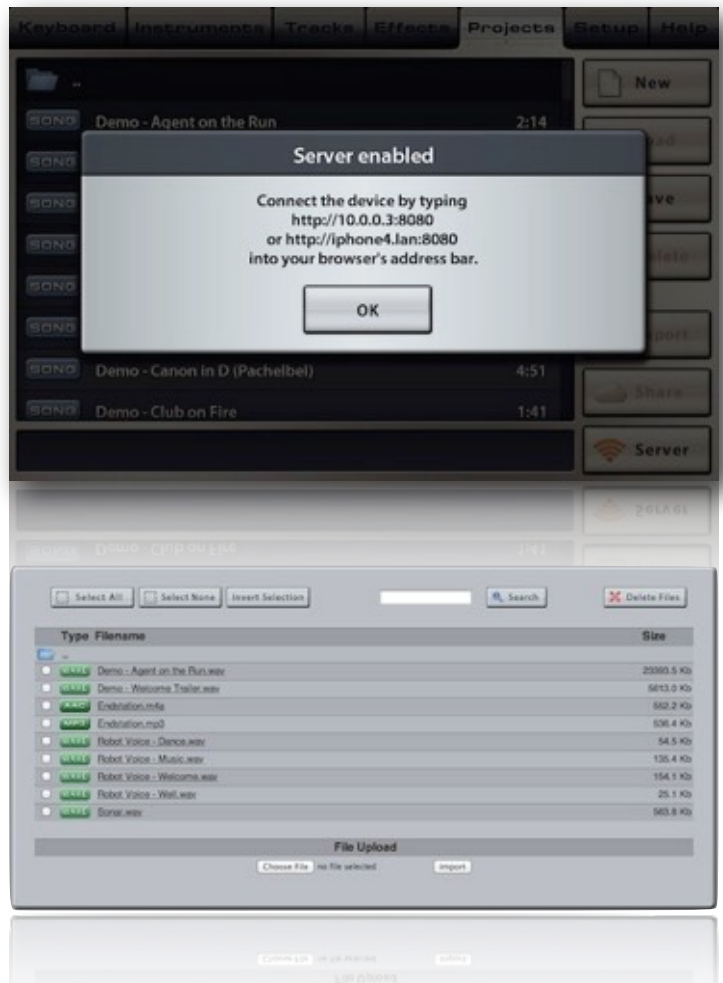


Music Studio features an integrated WiFi server for you to access your Music Studio files from the browser of another device that is connected to the same WiFi network. The server is *not* on the internet, think of it as a port that is opened on your mobile device for accessing your Music Studio files from another device's web browser. The fact that a web browser is used is due to the protocol, even though the internet is not accessed.

While [iTunes file sharing](#) is the recommended method for transferring files between your mobile device and your computer, a WiFi server is also available. It is harder to set up but has the advantage that subfolders can be accessed.

Follow these steps to connect to the Server:

- Connect to a WiFi network with your iPhone.
- Connect to the same WiFi network with your computer.
- Tap the Server button.
- Enter the IP address (without www) followed by the port into your computer's browser's address bar, e.g. 10.0.0.3:8080
- Right click a file and select Download (or "Save target" or something similar depending on your browser) to save it to your hard drive.



To upload a file from your computer to Music Studio, click the **Choose file** button, select a file from your hard drive and click the **Import** button to copy any of the [supported file formats](#) onto your device. Zip files are decompressed automatically after the upload has finished.

Note: In order for the Bonjour URL to work (e.g. <http://My-iPhones-Name.local:8080>), Windows PCs need to have Bonjour installed, which usually comes with iTunes. Otherwise, use the IP address (e.g. <http://10.0.0.3:8080>) to access the files.

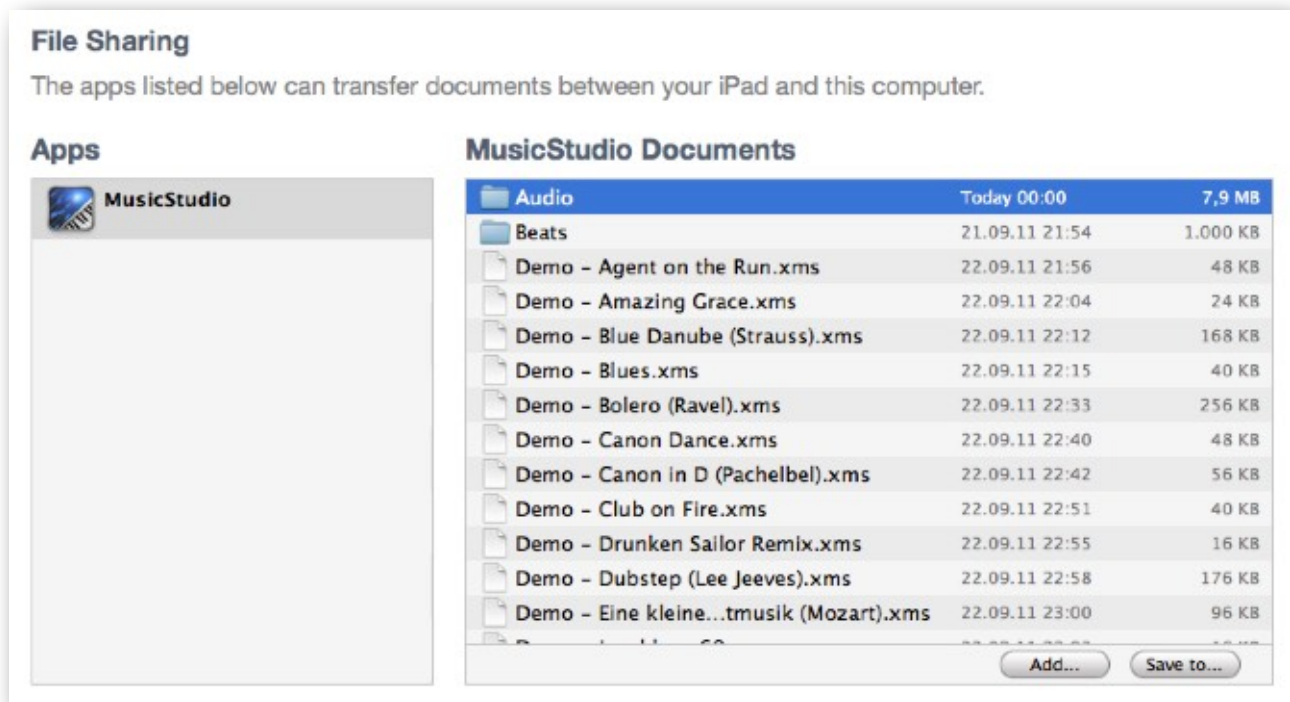
Follow these steps if you experience any issues with the WiFi server:

- Try iTunes file sharing instead, it requires no setup and is more reliable.
- Make sure that your device is connected to the same WiFi network as your computer.
- Enter the IP address (numbers) instead of the Bonjour address (device name) in the browser's address bar on your computer, followed by a colon and the number 8080.
- Try a different browser like Firefox or Chrome.
- Disable your PC's firewall.
- Only as a last resort: bypass your router by setting up an ad-hoc network on your computer.

¹⁷ Unavailable in Music Studio Lite, only available in the full version

iTunes File Sharing¹⁸

iTunes file sharing is the easiest way to transfer file from and to your computer. It is recommended that you regularly backup your files this way.



Follow these steps to access Music Studio's files via iTunes file sharing:

- Connect your device with the USB cable to your computer and launch iTunes.
- In the *Devices* section of the left list, click your device and select the *Apps* section in the menu on the top.
- A list of apps that support file sharing is displayed below the "Sync Apps" list.
- Select Music Studio to display its files in the Documents list on the right.
- To copy a file into Music Studio, click the *Add* button or drag and drop it into the list.
- To copy a file from Music Studio to your computer, click the *Save to* button or drag and drop the file from the list into a Finder (Mac) or Windows Explorer window.

Note: Folders cannot be opened in the file list in iTunes, but they can be saved to your hard disk as a whole.

¹⁸ Unavailable in Music Studio Lite, only available in the full version

Setup

General setup



Polyphony

Polyphony defines the maximum number of notes that Music Studio can play simultaneously. High polyphony requires more CPU and can lead to stuttering during playback, while low polyphony can result in notes stopping too soon.

If it is set to 16 and at one point during playback, the song would require 17 notes to be played simultaneously, the oldest note will quickly be faded out to allow the new one to play. The required polyphony of a song depends on the number of simultaneous notes on all tracks, and heavily on the release times. During export to wav or AAC, the polyphony is automatically set to 128.

Lock interface orientation

Per default, the interface is rotated to match the current device orientation. If the *Lock interface orientation* checkbox is enabled, the interface won't be rotated regardless of how you tilt the device.

Continuous playhead movement

In order to save CPU power, continuous playhead movement is off by default and the playhead in the Tracks screen moves only at every beat. Enable this checkbox to trade a lot of CPU power for more precise playhead movement. It may lead to playback stuttering.

Keep attack/release times (iPhone only)

If this setting is disabled, each time you select an instrument its default attack and release time are set. If enabled, the current track's attack and release times are kept when you select another instrument.

On the iPad, this setting is located in the [Instruments screen](#).

Bluetooth / AirPlay

This mode is required for output audio via Bluetooth or AirPlay. However, Bluetooth / AirPlay audio output and audio recording are incompatible so this mode will be disabled if you enter recording mode.

Bluetooth: Remember to activate Bluetooth in the iOS settings and pair your device with the Bluetooth accessory (headphones or speakers).

AirPlay: An AirPlay button appears next to the checkbox if an AirPlay audio device is in range.

Background audio

Background audio means that playback continues while the app is running in the background. Start the playback of a song, click the home button and playback continues, even if you launch other music apps. In combination with MIDI, background audio has several practical uses:

- Play your backing track in Music Studio in the background while performing with another music app on top of it.
- Use any app that sends Core MIDI (or virtual MIDI) data to trigger Music Studio's sounds.
Tip: Set MIDI IN to *TRACKS*, create 16 empty tracks and assign different instruments to them. Then configure the other app to send on a specific channel 1-16 to select the instrument.
- Use Music Studio as a sequencer for other background apps.
Tip: Set MIDI OUT to *TRACKS* to send each track's notes to the MIDI channel corresponding to its track number. Configure other apps to receive MIDI IN from a specific channel to select the track.
- Save battery by pressing the power button to switch the screen off during playback of a song.

Note: If background audio is enabled, Music Studio will drain your battery significantly even if the screen is turned off or if other apps are running, even if Music Studio does not trigger any sounds. To quit Music Studio, double tap the home button, tap and hold the Music Studio icon, then tap the red minus icon.

Keyboard setup



Snap to white keys

The keyboard can snap after scrolling so that it always starts with a white key at the left screen edge.

Allow touches between black keys

White keys can be touched in the area between the black keys if this setting is enabled. Otherwise, white keys can only be touched on the area below the black keys.

Allow touches on key borders

By default, a tiny invisible border between the white keys won't react to touches. This minimizes accidental touches. If you find that the keyboard often doesn't react to your input, enable this checkbox.

Key label language

Key labels on the Keyboard and the pads use the selected naming convention:

- The German key naming system uses the letter H instead of B and B instead of A#.
- The French key naming system is: Do, Ré, Mi, Fa, Sol, La, Si

Velocity control

Enable velocity to control the note volume while playing on the keyboard. There are 4 options:

- **Mod wheel:** on the iPhone, the "Mod wheel instead of pitch wheel" setting needs to be enabled for the mod wheel to be visible and utilized for velocity control.
- **Touch position:** the volume depends on where a key is touched (upper end quiet, lower end forte).
- **Accelerometer X/Y:** Velocity can be control by tilting the device in the selected axis.

Mod wheel instead of pitch wheel (iPhone only)

By default, the [pitch wheel](#) is displayed in the Keyboard screen. Enable this setting to change it to the mod wheel which controls the [filter](#) effect or the keyboard velocity.

Auto quantization

To speed up your workflow, [quantization](#) can automatically be applied after each recording on the keyboard or drum pads. The default setting is off. It is recommended for bass and drum recording.

Note: Automatic quantization can lead to undesirable results and is not undoable.

Transposition

If you tap a C on the keyboard with the transposition set to +2, a D will be played. The transposition range of -24 to +24 semitones allows you to play in a different key without having to learn the melody again.

Pitch

Pitch bend can be applied when playing live or recording with the [pitch bend wheel](#) or the [accelerometer](#). In the [piano roll editor](#), pitch bend is indicated with lines emerging from the notes.



Note: Unlike most MIDI sequencers, Music Studio stores pitch bend data per note, not just per track. This means that two simultaneous notes on the same track can have different pitch bend data (events). The big advantage of this method is that editing a note automatically affects the pitch bend data for this note, but does not affect any other notes on the track (other software sequencers commonly ask if you want to move the pitch bend data too, this is obsolete with this method).

Pitch bend semitones

The pitch bend range fader sets the number of semitones from 0.25 to 24 in both directions. This applies to the pitch bend wheel as well as the accelerometer.

Pitch bend sensitivity

The sensitivity fader only applies to accelerometer controlled pitch bend. It sets the tilt angle required to bend the full semitone range. The text to the right of the faders clarifies the behavior of the current setting (e.g. the device needs to be tilted 49 degrees to achieve a pitch bend of 4 semitones).

Pitch bend accelerometer control

Select **OFF** to disable accelerometer control and enable the pitch bend wheel, or select an axis and tilt the device to pitch bend.

Invert axis reverses the behavior of the accelerometer, e.g. moving down (instead of up) will increase the pitch.

Adaptive calibration starts the pitch bend at zero for each note that you trigger, regardless of the current device tilt.

Pitch bend record mode

The recording mode controls how existing pitch bend data is treated during recording:

- **Overwrite** means that existing pitch bend events on the recorded track are overwritten by the new ones.
- **Overdub** mode preserves existing pitch bend data and stores the new pitch bend events only for newly recorded notes.

Accelerometer setup



[Pitch bend](#), the [filter effect](#) and the keyboard [velocity](#) can be controlled via the [accelerometer](#). The global settings in this screen might come in handy if you use the accelerometer a lot. The crosshair in the accelerometer panel indicates the current device tilt as perceived by the app (after processing the calibration, threshold and reactivity settings).

Threshold

Device tilt is ignored until it reaches the angle set by the threshold fader. With a high threshold, the device can be tilted by about 15° until accelerometer values are recorded.

Reactivity

High reactivity increases the effect of accelerometer sensor noise while low reactivity leads to sluggish behavior (which may be a desirable effect in some cases).

Calibration

Tap the calibrate button to set the current device tilt as the center position. The *Reset Calibration* button restores the original center setting.

Metronome setup



Volume

The volume fader controls the gain of the metronome tick sound.

Pan

The pan fader controls the left/right output balance of the metronome tick sound.

Style

Choose between five metronome style. Each style consists of two sounds, one (the higher one) for the beginning of a bar, the lower sound marks the other beats.

Count in

When the record button in the Keyboard screen is pressed, the metronome will count one or more bars before triggering the song playback. This is called “count-in” and is handy for recording the first note at the very beginning of the song. Without count in, there wouldn't be enough time to play the first note immediately after tapping the record button. Count-in also helps you to get in line with the rhythm before you start playing (recording).

For example if count-in is set to 2 bars, the playhead position is at the beginning of the song (1.1) and you tap the record button, the playhead will count 2 bars from -2.1, -1.1 until the recording starts at 1.1.

Count in only at the beginning of the song

If this checkbox is enabled, count-in is only applied if the recording starts at the beginning of the song.

MIDI setup

The MIDI section in the setup provides options for connected MIDI hardware and MIDI communication with other apps. The black text box indicates if a MIDI port is detected. Tap it to show a list of all the detected external and internal MIDI devices. See the quick start guide for a [list of compatible hardware](#).



MIDI out for muted tracks

By default, MIDI events are not output for [muted](#) tracks. Enable this checkbox to send all track's events via MIDI during playback. This way you can minimize the CPU load on your device by muting all tracks, using Music Studio like a MIDI sequencer.

Send MIDI Clock

The MIDI clock checkbox toggles Music Studio's MIDI clock output to other apps and external MIDI devices. Clock signals are only output while playback is running.

MIDI Thru

If *MIDI Thru* is enabled, all incoming MIDI events are routed through to MIDI OUT. If set to "MIDI Thru sel. track", the channel of the relayed MIDI events is changed to the selected track's channel (track number).

Keyboard split point

Enabling the keyboard split point will automatically create a track and assign it to the lower row in the Keyboard screen. On your external keyboard, the lower row's instrument (which you can configure in the [Instruments screen](#)) can be played on the keys left to the split point. Move the marker on the mini keyboard to set the split point.

Ports & Channels button

The configure button shows the [MIDI configuration popup](#).

Send params button

The *Send Params* button transmits the current song's instruments, track volumes and track pan values to the connected MIDI device. If a multitrack MIDI device is connected, it can be set to mimic Music Studio's current track setup with this button.

MIDI panic button

Tap the *MIDI Panic* button to silence both Music Studio and the device connected to the MIDI ports. This can be useful in the rare event that notes are hanging.

MIDI ports & channels popup

The MIDI configuration popup looks different depending on the kind of hardware connected:

- For the *Akai SynthStation 25*, it shows the battery level.
- For the *Line 6 MIDI Mobilizer*, it offers MIDI IN and OUT channel selection.
- With a [CoreMIDI device](#) or app connected, port selection is available in addition to the channel selection.



MIDI IN

Tip: Set MIDI IN to TRACKS, create 16 empty tracks and assign different instruments to them. Then configure your MIDI device or another MIDI compatible app to send on a specific channel 1-16 to select the instrument.

Tip: To use Music Studio as a sequencer for other background apps or external devices, set MIDI OUT to TRACKS to send each track's notes to the MIDI channel corresponding to its track number. Configure other apps to receive MIDI IN from a specific channel to select the track.

The channel can be set to the following values:

- **TRACKS:** Incoming MIDI events are routed to the corresponding tracks 1-16. For example, if track 4 exists, incoming MIDI notes on channel 4 will be played by Music Studio with track 4's instrument and settings.
- **ALL:** All incoming MIDI events are routed to the selected track (the upper keyboard row), regardless of their channel.
- **1-16:** Only events with this channel are routed to the selected track.

In addition to note on/off events, Music Studio responds to the following MIDI events:

- Note [velocity](#)
- Sustain pedal on/off (MIDI CC64)
- [Pitch bend](#)
- Mod wheel controls the [filter](#) effect (MIDI CC01)
- Volume and pan: the selected track's volume and pan can be set with a hardware controller (MIDI CC07 and CC10)
- Start and stop events trigger playback

MIDI OUT

Note on, note off and pitch bend MIDI events are sent to the connected device as you play on the Keyboard screen or play back a song. The channel can be set to the following values:

- **TRACKS:** MIDI events from all tracks are sent to their respective channels. For example, a note from track 4 will be sent to MIDI channel 4 during playback. Tracks above number 16 are mapped to channel 1.
- **1-16:** Only the keys touched in the Keyboard screen are transmitted to the selected MIDI channel. When a song is played back, the notes on the tracks will not be transmitted in this mode.

In addition to note on/off events, Music Studio responds to the following MIDI events:

- Note [velocity](#)
- Sustain pedal on/off (MIDI CC64)
- [Pitch bend](#)
- Mod wheel
- MIDI Clock (if enabled)
- Playback start and stop events
- Volume, pan and program events are sent only when the "Send params" button is tapped.

Port

If a CoreMIDI device is connected, the input and output ports can be selected. For example, most MIDI-USB adapter cable have two plugs and thus two ports. The possible choices are:

- **ALL:** sends/receives to/from all ports. This might lead to playback stuttering on older devices.
- **1-16:** MIDI events are only sent/received to/from the selected port.

Troubleshooting Guide

For support-related discussions, visit the forum at the [Music Studio website](#).

Four steps to resolve most issues

1. **Quit all audio apps**
Tap the home button twice, then swipe all music related apps up to quit them.
2. **Reboot your device**
Press and hold the *Home* and the *Power* buttons for about 10 seconds until the Apple logo appears. Don't slide to power off, hold longer!
3. **Disable iOS zoom**
Launch the *Settings* app from the home screen. Go to *General, Accessibility*, and turn off the *Zoom*.
4. **Disable iOS multitasking gestures** (iPad only)
Launch the *Settings* app from the home screen. Go to *General* and turn off the *Multitasking Gestures*.

Installing does not work

Apps are downloaded from Apple's servers, we as the developers have no control over the download and installation process. Music Studio is quite a big download and it rarely occurs that the progress indicator during downloading or installing does not change for several minutes. In this case, try the following:

- Make sure that you are connected to the internet via WiFi. A cellular connection is not recommended for such a big download, it might also exceed your download plan.
- Tap the icon to pause it, then tap again to continue.
- Reboot your device (as described in the four steps above) and see if the download continues then.
- Download it on your computer with iTunes and then sync it onto your device.

If this doesn't solve the issue, please contact iTunes support at <http://www.apple.com/support/itunes/>

In general, you can re-download a purchased app as often as you wish (with the same account of course). The App Store won't debit your credit card twice for the same product.

My purchased instruments do not appear on my second device

See the [FAQ](#) on how to restore the instruments and packages that you already purchased on your other devices.

Audio recording does not work

Check the iOS microphone permissions in the Settings app (tap the Settings icon on the home screen) under Privacy, Microphone.

The Instruments tab is greyed-out

That's because an audio track is selected. Audio tracks cannot have MIDI instruments. Select or add a piano track to access the Instruments screen again.

Audio stuttering occurs

Decrease the [reverb](#) quality and the [polyphony](#) to reduce the CPU load. If the playback requires more CPU speed than your device can provide, audio stuttering occurs. Read more on this topic in the [quick start guide](#).

Some notes are not played back

Increase the [polyphony](#) in the Setup screen, but keep in mind that this may lead to stuttering with complex songs on older devices. Follow these steps to decrease the polyphony requirement of your song:

- Reduce the number of simultaneous notes
- Delete any congruent (duplicate) notes. They are displayed as red notes (in the piano-roll editor) and orange notes (in the track list).
- Set the release time of every track as low as possible. In some cases, increase reverb size can make up for it.

The audio output sounds noisy

- Use headphones or speakers because the device's internal speaker cannot cope with the broad frequency spectrum of the instruments.
- Decrease the limiter's [master gain](#) to prevent clipping.

The server does not work

[iTunes file sharing](#) is the recommended method of transferring files to and from your computer. However, if you must use the WiFi Server, follow the steps outlined in the [Server section](#).

Version history

Version 2.0

Released on October 5, 2011

Audio tracks

- [Microphone recording](#)
- [AudioCopy](#) & [AudioPaste](#)
- [iPod library and wav/mp3/AAC/ogg file import](#)
- [Waveform](#) and audio-region editing

Major new features

- 35 new instruments: 24 synths, 9 orchestral and 2 drum kits
- [Drum pads](#), chord pads and [chord programming](#)
- [Pitch wheel](#), filter wheel
- File sharing via [email and SoundCloud](#)
- New look & feel

Hardware support

- iRig, iRig Mic, Ampkit Link, Apogee Jam, Alesis IO Dock, iConnectMIDI and Line 6 MIDI Mobilizer II
- [Keyboard split point setting](#)
- MIDI Thru
- Muted tracks can now be sent to MIDI OUT
- CoreMIDI compatibility improved

Many new small features

- [Volume gradient](#) in the piano roll editor
- [Attack offset](#) time configurable for every instrument
- Keyboard [sustain](#) button
- [Export](#) to compressed format (AAC)
- Export every track into a separate file
- [Import](#) songs and midi files (iPad only)
- Performance improvements and small enhancements in all areas

Version 2.0.1

Released on October 18, 2011

- Stereo waveform display
- Bug fixes and performance improvements

Version 2.0.2

Released on October 31, 2011

- HDMI audio output supported

- Blue Mikey supported
- Bug fixes: SynthStation 25 support, AudioPaste

Version 2.0.3

Released on December 16, 2011

- Input monitoring latency greatly improved
- 2 monitoring modes: direct (low latency) and FX (with effects)
- Colored input level indicators with clipping indicators
- WAV file import is no longer restricted to 16bit and 44kHz
- Minimum latency setting for current generation devices
- Bug fixes

Version 2.0.4

Released on February 1, 2012

- Stereo and up to 8 channel audio recording
- Setup option to normalize recorded audio files
- MIDI Thru can be locked to the current track
- SoundCloud: tap the username to logout
- Fix: the amp effect was not applied to input monitoring
- Fix: midi file import now reads the pitch bend range correctly
- Bug fixes

Version 2.0.5

Released on February 29, 2012

- Audio track playback performance increased
- Bug fixes

Version 2.0.6

Released on March 18, 2012

- Compatible with the new iPad
- Faster app launch
- Bug fixes

Version 2.0.7

Released on March 30, 2012

- Retina display support for the new iPad
- Graphical glitches on the new iPad fixed

Version 2.0.8

Released on April 27, 2012

- AudioPaste lets you choose the wav file name
- SynthStation and CoreMIDI (for background apps) can be used simultaneously
- Bug fixes regarding undo and saving

Version 2.1

Released on November 8, 2012

- Sampler (tap the + button in the instrument list's user section)
- Background audio
- New sharing options: Dropbox, open with other app
- New instrument: Harmony Pad
- Minimum required iOS version is now 4.2
- Virtual MIDI
- Instrument files created with FL Studio Mobile can be loaded
- Bug fix: AAC export of mono files did not work with bit rates above 160kbit/s
- Bug fix: count-in was always 4 beats, even if the signature was not 4/4
- Bug fix: rare graphics glitches in the drum/chord pad edit modes
- Many more bug fixes, especially regarding the wave editor

Version 2.2

Released on March 9, 2013

- [Audiobus](#) support
- iPhone 5 Retina Display graphics
- 24 audio inputs supported (requires a class-compliant audio interface)
- VirtualMIDI compatibility improved
- Minimum required iOS version is now 5.1
- Bug fixes

Version 2.2.1

Released on March 13, 2013

- Music Studio can now be used as an Audiobus input and output simultaneously

Version 2.3

Released in on October 11, 2013

Audio:

- Major performance improvements (play more tracks without audio dropouts!)
- Wave editor editing is up to 5x faster
- Reverb quality and performance improved
- Internal 32bit processing
- Polyphony: per-track limit lifted, now notes are counted regardless of the track
- Input gain slider in the recording window (only visible with external mic connected)
- Audio recordings are placed more accurately

MIDI:

- MIDI clock output setup option
- MIDI start/stop input & output
- Setup latency options removed, it's now always at minimum
- Setup polyphony options changed (8 removed, 48 added)
- Akai SynthStation support improved

Keys & pads:

- Chord buttons can be cleared by tapping SET and holding the chord button
- Maximum number of drum pads increased to 70

Files:

- Filenames can now contain non-latin characters
- Inbox folder is no longer present, files are moved to the top level folder
- The file name entered in the recording popup is retained
- .beat files can be opened from other apps like Mail and Safari
- New AudioCopy 2.0 support (iOS 7 compatible)

Misc:

- Rate button added to the setup screen
- Overall stability greatly improved

Version 2.3.1

Released on October 16, 2013

- Bug fixes

Version 2.4

Released on December 11, 2013

- 52 new high quality orchestral instruments
based on the Sonatina Symphonic Orchestra, see <http://sso.mattiaswestlund.net>
- New instrument list folder layout
- Polyphony can be set to 128 (on iPhone 5S, iPad 4 and newer devices)
- MIDI CC2 (breath) input controls track volume
- Bug fixes

Version 2.4.1

Released on February 1, 2014

- Bluetooth mode setup option
- Bug fixes

Version 2.5

Released on July 29, 2014

- New effect routing: 5 track, 5 send and 6 global effects
- 4 new effects: Compressor, BitCrusher, Phaser, StereoWidener
- Polyphony during export increased to 256
- MIDI CC2 input is mapped to track volume
- Audiobus SDK 2.0 compatibility
- Bug fixes and performance improvements

Version 2.5.1

Released in September 2014

- Compatible with iOS 8 and Audiobus 2.1
- Music Studio is now an Inter-App Audio Node
- Bug fixes

Version 2.5.2

Released in October 2014

- Bug fixes

Version 2.6

Released in June 2015

- Inter-App Audio audio recording, instruments and effects
- iCloud Drive support
- Music Studio is now a 64-bit app
- Akai SynthStation is no longer supported
- Minimum iOS requirement is now iOS 7.0
- Bug fixes and stability improvements

Version 2.6.1

Released in July 2015

- Bug fixes

Version 2.6.2

Released in August 2015

- Bug fixes

Version 2.6.3

Released in October 2015

- Bug fixes

Version 2.6.4

Released in April 2016

- Change the wave editor's ruler units to measures (beats) by tapping the LCD
- Bug fixes and performance improvements

Version 2.6.5

Released in May 2016

- Fixes a bug where the wave editor's ruler was empty

Version 2.7

Released in December 2016

- iOS 10 compatibility
- Minimum iOS requirement is now iOS 8.0
- Cancelling a wav export retains the partial file
- AudioCopy SDK updated
- Bug fixes and stability improvements

Version 2.7.1

Released in December 2016

- Bug fixes

Version 2.8

Released in February 2017

- Audiobus 3 support
- Bug fixes

Version 2.9

Released in December 2017

- 5 new instruments: MC Drum Kit, Vintage Bass, Dulcimer, Music Box, Orchestra Hit
- Trash folder to prevent accidental deleting or overwriting
- File renaming
- Share option "Open with" changed to "Apps & more"
- Audiobus 3 SDK updated
- Bug fixes and stability improvements

Version 2.10

Released in June 2018

- iOS 11 Files app support enables you to create and manage custom folders
- Files app (iCloud) import now allows for multiple file selection
- Fixed a bug where touches on the screen edges were ignored
- Bug fixes and stability improvements

Limitations of the Lite version



- Saving, exporting and sharing is disabled, hence only one song can be created.
- Only 11 instruments are available. The full version features 123 free instruments and 60 more in the in-app shop. Visit the [Music Studio website](#) for a complete list of instruments.
- The number of [audio tracks](#) is limited to 2. Up to 127 tracks (audio and MIDI) can be created in the full version.
- The keyboard is limited to 5 octaves instead of 7.
- 6 Effects are not available: Delay, EQ, Amp, Phaser, BitCrusher, StereoWidener
- Only 10 [beats](#) (instead of 100) are included.
- The full version features iTunes file sharing and a WiFi server for exchanging files with your computer.
- MIDI import and export is disabled.
- Audiobus and Inter-App Audio are only available in the full version.
- The full version features AudioCopy, SoundCloud, Dropbox and many other sharing and export options (wav, m4a)