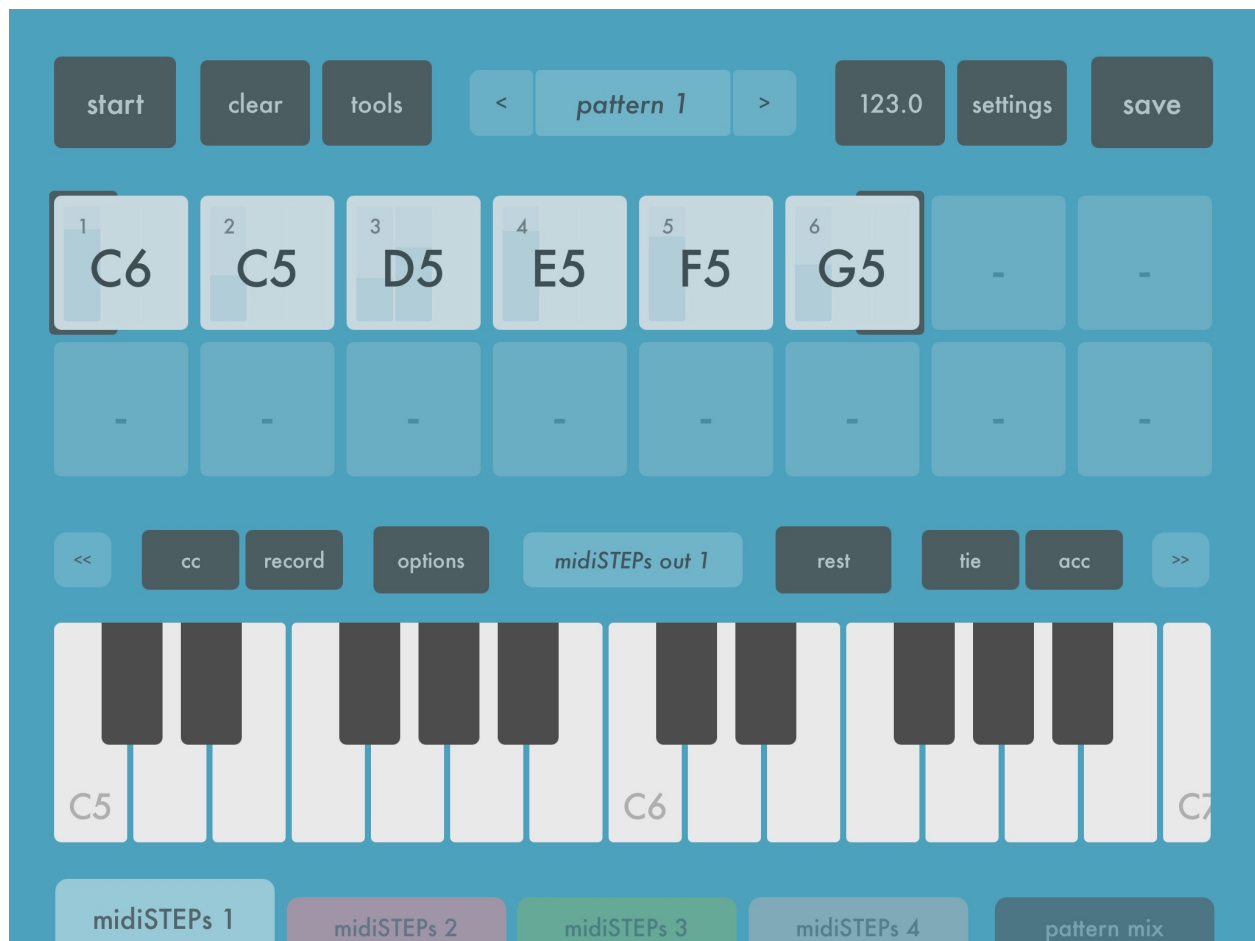


midiSTEPs

coremidi step sequencer toy



app v1.5, user manual v1.5

©2017 art kerns music + apps

New in v1.5	5
Introduction	6
Main Sequencer page	7
Start button	8
Clear button	8
Tools button	8
Pattern Select button	9
Tempo button	9
Settings button	9
Save button	9
Sequence Step buttons	10
Octave buttons	10
CC Slider Display button	11
CC sliders	11
CC Clear button	12
Input button	12
Record/Pattern/Transpose button	12
Options button	13
Midi Output button	14
Rest button	14
Tie button	14
Accent button	14
Mute button	15
Skip button	15
Start button	15
End button	16
Part Tabs plus Pattern Mix Tab	16
Main Sequencer popover menus	16
Tools popover menu	16

midiSTEPS user manual

Shift tools	17
Note up and down tools	17
Octave up and down tools	17
Randomize tools	17
Double tools	18
Reverse tool	18
Tempo menu	19
Tempo	19
Swing	19
MIDI clock	20
Link	20
Settings menu	21
Info	21
Apps	21
MIDI In	22
MIDI Map	22
MIDI-BT	23
Options	23
Save Set menu	24
MIDI Output menu	25
Pattern Menu	26
Options Menu	27
Sync tab	28
Pattern	29
Notes	29
Velocity	30
Keys	30
Random	31
Input	31
Edit Sequence Step page	32
Step Display	33

midiSTEPS user manual

Insert Previous Step and Insert Next Step buttons	33
Copy and Paste buttons	33
Clear button	33
Hold button	33
Mute/skip/start/end buttons	34
Rest/tie/acc buttons	34
Pattern Mix page	35
Start button	35
Panic button	36
Resync button	36
Master Sync display	36
Tempo/Settings/Save buttons	36
Pattern Select buttons	37
MIDI/Sync buttons	37
Mute and Solo buttons	37
Start buttons	38
Record buttons	38
Troubleshooting	38
Examples	38

New in v1.5

Updated for iOS 10

Ableton Link support

Enable in Link tab of Tempo menu

Audio Unit Effect support

Add effects to an instruments output in the Audio Unit edit view with “+”

Multiple audio outs w/AudioBus and Inter-App Audio

Mix + outputs for individual parts

Email/airdrop sets

Access in Sets menu

Bluetooth MIDI support

Enable in BT-MIDI tab of Settings menu

MIDI program change support

Enable in each part's Output menu

AU/CC parameter midi map

Access in MIDI-Map tab of Settings menu

Trigger step with midi note or other part

Access in Input tab of Options menu

More per step probability options: added skip, tie, accent, reset to existing mute

Access in CC configuration menu

Randomize pattern now uses only visible keys for better results

Bug fixes and minor improvements

Introduction

Welcome to midiSTEPS, thank you for buying it! midiSTEPS is an easy to use but powerful MIDI step sequencer app for the iPad. It's based on the classic SH-101 sequencer, with some additional interesting features from other sequencers also included.

The primary appeal of the 101 sequencer was that you could just record a few taps from the keyboard and then hit play and it would start playing those notes. Record some notes, then play those notes. Straightforward and useful and some welcome simplicity in a world of feature-filled but sometimes very complicated sequencers. After I had gotten the basics of the midiSTEPS app working in a similarly simple way, I started adding a lot of additional features to it. But I tried my best to hide them from the main simple interface so that if you weren't interested in them you didn't have to pay attention to them.

With midiSTEPS you can sequence four different parts, switch between sixteen patterns per part, enter accents ties and rests, play chords, record CC values per step, change start/stop points or mute/skip steps, sync everything to MIDI, and other fun stuff. But if you just want to record a few notes and then hit play and have those notes sent as MIDI to your synth, repeating over and over, you can do that too and you won't have to think too hard about how to do it.

If you like midiSTEPS you should also check out my app midiLFOs, which gives you four easy to use, sync-able, modulate-able LFOs that send MIDI CC data to other apps or synths.

Thanks again for buying midiSTEPS! I hope you make some great music with it.

Main Sequencer page



The main sequencer page is where you record and tweak your sequences. At the top there is a toolbar with several useful sequencer functions that will be explained later in this chapter.

Right below the top toolbar is a grid of sequence steps where you will record your sequences. At first this will be 16 empty squares waiting for your notes. If you enter more than 16 notes, the display will change to show 64 smaller steps.

Below the step display is another toolbar with several buttons related to recording and playing steps. Below that is a keyboard to enter in the actual

notes. Give the keyboard a few taps and you'll see the steps get entered into the sequencer.

Finally at the bottom of the main sequencer page there are five tabs which allow you to choose between the four independent sequencer parts, and the pattern mix page where you can mix those four parts.

Let's start with the top toolbar buttons:

Start button

The start button, as you might expect, starts playing all your sequences. Once the sequencer has started playing, this button will turn into a stop button that will, again as you'd expect, stop the sequencer.

If you have configured this particular sequence to not be synced with the others, you will see two buttons here: a start button that starts the master sequencer, and a trigger button that only starts this particular sequence. But for now, you don't need worry about that, just start everything and stop everything with the start button.

Clear button

Tapping the clear button will delete the last sequence step of the sequence. Pressing the button multiple times will slowly delete your sequence, from the last step backwards.

If you press and hold down the clear button for a couple seconds, when you release the button the entire sequence will be deleted.

Tools button

The tools button will bring up the tools popup menu, which allows you to manipulate your sequence in various ways such as moving all the notes up and down, shifting their positions, randomizing them, and duplicating them. For more information on this refer to the Tools Popup Menu section.

Pattern Select button

The pattern select button allows you to choose a different sequence pattern for this part. Each part can have up to 16 patterns that you can switch between as the sequencer plays to create songs. For more information on this refer to the Pattern Select Popup Menu section.

To the left and right of the pattern select button are left and right arrows that allow you to decrement and increment the pattern number. If you are on pattern 3 and tap the left arrow you will go down to pattern 2. If you are on pattern 5 and tap the right arrow you will move up to pattern 6. Tap it again and you're using pattern 7.

There are various settings that determine whether the sequencer will move to the next pattern immediately, or wait for the current pattern to finish before switching, or wait for the master sequencer to synchronize before switching. These settings are contained in the Options Popup Menu in the lower toolbar, and will be explained in more detail later in the manual.

Tempo button

Tapping the tempo button brings up the Tempo Popup Menu, where you can set the tempo in BPM, the swing amount, configure if midiSTEPS sends or receives MIDI clock, and configure Ableton Link syncing.

Settings button

Pressing the settings button brings up the Settings Popup Menu, which allows you to configure numerous set-level settings (as opposed to part-level settings, which are configured with Options in the lower toolbar) such as background mode, clock shifting and latency, MIDI mapping, bluetooth connections, and MIDI input sources.

Save button

Tapping the save button brings up the Save Popup Menu, where you can save the current set, retrieve other older sets, or share a set.

Sequence Step buttons

The first time you use midiSTEPS, and any time you create a new empty set, you will see 16 light colored squares labelled with a “-“ in their centers just below the top toolbar. These buttons represent the steps in your current sequence, which is empty, so they are empty.

If you press the keys on the on-screen keyboard below, you will see these squares fill up with notes (eg. C5, E6, A#7) as you press the corresponding keyboard keys. If you press down a chord on the keyboard, you will see the sequence step fill up with multiple notes.

Each sequence step square will display:

- Step number

- Accent, with a slightly bigger and darker note display

- Tie, with a connection between that note and the next one.

- Rest, with a “-“ in the note display

- Start/end boundaries for the sequence, if applicable

- Mute, muted steps will be slightly lighter

- Skip, skipped steps will be significantly lighter

- CC values, up to three vertical bars display any CC values that have been set

The keyboard toolbar is located underneath the sequence step buttons. The buttons in this second toolbar generally affect this sequence part or an individual sequence step:

Octave buttons

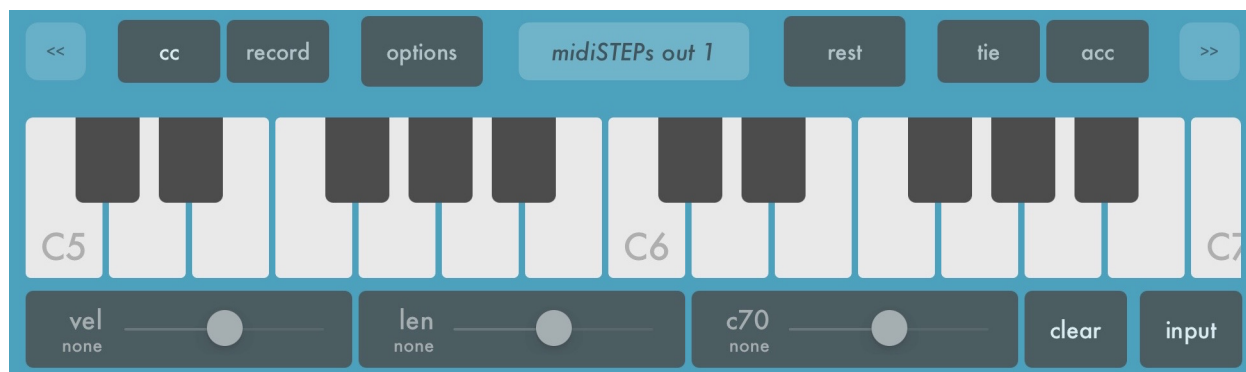
The “<<“ and “>>“ octave buttons allow you to move the keyboard display to the left or right so that you can play lower or higher notes. Each tap will move the keyboard one octave down or up.

CC Slider Display button

Tapping the CC display button causes the keyboard to shrink a bit and three MIDI CC sliders to appear underneath. These sliders are used to set MIDI CC values that will be sent with each step along with the notes. For instance, if MIDI CC 74 controls the cutoff frequency of the synthesizer you are sending MIDI notes to, by setting this slider you could set a different cutoff frequency for each step in the sequence.

In addition to CCs these sliders can be used to set velocity and step length per step. They can also be used to set a probability for certain things such as mute, skip, accent, or tie to happen to that step. Or you can set a probability that the sequence resets before playing the step and goes back to the first step, which can give you very interesting random sequence variations.

If your output destination is an Audio Unit Instrument, instead of using CCs you can assign these sliders to the parameters of the AU.



CC sliders

By default, slider #1 is set to velocity, slider #2 to step length, and slider #3 to mute probability. You can change what parameter they control by tapping on the parameter name ("cc74", "vel", etc) which will bring up a popup that allows you to pick which parameter to use.

If you are using an external MIDI controller, sending a CC message to midistEPs while the CC selection popup menu is up will choose that CC#.

CC Clear button

The CC clear button can be used to erase all the CC values for that step. This does not set the values to 0 or 127, it erases the current value so that no CC message at all will be sent for this step.

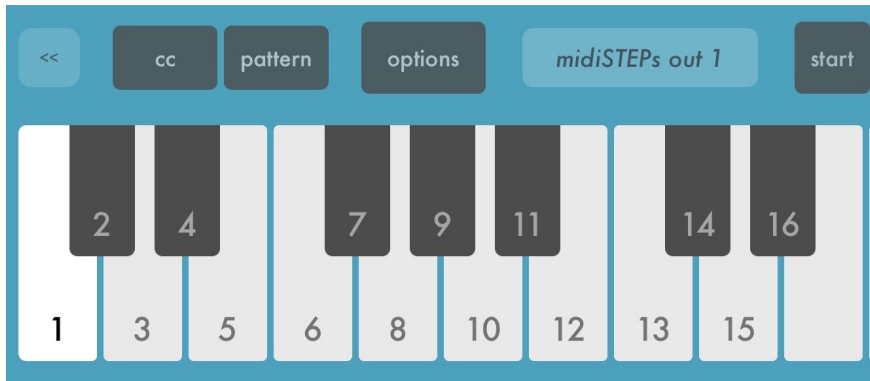
Input button

The input button allows you to change how MIDI input is processed. In “input” mode, any notes received in record mode will be recorded both into the sequencer as new steps, and also transmitted to the output port as MIDI notes. For example, if you are using an external keyboard controller, you want it to both record notes into the sequencer and hear the notes you are recording in the synthesizer that midiSTEPS is sending to.

However, if you are using an external synth that has its own keyboard, when you play its keyboard it will already be playing those notes. So if you put midiSTEPS into “mute” mode by tapping the input key, any MIDI notes received will be recorded into the sequencer but will not be transmitted to the output port. This prevents notes from being played twice, once by the synthesizers keyboard, and once from midiSTEPS.

“Input” or “mute” mode is set independently by sequencer part, which is useful if you are using the synthesizer with a keyboard along with other apps or synthesizers. For instance, your SuperSaturn-X++ has a keyboard and can play 2 parts at the same time. You would set sequencer parts 1 and 2 of midiSTEPS to “mute” mode, and set their outputs to the SuperSaturn ports 1 and 2. You also want to sequence a couple synth apps with midiSTEPS parts 3 and 4, so you keep both of those parts in “input” mode. When you press a key on the SuperSaturn when on parts 3 and 4, it will record the key and send the MIDI note to the respective app.

Record/Pattern/Transpose button



The Record/Pattern/Transpose button lets you switch keyboard input between those three modes by tapping on it.

In record mode, all keyboard input from the onscreen or external keyboards will be recorded into the step sequencer. This is the normal mode where you record your sequence.

In pattern mode, pressing a key will trigger a pattern switch to the pattern number displayed on that note of the keyboard. By default this pattern change will occur once the current sequence finishes playing, but you can also configure when the switch happens in the pattern sync configuration which is covered in the Options Menu Popup section.

In transpose mode, pressing a key on the keyboard will shift the pitches of all notes in your sequence by a certain amount, listed on the key display (“-1”, “+5”, etc) of the keyboard. By default this happens immediately, but you can change when the transpose event occurs in the Options Menu Popup.

Note that the buttons on the right of the toolbar are different in record mode (rest, accent, tie) compared to pattern and transpose mode (start, end, skip, mute). Even if you don’t want to change patterns or transpose your sequence, you may want to switch into these modes to access those keys, which are described in more detail in their various sections below.

Options button

Tapping the Options button brings up the Options Popup Menu, which allows you to set many different options for the current pattern. See the Options Menu section below for more info.

Midi Output button

Touching the midi output button will cause the Midi Output Popup Menu to appear. This menu allows you to set which MIDI output port and channel is used for this sequence part. See the Midi Output Menu section below for more info.

Rest button

Tapping the Rest button enters a new empty rest note step into the sequencer. Multiple taps will enter multiple rests. Note that you can set CC values for rest notes and they will be sent for that step, even though there is no note to send.

Tie button

Touching the Tie button will tie this note to the next step. A tied step will continue playing until after the note from the next step is played. If you tie a step to an adjacent step that has the same note value (eg. step 13 is tied to step 14, and both play C#4) then that note will be extended. Otherwise if there note values are different, a note off for the first step will be sent right after the note on message for the first, allowing you to do things like simulate 303-style slide with portamento, or just easily add some variation to a sequence by having steps with different lengths.

Accent button

Tapping the Accent button will mark the step that is currently being entered as an accent step, which when sent will use the accent velocity instead of the normal velocity. By default the accent velocity is a little higher than the normal velocity, which depending on the synthesizer patch you are triggering could make the note sound a little louder, or with a different cutoff, or whatever parameter you have mapped to velocity.

You can set the velocity values for normal and accented steps in the Options menu.

In Transpose and Pattern modes, the rest/tie/accent buttons will be replaced by mute/skip/start/end buttons to allow real time manipulation of the sequence as explained below:

Mute button

Pressing the Mute button enters the Sequence Step Buttons above into mute mode, where pressing any individual step will cause it to be muted. When the sequencer reaches that step it will treat it like a rest and play no notes, and also mute any CC values entered for that step. You can mute and un-mute steps as the sequence is playing to vary it in real time.

Tapping the mute button a second time will take you out of mute mode.

Skip button

Tapping the Skip button enters the Sequence Step Buttons above into skip mode. In skip mode, pressing a sequence step button will cause it to be skipped, so that the sequencer will pass over that step entirely. For instance, if you have four steps, 1 2 3 4, and you skip step 2, the sequence will now play 1 3 4 1 3 4 1 3 4 etc. The step is not muted, it is skipped entirely. You can skip and un-skip steps in real time to create some very interesting variations on your original pattern.

Tapping the Skip button again will take you out of skip mode.

Start button

Touching the pattern toolbar's Start button places the Sequence Step Buttons into start boundary mode. Whichever sequence button you tap in this mode will become the first step in the sequence. If you have entered steps 1 2 3 4 5 6 and tap 3, the sequence will now play 3 4 5 6 3 4 5 6 3 4 5 6. You can change the start step in real time as the sequence plays.

Tapping the Start button again will take you out of start boundary mode.

End button

Tapping the End button puts the Sequence Step Buttons into End Step mode. In this mode, when you tap a sequence step button it becomes the last step in the sequence. For example, if you have entered steps 1 2 3 4 5 6 and tap 3, the sequencer will now play 1 2 3 1 2 3 1 2 3 etc. You can change the end step in real time as the sequence plays.

Tapping the End button again will take you out of end boundary mode.

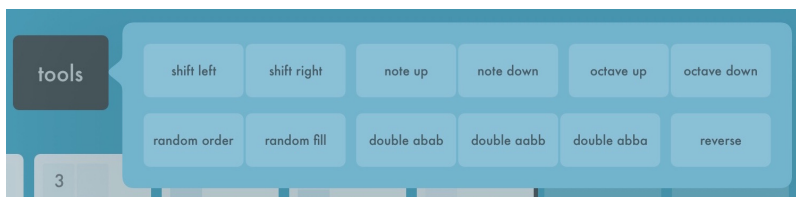
Part Tabs plus Pattern Mix Tab

At the bottom of the screen are five colored tabs that can be pressed to change to different main sequencer screens. The first four tabs will take you to each of the individual four sequencer parts. The background color of the current sequence screen tells you which part you are looking at.

The fifth tab takes you to the Pattern Mix tab where you can move between the patterns of all four parts at the same time, as well as mute, solo and trigger those parts independently.

Main Sequencer popover menus

Tools popover menu



The Tools popover menu appears when you tap the Tools button in the top toolbar, as seen above. Each of the buttons in the menu activates a particular

sequence tool function, that will transform the sequence steps in the current pattern in a particular way. The various tools are described below:

Shift tools

The shift left and shift right tools allow you to rotate the steps in the current sequence pattern. When rotating left, the note and CC data in each step will be moved to the step to its left, with the exception of the first step that will be moved to the last. So, for example, if you have four steps A B C D, and shift left, your new sequence will look like B C D A.

Using the shift right tool makes everything move to the right one step except the last step, which now becomes the first step. So our A B C D sequence would be transformed into D A B C.

Note up and down tools

The note up and note down tools allow you to change the pitch of all steps in the sequence, moving them up (eg. D5 would change to D5#) or down (D5 would change to C5#”).

Octave up and down tools

The octave up and down tools work similarly to the note up and down tools, but instead of moving every step in the sequence up or down by a pitch value, they are moved up by a full octave (C5 becomes C6) or down a full octave (C5 becomes C4).

Randomize tools

There are two tools to randomize the steps in the current pattern sequence. The first, randomize order, uses the existing steps and their CCs and just mixes up the current existing steps into a new random order.

The second tool, randomize fill, will fill every existing step with new random note and CC values, erasing all of the old values. Randomize fill does not, however, randomize the number of steps. This tool will always leave the

sequence with the same number of steps it started with. The notes it chooses will be randomly picked from the currently displayed keyboard keys. If you set the keyboard to only display a certain key, for example D# minor, then the randomizer will randomly pick notes from the two octaves of D# minor that are currently showing on the screen.

Double tools

There are several Double tools that allow you to double the size of the current sequence pattern to make it twice as long. They vary slightly in how they do the doubling.

The Double ABAB tool takes the current sequence pattern and doubles its size by taking the existing steps and appending identical steps in the identical order to the end of the sequence. For example, the sequence A B C D E becomes A B C D E A B C D E. This can be useful if you want to repeat the existing sequence multiple times with slight variations. First use Double ABAB once or twice, and then edit the copies slightly so the pattern sounds similar to the original, with subtle but interesting differences.

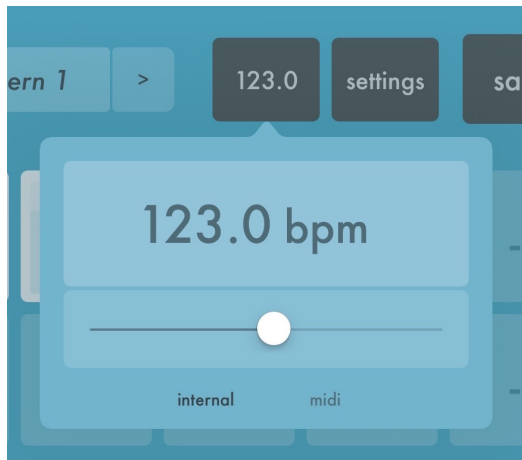
The Double AABB tool takes the current sequence pattern and doubles it by repeating every existing step twice. So A B C D E becomes A A B B C C D D E E. One way this tool can be useful if you want to take an existing sequence and make it run slower, without changing the note speed. You would also need to tie the original notes to their copies.

The Double ABBA tool doubles the current sequence pattern by making a copy of it, reversing it, and appending that to the existing sequence. So A B C D E becomes A B C D E E D C B A. This can have interesting theoretical melodic uses, and of course sometimes it just sounds cool.

Reverse tool

The reverse tool takes your current sequence pattern and just reverses the order of the steps. Sometimes, in a flash of insight, you suddenly realize you've been doing everything in your life completely back asswards and you need to fix that immediately. Don't worry, this tool will be there for you when that happens.

Tempo menu



Pressing the tempo button (the button with the current numerical tempo in BPM) brings up the Tempo Menu Popover. This menu allows you to set the tempo, swing, MIDI clock, and Link settings of the overall sequencer. All four sequencer parts will follow this same tempo and swing.

Tempo

The quickest way to set the tempo of the sequencer is to move the slider under the tempo bpm until it's where you want it to be. If you want a very specific tempo, tap on the bpm number itself (eg. the text that says 123.0 bpm) and a keyboard will come up, allowing you to manually enter the precise tempo.

Swing

Sliding the Swing slider sets the Swing amount of the sequencer. 50 is no swing, all steps are equal length. 75 is super swung, very long steps follow by very short ones. 62-66 is jussst right if you're looking for something nice and groovy.

Again, like tempo, this will effect all four sequencer parts. If you want to use different swing values per part you are out of luck, my friend. Time to buy

more sequencer apps to run alongside midiSTEPS, or buy three more iPads to run four copies of midiSTEPS.

You can also choose whether you want to use 1/16 or 1/8 swing. You will only hear swing if your fastest notes are equal to or faster than the swing value, for instance quarter notes sound normal with 1/8 swing, and eighth notes sound swung with 1/8 swing but normal and un-swung with 1/16 swing. So choose carefully, or all you will get is an eerie indiscernible ghost swing that haunts the 1/16s between your 1/8 notes, impossible to hear, but always lurking there silently, creepily. Of course maybe that's exactly what you're going for.

MIDI clock

The send and receive clock buttons let you set if MIDI clock is sent and received.

Turning Send Clock on will result in MIDI clock messages being sent to every sequence part's output port. The clock is not sent on any other ports. So if you want to send just clock messages to, for instance, a drum machine that you want to sync up but won't be sending any notes to, you will need to burn a sequencer part and assign its MIDI output port to that drum machine.

Turning Receive Clock on will cause midiSTEPS to sync to any incoming clock messages. That tempo you so carefully set in the first tab of this popover menu will be cheerfully ignored in favor of the incoming tempo. If multiple tempos are coming in simultaneously, midiSTEPS will pick one of them and ignore the others.

If Link is active, there is no option to turn Receive Clock on.

Link

Choose the Link tab to access the settings for Ableton Link. These are the built-in Link settings that every app that supports Link uses. You can enable or disable Link, enable or disable notifications related to Link, and see how many apps you are currently connected to.

Settings menu



Pressing the settings button in the top toolbar brings up the Settings Menu Popover where you can, get this, set a variety of midiSTEPS settings. Also hidden in here are a couple useless tabs of promotional information related to this app and others I've released. You can just ignore those.

Info

I warned you about this tab. There are some buttons here to check out my website (yawn), email (ehhh), twitter (why?), and a link to this manual (pretty sure you don't need that one at this point). Also some build info so you know what version of the app you're using, and a copyright notice that these days means basically nothing. Pretty weak tab.

Apps

If you thought Info was self serving, the Apps tab is even worse. These are links to other music apps I've written, just tap on the little icon and you can go buy more of my apps. Why would you do that? I have no idea, I don't think anybody ever actually does it. But this way when I whine to my friends that my apps don't sell and and it's soooo unfair, and they roll their eyes and sigh and try to condescendingly drone on that obviously the reason I fail is that I need to "cross-synergize your brands, bro, basic marketing 101", I can tell them that's a terrible idea and anyway I tried all that already and it didn't work, so they can just shove that advice right up their... uhhhh, where were we? Let's just head to the next tab.

MIDI In

The MIDI In tab is where you configure which MIDI input port and channel midiSTEPS will listen to. By default, it just listens to everything.

The sequencer part that is currently active and on the screen is the one the MIDI input will be sent to.

MIDI Map

The MIDI Map tab is where you can assigned specific incoming MIDI notes to specific midiSTEPS functions. Sending a note to the MIDI Map is the equivalent pressing a button on the screen, so you can use the map to reduce the number of screen taps you need to make.

Once you assign a note to a function, that note will only be used to control the function, it will not be sent to the sequencer, so you will want to choose notes that are out of the way of your sequences.

The following functions can be assigned within the MIDI Map: Start, Trigger, Clear, Rest, Tie, Accent, Pattern Down, Pattern Up, Part Down, Part Up, CC1, CC2, CC3, and No Rec.

CC1 CC2 and CC3 will map MIDI CCs to the three per-step CC sliders of a given part.

The RESET button will clear your MIDI map.

The DEFAULT button will bring up an option to either Save the current MIDI map as the default one to use, Load the existing default MIDI map. Or, you can Cancel because you actually didn't mean to press that button, or maybe you did and have suddenly realized that touching it was a terrible idea and just you wish you could take it all back. Life usually doesn't let you do that, but in this case midiSTEPS does.

MIDI-BT

The MIDI-BT tab allows you to connect to external devices via Bluetooth so that you can send MIDI back and forth. It is a standard configuration menu provided by Apple.

Options

The Options tab is where you can set some audio and timing related midiSTEPS settings. Like the other parts of the Settings menu, everything you set here will affect all four sequencer parts.

The Shift slider is most useful when you are synced to a received MIDI clock. It allows you to shift midiSTEPS clock a little bit forward or backwards in relation to the received clock. This can help you to get midiSTEPS in closer sync to the master clock. It can also be used to intentionally get midiSTEPS a little ahead or behind the master clock.

The Buffer slider determines how far in advance midiSTEPS will calculate the sequencer output. midiSTEPS always sends its MIDI data a little early, with timestamps that are set a little bit into the future, to account for any transmission delays along the way and to account for audio buffers on receiving apps and synths. This results in steady, well-timed MIDI output. However, sending things early means any real-time changes you make to your sequence (mute a part, change a pattern, skip a step, etc) are delayed a tiny bit. Move the slider to the left to reduce the buffer and make the midiSTEPS react more quickly to taps and other input. Move it to the right to

increase the buffer for steadier MIDI at the cost of slightly slower UI responsiveness.

The Background Audio buttons allow you to set the background behavior of midiSTEPs. If you set it to On, midiSTEPs will continue to play in the background even if you're using another app. 5 mins will let it play in the background for, yes, five minutes. Off means it won't play unless it's the active app in the foreground of the iPad. The reason to not always keep it "on" is you might forget it's sitting there in the background, happily sending MIDI notes to a non-existent destination, and it can run down your battery.

Save Set menu



Pressing the Save button in the top toolbar brings up the Save Set Menu popover. This is where you can save your current set of sequences and load up old ones.

To retrieve an old set, just tap its name in the set list menu. The current set will be saved and the new one loaded in its place.

If you want to save the current set under a different name, to create a new variation of it or to save the current version so you don't screw it up inadvertently, tap the Save As text button in the lower middle of the menu. This will prompt you for a new name for the set, which will then be used as the set's name, and the current set will be saved to the old name.

Tapping the New Set text button will create a new, blank set. The settings for this new empty set are based on the current active set, so if you have a specific MIDI or other configuration you'd like to use for your new set, just load up an old set that has that configuration before creating the new one.

Choosing the Share button brings up a standard Apple provided sharing menu to send the set file to another iPad with AirDrop, store it in iCloud drive, or send it via email. If you receive an email with a midiSTEPS set file, you should be able to long press the file and will then be given the option to load it into midiSTEPS.

MIDI Output menu



The MIDI Output Menu popover appears when you tap the light colored MIDI output button in the lower toolbar, in the middle right above the keyboard.

This is where you set the MIDI output port and channel for the current sequencer part. All of the MIDI notes, CC, and clock messages generated by this sequencer part will be sent to that port and that channel.

Note that when you change the MIDI output, the app will change the name on the part tab at the bottom of the screen. This way you can glance at the tabs and see which parts are sending MIDI to which output ports and channels.

With v1.2, midiSTEPS is able to host Audio Unit v3 Instruments. If you choose the “audio unit” destination, you will see a list of the available instruments currently installed on your iPad. Choose the instrument you wish to use for this part and it will load and play.

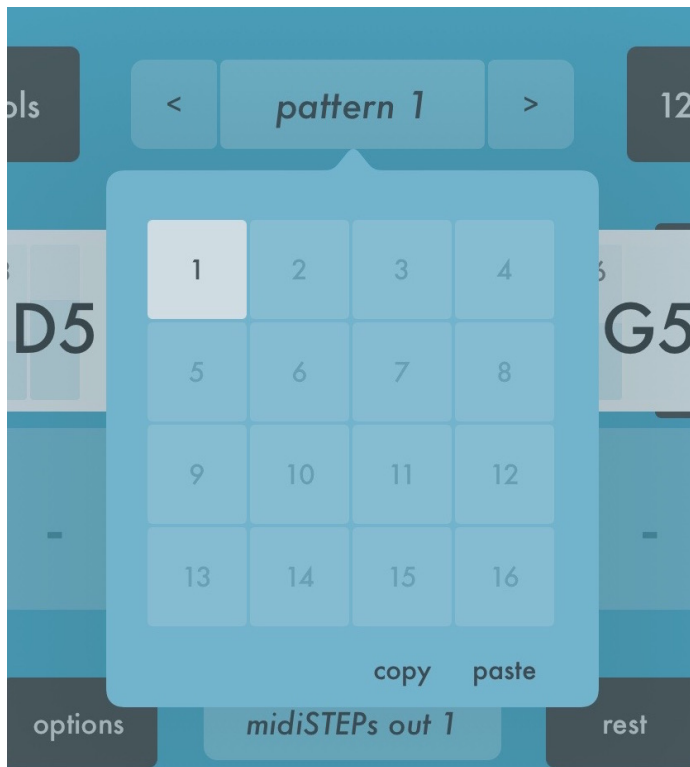
If an AU-Instrument has been set as the destination, the MIDI Output button will change into three buttons: mix, a smaller version of the MIDI output button, and an Audio Unit edit view button. Mix allows you to set volume and pan for the audio output of the various sequence parts.

The Audio Unit edit view button, which is the square with the instrument’s icon, will bring up a window that shows you the instrument’s UI and allows you to edit its parameters. As of v1.5 you can add AU-Effects to the output of the AU-Instrument by pressing the “+” button at the top of the Audio Unit edit view window. To remove or replace an effect, press and hold that effects icon. To replace the instrument you need to use the MIDI Output menu.

With v1.5 you can also set a MIDI Program Change value for the part. This will send that Program Change message to the destination when you start up midiSTEPS, when you load a set, or when you tap the “prg” title.

Pattern Menu

Tapping the light-colored Pattern button, located in the top toolbar in the middle of the screen, brings up the Pattern Menu popover.



Here you can switch between any of the 16 patterns in the current sequencer part. Just tap on the number of the part you want to switch to.

You can also copy and paste patterns here. Tapping the Copy text button will copy the current pattern you see below the popover. Tapping the Paste text button will paste the pattern you previously copied into the current pattern below. So move to the pattern you want to copy, press Copy, move to the pattern you want to paste it into, and press Paste.

Options Menu

Tapping the Options button in the lower toolbar brings up the Options Menu popup, which allows you to configure various options for the current sequence part. Note that these options are set for all patterns of the current part, but they are per part. So the blue sequencer has a different options configuration from the red sequencer, but pattern 1 on the blue sequencer will always have the same options set as pattern 2-16.



Sync tab

Start sync/free buttons

The Start Sync option sets the current part to either start when the master sequencer resets (sync), or start immediately when its trigger button is pressed. By default all parts are start-synced to the master sequencer.

Start link/independent

The Start Link option sets the current part to start and stop whenever the master sequencer starts and stops (sync), or start and stop independently from the master sequencer (inde). By default all parts are start-linked to the master sequencer.

Transpose sync/free buttons

The Transpose Sync option sets the current sequencer part to make transpose changes on a master sequence resync boundary (sync), or start transposing immediately (free). By default, all parts are set to transpose-free mode and happen immediately.

Transpose link/independent

The Transpose Link option sets the current sequencer part to link its transpose changes up to all other linked parts (link) so they all transpose the same amount together, or handle its own transpose changes and ignore the other parts (independent). By default, all parts are set to transpose-independent.

Pattern

Pattern sync/free

The Pattern Sync option sets the current part to sync up pattern changes so they happen on a master sequence resync boundary (sync), or configure pattern changes to happen when the part wants to make them (free). The default is all parts set to pattern-free.

Pattern link/independent

The Pattern Link option sets the current part to link all pattern changes with other linked parts (link) so when you change one part to a certain pattern you also change the others to the same pattern, or set pattern changes to happen independent of the other parts (inde). By default, this is set to pattern-independent.

Sequence loop/one-shot

The Sequence Loop option allows you to set the patterns of this part to either loop continuously until the sequencer is stopped (loop), or to only play once and then stop (one-shot). By default, pattern sequences for all parts will loop.

Sequence finish/jump

The Sequence Finish/Jump option determines when the sequencer part will change to a new pattern sequence. When set to Finish, the sequencer will change to a new pattern sequence once the current part finishes playing the current pattern. If set to jump, the part will jump immediately to the new pattern sequence, and it will also jump to the same step within that second pattern sequence that it is currently playing in the first sequence. This can create some interesting melodic improvisational opportunities when you jump back and forth mid-sequence between multiple patterns.

Notes

Note length slider

The note length slider sets how long each sequence step note in the pattern sequence will play for (unless manually over-written with a CC slider). Moving the slider to the left means the note will be very short, to the right the note will last almost the entire step.

Note speed

The Note Speed option lets you set how long each step lasts as a division of the overall clock. You can set it anywhere from a whole note to a 1/32 note.

Velocity

Normal velocity amount

The Normal velocity slider sets the default velocity amount to use when sending the MIDI notes for a normal, non-accented sequence step (unless the velocity for the step was manually over-written with a CC slider).

Accent velocity amount

The Accent velocity slider sets the default velocity amount to use when sending the MIDI notes for an accented sequence step (unless the velocity for the step was manually over-written with a CC slider).

Keys

The Keys tab allows you to restrict the keys shown on the screen to a certain musical key. The default is All Keys which predictably displays all the keys. Your other choices are to use a Major key or a Minor key. If you've chose Major or Minor, you can then choose the root note of the key, for example tapping F and Major will change the keyboard to only notes in F Major, D# and Minor will likewise give you D# minor.

Note that as of v1.5 the keys you set here will affect the Random Fill command in the Tools menu. Instead of choosing completely random notes, Random Fill will now restrict itself to the keys visible on the screen, meaning both the all/major/minor key and the octave range.

Random

The Random tab lets you create a little automatic random variation in all the notes being played in your sequence, independent of any step-lock CCs or other variations. You can add some randomness to the note length and note velocity of each note by moving the slider to the right. Left is no random variation, sliding all the way to the right gives you extreme randomness.

Input

Input thru / Sequence only button

Setting the Input Thru option means midiSTEPS will process any notes and CCs received at the MIDI input, then echo those notes to the MIDI output. In Sequence Only mode it processes the input but does not echo that input back to the output. Sequence Only is useful if you are using a synthesizer with a keyboard as your input device and also an output destination, so that notes only get played once.

Record/ignore velocity buttons

midiSTEPS can record the velocity into the first CC position of each step as you record the steps if you wish. By default it will ignore the velocity component of incoming notes.

Clock step / Note step button + Note source button

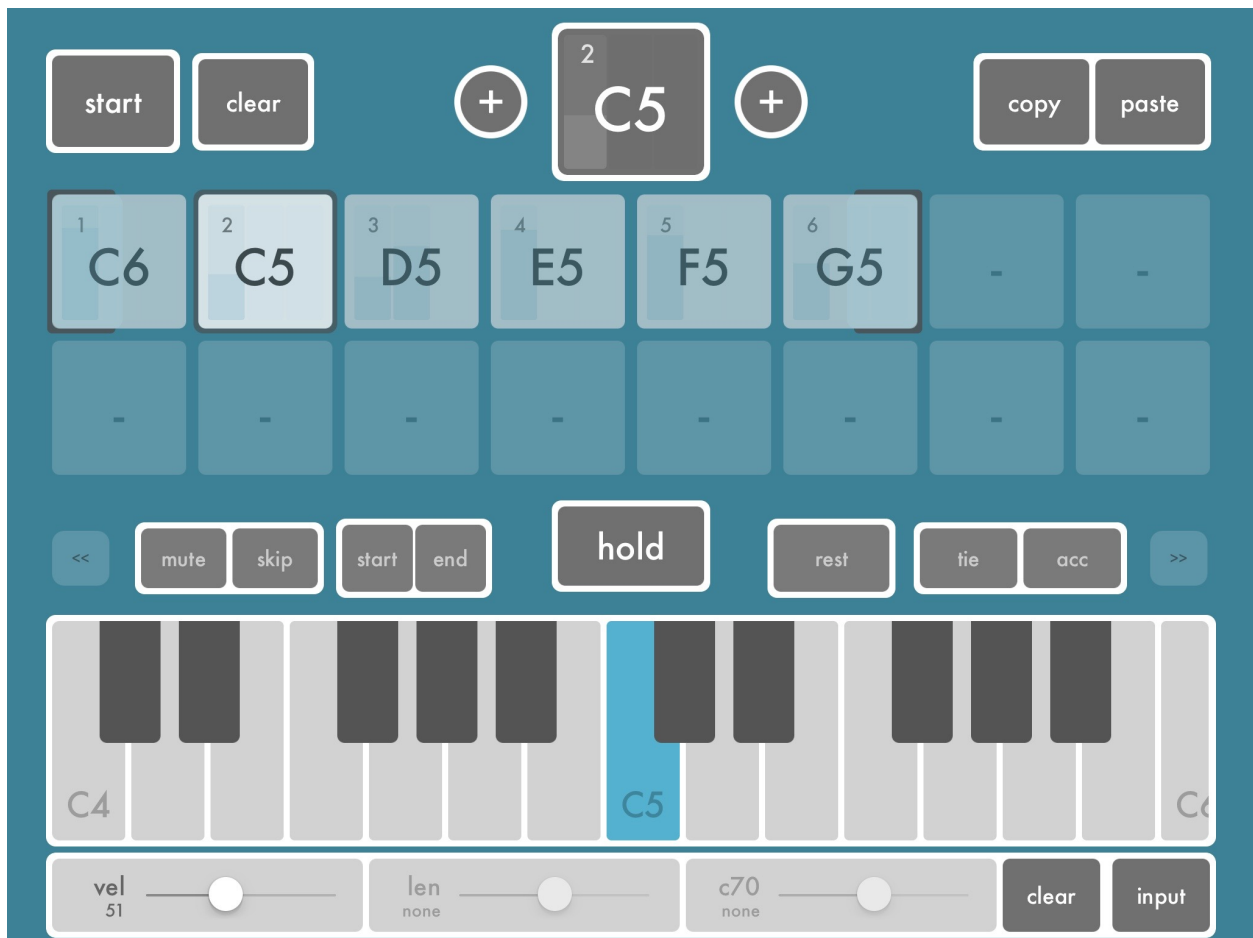
This is a new v1.5 feature that allows you to trigger sequence steps with notes instead of automatically with the internal clock. If you set this toggle to Note Step, any time midiSTEPS receives a note it will trigger the sequence to move forward one step. Sending a steady stream of quick notes would be similar to using the internal clock. Sending irregular notes, and thus triggering steps at irregular intervals, can give you some interesting sequence variations.

If Note step is toggled on, the button to its right allows you to set the source of notes to use to trigger steps. “midi in” will use notes on whatever MIDI In source you have set in the Settings menu. You can also trigger steps for one part with another sequence part, such as “red out”. Any time a step from that sequence is triggered, it also triggers a step for this sequence.

Some interesting things to try when triggering one sequence with another:

- Use sequence parts with different lengths
- Use step-probability triggers (mute, skip, reset) on one or both sequences
- Set up a chain of multiple sequences triggering each other

Edit Sequence Step page



Once you have entered your sequence steps on the main sequencer page, you can then edit and tweak the individual steps using the Edit Step Sequence page.

Getting into the Edit Step Sequence page is easy, first make sure your main sequence page is in Record mode. In the lower toolbar above the keyboard,

the second darker button from the left should say “record” and not “transpose” or “pattern”. Now just press and hold whichever step you want to edit and the Edit Sequence Step page pops up allowing you to edit that step. The Edit Sequence Step page will stay up as long as you hold down the step button that called it up, or you can keep it up by pressing hold.

Step Display

At the top of the Edit Step page, in the middle, is the Step Display which displays the step number of the step, the note value(s), and shows any CC values that have been entered.

Insert Previous Step and Insert Next Step buttons

To the left and right of the Step Display are two buttons marked “+”. These allow you to insert a new step into the sequence before (the left + button) or after (the right + button) the currently displayed step.

Copy and Paste buttons

The Copy and Paste buttons are used to, unsurprisingly, copy and paste individual sequence steps. Tap copy to put all of the current note, CC, etc step data into the copy buffer. Move to another step and press Paste to paste that data from the first step into the second step.

Clear button

Tapping the Clear button will delete the current step and remove it from the sequence.

Hold button

Pressing the hold button will keep the Edit Sequence Step page active even if you release the step button that brought the page up. This allows you to experiment with different note and CCs values without pressing down a step button the whole time. The Hold button will flash to remind you that when

you're done you just need to press it again to dismiss Edit Sequence Step and get back to the Main Sequencer page.

In the midiSTEPS entry of the Settings App there is a setting to "Auto-hold in step edit". This will automatically engage the hold function whenever you enter the edit sequence step page.

Mute/skip/start/end buttons

You can change whether the current step is muted or skipped by pressing the mute and skip buttons. Pressing the start button will make this step the first step in the sequence pattern, likewise pressing end will make it the last step.

Rest/tie/acc buttons

Tapping the rest, tie and accent buttons allows you to edit those parameters for the current step. Remember a rest step will not send notes but will still send CCs.

Pattern Mix page



The Pattern Mix page allows you to switch between patterns for all four sequence parts at the same time, as well as start, stop, mute, and solo those parts. It's a good place to play with song structure once you have recorded sequence patterns for all your parts.

Start button

The large Start button in the upper left corner of the Pattern Mix page starts and stops the master sequencer. In the default start/sync modes, tapping this means all four individual sequencer parts will start playing together.

Panic button

The Panic buttons sends an All Notes Off message to all four sequencer parts. If for whatever reason you encounter stuck MIDI notes or any other sort of strangeness, try tapping the Panic button.

Resync button

Tapping the resync button will restart all of the currently playing sequencer parts when a master sync event occurs.

Individual sequence patterns and parts can have different lengths, plus you can skip steps and change start and end points. This is very useful to create polyrhythms and other interesting melodic effects, but sometimes you just want everything to sync up to the 1. Tapping resync will make this happen, and everything will sound nice and synced and orderly until you decide to muck it all up again.

Master Sync display

The eight dots in the middle of the upper toolbar of the Pattern Mix page represent the master sequencer sync. You can see the sync progress through time as the dots change size.

Tapping the sync display brings up a menu that allows you to set the granularity of master re-syncs, both for the resync button and for start trigger sync, pattern change sync, and transpose sync. You can choose for this resync boundary event to happen the next whole note, the next bar, or at the next four bar boundary.

Tempo/Settings/Save buttons

Tempo, Settings, and Save work identically to how they work in the Main Sequence page.

Pattern Select buttons

At the top of each sequence part display in the Pattern Mix menu, there are numbered Pattern Select buttons that allow you to switch between the sequence patterns of that sequence part.

If you have four or less patterns per part, you will see four big buttons labelled 1-4. The current pattern will be highlighted and if the sequencer is playing you will see a display of which step is currently being played within the sequence.

If you have more than four patterns, you will see sixteen smaller buttons. These work the same way, you just have more patterns to play with.

MIDI/Sync buttons

Below the pattern select buttons you'll see a wide button that is labelled with the title of the MIDI output port and channel being used by that sequence part. This is the MIDI/Sync display button for that part. You can tap this button to bring up a menu that will allow you to change output and sync parameters in a way similar to the Main Sequence page menus.

Mute and Solo buttons

The Mute button for a part allows you to completely mute that sequence part (both notes and CCs) while still allowing it to run. You can also still change patterns, go back to the Main Sequence Page and change start/stop points and mute/skip steps, etc. No MIDI will be sent to the output port as long as the part is muted.

The Solo button for a part will mute all other parts that are not also solo'd. This can be useful if you want to focus on a single sequencer part for a little bit without having to hear all the other parts clanging away as well.

If you are suddenly having trouble getting midiSTEPS to send MIDI on one or all parts, be sure to check that you didn't mute and/or solo some of the sequence parts and then forgot about it.

Start buttons

The Start/Stop button for each sequence part lets you start and stop that particular part. It works similarly to the Trigger button on the main page.

Record buttons

Tapping the Record button on the Pattern Mix page will make that sequence part the Recording Part that all MIDI input is sent to.

Normally, when midiSTEPS receive input it is sent to the currently active Main Sequence page you are looking at. Things work differently on the Pattern Mix page since you can see all four parts at once, so you use the Record button to decide where the MIDI input should go.

Troubleshooting

Examples