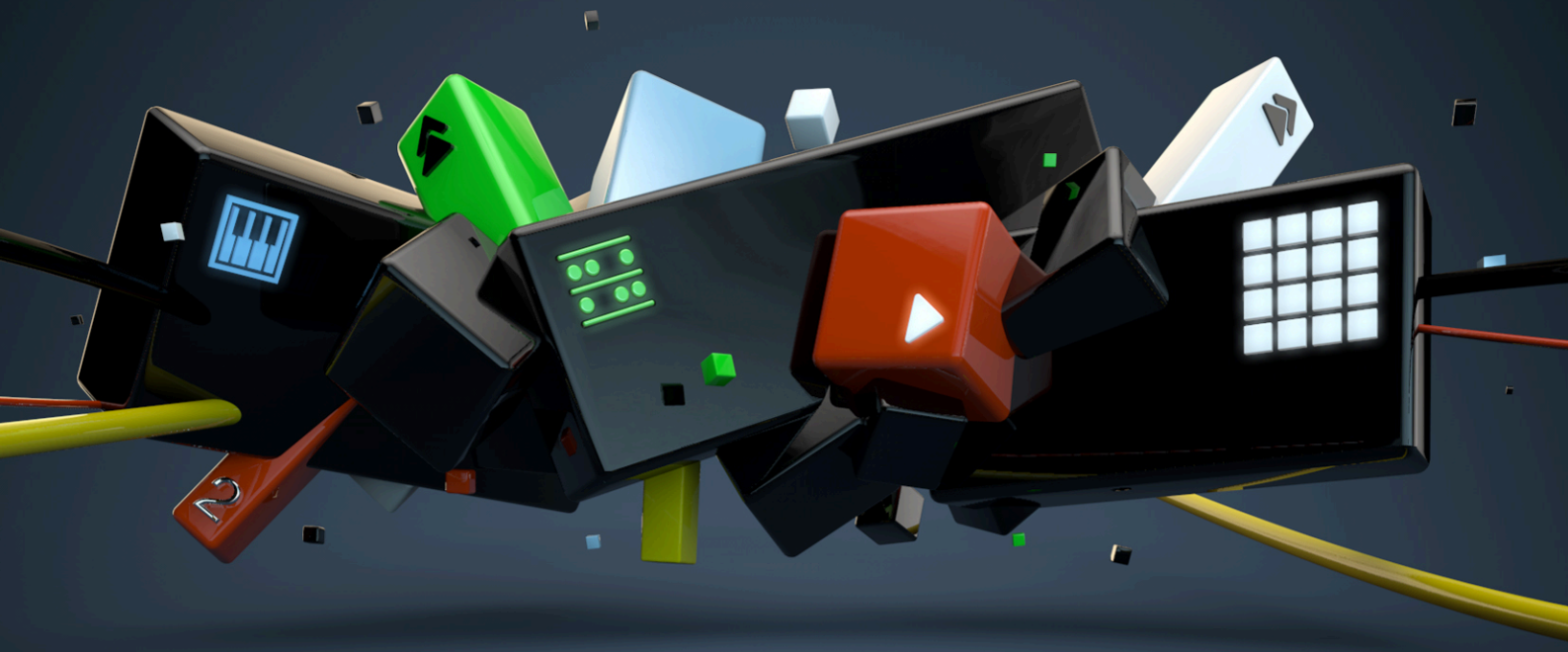


BeatMaker 2

User Manual

INTUA

Revision 2.3: 08/10/2012

1. INTRODUCTION TO BEATMAKER 2 5
2. STUDIO 6
3. DRUM MACHINE 8
OVERVIEW 9
BANK SWITCHING 10
MULTI-SELECTION 11
SCREEN MENUS 12
PRESET 12
SAMPLE 13
MIX 15
TUNE 16
TRIGGER 17
16-MODE 19
4. KEYBOARD SAMPLER 20
OVERVIEW 20
KEYBOARD DISPLAY OPTIONS 22
SETTINGS 23
POLYPHONY / VOLUME ENVELOPE 23
FILTER / FILTER ENVELOPE 25
LFOs 27
MAPPING EDITOR 29
5. AUDIO TRACK 32
6. SEQUENCER 33
OVERVIEW 33
PATTERN MANAGEMENT 35
AUDIO PATTERNS 37
PATTERN EDITOR 38
PRESENTATION 38
EDITING NOTES 40
EDITING NOTE PARAMETERS & AUTOMATIONS 41
NOTE PARAMETERS 41
AUTOMATIONS 42
EXPORTING YOUR SONG TO AN AUDIO OR MIDI FILE 44

7. TRANSPORT: PLAYBACK AND RECORDING 46
8. MIXER 50
9. AUDIO EFFECTS 52
ADDING EFFECTS TO AN INSTRUMENT 52
CREATING FX BUSSES 53
LIST AND DESCRIPTION OF EFFECTS 54
AUTO PAN 54
BITCRUSHER 55
CHORUS 55
COMPRESSOR 56
DELAY 57
OVERDRIVE 58
EQUALIZER 58
FLANGER 59
FILTER 60
REVERB 60
X/Y CROSS CONTROLLER 62
10. SAMPLE LAB 63
OVERVIEW 63
EDIT SAMPLES: PROCESS AND MODIFY AN AUDIO FILE 64
EDITING TOOLS 64
PROCESSING SAMPLES 65
CHANGING THE TEMPO OR PITCH OF A SAMPLE 66
TIME-STRETCH 66
PITCH-SHIFT 67
SETTING LOOP MARKERS 67
CHOP LAB: SLICING YOUR SAMPLES 68
TEMPO AND SIGNATURE INFORMATION 70
AUDIO RECORDER: RECORD YOUR OWN SAMPLES FROM YOUR DEVICE 71
11. TAGGING AND FINDING FILES 72
12. SHARING 74
TRANSFER FILES TO AND FROM YOUR COMPUTER 74
CONFIGURING YOUR DEVICE AND COMPUTER 74

CONNECTING TO BEATMAKER 74
UPLOADING SONGS TO YOUR SOUNDCLOUD ACCOUNT 77
USING YOUR DROPBOX ACCOUNT 77
COPY AND PASTE AUDIO FILES TO AND FROM OTHER iOS APPLICATIONS 79
IMPORT SONGS FROM YOUR iPOD LIBRARY 80
13. MIDI: CONTROLLING BEATMAKER AND COMMUNICATING WITH EXTERNAL ACCESSORIES, SOFTWARE AND iOS APPLICATIONS 81
CONFIGURING GLOBAL MIDI SETTINGS 81
CONNECTING A MIDI CONTROLLER TO YOUR DEVICE 83
USING THE USB CAMERA CONNECTION KIT (iPad ONLY) 83
USING A COREMIDI-COMPATIBLE DOCK ACCESSORY 83
CONNECTING MULTIPLE iOS MUSIC APPLICATIONS TOGETHER 83
CONTROLLING INSTRUMENTS & EFFECTS 83
DRUM MACHINE 84
KEYBOARD SAMPLER 84
EFFECTS 87
SETTING UP YOUR OWN MIDI CONFIGURATION 88
MIDI CHANNELS AND OMNI MODE 89
14. PREFERENCES 90
AUDIO DEVICES & OUTPUTS 90
WIST SUPPORT 90
APPLICATION SETTINGS 90

1. INTRODUCTION TO BEATMAKER 2

BeatMaker 2 is a complete virtual home-studio: you can create any number of instruments and connect them to a full-range of audio effects. You can also compose, record, arrange and transform your ideas into a complete song, ready to be shared with others.

BeatMaker mostly works with audio samples: short sound segments that can form the basis of a larger composition. There are two sample-based instruments, the Drum Machine and Keyboard Sampler, which will help you combine your audio files to produce beats or melodies easily. BeatMaker also comes with a large soundbank of 68 drum presets and 111 instruments, ranging from synthesizers to rich orchestral sounds, which you can use in your compositions.

As of version 2.3, BeatMaker supports sample streaming, which permits loading of very large samples without consuming memory, reading them from the device storage as they are played.

This manual covers all the different tools and interfaces you will find in BeatMaker.

2. STUDIO

The Studio is BeatMaker's main screen where you organize your virtual home-studio, create new instruments and apply new effects to sounds.
It is also the place where you can access the different parts of the application, such as the Sequencer, Mixer, Sample Lab and Sharing features, as well as project management.

On the iPad, the Studio is displayed in a popup panel which can be shown or hidden by pressing the [HOME] button at the top-left corner of the screen.

This is how it is arranged:

1. **Sequencer**: Access the song sequencer, the graphical view of the song and patterns

2. **Mixer:** Control the volume, pan and output bus of each instrument and FX bus.

3. **Sample Lab:** Edit audio files and apply effects such as Time Stretching, Pitch Shifting, normalization, etc.

4. **Sharing:** Transfer files to and from your computer, import a song from your iTunes library, use the pasteboard features or share your songs via SoundCloud.

5. **Project management:** Create a new project, load an existing one or save your current session so that you can come back to it later.

6. **Info window:** Displays available CPU and memory resources, as well as MIDI input, output and synchronization settings. If you have an audio sound card or speaker connected to your device, it also lets choose which audio output BeatMaker should use.

7. **Effect icon:** Tap to access this effect. Hold it down for one second to remove it from your virtual studio.

8. **Insert Effect:** Add a new effect to the instrument that is currently visible.

9. **MIDI Settings:** Displays the MIDI settings panel to let you configure how your external MIDI controllers should interact with the current instrument. For more information, please follow Chapter 12 from this manual.

10. **Add device:** A window will open to allow you to create a new instrument or FX bus.

11. **Studio navigation:** Navigates through instruments and FX busses.

12. **Home:** Goes back to the previous screen.

13. **Instrument icon:** Tap to access this instrument. Hold it down for one second to remove it from your virtual studio.

14. **Transport (*iPhone & iPod only)***: Displays the Transport Bar to control playback and recording features. On the iPad, the Transport Bar is always displayed at the top of the screen.

3. DRUM MACHINE

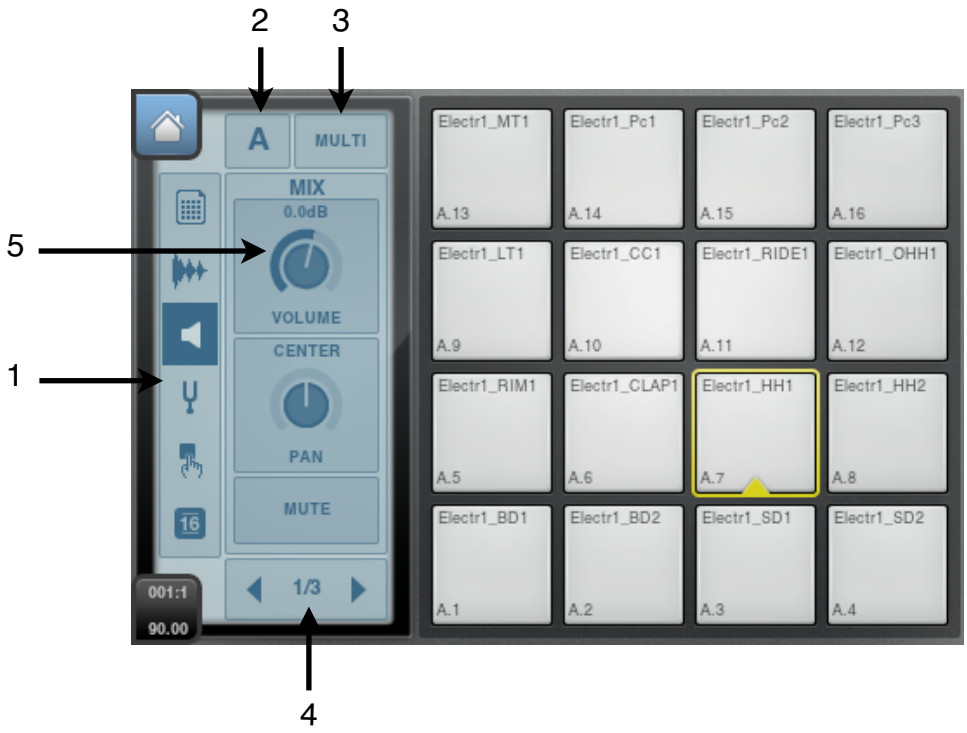
This instrument is a pad-based sampler, perfect for composing the rhythmic parts of your song. You can play on up to 128 pads, split into 8 different banks, 16 pads per bank.

The interface is straight-forward and performance oriented:

On the left side, the screen helps you control how the pads react, loading new presets and tuning various controls such as volume and pan.
On the right, the 16 trigger pads let you compose and play live, with helpful visual feedbacks.

A. OVERVIEW

Here is a quick overview of the drum sampler:



1. **Menu selector**: Press the icons to switch between menus.

2. **Bank selector**: Switch between different sample banks. A bank is a set of 16 pads where you can add your samples. You can use up to 8 banks in all (128 pads total).

3. **Multi**: This button is only visible in menus in which you can select multiple pads. Press it to switch between multi-selection and trigger mode. In multi-selection mode, pressing a pad will add it to the current selection to change sound parameters on multiple pads at the same time.

4. **Page navigation**: Use the left and right arrow buttons to navigate between menu pages.

5. **Content**: Displays the actual page content and controls.

Menu description:

PRESET: Preset loading/saving, and global polyphony

SAMPLE: Loading, editing, recording, clearing samples, automatic fade in/outs

MIX: Volume, pan, mute, filter and audio routing

TUNE: Semitones, fine-tune, reverse, auto-scaling

TRIGGER: Pads triggering mode and polyphony, ADSR, exclusive-groups

16-MODE: Mute / reverse modes, velocity / tune spread

B. BANK SWITCHING

The drum sampler has 128 pads but only 16 can be displayed at a time.
That means there is one bank visible at a time. You can switch between the 8 banks in the bank menu:

Press the bank button (“2” as shown on the previous figure) to bring the bank menu:

‣ **BANK SWITCH:** Allows you to choose the bank.

‣ **LOAD BANK:** Loads a preset to the bank you are currently working with. The previous banks won’t be affected, and you can load multiple presets on the same drum machine.

‣ **CLEAR BANK:** Will reset all 16 pads of the currently selected bank.

Note that the bank button shows the bank you are currently working with. The numbers on each pad are also a quick way to see which bank you are in.

C. MULTI-SELECTION

In order to edit multiple pad parameters at once, the drum sampler comes with a handy pad selection tool. Multi-selection only applies in the following menus: *SAMPLE, MIX, TUNE* and *TRIGGER*.
By default, when entering a function menu, the multi-selection function is not turned on, so that only the last pad pressed is selected.

To switch to multi-selection mode, press the [MULTI] button on the top of the screen. Each pad you press will be added to the selection, or removed if it was already selected. Note that tapping the pads does not produce a sound when in multi-selection mode.

The following screenshot shows multiple pads selected:

From now on, when modifying a setting, the change will be applied to all selected pads. In the above example, if *MUTE* is pressed, pads 8, 12, 13, 14, 15 and 16 will all be muted.

To exit the multi-selection mode, just press the [MULTI] button again. Note that that selection is saved for all the menus which support it, but it is reset each time you switch banks.

D. SCREEN MENUS

D.1. PRESET

Controls the basic loading/saving features of the drum sampler, as well as polyphony settings.

Page 1: Preset

- **Left/Right arrows**: Switch between presets (previous/next)
- **LOAD PRESET**: Load a new preset on all 128 pads. Note that it is not related to the current bank.
- **SAVE PRESET**: Save the whole 128 pads as a new preset.
- **CHOP LAB**: An easy loop-to-preset tool, for splitting a loop as slices and assigning them to pads (for more information see Chapter 9 “Sample Lab”, section D).

Page 2: Polyphony

Use the plus and minus buttons to adjust current drum sampler polyphony. You can set it to up to 32 voices.

D.2. SAMPLE

Handles the loading, editing, and recording of samples on the trigger pads.

- **LOAD:** Load a sample on the currently selected pad(s)
- **QUICK LOAD:** Opens a drag'n'drop sample browser for quick loading of samples on pads:

Select a sample from the browser, and drag it onto a pad. You can optionally load the sample in disk streaming mode by toggling "STREAMING" before dragging. Also, you can toggle or un-toggle the "AUTO PLAY" button to preview samples as you select them in the browser.

‣ **RECORD:** Shows the Audio Record panel, to record audio from the microphone, headset, line-in, or any audio input available on the system. The new sample will be assigned on the selected pad.

‣ **EDIT SAMPLES:** Edit currently selected pad. The Sample Lab will appear, allowing you to edit the sample. When exiting, the sample will be reloaded and the changes you made will be applied. See Chapter 9 “Sample Lab” for more information about editing samples.

‣ **EDIT BOUNDS:** Edit the start and end playback positions of the currently selected pad(s):

1. **Close**: Closes the bounds editor and applies the changes.

2. **Start/End markers**: Drag and drop the start and end markers to the desired position.

3. **Pad selector**: Use the left and right arrows to edit the bounds of other pads.

4. **Bounds tool**: When activated, enables moving the start and end position markers over the waveform.

5. **Trigger mode**: Changes the trigger mode of the currently edited pad.

6. **Follow sample info**: Use the start and end positions defined within the sample file.

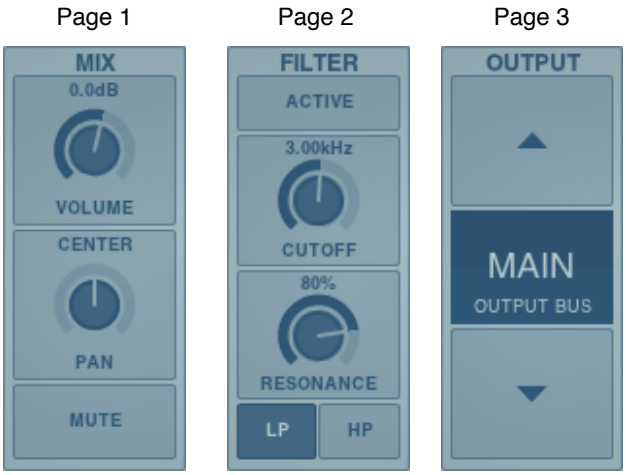
For more sample editing options, see Chapter 9 “Sample Lab”.

‣ **FADE IN/OUT:** Use this option to smooth sample start and end by fading in and out, useful if you hear clicks in the sample (i.e. if the sample was not cut properly).

‣ **CLEAR:** Clears the sample(s) currently loaded on selected pad(s). Note that the entire configuration of the pad(s) will be reset.

D.3. MIX

Set the volume, pan, mute, filter and output bus of trigger pads.



Page 1: Mix

- **VOLUME:** Controls volume of selected pad(s) from -∞ to +6dB.

- **PAN:** Controls panning (stereo image) of selected pad(s).

- **MUTE:** Turns mute for selected pads on and off. Pad will continue playing but will not output to the instrument or FX bus.

Page 2: Filter

- **ENABLE/DISABLE FILTER**: Each pad has its own Low Pass / High Pass resonant filter. Use this button to quickly enable or disable the filter. You can use this feature on multiple pads at once using the multi-selection.

- **CUTOFF:** Adjusts the cutoff frequency for selected filter(s).

- **RESONANCE:** Sets the cutoff for the amount of resonance for selected filter(s).

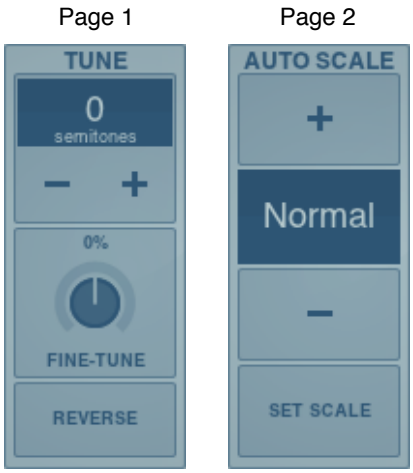
- **LP/HP toggles:** Switch between “Low Pass (LP)” (lower frequencies will pass through) or “High Pass (HP)” (higher frequencies will pass through) modes for selected filter(s).

Page 3: Audio routing

You can route the sound from selected pads to either the instrument output (MAIN), or one of the FX tracks you created. This is very useful if you want to use specific effects on one or more pads (for more information see the Audio Effects chapter of this manual).

D.4. TUNE

Controls the tuning of each pad.



Page 1: Tune

- **SEMITONES:** Adjust semitones of selected pad(s).

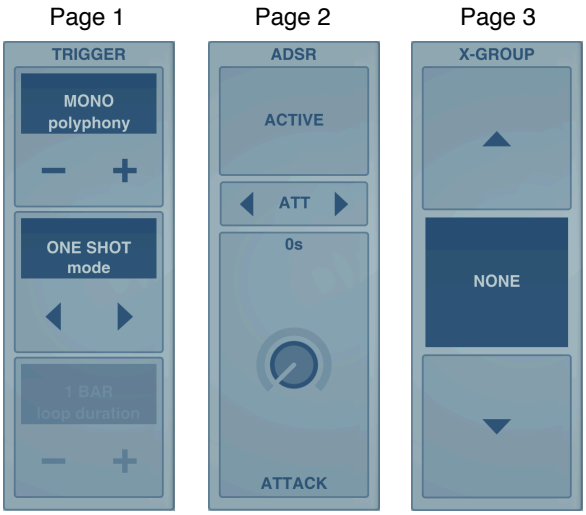
- **FINE-TUNE:** Controls the fine tune (-50% to 50%). Fine tune is handy for adjusting tune between 2 semitones.

- **REVERSE:** Set forward or reverse sample playback of selected pad(s).

Page 2: Auto-scale

Use the Auto-scale feature to adjust the sample length on a bar subdivision ($^1/_{16}^{th}$ to ½), or from 1 to 32 bars. You can easily beat-match a loop to a particular tempo using this feature. Note that pitch will be affected. In order to preserve pitch, use the time-stretch feature in the Sample Lab (for more information see the Sample Lab chapter of this manual).

D.5. TRIGGER



Page 1: Trigger style

▸ **Pad polyphony:** By default, pads are monophonic, meaning that only one “voice” is used per pad. For example, if you re-trigger a loop, current pad playback will stop, and restart.
The monophonic mode should be all you need in most cases, but to achieve more realistic drum emulation, especially for cymbals and snare rolls, you can set it to a specific value, up to 32 voices. Note that the global instrument polyphony may need to be changed as well (See the “Preset” menu).

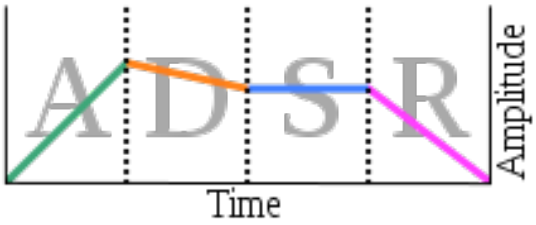
▸ **ONE-SHOT / HOLD / HOLD&LOOP / AUTO-LOOP:** Allows you to set how the pad reacts when it is pressed:

TRIGGER MODE	PAD BEHAVIOR
ONE-SHOT	When the pad is pressed, the sample will play until the end
HOLD	As long as the pad is held, the sample will play back, but will stop playing as soon as it is released.
HOLD & LOOP	Same as “HOLD”, but loops between the sample loop points. You can set them using the Sample Lab (see the “Sample” menu). By default, the entire sample will loop.
AUTO-LOOP	When the pad is pressed, the sample will start and will repeat using the loop quantization. If you set it to 1 bar, the sample will be automatically re-triggered every bar. When the pad is pressed again, the sample will stop (also using quantization). Triggering follows the sequencer/instrument quantization. See the transport bar “Rec.” menu to set it. You can use for example 1 bar to ensure the pad will start looping exactly on the next bar. As you select this mode, you will see that the “loop quantization” option will become available. Select a quantized value from 1/16th of a bar to 32 bars. Using this feature along with time-stretching or Auto-Scale (Tune screen) allows you to loop all your samples on the same tempo.

Note that “HOLD” and “HOLD & LOOP” modes should be used with an ADSR envelope, to avoid abrupt release, audio clicks, etc.

Page 2: ADSR

▸ **ENABLE/DISABLE ADSR**: Use the toggle button to add or delete an ADSR volume envelope on selected pads. A volume envelope allows you to control the volume of the sample over time, using four simple controls:



Attack time (seconds): brings the volume from 0 to its maximum.
Decay time (seconds): brings the volume from its maximum to the sustain level.
Sustain level (%): level of sound is steady while the pad is held, after the attack and decay have passed.
Release time (seconds): brings the volume from sustain level back to 0, starting when the pad is released

As previously mentioned, you should add a volume envelope for pads using the “HOLD” and “HOLD & LOOP” trigger modes.

In order to switch between A, D, S and R regions, use the left/right arrows. The knob will turn to reflect the current setting.

Page 3: X-Groups

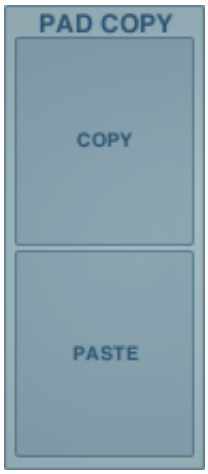
Set an exclusive group on selected pads. You can use up to 128 different “X-Groups” (also called “choke group”). Only one of the pads within the group can play at once, playing a pad stops the pad that was playing before. This is very useful for creating realistic sounding hi-hats, or to only have one slice playing at a time when using a chopped loop.

D.6. 16-MODE

Allows you to switch between various performance modes and copy/paste pads.

Page 1

Page 2



Page 1: Live modes

- **NORMAL:** The default mode, which trigger pads
- **MUTE:** Quickly mute/un-mute pads, ideal for live mashups
- **REVERSE**: Quickly reverse playback of pads
- **VELOCITY:** Spread velocity of last selected pad. Each group of 16 pads will have one velocity, ranging from 7 to 127. This way you can easily record snare rolls and other velocity-related patterns.
- **TUNE:** Same as velocity, but for semitone control. Range from -8 to +7 semitones.

Example for MUTE and REVERSE modes:

Note: pads are not triggered when using MUTE and REVERSE modes.

Page 2: Pad copy and paste

This function allows you to duplicate all the parameters from one pad to another.

- **COPY:** Copies the parameters of the selected pad to BeatMaker's clipboard.
- **PASTE:** Assigns to the selected pad the parameters of the pad that has been previously copied.

4. KEYBOARD SAMPLER

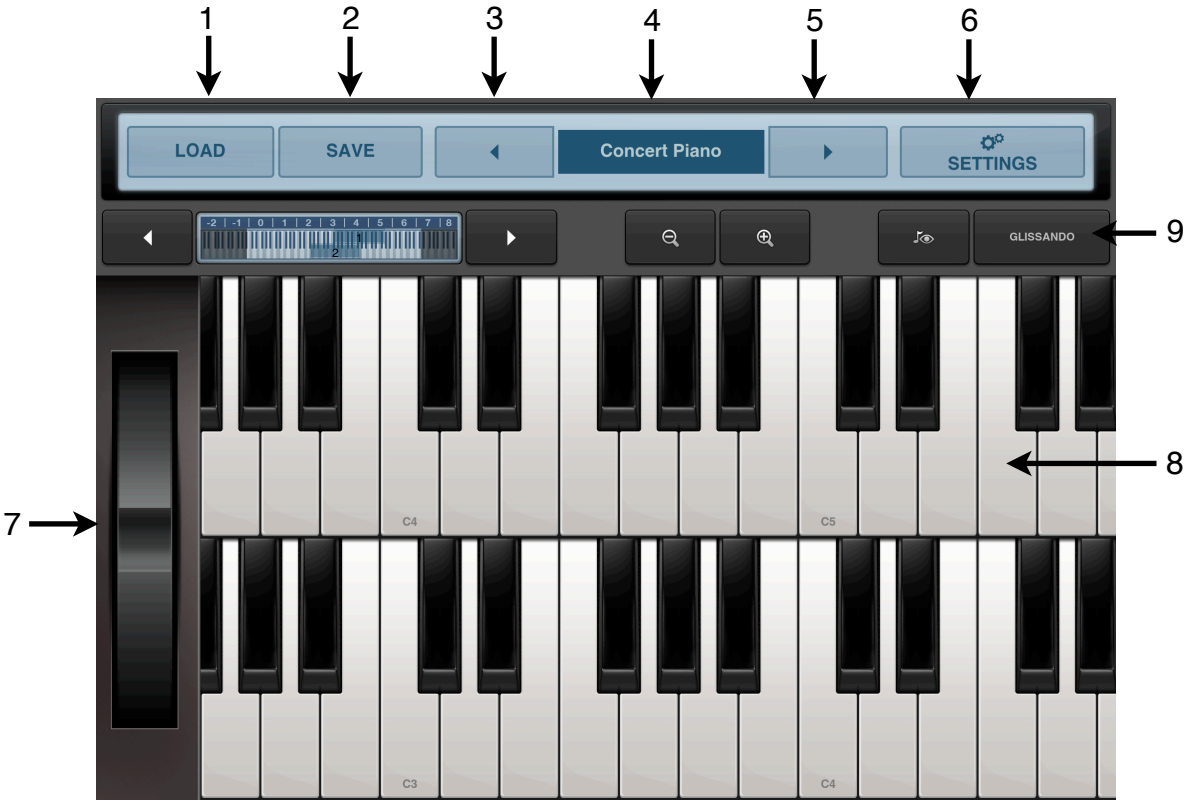
The keyboard sampler is a sample-based instrument with a 128-key piano-like interface, useful for creating melodies, chord progressions or bass lines.
BeatMaker 2 comes with a variety of presets ranging from synthesizers to orchestral instruments, which you can use freely in your compositions.
You can also create your own chromatic instruments by using any samples or by recording your own sounds in the interface.

It also supports layers, which expand the possibilities greatly. Multiple samples can be mapped on the same note, responding to a specific velocity. The mapping editor highlights this concept, please see the MAPPING EDITOR section below.

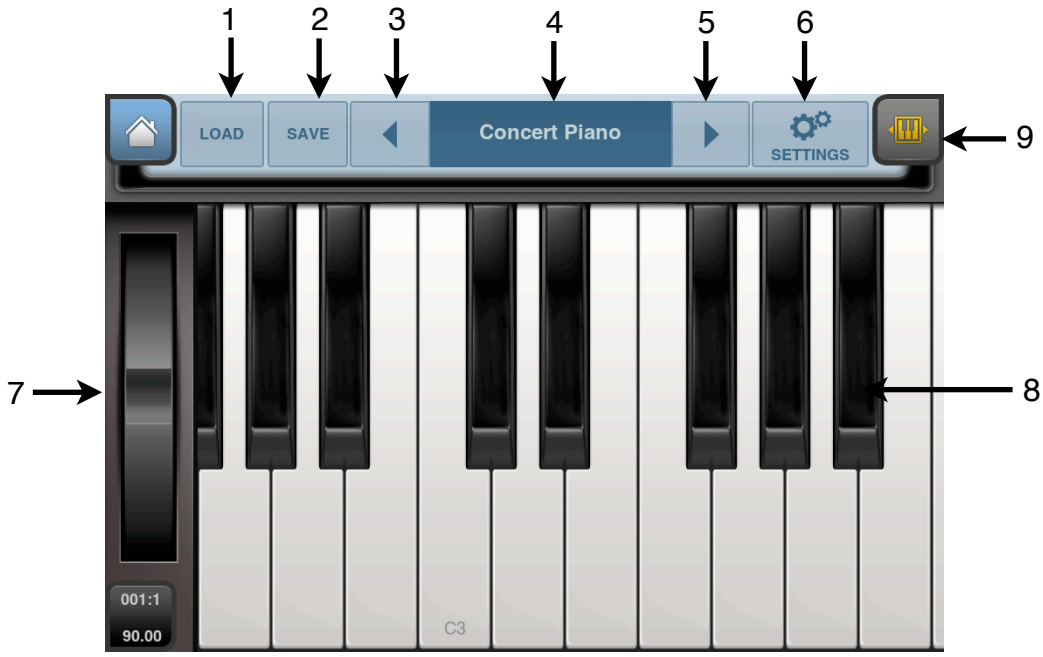
The interface of the Keyboard Sampler varies depending if your device is an iPad or iPhone. Please refer to the appropriate sections for your device.

A. OVERVIEW

• iPad interface



• iPhone & iPod interface



1. **Load preset**: Loads a new preset in the keyboard sampler, replacing the current content.
2. **Save preset**: Saves the current content to disk for later use.
3. **Previous preset**: Loads the previous preset from those saved (previous in alphabetic order).
4. **Current preset:** Displays the name of the current preset
5. **Next preset**: Loads the next preset from those saved (next in alphabetic order).
6. **Settings:** Displays advanced sampling options
7. **Pitch wheel:** This control allows you to change the tuning of the instrument from -2 to 2 semitones while playing.
8. **Keyboard playing zone:** the actual keys used to trigger notes.
9. **Keyboard display options:** See Section B below.

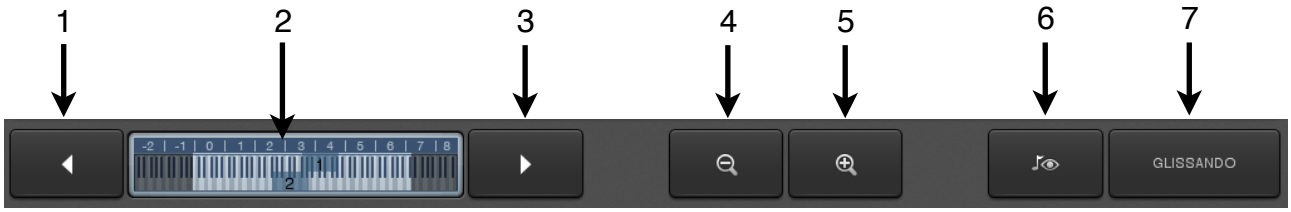
NOTE: The keyboard sampler supports the sustain pedal, via MIDI CC #64. Also, sustain pedal events can be edited in the Pattern editor.

B. KEYBOARD DISPLAY OPTIONS

There are various options to modify how the keyboard interface looks to best suit your style of playing.

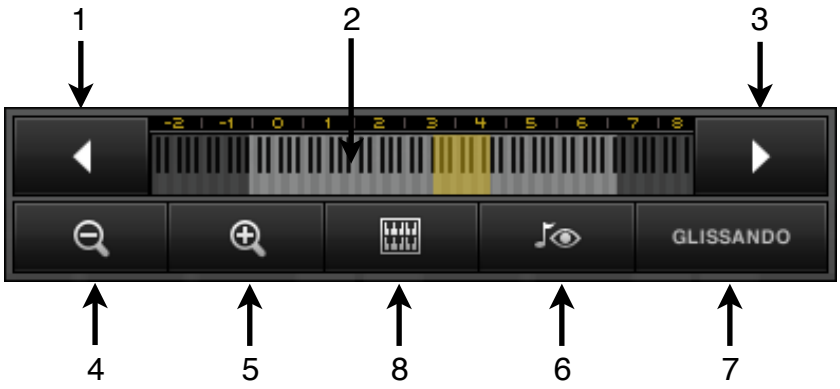
• iPad interface

These options are located just above the keyboard:



• iPhone & iPod interface

Press the top-right corner to display the following panel:



1. **Previous octave**: Shifts the visible keyboard zone to the previous octave (12 notes).

2. **Keyboard scroller**: Allows you to scroll through the visible keyboard zone. The highlighted part represents the section of the keyboard that is currently displayed. The darkened areas mean there are no samples to be played on these keys.

3. **Next octave**: Shifts the visible keyboard zone to the next octave (12 notes).

4. **Decrease key size:** Shrinks key size.

5. **Increase key size:** Widens key size.

6. **Display all notes:** Activate text hints over the keys to indicate the notes.

7. **Glissando mode:** When activated, moving your finger over the keyboard scrolls the position instead of playing notes.

8. **Double keyboard mode (*iPhone & iPod only*):** Splits the playing view into two keyboards. The positions of both keyboards can also now be controlled in the Keyboard scroller.

C. SETTINGS

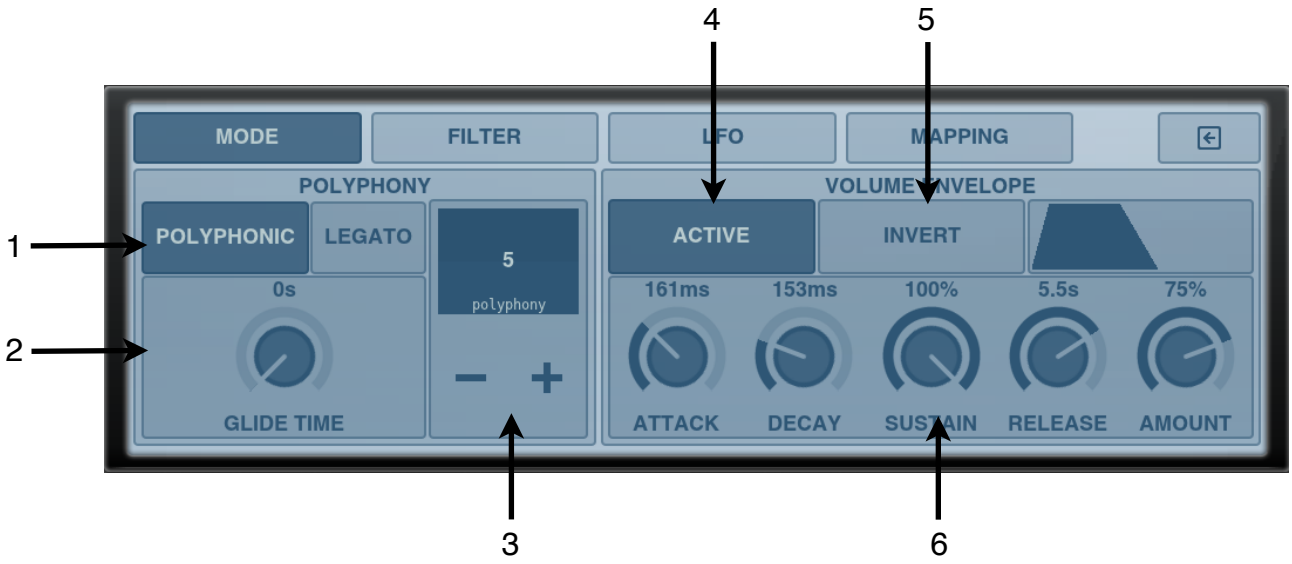
To access the keyboard sampler settings, press the [SETTINGS] button. The settings are divided into several screens to help you manipulate what the keyboard is going to play and how it will sound.

On the iPad, use the top to navigate between screens (*MODE, FILTER, LFO, MAPPING*) and the [BACK] button on the top-right to go back to normal playing mode.

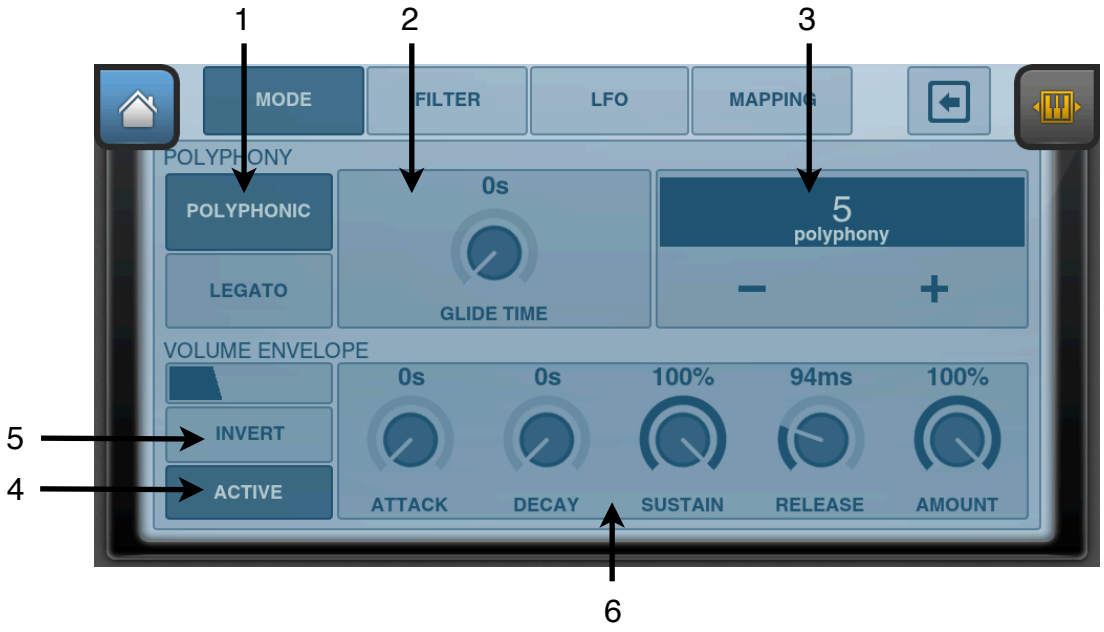
On the iPhone, you can use the arrows on the right side to navigate between screens and the [BACK] button on the left to go back to normal playing mode.

C.1. POLYPHONY / VOLUME ENVELOPE

• iPad interface



• iPhone & iPod interface



1. **Polyphonic/Legato mode**: Switch from normal to legato playing mode. In legato mode, no gaps will be heard between the notes played, and the instrument becomes monophonic.

2. **Glide time**: When in legato mode, this parameter controls the amount of time it will take for one note to change in pitch to become the next note played.

3. **Maximum polyphony**: Controls the maximum number of active notes (voices) that can be played at the same time. With a high value, more CPU will be used by the instrument.

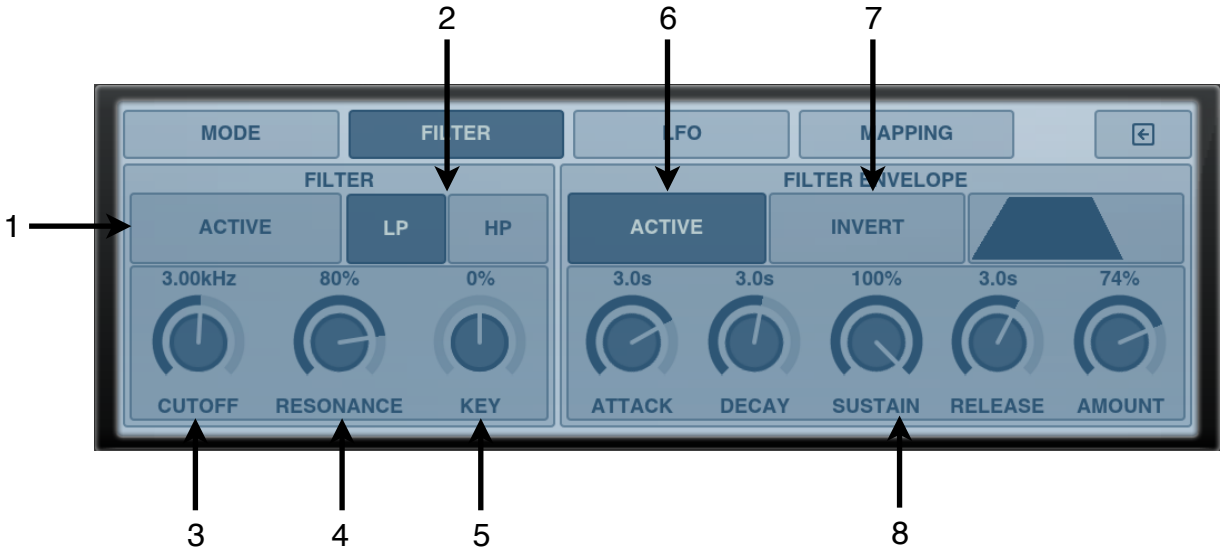
4. **Enable/Disable volume envelope:** Applies a volume envelope for the whole instrument.

5. **Invert envelope:** Inverts the envelope vertically.

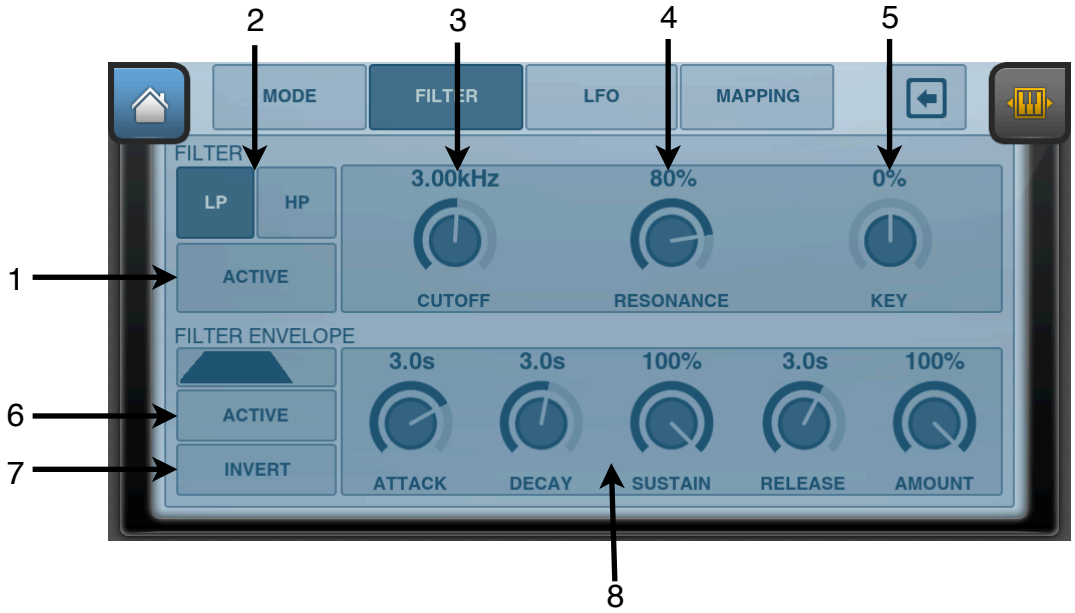
6. **ADSR volume envelope controllers:** Controls the Attack, Decay, Sustain, Release and Amount parameters of the volume envelope. For more information on ADSR, please refer to the Drum Machine chapter “Trigger screen”. The “Amount” parameter controls how much of the envelope will be applied to the volume (or filter cutoff, see FILTER screen).

C.2. FILTER / FILTER ENVELOPE

• iPad interface



•iPhone & iPod interface



1. **Activate Filter**: Turns the filter for this instrument on and off.

2. **Low pass/High pass filter mode**: Select either a Low pass or High pass filter to be applied to the output of the instrument. A low pass filter reduces the high frequencies. A high pass filter reduces the low frequencies.

3. **Filter cutoff**: Controls the frequency at which the filter will start to reduce the sounds

4. **Filter resonance:** Controls how much the sound is accentuated at the cutoff frequency.

5. **Filter key:** Controls the amount of cutoff modification depending of the notes played.

6. **Enable Filter envelope:** Activates the filter frequency envelope.

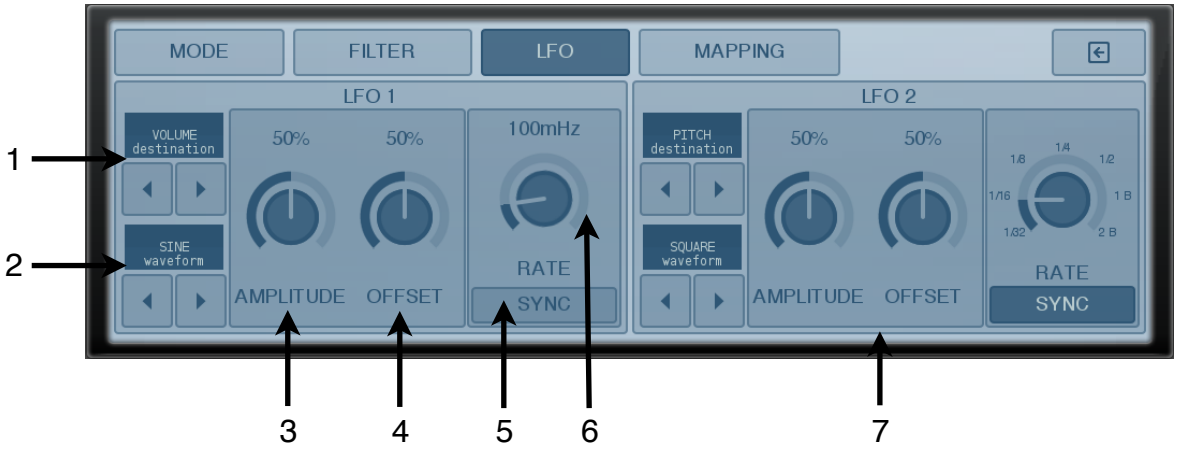
7. **Invert envelope:** Inverts the envelope vertically.

8. **Filter envelope parameters:** Controls the Attack, Decay, Sustain, Release and Amount parameters of the filter envelope. For more information on ADSR, please refer to the Drum Machine chapter “Trigger screen”. The “Amount” parameter controls how much of the envelope will be applied to the filter cutoff.

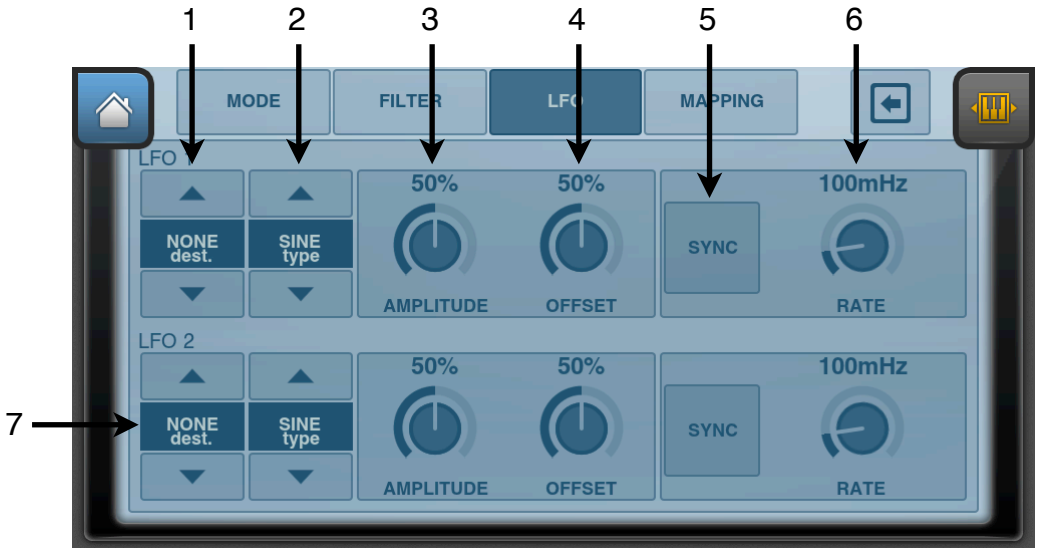
C.3. LFOs

The keyboard sampler instruments contains two low frequency oscillators. These oscillators can modulate a parameter of the sound at a repeated time or rate, making it possible to create interesting synthesizer effects. The different properties of an LFO are explained below:

• iPad interface



• iPhone & iPod interface



1. **Destination**: This is the sound parameter that will be modulated by the LFO. You can choose between *VOLUME*, *PITCH*, *FILTER CUTOFF* and *FILTER RESONANCE*. If *NONE* is selected, the LFO is turned off.

2. **Waveform**: Choose the type of signal that will do the actual modulation of the parameter. The waveform can be one of the following: *SINE, SQUARE, TRIANGLE, SAWTOOTH* and *EXPONENT*.

3. **Amplitude**: Depth of the modulation effect. If amplitude is 0%, no modulation is applied, if set to 100% the full audio signal is modulated.

4. **Offset:** Defines at what amplitude the signal should start to modulate.

5. **Sync:** Turns the Rate parameter into a quantization, relative to the current BPM. It is very useful for creating tempo matching LFOs.

6. **Rate:** Frequency at which the modulation signal is repeated.

7. **LFO 2:** Same parameters as above, but for the second LFO.

C.4. MAPPING EDITOR

The sampler can control a different set of playing samples over the keyboard range, up to 128 notes, per layer. With the Mapping Editor, you can easily create your own sample-based instruments.

You can create complex presets using layers. For example you can map a piano sound from C3 to C4, and also add a violin sound on the same mapping. Optionally, layers can respond to a specific velocity, which is great to use soft instrument sound on low velocity, and more percussive sounds on higher velocities.

The process for creating a new instrument is as follow:

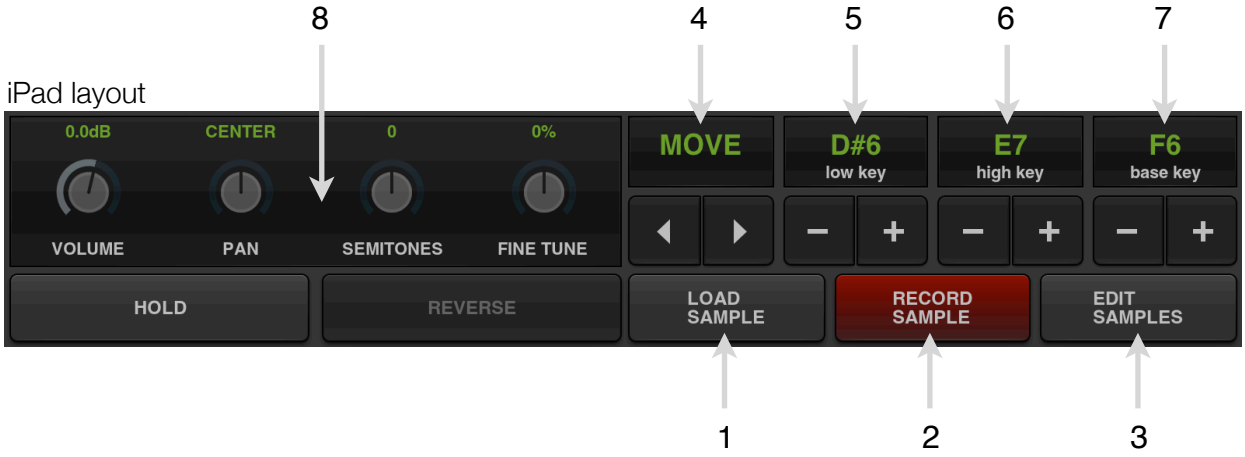
- Create a new empty zone on the default layer
- Select the key range you want your sample to play on (*low key* and *high key*)
- Select the key starting from which the chromatic pitch spread of the sample will be applied to keys in the selected range (*base key*)
- Load or record a sample on this zone
- Repeat this process for any other sample you want to pitch spread on the instrument.

• Main interface

iPad interface. The iPhone/iPod version is slightly different: the zone configuration (8) is split in 3 different boxes. See zone configuration below for more information.

1. **Layer list**: Shows all the layers of the current preset. The currently selected layer is highlighted in blue. By default, there is only one layer, which responds to the 1-127 velocity range. To delete a layer, press the cross button on the right; be warned that all zones contained within the deleted layer will also be removed.
2. **Layer velocity range**: Edit the minimum and maximum velocities of the currently selected layer. A custom range can be set to trigger a specific sample with a specific velocity, or use the 0-127 range to trigger multiple samples/zones at once.
3. **Edit layer name**: Edit the display name of the currently selected layer. Useful to keep layers organized.
4. **Add layer / Add zone**: Either add a new layer or a new zone on the currently selected layer. The newly created layer or zone will be automatically selected.
5. **Keyboard scroller**: Use this scroller to scroll the keys displayed on the bottom.
6. **Zoom in/out**: Zoom in or out the keyboard.
7. **Zone list**: This is a listing of all the sample zones already assigned to the sampler, for the current layer. Move your finger over it to scroll up or down. The highlighted item represents the zone which you are currently editing parameters for. The current zone is also highlighted in green on the keys. If you double-press a zone, the keys will be centered on its range. To delete a zone, press the cross button on the right.
8. **Zone configuration**: Shows the configuration/parameters of the currently selected zone. See below for detailed information.
9. **Keyboard**: Trigger keys and shows the mapping on the currently selected zone (if any).

• Zone configuration



iPhone/iPod layout

The iPhone/iPod touch is layout is similar to the iPad version, the only difference being it is split in 3 different boxes. Use the arrow button to switch between boxes.

1. **Load sample**: Open the sample browser and loads a sample on the currently selected zone. It also supports DISK STREAMING.
2. **Record sample**: Open an audio record panel to start recording a new sample from the microphone or any audio input connected to the device. Once recorded, the sample will be automatically loaded on the currently selected zone.
3. **Edit samples**: Open the sample lab, to edit the currently loaded sample, if any. Once saved, the sample will be automatically reloaded on the currently selected zone.
4. **Move zone:** Use the left and right arrows to move the key range of the selected zone in either direction.
5. **Low key:** Use the [-] and [+] buttons to set the low key for the range.
6. **High key:** Use the [-] and [+] buttons to set the high key for the range.
7. **Base key:** Use the [-] and [+] buttons to set the base key in the zone. This is the key on which the sample will start to be spread from.
8. **Zone configuration**
   - *Volume: Controls the volume of the sample assigned to the zone.*
   - **Pan:** Controls the panning (stereo image) of the sample.
   - **Semitones:** Increases or decreases the pitch of the base sample, by semitone.
   - **Fine tune:** Controls the tuning (-50% to 50%) of the sample. Fine tune is handy for adjusting tune between two semitones.
   - **Key trigger mode:** Sets how the assigned sample reacts when a key is pressed.

TRIGGER MODE	KEY BEHAVIOR
ONE-SHOT	When a key is pressed, the sample will play until the end regardless of whether the key is later released or not.
HOLD	As long as the key is held, the sample will play back, but will stop playing as soon as it is released.
HOLD & LOOP	Same as “HOLD”, but loops between the sample loop points. You can set them using the Sample Lab (see [EDIT SAMPLE] button). By default, the entire sample will loop.

   - **Reverse mode:** If activated, the sample will play backward.

5. AUDIO TRACK

The Audio Track is a new element as of version 2.3 that enables you to record from an input, import, arrange and edit audio patterns in the sequencer.
You can now record your guitars, vocals or any audio input, up to 8 simultaneously, directly on the sequencer window.
As the Drum Machine and Keyboard Sampler elements, it is considered an instrument and can be added within the Studio View.

There are several input settings available through the Studio view by pressing the element itself or the AUDIO input button.

MONITOR
When enabled, the audio from the selected input will be outputted directly through the instrument output.
(NB: Be careful when using that monitored

INPUT SELECTION
Only one mono input can be selected at a time

ARM RECORDING
If enabled when the sequencer is recording, the audio input will be recorded as well

GAIN
Add gain to your input signal

NOISE GATE
When enabled, lets the audio signal pass trough only above a defined volume.
The **Threshold** value defines the volume at which the gate should open and let the audio through.
The **Attack** value fades the input volume up to its full volume once the gate is opened.
The **Hold** value defines the minimum time for the gate to be closed.
The **Release** value fades the input volume to 0 once the gate is closed.

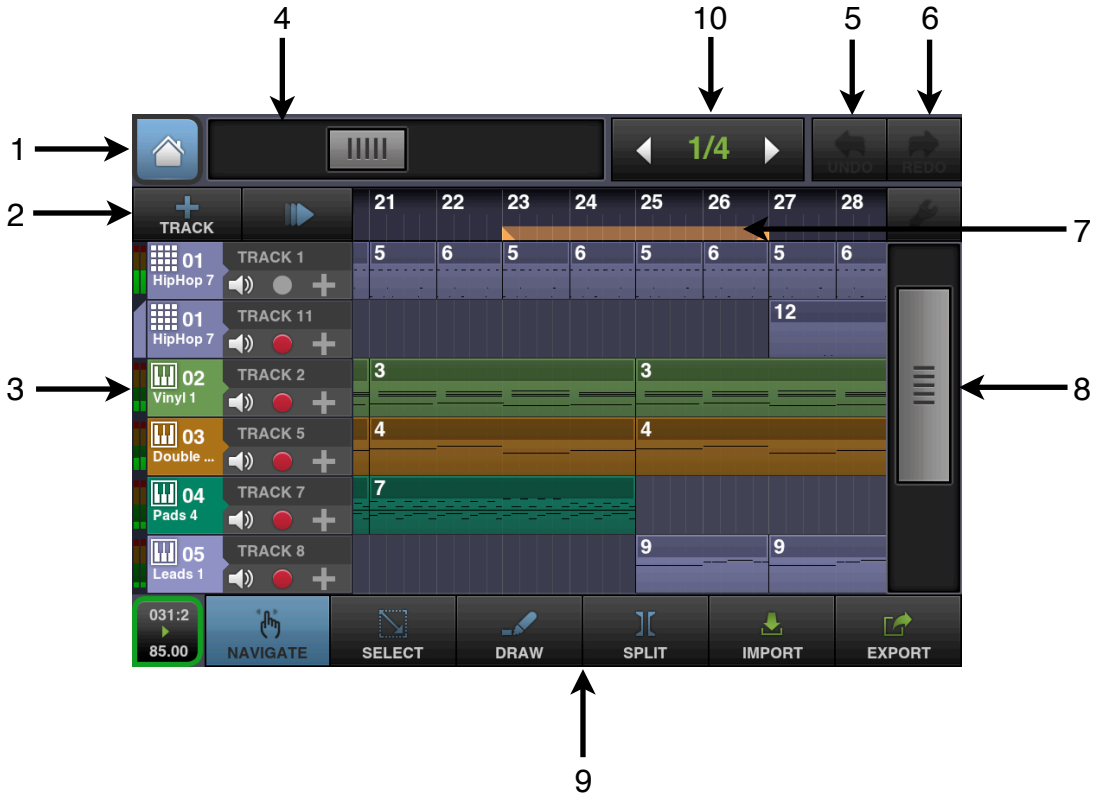
6. SEQUENCER

The sequencer is one of the most important tools in BeatMaker. This is the place where you can combine, create, edit and sequence your patterns to create a song. Patterns are arranged along the instrument tracks and follow a time grid so that they can be played together or sequentially.

By managing their arrangement on the sequencer, you can create intros, verses, choruses and breaks that will form your final composition.

A. OVERVIEW

To access the Sequencer, press the [SEQUENCER] button at the top of the Studio view:



1. **Home**: Opens the Studio screen.

2. **Add track & Follow playback**:
Pressing the add track button brings a list of studio elements for which you can create a new empty track.
With the Follow playback activated, the sequencer will automatically scroll when playing, following the current play position.

3. **Track handle buttons**:

- **Mute track**
- **Arm for recording**
- **Track actions**:
  - Change track name
  - Duplicate track
  - Clear all track events
  - Delete track
  - Import midi
  - Import sample
  - Import from ipod library.

4. **Horizontal scrolling**: Move the button to scroll horizontally in the sequencer.

5. **Undo**: Cancels the last editing action done in the sequencer.

6. **Redo**: Restores the last undone action.

7. **Timeline indicator:** This bar indicates the timeline of your song. Each number represents the bar at which the song events shown below will be played back. The orange delimiter shows the time range that will repeat when *LOOP* mode is on in the Transport bar. The white triangle indicates the current playback position.

8. **Vertical scrolling**: Move the button to scroll vertically in the sequencer if you have more tracks that can be displayed on one screen.

9. **Sequencer toolbar:**
   - **NAVIGATE:** With this tool you can move your finger over the sequencer to scroll through your sequences. Use the pinch movement to zoom in or out on the sequencer. Tapping a pattern selects it. Also you can directly move selected patterns with this tool.
   - **SELECT:** Use this tool to select one or more patterns at the same time by drawing a rectangle around it/them with your finger. Double-tapping a pattern opens the Pattern Editor (see section C below).
   - **DRAW:** This tool allows you to create a new pattern by moving your finger over a zone in the sequencer. Tapping an existing pattern will delete it.
   - **SPLIT:** Divides a single pattern into two pieces. Tap on a specific location in the pattern to split it there.
   - **TRACK:** Opens a panel to let you create a new empty track for any of your instrument.
   - **IMPORT**: Load a MIDI file into the song sequencer. You can then reassign the created MIDI patterns to your existing tracks. *Note*: Control, Program Changes and Pitch Wheel events will not be taken into account.
   - **EXPORT:** Displays the song export panel. See section D below for more information.

10. **Grid edition resolution:**
    Changes grid edition resolution used with the sequencer tools draw, split, move and resize.

B. PATTERN MANAGEMENT

As you record and compose new patterns, you will want to arrange, repeat and duplicate them along the sequencer timeline, in order to organize your music as short sequences or a song.
The sequencer provides various tools for doing this; they become available once you select one or more patterns in the timeline:

As you can see in the screenshot above, the [SELECT] tool is turned on and we selected pattern number 2. When a selection is made, the pattern management tools are displayed on the sequencer.

In this example we have pattern number 5 and number 6 from a Drum Machine track repeated several times. If we later modify the content of Pattern 5 or 6, by recording over it or modifying it, all repetitions will be modified.
You can distinguish a pattern as being one based on another by its name/number and a slightly darker color.

Let's take a look at the tools available for managing patterns:

EDIT PATTERN: Opens the selected pattern in the Pattern Editor (see Section D below for more information), or the audio editor if is an audio pattern.

REPEAT PATTERN: Creates a duplicate of the selected pattern and places it directly after the original on the timeline.

COPY PATTERN: Creates a new copy of the selected pattern and places it directly after the original on the timeline. Use this option instead of duplicating if you want to modify a pattern while preserving the original unchanged.

DELETE PATTERN: Deletes the selected patterns or pattern references from the sequencer.

DISPLAY TOOLS: Tap this button to show or hide the editing tools.

MOVE HORIZONTALLY: Hold this button and move your finger horizontally to move the selected patterns to the left or right on the timeline. Remove your finger when the patterns are where you want them to be.

MOVE VERTICALLY: Hold this button and move your finger vertically to move the selected patterns up or down to other tracks. Remove your finger when the patterns are where you want them to be.

RESIZE PATTERN: Hold this button and move your finger horizontally to resize the selected patterns. Remove your finger when the patterns are the size you want them to be.

CENTER/ZOOM: Tap this button to center the visible part of the sequencer on the current selection. Double tap to center and zoom in on the current selection.

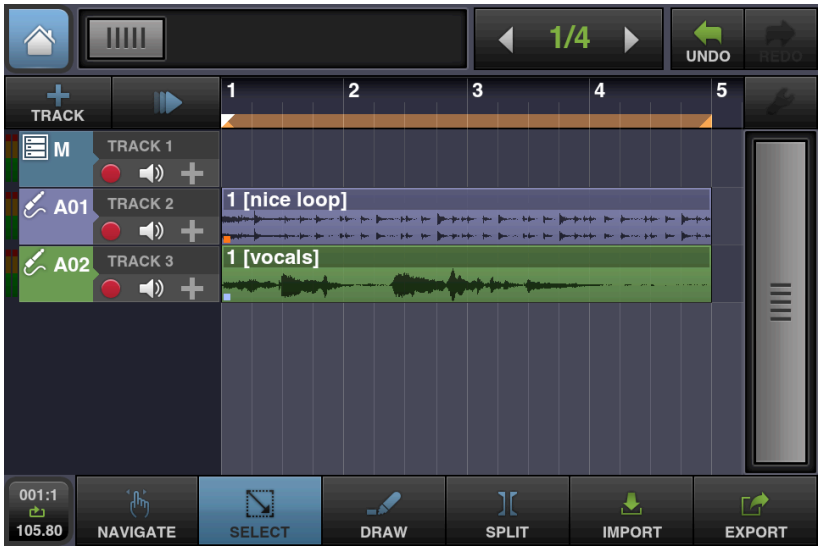
LOOP SELECTION: Sets the loop markers around the current selection.

MERGE SELECTION: When a selection contains more than one pattern, the MERGE button replaces the EDIT PATTERN button, and gives the ability to merge the selected patterns into one.

By using the tools explained above, you can perform all the necessary actions to arrange your patterns along the sequencer. The UNDO and REDO tools are useful if you make a mistake like deleting a pattern or moving a selection to the wrong position.

C. AUDIO PATTERNS

With the new Audio Track element, you can record, import, arrange and edit samples directly from the sequencer timeline.



In the example above, we can see 2 Audio instrument tracks with 2 audio patterns.

Audio patterns behave as regular patterns in the sequencer timeline but have some particularities:

- It is only a reference to a sample with its own starting and ending points.
  Using the Repeat function, the same pattern will be repeated, sharing the same starting and ending points, and referencing the same sample.
  Using the Copy function, a new pattern is created with its own starting and ending points, referencing the same sample.

- Audio patterns can reference a sample loaded in memory or loaded as streaming from disk
  The blue square at the bottom left side of the pattern indicates that the sample is loaded in memory.
  The orange square at the bottom left side of the pattern indicates that the sample is loaded as streaming from disk.

- Using the Edit function will bring the Sample editor instead of the Pattern editor.
  In this case, the Sample editor will have 2 edit modes available:
    Mode edit bounds: Change the start and end point of the pattern.
    Mode edit samples: Regular editing on samples.

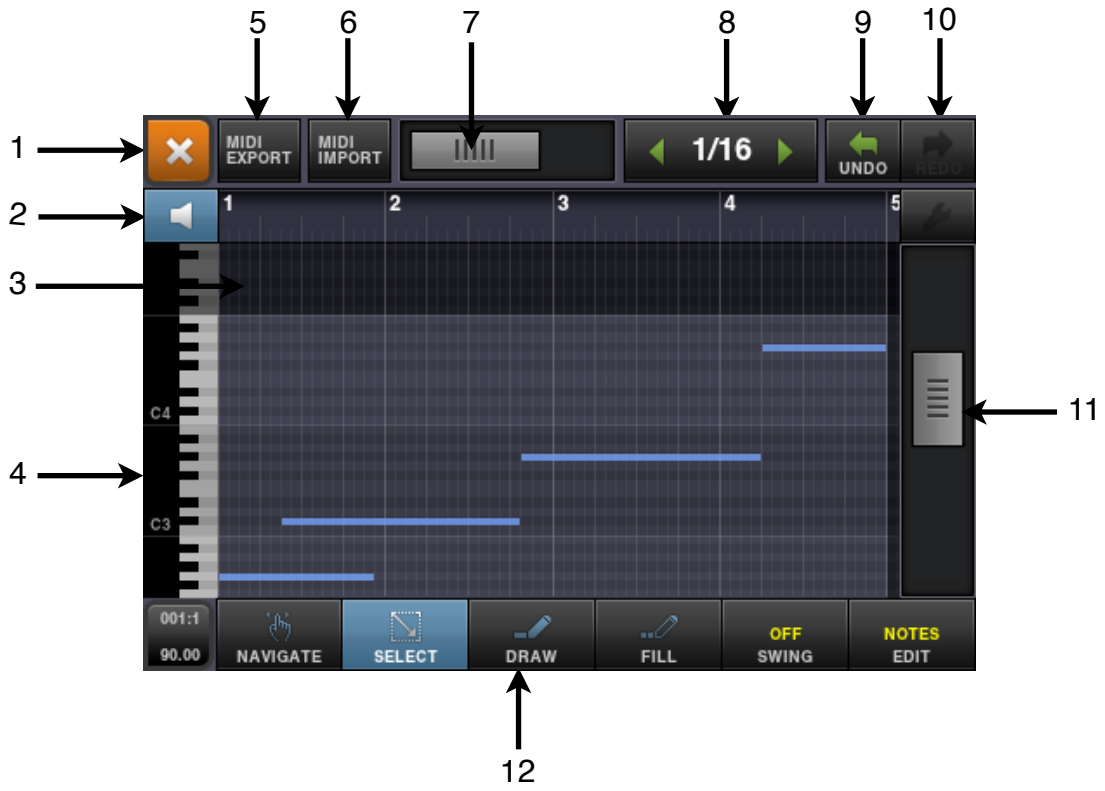
- You cannot merge audio patterns.
- You cannot move audio patterns outside their Audio Track element.

D. PATTERN EDITOR

D.1. PRESENTATION

The Pattern Editor is where you can sequence and edit all the events, such as notes and automations, that make up a specific pattern. You can compose entire patterns using it, as well as modify a previously recorded pattern to adjust incorrect notes or automations.

The Pattern Editor is composed of a timeline, showing the duration of a pattern, and of a pad or piano roll, representing the different notes/samples of a Drum Machine or Keyboard Sampler (up to 128 pads/keys).
To edit a specific pattern, select it in the sequencer and press the [EDIT PATTERN] button



1. **Close**: Goes back to the Sequencer.

2. **Auto preview**: If this button is activated, when you draw a note the sound of the corresponding key or pad will be played. This is useful for knowing how a note will sound.

3. **Empty zone**: The grayed-out area symbolizes a zone where no samples are available in the instrument for which you are making music. In other words, if you place notes into this area, the instrument will not make any sound.

4. **Pad/piano roll**: Indicates which sample or note will be played by the corresponding events on the timeline.

5. **MIDI Export**: Saves the current pattern into a MIDI score file.

6. **MIDI Import**: Loads an existing MIDI score file into the current pattern. *Note*: Control, Program Changes and Pitch Wheel events will not be taken into account.

7. **Horizontal scrolling**: Move the button to scroll horizontally in the timeline.

8. **Quantization:** Defines the smallest fraction of a bar in the Pattern Editor. Use the left and right arrow to change it (from 1/8 to 1/96 of a bar). For example, setting this value to 1/16 will allow you to draw or resize notes down to one-sixteenth of a bar precision.

9. **Undo**: Cancels the last editing action done in the pattern editor.

10. **Redo**: Restores the last undone action.

11. **Vertical scrolling**: Move the button to scroll vertically in the pattern editor, to display other notes/samples available on the instrument.

12. **Pattern Editor toolbar:**

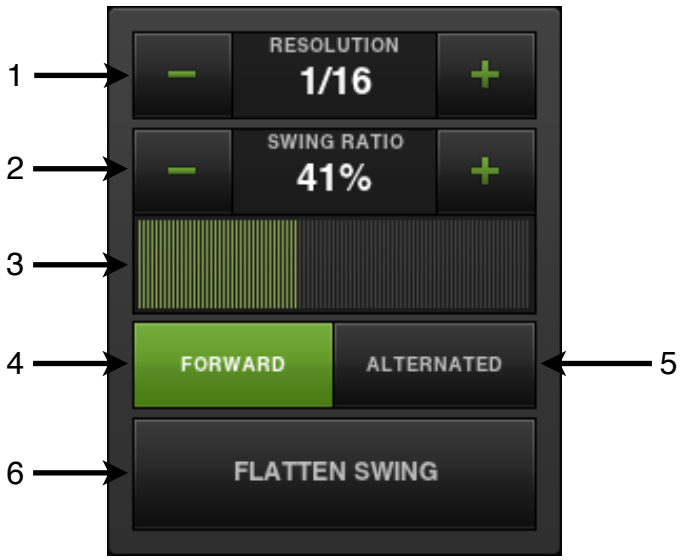
    - **NAVIGATE:** With this tool you can move your finger over the editor to scroll through the entire timeline and pad/piano roll. Use the pinch movement to zoom in or out. Double-tapping on the [NAVIGATE] button automatically zooms out the pattern grid to the activated keys range.

    - **SELECT:** Use this tool to select one or more events at the same time by drawing a rectangle around it/them with your finger. Double-tapping on the [SELECT] buttons selects all available notes or events.

    - **DRAW:** This tool allows you to create a new note/event by moving your finger over a zone in the timeline. Tapping an existing note will delete it.

    - **FILL:** Same as *DRAW* except that it will create a new note for each horizontal step you move your finger on.

    - **SWING**: Displays the swing panel. Adding swing to a pattern is useful to give it a groovy, more human feeling:



1. **Resolution**: Sets the quantize resolution the swing takes effect on.

2. and 3. **Swing Ratio**: Sets how much percentage of a quantize resolution the notes will be shifted to.

4. **Forward**: Sets if the note shifting happens forward or backward through time.

5. **Alternated**: If enabled, notes are shifted forward and backward alternatively.

6. **Flatten Swing**: Applies the swing directly to the notes, modifying their position over the pattern grid. If the swing is not flattened, it will still be applied while playing but notes position on the grid will not be affected.

- **EDIT:** Switch edition mode to either Note, Note Parameter or Automation. See Section C.3 below for more information.

D.2. EDITING NOTES

Editing notes in the Pattern Editor is similar to managing your patterns in the sequencer. Start by selecting the notes you want to edit, and the editing tools will appear above the editor:

On the screenshot above, we selected two notes (E3 and G3). Here are the tools we can use to modify notes in the editor:

QUANTIZE NOTES: Opens the Quantize window. If the timing of a note is wrong, you can use quantization to move it to the bar division of your choice. This is also useful when a recording has not been played perfectly on time. You can also add “swing” to the selected notes, by adding a small lag between the notes.

COPY NOTES: Creates a copy of the selected note and places it directly after the original on the timeline.

DELETE NOTES: Deletes the selected notes from the timeline.

DISPLAY TOOLS: Tap this button to show or hide the editing tools.

MOVE HORIZONTALLY: Hold this button and move your finger horizontally to move the selected notes to the left or right on the timeline. Remove your finger when the patterns are where you want them to be.

MOVE VERTICALLY: Hold this button and move your finger vertically to move the selected notes up or down to the pad/piano roll. Remove your finger when they are where you want them to be.

RESIZE NOTES: Hold this button and move your finger horizontally to resize the selected notes. Remove your finger when the notes are where you want them to be.

CENTER/ZOOM: Tap this button to center the visible part of the pattern editor on the current selection. Double tap to center and zoom in on the current selection.

D.3. EDITING NOTE PARAMETERS & AUTOMATIONS

Apart from notes position and duration, the Pattern Editor lets you modify other note parameters, as well as the connected instrument and effects properties. It is possible to define through time how an instrument or effect will behave (automations).

You can select which parameter/automation to modify within the Pattern Editor by pressing the [EDIT] button at the bottom-right corner of the screen. A parameter list will popup:

D.3.1. NOTE PARAMETERS

Notes have three additional properties which can be modified in the Pattern Editor:

‣ **NOTES VELOCITY:** this is the volume of the note. You can change to have different volumes for individual notes in a pattern.

‣ **NOTES TUNE:** Regardless of what key or sample the note is triggering, you can affect the pitch of the sound up or down by 12 semitones.

‣ **NOTES PAN:** Modifies the stereo output of a note, to the left or right.

In the Pattern Editor, select the notes for which you want to modify the parameters, and select in the list one of the three parameters defined above (if no notes have been selected, all notes will be displayed in the Note Parameter editor):

1. **Parameter range**: Indicates the range of the note parameter that is currently being edited (i.e. 0 to 127 for the Velocity)

2. **Editing notes**: Notes that have previously been selected are displayed in the Note Editor (in our example, three notes). Their heights are relative to the parameter value currently being edited.

3. **Current parameter**: The list item with a pencil icon on its left refers to the currently edited parameter.

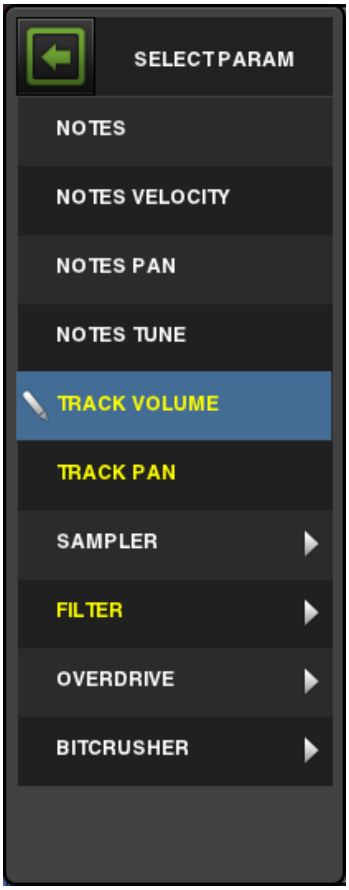
4. **Parameter/Automation Selector**: Shows or hides the parameter list popup. To go back to normal note editing mode, select *NOTES* from the list.

5. **Draw**: When this tool is activated, moving your finger above a note will redefine its parameter value. The *Navigate* and *Select* tools work similarly as within the normal Pattern Editor view.

D.3.2. AUTOMATIONS

Automations allow you to control various parameters of the instrument and effects assigned to a pattern track over time. A pattern can thus not only send notes to an instrument but also modify how the instrument plays and the effects applied to it. You can also record automations, as explained in section *TRANSPORT: PLAYBACK AND RECORDING* of this manual.

The following screenshots shows the list of possible automation parameters for a Keyboard Sampler having 3 effects connected (Filter, Overdrive and BitCrusher):



The list items written in YELLOW specifies that an automation already exists for this parameter.

Two parameters are always available regardless of the instrument or effects connected: *TRACK VOLUME* and *TRACK PAN*. They respectively allow you to automate the volume and panoramic of the instrument.

The following screenshot shows an automation of the Filter effect Cutoff parameter:

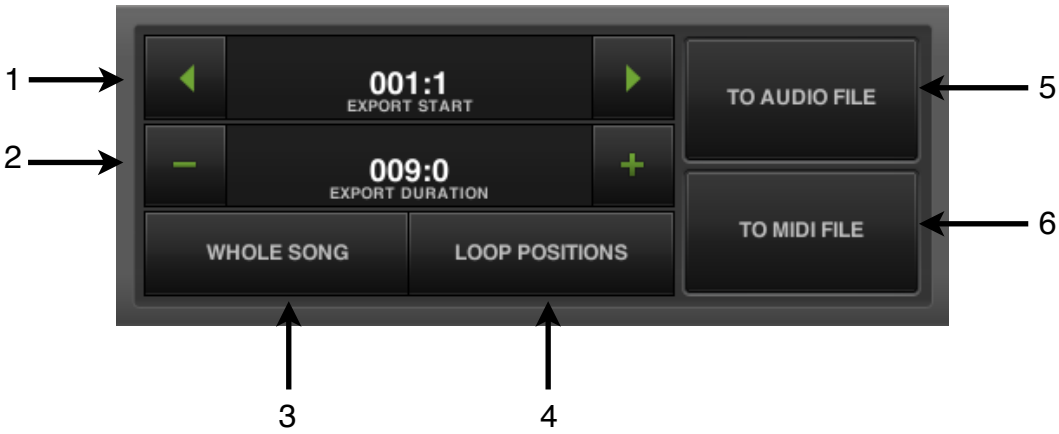
Use the [DRAW] tool to modify the automation values over time of the selected parameter.

E. EXPORTING YOUR SONG TO AN AUDIO OR MIDI FILE

If you want to play the song you created with BeatMaker on your computer, share it with friends or burn it to a CD, you will need to first convert it to a standard audio file. You can also export a small part of your song to reuse it later as a sample in a Drum Machine or Keyboard Sampler instrument.

BeatMaker can also export your song in the MIDI format, which is like having a score of your work. You can later use this MIDI file with software of your choice to edit or reuse the notes you have been composing in BeatMaker. Please note that a MIDI file is not an audio file, and will not play exactly as it would in BeatMaker: it only contains notes and track information.

To start the export process, press the [EXPORT] button at the bottom right corner of the Sequencer and the following window will appear:



1. **Export start**: Choose from which bar of your song you want to start exporting.

2. **Export duration**: Choose the duration in bars for your export.

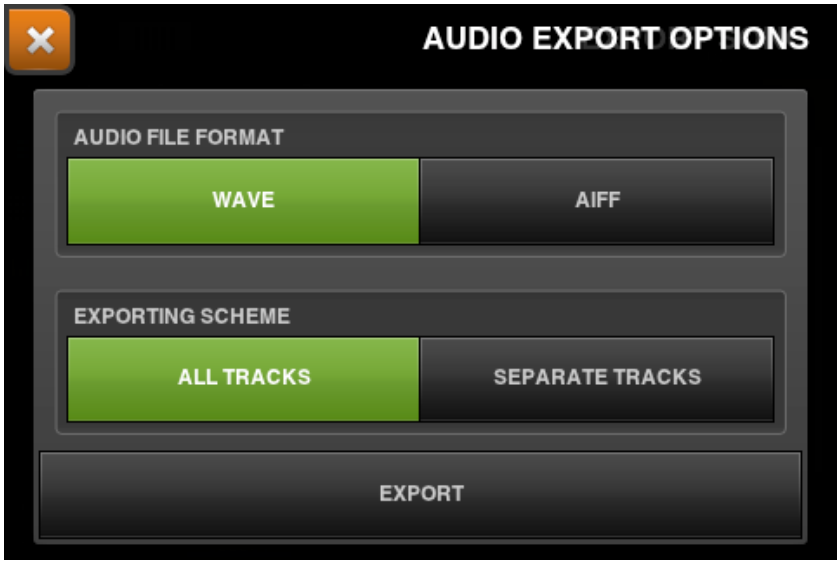
3. **Whole song**: Tap this button to automatically set the *Export start* and *Export duration* to the full duration of your song (i.e. starting at bar 1 and ending at the last pattern found in the sequencer timeline).

4. **Loop positions**: Tap this button to automatically set the *Export start* and *Export duration* to correspond to the loop in the sequencer.

5. **To Audio file**: Press this button to export your song to one or multiple audio WAVE or AIFF file(s).

6. **To MIDI file**: Press this button to export your song to a standard MIDI score file. The file browser will pop up to let you choose where you want the MIDI file to be saved.

If you choose to export to an audio file, the following option panel will pop-up:



- **Audio file format**: Choose whether you want your file to be saved as a standard WAVE or AIFF audio file. Most audio software and MP3 players can read both formats.

- **Exporting scheme**: Your song can either be exported into one single audio file (“ALL TRACKS”) or into individual audio files for each track within the song sequencer (“SEPARATE TRACKS”). Exporting your tracks into separate audio files can be useful if you want to rework your song using another DAW software.

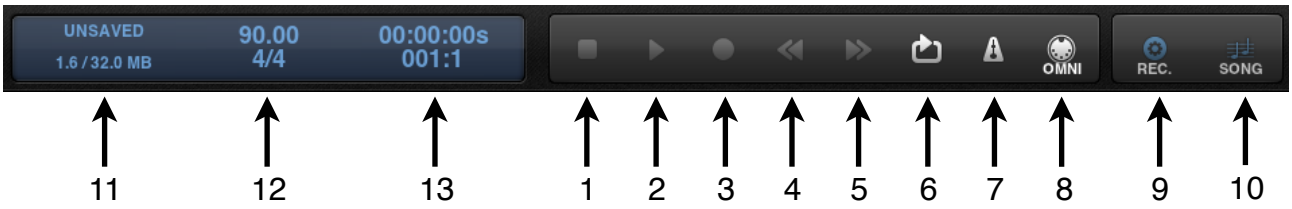
After the export process is complete, you will be able to transfer the resulting file to your computer, website or to other compatible iOS applications. Please see the *Sharing* section of this manual for more information.

6. TRANSPORT: PLAYBACK AND RECORDING

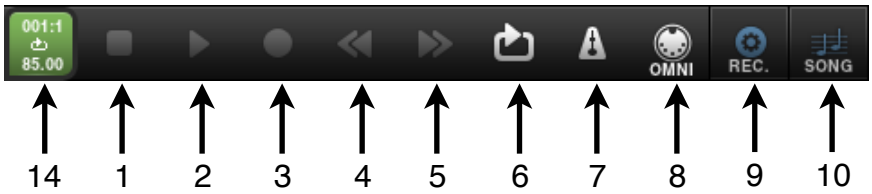
The transport bar is where you can control the sequencer, song playback and recording settings.

On the iPad, it is always displayed at the top of the screen.
On the iPhone, it can be accessed at any time with the bottom left corner toggle button.

• iPad interface



• iPhone & iPod interface



1. **Stop**: Stops the sequencer (when already stopped, it also stops all the remaining sounds playing).

2. **Play**: Starts the playback.

3. **Record**: Starts/Stops the recording process.

4. **Rewind**: Moves backward through the song.

5. **Forward**: Moves forward through the song.

6. **Loop mode**: Turns LOOP mode on and off. When this is turned on, the playback and recording will repeat the sequence between the loop locators set in the Sequencer.

7. **Metronome**: Turns on or off a rhythmic clicking sound to help you with the tempo of the song when playing or recording.

8. **MIDI Omni**: When enabled, the MIDI channel of the connected MIDI controller will be ignored. The application will route the events to the currently opened instrument only. (See Chapter 12 of this manual for more information).

9. **Recording settings**: Tap this button to show the Recording settings panel. See below for more information.

10. **Song settings**: Tap this button to modify your song parameters such as tempo (BPM), time signature, and loop positions.
11. **Project info** *(iPad only)*: Displays the current project name and memory usage.

12. **BPM & Signature** *(iPad only)*: Displays the current project tempo and signature.

13. **Song position** *(iPad only)*: Displays the current song position in seconds and bars.

14. **Transport toggle** *(iPhone & iPod only)***:** Calls up/hides the transport bar.

You can record beats and melodies by playing directly on the Drum Machine and Keyboard Sampler, as well as change certain parameters (automations). These patterns can then be organized and edited using the Sequencer (see the *Sequencer* section above for more information).

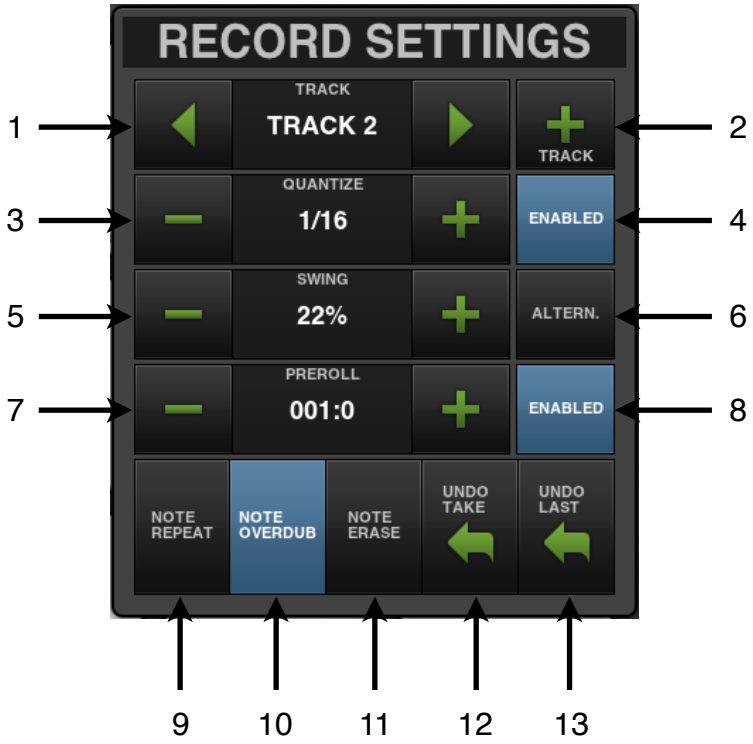
Various parameters are set when recording:

- The track on which the recording will happen
- The current position in your song
- The possibility of a pre-existing pattern at this point in the song
- Whether the LOOP mode is on or off

BeatMaker records on a track assigned to the current instrument or FX bus that has the RECORDING parameter turned on. The recording starts at the current playback position, and if there is a pattern already placed at this location what is recorded is added to it. If no pattern is present, a new one is created automatically.
When the LOOP mode is on, the recording repeats the portion of the song, enabling you to record your instrument step-by-step.

Please note that recording is only possible when you are on an instrument view (Drum Machine and Keyboard Sampler), Mixer console or any effect rack. The Recording settings panel contains important parameters and tools that are useful when recording.

Press the [REC.] button in the transport bar (number 9 on the figure above) to display it:



1. **Recording track**: Selects the track to record to. Only the tracks connected to the instrument being used are shown. Use the left/right arrows to change between tracks.

2. **Add track**: Creates a new empty track for the instrument.

3. **Auto quantize value**: Defines the maximum fraction of a beat used when recording a note. For example if 1/16 is selected, the recording of all the notes will be able to be shifted by one-sixteenth of a bar. This is very useful for automatically correcting the timing of a recording. Use the -/+ buttons to change the quantize value.

4. **Enable Auto quantize**: If this is turned off, your recordings will not undergo any quantization. The notes will play back at the exact position you recorded them.

5. **Swing value:** Changes the quantization of recorded notes by adding a delay relative to a percentage of the quantized value. Adding swing is very useful to create groove or human feeling in your recordings.

6. **Alternate Swing:** Changes the swing algorithm so that it alternates the delay applied between each recorded note.

7. **Preroll value**: Defines the number of bars the sequencer will play before actual recording begins. This is useful in combination with the *Metronome* to prepare yourself for recording.

8. **Enable Preroll:** Turns preroll on and off.

9. **Note repeat**: When turned on, holding an instrument key or pad repeatedly triggers the note at a rate set by the *"Auto quantize value"*.

10. **Note overdub**: With this feature turned on, when you record over a previously existing pattern, the new notes you trigger will not replace the existing ones.

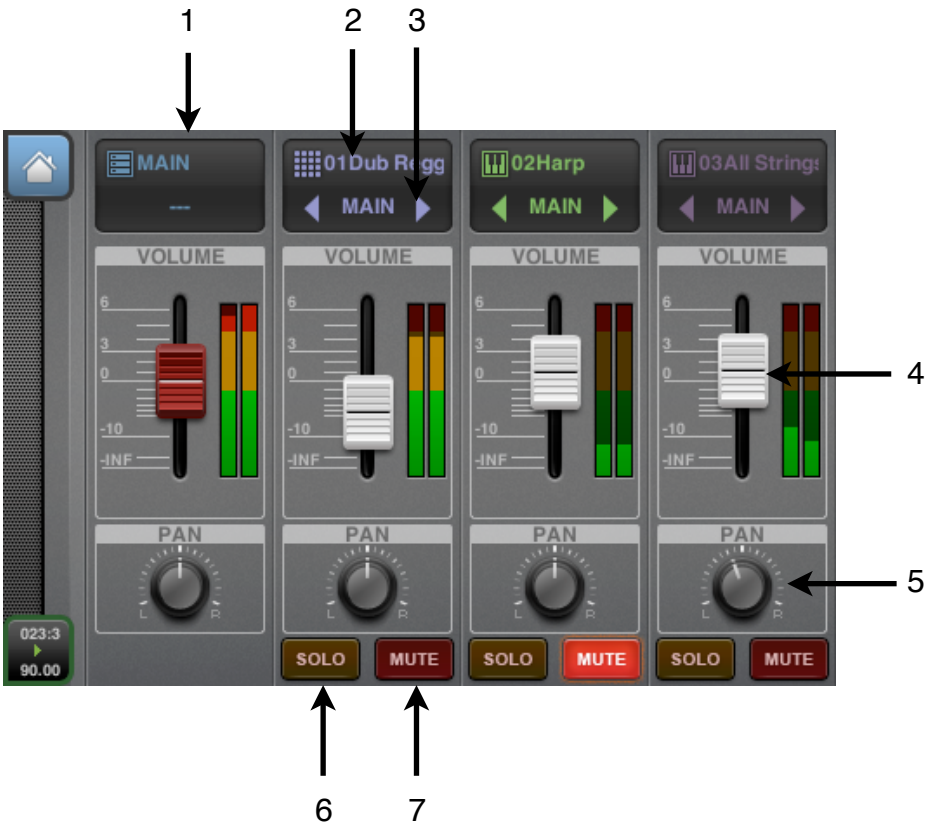
11. **Note erase**: Tap this button to turn on the *Note erase* mode. When this is on, pressing a note while recording will remove any existing similar notes that are played back from the current pattern.

12. **Undo take**: Erases everything that has been recorded since the last time the [RECORD] button was pressed.

13. **Undo last**: Erases the last event/note that have been recorded.

7. MIXER

BeatMaker provides a mixing console to easily control and manipulate the volume, panning and output of each instrument and FX bus. To access the Mixer, press the [MIXER] button in the studio view.



1. **Main output track:** This column controls the volume and pan of the mix of all your instruments and FX busses together. This is the audio signal being sent to your headphones and/or speakers.

2. **Instrument label:** Displays the instrument currently being used on this console unit. Move your finger over the display to scroll to other instruments.

3. **Instrument output:** Displays which output the audio signal coming from the instrument is routed to. If you have created FX busses, use the left and right arrow to change the output from *MAIN* to the FX bus of your choice.

4. **Instrument volume:** Indicates the volume level of the instrument. Move the fader vertically to increase or decrease the volume.

5. **Instrument panoramic:** Changes whether the instrument is panned to the left or right speaker output.

6. **Solo:** When activated, only this instrument will have an audible output (i.e. all other instruments will be muted)

7. **Mute:** Deactivates the output of the instrument so that it is not heard in the final mix.

8. AUDIO EFFECTS

A. ADDING EFFECTS TO AN INSTRUMENT

You can modify the sound of your instruments by adding effects. Up to three effects can be applied to each instrument output in the Studio view:

1. **Effect**: Tap this icon to view the effect and change its parameters. Holding the effect icon for two seconds opens a window to let you remove the effect from the instrument. If you hold the effect icon and quickly move your finger to another effect, their positions will be switched.

2. **Slot for another effect**: A new effect can be added by tapping the [+] icon.

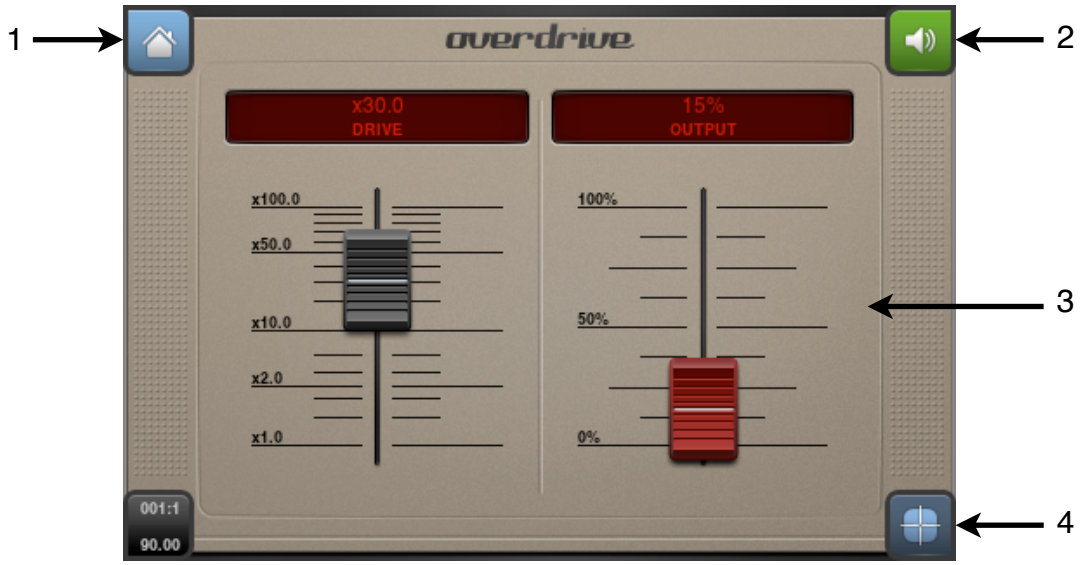
When you tap an empty effect slot, the following window appears:

1. **Cancel**: Returns to the Studio view without creating any effect.

2. **Effect list**: This is the list of effects available on BeatMaker 2. Tap the effect icon you want to add to your instrument.

3. **More effects**: Tap this button to go the next page of available effects.

Once your effect has been added it is applied immediately and will start to modify the sound output of your instrument. To modify its parameters, tap on that instrument's icon in the Studio view. The following view will be displayed:



1. **Home**: Goes back to the Studio screen

2. **Bypass**: Activates or deactivates the effect. When deactivated, the effect will not be applied to the instrument and will not modify the original sound.

3. **Effect controls:** Each effect has its own parameters, usually represented as faders. You can move the fader up or down to change the parameter value. Double-tap on a fader to reset to the default value.

4. **Cross Controller**: Access the X/Y Cross Controller to modify the effect parameters. See section D below for more information.

B. CREATING FX BUSSES

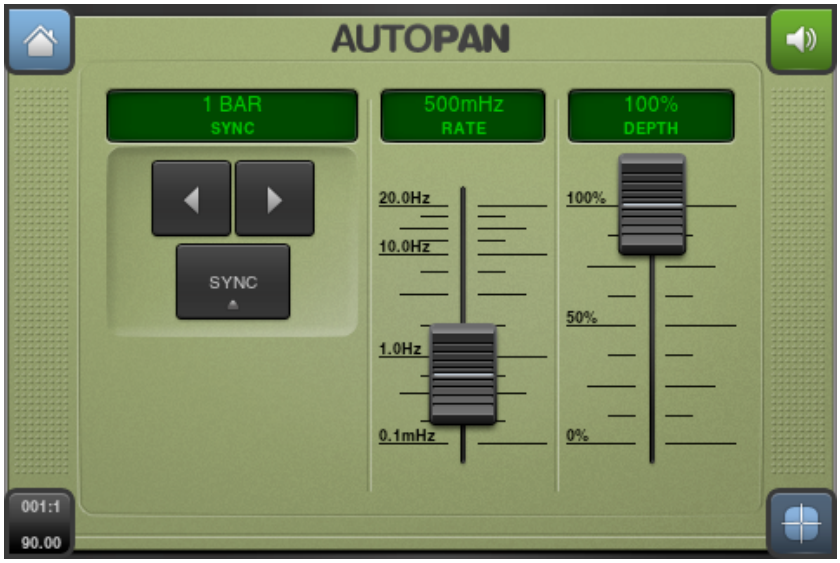
An effect (FX) bus is an additional set of 3 effects which you can apply to your instruments or drum pads. Multiple instruments can be connected to an FX bus to apply the same effect to their sound. It is also useful because it allows you to avoid using too much of your processing resources by creating many individual effects.

To create an FX bus, press the [+] button at the bottom left of the Studio view, and click on the FX Bus icon.

C. LIST AND DESCRIPTION OF EFFECTS

C.1. AUTO PAN

This tool creates a stereo “ping-pong” effect, balancing the sound left to right at a customizable speed.



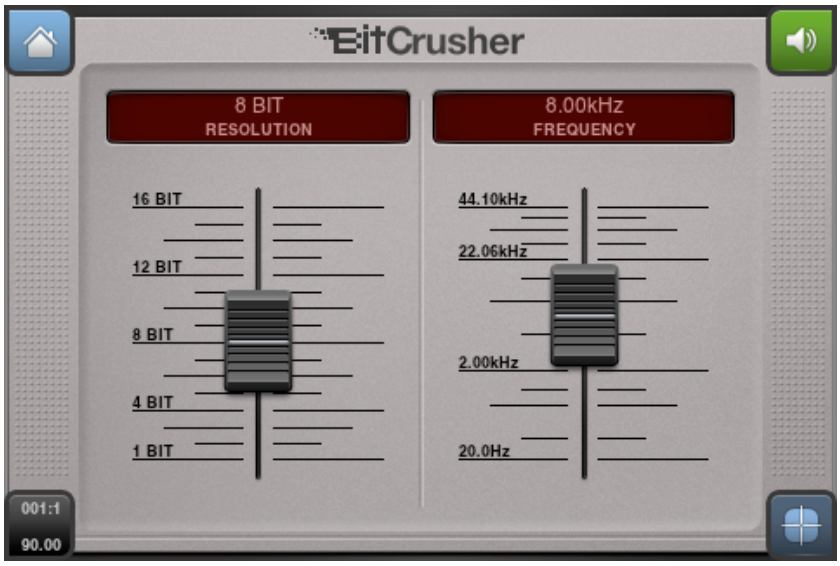
‣ **Sync**: Tap the [SYNC] button to synchronize the Auto Pan to the current song tempo. With the left and right arrows, select the length of time it will take for the sound to cycle left to right and right to left. If this is turned on, the *Rate* parameter has no effect.

‣ **Rate:** If *Sync* mode is turned off, this parameter controls the frequency at which the sound will cycle left to right and right to left.

‣ **Depth:** Defines how much sound will be processed by the effect. If set to 100%, the sound will be completely balanced. A lower value will keep a percentage of the sound at its original panoramic value.

C.2. BITCRUSHER

Alters sound quality by reducing sample properties (resolution and rate).

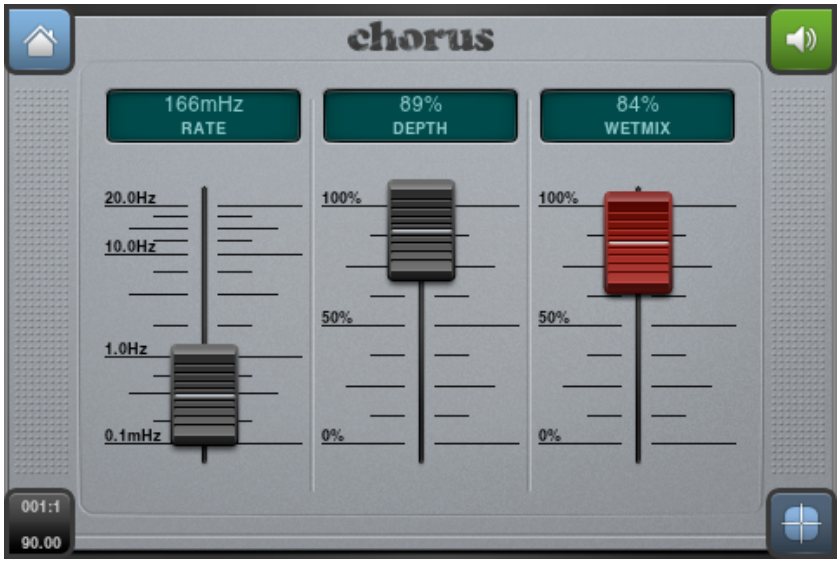


‣ **Resolution**: Number of bits used to encode the audio signal. A low value will give a more “low-fidelity” sound.

‣ **Frequency:** Defines the sampling frequency of the sound. Choose a low value to reduce the quality of the sound.

C.3. CHORUS

This tool mixes the audio signal with delayed copies of itself to create a choir effect, as if several instruments where playing at the same time.



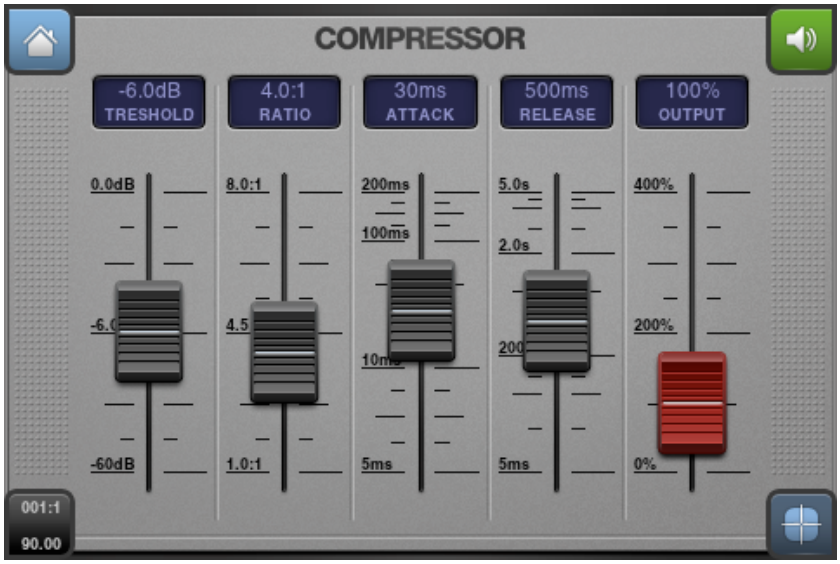
‣ **Rate**: Defines the frequency at which the sound is modulated.

‣ **Depth:** Intensifies the modulation applied to the sound.

‣ **Wet Mix:** Specifies how much of the original signal is mixed with the modified one. A value of 0% plays only the original sound, while a value of 100% reproduces only the modified signal

C.4. COMPRESSOR

Changes the dynamic range of an audio signal by reducing the span between the softest and the loudest sounds.



‣ **Threshold**: Defines the level at which the compressor will start to reduce the signal gain. Signals below this level will not be processed.

‣ **Ratio:** Degree to which the compressor reduces the dynamic range.

‣ **Attack:** Specifies the time it takes to start compressing after the threshold value has been reached.

‣ **Release:** Specifies the time it takes to stop compressing after the signal falls below the threshold value.

‣ **Output:** Increases or decreases the sound level after it has been processed.

C.5. DELAY

This tool records the incoming audio signal and plays it back multiple times over a regular interval, like an echo.

‣ **Delay time**: Defines the time lapse for the repeated sound, synchronized to the tempo (e.g. 1/16 will repeat the sound every one-sixteenth of a bar).

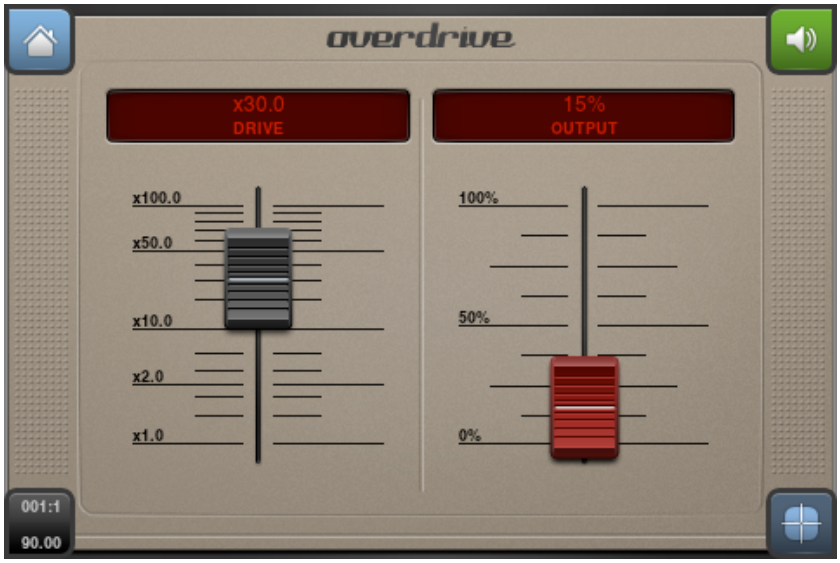
‣ **Quantization:** Modifies the duration of the delay time, using a plain note, dotted note or a triplet.

‣ **Feedback:** Specifies how much of the modified signal will be fed back in the delay line. If set to 0%, the signal will only be repeated one time, if set to 100% the signal will repeat infinitely.

‣ **Wet Mix:** Specifies how much of the original signal is mixed with the modified one. A value of 0% plays only the original sound, while a value of 100% reproduces only the modified signal.

C.6. OVERDRIVE

This effect saturates the sound by increasing its level.

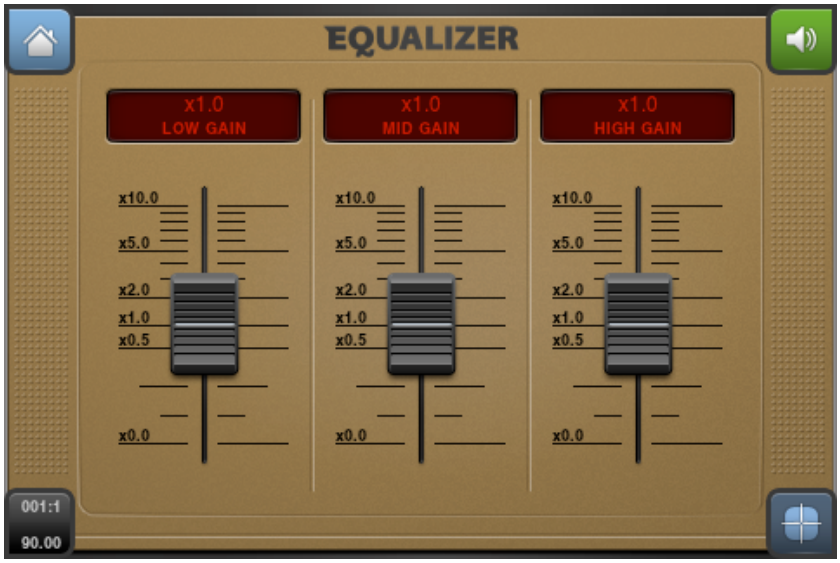


‣ **Overdrive**: Sets the volume multiplier. If set at x10, the volume will be multiplied by 10. High values create greater distortion.

‣ **Output:** Modifies the output level after distortion. Use it in case the saturated sound has too much volume.

C.7. EQUALIZER

This tool allows you to boost or lower the low, middle and high frequencies of the sound. It is useful for correcting sound levels that may be too low or high in a given frequency range.



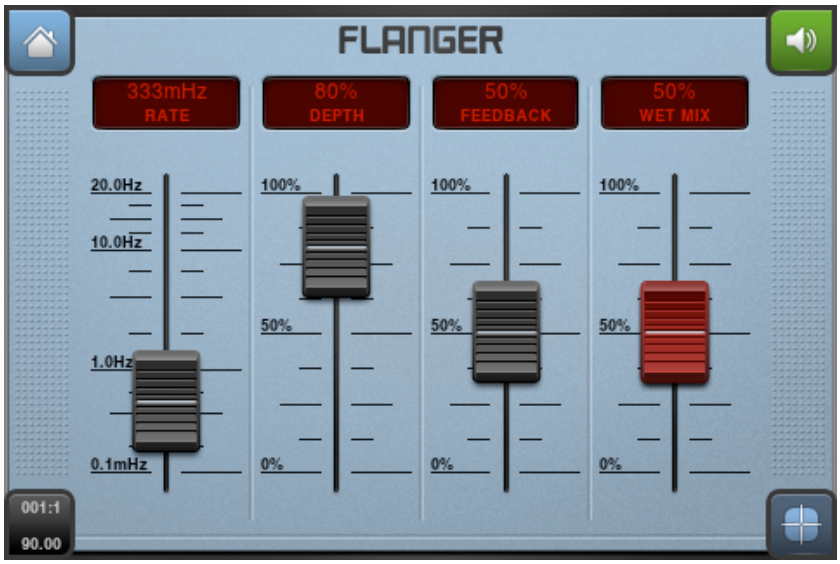
‣ **Low gain**: Specifies the value by which the sound level for *low* frequencies will be multiplied.

- **Mid gain**: Specifies the value by which the sound level for *middle* frequencies will be multiplied.

- **High gain**: Specifies the value by which the sound level for *high* frequencies will be multiplied.

C.8. FLANGER

This effect creates a copy of the input signal that can be modulated and delayed, producing sounds ranging from a simple tremolo to a jet-like vibration.



- **Rate**: Defines the frequency at which the sound is modulated.

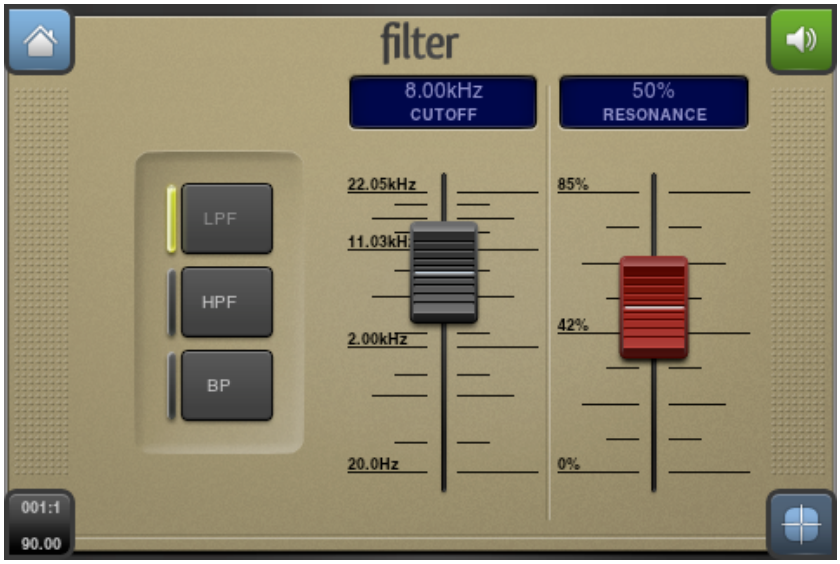
- **Depth:** Specifies the flanging intensity to apply to the signal.

- **Feedback:** Specifies how much of the modified signal will be fed back into the input signal after the sound has been processed.

- **Wet Mix:** Specifies how much of the original signal is mixed with the modified one. A value of 0% plays only the original sound, while a value of 100% reproduces only the modified signal.

C.9. FILTER

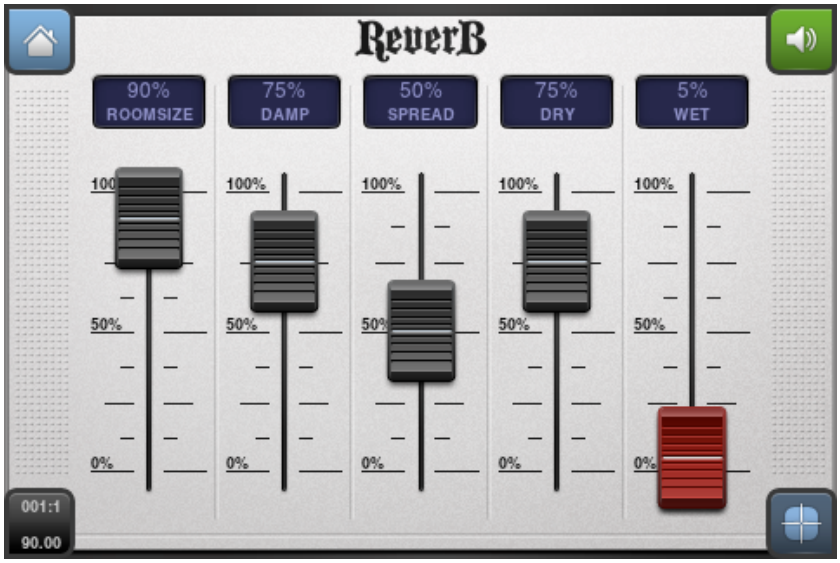
This tool narrows the audio signal to a specific frequency range. The filter has a resonance control for boosting the peak within that range.



- **Filter type:** Choose between a *Low-pass (LPF), High-pass (HPF),* or *Band-pass (BP)* filter.
- **Cutoff:** Specifies the frequency at which the filter will start to reduce the sounds.
- **Resonance:** How much the sound is accentuated at the cutoff frequency.

C.10. REVERB

This effect creates an acoustic environment to surround the sound. Adding a reverb to your instrument will make it sound as if it was being played in a fairly large room, adding a tail to the notes.



- **Room size**: Defines the size of the acoustic environment to be recreated.

- **Damp:** Reduces the amount of high frequencies that are being reverberated.

- **Spread:** Defines the amount of reverberation across the stereo balance.

- **Dry:** Specifies how much of the original signal is mixed with the modified one. A value of 100% will not reproduce the original sound, only its reverberation.

- **Wet:** Specifies how much reverberation will be heard at the output.

D. X/Y CROSS CONTROLLER

Specially made for working live, the cross controller is a special interface used to modify two effect parameters at the same time, via an X/Y display. You can access the cross controller by tapping the [CROSS CONTROLLER] button at the bottom right corner of any effect:

1. **Close**: Goes back to the normal effect screen

2. **X parameter**: Use the left and right arrows to select which effect will be controlled on the **horizontal** axis. The name and current value of that effect are also displayed.

3. **Y parameter**: Use the left and right buttons to select which effect will be controlled on the **vertical** axis. The name and current value of that effect are also displayed.

4. **Cross controller/Current parameters values**: You can move your finger onto this zone to increase or decrease the effect assigned to the horizontal and vertical axis. The current position is indicated by a bluish-white light.

9. SAMPLE LAB

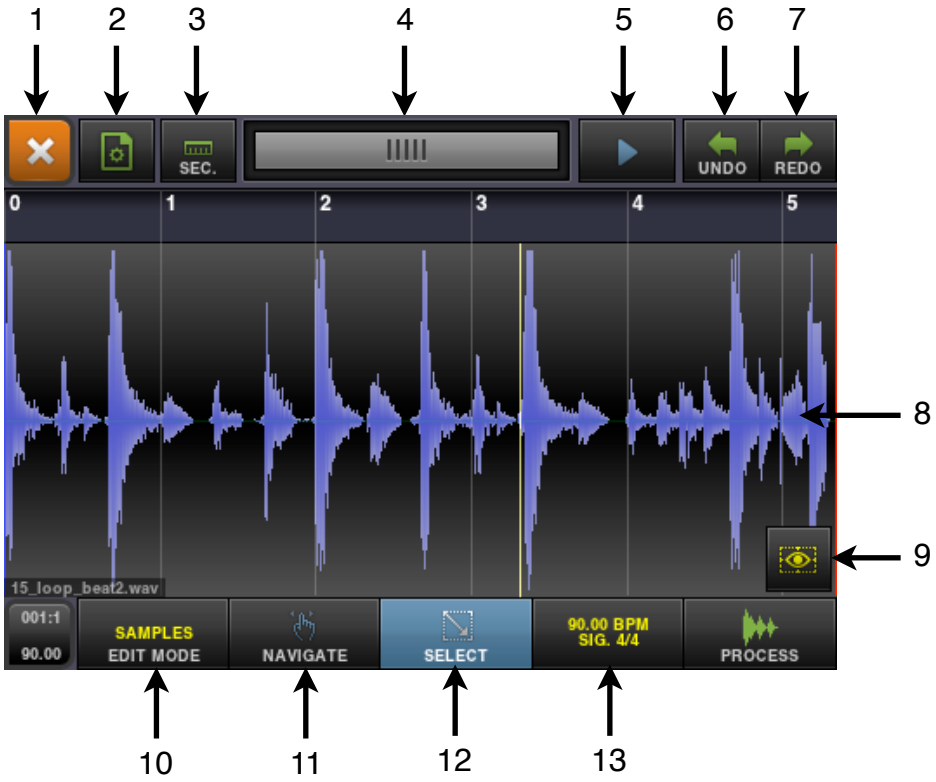
The Sample Lab is a tool used to edit the properties of audio files, transform and slice a sound and add effects. You can access it from the Studio view by tapping the [SAMPLE LAB] button, as well as from the instruments themselves (see the instruments sections of this manual).

A. OVERVIEW

When launching the Sample Lab, you will be asked to either load an existing file or make a new recording. The Sample Lab has 3 different editing modes:

- SAMPLES: Edit, transform and apply effects to the currently loaded sample
- LOOP MARKERS: Define the looping point of a sample, useful when using the HOLD+LOOP mode within the Drum Machine and Keyboard Sampler.
- CHOP MARKERS: Define slices within the sample, useful to create Drum Machine presets out of a single audio file.

These edit modes have common tools and actions as described below:



1. **Close**: Closes the Sample Lab. If the sample has been modified, a panel will popup to save or discard the changes.

2. **File menu**: Brings the file menu panel, offering the following actions:

- Record sample: records a new sample from your device microphone/sound card.
- Load sample
- Save sample (if sample has been modified)
- Save sample as
- Export chop preset: creates a Drum Machine preset using the slices of the current sample (see Section D below for more information).

3. **Unit of time**: Changes the unit used to display time information. Possible choices are seconds, bars or sample frames.

4. **Scrollbar**: Scrolls within the sample.

5. **Preview audio**: Plays the audio file, or a selection from it if one has been defined.

6. **Undo**: Cancels the last action performed on the audio file.
7. **Redo**: Redoes the last undone action.

8. **Waveform**: This is the actual display of the audio file, in a wave form.

9. **Center**/**Zoom**: Single tap this button to center the waveform display on the current selection. Double tap to zoom the current selection along the screen.

10. **Edit Modes**: Selects the current editing mode within the Sample Lab. Choices can be SAMPLES, LOOP MARKERS and CHOP MARKERS (see corresponding sections B, C and D below).

11. **Navigate**: This tool allows you to scroll through and zoom into the waveform. Move your finger over the waveform to navigate through it, and use pinch gestures to zoom in or out.

12. **Select**: Toggles the selection tool. Move your finger over the waveform to make a new selection, and use pinch gestures to zoom in or out. Double tapping selects the whole waveform.

13. **Set Tempo/Time Signature**: Displays the set tempo and signature panel. See section E below for more information.

B. EDIT SAMPLES: PROCESS AND MODIFY AN AUDIO FILE

The default edit mode of the Sample Lab allows you to transform, trim, cut & paste and apply various effects to any audio file.

B.1. EDITING TOOLS

After making a selection, the following tools will be displayed:

1. **DELETE:** Deletes the currently selected sample region

2. **TRIM**: Removes the audio content outside the current selection.

3. **COPY**: Copies the current selection to the clipboard.

4. **PASTE**: pastes the content of the clipboard at the point selected.

5. **SCROLL LEFT/RIGHT**: Scrolls the screen to the left or right.

6. **PROCESS:** Displays the processing and effects panel. See section B.2 below for more information.

B.2. PROCESSING SAMPLES

Various sound treatments can be applied to your samples. First select a portion of your sample using the [SELECT] tool, then press the [PROCESS] button. You can then choose from a list of processors:

- **NORMALIZE**: Changes the volume of the selected samples so that the highest peak is 0dB (maximum volume).

- **SILENCE**: Mutes the current selection.

- **REVERSE**: Invert samples (similar to playing a selection backwards)

- **FADE IN**: Slowly brings your sample from inaudible to its normal volume.

- **FADE OUT**: Slowly brings your sample from its normal volume to inaudible.

- **CROSS FADE**: Applies a similar fade in and fade out to the selection. This is useful when working with loops to avoid audio clicks when looping.

B.3. CHANGING THE TEMPO OR PITCH OF A SAMPLE

When working with audio samples to compose songs, you may often need to adjust their tempo or pitch (tune) so that they sound right with the rest of your project.

The traditional pitch-change technique has the side effect of a change in the tempo as well as the tune. Using BeatMaker 2 Time-Stretching and Pitch-Shifting algorithms, you can change the tempo of a sample without affecting its tuning, and change its pitch without altering the playback speed.

B.3.1. TIME-STRETCH

To access the time-stretching panel, tap the [PROCESS] button on the bottom toolbar of the Sample Lab, then on [TIME STRETCH]. If you have not previously set the tempo of your sample, the *Set tempo* panel will be displayed first (see Section E below).

1. **New sample tempo**: Choose the tempo your sample should be time-stretched to.

2. **Quick tempo setters**: Sets the new sample to the current song tempo, or divides/multiplies it by two.

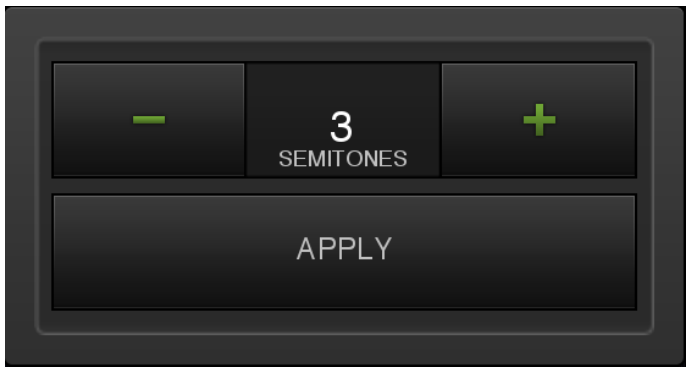
3. **Pitch-shifting**: Applies a pitch-shift to the sample by selecting the value of the shift in semitones. A value of 0 does not change the sample's tune.

4. **Source of sample type**: Helps the time-stretching algorithm process your sample better by knowing the type of sound it is.

5. **Process**: When the previous parameters have been set, tap this button to apply the time-stretch algorithm to your sample.

B.3.2. PITCH-SHIFT

Use the [-] and [+] buttons to change the semitone value and tap [APPLY] to pitch-shift your sample. The tune of your sample will be changed by the semitone value you selected.



Use the [-] and [+] buttons to change the semitone value and tap [APPLY] to pitch-shift your sample. The tune of your sample will be changed by the semitone value you selected.

C. SETTING LOOP MARKERS

Switching to the [LOOP MARKERS] editing mode allows you to set the looping region of an audio file. Setting the loop markers (also known as Sustain loop) is useful when making your own sampled instrument: it defines the zone that is supposed to be looped when your sample plays back. See the *HOLD+LOOP* trigger mode parameters in the instrument sections of this manual.

11. **Loop region**: Move the left and right markers to define the loop region of your sample.

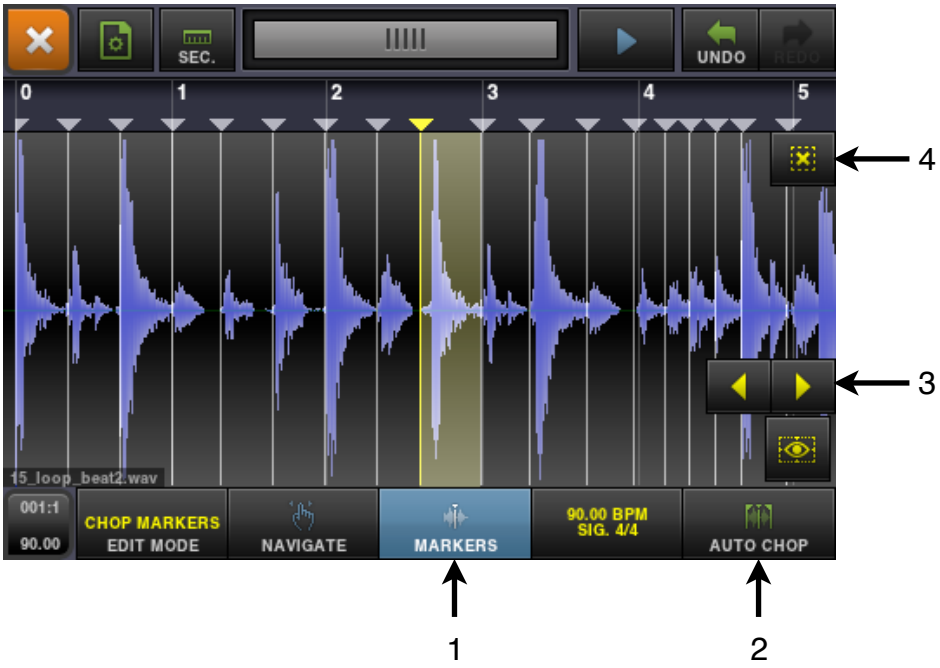
12. **Set/unset sustain loop**: Enables or disables the loop region on the sample.

D. CHOP LAB: SLICING YOUR SAMPLES

The Chop Lab is a tool which can slice an audio sample into smaller parts and automatically create new Drum Machine presets and patterns that combines them. For example, you can load in a beat sample and extract the kick, snare and hi-hat elements that make it up, then reuse them later, individually, in the Drum Sampler.

You can access the Chop Lab within the Sample Lab by switching to the CHOP MARKERS edit mode, as well as within the Drum Machine by pressing the [CHOP LAB] button from the *Preset* menu.

You can also load *Apple Loops* AIFF files into the Chop Lab: it will automatically read the existing slices information and display them on the waveform.



You can slice a sample by inserting markers at the desired locations. By default, a marker is placed at the beginning of the sample.

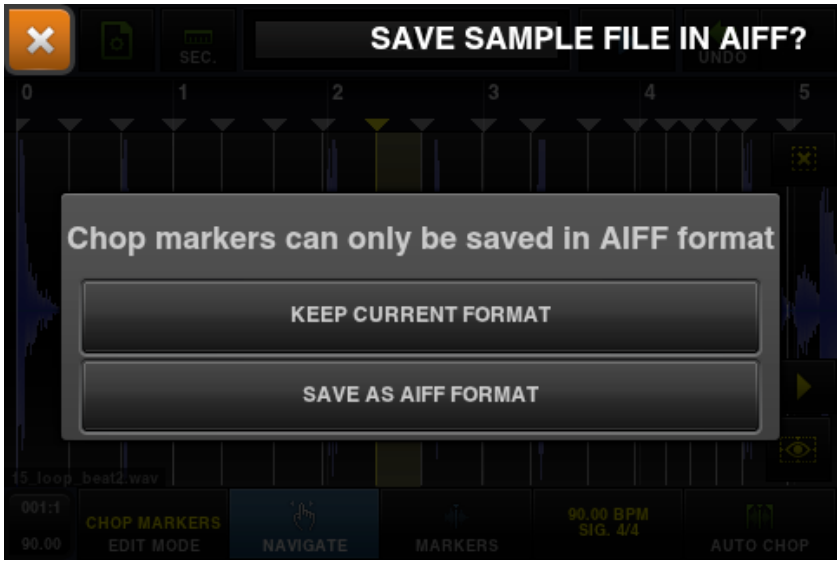
1. **Markers mode**: Use this tool to add a slice marker or move it to the desired location on the waveform. While in Navigate mode, the same can be achieving by tapping within the top time grid.

2. **Auto chop**: Displays a panel to let you automatically chop the sample into a customizable number of slices.

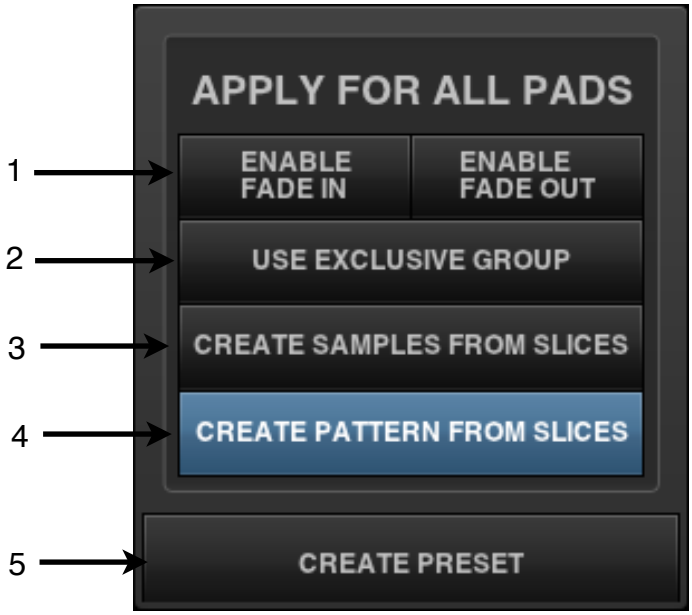
3. **Previous/Next slices:** Selects the slice to the left of the current selection.

4. **Delete slice**: Deletes the currently selected slice.

When you are done adding markers to slice the sample at the desired locations, press the [CLOSE] button at the top-left corner to save your changes. If you were working on a WAV audio file, BeatMaker will ask you to save your sample as an AIFF file in order to keep the slices information:



If you launched the Chop Lab within the Drum Machine, an extra panel will popup allowing you to create a preset and pattern out of your sliced sample (press the [CLOSE] button at the top-left corner to skip this step):



1. **Enable Fade In/Out**: Turn these options on to smooth each slice start and end by lightly fading in and out. It is useful if you hear clicks while reproducing slices.

2. **Use Exclusive Group:** Sets all slices to use the same exclusive group.

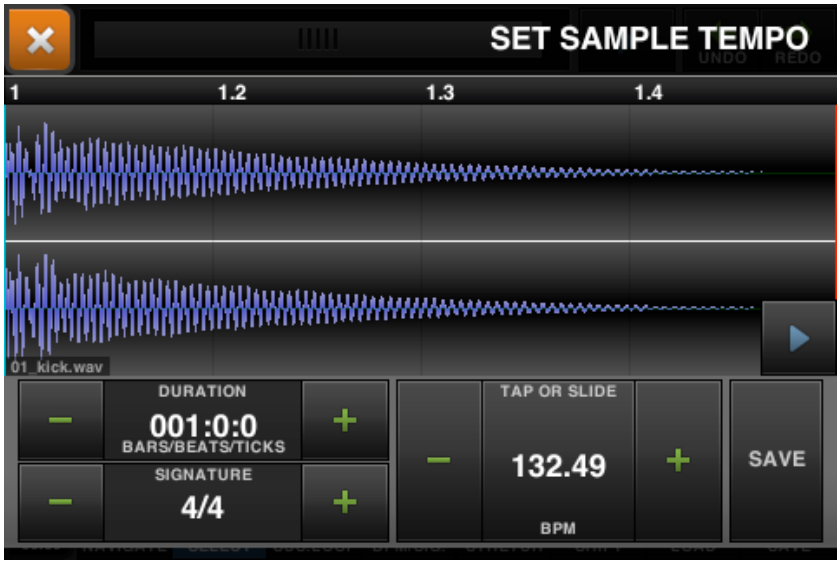
3. **Create samples from slices**: Creates an individual audio file for each slice.

4. **Create pattern from slices**: Creates a pattern on the Sequencer that will trigger each slice sequentially. This pattern can be very useful as a start to rearrange the playback of a sliced sample.

5. **Create Preset**: Finally creates a new Drum Machine preset from all your slices. After saving it, you will be asked if you want to load this new preset now on the Drum Machine.

E. TEMPO AND SIGNATURE INFORMATION

Setting the tempo information for your samples can be useful when working with audio loops so that you can easily recognize the ones that match a specific song, as well as for time-stretching operations (see Section B.3.1 above for more information on time-stretching).
This panel can be accessed by tapping the [BPM/SIG] button on the bottom toolbar of the Sample Lab.

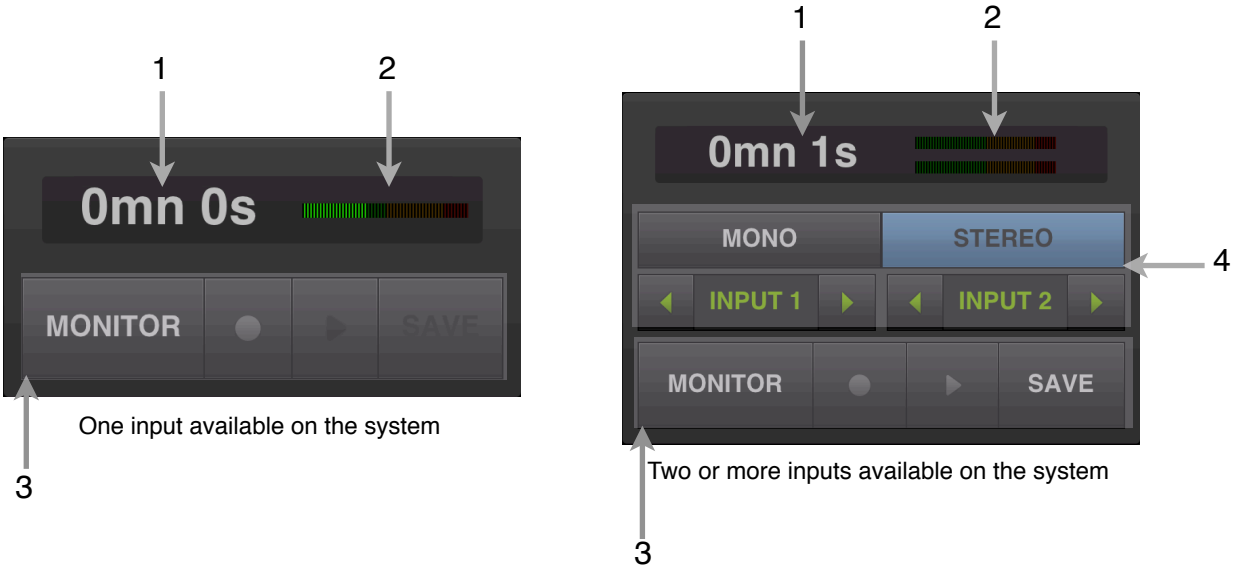


To set the sample tempo, follow these steps:

- First set the duration, in bars, of your sample
- Set the time signature (4/4, 3/4, …)
- The tempo should now be set correctly in the BPM box. If not, you can use the [-] and [+] buttons to adjust it, or slide your finger over the BPM label.
- Press [SAVE] to save the tempo information in the sample file.

F. AUDIO RECORDER: RECORD YOUR OWN SAMPLES FROM YOUR DEVICE

BeatMaker includes a very simple yet powerful in-line recorder. You can record, play, and then save your recording easily. It also displays elapsed recording time and a level monitor. You can access it when loading the Sample Lab, or through the Drum Machine and Keyboard Sampler instruments:



Depending on your audio setup, you will either see the mono recorder or the stereo recorder.
If only one audio input is available, for example, your iPad microphone, you will see the panel shown on the left.

1. **Recording time:** Displays the current duration of your recording in minutes and seconds.

2. **Level meter**: Displays the current level of the recording.

3. **Monitor / Record / Play / Save**: Activate monitoring if you want to listen in your headphones what is currently being recorded / Start and stop recording / Play or stop playback of the last audio recording / Save last audio recording and exit panel.

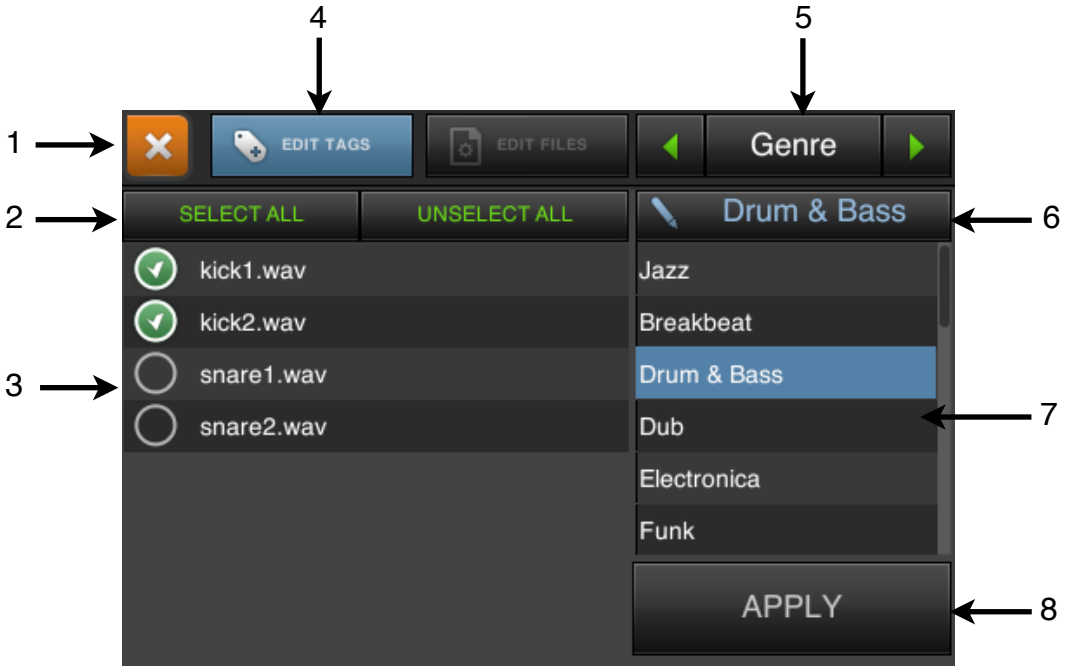
4. **Mono/Stereo and input selection**: If two or more audio inputs are available on the system, you have the possibility to record either a mono or stereo file. First, select either “MONO” or “STEREO”, then proceed into selecting the left and right channels input.

NOTE: Each time you hit the record button, the previous recording, if any, will be discarded.
To exit the Audio Recorder without saving, tap on the top-left exit button.

10. TAGGING AND FINDING FILES

BeatMaker uses an internal database to keep track of your projects, presets and audio files. It has a search function to let you easily find your files using various criteria. Each file can be given specific *tags* that can help you recognize them in the File Browser. By tapping on the “Find” item in the root directory of the File Browser, you can navigate between the different tag categories such as *Artists, Genre, Category* and *BPM* as well as see a list of all files of a specific type.

The included sound bank is already tagged so you can quickly and easily find a Bass preset or a Hi-hat drum sample. To start tagging your own files, navigate to the *“My content”* directory and tap the [EDIT TAGS] button:



1. **Close**: Exits the File Browser.

2. **Select/Unselect all**: Selects or unselects all files in the list.

3. **File list**: A list of the files in the current directory. Select one or more files that you want to tag (selected files have a green checked box).

4. **Edit tags**: Goes back to the normal browsing mode.

5. **Tag category**: With the left and right arrows, choose the tag category you want to edit. Categories include *Artists, Category, Genre* and *BPM*.

6. **Current tag value**: Displays the category tag for the files selected at left. Tap this button to manually enter a new tag using the virtual keyboard.

7. **Tags list**: List of all the tags that are already used to describe categories. Tap any tag to assign it to the selected files.

8. **Apply**: Tap this button when you are done tagging the selected files, in order to save your changes.

11. SHARING

BeatMaker 2 offers different ways to transfer your songs, samples and projects to and from your device. It is also possible to share them on other music applications that support it. To access sharing capabilities, press the [SHARING] button in the Studio view.

A. TRANSFER FILES TO AND FROM YOUR COMPUTER

A.1. CONFIGURING YOUR DEVICE AND COMPUTER

To be able to use this feature correctly, you first need to have both your computer and your device connected to the same WiFi network. Please refer to the iPhone/iPod/iPad documentation and to your computer's Operating System manual for more information on connecting to your WiFi network.

BeatMaker acts as a FTP (File Transfer Protocol) server to transfer files. You will need to have software known as an FTP client installed on your computer; it will connect to BeatMaker and allow you to manage the files on your device. As a convenience to you, some free FTP clients are listed below for different operating system:

For Windows:

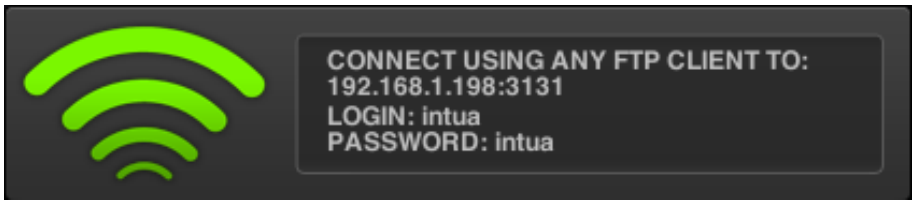
- FileZilla: http://filezilla-project.org/download.php
- WinSCP: http://www.winscp.net

For MacOS X:

- Cyberduck: http://www.cyberduck.ch
- FileZilla: http://filezilla-project.org/download.php

A.2. CONNECTING TO BEATMAKER

Once you are connected to your WiFi network, and have successfully installed and launched your FTP client, press the [FILE TRANSFER] button in BeatMaker's Sharing panel. You should see the following window:



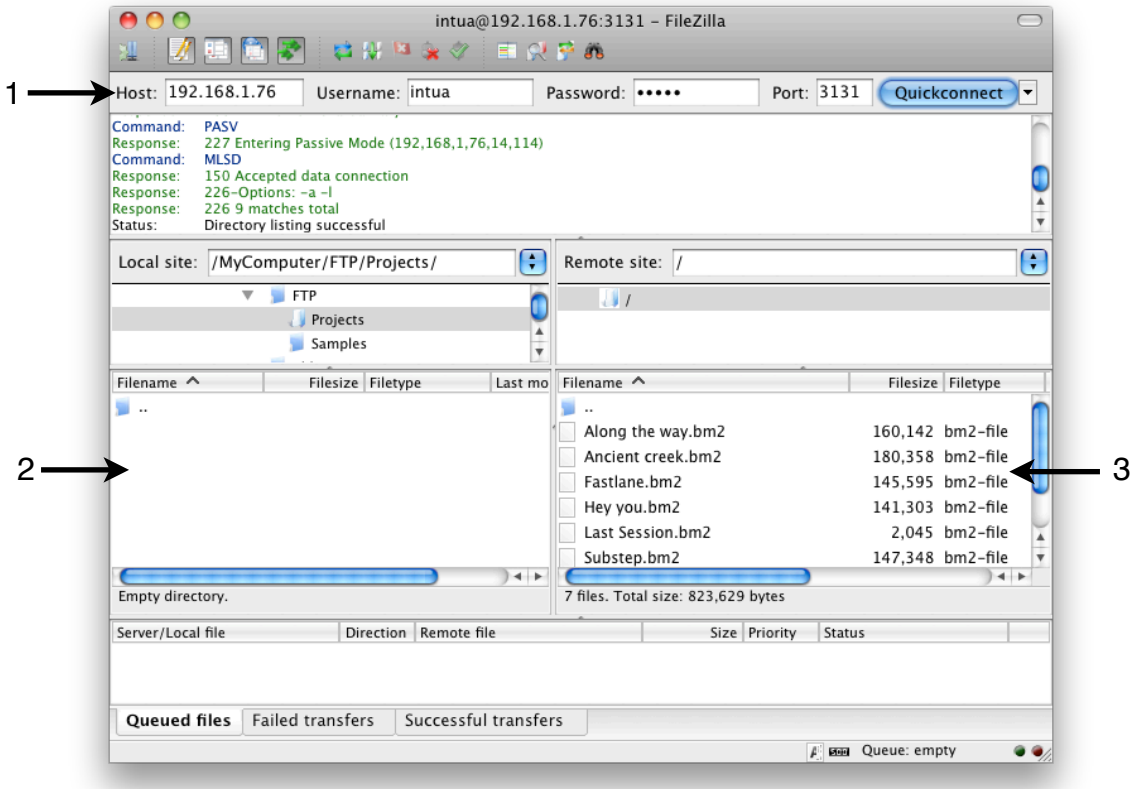
This window contains the information that you need to enter in your FTP client to connect to BeatMaker: your device IP address, login and password. As an example, we will demonstrate how to configure FileZilla and Cyberduck.

FileZilla:

After loading FileZilla, you need to fill in the *Host, Username* and *Password* information found at the top of the application:

Host: type in the IP address given in BeatMaker (example: 192.168.1.76:3131)
Username: type in the LOGIN given in BeatMaker (by default: intua)
Password: type in the PASSWORD given in BeatMaker (by default: intua)

Press the *QuickConnect* button to connect to BeatMaker. You should now see a window similar to the following screenshot:



1. **FTP server**: Fill in the BeatMaker FTP info as explained above.

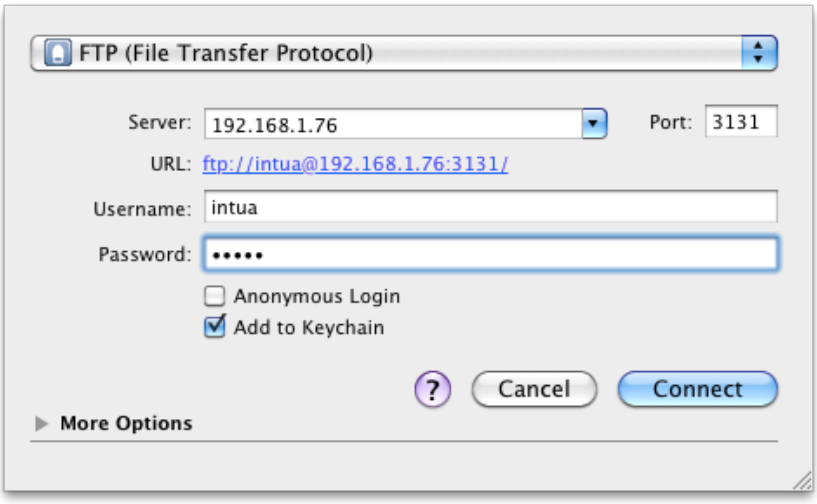
2. **Local files**: This is a view of your computer filesystem.

3. **Remote (BeatMaker) files**: This is a view of the files and folders of BeatMaker on your device. You can create new directories and move or delete files.

You can now drag and drop files between your computer and BeatMaker (the local and remote file view) as you would do with the Mac Finder or Windows Explorer. Close FileZilla and the File Transfer window in BeatMaker when you are done.

CyberDuck:

CyberDuck uses a service called *Bonjour* that should automatically recognize your device. Press the [BONJOUR] button at the top of CyberDuck to list all FTP servers available on your network. If you see your device in the list, double-click on it to connect to BeatMaker.
If your device is not listed, click on the *"Open Connection"* button at the top left of the application. The following window will appear:



Use the information given in BeatMaker File Transfer window to fill in the *Server, Port, Username* and *Password* fields:

Server: type in the IP address part given in BeatMaker (e.g. 192.168.1.76)
Port: type: 3131
Username: type the LOGIN given in BeatMaker (by default: intua)
Password: type the PASSWORD given in BeatMaker (by default: intua)

Also make sure the *"Anonymous Login"* box is unchecked. Press the ***Connect*** button when you are done to connect to BeatMaker.

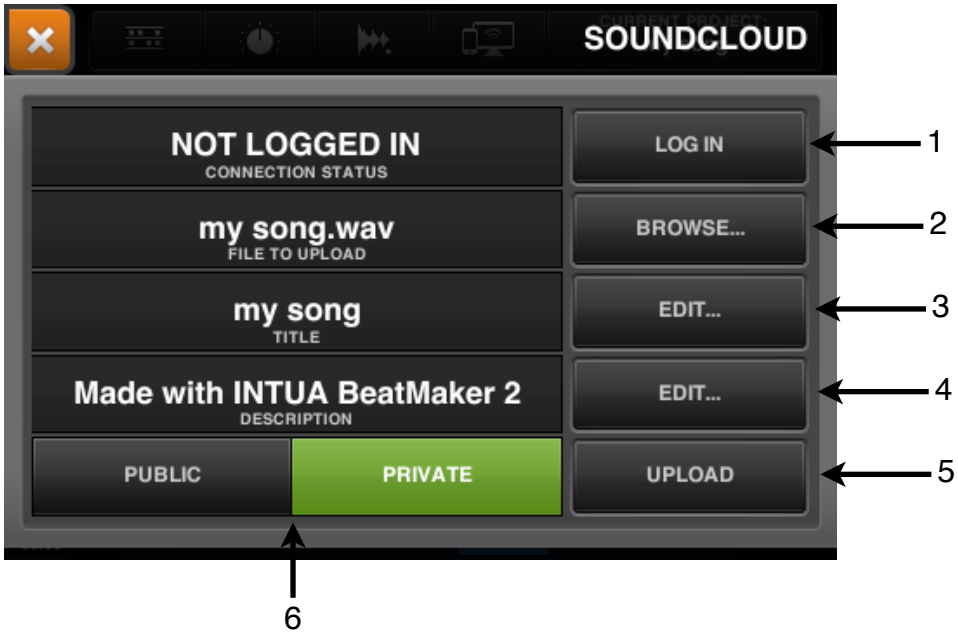
After connecting manually or using *Bonjour*, you should now see a list of the files present in your BeatMaker. You can rename, move, delete and create directories, as well as drag and drop files to and from your computer using the Mac Finder.

B. UPLOADING SONGS TO YOUR SOUNDCLOUD ACCOUNT

SoundCloud is a website where musicians can share and manage their songs and audio tracks. BeatMaker supports uploading your songs to your SoundCloud account. For more information about SoundCloud or to create a SoundCloud account, please visit: http://www.soundcloud.com

NB: Intua is not affiliated in any way with the SoundCloud company. Please read the terms of use available on their website before using this service.

This feature can be accessed from the Sharing panel by clicking on the [SOUNDCLOUD] button. The following panel will be displayed, where you will be able to login to SoundCloud and upload a song of your choice from BeatMaker:



1. **Log in**: Connect to your SoundCloud account. You must do this first before you can begin uploading any songs. You will be asked to enter the email address and password registered to your SoundCloud account.

2. **File to upload**: Opens the file browser to select which audio file you want to upload to SoundCloud.

3. **Title**: Give the song you are uploading a title. It will appear as such in your SoundCloud track listing.

4. **Description**: Allows you to provide a description of the song if you wish.

5. **Upload**: Press this button when you are done filling in the information. It will start the process of uploading your song to SoundCloud. When this is done, you will be able to access this song from your SoundCloud account.

6. **Song Privacy**: Select if you want your song to appear as public or private. Choosing *Public* will let all SoundCloud visitors listen to your track, while *Private* will keep your song only available to you.

C. USING YOUR DROPBOX ACCOUNT

DropBox is a web service that lets you store and manage your files between different computer/devices. BeatMaker supports transferring your DropBox-hosted files from and to your device. For more information about DropBox or to create a DropBox account, please visit: http://www.dropbox.com

NB: Intua is not affiliated in any way with the DropBox company. Please read the terms of use available on their website before using this service.

This feature can be accessed from the Sharing panel by clicking on the [DROPBOX] button.

1. **Login information**: Displays login information as well as used and remaining disk space on your DropBox account.

2. **Log in/Log out**: Press the button to log in or log out to your DropBox account. When logging in, the DropBox website will be displayed for you to sign on. During the first log in, you will be asked by DropBox to allow BeatMaker 2 to access your DropBox account.

3. **File toolbar**: By order: Go back to parent directory, File information, Create directory, Delete selected file or directory.

4. **BeatMaker files listing**: Lists files and directories saved in your BeatMaker application.

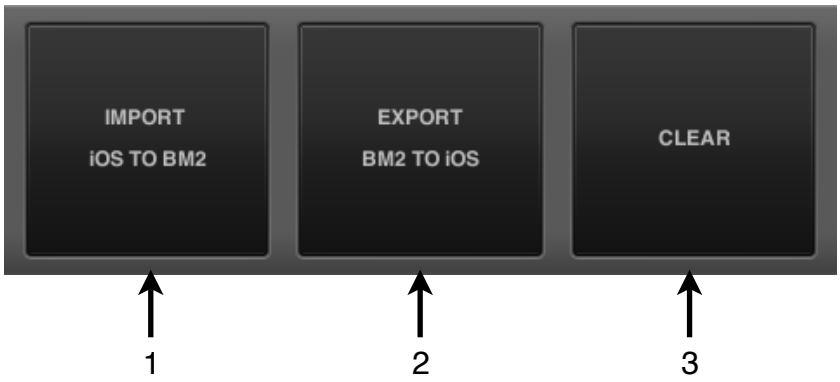
5. **DropBox files listing**: Lists files and directories hosted in your DropBox account.

6. **Upload / Download**: The [>] button lets you upload the selected file or directory to your DropBox account. The [<] button lets you download the selected file or directory from your DropBox account to your BeatMaker application.

D. COPY AND PASTE AUDIO FILES TO AND FROM OTHER iOS APPLICATIONS

You can share your audio files with other applications installed on your iPhone/iPod/iPad that support the global audio pasteboard feature. For a list of compatible applications, please visit the following website: http://code.google.com/p/intua-audio-sharing/wiki/CompatibleApps

You can access this feature by pressing the [PASTEBOARD] button on the Sharing panel:



1. **Import to BeatMaker**: Saves the content of the pasteboard to a file of your choice. This feature only works if you have already copied an audio file from another compatible application onto the pasteboard.

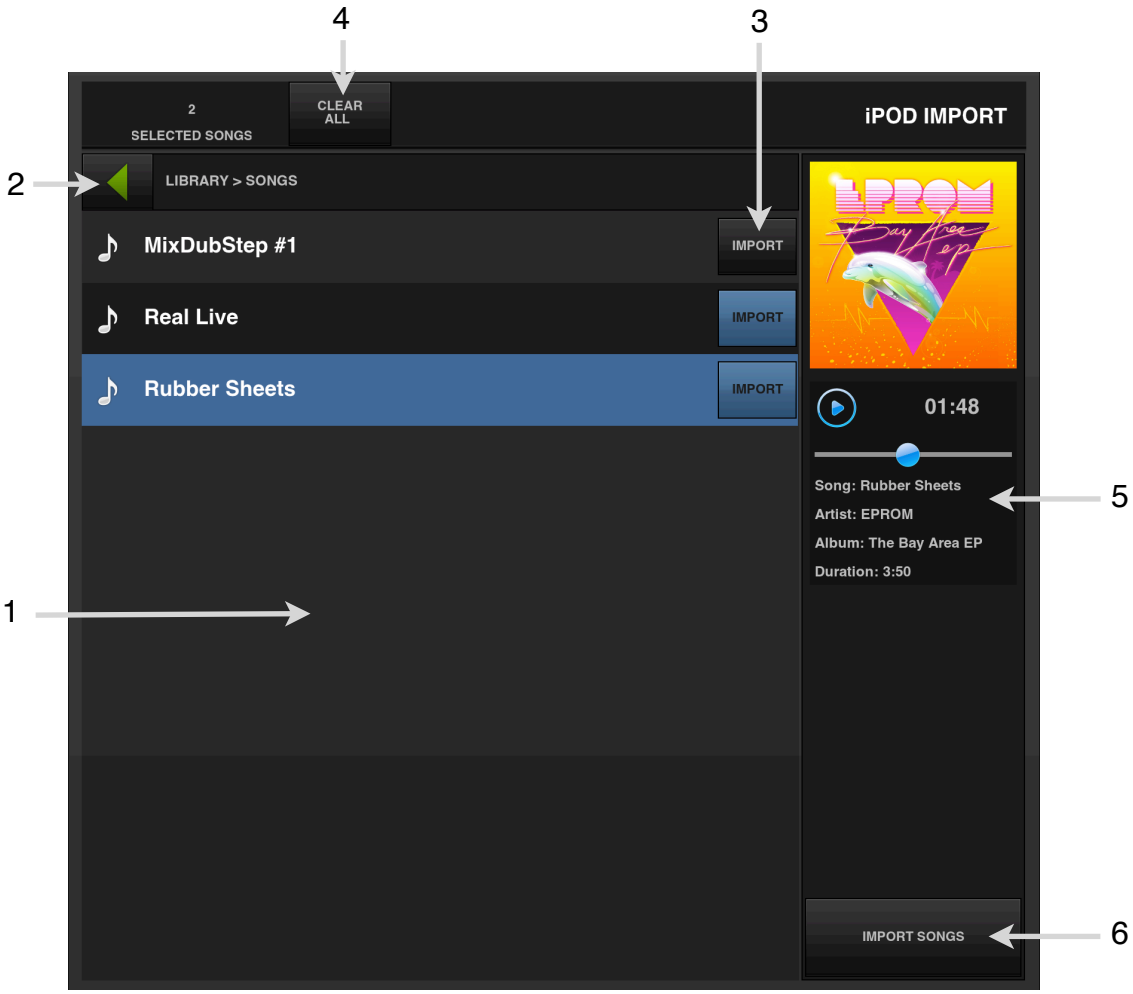
2. **Export from BeatMaker**: Opens the file browser to select an audio file that will be copied to the pasteboard. You can then launch another compatible application to retrieve this file (see the manual of your compatible application to learn how to do so).

3. **Clear**: Removes any file currently held on the pasteboard.

E. IMPORT SONGS FROM YOUR iPOD LIBRARY

You can access all the music available on your device and import one or multiple songs to BeatMaker.

To access this feature, press the [iPOD IMPORT] button on the Sharing panel.
Use this panel to navigate through your library, by browsing by artists, albums, genres, songs, compilations and playlist, and select one or more tracks to import:



1. **Item list**: This is where you navigate trough your library. Start browsing either by artists, albums, genres, songs, compilations or playlists.
2. **Back button**: Goes back to the previous listing.
3. **Import button**: Each song will display an IMPORT button. Toggle or un-toggle it to add or remove the song from the list of songs to import.
4. **Track counter / Clear All:** Shows the number of songs you have selected to import. The Clear All button will remove every songs you have previously added.
5. **Cover, playback and track info**: Displays the cover, a play/stop button and a position scroller to skip trough the track. On iPad, additional song information is also displayed.
6. **Import songs button**: When done, press this button to start importing selected songs. A directory browser will appear, where you can select a destination directory (or create one), to hold all the imported songs. They are imported in the WAVE format.

12. MIDI: CONTROLLING BEATMAKER AND COMMUNICATING WITH EXTERNAL ACCESSORIES, SOFTWARE AND iOS APPLICATIONS

MIDI is a protocol for communicating musical events and parameters between applications and music hardware. BeatMaker supports both receiving and sending MIDI events:

BeatMaker's instruments, effects and parameters can be controlled by and can control external MIDI accessories, making it a very convenient integration for your home-studio or live sets needs.

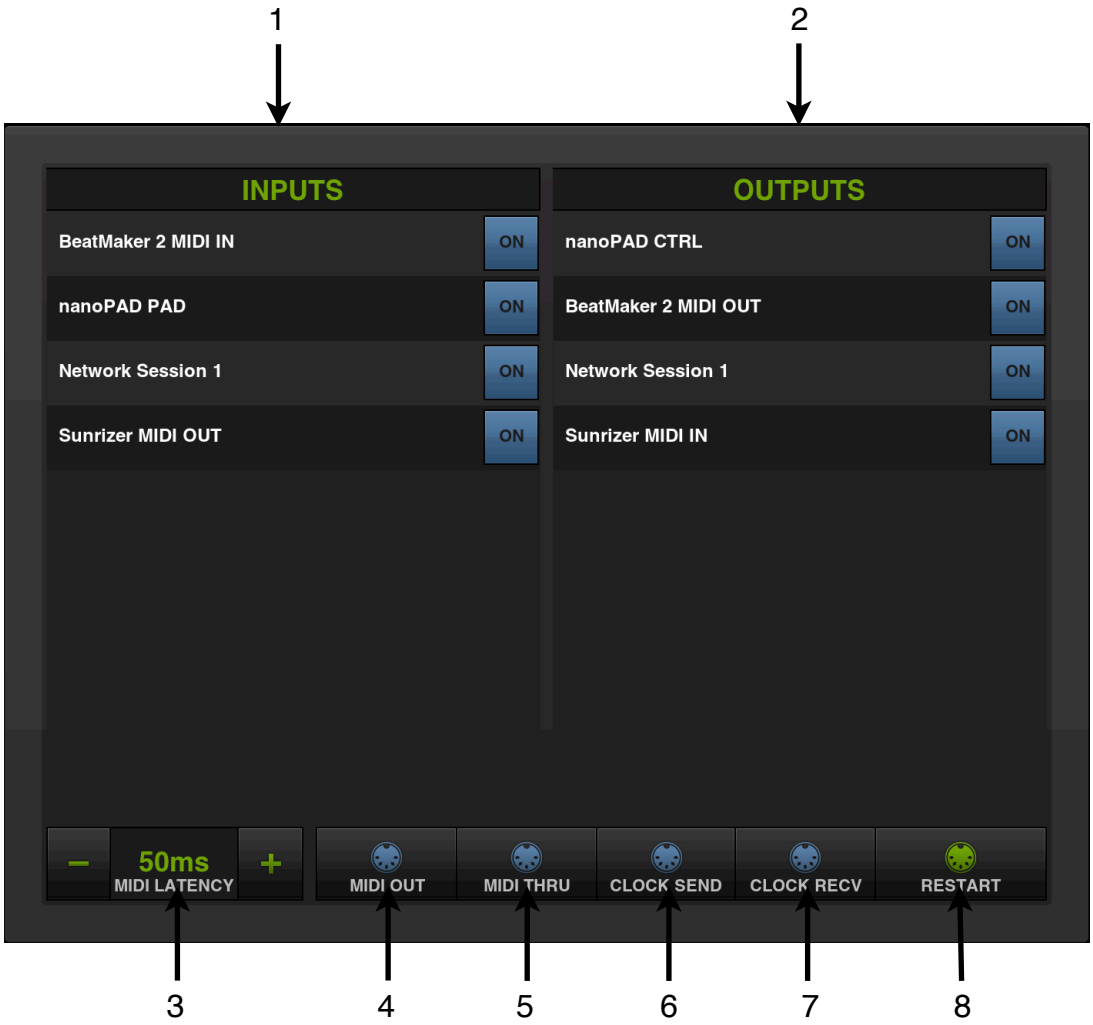
Using Virtual MIDI connections, compatible iOS applications (such as synthesizers) can generate sound from events triggered or recorded within BeatMaker.

Hardware and software sequencers can also be synchronized to BeatMaker's sequencer using the MIDI Clock feature.

MIDI controllers can be connected using CoreMidi-compatible dock accessories (for iPhone, iPod & iPad) or using the *USB Camera Connection Kit* (at this time of writing, **this feature is only supported on iPad devices**).

A. CONFIGURING GLOBAL MIDI SETTINGS

BeatMaker's global MIDI settings can be accessed by tapping on the [INFO] button within the Studio view, then on the [MIDI SETUP] button:



1. **MIDI Inputs**: Lists the controllers and applications BeatMaker is currently listening to. You can enable or disable each input by tapping on the [ON/OFF] button. When an input is enabled, BeatMaker will react to events sent by it (see section C below).

2. **MIDI Outputs**: Lists the external hardware and applications BeatMaker can send MIDI events to You can enable or disable each input by tapping on the [ON/OFF] button. When an output is enabled, BeatMaker will send to it MIDI notes & parameters from its instruments and sequencer.

3. **MIDI buffer latency**: Sets the duration before BeatMaker sends MIDI events to other controllers and applications. When sending MIDI over a WiFi network (such as with the *Network Session* output), you may need to change this value to an higher value.

4. **MIDI Out**: Enables or disables sending MIDI data to enabled external controllers and applications within the outputs list.

5. **MIDI Thru**: If activated, BeatMaker will forward to the MIDI outputs any event received from any enabled MIDI input.

6. **Send MIDI Clock**: Activate this option to synchronize other sequencing applications to BeatMaker's tempo and song position. This only affects applications that are enabled in the MIDI outputs list and that support MIDI Clocking.

7. **Receive MIDI Clock**: Activate this option to synchronize BeatMaker to other sequencing applications or accessories. The tempo will be automatically set according to the master application or accessory.

8. **Restart MIDI**: Press this button to reload available MIDI inputs and outputs.

B. CONNECTING A MIDI CONTROLLER TO YOUR DEVICE

B.1. USING THE USB CAMERA CONNECTION KIT (iPad ONLY)

First plug-in your MIDI controller using the *USB Camera Connection Kit*. If your device is supported, it should now be powered up. However, it is possible that the iPhone Operating System (iOS) displays one of the following error message:

- *"The attached accessory is not supported"*: Your MIDI controller is not yet supported by the operating system and cannot be used with your iPad.
- *"The attached accessory uses too much power"*: Your device cannot bring enough energy to power up your controller. You can try connecting an USB Hub (powered with external alimentation) to your *USB Camera Connection Kit* and then plug-in your MIDI controller to this hub.

B.2. USING A COREMIDI-COMPATIBLE DOCK ACCESSORY

Follow the instructions given in your specific dock accessory manual to learn how to connect your external MIDI controllers to your iPhone, iPod Touch or iPad. If your dock accessory is CoreMidi-compatible, no further configuration should be required.

C. CONNECTING MULTIPLE iOS MUSIC APPLICATIONS TOGETHER

Using Virtual MIDI inputs & outputs, compatible iOS applications can communicate notes and instrument parameters between each other. As such, other applications can control BeatMaker's instruments and effects and vice-versa, also while running in the background. This feature is also great for using other software synthesizers along with BeatMaker, increase sound palettes and possibilities. Section D below explains how to connect applications together.

To bring the list of applications running in the background, double-tap on your device HOME button. Tap on an application icon to make it visible. If you hold an application icon, you will enter the "Close Application" mode: type then on any application to close it.

IMPORTANT NOTE: Using more than one music application on your device is a very CPU and Memory intensive operation. iOS may close without warning any running applications if it believes your device is running out of resources. Make sure to close any non-essential background applications when using BeatMaker to free up resources.

D. CONTROLLING INSTRUMENTS & EFFECTS

If you connected a MIDI controller which has keys, pads or buttons that can send MIDI notes, you can use them to directly trigger the Drum Machine's pads or Keyboard Sampler's keys, without using your iPhone or iPad screen. Other iOS applications which support sending MIDI can also be used to achieve the same results.

You can use the full MIDI keyboard range to trigger the:

- 128 pads from the 8 banks on the Drum Machine. For example, the first pad from Bank A can be triggered by sending a C-2 MIDI note message (lowest possible key).
- 128 keys of the Keyboard Sampler. The corresponding MIDI note will be played by the sampler.

Each MIDI controller or application has its own configuration for sending MIDI messages when moving a knob, fader or other. By default, BeatMaker maps most of the instruments and effects controls to specific MIDI Continuous Controller (CC) commands. The next sections define what is the default configuration for the instruments and effects.

You can also assign your own MIDI CC to each BeatMaker parameter so that your MIDI setup fully reflects the one of your controller (See Section D.5: *Setting up your own MIDI configuration for each instrument*).

D.1. DRUM MACHINE

The following table defines which MIDI CC commands are assigned by default to the Drum Machine's parameters:

PARAMETER	MIDI CC NUMBER
TRACK VOLUME	7
TRACK PAN	10

The following parameters can also be controlled for each pad:

- VOLUME
- PAN
- FILTER CUTOFF
- FILTER RESONANCE
- FILTER KEY
- VOLUME ENVELOPE ATTACK
- VOLUME ENVELOPE DECAY
- VOLUME ENVELOPE SUSTAIN
- VOLUME ENVELOPE RELEASE

Since their availability depends whether a sample is loaded on a specific pad or not, there is no default MIDI configuration for these parameters. However, you can assign them manually to the MIDI CC of your choice (See Section C: *Setting up your own MIDI configuration*).

D.2. KEYBOARD SAMPLER

The following table defines which MIDI CC commands are assigned by default to the Keyboard Sampler's parameters:

PARAMETER	MIDI CC NUMBER
TRACK VOLUME	7
TRACK PAN	10
FILTER CUTOFF	70
FILTER RESONANCE	71
FILTER KEY	72
FILTER ENV. ATTACK	77
FILTER ENV. DECAY	78
FILTER ENV. SUSTAIN	79
FILTER ENV. RELEASE	80
VOLUME ENV. ATTACK	73
VOLUME ENV. DECAY	74
VOLUME ENV. SUSTAIN	75
VOLUME ENV. RELEASE	76
LFO 1 AMPLITUDE	81
LFO 1 AMP. OFFSET	82
LFO 1 RATE	83
LFO 2 AMPLITUDE	84
LFO2 AMP. OFFSET	85

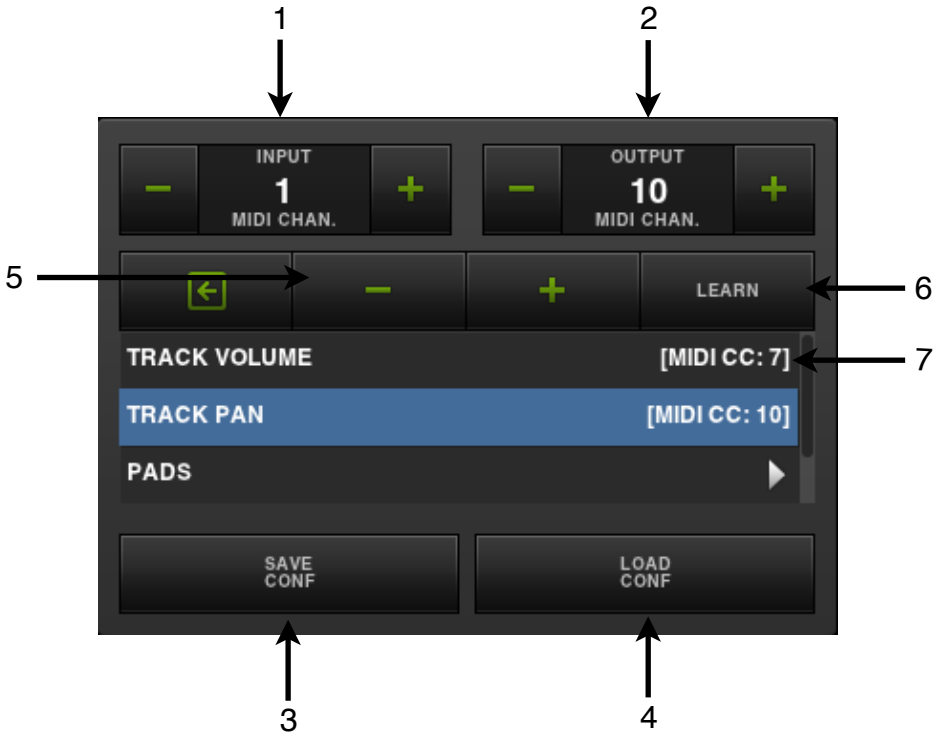
PARAMETER	MIDI CC NUMBER
LFO 2 RATE	86
PORTAMENTO GLIDE TIME	5

D.3. EFFECTS

PARAMETER	MIDI CC NUMBER
EFFECT #1: FIRST FADER	12
EFFECT #1: SECOND FADER	13
EFFECT #1: THIRD FADER	14
EFFECT #1: FOURTH FADER	15
EFFECT #1: FIFTH FADER	16
EFFECT #2: FIRST FADER	17
EFFECT #2: SECOND FADER	18
EFFECT #2: THIRD FADER	19
EFFECT #2: FOURTH FADER	20
EFFECT #2: FIFTH FADER	21
EFFECT #3: FIRST FADER	22
EFFECT #3: SECOND FADER	23
EFFECT #3: THIRD FADER	24
EFFECT #3: FOURTH FADER	25
EFFECT #3: FIFTH FADER	26

D.4. SETTING UP YOUR OWN MIDI CONFIGURATION

To enter the MIDI Configuration menu for a specific instrument, tap on the [MIDI] button at the bottom-right of the instrument icon within the Studio View:



The screenshot above displays the MIDI configuration of a Drum Machine instrument.

1. **Input MIDI Channel**: Sets the MIDI channel to which the instrument will respond to. If [OMNI] mode is enabled, the instrument will process any MIDI message regardless of the MIDI channel. For more information, see Section C.5 *MIDI Channels and OMNI mode*.

2. **Output MIDI Channel**: If *MIDI Out* is enabled within the *MIDI Settings*, sets the MIDI Channel the instrument will send its events too. Tracks for this instrument will also send events to this particular MIDI Channel.

3. **Save Configuration**: Saves the current MIDI configuration to a file of your choice. It is useful to reuse the same MIDI configuration for another instrument or project.

4. **Load Configuration**: Loads a previously saved MIDI configuration.

5. **MIDI CC Value change:** Use the [+] and [-] buttons to manually change the MIDI Continuous Controller assigned to the selected parameter.

6. **MIDI Learn:** When turned ON, moving a control (knob, fader…) on your MIDI Controller will assign it to the currently selected parameter. This feature is very useful to quickly set up BeatMaker to work with your controller:
   - Select a parameter such as “TRACK VOLUME”
   - Press [LEARN]
   - Move the desired knob/fader on your MIDI controller
   - This knob/fader will now correctly control the “TRACK VOLUME”

7. **MIDI CC Value:** Displays the current MIDI Continuous Controller number assigned to the parameter.

D.5. MIDI CHANNELS AND OMNI MODE

The MIDI specification defines that up to 16 Instrument Channels can be used to communicate information between hardware and software musical instruments. MIDI Channels can be useful to control different BeatMaker instruments using one or several MIDI devices.

You can assign each instrument to a specific MIDI channel at the top of the MIDI Configuration panel. The instrument will respond to any MIDI message sent to its Channel number.

An [OMNI] global option is also available in the Transport Bar. When [OMNI] mode is enabled, the currently displayed instrument will respond to any MIDI messages, regardless of which MIDI Channel it has been assigned to.

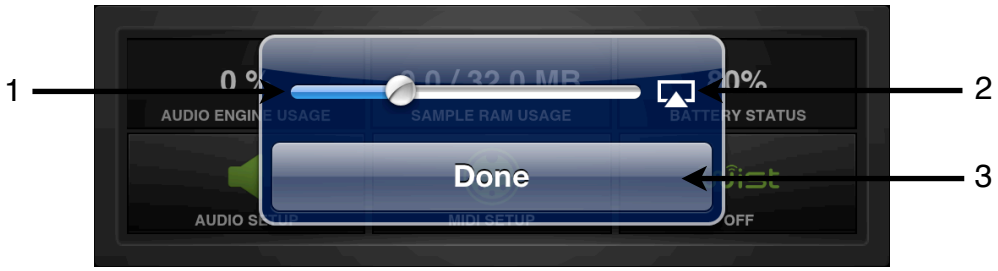
Let's take an example to illustrate how to setup MIDI Channels:

- Two instruments are created in your BeatMaker project: a Drum Machine and a Keyboard Sampler
- You have two MIDI controllers connected to your device. You would like one to control the Drum Sampler, and the other one to control the Keyboard Sampler
- Go to the MIDI Configuration of the Drum Machine. Set the MIDI Channel to 1.
- Configure one of your MIDI devices so that it sends messages to Channel number 1 (check your device user manual for instructions on how to do so)
- Go to the MIDI Configuration of the Keyboard Sampler. Set the MIDI Channel to 2.
- Configure your second MIDI device so that it sends messages to Channel number 2 (check your device user manual for instructions on how to do so)
- Disable [OMNI] mode in the Transport Bar.
- Now each of your MIDI devices should control a different instrument.

13. PREFERENCES

A. AUDIO DEVICES & OUTPUTS

If you connect other audio devices to your iPhone or iPad (such as a sound card or bluetooth speaker), you can tell BeatMaker which audio output it should playback to.
By default, BeatMaker sends audio to your device line out. To change the audio output, press the [INFO] button at the top-right corner of the Studio view, then press the [AUDIO OUTPUT] button from the info panel. The following window will pop-up:



1. **Output volume**: Sets the volume for the current audio output.

2. **Select Audio Device output**: Brings a list for selecting the audio output BeatMaker should use. If you are using a connected sound card or bluetooth speaker, they will be displayed in the list to let you use them.

3. **Done**: Closes the Audio Output panel.

NOTE: Using bluetooth devices can add an extra audio delay (latency) during playback.

B. WIST SUPPORT

WIST (Wireless Sync-Start Technology) is a technology which allows two WIST-compatible applications to be started/stopped synchronously and wirelessly. It can be useful during live performances to start the playback and match the tempo of two iOS devices at the same time.

To enable WIST, press the [INFO] button at the top-right corner of the Studio view, then tap on the [WIST] button. The application will then look for other devices connected to your WiFi network or via Bluetooth. Once another device has been found, pressing the [PLAY] button from the Transport bar will also trigger the playback of the application running on your other device. The device that initiates the WIST connection is the *Master*: it will control the playback and tempo of the other device.

Wist
Wireless Sync-Start Technology

WIST is a trademark and software of KORG INC.

C. APPLICATION SETTINGS

You can modify some of the parameters of BeatMaker 2 through the *Settings* application. Launch *Settings* from your springboard, scroll down to the applications and tap on *BeatMaker 2*. Here is a description of the available settings:

Knob handling:

Select whether knobs should rotate on horizontal or vertical finger movements.

FTP Settings:

- Username: Choose the login used to connect to BeatMaker's FTP server
- Password: Choose the password used to connect to BeatMaker's FTP server

Audio Latency:

Audio latency is the time between when a sound is played (like a note triggered from the Keyboard Sampler piano) and the moment it is heard in your headphones or speakers. Choosing the *Low* value improves the delay but takes more processing power. If you use many instruments and effects in a project and you think that this may be too much for your device, you may switch to the *High* value.

MIDI:

- OUT active by default: Always activate sending MIDI data to MIDI outputs
- Send Clock by default: Always activate sending MIDI Clock synchronization data to MIDI outputs
- Thru active by default: Always forward MIDI events received from MIDI inputs to MIDI outputs
- Virtual MIDI ports: Enable or disable MIDI inputs and outputs ports created by other applications.
- Buffer latency: Sets the duration before BeatMaker sends MIDI events to other controllers and applications. When sending MIDI over a WiFi network (such as with the *Network Session* output), you may need to change this value to an higher value.

Memory limit:

Specifies how many Megabytes of RAM memory (not disk space) BeatMaker will allow for loading samples.
As RAM memory is shared amongst all applications, iOS may close without warning any application that is using too much resources, losing any unsaved work. If you are experiencing random BeatMaker exits, you should try to lower the memory limit to a safer value.
It is very recommended to close any application running in the background when using BeatMaker. Rebooting your device can also help recovering all your RAM memory.

By default, this limit is set to 32 MB.

File Database:

BeatMaker 2 manages your projects, presets and samples in a database so that you can find them quickly. You should not have to modify these settings unless something has gone wrong (hardware or software failure, quitting the application while it was saving or updating the database).

- Reset Database: resets the database to the factory settings.

- Update Database: the next time BeatMaker launches, it will scan your projects, presets and samples again to update its internal database.