



OWNER'S MANUAL

BtBx Version 2.0
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INTRODUCTION

THE BASIC IDEA BEHIND BtBx



BtBx gives you instant access to the world of electronic music with big drum sounds and acid-style synthesizers. With an easy to use sequencer and keyboard view, you will have creative freedom without overwhelming you with complicated options.

BtBx is an audio sequencer. At its core is an efficient customized audio engine. This audio engine has the ability to play back sampled sound in real-time while manipulating the audio playback. For example, BtBx can play a sound forward, in reverse, at different pitches, distorted, delayed, and filtered. Controlling these parameters are the job of the drum machine style sequencer. The sequencer can store audio playback information such as note on, note reverse, and pitch.

The sequences are organized in patterns. Each pattern contains a separate sequence for each available sound. Each pattern consists of 16 steps. These steps represent 1/16th notes and the combination of all of the steps represents 1 bar or measure.

SPECIFICATIONS

By programming drum and instrument patterns, you the user have the ability to create beats, rhythms, and melodies.

NOTE: BtBx IS BEST USED WHEN CONNECTED TO MONITOR SPEAKERS OR HEADPHONES. THE INTERNAL SPEAKER DOES NOT TRANSLATE THE ENTIRE RANGE OF FREQUENCIES VERY WELL, MUCH OF THE LOW FREQUENCY SPECTRUM WILL BE LOST.

CAUTION: SOUND OUTPUT CAN GET LOUD. PLEASE LISTEN TO BtBx AT A REASONABLY COMFORTABLE LEVEL TO AVOID EAR DAMAGE!

FUNCTIONALITY

USER INTERFACE

The user interface has two main views. These views are SEQUENCER and KEYBOARD. Each main view has two modes. SEQUENCER view has PATTERN mode and STEP mode. KEYBOARD view has SOUND mode and STEP mode.



SEQUENCER VIEW - STEP MODE

SEQUENCER view - STEP mode allows you to select sounds, write patterns, add effects, change sounds volume, change view, change mode, change tempo and play your pattern.



SEQUENCER VIEW - PATTERN MODE

SEQUENCER view - PATTERN mode allows you to control mutes, master volume, pattern selection and pattern copy/paste functions.



By pressing the PATT/STEP button the mode will change between STEP and PATTERN modes.
REASONABLY COMFORTABLE LEVEL TO AVOID EAR DAMAGE!

FUNCTIONALITY



KEYBOARD VIEW - SOUND MODE

KEYBOARD view - SOUND mode allows you to select sounds, preview pitch sounds via the keyboard and control the individual sound's filter settings.



KEYBOARD VIEW - STEP MODE

KEYBOARD view - STEP mode allows you to write rhythms and melodies via the step sequencer. Any sound can be played back in a range of +/- 36 semitones.



By pressing the SOUND/STEP button the mode will change to STEP.



KEYBOARD view



SEQUENCER view

PATTERN modes
Switching views can be done by pressing either the KEYBOARD view or SEQUENCER view buttons.

FUNCTIONALITY

SEQUENCER VIEW - STEP MODE OVERVIEW

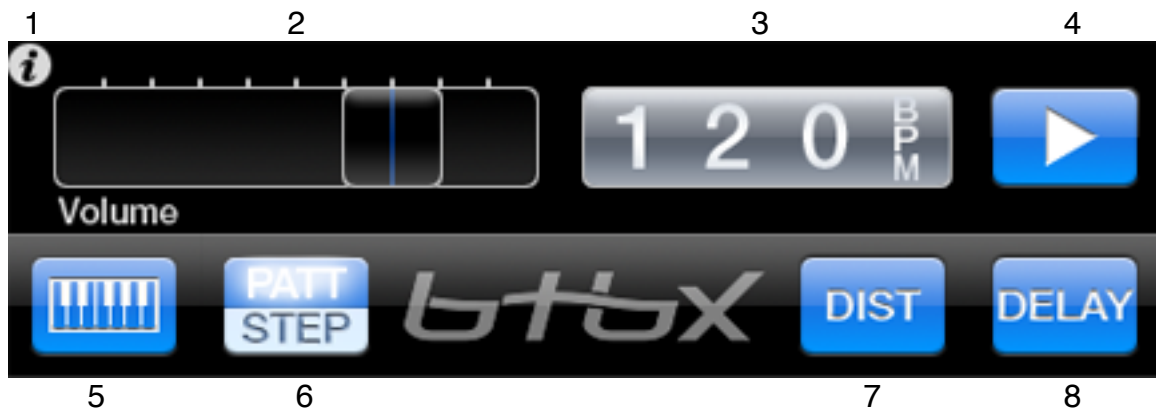


Step Buttons 1 through 16

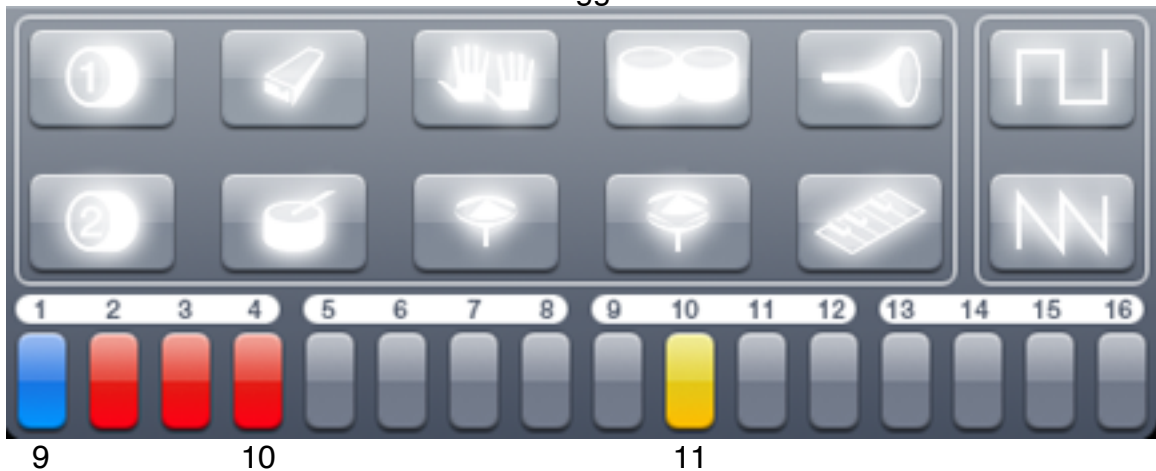
1. Information Icon
2. Volume Slider for selected sound
3. Tempo Window
4. Play Button
5. Keyboard View Button
6. Pattern/Step Mode Button
7. Distortion Button
8. Delay Button
9. Bass Drum 1 Button
10. Cowbell Button
11. Hand Clap Button
12. Tom Drum Button
13. Horn Button
14. Square Wave Button
15. Bass Drum 2 Button
16. Snare Button
17. Closed High Hat Button
18. Open High Hat Button
19. Keys Button
20. Saw Wave Button

FUNCTIONALITY

SEQUENCER VIEW - PATTERN MODE OVERVIEW



Sound buttons toggle mutes on/off.



Pattern Buttons 1-16

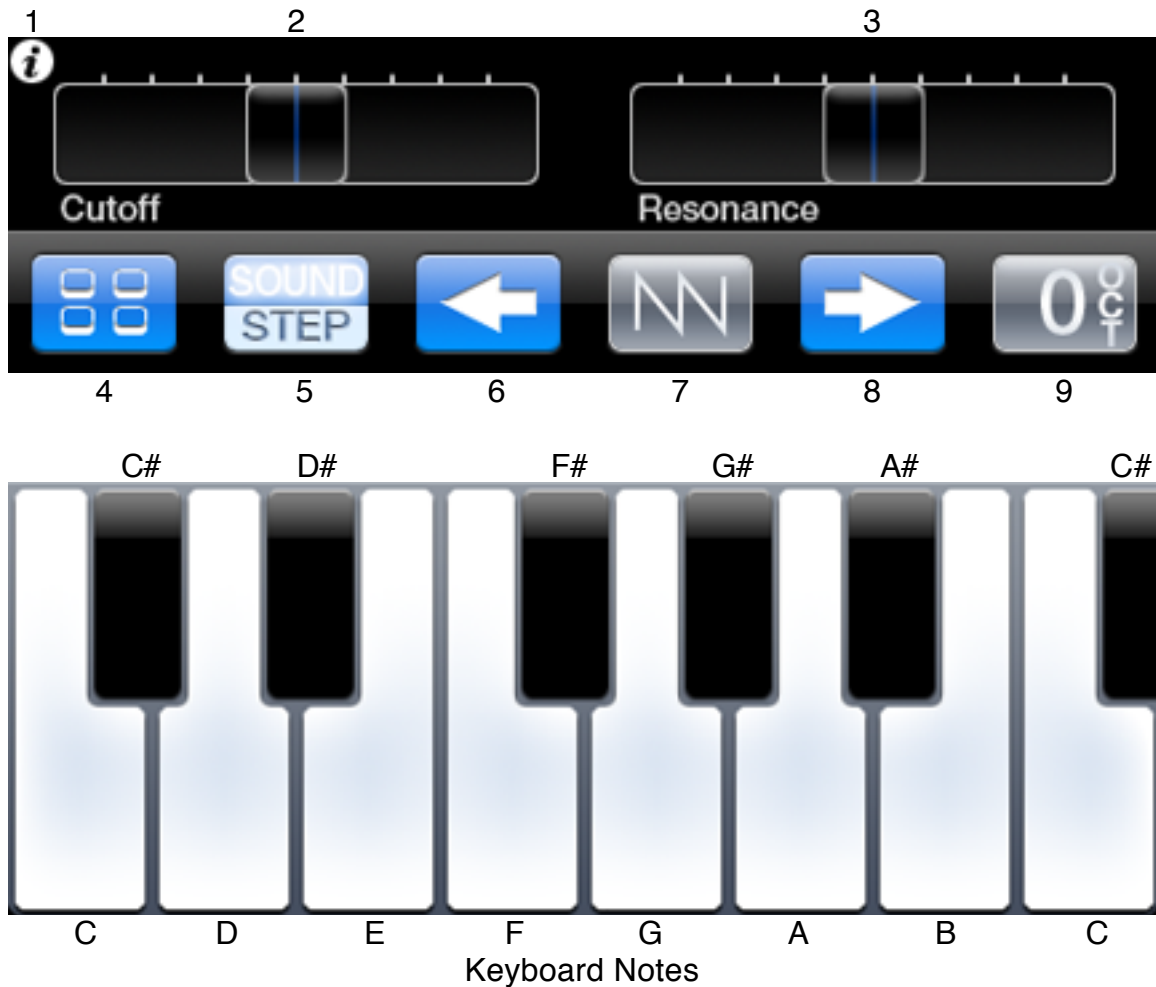
- | | |
|--|----------------------------------|
| 1. Information Icon | 7. Distortion Button (not used) |
| 2. Master Volume Slider for all sounds | 8. Delay Button (not used) |
| 3. Tempo Window | 9. Current Pattern |
| 4. Play Button (On, as shown) | 10. Last Pattern in Pattern Loop |
| 5. Keyboard View Button | 11. Currently playing step |
| 6. Pattern/Step Mode Button | |

10. Cowbell Button

20. Saw Wave Button

FUNCTIONALITY

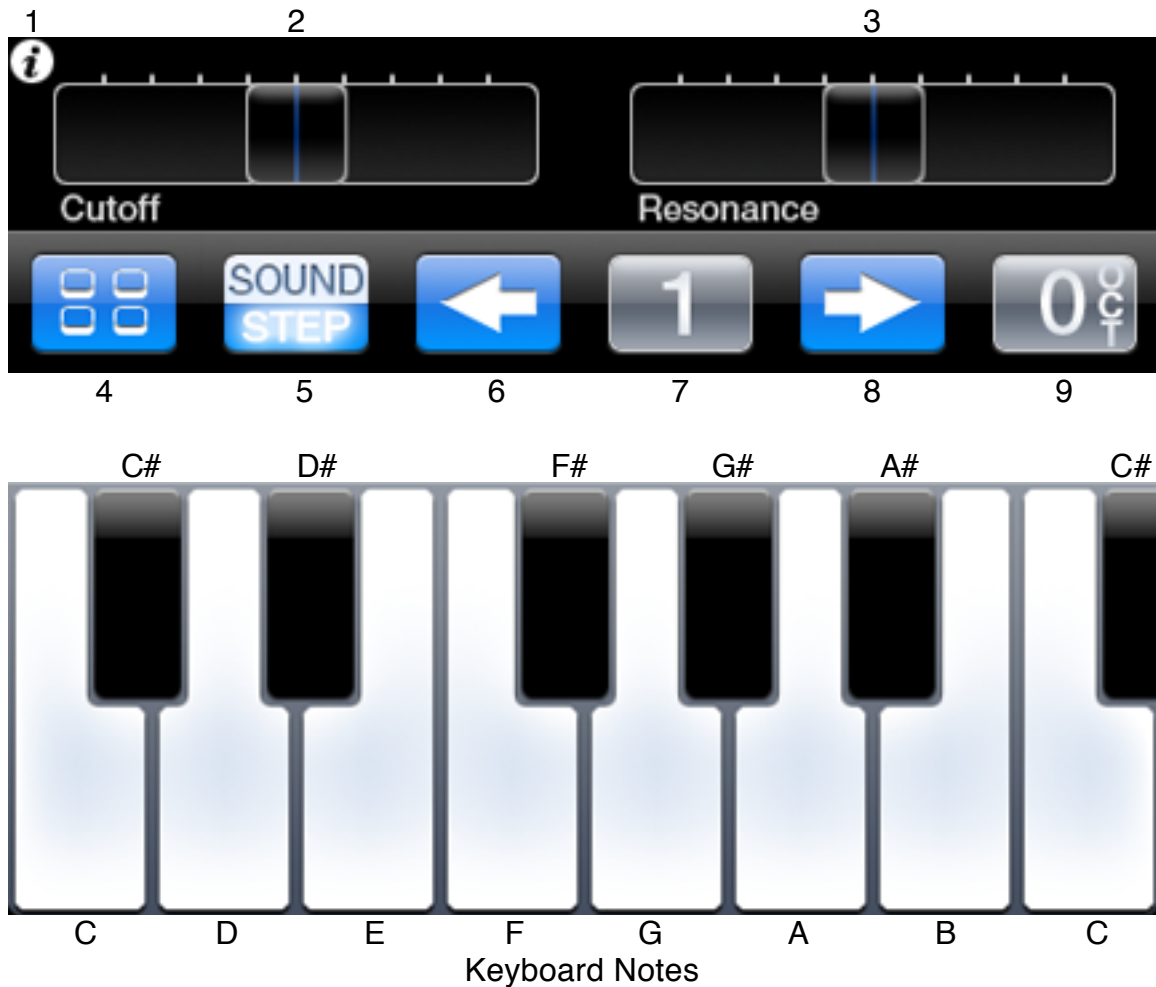
KEYBOARD VIEW - SOUND MODE OVERVIEW



1. Information Icon
 2. Filter Cutoff Slider for Current Sound
 3. Filter Resonance Slider for Current Sound
 4. Sequencer View Button
 5. Sound/Step Mode Button
 6. Left Button
 7. Current Sound Window
 8. Right Button
 9. Octave Window
6. Pattern/Step Mode Button

FUNCTIONALITY

KEYBOARD VIEW - STEP MODE OVERVIEW



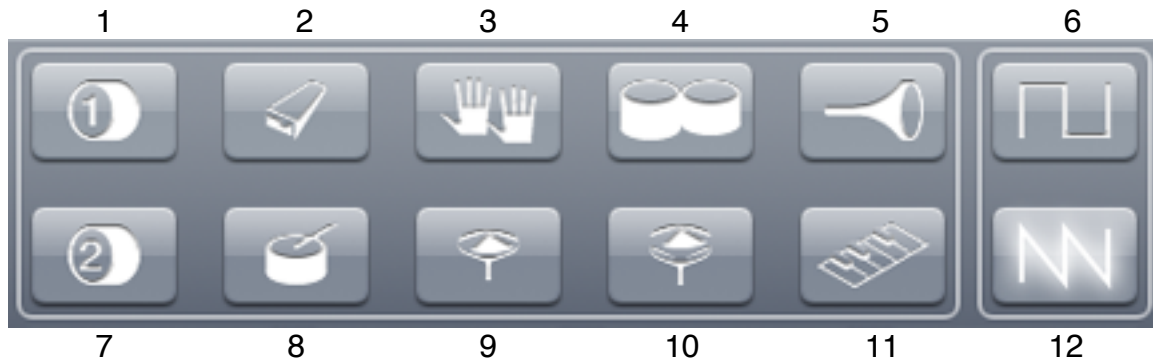
- | | |
|--|------------------------|
| 1. Information Icon | 6. Left Button |
| 2. Filter Cutoff Slider for Current Sound | 7. Current Step Window |
| 3. Filter Resonance Slider for Current Sound | 8. Right Button |
| 4. Sequencer View Button | 9. Octave Window |
| 5. Sound/Step Mode Button | |

FUNCTIONALITY

SOUNDS

There are 12 sounds in total which can be played back to create your music.

These sounds can be put into 2 categories of sample playback and synthesizer. Sample playback sounds can be further divided into 2 groups of drum sounds and instrument sounds.



Sounds available:

- | | |
|--------------------|------------------------------|
| 1. Bass Drum 1 | BtBx BD 1 |
| 2. Bass Drum 2 | BtBx BD 2 |
| 3. Cowbell | BtBx CB |
| 4. Snare Drum | BtBx SN |
| 5. Hand Claps | BtBx CP |
| 6. Closed High Hat | BtBx CH |
| 7. Tom Drum | BtBx LT |
| 8. Open High Hat | BtBx OH |
| 9. Horns | BtBx Synth Horn |
| 10. Keys | BtBx minor piano chord |
| 11. Square | BtBx Square wave synthesizer |
| 12. Saw | BtBx Saw wave synthesizer |

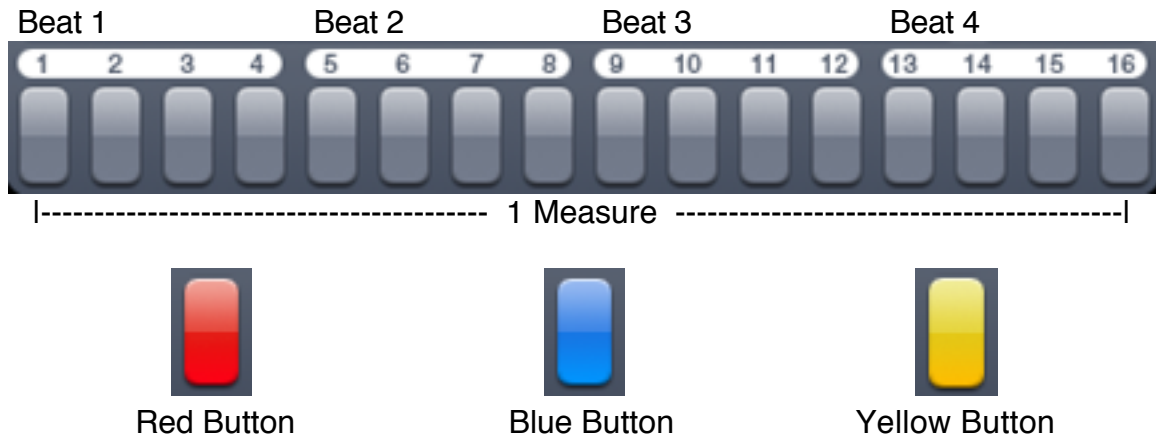
5. Sound/Step Mode Button

Note: All sample playback sounds reset playback of the individual sound when it is retriggered with the exception of the Keys sound. The Keys sound does not reset playback, but allows each trigger to playback in its entirety to sound more natural and realistic.

FUNCTIONALITY

SEQUENCER - SEQUENCER VIEW

The sequencer of BtBx is based on the classic 16 step hardware drum machine. Each step represent a 1/16th note of a 4/4 time signature. The entire 16 steps represent 1 bar or measure. Each sound has it's own 16 step pitch sequence. The combination of all the sound sequences is one pattern.



SEQUENCER VIEW - STEP MODE

Sample Playback Sounds:

Red Button = Play sound

Blue Button = Play sound in reverse

Synthesizer Sounds:

Red Button = Play note

Blue Button = Play note with accent

SEQUENCER VIEW - PATTERN MODE

Pattern Playback:

Red Button = Next pattern in queue

Blue Button = Current pattern

Pattern Playback (Loop Mode):

Red Button = Pattern group to loop

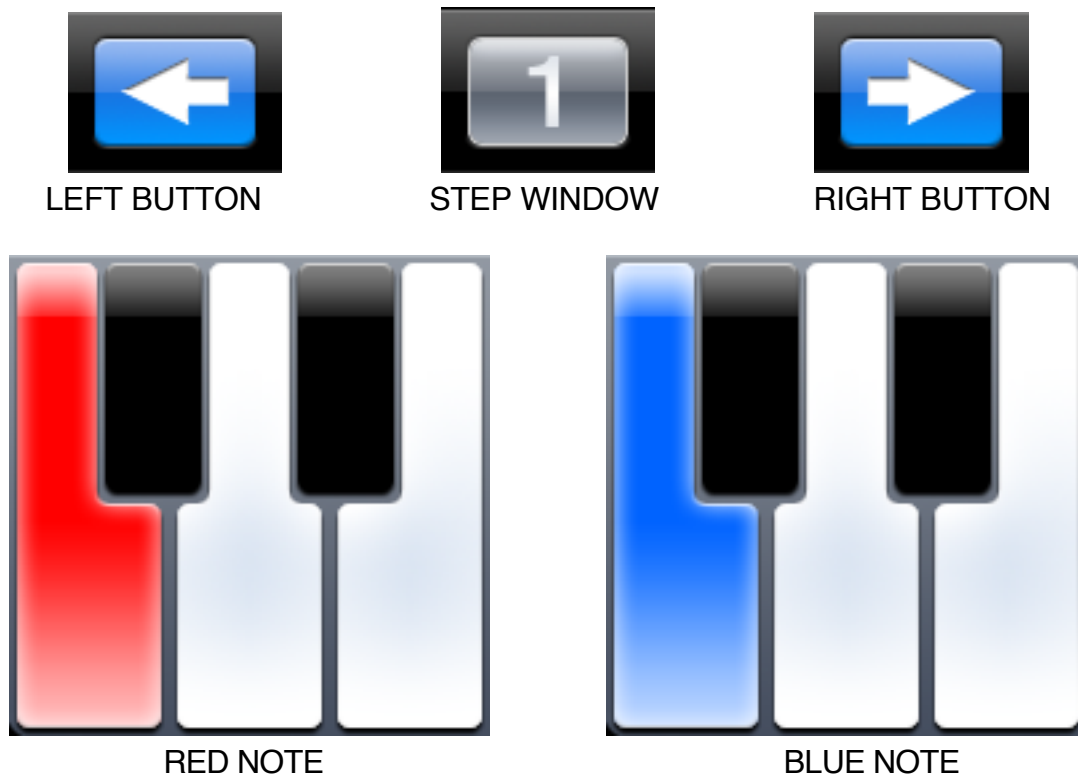
Blue Button = Currently playing pattern

Yellow Button (in all modes) = Currently playing step (while the sequencer is playing)

FUNCTIONALITY

SEQUENCER - KEYBOARD VIEW

Once you are in KEYBOARD view - STEP mode, you will be able to change the pitch of the sound sequence. Any time you enter this mode step 1 will be displayed in the step window located between the arrows. To change the currently selected step, press the left or right buttons on either side of the number window.



Once you have a step selected which has been triggered to play the sound, you will see either a RED or BLUE note. If the step does not have any pitch assigned to it, it will default to middle C (C, octave 0). To change the pitch, touch the desired key on the keyboard.

Note: if the pitch was set to play in reverse (BLUE key), selecting a new pitch will reset it to playback forward (RED key). To make the desired pitch play back in reverse, touch the key one more time.

FUNCTIONALITY

CHANGING THE OCTAVE OF THE KEYBOARD



It is possible to change the pitch of the note higher or lower than the displayed keyboard by touching the octave number window. By touching this window, the octave number will cycle from 0, +1, +2, +3, -3, -2, & -1. This allows you to write pitch information with a full 7 octaves of pitch range.

It is possible to cycle through playback methods of the sound by pressing a key once to play forward, pressing twice to play in reverse, and pressing a third time to deactivate the currently selected step from triggering the sound to play back.

PLAYING PATTERNS



To play a pattern, while in SEQUENCER view, touch the play button in the upper right corner.



To change the speed of pattern playback, while in SEQUENCER view, touch the tempo button and drag your finger left or right to lower or raise the tempo. Tempo is measured in Beats Per Minute (BPM).

Tip: when changing the tempo, more precise control can be used by moving your finger slowly and rolling it on the screen.

FUNCTIONALITY

CHANGING PATTERNS

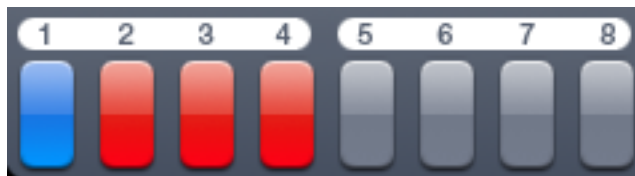
The currently playing pattern is displayed by a BLUE step button. There are 16 patterns available to write sequences to. If the sequencer is stopped, touch the desired pattern button to change patterns.

If the sequencer is playing, touch the desired pattern button to change patterns.

Note: the sequencer does not automatically change to the next pattern right when you press the button. The sequencer waits until the currently playing pattern is finished playing to start the next pattern. The pending pattern is displaying in RED.

LOOP MULTIPLE PATTERNS

If you would like to play more than a 1 pattern loop, follow these steps:



If the sequencer is stopped, touch the desired starting pattern for the loop to select it. Once your start pattern button is BLUE, activate the pattern button at the end of the playback loop by double tapping the button. You will see a series of red pattern buttons from the pattern following the start pattern to the end pattern. By pressing play, you will notice that once the sequencer will play all the patterns highlighted. Once the sequencer reaches the end of the loop, it will repeat the sequence of patterns.

COPY PATTERN - ERASE PATTERN

Copy Pattern - To copy a pattern, stop the sequencer from playing, select the pattern you want to copy. This will turn the pattern button BLUE. Touch the pattern button one more time to copy it. This will turn the pattern button RED. Finally, touch the pattern button of the desired target pattern to overwrite and copy the current pattern. The target pattern button will turn BLUE.

Erase Pattern - To erase a pattern, stop the sequencer from playing. Touch and hold the pattern button down until a 3 second countdown appears in the tempo window. Once the countdown is complete, the pattern will be erased.

finger slowly and rolling it on the screen.

FUNCTIONALITY

EFFECTS



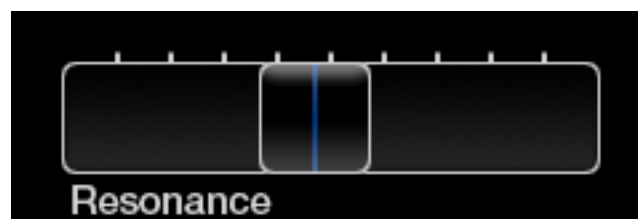
Distortion - Distortion can be applied to any sound via the SEQUENCER view - STEP mode. First, select a sound, then touch the DIST button.

Delay - Delay can be applied to any sound via the SEQUENCER view - STEP mode. First, select a sound, then touch the DELAY button. The delay is directly related to the current tempo. The delay time is preset to a rate of 16th note triplet and a feedback of 50%.

Lowpass Filter - The Lowpass Filter can be applied to any sound via the KEYBOARD VIEW. First, select a sound, then slide either the CUTOFF or RESONANCE sliders to alter the tone of the sound.



CUTOFF controls the cutoff frequency of the filter. Any frequency above the cutoff value will be filtered out. This removes the higher frequencies making the sound more muffled.



RESONANCE controls the amount of feedback at the cutoff frequency. High values will enhance the cutoff frequency. The maximum resonance setting will not allow the filter to self oscillate.

FUNCTIONALITY

MUTES



While in SEQUENCER view - PATTERN mode, all of the sound buttons act as mute controls. What this means is that if a sound button is lit, then the programmed sequence for that sound will be heard. If the sound button is not lit, then that sound will be muted. This gives you the ability to get the most out of each pattern.

For example, if you want to compose a song in realtime from the patterns you have created, you can by muting sounds, changing patterns and creating multiple pattern loops.

MASTER VOLUME



MASTER VOLUME can also be found in the SEQUENCER view- PATTERN mode screen. MASTER VOLUME controls the final output volume of BtBx.

filter to self oscillate.

FUNCTIONALITY

MENUS



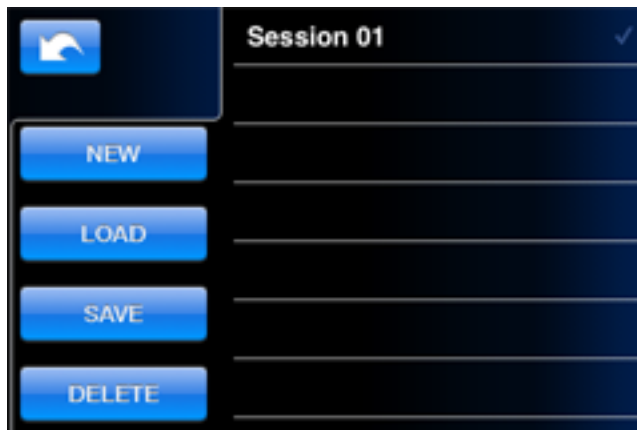
The information icon will take you to the Main Menu. From the Main Menu you can access sessions and sound kits.



Main Menu

Touch the arrow in the upper left hand corner to exit back to the BtBx sequencer.

From the Sessions Menu you can create a new session, load an existing session, save the current session, or delete the selected session.



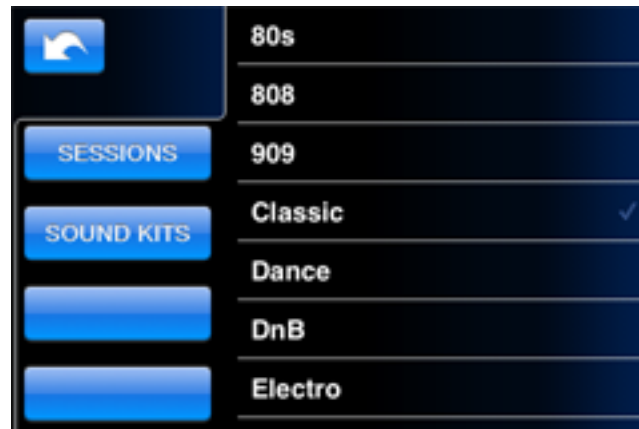
Session Menu with example session in list

Touch the arrow in the upper left hand corner to exit back to the Main Menu.

FUNCTIONALITY

MENUS

From the Sound Kits Menu you can load different sets of sounds for your session.



Sound Kits Menu

The sound kits included are:

80s
808
909
Classic
Dance
DnB
Electro
Hip Hop
House
Jazz
Stage
Tech
Trance

Touch the arrow in the upper left hand corner to exit back to the Main Menu.

BASICS

MAKING A BEAT

This simple tutorial will walk you through creating a standard beat. We will assume that you don't have any patterns already written to BtBx's memory file.

BASIC DRUM BEAT

SEQUENCER view - STEP mode.



1. Touch the Bass Drum 1 button (upper left hand sound button).

Note: You will notice that if the sequencer is not playing, you will hear a preview of the sound when you touch the button. If the sequencer is not playing, go ahead and press the play button (upper right hand corner of screen).



Note: Once the sequencer is playing you will see a yellow strobe cycling through the currently playing steps.

- a. Touch step button numbers 1, 5, 9 and 13.
You will hear the Bass Drum 1 play once every beat.

Note: The step buttons are somewhat small and may take getting used to touching. If you touch the incorrect button, touch it once to turn in BLUE and touch it twice to deactivate it.

BASICS



2. Touch the Snare button.
 - a. Touch step numbers 5 and 13.



3. Touch the Closed High Hat button.
 - a. Touch step numbers 1, 3, 5, 7, 9, 11, 13, and 15.



4. Touch the Open High Hat button.
 - a. Touch step numbers 3 and 11.

Congratulations, you have written a basic drum beat with BtBx!

ADDING PERCUSSION



1. Touch the Clap button.
 - a. Touch step numbers 7 and 11.
 - b. Touch step number 11 once more to turn the button BLUE which plays the sound in reverse.

BASICS



2. Touch the Tom Drum button.
 - a. Touch step numbers 1, 4, 7 and 12.

Great, now we're ready to to add an instrument.

ADDING INSTRUMENTS

This next simple tutorial will add a synthesizer to your current beat.



1. Touch the Saw Wave Synthesizer button.
 - a. Touch step numbers 1, 3, 5, 7, 9, 11, 13 and 15.

Note: The repetitive synthesizer sound isn't too exciting. Let's spice it up.



KEYBOARD VIEW - SOUND MODE

2. Go to KEYBOARD view - SOUND mode by pressing the KEYBOARD button.

Note: If you the currently selected sound from SEQUENCER view carries over to the currently selected sound in KEYBOARD view.

BASICS

- Alter the synthesizer's tone.

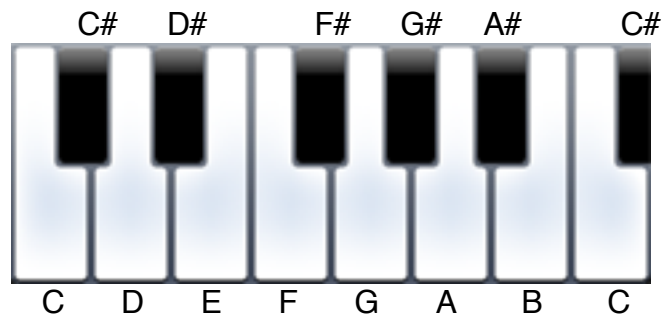


- Move the cutoff slider all the way to the left.
- Change the pitches of the synthesizer's activated steps.



- Touch the PATT/STEP button.

Note: The default pitch of C0 is highlighted by a RED key.



- Touch the D key (second white key from the left).
- Touch the right arrow button twice to change the current step to 3.
- Touch the D key.
- Touch the OCTAVE window once to change it to +1 octave.
- Touch the right arrow button four times to change the current step to 7.
- Touch the OCTAVE window once to change it to +1 octave.
- Touch the right arrow button twice to change the current step to 9.
- Touch the G key (5th white key from the left).
- Touch the OCTAVE window six times to change it to -1 octave.
- Touch the right arrow button twice to change the current step to 11.

BASICS

- l. Touch the G key.
- m. Touch the right arrow button twice to change the current step to 13.
- n. Touch the D# key (second black key from the left).
- o. Touch the right arrow button twice to change the current step to 15.
- p. Touch the D# key.
- q. Touch the OCTAVE window once two change it to +1 octave.

ADDING FX

1. Go to the SEQUENCER view - STEP mode by touching the SEQUENCER button.

Note: Double check that the correct Saw Wave Synthesizer sound is selected.



2. Touch the DIST button.
3. Go to the KEYBOARD view - SOUND mode by touching the KEYBOARD button.
4. Change the Filter settings.



- a. Move the RESONANCE slider all the way to the right.



- b. Touch the right arrow button twice to change the current step to 11.
Touch the CUTOFF slider and move it quickly from left to right.

APPENDIX

TROUBLE SHOOTING

Issue: BtBx does not load after I touch the icon.

Solution 1: Please reset your iPhone or iPod Touch.

To reset your unit, hold both the Power button and Home button down at the same time. A power off screen will be displayed. Slide the red slider to power your unit off.

To power your unit back up, hold the Power button down until you see the APPLE logo.

Solution 2: Reinstall BtBx from the appstore.

Warning: Reinstalling BtBx will remove all of your pattern data.

To reinstall BtBx, first remove BtBx from your unit by touching the BtBx icon until it starts to shake. At that time, a black circle with an X in it will appear on the top left of the icon. Touch the X. A message will pop up to confirm the delete. Touch the Delete option. Press the Hold button to lock your icons back into place.

Make sure that you use the same I.D. as when you first purchased BtBx.

Go to the appstore. Go to Search. Look up BtBx. Touch the BtBx entry. Touch the PRICE button. the PRICE button will turn into a BUY NOW button. Touch the BUY NOW button. A message will appear stating that you have already purchased this item. To download it for free touch the OK button.

Issue: I don't hear any sound.

Solution 1: Check your iPhone or iPod Touch volume settings.

If you have an iPhone, check to see if the Silence Switch is in the off position.

Turn up the volume with the volume controls on the side of the unit.

If you have an iPod Touch with no external speaker, connect speakers or headphones.

Check your speaker or headphone connections. If the speakers or headphones are powered, check to make sure they are turned on.

APPENDIX

Solution 2: Check BtBx sound output.

Check to see if you are playing a pattern with sequencer information in it.

Go to SEQUENCER view - STEP mode. Stop the sequencer if it is playing. Touch a sound button to see if you can hear it preview the sound. If you cannot hear it, check the volume slider for the sound. If you are still unable to hear it go to PATTERN mode by touching the PATT/STEP button. Check the master volume. If the master volume is OK, go to KEYBOARD view - SOUND mode by touching the KEYBOARD button. Check the cutoff slider. Move the slider to the right.

Issue: BtBx crashed out of the application or locked up my iPhone or iPod Touch.

Solution 1: If BtBx is locked up, reset your unit.

If BtBx is locked up, power down the unit by holding the Power button and Home button down at the same time. This may take a while depending on the severity of the lock up, but it will work. Once it is powered off you can power your unit back on by holding the Power button until you see the APPLE logo.

Solution 2: If BtBx crashes and exits, either reset your unit as stated above, or restart BtBx. Crashes are usually caused by memory issues and once BtBx has been exited, it has been released from memory. Touch the BtBx icon to restart BtBx.

Issue: I want to erase all of my patterns at once.

Solution: To erase all of your patterns and reset all of the BtBx settings go to SEQUENCER view - PATTERN mode. Touch and hold the DIST, DELAY and PATT/STEP. Continue holding. You will see a 3 second countdown. Once the countdown is complete, all of the internal memory and settings of BtBx will be reset to factory defaults.

WARNING: ALL DATA WILL BE LOST WHEN RESETTING BtBx.

support@pulsecodeinc.com

APPENDIX

SPECIFICATIONS

Sounds:

- 12 Sound audio sequencer
- 8 Monophonic drum sounds
- 1 Monophonic instrument sound
- 1 Polyphonic instrument sound
- 2 Real-time monophonic synthesizers
- Real-time forward and reverse sample playback
- Real-time pitch shifting +/- 36 semitone range
- Real-time mutes

Sequencer:

- Drum machine style sequencer
- 16 Steps per pattern
- 16 Patterns
- Multiple pattern loop function
- Tempo adjustment (40-240 BPM)

Effects:

- 12 Individual lowpass filter effects (1 on each sound)
- 1 Distortion effect (all sounds can be routed to this effect)
- 1 Delay effect (all sounds can be routed to this effect)

Other:

- 13 sound kits
- Session management