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BOOM CHICK!

USER GUIDE V 1.0

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Boom Chick Design Team

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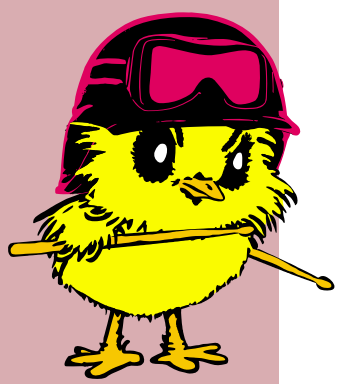

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Thank You!

I would like to take a moment to express my gratitude for your purchase of the Boom Chick.

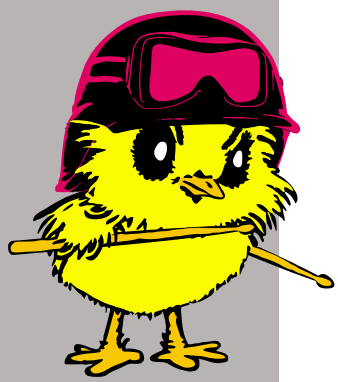
For me, drum machines are deeply woven into my personal history. From the first beats I crafted as an aspiring musician to countless nights chasing the perfect groove, drum machines have been an essential part of my creative journey. They've inspired me and helped fuel a lifelong passion for music.

The Boom Chick represents the culmination of years of dreaming, designing, and perfecting something I truly believe in. To see it in your hands, helping you bring your own music to life, is a wonderful thing.

Thank you for inviting Cre8audio and Pittsburgh Modular to be a part of your creative process. I can't wait to hear what you create.

With gratitude,

Richard Nicol
Founder | Product Designer
Pittsburgh Modular Synthesizers



1 | Important Power Information

1.1 Read Instructions!

Please read the Cre8audio Boom Chick Drum Machine User Guide completely before use and retain for future reference.

- Only use the DC power adapter provided by Cre8audio with the Boom Chick. Using an incorrect power adapter can cause permanent damage to the Boom Chick and the power adapter.
- The Boom Chick is an electronic device. Exposure to water will cause the Boom Chick circuitry to short circuit and may cause permanent damage.
- Do not attempt to modify the Boom Chick. Tampering with the circuitry may cause permanent damage.
- Do not place heavy objects on the Boom Chick. The user interface is mounted on a PCB that can be damaged if stressed by excessive weight.
- Do not attempt to repair the Boom Chick. Please contact Cre8audio regarding malfunctions of any kind.
- Cre8audio is not responsible for any damage or loss caused by improper use of the Boom Chick.
- Do not taunt the Boom Chick.

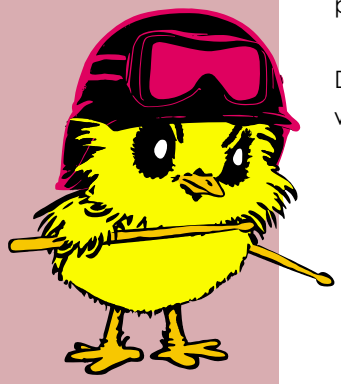
1.2 Eurorack Power Cable Information

The Cre8audio Boom Chick Drum Machine is a Eurorack format synthesizer module. The module can be installed, rearranged, removed, and replaced in any compatible Eurorack case from Cre8audio, Pittsburgh Modular, or other manufacturers.

The Cre8audio Boom Chick Drum Machine uses a standard 16 pin Eurorack ribbon cable to connect the module to a bipolar +/-12v power supply. Please pay very close attention to the orientation of the ribbon cable when adding and removing modules. The stripe on the ribbon cable marks -12 volt power. This stripe needs to line up with the -12 volt pins on the power supply and the -12 volt pins on the module. The Cre8audio Boom Chick Drum Machine includes reverse polarity protection so it will not be damaged when plugged in incorrectly; however, as a general rule, failure to match up the pins correctly can result in damage to one or all the modules in a case. On Cre8audio and Pittsburgh Modular cases the positive and negative voltages are clearly labeled. On the
Cre8audio Boom Chick Drum Machine module, the power header is clearly labeled and keyed to ensure a safe and proper connection.

Do NOT remove the Cre8audio Boom Chick Drum Machine module from any case while it is plugged in.

Do NOT unplug power ribbon cables from the Cre8audio Boom Chick Drum Machine or case while the case is plugged in.



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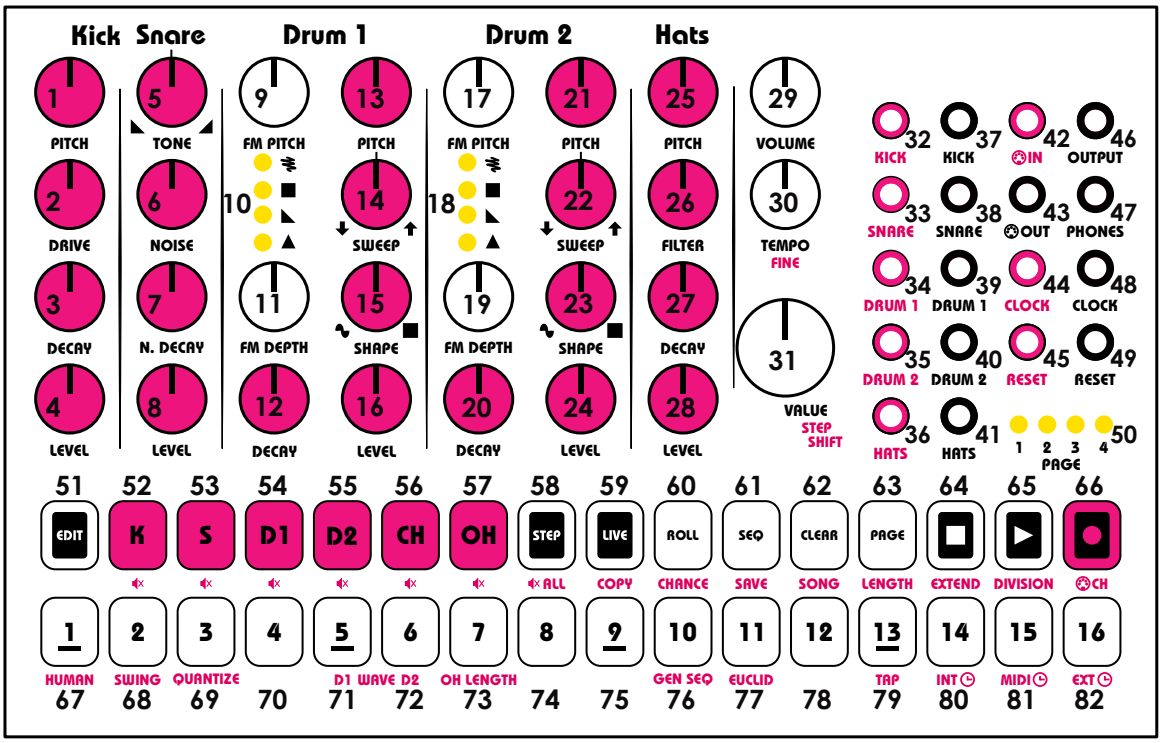
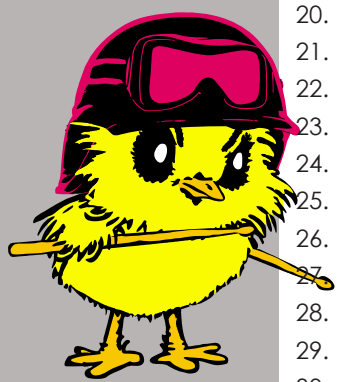
2 | User Interface



1. Kick Pitch Knob
2. Kick Drive Knob
3. Kick Decay Knob
4. Kick Level Knob
5. Snare Tone Knob
6. Snare Noise Level Knob
7. Snare Noise Decay Knob
8. Snare Level Knob
9. Drum1 FM Pitch Knob
10. Drum1Wave Shape LEDs
11. Drum1 FM Depth Knob
12. Drum1 Decay Knob
13. Drum1 Pitch Knob
14. Drum1 Sweep Knob
15. Drum1 Shape Knob
16. Drum1 Level Knob
17. Drum2 FM Pitch Knob
18. Drum2 Wave Shape LEDs
19. Drum2 FM Depth Knob
20. Drum2 Decay Knob
21. Drum2 Pitch Knob
22. Drum2 Sweep Knob
23. Drum2 Shape Knob
24. Drum2 Level Knob
25. Hats Pitch Knob
26. Hats Filter Knob
27. Hats Decay Knob
28. Hats Level Knob
29. Master Volume Knob
30. Tempo**[fine]** Knob
31. Value**[step shift]** Knob
32. Kick Trigger Input
33. Snare Trigger Input
34. Drum 1 Trigger Input
35. Drum 2 Trigger Input
36. Hats Trigger Input
37. Kick Output
38. Snare Output
39. Drum1 Output
40. Drum2 Output
41. Hats Output
42. Midi Input
43. Midi Output
44. Clock Input
45. Reset Input
46. Euro-Rack Output Jack
47. Headphone Jack
48. Clock Output
49. Reset Output
50. Page LEDs
51. Edit Button
52. Kick**[kick mute]** Button
53. Snare**[snare mute]** Button
54. Drum1**[drum1 mute]** Button
55. Drum2**[drum2 mute]** Button
56. Closed Hat **[closed hat mute]** Button
57. Open Hat **[open hat mute]** Button
58. Step**[mute all]** Button
59. Live**[copy]** Button
60. Roll**[chance]** Button
61. Seq**[save]** Button
62. Clear**[song]** Button
63. Page**[length]** Button
64. Stop**[extend]** Button
65. Play**[division]** Button
66. Rec**[midi channel]** Button
67. Step 1**[humanize]** Button
68. Step 2**[swing]** Button
69. Step 3**[quantize]** Button
70. Step 4 Button
71. Step 5**[drum1 wave]** Button
72. Step 6**[drum2 wave]** Button
73. Step 7**[open hat length]** Button
74. Step 8 Button
75. Step 9 Button
76. Step 10**[generate seq]** Button
77. Step 11**[generate euclid]** Button
78. Step 12 Button
79. Step 13**[tap tempo]** Button
80. Step 14**[internal clock]** Button
81. Step 15**[midi clock]** Button
82. Step 16**[external clock]** Button



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3 | Boom Chick Overview

3.1 Overview:

Designed for hands-on control and instant creativity, the Cre8audio Boom Chick is a one-knob-per-function percussion powerhouse. The Boom Chick features a fresh set of flexible drum sounds designed by Pittsburgh Modular, to deliver complex, analog sound with an intuitive and direct interface. This powerful sound engine is paired with a deep, modern sequencer offering intricate rhythm programming and performance flexibility.

3.2 Panel Labeling Conventions:

The Cre8audio Boom Chick uses several simple labeling conventions to make the user interface and signal flow easy to understand.

- Each main function is contained within a white outline.
- Input jacks are labeled with **Red**.
- Output jacks are labeled with **White**.
- Knob main functions are written in **White** and alternate functions are written in **Red**
- The Main functions of the buttons are printed on the buttons in **Black.**
- The ***edit functions*** of the buttons are printed in **Red** and are accessed by holding the **[Edit Button]**

3.3 Manual Labeling Conventions:

Within the manual, buttons and knobs are in bold and marked with brackets **[ ]**. For example, **[Tempo Knob]** refers to the knob marked **Tempo** in the control knobs section.

Alternate functions are marked in **Red.** For example, **[Human]** refers to the ***edit function*** of **[Step 1].** Aside from **[Step Shift]**, ***edit functions*** are accessed by holding **[Edit]** and then pressing a button or turning a knob with an ***edit function.***

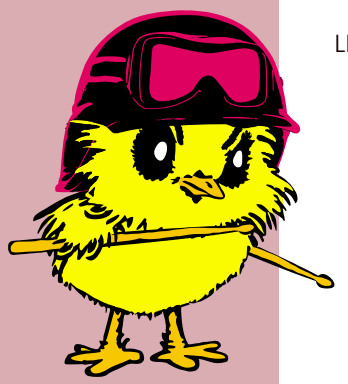
I/O Jacks are marked in bold with curly braces **{ },**

Output jacks are labeled in **Black** for example **{Clock Output}** refers to the jack labeled **Clock** in the ***I/O Jacks*** section

Input jacks are in bold and marked in **Red**. For example, **{Kick Input}** refers to the jack labeled **Kick** in the ***I/O Jacks*** section

LEDs are marked in bold with Parentheses **( )** and labeled in **Black**.

LEDs Important phrases are marked in **Bold** and *Italicized,* for example*:* ***Drum Channel.***



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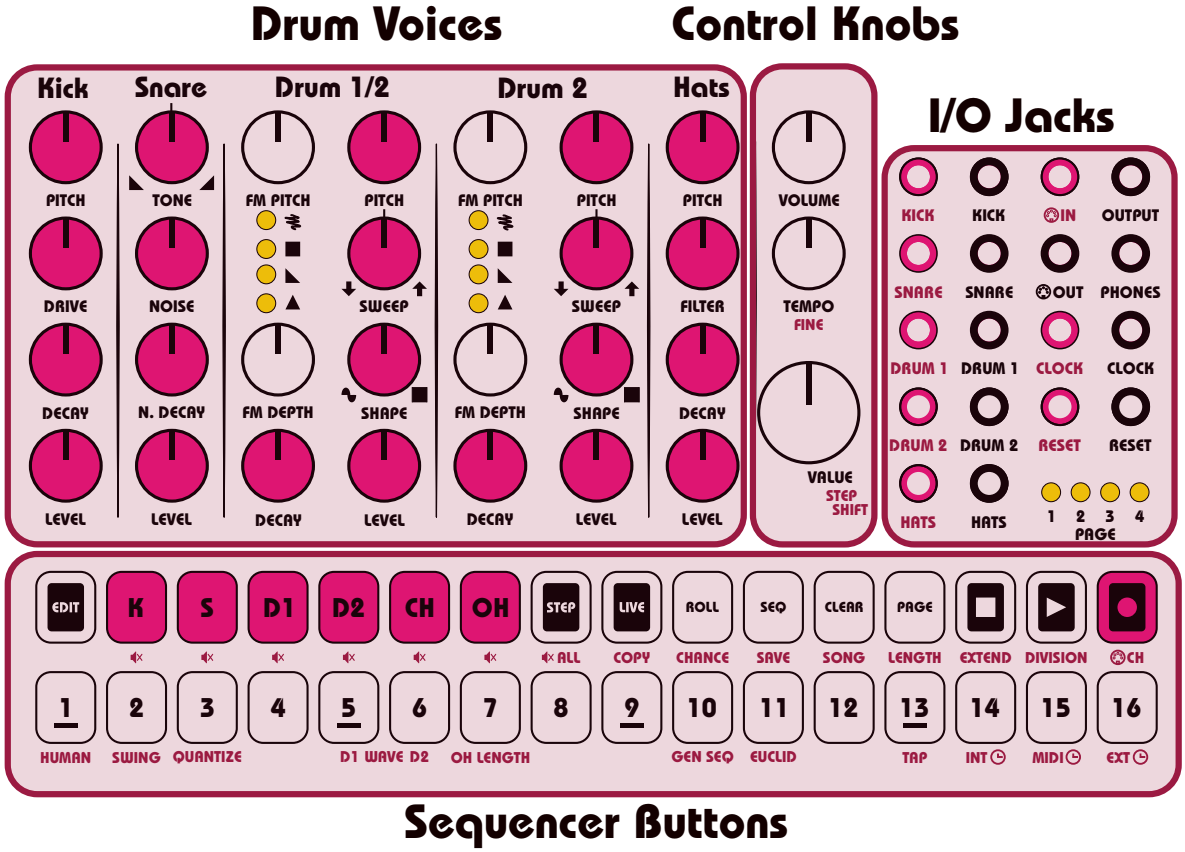
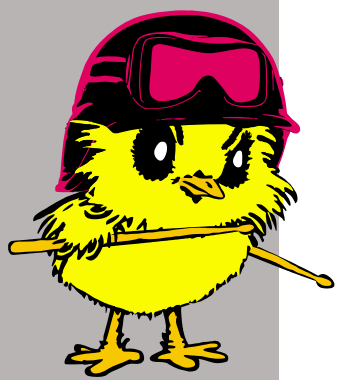
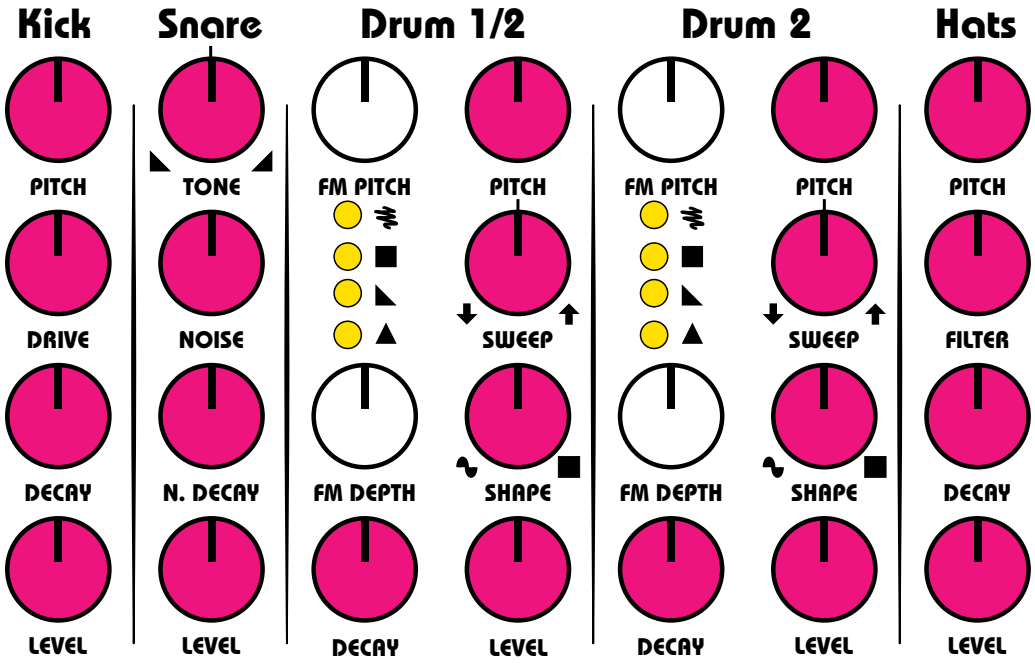
4 | Individual Modules

4.1 Panel Layout:



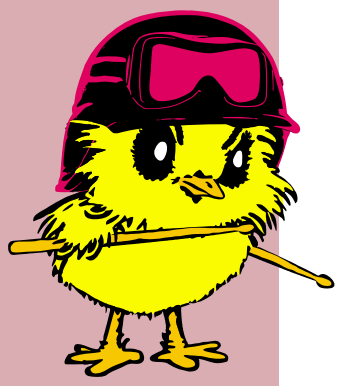


5 | Drum Voices



5.1 Drum Voices Overview

The Boom Chick redefines classic, analog drum sounds with all-new designs that allow it to recreate many of the classic sounds while simultaneously expanding into new sonic territory. The drum sounds utilize a knob-per-function interface for direct drum tweaking, perfect for casual sound design and intense live sets.



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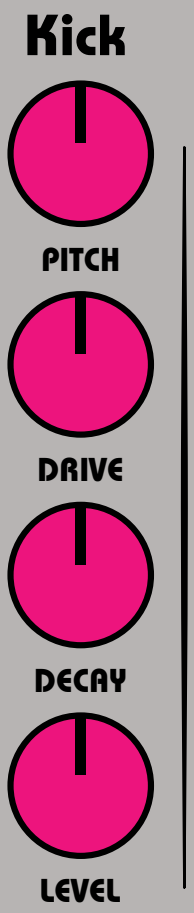
5 | Drum Voices : Kick Module



5.2 Kick Module

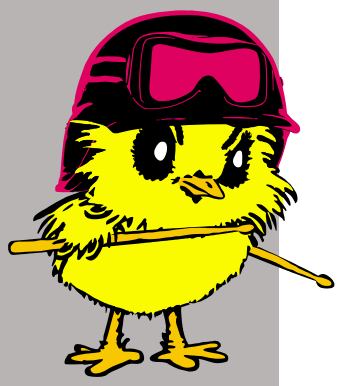
The kick drum utilizes a purpose built sine wave oscillator, overdrive, and a tuned percussion decay envelope with controls for pitch, overdrive, envelope decay, and level.

Pitch Knob - Adjust the frequency of the kick drum.

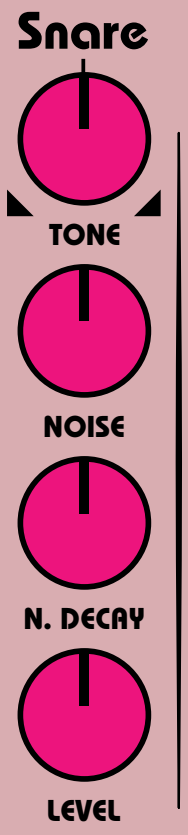
Drive Knob - Adjust the overdrive amount from clean to super dirty.

Decay Knob - Adjust the decay time of the kick drum envelope.

Level Knob - Adjust the volume level of the kick drum.



5 | Drum Voices : Snare Module



5.3 Snare Module

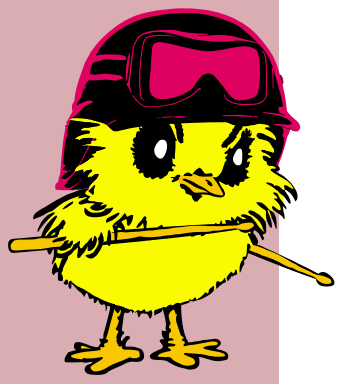
The snare drum is an attempt at reproducing the sound of a physical snare drum using analog circuitry. This drum is not based on the sound of a famous drum machine. It is a unique attempt at a synthesized snare drum that sounds not completely unlike a snare drum, but with a sonic flexibility that swings far beyond the limits of a physical instrument.

Tone Knob - Adjust the tone of the Snare's body. At 12 o'clock the effect is disabled. Turn to the left to tilt the overall tone toward the lower frequencies. Turn to the right to tilt the overall tone toward the higher frequencies.

Noise Knob - Adjust the volume level of the noise.

Noise Decay Knob - Adjust the decay time of the noise envelope.

Level Knob - Adjust the volume level of the snare drum.



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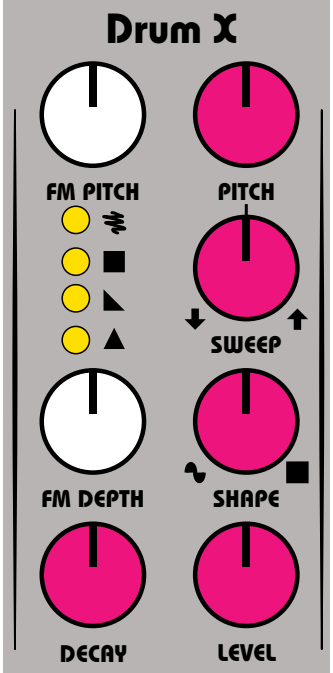
5 | Drum Voices : Drum 1 / 2 Modules



5.4 Drum 1 / 2 Modules

The drum channels are a re-imagining of the classic Pollard Syndrum. Although not a clone of the original, the drums were inspired by the flexibility and musicality of the Syndrum. A variable waveform oscillator is rhythmically modulated (or not) to create complex percussive sounds. Built in modulator and percussive decay envelope add depth and movement the oscillator.

We think this one sounds very nice.

FM Pitch Knob - Adjust the frequency of the modulator.

FM Depth Knob - Adjust the depth of the frequency modulation.

Decay Knob - Adjust the decay time of the drum envelope.

Pitch Knob - Adjust the frequency of the drum.

Sweep Knob - Adjust the frequency sweep of the drum. At 12 o'clock the effect is disabled. Turn to the left to sweep the oscillator frequency down. Turn to the right to sweep the oscillator frequency up.

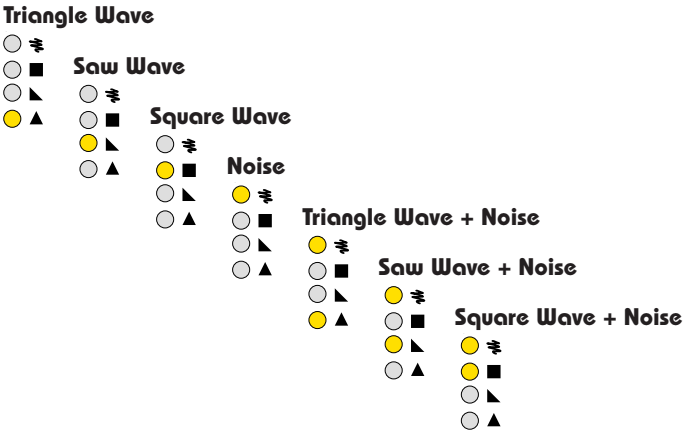
Shape Knob - Adjust the waveform of the drum. Full left the wave is a sine, turning the knob to the right morphs the wave into a square.

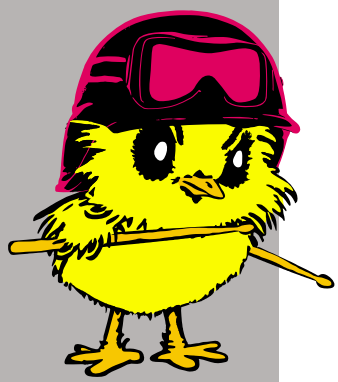
Level Knob - Adjust the volume level of the drum.

5.5 FM Mod Waveforms

Press **[D1 Wave]** or **[D2 Wave]** to cycle through the available wave shapes for the FM Mod Oscillators. The selected shape is displayed on the **(Drum Wave LEDs).**

There are seven available mod wave settings:





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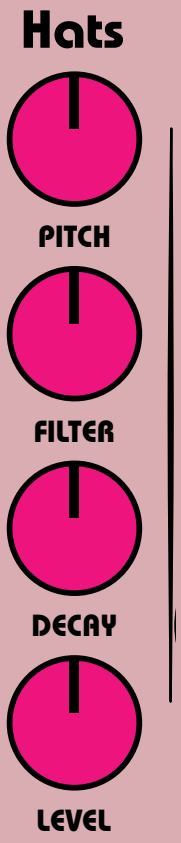
5 | Drum Voices : Hats Module



5.6 Hats Module

Hats is an attempt at reproducing the complexity of a cymbal using analog circuitry. This module is not based on the sound of a famous drum machine. It is a unique attempt at a synthesized hi-hat.

Pitch Knob - Adjust the frequency of the hats.

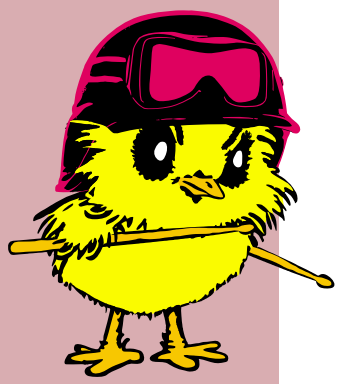
Filter Knob - Adjust the cutoff of the highpass filter.

Decay Knob - Adjust the decay time of the hats envelope.

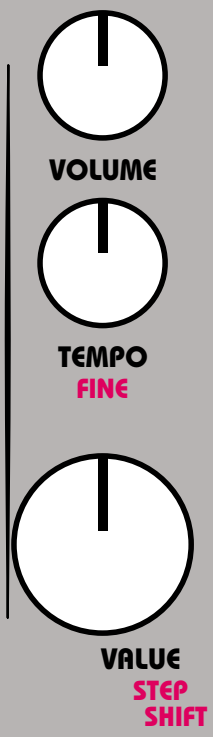
Level Knob - Adjust the volume level of the hats.

5.7 Open Hat Length

Press **[OH Length]** to enter the ***OH Length Screen*** then use the **[Value Knob]** to set the ***Open Hat Length*** from 5 to 500 milliseconds(0.005 to 0.5 seconds). The set ***Open Hat Length*** will be shown on the **(Step Button LEDs)**.



6 | Control Knobs



6.1 Volume Knob

The **[Volume knob]** is used to adjust the master mix volume of Boom Chick. This knob sets the volume of both the **{Output Jack}** and the **{Phones Jack}.**

6.2 Tempo Knob

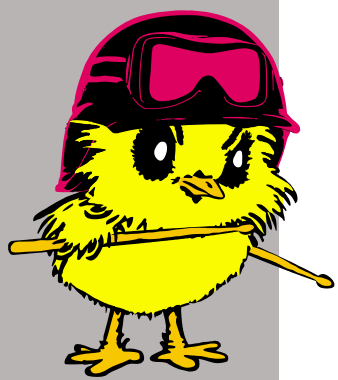
The **[Tempo Knob]** is used to adjust the ***Tempo*** of Boom Chick while in ***Internal Clock Mode.***
Turn the **[Tempo knob]** to adjust the tempo of your Boom Chick from 60 BPM to 185 BPM(quarter note = 1 beat).

Use **[Fine]** to micro-adjust the tempo.

6.3 Value Knob

The **[Value Knob]** is the main control used for setting values in all of the ***Edit Screens.*** The behavior of the value knob changes contextually.

[Step Shift] is the default behavior of the **[Value Knob]** in ***Step Mode.*** Use **[Step Shift]** to assign the ***Step Shift*** of a step while holding any **[Step Button]**.



7 | I/O Jacks

7.1 Drum Trigger Inputs

The **{Drum Trigger Input Jacks}** are analog gate inputs that will trigger their respective drums. They accept gates as small as 1 volt. The minimum gate length is 0.5 milliseconds.

7.2 Drum Outputs

The **{Drum Output Jacks}** are Eurorack level audio outputs that send the output of any of Boom Chick's ***Drum Voices*** for use with effects or external processing.

7.3 Midi Input and Output

The **{Midi In Jack}** allows the Boom Chick to be controlled or clocked with external Midi controllers or sequencers.

The **{Midi Out Jack}** sends midi clock, midi start, midi stop, midi continue, and midi note on/off messages from Boom Chick for sequencing external gear from the Boom Chick sequencer.

Both the **{Midi In Jack}** and the **{Midi Out Jack}** use the Midi Type A TRS standard.

7.4 Clock and Reset Inputs

The **{Clock Input}** receives analog clock signals for clocking your Boom Chick while in ***External Clock Mode***. The **{Clock Input}** prefers positive-only 5 Volt gate signals, but will behave with bi-polar LFOs under +-5 Volts.

The **{Reset Input}** receives analog gate signals and resets all channels of the Boom Chick sequencer to step 1. The **{Reset Input}** prefers positive-only signals.

7.5 Clock and Reset Outputs

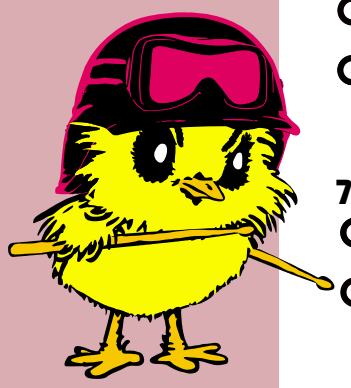
The **{Clock Output}** sends +5 volt, 5 millisecond analog gates once per step while Boom Chick's sequencer is playing.

The **{Reset Output}** sends a +5 volt, 5 millisecond analog gate whenever the longest sequence returns to step one.

7.6 Master Outputs

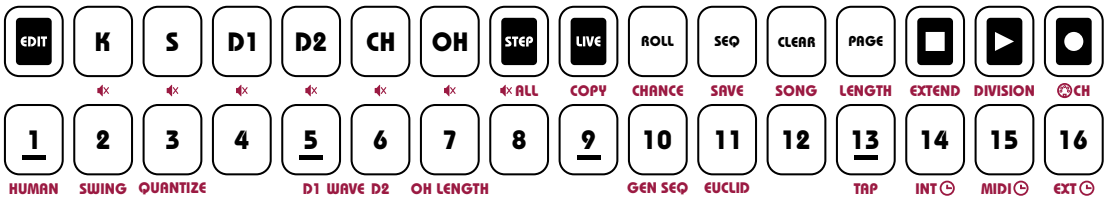
The **{Output Jack}** is a Eurorack level mono TS output jack that sends out the master mix.

The **{Phones Jack}** is a line level TRS output jack that can be used with headphones.



8 | The Sequencer

8.1 Sequencer Overview



Boom Chick has a 6-track step sequencer for sequencing Boom Chick's ***Drum Voices.*** The sequencer is designed to allow for a breadth of complex rhythmic possibilities while maintaining a quick, snappy, playful user experience.

8.2 Play and Stop

When Boom Chick's Sequencer is stopped, pressing the **[Play Button]** will start the sequencer on step one of the sequence.

While Boom Chick is playing, the **[Play Button]** will reset all tracks to step one.

While Boom Chick is playing, the **[Stop Button]** will ***Drop Out***, or "mute" all the Drum Voices on Boom Chick. While ***Dropped Out***, the **(Stop Button LED)** will flash and the sequencer will continue to track the active step and send clock outputs, resets, and midi clock and continue messages.

While ***Dropped Out***, the **[Play Button]** will trigger a ***Drop In*** and the sequence will start again when the longest track returns to step one. Pressing the **[Play Button]** twice will start the voices immediately rather than waiting to ***Drop In.***

While ***Dropped Out,*** the **[Stop Button]** will stop the sequencer.

8.3 Exiting Screens

= Exit Screens

The Boom Chick has a bunch of ***Screens*** that are used to edit ***Sequencer*** settings and interact with Boom Chick's sequencing tools.

To exit a ***Screen*** , use the **[Edit Button]**!

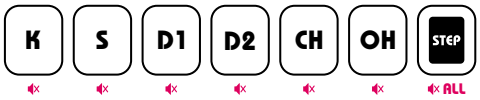
Get in the habit of using the **[Edit Button]** whenever you've finished using a ***Screen***, so that you don't accidentally edit settings you didn't mean to.

8 | The Sequencer

8.4 Edit Screen

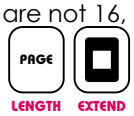
While holding the **[Edit Button],** Boom Chick will show the ***Edit Screen.*** The edit screen displays a bunch of information about the states of all of Boom Chick's settings.

The **(Drum Button LEDs)** will show which Drum Voices are muted, and will blink when ***Mute All*** is on. The **(Step Button LED)** will also be lit if ***Mute All*** is on.



The **(Roll Button LED)** will be lit if any chance settings are active on any voices.

The **(Page Button LED)** and **(Stop Button LED)** will be lit if any of the ***Sequence Lengths*** are not 16, and blinking if the ***Sequence Lengths*** of the channels are not the same.



The **(Play Button LED)** will be lit if any of the channels' ***Clock Divisions*** are not 1, and blinking if the ***Clock Divisions*** of the channels are not the same.

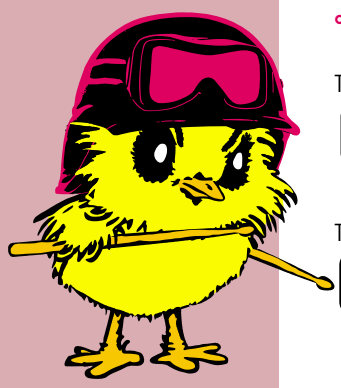
The **(Record Button LED)** will be lit if any of the channels' ***Midi Channels*** are not 10, and blinking if the ***Midi Channels*** of the channels are not the same.

The **(Step 1,2,and 3 LEDs)** will be lit if any of the channels' ***Humanize ,Swing,*** or ***Quantize*** (respectively) are active and blinking if the ***Humanize ,Swing,*** or ***Quantize*** of the channels are not the same.

The **(Step 7 LED)** will be blinking at a rate equal to the length of the ***Open Hat Length.***

The **(Step13 LED)** will be blinking at a rate equal to the ***Tempo.***

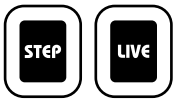
The **(Step 14,15,and 16 LEDs)** will display the ***Clock Source.***



8 | The Sequencer

8.5 Step Mode and Live Mode

Boom Chick has two main modes for its sequencer: ***Step Mode*** and ***Live Mode.***



The **[Step Button]** will activate ***Step Mode,*** and the **[Live Button]** will activate ***Live Mode.***
Step Mode and ***Live Mode*** cannot be active at the same time.

In ***Step Mode,*** the **[Drum Buttons]** will select the active drum, and the **[Step Buttons]** will turn on and off steps for that drum.

In ***Live Mode,*** the **[Drum Buttons]** will trigger drums, allowing for live play. If ***Record*** is active and the sequence is Playing, the played drums will be recorded.

Roll and ***Chance*** also have different behaviors when in ***Step Mode*** vs ***Live Mode***, and we'll talk about this later.

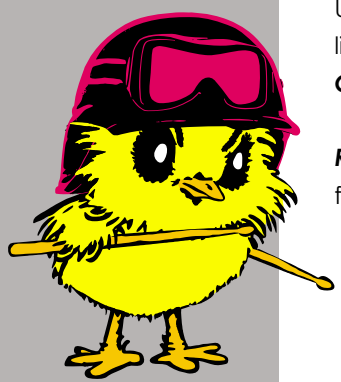
8.6 Pages

Sequences on Boom Chick can be up to 64 steps, shown in ***Pages*** of 16 steps. Use the **[Page Button]** to scroll through the active pages, and the currently active page will be shown on the **(Page LEDs).**

8.7 Record Mode

Use the **[Record Button]** to turn on and off ***Record Mode.*** While ***Record Mode*** is on in ***Live Mode,*** live played drums will be recorded un-quantized into the step sequencer. ***Live Rolls*** and ***Live Chance*** will also be recorded.

Record Mode also impacts the behavior of the ***Generate Sequence*** and ***Generate Euclidean*** functions, discussed later.



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8.8 Clock Source

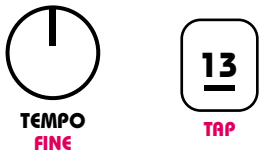
There are three options for clocking the Boom Chick: ***Internal Clock***, ***Midi Clock***, and ***External Clock.*** Selecting a clock source is done in the ***Edit Screen*** using **[Int Clock]**, **[Midi Clock]** or **[Ext Clock]**.

In ***Internal Clock***, the tempo of Boom Chick is set either using the **[Tempo Knob]** or the **[Tap]** Function.

In ***Midi Clock***, the tempo is set by the **{Midi In Jack}.**

In ***External Clock***, the tempo is set by the **{Clock Input Jack}.**

8.9 Tempo



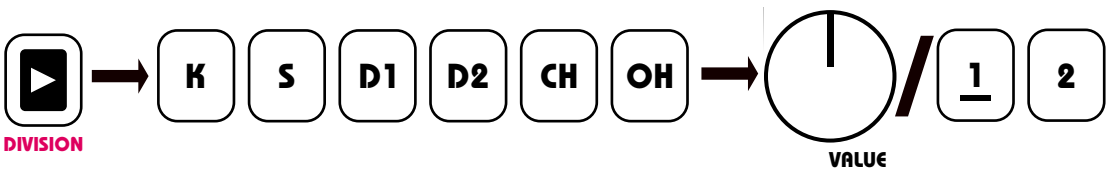
In ***Internal Clock***, there are two ways to set the ***Tempo:*** using the **[Tempo Knob]** or using the **[Tap]** function.

The **[Tempo Knob]** is used to adjust the ***Tempo*** of Boom Chick while in ***Internal Clock Mode.*** Turn the **[Tempo knob]** to adjust the tempo of your Boom Chick from 60 BPM to 185 BPM(quarter note = 1 beat).

The **[Tap]** function is used for tapping in the **Tempo.**

After setting the Tempo with either the **[Tempo Knob]** or **[Tap]**, use **[Fine]** to micro-adjust the tempo.

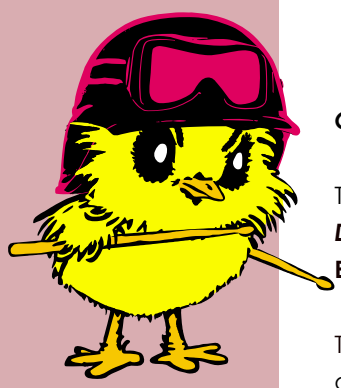
8.10 Clock Division



Clock Division is set per channel in Boom Chick, and changes the number of clocks per step.

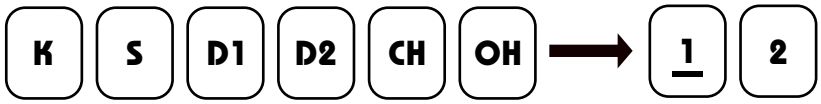
To set the ***Clock Division***, first enter the ***Clock Division Screen*** using **[Division].** Next, select which ***Drum Channels*** you want to edit using the **[Drum Buttons].** Use the **[Value Knob]** or the **[Step Buttons]** to set the ***Clock Division*** for the chosen channels, displayed on the **(Step LEDs)**.

To exit the ***Clock Division Screen,*** use the **[Edit Button]** or wait 10 seconds for the screen to time out.



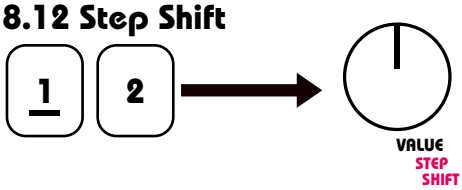
8 | The Sequencer

8.11 Step Mode Sequencing



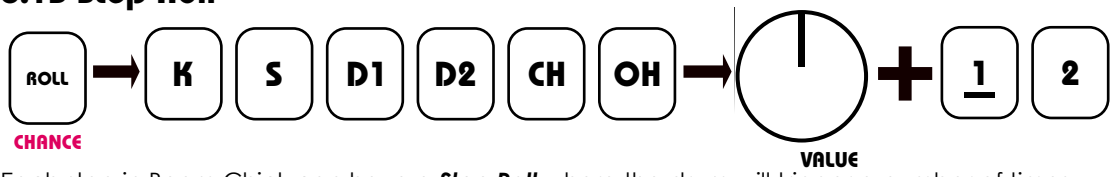
In ***Step Mode,*** use the **[Drum Buttons]** to select a ***Drum Channel*** to edit, then use the **[Step Buttons]** to turn on or off steps for that ***Drum Channel.*** Use the **[Page Button]** to show other pages for editing.

8.12 Step Shift



Steps in Boom Chick can be shifted forward or backward off the step by up to half a clock. This is called ***Step Shift.*** To edit the ***Step Shift*** of a step, use ***Step Mode.*** First, turn on a step using the [Step Buttons], then use the **[Step Shift Knob]** to set the ***Step Shift*** for that step. The selected ***Step Shift*** will be displayed on the **(Step Button LEDs).**

8.13 Step Roll



Each step in Boom Chick can have a ***Step Roll*** where the drum will trigger a number of times equal to the ***Step Roll*** over the length of the step. The step roll can be anywhere from 1 to 8 triggers, where 1 is no rolls.

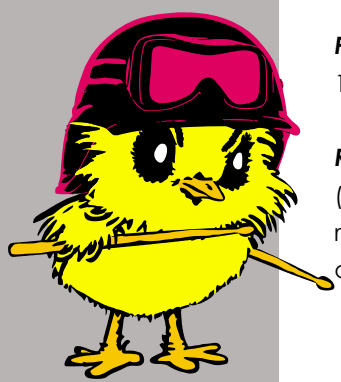
To set the ***Step Roll,*** first enter ***Step Mode,*** then use the **[Roll Button]** to enter the ***Roll Screen.*** Use the **[Drum Buttons]** to pick a drum to edit, and use the **[Page Button]** to show different pages for that drum. Next, either use the [Value Knob] to select a ***Step Roll*** amount, and then use the **[Step Buttons]** to quickly assign that ***Step Roll*** amount to any number of steps, or hold a **[Step Button]** and use the **[Value Knob]** to set the ***Step Roll*** for that Step.

8.14 Step Chance

Each step in Boom Chick can have a ***Step Chance*** which determines whether a step will trigger**.** To set the ***Step Chance,*** first enter ***Step Mode,*** then use the **[Chance Button]** to enter the ***Chance Screen.*** The ***Step Chance Screen*** works exactly like the ***Step Roll*** screen, and there are two types of chance that can be assigned: ***Percentage Chances***, and ***Repeat Conditions.***

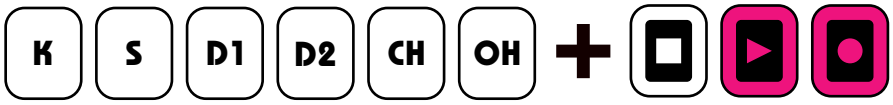
Percentage Chances are set in the first half of the **[Value Knob]** and go from 0%(default) to 100%, and they represent a percentage chance of skipping a trigger.

Repeat Conditions make drums trigger on different repeats of the sequence. Shown on the (Step Button LEDs), the left value shows which repeats, and the right value shows how many repeats. For example, this repeat conditions shows that a drum will trigger on the first and third of every four repeats:



8 | The Sequencer

8.15 Live Mode Recording



In ***Live Mode*** while the sequence is ***Playing*** *and* ***Record*** *is on,* the **[Drum Buttons]** will both trigger the drums and record into their respective drum's steps. Recording on Boom Chick is done with an overdub behavior.

To clear steps you don't like while in live mode, you can use the ***Clear Tool***, or edit them in ***Step Mode.***

8.16 Live Mode Shift

The recording done in ***Live Mode*** will include ***Step Shift*** to match the timing you played the drums in with.
If you're unhappy with the timing you played in, you can use the ***Quantize Tool*** or edit the ***Step Shift*** in ***Step Mode.***

8.17 Live Roll

The **[Roll Button]** has a completely different behavior in ***Live Mode*** than it has in ***Step Mode.*** In ***Live Mode,*** the **[Roll Button]** will show the ***Live Roll Screen*** while held. While in the **Live Roll Screen,** use the **[Drum Buttons]** to select the ***Roll Drums,*** and use the **[Value Knob]** to set the ***Roll Amount.*** While ***Live Roll-***ing, the ***Roll Drums*** will roll based on the ***Roll Amount.*** If ***Record*** is on, the ***Live Rolls*** will be recorded.

It can be helpful to set up your ***Roll Drums*** and ***Roll Amount*** before performing, giving you a one-button live performance tool that you don't have to fiddle with while playing!

As a default, ***Live Roll*** will roll the Closed and Open Hats in a double roll.

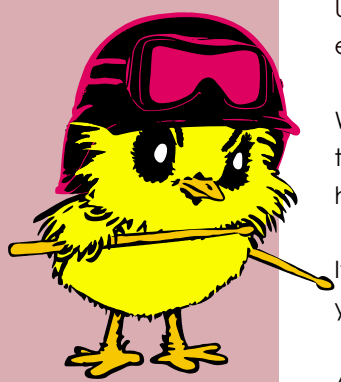
8.18 Live Chance

Using **[Chance]** in ***Live Mode*** will show the ***Live Chance Screen***. The ***Live Chance Screen*** works exactly like the ***Live Roll Screen*** but instead interacting with the chance function.

While in the ***Live Chance Screen,*** use the **[Drum Buttons]** to select the ***Chance Drums,*** and use the **[Value Knob]** to set the ***Chance Amount.*** While ***Live Chance-***ing, the ***Chance Drums*** will miss hits based on the ***Chance Amount.*** If ***Record*** is on, the ***Live Chances*** will be recorded.

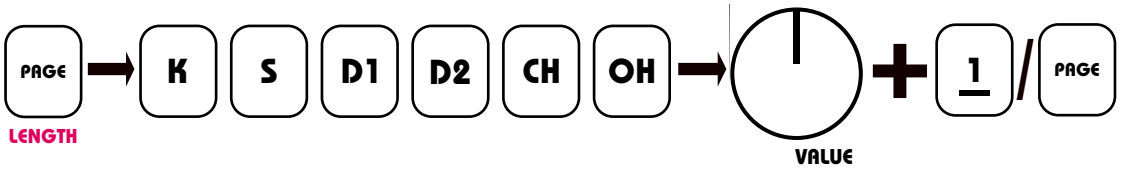
It can be helpful to set up your ***Chance Drums*** and ***Chance Amount*** before performing, giving you a one-button live performance tool that you don't have to fiddle with while playing!

As a default, ***Live Chance*** will apply a 50% ***Chance Amount*** to all ***Drum Voices***.



8 | The Sequencer

8.19 Sequence Length

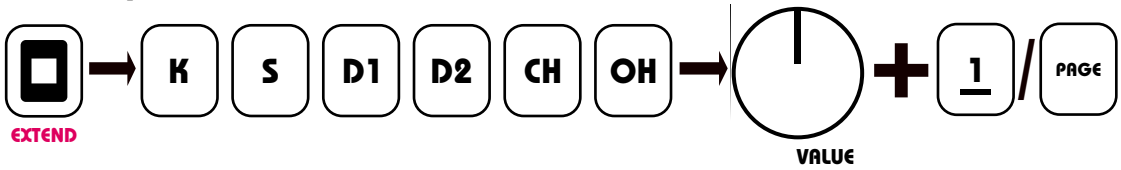


Sequence Length is the number of steps in the sequence. It can be set per ***Drum Voice***, allowing for polymetric sequencing!

To edit the ***Sequence Length***, first enter the ***Length Screen*** by pressing **[Length]**. Next, use the **[Drum Buttons]** to select which ***Drum Voices*** you want to edit. Finally, use the **[Value Knob]** or the **[Step Buttons]** to set the ***Sequence Length.*** The ***Sequence Length*** is shown using both the **(Page LEDs)** and the **(Step Button LEDs).**

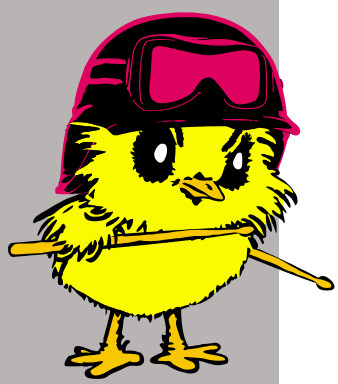
If you hold the **[Page Button]** while setting the ***Sequence Length*** with the **[Value Knob]** the ***Sequence Length*** will snap to multiples of 16, allowing for easily adding full pages to the ***Sequence Length.***

8.20 Sequence Extend



Sequence Extend is an alternative way to set the ***Sequence Length***. The **Sequence Extend Screen** behaves exactly the same as the ***Sequence Length Screen.*** To enter the Sequence Extend screen press **[Extend]**.

Unlike the ***Sequence Length Screen***, ***Sequence Extend*** will fill in newly added steps based on what you had already sequenced in the previous steps, allowing a user to easily build longer loops from short sequences.

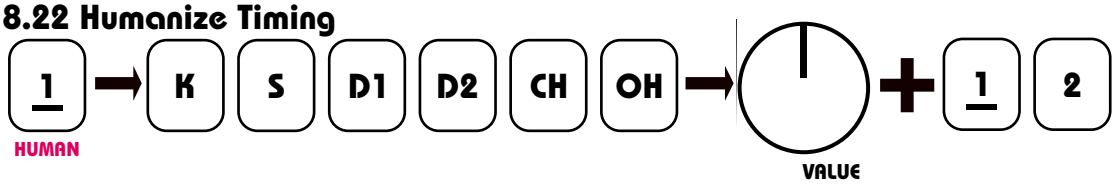


8 | The Sequencer

8.21 Timing Functions

Boom Chick has three ***Timing Functions*** that impact how the timing of steps is handled: ***Humanize Timing***, ***Swing Timing***, and ***Quantize Timing. Timing Functions*** are set per ***Drum Voice***, so each voice can have a different set of Timing Function behaviors.

8.22 Humanize Timing

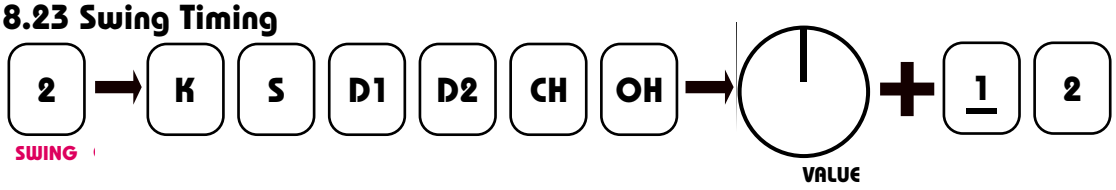


Humanize Timing applies randomization to the timing of steps, shifting them forward or backward in time by a random amount bounded by the ***Humanize Amount,*** within a half step**.**

To edit the ***Humanize Timing***, first enter the ***Humanize Timing Screen*** by pressing **[Human]**. Next, use the **[Drum Buttons]** to select which ***Drum Voices*** you want to edit. Finally, use the **[Value Knob]** or the **[Step Buttons]** to set the ***Humanize Amount.*** The ***Humanize Amount*** is shown using the **(Step Button LEDs).**

To turn off ***Humanize Timing*** for a channel, simply set the ***Humanize Amount*** to zero.

8.23 Swing Timing

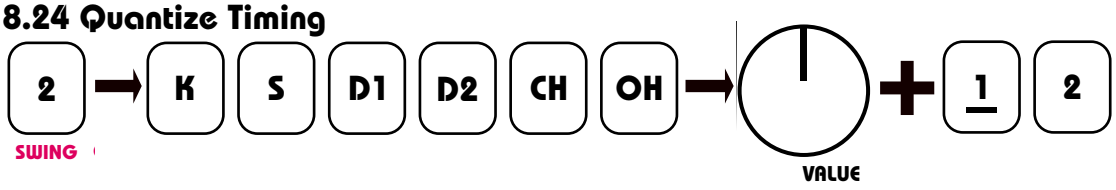


Swing Timing moves even steps back in time by the ***Swing Amount,*** up to a half step.

To edit the ***Swing Timing***, first enter the ***Swing Timing Screen*** by pressing **[Swing]**. Next, use the **[Drum Buttons]** to select which ***Drum Voices*** you want to edit. Finally, use the **[Value Knob]** or the **[Step Buttons]** to set the ***Swing Amount.*** The ***Swing Amount*** is shown using the **(Step Button LEDs).**

To turn off ***Swing Timing*** for a channel, simply set the ***Swing Amount*** to zero.

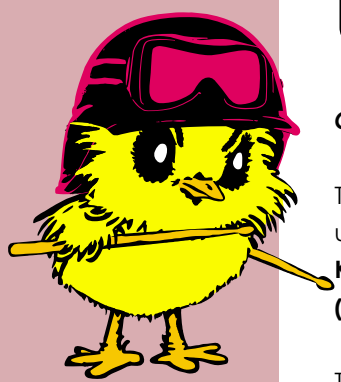
8.24 Quantize Timing



Quantize Timing reduces the ***Step Shift*** of steps based on the ***Quantize Amount*** from 0-100%.

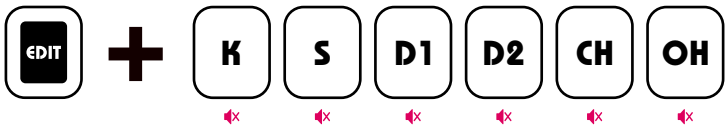
To edit the ***Quantize Timing***, first enter the ***Quantize Timing Screen*** by pressing **[Quantize]**. Next, use the **[Drum Buttons]** to select which ***Drum Voices*** you want to edit. Finally, use the **[Value Knob]** or the **[Step Buttons]** to set the ***Quantize Amount.*** The ***Quantize Amount*** is shown using the **(Step Button LEDs).**

To turn off ***Quantize Timing*** for a channel, simply set the ***Quantize Amount*** to zero.



8 | The Sequencer

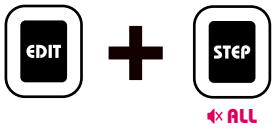
8.25 Drum Mutes



To ***Mute*** a ***Drum Voice***, hold **[Edit]** and use any of the **[Buttons]** to turn on or off ***Mute*** for a ***Drum Voice***.

Muted ***Drum Voices*** will be lit while in the ***Edit Screen.***

8.26 Mute All



To ***Mute All Drum Voices***, hold **[Edit]** and use **[All]** to turn on or off ***Mute All***.

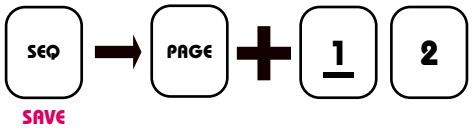
Drum Voices will be flashing in the ***Edit Screen*** while ***Mute All*** is active.

8 | The Sequencer

8.27 Save Slots

Boom Chick has 64 ***Save Slots*** arranged in four pages of 16 saves. Each of these save slots can hold one ***Sequence*** of all six ***Drum Voices***.

8.28 Save Screen

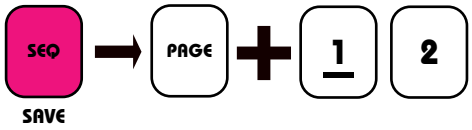


Enter the ***Save Screen*** by using **[Save].** While in the ***Save Screen,*** use the **[Page Button]** to scroll through the available ***Save Pages.*** Used ***Save Slots*** are displayed on each ***Save Page*** using the **(Step Button Leds).** Use any of the **[Step Buttons]** to select a ***Save Slot,*** and the current ***Sequence*** will be saved into that ***Save Slot.***

Be warned! This will overwrite any **Sequence** currently stored in the selected ***Save Slot!***

To ***Clear*** a ***Save*** while in the ***Save Screen***, Hold the **[Clear Button]** and select the ***Save Slot*** to be deleted.

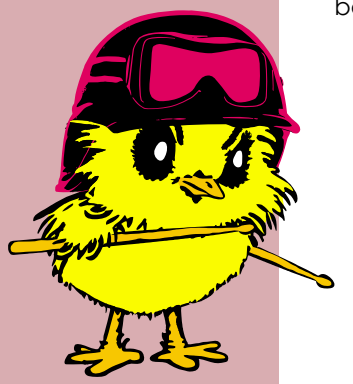
8.29 Seq Load Screen



Enter the ***Seq Load Screen*** by using the **[Seq Button].** While in the ***Seq Load Screen,*** use the **[Page Button]** to scroll through the available ***Save Pages.*** Used ***Save Slots*** are displayed on each ***Save Page*** using the **(Step Button Leds).** Use any of the **[Step Buttons]** to select a ***Save Slot,*** and the selected ***Save*** will be loaded**.** If ***Play*** is active, the ***Sequence*** will be loaded the next time the longest sequence returns to its first step.

Be warned! If you ***Load*** a **Sequence**, your current ***Sequence*** will disappear if it has not been ***Saved***!

To ***Clear*** a ***Save*** while in the ***Seq Load Screen***, Hold the **[Clear Button]** and select the ***Save Slot*** to be deleted.



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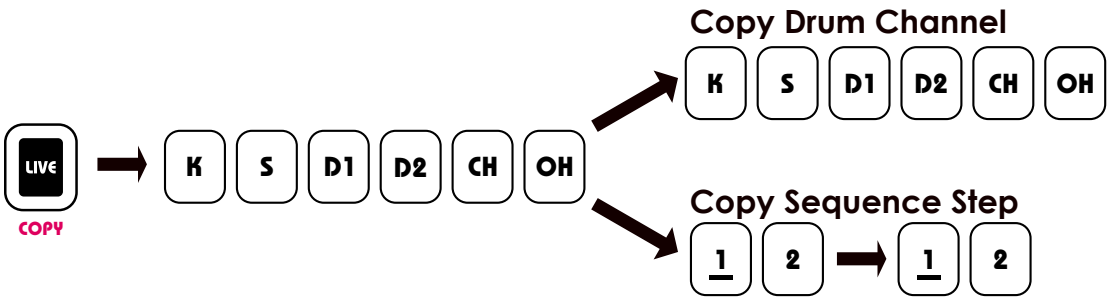
8.30 Copy/Paste Tool

The ***Copy/Paste Tool*** can be used to ***Copy Drum Channels*** into other ***Drum Channels***, or to ***Copy Sequence Steps*** into other ***Sequence Steps*** inside the same ***Drum Channel.***

Copying Drum Channels into other ***Drum Channels*** is useful for a sample stacking type of workflow. I often like to ***Copy*** my ***Kick Drum Channel*** into my ***Drum 1 Channel***, so that I can use ***Drum 1*** to augment the sound of my ***Kick Drum***. I also do the same with my ***Open Hat*** and ***Drum 2***, enabling a wider range of sound design possibilities!

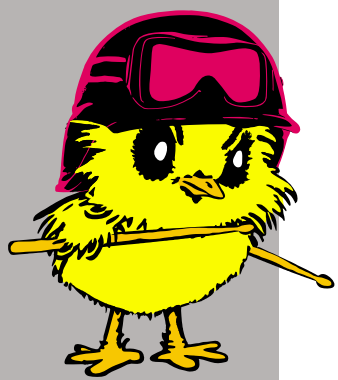
Copying Seauence Steps into other ***Sequence Steps*** is a quick way to edit the ***Step Shift***, ***Step Roll***, and ***Step Chance***. If I have a ***Sequence Step*** that I really like, I can ***Copy/Paste*** it rather than having to go into all those sub screens to achieve a duplicate step.



To use the ***Copy/Paste Tool***, first use [Copy] to enter the ***Copy/Paste Screen.*** Next, select a ***Copy Channel*** using the **[Drum Buttons].**

To ***Copy*** the ***Copy Channel*** into another ***Drum Channel***, simply use the **[Drum Buttons]** to select a different ***Drum Channel,*** and your ***Copy Channel*** will be ***Pasted*** into the selected ***Drum Channel,*** and your ***Copy Channel*** will be reset, allowing you to choose a new ***Copy Channel.***

To Copy a Sequence Step into another Sequence Step after selecting a Copy Channel, selected a Copy Step using the [Page Button] and the [Step Buttons], then select a different step and



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8.31 Clear Tool

The ***Clear Tool*** can be used to delete a ***Sequence Step***, a ***Drum Channel***, all ***Step Rolls*** for all ***Drum Channels***, or a full ***Sequence***.

CLEAR To use the ***Clear Tool***, enter the ***Clear Screen*** using the **[Clear Button].**

While in the ***Clear Screen*:**

1 Use the **[Page Button]** to scroll through the ***Sequence Steps*** for the current active ***Drum Channel,*** then use any of the ***[Step Buttons]*** to Clear a ***Sequence Step.***

Note: Select the active ***Drum Channel*** using the **[Drum Buttons]** before entering the ***Clear Screen*** when clearing ***Sequence Steps.***

K Use the **[Drum Buttons]** to clear all the ***Sequence Steps*** for the ***Drum Channel.***

ROLL Use the **[Roll Button]** to clear all ***Step Rolls*** for all ***Sequence Steps*** in all ***Drum Channels.***

SEQ X2 Use the **[Seq Button]** twice to clear the entire ***Sequence*** for all ***Drum Channels.***

8.32 Clear Edit Tool

The ***Clear Edit Tool*** can be used to delete, or return to factory default, all the settings that are accessed through the ***Edit Screen.***

CLEAR + EDIT To use the ***Clear Edit Tool***, enter the ***Clear Edit Screen*** by holding the **[Clear Button]** and pressing the **[Edit Button].**

While in the ***Clear Edit Screen*:**

K / STEP Use either the [🔇 Buttons] or [🔇 All] to turn off all ***Mutes.***

ROLL CHANCE Use [Chance] to clear all ***Step Chances*** for all ***Sequence Steps*** in all ***Drum Channels.***

PAGE LENGTH / EXTEND Use [Length] or [Extend] to set all ***Sequence Lengths*** for all ***Drum Channels*** to 16.

DIVISION Use [Division] to set all ***Clock Divisions*** for all ***Drum Channels*** to 1.

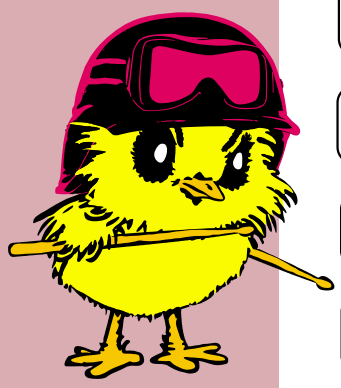
CH Use [Midi Ch] to set all ***Midi Channels*** for all ***Drum Channels*** to 10.

1 HUMAN 2 SWING 3 QUANTIZE Use [Human], [Swing], or [Quantize] to the ***Humanize Timing***, ***Swing Timing***, or ***Quantize Timing*** for all ***Drum Channels.***

5 D1 WAVE 6 D2 Use [D1 Wave] or [D2 Wave] to reset the **Drum FM Mod Shape** to Triangle.

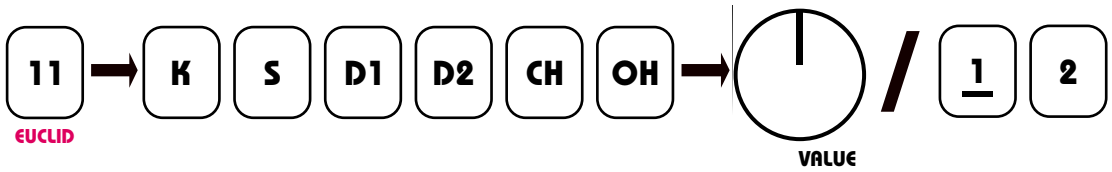
13 TAP Use [Tap] to reset the ***Tempo*** to 145 BPM.

14 INT 15 MIDI 16 EXT Use [Int Clock], [Ext Clock], or [Midi Clock] to set the ***Clock Source*** to ***Internal Clock.***



8 | The Sequencer

8.33 Euclidean Generator

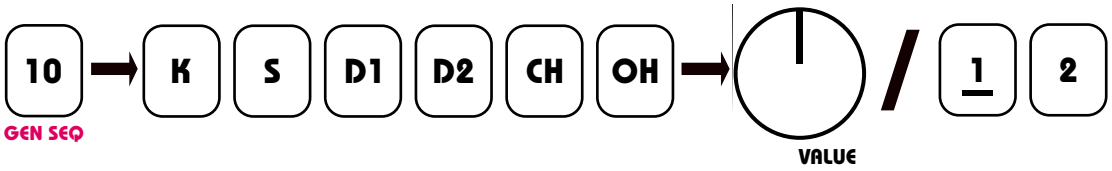


To generate a ***Euclidean Pattern,*** use **[Euclid]** to enter the ***Euclidean Generator Screen.*** Use the ***[Drum Buttons]*** to select a ***Drum Channel*** to generate a ***Euclidean Pattern*** for, then use the ***[Value Knob]*** or ***[Step Buttons]*** to set the number of steps for the ***Euclidean Generator***. If ***Record*** is on, the ***Euclidean Sequence*** will replace the previous sequence. If ***Record*** is off, the ***Euclidean Sequence*** will be played as a fill.

If ***Play*** is on, the ***Euclidean Sequence*** will be generated at the end of the current sequence. If ***Play*** is off, the ***Euclidean Sequence*** will be generated immediately.

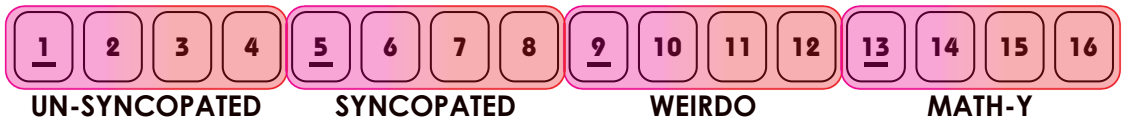
8.34 Sequence Generator

The **Sequence Generator** is a rhythm generation tool that tries to generate human-like drum patterns based on a core groove. It can be used to generate sequences of varying levels of complexity and with one of four different grooves.

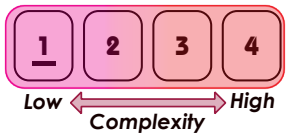


To ***Generate*** a ***Sequence***, use **[Gen Seq]** to enter the Sequence Generator Screen**.** Use the ***[Drum Buttons]*** to select the ***Drum Channels*** to ***Generate*** a ***Sequence*** for, then use the ***[Value Knob]*** or ***[Step Buttons]*** to set the ***Generation Complexity***. If ***Record*** is on, the ***Generated Sequence*** will replace the previous sequence. If ***Record*** is off, the ***Generated Sequence*** will be played as a fill.

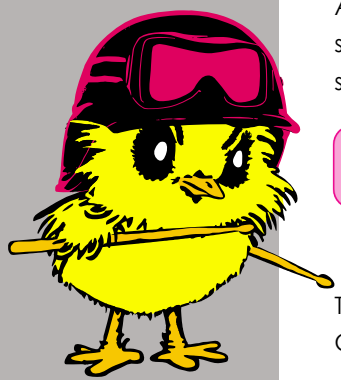
The ***Sequence Generator*** has four **Grooves** that dictate the core rhythmic structure. You can generate: Un-Syncopated Grooves, Syncopated Grooves, Weirdo Grooves, and Math-Y Grooves.



At the lowest complexity inside a **Groove**, you'll generate simple sequences that have the selected **Groove**. At the upper end of a **Groove**, you'll generate much more complex sequences with the same **Groove**.

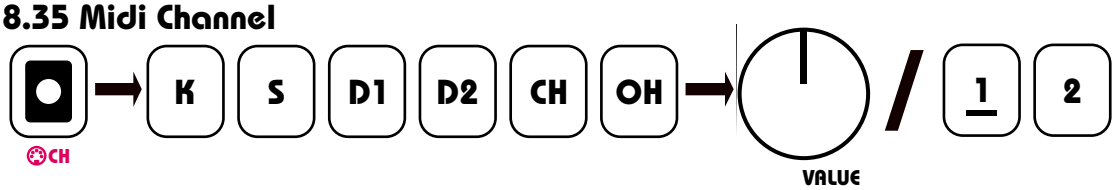


The ***Sequence Generator*** likes to think of Drum 1 as a Low Tom or Bass Voice, and Drum 2 as a Cymbal or Aux Percussion Voice.



8 | The Sequencer

8.35 Midi Channel



To set the ***Midi Channel***, first enter the ***Midi Channel Screen*** by pressing **[Midi Ch]**. Next, use the **[Drum Buttons]** to select which ***Drum Voices*** you want to edit. Finally, use the **[Value Knob]** or the **[Step Buttons]** to set the ***Midi Channel.*** The ***Midi Channel*** is shown using the **(Step Button LEDs).**

The default ***Midi Channel*** for all ***Drum Voices*** is Channel 10.

8.36 Midi Note On and Off

The drums on Boom Chick will send a ***Midi Note On*** message(velocity 100) every time they are triggered from any source other then the **{Drum Trigger Inputs}.** They will then send a ***Midi Note Off*** message 10 milliseconds later. All Midi Note On and Midi Note Off Messages are sent on their respective Drum's ***Midi Channel,*** and the Midi note mappings are as follows:

- ***Kick Drum*** : Note 36 (Electric Bass drum)
- ***Snare Drum*** : Note 38 (Acoustic Snare)
- ***Drum 1*** : Note 43 (High Floor Tom)
- ***Drum 2*** : Note 48 (High-Mid Tom)
- ***Closed Hat*** : Note 42 (Closed Hi-Hat)
- ***Open Hat*** : Note 46 (Open Hi-Hat)

The drums on Boom Chick will trigger whenever they receive a ***Midi Note On*** message on their ***Midi Channel*** that maps to any of the ***Midi Note Numbers*** mapped to them. The ***Midi Note On*** Mappings are as follows:

- ***Kick Drum*** : Note 35 and 36 (Acoustic Bass Drum, Electric Bass drum)
- ***Snare Drum*** : Note 38 and 40 (Acoustic Snare, Electric Snare)
- ***Drum 1*** : Note 41, 43, 45, and 61(Low Floor Tom, High Floor Tom, Low tom, Low Bongo)
- ***Drum 2*** : Note 47, 48, 50, and 60(Low-Mid Tom, High-Mid Tom, High Tom, High Bongo)
- ***Closed Hat*** : Note 42 and 82 (Closed Hi-Hat, MPC Shaker)
- ***Open Hat*** : Note 46 and 44 (Open Hi-Hat, Pedal Hi-Hat)

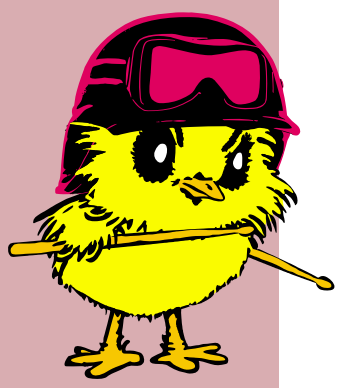
8.37 Midi Start, Stop, and Continue

Receive:

Boom Chick responds to incoming ***Midi Clock Start*** Messages while ***Midi Clock*** is on by playing from the first step, starting at the next incoming clock message.
Boom Chick responds to incoming ***Midi Clock Stop*** Messages while ***Midi Clock*** is on by stopping the Sequencer.
Boom Chick responds to ***Midi Clock Continue*** Messages while ***Midi Clock*** is on by resetting to the first step of the ***Sequence***.

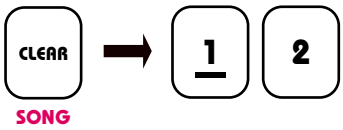
Send:

Boom Chick sends a ***Midi Clock Start*** Message whenever ***Play*** is started.
Boom Chick sends a ***Midi Clock Stop*** Message whenever ***Play*** is stopped.
Boom Chick sends a ***Midi Clock Continue*** Message whenever ***Play*** is active, and the longest ***Drum Channel*** returns to its first step.



8.38 Song Mode

Song Mode allows you to create, save, and play chains of ***Saved Sequences*** as ***Songs***.



To use ***Song Mode,*** first use **[Song]** to enter the ***Song Selection Screen.*** While in the ***Song Selection Screen***, use the ***[Step Buttons]*** to select one of the 16 ***Song Slots.***

Selecting a ***Song Slot*** will load ***Song Mode.***

While in **Song Mode**, if **Record** is active, the **(Step Button LEDs)** will show the available **Saved Sequences**. Pressing any of the lit **[Step Buttons]** will add the **Saved Sequence** onto the end of the ***Song***.

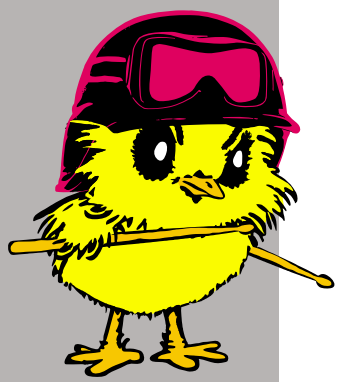
While in Song Mode, if ***Record*** is inactive, the **(Step Button LEDs)** will show the ***Song Chain***. To change the selected ***Saved Sequence*** for a step in the ***Song Chain,*** select a ***Song Step*** using the **[Step Buttons]** and then select the ***Saved Sequence*** you want to use for that step.

With ***Record*** inactive, you can remove a ***Song Step*** from the ***Song*** by holding the **[Clear Button]** and pressing any of the lit **[Step Buttons]**. You can also duplicate a ***Song Step*** by holding the **[Live Button]** and pressing any of the lit **[Step Buttons]** to add another copy of that ***Song Step*** to the ***Song***.

In ***Song Mode***, use the ***Edit Screen*** to toggle ***Song Extend*** with **[extend].** While **Song Extend** is active, the ***Song*** will loop. If ***Song Extend*** is inactive, the song will ***Stop*** after it reaches the end of the ***Song Chain.***

To ***Save*** your song, use **[Save]** to enter the ***Song Save Screen*** and then select a song ***Save Location***.

To exit ***Song Mode***, use the **[Seq Button]** and select any ***Saved Sequence*** to leave ***Song Mode*** and load the selected ***Saved Sequence***.



9 | Factory Reset

9.1 All Settings Factory Reset:

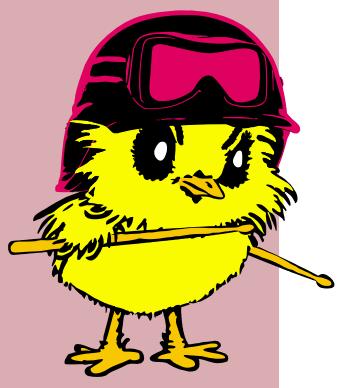
To perform a ***Factory Reset,*** hold the **[Edit Button]**,**[Clear Button]**, **[Stop Button]**, and **[Record Button]** until the lights stop blinking, then power cycle your Boom Chick.

10 | Eurorack Specs

10.1 Eurorack Specs:

Panel size: 40hp.
Module depth: 30mm.
Power consumption: +12v 250 mA, -12v 200 mA, +5v rail not required.
Reversed power polarity protection.

Due to the complexity of this module, it requires a significant amount of power. Please use a clean, high quality power source for optimum performance.



cre8audio™

11 | More Information

11.1 Warranty:

Cre8audio warrants to the original purchaser that this unit is free of defects in materials and workmanship under normal use and maintenance for a period of one (1) year from the date of original purchase. The warranty applies only to registered Cre8audio users that register their Cre8audio Product(s) within fourteen (14) days of time of original purchase. To register Cre8audio Products, visit Cre8audio.com. If the unit fails within the one (1) year period, it will be repaired, or replaced, at Cre8audio's option, at no charge, when returned prepaid to the Cre8audio Technical Service Center with proof of purchase – the sales receipt may be used for this purpose. Installation labor is not covered under this warranty.

Cre8audio reserves the right to change the method by which Cre8audio may provide warranty service, and any Cre8audio Product's eligibility to receive a particular method of service. Service will be limited to the options available in the country where service is requested. Service options, parts availability and response times may vary according to country. The original purchaser will be responsible for all shipping and handling charges. Customers that seek service in a country that is not the country of purchase must comply with all applicable import and export laws and regulations and be responsible for all custom duties, V.A.T. and other associated taxes and charges. For international service, Cre8audio may repair or replace Cre8audio Products and parts with comparable Cre8audio Products and parts that comply with local standards.

All replacement parts, whether new or re-manufactured, assume as their warranty period for only the remaining time of this warranty. This warranty does not apply to damage caused by improper use, accident, abuse, improper voltage service, fire, flood, lightning, or other acts of God, or if the product was altered or repaired by anyone other than Cre8audio Technical Service Center. Consequential and incidental damages are not recoverable under this warranty.

Some regions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. This warranty gives you specific legal rights, and you may also have other rights, which vary by state and country No portion of this warranty may be copied or duplicated without the expressed written permission of Cre8audio. THIS WARRANTY IS NOT TRANSFERABLE.

11.2 Service and Contact Information:

Please contact us for service or other information related to the Boom Chick or any other Cre8audio product. https://www.cre8audio.com/supportticket

11.3 Firmware Revision

To check the firmware revision on BoomChick, hold the **[Edit Button]**, **[Step Button]**, and **[Live Button].** The firmware revision will display on the **(Step Button LEDs).**

Firmware Rev 1.1: