PATCHING PANDA PARTICLES Trigger Modulation Full DIY Kit User Manual

Contents

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PRODUCT INFORMATION

Particles is a 4-channel trigger modulation device that allows you to variate and manipulate patterns using a combination of fun features. It can transform your rhythmic ideas into complex and groovy patterns, even if you have limited music knowledge. With the provided rhythmic tools, you can create your own algorithms to instantly change patterns in various ways without sacrificing the original idea. Particles offers features for building complex breaks, grooves, evolving percussion sounds, arpeggios, and bass line grooves.

INTRODUCTION

Particles, is 4 channels of trigger modulation, capable of mathematically variating and manipulating your patterns with a combination of fun features to play with. It can evolve your rhythmic idea into more complex and groovy patterns which are difficult to achieve without music knowledge. You can create your algorithms from the rhythmic tools provided to be able to change the patterns instantaneously in many ways without worrying to sacrifice the original idea. You can shift and scramble the outputs, you can repeat the triggers with different time signatures to transform the grooves, mute in different ways, disappear by probability trigger inputs, disappear by probability repetitions, use sequential switching to shift randomly with a different kind of resetting, bypass each channel and set it individually the amount of each feature per channel when feeding external CV. The idea of Particles, was designed to provide features for building complex breaks, grooves, organic-evolving percussion sounds, different options for arpeggios, and even bass line grooves, the limits are decided by you.

INSTALLATION

- Disconnect your synth from the power source.
- Double check polarity from the ribbon cable, unfortanetly if you damage the module by powering in the wrong direction it will not be covered by the warranty.

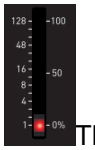
- After connecting the module check again you have connected the right way, the red line must be on the -12V.

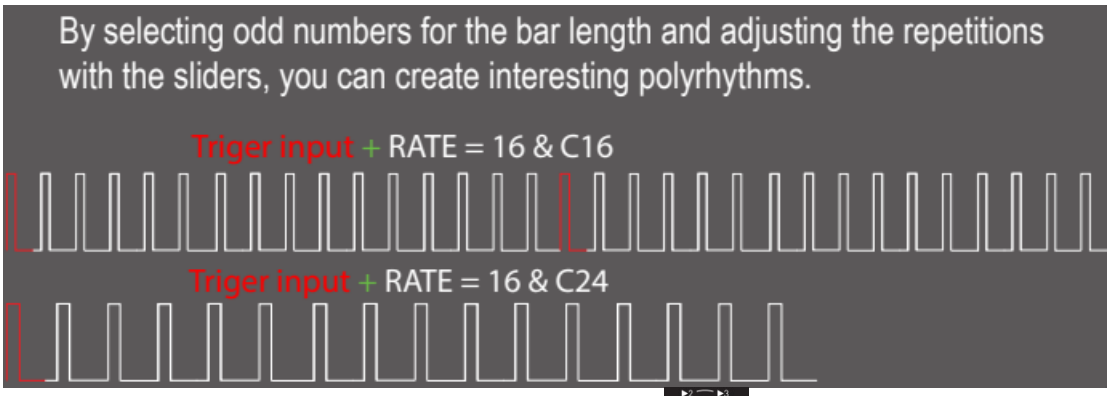
INSTRUCTIONS

- **A** Trigger input 1
- **B** Trigger input 2
- **C** Trigger input 3
- **D** Trigger input 4
- **E** Trigger output 1
- **F** Trigger output 2
- **G** Trigger output 3
- **H** Trigger output 4
- **I** Clock input
- **J** Reset trigger input
- **K** Parameters adjusting out 1
- **L** Parameters adjusting out 2
- **M** Parameters adjusting out3
- **N** Parameters adjusting out4
- **Ñ** Triplets On/Off toggling
- **O** Shifting inputs manual adjustment
- **P** Shifting inputs CV adjustment

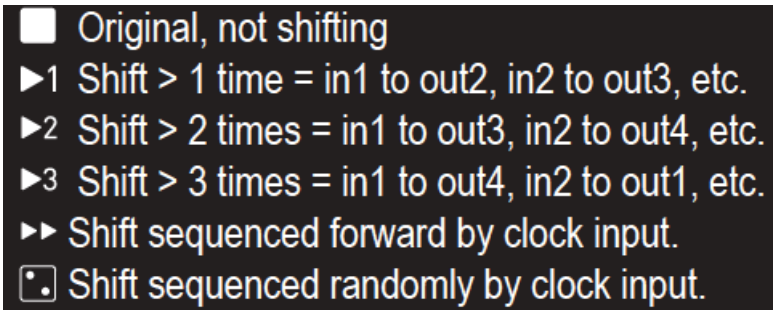
- **Q** Encoder feature adjustment
- **R** Repetitions CV adjustment
- **S** Absorb CV adjustment
- **T** Probability CV adjustment
- **U** Gater CV adjustment
- **V** Random CV output
- **W** Channel 1 BTN feature adj
- **X** Channel 2 BTN feature adj
- **Y** Channel 3 BTN feature adj
- **Z** Channel 4 BTN feature adj
- **Ç** Function and exit BTN

USAGE

1. **Default mode:** To make calculations, Particles needs 4 triggers and a clock. In default mode, you can set the number of global repetitions by rotating the encoder. The display will show the number of repetitions you have selected. You can also select the distribution of the repetitions by pressing the encoder. The default setting is 16 clocks, which is also known as C16.
    -  Set the amount of Global repetitions by rotating the encoder or sending CV to RATE input. Rate=1, 2, 3, 4, 6, 8, 12, 16, 24, 48, 64, 96, 128
    -  The length of the repetitions distribution can be adjusted. By default, C16 is selected, which means that the repetitions will be distributed in 16 clocks (x/16). Changing the distribution can create interesting grooves. The available options are x/16, x/24, x/32, x/40, x/48, x/56, and x/64
    -  The sliders work together with the encoder and CV input. They will reach the maximum value that is shown on the screen. Each slider can limit the amount of repetitions, even if the CV or encoder goes further. The sliders will remember the last value that was adjusted until it is moved back. This is very useful when you send an LFO to the RATE input and you want each channel to reach a maximum number of repetitions.
    -  Pressing the buttons toggles Triplets ON/OFF, for musical results select “no triplets/ON”
    -  Pressing the buttons in default menu toggles Mute ON/OFF the channel selected
    -  Random output will deliver random voltages from 0-10V



- You can manually or with CV shift the inputs to outs selected. 



  - Holding down the FUNCTION button and pressing the encoder will take you to the RESET POSITION menu. You can select from 4 options:
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R.P.1 – Every time a trigger is received to the RESET input, the inputs will be shifted back to their original position.
  - R.P.2 – Every time a trigger is received to the RESET input, the inputs will be shifted to the shift> 1 position.
  - R.P.3 – Every time a trigger is received to the RESET input, the inputs will be shifted to the shift> 2 position.
  - R.P.4 – Every time a trigger is received to the RESET input, the inputs will be shifted to the shift> 3 position.

2. **GATER mode:** The GATER feature uses clock divisions from the clock input to mute the triggers per channel. You can enable or disable GATER on each channel by pressing its button. When GATER is OFF, the button LED will blink briefly every 16 steps of the clock. This blinking also shows you the phase of the clock divisions. When GATER is ON, the button LED will toggle on and off, clocked by the divisions you have selected. When the clock is high, MUTE toggles ON. The button LED from each channel will toggle ON. When the clock is low, MUTE toggles OFF. The button LED from each channel will toggle OFF.
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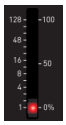
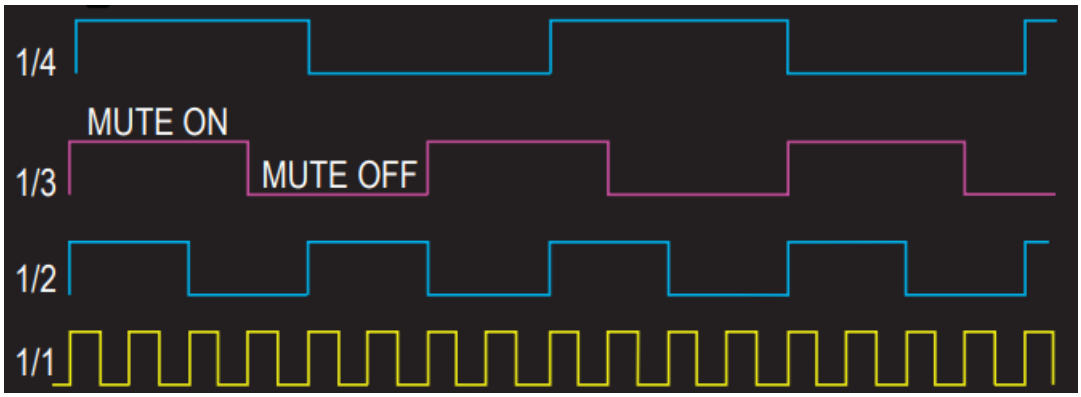
You can use the encoder or CV to set the maximum amount of divisions. The available divisions are 1/1, 1/2, 1/3, 1/4, 1/6, 1/8, 1/12, 1/16, 1/24, 1/32, 1/48, 1/64, 1/96, and 1/128. The sliders can be used to adjust and limit the amount of divisions that are set on the screen.
   - 

The button LED will show the divisions when the sliders are moved.



3. **BYPASS:**

Pressing the FUNCTION button and the BYPASS button will take you to the BYPASS menu. The BYPASS button toggles BYPASS on and off. When the button is pressed, it will wait for the next trigger to toggle.

4. **PROBABILITY:**

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The Probability feature removes triggers randomly, based on the probability that you set. You can set the probability with the sliders, encoder, or CV.
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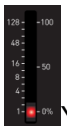
To access the Probability menu, press the FUNCTION button and the PROB button. The global probability is displayed on the screen. The sliders limit the probability for each channel. This means that you can set different patterns for each channel.
- 

You can also lock the probability for each channel to 100%. This means that the probability for that channel will not be affected by the global probability or the sliders. The button LED will be on when the probability is locked to 100%.
- When the probability is not locked to 100%, the button LED will blink to show the percentage that is limited. A slow blink means a low percentage, and a fast blink means a high percentage. The slider values are kept until you move them back.
  The algorithm in Probability is meant to have more organic results.

5. **ABSORB:**

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The Absorb feature removes triggers randomly, except for the original trigger input, based on the probability that you set. You can set the probability with the sliders, encoder, or CV.
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To access the Absorb menu, press the FUNCTION button and the Absorb button. The global probability is displayed on the screen.
- The sliders limit the probability for each channel. This means that you can set different patterns for each channel.
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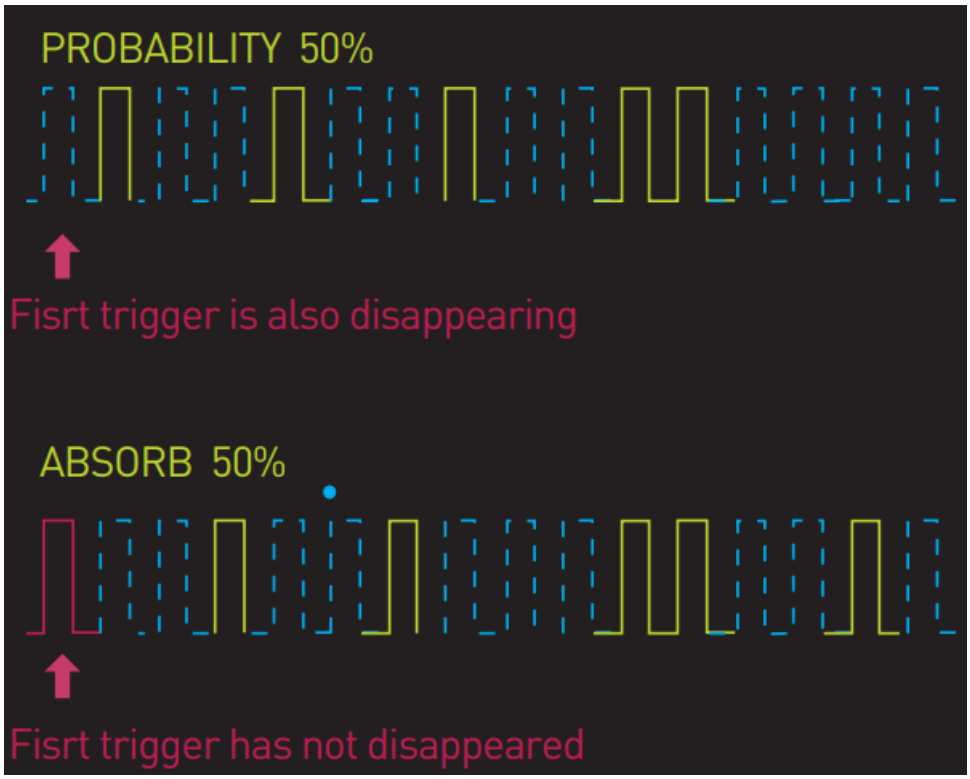
You can also lock the probability for each channel to 100%. This means that the probability for that channel will not be affected by the global probability or the sliders. The button LED will be on when the probability is locked to 100%.
- When the probability is not locked to 100%, the button LED will blink to show the percentage that is limited. A slow blink means a low percentage, and a fast blink means a high percentage. The slider

values are kept until you move them back.

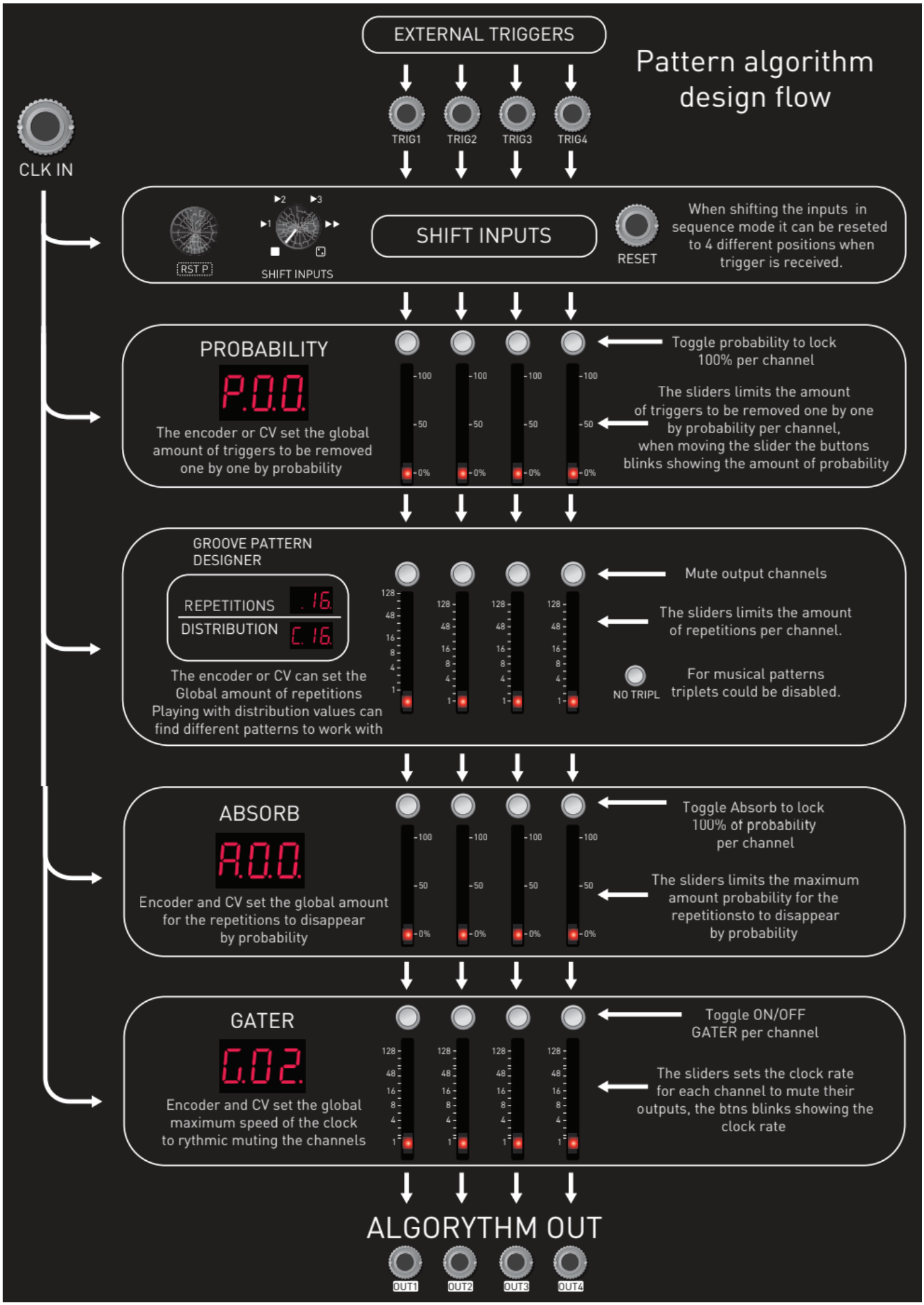
Pressing encoder for 3 seconds will save the adjustments to the SD card.

Pressing FUNC btn for 3 seconds will reset all values adjusted

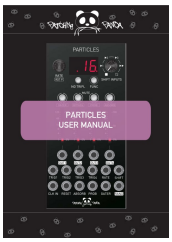
PROBABILITY AND ABSORB EXAMPLE 16 REPETITIONS



Pattern algorithm design flow



Documents / Resources

	**PATCHING PANDA PARTICLES Trigger Modulation Full DIY Kit** [pdf] User Manual PARTICLES, PARTICLES Trigger Modulation Full DIY Kit, Trigger Modulation Full DIY Kit, Full DIY Kit, DIY Kit

References