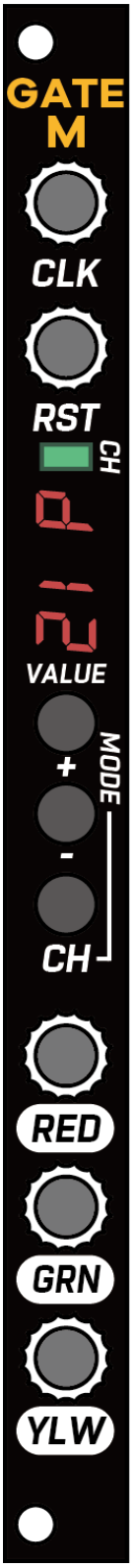
GATEM Manual

ver 1.0.0

Manufactured by centrevillage (https://centrevillage.net)



1. Abstract

GATEM is an multi-function trigger/gate generator that has 3 output channels (Red/Green/Yellow).

The editing channel can be selected by pressing the “CH” button.

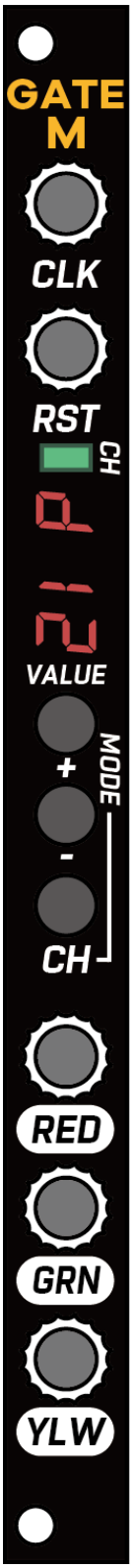
The “+” or “-” button is used for changing parameter value.

And, you can select the editing parameter by pressing&holding “CH” button and pressing “+” or “-” button.

The below parameters are available;

- Clock Divider (d)
- Clock Multiplier (M)
- Euclidean Rythm Fill (F)
- Euclidean Rythm Rotation (r)
- Euclidean Rythm Length (L)
- Trigger Probability (P)
- Trigger Gate Length (G)
- Trigger Delay (y)
- Trigger Swing (s)

2. Hardware



Name	Role
CLK	Clock Input
RST	Reset Input
CH	LED that shows the editing channel
VALUE	Display that shows the current parameter value
+	Increment the parameter value
-	Decrement the parameter value
CH	Select the editing channel
(RED)	Red channel output
(GRN)	Green channel output
(YLW)	Yellow channel output

3. Basic Operation

When powered on, it’s in the Clock Divider mode.

The current setting is displayed like below:

This is the value of the current channel, you can see the current channel on the above LED color (Red/Green/Yellow).

Each time you tap the **+ button** or **- button**, the division value will increase or decrease by 1. You can also increase or decrease the value continuously by pressing & holding the **+ button** or **- button.**

The changed value is automatically saved after 5 seconds.
And, when powered on next time, that setting is automatically loaded.

Tapping the **CH button**, you can change the current channel.

Pressing & holding the **CH button** and tapping **+ button** or **- button**, you can change the edit parameter.

4. Parameter List

Parameter	Display	Description
Clock Divider	d 1	The range of the values is 1 to 96. it indicates the clock dividing count.
Clock Multiplier	M 1	The range of the values is 1 to 96. it indicates the clock multiplier rate.
Euclidean Rythm Fill	F 16	The range of the values is 0 to 16. it indicates the trigger output count between the steps defined **Euclidean Rythm Length** parameter.
Euclidean Rythm Rotation	r 0	The range of the values is 0 to 15. it indicates the rythm pattern rotation that defined by **Fill & Length.**
Euclidean Rythm Length	L 16	The range of the values is 1 to 16. it indicates the step length of the sequence.
Trigger Probability	P 16	The range of the values is 1 to 16. it indicates the probability of the trigger output. When the value is 16, the trigger is always outputted.
Trigger Gate Length	G 0	The range of the values is 0 to 99, and _1 to _9. When the value is 0, the gate length is automatically calculated by the gate length of the inputted clock and Clock Multiplier & Divider settings. When the value is between 1 and 99, the displayed value indicates the fixed gate length in milliseconds. Wehen the value is between _1 and _9, the displayed value indicates the fixed gate length in 100 milliseconds (100 to 900 ms).
Trigger Delay	y 0	The range of the values is 0 to 99, and _1 to _9. When the value is 0, the trigger doesn't delay. When the value is between 1 and 99, the displayed value indicates the trigger delay in milliseconds. Wehen the value is between _1 and _9, the displayed value indicates the trigger delay in 100 milliseconds (100 to 900 ms).
Trigger Swing	S 0	The range of the values is 0 to 6, and the larger the number, the more the timing of the even clock swings back.

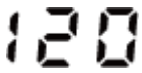
5. Global Settings

To enter the global settings, you can press&hold **CH button** and press **+ and - button.**

And you can go back to parameter edit mode doing same operation (Press CH/+/- buttons).

5.1. Default BPM

When you enter the global setting mode, you can see something like below:



This indicates the **default BPM** that is used when the clock interval is not estimated.
Clock Multiplier is calculating the current BPM internally, but it's not working when the first clock arrived.
So the **default BPM** is used for that case.

You can change the default BPM pressing the **+ or - button.**

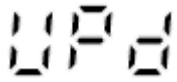
5.2. Auto Reset Interval

To enter the auto reset interval setting, you press&hold **CH button** and press **+ button.**
And then you can see something like below:

This indicates the auto reset interval seconds.
When the clock input is not comming for this seconds, Euclidean Rythm Sequencer is automatically resetted.
When this value is 0, this auto resetting behavior gets inactive.

6. Firmware Update

Pressing & Holding the **CH button** and powering on the module, it enters firmware update mode.
Then something displayed like below:



In this state, connect the audio output from the audio interface of the PC to the CLK input of this module and play the wav file (GATEM_firm_v_x_x.wav) of the firmware to start the update.

If it's failed, the play volume has to be maximized, and use the amplifier module to increase the playback gain.
I recommend the AMP ATT (https://centrevillage.net/products/6).

After the update completes, Pressing & Holding the **+ button** and powering on the module, it displays the current firmware version.

7. Contact Info

mail: centrevillage@gmail.com
site: https://centrevillage.net