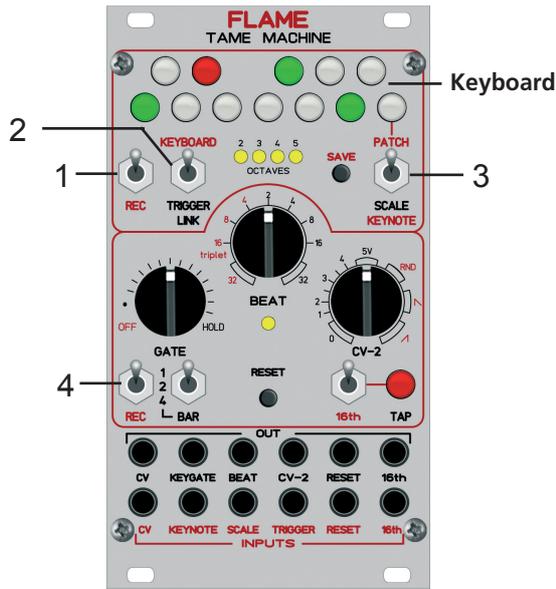


FLAME TAME MACHINE

Quantizer - Beat Looper



TECHNICAL DETAILS

Inputs:	CV	0..+4,8V	Size:	3HU, 14HP
	CV-KEYNOTE	1..+1,92V		128,5mm x 70,8mm
	CV-SCALE	1..+3,84V	Current	
	TRIGGER	0/+5V	consumption:	max.180mA (+12V)
	RESET	0/+5V		max. 10mA (-12V)
	16th	0/+5V		
Outputs:	CV	0..+5V		
	CV-2	0..+5V		
	KEYGATE	+0,3/+10V		
	BEAT	+0,3/+10V		
	RESET	+0,3/+10V		
	16th	+0,3/+10V		

QUANTIZER FUNCTIONS

LOAD SCALE

manually:

Set switch 3 at position PATCH (switch 2 at TRIGGER or LINK).

- set the bank in the upper key row (red color)

(#C, #D, #F, #G=preset bank 1-4, #A=user bank 5)

- set the patches of banks (1-7) in the lower key row (green color)

automatically:

In any order of switch 3.

- voltage change on the jack SCALE

in the range of +1..+3,84Volt (C1...#A3)

STORE SCALE

in position SCALE of switch 3 (switch 2 at TRIGGER or LINK):

1. please push the button SAVE

2. select the memory place (patch 1..7) in the lower key row

3. push the button SAVE again for storage permanently

SET KEYNOTE (transpose scale)

manually:

Set switch 3 at position KEYNOTE (switch 2 at TRIGGER or LINK).

- please set the keynote with the keyboard buttons (the keynote is red and the transposed dedicated scale is green)

automatically:

In any order of switch 3.

- voltage change on the jack KEYNOTE

in the range of +1..+1,92Volt (C1...B1)

Please note: The keynotes can't be stored.

SHORT DESCRIPTION

QUANTIZER SECTION

The module is a combination of quantizer and beat looper. A quantizer converts a continuous control voltage (on CV-input) in the range of 0...+5V into a stepped output voltage in the same voltage range. The scale assigns the possible voltage states. The quantizer can be triggered per external trigger input or per link of the pulse from the beat section.

The module has 5 banks with each 7 patches for scales: Bank 1-4 with 28 fixed preset scales and bank 5 with 7 patches for individual user scales. The keynote transposes the actual scale.

Keynote and scale can be set by external CV inputs (keynote, scale) or manually per keyboard buttons.

The playing of keynotes is recordable over max. 4 measures.

The keyboard buttons can be used like a mini keyboard (jack key-gate=gate out, jack CV out=notes, octave setting with CV-2 ruler).

The CV inputs and outputs have the Moog characteristic (1V/oct.).

BEAT SECTION

The second section can create individual beat patterns and can record over max. 4 measures. The GATE ruler assigns the gate length of the beat output pulse (off, gate, hold) and the BEAT ruler assigns the rhythm of the beat output pulse.

Also the beat section generates the CV-2 output with following settings:

- variable voltage between 0..+5 Volt

- Random between +1..+2 Volt

- LFO down or up 0..+5 Volt (fixed time interval over 1 measure).

The Tap-Tempo generates the internal tempo (two times 4th-tap) or per permanently external 16th clock.

A Reset input/push button sets the beat on measure 1 and sets also the reset output. The module generates automatically a reset pulse on measure 1 (pulse length=16th).

BEAT FUNCTIONS

GATE ruler

Sets the gate length of the beat out pulse:

OFF: the beat out is permanently low

HOLD: the beat out is permanently high

In middle position is the gate length half of the beat pulse.

BEAT ruler

Sets here the rhythm of the pulse: on left side triplets on right side duplets. **Please note: In external sync the 32th's are not available!**

CV-2 ruler

Sets the output voltage of CV-2 output:

Different values of following positions:

0..5: variable output voltage 0..+5 Volt

RND: a random voltage between +1..+2 Volt (1 octave)

↘ : LFO down 0..+5V (fixed time interval over 1 measure)

↗ : LFO up 0..+5V (fixed time interval over 1 measure)

RESET

A Reset sets the beat pattern on measure 1 and sets also the reset output to high. A Reset can be released manually per RESET key or external per high impulse on RESET input. The module generates automatically a reset pulse on measure 1 (pulse length=16th).

TEMPO/INTERNAL per Tap key

Set the TAP switch in position top: The sequence runs with a tempo determined per Tap-tempo-key. Please tap two times 4th for changing the tempo. The Tap-LED blinks in 4th beat.

TEMPO/EXTERNAL per permanently 16th pulse

Set the TAP switch in position 16th: The sequence runs with a tempo, generated from the 16th clock (Tap-LED blinks in 16th beat). **Please note: In external sync the 32th's are not available!**

RECORD/LOOP FUNCTIONS

RECORD: Record is on if REC switch in position top and play ing the parameters if the REC switch is in position bottom.

LIST OF RECORDED PARAMETERS OF THE REC SWITCHES:

Rec switch 1 (switch 2 is in position KEYBOARD):

- Keynotes of the Keyboard and the moves of CV-2 ruler between 1..5 (= the octaves of keyboard notes)

Rec switch 1 (switch 2 is in position TRIGGER or LINK):

- Keynotes of scale

Please note: Both keynotes (from keyboard and scale) has the same value!

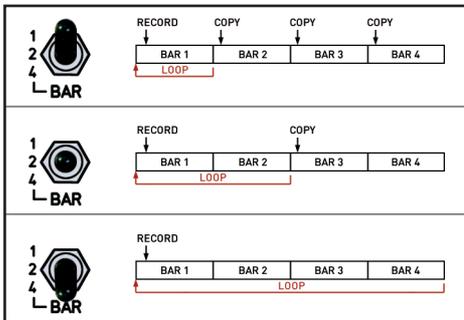
Rec switch 2:

- the motions of the three knobs (Gate, Beat, CV-2)

LOOP (automtic copy of measures):

Recording steps with different lenght of the loop. To arrange LOOPS faster, at position 1 or 2 the according steps of the not played measures are recorded too.

That means: if BAR is at 1 all other measures are recorded with the same played steps. So the sequence goes on looping, even if you switch to BAR 4 (because all measures are the same). Because



of this, you can play the measures only separately when BAR=4.

If BAR is=2, the sceme is always 2-measured and recorded are always 1 and 3, as well as 2 and 4.

KEYBOARD FUNCTIONS

KEYBOARD

If switch 2 in position KEYBOARD then the keyboard buttons can be used like a mini keyboard (the note output is the CV output). If a key is pressed then the KEYGATE output goes on (high level). If a key is released then the KEYGATE output goes off (low level). The octave of the note can be set with the CV-2 ruler between position 1..5, displayed by the octaves LED's.

Please note: The KEYGATE output is only available in mode KEYBOARD, not in the other modes TRIGGER and LINK.

LIST OF EXTERNAL CONTROL VOLTAGE FOR KEYNOTE*

Keynote	Voltage (KEYNOTE-In)	Note (KEYNOTE-In)
C	1,000 Volt	C1
#C	1,083 Volt	#C1
D	1,166 Volt	D1
#D	1,250 Volt	#D1
E	1,333 Volt	E1
F	1,416 Volt	F1
#F	1,500 Volt	#F1
G	1,583 Volt	G1
#G	1,666 Volt	#G1
A	1,750 Volt	A1
#A	1,833 Volt	#A1
B	1,916 Volt	B1

*moog characteristic: 1Volt / octaves

LIST OF PRESET/USER SCALES (included the external control voltage)*

Bank/Patch	Name	Scale	Voltage (Scale-Input)	Notes (Scale-Input)
1-1	Major Scale	1,2,3,4,5,6,7	1,000 Volt	C1
1-2	Major Chord	1,3,5	1,083 Volt	#C1
1-3	Major 6 Chord	1,3,5,6	1,166 Volt	D1
1-4	Major 7 Chord	1,3,5,7	1,250 Volt	#D1
1-5	Major 7b5 Chord	1,3,b5,7	1,333 Volt	E1
1-6	Fourths	1,4,b7	1,416 Volt	F1
1-7	Major Blues	1,b3,3,5,6,b7	1,500 Volt	#F1
2-1	Minor harmonic	1,2,b3,4,5,b6,7	1,583 Volt	G1
2-2	Minor clean	1,2,b3,4,5,b6,b7	1,666 Volt	#G1
2-3	Minor chord	1,b3,5	1,750 Volt	A1
2-4	Minor 6 chord	1,b3,5,6	1,833 Volt	#A1
2-5	Minor 7 chord	1,b3,5,b7	1,916 Volt	B1
2-6	Minor 7b5 chord	1,b3,b5,b7	2,000 Volt	C2
2-7	Minor Blues	1,b3,4,#4,5,b7	2,083 Volt	#C2
3-1	Dorian	1,2,b3,4,5,6,b7	2,166 Volt	D2
3-2	Phrygian	1,b2,b3,4,5,b6,b7	2,250 Volt	#D2
3-3	Lydian	1,2,3,#4,5,6,7	2,333 Volt	E2
3-4	Diminished	1,2,b3,4,b5,b6,6,7	2,416 Volt	F2

Bank/Patch	Name	Scale	Voltage (Scale-Input)	Notes (Scale-Input)
3-5	Mixolydian	1,2,3,4,5,6,b7	2,500 Volt	#F2
3-6	Wholetone	1,3,#4,#5,b7	2,583 Volt	G2
3-7	Pentatonik	1,2,4,5,b7	2,666 Volt	#G2
4-1	Spanish	1,b2,3,4,5,b6,b7	2,750 Volt	A2
4-2	Algerian	1,2,b3,4,#4,5,b6,7	2,833 Volt	#A2
4-3	Balinesian	1,b2,b3,5,b6	2,916 Volt	B2
4-4	Byzantine	1,b2,3,4,5,b6,7	3,000 Volt	C3
4-5	Hindu	1,2,3,4,5,b6,b7	3,083 Volt	#C3
4-6	Nine tone	1,2,#2,3,#4,5,#5,6,7	3,166 Volt	D3
4-7	Octatonic	1,b2,b3,3,b5,5,6,b7	3,250 Volt	#D3
5-1	User Patch 1	initialized chromatic	3,333 Volt	E3
5-2	User Patch 2	initialized chromatic	3,416 Volt	F3
5-3	User Patch 3	initialized chromatic	3,500 Volt	#F3
5-4	User Patch 4	initialized chromatic	3,583 Volt	G3
5-5	User Patch 5	initialized chromatic	3,666 Volt	#G3
5-6	User Patch 6	initialized chromatic	3,750 Volt	A3
5-7	User Patch 7	initialized chromatic	3,833 Volt	#A3

ADDITIONAL INFORMATIONS

WARRENTY: Beginning from the date of purchase a 2-year warranty is guaranteed for this device in case of any manufacturing errors or other functional deficiencies during runtime. The warranty does not apply in case of: damage caused by misuse damage caused by mechanical damage arising from careless treatment (dropping, vigorous shaking, mishandling, etc) damage caused by liquids penetrating the device heat damage caused by overexposure to sunlight or heating electric damage caused by improper connecting (wrong power supply/ jacks/ MIDI connections/ voltage problems). If you have any complaints please contact your dealer or send an e-mail to: service@flame.fortschritt-musik.de **TERMS OF PRODUCTION:** conformity: CE, RoHS, UL **DISPOSAL:** The device is produced with RoHS-conformity (subject to the regulations of the European Union) and is free of hazardous substances (like mercury, plumb, cadmium and hexavalent chrome). But electronical scrap is hazardous waste. Please don't add this to consumer waste. For a environment-friendly disposal of waste please contact your distributor or specialist dealer. **ACKNOWLEDGMENT:** For help and assistance a big thanks to: Thomas Wagner, Robert Junge, Anne-Kathrin Metzler, Lena Büniger, Schneiders Büro Berlin, Shawn Cleary (Analogue haven) **SUPPORT:** Actually and additional informations, updates, downloads, and more: <http://flame.fortschritt-musik.de>