

FLAME

C-1U KNOB RECORDER



MANUAL

Version 1.00

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1. Short description

The C-1U module is a one-channel module for recording and playing back movements of controllers. Those can be recorded with the potentiometer knob. The movements will be output as control voltage. The record time amounts to one minute maximal.

The track can be played once only (one shot) or in loop. The speed of the play back or the output offset is controllable with the pot. There are an additional CV input for CV recordings and additional reset input.

The track data remains permanently stored when a 3V battery is used to buffer the RAM. When the module is switched on, the recorded data is available again.

The module can be operated unipolar or bipolar.

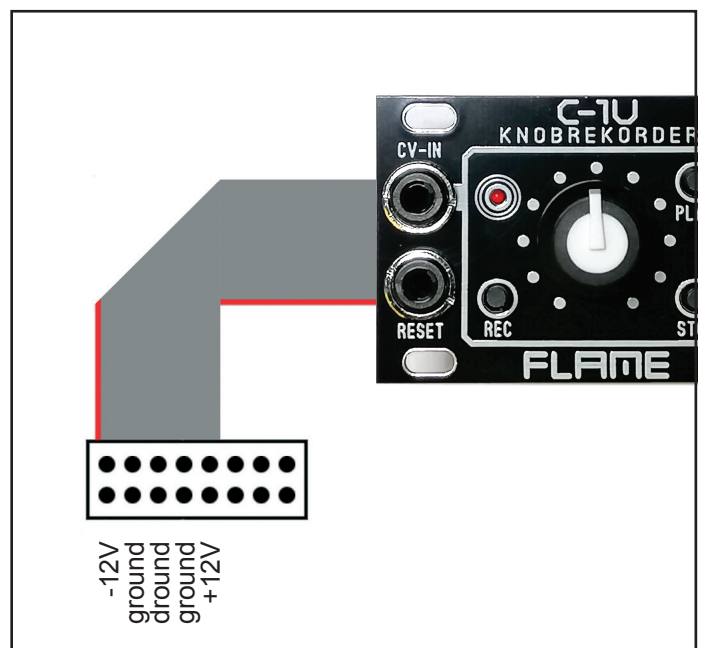
2. Hardware / Connections

2.1 Connection to the modular system (Doepfer bus)

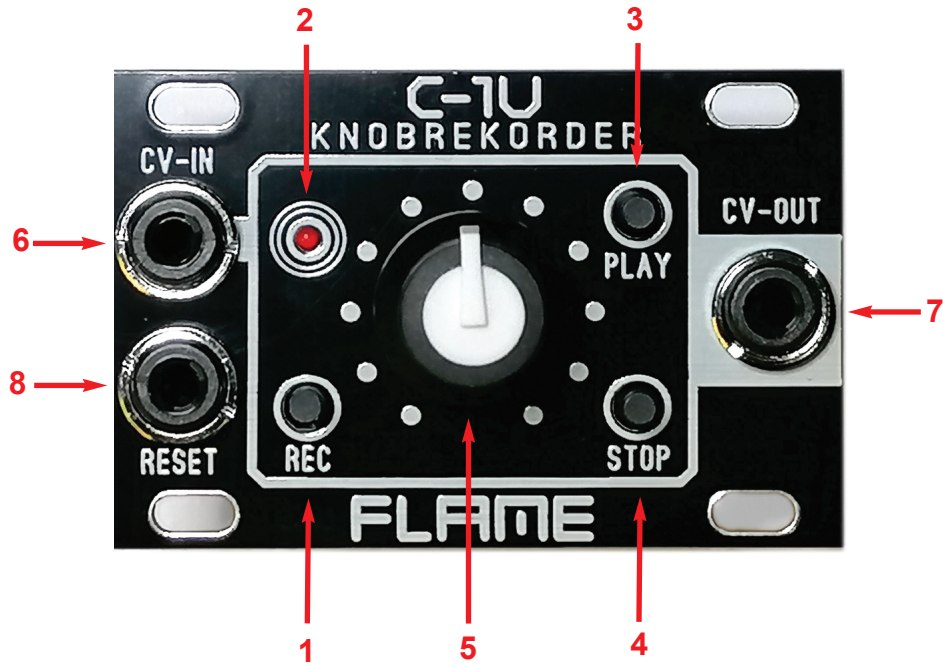
The module is delivered with a connected ribbon cable for the Doepfer bus. The red lead marks -12 volt. Connecting the module please note the right polarity!

If the module is poled accidentally wrong safety diodes avoid the immediate destruction of the module but further damages cannot be expected.

So please pay attention: Check the connection various times before switching on!



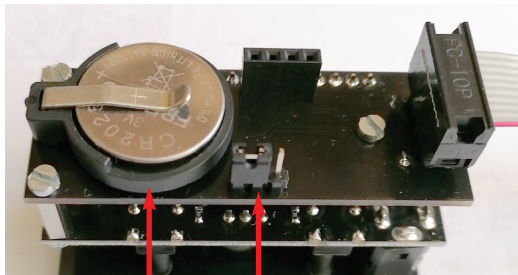
2.2 Modul overview



- ① Key RECORD
- ② LED Modi
- ③ Key PLAY
- ④ Key STOP
- ⑤ Knob CV, Speed or Offset
- ⑥ CV input (0..10V , +/-5V)
- ⑦ CV output (0..10V, +/-5V)
- ⑧ Input RESET (0/5V)

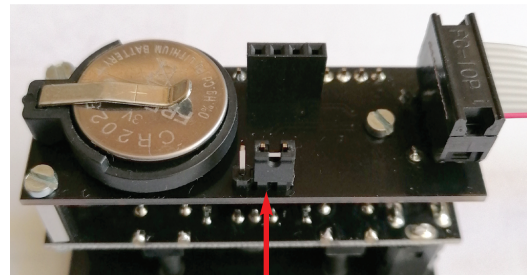
2.3 Module backside

At the bottom of the module there is a jumper for setting the polarity of the module (the range is either unipolar 0 .. + 10V or bipolar +/- 5V) as well as the socket for the backup battery of the memory. Please note the information below!



Backup battery
3V Typ CR2032

Jumper position
Unipolar 0v ... +10v

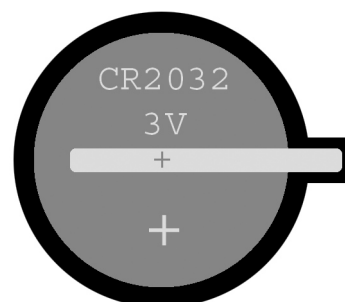
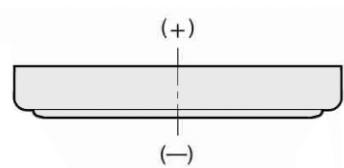


Jumper position
Bipolar -5v ... +5v

Insert the backup battery before connecting the unit to your modular rack

The C-1U KNOBREKORDER uses a standard 3v lithium backup battery, type CR2032. Insert the provided battery or a comparable battery into the battery compartment as shown below. The battery is needed to keep recordings and settings stored when the Eurorack case is turned off.

Make sure the anode (+) points outwards ! Otherwise you destroy the SRAM !



3. Handling

3.1 Manual mode (Stop)

After power on the module stands in STOP mode. The LED are off. With the pot you can adjust an output voltage between 0 and +10V. Track can alternatively output and record a voltage applied to the CV input. They switch between the two sources by their activity: When turning the potentiometer, the potentiometer voltage is taken, when changing the CV input voltage, this voltage is taken. You activate the manual mode by pushing the button STOP.

3.2 Record

For beginning the record sequence please push the REC button (blinking LED). You can record the movements of the ruler until you push again the button REC or until up to the maximal record time. Now the record sequence stops and jumps automatically in the Play loop mode (LED on).

The track has an additional CV input (0 .. + 10V or +/- 5V). They switch between the two sources by their activity: When turning the potentiometer, the potentiometer voltage is taken, when changing the CV input voltage, this voltage is taken.

You can record the CV input voltage curves of z.Bsp. Record LFOs between 0 and + 10V (or +/- 5V). The sample rate is about 300Hz.

From mode STOP or PLAY you can start a record sequence anytime.

The maximum recording time per channel is about 1 minute.

3.3 Play back

After a record sequence the play back of the track starts automatically in loop (LED on). If you are in mode STOP (LED off) then you can start the play back with pushing the button PLAY. Please note the both versions of pushing (short or long):

ONE SHOT - Track plays once only: Push the button shortly (< 1,5sec)

PLAY LOOP - Track plays in loop: Push the button longer (> 1,5 sec)

ATTENTION:

Reset can start the track while Play mode is activated (LED on).

3.4 Play functions (Speed and Offset)

You can use two switchable functions in Play mode:

- SPEED (the speed of the play back) and
- OFFSET (shifting the CV output up or down).

Toggle between both functions while you hold down the button STOP and then you press the button PLAY.

SPEED:

After power on the function SPEED is preselected.

With the ruler you can change the speed of the play back. Turn the pot over the middle position to activate the speed function. In ruler position Zero you have the half speed and in ruler position maximal you have the fourth speed. The original record speed is about ruler middle position.

OFFSET:

Starting from the middle position you can shift the CV up or down (Offset). The range is - / +5V. The output is limited to 0..+10V (or +/-5V).

ADVICE:

After changing between both functions the value persists. To avoid skips of value the function gets active only while you turn the pot over the old value (position).

Please note: After the end of the One shot sequence the function SPEED has no effect.

After switching on, the values for SPEED and OFFSET are reset again.

3.5 Reset

A high pulse at the external reset input resets the activated track and restarts the track (like one shot or loop according to the last manual setting).

ADVICE:

Reset has no effect while mode RECORD or STOP is activated.

4. Appendix

4.1. Technical details

Connections:

Ribbon cable adapter for Doepfer bus +/-12Volt

Inputs: 1x CV (0..+10V, +/-5V), 1x Reset (0/+5..10V), 1/8th inch mono jacks

Output: 1x CV (0..+10V, +/-5V), 1/8th inch mono jack

Control elements:

3 push buttons

1 knob for CV, speed, offset

1 LED

Resolutions: AD/DA converter: 12bit, Sample rate: ca. 300Hz

Record time: max. 1 minute

Current consumption: + 20mA / - 9mA

Size: 1U intelligjel Euro rack format 1U / 12HP 60,6 x 39,6 x 41mm

4.2 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
- 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-instruments.de

4.3 Terms of production

conformity: CE, RoHS, UL

4.4 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 an environment friendly disposal of waste please contact your distributor or specialist dealer.

4.3 Support

Updated and additional informations, updates, downloads and more see:
www.flame-instruments.de

4.4 Acknowledgment

For help and assistance big thanks to: ALEX4 Berlin, Shawn Cleary (Analogue haven, Los Angeles), Thomas Wagner, Robert Junge, Anne-Kathrin Metzler and oLivier Landry.