SITKA
INSTRUMENTS

GRAVITY

6-CHANNEL CLOCK
AND TRIGGER SEQUENCER

Manual

July 2024

Firmware 1.1

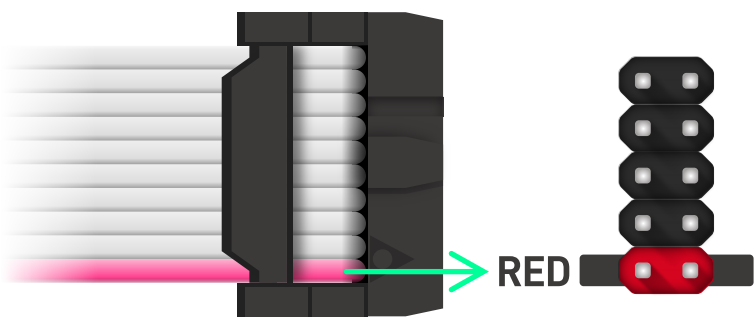
Power

Gravity requires a **+12V** and **-12V** power supply.

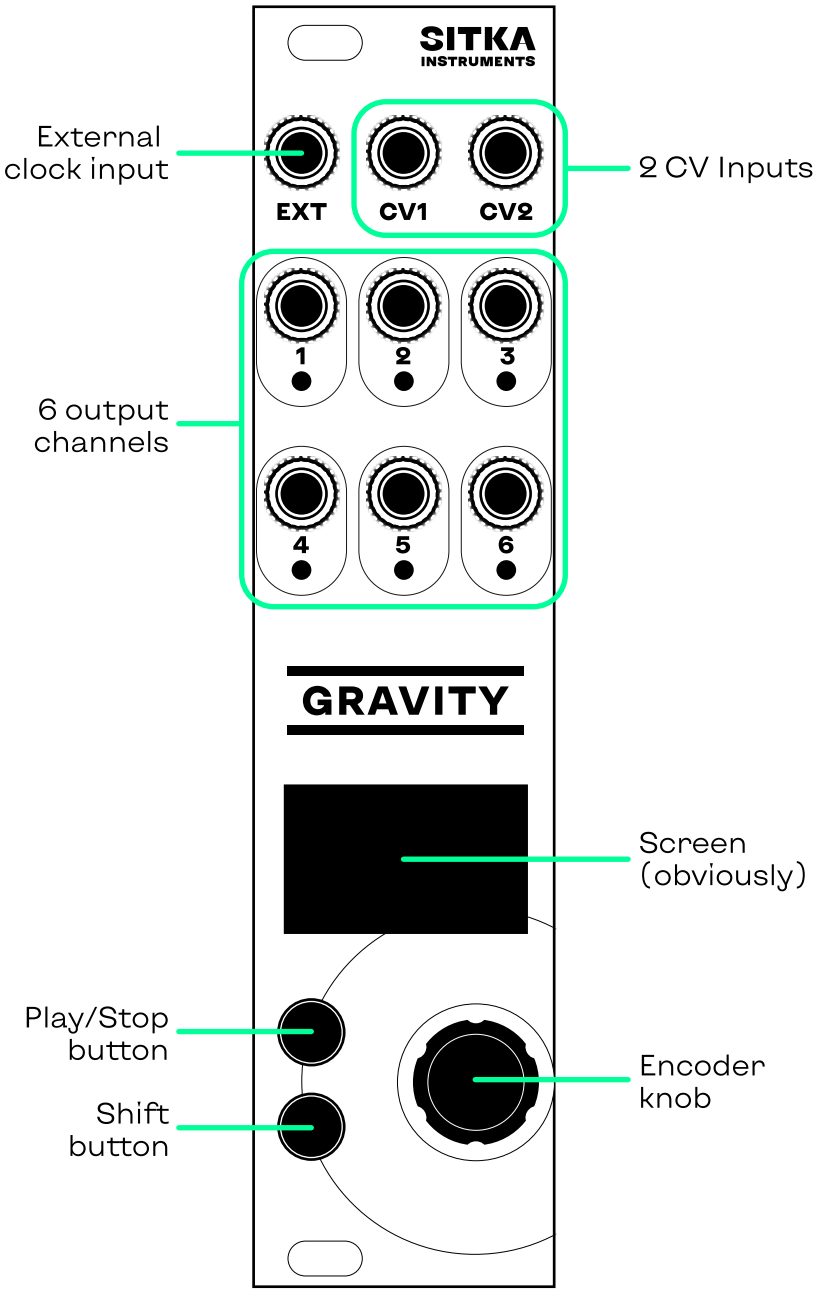
There is a 10-pin power connector on the back side of the module.

The red line on the power cable should be aligned with the "RED" marking near the power connector and the -12V side on the power bus.

The power consumption of gravity is 45mA of +12V and 20mA of -12V.

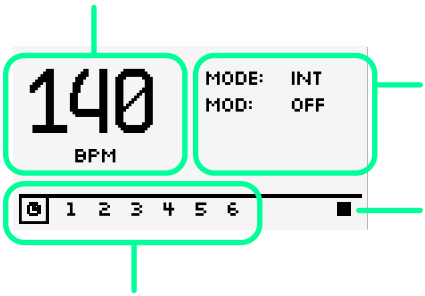


Front panel overview



Onscreen UI and Navigation

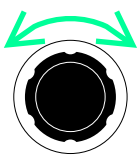
Main parameter. It will be different depending on the current tab and channel mode.



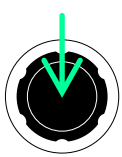
Settings related to the currently selected tab.

Play/Stop indicator.

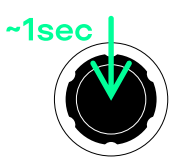
Tabs. The first is the main clock settings; the others are 6 channel settings.



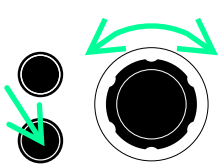
Rotate the encoder to scroll through the currently selected menu or parameter values.



Press the encoder to enter the tab or edit mode of the value of the currently selected parameter.



Long-press the encoder to go back.

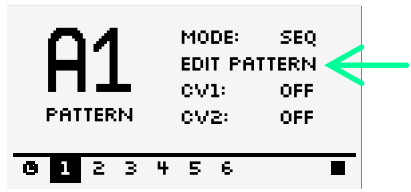


Hold shift and rotate the encoder to quickly change the selected parameter or main parameter if you are in the tabs menu.

Sequencer

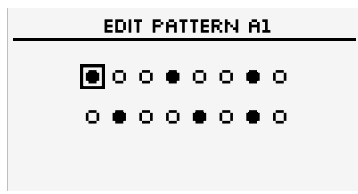
Gravity comes with 8 predefined sequencer patterns (bank A) and 8 empty ones (bank B).

You can edit any pattern by selecting "EDIT PATTERN" while in "SEQ" mode.



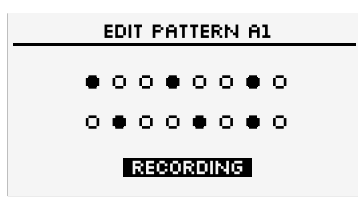
Pattern edit mode

- **Rotating the encoder** will select the step.
- **Pressing the shift button** will toggle the selected step.
- **Pressing the encoder** will start or stop the recording.
- **Long-pressing the encoder** will exit back to the channel setting.

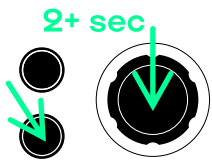


Recording

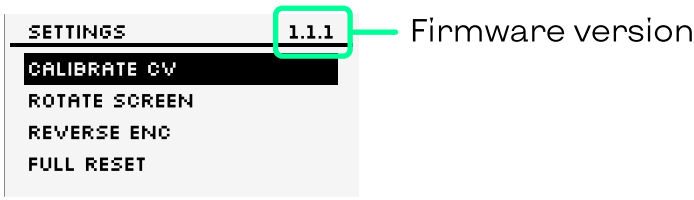
- **Tapping the shift button** will record a trigger in a current step.
- **Long-pressing the shift button** will clear the sequence.



Settings



Enter the settings by pressing and holding the shift button and the encoder for at least 2 seconds. Rotate the encoder to navigate the settings menu, press the encoder to execute the selected action. Long-press the encoder to exit the settings



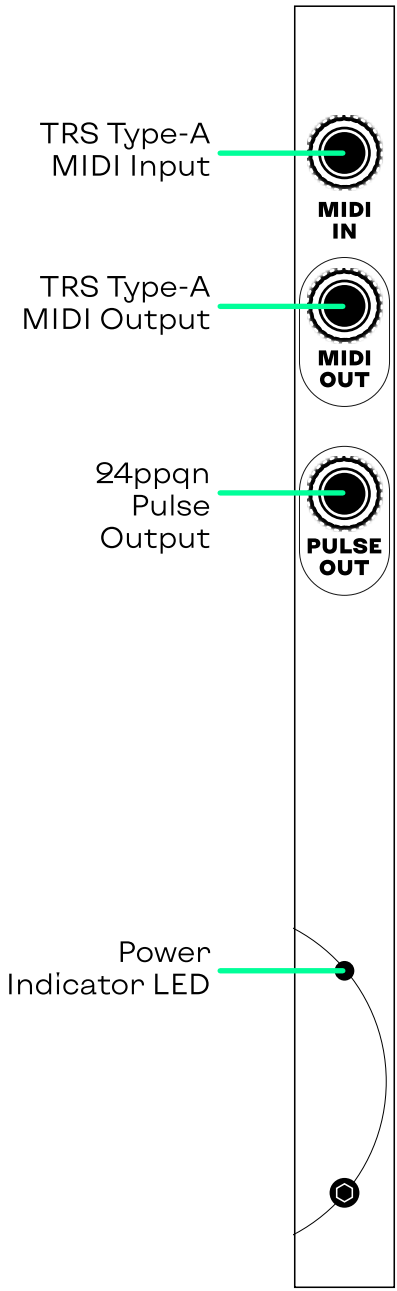
Calibrate CVs will set the voltage currently supplied to both CV inputs as a zero point. In some cases, it might make sense to patch both CV inputs to a known 0-volt reference.

Rotate Screen rotates the screen 180°, which might be handy if you want to mount the Gravity upside-down in your system.

Reverse Encoder changes the scroll direction of the encoder. This might be needed after the firmware update or module reset if rotating the encoder scrolls the menu in the wrong direction.

Full Reset resets the Gravity memory. This includes all the channel settings, sequences, CV calibration, screen rotation and the encoder direction. You might need to power cycle your system if Gravity doesn't restart automatically and is unresponsive after the reset.

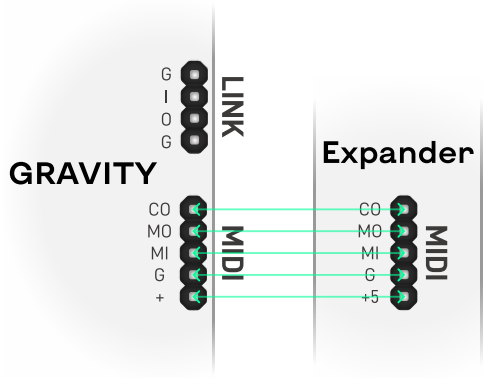
MIDI Expander overview



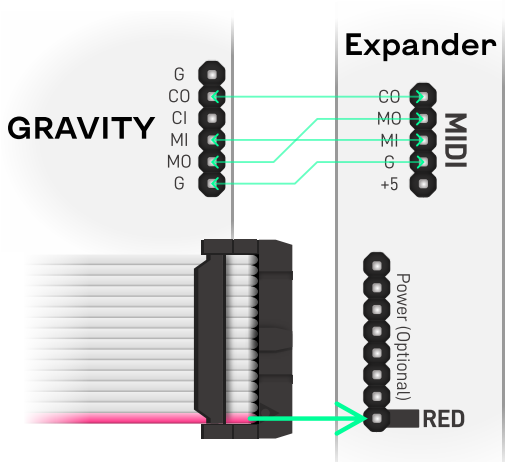
Connecting MIDI Expander

Depending on your Gravity revision, it may have either a new 5-pin connector or a legacy 6-pin connector for the MIDI Expander.

For the new connector, use the included 5-pin DuPont jumper cable to connect the expander, as shown.



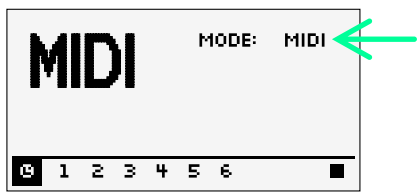
For the legacy connector, use 4 DuPont jumpers to connect matching pins as shown. Since it lacks a +5 pin, connect the power ribbon to the bus with a +5V line, aligning the ribbon's red line with the marking by the power connector.



Using MIDI Expander

To use the MIDI expander, your Gravity firmware version must be 1.1 or higher. You can check the firmware version in the top-right corner of the settings screen. You can update the firmware using this link: https://sitkainstruments.com/gravity/updater/.

For **MIDI In** to work, set the clock mode to MIDI in the main clock settings tab. MIDI In takes START, STOP and Clock MIDI messages.



MIDI Out outputs the START and STOP MIDI commands when you press the Play/Stop button and MIDI Clock messages whenever the Gravity clock is running.

Pulse Out outputs a 24ppqn pulse clock and is basically the same as a clock channel set to an x24 multiplier.

Both MIDI In and MIDI Out use **TRS Type-A**. Use the included Type-A to 5-Pin DIN MIDI adapter to connect to other MIDI devices. Alternatively, if the devices on the other end also use TRS Type-A MIDI, you can connect it with a regular stereo mini-jack cable. Check your device's manual to know if it uses Type-A or Type-B TRS MIDI, or look it up on a minimidi.world website.