

Operators

To display the list of operators inside of Orca, use `CmdOrCtrl+G`.

- A **add**(*a b*): Outputs sum of inputs.
- B **subtract**(*a b*): Outputs difference of inputs.
- C **clock**(*rate mod*): Outputs modulo of frame.
- D **delay**(*rate mod*): Bangs on modulo of frame.
- E **east**: Moves eastward, or bangs.
- F **if**(*a b*): Bangs if inputs are equal.
- G **generator**(*x y len*): Writes operands with offset.
- H **halt**: Halts southward operand.
- I **increment**(*step mod*): Increments southward operand.
- J **jumper**(*val*): Outputs northward operand.
- K **konkat**(*len*): Reads multiple variables.
- L **less**(*a b*): Outputs smallest of inputs.
- M **multiply**(*a b*): Outputs product of inputs.
- N **north**: Moves Northward, or bangs.
- O **read**(*x y read*): Reads operand with offset.
- P **push**(*len key val*): Writes eastward operand.
- Q **query**(*x y len*): Reads operands with offset.
- R **random**(*min max*): Outputs random value.
- S **south**: Moves southward, or bangs.
- T **track**(*key len val*): Reads eastward operand.
- U **uclid**(*step max*): Bangs on Euclidean rhythm.
- V **variable**(*write read*): Reads and writes variable.
- W **west**: Moves westward, or bangs.
- X **write**(*x y val*): Writes operand with offset.
- Y **jymp**(*val*): Outputs westward operand.
- Z **lerp**(*rate target*): Transitions operand to input.
- * **bang**: Bangs neighboring operands.
- # **comment**: Halts a line.

IO

- : **midi**(*channel octave note velocity length*): Sends a MIDI note.
- % **mono**(*channel octave note velocity length*): Sends monophonic MIDI note.
- ! **cc**(*channel knob value*): Sends MIDI control change.
- ? **pb**(*channel value*): Sends MIDI pitch bench.
- ; **udp**: Sends UDP message.
- = **osc**(*path*): Sends OSC message.
- \$ **self**: Sends ORCA command.

MIDI

The MIDI operator : takes up to 5 inputs('channel, 'octave, 'note, velocity, length).

For example, :25C, is a **C note, on the 5th octave, through the 3rd MIDI channel**, :04c, is a **C# note, on the 4th octave, through the 1st MIDI channel**. Velocity is an optional value from 0(0/127) to g(127/127). Note length is the number of frames during which a note remains active. See it in action with [midi.orca](#).

MIDI MONO

The MONO operator % takes up to 5 inputs('channel, 'octave, 'note, velocity, length).

This operator is very similar to the default Midi operator, but **each new note will stop the previously playing note**, would its length overlap with the new one. Making certain that only a single note is ever played at once, this is ideal for monophonic analog synthesisers that might struggle to dealing with chords and note overlaps.

MIDI CC

The MIDI CC operator ! takes 3 inputs('channel, 'knob, 'value).

It sends a value **between 0-127**, where the value is calculated as a ratio of 36, over a maximum of 127. For example, !008, is sending **28**, or $(8/36) * 127$ through the first channel, to the control mapped with id0. You can press **enter**, with the ! operator selected, to assign it to a controller. By default, the operator sends to CC64 and up, the offset can be changed with the command cc:0, to set the offset to 0.

MIDI PITCHBEND

The MIDI PB operator ? takes 3 inputs('channel, 'lsb, 'msb).

It sends two different values **between 0-127**, where the value is calculated as a ratio of 36, over a maximum of 127. For example, ?008, is sending an MSB of **28**, or $(8/36) * 127$ and an LSB of 0 through the first midi channel.

UDP

The UDP operator ; locks each consecutive eastwardly ports. For example, ;hello, will send the string "hello", on bang, to the port 49160 on localhost. In commander, use udp:7777 to select the **custom UDP port 7777**, and ip:127.0.0.12 to change the target IP. UDP is not available in the browser version of Orca.

Commands

All commands have a shorthand equivalent to their first two characters, for example, `write` can also be called using `wr`. You can see the full list of commands [here](#).

- `play` Plays program.
- `stop` Stops program.
- `run` Runs current frame.
- `bpm:140` Sets bpm speed to 140.
- `apm:160` Animates bpm speed to 160.
- `frame:0` Sets the frame value to 0.
- `skip:2` Adds 2, to the current frame value.
- `rewind:2` Removes 2, to the current frame value.
- `color:f00;0f0;00f` Colorizes the interface.
- `find:aV` Sends cursor to string aV.
- `select:3;4;5;6` Move cursor to position 3, 4, and select size 5:6(optional).
- `inject:pattern;12;34` Inject the local file `pattern.orca`, at 12, 34(optional).
- `write:H;12;34` Writes glyph H, at 12, 34(optional).
- `time` Prints the time, in minutes seconds, since 0f.
- `midi:1;2` Set Midi output device to #1, and input device to #2.
- `udp:1234;5678` Set UDP output port to 1234, and input port to 5678.
- `osc:1234` Set OSC output port to 1234.