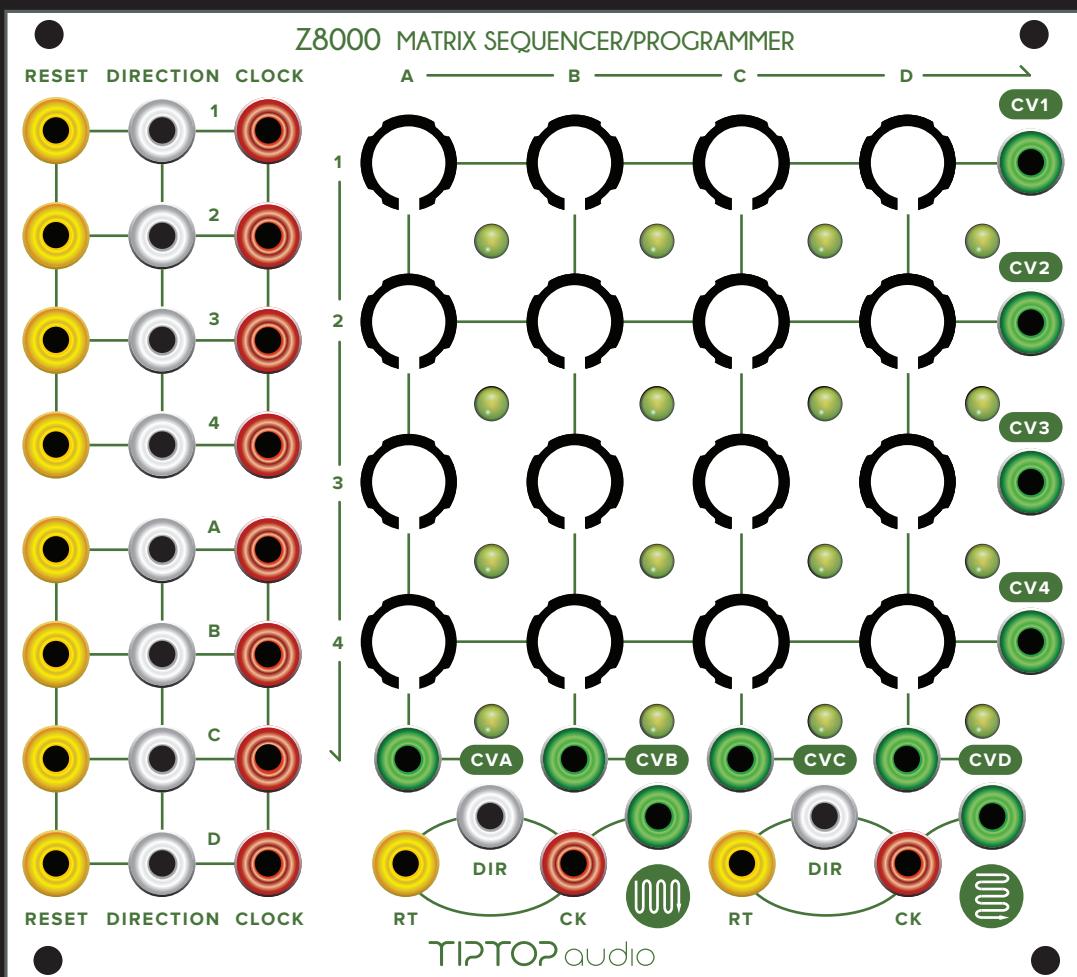


TIPTOP audio



INTRODUCTION

The Z8000 Matrix Sequencer is a powerful tool in a small package. Contained within it's structure are the following:

- a) Four 4 step sequencers on the horizontal (1/2/3/4).
- b) Four 4 step sequencers on the vertical (A/B/C/D).
- c) One 16 step sequencer aggregating all four horizontal 4 step sequencers in order from top to bottom, left to right ().
- d) One 16 step sequencer aggregating all four vertical 4 step sequencers in order from left to right, top to bottom ().

Thus, giving you a total of ten sequencers in all.

INPUT/OUTPUT

Each and every sequence has its own individual CV output as well as Clock, Direction & Reset inputs. The grouped 4 step sequencers each share anormalized connection to the Clock. Allowing, for instance; a single clock to guide all four horizontal 4 steps from only one connection. The same applies for the four vertical sequences. (ex: plugging in a new timing signal into the third Clock while the first Clock still has its jack in place would make sequences 1 & 2 of the group run at a separate rate than sequences 3 & 4.) On the other hand Direction & Reset Inputs are not normalized in order to keep these functions independent. The Tiptop Stackcable is ideal to be used to distribute a Reset signal to many sequences at once.

Reset is simple. A gate high signal triggers that particular sequencer to reset back to step one.

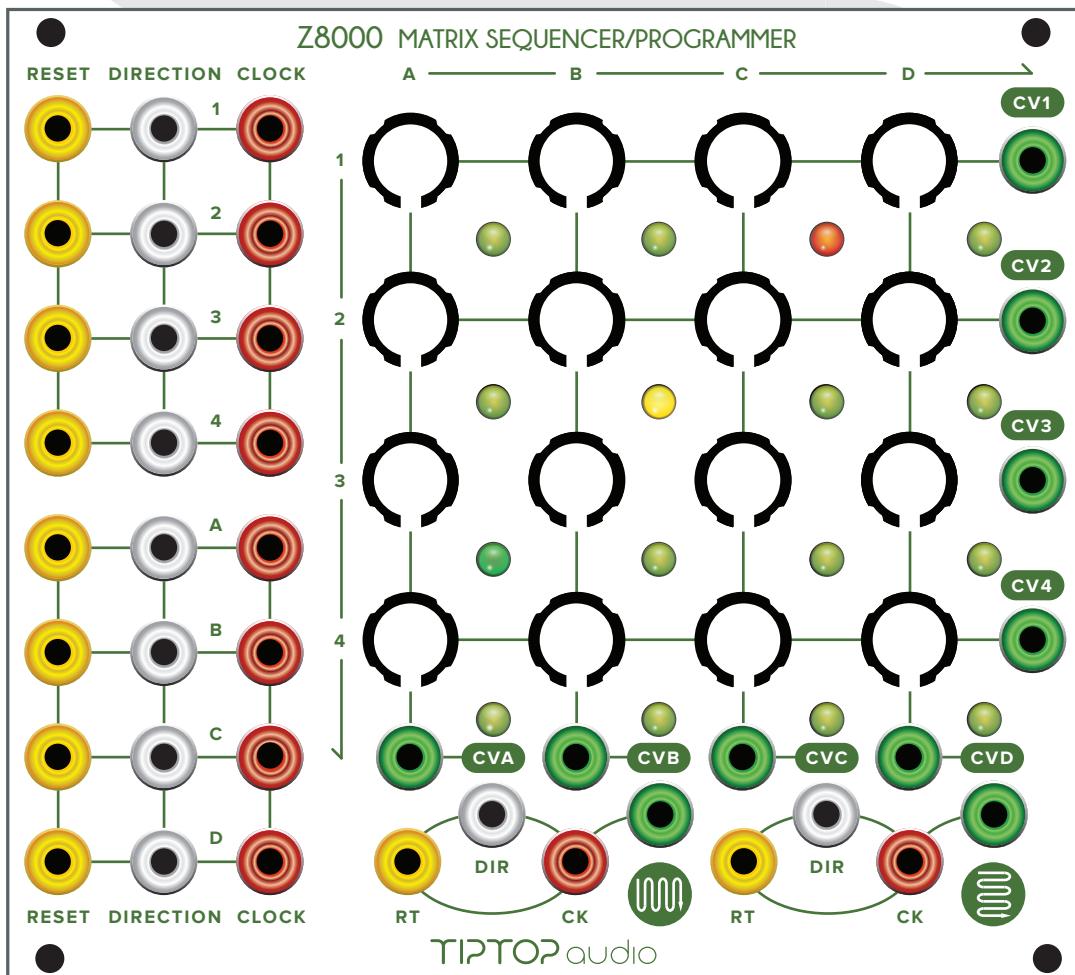
Direction works so that with a gate low the sequencer travels forward. A gate high signal dictates the sequencer travels backwards.

The Z8000 has a very fast response time and will be triggered by long and even very short pulses. The electrical noise caused by inserting a plug into a normalized clock input might cause some of the sequencers to step, this behavior is normal. A cascaded Reset signal using Stackcables will reset all sequencers in a group back in line if desired. The CV output of each sequencer can be set to 0-10V or 0-5V using the jumpers on the back of the module. Factory set is 0-10V on all outputs.

LEDs

The Z8000 uses multicolored LEDs to help with visual feedback. The red lights are assigned to the eight 4 steps, the green lights are assigned to the two 16 steps & lastly the yellow lights engage when a 4 step red light & 16 step green light intersect that specific LED. In addition to that, when two 4 step sequencer red lights engage the light intensity of that led increases by about 35%.

Whether the sequencer is clocked or not, its knobs and lights are still on and functioning. (ex: the red led of step A of sequencer 1 is on, plug the CV1 out and turn that knob, you will hear that the step is “alive”.



CV OUT RANGE

Changing the CV out range.

On the back of the Z8000 are jumpers that are used to set the CV out range of each sequencer in the Z8000, they are labeled CV RANGE. When the jumpers are set on both pins the range is 0-10V and when are removed the range is 0-5V. The factory default is 0-10V. There are total of 10 jumpers you can adjust. The horizontal and vertical 16 steps are the two on the top with graphics that match the front panel graphics. The eight 4 steps sequencers have lines indicating horizontal and vertical, each one can be set individually. There are two more jumpers on the bottom, they are not labeled and are used during production.

APPLICATIONS

The Z8000 is very simple to use but can create some extremely complex control patterns. Each sequencer can be made to step very slow or very fast up to audio rate. Each CV output has the capability to drive many inputs. One of the fun applications with the Z8000 is to patch one of the sequencer's CV out back to the clock

frequency input, creating a "swing" in the movement from step to step. The Z8000 has 10 CV outputs that can modulate 10 parameters in your modular, having them change polyrhythmically, making things move.

Although the word 'sequencer' is mostly known as playing a sequence of tones (controlling the pitch of a VCO), the Z8000 is by no means restricted to doing only that. The Z8000 is a note sequencer but also a modulation sequencer and a programmer of events that happen in a predetermined time.

The Z8000 modular structure makes it interesting to combine with various clock modifiers such as Clock dividers, Clock sequencers, etc.

As a note sequencer the Z8000 will work well with the QuantiZer to create melodies within a scale. Please check the QuantiZer user manual for more information about that.

We hope you will enjoy your Z8000.