PM Presets – PM Sequencer 1

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Overview

This step sequencer is built up in classical sequencer style. Kernel is an eight step *P.moon Stepper module*. Each gate output controls a *P.moon Tone Event*.

Each *Tone Event* creates both KEYB and GATE signals. Common step sequencers offer just one KEYB and one GATE output. Because this sequencer is modular, there is something to do for getting just this <u>single</u> KEYB and GATE outputs. Therefore additional *P.moon* modules are used as are *Switch 8 to 1* and *Logic 8 to 1*.

Functional Sections

Clock Generator

A *Voltage Mini LFO* creates basic clock and determines stepping speed. *Voltage Clock Divider* is used to form normal and half speed clock with matching

phases. Half speed clock is used to trigger the *P.moon Stepper*, normal clock will be talked about in ARP section.

“Transport Control”

Simple *P.moon Buttons 2/1* module lets you reset all counters with one click on button 2. Toggle button 3 works as PLAY switch.

Step Generator

P.moon Stepper is the heart of the sequencer. All eight stages are used. Circle Run Mode lets step counter restart counting at ninth trig pulse.
Stage outputs are labeled with “cv out”. That is, because either GATE or TRIG signals can be obtained at the output jacks.
“Resume output” is normally used, when several *Steppers* have to be cascaded. This output jack gives one pulse when n+1 trig pulses came in, while total number of preset steps is “n”. In this setup a second *Stepper* in Circle Run Mode is triggered by “resume out”.

KEYB signal

Tone Event’s KEYB sections are chained. First “keyb in” gets signal from host, so that keyboard following transpose is possible.
In order to control oscillator one KEYB voltage is necessary. *P.moon Switch 8 to 1* collects “cv outs” from all eight *Tone Event*s to one KEYB signal.

GATE Logic

GATE is needed for triggering envelope generator. *P.moon Logic 8 to 1* creates a single gate voltage out of seven “gate outs”.
P.moon Pulser converts GATE signal to pulses with adjustable length.

Chirp Effect

As little gimmick a chirp effect is installed. At third step a *Voltage Amplifier* sends a voltage from second oscillator of *LFO #2* to oscillator frequency modulation input.

ARP Section

Synthesizer music of “Berlin School” often uses a ”ratcheting effect”, where sometimes a double or triple note is played during one sequencer step. With *P.moon Tone Event* it is possible to obtain such an effect too.

Therefore all *Tone Events’s* “arp in” are chained by use of “arp through”. “Arp in” of first Tone Event gets “normal clock” in order to get two notes during one step. For a live performance “enable” buttons could be used to activate a double note manually. In this setup a second *Stepper* controls “arp enable” signals. This additional *Stepper* is triggered after last step of main *Stepper* and set to four steps. So four sequences can be a little different from each other.

Tone Event #1 gets an “arp enable” at steps 2 and 4 of second *Stepper*. *Tone Events* #6 and #7 are enabled at step 4 only.

Example preset: PM Sequencer 1.voltagepreset