PM Presets – PM LFSR Example 2

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This complex preset creates generative music. Melody will be repeated four times and then replaced by another one. Because there are no feedback knots activated, LFSR shift register only rotates it's bits. So it acts like a regular eight step sequencer with this difference: Pitch CV depends on whole register content.

Description

Bay #1

Toggle button 3 “Run” of **PM Bttns 2/1** starts preset. It’s inverted output stops and resets **PM Multi Divider**, **CA 8Step Sequencer** and **MA Drum Trigger Sequencer**.

CA Sample & Hold creates a really random CV. This could feed **LFSR** start value ***cv in*** directly.

PM Transform is inserted as an option. It allows you to define a CV range, which is smaller than 0 to 5 volts. That might result in less varying “random” melodies.

In this preset LFSR does not use polynome defined feedback. So only register output (bit 8) will fed back to register input.

Register content is preset with start value, when ***preset trig in*** recognizes OFF-ON states. Start value is set by random CV from S&H.

LFSR ***trig out*** sends a trigger pulse each time when bit 8 gets or stays *ON*. **Pulser** changes duration of these trig pulses for **CA Envelope Generator**.

LFSR ***gate out*** is active, as long as register bit 8 is ON. For an uninterrupted group of ONs one single gate signal is provided. In this preset it is used to trig another **CA Envelope Generator** in second bay.

LFSR ***cv out*** delivers a voltage that is represented by register content. This voltage is used as pitch signal for melody oscillator.

max and ***min*** knobs set pitch range. For this example max is set to 3.0 and min is 0. So we will get a pitch within middle three octaves.

A **CA Quantizer** fits pitch CV into chosen scale. It gets two pitch CV at same time: One is from **LFSR**, the other from **8 Step Sequencer**.

Other modules on further right side build a common synthesizer voice.

Bay #2

CA Mini LFO defines clock speed for whole preset.

PM Multi Divider channel 1 (2 : 1 divider) is used to get exactly timed trigger pulses for **LFSR** and the sequencers. Channel 2 (16 : 1 divider) represents **Drum Trigger Sequencer** steps count. Within it’s 16 steps **LFSR** already solved two cycles. Channel 3 (2 : 1 divider) extends number of cycle repetitions to four.

PM Multi Divider can be replaced with similar modules of other manufacturers.

Other modules on further right side build a common synthesizer voice.

Bay #3

Only special module in third bay is the **CA Eight Step Sequencer**. It brings some variations in scale, after **LFSR** cycle was repeated some times.

Bay #4

This bay contains commonly built up rhythm section.

Example preset:
PM LFSR - Example 2.voltagepreset

P.moon DOC files:
https://p-moon-modules.de/modules.htm