

General

MFB's URZWERG is a step-sequencer with 32 steps that can either be used for two sequences with 16 steps each or for four sequences with 8 steps each, including variations that use shorter sequence lengths. Accordingly, URZWERG allows addressing up to four synthesizers or four CV-controllable parameters in a modular system simultaneously. In 4 x 8 mode, you may control four monophonic analogue synthesizers or one polyphonic unit. Combined with a modular/semi-modular synthesizer, you could independently modulate pitch, pulse width, filter-cutoff and LFO-speed. Almost all functions are directly accessible and can be edited while the unit is running.

Set-up and connections

Connect the external power-supply to the **Power** jack. Use **CV1** to **CV4** and **Gate1** to **Gate4** to connect the CV- and Gate-inputs of analogue synthesizers, filters and modular synthesis components. **MIDI IN** can be used to connect an external tempo-source (e.g. a drum-machine) or a MIDI-keyboard. To switch URZWERG on and off, press **On/Off** on the unit's rear.

CV/Gate-Settings

The CV-outputs range from approx. 1 to 10 volts. This range can be limited to allow more precise control for step adjustments. Use **Range12** for sequence rows 1+2 and **Range34** for rows 3+4. The output CV-level and the resulting pitch or the modulation values are controlled with individual step-controls. The Gate-outputs deliver either 5 or 10 volts, set globally by DIP-switch 2 (Off: 10 volts, On: 5 volts). The gate polarity is switched using DIP-switch 1 (Off: positive, On: negative). With this, URZWERG can be used with most analogue synthesizers. Note that switch-triggering is not supported however.

General control functions

Each of the 4x8 controls on URZWERG's user-interface represents a step of a rhythmic pattern that send an individual control-voltage value. Depending on where the CV-out is connected, these voltages control pitch or other parameters of a synthesizer step by step. The step advancement is displayed by the row's two colored LEDs, with red representing step 1. **Start/Stop** will start and stop the sequencer, **Tempo** sets the speed. In addition, the tempo can be edited continuously using the **CV Clock** input with an external CV-voltage source. When setting URZWERG to work as sync-slave, start/stop functions and the tempo will be externally controlled by MIDI or gate-signals. Toggle between master- and slave-mode using the **Sync Mode** switch.

Start In/Clock In

URZWERG can be synchronized to other analogue gear using its **Start In** and **Clock In** jacks. These jacks work as in- and outputs, depending on the **Sync Mode** switch setting, which defines master or slave mode.

Sequence length

Each of the four sequence rows offers a **Length** control that can be set anywhere between 1 to 8 steps. In addition, sequence rows 1+2 and 3+4 can be coupled using the **Chain** switches. By this, two sequences with up to 16 steps length are available. The step length is also variable with combined rows.

Skip-Switch/Hold-Notes

Every step-control has a corresponding skip-switch. Here, the gate-signal for the step can be switched off. With the switch pressed, the gate-signal for the corresponding step is activated, deactivated when not pressed. CV-voltages for the steps can also be sent with the gate being deactivated: With DIP-switches 4 (rows 1+2) and 3 (rows 3+4) in OFF position, CV-voltage will still be sent for deactivated steps. With these DIP-switches set to ON, deactivating the gate will result in no CV-output.

By using the skip-switches, it is possible to create hold-notes. Set DIP-switches 4 (rows 1+2) and 3 (rows 3+4) to OFF. Now, those notes/steps with un-pressed skip-buttons will be bound to the previous steps and therefore result in different note-lengths.

Hint: When using the sequence backwards or backwards in alternate mode, the note-lengths are inverted.

Quantize

To create precise melodies, the CV-output can be quantized to approx. 1 to 5 volts. Use **Range12** and **Range34** controls and set a value left to the center position. With values right from center position, CV-quantization is inactive. The **Quantize** switch either activates this function for sequence rows 1+2 or all four rows. In its center position, quantization is deactivated.

Glide

Glide12 and **Glide34** controls for sequence rows 1+2 and 3+4 specify a glide-effect, where values no longer change stepped but continuously. When controlling pitches, this results in a so called portamento.

Gate-length

GateTime12 and **GateTime34** controls adjust the length for the output gate-impulse between 15 and 85 % in five steps.

Direction

Four **Direction** switches define the running direction for each sequence row. Chose between forward, backwards and alternating (forth & back) modes. The fifth **Direction** switch sets the behavior in alternate mode: In mode **16**, the sequence will run from the first to last step and back. When changing direction the last and first steps are repeated (which makes the sequence pattern exactly twice as long as forward and backwards modes)? Mode **14** skips the first and last step repetitions and therefore shortens the length of the sequence. Finally, the **RND** (Random) setting switches between 16 and 14 mode randomly.

Reset/Manual Step advancement

Reset1+2 and **Reset3+4** buttons force a reset to the first step for the corresponding sequence rows. With the sequencer stopped, these buttons can be used to advance the step number manually.

Shuffle

URZWERG offers two optimized shuffle-modes. With the shuffle function active, the length controls will only allow for even sequence lengths, to avoid unsynced sequences. Mode 1 will result in a moderate, mode 2 in a more intense shuffle-feel. Setting the switch to center position, the shuffle function is deactivated.

Setting the MIDI-channel

Use DIP-switches 1 to 4 to set the MIDI-channel as follows:

Ch.	8	7	6	5	Ch.	8	7	6	5
1	OFF	OFF	OFF	OFF	9	OFF	OFF	OFF	ON
2	ON	OFF	OFF	OFF	10	ON	OFF	OFF	ON
3	OFF	ON	OFF	OFF	11	OFF	ON	OFF	ON
4	ON	ON	OFF	OFF	12	ON	ON	OFF	ON
5	OFF	OFF	ON	OFF	13	OFF	OFF	ON	ON
6	ON	OFF	ON	OFF	14	ON	OFF	ON	ON
7	OFF	ON	ON	OFF	15	OFF	ON	ON	ON
8	ON	ON	ON	OFF	16	ON	ON	ON	ON

MIDI-Sync

URZWERG can be synchronized as sync-master or sync-slave to other MIDI-compatible units. Toggle between master- and slave-mode using the **Sync Mode** switch.

Transposing sequences

Sequences can be transposed globally within a range of 2,5 octaves using a MIDI-keyboard [C1 (#36) to G3 (#67)] Alternatively, separate transposing of rows 1+2 and 3+4 is possible using inputs **CV1+2In** and **CV3+4In**.

MIDI-step-control

With the sequencer stopped, all steps can be stepped through using MIDI-note commands. Note-number A3 (#69) will step through of all four sequences, while A#3 (#70) and B3 (#71) treat rows 1+2 and 3+4 independently.

Note-numbers C4 (#72) to G4 (#79) jump to the individual step positions of all four sequences. C4 = step 1, C#4 = step 2 and so on... This works for the active MIDI-channel with all four sequence rows being addressed at the same time.

Using the next-higher MIDI-channel accesses the steps of the sequence rows independently: Sequence 1 = C1 to G1, Sequence 2 = C2 to G2, Sequence 3 = C3 to G3 and Sequence 4 = C4 to G4.



Owner's manual

MFB-URZWERG