M-185 SEQUENCER [V2.1 ONLY] - MANUAL OF CONTROLS

This sequencer is a multi-stage CV controller, with stage selectable gate modes.
The length of each stage can be selected from 1 to 8 clock pulses.
Each stage can have 1 of 4 different gate modes.

STAGE CV CONTROL POTS
These control the voltage output for each stage in the sequence.

STAGE INDICATORS
These LEDs show the current stage in the sequence.
Bright flash indicates **Gate Output** high.
The LEDs are also used to display extended mode functions [see **Reset Control Extended Mode**]

STAGE GATE MODE CONTROL
These switches determine the Gate Out activity for each stage in the sequence.
Position 0 [Gate Mode 0] [Gate off]:
The gate output will not activate.
Position I [Gate Mode 1] [Single gate]:
The gate output will go high on the first clock pulse of the stage, and remain low for any remaining clock pulses on the stage.
Position II [Gate Mode 2] [Multiple gate]:
The gate output will go high on every clock pulse for the stage, except where the **Step Subdivision** is set to a value larger than 1. [See **Step Subdivision Control**]
Position I- [Gate Mode 3] [Gate hold/long]:
The gate output will go high on the first clock pulse of the stage, and remain high until just before the end of the stage.

STAGE COUNT CONTROL
These switches determine the repeat count for each stage.
It is adjustable from 1 to 8 clock pulses per stage.
[NB The **Step Subdivision** has no effect on this control]

TEMPO CONTROL
Controls the tempo of the internal clock for the sequence.

GATE TIME CONTROL
Determines the length of the pulses for the **Gate Output**.
[NB This function is not available when using an external clock]

PORTAMENTO CONTROL
Controls the amount of lag to the **CV Output**.
When using the CV Output for pitch, this produces a sliding effect between notes.

STAGES CONTROL
This control determines the number of stages used in the sequence, when in sequencer modes **FWD, PPG, or RND**
When in sequencer mode **FXD,** this control determines the overall length of the sequence

in multiples of 4 clock pulses. [see below **Mode Control – FXD**]

R/S CONTROL
This switch starts or stops the current sequence.
[NB When using an external clock this switch has no effect]

RESET CONTROL
This switch resets the current sequence to the first stage.
If the sequence is currently paused, then the **Gate Output** will be reset to low.

RESET CONTROL Extended Function
If the Reset Control is pressed and held, it will flash the stage LEDs.
If the switch is held for two or more flashes the sequencer will enter **Extended Mode**.
This mode allows setting the **Portamento** ON or OFF for each stage.
The current stage is shown by a the flashing LED, and can be selected by using the **Prev or Next Control.**
Pressing the **Reset Control** quickly, toggles the **Portamento** ON or OFF.
A lit LED represents the **Portamento** as ON, an unlit LED represents the **Portamento** as OFF.
Pressing the **Reset Control** longer exits the **Extended Mode** back to normal sequencer operation.

[NB These settings are kept in memory when the sequencer is powered off]

PREV CONTROL
This switch steps back through the sequence one stage at a time.
[NB When the sequence is paused this control will trigger gate high, if the current stage is **Gate Mode 1,2, or 3**]

NEXT CONTROL
This switch steps forwards through the sequence one stage at a time.
[NB When the sequence is paused this control will trigger gate high, if the current stage is **Gate Mode 1,2, or 3**]

RANGE
This switch sets the voltage range covered by the **CV Controls** for the **CV output**.
Can be set to 0V-3V range, or 0V-5V range.

STEPDIV CONTROL
This switch controls the clock **Step Subdivision** that will be used for **Gate Mode 2**.
Position 1: The gate output will trigger on every clock pulse.
Position 2: The gate output will trigger on every 1st, 3rd, 5th clock pulse, etc.
Position 3: The gate output will trigger on every 1st, 4th, 7th clock pulse, etc.
Position 4: The gate output will trigger on every 1st, 5th, 9th clock pulse, etc.
[NB This only affects the gate output and not the step count per stage]
[NB This is only affective on a stage that uses **Gate Mode 2**]

MODE CONTROL
This switch determines the mode of the sequencer.
FWD [Forward]:
The sequencer will play the stages in ascending order, and reset to the first stage when it

reaches the last stage [determined by the **Stages Control**].

PPG [Ping-Pong]:

The sequencer will play the stages in ascending order, when it reaches the last stage [determined by the **Stages Control**] it will then play in descending order to the first stage.

RND [Random]:

The sequencer will play stages in random order, from the range of stages determined by the **Stages Control**.

FXD [Fixed Sequence Length]

The sequencer will play the stages in ascending order, but with a fixed “total sequence length”, and then restart from the first stage

The sequence length is determined by the value of the **Stages Control** multiplied by 4.

Eg: If the **Stages Control** is set to “4”, then the sequencer will play 16 clock pulses of the sequence before resetting to the first stage and playing again.

The length of each stage is still affected by the **Stage Count Control** switches, but their values no longer affect the length of the entire sequence.

This mode is recommended for Dance type music where the sequencer is to be synchronised with a Drum Machine for repeating groove type sequences.

CV OUT JACK

The output of the CV from the currently playing stage.

[NB Stages set to **Gate Mode 0** do not update the **CV Output**]

GATE OUT JACK

The gate output of the currently playing stage.

CLOCK IN JACK

The clock input jack, for using an external clock source.

The clock pulse should rise from 0V to 5V or more.

[NB This jack breaks the connection to the internal clock]

[NB The **Gate Time Control** has no effect when using an external clock source]

CLOCK OUT JACK

The output of the sequencer clock source.

[NB When using the internal clock, this output is affected by the **Gate Time Control**]