



SYSTEM-100M 185

SEQUENCER

STAGE INDICATORS

1

STAGE CV

2

STAGE COUNT

3

STAGE GATE MODE

4

5

6

7

8

TEMPO

PORTAMENTO

GATE TIME / CTRL

STAGES

VOLTAGE MODE / GLIDE PROG

2VQ • 5VQ 5V

SPLIT MODE SEQUENCE MODE

FXD RND PNG FWD

RESET / MENU

START STOP PREV

MIDI IN / RESET IN

CV OUT GATE OUT

MIDI IN MIDI OUT



SYSTEM-100M 185

RYK M185 USER MANUAL

Thanks for purchasing the **M185 sequencer**, which is the first mass produced module for the Roland System 100m in over 35 years ! The unique design of the M185 features stage selectable gate modes and repeat counts, enabling the creation of rhythmically-complex melodies. Our new version of the M185 features 2 channels of CV/Gate, 15 scale quantisation modes, and MIDI IN /OUT.

1.1 DESCRIPTION OF FUNCTIONS

STAGE CV

Turn the knob to set the CV for the stage.

STAGE INDICATORS

Red = Current stage(s)

Orange = Gate High stage(s)

Green = Glide on

STAGE COUNT

Slide to select the pulse count for the stage.

STAGE GATE MODE

Slide to select the Gate Out activity for the stage:

- **Off:** Gate low
- **Single gate:** Gate high on the first clock pulse of the stage, then low for remaining clock pulses of the stage.
- ≡ **Multiple gate:** Gate high on every clock pulse of the stage.
- ⋮ **Multiple gate / 2:** Gate high on every 2nd clock pulse of the stage.
- ⋮ **Multiple gate / 3:** Gate high on every 3rd clock pulse of the stage.
- ⋮ **Multiple gate / 4:** Gate high on every 4th clock pulse of the stage.

? **Probability / Programmable gate:**

Probability: gate is randomly high or low for each clock pulse of the stage.

Programmable: Programmable gate patterns can be set [*SETTINGS MENU* page 5]

- ▮ **Long:** Gate high for the entire length of the stage.

TEMPO

Turn the knob to set the tempo.

PORTAMENTO

Turn the knob to set the amount of glide to the CH1 CV Output.

[This can be set On/Off per stage, in the ● **GLIDE PROG**, see **VOLTAGE MODE** page 3].

STAGES

Turn this knob to set the number of stages used in the sequence.

When in Fixed mode, the overall length of the sequence is set in multiples of 4 clock pulses. [See Page 2 Sequence Mode - Fixed Sequence Length]

When in Split Mode, this determines the last stage of sequence B.

GATE TIME/CH2 CV SET

Turn this knob to set the length of the gate time.

When in ● **GLIDE PROG**, and the sequence is stopped, turn this knob to set the Stored CV value for the stage indicated by the flashing Green LED.

The Stored CV values are used to control the velocity of MIDI Notes, and CH2 CV when not using $\frac{A}{B}$ split mode.

START/ STOP

Press this button to start or stop the internal sequence clock .

[NB If using an external clock, it is a good idea to stop the internal clock first !]

In the **SETTINGS MENUS**, the **START/STOP** button is used to escape the current menu level.

RESET

Push this button to reset the sequence to the first stage.

Press and hold for approx 1 secs, to activate the **SETTINGS MENU**.

In a Settings menu, push the **RESET** button to toggle a function On/Off or enter a sub menu.

When in ● **GLIDE PROG** , push the **RESET** button to toggle On/Off the glide setting for the stage indicated by the flashing Green LED.

Stages with glide set On, are indicated by a solid Green LED indicator.

PREV / NEXT

Push to step back or forward through the Sequence or the Menus.

SEQUENCE MODE

Slide this switch to set the sequence play mode.

FWD Forward, plays forwards in ascending order. The sequence will reset after the last stage set by the Stages-Control.

PNG Ping-Pong, plays forwards, when reaching the last stage, the direction reverses and plays back towards the first stage.

RND Random, plays stages in random order, from the range of stages set by the Stages control.

In **AB** Split Mode, A or B will be chosen randomly to play in Forward mode.

When in **A/B** Split Mode, the sequencer will randomly choose stages from sequence A, whilst sequence B plays in Forward mode.

FXD: Fixed Length, play forwards, until a fixed number of clock pulses have elapsed, before restarting from the first stage. The sequence length of clock pulses is determined by the value of the Stages Control multiplied by 4.

FIXED LENGTH TIP:

Set the **STAGES** to "4"; the sequencer will play 16 clock pulses of the sequence before resetting.

The sequence length is not affected by the total value of the Stage Counts.

This mode is great for locking a sequence to a drum-machine for repeating groove type sequences.

SPLIT MODE

Slide this switch to select and set the Split Mode settings.

OFF No Split, plays without any split.

AB Serial Split Mode, plays Sequence A "X" times, then plays Sequence B "Y" times.

A/B Parallel Split Mode, simultaneously plays Sequence A and Sequence B. Sequence A CV/GATE are output to CH1 and MIDI Note output. Sequence B CV/GATE are output to CH2.

SET Enables setting the split point, and repeat counts for A and B Sequences.

To setup a sequence split, use the **PREV/NEXT** controls to move the Green LED cursor to define the Split point [start of Sequence B], then press **RESET** to set the point.

Next, use the **PREV/NEXT** controls to move the Green LED cursor to define the repeat count of Sequence A, then push **RESET** to set.

Finally, use the **PREV/NEXT** controls to move the Green LED cursor to define the repeat count of Sequence B, then push **RESET** to set.

Once this is complete, move the switch to select **AB** serial split, or **A/B** parallel split.

SERIAL SPLIT MODE TIP: To set up an AAAB type structure, where Sequence A plays STAGES 1-4 three times, then Sequence B plays STAGES 5-8 once;

Set the following values 5, 3, 1 respectively.
5 = Split point, 3 = A repeats, 1 = B repeats.

When in **A/B** Split Mode, the sequencer will play both A & B sequences simultaneously, but the B repeat count is used as a clock-count multiplier.

Eg. If B repeats are set to 3, and a Stage Count on Sequence B is set to 4, then that stage will play 12 clock pulses. [3 x 4 = 12]

VOLTAGE MODE

Slide this switch to set the voltage range of the CV.

For CH1 this can be set to 2V Quantised, 5V Quantised, or 5V Non-Quantised.

For CH2 2V or 5V Quantised only.

● **GLIDE PROG** is used to set the glide On/Off per stage.

Also, if the sequencer is stopped, Stored CV values for CH2 CV and MIDI Note Velocity can also be set.

To set the glide per stage, use the **PREV/NEXT** controls to select a stage, indicated by the flashing Green LED.

Push **RESET** to toggle On/Off the Glide setting for this stage. Stages with glide set On are indicated by a solid Green LED.

When the sequencer is stopped, the **GATE TIME** control is used to adjust the Stored CV value of the stage indicated by the flashing Green LED.

These Stored CV values are used for the velocity of MIDI Note output.

When not in **A/B** Split Mode, the Stored CV values are output from the CH2 CV output.

NB On the back LHS of the module there is a micro switch to select 2V or 5V for the non-quantised CH1 CV range.

CV OUT

CH1 CV output from the current stage in the Sequence.

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

GATE OUT

Gate output from the current stage in the Sequence.

CV/GATE 2 / SYNC OUT

A combined stereo jack socket for CH2 CV output for the Stored CV of current stage, and CH2 Gate or Sync pulse for start of sequence.

In **A/B** Split Mode, the CV and Gate from Sequence B are output from this jack, otherwise the Gate outputs the sync pulse. Use the supplied Y-cable for CV [Black jack], and Gate [Grey jack].

TIP: If using only the CV of CH2, a standard mono jack cable can be used instead.

CLOCK IO

Can be used for clock input, or clock output.

[NB If using an external clock, it is a good idea to stop the internal clock first !]

MIDI IN / RESET IN

Can accept MIDI CLOCK from external units such as drum machines, and also MIDI NOTE input for shifting the Root Note key of the sequence for quantised scales.

When the RESET menu option is selected, **MIDI IN** becomes a RESET input, to reset the sequence to the first stage.

MIDI OUT JACK

Outputs MIDI NOTES from CH1, and MIDI CLOCK sync, with stop, start, reset commands.

NB On the back bottom edge of the module PCB are two micro switches to set the type of TRS MIDI.

The supplied cable is Type B, which we recommend.

2.1 SETTINGS MENUS

LEVEL 1 TOP MENU

- 1 - Scale Quantise selection Sub Menu
- 2 - Programmable Gate Pattern Sub Menu
- 3 - Long Gate Slur ON/OFF
- 4 - A + B Sequence CV offset ON/OFF
- 5 - Clock multiply ON/OFF
- 6 - MIDI Input / Reset Input Toggle
- 7 - Sequence B Gate -> Reset ON/OFF
- 8 - Pre / Post Scale Root Note offset

To access the settings menus, push and hold **RESET** for approx 1 sec, until the animation of Red LEDs appears.

2.2 LEVEL 1 TOP MENU

The top level SETTINGS MENU is indicated by Green Toggle ON/OFF LEDs, and a Red cursor LED.

Use the **PREV/NEXT** controls to move the Red cursor LED to the required item, then push **RESET** to toggle the item ON or OFF, or if available enter the sub menu for that item.

When in the SETTINGS MENUS, Push **RUN/STOP** to escape the current menu level.

1. Scale Quantise Sub Menu

[see page 5 for sub menu]

2. Programmable Gate Pattern Sub Menu

[see page 5 for sub menu]

3. Long Gate Slur ON/OFF

When set ON, the Gate is not cleared at the end of Long Gate mode, allowing for a continuous gate to the next stage.

TIP: Set glide on for the stage after a Long Gate with slur, to create a TB303 style slide.

4. A + B CV offset ON/OFF

When set ON, the CV from Sequence B is added to the CH1 CV to create root note offsets, or key changes. [NB MIDI NOTE input root note offset will be deactivated]

TIP: Create a looped pattern in Sequence A, then using a slower pattern in Sequence B to change the key of Sequence A.

5. Clock multiply ON/OFF

When set ON the sequencer clock [internal or external] is doubled, enabling 16th notes from 8th note clock. This is especially suited to syncing with units that have 2PPQ clocks such as Korg Volca units or Teenage Engineering Pocket Operator units.

6. MIDI Input / Reset Input Toggle

The MIDI Input jack can be switched between MIDI IN [OFF] or as Reset Input [ON]. When using as a Reset Input please switch the MIDI TRS switch on the back of the module to position 'B'

7. Sequence B Gate -> Reset ON/OFF

When set to ON, this enables Resets of Sequence A to be triggered by a Gate high from Sequence B

8 - Pre / Post Scale Root Note offset

Root note, A+B CV, and MIDI IN offsets can be applied Pre [OFF] or Post [ON] to the scale quantise.



2.3 SETTINGS SUB MENUS

LEVEL 2 SCALE QUANTISE SUB MENU

- 1 - OFF/Chromatic
 - Diminished
- 2 - Major
 - Pentatonic major
- 3 - Minor
 - Pentatonic minor
- 4 - Major 6th
 - Dorian
- 5 - Minor 6th
 - Phrygian
- 6 - Major 7th
 - Lydian
- 7 - Minor 7th
 - Mixolydian
- 8 - Iwato
 - Locrian

The level 2 SUB MENUS are indicated by Red toggle ON/OFF LEDS, and a Green cursor LED.

1. Scale Quantise Sub Menu

Use **PREV/NEXT** to move the Green LED to the required stage, then push **RESET** to select the scale.

Push once for the main scales [Red LED], and push again to toggle to the alternates scales [Orange LED], see above..

Root Note setting.

Turn the **GATE TIME** knob to adjust the scale root note from C to B in semitones.

Push **RUN/STOP** to escape the Sub Menu, back to the Top Menu.

2. Programmable Gate Pattern Sub Menu

Allows setting of custom gate patterns for **Gate Mode “?”**

Push **PREV / NEXT** to move the Green cursor LED to the required position, then push **RESET** to toggle each position ON/OFF, indicated by lit Red LEDs.

Probability **Random Gate** is set by turning off all the positions.

TIP: Tip to set up a gate pattern that plays the 1st, 4th, 5th clock pulses, set the LEDs to the following pattern:



Once the required settings have been chosen, push **RUN /STOP** to exit the menu back to Level 1 menu, push again to return to sequencer mode.

Whilst the sequencer is running an animated green LED illustrates the clock pulse position whilst playing a Programmable Gate Pattern stages.

3.1 SEQUENCER UTILITY MODES

There are several utility modes that can be accessed by holding down certain buttons whilst switching on power to the **M185**.

3.2 MIDI TO CV MODE

With this mode the **M185** can be used as a MIDI to CV converter.

Push the **PREV** control whilst powering up, continue to hold until the LEDs stop moving, before releasing the button.

Connect a MIDI source such as a keyboard to the MIDI IN socket via the supplied MIDI/TRS cable.

Turn the **STAGES** knob to select the MIDI Channel for MIDI input.

The MIDI note input is converted to CV and GATE which are output from CH1. Velocity or modulation CVs are output from CH2.

Slide the **MODE** switch to select one of the following options for the CH2 CV output.

- FWD** CV2 outputs the Velocity of the MIDI note.
- PNG** CV2 outputs the Bender Wheel data.
- RND** CV2 outputs the Modulation Wheel data.

3.3 - UTILITY MENU

Push **RUN/STOP** whilst powering up until the LEDs stop moving, before releasing the button.

The UTILITY MENU is indicated by Green Toggle ON/OFF LEDs, and a Red cursor LED.

Use the **PREV/NEXT** controls to move the Red cursor LED to the required item, then push **RESET** to toggle the item ON or OFF, or if available enter the sub menu for that item.

1. Master / Slave select

Two **M185** modules can be slaved together to create sequences with up to 16 stages. Use a 3x2 ribbon cable, to connect the SLAVE socket on the back of both modules, making sure the polarity is correct.

Push **RESET** to toggle MASTER MODE ON/OFF.

Push **RUN/STOP** to start sequencer mode. If successfully slaved, a red LED will animate from the Master module to the Slave module.

All functions and outputs [apart from individual stage controls] are from the Master module.

The Stages control, for length of sequence etc becomes 9-16 [rather than 1-8] when using two modules in Master/Slave mode.

2. MIDI CH & Clock Subdiv Sub Menu

Used to set the MIDI Channel for the MIDI Note output and input. Also the MIDI Clock subdivision for the MIDI clock / internal clock .

For Clock Subdivide

Push **PREV / NEXT** to move the Red LED to the required stage to select the subdivide amount.

Each stage represents a multiple of 6, displayed by a lit Red LED.

TIP: Stage 1 = Subdivision of 6 , Stage 4 = Subdivision of 24

For MIDI Channel

Turn the **Gate Time** knob to select the MIDI IN/OUT Channel, indicated by the Green LED.

3.4 - FIRMWARE UPLOAD MODE

Push **RESET** whilst powering up the module. The sequencer will indicate Firmware Update mode with the top first 2 red LEDs.

Firmware is updated using MIDI sysex files transferred to the module via the MIDI input.

When shipped the firmware version is indicated on the back of the socketed microcontroller chip. Check the RYK shop or Instagram for firmware updates.



www.rykmodular.bigcartel.com
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