

Stylophone™ GEN R-B

USER MANUAL

dübreq

IMPORTANT

PLEASE READ THIS INSTRUCTION MANUAL BEFORE USE AND KEEP FOR FUTURE REFERENCE

WARNING

If operating the unit with headphones, earbuds or similar: To prevent possible hearing damage, do not listen at high volume levels for long periods.

WARNING

This product contains flashing lights.

WARNING

CHOKING HAZARD

Product contains small parts – not suitable for children under 3 years old.

WARNING

RISK OF ELECTRIC SHOCK

If appliance or power supply becomes damaged, do not use.

The appliance must only be used with the power supply provided – Fidus EDA1812-C14

The appliance should be placed on a flat and stable surface.

- Keep these instructions for reference as they contain important safety and operating information.
- Do not allow liquids to spill into the appliance or subject the appliance to excessive smoke, dust, mechanical vibration or shock.
- The appliance and power supply are only intended for indoor use.
- Do not tamper with any internal components. There are no serviceable parts inside the unit and opening the unit will invalidate the warranty.
- If the appliance malfunctions, do not attempt to repair yourself. Contact your retailer or our customer service department.
- Clean the appliance with a dry soft cloth. Do not clean with liquids or solvents.
- This appliance meets all appropriate compliance directives regarding safety and performance when used correctly with the appropriate approved accessories.

IMPORTANT

The plug severed from the mains lead must be destroyed, as plugs with bared flexible cords are hazardous if engaged in a live socket outlet.

The wires in the mains lead are coloured in accordance with the following code:

Green and Yellow – Earth
Blue – Neutral
Brown – Live

As the colour of the wiring in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The green and yellow wire must be connected to the terminal in the plug marked as 'E' or by the earth symbol.
- The blue wire must be connected to the terminal in the plug marked as 'N'.
- The brown wire must be connected to the terminal in the plug marked as 'L'.

Power Supply

AC Input Rating: 90 – 264VAC
AC Input Frequency: 47 - 63Hz
DC Output Voltage: 12VDC
DC Output Power: 19.2W

Stylophone Unit

DC Input: 12VDC (Centre pin positive)
Operating Temperature: 0-60°C
Relative Humidity: 20-80%
Battery operation: 4 x AA non-rechargeable

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MADE IN GREAT BRITAIN

OVERVIEW

The Stylophone GEN R-8 is a dual VCO British made boutique synthesizer with a fully analog signal path.

Both VCOs have “divide-down analog” sub-oscillators (one octave down) and subsub oscillators (two octaves down) that all can be switched on at the same time for a total of six oscillators sounding at once.

Self-oscillating proprietary British design 12 dB state variable filter with Low Pass, High Pass, Band Pass and Wide Notch modes.

LFO with eight waveforms including Sample & Hold, and dual CV outputs for maximum patching flexibility.

ADSR envelope with exponential response, augmented with a short hold stage at the Attack/Decay peak for a punchier sound.

Analog style Delay modulatable with a Time CV input.

Mixer section with a unity AUX input which allows external sound sources to be processed through the GEN R-8s Filter/Delay/Drive audio chain.

Classic British silicon diode Drive circuit with an added JFET boost stage, custom designed for synths as it retains the low end.

Step sequencer with 8 banks and 16 steps per sequence that can play the GEN R-8 synthesizer engine or external synthesizers through the CV/Gate or MIDI outputs.

DAW integration and MIDI controller keyboard flexibility with MIDI Local on/off.

CV/Gate controller keyboard feature where the CV/Gate outputs on the sequencer doubles as keyboard CV/Gate outputs when the sequencer is not playing.

3-octave touch keyboard with two additional momentary performance keys for Glide and Modulation.

Line Out is transformer isolated with an iron core transformer imparting transformer saturation on the low end when the volume is cranked up.

QUICK START

The Stylophone GEN R-8's analog oscillators need to warm up for a few minutes after you've switched it on.

When there's no detectable drift in the oscillators, press and hold the RING MOD and OSC SYNC keys simultaneously for a few seconds. The GEN R-8 will enter the oscillator calibration mode that tunes the oscillators so that they track correctly over the keyboard range.

The oscillators will sound as they're being calibrated so you can monitor progress. When the calibration cycle comes to an end, the GEN R-8 will automatically exit calibration mode.

You can perform this calibration as often as you like, and the shorter it takes, the closer the GEN R-8 was to optimal calibration.

KEYBOARD



The keyboard is a 3-octave touch keyboard that you can play with your finger. It has two extra performance keys on the left, MOD and GLIDE that allows the player to instantly add deeper modulation from the LFO, and glide between notes.

MOD

This key adds extra modulation depth from the LFO, the level of which is set with the MOD DEPTH knob in the CONTROL section. The MOD key is momentary just like the note keys, so when you let go, the depth goes back to normal as set with the DEPTH knob in the LFO section.

GLIDE

This key adds a glide between two notes, it's momentary like the MOD key, so the Glide function is only active as long as the GLIDE key is held down. With this performance control you can not only perform traditional glides, but also precise pitch bends making it a very powerful performance tool.

The way the GLIDE key behaves is set with the GLIDE CONSTANT button and the TIME/SPEED knob in the CONTROL section.

NOTE! The MOD and GLIDE keys double as REST and TIE keys when the sequencer is in Record mode, more on this in the Sequencer section in this manual.

FIRST/LAST NOTE PRIORITY

DIP switch 5 on the side switches between first and last note priority.

LEGATO MODE ON/OFF

DIP switch 6 on the side switches Legato mode on and off.

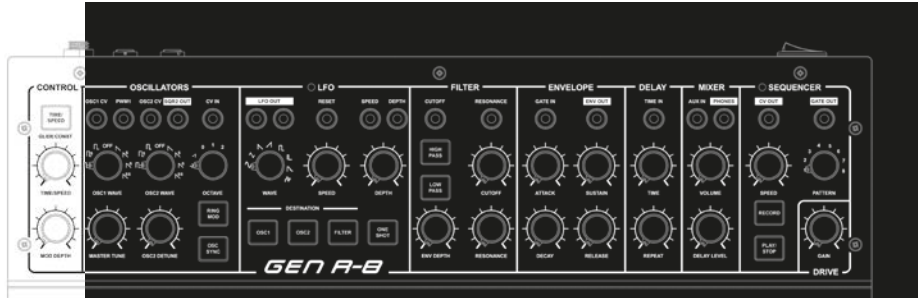
MIDI CONTROLLER (MIDI LOCAL ON/OFF)

DIP switch 3 on the side switches MIDI local on and off. This is useful if you wish to integrate the GEN R-8 into your DAW setup as a MIDI controller keyboard.

CV/GATE CONTROLLER

The CV/Gate outputs on the sequencer doubles as keyboard CV/Gate outputs when the sequencer is not playing.

CONTROL



The CONTROL section on the front panel is for setting the behaviour of the MOD and GLIDE performance keys on the keyboard.

GLIDE CONSTANT

This button determines which parameter is held constant when performing a glide using the GLIDE key on the keyboard. The button toggles between TIME and SPEED as the constant parameter. The default is SPEED being held constant and the button is dimmed to signify this. When the button is lit, TIME is the glide parameter that is held constant.

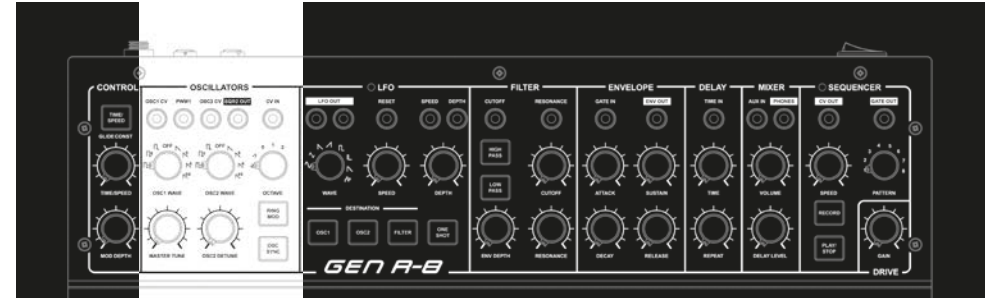
TIME/SPEED

This is the only dual function knob on the GEN R-8, it either controls the constant length of time a glide takes or the speed of the glide. When TIME is selected as the GLIDE CONSTANT parameter, use this knob to set the time, or when SPEED is selected as the GLIDE CONSTANT, use this knob to set the speed.

MOD DEPTH

This knob sets the amount of extra LFO modulation depth that is applied to a sound when using the MOD key on the keyboard.

OSCILLATORS










The OSCILLATOR section is where you select waveforms and tune the oscillators. RING MOD and OSC SYNC are also found here, and you also use these keys to engage the oscillator calibration mode.

OSC SYNC

This button engages the Osc Sync mode where the two oscillators are synced to each others frequency, or their harmonics in the case of detuning to an interval. It syncs the oscillators in perfect tune with each other removing the "beating" chorus effect of two oscillators, and instead creates a new waveform with new harmonic content for single oscillator sounds. If one of the oscillators is frequency modulated, weird pitch stepping effects can be achieved as one oscillator latches on to the harmonics of the other.

OSC1 WAVE

Oscillator 1 has two basic waveforms, sawtooth and square. In addition, it also has a square sub-oscillator (one octave down) and a subsub-oscillator (two octaves down). The audio of the oscillator can also be switched to OFF using this knob. The combination of the basic waveform and sub/subsub-oscillators are denoted as follows:

-  square + subsub-oscillator
-  square + sub-oscillator
-  square
- OFF** oscillator audio switched off
-  sawtooth
-  sawtooth + sub-oscillator
-  sawtooth + subsub-oscillator
-  sawtooth + sub-oscillator + subsub-oscillator

OSC2 WAVE

As OSC1 WAVE, see above.

MASTER TUNE

Tunes both oscillators up or down by seven semi-tones.

OSC2 DETUNE

Detunes oscillator 2 only, to a tuning offset of up to one octave up or down. This tuning offset is maintained when using the MASTER TUNE knob.

OCTAVE

Transposes both oscillators up or down by one or two octaves. When using the GEN R-8 as a MIDI controller, this knob also transposes the keyboard up or down by one or two octaves.

RING MOD

This button engages oscillator Ring Modulation, it can produce atonal clangy and bell like sounds when the oscillators are detuned.

OSCILLATOR CALIBRATION

Press and hold the RING MOD and OSC SYNC keys simultaneously for a few seconds. The GEN R-8 will enter the oscillator calibration mode that tunes the oscillators so that they track correctly over the keyboard range. The oscillators will sound as they're being calibrated so you can monitor progress. When the calibration cycle comes to an end, the GEN R-8 will automatically exit the calibration mode. You can perform this calibration as often as you like, and the shorter it takes, the closer the GEN R-8 was to optimal calibration.

CV PATCH POINTS FOR THE OSCILLATORS

OSC1 CV	CV input for oscillator 1 FM
PWM1	CV input for Pulse Width Modulation of oscillator 1
OSC2 CV	CV input for oscillator 2 FM
SQR2 OUT	CV output of square waveform from oscillator 2 as an FM source
CV IN	Calibrated 1V/OCT CV input for pitch of both oscillators (use this to control pitch in a standard CV/Gate setup)

DESTINATION

These buttons route the LFO to the most common destinations. They are on/off latching buttons, so all three can be on at the same time. The available destinations are:

OSC1	oscillator 1 pitch
OSC2	oscillator 2 pitch
FILTER	filter cutoff frequency

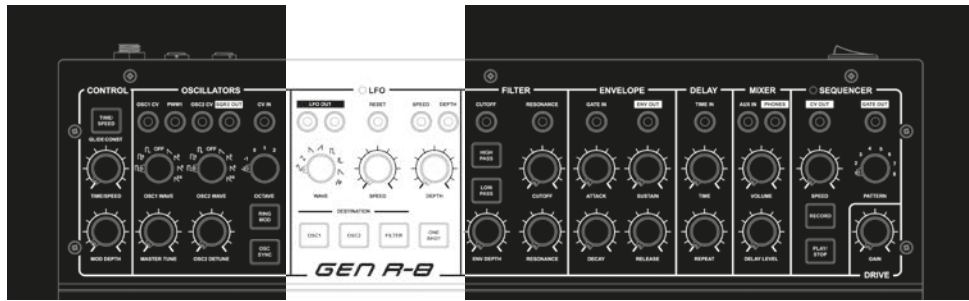
CV PATCH POINTS FOR THE LFO

LFO OUT	CV outputs for the LFO modulation signal, the two outputs are identical
RESET	CV input for LFO reset, LFO cycle resets to start when receiving a gate signal
SPEED	CV input for control of LFO speed
DEPTH	CV input for control of LFO depth

ONE SHOT

This button resets the LFO cycle to its starting point whenever a note is played, and it also limits the LFO to one cycle only. This makes it possible to use the LFO as a second envelope. For example it can be used for auto pitch bends at the start of a note or to control the filter cutoff separately from the main envelope. Sample & Hold in One Shot mode plays a little cycle of random values before settling.

LFO



The LFO section on the front panel is home to the GEN R-8's most advanced modulation source and is where you select LFO waveforms and set speed and depth. Use the DESTINATION buttons to route the modulation, or patch it out from the LFO OUT patch points to anywhere you desire.

WAVE

The LFO has eight waveforms that are selected with this knob. The waveforms are as follows (going around the knob clockwise): Sine, triangle, sawtooth, ramp, square, narrow pulse, falling staircase, sample & hold.

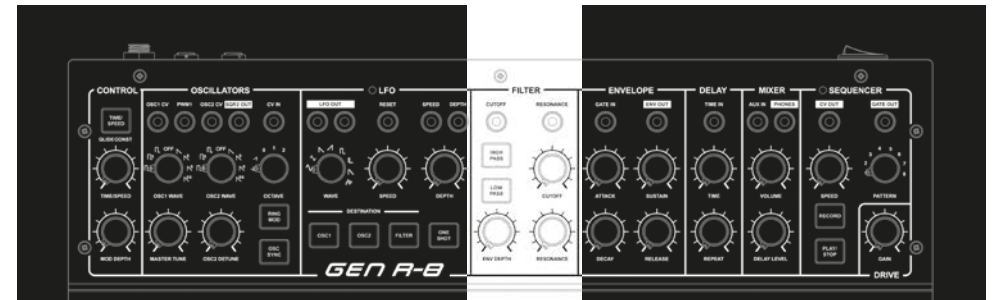
SPEED

This knob sets the speed of the LFO, the range is from slow undulating sweeps to low frequency audio spectrum rate.

DEPTH

This knob sets the depth of the LFO modulation. It has a wide range for deep modulation effects. (Even deeper modulation can be achieved with the MOD key by setting the MOD DEPTH in the CONTROL section for extra modulation depth.)

FILTER



The filter section is where you select what type of filter you want and set filter Cutoff frequency and Resonance. The influence of the envelope on the filter is also controlled from here with the Envelope Depth.

LOW PASS / HIGH PASS

Use these buttons to select the Low Pass or High Pass filter. They're latching buttons that can be switched on at the same time. If both the LOW PASS and HIGH PASS buttons are switched on it will result in a Band Pass filter. If both LOW PASS and HIGH PASS buttons are switched off it will result in a wide Notch filter that scoops out the mid frequencies.

CUTOFF

This knob sets the cutoff frequency of the filter. When the Low Pass filter has been selected, frequencies above the cutoff point will be rolled off by 12 dB per octave, and when the filter is set to High Pass, frequencies below the cutoff point will be rolled off by 12 dB per octave. It's a full audio range cutoff so for example if it's set to max in Low Pass mode chances are you won't hear the filter working and if it's set to min you might not hear any sound at all.

RESONANCE

This knob determines the amount of filter emphasis around the cutoff frequency. Use it sparingly to sculpt the timbre of a sound, or go wild and crank it all the way up until it self-resonates, you'll then hear a distinct whistling sound where the pitch is set by the cutoff frequency.

CV PATCH POINTS FOR THE FILTER

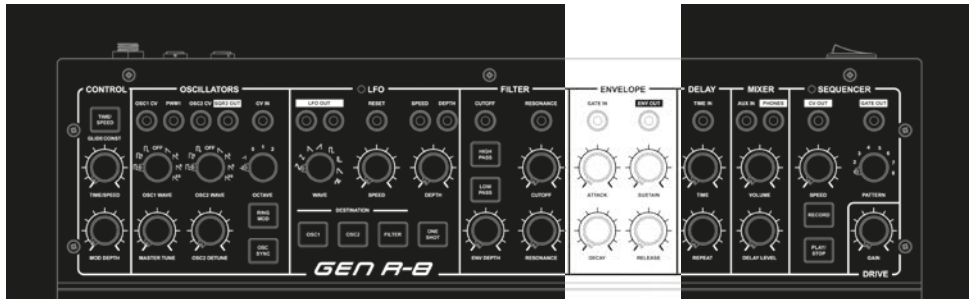
CUTOFF CV input for control of the filter cutoff frequency

RESONANCE CV input for control of the filter resonance

ENV DEPTH

Use this knob to set the effect of the envelope on the filter cutoff frequency. If it's set to zero the envelope will have no effect on the filter, you may want that so that the cutoff can be controlled by the LFO only, or you may want to turn up the level of envelope depth to let the envelope control the cutoff frequency.

ENVELOPE



The envelope controls the loudness of the sound as it's hardwired to the amplifier stage. There are four knobs that determine the shape of the envelope, where Attack, Decay and Release are time parameters, while Sustain is a volume parameter. Collectively they're often referred to as ADSR.

ATTACK

This knob sets the amount of time it takes for the envelope to ramp up the sound, if you want a snappy sound that starts straight away when you press a key, set it to zero.

DECAY

After the Attack portion of the envelope has played out, this knob sets the time it takes the sound to come down to the Sustain level. Most of the time you don't want this set to zero.

SUSTAIN

This knob sets the volume parameter that determines how loud the sound is as long as you keep holding down a key.

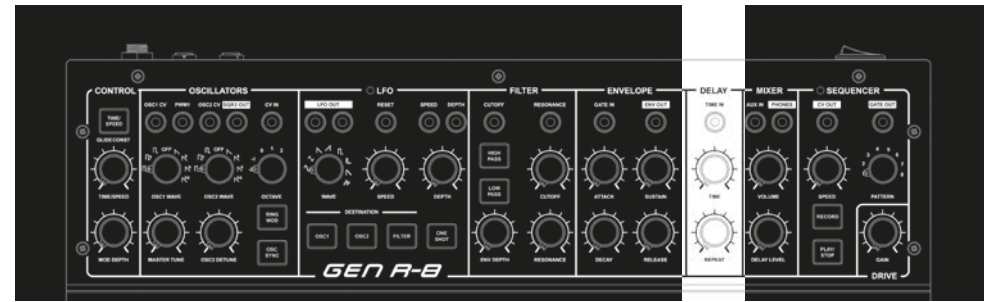
CV PATCH POINTS FOR THE ENVELOPE RELEASE

GATE IN CV input for a gate signal to trigger the envelope and holding it open in the Sustain stage until the gate signal goes low (use this to control the envelope in a standard CV/Gate setup)

ENV OUT CV output of the envelope signal as set up with the ADSR knobs

This knob sets the last time parameter which determines how long it takes the sound to fade away after you have released the key.

DELAY



The analog style delay is based on the popular lo-fi Princeton PT2399 Delay chip and is implemented with a CV input for time modulation, it's also capable of infinite regeneration.

TIME

This knob sets the length of time between each delay repeat. The maximum is around 750ms and the longer the delay is, the more grungy it becomes.

REPEAT

This knob sets the number of repeats of the delay. At maximum it can self-oscillate and keep repeating forever, but the sound gets more and more mangled the longer it goes on for.

CV PATCH POINT FOR THE DELAY

TIME CV input for control of the delay time

MIXER



The mixer section adds together the different audio sources within the GEN R-8.

VOLUME

This knob sets the level of the direct sound from the analog synthesizer engine.

DELAY LEVEL

This knob sets the level of the Delay signal that is mixed in with the direct signal.

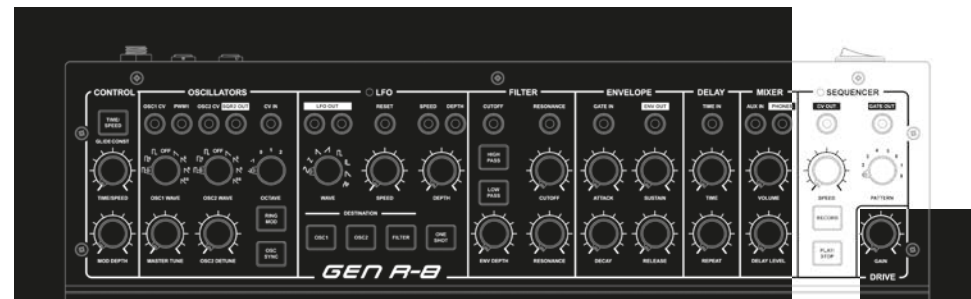
AUX IN

Unity gain input for an external sound source that is processed through the GEN R-8's FILTER/DELAY/DRIVE audio chain.

PHONES

This is an audio output on a 3.5mm jack designed for headphones.

SEQUENCER



The step sequencer is used to play a repeated sequence of programmed notes on the GEN R-8. The sequence is also transmitted to the MIDI OUT socket on the rear and the CV/GATE sockets at the top of the sequencer section. The sequencer has two modes, Record mode and Play mode respectively for recording a sequence and for playing it back.

RECORD

This button activates the Record mode and becomes lit when pressed once, press it again to exit Record mode and it goes dim.

When in Record mode, up to 16 steps can be input by pressing a key, which then advances the sequence programming one step and waits for the next key. When you reach the maximum of 16 steps, the sequencer automatically exits Record mode and the RECORD button goes dim. You can also program sequences shorter than 16 steps, just exit Record mode at any time by pressing the RECORD button.

When in Record mode, pressing the REST key on the keyboard inserts a rest (silent note) and advances the sequence one step. Pressing and holding the TIE key on the keyboard while pressing a note key will "tie" the note with the previous note, meaning the gate is held open between the two notes so the envelope doesn't retrigger.

When Record mode is activated it deletes the existing sequence in the selected pattern memory as soon as the first key is pressed, until then it's only "armed", so if RECORD was pressed in error, you can come out of Record mode and the old sequence will be intact.

PLAY/STOP

This button activates the Play mode, when pressed once it becomes lit and the sequencer starts playing the sequence of recorded notes in the selected pattern memory. Press it again to stop the sequence playing.

GATE TIME

DIP switch 1 on the side sets gate time, you can choose between long or short gate times.

SPEED

This knob sets the speed at which the sequence is played back in Play mode. It has no function in Record mode.

SEQUENCE TRANSPOSE AND RESET

The sequencer is a powerful performance tool with which you can improvise sequence variations while it's playing in time.

When the sequencer is playing you can transpose the sequence seamlessly up and down by using the keyboard. Middle F is the original pitch, pressing any other keyboard key instantly transposes the sequence up or down while still playing in time.

You can also choose to have the sequence reset to the beginning every time you press a key, this feature is set with DIP switch 2 on the side.

CV PATCH POINTS FOR THE SEQUENCER

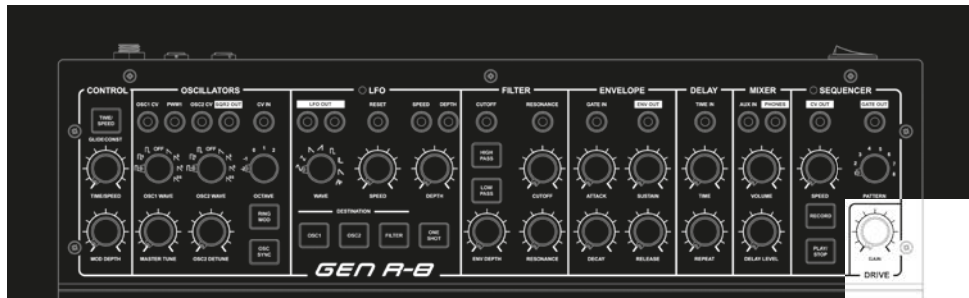
CV OUT CV output for pitch to control an external instrument

GATE OUT Gate output to trigger the envelope of an external instrument

NOTE!

When the sequencer is not playing, the CV/GATE outputs will transmit the notes that are played on the keyboard.

DRIVE



The Drive is a diode-clipping overdrive circuit with an added JFET transistor boost stage. It has been designed specifically for synthesizer sounds and is different from many other overdrive/distortion circuits, in that it retains the low end while still being able to mangle the sound.

PATTERN

This knob selects which of the 8 pattern memories that is active in both Play mode and Record mode.

In Play mode the GEN R-8 will play back the sequence stored in the selected pattern memory. You can switch patterns seamlessly with this knob while the sequencer is playing and it will keep playing in time and pick up the sequence in the new pattern memory that is selected.

In Record mode, the newly recorded sequence will be stored in the selected pattern memory. Switching patterns will have no effect, the new sequence will be stored in the pattern memory that was selected when activating Record mode.

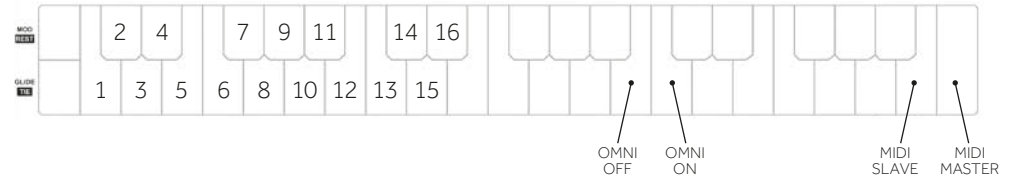
GAIN

This knob sets the level of the Drive effect, the further clockwise you turn it, the more severe the Drive effect becomes.

MIDI PROGRAMMING

MIDI CHANNEL PROGRAMMING

DIP switch 4 engages the MIDI Channel Programming mode. This alters the functionality of the note keys and you use them to program the MIDI channel number and more as laid out in the graphic below.



REAR CONNECTORS

LINE OUT

Output socket for the audio line level signal. This is a transformer isolated output.

MIDI IN

Input socket for a MIDI in signal. If the instrument or device you're connecting has an old type 5-pin DIN MIDI socket, you'll need a converter cable to the 3.5mm (stereo) socket on the GEN R-8. Our MIDI cable adheres to the official MIDI standard.

MIDI OUT

Output socket for the MIDI out signal from the GEN R-8. If the instrument or device you're connecting has an old type 5-pin DIN MIDI socket, you'll need a converter cable to the 3.5mm (stereo) socket on the GEN R-8.

POWER SOCKET

Input socket for the power. Connect only a grounded 12V DC power supply as the ground connection affects the ability to properly trigger the keys.

DIP SWITCHES

- DIP 1 – Sequencer gate time, short/long
- DIP 2 – Sequencer transpose reset on/off
- DIP 3 – MIDI local on/off
- DIP 4 – MIDI channel programming mode on/off
- DIP 5 – First/last note priority
- DIP 6 – Legato on/off

SPECIFICATIONS

Power Supply Voltage:	Grounded 12V DC	
Dimensions (HxWxD):	58mm Height x 366mm Width X 167mm Depth	
Weight:	2.5kg	
Output Impedances:	LINE OUT	200 Ohm
	PHONES	60 Ohm
Input Impedance:	AUX IN	10k Ohm

IMPORTANT: Battery Information


IMPROPER BATTERY USE MAY RESULT IN A FIRE, EXPLOSION, OR OTHER HAZARD

- Only adults should handle batteries.
- Keep batteries from children and pets.
- Do not mix old and new batteries or batteries of different types: alkaline, lithium, standard(carbon-zinc), or rechargeable (nickel-cadmium, nickel metal-hydride).
- Use only batteries of the same or equivalent types as recommended.
- Insert the batteries observing the proper polarity (+/-) as illustrated or indicated inside the battery compartment.
- Exhausted batteries are to be removed from device. Depleted batteries may cause the unit to malfunction.
- Remove the batteries when the product will not be used for an extended period.
- The supply terminals are not to be short-circuited.
- Do not use rechargeable batteries.
- Non-rechargeable batteries are NOT to be recharged.
- Never throw batteries into a fire or other heat sources.
- Do not overtighten battery compartment screw.

BATTERY DISPOSAL:

Spent or discharged batteries must be properly disposed of and recycled in compliance with all applicable national legislation.



The symbol  on the product, packaging or accompanying documents indicates that this product must not be disposed of with your other general household waste.

Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the proper

treatment, recovery and recycling of waste electrical and electronic equipment.

The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

For more information about where you can take your waste equipment for recycling, please contact either your Local Authority, or where you purchased your product.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

ACKNOWLEDGEMENTS

Like any project this couldn't be done without a group of dedicated, talented and enthusiastic people. It's been a pleasure and a privilege to work with you

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