



SOUNDMASK®

OPERATING MANUAL

RANDOM DIGITAL SOUND GENERATOR



MODEL **SM-GR-3100**

IMPORTANT SAFETY INFORMATION

The information furnished in this manual does not include all of the details of design and engineering of this particular product; nor does it cover every possible application or situation concerning its usage, which may occur during the installation, operation or maintenance of the product.

IMPORTANT - THE PRODUCT REQUIRES CLASS 2 OUTPUT WIRING

TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE TOP OR BOTTOM COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL. DISCONNECT POWER CORD BEFORE REMOVING REAR PANEL COVER TO ACCESS GAIN SWITCH.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE!

Safety Instructions

1. Read, follow and retain these instructions.
2. Read all warnings.
3. The apparatus must not be exposed to dripping or splashing and no objects filled with liquids, such as vases, may be placed on the apparatus. Do not use this apparatus near water. Clean only with a damp cloth.
4. The apparatus must be connected to a mains socket outlet with a protective earthing connection.
5. The appliance coupler must remain readily operable for disconnection from the mains.
6. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.

8. Do not install the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and third grounding plug. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

9. Protect the power cord from being walked on or pinched, particularly at plugs, convenience at plugs, convenience receptacles, and the point where they exit from the apparatus.

10. Only use power cord from attachments/ accessories specified by the manufacturer.

11. Use only with a cart, stand, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from flip-over.

12. Unplug this apparatus during lightning storms or when unused for long periods of time unless there is a surge diverter on that circuit or that protects that circuit.

13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, or does not operate normally.

Please follow the instructions in this manual to obtain the optimum results from this unit. We also recommend that you keep this manual handy for future reference.

GENERAL DESCRIPTION

The Soundmask SM-GR-3100 is a microcontroller controlled digital random noise generator with an effective frequency range of 20Hz to 20kHz. The digitally generated Gaussian noise is passed through a Spectrum Shaper to flatten its response through the midrange, corresponding to human speech frequencies. The output can further be shaped through an external Soundmask Third Octave Digital Equaliser, Model SM-EQ-2000, via two XLR connectors.

The random noise is then amplified through a 50W full bridge digital amplifier capable of driving 100 Soundmask speakers (Model SM-T-1200). The device's output can also be adjusted to ramp up when the device is switched on for a more acoustically comfortable start up.

The device has a switchmode power supply (CE and CB Compliant Separate Certificates can be supplied as required) and a digital amplifier to minimize power use.

SPECIFICATIONS

Model	SM-GR-3100
Generator	<ul style="list-style-type: none"> › Microcontroller based digital random noise generator › Blue LCD display › Digital button lock to preserve settings
Amplifier	<ul style="list-style-type: none"> › PWM oscillator is up to 1.0M › 50W x 2 RMS into 6W with Vcc 24V › 50W x 2 RMS into 8W with Vcc 28V › 24-28V Vcc Supply Voltage Operation › Full Bridge (BTL) output Amplifier › Integrated Short Circuit Protection › Integrated Thermal shutdown › Start Up De-pop Circuit › Efficiency up to 90% › Frequency response 20Hz-20kHz › UL/CSA/CE Mark compliance
Power	<ul style="list-style-type: none"> › Power in 110 – 240V AC 50/60Hz › Fuse T800mA/250V › Power output to speakers 7W
Dimensions & Weight	483 x 155 x 45 mm, 2 Kg
Compliance	
Safety information	Mount unit in locations that provide unobstructed air movement to minimise the risk of overheating.

USER INTERFACE

The user interface is controlled by two buttons and the response is displayed by the LCD. Pressing both buttons at the same time for 6 seconds (this delay can be changed in firmware settings) will unlock the device displaying the current volume settings. Once unlocked, the volume can be increased by pushing the button pointing upwards, or decreased by the button pointing downwards. If the buttons are not pressed for 30 seconds (this delay is also settable in the firmware) then the device will return back to its normal state and display the word "Active". At this point the new volume setting is written back to the EEPROM and will be the default volume.

Note that if the volume is set, and the device is then powered down before it has returned to its normal state, then at the next power up it will revert to the previous volume state, not the one last set. There is a switch that can be either switched to the left (as seen from the rear of the unit) so that the graphic equalizer is driving the output or to the right for operation without a graphic equalizer.



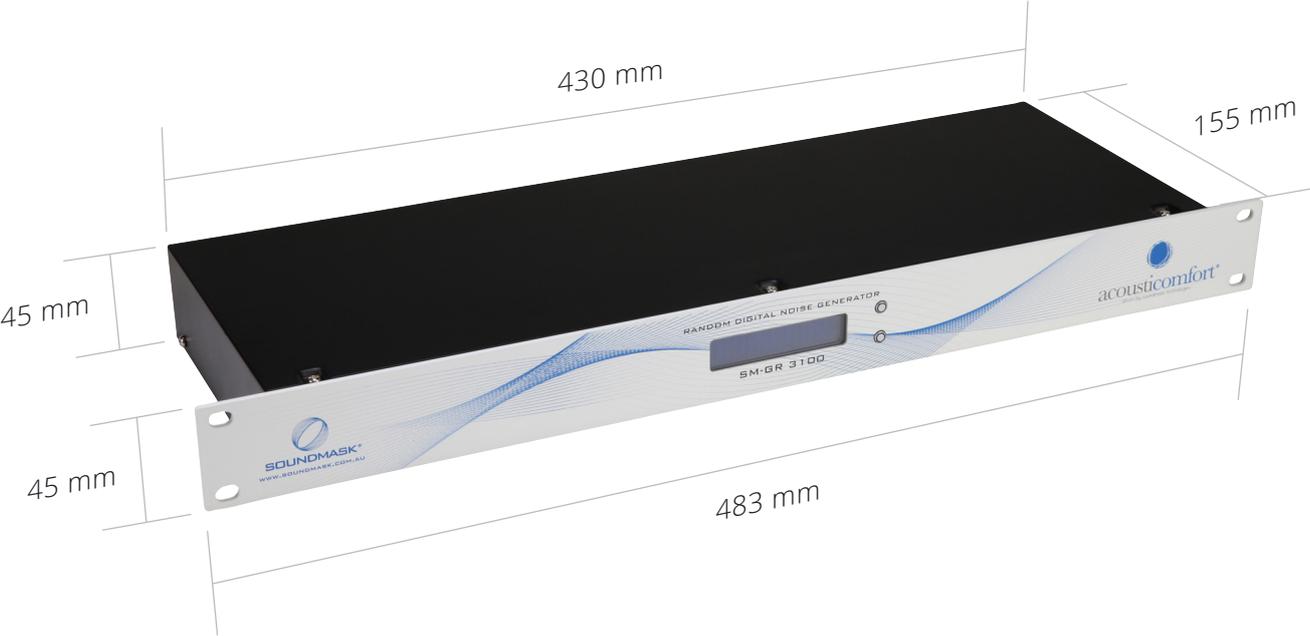
FRONT PANEL

1. **LCD Display** - Shows unit status and all the necessary information to control the unit.
2. **Volume level controls** - Upper control increases volume, lower control decreases volume.

REAR PANEL

1. **Audio output** - Black.
2. **Audio output** - Red.
3. **XLR input connector for EQ** - 3 pin XLR connectors are fully balanced where pin 2 is hot, pin 3 is cold and pin 1 is ground (shield).
4. **EQ Bypass switch** - If using an EQ with the generator, switch is "ON"; if not using an EQ, switch is "OFF".
5. **XLR output connector for EQ** - 3 pin XLR connectors are fully balanced where pin 2 is hot, pin 3 is cold and pin 1 is ground (shield).
6. **Main Power** - Connects via a standard IEC socket. A compatible power cord is supplied with the unit.
7. **ON/OFF switch**.

DIMENSIONAL DIAGRAM



EXAMPLE LAYOUT

RANDOM DIGITAL NOISE GENERATOR [SM-GR-3100](#)



DIGITAL EQUALIZER [SM-EQ-2000](#)



DIGITAL DISTRIBUTOR [SM-DX-4800](#)



DIGITAL AMPLIFIER [SM-DA-8000](#)



CEILING TRANSDUCER [SM-T-1200](#)



- NOTES**
- › Each [SM-T-1200](#) pictured represents 100 transducers.
 - › The [SM-DA-8000](#) is capable of servicing up to 800 transducers.
 - › Diagram not to scale.

TROUBLESHOOTING

If the unit is running slowly or “freezes up”, reset the unit by turning it off using the power switch. Leave the unit to reset for 15 minutes before turning the power switch on again.

For any further problems, contact us via the detail below.

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NOTES



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