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# Waves SoundGrid Servers

Quick Start Guide

## *The SoundGrid Server (SGS)*

This quick start guide provides basic instructions for setting up a SoundGrid server in a SoundGrid network. It covers these models:

- Proton Server
- One-C Server X10
- Extreme-C Server X10
- Extreme Server X10
- Titan Server
- Titan-R Server

Installation is the same for all series, except for network connectors and power sources. The SoundGrid server software is pre-installed on the SoundGrid server's internal flash disk. Once you connect and turn on the server and launch the host application, the host will recognize the server and you'll be up and running. The host may prompt you to update the server firmware. Follow the on-screen prompts.

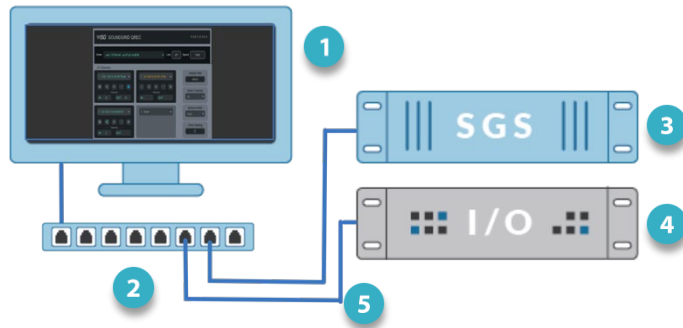
Detailed product descriptions and specifications can be found on each server's product page at [www.waves.com](http://www.waves.com).

For in-depth setup instructions about SoundGrid configurations, please refer to the user guided for your SoundGrid-compatible host application.



## How to Connect

A SoundGrid network consists, at minimum, of these elements:



- 1 SoundGrid host computer
- 2 1Gb Ethernet switch
- 3 SoundGrid server
- 4 SoundGrid I/O
- 5 Cat 6 (or better) Ethernet cables

Connect all components to a 1 Gb SoundGrid-compatible switch, using Cat 6 (or better) Ethernet cables. Use the etherCON connector (all 2U height servers) or RJ45 connector (all 1U height servers) on the server's rear panel. For a list of SG- compatible switches, consult this Waves support page:

<http://www.waves.com/support/network-switches-for-soundgrid-systems>

### IMPORTANT NOTES

- The SoundGrid port is used to connect exclusively to the SoundGrid switch. Do not use other networks, such as internet, on the SoundGrid network.
- USB3 and HDMI ports on a server are for service only.

## Configuring a Server in the Host Application

Once the host computer, I/O devices, and the server are connected to the switch, turn on all the components and launch the host application. The host will identify all network devices and ask you if you want to configure them. Some hosts require you to click Auto-Config Start, which sets in motion the same configuration process. The host will scan the network, assign devices, and patch the I/Os. You can also assign I/Os and servers manually. Please refer to your host application for details.



## Installation Notes:

If the server is installed in a rack, the rack manufacturer's safety instructions apply. When installing, note that the server may weigh more than 10 kg. Maximum ambient air temperature is 40 °C. Operation in higher temperatures should be avoided. A 1U space should be left above and below the unit to prevent heat transfer from adjacent equipment, if this generates heat above 40° C.

At least 75 mm (3 inches) should be allowed on the sides of the unit to allow ventilation. At least 75 mm (3 inches) of free air should be available at both the front and the rear sides of the rack to allow heat dissipation. Under no circumstances should the fan (where fitted) or ventilation outlets be blocked or restricted.

**!** The SoundGrid Server must be earthed to the mains earth (ground).

Power is provided via an IEC inlet on the rear of the unit. This must be connected to an earthed mains outlet using a cable that complies with local approvals and regulations. The Mobile server is powered with an external 12 VDC, 3 A wall adapter.

### REDUNDANT POWER SUPPLIES

R-series servers, such as the Titan-R Server, have a dual, redundant, hot-swappable power supply module with independent power connections. Each module is rated at 350 watts independently. Each PSU module can deliver sufficient power to run the server at full capacity.

Failure of either power supply module results in a visible red warning LED indicating which of the two modules have failed. Removal of the failed module will cancel the indication and the system will continue to operate normally, without interruption, on the remaining PSU module. A replacement for the failed module may be inserted at any time and automatically restores the PSU system redundancy.

**!** Risk of explosion if the battery is replaced with an incorrect type.  
Dispose of used batteries according to local regulations.



## SoundGrid Server Network and Temperature Indicators

There are two status LEDs on the front panel. They indicate network connectivity status and CPU operating temperature.

### Network LED

The color of the LED indicates the device's connectivity status.

Blinking Blue or Green	Server is loading.
Blue	Server is controlled by the SoundGrid application.
Blinking Red	Server is not controlled by the SoundGrid application.
Yellow	Firmware is updating.
White	Unit malfunction (e.g., firmware did not load properly, unit did not boot properly).
Cycling colors	Identifies the device from the host application.

### Temperature LED

The color of the LED indicates the device's operating temperature status.

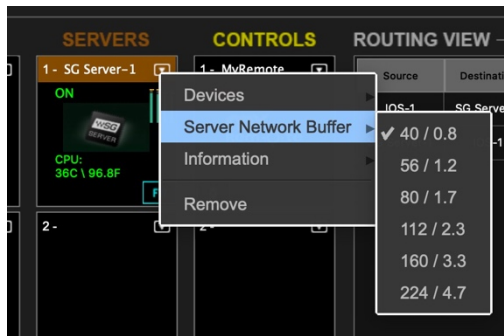
Green	Server CPU is within normal operating parameters.
Red	Server CPU is overheating.

## Specifications

For power requirements, physical specifications, environmental limits, and system requirements, visit your server's product page at [www.waves.com](http://www.waves.com).



## Minimum Network Latency Settings



The Network Latency is the round trip from the SoundGrid I/O to the SoundGrid server and back. This determines the speed of real-time processing. Lower settings result in lower system latency and greater responsiveness. Higher settings yield more stability but greater latency.

If you encounter pops or similar errors, increase the buffer setting. The buffer size is set in samples but is also displayed in milliseconds. This setting is controlled through the SoundGrid host. Click on the server's icon menu in the Servers Rack and select Server Network Buffer. The default network latency is 0.8 ms.

## Cleaning the Dust Filters

A 2U server has two dust filters that should be cleaned periodically and replaced if damaged. Remove the four screws on the front panel to expose the filters.

## Battery Disposal Information



### CAUTION

*Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.*

