

iSP
Technologies

ACTIVE
SERIES



GSL12 "MONGOOSE"
GROUND STACKED LINE ARRAY SYSTEM
OWNERS MANUAL

INTRODUCTION

Congratulations on your purchase of the GSL12 Mongoose system. The Mongoose represents a cutting edge design in ground stacked sound reinforcement system and offers extremely high performance using line source technology. The GSL12 Mongoose can be used in "1/2 Line" configuration (2-cabinets) or expanded to 4 cabinets to provide a "Full Line" configuration.

The GSL12 system is a 3-way active speaker system with high output and low distortion. The basic 1/2-line system comprises two boxes, which are stacked to form a 4-element line. The bottom box contains two vertically arrayed, high performance 12-inch speakers and two amplifier modules, which contain 8 channels of amplification and an optimized electronic crossover. The top box contains two more 12-inch speakers, a horn-loaded compression midrange, and two high frequency drivers. The two boxes are interconnected using an 8-pole Speakon cable. Use with subwoofers is highly recommended. These two-box stacks are sold in mirror-image pairs. The system can be expanded to 4 boxes per side by placing a right top upside down on a left top (and vice-versa), thereby aligning the LF, MF, and HF lines. The system has tight vertical dispersion and is recommended for crowds that cover vertical angles of 18 degrees or less.

Use of a horn-loaded MF compression driver results in top-quality midrange clarity and throw, while use of 1-inch HF compression drivers results in extended highs and wide horizontal dispersion. These compression drivers are of the very highest sensitivity (>110 dB/1W/1m).

Standard with the system is a built-in 8-channel, 1700 Watt RMS (total) amplifier/electronic crossover that is specifically designed for use with the GSL12 speaker system. This amplifier features ISP's patent pending DCAT high-current amplification technology. Dual internal cooling fans automatically activate when the amplifier extrusions reach a temperature greater than 50 degrees centigrade.

Extreme caution and common sense should be used when setting up the Mongoose system for use to avoid the possibility for the system to fall or tip over causing serious injury. Safety straps should be used with any Full Line Mongoose system.

Please take a minute to read this entire manual for complete information regarding the use of the GSL12 Mongoose system in both 1/2 Line and Full Line configurations.

IMPORTANT SAFETY INSTRUCTIONS!

Please read this very carefully before operating this unit.

- Read **ALL** instructions carefully before using this unit.
- Do not operate this unit near water, in the rain or where there is moisture. If this warning is ignored a serious electrical shock or death may occur.
- Do not attempt to service this unit. No user serviceable parts inside. Refer servicing to qualified, ISP approved service personnel.
- Never remove or defeat the ground connection on the power cord of this unit.
- Care should be taken to avoid spilling any foreign objects or liquid into this unit.
- This active speaker system has eight internal power amplifiers and an external heatsink located on the back of the speaker for cooling of the internal amplifiers. Care should be taken to avoid placing this active speaker in a location where the external heatsink does not allow proper cooling of the internal amplifiers. Avoid placing this system close to other heat sources. The external heatsink may reach high temperatures under normal use. Do not block the external heatsink with any other object. Make certain there is proper ventilation for the external heatsink when is use.
- Failure to follow these instructions may void the warranty.



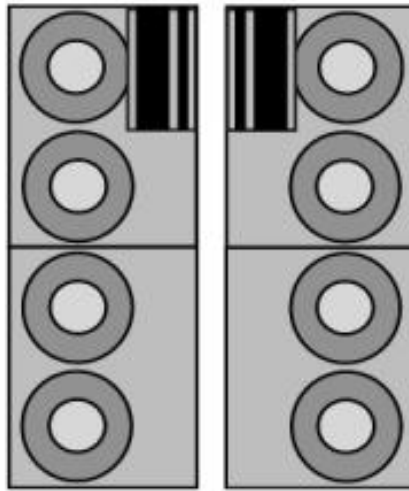
Caution: Exposure to extremely high noise levels can cause permanent hearing loss.

The GSL12 "Mongoose" Speaker System is capable of producing in excess of 140 dB SPL. Continued exposure to noise levels in excess of 90db may cause permanent hearing loss. Below is a chart of the OSHA (Occupational Safety & Health Administration) regulations for Occupational Noise Exposure. Please note: OSHA requires hearing protection for any work environment when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response.

TABLE G-16- PERMISSIBLE NOISE EXPOSURES	
Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4	115

PLACEMENT

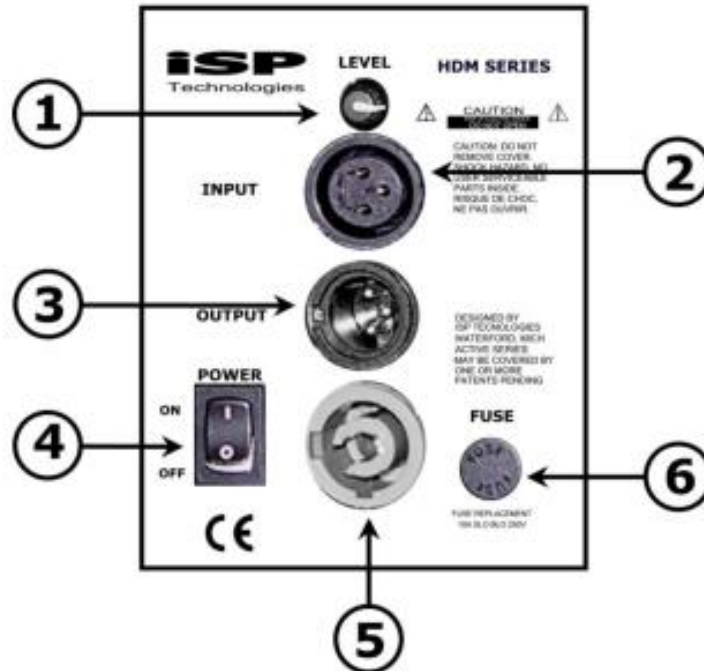
The GSL12 "Mongoose" is designed to sit on a stable, secure mounted subwoofer or directly on a stage or floor. Stack the Mongoose system with the powered cabinet, which includes the rear control panel and power connector, as the bottom cabinet. Note that the weight of each GSL12 upper and lower cabinet is approximately 115lbs per cabinet. Use caution to avoid stacking the system in any manner that may be considered unstable. The top GSL12 cabinet includes two 12 inch woofers and the mid / high frequency horn assemblies. Stack the top Mongoose cabinet on top of the lower powered cabinet and position it such that the rubber feet drop into the recesses provide in the lower cabinet. This helps secure the system during use. It is recommended when using the system as a stereo system to position the left and right stacks with the horn assemblies on the inside of the line of 12-inch speakers (as shown below).



DO NOT position or mount the cabinet where it can tip over and fall on someone. Do not attempt to mount the cabinet on speaker stands. Do not attempt to 'fly' (suspend by cables, chains, ropes, etc.) the cabinet. It was not designed for flying. Position it only on a flat, stable surface where it is not in danger of tipping over.

Also, note that the placement of the cabinet relative to floors and walls will affect the frequency response of the system based on reflections from the walls and or floor. For the best sound, locate the system to reduce the effect of reflected sound. Placing it closer to the floor and walls will reinforce the low frequency response. The closer it is, the higher in frequency this reinforcement will go. Do not block the rear fan opening in any way; make sure that adequate space (6 inches recommended) is left behind the cabinet for proper airflow over the internal amplifiers.

REAR CONTROL PANEL DESCRIPTION



1. INPUT GAIN- This control determines the overall input level of the signal to the power amp section of the Tri-Power cabinet. Adjusting this level will not affect the level of the signal passing through to output connectors.

2. BALANCED XLR INPUT-This female XLR connector provides an input for balanced line level signal source

3. BALANCED XLR OUTPUT- This XLR male provides a balanced loop through for connecting to additional powered cabinets.

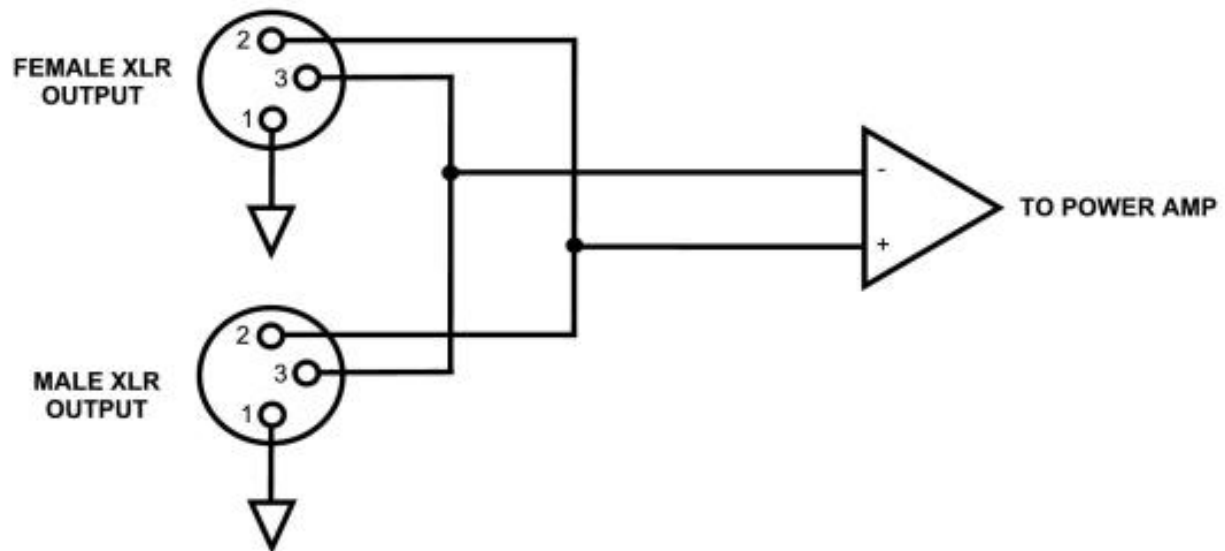
4. POWER SWITCH-This switch provides power to the Tri-Power power amp section. This switch is a three-position switch where center is OFF and the outer positions are ON.

5. POWERCON CONNECTION-This module provides a connection for the power cord.

6. FUSE- This fuse holder contains the mains fuse for the Mongoose system. Use only 1 ¼ inch 10 AMP slow blow fuse for replacement

BALANCED CONNECTION DESCRIPTION

The ISP HDM series has balanced XLR inputs and outputs configured to AES standards (Audio Engineering Society). These connections are connected in a loop through configuration and will accept a balanced line-level input. The standard phase configuration is that pin 2 is (+), pin 3 is (-), and pin 1 is shielded ground on the XLR.



NOTE: IF AN UNBALANCED SIGNAL SOURCE IS USED, THE MALE XLR OUTPUT FOR LOOPING THROUGH TO ADDITIONAL POWERED CABINETS WILL ALSO BE UNBALANCED.

3. FAN VENT OPENING- This opening provides ventilation for the internal cooling system. Do not block or obstruct the flow of air around this opening.

4. 8-CONDUCTOR SPEAKON CABLE- This 8-conductor Speakon cable, supplied with the GSL12 system, allows connection to the top GSL12 cabinet providing system amplification.

5. SPEAKON SPEAKER INPUT CONNECTOR- This NL8M eight-conductor Speakon connector provides the connection of the internal amplifier to the top GSL12 cabinet.

THERMAL CONDITIONS

The ISP Technologies GSL12 Mongoose is capable of producing in excess of 1700 watts RMS at full power. This generates heat that must be dissipated in order to maintain reliability and insure the amplifier components stay within their operating temperature specs. To accomplish this, the amplifier modules are mounted on an internal heatsinks. Airflow is forced through the fins of the heatsinks via dual fans. It is recommended that the rear of the system have at least 6 inches of clearance from any obstruction to allow proper ventilation to occur.

In addition, the amplifiers are thermally protected internally via a thermal switch, which will attenuate the signal 40db in case of failure of the cooling system i.e. the heatsink temperature exceeds a certain point. When the temperature drops below a certain point, full signal will be restored. Tests have shown under extreme conditions that cycling will occur approx. (40 sec. ON, 20 sec. OFF). If this condition occurs check to confirm if there is any obstruction of the fan vent on the rear of the lower GSL12 cabinet.

It should also be noted that a separate internal thermal breaker also protects the power transformer. If the power transformer temperature reaches a critical point, the internal thermal breaker will open. The power LED on the front of the cabinet will go out and the Mongoose will shut down for several minutes while the power transformer cools. If this condition occurs, simply reduce the signal level of the system. This will only occur if the GSL12 system is continually pushed into heavy distortion.

NOTE: The power transformers inside the GSL12 contain an enamel coating on the wires. During the first several hours of heavy use, the GSL12 may have a slight odor caused by the enamel on the transformer wires heating.

SPECIFICATIONS

Configuration:	3-way
Power Required:	14 Amps x 120 VAC (2-box stack).
Connector:	XLR or 1/4" for audio input. 3-pin IEC for AC power.
Coverage:	90-degree Horizontal x 18 degree Vertical.
Freq. Range:	52 Hz to 19 KHz (-10 dB)
Freq. Response:	65 Hz to 17.5 KHz (+- 3 dB), @1 W
LF Driver:	4 x 12 inch, 500 W RMS per driver, vented.
MF Driver:	4-inch compression, 125 W rms.
HF Driver:	2 x 1.75 inch compression, 100 W RMS, polyester diaphragm, on constant directivity horn.
Amplifier:	2 x 600 + 300 + 2 x 100 W RMS, 8 channels, high current DCAT, fan cooled (2-box stack). Built-in electronic crossover (4th order).

Calculated Output- 2-boxes @ 1 meter:

LF: 133 dB SPL (long term), 134 dB SPL (peak).
MF: 132 dB SPL (long term), 136 dB SPL (peak).
HF: 133 dB SPL (long term), 134 dB SPL (peak).

Calculated Output- 4-boxes @ 1 meter:

LF: 139 dB SPL (long term), 140 dB SPL (peak).
MF: 137 dB SPL (long term), 141 dB SPL (peak).
HF: 138 dB SPL (long term), 139 dB SPL (peak).

Dimensions:	24" W x 27" H x 18.5" D per box.
Weight:	115 lbs. per box.
Construction:	Baltic Birch Plywood. Powder coated Steel grille.
Finish:	Black Rubberized Polyurethane.

(Option):	2 x 1.75 inch V.C. compression, 60 W RMS, polyester diaphragm, on CD horn.
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WARRANTY AND SERVICE

The Internal Circuitry is fully guaranteed to be free of defects under normal use and service for a period of three years from the date of purchase. The Speakers and Cabinet that are used in this product are fully guaranteed to be free of defects under normal use and service for a period of three years.

Any damage resulting from the misuse or the failure to follow the precautions and instructions will void the warranty.

In the event that the unit needs to be repaired, please return the unit to ISP Technologies directly. Simply repack the unit, send a copy of the original receipt, a note stating the problem, and send it to:

ISP Technologies, LLC
5479 Perry Drive Suite B
Waterford, MI 48329
Attn: Repair Dept.

All shipping charges must be fully prepaid.

ISP will not be responsible for any damages incurred in shipping of any unit. Any claim will need to be settled with the shipping company.

The warranty will be voided if the serial number has been tampered with in any way.

The warranty card must also be filled out and returned in order to activate the warranty.

Should you have any questions for the repair department prior to returning the product please call 1-248-673-7790.

NOTE: If it is determined that the power amp module has failed, it is possible for an ISP certified service center to remove the module from the cabinet by removing the mounting screws and disconnecting the speaker terminals and the transformer. The module may be sent back to ISP separately. Please contact ISP for technical support to help determine if the amplifier module may be defective.



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