

iSP
Technologies

ACTIVE SERIES



XMAX 415

ACTIVE SUBWOOFER SYSTEM
OWNERS MANUAL

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 an internal amplifier and a heatsink located inside the back of the cabinet with an internal fan for cooling of the internal amplifier. Care should be taken to avoid placing this active speaker in a location where the fan is blocked and does not allow proper cooling of the internal amplifier. Avoid placing this system close to other heat sources. Do not block the fan or underside ventilation holes with any other object. Make certain there is proper ventilation for the internal amplifier when is use.
- Do not drive the XMAX415 into excessive heavy distortion for an extended period of time to avoid premature speaker failure.
- Failure to follow these instructions may void the warranty.



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

The XMAX415 speaker system is capable of producing in excess of 137db SPL at 1 meter. 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

INTRODUCTION

Thank you for purchasing ISP Technologies XMAX415 active subwoofer system. The ISP Technologies XMAX415 Subwoofer has been carefully designed to provide a level of performance, both in terms of SPL output and low frequency extension, equal to or better than the best 4 x 15 subwoofer cabinets. The 15-inch drivers are of the latest state-of-the-art design. This results in outstanding 2800-watt RMS power handling for low power compression and high reliability.

The Cabinet also features a very large port, much larger than found on many subwoofer cabinets. This provides better linearity for higher output and lower frequencies. Combine all this with a low cabinet tuning, and deep, tight, high output bass is achieved.

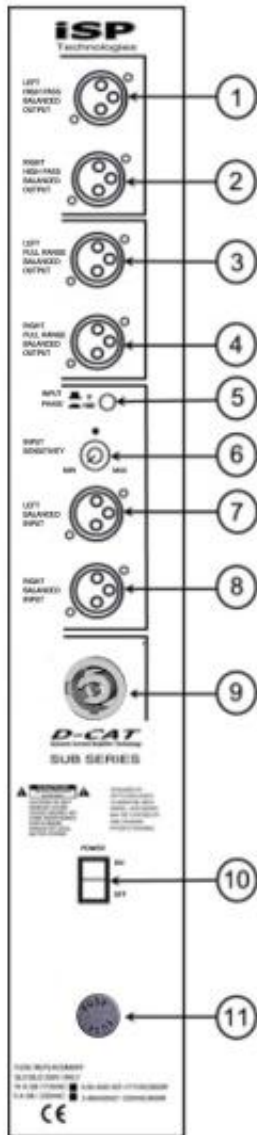
Standard with the system is a dual channel, 1600-watt RMS (2500-watt peak) amplifier that is specifically designed for use with the 4x15 speaker. This amplifier features ISP's patented **D-CAT** high-current amplification technology, and is capable of driving the speakers up to their safe operating limits. Dual cooling fans automatically switch on when needed if the internal heatsink temperature exceeds 60 degrees centigrade.

PLACEMENT

The XMAX415 is designed to sit directly on the floor or stage. 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. The highest level of performance will be achieved when the XMAX415 is used in pairs and mounted at floor level against a back or sidewall.

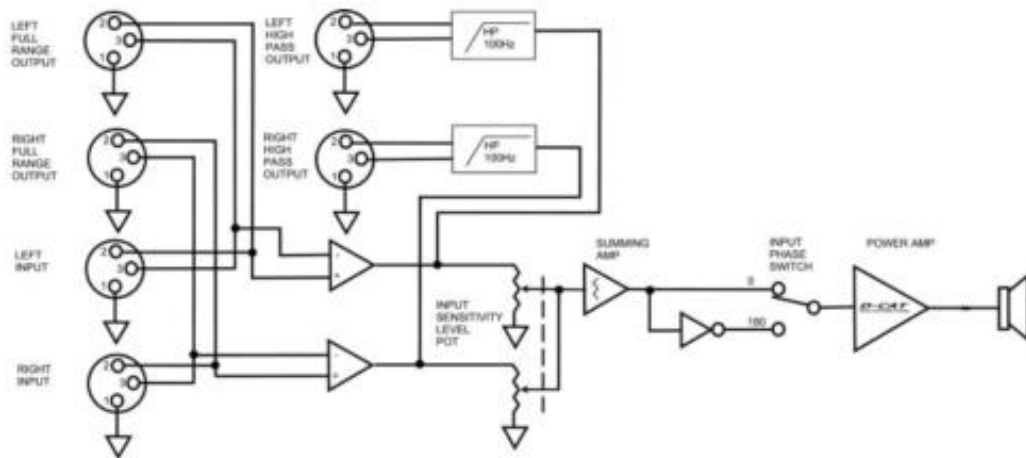
Also, note that the placement of the cabinet relative to floor and walls will affect the low frequency response. Placing it closer to the floor and walls will reinforce the low frequency response. Also, make sure that adequate space (at least 6 inches) is left behind the cabinet for airflow over the internal amplifier heatsink.

REAR PANEL DESCRIPTION



- 1. LEFT HIGH PASS BALANCED OUTPUT-** This XLR male connector provides a balanced high pass output from the left channel input. The high pass frequency is set at 90 Hz with a 24 dB per octave roll off.
- 2. RIGHT HIGH PASS BALANCED OUTPUT-** This XLR male connector provides a balanced high pass output from the right channel input. The high pass frequency is set at 90 Hz with a 24 dB per octave roll off.
- 3. LEFT FULL RANGE BALANCED OUTPUT-** This XLR male connector provides a balanced full range output from the left channel input. This connector may be used to daisy-chain the full range signal to additional powered sub cabinets.
- 4. RIGHT FULL RANGE BALANCED OUTPUT--** This XLR male connector provides a balanced full range output from the right channel input. This connector may used to daisy-chain the full range signal to additional powered sub cabinets.
- 5. INPUT/PHASE SWITCH-** This switch will function to bypass the internal crossover feeding the input to the internal power amp of the XMAX415 subwoofer. On other models this will control the phase of the input signal feeding the internal amplifier but is configured to by pass the crossover for the XMAX415 subwoofer. This will allow the use of an external crossover to configure the system. This switch will not affect any of the balanced outputs.
- 6. INPUT SENSITIVITY-** This control determines the overall input level of the signal to the power amp section of the subwoofer cabinet. Adjusting this level will not affect the level of the signal passing through to the full range or the high pass outputs.
- 7. LEFT BALANCED INPUT-** This female XLR connector provides an input for the left channel signal source. This will also feed the left channel signal to the left high pass and left full range balanced outputs.
- 8. RIGHT BALANCED INPUT-** This female XLR connector provides an input for the right channel signal source. This will also feed the right channel signal to the left high pass and right full range balanced outputs.
- 9. NEUTRIK POWERCON CONNECTOR-** This module provides a connection for the power cord.
- 10. POWER SWITCH-** This switch provides power to the subwoofer amp section. Make sure that the input sensitivity control is set to minimum upon power up
- 11. FUSE REPLACEMENT -** Twist the knob counter-clockwise to access the fuse. Replace with the same type and amperage fuse if needed. A 10 amp slow blow is installed at the factory.

BALANCED CONNECTION DESCRIPTION



The ISP Sub Series has balanced XLR inputs and outputs configured to AES standards (Audio Engineering Society). These connections are connected in a loop configuration from the inputs to the full range outputs 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.

SPECIFICATIONS

CONFIGURATION:	Quad 15 ported active subwoofer.
LF DRIVERS:	4 x 15 inch, large excursion, 2800 watt (total) AES rating.
SENSITIVITY:	103dB at 1 watt at 1 meter.
SPL:	135dB at 1 meter, long term 137dB at 1 meter, peak
FREQ. RANGE:	33Hz to 110Hz (- 10dB), with internal crossover
FREQ. RESPONSE:	40Hz to 80Hz (+- 3dB @ 1 watt), with internal crossover
AMP POWER:	1600 W RMS, 2500 W peak, high current DCAT, fan Cooled.
CROSSOVER FREQ.:	90Hz. Internal 4 th order LR low and high pass. Low pass can be bypassed for use with external Processor.
POWER REQUIRED:	10 amps x 120 VAC maximum
CONSTRUCTION:	Baltic Birch Ply wood, extensively braced.
FINISH:	Rubberized Polyurethane
DIMENSIONS:	29 ¾ " W x 45 7/8 " H x 31 ¼ " D.
WEIGHT:	200 Lbs.

THERMAL CONDITIONS

The ISP XMAX415 Sub Series is capable of producing 2000 watts 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 is mounted onto a heatsink that is fan cooled when the internal temperature rises above 60 degrees centigrade and requires air movement at the rear of the cabinet. It is recommended that the rear of the cabinet have at least 6 inches of clearance from any obstruction to allow proper ventilation to occur.

The XMAX415 is designed such that the temperature should never exceed a level where the global thermal protection becomes active. If the internal fan fails or the ventilation system is blocked so that airflow is impeded the global thermal protect may activate, which will attenuate the signal 40 to 60db when the temperature exceeds a preset point. When the temperature drops below a certain point, full signal will be restored. Tests have shown under extreme conditions that cycling will occur (40 sec. ON, 20 sec. OFF). If the global thermal protection becomes active, determine the cause for the lack of proper cooling. Correcting the problem will allow the XMAX415 to continue correct operation.

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, INC.
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: This Product may be covered under one or more of the following patents and or patents pending: 7,035,413; 6,944,305; 6,931,134; 6,831,514; 6,091,013

NOTE: **D-CAT and XMAX415** are trademarks of ISP Technologies LLC

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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