



# **HDDS SM800**

## **WALL MOUNT SPEAKER**



# **OWNERS MANUAL**

## PRECAUTIONS!

### 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 the Master Control Module that is connected to the HDDS SM800.
- Care should be taken to avoid spilling any foreign objects or liquid into this unit.
- Failure to follow these instructions may void the warranty.



## CAUTION:

DO NOT CONNECT THE CAT6 INPUT CABLE BETWEEN THE MASTER CONTROL MODULE AND THE INPUT OF THE HDDS SM800 SPEAKER WHEN THE POWER ON THE MASTER CONTROL MODULE IS SWITCHED ON! THE MASTER CONTROL MODULE MUST BE SWITCHED OFF PRIOR TO CONNECTION. THE HDDS SM800 MUST BE POWERED ON WITH SYMMETRICAL POWER IN ORDER TO CHARGE BOTH POSITIVE AND NEGATIVE INTERNAL POWER SUPPLIES. FAILURE TO POWER DOWN THE MASTER CONTROL MODULE PRIOR TO CONNECTION TO THE HDDS SM800 MAY CAUSE POSSIBLE DAMAGE TO THE HDDS SM800 OR THE CONTACTS PINS OF THE CAT6 CABLE DUE TO LARGE NON-SYMMETRICAL INRUSH CURRENT.

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# INTRODUCTION

Thank you for your purchase of the ISP Technologies High Definition Distributed System HDDS SM800 Surface Mount Speaker. This product provides a new level of performance in distributed audio systems allowing greater system flexibility and easy installation of distributed sound. All connections are made via CAT6 RJ45 connections making installation of systems faster and easier using the HDDS SM800.

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## PRECAUTIONS

**NOTE: IT IS VERY IMPORTANT THAT YOU READ THIS SECTION TO PROVIDE YEARS OF TROUBLE FREE USE. THIS UNIT REQUIRES CAREFUL HANDLING.**

All warnings on this equipment and in the operation instructions should be adhered to and all operating instructions should be followed.

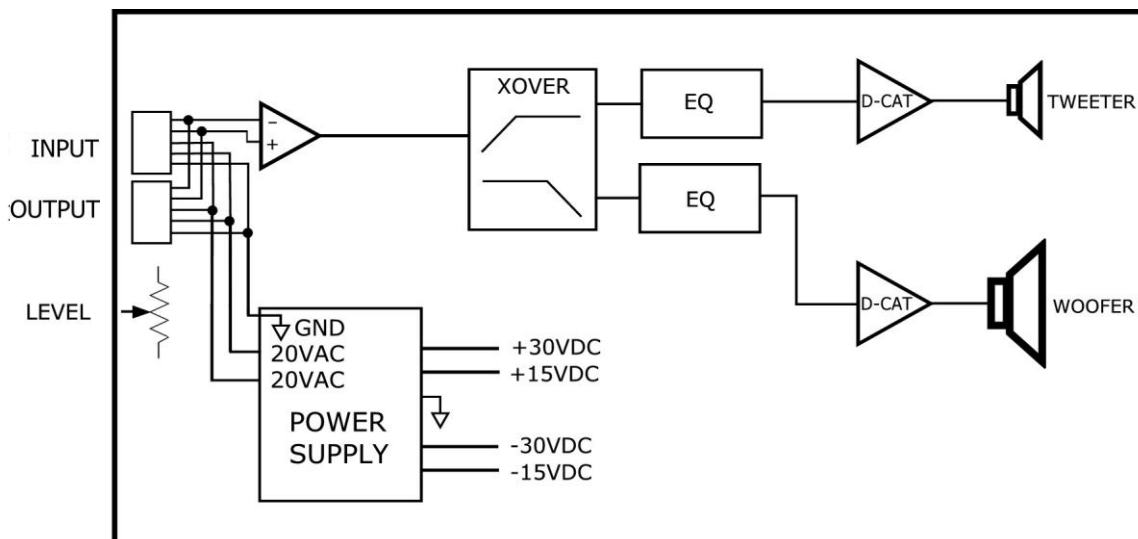
Do not use this equipment near water. Care should be taken so that objects do not fall onto and liquids are not spilled into the unit through any openings.

The power cord should be unplugged from the Master Control Module when the unit is left unused for an extended period of time.

DO NOT ATTEMPT TO SERVICE THIS EQUIPMENT. THIS EQUIPMENT SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL ONLY. DO NOT MAKE ANY INTERNAL ADJUSTMENTS OR ADDITIONS TO THIS EQUIPMENT AT ANY TIME. DO NOT TAMPER WITH INTERNAL ELECTRONIC COMPONENTS AT ANY TIME. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL VOID THE WARRANTY OF THIS EQUIPMENT, AND MAY CAUSE A SHOCK HAZZARD.

## OPERATION

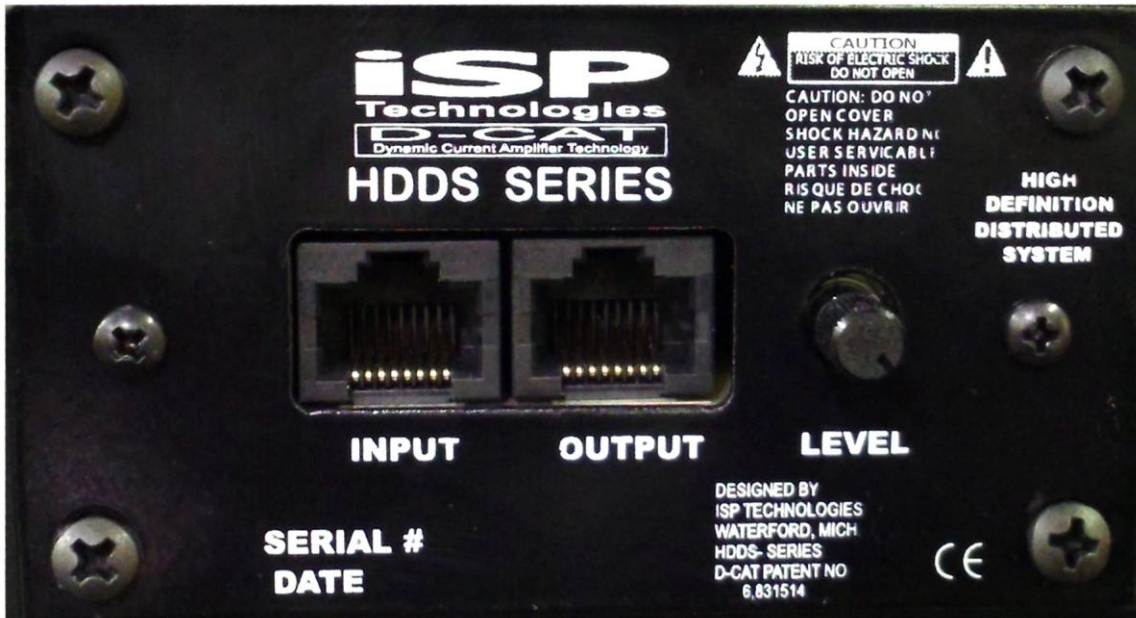
The HDDS Master Control Module is the Master control center for distributed sound systems using the HDDS technology. The Master Control Module includes six zones that can be used independently or can be linked to work together allowing the system designer the flexibility to set up any system with the desired configuration. The block diagram below shows the basic configuration of the HDDS SM800 Surface Mount Speaker. The speaker receives power and audio over a CAT6 cable connected to the Master Control Module, internally converts the AC power to plus / minus 15VDC and 30VDC to power the amplifier. The audio signal is fed to a precision differential amplifier to remove any common mode noise, filtered with a crossover circuit to produce a low pass and high pass signal, equalized and fed to DAAT Dynamic Adaptive Amplifier power amplifier circuits to drive both the woofer and tweeter in the speaker. The woofer section will dynamically increase the positive and negative power supply rails as required based on the audio signal. The output swing can exceed 120 volts and can deliver over 220 watt continuous output power. The HDDS SM800 includes a rear panel level adjustment that allows simple balancing of installed systems.



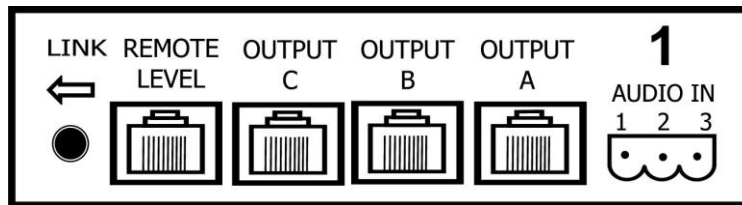
The HDDS SM800 requires connection to the Master Control Module with CAT6 cable in order to handle the current of the HDDS SM800. The output connection can be used to connect to not more than one additional HDDS SM800. Connecting more than one additional HDDS SM800 can exceed the maximum output current available per output of the HDDS Master Control Module and may trip the internal resettable fuses in the output circuit.

**DO NOT CONNECT THE CAT6 INPUT CABLE BETWEEN THE MASTER CONTROL MODULE AND THE INPUT OF THE HDDS SM800 SPEAKER WHEN THE POWER ON THE MASTER CONTROL MODULE IS SWITCHED ON! THE MASTER CONTROL MODULE MUST BE SWITCHED OFF PRIOR TO CONNECTION. THE HDDS SM800 MUST BE POWERED ON WITH SYMETTRICAL POWER IN ORDER TO CHARGE BOTH POSITIVE AND NEGATIVE INTERNAL POWER SUPPLIES. FAILURE TO POWER DOWN THE MASTER CONTROL MODULE PRIOR TO CONNECTION TO THE HDDS SM800 MAY CAUSE POSSIBLE DAMMAGE TO THE HDDS SM800 OR THE CONTACTS PINS OF THE CAT6 CABLE DUE TO LARGE NON-SYMETRICAL INRUSH CURRENT.**

## Rear Panel



The rear panel of the HDDS SM800 includes two RJ45 connectors, connect the INPUT to the output of the HDDS Master Control Module and the output can be used to connect to not more than one additional SM800 speaker. The maximum CAT6 cable length should not exceed 300 feet. The level control allows individual speakers to be balanced in a given system. The HDDS SM800 will typically pull less than 2 amps of current from the output of the Master Control Module at average listening levels. At maximum or peak level the HDDS SM800 can pull in excess of 3 amps of current. Longer runs of CAT6 cable will reduce the maximum output power of the HDDS SM800. Connect the HDDS SM800 to any of the A, B or C outputs on the rear of the HDDS Master Control Module as shown below. Do not connect more than two HDDS SM800 speakers per output on the Master Control Module.



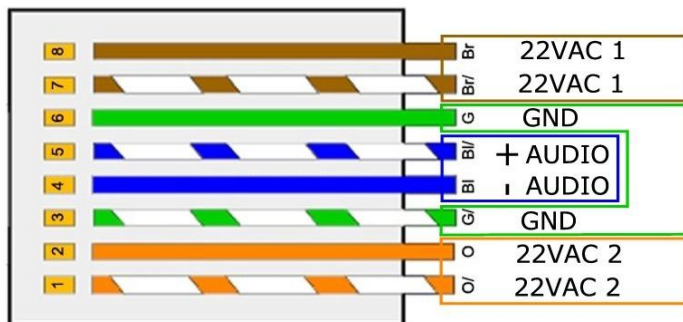
### **SPEAKER POWER:**

The HDDS system distributes low voltage Alternating Current over the CAT6 cable plus high level balanced audio and is capable of greater than 150 watts continuous power per HDDS SM800 speaker. Each of the three outputs A, B and C are capable of delivering up to 7 amps of output current.

## CAT6 Connections

The figure below shows the connections for each output A, B and C of each zone output on the Master Control Module and also connections between each HDDS SM800 speaker. Connections are done via standard CAT6 cables where pins 1 through 8 are connected common to the same pins 1 through 8 at each end. As shown below two wires in the Cable are used for balanced audio and 6 wires are used for power with two providing ground and two for each of two 22VAC power signals fed down the cable.

## RJ45 CAT6 CONNECTIONS



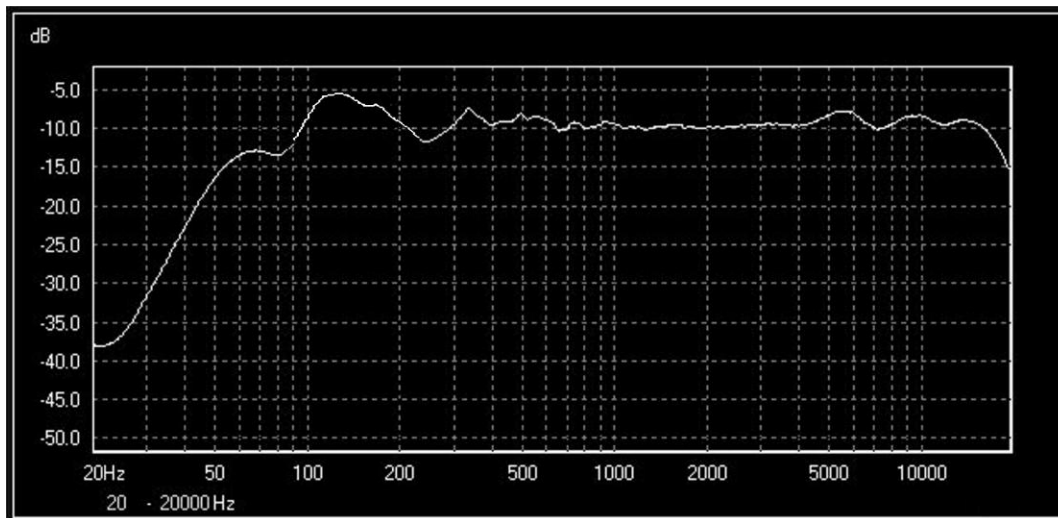
The HDDS SM800 is a wall mountable Speaker The SM800 works excellently for foreground and background music plus music-plus-paging systems. Low frequency output can be augmented with the addition of the HDDS SB112subwoofer. The SM800 loudspeaker is packaged with a bracket for easy wall mounting.

## Mounting the HDDS SM800

Refer installation to a qualified installer to ensure proper mounting to overhead structures. The HDDS SM800 includes a wall mounting bracket for easy install. The HDDS SM800 weighs 14.5 lbs, make sure to use mounting hardware in accordance with local safety standards for suspending 14.5 lbs.

## HDDS SM800 SPECIFICATIONS

Speaker Type: 2-way active  
Low Frequency: 8" cone  
High Frequency: 1" Silk Dome Tweeter  
Crossover: 4th order LR high pass and low pass  
Maximum SPL: 118 dB peak, 112 dB long-term  
Nominal Coverage Angle: 100 deg. H x 80 deg. V  
Frequency Range (-10 dB): 45 Hz – 20 kHz  
Frequency Response (+-3 dB): 60 Hz – 19 kHz  
Audio Input: Balanced 30k input impedance  
Amplifier Power: 115 WRMS continuous LF, 35 WRMS continuous HF  
Backplate: INPUT / OUTPUT RJ45 Connectors, Remote level control  
Size: 16.5" H x 10.8" W x 10" D  
Weight: 14.5 lbs  
Enclosure: ABS Plastic  
Grille: Powder Coated Steel  
Mounting Hardware: Included wall mounting bracket



# WARRANTY AND SERVICE

The unit, parts and workmanship are fully guaranteed to be free of defects under normal use and service for a period of 3 years from the date of purchase.

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 Unit 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 is covered under multiple patents pending.



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