

Hartke

HyDrive HD Series Bass Cabinets



Owner's Manual



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private household in the 28 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For Countries not mentioned above, please contact your local authorities for a correct method of disposal. By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

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Introduction

Thank you for purchasing a HyDrive HD Bass Enclosure from Hartke! We know you don't like reading owners manuals, but you've just purchased one of the finest bass speaker systems around, and we want to tell you about it. So, before you plug in and start playing, we'd like to suggest you take just a few moments to scan these pages.

The HyDrive HD series is the second generation of bass speaker enclosures featuring Hartke's patented HyDrive hybrid cone bass transducers. HyDrive speakers are constructed using an outside curved Kevlar®-loaded paper cone producing warm low frequencies and an inside anodized aluminum cone that produces smooth mids and high-end extension. This new series reproduces even more of the fundamental frequency, providing a clean sound with a big low end, allowing you to sculpt a wide range of tones for any musical style.

With proper care and operation, your HyDrive cabinet will operate trouble free for many years. We recommend you record your serial number in the space provided below for future reference.

Serial number: _____

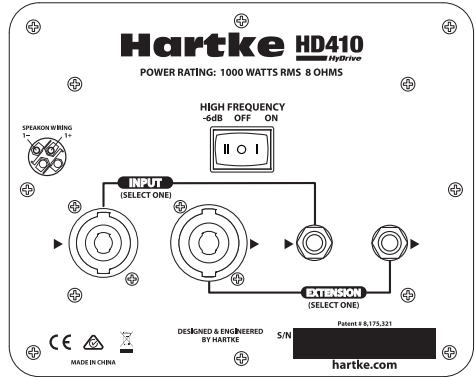
Date of purchase: _____

NOTE: Should your Hartke Cabinet ever require servicing, a Return Authorization (RA) number is necessary. Without this number, the unit will not be accepted. If purchased in the United States, please call Hartke at 1-800-372-6766 for a Return Authorization number prior to shipping. Please retain the original packing materials and, if possible, return the unit in its original carton and packing materials. If purchased outside the United States, please contact your local distributor for warranty information.

Connecting the HD Cabinet

The HyDrive HD Cabinets feature two 1/4" and two twist-and-lock connectors wired in parallel. Each connector can be used as an input from an amplifier or as a pass through to an additional speaker cabinet.

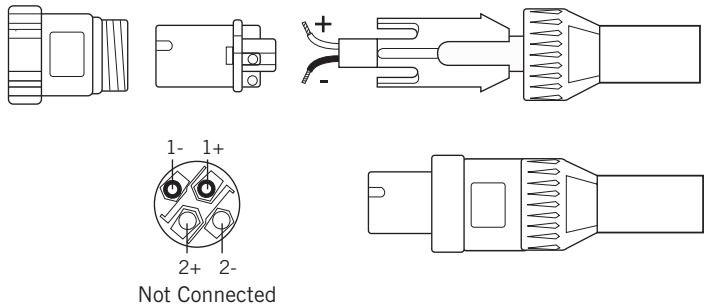
When connecting an HD series cabinet to another extension cabinet be sure to check the manufacturer's recommended impedance for the amplifier to avoid any damage. Read the section "About Impedance" for more information on connecting multiple speakers together.



NOTE: Never connect more than one amplifier to a HyDrive HD series enclosure. This will damage the speaker cabinet and void the warranty.

NOTE: Use only unshielded speaker wire with a gauge of 12 – 18 AWG. Do not use shielded instrument cables when connecting an amplifier to a speaker cabinet or when connecting an extension cabinet.

Use a standard 2-conductor cable, wired to pins 1+ and 1-, when connecting an amplifier to a Hydrive HD cabinet



Using The High Frequency Level Control

The HyDrive HD cabinet has a control used to adjust the level of the high-frequency driver. The switch has three positions, ON, -6dB and OFF. When the switch is set to OFF, the high frequency driver is completely out of the circuit and off. Setting the switch to -6dB, will attenuate the driver by 6dB. When set to ON, you get the full level of the high-frequency driver.

About Impedance

Basically, impedance is the amount of current that will flow through a speaker at a certain voltage. It is measured in Ohms (Ω). The actual impedance of a speaker is not constant across all frequencies. So, for convenience we use the term “nominal impedance”, which refers to the impedance that a speaker presents to an amplifier at a reference frequency.

A speaker typically has an impedance rating of 4Ω , 8Ω , or 16Ω . Generally, the lower the impedance of a speaker, the more power will be developed by the connected amplifier. For example, a 4Ω speaker will extract more power from your amplifier than an 8Ω speaker. If you connect a speaker with an impedance lower than the amplifier’s output rating, the amplifier can overheat and damage the power output section. It is important to learn how to connect multiple speaker cabinets safely without damaging the speakers or the amplifier in this way.

Here is a simple rule of impedance: When two speakers with the same impedance are wired in **parallel**, the total system impedance is **cut in half**, and when two speakers with the same impedance are wired in **series**, the total impedance is the **sum of the speakers individual impedance**.

Hartke HyDrive HD speaker cabinet input jacks are parallel connections. The formula to calculate the total impedance of a parallel speaker system is:

$$1/R_t = 1/R_1 + 1/R_2 + 1/R_3 + \dots 1/R_n$$

(*R is the rated impedance of a speaker cabinet*)

If all speakers have the same impedance, the total impedance will be equal to the impedance of a single speaker divided by the total number of speakers. For example, if you have two 4Ω speakers connected in parallel, the total impedance is 4 divided by 2, or 2Ω . You should be careful when connecting speakers in parallel to an amplifier. The impedance can quickly fall below safe levels. This is especially true when connecting speakers in parallel to a bridged amplifier.

Typical Parallel Speaker Impedance Calculations:

$$\begin{aligned} 16\Omega + 16\Omega &= 8\Omega \\ 8\Omega + 8\Omega &= 4\Omega \\ 4\Omega + 4\Omega &= 2\Omega \\ 4\Omega + 8\Omega &= 2.7\Omega \\ 8\Omega + 16\Omega + 16\Omega &= 4\Omega \end{aligned}$$

HD112 - Impedance Selection

The HyDrive HD112 has an innovative dual voice coil design that allows the cabinet to operate at either 4 or 8 ohms impedance. The cabinet has a impedance selector switch on the rear jack plate.

If you are using a single speaker cabinet, and the amplifier has a minimum impedance of 4 ohms, set the HyDrive HD112 impedance selector switch to 4-ohms to get the maximum power from the amp.

If you are using two HyDrive HD112 together in parallel, for a total impedance of 4 ohms, or adding a HyDrive HD112 to your current rig, set the impedance selector switch to 8 ohms.



NOTE: Be sure to check the manufacturer's recommended minimum safe impedance rating for your amplifier before setting the impedance selector switch to avoid any damage to your amplifier.

Specifications

HD410

Description	4 x 10" Bass Speaker Cabinet
Cabinet Type	Two chamber, sealed enclosure
Cabinet Impedance	8 Ohms
LF Drivers	250 watt, 10", paper and aluminum hybrid cone
HF Driver	1" High Frequency Driver
HF level control	3-position switch (0,-6dB, Off)
Power Handling	1000 Watts RMS
Frequency Response	50Hz - 17kHz -3dB
-10dB LF Response	30Hz
Dimensions	24" x 24" x 15" 618mm x 618mm x 381mm
Weight	63lb 28.6kg

HD115

Description	1 x 15" Bass Speaker Cabinet
Cabinet Type	Vented bass enclosure
Cabinet Impedance	8 Ohms
LF Drivers	500 watt, 15", paper and aluminum hybrid cone
HF Driver	1" High Frequency Driver
HF level control	3-position switch (0,-6dB, Off)
Power Handling	500 Watts RMS
Frequency Response	45Hz - 17kHz -3dB
-10dB LF Response	20Hz
Dimensions	24" x 24" x 15" 618mm x 618mm x 381mm
Weight	51.6lb 23.4kg

Specifications

HD210

Description	2 x 10" Bass Speaker Cabinet
Cabinet Type	Sealed enclosure
Cabinet Impedance	8 Ohms
LF Drivers	250 watt, 10", paper and aluminum hybrid cone
HF Driver	1" High Frequency Driver
HF level control	3-position switch (0,-6dB, Off)
Power Handling	500 Watts RMS
Frequency Response	50Hz - 17kHz -3dB
-10dB LF Response	35Hz
Dimensions	14.5" x 24" x 15" 371mm x 612mm x 383mm
Weight	36.6lb 16.6kg

HD112

Description	1 x 12" Bass Speaker Cabinet
Cabinet Type	Vented bass enclosure
Cabinet Impedance	4 or 8 Ohms selectable
LF Drivers	300 watt, 12", paper and aluminum hybrid cone HF
Driver	1" High Frequency Driver
HF level control	3-position switch (0,-6dB, Off)
Power Handling	300 Watts RMS
Frequency Response	35Hz - 17kHz -3dB
-10dB LF Response	25Hz
Dimensions	19" x 15" x 16" 483mm x 381mm 406mm
Weight	34lb 15.4kg

At Hartke, we are continually improving our products, therefore specifications and images are subject to change without notice.

Hartke

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