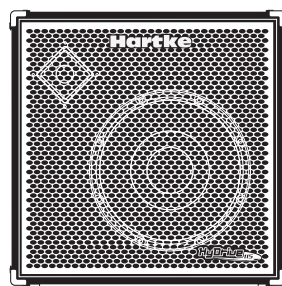
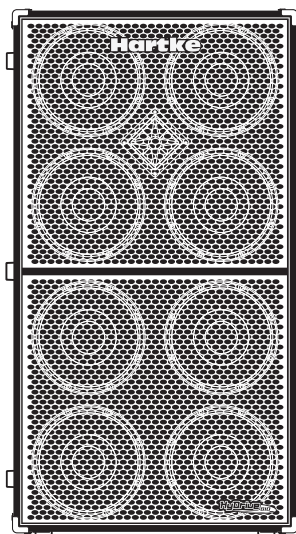
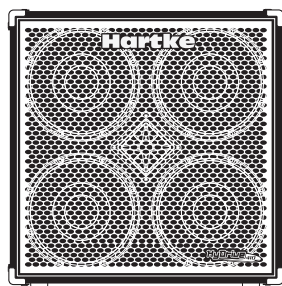


HYBRID DRIVE BASS ENCLOSURES

# Hydrive

HX115  
HX410  
HX810



**Owner's Manual**

# Hartke

## Introduction

Thank you for purchasing the Hydrive 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 popping and slapping, we'd like to suggest you take just a few moments to scan these pages. We'll make it as painless as possible, we promise—and, who knows, you might just pick up a tip or two.

The Hydrive series is new line up of bass speaker enclosures featuring Hartke's (Patent Pending) Hydrive hybrid cone bass transducers. This manual covers three models, the HX115, HX410 and HX810. The HX115 provides 500 watts of power handling from the single 15-inch Hydrive speaker, with a 1-inch titanium compression driver in a precision tuned, vented enclosure. The HX410 is configured with four 10-inch, 250-watt Hydrive speakers, with a 1-inch titanium compression driver in a dual chambered, sealed enclosure, with 1000 watts of power handling. For the serious back-line, HX810 employs eight 10-inch, 250-watt Hydrive speakers with a 1-inch titanium compression driver in a four chamber, sealed enclosure, providing a massive 2000 watts of power handling. Hydrive transducers are a radical change, and improvement, in bass speaker technology. Hartke's unique hybrid cone speaker is constructed using an outside paper cone producing deep and warm low frequencies and an inside aluminum cone that produces mids that cut, yet are still sweet. Hydrive speakers incorporate a cast frame design, supporting robust motors constructed with large, edge-wound voice coils and neodymium magnets, providing increased power handling while being lightweight! To complete the speakers systems, there's a 1-inch titanium compression driver with level control, producing the high frequency response that allows you to get a sweet tone that cuts through the back-line. The Hydrive cabinets are constructed using high quality birch plywood with extensive bracing and dado joinery, which makes them rigid and at the same time lightweight. The vinyl covering, steel grill and corners provide added protection while moving the enclosure from gig to gig. The road tough, black and chrome biker look says you're ready to rock! Hydrive cabinets are super clean and natural with enough power handling to produce a radical range of sounds. That versatility, together with Hartke's famous reliability, make the Hydrive combos the ideal cabinet for bassists playing jazz, funk, country, roots rock, death metal or for whatever style you create.

In these pages, you'll find a detailed description of the many features of your Hydrive Bass Speaker system, as well as step-by-step instructions for setting up and using your bass cabinet. You'll also find a warranty card enclosed—please don't forget to fill it out and mail it so that you can receive online technical support and so we can send you updated information about this and other Hartke and Samson products in the future. Also, be sure to check out our website ([www.hartke.com](http://www.hartke.com)) for complete information about our full product line.

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: \_\_\_\_\_

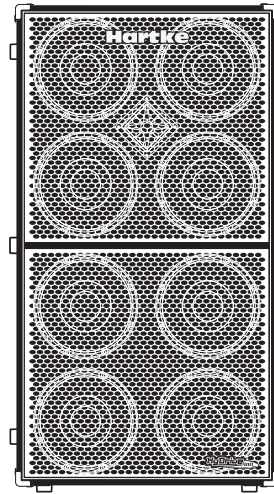
Date of purchase: \_\_\_\_\_

**SPECIAL NOTE:** Should your Hartke Hydrive Combos Combo Bass Amplifier 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 Samson 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.

# Hydrive Enclosures Features

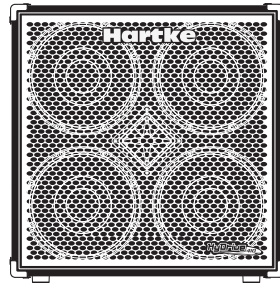
## HX810 Features

- 8 x 250 watt, 10-inch, heavy-duty, hybrid cone low frequency drivers with neodymium motor
- 1-inch, titanium, high frequency compression driver with level control
- Sealed, four chamber enclosure
- 2000 Watt Power Handling
- 4-ohm impedance
- 3/4" birch plywood construction
- Perforated metal speaker grill
- Recessed metal handles
- Metal corners
- Speakon and 1/4" Input jack
- Durable black vinyl covering



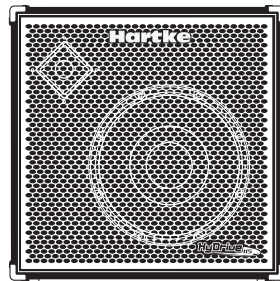
## HX410 Features

- 4 x 250 watt 10-inch, heavy-duty, hybrid cone low frequency drivers with neodymium motor
- 1-inch, titanium, high frequency compression driver with level control
- Sealed, two chamber enclosure
- 1000 Watt Power Handling
- 8-ohm impedance
- 3/4" birch plywood construction
- Perforated metal speaker grill
- Recessed metal handles
- Metal corners
- Dual Speakon and 1/4" Input jacks
- Durable black vinyl covering



## HX115 Features

- 1 x 500 watt, 15-inch, heavy-duty, hybrid cone low frequency driver with neodymium motor
- 1-inch, titanium, high frequency compression driver with level control
- Precision tuned, vented enclosure
- 500 Watt Power Handling
- 8-ohm impedance
- 3/4" birch plywood construction
- Perforated metal speaker grill
- Recessed metal handles
- Metal corners
- Dual Speakon and 1/4" Input jacks
- Durable black vinyl covering



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## About Impedance and Power Handling

### About Impedance

Before you hook up your speaker cabinet, be sure that you understand a little about impedance. Impedance is the electronic load that the speaker puts on the power amplifier and is measured in Ohms. Too much of a load (indicated by lower impedance number) can damage your amplifier, while too small a load (indicated by lower impedance number) will not draw enough power from your amplifier.

Here is the tricky, yet simple rule of impedance: When two speakers are wired in "Parallel", the total system impedance is cut in half and when two speakers are wired in "Series", the total impedance is the sum of the speakers individual impedance.

The HX410 and HX115 impedance (many audio guys use the made up word "ohmage", however the correct term is impedance) is 8 Ohms. So, when two HX410's or HX115's are connected together in parallel, the total impedance is 4 Ohms. The impedance of your speaker has an effect on your amplifier. In general, the lower the impedance, the more power your amplifier will put out.

### About Power Handling

There is a lot of heated discussion around power handling. Is it better to over power a cabinet, or is dangerous to under power a speaker? While it is certain that the debate will continue far into the future, the fact is that both are true. If you are using an amplifier with a lot of power, you can damage your speaker by running the amp to the maximum and pushing the speaker beyond its physical limits. When using too little power, there is a tendency to push the amplifier into overload, which will generate enough distortion to burn the voice coil. The most important point to consider is how the power is used in order to ensure the speaker is presented with a clean signal. Be sure that your amplifier is producing a good clean signal. If your amp has an on-board compressor or limiter, we recommend you use it to protect the speaker. If the sound is getting distorted you're probably starting to damage the speaker.

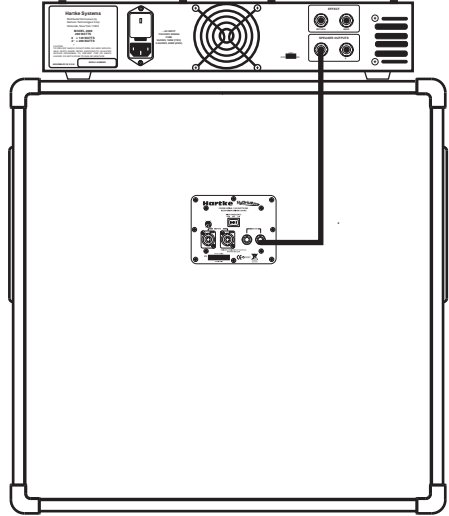
The good news is that Hartke Hydrive cabinets are really efficient and they run well with amplifiers that have lower power. Plus, each model carries an extremely high power handling rating, making them ideal with more powerful heads. The Hydrive cabinets will work well with the Hartke HA3500, HA5500, LH 500 and LH1000, and of course the Hartke Kilo. Again, remember, be nice to your speaker and keep the signal clean.

## Connecting the HX410 and HX115

**IMPORTANT:** There is a minimum safe impedance so be sure to check the manufacturer's recommended impedance for your amplifier to avoid any damage to your amplifier or voiding your warranty.

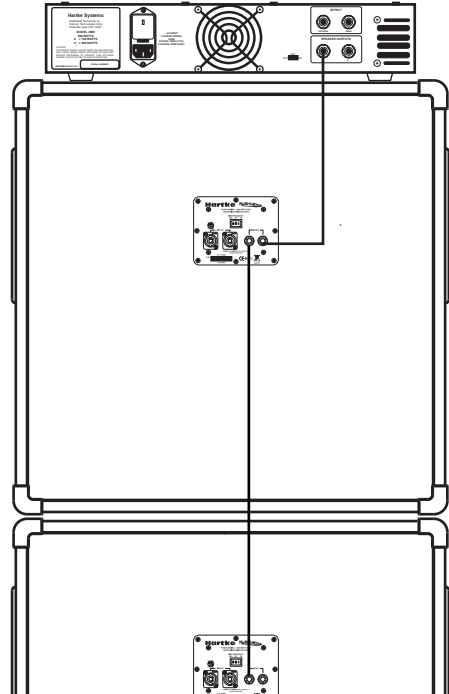
### Connecting the HX410 and HX115 to Your Amplifier

The HX410 and HX115 connections are made via either the 1/4" phone jacks or Speakon connectors located on the rear panel jack-plate. Be sure to make your connection with unshielded speaker cable. Connect the Amplifier Output to the speaker Input on the HX410's or HX115's rear jack-plate.



### Using the EXTENSION Output

The HX410 and HX115 provides a convenient Extension Output for connecting additional speaker cabinets in parallel. Be sure to read the section above on impedance to insure a proper hook-up with your amplifier. Follow the steps below to connect two HX410 or HX115's using the Extension Output. Connect the Amplifier Output to the Input of the first HX410 or HX115. Now, connect the Extension Output to the Input of the second cabinet.



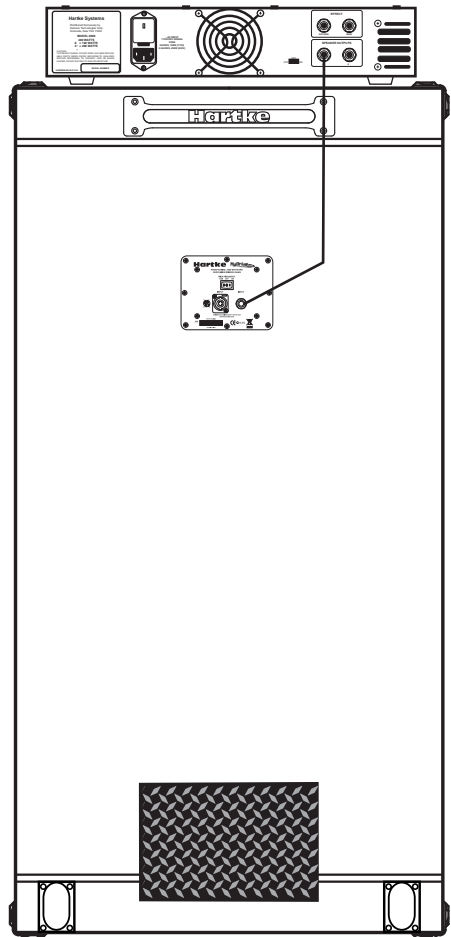
## Connecting the HX810

The HX810 impedance is 4 Ohms. So, when two HX810's are connected together in parallel, the total impedance is 2 Ohms. The impedance of your speaker has an effect on your amplifier. In general, the lower the impedance, the more power your amplifier will put out.

**IMPORTANT:** There is a minimum safe impedance so be sure to check the manufacturer's recommended impedance for your amplifier to avoid any damage to your amplifier or voiding your warranty.

### Connecting the HX810 to Your Amplifier

The HX810 connections are made via a 1/4" phone jack or Speakon connector located on the rear panel jack-plate. Be sure to make your connection with un-shielded speaker cable. Connect the Amplifier Output to the speaker Input on the HX810's rear jackplate.



## Using The High Frequency Level Control

### Using The High Frequency Level Control

Your Hydrive cabinet has a control used to adjust the level of high frequency compression driver. The switch has three positions, ON, -6dB and OFF. When the switch is set to OFF, the compression driver is completely out of the circuit and off. This position will give you a darker frequency response, which a lot of bassists like for roots rock and metal. If you set the switch to -6dB, you get half the level of the horn. The frequency response becomes a little brighter, which is nice for cutting through the back-line in just about any type of band. When set to ON, you get the full level of the compression driver and the response is full range with nice treble response. This voicing is great for bass soloists, for funk, R&B or for whatever style requires some serious, sweet top end.

At Hartke we don't put any player in a category or box, we realize that your sound is personal regardless of the style of music you play. Heck, we know a lot of bass players that play a lot of different styles! The Hydrive cabinets are designed to offer a natural response to faithfully reproduce the sound of your bass and amp. The High Frequency Level control gives you another dimension of control to get the sound you're looking for. Like always, with a little bit of experimentation, you'll easily dial up the sound that fits your style and musical personality.

**HIGH FREQUENCY**  
**-6dB OFF ON**



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# Specifications

## HX810 Specifications

Type	4 chamber, sealed enclosure
System Impedance (Ohms)	4 Ohms Impedance
Low Frequency Drivers	4 x 250 watt, 10-inch, heavy-duty, hybrid cone low frequency drivers with neodymium motor
High Frequency Driver Control	1" Throat Compression Driver with Level Control
Power Handling	2000 Watts RMS Power Handling
Frequency Response	25Hz - 17kHz
Dimensions	
Height:	47" (1200 mm)
Width:	26" (660 mm)
Depth:	16" (400 mm)
Weight	132 lbs. (60 kg)

## HX410 Specifications

Type	2 chamber, sealed enclosure
System Impedance (Ohms)	8 Ohms Impedance
Low Frequency Drivers	4 x 250 watt, 10-inch, heavy-duty, hybrid cone low frequency drivers with neodymium motor
High Frequency Driver Control	1" Throat Compression Driver with Level Control
Power Handling	1000 Watts RMS Power Handling
Frequency Response	30Hz - 17kHz
Dimensions	
Height:	24" (618 mm)
Width:	24" (618 mm)
Depth:	15" (381 mm)
Weight	70.5 lbs. (32 kg)

## HX115 Specifications

Type	Vented Bass Enclosure
Low Frequency Driver	1 x 500 watt, 15-inch, heavy-duty, hybrid cone low frequency driver with neodymium motor.
High Frequency Driver Control	1" Throat Compression Driver with Level Control
Power Handling	500 Watts RMS Power Handling
Frequency Response	20Hz - 17kHz
Dimensions	
Height:	25" (618 mm)
Width:	25" (618 mm)
Depth:	15" (381 mm)
Weight	61 lbs. (28 kg)

*Specifications subject to change without notice.*