



400 User Manual

HEGEL

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Index

A word from Bent	5
What's in the box	6
Quickstart	7
General Use	10
Connections	11
Network Configuration	12
Using AirPlay	13
Remote Control	15
Special Functions	16
General Information	18
Additional Information	19



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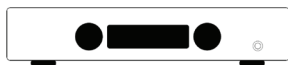
Congratulations, on your new Hegel H90. All Hegel products are based on a simple philosophy: Add as little as possible. Keep the music signal as close to the original as possible. We always chase lower distortion and lower noise. The music is reproduced as close to the original as possible and is limited only by the quality of the recording. Our aim is to give you the best possible music experience. Our minimalistic Scandinavian design is styled to fit in with any interior. The products shall be easy to operate and manufactured according to the best quality principles.

“Hegel H90 is our second amplifier with the new design, and a big upgrade from the previous model Hegel H80. Making an entry level amp is a difficult task. It must outperform the competitors and have enough power and features to make it work in a home system. The H90 does all of this and delivers bang for the buck. The performance and features on the H90 make it the best amp in its category.”

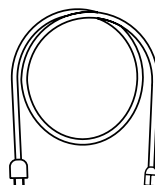
Bent Holter
Founder Hegel Music System

A handwritten signature in black ink, which appears to be 'Bent Holter', written in a cursive style.

What's In The Box



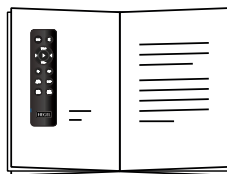
Amplifier



Power Cord



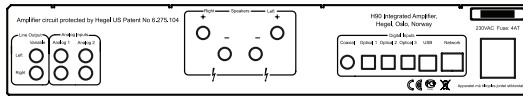
Remote
Control



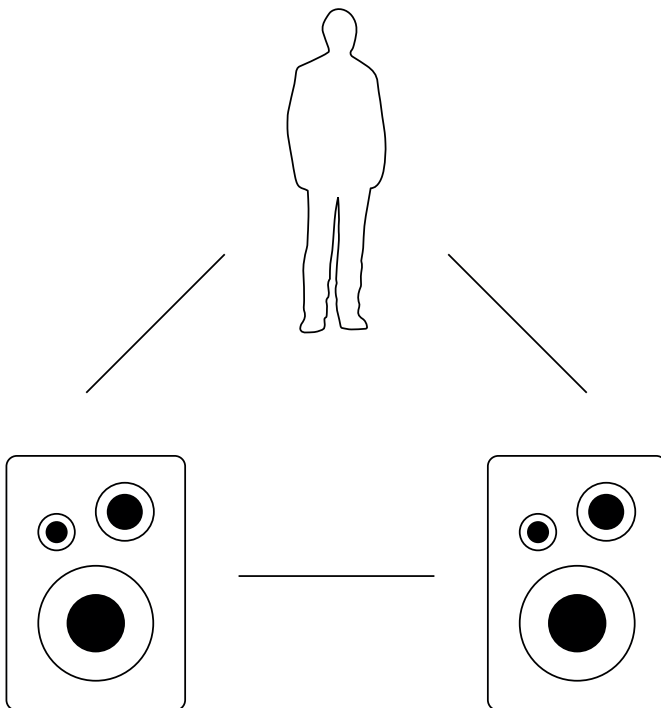
User Manual

Quickstart

1. Connect your speakers



For the best audio experience the distance
between the listener and each speaker
should be the same.

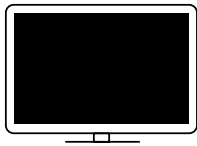


Quickstart

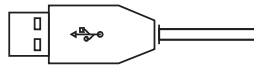
2. Connect a source



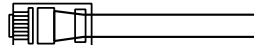
Unbalanced Analog



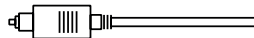
Coaxial Digital



USB Computer



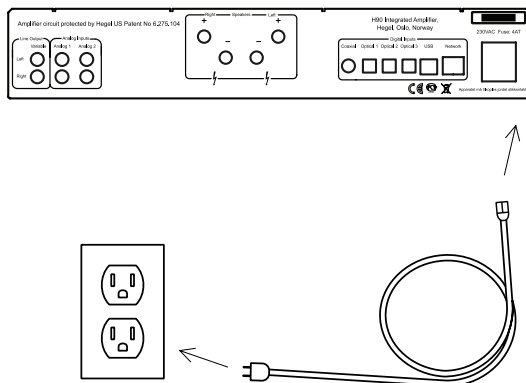
Network streaming



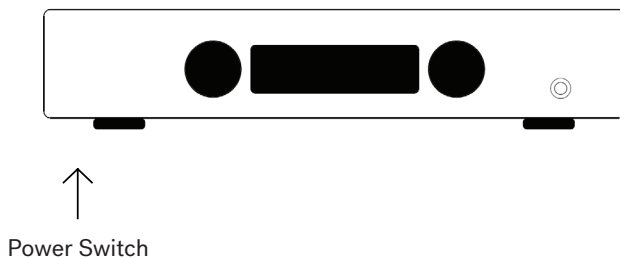
Optical Digital

Quickstart

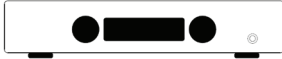
3. Connect the power cord



4. Turn on the amplifier



General Use



On/Off

The H90 amplifier is switched on and off with the power button, located on the underside of the amplifier, towards the front of the unit. When powered up, the H90 takes a few seconds to calibrate. During this time, the outputs are muted.

NOTE: When powered up, the outputs are muted and the right hand part of the display flashes for a few seconds, indicating mute. This is normal, and is part of the start-up procedure.

NOTE: When the H90 has been switched off, wait 30 seconds before powering on again.

Display

The left side of the display shows the selected source input, while the volume value is shown on the right side of the display. A flashing volume value indicates the amplifier is in mute mode.

Headphone Output

Connect the 6.3mm headphone jack to the front of the H90. This activates the headphone volume control and mutes the speaker outputs.

NOTE: Variable Line Output is still active.

Source Selector

The input source selector knob is on the left side of the front panel.

Volume

The volume control knob is on the right side of the front panel. The volume level is indicated by a number between 0 and 99 on the right side of the display, with 0 being the mute level and 99 being max volume. The H90 powers up with a preset volume value. The volume level is adjusted by turning the volume knob clockwise or counter clockwise, or by using the Hegel remote control.

Mute

Pressing the mute button on the Hegel remote control mutes the outputs on the amplifier. The volume number flashes to indicate that mute is on. Press the mute button, or adjust the volume level, to switch mute off.

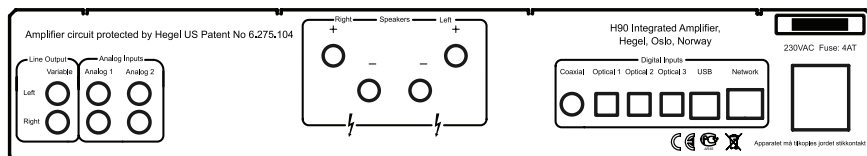
Status Indicators

The Hegel H90 will display the product status.

✓ If it is connected to a network

✗ If there is a network problem

Connections



Always power the amplifier off before connecting input/output audio cables and the power cable.

Speakers

- Right outputs
- Left outputs

Line Outputs

- Variable Line Level (RCA)

Analog Inputs

- Analog 1(RCA): Standard analog input
- Analog 2(RCA): Standard analog input

If you want to connect H90 to a Home Theater, see page 16

AC Power Connection

- AC Power connector with fuse holder: 230V/115V/100V AC depending on country.

Digital Connections

- Coaxial 1: Input Coaxial/RCA
- Optical1: Input TOSLINK/EIAJ Optical
- Optical2: Input TOSLINK/EIAJ Optical
- Optical3: Input TOSLINK/EIAJ Optical
- Computer USB input
- Home network connection (LAN - RJ45)

Network Configuration

Use the Network Configuration page to change the name, the IP settings and update the firmware.

PC: Open the Network Settings, under Media devices the Hegel H90 will appear. If the Hegel H90 does not appear, make sure the network is setup to hand out IP addresses automatically. When you click on the Hegel H90, the Network Configuration page opens.

MAC: Open the Safari browser. Under bookmarks, you will find the Bonjour tab, and here the Hegel H90 will appear.

If you can't find the Bonjour tab, select on (Preferences -> Advanced -> Bonjour) in the Bookmarks Menu.

Playing Files on a Network Device

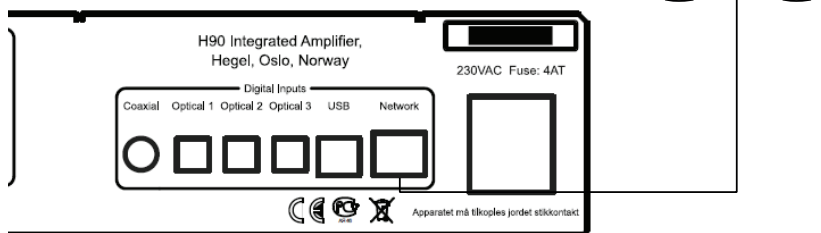
The Hegel H90 can function as a DLNA Digital Media Renderer. This means that it can receive and play media files from a UPnP/DLNA compatible media player. For details on how to set up your media player, please refer to the user manual supplied with the player.

The Hegel H90 supports the following formats from a UPnP/DLNA compatible player: PCM (WAV/AIFF), FLAC, Ogg and MP3.

For more tips and tricks about how to use the H90 with a NAS drive, DLNA players and other software solutions, go to www.hegel.com/products/integrated/H90.

Using AirPlay

Use AirPlay on the Hegel H90 to send the music stream from your AirPlay compatible device to the amplifier. First, connect the Hegel H90 to the local network using an Ethernet cable from the local network (LAN - RJ45) on the back of the amplifier to your router.



Make sure the Hegel H90 is connected to your network. Check status indicators(see page 10) to confirm this.

When connected, the unit sets up to DHCP, and automatically receives an IP-address and integrates in your home network. All AirPlay compatible devices will now detect the Hegel H90 in their list of AirPlay speakers. It will be displayed as "H90", followed by a unique number.

To activate the AirPlay function on your AirPlay compatible device, first make sure the device is connected to the same network as the Hegel H90. For details on this please check the device manual. Select the AirPlay icon, then select the H90. You are now ready to send the music stream to your amplifier.

Playing from iTunes on your Hegel H90: Install iTunes 11, or later, on your Mac or Windows computer. Launch iTunes, press the AirPlay Logo, and select the H90. To play to more than one speaker, select the AirPlay logo, then "multiple"and select, the speakers that you want to listen to. The volume on each individual speaker can be adjusted.

[WARNING: After selecting the H90 as the output, always remember to check the iTunes volume-setting before pressing play. The H90 will change its volume to the volume set in iTunes, when iTunes starts playing to the H90.](#)



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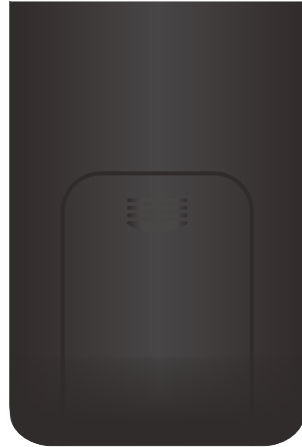
Remote Control - RC10

The Hegel H90 can be controlled with the included Hegel RC10 Remote Control. The RC10 controls other Hegel products, such as amplifiers and preamplifiers, and most Media players on your Mac/PC, avoiding the need for multiple remote control devices.

The remote control uses one CR2032 battery. To insert the battery, slide down the battery cover. Place the battery with plus side up, and replace the battery cover.

NOTE:

The remote control is delivered with batteries installed. However, you must open the battery cover and remove the plastic protection for the RC10 to function.



Remote control buttons (starting top left)

1. Low power mode for Hegel amplifiers
2. Mute for Hegel amplifiers
3. Volume up for Hegel amplifiers
4. Skip to previous track on most media players
5. Play/Pause on most computers/media players
6. Skip to next track on most computers/media players
7. Volume down for Hegel amplifiers
8. Switches down to previous input on your Hegel amplifier
9. Switches up to next input on your Hegel amplifier
10. Select input on most separate Hegel DAC's
11. Display on/off (hold for off)
12. Volume down for Hegel DAC's
13. Volume up for Hegel DAC's

Special Functions

Display On/Off

The DISP button on the RC10 remote control may be used to turn the display of the H90 on or off. Hold the DISP button for more than 1 second to turn the display off. Press the button to turn the display on.

Home Theater or Standard Analog Input

All inputs can be changed into a Home Theater input. This will set the Volume at a fixed high volume level. Use the RC10 remote to change the settings. Hold computer play until the setup menu appears. Use computer prev/next to navigate to "HT" and press computer play to select this submenu. Now use computer next/prev to maneuver to the input you want to change into a fixed level input. Press computer Play to toggle between a fixed level input or normal variable input. Now don't press anything for 15sec, and the H90 will return to normal mode.

[WARNING: Activating Home Theater sets the volume at a high fixed level. This may harm your speakers if a fixed level input is connected.](#)

Reset to Factory Default Settings

Use the RC10 remote to change the settings. Hold computer play until the setup menu appears. Use computer prev/next to navigate to Factory Reset. The H90 will be reset to factory settings. This will clear all user defined settings, including IP settings, and reinitialize H90.

Special Functions

Using the USB Connection:

When you connect H90 to a computer with a USB cable (not included), the H90 will automatically install itself as a USB soundcard on all newer versions of Windows and MAC OS X, and most newer versions of Linux.

When your computer is connected with the USB-cable you may use the supplied remote control to skip/play/pause in most media players.

The first time you connect your computer to H90: Connect the computer to the internet and close all media players, such as iTunes or Windows Media Player.

Troubleshooting with MAC:

H90 connected but no sound out of the speakers: Go to System Preferences – Sound – Output and select “TE7022 Audio w/ SPDIF” as the Output Device.

24 bit Audio:

H90 can receive 24-bit music files through the USB interface. Sending 24-bit audio signals, from your computer, may require some set-up in your media player. Setup varies depending on the operating system and the media player. Consult the FAQ section of the media player for details.

CD-quality and lower resolution files:
No additional set-up is needed.

General Information

Transport and Shipment

When packing the amplifier for shipping, follow these instructions to avoid damaging the unit:

Insert the amplifier into the plastic bag. Ensure the plastic bag does not press tightly on the knobs as this may damage them during transportation.

Place the amplifier into the shock absorbers. Place the amplifier with absorbers into the original cardboard box.

Cleaning

Fingerprints or stains on the front panel or top cover can be removed with a cloth moistened with warm water or a mild detergent suitable for cleaning mirrors and windows.

Technical Specifications H90 Integrated Amplifier

Power output	2*60W in 8 Ohms
Minimum load	2 ohms
Analog Inputs	2*unbalanced (RCA),
Digital Inputs	1*coaxial S/PDIF, 3*optical S/PDIF, 1*USB, 1*Network
Line level Output	1*unbalanced variable(RCA)
Frequency response	5Hz-100kHz
Signal-to-noise ratio	More than 100dB
Crosstalk	Less than -100dB
Distortion	Less than 0.01% @ 25W 8 Ohms 1kHz
Intermodulation	Less than 0.01% (19kHz + 20kHz)
Damping factor	More than 2000 (main power output stage)
Dimensions	8cm x 43cm x 31cm (HxWxD) 11kg shipment weight. 3.15" x 16.93" x 12.20" (HxWxD) 26.46lbs shipment weight.

Additional Information

Warning

Hegel products should only be opened or serviced by certified technicians. The devices contain electronic components that may cause severe electric shock. Work performed on Hegel products by unqualified personnel may cause serious damage or personal injury.

The products must not be exposed to rain or moisture.

Warranty

All Hegel products come with a 2-year warranty against defective materials and workmanship.

Opening of the product by non-authorized personnel voids the warranty.

In case you need any assistance with your Hegel product, please find your nearest dealer or distributor by looking at the Hegel web site www.hegel.com. If you experience any problems locating your dealer or distributor, please contact info@hegel.com

More Information

For more information, please visit www.hegel.com/products/integrated/H90

Use and Placement

The Hegel H90 should be placed on a flat, hard surface for proper cooling. A certain space is required for air circulation above and below the amplifier. The Amplifier must never be placed on a carpet or similar surface that obstructs air circulation through the unit. Nor should it be covered while in use or placed on a narrow shelf or other confined space.

The Amplifier needs some break-in time before maximum sound quality can be experienced.

Never lift the amplifier by holding around the volume knob or input selector knob. H90 is heavy, and applying pressure may damage the knobs.

The amplifier will automatically switch itself off if overheated.



AirPlay works with iPhone, iPad and iPod touch with iOS 4.3.3 or later, Mac with OS X Mountain Lion or later, and PC with iTunes 10.2.2 or later.

"Made for iPod," "Made for iPhone," and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

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