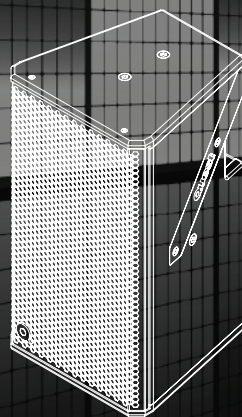


User Manual

MODEL: HPI 8i



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Safety Precautions

- Be sure to read the instructions in this section carefully before use.
- Make sure you observe the instructions in this manual as the conventions of safety symbols and messages are very important.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of any risks.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

1



WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be exposed to water or other liquids, as doing so may result in damage to the bass driver or corrosion of the steel protective grill.
- Do not cut, kink, otherwise damage nor modify the speaker cable. Also use speaker cable of at least 1.5mm core diameter. In addition, avoid locating the speaker cables close to heaters, high traffic areas or locations where the cables can be damaged.
- Avoid installing or mounting speaker boxes in unstable locations and when flying, use the hardware designed for the speaker box and fix securely to a solid wall. Failing to do so may result in the unit falling, causing personal injury and/or property damage.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- Never hang a speaker box from only one rigging point. Use multiple points and attach a safety line to a point strong enough to take the weight of the speaker box.

When the Unit is in Use

- Turn down the amplifier before switching on the amplifier. If there is no sound, check the speaker connections. Speakon connectors must be locked in place.
- Should any of the following irregularities be found during use, immediately switch off the amplifier power, disconnect the power supply plug from the AC outlet and contact your nearest Quest dealer:
- If you detect smoke or a strange smell coming from the unit,
- If the unit falls and the unit case is damaged,
- If it is malfunctioning (no HF or low frequency output).

Make no further attempt to operate the unit if it is found to be in any of the above conditions as this may cause fire or electric shock.

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WARNING

Flying the box from one insert must not be attempted! Improper installation may result in damage, injury or death.

General Description

The HPI 8i is a full frequency range multi-purpose 2-way passive speaker system designed for the live sound touring and permanent installation market.

It is suited to full range front-of house sound for short and mid throw applications in both stand alone applications, as part of a small array or distributed system. Its versatility means it can also be configured in multiple numbers as a multi-way system with sub bass enhancement or individually as part of a compact portable full range system with single sub bass enhancement. (See HPI Series bass speaker systems).

The HPI 8i requires no special system processor and can be installed in a vertical or horizontal installation with the horn flare rotated to give the appropriate HF dispersion.

Features

The HPI 8i has a number of features designed to increase performance and versatility for a professional sound installation environment. A great deal of attention was paid to the details of the design to make the HPI 8i both sonically excellent and functionally suited to all aspects of mobile and permanently installed sound reinforcement.

High Powered Purpose Designed Components

A high powered 25mm exit 1.4" diaphragm high frequency driver matched to a Quest designed asymmetrical horn flare delivers a hi fidelity high frequency response with a long throw capability.

The HPI 8i is a bass-reflex design where the porting is specifically dimensioned to match the low frequency range capabilities of the high efficiency 8" neodymium magnet transducer, despite the relatively small dimensions of the enclosure.

Good vocal and midrange response makes the HPI-8i an exceptional performer when it comes to vocal projection and reproduction of acoustic instrumentation.

Functional Design

Not just stylish, but practical, an integrated carry handle also doubles as part of the rigging system and also serves to give the casing more strength and rigidity.

The recessed input panel allows for protection of the plastic Speakon connectors and also aids a visually tidy installation.

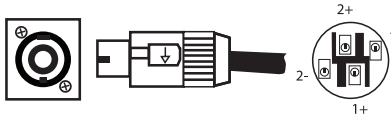
Solid Build Construction

Built for a touring environment, the HPI 8i is well suited to all professional applications. The timber casing is reinforced birch ply with a heavy gauge power-coated steel grill. Like all Quest products, it is "built tough for a tough world".



Getting The Best From Your HPI 8i

Connections



Two Neutric Speakon model NL-4 connectors are mounted in a recessed panel on the rear surface of the box. This allows the speaker box to be set flat against a wall without physical interference to the speaker connector.

- The connector input is wired pin 1+ and pin 1-
- Pin 2 is not connected

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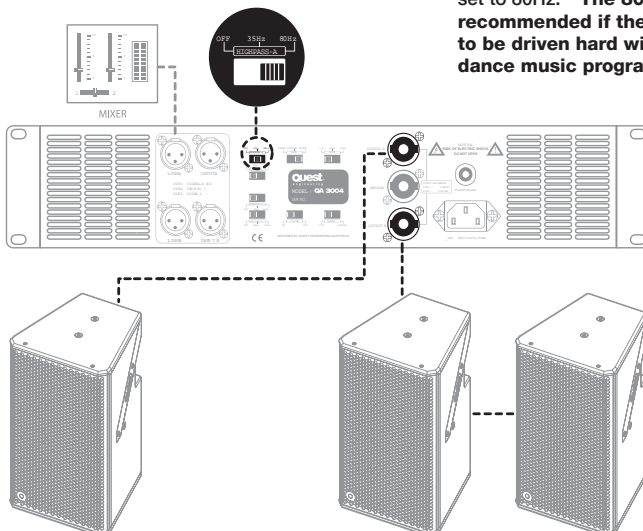
Take care when inserting the Speakon connector twisting the connector until it locks into place. Reverse the procedure to disconnect.

Suitable Amplification

The HPI-8i is an 8 ohm enclosure and can be connected in multiple parallel connections to an amplifier channel that can operate at speaker impedances of 4 ohms. A third speaker box can be connected in parallel if the amplifier can operate into loads of less than 4 ohms.

The HPI 8i is a mid power level high efficiency system, so ultra high power is not necessary to obtain high sound pressure levels. The recommended power range per amplifier channel is 350-450 watts RMS into an 8 ohm load or up to 900 watts RMS into a 4 ohm load. The HPI-8i is ideal for use with the Quest QA1004-2004 or QM1000P amplifiers.

Setting the QA amplifier's high pass filter at 35Hz is recommended for full range applications. If you are intending to add sub bass speakers or use for mainly vocal reproduction, the high pass filter can be set to 80Hz. *** The 80 Hz Hi pass is also recommended if the HPI 8i speakers are to be driven hard with full frequency dance music program over long durations.**



Reducing low frequency output will make more amplifier power available for clean vocal reproduction for full range sound, set the high pass filter to 80Hz

Recommended HPI 8i Amplifier Configuration

Speaker cables

Speaker cable needs to be as heavy gauge as conveniently possible for low-loss results. Light gauge cable (below 1.5mm) will create extra resistance and waste amplifier power. This particularly applies to long speaker runs. The amplifier's damping factor statistic ("punch" for the non technical) is greatly diminished, so keep your speaker cables short and as heavy gauge as practical.

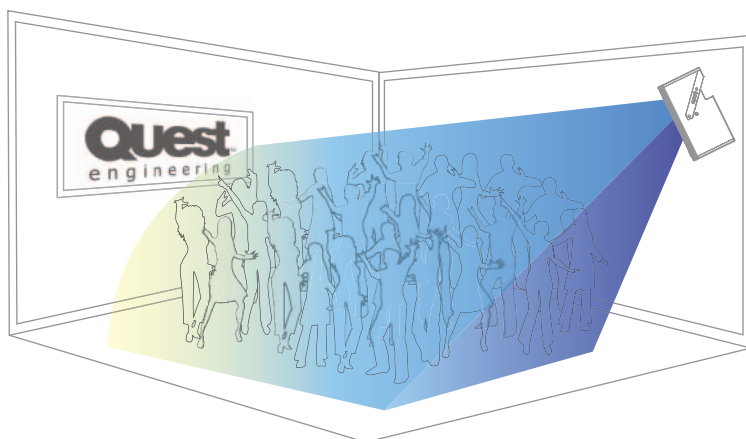
Speaker Placement as a Single Box or in Arrays

The HPI 8i is intended for use as a single speaker, distributed system or as part of a multiple speaker setup with or without sub bass reinforcement. It can also be installed in small arrays of up to three boxes per array for very wide coverage applications. When a group of point source speaker boxes are placed together, it is possible to have "interference effect" between the boxes causing uneven frequency response. This can be particularly noticeable in the mid-high frequency area. If you intend to set up the HPI 8i as part of a multiple box array, see the section 'Flying the HPI 8i'.

When positioning the speaker system on a stage, make sure the HF horn at the top of the speaker box is above the heads of the audience. At full power the output of the HPI 8i is very high and hearing damage can result from short to medium term exposure.

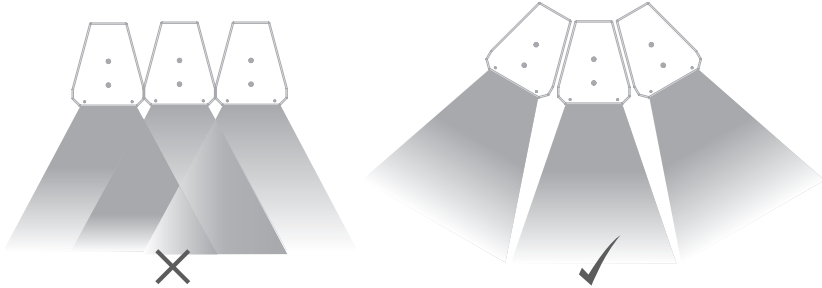
For best results when the HPI 8i is used as a front of house speaker, consider angling the box forward slightly to direct the HF horn to cover the audience area. The HF horn should be aimed away from the ceiling and focused on the intended area of coverage. This will minimize HF reflections, lower the reverberant field in the room and give better intelligibility.

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Ideal HPI 8i Flown Configuration

Flying the HPI 8i



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The HPI 8i can be flown in a permanent installation by attaching the designed flying hardware. The HPI-8i can be wall mounted or hung in a flown installation using the flying fitting accessory. For more information, see the Quest HPI flying hardware manual.

Before suspending any speaker system always inspect all components (enclosure, rigging frames, eyebolts, track fittings, etc.) for cracks, deformations, corrosion, missing, loose or damaged parts that could reduce strength and safety of the array. Do not suspend the speaker system until the correct preparation of the installation site has been taken to avoid health risks during and after the completion of the installation. A licensed Professional Engineer must approve the placement and method of attachment to the structure prior to the installation of any overhead object.

Rotating the Horn Flare

The asymmetrical horn flare can be rotated through three separate planes of dispersion depending on the speaker box requirement and installation environment. The planes are suited to either vertical or horizontal installations.

Good coverage of audiences often requires wide dispersion at the base of the horn flare to cover close listeners and a focused narrow dispersion at the top of the flare to beam to the back of the room.

The HPI 8i horizontal horn covers both “short-throw” and “long-throw” requirements in a single system. For the majority of installations (where the box is installed vertically), the asymmetrical horn should be used as supplied and will not need to be rotated.

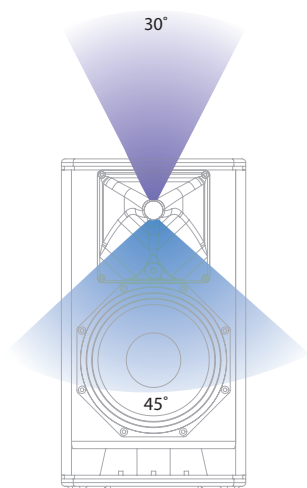
For horizontal installation rotate 45 degrees so the arrow is pointing at the floor side so as to have the “beaming” facility at the top of the horn.



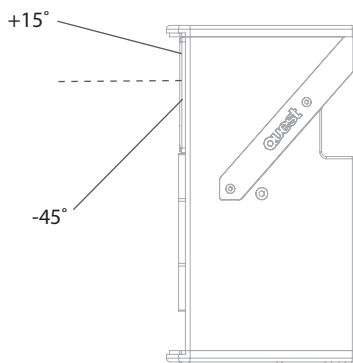
WARNING

Ensure the box is securely located. If any doubt about the physical stability, tie the box down with ratchet straps to a secure base.

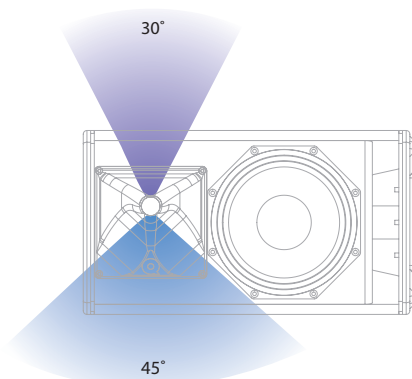
HPI 8i Wave Guide Examples



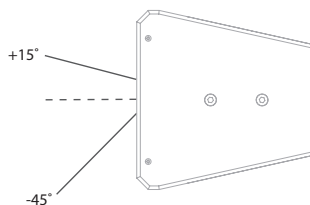
HPI 8i Vertical Front



HPI 8i Vertical Side



HPI 8i Horizontal Front

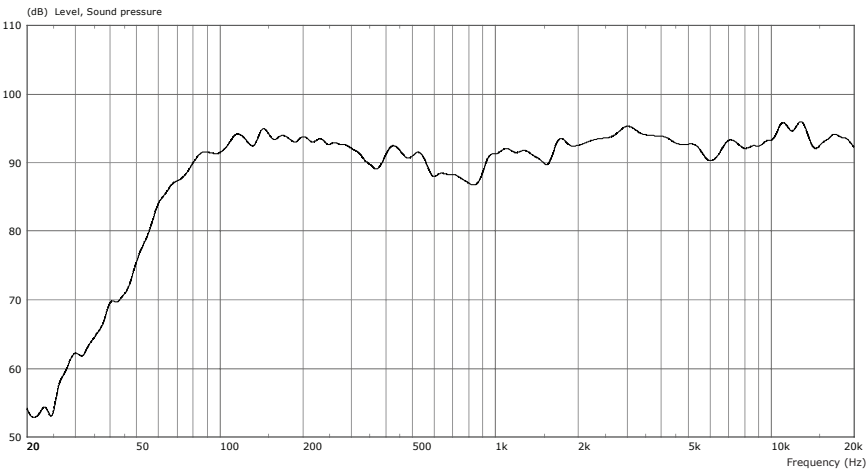


HPI 8i Horizontal Side

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HPI 8i Specifications

Typical Frequency Response

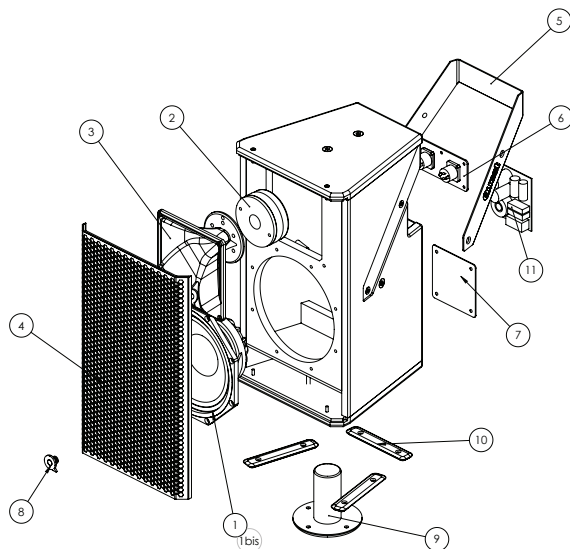


— Frequency Response – 1W @ 1m

Technical Specifications

Power Handling	400W RMS
Frequency Response	75 – 20kHz (+/-3dB)
Sensitivity	91.5dB @ 1kHz
Maximum SPL @ 1m	119dB
Impedance	8 ohms
Connections and Wiring	2x Speakon NL4 - 1+/1- (2+/2- through)
Woofer	8" High Power Mid-Bass Woofer
Tweeter	1" Exit Ferrite Compression Driver
Directivity	Asymmetric +15/-45 Vertical 30/45 Horizontal
Dimensions	449 x 250 x 250 mm
Weight	8.9 kg Net

HPI 8i Reference Diagram



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No.	Description	Spare Part
1	8" Neodymium Woofer	T8007
1bis	Recone kit for RT8007	RT8007
2	1" Ferrite Compression Driver	T1011
3	Asymmetric Horn Flares	HWGHPI8i
4	Complete grill (includes foam)	HGHPI8i
5	Metal handle for HPI8i	HHHPI8i
6	Connection Plate	HCP8i
7	Manufacturer Plate	HMP8i
8	Rotative Q-badge (with spring)	HQB25
9	Top hat plate	HTHP2
10	Rubber skids 137mm	HSK137
11	Passive Filter Network for HPI 8i	HXHPi8i

Register Your Product

Thank you for choosing Quest. Please take the time to complete your product registration card which is included with the packaging.

Registering your Quest Engineering product will:

- CONFIRM YOUR WARRANTY
- REGISTER YOUR PRODUCT
- PROTECT YOUR NEW PRODUCT

REGISTER ONLINE:

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