



HQ210

THREE WAY PASSIVE
REFERENCE
MONITORING

OWNER'S MANUAL

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Introduction

Thank you for purchasing your Quested HQ210's.

You can be sure you have purchased one of the finest monitors in the world and if you take time and care in positioning and aligning the system you will appreciate why Quested monitors have a reputation for faithful reproduction covering the entire audible spectrum. They are professional monitors, and are not designed to flatter, but faithfully reproduce. Please take care to maintain the system and you will obtain many years of service

This manual covers the HQ210 3 way passive monitor. Please read this manual, which we have kept as concise as possible, it really will help you and covers important safety considerations.

The HQ210 is a 3 way passive monitor and can be used soffit mounted or free standing. They are suitable for use as main monitors in smaller control rooms or as mid field reference monitors in larger rooms. The bass drivers are fully magnetically shielded and a fully magnetically shielded tweeter is available as an option, although in practice this is rarely required as the HQ210 can be used in close proximity to TV and computer monitors in its standard form. If you require the shielded tweeter please contact your dealer or distributor.

Typical applications include post production suites, broadcast, audio visual, project studios, surround sound, midfield reference monitors and main monitors in small to medium sized control rooms.

A pair of HQ210 are ideally driven by a Quested AP1550-2 amplifier, but other amplifiers with a power output of between 500-700 watts RMS per channel can be used. Lower powered amplifiers could well damage the HQ210 through poor distortion performance when pushed hard. Please consult us if you have any questions. The low frequency performance is more than adequate for most situations, but can be further extended by combining it with a sub bass solution from Quested to extend the frequency response down to 20Hz, or when a discrete sub channel is required for formats such as Dolby 5.1

2. Safety Considerations

2.1 General

THE HQ210 HAS BEEN DESIGNED IN ACCORDANCE WITH INTERNATIONAL SAFETY STANDARDS. THE FOLLOWING WARNINGS MUST BE FOLLOWED TO ENSURE SAFE OPERATION OF THIS EQUIPMENT.

CAUTION: TAKE CARE AFTER CONNECTING THEM TO THE AMPLIFIERS, AS AUDIO SIGNAL CABLES CAN CARRY DANGEROUS VOLTAGES AT HIGH MONITORING LEVELS.

CAUTION: THIS UNIT CONTAINS MAGNETIC COMPONENTS WHICH MAY EFFECT ADJACENT SUSCEPTIBLE EQUIPMENT.

2.2 Hearing Damage

This equipment can deliver sound pressure levels in excess of 110dB. At this level permanent hearing damage can occur and exposure to this level of sound, even for relatively short periods (see table below), can be harmful. Of equal importance to the maximum level of sound is the exposure to high levels of sound for extended periods.

There are no international agreed limits and different countries have different limits measured in differing ways. IT IS THEREFORE IMPORTANT THAT THE USER ESTABLISHES THE RECOMMENDED LEGAL LIMITS, THAT ARE IN PLACE. As a guide the table below shows the levels that are acceptable in the majority of Western Europe and the US & Canada.

SPL dB(A) Listening time per day

90 8 hours

95 2.4 hours

100 40 minutes

105 15 minutes

110 5 minutes

115 and over Not at all

It is also important to note that the effect of exposure to sound is cumulative.

Having listened to sound, for example, for 15 minutes at 105 dB then further exposure to noise levels above 80dB should be avoided until the next day.

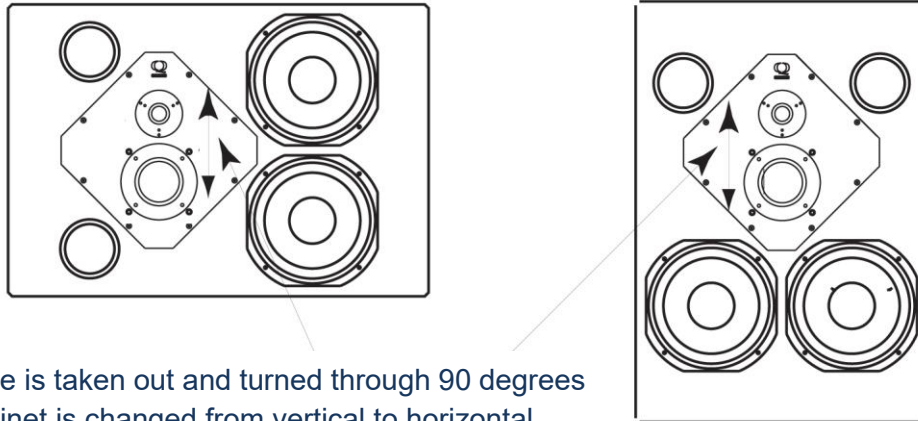
3. Unpacking

This Requested product has been carefully manufactured, tested and packed to ensure it arrives in a flawless condition. The component parts of the packing have been thoughtfully designed to offer sufficient protection during transportation, yet remain fully recyclable and should be retained for future use.

4. Installation

4.1 Positioning

The HQ210 is designed to be mounted either horizontally or vertically, but it is important that the baffle containing the mid range and the tweeter are correctly aligned as indicated in the diagram below.



Note the baffle is taken out and turned through 90 degrees when the cabinet is changed from vertical to horizontal mounting so that the tweeter and mid range are still aligned vertically

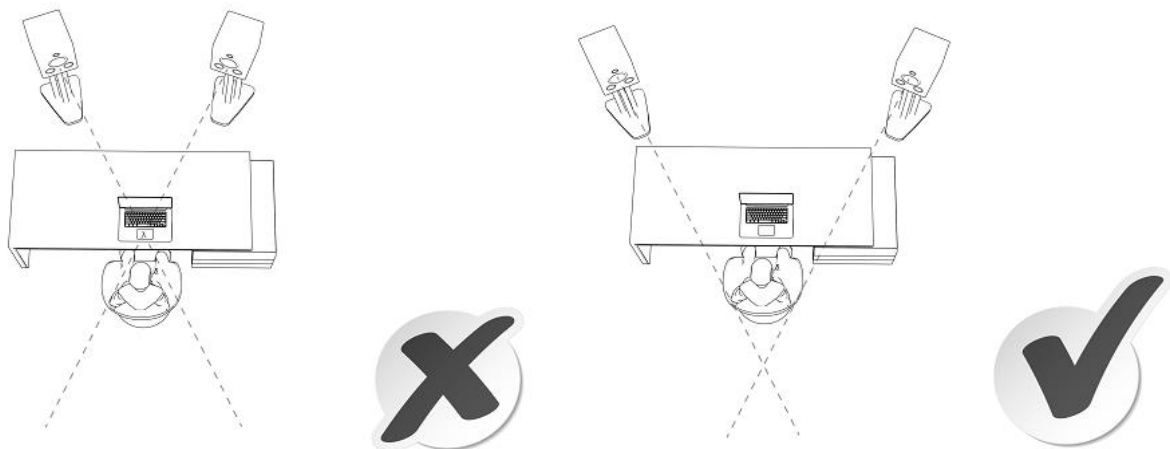
The HQ210 can either be soffit mounted or positioned on speaker stands, but whichever way is chosen, the support should be rigid and must not vibrate when the monitor is driven. Vibrations will result in lack of low frequency definition. Positioning close to or away from the rear wall and proximity to any room corners is best determined by experimenting and placing the speaker in differing positions. The shape of the room, normal listening position and room treatment will all have an effect on determining the speakers positioning.

Placing the cabinet against a wall will reinforce the bass performance of the speaker and up to an additional 3dB may be obtained. Placing the monitors in a corner will further reinforce the bass performance and gains of up to 6dB may be achieved, but be very careful about placing the monitors in a room corner because it can excite standing waves and create an unpleasant boominess.

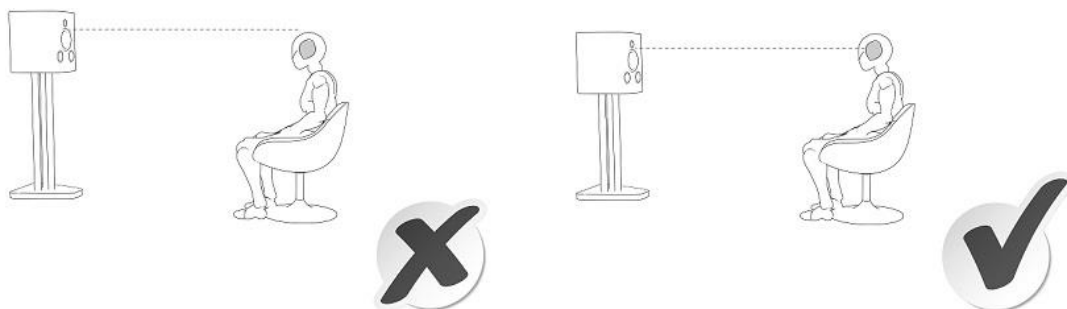
The speakers should be positioned so that the axis (an imaginary line drawn from the acoustic centre of the left and right monitor — see line drawing in this manual) should cross between 0.5 and 1 meters behind the engineer's position, for the following reasons:-

- a) To obtain the most accurate imaging, both front to rear and side to side, and to obtain as large as possible listening area so that the engineer can move and operate the console without perceiving a change in character of the monitors.
- b) To enable listening for long periods of time without suffering strain or fatigue.

Sketch showing positioning of speakers. The speakers should be between 1.9 to 2.8 meters apart and the axis of the speakers should cross between 0.5 and 1 meters behind the listening position.



The height of mounting the speaker is equally as important. The correct height should result in the axis being at ear level when the engineer is sitting in his normal position at the console.



4.2 Audio Connections

The connection to the HQ210 is through a double pair terminal tray which accepts either bare end cables or 4mm banana plugs.

Factory standard configuration is that the pairs of terminals will be joined by a metal strip. This allows the speaker to be connected to a single amplifier channel.

If you remove the connecting strip, then the HF/Mid section can be driven by a single channel, and the twin 10" drivers driven by a separate channel. For advice on setting up in this way, please contact Quested.

4.2.1 Cable

When running speaker cables it is important that good quality oxygen free 4mm² speaker cable (OFC) is used.

5. Technical Specification

Size (w x h x d) 590 x 850 x 355mm (23.23" x 33.46" x 13.98")

Weight 60kgs (132lbs)

Drivers Bass cone 2 x 250mm (10")

Mid Range softdome 1 x 75mm (3")

High Frequency soft dome 1 x 28mm (1 1/8")

Maximum SPL 113.5dB

Sensitivity 91.5dB at 1 watt at 1 meter

Frequency Response 40Hz-20kHz ± 2 dB

Nominal Impedance: 8 Ω

Connectors: Double pair gold plated binding posts for 4mm banana or bare wire

Crossover: Multipole network utilizing polypropylene capacitors and air cored inductors throughout

Power requirements Amplifier rating at 8ohm between 500-700 watts RMS

6. Guarantee



The HQ210 is guaranteed for 24 months from its date of purchase. If any part of the product is found defective due to faulty manufacture within 24 months from the date of purchase, Quested, through its authorised distribution network will effect repair or replacement, at its discretion, free of charge providing:-

- a) The fault is reported to the authorised distributor.
- b) Proof of purchase is provided.
- c) The fault is not caused by, misuse, neglect, or faulty operation by the user.
- d) The fault is not a result of fair wear & tear
- e) The equipment has not been modified in any way.
- f) The equipment has not been taken apart or tampered with in any way other than described in the service manual for the adjustment and replacement of user accessible items.

The guarantee does not cover

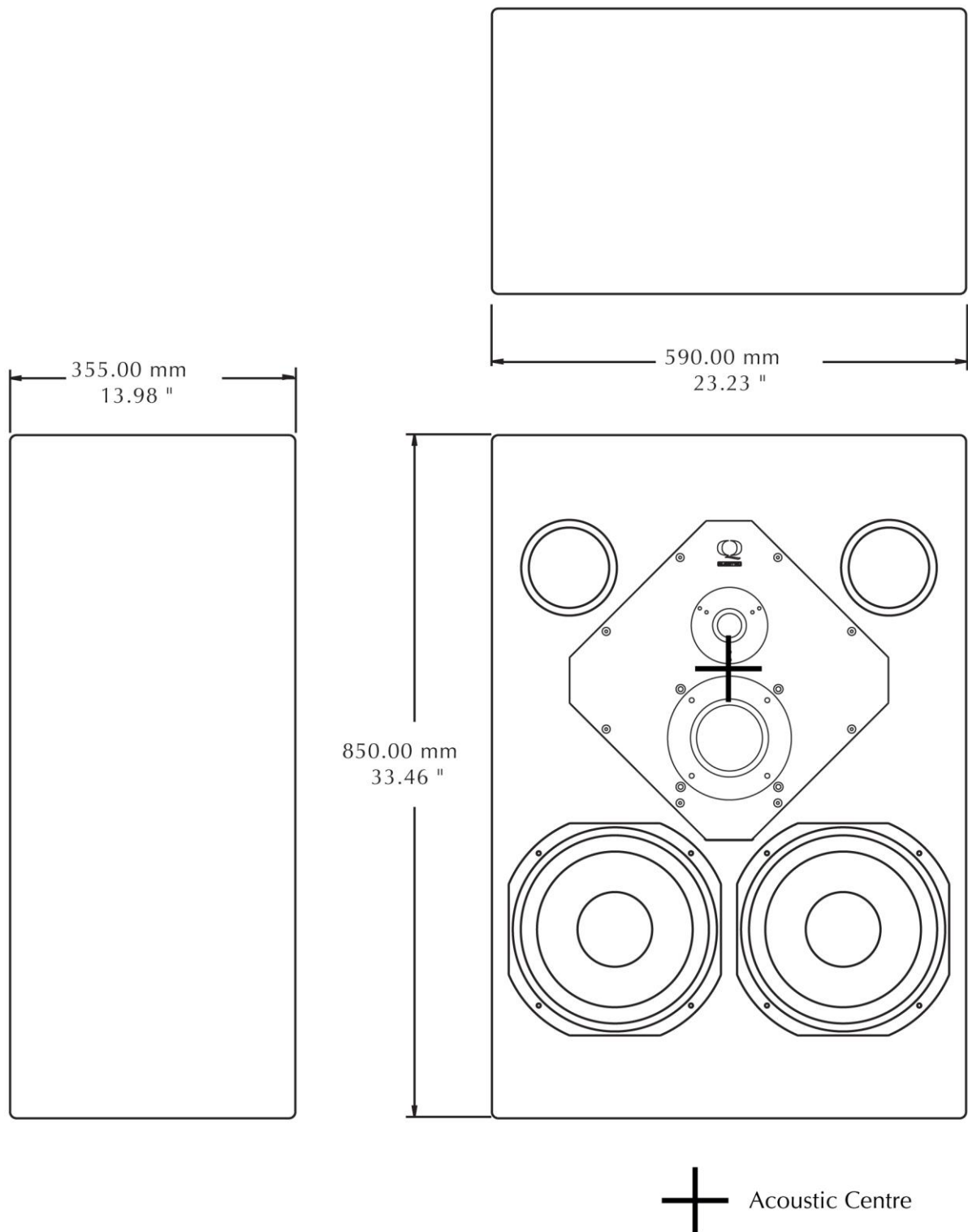
- a) Damage during transit
- b) Damage to diaphragms, cones and other speaker parts as a result of the over-driving of the monitors or by faulty installation or connection.
- c) Damage caused by incorrect installation or during installation caused by incorrect handling.
- d) The cost of carriage to or from the authorised repairer.

7. Appendix

7.1 Accessories/Spare Parts

LS2515 250mm (10") Loudspeaker
RC2515 250m (10") Recone Kit for LS2505
MD75D 75mm (3") Soft dome
TW30 28mm (1 1/8") Soft dome Tweeter
RD30 28mm (1 1/8") Soft dome diaphragm for TW30
FF1 1ml of Ferrofluid

8. Line Drawing



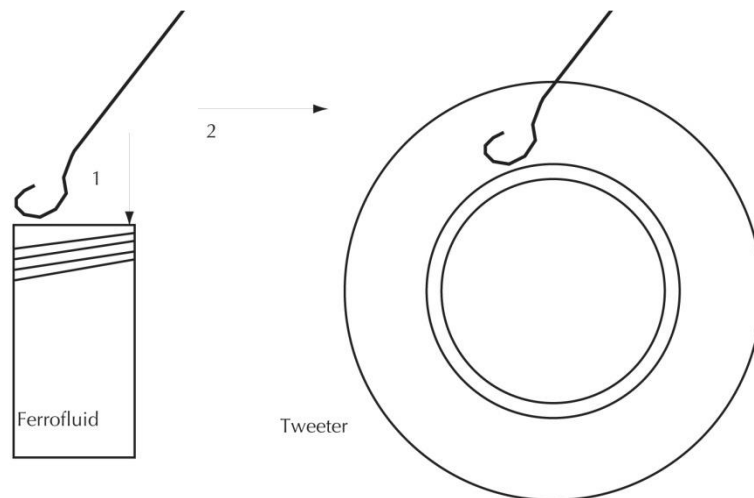
9 Driver replacement procedures

9.1 Tweeter and tweeter diaphragm

Remove the 3 outermost screws with a posidrive no. 2 screwdriver. Take out the tweeter and disconnect the two wires, noting which colour goes to which terminal. If on removing the 3 screws that hold the tweeter there is any difficulty in removing the unit do not try to force a blade between the cabinet and tweeter, but use a small narrow bladed screwdriver in one of the screw holes to gently lever out the tweeter.

If it is necessary to replace the diaphragm

- a) Remove the 3 machine screws on the front plate of the tweeter using a 2mm hex driver.
- b) De-solder and unwind wires from the terminal tags
- c) Remove diaphragm assembly and replace with the new diaphragm. The ferrofluid has the appearance of oil and is dark brown in colour and should cover about 1/3 of the coil. If there is less than this then additional ferrofluid should be added. This can be obtained from your dealer/distributor or directly from Quested. It should be noted that ferrofluid is best added as shown in the diagram below. The fluid should never cover more than 1/2 the coil.
- d) Wrap the wires from the diaphragm around the corresponding tags
- e) Keep the wire slightly taught, but do not strain
- f) Re-solder the wires and re-assemble.



Dip wire in ferrofluid, a small amount will be retained on the wire hold wire over the tweeter gap and the magnet will attract the fluid from the wire into the gap. Do this 3 or 4 times in different position on the tweeter, then check by inserting the new diaphragm to see the amount of fluid in the tweeter.

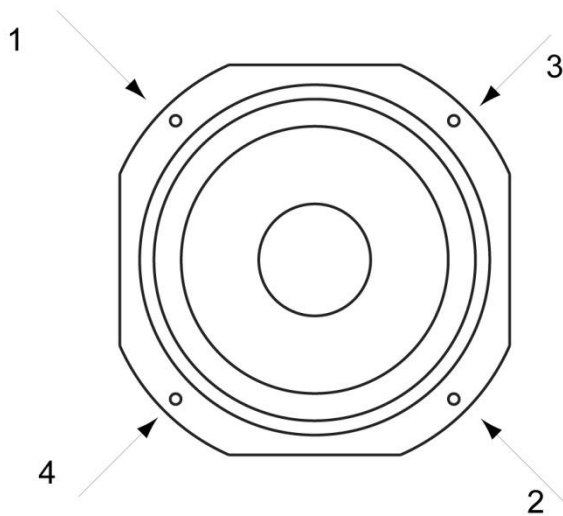
9.2 Mid range driver

No recone kit is available for the mid range so if a fault develops the unit will need to be replaced. Remove the 4 screws using a posidrive no.2 screwdriver. Take out the unit and disconnect the two wires, noting which colour goes to which terminal. If on removing the 4 screws that hold the mid range there is any difficulty in removing the unit do not try to force a blade between the cabinet and mid range, but use a small narrow bladed screwdriver in one of the screw holes to gently lever out the unit. Connect the new mid range and re assemble into the cabinet. Do not over tighten the 4 screws.

9.3 Bass driver and bass driver recone.

The bass drivers are held in by four M5 machine screws. Remove the screws in the order shown below using a 4mm hex driver. The drivers are heavy so hold the driver by the frame when removing the last screw. Remove the bass driver, using a screwdriver in one of the screw holes to gently lever out the driver if there is any difficulty in removing the unit. Do not force a blade between the cabinet and driver. Disconnect the two wires, noting which colour goes to which terminal. Replace with the new driver and re-assemble in the reverse order.

A recone unit is available for the HQ210 bass driver. Instruction for re-coning is included with the recone kit. However, unless you are familiar with the practise of re-coning it is better to have the speaker re-coned by someone who is experienced.



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