



Q212d Q412d

The Quested Q212d, & Q412d cabinets are the fundamental elements of uniquely flexible monitoring systems incorporating electronic crossovers and power amplifiers. In addition there are optional electronics and specialist enclosures so there is potential to configure an extensive range of systems for stereo and multi-channel formats. In particular the Q212 system together with its options was designed to make the ideal multi-channel system for a wide variety of rooms. Both cabinets are intended to be soffit mounted, they can however, in certain situations, be employed free standing if a sub-woofer is incorporated in the system.

Cabinets

The cabinets are manufactured from 25mm MDF with a 40mm front baffle and a 25/65mm heavily damped sandwich construction for the cabinet rear wall. Internal cabinet walls are used to create separate enclosures for each bass driver, and in addition to eliminating driver interaction these walls make the cabinet extremely rigid and add to the mass. Mid range and high frequency drivers are mounted on a rotatable sub-baffle allowing the cabinet to be mounted horizontally or vertically whilst retaining the correct driver geometry.

Drive Units

Both models are loaded with identical drive units. Bass drivers are 305mm (12") units built on unique radial chassis. The chassis acts as a heat sink whilst additional cooling is provided by the vented magnet. This results in improved performance, with thermal compression being typically 3dB better than conventional designs. These drivers provide outstanding performance with exceptionally clean transients and an extended low frequency response.

The mid range driver is a development of the well proven 75mm (3") soft-dome unit used in previous Quested models. A new doping process and tighter tolerances results in higher efficiency and improved performance across the critical mid-range frequencies.

The HF driver is a 34mm (1 1/4") soft-dome unit which is carefully matched to the mid range to ensure a seamless crossover between the units. In common with the mid-range driver the diaphragm assembly is user replaceable. This combination of soft domes and cone drivers in a direct radiator design, together with low crossover points, results in faithful uncoloured reproduction of the input signal, nothing added or left out.

Electronics

The electronics packages are designed for remote 19" rack mounting. A standard package with 4 AP800 and a SM326 analogue system manager is provided for stereo systems whilst the appropriate combination of amplifiers and system managers are specified for multi-channel systems. The SM326 system manager is a Quested designed and manufactured unit of exceptional sonic transparency. The topology, filter configuration and gain structure are set on internal cards with system calibration adjustments and switched settings protected by a removable panel. The specification features mid-filter limiters, 24db/oct. Linkwitz-Riley band filters, level limiter meters and output meters for each band. Calibration trims include fine level control and phase adjustment. A 2 wire remote standby connector allows the system to be muted from the studio console.

Amplification is via the Quested AP800, and where appropriate in multi-channel systems, the AP1300 amplifiers. The unique current driven drive stage optimises the transient ability of the bass drivers whilst ensuring both openness and neutrality of the soft-domes are not compromised. Soft start switch on respects the most sensitive power circuit breakers and sophisticated digital control is provided for management of load, temperature and operating conditions.



ACCESSORIES

A set of cables for crossover/amplifier connection is supplied as are dual banana plugs, for termination of both ends of the speaker cables, and a spares kit. Speaker cable is an optional accessory.

OPTIONS

The QSB118 sub-bass cabinet, for use with systems requiring a low frequency effects channel, can also be used with the Q212 to extend the systems low frequency if soffit mounting is not possible.

The Q212dN cabinet can be used where space restrictions dictate a narrow cabinet. The cabinet can be installed either vertically or horizontally.

The Q112 cabinet, which has a single 12" bass driver, is offered for use in multi-channel formats for smaller rooms or where very high SPL is not required, and would typically be used as the centre and rear channels in conjunction with Q212 as the left and right monitors.

Dual input versions of the AP800 and AP1300 amplifiers are used where the sub-bass is part of a 4-way system as well as being the monitors for the effects channel.

The optional digital crossover is an adaption of an industry standard unit that features carefully optimised double precision processing with a 40 bit internal data path for exceptional dynamic range. The unit is pre-programmed for the Q212 and Q412 but the 40 memories allow different set ups if required by the user. Offering 2 inputs and 6 output with both inputs having an 8 band parametric equaliser, base delay and gain controls. The 6 outputs provide 5 band parametric equaliser, crossover filters, high & low shelving filters, limiter and delay. Full metering is provided for inputs and outputs with mute and access buttons allowing quick set up and gain adjustment. The crossover can also be controlled by a PC using windows control software.

APPLICATIONS

Q212

- Medium sized control rooms [typically* 15-30m² (ft²)] when using a stereo pair
- Post production
- Broadcast
- Mastering suites
- Combined with the QSB118 the Q212 is the ideal 5.1 system for medium to large control rooms

Q412

- Large control rooms [typically* in excess of 20m² (280 ft²)] when using a stereo pair
- Broadcast
- Mastering suites
- Playback monitors for preview theatres
- Post production

* When specifying monitors for a control room of a given size the listening level, programme material and monitor format e.g. stereo pair, LCR, 5.1 also needs to be taken into consideration.



Sarm Studios showing Q212 with Q112 centre channel

MONITOR SPECIFICATION (PER MONITOR)

Q212d

700 x 700 x 640mm

(27¹/₂" x 27¹/₂" x 25")

Q212dN

Mounted Vertically 462 x 1104 x 610mm

(18" x 43¹/₂" x 24")

Mounted Horizontally 1104 x 462 x 610mm

(43¹/₂" x 18" x 24")

80kg (176lbs)

2 x 305mm (12")

1 x 75mm (3")

1 x 34mm (1¹/₄")

121dB @ 1m

40Hz - 18kHz ± 2dB

Two x twin pair gold plated binding posts accepts bare ends or 4mm banana plugs

Dimensions (w x h x d)

Weight
Driver Compliment
Bass
Mid
High
Suggested Maximum SPL
Frequency Response
Connectors

Q412d

Mounted Vertically 880 x 940 x 670

(34³/₄" x 37" x 26¹/₂")

Mounted Horizontally 940 x 880 x 670

(37" x 34³/₄" x 26¹/₂")

130kg (286lbs)

4 x 305mm (12")

1 x 75mm (3")

1 x 34mm (1¹/₄")

125dB @ 1m

40Hz - 18kHz ± 2dB

Two x twin pair gold plated binding posts accepts bare ends or 4mm banana plugs

Two Channel System Manager

Front Panel Controls and indicators (free access)

Band mute with LED
Band level meter/limiter indicator (6 LED)
Power on LED
Limiter cancel LED
Standby mute LED

Front Panel Controls (restricted access)

Band gain trim $\pm 6\text{dB}$
Band signal polarity
Interband phase correction 0-170°
Band 1 (Low) mono switch
Limiter cancel switch
Remote standby mute cancel switch
Switch to select power on into mute or auto unmute

Rear panel connector and controls

Input connectors 3 pin XLR electronically balanced 10k Ω pin 2 - hot pin 3 - cold
Output connectors 3 pin XLR electronically balanced 100 Ω pin 2 - hot pin 3 - cold
Remote standby connector 2 pin removable block (close contacts to mute)
Power connector 3 pin IEC
Power switch
AC fuse 115V T250mA 230V T200mA

Rear panel connector and controls (restricted access)

Channel limiter threshold switch (1dB steps +1dBu to +10dBu)

System Specification

Subsonic filter 15 Hz 24 dB/octave
Low mid filter 450Hz 24dB/oct Linkwitz-Riley
Mid-high filter 4.5kHz 24dB/oct Linkwitz-Riley
Ultrasonic filter 150 kHz 6 dB/octave
Dimensions(w x h x d) 482 x 44 x 252mm (19" x 1 3/4" x 10")
Net Weight 3.9kg (8.6lbs)
Power requirements 85-130 or 190-260Vac set internally. 50/60Hz 25VA

Amplification

Front Panel Controls

Power: On/Off rocker Level: 2 rotary knobs
Mute: 2 mute buttons (fade up on release)

Front Panel Indicators

Peak Meters: 2 x 8 Led peak meters
2 x LED's (each channel) indicates Mute, Fault/DC & Limit Single LED's Indicates Power & Temp Warning

Rear Panel Settings*

Impedance 2/4 & 4/8 switch
Mono Stereo & Bridged mono switch

Output RMS

Bass Q212 2 x 450W into 8 Ω
Bass Q412 2 x 770W into 4 Ω
Mid Q212 & Q412 450W into 8 Ω
High Q212 & Q412 450W into 8 Ω

Frequency Response

20Hz-20kHz +0 - -0.5dB

Amplifier Gain 31dB i.e. +7dBu signal drives full output

Load Impedance* Switchable 2/4 Ω & 4/8 Ω

Input Impedance 10kohm actively balanced

Input CMRR >90dB

Slew Rate 50V per micro second

Damping Factor >400

T.H.D <0.005% @ 1kHz
[20Hz -20kHz < 0.02%

Hum & Noise - 105dB

Input Connectors XLR 3 pin Pin 1 Ground
Pin 2 Hot
Pin 3 Cold

Outputs Shrouded 4mm binding posts

Dimensions

Width 482mm (19" rack mount)
Height 88mm (3 1/2") 2U
Depth 381mm (15")

Weight 23kgs (51)lbs

* When used in this system the amp. is set to stereo and the 4/8 Ω setting

Digital Crossover

Display 2 x 20 character backlit LCD
Frequency Resp. $\pm 0.5\text{dB}$ 20Hz-20kHz
Dynamic Range >110dB 20Hz-20kHz unwdt
Distortion < 0.02% @ 1kHz, +18dBm.
Maximum Delay 650 mS. (increments 2.6 μS Steps
Output Gain Adjustable +15dB to -40dB in 0.1dB steps and mute

Parametric Equalisation

Filters 8 Per input, 5 per output
Filter gain +15dB to -30dB in 0.1dB steps
Centre Frequency 20Hz-20kHz, 1/36 octave
Filter Q/BW 0.4 to 128/2.5 to 0.008

High Xover Point Linkwitz Riley 4k5Hz 24dB/oct.

Low Xover Point Linkwitz Riley 450Hz 24dB/oct

(Filters set as above but adjustable for xover points, slopes and filter responses (Bessel & Butterworth)

Limiters

Threshold +22dBu to -10dBu
Attack time 0.3 to 90 milliseconds
Release time 4,8,16 or 32 times attack

Connectors

Inputs 2 x electronically balanced 3 pin female XLR (2 hot)
Outputs 6 x electronically balanced 3 pin male XLR (2 hot)
Power 3 pin IEC 60 - 240VAC
Other RS485 In/Out XLRs, RS232 9 pin female DEE connector, MIDI pin DIN

Input Impedance >10k ohms

Input CMRR >65dB 50Hz - 10kHz

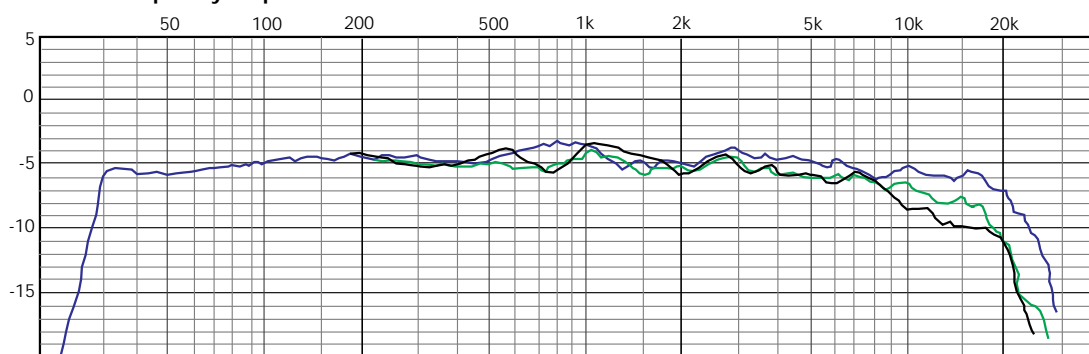
Outputs

Source Imp. < 60 ohms
Min Load 600ohms
Max. Level +20dBm into 600 ohm load

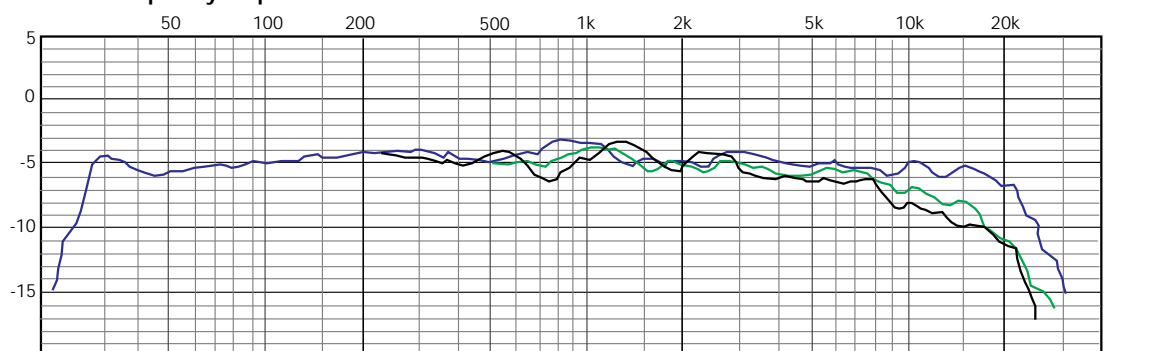
Dimensions

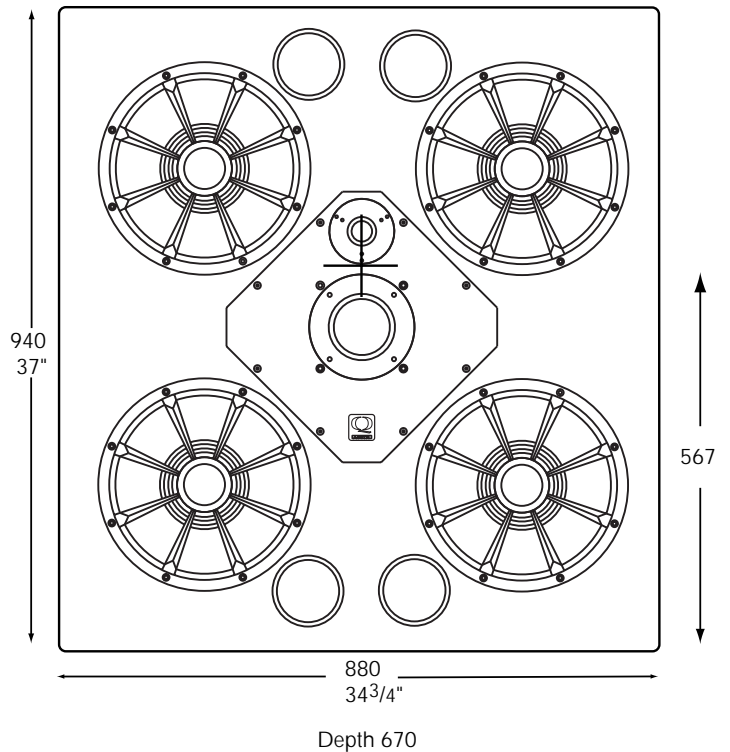
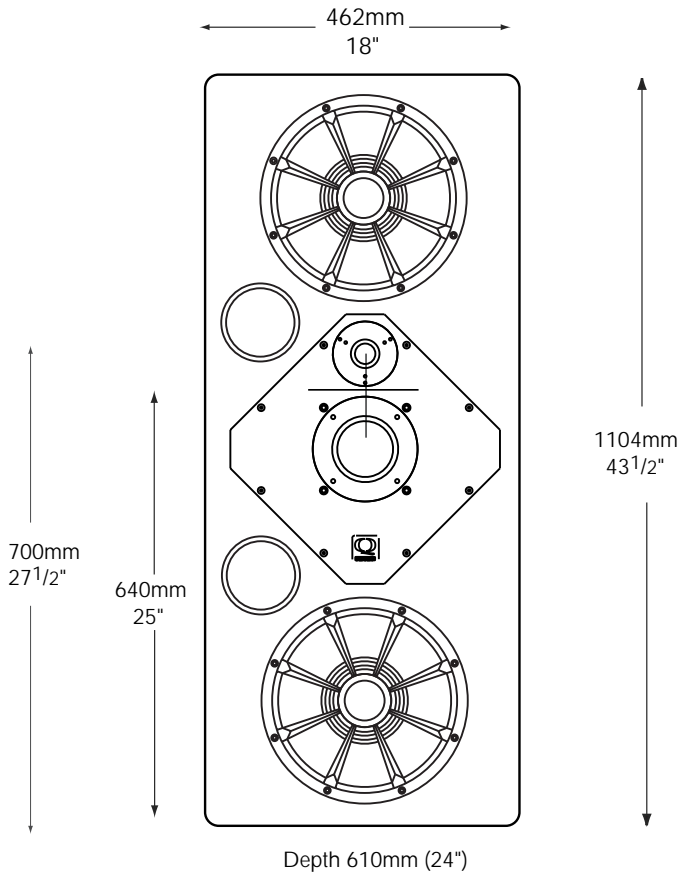
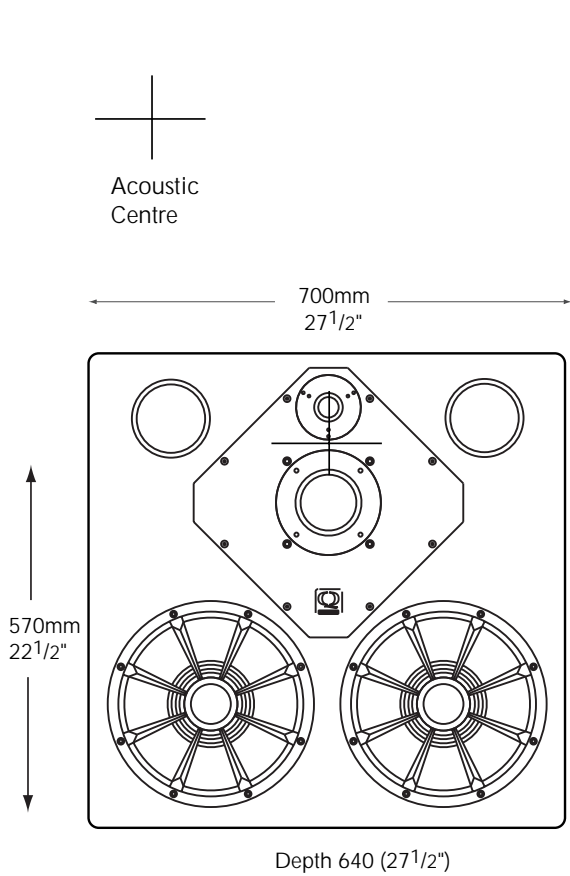
Width 482mm (19" rack mount)
Height 44mm (13/4" 1U)
Depth 300mm (12")
Weight 3.5kg. net (4.8kg. shipping)

Q212 frequency response



Q412 frequency response





**Quested Monitoring
Systems Ltd,**

Unit 2A West Ealing Business Centre,
Alexandria Road,
London W13 0NJ

Tel: +44 (0)20 8566 2488

Fax: +44 (0)20 8566 2484

Email: qmssales@compuserve.com

Web Site: www.quested.com

