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AMK Commercial Series

## QT615-MD2

2x2 Self Amplified  
 6.5" Coaxial Loudspeaker Assembly



### Features

- \* Systems install quickly into suspended tile ceilings and are supported by the T-bar grid.
- \* Systems include a complete powered speaker with UL based plenum enclosure.
- \* Fine perforated grilles blend with ceiling tiles and provide excellent acoustic transparency.
- \* Self powered with 40 watt Class D amplifier

The **AMK QT615-MD2** powered speakers feature a 40 watt Class D digital design amplifier, with > 75% efficiency for the main speaker. The speaker includes 1 powered and 3 companion speakers for 4 speaker set installation.

The speaker combines high performance, power handling, and a very smooth response. **AMK QT Series** speaker assemblies provide quality performance, unobtrusive appearance, and easy installation in suspended ceiling applications. Systems include a choice of factory wired drivers and enclosures mounted to a fine perforated 2' X 2' grille.

The loudspeaker driver, CX602, is one of the few transducers in the commercial sound industry that produces and meets the standards of recording studio. Excellent dispersion, wide bandwidth, and a smooth frequency response make this the top choice for today's overhead commercial applications.

There are wide ranges of the application for this unit, especially in educational markets and corporate boardrooms where direct input of the signal from the processor is desired (i.e., projectors, laptops, or any line level device)

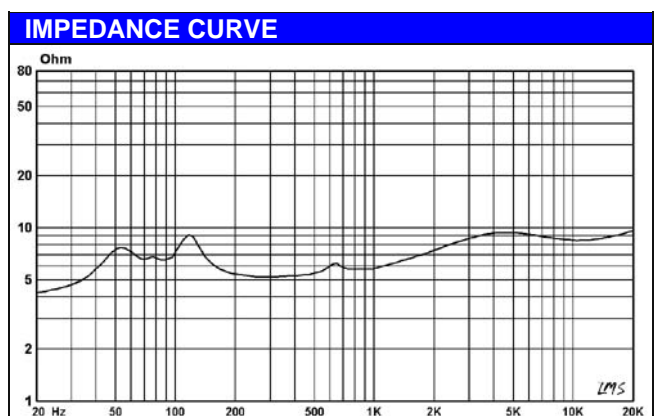
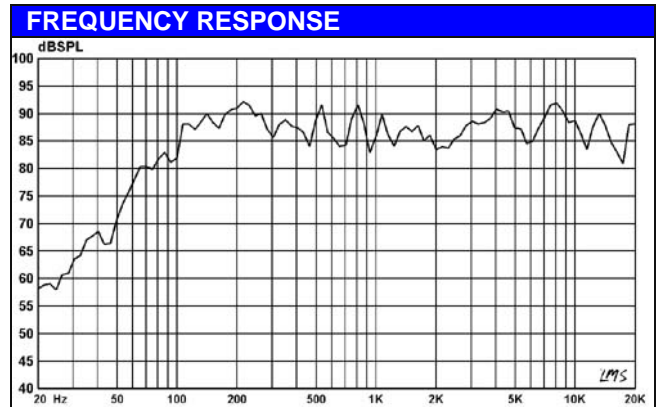
They are shipped ready to install and require no speaker cut-outs in the tile or time consuming assembly. 2' x 2' Systems are designed to replace a standard 2' x 2' tile and are supported by the T-bar grid.

Assemblies include a factory wired speaker mounted to a 2' x 2' subplate with a fine perforated grille and mounted AMK powered speaker enclosure. The backbox is offset to one side of the 2' x 2' grille allowing it to be rotated in the ceiling to install around plenum obstructions. Several options are available for the line level audio and power connections. Each is designed and manufactured to assure consistent performance with clear intelligibility and wide dispersion.

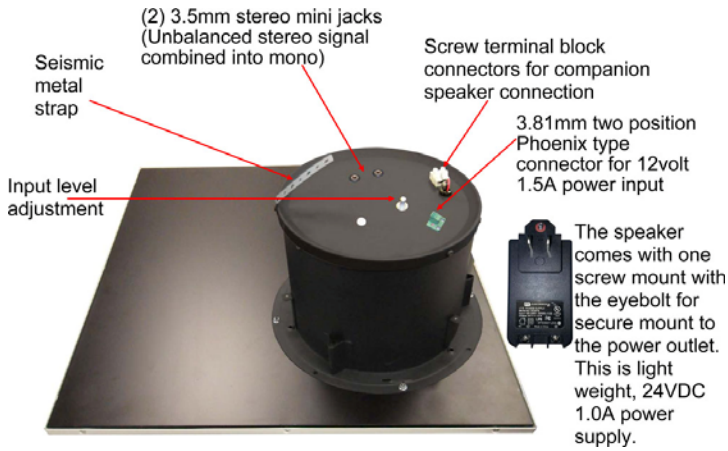
Architectural Grilles feature a fine perforated pattern for a clean unobtrusive appearance. Grilles are engineered to provide maximum free-air space for excellent speaker sound transmission while achieving virtually invisible presentation of the speaker in new or exiting tile ceilings. 2' x 2' grilles simply replace a 2' x 2' tile. All are formed from perforated steel and finished in white powder epoxy for long lasting appearance.

| Specifications            |                          |
|---------------------------|--------------------------|
| Frequency Response        | 65 Hz - 20 kHz           |
| Voice-coil diameter       | 1"                       |
| Average Beamwidth @ 2 kHz | 144 deg.                 |
| Magnet Weight             | 13 oz                    |
| Magnet Material           | Barium Ferrite           |
| Tweeter                   | 13mm Polyamide Soft Dome |
| Woofer Cone               | Polypropylene            |
| Surround Material         | Inverted Rubber          |
| Crossover Frequency       | 5.0 kHz                  |
| Depth of the Enclosure    | 7 in.                    |
| Dimension of Grille       | 2' x 2'                  |

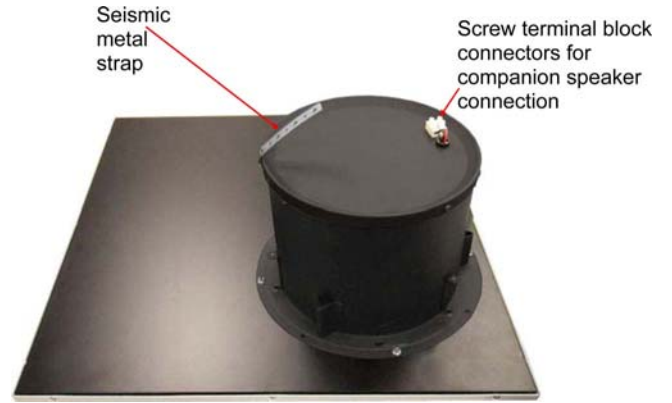
| Amplifier Specifications  |  |
|---------------------------|--|
| Amplification             | 40 watt Class D design amplifier   |
| Amplifier Efficiency      | > 75%  |
| Total Harmonic Distortion | < 0.2%   |
| Signal to Noise Ratio     | >95dB  |
| Protection                | Protected as to short circuit to supply and ground, as well as minimum current |
| Controls                  | Input potentiometer level adjustment   |



## MODEL CONFIGURATION



**Powered Speaker**

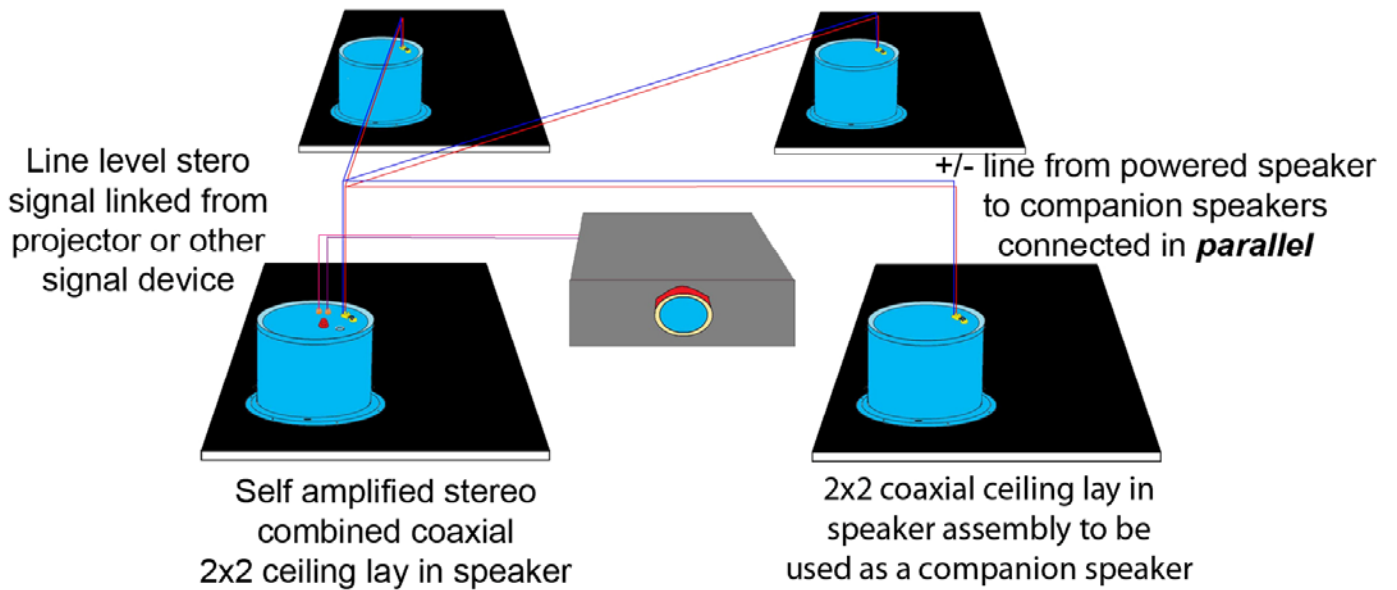


**Companion Speaker**  
(3) units are included

|                         |   |   |                                 |
|-------------------------|---|---|---------------------------------|
| <b>Power Supply</b>     | External 12Volt w/ Screw Terminal   | <b>Signal Input</b>                               | Stereo to Mono unbalanced       |
| <b>Power Connection</b> | 3.81mm two position Phoenix type connector                                | <b>Companion speaker input/output connections</b> | Screw terminal block connectors |
| <b>Input Connection</b> | (2) 3.5mm stereo mini jacks (Unbalanced stereo signal combined into mono) | <b>Input Level Adjustment</b>                     | Internal                        |

## QT615-MD2 ILLUSTRATION

Typical layout of a classroom or a board room A/V system using AMK QT series speakers



## Architect's & Engineer's Specifications

## Polar Responses

The powered loudspeaker system shall be **AMK QT 615-MD-2**. The speaker shall feature a 40watt Class D design amplifier, with >75% efficiency for the speaker. The powered speaker systems shall be one amplified speaker with three companion speakers connected in parallel.

The loudspeaker system shall have a white metal round grille with a mounting spring tab snaps into the rim of the enclosure.

The powered unit of the system shall have two 3.5mm stereo mini jacks for unbalanced audio stereo signal combined into mono audio input. The input level shall be control by the internal potentiometer. The power connection shall be a 3.81mm two position phoenix type connector. The system shall have 12 volt 1.5 Amps screw mount power supply.

The loudspeaker unit in the system shall be of the coaxial type with an 6.5" woofer of polypropylene, an inverted rubber surround, and a 1" polyamide soft dome tweeter mounted on a post. The transducer in the loudspeaker system shall be AMK CX 602 coaxial loudspeaker. The woofer shall have a 13 oz. (369g) Barium Ferrite magnet. The two reproducer sections shall be coupled through a built-in capacitor bypass crossover.

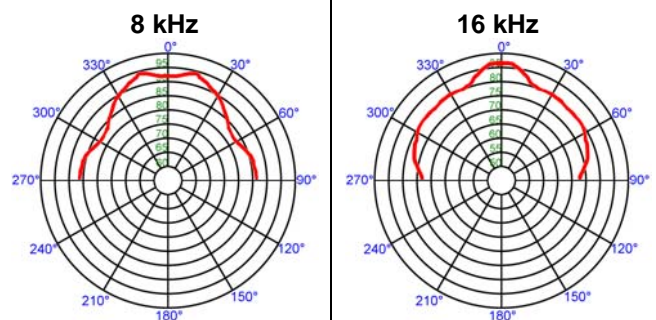
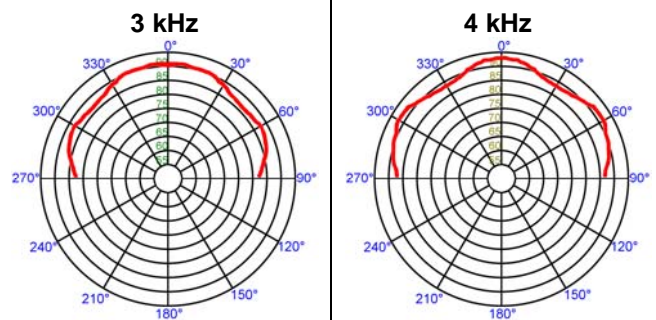
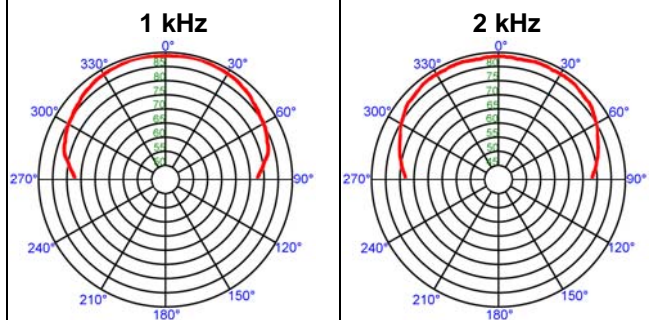
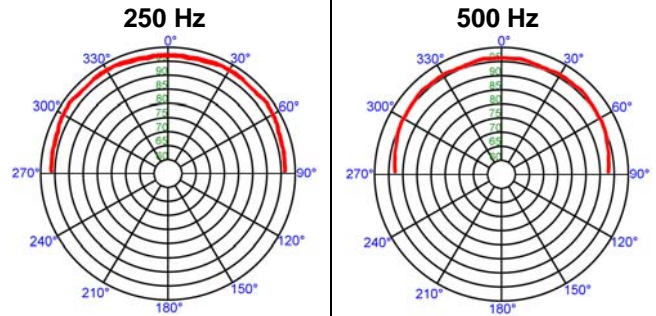
The crossover frequency shall be at 5.0 kHz. The low frequency reproducer shall have 1" (25.4mm) voice coil and the high frequency reproducer shall have 0.51" (13mm) voice coil. The system shall have a frequency response of 65 Hz- 20 kHz (+/- 5dB). The sensitivity shall be 91dB at 1watt / 1meter.

The loudspeaker system shall be on a 2' x 2' lay in system with perforated white grille. The enclosure of the systems shall be on the back of the grille, not extending 7 inches in depth. The diameter of the enclosure shall be 9.25" The system shall have metal strap attachment to the structure for seismic protection.

The total weight of the each unit system shall not exceed 15.0 lbs.

The loudspeaker system shall be AMK Innovations model **QT 615-MD-2**.

**Conforms to EIA Standards: RS-276-A, RS-278-B, RS-426-A**



| Freq   | Deg  | Q    | DIdB |
|--------|------|------|------|
| 250 Hz | 100° | 3.8  | 5.8  |
| 500 Hz | 96°  | 4.8  | 6.8  |
| 1 kHz  | 79°  | 6.8  | 8.3  |
| 2 kHz  | 72°  | 6.7  | 8.2  |
| 3 kHz  | 66°  | 9.2  | 9.6  |
| 4 kHz  | 86°  | 8.4  | 9.2  |
| 8 kHz  | 40°  | 7.1  | 8.5  |
| 16 kHz | 16°  | 15.3 | 11.8 |