

KEF REFERENCE SERIES
MODEL 105|3



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Model 105/3 is a floor standing loudspeaker system of the highest quality. It is a 4-way system employing six drive units and has very high sensitivity, high output capability and outstanding power handling capacity.

Combining all of KEF's recent research in moving coil loudspeaker technology with the established KEF Reference Series features of consistency, reliability and innovation, Model 105/3 presents a formidable array of features dedicated solely to the accurate reproduction of music and stereo images.

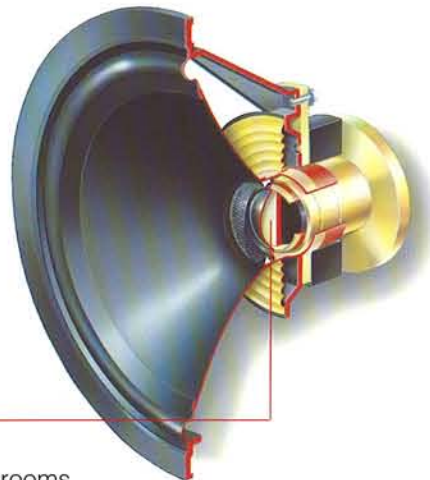
The midrange/high frequency section
controlled directivity

The midrange and high frequency assembly is contained in an independent, specially profiled module, precision machined from solid MDF 75mm (3") thick. This houses a symmetrical vertical array of three separate die-cast aluminium sealed enclosures. The upper and lower enclosures house polypropylene diaphragm units of 160mm (6.5") nominal diameter which cover the lower midrange. The centre unit is a coincident-source 2-way Uni-Q drive unit. The use of two 160mm low/mid units gives the equivalent power handling of a much larger unit but allows the narrow frontal area so essential for good stereo imaging to be retained.

The symmetrical layout gives improved vertical integration, with the acoustic sources of all four units appearing at the same point in space. The use of Uni-Q for the upper mid and high frequencies resolves the directivity problems associated with conventional systems using separated mid and high frequency units. The Uni-Q coincident-source technology eliminates discontinuities that occur around the crossover point, resulting in greatly improved reproduction, particularly of voices and strings.

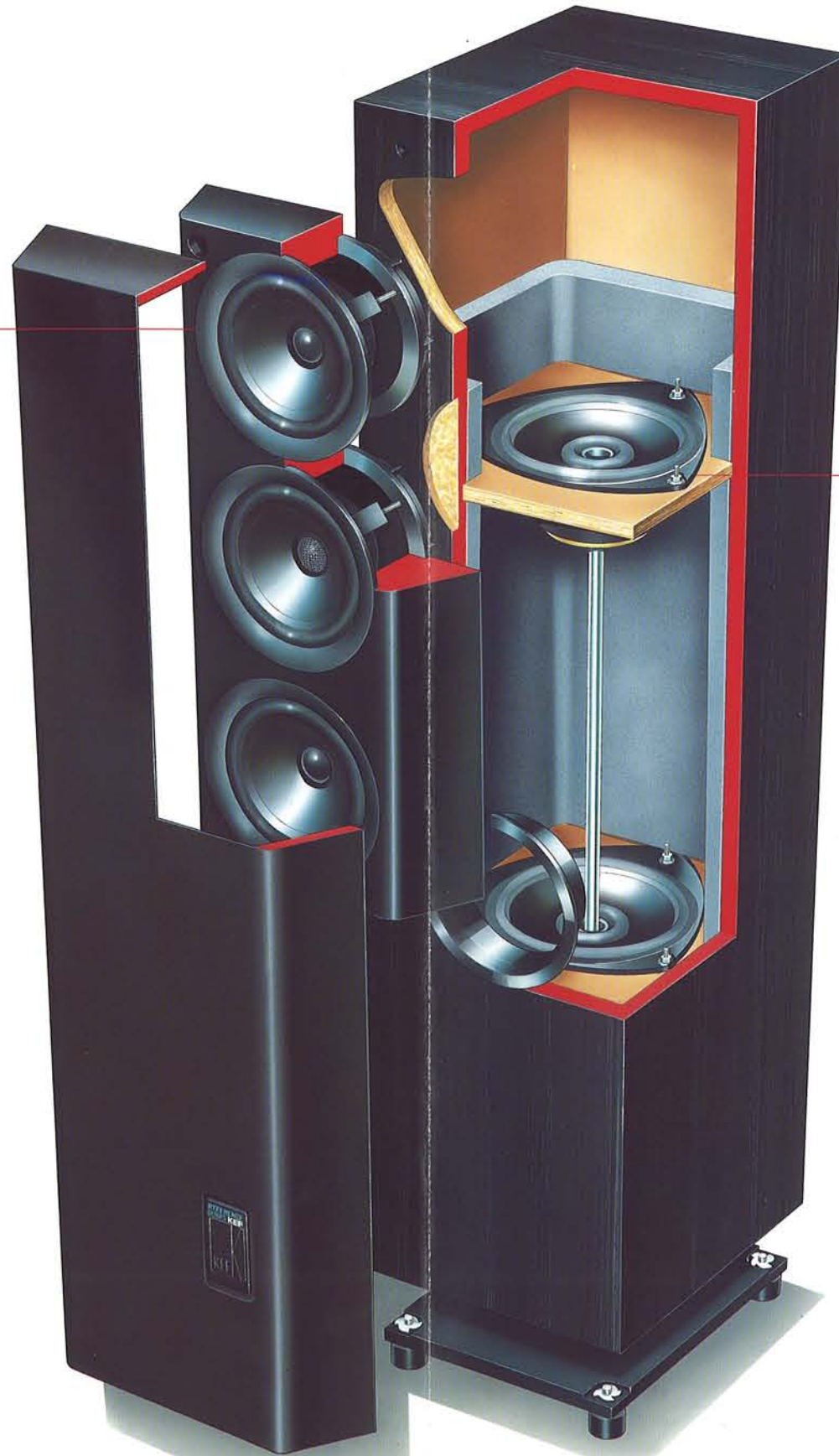
KEF Uni-Q
the coincident source

Using a new magnetic alloy, Neodymium-Iron-Boron, KEF has designed a 25mm tweeter to sit in the neck of the midrange driver, positioned precisely at the point where the acoustic centres of the two units coincide.

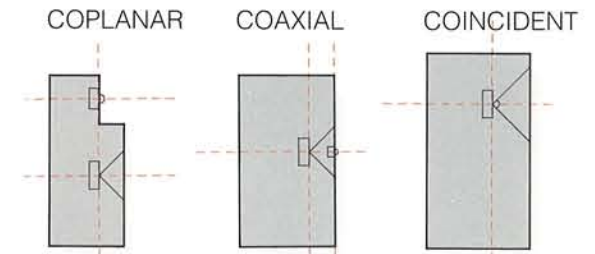


At most listening positions, in most rooms, sounds from different drive units arrive at different times altering the phase relationships so that high and low frequencies no longer add together as intended in the crossover region. The resulting raggedness in response colours the "first arrival" sound and muddles the apparent location of instruments in the sound stage.

With Uni-Q not only has KEF placed the woofer and tweeter on the same axis, their acoustic centres are also **in the same plane**. The profile of the woofer cone modifies the directivity factor or "Q" of the tweeter, so that both drive units have the same directivity in the critical crossover region. This unification of woofer and tweeter "Q" lies behind the new unit's name: the KEF Uni-Q Driver.



As the direct and reflected path-lengths from both units to the listeners' ear are now the same, the proper tonal balance is not confined to a single "sweet spot" in your listening room. KEF Uni-Q brings the sound source into the sharpest focus because the sound arrives in phase. KEF Uni-Q reveals the location of each musical voice in the stereo image with pin-point accuracy, voices and strings in particular being more accurately reproduced.



PREVIOUS DESIGNS HAVE BEEN COPLANAR OR COAXIAL
THE KEF UNI-Q DRIVER IS COINCIDENT

The low frequency section
twin coupled cavity

The low frequency section incorporates two 200mm (8") units mounted in twin coupled-cavity configuration and linked with a force-cancelling rod. This arrangement gives tight control where the sonic demands are greatest. Linking the two drivers reduces distortion whilst cancelling the forces set up in the units themselves. This prevents the transfer of energy to the main enclosure eliminating the delayed resonances which give rise to "boxy" colouration. Model 105/3's entire low frequency output is radiated by a smoothly contoured duct placed immediately below the mid/high-frequency section. This acts as an air diaphragm of very low mass and similar diameter to the midrange units. Thus directional characteristics match, ensuring exceptionally smooth acoustic integration throughout the entire frequency range. In addition to the bracing provided by the construction of the two internal sealed enclosures, further bracing is incorporated to prevent resonances in the main cabinet structure.



TWIN GOLD-PLATED TERMINALS
ALLOW BI-AMPING OF MODEL 105/3

The amplifier
conjugate load matching

KEF Conjugate Load Matching ensures that the speaker presents the driving amplifier with the simplest of all loads - pure resistance, enabling it to give of its best particularly when handling complex programme at highest level. Two pairs of heavy duty gold-plated input terminals are provided allowing the system to be bi-wired or bi-amped; the low-frequency and mid/high-frequency sections being driven by separate amplifiers.



Technical specification of the Model 105/3

Frequency range	49Hz - 20kHz \pm 2.5dB at 2m on reference axis (-6dB at 20Hz when used with KUBE 200)
Directional Characteristics	Flat within 2dB from 50Hz to 17kHz up to 30 degrees off axis
Maximum output	115dB spl on programme peaks under typical listening conditions
Characteristic Sensitivity level	93dB spl at 1m on reference axis for pink noise input of 2.83V rms band limited 50Hz - 20kHz (anechoic conditions)
Amplifier Requirements	Suitable for use with amplifiers capable of providing between 50 and 300W into 4ohms resistive load
Nominal impedance	4ohms resistive 20Hz - 20kHz
Weight, Finishes	42kg 92.5lb. Black Ash, Walnut and Rosewood veneer
Dimensions	1104 (h) x 280 (w) x 405 (d) mm, 43.5 x 11 x 16 in

KUBE 200

Loudspeaker active equaliser

Whilst Model 105/3 on its own is capable of performing at the very highest level, an active equaliser KUBE 200 is available as an optional extra. This allows the user to enhance the performance of Model 105/3 in three ways: to extend the low frequency cut-off point from 49Hz to 20Hz; to optimise the relative levels of mid and low frequency to suit room position, programme, and user preference; to optimise high frequency balance, also to suit room conditions and listener preference.

Further information is available on KEF leaflet PL653ENO1 available from your Dealer



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