

Kenwood KL-7070D



The Gigantic Kenwood 5-Way 6-Speaker System with 16-Inch Woofer

150 WATTS

As receivers and amplifiers move up and up in power and quality -- with Kenwood leading the way -- it's the speaker system that determines how much of that power and sound quality you actually hear. That's why Kenwood engineers set about designing the KL-7070D with its giant 16-inch woofer. Titanium oxide coating of the woofer cone, finely balanced performance from the other five (!) drivers, and an overwhelming amount of power are typical examples of the Kenwood approach to sound quality. No music is too complex, no amplifier or receiver too powerful, no musical taste too discriminating for the superb engineering that you find in the KL-7070D. Find out about the many fine points in the KL-7070D'S technology. Better yet, arrange to hear it. We promise you a powerful experience.

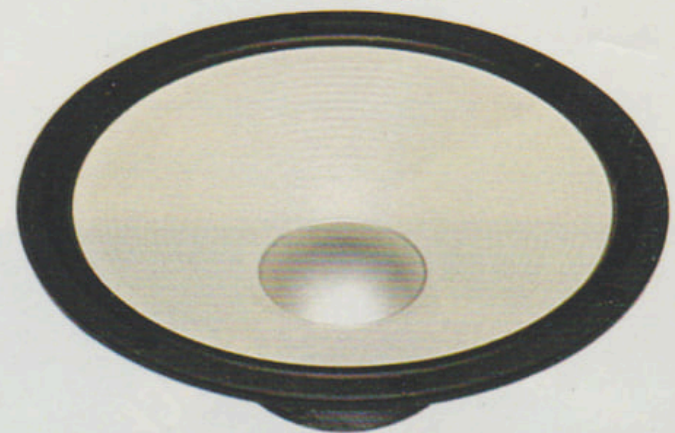


- ① 16" Rolled free edge woofer
- ② 6½" Free edge squarker
- ③ Horn type hi-mid range
- ④ Horn type twin tweeters
- ⑤ Mylar cone type super tweeter
- ⑥ 3-step tone selector
- ⑦ Bass reflex ducts

The Giant 16-Inch Woofer.

16-INCH DIAMETER GIVES
POWERFUL BASS ENERGY TRANSFER

With its extra-large cone area, this woofer can transfer large amounts of bass energy very effectively to the air. It also needs to perform only shorter excursions than conventional, smaller woofers, and therefore requires only a smaller cone velocity to do the same job. As cone velocity is directly related to a special kind of sound distortion known as "Doppler distortion," the 16-inch woofer improves the quality of what you hear while giving you a lot more to hear in the first place.

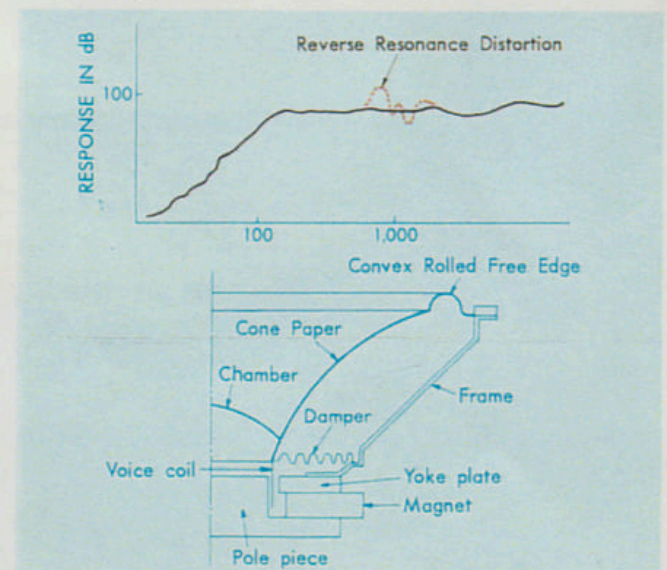


TITANIUM COATING PREVENTS
CONE BREAKUP

Scientific analysis of speaker cone movements, often employing laser holography and other advanced methods, has shown that "cone breakup" is one chief source of loudspeaker distortion. Kenwood now coats the KL-7070D's woofer cone with a special layer of titanium oxide which lends the cone additional strength and rigidity for clearer, undistorted sound. (The white color is also caused by this titanium oxide.) The cone paper itself has been chosen for its ideal combination of low mass and high rigidity to provide an additional improvement in sound quality.

FREE EDGE DESIGN REDUCES
EDGE DISTORTIONS

With a cone fixed rigidly to the frame, cone breakup and other problems are apt to occur which can seriously affect the sound quality. In the KL-7070D, the woofer's edge can move freely back and forth



together with the rest of the cone, because it is held in a soft, pliant, rolled edge. Another Kenwood contribution to better bass sound.

ALUMINUM VOICE BOBBIN PERMITS HIGHER INPUT POWER

When a speaker is damaged by excessively high input power, the cause is usually the heat generated in the voice coil. In the KL-7070D, the voice coil is mounted on an aluminum bobbin of excellent heat dissipation. In this way, the woofer can handle large amounts of power more safely than a conventional paper bobbin type -- one reason behind the tremendous input power rating of 150 watts.

Comparison of Aluminum bobbin and Kraft paper bobbin

Room Temp. 21°C 50Hz	130W	160W
Aluminum bobbin (4.8Ω)	105.8°C 6.4Ω	121.7°C 6.7Ω
Kraft paper bobbin (4.9Ω)	119.7°C 6.8Ω	156°C 7.5Ω



LEFT: Kenwood Aluminum Voice Coil Bobbin
RIGHT: Conventional Kraft Paper Bobbin
Aluminum voice coil bobbin provides high thermal conductivity for better heat dissipation, lets the speaker handle higher input loads.

DURALMIN CONE CAP IMPROVES RESPONSE TOWARDS THE UPPER RANGE

In the upper portion of the frequency range assigned to the woofer, the Duralmin cap plays an important role. Highly rigid and showing very small internal loss, this cap functions somewhat like a dome radiator, giving extra clarity to the medium-to-low sound range.

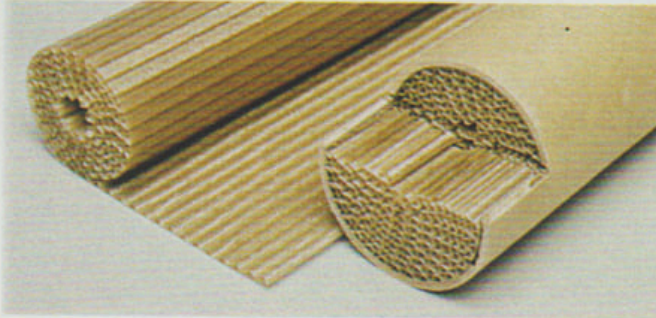
LONG VOICE COIL ASSURES EXCELLENT LINEARITY

The voice coil is much longer than in conventional woofers of this type, meaning that even at the extreme excursion points it remains within the linear area of the magnetic field -- another important consideration in preventing sound distortions.

NEWLY DESIGNED "ACOUSTIC FILTER" BASS REFLEX DUCTS

To fully utilize the stupendous bass performance of the 16-inch woofer, the KL-7070D is built upon the bass reflex enclosure principle. Its two ducted ports, however, are equipped with specially developed acoustic filters made of rolled,

corrugated PVC (see photograph). These filters impose an acoustic load on the woofer to obtain better bass response and also prevent the build-up of standing waves which could affect the clarity of the bass reproduction. In combination, these numerous technological advances act together to deliver a degree of bass power and bass fidelity that can hardly be described -- but easily heard.



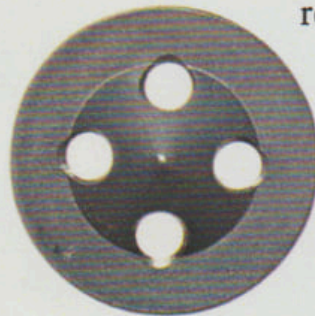
"Acoustic Filter" filling in port ducts provides acoustic load on woofer for improved bass response.

WIDE-RESPONSE MID-LOW DRIVER LENDS "BODY" TO THIS IMPORTANT SOUND RANGE!

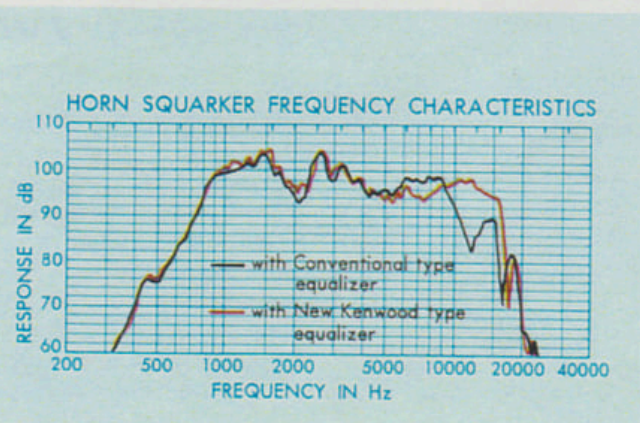
As large as the woofers in some bookshelf systems, the 6½-inch midlow speaker of model KL-7070D reproduces the very important medium-low range with accuracy. The cone cap is made of mylar with a 200 micron thick deposit of aluminum for extra crispness. Corrugated edge construction prevents cone break-up around the edge, and again an aluminum bobbin is used in the voice coil to guarantee safe handling of high input power levels. This driver possesses a frequency response far in excess of the range that it actually must handle -- it can operate in its optimum area of minimized distortion and highest clarity.

NEWLY ENGINEERED HORN ADDS REALISM IN THE MID-HIGH SPECTRUM

For high efficiency, a powerful Alnico (aluminum-nickel-cobalt) magnet structure is used to drive the thin mylar diaphragm. Towards the high range, sound reproduction is further improved by allowing only a very narrow gap between the diaphragm and the equalizer in front of it. The illustration shows the vastly improved internal structure of this horn driver.



New Kenwood type equalizer



PAIR OF HIGHLY EFFICIENT HORN TWEETERS FOR SPARKLING HIGHS

Phenole coating of the diaphragm gives it a hardness even in excess of mylar, assuring undistorted, brilliant highs. Again, the Alnico magnet structure provides high magnetic energy for efficient sound reproduction. The horn is a special exponential design that couples the diaphragm effectively to the air and assures wide-angle sound dispersion. You will soon realize that the KL-7070D is very forgiving in its room placement and creates a wide, spacious stereo listening area.

SUPER TWEETER OF MINIMIZED MOVING MASS ADDS THAT EXTRA BRILLIANCE

Way up near the limits of human hearing, Kenwood adds that decisive extra "bite" and "glitter" by means of a super tweeter. Its aluminum-coated mylar film diaphragm is extremely light and can reproduce those very high frequencies with unimpeded accuracy. Technically speaking, the speed of sound propagation in this material is so great that theoretically supersonic frequencies could be obtained. Abundant magnetic energy is again supplied by a powerful Alnico magnet structure.

OPTIMUM MATCHING TO ROOM ACOUSTICS EASILY POSSIBLE

As different rooms exhibit vastly different frequency characteristics, Kenwood engineering had to make sure that your KL-7070D performs equally well under all commonly encountered circumstances. Towards this end, a 3-step tone selector has been provided which lets you adjust the speaker's response to clear, normal, or soft. A little experimentation will soon reveal the ideal setting for your particular listening room.

A KENWOOD SPEAKER ENCLOSURE IS AN IMPORTANT CONTRIBUTION TO SOUND QUALITY

Speaker enclosures are sometimes treated as the stepchildren of audio. Kenwood engineers, however, have long realized the great importance of a well-designed and carefully built enclosure -- poor dimensioning are less than perfect construction can cause resonances, "rattles," unwanted dips and peaks in the response curve, and can otherwise distract from the quality of a speaker system. The KL-7070D is therefore housed in a heavy duty enclosure made of high density particle board and crafted for superior mechanical stability. The good looks? Well, those came almost as an after-thought...

KL-7070D

● KL-7070D FREQUENCY RESPONSE



SPECIFICATIONS

MOUNTED SPEAKERS

Woofer.....	406 mm (16")	Cone Type x 1
Midrange.....	160 mm (6-1/2")	Cone Type x 1 Horn Type x 1
Tweeter.....		Horn Type x 2
Super Tweeter.....	30 mm (1-1/4")	Cone Type x 1
ENCLOSURE.....	Bass-Reflex Type	
MAXIMUM INPUT POWER.....	150 Watts	
SENSITIVITY.....	98 dB/W at 1 m	
FREQUENCY RESPONSE.....	20 Hz to 22,000 Hz	
CROSSOVER FREQUENCIES.....	700 Hz, 2,000 Hz, 5,000 Hz, 10,000 Hz	
IMPEDANCE.....	8 ohms	
FINISH.....	Walnut Grain	

ADDITIONAL FEATURE

3-Step Tone Selector
One Touch Connection Speaker Terminals

DIMENSIONS.....

W 445 mm (17-17/32")
H 660 mm (26")
D 280 mm (11-31/32")

WEIGHT.....

24.6 kg (54.1 lbs)

Any of specifications given here may be changed or modified without notice.

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MUSIC

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