

# KEF KITS

MODEL 104aB  
CANTATA



KEF loudspeakers are famous world-wide for their accurate sound reproduction and natural quality of tone.

KEF design loudspeakers using their "Total System Design Concept," whereby each component of the product is developed to complement all the others so as to achieve the targeted performance.

In order to obtain the necessary design data on each component, KEF have pioneered computer-aided digital analysis techniques, by which they study transient behaviour, diaphragm performance, enclosures and networks and therefore relate objective and theoretical factors to the sound we hear.

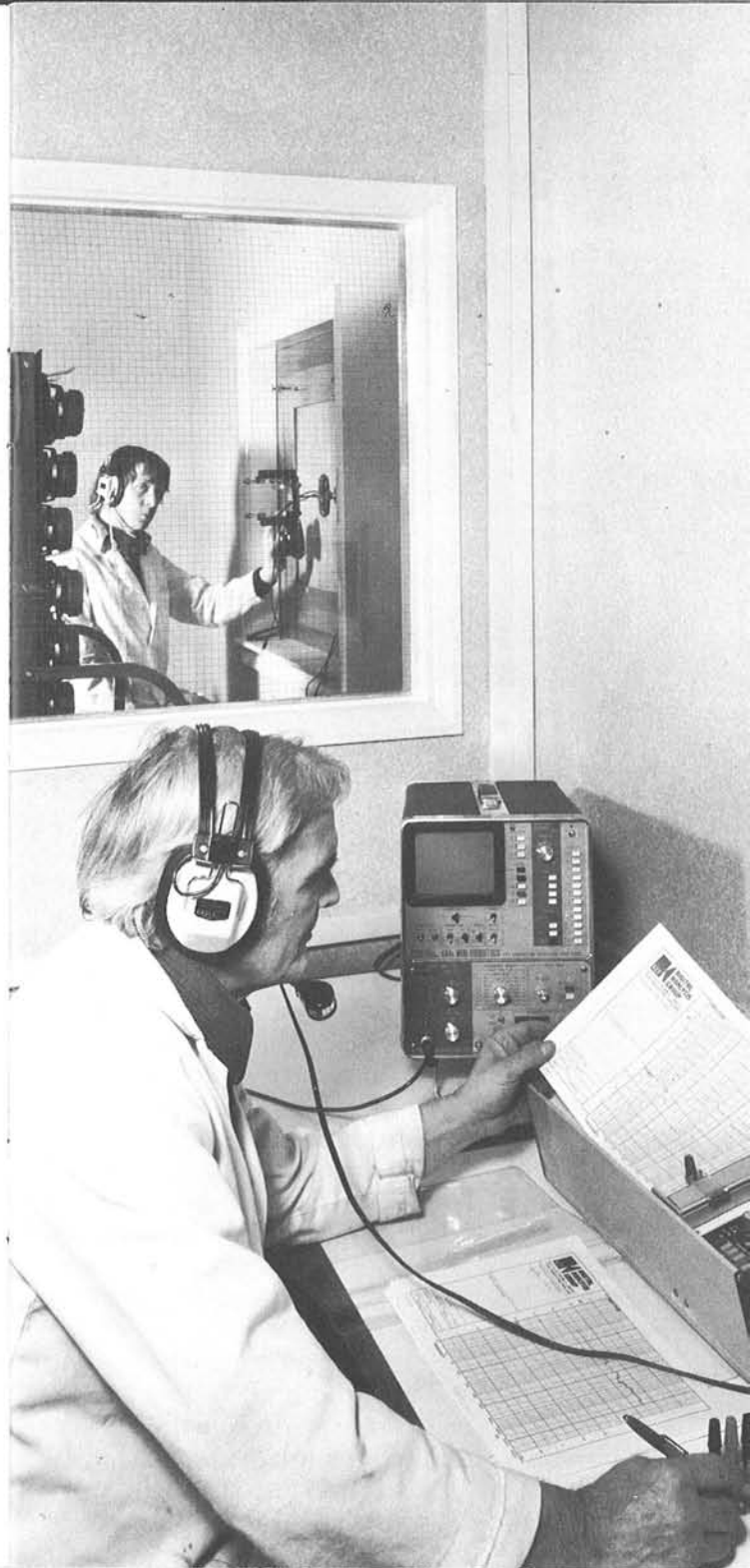
KEF manufacture nearly all the loudspeaker components themselves, and incoming raw materials are checked thoroughly to maintain the desired design standard. Not one drive unit or filter network goes into a loudspeaker assembly until it has passed meticulous assessment.

The same quality control applies to these two kits.

When you build a Model 104aB or Cantata kit, you know that the important components have been made by KEF, and that the assemblies have been wired up and tested against laboratory standards before leaving the factory.

All you have to do is build the enclosure, connect a few wires, fit the kit assemblies and switch on.

This leaflet gives details of what you get in each kit and also describes the drive units and filter networks that are available should you wish to attempt to design your own loudspeaker from first principles.



## KEF MODEL 104aB KIT



KEF kit Model 104aB contains all the components necessary to construct a loudspeaker system similar in performance to the KEF Model 104aB.

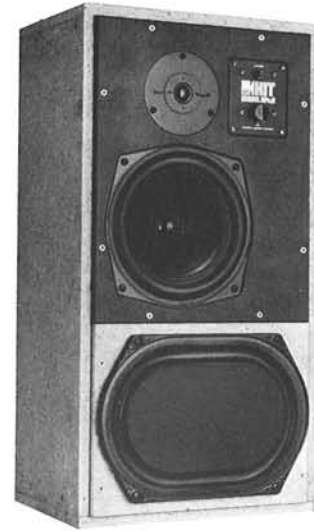
It is supplied in two main parts. One is a baffle assembly on which are mounted a B200 mid/bass drive unit and a T27 tweeter, which are combined through an Acoustic Butterworth filter.

The other part is an acoustic bass radiator, BD139, which increases the bass response from a modest sized enclosure, without any sacrifice of efficiency.

The tweeter is fuse-protected. A 500mA slow-burn fuse allows musical peaks to pass unattenuated, but protects the tweeter from sustained excessive loads.

There is also a three-position mid-frequency contour control by which the final system can be "fine tuned" for its acoustic environment.

The baffle assembly has a tough lacquer finish, and has been fully wired and tested. It is already drilled to fit the suggested enclosure.



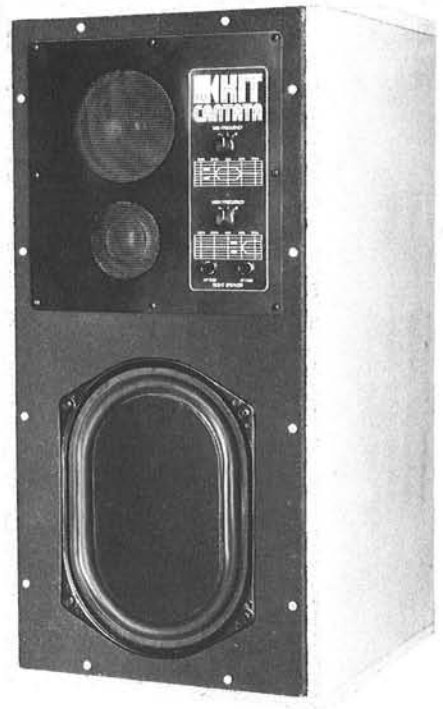
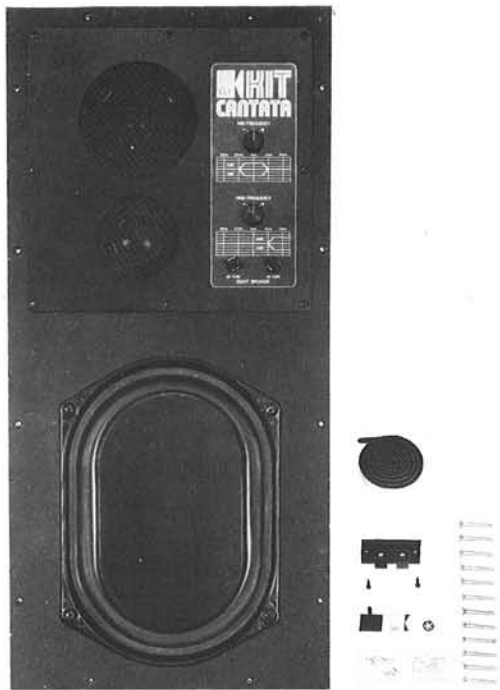
The detailed instruction leaflet describes how to construct the enclosure and illustrates each step with a photograph.

The 104aB kit makes up into a reflexed loudspeaker system of only 36 litres, and should be used on a stand, to raise the system 20cms from the floor.

### Specifications

Baffle dimensions	: 388 x 310 x 212mm
Weight	: 14 kg (per pair packed)
Nominal impedance	: 8 ohms
Rated max power	: 100 watts programme
Frequency response	: 50 to 20,000 Hz $\pm$ 2dB
System resonance	: 35 Hz mechanical reflex
Dividing frequencies	: 45 Hz and 3000 Hz
Sensitivity	: 12.5 watts for 96dB at 1 metre and 400 Hz in anechoic conditions.
Amplifier requirements	: 15 to 100 watts (into 8 ohms)

## KEF CANTATA KIT



KEF kit Cantata contains all the essential components required to construct a loudspeaker system similar in performance to the KEF Cantata.

There are three drive units in this system, ready-assembled on a baffle. The T52 tweeter and B110 mid-range units are wired through an Acoustic Butterworth network, and the famous B139 bass unit handles the frequency range below 250Hz.

Acoustic contour controls are fitted to join the MF and HF units so that they can be tailored to suit the acoustics of the actual listening room.

The baffle assembly has a tough, lacquer finish, and has been fully wired and tested. The baffles are supplied in matched pairs, clearly marked left and right, for the best stereo perspective.

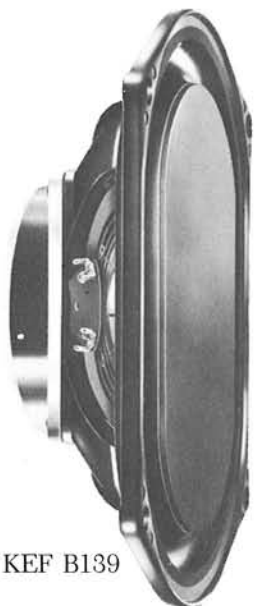
The instruction leaflet is very detailed and describes how to construct the recommended enclosure and illustrates each important step with a photograph.

The Cantata kit makes up into a closed box loudspeaker system of 60 litres and should be floor mounted.

### Specifications

Baffle dimensions	: 622 x 312 x 348mm
Weight	: 24 kg (per pair packed)
Nominal impedance	: 8 ohms
Rated max power	: 150 watts programme
Frequency response	: 35 to 20,000 Hz $\pm$ 3dB
System resonance	: 38 Hz
Dividing frequencies	: 250 Hz and 3000 Hz
Sensitivity	: 8 watts for 96dB 1 Metre and 400Hz in anechoic conditions.
Amplifier requirements	: 15 to 150 watts (into 8 ohms)

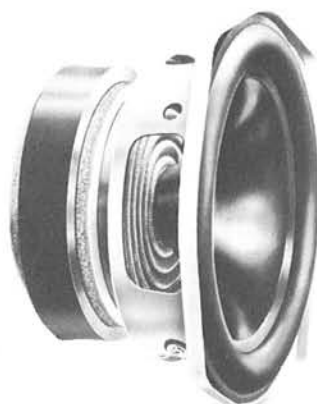
# KEF DRIVE UNITS



KEF B139



KEF B200



KEF B110



KEF T27

If you prefer to design your own enclosure from first principles, there are four KEF drive units available, all used in complete KEF systems.

Each of these KEF units has been designed and manufactured as a result of KEF's continuous research into materials and testing procedures.

Conventional diaphragm materials suffer from various defects associated with cone resonance, humidity and ageing. KEF's use of plastics, with laminated damping layers, overcomes these problems.

The end result is a unit of moderate efficiency, but capable of an extensive frequency response.

KEF B139 is a 330 x 229mm bass driver with a solid flat diaphragm made from expanded polystyrene covered with a layer of aluminium. The diaphragm behaves as a rigid piston throughout its working range to give a superb bass performance.

Frequency range is 20 to 1000Hz.

KEF B200 is a 200mm low frequency driver with a diaphragm in consistent rubber-modified polystyrene. It also features visco-elastic damping layers to ensure very low colouration.

Frequency range is 25 to 3,500Hz, making it ideal for 2-way systems.

KEF B110 is a 110mm mid-range or miniature bass unit. It features exactly the same construction as the B200, and with a frequency range of 55 to 3,500Hz it is also ideal for the smaller 2-way systems.

KEF T27 is an ultra-high-frequency tweeter with a 25mm Mylar dome, and a special, PVC, edge-damped suspension. Sound dispersion is very wide, within a frequency range of 3,500 to 40,000Hz.

## KEF FILTER NETWORKS

If you choose to buy KEF drive units on their own, you will need filter networks to combine them.

It is important to realise that in any multi-speaker system the network plays a vital role. However good the drive units are, if you wire them up with the wrong network the audio frequency spectrum will not be divided correctly, and the overall sound of the system will not be smooth.

KEF networks were originally designed to be used with KEF drive units and, in their construction, the same rigid testing and quality control has been applied. Every electrical component is checked against a reference standard before it is passed to the assembly line.

KEF DN12 (SP1004) has nine elements and will provide the two ideal crossover points between the B139 and B110 and T27.

KEF DN13 (SP1017) has six elements and is best used between the B110 and T27 in compact two way systems.

KEF DN13 (SP1106) has five elements and is designed for larger two way systems combining the B200 and T27.



KEF Electronics Ltd  
Tovil  
Maidstone  
Kent ME15 6QP  
England  
Telephone: 0622 672261  
Telex: 96140



THE QUEEN'S AWARD  
TO INDUSTRY

KEF reserve the right to incorporate developments  
and amend the specification without prior notice,  
in line with continuous research and development.