SYSTEM 3

Volume: 28 litres

Type: Reflex

Response: 45 – 20 kHz

Bass unit: Dalesford D70/200

Midrange unit: Dalesford D20/105

Treble unit: Isophon KK10/8

Crossover network: Dalesford DX3/4

Suitable for amplifier of 20 – 70 watts per channel.

Impedance: 8 ohms

Acoustic absorbent: 10 oz Acoustilux

Acoustic absorbent (midrange enclosure): Long fibre wool

Cabinet material: 18 mm chipboard

Grille frame material: 12 mm plywood.

Components list
(for pair of cabinets)

4 49 × 26 cms 18 mm chipboard

4 27.5 × 49 cms 18 mm chipboard

4 29.6 × 27.5 cms 18 mm chipboard

2 48.8 × 25.8 cms approx. 12 mm plywood (exact size dependent on thickness of fret cloth)

7.5 metres of 2 × 2 cms wood for battens

2 Dalesford D70/200

2 Dalesford D20/105

2 Isophon KK10/8

1 Dalesford crossover pack DX3/4

1.5 sq. metres 10 oz. Acoustilux Bonded Acetate Fibre

57 grams (2 ozs.) long fibre wool

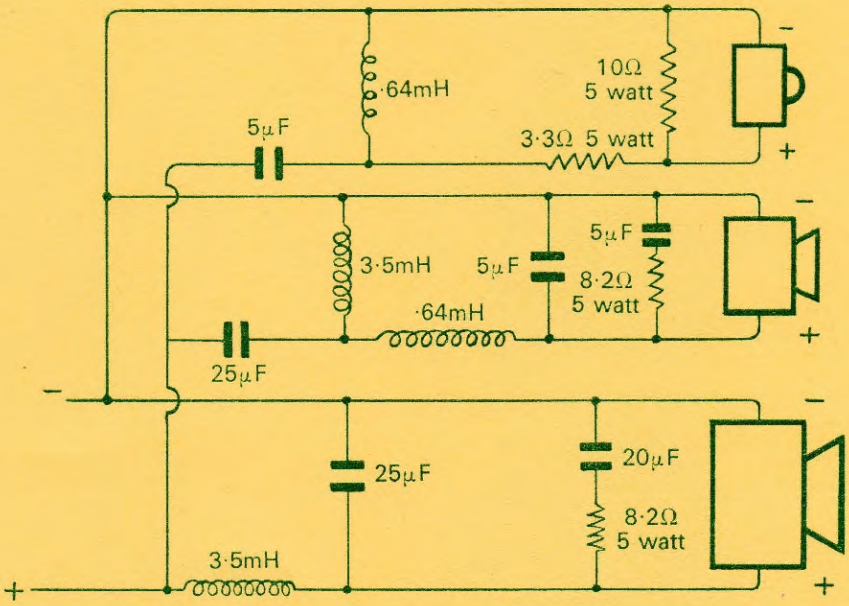
2 pieces fret cloth 60 × 37 cms

2 Loudspeaker connection panels, DIN 2 pin loudspeaker sockets or similar

50 cms Velcro

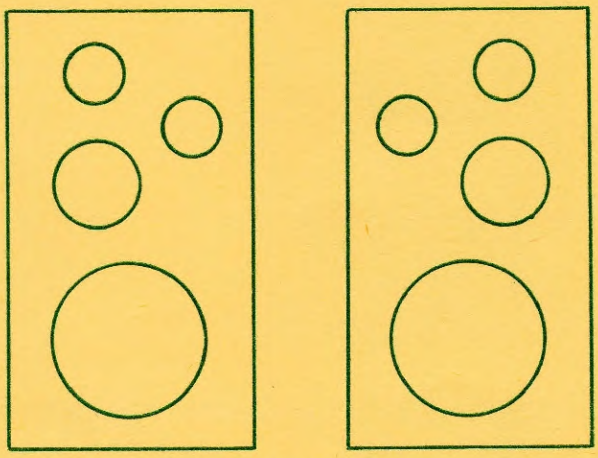
T nuts, screws, wood glue, Evostik etc.

SYSTEM 3
THE CROSSOVER NETWORK



Inductors	Capacitors ("Elcap" type)	Resistors
2 3.5 mH	2 25 mfd	2 8.2 ohm 5 watt
2 .64 mH	1 20 mfd	1 3.3 ohm 5 watt
	3 5 mfd	1 10 ohm 5 watt

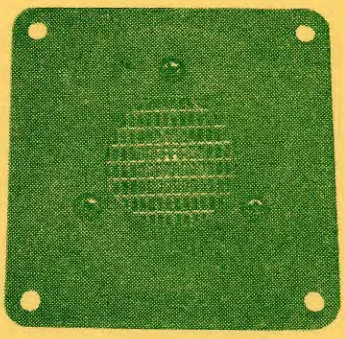
This crossover is available in assembled form as Dalesford Crossover pack DX3/4 (Pack contains pair of crossovers and reflex tubes used in this design).



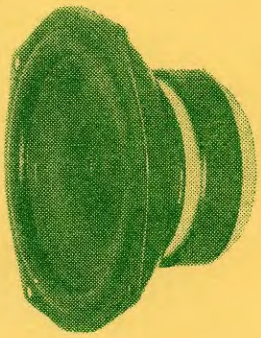
System 3 may be made as a "mirror image "pair.

SYSTEM 3

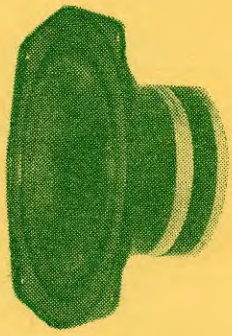
THE DRIVE UNITS
Midrange Enclosure – Reflex Port



Isophon KK10/8
Frequency range: 1 kHz – 20kHz
Magnet: 13 K Gauss
Weight: ·4kgs.
Manufacturer: Isophon Werke, Gmbh, Berlin.

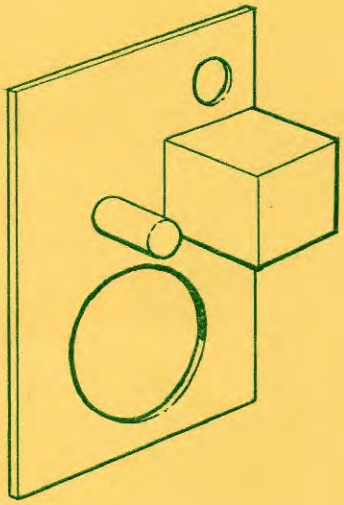


Dalesford D20/105. Midrange unit
Response 70 – 20 kHz
Resonance: 84 hz
Flux density: 10 K gauss
Weight: .75 kgs.



Dalesford D70/200. Bass unit.
Response: 30 – 3.5 kHz
Resonance: frequency: 33 hz
Flux density: 14 K gauss
Weight: 2.75 kgs.

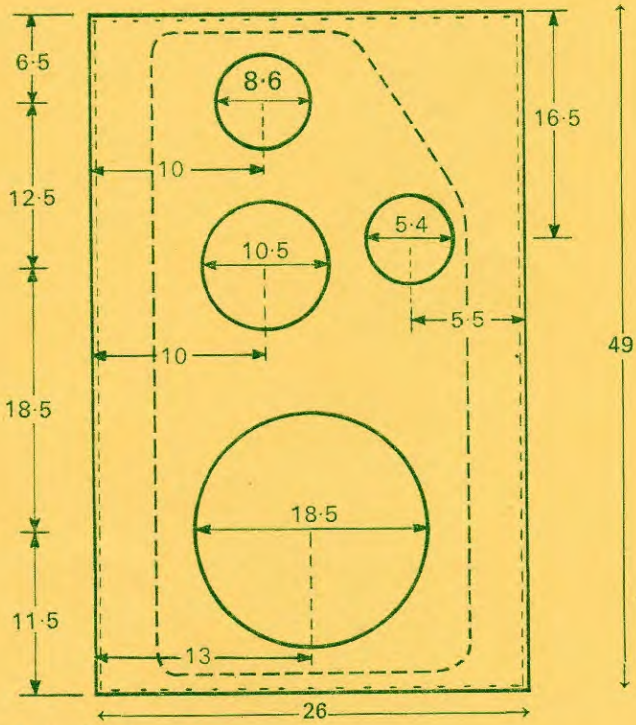
The midrange speaker is isolated from the main enclosure in a sealed compartment 13 × 13 × 13 cms internal. This is evenly filled with 28 grams (1 oz) of long fibre wool. The reflex port tube (5 cms internal diameter × 10 cms long) is fitted flush with the front face of the baffle. Suggested material for midrange enclosure 9mm plywood.



SYSTEM 3

THE BAFFLE AND GRILLE FRAME

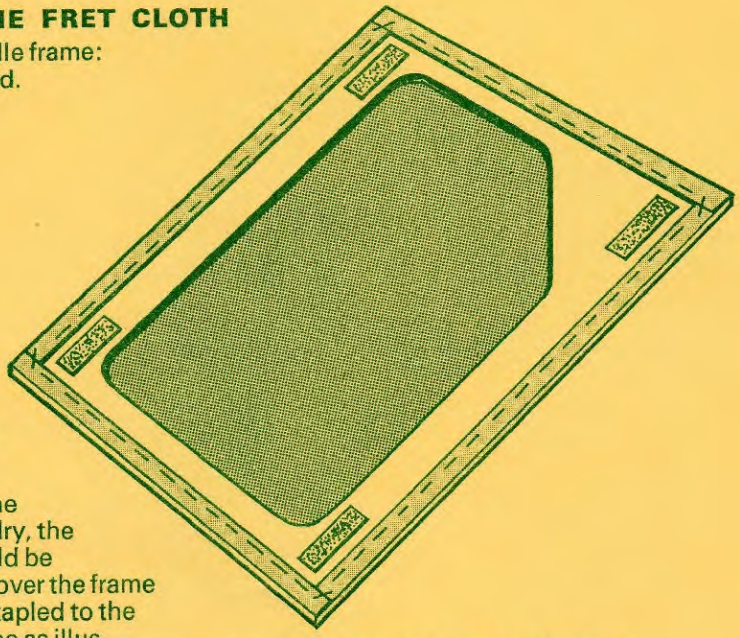
All dimensions in cms.



Grille frame as dotted line.
The outside dimension of the grille frame is smaller than the baffle to allow for the thickness of the speaker fret cloth.
Material for baffle: 18 mm chipboard

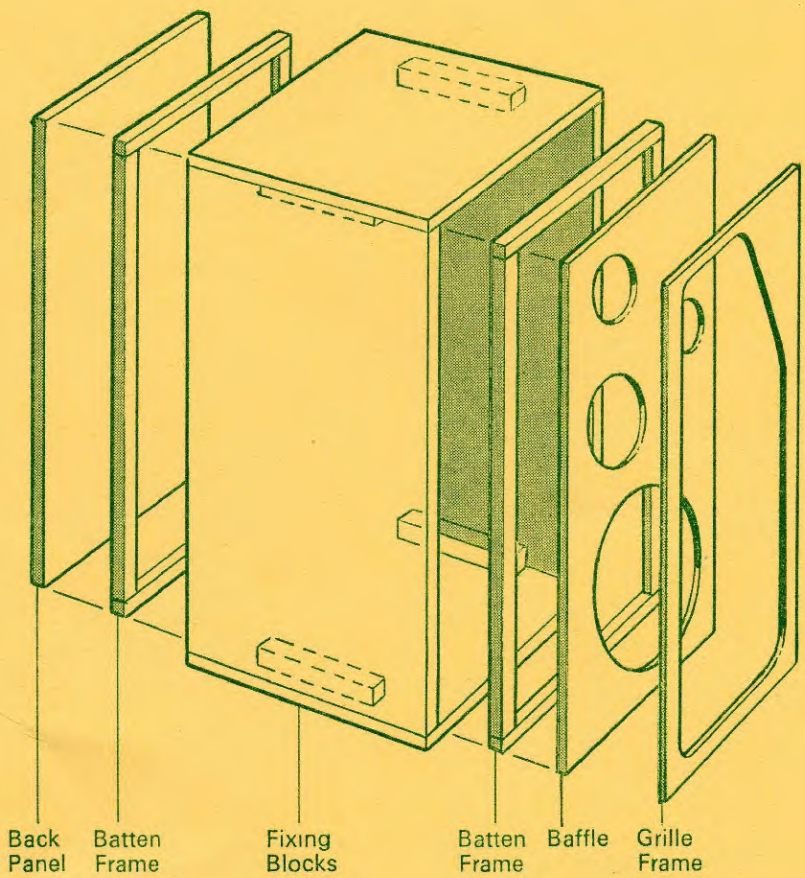
FITTING THE FRET CLOTH

Material for grille frame:
12 mm plywood.



The baffle and grille frame front surfaces should be painted matt black. When the grille frame is dry, the fret cloth should be stretched taut over the frame and glued or stapled to the rear of the frame as illustrated. Velcro "hook and loop" tape is a convenient method of holding the grille frame in the cabinet.

SYSTEM 3
GENERAL CONSTRUCTION



Internal dimensions:	Height: 49 cms Width: 26 cms Depth: 22 cms (between front surface of back panel and back of baffle)
External dimensions: (using 18 mm chipboard)	Height: 52.6 cms Width: 29.6 cms Depth: 27.5 cms

After lining the cabinet with 10 oz Acoustilux (except the back of the baffle) the baffle, with its midrange enclosure and reflex tube fitted, can be permanently glued and screwed into place. Before fitting the reflex tube to the baffle, it is advisable to roughen the surface with sandpaper to provide a "key" for the glue (Evostik).