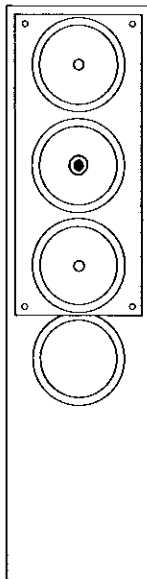
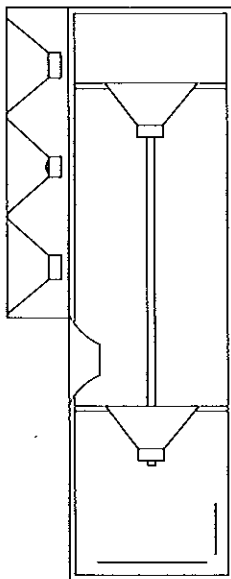


KEF REFERENCE SERIES			Sheet 1 of 2		R105/3
MODEL: R105/3 REF. NO. SP3111			Date of Issue: May 1990		
SPECIFICATION			ELEVATION		SECTION
Frequency Response		49Hz - 20kHz \pm 2.5dB			
Nominal Impedance		4 ohms resistive 20Hz - 20kHz			
Sensitivity		93dB spl at 1m for 2.83Vrms			
Maximum Output		115dB spl			
Amplifier Requirements		50 - 300W into 4 ohms			
Enclosure Volume		LMF: LF:			
Dimensions		mm in. 1104(h) \times 280(w) \times 405(d) 43.5''(h) \times 11''(w) \times 16''(d)			
Weight (each)		42kg 92.5lb			
A full size six drive unit 4-way domestic loudspeaker using twin coupled cavity bass loading with conjugate load matching Dividing Network and an optional KEF KUBE active equaliser.					
DESCRIPTION	PART TYPE	PART ORDER NO.	MAINTENANCE		SEE SECTION
HF Unit	NT25	R1240X	Replace with matched units		4
UMF Unit	MB160	R1258X	Replace with matched units		3
LMF Unit	B160	R1257X	Replace with matched units		2
LF Unit	B200	R1256X	Replace with matched units		5
Networks	HF/MF Network	R2155X	Replace with matched Networks		6
	LF Network	R2156X	Replace with matched Networks		6
KUBE equaliser	KUBE 200 (optional)	SP2147	Replace/Repair		7
KUBE AC adaptor	240v adaptor	SP2159	Replace		8
	220v adaptor	SP2162	Replace		8
	120v adaptor	SP2163	Replace		8
KEF AUDIO (UK) LIMITED Eccleston Road, Tovil, Maidstone, Kent ME15 6QP, UK Telephone: +44 (0)622 672261 Fax: +44 (0)622 750653					

SECTION	MAINTENANCE NOTES
1. HF/MF Assembly	<p>Before any drive unit can be replaced the HF/MF assembly must be removed.</p> <ul style="list-style-type: none">(a) Rest the speaker on its right side with the driver units facing forward.(b) Unscrew the four hex headed bolts using a 6mm allen wrench.(c) Unclip the cable from the edge connector, taking care to remove slowly.(d) Remove the HF/MF assembly.(e) Refit the HF/MF assembly by reversing 1 (a) - (d).
2. LMF Units	<p>LMF Units should be replaced with a factory matched pair (one drive unit to replace the faulty one and the second to replace the corresponding unit on the other loudspeaker).</p> <ul style="list-style-type: none">(a) Remove the HF/MF assembly as in Section 1 (a) - (d).(b) Place the HF/MF assembly on a working surface with the drive units face down.(c) Locate the faulty unit and start removing the three posidrive screws located at the middle rear of the aluminium casting. As the final screw is removed, lift up the HF/MF assembly to ensure that the drive unit is held as it comes free.(d) Remove the connections on the back of the unit taking note of their positions.(e) Replace with a new unit taking care to reconnect the cables for the correct polarity.(f) Reassemble the speaker by reversing 2 (a) - (d) making sure that all screws are tightened after checking that all gaskets are correctly positioned for an air tight fit.
3. UMF Units	<p>This is the Uni-Q upper mid-frequency driver. UMF Units should be replaced with a factory matched pair.</p> <ul style="list-style-type: none">(a) Remove the UMF Unit as in Section 2 (a) - (d).(b) Remove the HF Unit as in Section 4 (a) - (d).(c) Remount the HF Unit on the new UMF Unit taking care to connect the cables for the correct polarity.(d) Replace the UMF Unit on the HF/MF assembly and refit it as in 2 (e) - (f) making sure that all screws are tightened after checking that all gaskets are correctly positioned for an air tight fit.
4. HF Unit	<p>The HF Unit is located at the centre of the UMF (MB160) driver. Both HF Units should be replaced with a factory matched pair.</p> <ul style="list-style-type: none">(a) Remove the HF/MF assembly as in Section 1 (a) - (d) and the UMF driver as in Section 2 (b) - (d).(b) Unsolder the HF cables from the UMF driver taking note of their positions.(c) Unscrew the central posidrive nut on the rear of the UMF driver and then remove the plastic fixing ring.(d) Push the HF Unit out of the chassis and remove it from the front.(e) Replace with a new unit taking care to reconnect the cables for the correct polarity.(f) Reassemble the speaker by reversing 3 (a) - (d) making sure that all screws are tightened after checking that all gaskets are correctly positioned for an air tight fit.
5. LF Unit	<p>LF Units should be replaced with a factory matched pair (one drive unit to replace the faulty one and the second to replace the corresponding unit on the other loudspeaker).</p> <ul style="list-style-type: none">(a) Remove the HF/MF assembly as in section 1 (a) - (d).(b) Place the speaker face upwards taking care not to damage the rear terminals.(c) Remove the bottom panel of the cabinet by unscrewing the eight posidrive screws.(d) Remove the internal wadding from the top and bottom bass enclosures.(e) Remove the top and bottom bolts holding the force cancelling bar using a 10mm nut driver, and lay the rod to one side.(f) Remove the faulty LF Unit by undoing the three nuts and removing the washers.(g) Lift the LF Unit out of the front of the cabinet and remove the rear connections.(h) Replace with a LF Unit taking care to connect all the cables for the correct polarity.(i) Reassemble the speakers by reversing 5 (a) - (f) and tighten all screws after checking that all the gaskets are correctly positioned for an air tight fit. Do not overtighten the LF Unit fixing nuts. They should hold the unit firmly in position on the rubber decoupling grommets without direct contact between the LF Unit and the speaker cabinet.

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SECTION	MAINTENANCE NOTES
6. Networks	<p>Replace both Networks with a factory matched pair. The Networks are within the base of the enclosure.</p> <ul style="list-style-type: none">(a) Place the speaker face upwards taking care not to damage the rear terminals.(b) Remove the base panel of the cabinet by undoing the eight posidrive screws around the edge of the panel.(c) Pull the base forward. The two Networks are attached within the base enclosure.(d) Identify the Network by their part ref. no. printed on the pcb — LF Network is SP2156 - HF/MF is SP2155.(e) Remove the nuts holding the Network to the base.(f) Disconnect all cables attaching the Network to all other components taking note of their positions.(g) Install a new Network taking care to connect all cables for correct polarity.(h) Reassemble the speaker by reversing 6 (a) - (f) making sure that all screws are tightened and that all the gaskets are correctly positioned for an air tight fit.
7. KUBE 200	<ul style="list-style-type: none">(a) Repair the KUBE unit or return it to KEF for repair.(b) Replace.
8. AC Adaptor	<ul style="list-style-type: none">(a) Check that the AC Adaptor is the correct type for the voltage supply.(b) Replace the AC Adaptor with a new unit.
NOTE:-	<p>Ensure that gaskets which seal the drive units to the cabinet are seated correctly to give an air tight seal. If in doubt replace the gaskets with a new set.</p>

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No.	AMEND.	DATE
2	M255	13-10-97
3	M331	18-11-97

COMPONENT SELECTION
CAPACITORS & INDUCTOR SELECTED AS TABLES ON SHEET 2
AND MATCHED IN PAIR AS FOLLOWS:-
C11,C12,C13,C16,C20,C35,L11,L12,L14,&L35 FROM SAME 1% BAND
ALL OTHER CAPACITORS & INDUCTORS FROM SAME 5% BAND UNLESS
RESTRICTED BY TABLES

INDUCTOR L14-LC202-2.7mH
-1off-SEE TABLE 5

CAPACITOR C18-100uF50V-1off
-SEE TABLE 4

TYRAP-320003A-6off

INDUCTOR L15-LC244-4.1mH
-1off-SEE TABLE 4

SPEC/SERIAL LABEL-330486A-1off

CAPACITOR C19-50uF50V-1off
-SEE TABLE 5

RESISTOR R15-593R90J225-
3.9ohms±5%11W-1off

RESISTOR R16-593R90J224-
3.9ohms±5%5W-1off

CAPACITOR C17-100uF50V
-1off-SEE TABLE 4

CAPACITOR C16-80uF50V
-1off-SEE TABLE 5

TAB-230011A-6off

INDUCTOR L16-LC281-7.2mH
-1off-SEE TABLE 6

RESISTOR R12-592R20J224-
2.2ohms±5%5W-1off

INDUCTOR L13-LA284-1.6mH
-1off-SEE TABLE 3

RESISTOR R17-592R20J224-
2.2ohms±5%5W-1off

WIRE LINK-000108A-1off

CAPACITOR C14-7uF50VLL-
-1off-SEE TABLE 3

CAPACITOR C21-80uF50V
-1off-SEE TABLE 6

CAPACITOR C36-20uF50V-1off
-SEE TABLE 1

P.C.BOARD-110098A-1off

TYRAP-320002A-7off

CAPACITOR C20-100uF50V-1off-SEE TABLE 6

INDUCTOR L35-LA246-0.15mH-1off-SEE TABLE 1

INDUCTOR L11-LC228-0.5mH-1off
-SEE TABLE 3

CAPACITOR C15-100uF50V-1off
-SEE TABLE 2

RESISTOR R11-591R00J225-1.0ohm±5%
11W-1off

CAPACITOR C13-20uF50V-1off
-SEE TABLE 3

INDUCTOR L33-LC204-0.25mH
-1off-SEE TABLE 9

RESISTOR R33-5910R0J225-
10ohms±5%11W-1off

RESISTOR R13-595R00J225-
5ohms±5%11W-1off

CAPACITOR C33-16uF50V-1off
-SEE TABLE 9

RESISTOR R14-593R90J225-
3.9ohms±5%11W-1off

TAB-230011A-2off

INDUCTOR L12-LC189-7.8mH
-1off-SEE TABLE 2

RESISTOR R32-5915R0J225-
15ohms±5%11W-1off

CAPACITOR C32-100uF50V-1off
-SEE TABLE 8

CAPACITOR C11-100uF50V-1off
-SEE TABLE 2

INDUCTOR L32-LC217-1.5mH
-1off-SEE TABLE 8

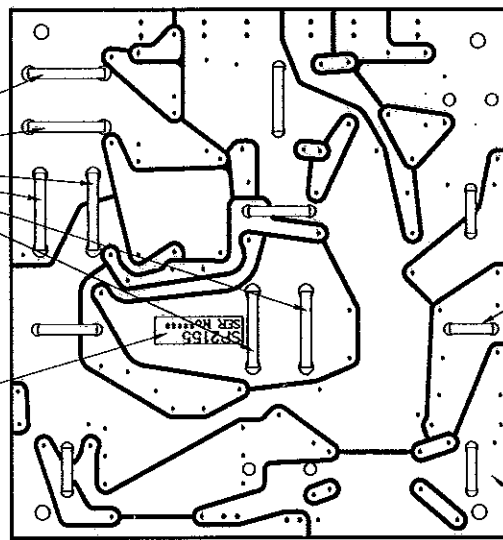
CAPACITOR C34-20uF50V-1off-
SEE TABLE 7

RESISTOR R36-592R20J224-22ohms±5%
5W-1off

CAPACITOR C12-50uF50V-1off-SEE TABLE 2

INDUCTOR L34-LA283-0.007mH-1off-SEE TABLE 7

CAPACITOR C35-7uF50VLL-1off-SEE TABLE 1



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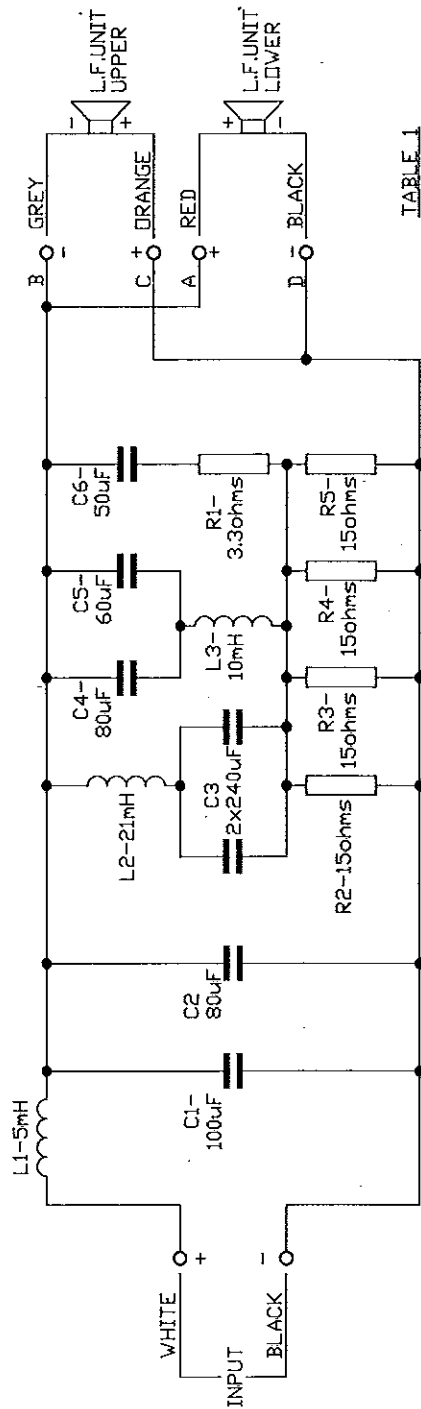
SHEET 1 OF 2 SHEETS

KEF	Electronics Limited		SCALE: 1/2 SIZE		WHERE USED MODEL 105/3 MF		MATERIAL		TITLE	
	TOVIL-MAIDSTONE-KENT		DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED. REMOVE BURRS.		DIMENSIONS TO BE WITHIN ±		FINISH		NETWORK ASSEMBLY	
			ALL DIMENSIONS TO BE WITHIN ±		mm. UNLESS OTHERWISE STATED.				DRG.No.	
			WORK TO DIMENSIONS. DO NOT SCALE DRAWING. 1st ANGLE PROJECTION.				DRAWN, J.R.W. 26-10-89		GA2155	
							APPRO.		1/2/3	

No.	AMEND.	DATE
2	F755	13-3-90
3	F823	7-11-90
4	M255	13-10-97

C3A&C3B-S8240UNAD*		L2		0 TO +5%
C3A LAST DIGIT ONLY	X	C3B LAST DIGIT ONLY	K	
	W		F TO J	
R TO V		A TO E		
M TO Q		M TO Q		-5% TO 0
A TO E		A TO E		
F TO J		M TO Q		
K		R TO V		
	L		W	

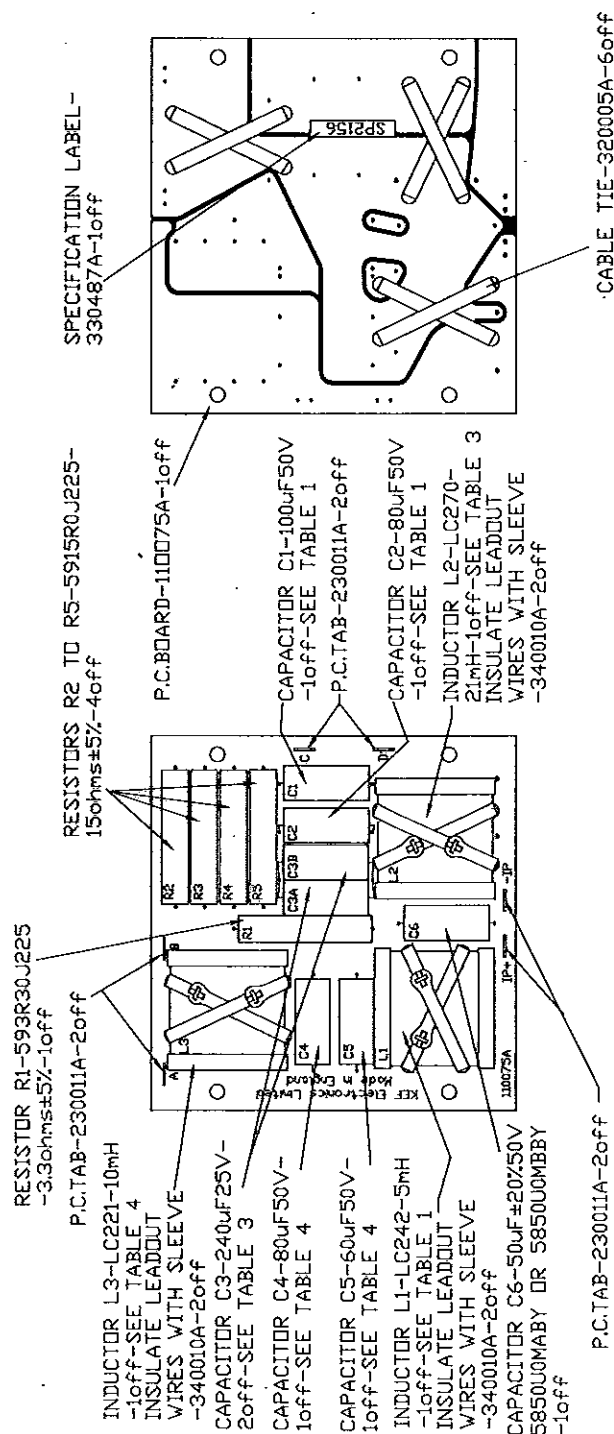
No.	AMEND.	DATE
2	F755	13-3-90
3	F823	7-11-90
4	M255	13-10-97



CIRCUIT DIAGRAM

TABLE 4

C1-58100UMAB*	C1C2 SEE TABLE 2	L1	0 TO +5%	3	1
C2-5880U0KAB*					
C4-5880U0KAB*	C4C5 SEE TABLE 2	L3	0 TO +5%	3	1
C5-5860U0MAB*					

TABLE 2[illegible]

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KEF
Electronics Limited
TOMI - MAIDSTONE - KENT

SCALE. 1/2 SIZE	WHERE USED	MODEL 105/3 LF	MATERIAL
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DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED. REMOVE BURRS.

ALL DIMENSIONS TO BE WITHIN \pm mm, UNLESS OTHERWISE STATED.

WORK TO DIMENSIONS. DO NOT SCALE DRAWING. 1st ANGLE PROJECTION.

MATERIAL.

FINISH.

DRAWN. J.

374

NETWORK ASSY

ORG. No.

GA2156

1	2	3	4
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