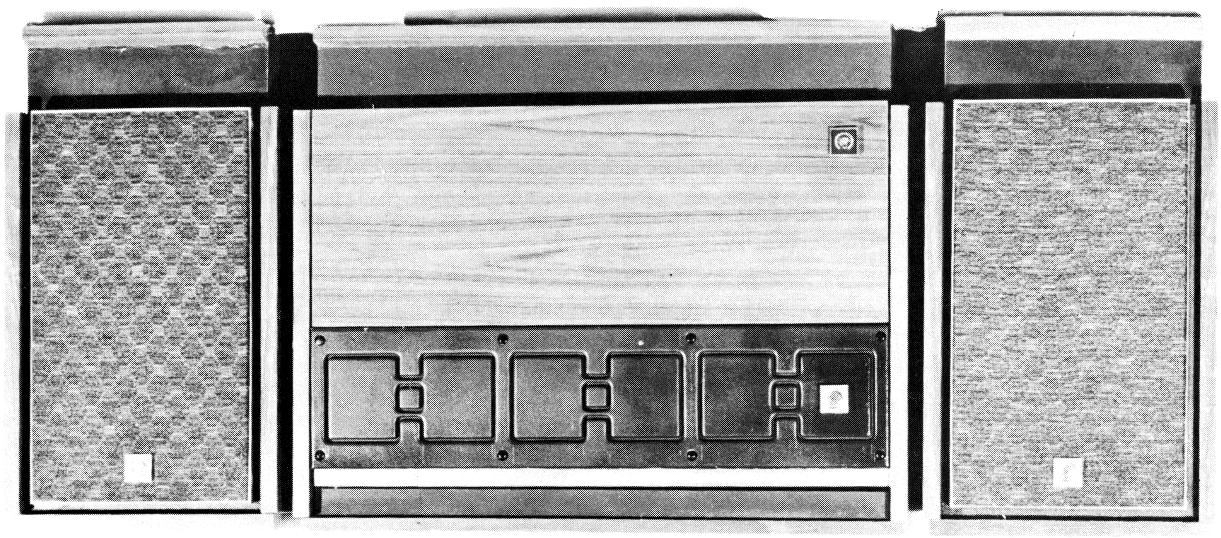
SERVICE MANUAL-
AWA MODEL B408

Model B408 is a mains operated stereogram of 8 watts output per channel.



SPECIFICATIONS:

Tuning Range	520-1630KHz
I.F.	455KHz
Power Supply	240v 50Hz AC only
Power Consumption	Radio25W Gram 40W
Power Output	8 watts per channel
Voice Coil Impedance	8 ohms
Pick-up Cartridge	BSR SC5M ceramic
Replacement Stylus	BSR ST14 D/S

CHASSIS REMOVAL

Remove the three screws holding the escutcheon from inside the record changer compartment. Slide the escutcheon forward, out of its locating groove, and the chassis clear of the cabinet.

TURNTABLE REMOVAL

To gain access to underside of turntable, remove the three bottom panel securing screws from inside the record storage compartment, and pull the panel forward out of the rear groove. Looking into the record storage compartment, disconnect the motor A.C. power leads from mains terminal block. Lift off quick connect clips from pick-up tagstrip. Turn transit screws fully clockwise then prise up locking tongue of clip on end of each transit screw. Lift turntable clear of cabinet by guiding clips carefully through holes in motorboard.

ACCESS TO SPEAKERS

Remove the front baffle by gently pulling on the side trims until the baffle lifts free of its Velcro adhesion pads.

PHASING:

Before disconnecting the leads from the loudspeaker tags note the connections to ensure correct phasing is maintained.

QUIESCENT CURRENT ADJUSTMENT

Short input side of C301 and C302 to earth. Connect a 20mA meter between metering points on printed board (emitters of T312 and T314 to earth). Iq range 2-15mA. To increase current link pins A and C. To decrease current link pins A and B. All linkages should be made on component side of board with tinned copper wire.

SENSITIVITY

Main Amplifier:

With a generator output of 45mv RMS at 1KHz fed to input of main amplifier (via C301 and C302) a power meter connected to the amplifier output should register 4 watts ± 2db on each channel.

Pre-Amplifier:

With a generator output of 55mv RMS at 1KHz fed to input of pre-amp (via C203 and C204) a power meter connected to the amplifier output should register 4 watts ± 2db on each channel. Both tone controls should be in the flat position and balance control rotated to check each channel alternately.

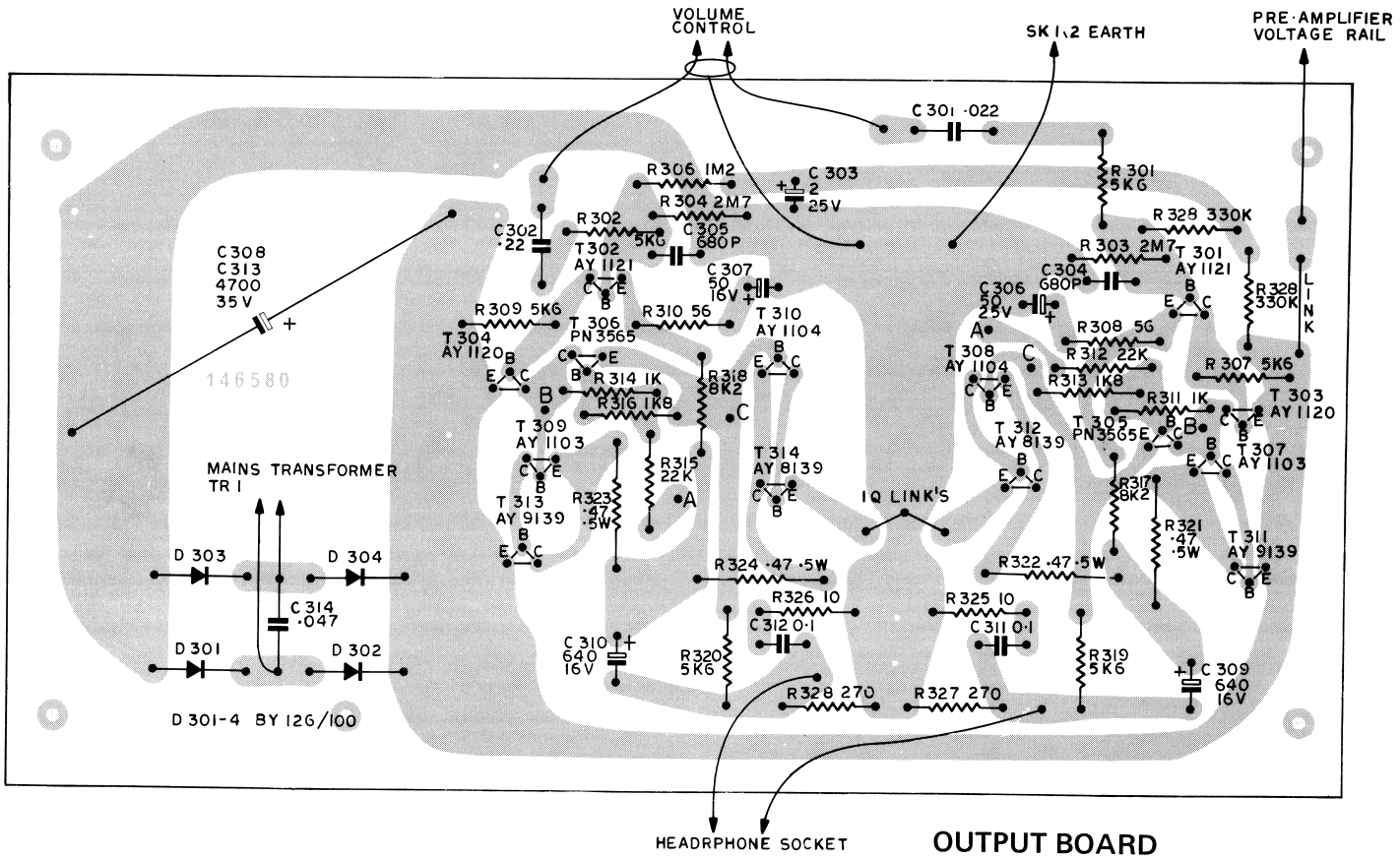
ALIGNMENT:

I.F.

The ceramic filter FL101 is pre set and should not be adjusted.

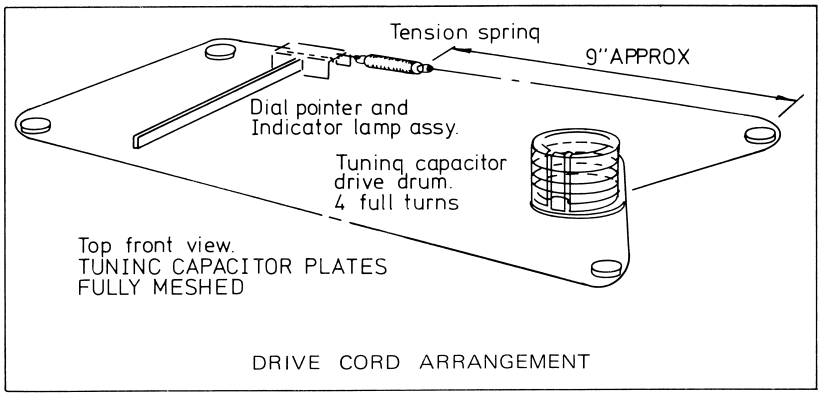
R.F.

Fully close tuning gang and align pointer to calibration mark on dial. With gang fully closed adjust oscillator coil at 520KHz, with gang fully open adjust oscillator trimmer at 1630KHz, repeat the above adjustments until tracking is correct. Adjust the serial coil (by sliding along rod) for maximum output at 600KHz, and aerial trimmer for maximum output at 1470KHz.



OUTPUT BOARD

KRALCO PRINT — SYDNEY



DRIVE CORD ARRANGEMENT

B408 PARTS LIST

MECHANICAL

		Part No.
Cabinet Centre Module	–	160314
Cabinet Speaker Box	–	160315
Escutcheon Assembly	–	420122
Background Dial	–	375025
Control Knob	–	510168
Knob Insert (Silver)	–	477034
Tuning Knob	–	510229
Aerial Mounting Bracket	–	135320
Aerial Mounting Bracket	–	135334
Nylon Bush Bearing	–	152011
Chassis	–	220068
Aerial Panel	–	658073
Speaker Socket Panel	–	658198
Dial Pointer	–	683004
Large Pulley	–	686403
Gang Mounting Screw	–	820020
Hum Shield	–	835021
Hum Shield	–	835022
2 Pin Socket	–	845017
5 pin DIN socket	–	845096
Switch Spacer	–	851037
Pulley Spindle	–	852037
Ferrite Rod Aerial 12mm x 150 mm	–	770012

GENERAL ELECTRICAL

Loudspeaker, tweeter (4" MSP 56254-004/4MBC/8/15HF)	–	560101
Loudspeaker (8" MSP 56407/6/ 8WAC/8)	–	560305
Record Changer BSR C.141 C/W SC5M	–	720065
Tuning Capacitor	–	274009
Lampholder LES	–	535026
Lamp 28v LES	–	535028
Rocker Switch DPDT	–	880816
Rocker Switch 3PDT	–	880817
Mains Transformer	–	917552
Aerial Coil Assembly	–	10603
Coupling Coil Assembly	–	10604
C2/C3	–	2.2mF 25v N/P Electro.
C1/C4	–	.01mF 350v AC 2.5KV DC cer.
R1/R2	–	330 ohm ½w

TUNER BOARD ASSEMBLY

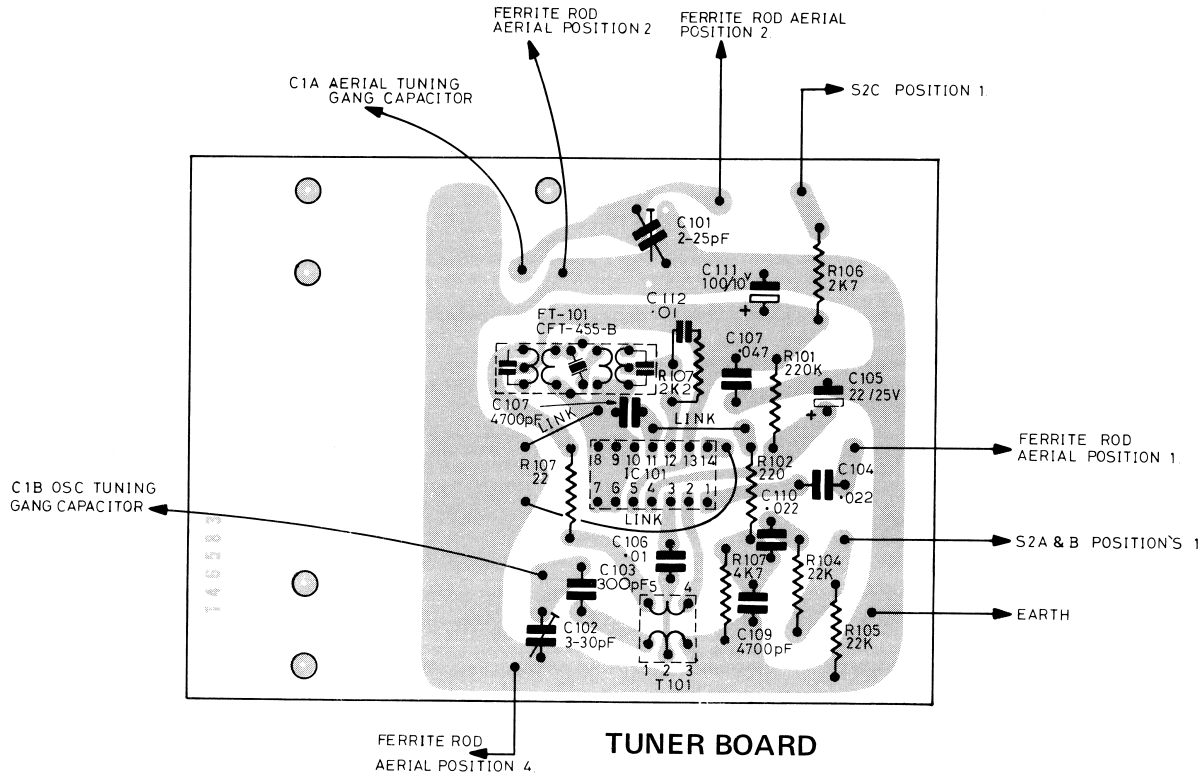
Printed Circuit Board		–	146583
C101	–	Trimmer 2.25pF	274010
C102	–	Trimmer 3.30pF	274016
C103	–	270pF 5% 300v mica	
C104/C107	–	.047mF 50v ceramic	
C105	–	22mF 25v Electro.	
C106	–	.01mF 10% 50v poly.	
C108/C109	–	4700pF 10% 50v poly.	
C110	–	.047mF 10% 50v poly.	
C111	–	100mF 10v electro.	
C112	–	.01mF 50v ceramic	
R101	–	220K ¼w 5% H.S.	
E102	–	220 ohm ¼w 5% H.S.	
R103	–	4.7K ¼w 5% H.S.	
R104/R105	–	22K ¼w 5% H.S.	
R106	–	2700 ohm ¼w 5% H.S.	
R107	–	22 ohm ¼w 5% H.S.	
FL.101	–	Ceramic Filter	436032
IC.101	–	I.C. TAA.840	471000
T.101	–	Osc. B/C Transformer	917617

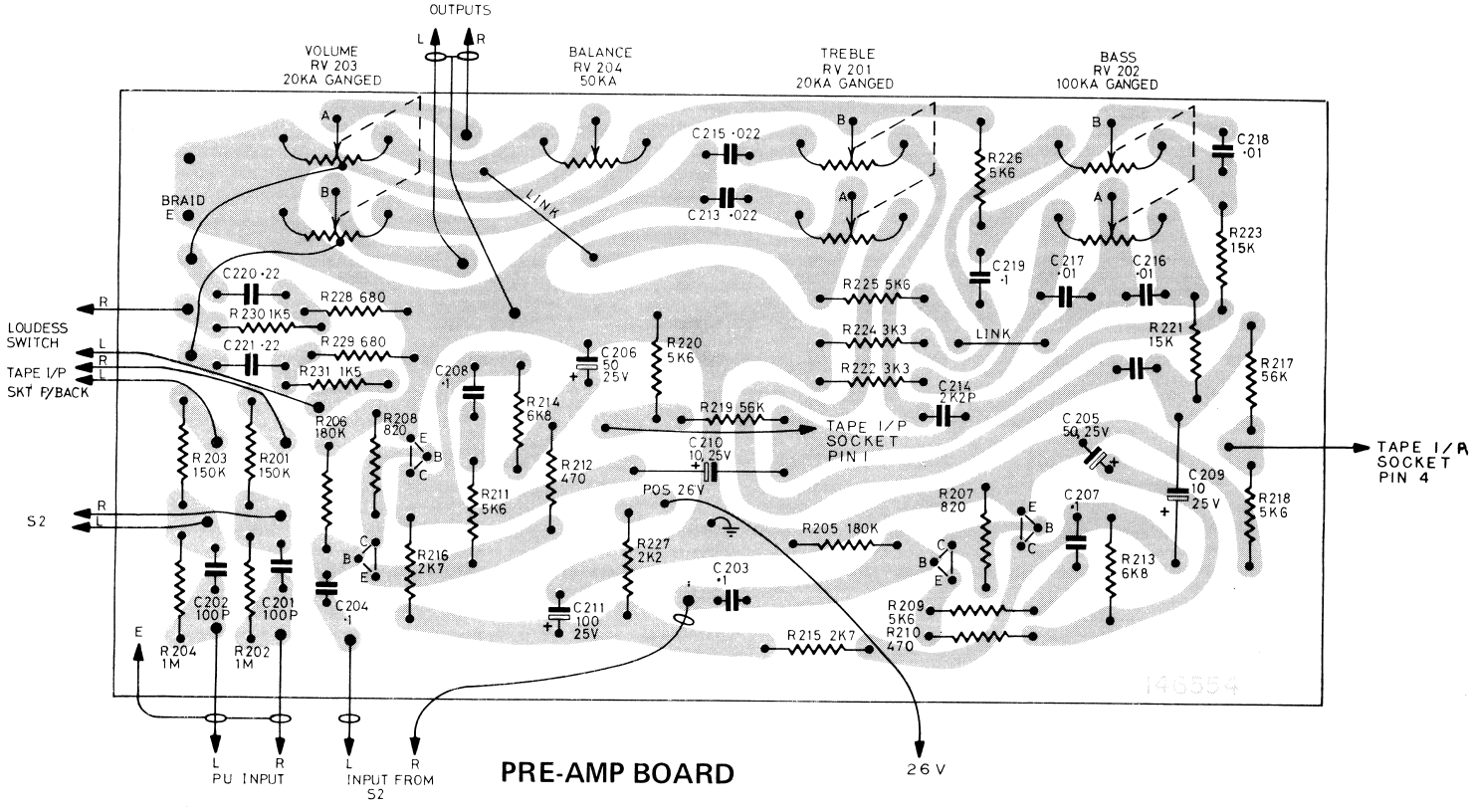
PRE–AMP BOARD ASSEMBLY

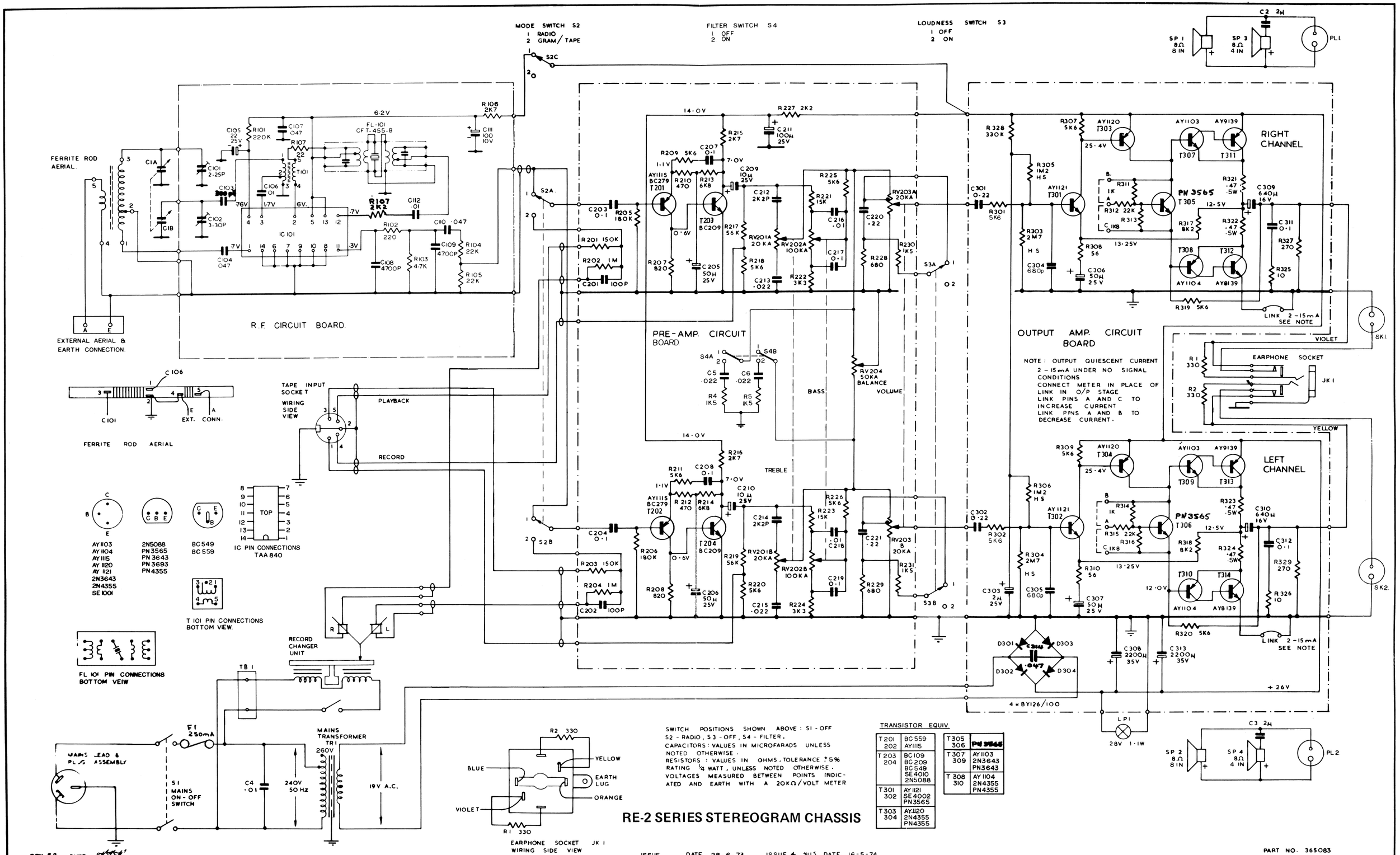
Printed Circuit Board	–	146554	
C5/C6/C213/C215	–	.022mF 50v poly.	
C201/C202	–	100pF 50v Ceramic	
C203/C204/C207/C208/ C217/C219	–	.1mF 50v poly.	
C205/C206	–	47mF 25v Electro.	
C209/C210	–	10mF 25v electro.	
C211	–	100mF 25v electro.	
C212/C214	–	2200pF 100v poly.	
C216/C218	–	.01mF 50v poly.	
C220/C221	–	.22mF 50v poly.	
RV201A/RV201B	–	Treble Pot. 20K lin + 20K lin.	686527
RV202A/RV202B	–	Bass Pot. 100K lin + 100K lin.	686700
RV203A/RV203B	–	Vol. Pot. 20K lin (tap 12K) 20K lin (tap 12K)	686528
RV204	–	Balance Pot. 50K lin PCB tags	686050
R4/R5/R230/R231	–	1500 ohm ¼w 5% H.S.	
R201/R203	–	150K ¼w 5% H.S.	
R202/R204	–	1M ¼w 5% H.S.	
R205/R206	–	180K ¼w 5% H.S.	
R207/R208	–	820 ohm ¼w 5% H.S.	
R209/R211/R218/R220/ R225/R226	–	5600 ohm ¼w 5% H.S.	
R210/R212	–	470 ohm ¼w 5% H.S.	
R213/R214	–	6800 ohm ¼w 5% H.S.	
R215/R216	–	2700 ohm ¼w 5%	
R217/R219	–	56K ¼w 5% H.S.	
R221/R223	–	15K ¼w 5% H.S.	
R222/R224	–	3300 ohm ¼w 5% H.S.	
R227	–	2200 ohm ¼w 5% H.S.	
R228/R229	–	680 ohm ¼w 5% H.S.	
T201/T202	–	Transistor BC279	918115
T203/T204	–	Transistor BC209	918114

AMPLIFIER BOARD ASSEMBLY

Printed Circuit Board	–	146579	
C301/C302	–	.22mF 50v poly.	
C303	–	2.2mF 25v electro.	
C304/C305	–	47pF 500v ceramic	
C306/C307	–	47mF 25v electro.	
C308/C313	–	2200mF 35v electro.	
C309/C310	–	640mF 16v electro.	
C311/C312	–	.1mF 50v poly.	
D301/D302/D303/D304	–	Diode OA626-100	378082
R301/R302	–	47K ¼w 5% H.S.	
R303/R304	–	2.7m ½w 5% H.S.	
R305/R306	–	1.2m ½w 5% H.S.	
R307/R309/R319/R320	–	5600 ohm ¼w 5% H.S.	
R308/R310	–	56 ohm ¼w 5% H.S.	
R311/R314	–	1000 ohm ¼w 5% H.S.	
R312/R315	–	22K ¼w 5% H.S.	
R313/R316	–	1800 ohm ¼w 5% H.S.	
R317/R318	–	8200 ohm ¼w 5% H.S.	
R321/R322/R323/R324	–	.47 ohm 1w 5% met.	
R325/R326	–	10 ohm ¼w 5% H.S.	
R327/R329	–	270 ohm ¼w 5% H.S.	
R328	–	330K ¼w 5% H.S.	
T301/T302	–	Transistor AY1121	918086
T303/T304	–	Transistor AY1120	918097
T305/T306	–	Transistor SE1001	918004
T307/T309	–	Transistor AY1103	918095
T308/T310	–	Transistor AY1104	918096
T311/T313	–	Transistor AY9139	918113
T312/T314	–	Transistor AY8139	918101


FERRITE ROD AERIAL POSITION 2
FERRITE ROD AERIAL POSITION 2
C1A AERIAL TUNING GANG CAPACITOR
S2C POSITION 1
C101 2-25pF
C111 10/10V
R106 2K7
C112 ·01
FT-101 CFT-455-B
C107 ·047
R101 220K
C105 22/25V
R107 2K2
C107 4700pF
LINK
LINK
LINK
FERRITE ROD AERIAL POSITION 1
R107 22
IC 101
R102 220
C104 ·022
C1B OSC TUNING GANG CAPACITOR
C110 ·022
S2A & B POSITION'S 1
C106 ·01
C103 300pF
R107 4K7
R104 22K
EARTH
C102 3-30pF
T101
C109 4700pF
R105 22K
FERRITE ROD AERIAL POSITION 4
TUNER BOARD


OUTPUTS
L R
VOLUME RV 203 20KA GANGED
BALANCE RV 204 50KA
TREBLE RV 201 20KA GANGED
BASS RV 202 100KA GANGED
BRAID E
LINK
C215 ·022
C213 ·022
R226 5K6
C218 ·01
R223 15K
C219 ·1
C217 ·01
C216 ·01
R225 5K6
LOUDESS SWITCH
TAPE I/P SKT F/BACK
C220 ·22
R228 680
R230 1K5
C221 ·22
R229 680
R231 1K5
R224 3K3
LINK
R221 15K
R222 3K3
C214 2K2P
R217 56K
C208 ·1
C206 50 25V
R220 5K6
R214 6K8
R219 56K
TAPE I/P SOCKET PIN 1
C205 50 25V
TAPE I/P SOCKET PIN 4
R206 180K
R208 820
R203 150K
R201 150K
C210 10 25V
R212 470
C209 10 25V
R218 5K6
S2
POS 26V
R207 820
C207 ·1
R211 5K6
R216 2K7
R227 2K2
R205 180K
R213 6K8
C203 ·1
C204 ·1
C211 100 25V
R209 5K6
R210 470
R215 2K7
C202 100P
C201 100P
R204 1M
R202 1M
L PU INPUT
R
L INPUT FROM S2
R
26 V
PRE-AMP BOARD


MODE SWITCH S2
1 RADIO
2 GRAM/TAPE
FILTER SWITCH S4
1 OFF
2 ON
LOUDNESS SWITCH S3
1 OFF
2 ON
FERRITE ROD AERIAL
EXTERNAL AERIAL & EARTH CONNECTION
R.F. CIRCUIT BOARD
PRE-AMP. CIRCUIT BOARD
OUTPUT AMP. CIRCUIT BOARD
RIGHT CHANNEL
LEFT CHANNEL
NOTE: OUTPUT QUIESCENT CURRENT 2-15mA UNDER NO SIGNAL CONDITIONS
CONNECT METER IN PLACE OF LINK IN O/P STAGE
LINK PINS A AND C TO INCREASE CURRENT
LINK PINS A AND B TO DECREASE CURRENT.
LINK 2-15mA SEE NOTE
EARPHONE SOCKET
TAPE INPUT SOCKET
WIRING SIDE VIEW
PLAYBACK
RECORD
BASS
VOLUME
TREBLE
RV204 50KA BALANCE
IC PIN CONNECTIONS TAA840
T101 PIN CONNECTIONS BOTTOM VIEW.
FL101 PIN CONNECTIONS BOTTOM VEIW
RECORD CHANGER UNIT
MAINS LEAD & PLUG ASSEMBLY
S1 MAINS ON-OFF SWITCH
MAINS TRANSFORMER TR1
240V 50 Hz
19V A.C.
4 × BY126/100
+26V
EARPHONE SOCKET JK1 WIRING SIDE VIEW
SWITCH POSITIONS SHOWN ABOVE: S1 - OFF S2 - RADIO, S3 - OFF, S4 - FILTER.
CAPACITORS: VALUES IN MICROFARADS UNLESS NOTED OTHERWISE.
RESISTORS: VALUES IN OHMS, TOLERANCE ±5% RATING ¼ WATT, UNLESS NOTED OTHERWISE.
VOLTAGES MEASURED BETWEEN POINTS INDICATED AND EARTH WITH A 20KΩ/VOLT METER
TRANSISTOR EQUIV.
T201 202 BC559 AY1115
T203 204 BC109 BC209 BC549 SE4010 2N5088
T301 302 AY1121 SE4002 PN3565
T303 304 AY1120 2N4355 PN4355
T305 306 PN3565
T307 309 AY1103 2N3643 PN3643
T308 310 AY1104 2N4355 PN4355
RE-2 SERIES STEREOGRAM CHASSIS
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