KRIESLER
AUSTRALASIA PTY. LIMITED

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TECHNICAL ADVISORY SERVICE
SERVICE SHEET NO. 119

PLEASE CIRCULATE TO YOUR SERVICE DEPARTMENT

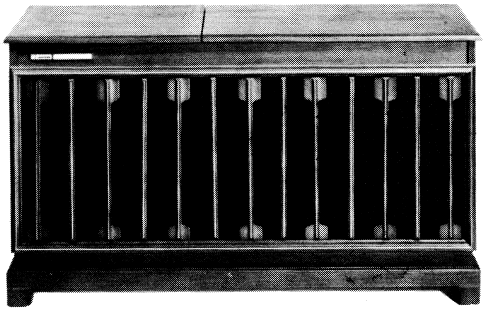
RADIO DATA SHEET, MODELS 11-115, 11-116

DESCRIPTION: These two models introduce the Kriesler Multisonic Multimix series of stereograms. The two models are fully solid state, operated from 240-260 V.A.C. mains (with tapped transformer) and are identical except for record playing equipment and loud-speaker complement.

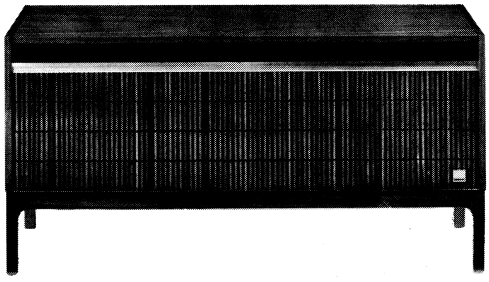
In the "Multimix" context, the output from the lefthand and righthand channels contains mainly the middle and high frequencies; and the output from the third, or bass channel contains mainly the low frequencies.

The stereo signal path is conventional in the left and right channels up to the output of the Tone Control Circuit (collector of TR10a and TR10b). Here, by the selection and use of suitable coupling capacitor values, the signals divide. The middle - and high-frequency signal voltages are amplified in the following stages of the lefthand and righthand channel amplifiers. In the output of the Tone Control Circuit, the low frequency content of the two channels is paralleled (via C40 and R47) and fed to the bass channel amplifier. In this amplifier, the middle- and high-frequency voltages are attenuated by the use of suitable value by-pass capacitors.

In addition to the normal Treble and Bass Tone Controls, further flexibility of operation is provided for by Treble Cut and Bass Boost Switches in their respective amplifiers.



MODEL 11-115



MODEL 11-116

RANGE OF TONE CONTROLS:
Treble, +10 to −10dB at 10KHz.
Bass, +10 to −10dB at 100Hz.

BOOST AND CUT CONTROLS:
At 10KHz, Treble Cut in left and right channels is 11dB.
At 100Hz, Bass Boost in third channel is 8dB.

SETTING OF CONTROLS: The system may be considered "Flat" if the Treble and Bass Controls are set to their mid positions, the Treble Switch to Boost and the Bass Switch to Cut. The user may vary the control settings from this "Normal" response to suit his taste for his particular recordings. When evaluating the performance after service work has been executed, the technciian should be mindful that some recordings have very heavy bass passages and these may not be suitable for playing with the Bass Controls in their extreme settings.

TAPE RECORDER OUTPUT: This is a low impedance output of approximately 22Ω. The output level, when unterminated by a tape recorder, is approximately one-seventh of the level fed to the speakers.

TAPE RECORDER INPUT: Insert a 1000 pF capacitor in series with the tape recorder output and adjust the level to be NOT GREATER THAN 100mV on the tape recorder side of the capacitor.

TUNING AND BALANCE INDICATOR: This is prevented from 'Goal-posting' by a suitable network of diodes and series resistors.

AUDIO POWER: 16 watts Music Power. 13 watts R.M.S. at 10% Distortion at 1KHz.

SPEAKERS: Model 11-115. Magnavox C15W, 8Ω. 2 x Magnavox 6 P1X, 15Ω. 2 x HF5S1C, 15Ω
Model 11-116. Magnavox 12PI, 8Ω; 2 x Magnavox 6 P1X, 15Ω.

RECORD PLAYING EQUIPMENT:

MODEL 11-115 Dual Changer, Type 1010F. Sonotone 25T Cartridge. N25TSD stylus. Pressure, 3Gm.
MODEL 11-116 Garrard Changer Type AT60 Mk II " " " " " " 4Gm.

IMPORTANT NOTE: Switch "Off" before connecting or disconnecting speakers because, if an accidental short on speaker wiring occurs and the amplifier is operated at high volume, damage to the output transistors is likely to result.

EXTENSION SPEAKERS: The use of extension speakers is not recommended because the speaker complement has been designed as an integral whole, and an extension speaker would carry only part of the range of reproduction.

DIMENSIONS:

11-115	HEIGHT 29½"	WIDTH 52"	DEPTH 17½"	WEIGHT 114lb.
11-116	17.3/8+legs	54"	17½"	WEIGHT 110lb.

STEREOPHONIC HEADPHONES: These, of the appropriate impedance, may be used by plugging them into the Output Sockets. Note that the speakers still will be operating. It is not desirable to change this situation unless adequate precautions are taken to prevent the open-circuiting or short-circuiting of the audio output circuits during speaker/ headphone switching operations.

CHASSIS REMOVAL: Remove two screws from cabinet back at approximately the same height as the dial scale. This frees the horizontal panel at rear of chassis. It is spring-loaded to enable a finger-grip to be obtained for removal. Remove one screw at each end of rear flange of chassis (note earth lead under right-hand screwhead). Draw chassis towards rear of cabinet to free front chassis-flange from capturing slot. Lift and invert chassis to the extent of the lead lengths and lay it across cabinet, suitably protecting the latter from damage.

CHANGER REMOVAL: 11-115 Disconnect appropriate leads, loosen both transit screws a few turns until they are free to be lifted. Lift and tilt them towards the edge of the base-plate. The changer may then be lifted clear of its housing.

CHANGER REMOVAL: 11-116 Remove perforated cabinet back section. After disconnecting appropriate leads, reach in through aperture and turn transit screw clips so that they lie vertically (Pressing down on changer-plate assists in this operation). Lift changer off motor-board.

AERIAL: Inbuilt ferrite rod with provision for connecting an external aerial.

EARTH: If the mains earth is not a satisfactory radio earth, a separate earth may be connected to the metal chassis-work (not the printed board earth).

TUNING RANGE: 525 to 1635 KHz I.F. 455KHz. **ALIGNMENT:** Conventional.

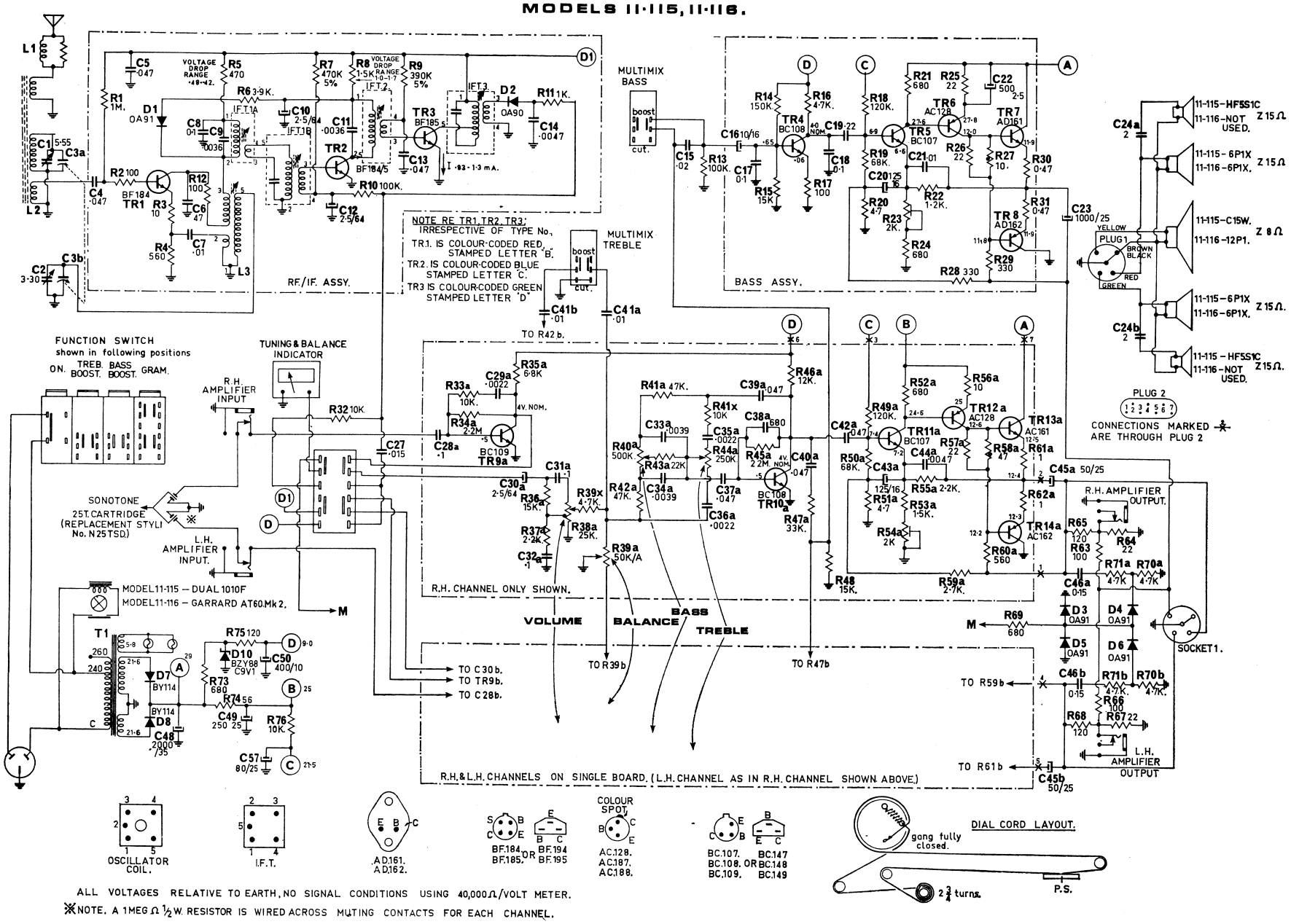
ALIGNMENT PROCEDURE

STEP	SIGNAL GEN. FREQUENCY	CONNECT SIGNAL GENERATOR TO–	WITH TUNING GANG –	PROCEED AS FOLLOWS
1.	455 Kc/s	Base of Tr 1	Closed	Peak core of IFT 3
2.	455 Kc/s	IMPORTANT	Closed	Peak core of IFT 2
3.	455 Kc/s	Connect	Closed	Peak core of IFT 1
4.	–	generator earth to emitter of TR 1	–	Repeat until no further gain is obtainable.
5.	455 Kc/s	Radiate into Aerial	Closed	Check alignment of IFT 1
6.	525 Kc/s	Radiate into Aerial	Closed	Adjust oscillator coil until signal is heard.
7.	1635 KC/s	Radiate into Aerial	Open	Tune oscillator trimmer until signal is heard.
8.	600 Kc/s	Radiate into Aerial	at 600 Kc/s	Peak aerial coil
9.	1500 Kc/s	Radiate into Aerial	at 1500 Kc/s	Peak aerial trimmer.
10.	Repeat 8 and 9 until no further gain is obtainable.			

NOTE: Inject 455 Kc/s signal to base of TR 1 via a 0.22 uF capacitor.

CARE OF CABINET: Polish with any reputable make of furniture polish or Scandinavian teak oil as appropriate to the timber. If alcoholic spirits are accidentally spilled on woodwork, the effect cannot be removed unless wiped off immediately, Beer, soft drinks, milk beverages, children's butter – y or egg – y fingermarks stains may be removed by wiping clean with a soft cloth and polishing with furniture polish. The anodised aluminium matt finishes are reasonably impervious to boiling water and to fingermarks if wiped off without delay; also to most household foodstuffs, soft drink and alcohol. However, milk, lemon juice, household cleaners and bleaches produce a stain which, though usually discernable at certain viewing angles only, is indelible. Rubbing with steel wool will produce a prominent stain, therefore VERY LIGHT rubbing should only be resorted to if the stain so produced is less disfiguring than the original stain (however produced) which it is desired to remove. A soft cloth moistened with water, to which a few drops of detergent have been added, will remove all substances which do not stain. After cleaning, the surface should be dried with a soft cloth.

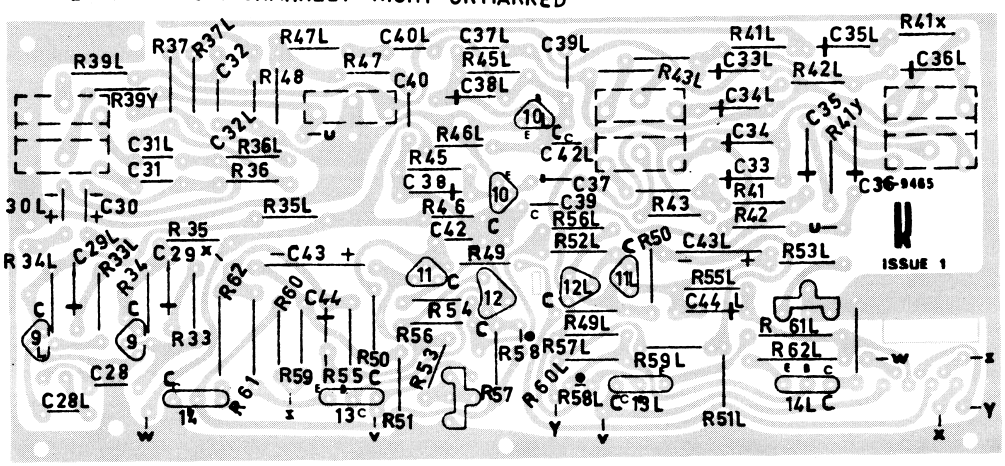
MODELS 11-115, 11-116.

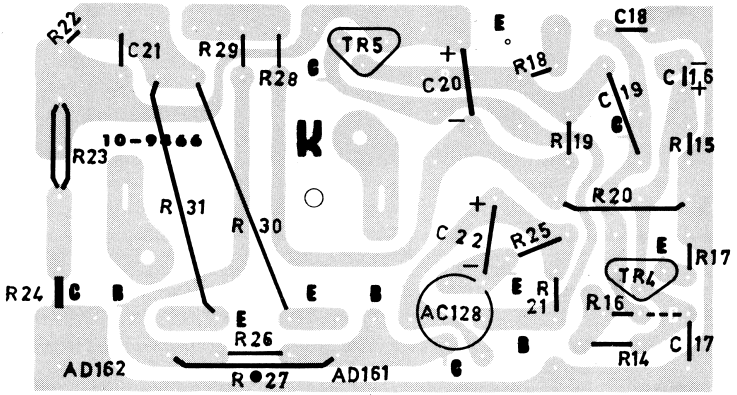


ALL VOLTAGES RELATIVE TO EARTH, NO SIGNAL CONDITIONS USING 40,000Ω/VOLT METER.

✳NOTE. A 1MEGΩ ½W. RESISTOR IS WIRED ACROSS MUTING CONTACTS FOR EACH CHANNEL.

"L" FOR LEFT CHANNEL. RIGHT UNMARKED





11-115 11-116 PARTS LIST

MECHANICAL

16-9468	Insert – Lower Control (Metal Cal)
16-9469	" Upper " "
16-9397	Dial trim - LH end (" ")
16-9399	Lower Dial scale.
16-9392	Control Panel extrusion
16-9393	Dial trim extrusion
16-909	Dial cord spring
20-8296	Pulley
20-8297	Pulley drive
20-8298	Diffuser
20-9384	Button-Rocker switch
20-8201	Spacer
20-9369	Insulator, jack.
20-64	Pulley post
26-8305	Bush, tuning spindle
26-8304	Tuning spindle
26-8306	Pillar-gang
26-9405	Spacer, meter mounting.
69-9396	Dial scale, screened.
90-9363	Knob, control.
71-7310	RADICATOR
17-9414	Switch, MSP
733-8-6	Pilot light socket, double contact.
MOJ BISR	Earphone jack
CON 7-1	7 pin socket, McMURDO Part No. 1337
5QP/B	5 pin plug
5Qs/Bu	5 pin socket.
90-7400	Microphone assembly.

11-115 11-116 PARTS LIST

ELECTRICAL

RESISTORS. ½W ±10% Carbon except as listed herewith.

R No.			
1	1MΩ ½W	± 5%	CARBON
7	470K "	"	"
9	390K "	"	"
23	2K	–	PRESET IRC TYPE P4
27	10Ω	–	THERMISTOR 90-9473
30	.47Ω ½W	± 10	WIREWOUND.
31	.47Ω ½W	± 10	WIREWOUND.
33	10K	± 10	DUCON RMB
34	2.2M	± 10 "	"
35	6.8K	"	
38	25K	– –	VOLUME 32-9420
39	50K	– –	BALANCE 32-9421
40	500K	– –	BASS 32-9422
44	250K	– –	TREBLE 32-9423
54	2K	– –	PRESET IRC TYPE P6
58	47Ω	– –	THERMISTOR 90-4567
61	1Ω	– ± 10	WIREWOUND.
62	1Ω	– "	"
73	680Ω 1W	"	CARBON
74	56Ω 1W	"	"

REMAINDER ½W ±10% CARBON

CAPACITORS

C No.	VALUE	VW	%	TYPE
1	5-55pF	–	–	TRIMMER DUCON CWA/0
2	3-30pF	–	–	TRIMMER DUCON CW NPO
3	–	–	–	TUNING GANG MSP 63-8313
4	.047uF	25	-20+80	REDCAP CERAMIC STYLE B
5	"	"	"	" " "
6	47pF	500	±10	N150 CERAMIC
7	.01uF	25	±20	REDCAP CERAMIC STYLE F
8	.1 uF	"	-20+80	" " " C
9	.0036uF	50	±5%	STYRO SEAL
10	2.5uf	64	-10+50	ELECTRO
11	.0036uF	50	±5%	STYRO
12	2.5uF	64	-10+50	ELECTRO
13	.047uF	25	-20+80	REDCAP CERAMIC STYLE B
14	.0047uF	"	±20	" " " F
15	.022uF	160	±10	POLYESTER
16	10uF	16	-10+50	ELECTRO
17	.1uF	25	±20	REDCAP CERAMIC STYLE C
18	"	"	"	" " "
19	.22uF	50VW	±20	LACQUER FILM
20	125uF	16	-10+50	ELECTRO
21	.01uF	25	±20	RED CAP CERAMIC STYLE A
22	500uF	2.5	-10+50	ELECTRO
23	1000uF	25	-10+50	ELECTROLYTIC
24	2uF	200	±20	METALISED PAPER (AEE)
27	.015uF	160	±10	POLYESTER
28	.1uF	250	±20	METALISED POLYESTER
29	.0022uF	50VW	±20	STYRO
30	2.5uF	64	-10+50	ELECTRO
31	.082uF	250	±20	Metalised POLYESTER
32	.1uF	"	"	" "
33	.0039uF	50VW	±20	STYRO
34	"	"	"	"
35	.0022uF	50VW	±20	STYRO
36	"	"	"	"
37	.047uF	250	"	METALISED POLYESTER
38	680pF	100VW	±20	STYRO
39	.047uF	250	"	METALISED POLYESTER
40	"	"	"	" "
41	.01uF	160	±10	POLYESTER
42	.047uF	250	20	METALISED POLYESTER
43	125uF	16	-10+50	ELECTRO
44	.0047uF	50VW	±20	STYRO
46	.15uF	160	±10	POLYESTER
48	2000uF	35	-10+50	ELECTROLYTIC
49	250uF	25	"	"
50	400uF	10	"	"
51	80uF	25	"	"

CZ-651-000	IFT 1a
CZ-651-004	IFT 2
CZ-651-005	IFT 3
CZ-651-006	IFT 1b

14-8315	Aerial Coil
14-8229	Oscillator Coil
34-4657	Compensating coil
18-9416	Power Transformer