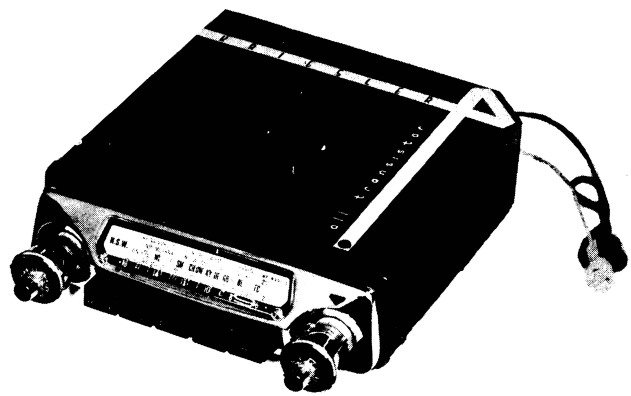
MODEL 41-44
PRESS-BUTTON CAR RADIO

DESCRIPTION.
Model 41-44 is a nine transistor single-unit car radio fitted with a five-button permeability tuner. This model features push-pull output transistors capable of 4 watts output. The 89-8 chassis (used previously in models 41-30 and 35) is used, with some modifications. The audio amplifier/output assembly wired on the output transistors' heat sink is new. In this model, the cabinet cover is black and the control knobs have been shortened.



DIAL SCALES.
Four dial scales are supplied, covering all States and all Australian Broadcast stations. To change scales, remove the two screws in the clear plastic dial lens and detach lens. Change scale and replace lens.

DIMENSIONS.
Width 7″, Height 2″, Depth $7\frac{1}{4}$″ (plus Knobs).

GROSS WEIGHT.
8 lbs.

LOUDSPEAKER.
Impedance 15 ohms. Size and type dependent on installation requirements. Universal Installation kit equipped with 7″ x 5″ elliptical speaker M.S.P. Type 750A/15.

OPERATING VOLTAGE AND POLARITY.
12 Volts D.C. only. For Positive ground car battery, insert polarity plug with + sign pointing to earth symbol on heat sink.
For Negative ground car battery, insert polarity plug with — sign pointing to earth symbol on heat sink.

BATTERY CONSUMPTION.
Min. Volume ..... 350 mA.
Max. Volume ..... 700 mA. These figures include 200 mA dial lamp.

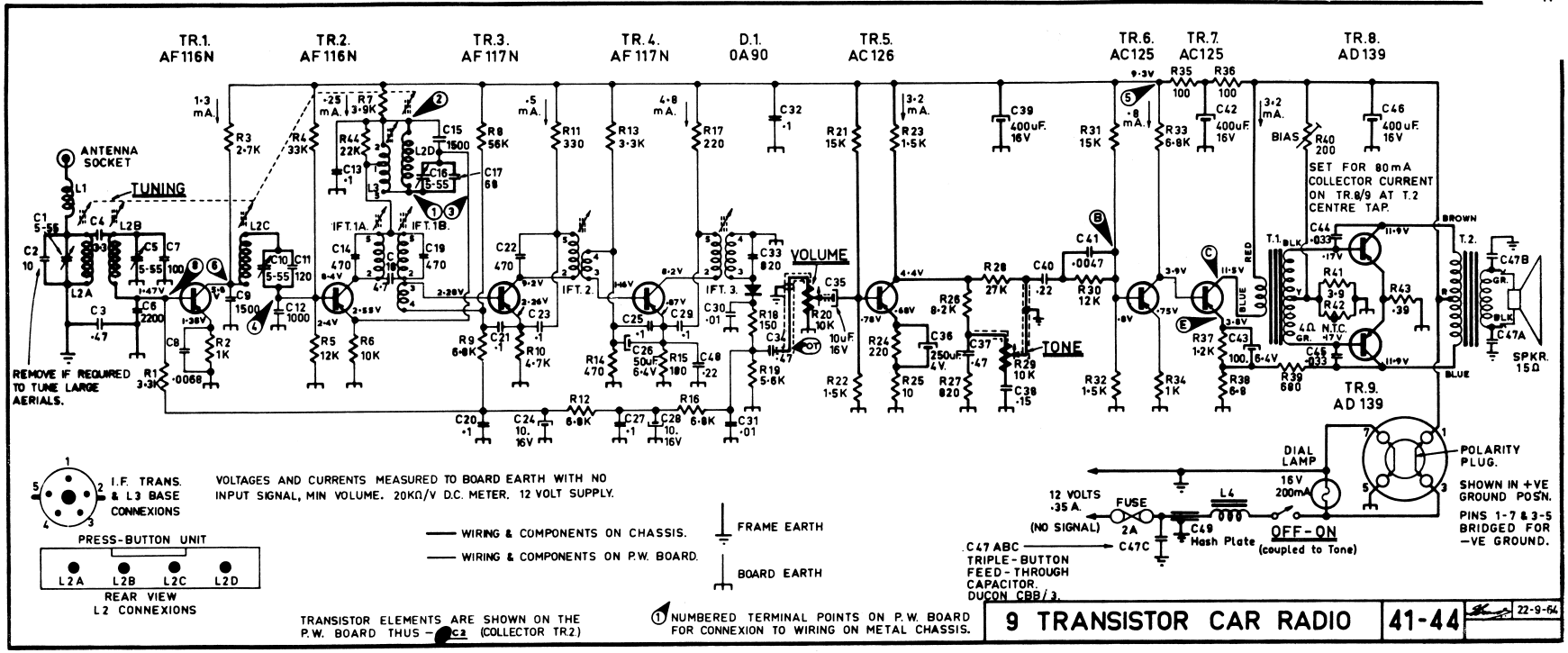
TUNING RANGE.
525 to 1620 Kc/s.

I.F. FREQUENCY
455 Kc/s.

ALIGNMENT PROCEDURE.

HIGH CAPACITY AERIALS.
Inability to peak the Aerial Trimmer after installation would indicate that the aerial and feeder capacitance is excessively high.

(a) Reduce the feeder cable length if possible.
(b) Remove the 10pF capacitor C2 from the aerial coil.
(c) Insert a series capacitor in the aerial circuit.



ELECTRICAL PARTS LIST — MODEL No. 41-44. — CHASSIS No. 89-8.

No.	DESCRIPTION		No.	DESCRIPTION		No.	DESCRIPTION		No.	DESCRIPTION	
R1, 13	3.3K ¼W BTS	I.R.C.	R35, 36	100Ω ¼W BTS	I.R.C.	C13, 20, 21, 23, 25, 27, 29, 32	.1uF 25V Ceramic.		C48	.22uF 25V Ceramic.	
R2, 34	1K " "	"	R37	1.2K " "	"				C49	Hash Plate.	
R3	2.7K " "	"	R38	6.8Ω " BW½	"						
R4	33K " "	"	R39	680Ω " BTS	"				L1	R.F. Choke. 4.7uH	I.R.C.
R5, 30	12K " "	"	R40	200Ω ½W AA Bias	"	C14, 19	470pF 600V Styro.	2%	L2	Tuner. Pt. No. 90-4307	M.S.P.
R6	10K " "	"	R41	3.9Ω ¼W BW½	"	22			L3	Osc. Padder Coil	14-4534
R7	3.9K " "	"	R42	4Ω Thermistor	90-5532	C15	1500pF 200V Styro.	10%	L4	Filter Choke.	28-4537
R8	56K " "	"	R43	0.39Ω ¼W BW½	I.R.C.	C17	68pF 500V Ceramic	5%N470			
R9, 12, 16, 33	6.8K " "	"	R44	22K " BTS	"	C18	4.7pF 500V Ceramic	5%NPO,	IFT 1A	I.F. Transformer.	24-4315
R14	470Ω " "	"	R10	4.7K " "	"	C24, 28, 35	10uF 16V Electro.		IFT 1B	" "	24-4316
R15	180Ω " "	"	R11	330Ω " "	"	C26	50uF 6.4V Electro.		IFT 2	" "	24-4317
R17, 24	220Ω " "	"				C30, 31	.01uF 25V Ceramic		IFT 3	" "	24-4318
R18	150Ω " "	"	C1	5-55pF Mica Trimmer		C33	820pF 600V Styro.	2%	T1	Driver Transformer.	18-5518
R19	5.6K " "	"	C2	10pF 500V Ceramic	N.P.O.	C34, 37	.47uF 25V Ceramic		T2	Output Transformer.	18-5519
R20	10K Pot. VOLUME	32-4295	C3	.47uF 125V Poly.		C36	250uF 4V Electro.				
R29	10K Pot. TONE	"	C4	3.3pF 500V Ceramic	N.P.O.	C38	.15uF 125V Poly.		Fuse	2 Amp. Type 3AG.	
R21, 31	15K ½W BTS	I.R.C.	C5, 10, 16	5-55pF Mica Trimmer		C39, 42, 46	400uF 16V Electro.		Dial Lamp	16V 200mA. BA9S.	Philips
R22, 23, 32	1.5K " "	"	C6	2200pF 400V Poly.	10%					Volume knob	36-4285
R25	10Ω " "	"	C7	100pF 600V Sryro.	10%	C40	.22uF 25V Ceramic.	20%		Tuning knob	36-4283
R26	8.2K " "	"	C8	6800pF Ceramic CDS	10%	C41	4700pF 500V Ceramic.	20%		Small knobs	36-4282
R27	820Ω " "	"	C9	1500pF 400V Poly.	10%	C43	100uF 6.4V Electro.			Spiral spring	16-4251
R28	27K " "	"	C11	120pF 600V Styro.	10%	C44, 45	.033uF 25V Ceramic.			Knob retaining spring clips. Simmonds	SC02152
			C12	1000pF 400V Poly.	10%	C47	3 x 1000pF CBB/3				

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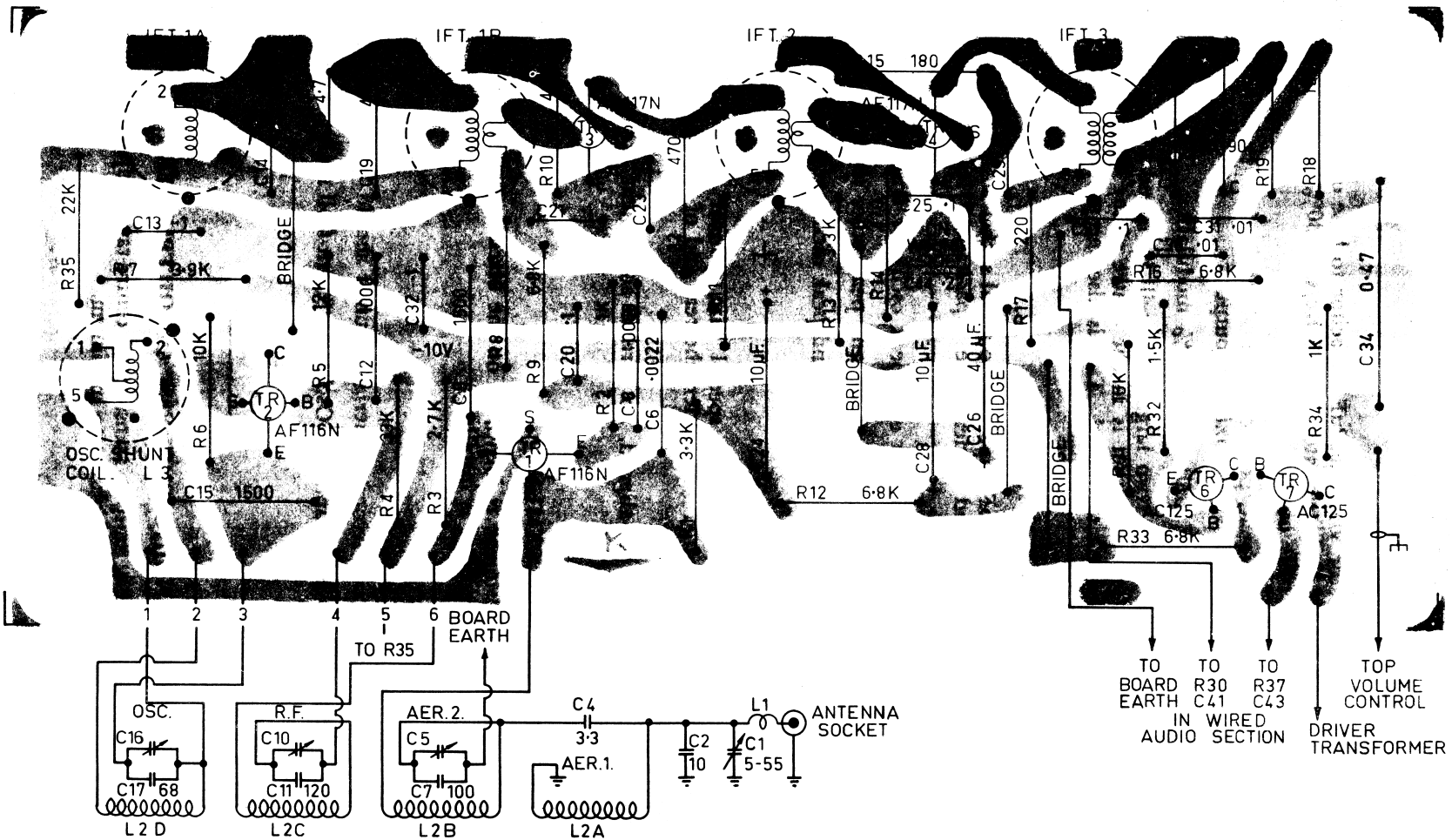

VIEW FROM CONDUCTOR SIDE OF PRINTED WIRING BOARD

I.F. ALIGNMENT.

(a) Connect signal generator via a .022uF capacitor to base of TR2. Set Volume and Tone controls to maximum and generator to 455 Kc/s. at 30% modulation. Set tuner to high frequency end (cores fully out).

(b) Using minimum input signal, peak cores of all three I.F. Transformers using the peak nearest the board. Repeat for maximum output.

(c) Reset generator output to 1 millivolt at 80% modulation. This step is most important.

(d) By adjusting core of IFT 3, two large peaks will be found with a smaller peak between them. The correct tuning position is in the centre of the valley between the small peak and the large peak nearest the board. This is also the point of minimum distortion.

R.F. and OSCILLATOR ALIGNMENT.

(a) Connect generator via a 15pF capacitor to aerial socket with a 47pF capacitor to ground. This simulates the aerial and feeder cable capacitance. Reset generator modulation to 30%.

(b) With tuner unit at high frequency end, peak oscillator trimmer to 1620 Kc.

(c) Tune receiver and generator to 1500 Kc and peak other three trimmers.

(d) Tune receiver and generator to 600 Kc and peak oscillator shunt coil L3 whilst 'rocking' the tuning spindle.

(e) Repeat until alignment is correct.

Calibrate by adjusting the pointer. A special thin spanner ($\frac{1}{4}$" AF) is required to adjust the small concentrically-mounted nut under the rear end of the pointer.
See diagram under 41-44 circuit.

NOTE: As tuner units are pre-aligned, no further adjustment of cores should normally be required.

AERIAL TRIMMER ADJUSTMENT.

The aerial trimmer adjustment is identified on the black heat sink. Peak the aerial trimmer at about 1500 Kc when receiver is installed.

GENERAL.

(a) The oscillator, R.F. and secondary aerial trimmer should be sealed after adjustment.

(b) Cores of I.F. Transformers and the Oscillator Shunt Coil must not be sealed after adjustment.

ADJUSTMENT OF STANDING CURRENT ON OUTPUT TRANSISTORS.

Measure standing current at output transformer centre-tap. Adjust at slide resistor mounted on heat sink below board. Set Volume to minimum.
Set standing current at 80 mA.

KRIESLER 41-44.

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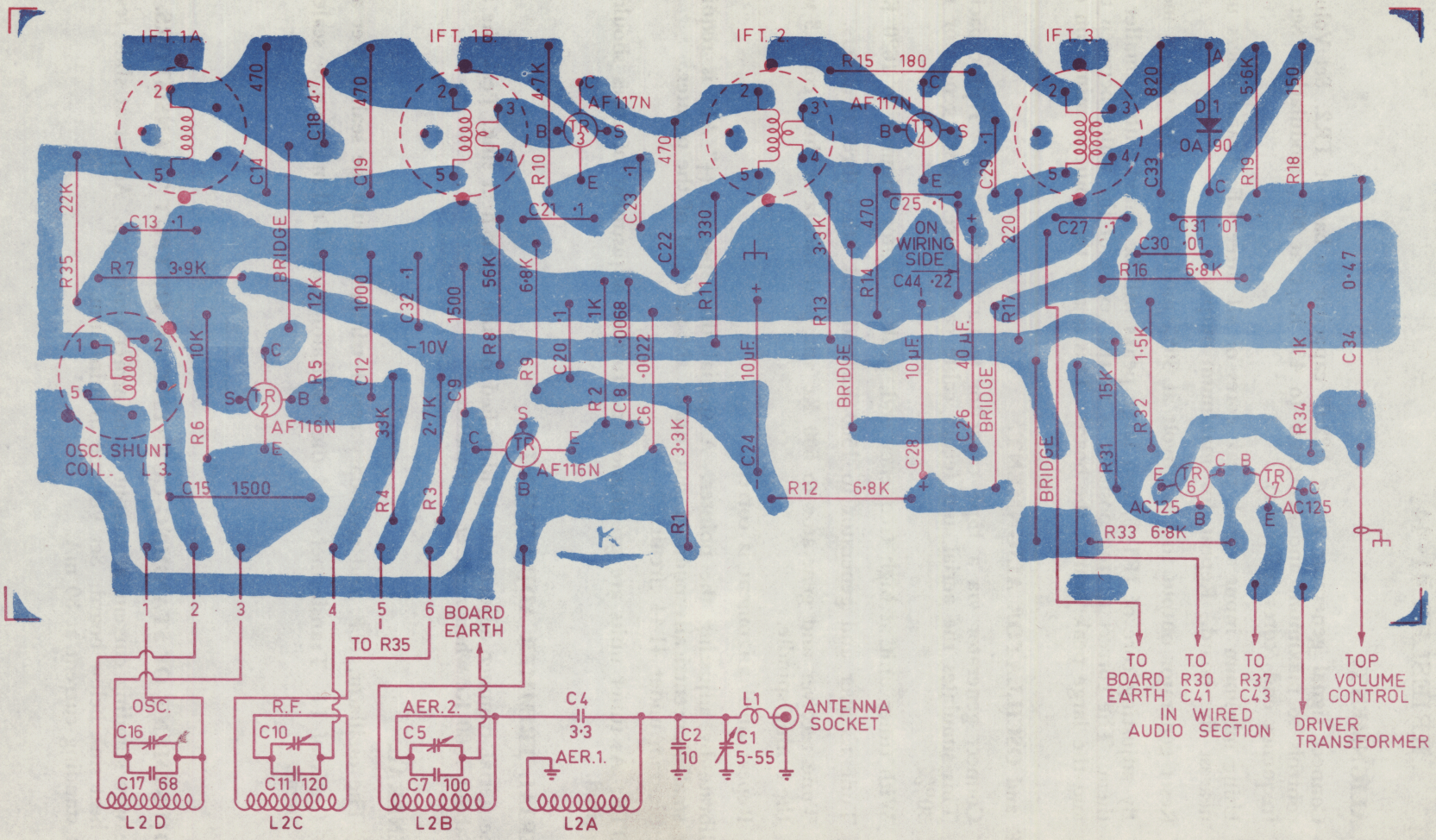

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