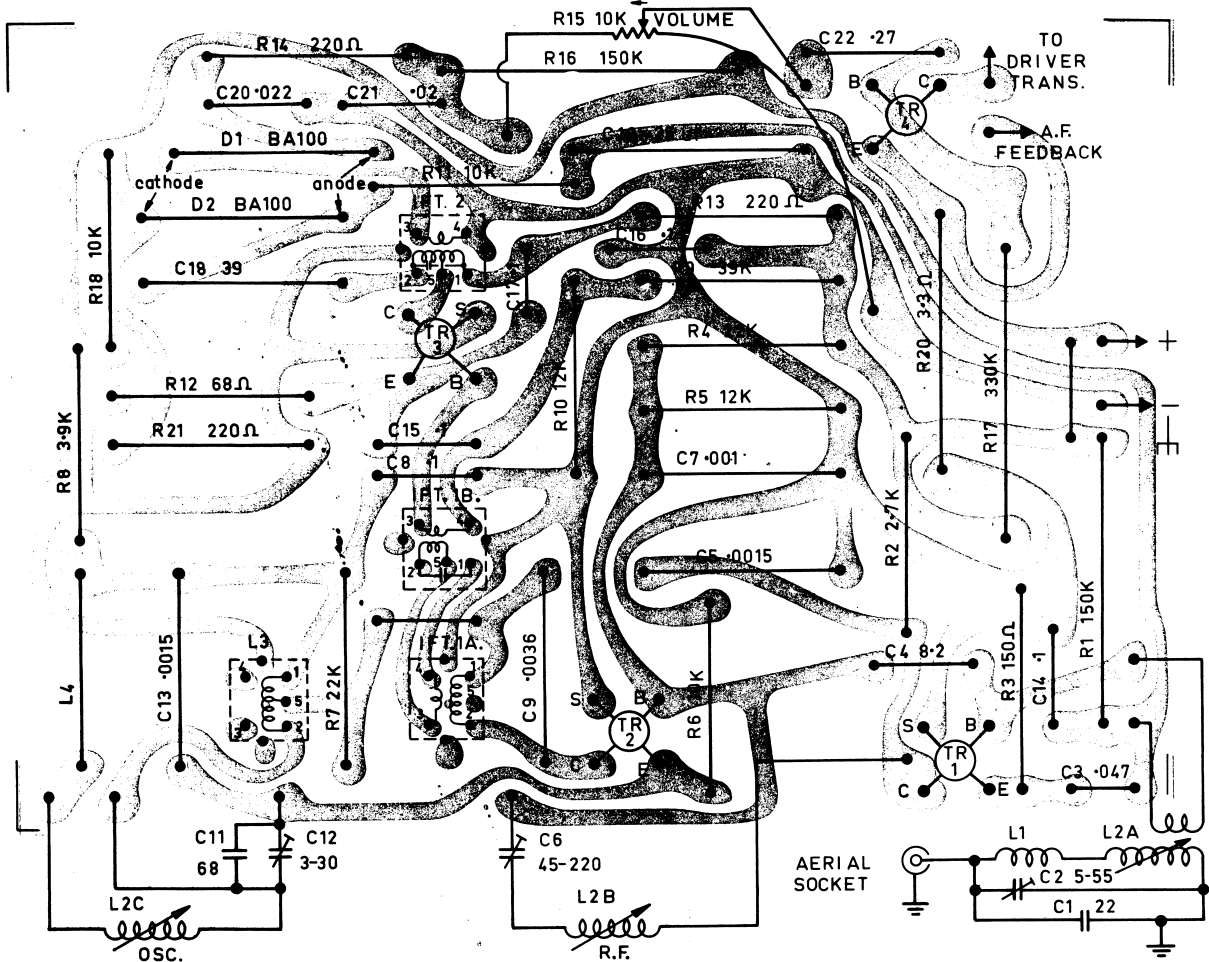


## MODEL 41-48



VIEW FROM CONDUCTOR SIDE OF PRINTED WIRING BOARD

# TECHNICAL SERVICE INFORMATION

ISSUED BY

## KRIESLER AUSTRALASIA PTY. LIMITED

12-30 Cawarra Road, Caringbah. P.O. Box 107, Caringbah. Telephone 5-2044

### 41-48 SERVICE HANDBOOK

**Description:** Model 41-48 is a six-transistor single unit car radio incorporating a manually operated permeability tuner.

**Frequency Range:** 525 to 1620 Kc/s.

**Intermediate Frequency:** 455 Kc/s.

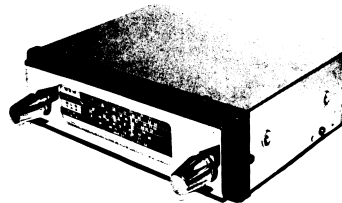
**Supply Voltage:** 12 volts D.C. An external polarity plug provides operation with either negative or positive ground electrical system.

**Consumption:** 183 mA. at 12 volts (no signal condition).

**Speaker:** 15 ohms impedance at 400 c.p.s. Size and type dependent on installation requirements; universal installation kit speaker is 7" x 5" M.S.P. type 750A/15.

**Power Output:** 2 watts at 400 c.p.s. (14 volts supply).

TR1	BF 115	NPN	silicon transistor	Tuned R.F. amplifier
TR2	BF 115	NPN	silicon transistor	Converter
TR3	BF 115	NPN	silicon transistor	I.F. amplifier
TR4	BC 108	NPN	silicon transistor	A.F. amplifier
TR5	AC 128	PNP	Germanium transistor	Class B power amplifier
TR6	AC 128	PNP	Germanium transistor	
D1	BA 100		silicon diode	Demodulator
D2	BA 100		silicon diode	A.G.C.



MODEL 41-48 CAR RADIO

**Controls:** 1. On-Off switch combined with volume control. 2. Tuning control.

**Dimensions:** Width 7", height 2", depth 5 3/4".

**Weight:** 3 lbs. 10 ozs.

#### Transistor and Diode Component:

#### ALIGNMENT PROCEDURE

Sig. Generator connected to	Sig. Generator Frequency	Align for Max. Output	Remarks
Converter base through 0.1 uF	455 Kc/s	IFT 2 IFT 1B IFT 1A	Tuner core carriage fully out
Repeat until maximum output is obtained			
Aerial socket through dummy aerial	1620 Kc/s	Osc. Trimmer C12	Tuner core carriage fully out
Aerial socket through dummy aerial	1500 Kc/s	R.F. Trimmer C6 Aerial Trimmer C2	
Aerial socket through dummy aerial	600 Kc/s	Padder Coil L3	Rock tuner
Repeat until correct alignment is obtained			

Calibrate by adjusting the pointer position on the dial cord.

**Note:** The aerial trimmer should be finally peaked on a weak transmission around 1500 Kc/s with the receiver installed in the car and the aerial fully extended.

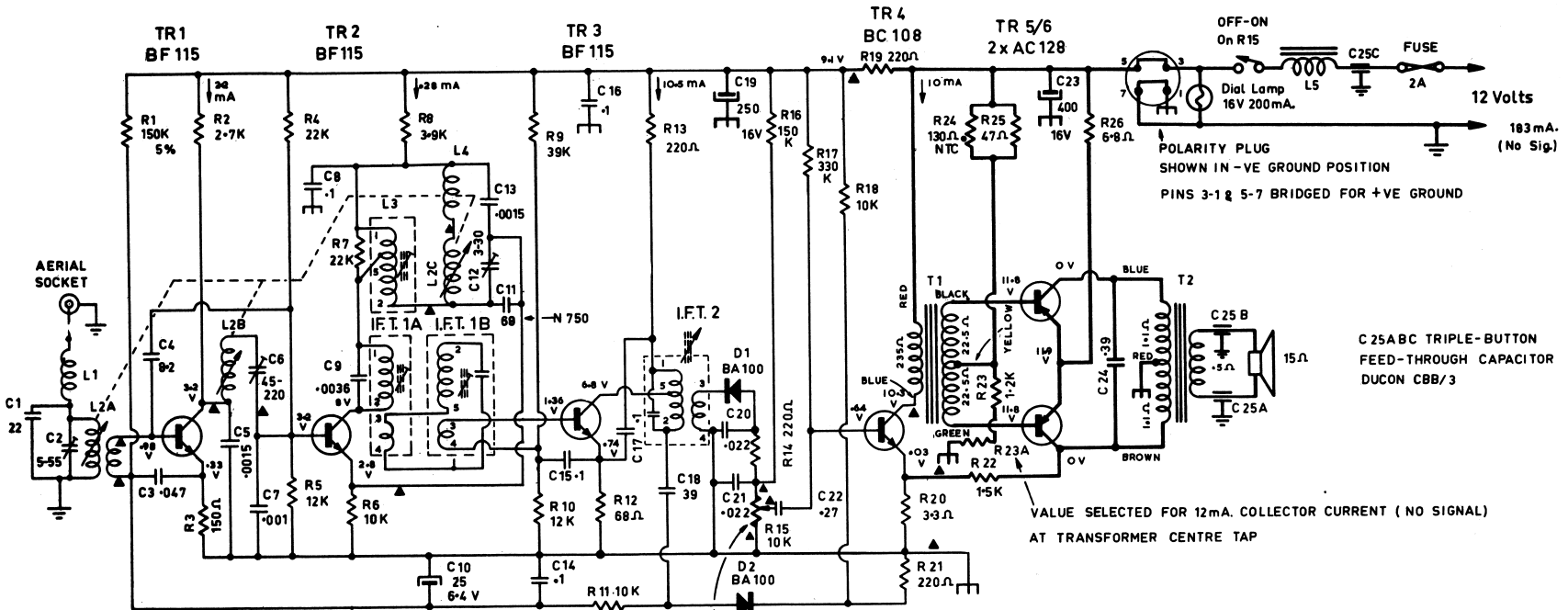
**Driver Transformer Replacement:** The driver transformer is best removed as an assembly with its mounting bracket. Disconnect leads and remove the two recessed self-tapping screws on the exterior base of the chassis.

Remove the transformer with its mounting bracket; detach bracket and fit to replacement transformer. Reverse the above procedure to re-install.

**Power Transistor Replacement:** Should the power transistors TR5 or TR6 require replacing, always use a matched pair and adjust the standing collector current at the output transformer centre tap to 12 mA.  $\pm$  2 mA. (no signal condition) by connecting an appropriate value of resistance (R23A) in the bias circuit.

**High Capacity Aerial System:** Inability to peak the aerial trimmer after installation could indicate that the aerial feeder capacitance is excessively high. To overcome this:—

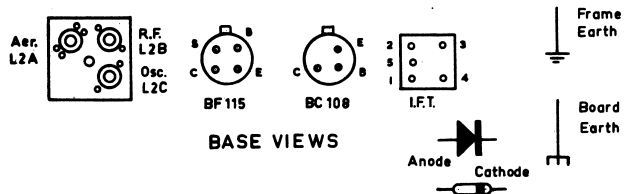
1. Remove the 22pF aerial shunt capacitance C1; or
2. Reduce the feeder cable length; or
3. Insert a series capacitor in the aerial circuit; however, this will reduce the signal input to the receiver.



POLARITY PLUG SHOWN IN -VE GROUND POSITION  
PINS 3-1 & 5-7 BRIDGED FOR +VE GROUND

C 25A BC TRIPLE-BUTTON FEED-THROUGH CAPACITOR DUCON CBB/3

VALUE SELECTED FOR 12mA. COLLECTOR CURRENT (NO SIGNAL) AT TRANSFORMER CENTRE TAP

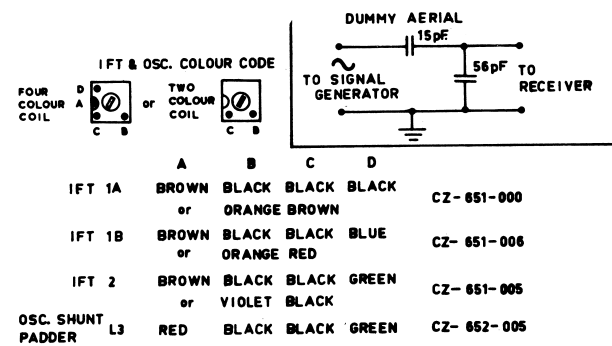


WIRING AND COMPONENTS ON CHASSIS  
WIRING AND COMPONENTS ON P.W. BOARD  
LEAD CONNECTIONS TO P.W. BOARD

VOLTAGES MEASURED TO BOARD EARTH WITH NO INPUT SIGNAL, MIN. VOLUME, 12 VOLT SUPPLY AND 20000 Ω/VOLT D.C. METER

6 TRANSISTOR CAR RADIO		41-48	DATE
DRAWN		<i>J. Blomax</i>	25-6-65
CHECKED			
APPROVED		<i>10/3/65</i>	

No.	Description	No.	Description	No.	Description
R1	150 K 1W	C25	22 pF H.P.O. Disc Ceramic Ducon	L1	4.7 uH R.F. Choke Type CLA I.R.C.
R2	2.7 K 1/2W	C26	5-55 pF Mica Trimmer 35130 M.S.P.	L2	A B C Permeability Tuner 90-7064 H.S.P.
R3	150 Ω 1/2W	C27	.047 uF 25V Ceramic Ducon	L3	Osc. Shunt Padder Coil CE-652-005 Philips
R4, 7	22 K 1/2W	C28	8.2 pF H.P.O. Ceramic 210E "	L4	Osc. Series Padder Coil 14-7068 J.Melops
R5, 10	12 K 1/2W	C29, 13	.0015 uF 200V Styroal 210E "	L5	Filter Choke 28-4537 H.S.P.
R6, 11, 18	10 K 1/2W	C30	63-220 pF Mica Trimmer Type OM "	IFT 1A	I.F. Transformer CE-651-000 Philips
R8	5.9 K 1/2W	C31	.001 uF 200V Styroal 210E "	IFT 1B	I.F. Transformer CE-651-006 Philips
R9	39 K 1/2W	C32	1 uF 25V Ceramic 25E "	IFT 2	I.F. Transformer CE-651-005 Philips
R10	68 Ω 1/2W	C33	0.006 uF 50V Styroal 210E "	T1	Driver Transformer 18-6194 H.S.P.
R11, 14, 19, 21	220 Ω 1/2W	C34	25 uF 6.4V Electrolytic Philips	T2	Output Transformer 18-6193 H.S.P.
R15	10 K Off-On Volume 33-7058	C35	68 pF Ceramic Type 8750 25E Ducon	Fuse	Australux 2 Amp Type 3AG/2A
R16	150 K 1/2W	C36	3-30 pF H.P.O. Trimmer Type OM Philips	Dial Lamp	Philips 16V .2A BA96-10PC5
R17	330 K 1/2W	C37	39 pF 630V Styroal 210E "	Knob	20-4531
R18	3.3 K 1/2W	C38	250 uF 16V Electrolytic Philips	Tuning	20-4532
R19	1.5 K 1/2W	C39	.022 uF 25V Ceramic 220E Ducon	Plug	69-7062
R20	1.2 K 1/2W	C40	.27 uF 25V Ceramic 220E Ducon	Dial Scale	69-7062
R21	See Note on Circuit Diagram	C41	400 uF 16V Electrolytic Philips	Scutchoon	16-7051
R22	150 Ω Thermistor BM/33001/A1308	C42	.39 uF 125V Polyester 210E Philips		
R23	47 Ω 1/2W	C43	3 x .001 uF Triple button feed-through Capacitor Type CBB/3 Ducon		
R24	6.8 Ω 1/2W				
R25					
R26					



Component	A	B	C	D	Code
IFT 1A	BROWN	BLACK	BLACK	BLACK	CZ- 651-000
	or	ORANGE	BLACK	BROWN	
IFT 1B	BROWN	BLACK	BLACK	BLUE	CZ- 651-006
	or	ORANGE	RED		
IFT 2	BROWN	BLACK	BLACK	GREEN	CZ- 651-005
	or	VIOLET	BLACK		
OSC. SHUNT PADDER L3	RED	BLACK	BLACK	GREEN	CZ- 652-005