

KRIESLER AUSTRALASIA PTY. LIMITED

12-30 CAWARRA ROAD, CARINGBAH.

P.O. BOX 107, CARINGBAH.

TELEPHONE: 5-2044

Series 'A' Radio Handbook

DESCRIPTION.

Models 41-30 and 41-35 both contain the 89-8 chassis.

The R.F., I.F. and Audio Amplifier circuits are of printed wiring construction. The Power Output and filtering components are mounted on the heat sink below the printed wiring board.

The 89-8 chassis is a seven transistor receiver designed for Broadcast Band reception. With the exception of the tuner units and dial scales, both models are identical.

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 to the required scale and replace lens. Note that the scales for Model 41-30 (Part No. 69-4301) and Model 41-35 (Part No. 69-4302) are quite dissimilar.

NETT WEIGHT.

Model 41-30 = 6 lbs. Model 41-35 = 5 lbs.

DIMENSIONS.

Both Models = Width 7", Depth $7\frac{1}{4}$ " (Plus knobs), Height 2".

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.

Operation on the incorrect voltage or polarity will void the guarantee.

ALIGNMENT PROCEDURE.

See Page 4,5

TUNING RANGE.

525 to 1650 Kc/s.

I.F. FREQUENCY.

455 Kc/s.

BATTERY CONSUMPTION.

750 mA. (with 16V 200mA. dial lamp).

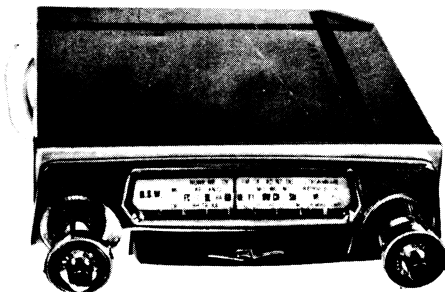
TRANSISTOR COMPLEMENT.

TR 1	OC170	R.F. Amplifier.	TR 5	OC71	Audio Pre-driver.
TR 2	OC170	Mixer-Oscillator.	TR 6	OC71	Audio Driver.
TR 3	OC169	1st. I.F. Amplifier.	TR 7	OC26	Audio Power Output.
TR 4	OC169	2nd I.F. Amplifier.	DIODE	OA79 of AA119	Detector.

MODEL 41-30
PRESS-BUTTON CAR RADIO



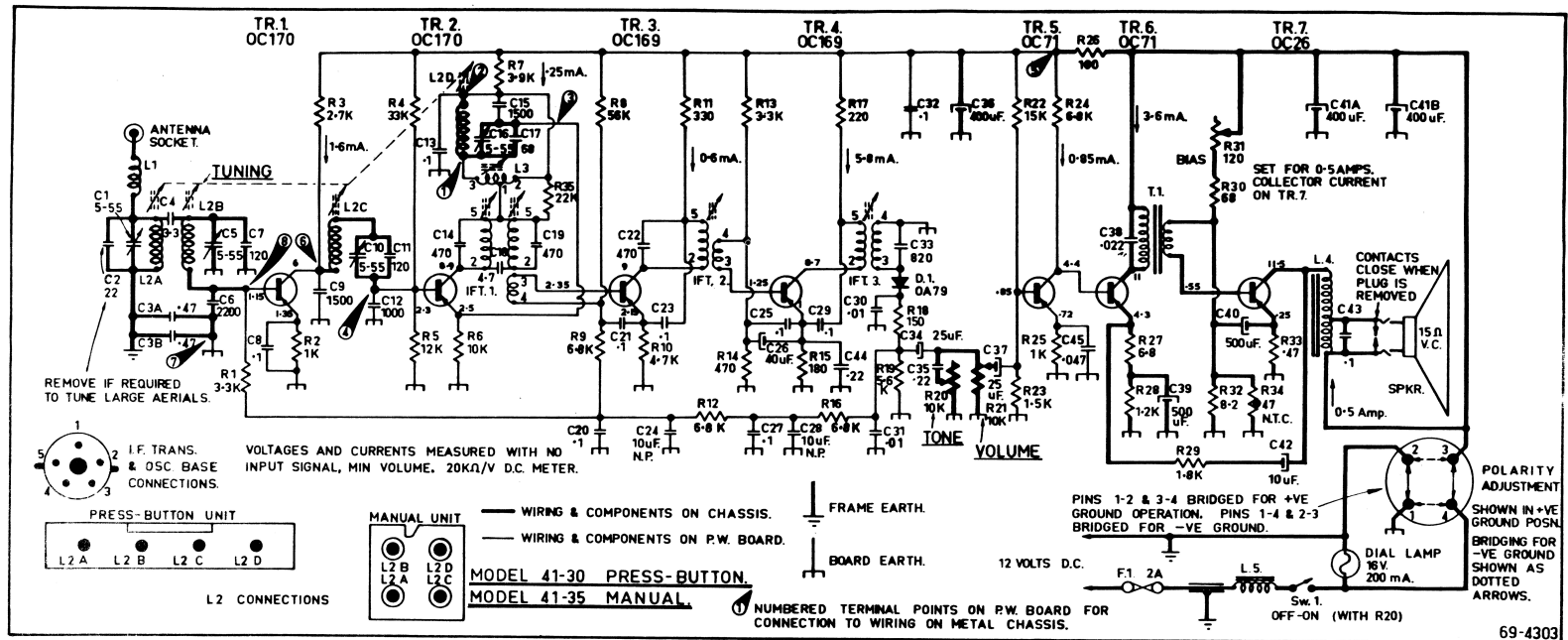
MODEL 41-35
MANUAL-TUNED CAR RADIO





VIEW FROM CONDUCTOR SIDE OF PRINTED WIRING BOARD

KRIESLER MODELS 41-30, 41-35.



69-4303

PARTS LIST.

CAR RADIO MODELS 41-30 and 41-35

CHASSIS No. 09-8

Code	DESCRIPTION	Part No.	Code	DESCRIPTION	Part No.	Code	DESCRIPTION	Part No.
R1	3.3K $\frac{1}{2}$ W	BTS	R32	8.2ohm $\frac{1}{2}$ W	BW $\frac{1}{2}$	C28	10uF 3V Electro non-polar	U.C.C.
R2	1K	"	R33	.47ohm 1W	BW1	C29	.1uF 25V Ceramic -20+80%	Ducon
R3	2.7K	"	R34	47ohm Thermistor-Kriesler Ass.	90-4567	C30	.01uF 25V Ceramic -20+80%	"
R4	33K	"	R35	22K	gW BTS	C31	.033uF 25V Ceramic -20+80%	"
R5	12K	"				C32	.1uF 25V Ceramic -20+80%	"
R6	10K	"	C1	5-55pF Mica Trimmer Type 35130	N.S.P.	C33	820pF 600V Styroacel 2%	"
R7	3.9K	"	C2	22pF 500V NPO ceramic 10%	Ducon	C34	25uF 10V Electro	"
R8	50K	"	C3ab	.47uF 125V Polyester 20%	Philips	C35	.22uF 25V Ceramic -20+80%	"
R9	6.8K	"	C9	3.3pF 500V NPO ceramic 10%	Ducon	C36	400uF 16V Electro	"
R10	4.7K	"	C5	5-55pF Mica Trimmer Type CWA	"	C37	25uF 10V Electro	Philips
R11	330ohm	"	C6	2200pF 400V Polyester 10%	"	C38	.02uF 25V Ceramic -20+80%	Ducon
R12	6.8K	"	C7	120pF 600V Styroacel 10%	"	C39	500uF 6.4V Electro	Philips
R13	3.3K	"	C8	.1uF 25V Ceramic -20+80%	"	C40	500uF 6.4V Electro	"
R14	470ohm	"	C9	1500pF 400V Polyester 10%	"	C41	400uF 16V Electro (2)	"
R15	180ohm	"	C10	5-55pF Mica Trimmer Type CWA	"	C42	10uF 25V Electro	"
R16	6.8K	"	C11	120pF 600V Styroacel 10%	"	C43	.1uF 25V Ceramic -20+80%	Ducon
R17	220ohm	"	C12	1000pF 400V Polyester 10%	"	C44	.22uF 25V Ceramic -20+80%	"
R18	150ohm	"	C13	.1uF 25V Ceramic -20+80%	"	C45	.047uF 25V Ceramic -20+30%	"
R19	5.6K	"	C14	470pF 600V Styroacel 2%	"	L1	R.F. Choke 4.7uH Type CL	I.R.C.
R20	10K Pot. OFF-ON/TONE-Kriesler	32-4295	C15	1500pF 200V Styroacel 10%	"	L2	Tuner Unit - Manual	Kr.No. 90-4313
R21	10K Pot. VOLUME. (With R20)	"	C16	5-55pF Mica Trimmer Type CWA	"		- Push-Button	Kr.No. 90-4307
R22	15K $\frac{1}{2}$ W	BTS	C17	68pF 500V N470 ceramic 5%	"	L3	Oscillator Shunt Coil	Kr.No. 14-4534
R23	1.5K	"	C18	4.7pF 500V NPO ceramic 5%	"	L4	Speaker Transformer	Kr.No. 28-4536
R24	6.8K	"	C19	470pF 600V Styroacel 2%	"		Filter Choke	Kr.No. 28-4537
R25	1K	"	C20	.1uF 25V Ceramic -20+80%	"	T1	Driver Transformer	Kr.No. 18-4294
R26	180ohm	"	C21	.1uF 25V Ceramic -20+80%	"			"
R27	6.8ohm	BW $\frac{1}{2}$	C22	470pF 600V Styroacel 2%	"	IFT1	A I.F. Transformer	Kr.No. 24-4315
R28	1.2K	BTS	C23	.1uF 25V Ceramic -20+80%	"	IFT2	B I.F. Transformer	Kr.No. 24-4316
R29	1.8K	"	C24	10uF 3V Electro non-polar	U.C.C.	IFT3	I.F. Transformer	Kr.No. 24-4317
R30	60ohm	BW $\frac{1}{2}$	C25	.1uF 25V Ceramic -20+80%	Ducon			Kr.No. 24-4318
R31	120ohm 5W	AA Bias Adjustment	C26	40uF 4V Electro	Philips	S1	Aerial Socket W. Barr Type	BT32
			C27	.1uF 25V Ceramic -20+80%	Ducon			

K1

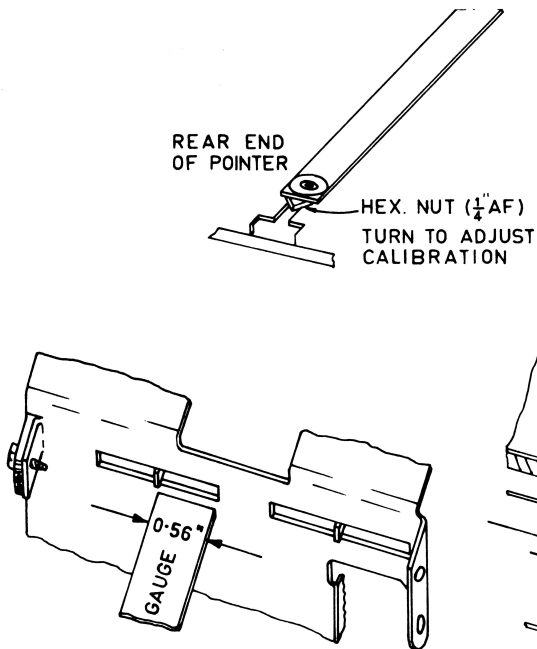


FIGURE 3

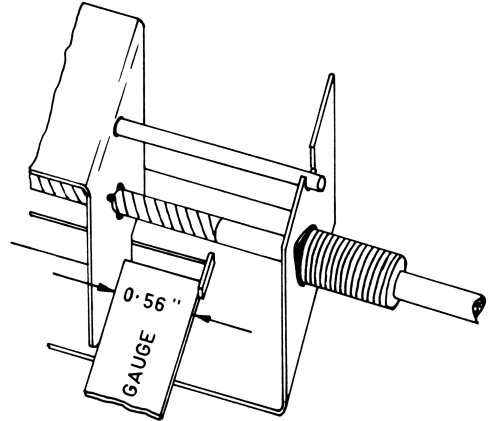
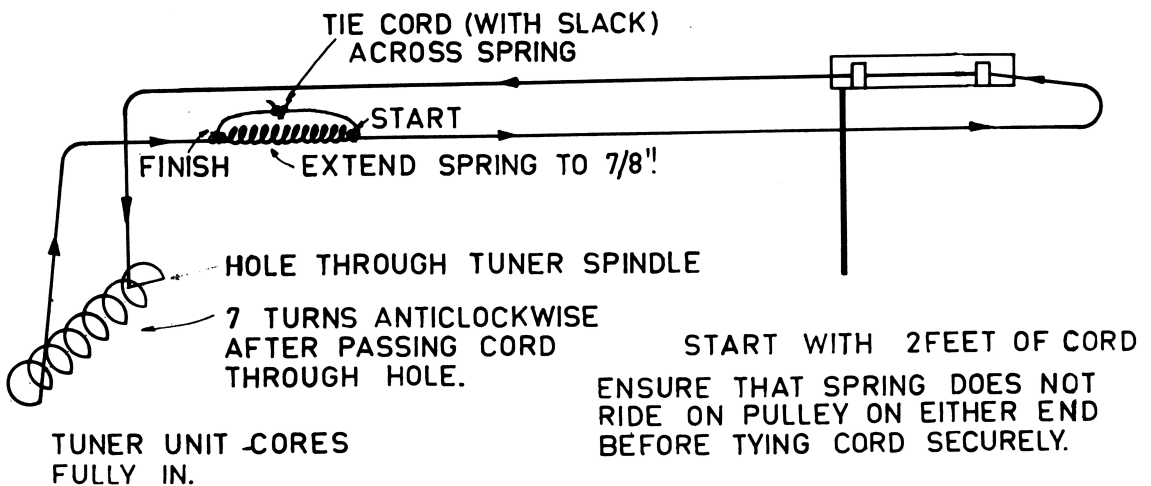


FIGURE 4

KRIESLER MODELS 41-30, 41-35.

DIAL CORD LAYOUT DIAGRAM



VIEW FROM REAR OF FRONT PANEL

FIGURE 5

ALIGNMENT PROCEDURE.

STEP 1. STANDING CURRENT.

Check standing current on OC26 by lifting collector lead at OC26 socket and inserting an ammeter. The standing current at minimum volume should be 500 mA. To adjust, loosen the clamp screw on the wiper of the adjustable bias resistor and slide resistor until correct. This resistor may be found below the printed wiring board, mounted on the heat sink.

STEP 2. I.F. ALIGNMENT.

- a) Connect signal generator, via a .022uF capacitor, to the base of the mixer stage TR 2 with the generator earth to board earth.
- b) Set Volume and Tone controls to maximum and generator to 455 Kc/s at 30% modulation. Connect output voltmeter across voice coil.
- c) Wind the tuner to the extreme high frequency end (cores fully out).
- d) Using minimum input signal, peak the cores of all three I.F. Transformers. Of the two peaks which can be found, that which occurs when the cores are nearest the printed wiring board is the correct one. Repeat this procedure until maximum output is obtained.
- e) Re-set the generator output to 1 millivolt at 80% modulation. This step is important.
- f) By adjusting the 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 printed wiring board. This is also the point of minimum distortion.

STEP 3. R.F. and OSCILLATOR ALIGNMENT.

- a) Connect the signal generator via a 15pF capacitor to the aerial input socket. Connect a 47pF capacitor from this point to ground. This shunt capacitor is used to simulate the capacitance of the aerial and feeder cable. Re-set generator modulation to 30%.
- b) With the cores of the tuner unit fully out, peak the oscillator trimmer to exactly 1650 Kc/s.
- c) Tune receiver and signal generator to 1500 Kc/s and peak the other three trimmers.
- d) Normally omitted. (See note below). With a gauge 0.56" (9/16") wide inserted in front of the rear carriage slot (on push-button units) or between the moving frame and the front stop (on manual units), peak all cores to exactly 1 Mc/s. See Figures 3 and 4.
- e) With receiver and generator tuned to 600 Kc/s, peak the Oscillator Shunt Coil L3 whilst 'rocking' the tuning spindle.
- f) Repeat the above steps until alignment is correct.

After alignment, sensitivity should be substantially constant over the band and the bottom band limit should be approx. 525 Kc/s.

Sensitivity - Better than 4 microvolts with signal equal to noise.

Calibration is completed by adjusting the pointer. On manual units, slide the pointer along the cord. On push-button units, a special thin spanner ($\frac{1}{4}$ " AF) is required to adjust the small eccentrically-mounted nut below the rear end of the pointer. See Figure 3.

NOTE. As tuner units are pre-aligned, no adjustment of cores should normally be required, but this step is included in case units have been disturbed.

STEP 4. AERIAL TRIMMER ADJUSTMENT.

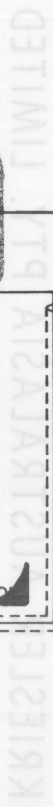
The aerial trimmer has been set at the approximately correct position in Step 3c, but must be re-set at about 1500 Kc/s when the radio has been installed in the car. Do not seal this trimmer.

GENERAL NOTES.

1. The oscillator, R.F. and secondary aerial trimmer should be sealed after adjustment.
2. The cores of the tuner unit should be re-sealed (if adjusted).
3. The cores of the I.F. Transformers & Oscillator Shunt Coil must not be sealed.

AERIAL CAPACITANCE.

The receiver has been designed to tune correctly with an input capacitance between 25 and 80 pF. If the total capacitance of the aerial and feeder exceeds 80 pF, remove the 22 pF capacitor shunted across the aerial trimmer. This will increase the range to about 100 pF maximum.



VIEW FROM CONDUCTOR SIDE OF PRINTED WIRING BOARD