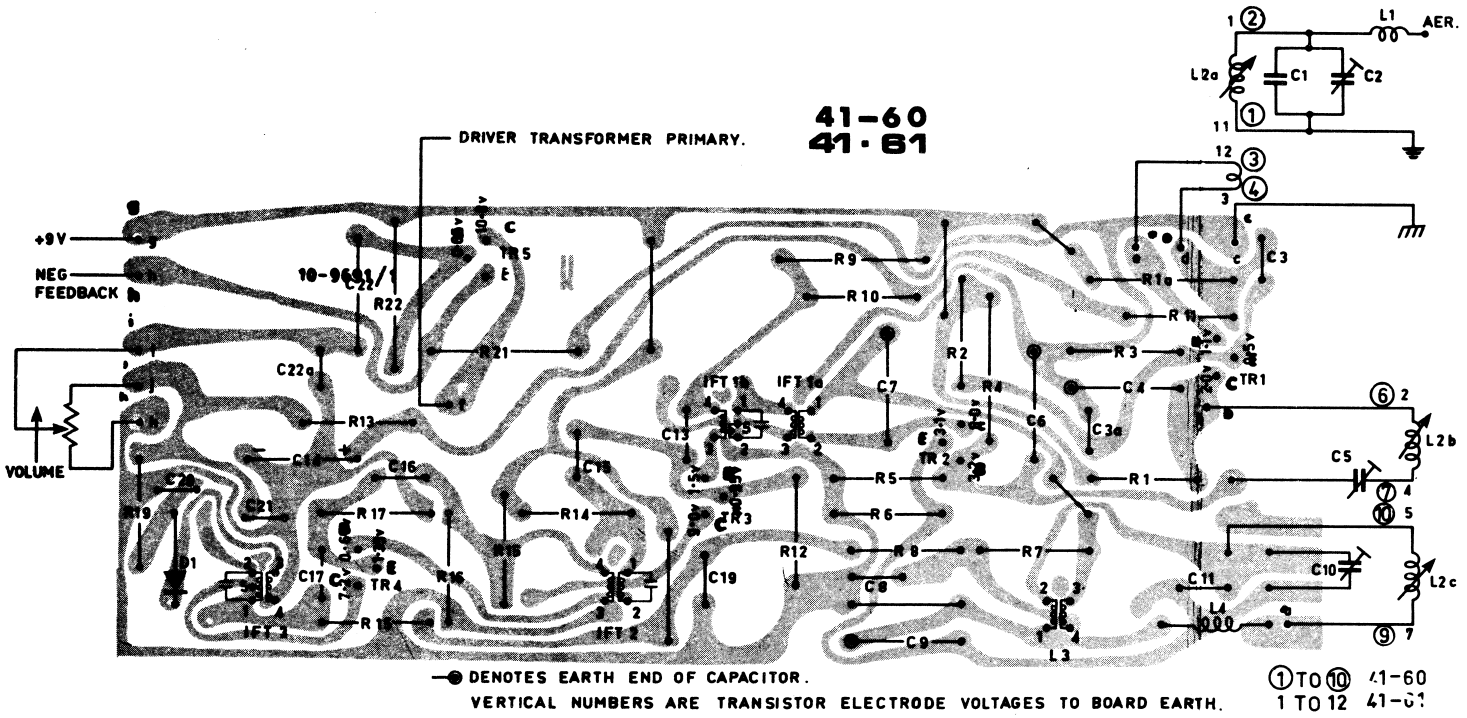
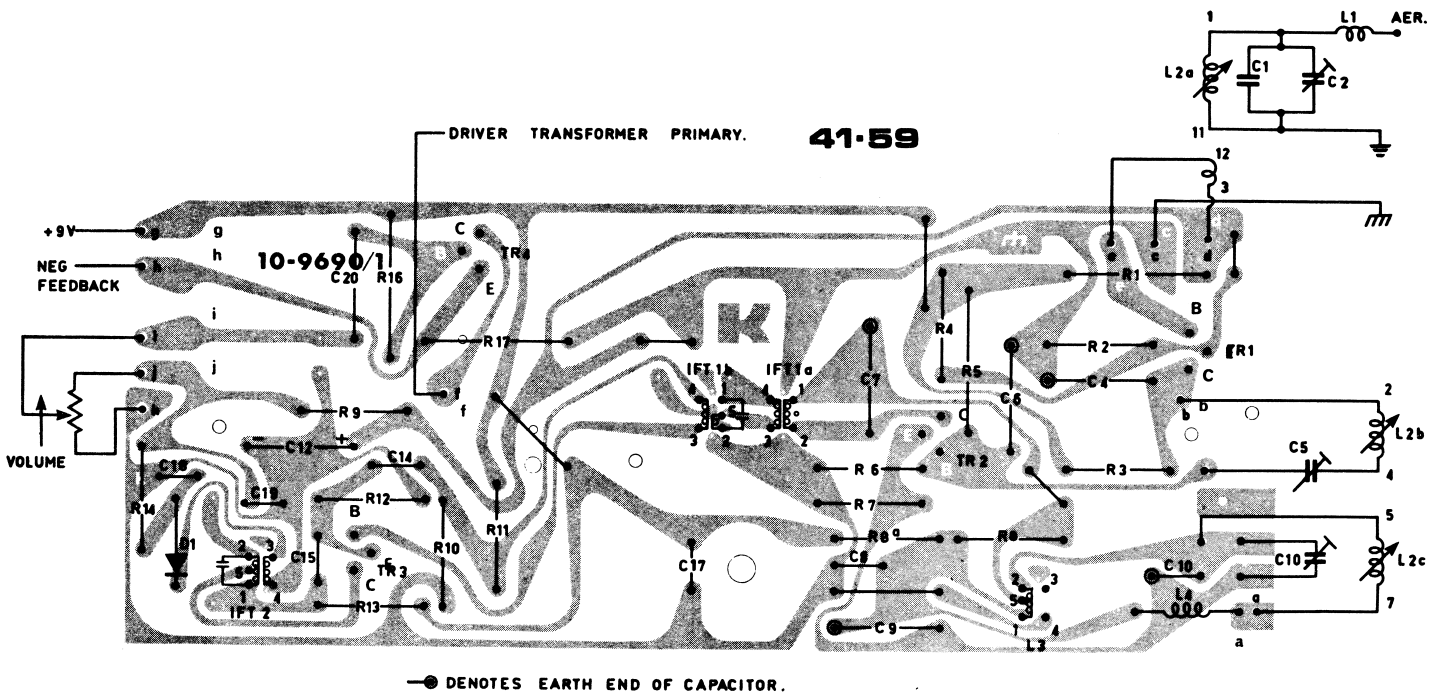

41-60
41·61
DRIVER TRANSFORMER PRIMARY.
+9V
NEG FEEDBACK
VOLUME
10-9691/1
L1 AER.
L2a
C1
C2
L2b
L2c
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C22a
C3a
R1
R1a
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
TR1
TR2
TR3
TR4
D1
IFT 1
IFT 1a
IFT 2
L3
L4
DENOTES EARTH END OF CAPACITOR.
VERTICAL NUMBERS ARE TRANSISTOR ELECTRODE VOLTAGES TO BOARD EARTH.
① TO ⑩ 41-60
1 TO 12 41-61


41·59
DRIVER TRANSFORMER PRIMARY.
+9V
NEG FEEDBACK
VOLUME
10-9690/1
L1 AER.
L2a
C1
C2
L2b
L2c
C4
C5
C6
C7
C8
C9
C10
C12
C14
C15
C16
C17
C19
C20
R1
R2
R3
R4
R5
R6
R7
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R9
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R11
R12
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R14
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TR1
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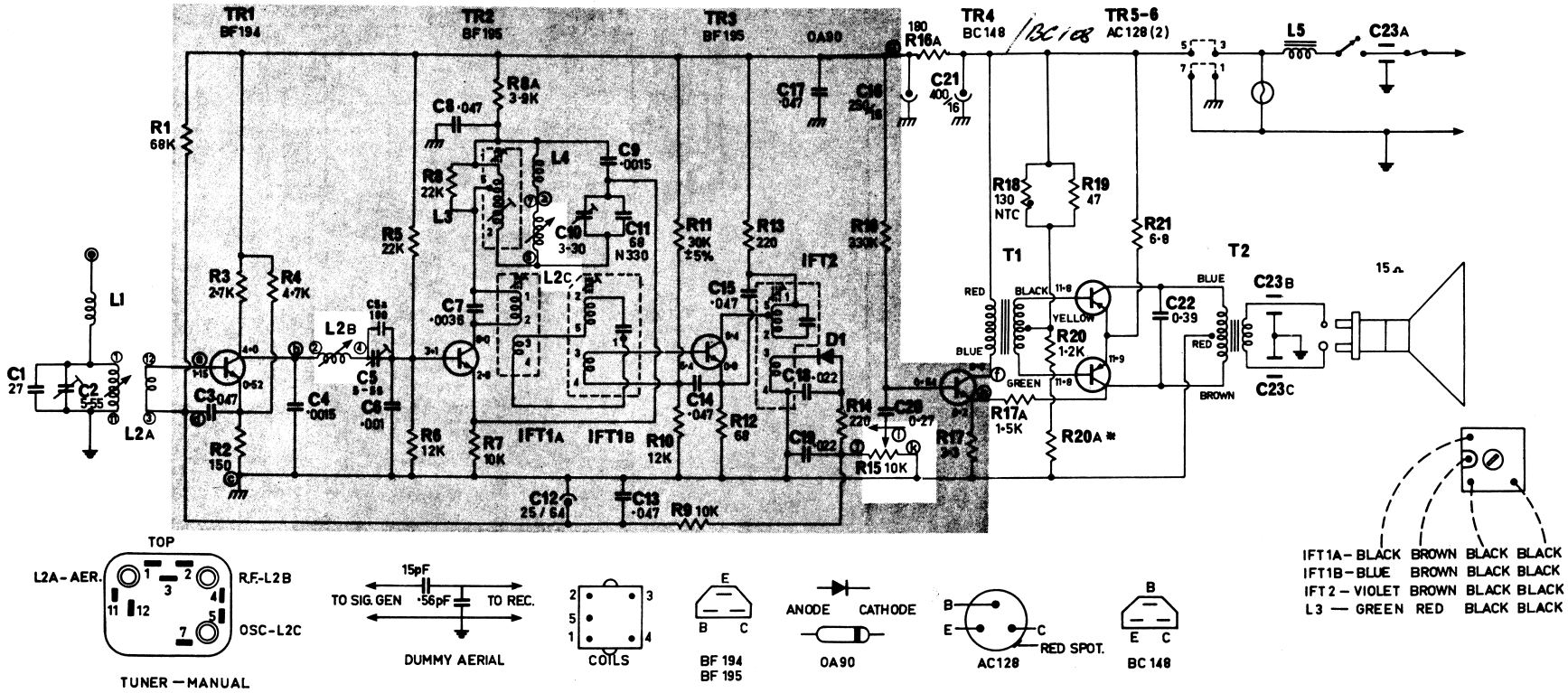
IFT 1
IFT 1a
IFT 2
L3
L4
DENOTES EARTH END OF CAPACITOR.







TUNER — MANUAL




DUMMY AERIAL



COILS




BF 194
BF 195




OA90




AC128




BC 148




ⓐ ENCIRCLED LETTERS INDICATE FLEXIBLE CONNECTIONS TO PRINTED WIRING BOARD.

VOLTAGES MEASURED TO BOARD EARTH WITH NO INPUT SIGNAL & 12 VOLTS SUPPLY & 20,000 Ω VOLT D.C. METER.

* VALUE SELECTED TO GIVE 12 mA COLLECTOR CURRENT (NO SIGNAL) AT T2 CENTRE TAP.

RESISTORS

| Cct. No. | Value | ±% | Wattage |
|---|---|---|---|
| 1 | 68K | 5 | 1 |
| 2 | 150 | 10 | ½ |
| 3 | 2.7K | 10 | ½ |
| 4 | 4.7K | 10 | ½ |
| 5 | 22K | 10 | ½ |
| 6 | 12K | 10 | ½ |
| 7 | 10K | 10 | ½ |
| 8 | 22K | 10 | ½ |
| 8a | 3.9K | 10 | ½ |
| 9 | 10K | 10 | ½ |
| 10 | 12K | 10 | ½ |
| 11 | 30K | 5 | ½ |
| 12 | 68 | 10 | ½ |
| 13 | 220 | 10 | ½ |
| 14 | 220 | 10 | ½ |
| 15 | 10K, Volume Part No. 32-9697 | | |
| 16 | 330K | 10 | 1 |
| 16a | 180 | 10 | ½ |
| 17 | 3.3 | 10 | ½w.w. |
| 17a | 1.5K | 10 | ½ |
| 18 | 130 | NTC | - |
| 19 | 47 | 10 | ½ |
| 20 | 1.2K | 10 | ½ |
| 20a | selected, see cct note, 10%, ½w. | | |
| 21 | 6.8 | 10 | ½w.w. |

41-59 ELECTRICAL PARTS LIST

CAPACITORS

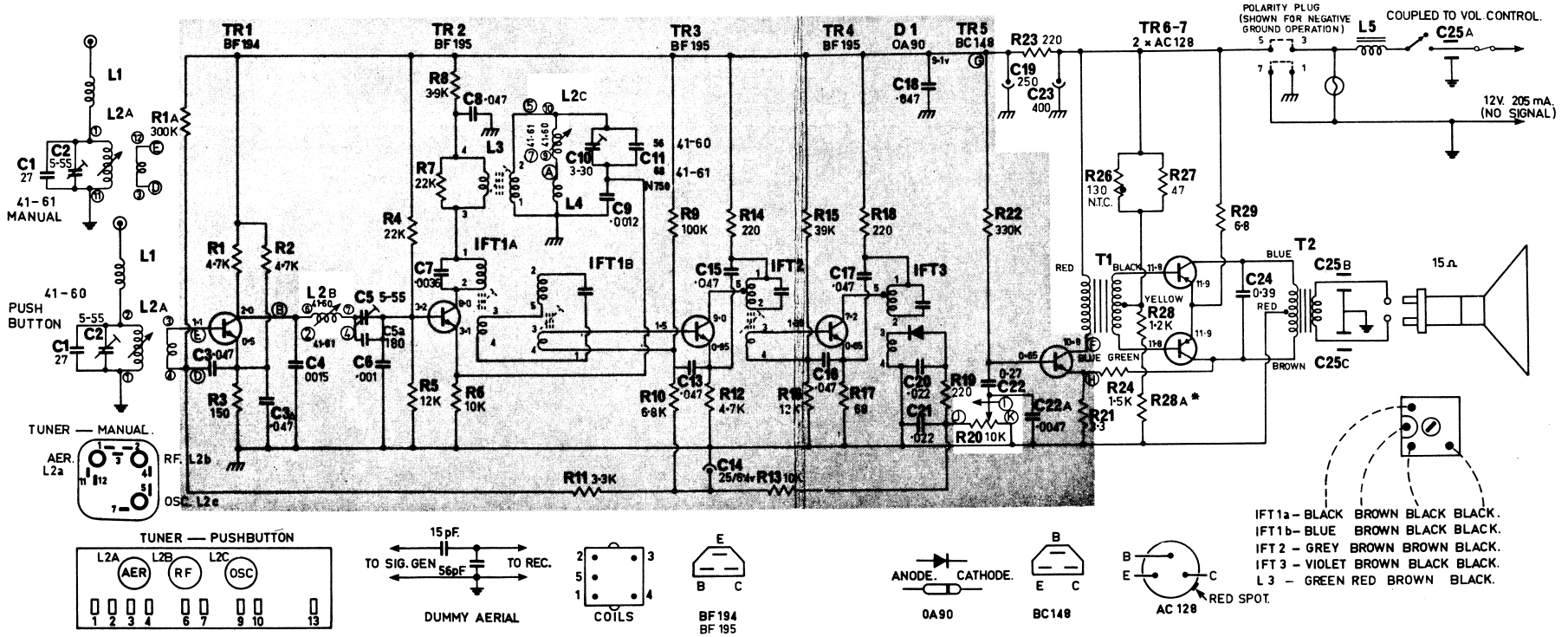
| Cct No. | Value | ±% | VW | Type |
|---|---|---|---|---|
| 1 | 27 | 10 | – | NPO style "C" |
| 2 | 5.55 | – | – | MSP 35130 |
| 3 | .047 | +80-20 | 25 | Redcap style "B" |
| 4 | .0015 | 10 | 400 | Styroseal |
| 5 | 5.55 | – | – | Ducon type CWA/O |
| 5a | 180 | 10 | 600 | Styroseal |
| 6 | .001 | 10 | 400 | " |
| 7 | .0036 | 5 | 50 | " |
| 8 | .047 | +80-20 | 25 | Redcap style "B" |
| 9 | .0015 | 10 | 400 | Styroseal |
| 10 | 68 | 5 | | Redcap style "C" N330 |
| 11 | 3–30 | – | – | Ducon type CW NPO |
| 12 | .25uF | – | 6.4 | Electrolytic |
| 13 | .047 | +80-20 | 25 | Redcap style "B" |
| 14 | " | " | " | " |
| 15 | " | " | " | " |
| 16 | 250uF | – | 16 | Electrolytic |
| 17 | .047 | +80-20 | 25 | Redcap style "B" |
| 18 | .022 | 20 | 25 | " " " |
| 19 | " | " | " | " " " |
| 20 | .27 | +80-20 | " | " " " |
| 21 | 400uF | – | 16v | Electrolytic |
| 22 | .39 | 10 | 160 | Polyester |
| 25a, 25b, 25c | .001 | +100-0 | – | Type CB8/3 |

MISCELLANEOUS ELECTRICAL

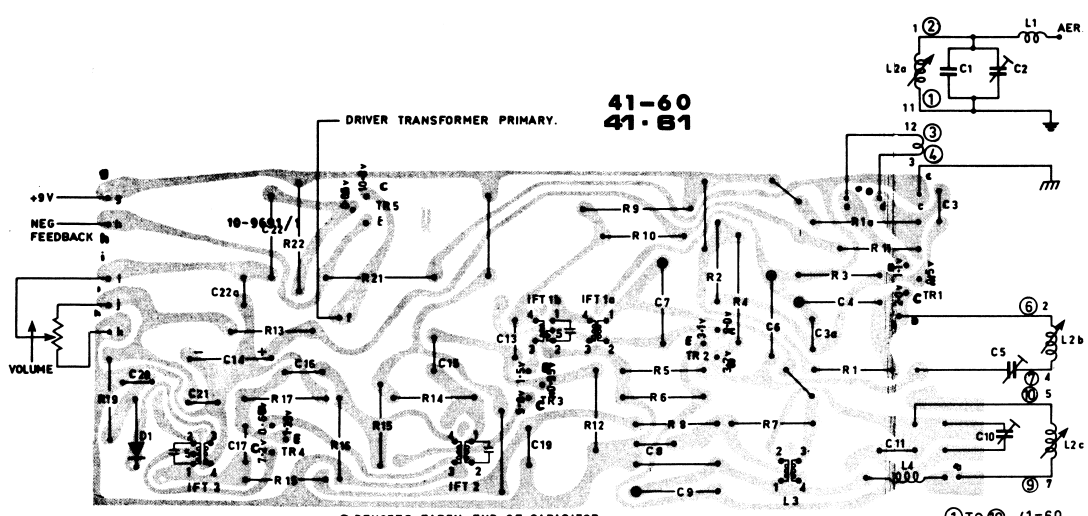
| | |
|---|---|
| Driver Transformer | MSP 18-6194 |
| Output " | MSP 18-6193 |
| Filter Choke | Astor 4048/025/02 |
| Permeability Tuner | 90-9695 |
| 4.7uH R/F Choke | IRC type CLA |
| IFT 1a | CZ651-000 |
| IFT 1b | CZ651-006 |
| IFT 2 | CZ651-007 |
| Osc Shunt Padder | CZ652-005 |
| Series Padder | 14-7068 |

41-59 41-61
MISCELLANEOUS MECHANICAL

| | |
|---|---|
| Polarity Plug | 90-7655 |
| Aerial Socket Lead Assy. | 90-8715 |
| Button Insulator | 20-5528 |
| Pointer Assembly | 90-8670 |
| Dial Lamp | 16v 0.2A |
| Dial Backing Plate | 16-8742 |
| Dial Escutcheon | 90-8789/B(41-59) |
| " " | 90-8789/A(41-61) |
| Dial Scale | 69-9692(41-59) |
| " " | 69-9694(41-61) |
| Control Knobs | 20-8585 |
| Trimmer Knob with spring | 20-6195 |
| Light Guide | 20-8734 |
| Dial Spring | 16-8745 |
| Pulleys Nylon | 20-8296 |
| Pulley Studs | 26-64 |




Ⓐ ENCIRCLED LETTERS INDICATE FLEXIBLE CONNECTIONS TO PRINTED WIRING BOARD.
VOLTAGES MEASURED TO BOARD EARTH WITH NO INPUT SIGNAL & 12 VOLTS SUPPLY & 20,000Ω / VOLT D.C. METER.




● DENOTES EARTH END OF CAPACITOR.
VERTICAL NUMBERS ARE TRANSISTOR ELECTRODE VOLTAGES TO BOARD EARTH.
① TO ⑩ 41-60
1 TO 12 41-61

* VALUE SELECTED TO GIVE 12 mA COLLECTOR CURRENT (NO SIGNAL) AT T2 CENTRE TAP.

**RESISTORS 41-60, 41-61.**

| Cct. No. | Value | Tolerance | Wattage |
|---|---|---|---|
| R1, 2, 12. | 4·7K | ± 10% | ½ |
| R1a | 300K | ± 5% | 1 |
| R3 | 150 | ± 10% | ½ |
| R4, 7 | 22K | " | " |
| R5, 16 | 12K | " | " |
| R6, 13 | 10K | " | " |
| R8 | 3.9K | " | " |
| R9 | 100K | ± 5% | 1 |
| R10 | 6.8K | ± 10% | ½ |
| R11 | 3.3K | " | " |
| R14,18,19,23 | 220 | " | " |
| R15 | 39K | " | " |
| R17 | 68 | " | " |
| R20 | 10K | Volume/On-off | Part No. 32-9697 |
| R21 | 3.3 | ± 10% | ½ W.W. |
| R22 | 330K | ± 10% | 1 |
| R24 | 1.5K | ± 10% | ½ |
| R26 | 130 | Thermistor | B8/320/01/A130E |
| R27 | 47 | ± 10% | ½ |
| R28 | 1.2K | " | " |
| R28a | Refer cct. note | " | " |
| R29 | 6.8 | ± 10% | ½ W.W. |

**CAPACITORS 41-60, 41-61.**

| Cct. No. | Value | Tolerance | Volts Wkg. | Type |
|---|---|---|---|---|
| C1. | 27 | ± 10% | – | NPO Disc. |
| C2 | 5-55 | – | – | MSP 36130 |
| C3, 3a, 8, 13 C15,16,17,18 | .047 | + 80% – 20% | 25 | Ceramic disc |
| C4 | .0015 | ± 10% | 400 | Styroseal |
| C5 | 5-55 | – | – | Ducon CWA/0 |
| C5a | 180 | ± 5% | 630 | Styroseal |
| C6 | .001 | ± 10% | 400 | Styroseal |
| C7 | .0036 | ± 5% | 50v | Styroseal |
| C9 | .0012 | ± 10% | 400v | Styroseal |
| C10 | 3-30 | – | – | Ducon CW.NPO. |
| C11 (41-60) | 56 | ± 5% | – | Ceramic N750 |
| (41-61) | 68 | ± 5% | – | Ceramic N330 |
| C14 | 25µF | – | 6.4 | Electrolytic |
| C19 | 250µF | – | 16 | Electrolytic |
| C20, 21 | .022 | ± 20% | 25 | Ceramic disc |
| C22 | 0.27 | + 80%–20% | 25 | Ceramic disc |
| C22a | .0047 | +80%–20% | 25 | Ceramic disc |
| C23 | 400µF | – | 16 | Electrolytic |
| C24 | 0.39 | ± 10% | 160 | Polyester |
| C25a, b, c | .001 | +100%–0 | – | Ducon CBB/3 |

**MISCELLANEOUS ELECTRICAL**

| Description | | 41-60 | 41-61 |
|---|---|---|---|
| L1 | R.F. Choke | IRC Type CLA | |
| L2a, b, c. | Permeability Tuner | 90-9696 | 90-9695 |
| L3 | Osc. Shunt Padder | CZ652-015 | |
| L4 | Osc. Series Padder | 14-7648 | 14 7068 |
| L5 | Filter Choke | 4048/025/02 | |
| 1FT1a | I.F. Transformer | CZ651-000 | |
| 1FT1b | " " | CZ651-006 | |
| 1FT2 | " " | CZ651-018 | |
| 1FT3 | " " | CZ651-007 | |
| T1 | Driver Transformer | 18-6194 | |
| T2 | Output Transformer | 18-9698 | 18-6193 |

**MISCELLANEOUS MECHANICAL**

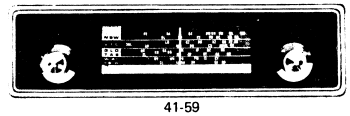
| Description | 41-60 | 41-61 |
|---|---|---|
| Polarity Plug | 90-7655 | |
| Aer. Socket Lead Assy. | 90-8715 | |
| Aer. Lead Clamp. | 36-9689 | |
| Dial Lamp | 12V.0-2A. BA9S (Phillips) | |
| Dial Backing Plate | 16-8688 | 16-8742 |
| Dial Escutcheon | 90-8749 | 90-8789A |
| Dial Scale | 69-9693 (2) | 69-9694 |
| Pointer Assy. | 90-8736 | 90-8670 |
| Light Guide | 20-8733 | 20-8734 |
| Dial Spring | – | 16-8745 |
| Control Knobs | 20-8585 | |
| Trimmer Knob | 20-6195 | |
| Tuner Shield | 16-9709 | – |

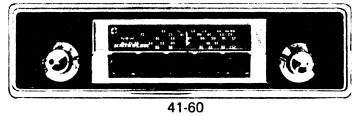
# K8 Kriesler 41-59, 60 & 61

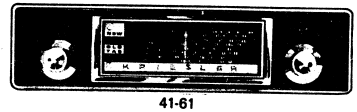
KRIESLER
AUSTRALASIA PTY. LIMITED

CAR RADIO SERVICE MANUAL

**INTRODUCTION:** This manual includes data on models 41-59, 41-60 and 41-61.
Earlier models were covered in:—
Service Manual No. 113, Model 41-58.
Service Manual No. 112, Model 41-57.
Service Manual No. 111 and Errata Sheet, Model 41-56.
Service Manual No. 103, Model 41-49.
Errata Sheet to 41-44, Model 41-44A.
Models 41-48,41-44,41-35 (with variants), 41-33 and 41-30 were covered in manuals identified by their respective model numbers.


41-59


41-60


41-61

**DESCRIPTIONS:**
Model 41-59 is a six-transistor, manually tuned, single unit car-radio.
Model 41-60 is a seven transistor, press-button or manually tuned, single unit car-radio.
Model 41-61 is manually tuned but otherwise basically identical with Model 41-60. Circuit differences are only in the numbering of the variably-tuned r/f circuit numbers; component differences are only in the capacity value of C11 and the inductance value of L4 (which has different Part Numbers).

**FREQUENCY RANGE:** 520 to 1620 KHz. **INTERMEDIATE FREQUENCY:** 455 KHz.

**SUPPLY VOLTAGE:** 12 volts D.C. only, of either polarity. The external polarity plug should be inserted so that the notch on its perimeter lines up with the "+" sign on the case, for supply from a positive-ground car battery; and with the "-" sign for supply from a negative-ground battery.

**CONSUMPTION:** At 12 volts, no signal input:— 41-59, 195mA. 41-60 and 41-61, 215mA.

**SPEAKER:** 15Ω V.C. impedance at 400 Hz. Size and type depend on installation requirements; universal installation kit speaker is 7 x 5 MSP type 750A/15.

**POWER OUTPUT:** 2 watts at 400 Hz (14 volts supply). **WEIGHT:** 3¾ lb.

**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 27pF 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.

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

**DIAL SCALES:** Models 41-59 and 41-61:— One dial scale is fitted, marked with the callsign letters of all stations within an 80 mile radius of, and including, all Australian capital cities.

**MODEL 41-60:** Two dial scales are supplied, marked with the callsign letters of all stations within an 80 mile radius of, and including, all Australian capital cities.
To change dial scales, remove the screw at the lefthand end of the dial lens. Utilising screwhole, pull this end towards you to clear lens aperture. Move lens bodily to the left so that the captive righthand end is clear of the lens aperture. Insert alternative lens in reverse sequence of the foregoing. Note that when inserting, if the lens is accurately lined up with the lens aperture, the lefthand end of the lens will 'click' into position when it is pressed against the mounting-screw hole.

## ALIGNMENT PROCEDURE

| Sig. Generator connected to | Sig. Generator Frequency | Align for Max. Output | Remarks |
|---|---|---|---|
| Converter base through 0.1 uF | 455 KHz | IFT 3 (41-60, 41-61)<br>IFT 2<br>IFT 1B<br>IFT 1A | Tuner core carriage fully out |
| **REPEAT UNTIL MAXIMUM OUTPUT IS OBTAINED** | | | |
| Aerial socket through dummy aerial | 1620 KHz | Osc. Trimmer C10 | Tuner core carriage fully out |
| Aerial socket through dummy aerial | 1500 KHz | R.F. Trimmer C5<br>Aerial Trimmer C2 | Dial pointer at 1500 KHz approx. |
| Aerial socket through dummy aerial | 600 KHz | Padder Coil L3 | Dial pointer at 600 KHz approx. Rock tuner |
| **REPEAT UNTIL CORRECT ALIGNMENT IS OBTAINED, AND DIAL POINTER (RE-SET AS NECESSARY) ACCURACY IS WITH LETTERING LIMITS** | | | |

**SERVICE ACCESS TO COMPONENTS:**

**COVER:** Remove 8 S.T. screws.

**PRINTED WIRING BOARD:** Remove 3S.T. screws from foil side of board. When screwing board back, ensure that the shielded leads are not caught under I.F. transformer cans or other tall components.

**PERMEABILITY TUNER:** Remove 4 S.T. screws securing front of tuner to chassis and lift vertically after disconnecting leads, light guide and manual drive. MODEL 41-60

**VOLUME CONTROL ASSEMBLY:** The chassis has a slotted hole which enables easy withdrawal of this component.

**LIGHT GUIDE:** Lift upwards to disengage from dial lamp bracket and withdraw from front of chassis. When replacing, ensure that the guide projects 5/8" from the dial back plate and that the other end does NOT touch the dial lamp. MODEL 41-60

**DRIVER TRANSFORMER:** Remove printed wiring board and remove 2 S.T. screws securing the transformer assembly to the chassis.

**OUTPUT TRANSFORMER:** As for Driver Transformer but note that a slightly different mounting bracket is used. Models 41-59 and 41-61:— The transformer is soldered to the chassis.

**POWER TRANSISTOR REPLACEMENT:** Should the power transistors require replacing, always use a matched pair and adjust the standing collector current at the output transformer centre tap to 12mA (no signal condition) by connecting an appropriate value of resistance (R20A/41-59, R28A/41-60 or 41-61) in the bias circuit.