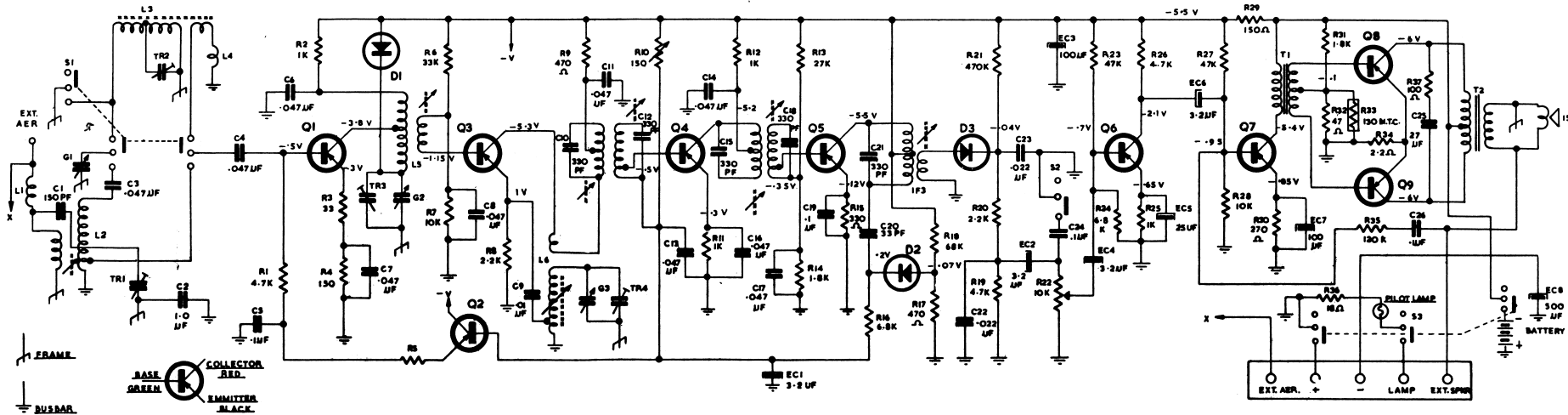


FERRIS ALL TRANSISTOR PORTABLE CAR RADIO MODEL 244-6VOLT



- R1 - 4.7K 10% RESISTOR
- R2 - 1K 10% RESISTOR
- R3 - 33Ω 10% RESISTOR
- R4 - 150Ω 10% RESISTOR
- R5 - 10K 10% RESISTOR
- R6 - 33K 10% RESISTOR
- R7 - 10K 10% RESISTOR
- R8 - 2.2K 10% RESISTOR
- R9 - 470Ω 10% RESISTOR
- R10 - 150K VARIABLE RESISTOR
- R11 - 1K 10% RESISTOR
- R12 - 1K 10% RESISTOR
- R13 - 27K 10% RESISTOR
- R14 - 1.8K 10% RESISTOR
- R15 - 330Ω 10% RESISTOR
- R16 - 6.8K 10% RESISTOR
- R17 - 470Ω 10% RESISTOR
- R18 - 68K 10% RESISTOR
- R19 - 4.7K 10% RESISTOR
- R20 - 2.2K 10% RESISTOR
- R21 - 470K 10% RESISTOR
- R22 - 10K POTENTIOMETER
- R23 - 47K 10% RESISTOR
- R24 - 6.8K 10% RESISTOR

- R25 - 1K 10% RESISTOR
- R26 - 4.7K 10% RESISTOR
- R27 - 47K 10% RESISTOR
- R28 - 10K 10% RESISTOR
- R29 - 150Ω 10% RESISTOR
- R30 - 270Ω 10% RESISTOR
- R31 - 1.8K 10% RESISTOR
- R32 - 47Ω 10% RESISTOR
- R33 - 130Ω N.T.C. RESISTOR
- R34 - 2.2Ω 10% RESISTOR
- R35 - 720K 10% RESISTOR
- R36 - 18Ω 10% RESISTOR
- R37 - 100Ω 10% RESISTOR
- C1 - 150PF 125V STYROSEAL CAP.
- C2 - 1.0UF 200V CAPACITOR
- C3 - .047UF 25V CAPACITOR
- C4 - .047UF 25V CAPACITOR
- C5 - .1UF 25V CAPACITOR
- C6 - .047UF 25V CAPACITOR
- C7 - .047UF 25V CAPACITOR
- C8 - .047UF 25V CAPACITOR
- C9 - .01UF 125V POLYESTER CAP.
- C10 - 330PF 125V CAPACITOR

- C11 - .047UF 25V CAPACITOR
- C12 - 330PF 125V CAPACITOR
- C13 - .047UF 25V CAPACITOR
- C14 - .047UF 25V CAPACITOR
- C15 - 330PF 125V CAPACITOR
- C16 - .047UF 25V CAPACITOR
- C17 - .047UF 25V CAPACITOR
- C18 - 330PF 125V CAPACITOR
- C19 - .1UF 25V CAPACITOR
- C20 - 33PF 125V CAPACITOR
- C21 - 330PF 125V CAPACITOR
- C22 - .022UF 25V CAPACITOR
- C23 - .022UF 25V CAPACITOR
- C24 - .1UF 25V CAPACITOR
- C25 - 27UF 125V CAPACITOR
- C26 - .1UF 25V CAPACITOR
- C27 - 3.2UF 6V ELECTRO
- C28 - 3.2UF 6V ELECTRO
- C29 - 3.2UF 6V ELECTRO
- EC1 - 100UF 6V ELECTRO
- EC2 - 3.2UF 6V ELECTRO
- EC3 - 100UF 6V ELECTRO
- EC4 - 3.2UF 6V ELECTRO
- EC5 - 3.2UF 6V ELECTRO
- EC6 - 3.2UF 6V ELECTRO
- EC7 - 100UF 6V ELECTRO
- EC8 - 500UF 16V ELECTRO

- G1 - 3 GANG TUNING CAPACITOR
- G2 - 200 X 200 PF X 98 PF
- G3 - OSCILLATOR SECTION
- TR1 - 3 PLATE TRIMMER
- TR2 - 2 PLATE TRIMMER
- TR3 - 2 PLATE TRIMMER
- TR4 - 3-30 PF AIR TRIMMER
- S1 - 3 POLE 2 POSITION SWITCH
- S2 - 1 POLE 2 POSITION SWITCH
- S3 - 3 POLE 2 POSITION SWITCH
- L1 - AERIAL CHOKE TYPE 6108
- L2 - AERIAL COIL TYPE 7117
- L3 - ROD AERIAL COIL TYPE 7135
- L4 - FERRITE BEAD CHOKE TYPE 6109
- L5 - RF COIL TYPE 7203
- L6 - OSC. COIL TYPE 7323
- PILOT LAMP
6V .6V

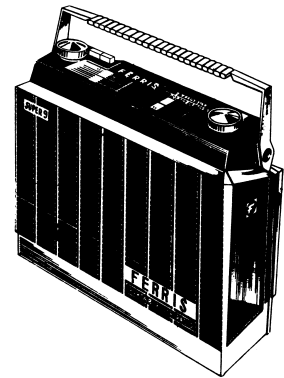
- T1 - DRIVER TRANSFORMER JDR72
- T2 - OUTPUT TRANSFORMER TYPE 432
- IF1 - 455 KC. TRANSFORMER TYPE 9123
- IF2 - 455 KC. TRANSFORMER TYPE 9123
- IF3 - 455 KC. TRANSFORMER TYPE 9121
- Q1 - 2N1637 2N374 AF116
- Q2 - 2N406 AC125
- Q3 - 2N1639 2N374 AF116
- Q4 - 2N1638 2N373 AF117
- Q5 - 2N1638 2N373 AF117
- Q6 - 2N406 AC125
- Q7 - 2N2175 AC126 2N408
- Q8 - AC128 AS128
- Q9 - AC128 AS128
- D1 - 0A90
- D2 - 1N60A
- D3 -

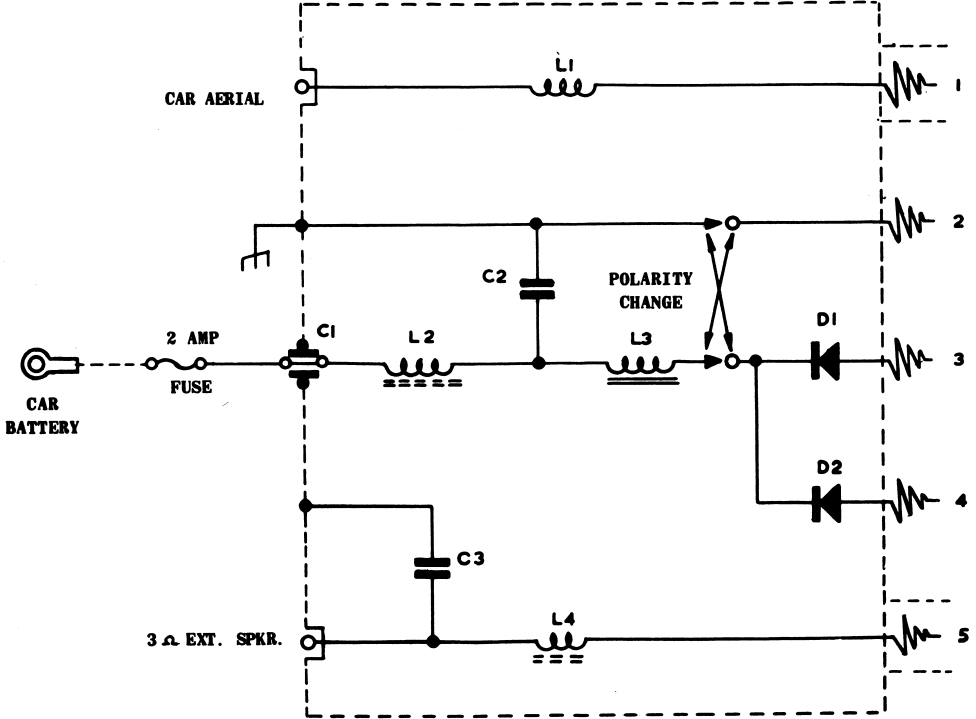
BAND COVERAGE 535 - 1620 KC S
IF FREQUENCY 455 KCS
TOTAL BATTERY CURRENT 13 MA FOR 6V BATTERY
COLLECTOR CURRENT OF O/P STAGE - 2.5 MA

ALL RESISTORS 1/2 WATT UNLESS OTHERWISE
STATED

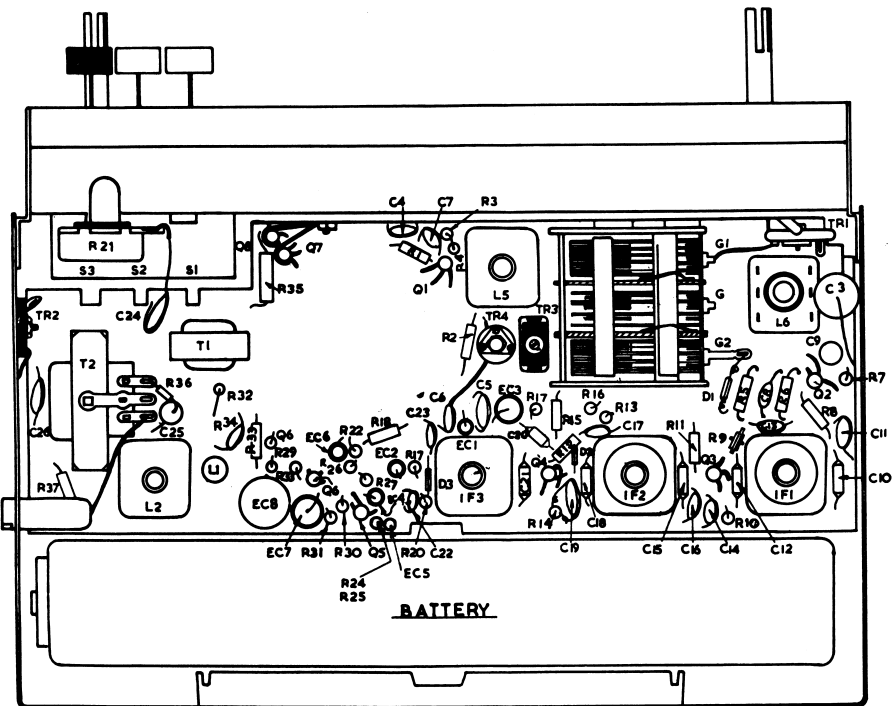
NOTE: ALL VOLTAGES CHECKED WITH 40,000
O.P.V METER AT ZERO SIGNAL INPUT.

**DO NOT OPERATE SET WITHOUT
SPEAKER CONNECTED.**





- C1 - .005 UF BUTTON CERAMIC CAPACITOR
- C2 - .1 UF 125V POLYESTER CAPACITOR
- C3 - .047 UF 25V CAPACITOR
- L1 - AERIAL FILTER CHOKE TYPE 6108
- L2 - RF CHOKE TYPE R859
- L3 - LF FILTER CHOKE TYPE 8117
- L4 - FERRITE BEAD CHOKE TYPE 6109
- D1, D2- SILICON DIODE TYPE BS1 OR HR10

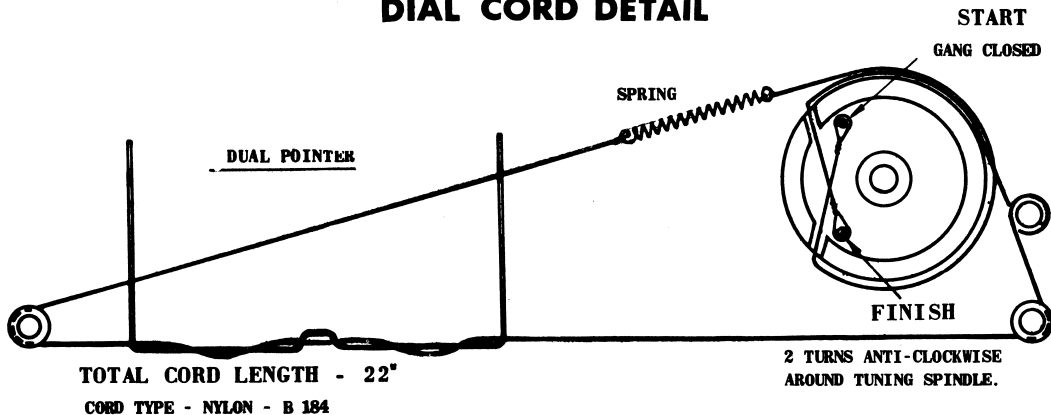


**FRONT VIEW OF SET
SHOWING COMPONENT LAYOUT**

DIAL CORD REPLACEMENT

Remove canopy and dial scale as previously described. Re-string dial in accordance with diagram. The dual pointer is attached by wrapping the dial cord around the crank formation along its carriage section. Calibration is achieved by sliding the pointer along the cord as required. The pointer can be lifted to vertical position to allow easy assembly of the dial backplate and scale. Ensure that the felt friction wads are correctly positioned against the edge of the dial scale before replacing the canopy.

DIAL CORD DETAIL



ALIGNMENT PROCEDURE

For all alignment operations, connect the low side of the signal generator to the frame or case and keep the generator output as low as possible to avoid AVC action. Set volume control at maximum.

NB - Use proper alignment tool for making adjustments. Cores are easily broken by improper handling, making replacement of entire coil or transformer necessary. Set aerial switch to "DOWN" position.

STEP	Connect Sig. Gen. to	Tune Sig. Gen. to	Tune Receiver to	Adj. for Max. Output
1	Base of 2N1699 via .1 uf capacitor	455 KC/S	Gang fully open " " "	IF3 (one slug)
2				IF2 (all slugs on
3				IF 1 outer peaks.)
4	Repeat above adjustments until no further increase can be obtained.			
5	Aerial socket via dummy aerial	525 KC/S	Gang fully closed	Osc. coil slug (L6)
6		1620 KC/S	Gang fully open.	Osc. Trimmer TR4
7	Repeat steps 5 and 6 until band limits are 525 - 1620 KC/S			
8	Aerial socket via dummy aerial	550 KC/f1	550 KC/S	* RF Coil slug (L5)
9		1400 KC/f1	1400 KC/S	* Aer. coil slug (L2) TR1 and TR3

* Rock gang back and forth through signal.
Repeat steps 8 and 9 till no further increase can be obtained.
Check sensitivity at 1400, 900 and 550 KC/f1.

Ferrite Rod Alignment: Place set in normal operating position with canopy removed.
Set aerial switch to "UP" position.

STEP	Connect Sig. Gen. to	Tune Sig. Gen. to	Tune Receiver to	Adj. for Max. Output
1	To aerial socket via dummy aerial (see note)	1400 KC/S	1400 KC/S	TR2
2	"	550 KC/S	550 KC/S	Slide windings (L3) along Ferrite slab.

Repeat 1 and 2 until no further increase can be obtained.

NOTE - When aligning the rod aerial as described, the output from the signal generator needs to be in the order of 0.3 - 1 mv, as it is only loosely coupled to the set via the capacity of the aerial