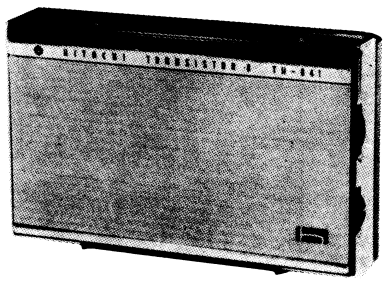
HITACHI TRANSISTOR
PORTABLE RADIO
MODEL TH-841



SPECIFICATIONS

CIRCUIT SYSTEM .....8-transistor superheterodyne
TUNING RANGE .....535~1,605 kc
TRANSISTOR COMPLEMENT....2SA357 Frequency mixer
2SA357 Local oscillator
2SA151 1st I.F. amp.
2SA356 2nd I.F. amp.
2SB77 1st A.F. amp.
2SB75 2nd A.F. amp.
2SB156×2 Push-pull class-B power amp.
GERMANIUM DIODE.....1N34A×2 Detector & AGC
VARISTOR.....HV-15 Temperature and voltage compensator

SPEAKER .....2½" P.M.
POWER OUTPUT .....180 mW (undistorted)
230 mW (maximum)
BATTERY.....Two cells, 1½ volts each (Hitachi UM-2 or equivalent)
POWER CONSUMPTION ....20 mA, without signals applied
BATTERY LIFE.....Approx. one month (2 hours per day)
ANTENNA .....Ferrite core antenna built-in, auxilliary antenna wire attached
EARPHONE.....One earphone jack (one earphone, Hitachi magnetic earphone EL-216 is provided)
DIMENSIONS.....3⅞" H, 6⅝" W, 1⅜" D
WEIGHT .....Approx. 1⅜ lbs. (including batteries)

ALIGNMENT PROCEDURE

1. Use batteries having the specified voltage. Voltage, when the switch is turned on (with no signal), must not less than 2.8 V.
2. Turn the volume control to maximum, make 400 c/s or 1,000 c/s modulation to signal generator and connect the output of signal generator to the receiver chassis.
3. Connect the vacuum-tube voltmeter (with an AC 3 V or less scale) to the earphone jack. Make adjustments of the following tables to gain maximum on voltmeter.
4. In alignment, adjust the output of the signal generator so that the reading of voltmeter may not exceed 0.5 V at maximum.
5. When adjustments is over, fix the antenna coils by waxing and the adjusted cores with white lacquer.

Adjustment of Intermediate Frequency Circuit

Step	Turn Band-Switch to—	Sig. Gen. Output	Dial Pointer Setting	Adjust for Max. Output
ⓐ	MW	455 kc	Gang fully open	T_3
ⓑ		455 kc	Gang fully open	T_2
ⓒ		455 kc	Gang fully open	T_1
ⓓ		Repeat steps ⓐ, ⓑ and ⓒ		

Adjustment of Radio Frequency Circuit

Step	Turn Band-Switch to—	Sig. Gen. Output	Dial Pointer Circuit	Adjust for Max. Output
ⓔ	MW	520 kc	Gang fully close	L_2
ⓕ		1,650 kc	Gang fully open	C_{10}
ⓖ		Repeat steps ⓔ and ⓕ		
ⓗ		600 kc	600 kc signal	L_1 coil's position
①		1,400 kc	1,400 kc signal	C_7
②		Repeat steps ⓗ and ①		

HOW TO LOOP DIAL CORD

1. After the dial mechanism was assembled, turning the tuning control clockwise, set the dial pointer to the lowest position.
2. Tie an end of the nylon cord to the position ② of spring ①.
3. Set the spring according to the dimensions specified, and pass the cord through PULLEY ③ and PULLEY ④. Then pass it through the slot and the race of the tuning control. Wind the cord one and a half turns on the race, and pass it through PULLEY ⑤. Then giving a tension of 150 gr., tie its end to the position ⑥ of spring ① and fix it with a clip. (Apply the adhesive on the knots.)
4. Turn the control 180 degree in the opposite direction. Apply adhesive on its inner side.
5. Turn the tuning control counterclockwise, and mount the pointer on the position indicated on the chassis. Apply adhesive on the contact point of the cord and the pointer.

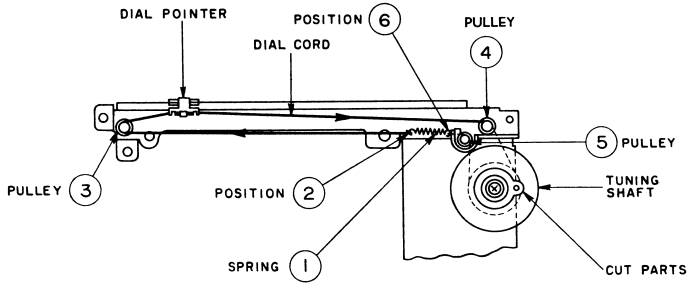
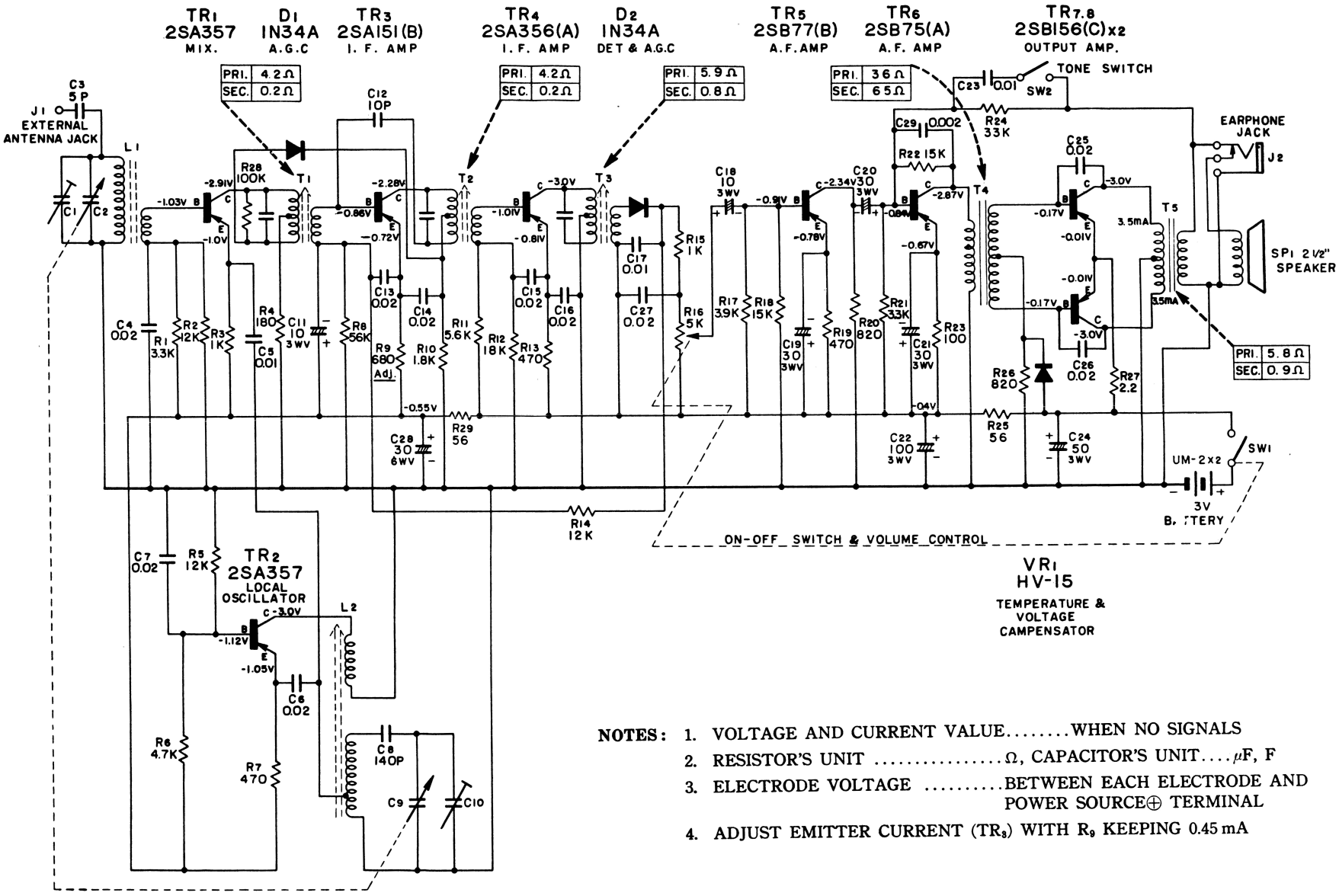


Fig. 3. Dial Cord and Pointer Mechanism

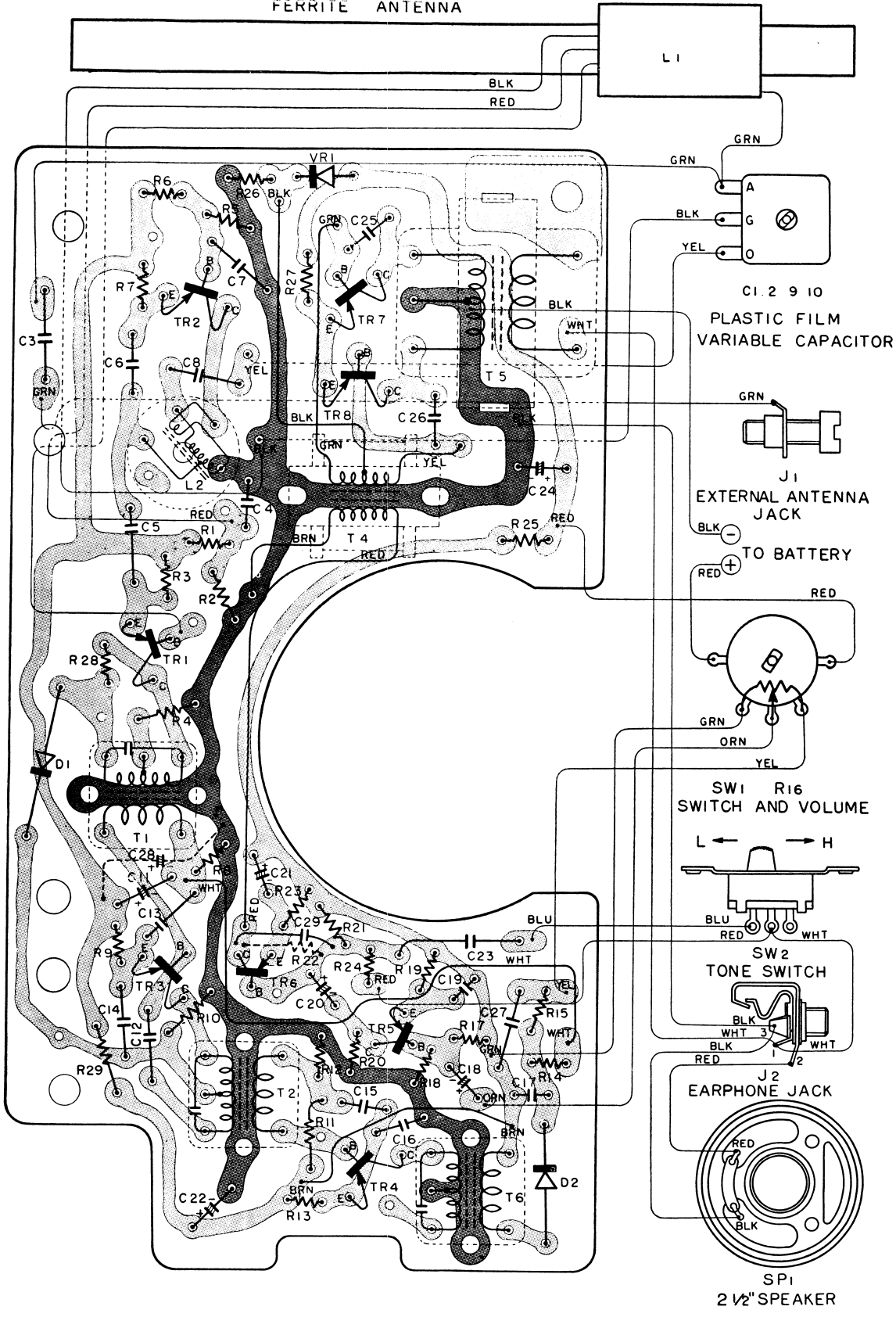
CIRCUIT DIAGRAM TH-841

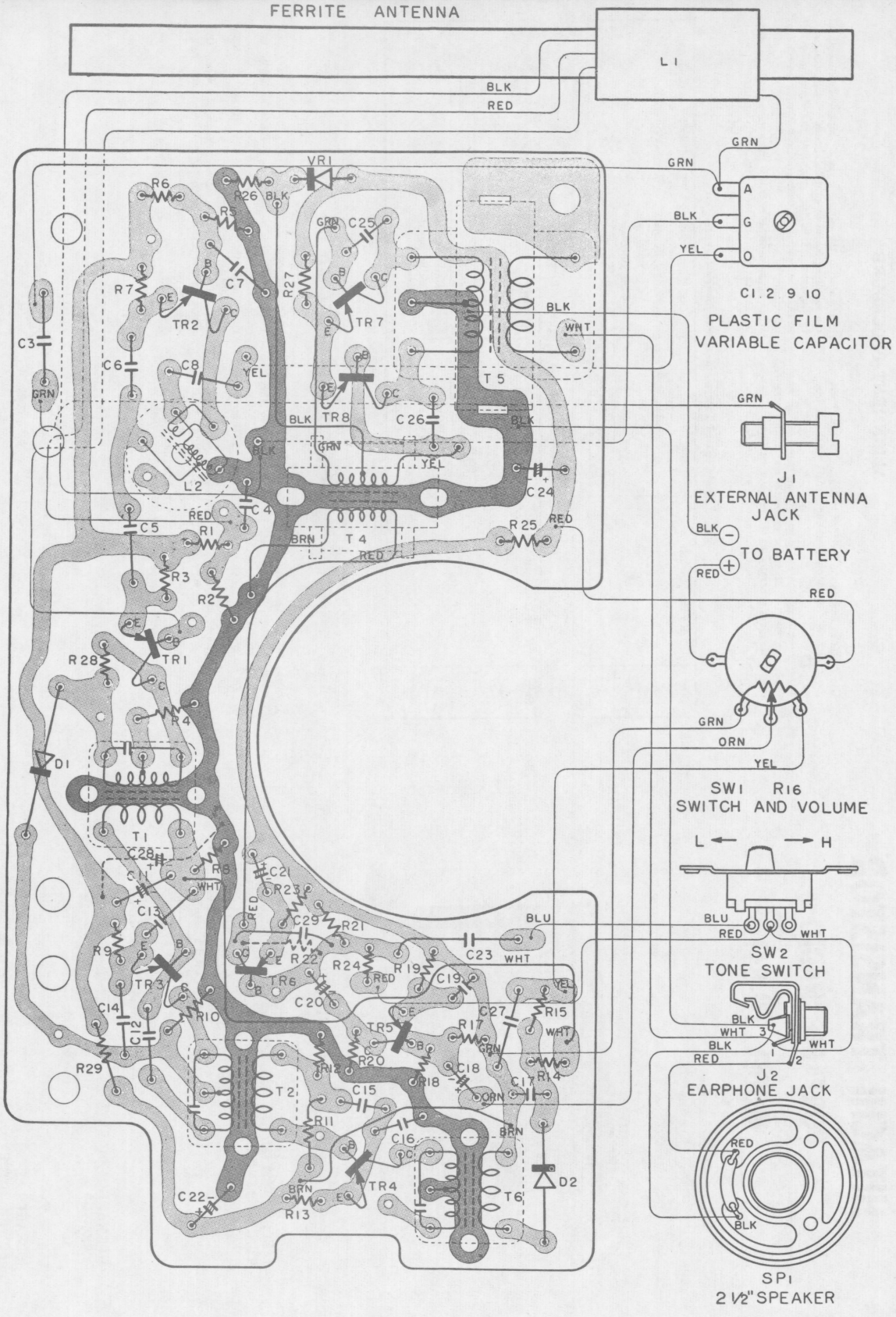
HITACHI TH-841



NOTES:

1. VOLTAGE AND CURRENT VALUE.....WHEN NO SIGNALS
2. RESISTOR'S UNIT .....Ω, CAPACITOR'S UNIT....μF, F
3. ELECTRODE VOLTAGE .....BETWEEN EACH ELECTRODE AND POWER SOURCE⊕ TERMINAL
4. ADJUST EMITTER CURRENT (TR_8) WITH R_9 KEEPING 0.45 mA


FERRITE ANTENNA
L1
BLK
RED
GRN
A
G
O
C1 2 9 10
PLASTIC FILM
VARIABLE CAPACITOR
J1
EXTERNAL ANTENNA
JACK
BLK
TO BATTERY
RED
SW1 R16
SWITCH AND VOLUME
L
H
SW2
TONE SWITCH
J2
EARPHONE JACK
SP1
2 1/2" SPEAKER
VR1
R6
R26
R7
C7
TR2
R27
C25
TR7
C3
C6
C8
YEL
T5
TR8
C26
WHT
L2
C4
C24
C5
R1
T4
R25
R3
R2
TR1
R28
R4
D1
T1
C28
C11
R8
C13
C21
R23
C29
R21
C23
R9
TR3
R22
R24
R19
C19
TR6
C20
C14
C12
R10
TR5
R17
C27
R15
R29
R20
C18
R18
R14
T2
C15
C17
R11
C16
D2
C22
R13
TR4
T6


FERRITE ANTENNA
L1
BLK
RED
GRN
GRN
A
BLK
G
YEL
O
C1.2.9.10
PLASTIC FILM
VARIABLE CAPACITOR
BLK
WHT
T5
GRN
J1
EXTERNAL ANTENNA
JACK
BLK
TO BATTERY
RED
RED
GRN
ORN
YEL
SW1 R16
SWITCH AND VOLUME
L
H
BLU
RED
WHT
SW2
TONE SWITCH
BLK
WHT
3
1
2
WHT
BLK
RED
J2
EARPHONE JACK
RED
BLK
SP1
2 1/2" SPEAKER
VR1
R6
R26
BLK
R5
GRN
C25
R27
C7
R7
TR2
TR7
C3
C6
C8
YEL
TR8
C26
BLK
GRN
YEL
L2
C24
C4
C5
RED
R1
BRN
T4
RED
R25
RED
R3
R2
TR1
R28
R4
D1
T1
C28
C11
C13
R8
WHT
C21
R23
RED
C29
R21
BLU
C23
WHT
R9
R22
R24
R19
C19
TR6
TR3
C20
YEL
C14
C12
R10
C27
R15
TR5
R17
WHT
GRN
R29
TR12
R20
C18
R18
R14
C17
ORN
T2
C15
R11
C16
BRN
TR4
T6
D2
C22
BRN
R13