



SERVICE MANUAL

AM CAR RADIO

MODEL : AR-6450S



SPECIFICATIONS

Circuit System:

Superheterodyne with RF amplifier

Tuning Range:

530~1605 KHz

Intermediate Frequency:

455 KHz

Power Output:

Maximum 10W

Power Source:

21.6 V ~ 31.2 V Negative ground only

Current Consumption:

0.16 ~ 0.65 A at 26.4 V

Shaft Distance:

124 mm (4-22/32")

IC:

1

Diodes:

5

Transistors:

4

Outside Dimensions:

W 100 mm (6½")

H 50 mm (2")

D 86 mm (3-25/64")

Weights:

0.95 kg (2.1 lbs)

MITSUBISHI ELECTRIC CORPORATION

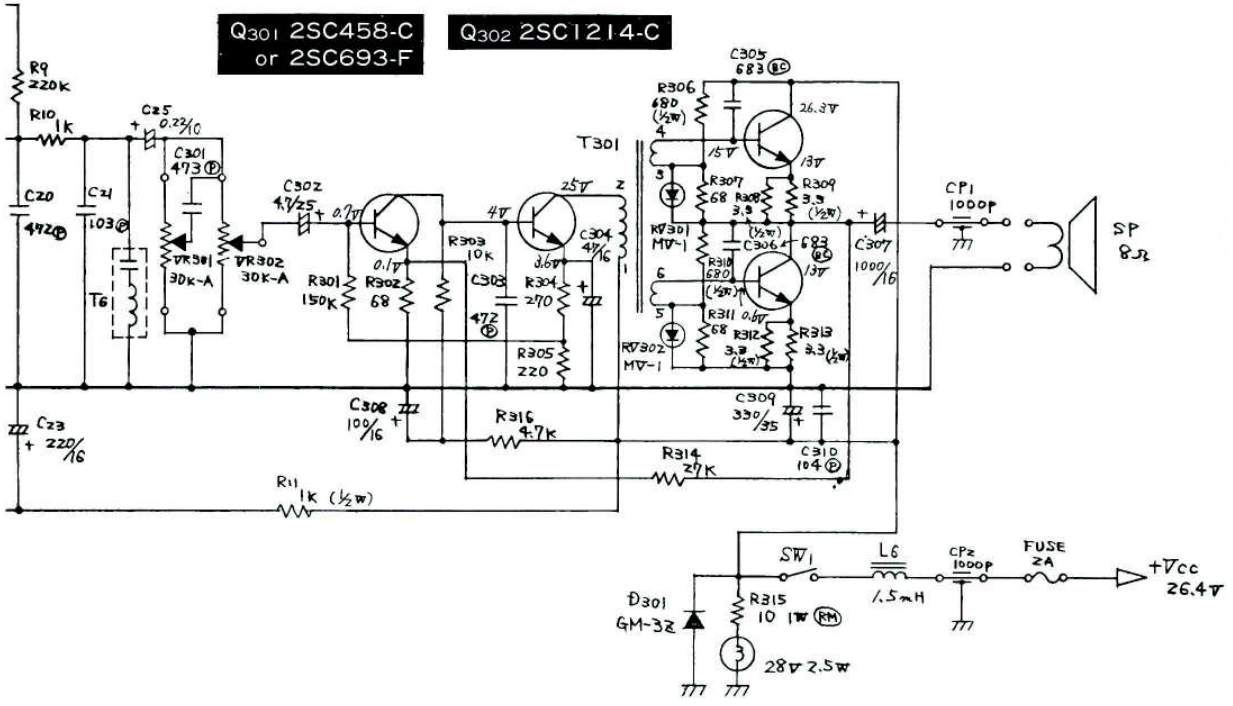
Head Office : 2-3 Marunouchi 2-Chome, Chiyodaku, Tokyo, Japan Cable Address : MELCO TOKYO

DIAGRAM R-6450S

Q303,304 2SC1061-C
or 2SD313-E

Q301 2SC458-C
or 2SC693-F

Q302 2SC1214-C



ALIGNMENT PROCEDURES

Procedures	Circuit	Signal generator connection	Signal generator frequency	Radio dial setting	Indicator connection	Adjust	Remarks
1	IF circuit	Fig. 1	455 KHz (400 Hz Mod.)	Point of noninterference near 1600 KHz	Fig. 2	T ₃ , T ₂	Try to equalize the degree of diminution near ±3 KHz
2						T ₄ , T ₅	
3						Repeat procedures 1 - 2	
4	Oscillation circuit and RF circuit	Fig. 3	1630 KHz	High freq. end stop	"	VC ₃	Tune in
5			510 KHz	Low freq. end stop	"	T ₁	Tune in
6					"	Repeat procedures 4 - 5	
7			1400 KHz	1400 KHz		VC ₂ VC ₁	Adjust VC ₁ , VC ₂ and get the maximum voltage of the output.
8			600 KHz	600 KHz	"	T ₁	Turn T ₁ gradually and find the maximum sensitivity near 600 KHz
9					"	Repeat procedures 7 - 8	Check the range of the frequency of the received wave. This is the end of the adjustment.

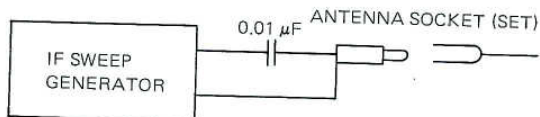


Fig. 1

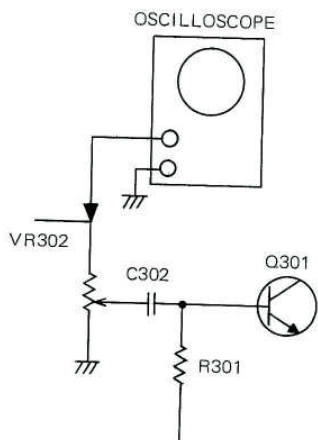


Fig. 2

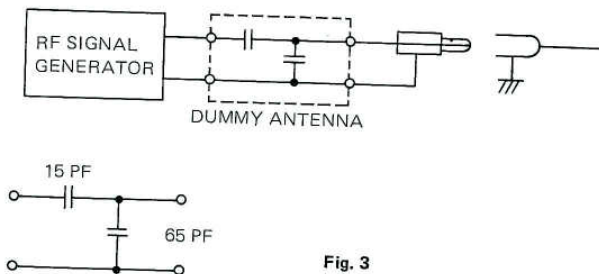
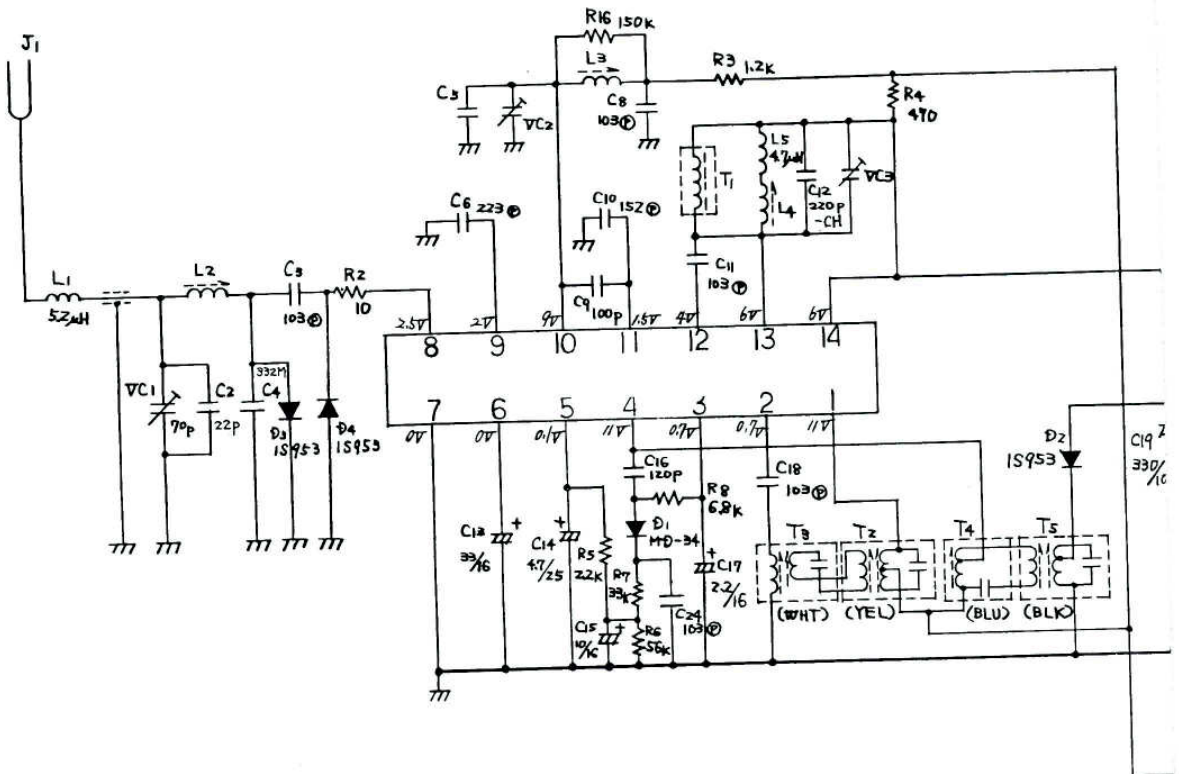


Fig. 3

SCHEMATIC MODEL :

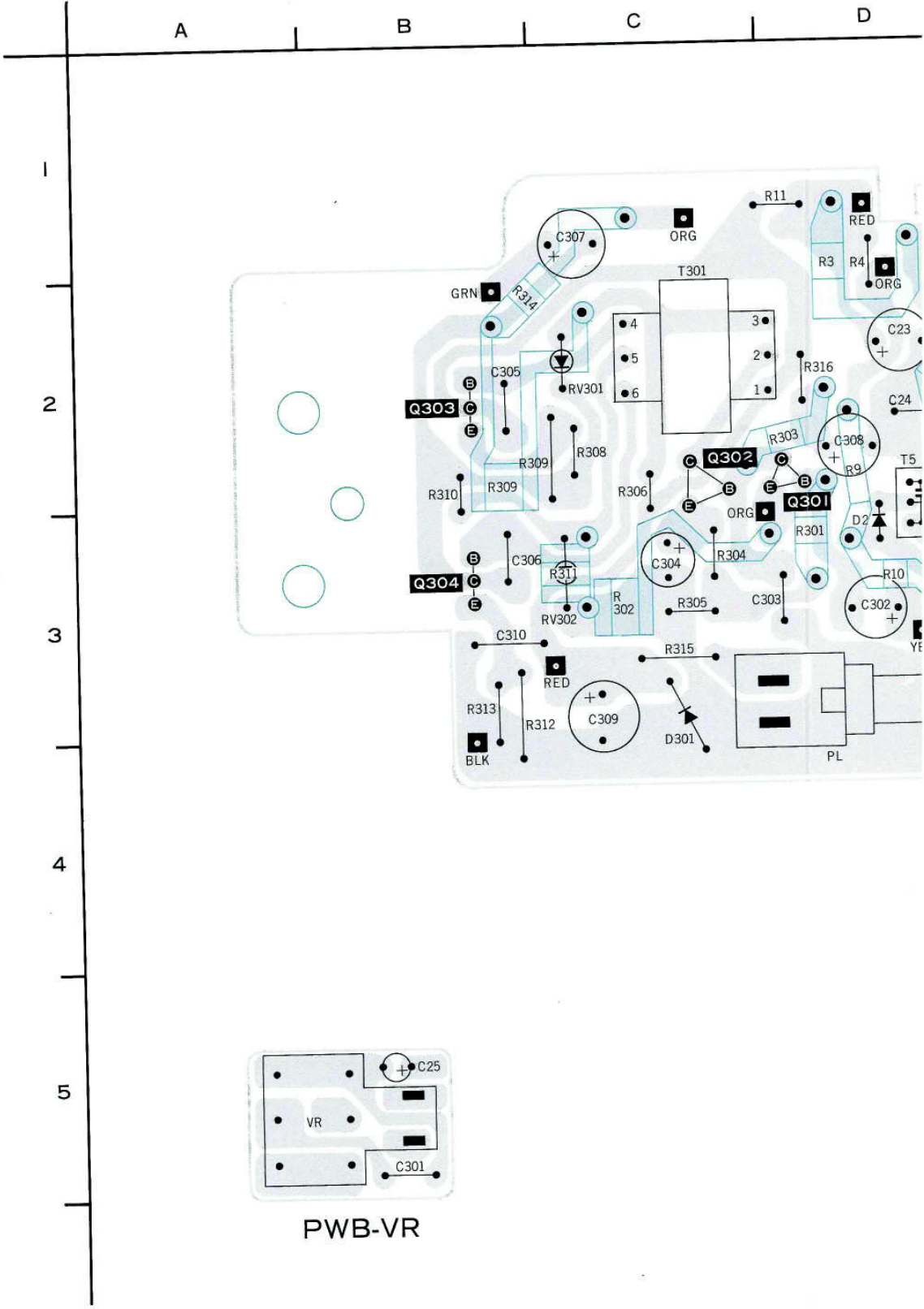
IC1 μ PC1171C



NOTICE

1. All resistors are ohms unless otherwise specified K=10³ohm, M=10⁶ohm.
2. All capacitors are microfarads unless otherwise specified P=10⁶ microfarad.
3. Expression of resistors.
 - Kinds (RC) mark Composition resistor
 - No mark Carbon resistor
 - Watt No indication = 1/4W
 - Permission-difference
 - J= ±5% No indication= ±10%
4. Expression of capacitors
 - Kinds (P) mark Polyester film capacitor
 - (S) mark Styrol capacitor
 - (BC) mark Ceramic capacitor type BC
 - (ML) mark Polypropilene film capcitor
 - No mark Ceramic capacitor
 - Permission-difference
 - J= ±5%, K= ±10%, M= ±20%
5. Each terminal-voltage taken with circuit tester at the minimum position of volume control when no signal is given.
6. Supply voltage maintained at rated value for voltage readings.(13.5V)

PRINTED CIRCUIT MODEL

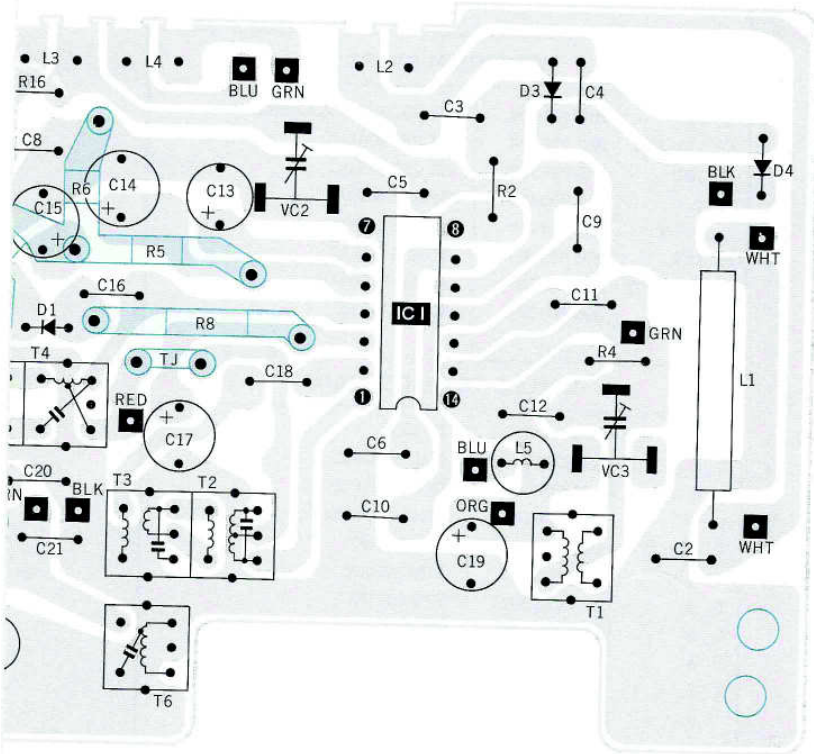


BOARD (Pattern Side) : AR-6450S

E

F

G



PWB

PARTS LIST MODEL AR-6450S

REF. No.	PART No.	DESCRIPTION
RESISTOR & CAPACITORS		
VR301, 302	122 L06603	VR-DOUBLE SHAFT
CP 1 ~ 3	189 P05402	C-CERAMIC 1000 PF
VC1	202 L00502	C-TRIMMER
VC2, 3	202 P10401	C-TRIMMER
SEMICONDUCTORS		
Q 301	260M01003	TR 2SC693-F/2SC458-C
Q 303, 304	260 P28504	TR 2SC1061-C
Q 302	260 P31303	TR 2SC1214-C
D 1	264 P00401	DIODE MD34
D 2 ~ 4	264 P11701	DIODE 1S953
D 301	264 P13201	DIODE GM-3Z
RV 301, 302	265 P03301	VARISTOR MV-1
IC 1	266 P01201	IC UPC1171C
COILS & TRANSFORMERS		
	295K05603	TUNER
L 5	351 D02103	COIL CHOKE
L 1	351 L00103	COIL CHOKE
L 6	351 P00105	TRANS CHOKE
T 301	353 P01303	TRANS IPT
T 1	373M00101	TRANS OSC
T 3	374 L01201	TRANS IF
T 2	374 L01202	TRANS IF
T 4	374 L01203	TRANS IF
T 5	374 L01204	TRANS IF
T 6	374 L01501	TRANS TRAP
OTHERS		
	253 L00803	ASSY LAMP
	449D00302	SOCKET ANT
	452 L04102	CONNECTOR
	560K09301	CHASSIS
	590K23101	UPPER COVER
	590 L81901	FRONT COVER
	590M69302	POINTER
	591M68801	HEAT SINK
	642M10603	INSULATOR PLATE
	704M13902	SHAFT TRIMMER
	768M05102	BACK PLATE