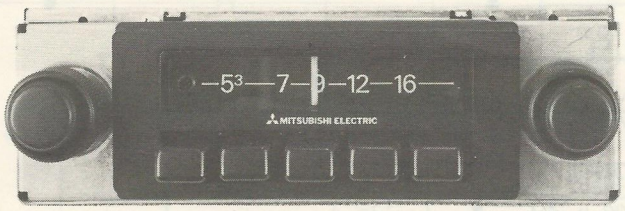
# MITSUBISHI

# SERVICE MANUAL

# AM CAR RADIO

**MODEL : AR–3500E**




## 1. Features

- All monocyclic IC, High RF and Power performance and 2-IC.
- Improved high input property.

## 2. Rating

| | |
|---|---|
| Receiving frequency: | 525 – 1605 KHz |
| Intermediate frequency: | 455 KHz |
| Maximum sensibility: | 25 dB/μV Max. (Output 1W) |
| Maximum output: | 5.0W Min. |
| Output impedance: | 4 ohm |
| Power source: | 13.2V ± 2.4V |
| Weight: | 0.7 kg |
| Dimensions: | 160(W) x 50(H) x 80(D) mm |

**MITSUBISHI ELECTRIC CORPORATION**

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

# SCHEMATIC DIAGRAM

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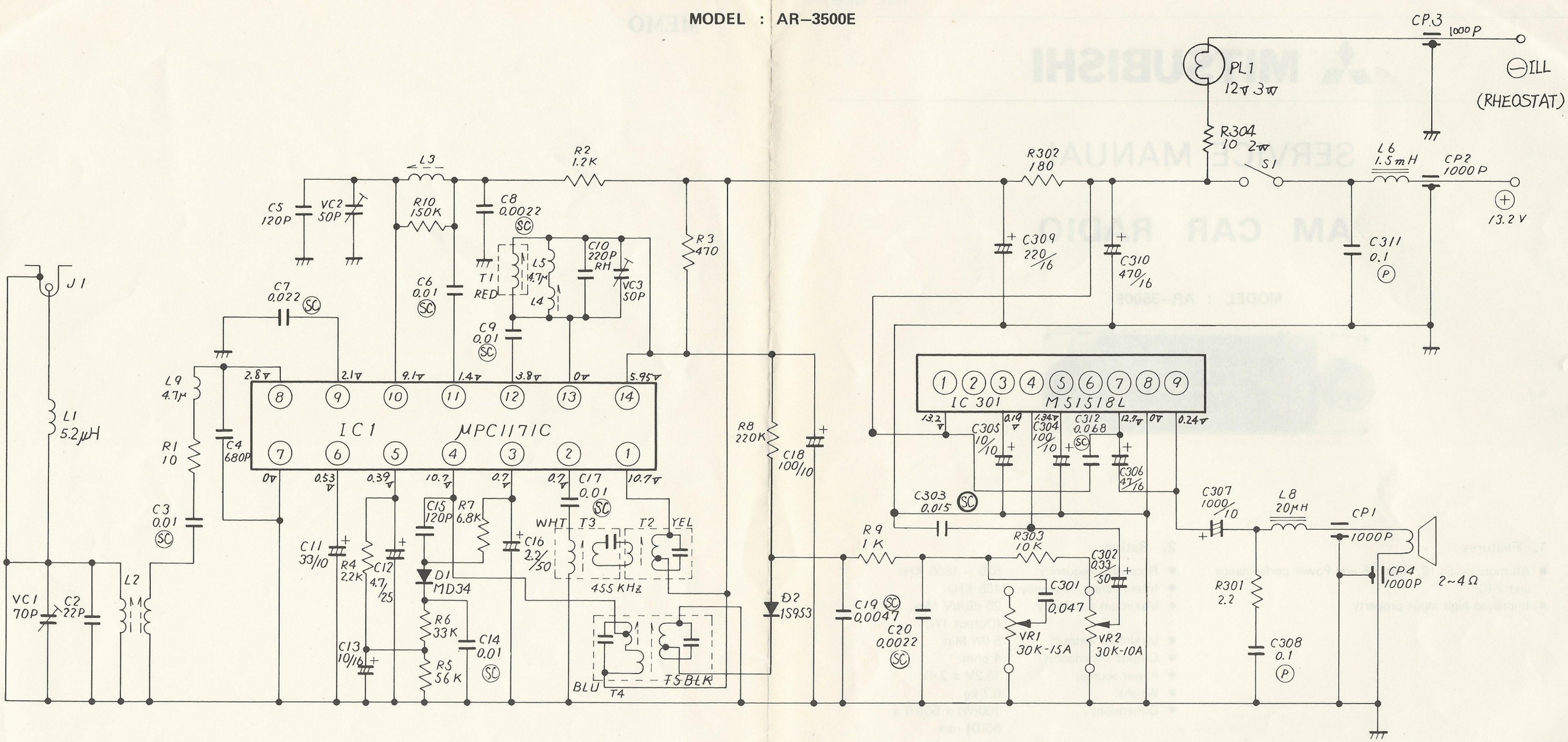



NOTICE:

1. **Indication**
   - All resistors are ohms unless otherwise specified. (K = $10^3$ ohm, M = $10^6$ ohm).
   - All capacitors are microfarads unless otherwise specified. (P = $10^{-6}$ microfarad)

2. **Resistors**
   - Kinds: Carbon resistor: No mark
     Solid resistor: (S) mark
     Printed resistor: mark
     Tip resistor: mark
   - Wattage: No indication = 1/4W. Other wattage will be indicated.
   - Tolerance

| Mark | Tolerance |
|---|---|
| J | ±5% |
| K | ±10% |

3. **Capacitors**
   - Types: Ceramic condenser: No mark
     Semiconductor ceramic condenser: (BC) mark
     Polyester film condenser: (P) mark
     Styrol condenser: (S) mark
     Tantalic condenser: (T) mark
     Aluminum electrolytic condenser: (Al) mark
     Tip condenser: mark
   - Tolerance

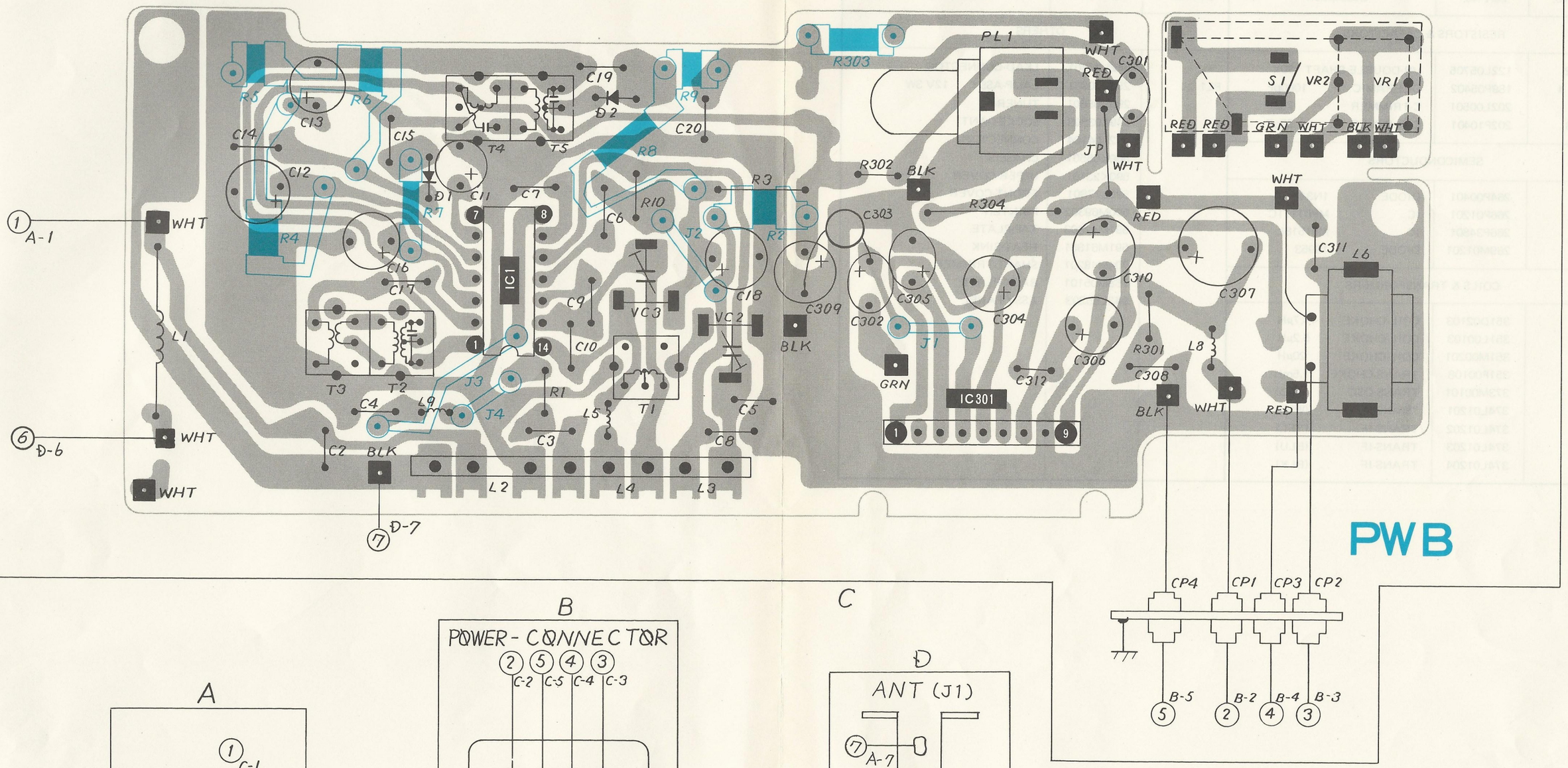
| Mark | Tolerance | Mark | Tolerance |
|---|---|---|---|
| C | ±0.25PF | M | ±20% |
| D | ±0.5PF | Z | +80% −20% |
| J | ±5% | No mark | +100% −0 |
| K | ±10% | | |

4. **Voltage Measurements**
   Voltage measurment made with D.C. voltmeter (20 KΩ/V DC) to chassis ground with no signal input (Source voltage 13.2V).

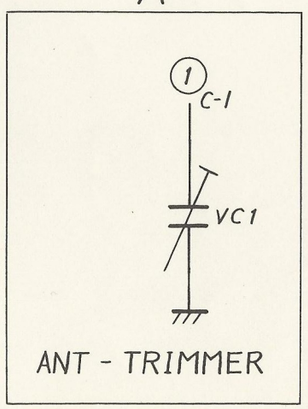
5. **This circuit is subject to change for improvement without notice.**

# PRINTED CIRCUIT BOARD

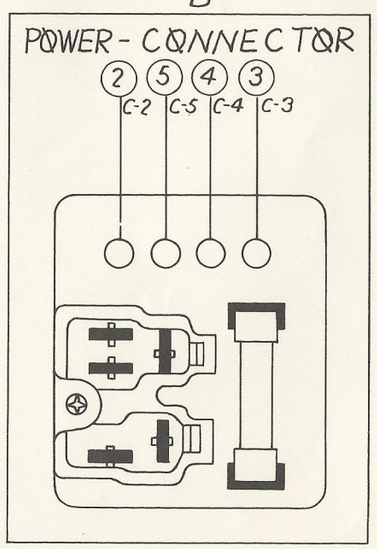
**MODEL : AR–3500E**




A

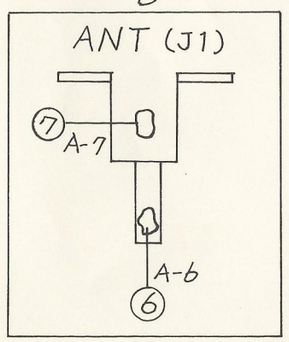



B




C

D




Note: How to identify the connecting terminals on the solid wiring drawing.
(Four blocks of A, B and C.D).

Example: (1) A-1

- Number inside the block to be connected.
- Block to be connected.
- Terminal number inside the respective block.

# PARTS LIST

## AR–3500E

| Ref. No. | Part No. | Description |
|---|---|---|
| RESISTORS & CAPACITORS | | |
| VR1, 2 | 122L05705 | VR-DOUBLE-SHAFT 30K |
| CP1 ~ 4 | 189P05402 | C-CERAMIC 1000pF |
| VC1 | 202L00501 | C-TRIMMER 70pF |
| VC2, 3 | 202P10401 | C-TRIMMER 50pF |
| SEMICONDUCTORS | | |
| D1 | 264P00401 | DIODE 1N34A |
| IC1 | 266P01201 | IC MPC1171C |
| IC301 | 266P34801 | IC M51518L |
| D2 | 269M01201 | DIODE 1S953 |
| COILS & TRANSFORMERS | | |
| L5, 9 | 351D02103 | COIL-CHOKE 4.7μH |
| L1 | 351L00103 | COIL-CHOKE 5.2μH |
| L7, 8 | 351M00201 | COIL-CHOKE 20μH |
| L6 | 351P00108 | TRANS-CHOKE 1.5mH |
| T1 | 373M00101 | TRANS-OSC (RED) |
| T3 | 374L01201 | TRANS-IF (WHT) |
| T2 | 374L01202 | TRANS-IF (YEL) |
| T4 | 374L01203 | TRANS-IF (BLU) |
| T5 | 374L01204 | TRANS-IF (BLK) |

| Ref. No. | Part No. | Description |
|---|---|---|
| OTHERS | | |
| | 242L37301 | LEAD-CONNECTOR |
| PL1 | 253L00801 | LAMP-ASSY 12V 3W |
| | 295K05601 | TUNER |
| | 449L03803 | SOCKET-ANT |
| | 452L04104 | CONNECTOR |
| | 560K08501 | CHASSIS |
| | 590K23101 | UPPER-COVER |
| | 590L77801 | FRONT-COVER |
| | 590M69302 | POINTER |
| | 591M42603 | TAP-PLATE |
| | 591M61801 | HEAT-SINK |
| | 704M48201 | SHAFT-TRIMMER |
| | 768M05101 | BACK-PLATE |
| | 943L55203 | ASSY-PANEL |