

www.freeservicemanuals.info 5/4/2013

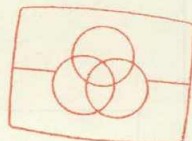
# SERVICE MANUAL

MODEL NO.

CARRY COMPONENT SYSTEM  
CA-100



Code No. 37-100-000-18



Free service manuals  
Gratis schema's  
Digitized by

TYPE. E, K

www.freeservicemanuals.info

DATE OF ISSUE 7/1982

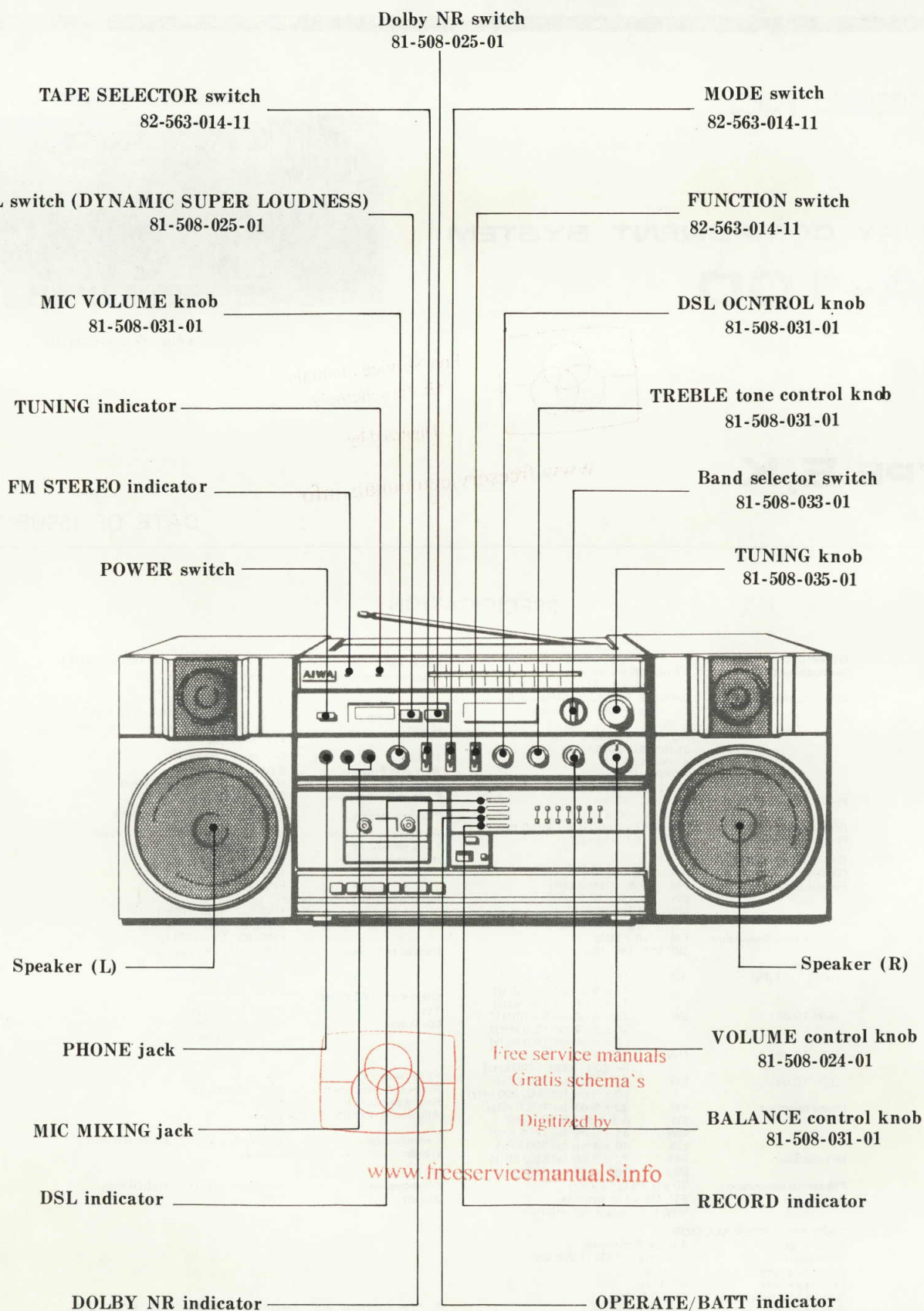
## SPECIFICATION

|                              |                                                                                                                                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>GENERAL</b>               |                                                                                                                                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Semiconductors:              | 13 ICs, 36 transistors, 25 diodes, 20 LED                                                                                                                                     |                                                                              | Noise level:                                                                                                                                                                                                                                                                                                                                                                                                                                 | Less than 1.25/1.6 mV (DC/AC, MIN.)                                                 |
| Power source:                | Batteries, DC13.5V (SUM-1 x 9)<br>Car battery (thru car adaptor)<br>E model<br>AC110 ~ 120/220 ~ 240V<br>Switchable 50/60 Hz<br>K model<br>AC120V/240V<br>Switchable 50/60 Hz |                                                                              | Frequency response:                                                                                                                                                                                                                                                                                                                                                                                                                          | 30 ~ 16,000 Hz (METAL)<br>30 ~ 14,000 Hz (CrO <sub>2</sub> )<br>30 ~ 13,000 Hz (LH) |
| Power consumption:           | E model 77W<br>K model 90W                                                                                                                                                    |                                                                              | Output power:                                                                                                                                                                                                                                                                                                                                                                                                                                | 36 W maximum (18W + 18W, DC)                                                        |
| Dimensions:                  | 332.8(W) x 250(H) x 198(D) mm                                                                                                                                                 |                                                                              | Head:                                                                                                                                                                                                                                                                                                                                                                                                                                        | Super permalloy head (for REC/PB)<br>Ferrite W gap                                  |
| Weight:                      | 9.75kg (W/Batteries)                                                                                                                                                          |                                                                              | Motor:                                                                                                                                                                                                                                                                                                                                                                                                                                       | DC electric governor                                                                |
| <b>RADIO SECTION</b>         |                                                                                                                                                                               |                                                                              | Wow and Flutter:                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.045% (WRMS)                                                                       |
| Circuit:                     | Superheterodyne                                                                                                                                                               |                                                                              | Auto stop:                                                                                                                                                                                                                                                                                                                                                                                                                                   | Mechanical auto stop system                                                         |
| Frequency range:             | FM 87.4 ~ 108.3 MHz<br>SW 5.8 ~ 18.5 MHz<br>MW 515 ~ 1650 kHz<br>LW 145 ~ 320 kHz                                                                                             |                                                                              | Pinch roller pressure:                                                                                                                                                                                                                                                                                                                                                                                                                       | 125 ± 10g (1.23 ± 0.098N)                                                           |
| Intermediate frequency:      | FM 10.7 MHz<br>SW, MW, LW 468 kHz                                                                                                                                             |                                                                              | Take up torque:                                                                                                                                                                                                                                                                                                                                                                                                                              | 35 <sup>+15</sup> - 5g-cm (343 - 49mN-m)                                            |
| Sensitivity:                 |                                                                                                                                                                               |                                                                              | FF & rewind torque:                                                                                                                                                                                                                                                                                                                                                                                                                          | 110 ± 20g-cm (1078 ± 196mN-m)                                                       |
| (IHF, THD 3%)                | FM                                                                                                                                                                            | 15 ± 4 dB (at 88 MHz)<br>17 ± 4 dB (at 100 MHz)<br>13 ± 4 dB (at 108 MHz)    | FF & rewind time:                                                                                                                                                                                                                                                                                                                                                                                                                            | 90 ± 5s. (C-60)                                                                     |
| (S/N 10 dB)                  | SW                                                                                                                                                                            | 28 ± 5 dB (at 5.9 MHz)<br>20 ± 5 dB (at 12.0 MHz)<br>15 ± 5 dB (at 18.0 MHz) | Input terminals:                                                                                                                                                                                                                                                                                                                                                                                                                             | MIX MIC φ6.3 jack x 2<br>LINE IN RCA pin x 2<br>PHONO RCA pin x 2                   |
| (S/N 10 dB)                  | MW                                                                                                                                                                            | 42 ± 4 dB<br>(at 600, 1000, 1400 kHz)                                        | Input sensitivity/Impedance:                                                                                                                                                                                                                                                                                                                                                                                                                 | MIC 1.4mV/3kΩ<br>LINE IN 300mV/100kΩ<br>PHONO 5mV/47kΩ                              |
| (S/N 10 dB)                  | LW                                                                                                                                                                            | 52 ± 5 dB (at 150 kHz)<br>50 ± 5 dB (at 200, 300 kHz)                        | Output terminals:                                                                                                                                                                                                                                                                                                                                                                                                                            | LINE OUT RCA pin x 2<br>EXT. SP φ3.5 jack<br>PHONES φ6.3 jack                       |
| Image rejection:             | FM                                                                                                                                                                            | 39 ± 5 dB (at 108.0 MHz)                                                     | <b>SPEAKER SECTION</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |
|                              | SW                                                                                                                                                                            | 6 ± 3 dB (at 18 MHz)                                                         | Type:                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2 way closed type                                                                   |
|                              | MW                                                                                                                                                                            | 41 ± 5 dB (at 1400 kHz)                                                      | Speakers:                                                                                                                                                                                                                                                                                                                                                                                                                                    | Woofer 120mmφ x 2<br>cone type<br>Tweeter 50mmφ x 2<br>cone type                    |
|                              | LW                                                                                                                                                                            | 46 ± 4 dB (at 300 kHz)                                                       | Impedance:                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6Ω                                                                                  |
| IF rejection:                | FM                                                                                                                                                                            | 73 ± 6 dB (at 88.0 MHz)                                                      | Frequency response:                                                                                                                                                                                                                                                                                                                                                                                                                          | 50 ~ 18,000 Hz                                                                      |
|                              | MW                                                                                                                                                                            | 28 ± 4 dB (at 600 kHz)                                                       | Sound pressure level:                                                                                                                                                                                                                                                                                                                                                                                                                        | 88 dB/W/m                                                                           |
| FM stereo separation:        | 20 ± 3 dB (at 1 kHz)                                                                                                                                                          |                                                                              | Allowance maximum input power:                                                                                                                                                                                                                                                                                                                                                                                                               | 20W                                                                                 |
| Antenna:                     | FM, SW whip antenna<br>MW, LW Ferrite bar antenna                                                                                                                             |                                                                              | Dimension:                                                                                                                                                                                                                                                                                                                                                                                                                                   | 162.5(W) x 250(H) x 182 (D) mm                                                      |
|                              |                                                                                                                                                                               |                                                                              | Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1.25kg                                                                              |
| <b>TAPE RECORDER SECTION</b> |                                                                                                                                                                               |                                                                              | <b>SYSTEM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |
| Track type:                  | 4 track 2 channels                                                                                                                                                            |                                                                              | Dimension:                                                                                                                                                                                                                                                                                                                                                                                                                                   | 645(W) x 250(H) x 198(D) mm                                                         |
| Tape speed:                  | 4.8 cm/s ± 2.5% (1-7/8 ips)                                                                                                                                                   |                                                                              | Weight:                                                                                                                                                                                                                                                                                                                                                                                                                                      | 11kg                                                                                |
| Recording system:            | AC bias                                                                                                                                                                       |                                                                              | <ul style="list-style-type: none"><li>• Specifications and external appearance are subject to change without due to product improvement.</li><li>• Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.</li><li>• Dolby and the  symbol are trademarks of Dolby Laboratories Licensing Corporation.</li></ul> |                                                                                     |
| Erasing system:              | AC erase                                                                                                                                                                      |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Record bias frequency:       | 61 ± 0.5 kHz                                                                                                                                                                  |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Erasing ratio:               | More than 60 dB                                                                                                                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Separation:                  | More than 39 dB (at REC/PB)                                                                                                                                                   |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Distortion:                  | Less than 3% (at PB)<br>Less than 3% (at REC/PB)                                                                                                                              |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Signal noise ratio:          | More than 47/46 dB (at PB, DC/AC)<br>More than 42/42 dB (at REC/PB, DC/AC)                                                                                                    |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |

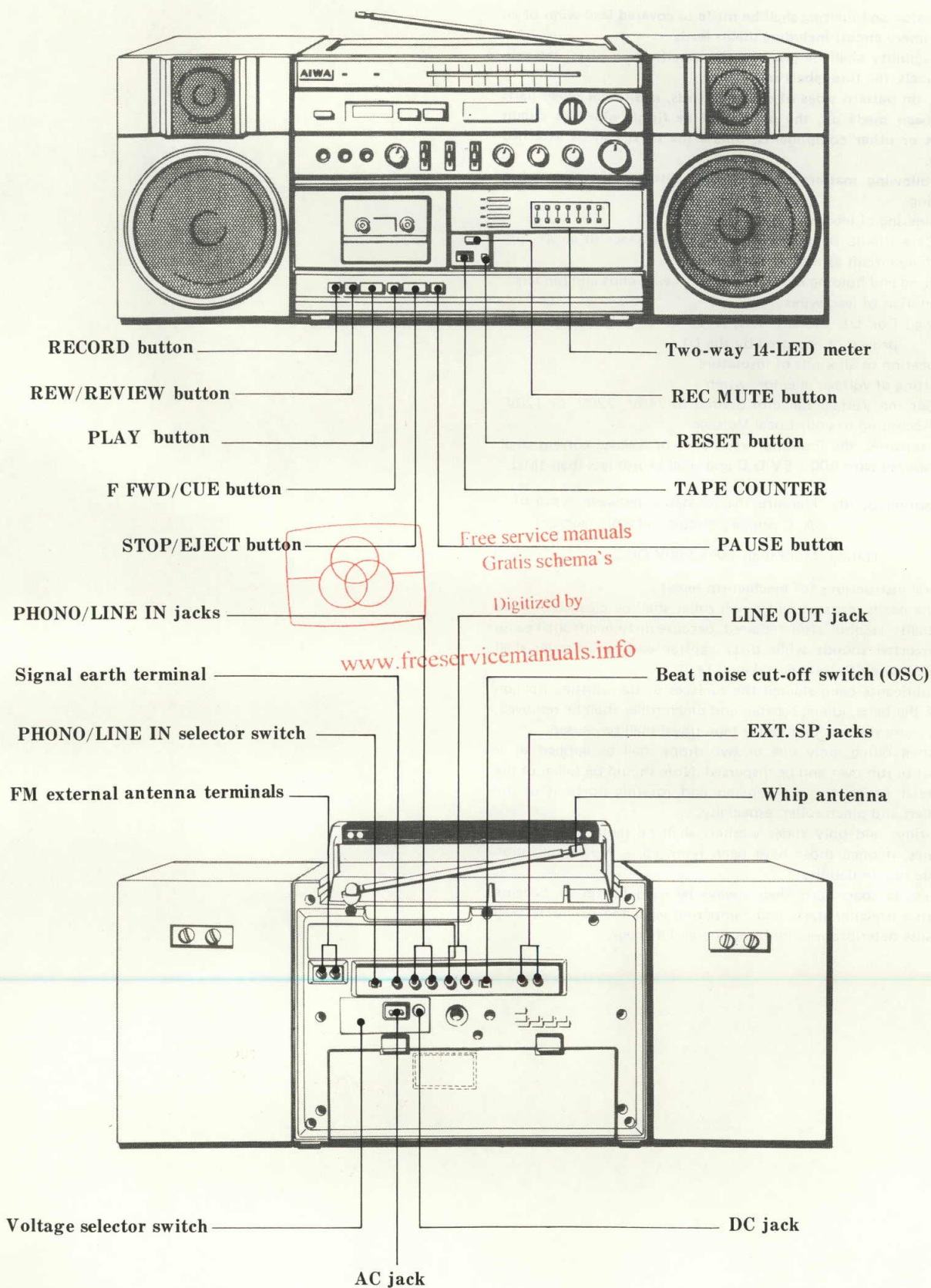
- Specifications and external appearance are subject to change without due to product improvement.
- Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
- Dolby and the  symbol are trademarks of Dolby Laboratories Licensing Corporation.

AIWA Co., Ltd. Tokyo Japan

# DESCRIPTION







Follow the instructions carefully, which will allow the user to optimise the products' performance and give many years of service.

1. No scratch and melting shall be made to covered lead-wires of an a.c. primary circuit including mains leads.
2. No illegibility shall be given to the specification plate, the caution labels, the fuse labels and others.
3. When, on pattern sides of circuit boards, additional repair-parts have been made up, the parts shall be firmly glued to circuit boards or other components, unless the parts can be attached firmly.
4. The following matters shall be maintained as they are, when repairing.
  - 1) Soldering of lead-wire ends
    - \* Care should be taken of the space distance in an a.c. primary circuit as well as soldering.
  - 2) Wiring and holding of lead-wires with wire-clips and binders
  - 3) Materials of lead-wires
    - \* e.g.; For UL models, lead-wires to be used shall be approved or accepted by the UL.
  - 4) Location of all kinds of insulators
  - 5) Setting of voltage selector switch
    - \* Set the Voltage Selector Switch to 240V, 220V, or 120V, According to your Local Voltage.
5. After repaired, the insulation resistance or leakage current shall be measured with  $500 \pm 5V$  D.C and shall be not less than  $1M\Omega$ .

Measuring points: Measure the resistance between a pin of A, C primary circuit and a pin jack (—)

Rating: More than  $1M\Omega/500V$  DC.

#### 6. General instructions for mechanism repair

- 1) The heads, capstan and pinch roller shall be cleaned of good quality alcohol after repaired, because dirty heads shall cause distorted sounds while dirty capstan and pinch roller shall occur wow/flutter and take-up fault.
- 2) Lubricants been stained the surfaces of transmitting portion of the belts, idlers, capstan and pinch roller shall be removed, because slippery and faulty tape travel shall be caused.
- 3) When oiling, only one or two drops shall be applied so as not to run over and be dispersed. Note should be taken of the metal fitting for the capstan and rotating portions of the idlers and pinch roller, especially.
- 4) E-rings and poly slider washers shall be replaced with new ones, if once those have been removed. — No re-utilization due to unreliability.
- 5) Regular spare-parts shall always be used for repair, because using irregular parts and tampering with the products shall cause deterioration, malfunction and damage.



ELECTRICAL MAIN PARTS LIST

| Symbol No.                      | Part No.       | Description                      |
|---------------------------------|----------------|----------------------------------|
| ◀ TUNER CIRCUIT BOARD SECTION ▶ |                |                                  |
| PCB-A                           | 82-599-613-01  | Tuner circuit board              |
| IC1                             | 87-027-734-01  | IC, HA12413                      |
| IC2                             | 87-027-867-01  | IC, TA7343P                      |
| Q1,2,4                          | 89-319-233-01  | Transistor, 2SC1923 (O)          |
| Q3,6                            | 89-307-103-01  | Transistor, 2SC710 (C)           |
| Q5                              | 89-318-154-01  | Transistor, 2SC1815 (Y)          |
| Q7                              | 89-318-156-01  | Transistor, 2SC1815 (BL)         |
| Q8                              | 89-303-804-01  | Transistor, 2SC380 (Y)           |
| D1                              | 87-017-004-01  | Diode, SD117                     |
| D2                              | 87-027-226-01  | Zener diode, RD5,6EB             |
| L1,2                            | 82-584-639-01  | FM antenna coil                  |
| L3                              | 82-576-670-01  | SW antenna coil                  |
| L6                              | 82-584-743-01  | SW OSC coil                      |
| L7                              | 82-563-663-01  | MW OSC coil                      |
| L8                              | 82-563-664-01  | LW OSC coil                      |
| L9                              | 87-008-209-01  | FM quad coil                     |
| VC1~4                           | 87-011-129-11  | PVC                              |
| TC1,2,4,7                       |                |                                  |
| TC3,6                           | 87-011-099-01  | Trimmer, 8P                      |
| TC8                             | 87-011-109-01  | Trimmer, 15P                     |
| TC5                             | 87-011-127-01  | Trimmer, 30P                     |
| CF1,2                           | 87-008-169-01  | Ceramic filter 230K              |
| CF3                             | 87-008-231-01  | Ceramic filter, CFM2-468BL       |
| IFT1                            | 87-008-223-01  | AM IFT                           |
| IFT2                            | 87-008-232-01  | IFT 468                          |
| LPF1,2                          | 87-028-038-01  | Low-pass-filter                  |
| BPF1                            | 87-030-081-01  | Band-pass filter                 |
| SFR1                            | 87-021-566-01  | Semi-fixed resistor, 5kΩ-B       |
| S1                              | 82-588-635-11  | Rotary switch<br>(BAND SELECTOR) |
| CON-1                           | 87-032-967-01  | Connector, 7P                    |
|                                 | 87-032-981-01  | Wire post                        |
|                                 | < Capacitors > |                                  |
| C56                             | 87-015-464-01  | 4.7μF 16V Electrolytic BP        |
| C33                             | 87-014-035-41  | 120pF PP                         |
| C32                             | 87-014-045-81  | 330pF PP                         |
| C59                             | 87-014-057-41  | 1000pF PP                        |
| C31                             | 87-014-069-41  | 3300pF PP                        |
| ◀ MAIN CIRCUIT BOARD SECTION ▶  |                |                                  |
| PCB-B                           | 81-508-601-01  | Main circuit board               |
| IC1                             | 87-027-714-01  | IC, M51542L                      |
| IC2                             | 87-027-885-01  | IC, TA7341P                      |
| IC3,4                           | 87-027-851-01  | IC, AN7158                       |
| Q1,2                            | 89-322-405-01  | Transistor, 2SC2240 (GR)         |
| Q3,5,6,7,8,10,11,13,19,20       | 89-318-154-01  | Transistor, 2SC1815 (Y)          |
| Q4,23                           | 89-408-804-01  | Transistor, 2SD880 (Y)           |
| Q15                             | 89-106-834-01  | Transistor, 2SA683 (R)           |
| Q25,26                          | 89-320-011-21  | Transistor, 2SC2001 (L)          |
| Q27                             | 89-110-155-01  | Transistor, 2SA1015 (GR)         |
| D1,2,4,5,6,20,22,23,24 ,25,27   | 87-027-097-01  | Diode, 1S1555                    |
| D3                              | 87-027-211-01  | Zener diode, RD3,9EB             |
| D7                              | 87-027-228-01  | Zener diode, 05Z7,5U             |
| D8,28,29                        | 87-027-365-01  | Diode, S5277B                    |
| D9                              | 87-027-606-01  | Zener diode, HZ7C2L              |
| D13                             | 87-027-676-01  | Zener diode, HZ12B3L             |
| D26                             | 87-027-226-01  | Zener diode, RD5.6EB             |
| D31, 32                         |                | Diode, S2V                       |
| L1,2                            | 87-003-070-01  | Choke coil, 5,6mH                |
| L3,4                            | 82-487-654-01  | Coil, 3-PE                       |
| L5                              | 82-401-661-01  | Choke coil, 600μH                |

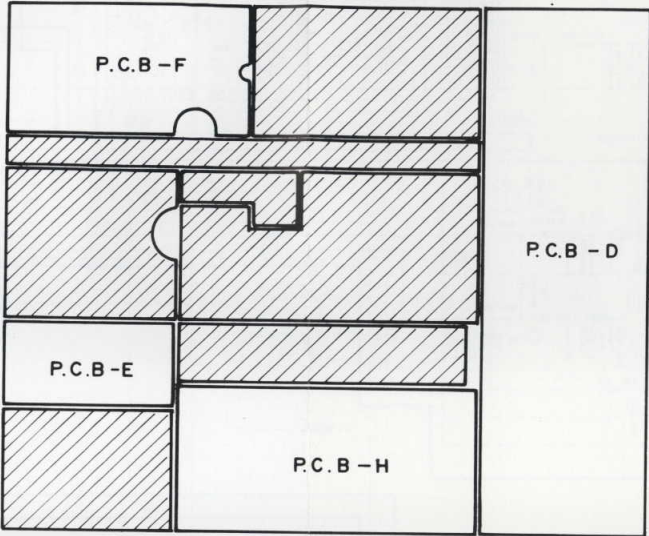
| Symbol No.                          | Part No.       | Description                                             |
|-------------------------------------|----------------|---------------------------------------------------------|
| CP1                                 | 82-570-639-01  | Bias OSC block (metal)                                  |
| J1,2,5,6,7,8                        | 81-508-635-01  | Jack plate ass'y (PHONO/LINE IN, LINE OUT, EXT. SP GND) |
| J3,4                                | 87-049-135-01  | Jack 6,3φ (MIC MIX)                                     |
| J9                                  | 87-049-136-01  | Jack, 6,3φ (PHONES)                                     |
| VR1                                 | 82-598-603-01  | Volume, 20kΩ-B (MIC)                                    |
| VR2                                 | 87-021-668-01  | Volume, 50kΩ-A (TREBLE)                                 |
| VR3                                 | 87-021-669-01  | Volume, 100kΩ-W (BALANCE)                               |
| VR4                                 | 87-021-667-01  | Volume, 20kΩ-A (VOLUME)                                 |
| VR5                                 | 82-598-634-01  | Volume, 2kΩ-B (DSL)                                     |
| S2                                  | 82-598-619-01  | Lever switch (TAPE SELECTOR)                            |
| S3                                  | 82-598-620-01  | Lever switch (MODE)                                     |
| S4                                  | 82-598-618-01  | Lever switch (FUNCTION)                                 |
| S7                                  | 82-563-609-01  | Slide switch (PHONO/LINE IN)                            |
| S8                                  | 82-431-604-01  | Slide switch (OSC)                                      |
| S10                                 | 82-598-617-01  | Slide switch (REC/PB)                                   |
| SFR1,2                              | 87-021-717-01  | Semi-fixed resistor, 220Ω-B                             |
| SFR5,6                              | 87-021-624-01  | Semi-fixed resistor, 50kΩ-B                             |
|                                     | < Resistors >  |                                                         |
| ⚠ R85                               | 87-029-094-01  | 15Ω 1/4W Fuse resistor                                  |
| ⚠ R88                               | 87-029-058-01  | 180Ω 1/4W Fuse resistor                                 |
| ⚠ R81                               | 87-029-092-01  | 470Ω 1/4W Fuse resistor                                 |
| ⚠ R117,118,119,120                  | 87-029-070-01  | 2.2Ω 1/4W Fuse resistor                                 |
| R162                                | 87-025-332-01  | 10Ω 1/4W Nonflammable                                   |
|                                     | < Capacitors > |                                                         |
| C61,62                              | 87-015-428-81  | 0.22μF 25V Aluminum solid                               |
| C101,102                            | 87-014-051-81  | 560pF PP                                                |
| C11,12                              | 87-014-053-81  | 680pF PP                                                |
| ◀ DSL CIRCUIT BOARD SECTION ▶       |                |                                                         |
| PCB-C                               | 82-598-654-01  | DSL circuit board                                       |
| IC1,2                               | 87-027-853-01  | IC, AN6562                                              |
| Q1,2,3,4                            | 89-318-154-01  | Transistor, 2SC1815 (Y)                                 |
| D1,2                                | 87-027-097-01  | Diode, 1S1555                                           |
| D3                                  | 87-027-301-01  | Zener diode, HZ3A1                                      |
|                                     | 87-049-091-01  | Mini terminal 3P                                        |
|                                     | 87-049-092-01  | Mini terminal 4P                                        |
|                                     | < Capacitor >  |                                                         |
| C12                                 | 87-014-067-81  | 2700pF PP                                               |
| ◀ SWITCH CIRCUIT BOARD SECTION ▶    |                |                                                         |
| PCB-D                               | *              | Switch circuit board                                    |
| S5,6                                | 87-031-619-01  | Push switch (DSL, DOLBY-NR)                             |
| S13                                 | 87-031-704-01  | Push switch (POWER)                                     |
|                                     | < Resistor >   |                                                         |
| R1                                  | 87-025-313-01  | 4.7Ω Nonflammable                                       |
| ◀ LED-1 CIRCUIT BOARD SECTION ▶     |                |                                                         |
| PCB-E                               | *              | Indicator circuit board                                 |
| D1,2                                | 87-027-542-01  | LED, LN217RP                                            |
| ◀ LED-2 CIRCUIT BOARD SECTION ▶     |                |                                                         |
| PCB-F                               | *              | LED-1 circuit board                                     |
| D1                                  | 87-027-890-01  | LED, LN442YP                                            |
| D2                                  | 87-027-889-01  | LED, LN342GP                                            |
| D3,4                                | 87-027-834-01  | LED, LN242RP                                            |
| D5                                  | 87-027-097-01  | Diode, 1S1555                                           |
| S9                                  | 87-031-705-01  | Tact switch (REC MUTE)                                  |
| ◀ INDICATOR CIRCUIT BOARD SECTION ▶ |                |                                                         |
| PCB-G                               | 81-508-602-01  | LED-2 circuit board                                     |
| IC1,2                               | 87-027-690-01  | IC, IR2E02                                              |
| D1,2,3,4,5,6                        | 87-027-772-01  | LED, GL-9PR4                                            |
| D7,8,9,10,11,12,13,14               | 87-027-773-01  | LED, GL-9NG4                                            |
| SFR1,2                              | 87-021-719-01  | Semi-fixed resistor, 5kΩ-B                              |

| Symbol No.                          | Part No.       | Description                     |
|-------------------------------------|----------------|---------------------------------|
| ◀ REC AMP CIRCUIT BOARD SECTION ▶   |                |                                 |
| PCB-H                               | *              | REC AMP circuit board           |
| Q1,2                                | 89-320-011-21  | Transistor, 2SC2001L            |
| Q3,4                                | 89-318-154-01  | Transistor, 2SC1815 (Y)         |
| SFR1,2                              | 87-021-672-01  | Semi-fixed resistor, 50kΩ-B     |
|                                     | 87-049-099-01  | Mini terminal, 11P              |
|                                     | < Capacitor >  |                                 |
| C3,4                                | 87-015-313-81  | 0.33μF 10V Aluminum solid       |
| ◀ RELAY CIRCUIT BOARD SECTION ▶     |                |                                 |
| PCB-I                               | 87-033-179-01  | Relay circuit board             |
| PIN-1                               | 87-049-080-01  | Pin, 2P                         |
| PIN-2                               | 87-049-050-01  | Pin, 6P                         |
| PIN-3                               | 87-049-088-01  | Pin, 7P                         |
| ◀ PHONO AMP CIRCUIT BOARD SECTION ▶ |                |                                 |
| PCB-J                               | 82-598-653-01  | PHONO AMP circuit board         |
| IC1                                 | 87-027-539-01  | IC, LA3161                      |
|                                     | 87-049-091-01  | Mini terminal 3P                |
|                                     | 87-049-092-01  | Mini terminal 4P                |
| ◀ DOLBY-NR CIRCUIT BOARD SECTION ▶  |                |                                 |
| PCB-K                               | 81-508-623-01  | Dolby-NR circuit board          |
| IC1,2                               | 87-027-754-01  | IC, LM1111C                     |
| Q1,2                                | 89-322-405-01  | Transistor, 2SC2240 (GR)        |
| D1,2                                | 87-027-097-01  | Diode, 1S1555                   |
| L1,2                                | 87-008-220-01  | Filter DBY61K                   |
|                                     | 87-049-091-01  | Mini terminal, 3P               |
|                                     | 87-049-097-01  | Mini terminal, 9P               |
|                                     | < Resistor >   |                                 |
| R13,14                              | 87-025-209-01  | 3.3kΩ Metal film resistor       |
|                                     | < Capacitors > |                                 |
| C29,30                              | 87-015-422-01  | 0.33μF 25V Aluminum solid       |
| C27,28                              | 87-015-311-01  | 0.1μF 10V Aluminum solid        |
| ◀ POWER CIRCUIT BOARD SECTION ▶     |                |                                 |
| ⚠ PCB-L                             | 82-551-672-21  | Power circuit board             |
| D1                                  | 87-027-609-01  | Encapsulated diode              |
| ⚠ J10,11                            | 87-032-958-01  | AC-DC jack (DC, AC JACK)        |
| ⚠ S14                               | 87-031-466-01  | Slide switch (VOLTAGE SELECTOR) |
| ⚠ F1                                | 87-035-194-01  | Fuse, T6.3A                     |
|                                     | 87-098-024-01  | Fuse label, T6.3A               |
| ⚠                                   | 87-033-147-01  | Fuse clamp                      |
|                                     | 87-025-194-01  | 220Ω 2W Metal film resistor     |
| ◀ RESISTOR ▶                        |                |                                 |
| R1                                  | 87-025-194-01  | 220Ω 2W Metal film resistor     |
| ◀ MISCELLANEOUS ▶                   |                |                                 |
| ⚠ T1                                | 81-508-622-01  | Power transformer               |
| RPH                                 | 87-046-209-01  | REC/PB head                     |
| EH                                  | 87-046-196-01  | Erase head                      |
| M                                   | 87-045-135-01  | Motor, DC-EG                    |
| SOL1                                | 82-598-630-01  | Solenoid                        |
| SP1,2                               | 83-063-601-01  | Speaker, Woofer                 |
| SP3,4                               | 83-063-602-01  | Speaker, Tweeter                |
| L1                                  | 87-003-065-01  | Choke coil, 36μH                |
| L4,5                                | 82-598-658-01  | MW-LW bar antenna coil          |
| S11                                 | 87-031-548-01  | Leaf switch (MOTOR)             |
| S12                                 | 87-031-649-01  | Leaf switch (F/R)               |
| S15                                 | 87-031-537-01  | Micro switch (PLAY)             |
|                                     | 82-588-641-01  | FM feeder cord                  |
|                                     | 82-591-636-01  | External antenna terminal       |
| CON-1                               | 81-508-625-01  | Connector ass'y, 2P             |
| CON-2                               | 81-508-618-01  | Connector ass'y, 6P             |
| CON-3                               | 81-508-619-01  | Connector ass'y, 7P             |
| CON-4                               | 81-508-617-01  | Connector ass'y, 4P             |
| CON-4'                              | 81-508-634-01  | Connector ass'y, 4P             |
| CON-5                               | 82-598-633-01  | Connector ass'y, 4P             |
| CON-5'                              | 82-598-632-01  | Connector ass'y, 4P             |

⚠ Safety component symbol  
This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.

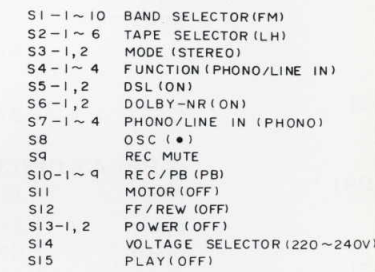
**Note; Combination Circuit Board**  
The parts on the electrical parts list which are indicated by an asterisk (\*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 81-508-610-01

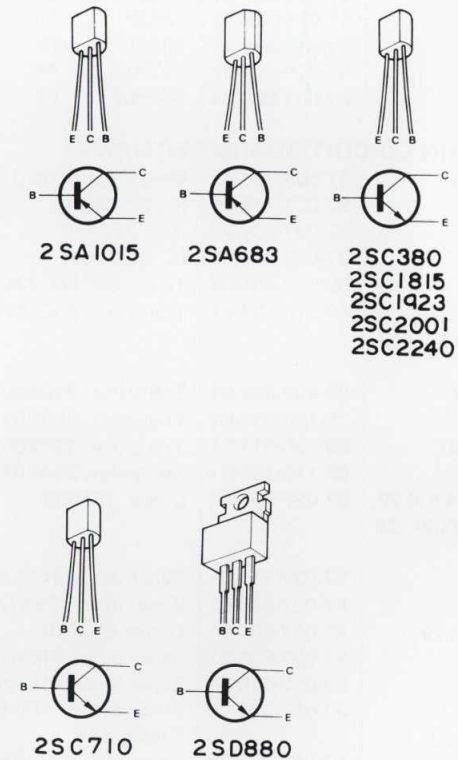




|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|



-  **Safety component symbol**
- This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.
- This schematic diagram is subject to change without notice in the interests of improved performance.

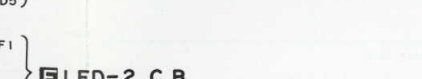
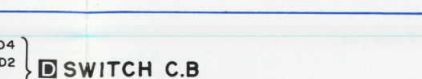
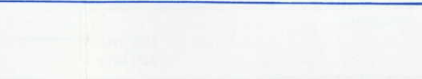
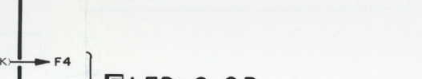
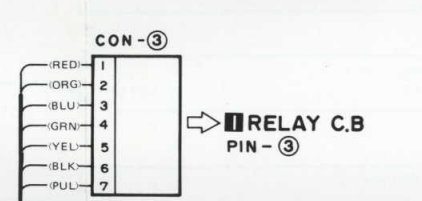
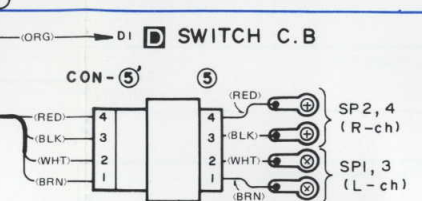
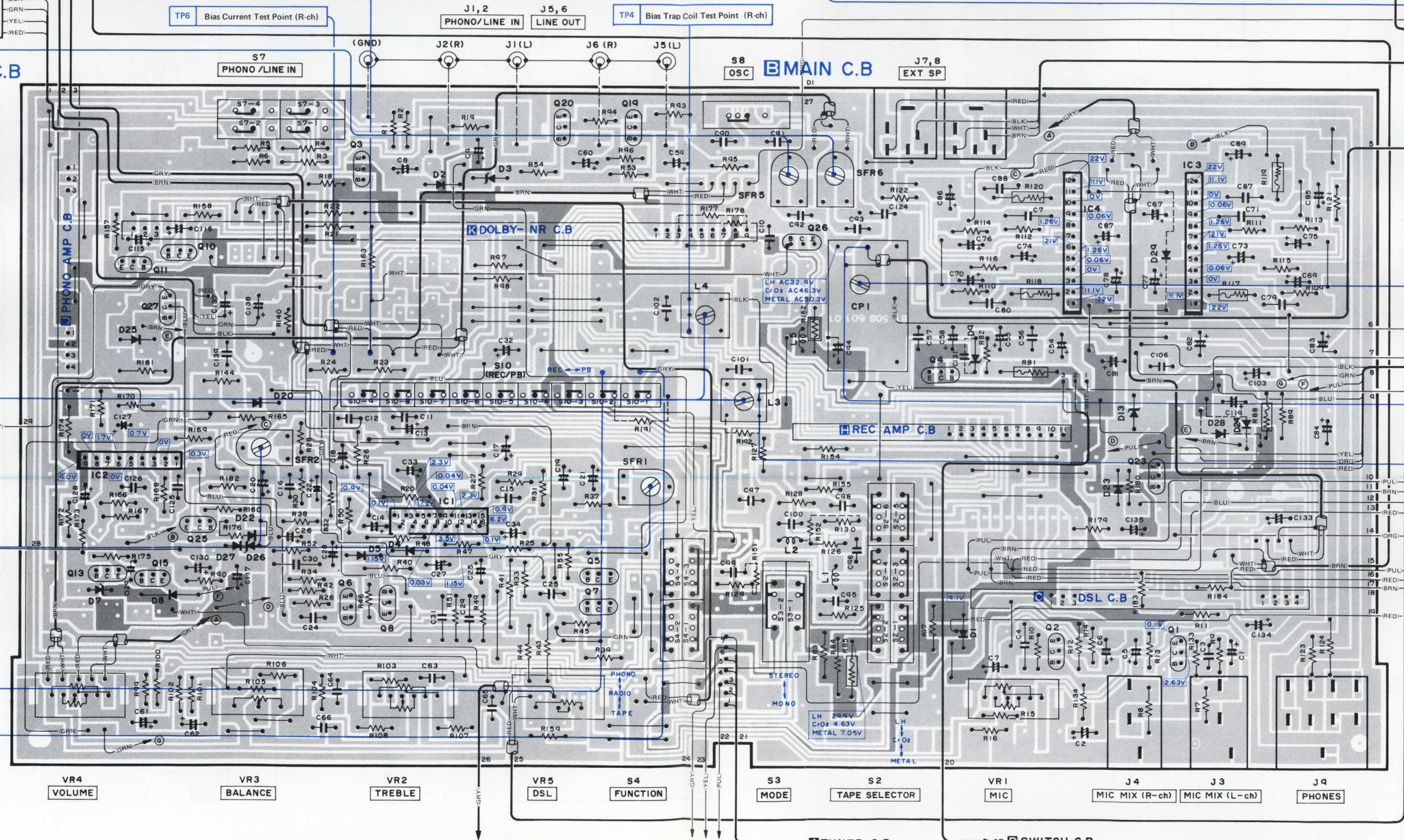
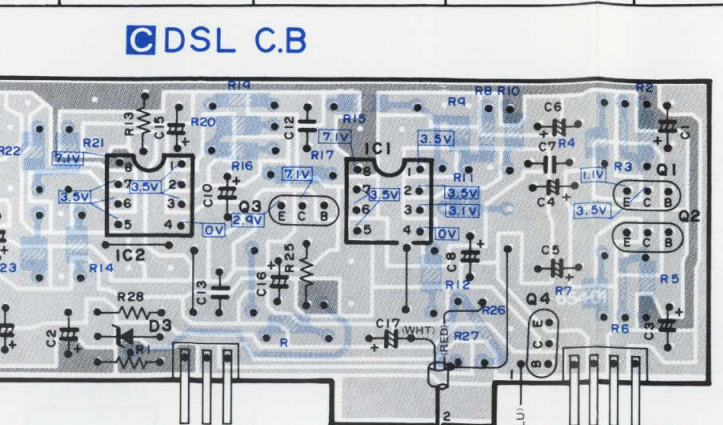


Free service manuals  
Gratis schema's  
Digitized by  
[www.freeservicemanuals.info](http://www.freeservicemanuals.info)



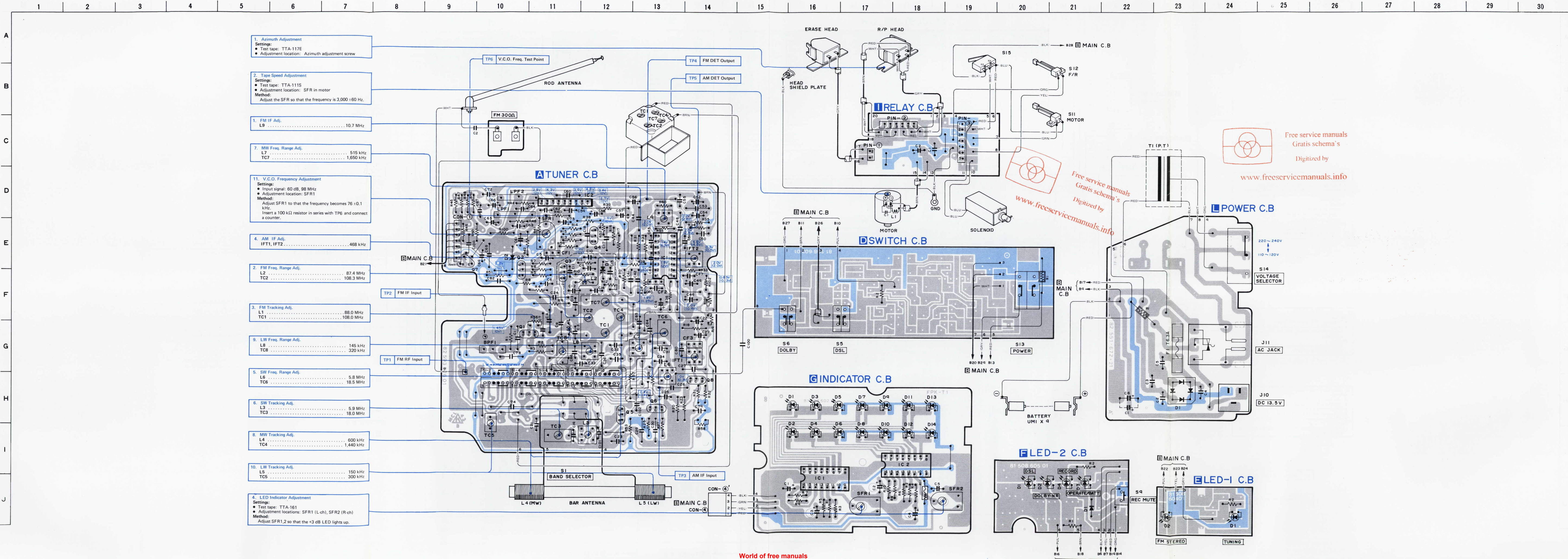
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

**World of free manuals**





WIRING-2





## DISASSEMBLY INSTRUCTIONS

### To remove the main cabinet

- 1) Pull out ten pcs. of the respective knobs (See figure 1)

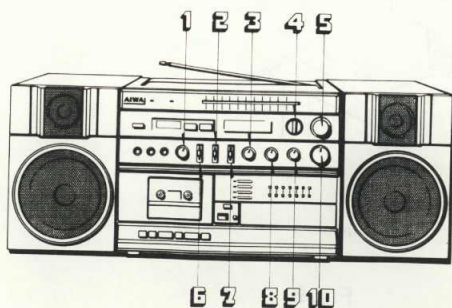


Fig. 1

- 2) Unfasten the six screws. (See figure 2)

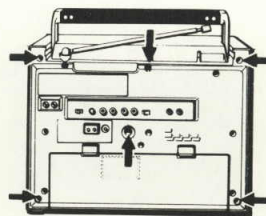


Fig. 2

- 3) Open the cassette lid by pressing the button and remove the main cabinet in the direction of the arrows. (See figure 3 and figure 4)

EJECT buttons

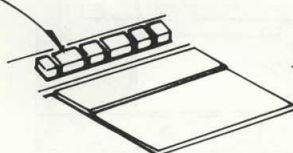
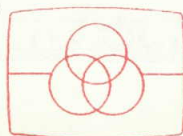


Fig. 3



Free service manuals  
Gratis schema

Digitized by

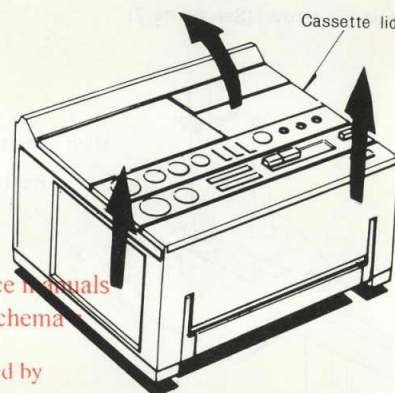


Fig. 4

### To remove the mechanisms

www.freeservicemanuals.info

- 1) Unfasten the four screws to remove in the direction of the arrows. (See figure 5)

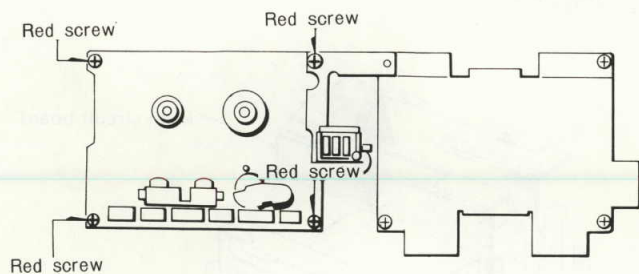


Fig. 5

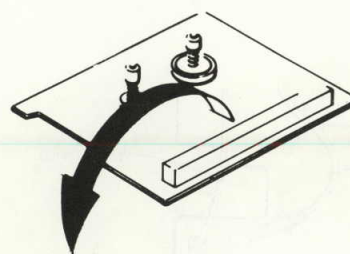
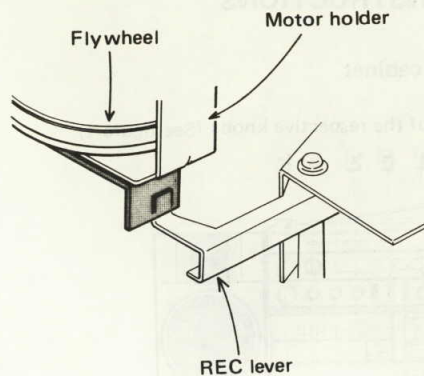


Fig. 5



**N.B.**

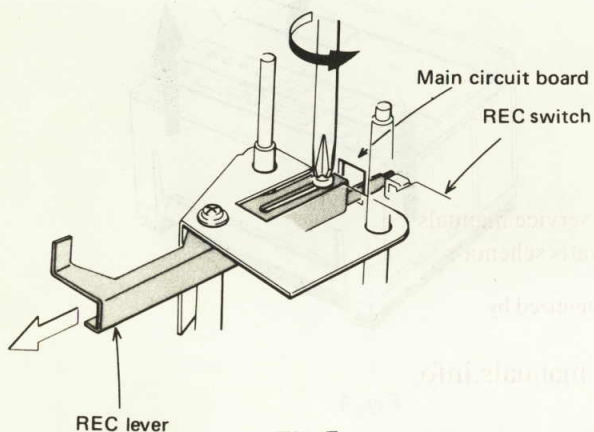
When mounting the deck, make sure that the REC lever is set to the illustrate position. (See figure 6)



**Fig. 6**

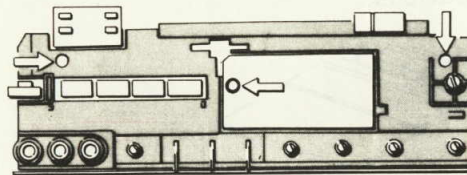
**To remove the main circuit board**

1) After loosened the screw for the REC lever, slide it in the direction of the arrow. (See figure 7)



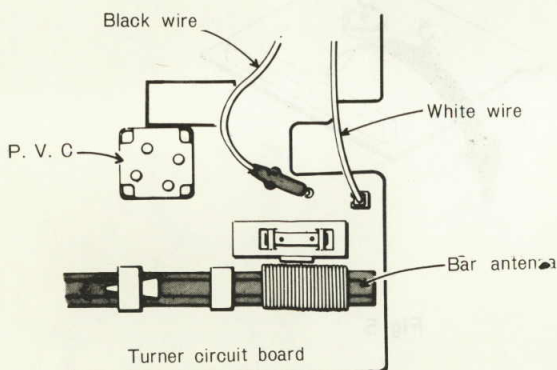
**Fig. 7**

2) Unfasten the three screws. (See figure 8)



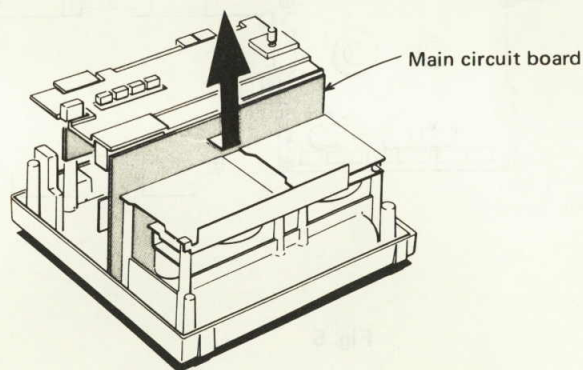
**Fig. 8**

3) Disconnect the two wires. (See figure 9)



**Fig. 9**

4) Remove the main circuit board in the direction of the arrow. (See figure 10)



**Fig. 10**



### To remove the tuner circuit board

- 1) Unfasten the screw. (See figure 11)

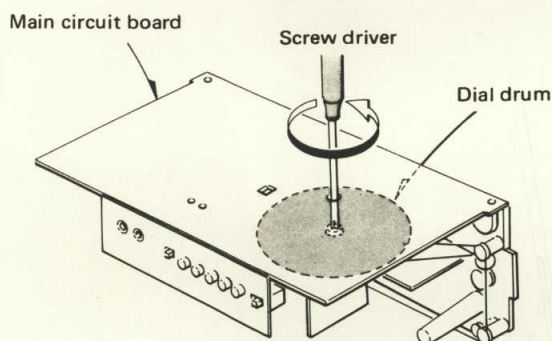


Fig. 11

- 2) After unfastened the two screws, pull out the p.v.c. from the dial drum to remove the tuner circuit board. (See figure 12)

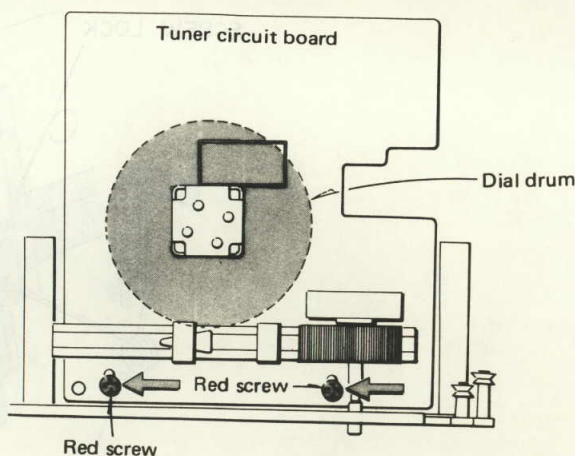


Fig. 12

### To dismount the speaker

- 1) Unfasten the four Hexagon socket head screws A to D by a hexagonal wrench of 2.5mm. (See figure 13)
- 2) Unfasten the two screws E and F. (See figure 13)

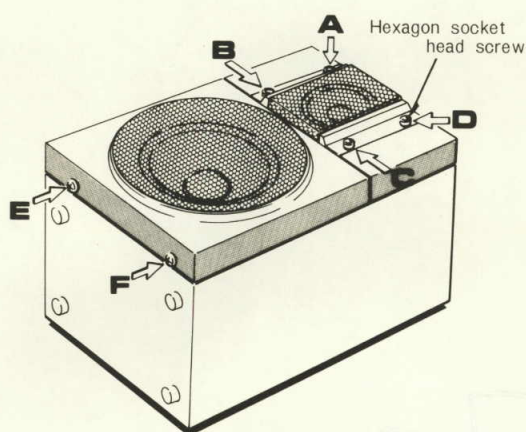


Fig. 13

- 3) Unfasten the two screws. (See figure 14)

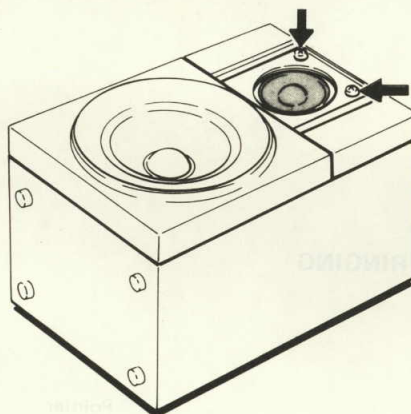


Fig. 14

- 4) Remove the front panel in the direction of the arrow (2) while distorting the enclosure by pressing the side board in the direction of the arrows (1). Because the front panel is attached to the enclosure with double-face adhesive tape. (See figure 15)

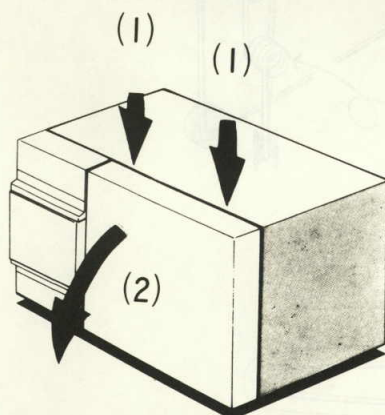
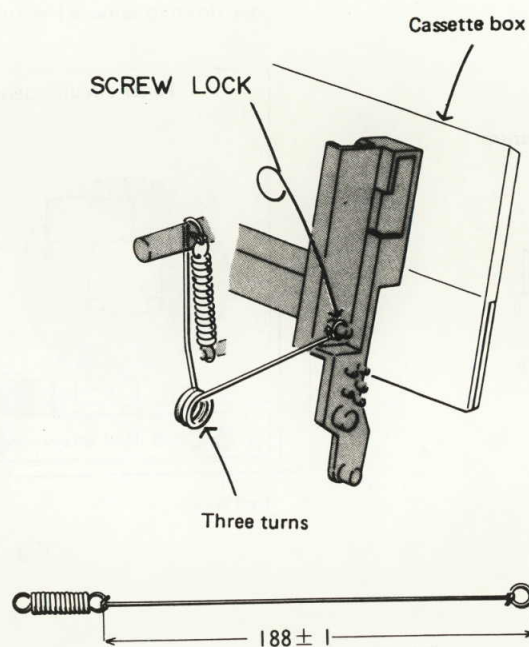


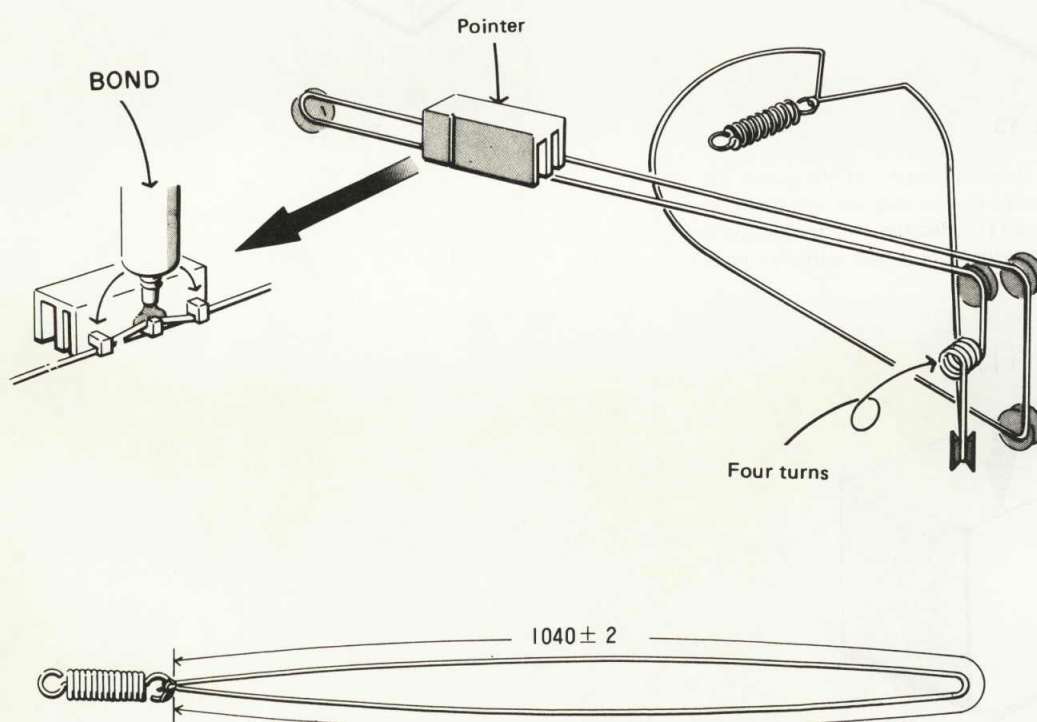
Fig. 15



## AIR-DAMP CORD STRINGING

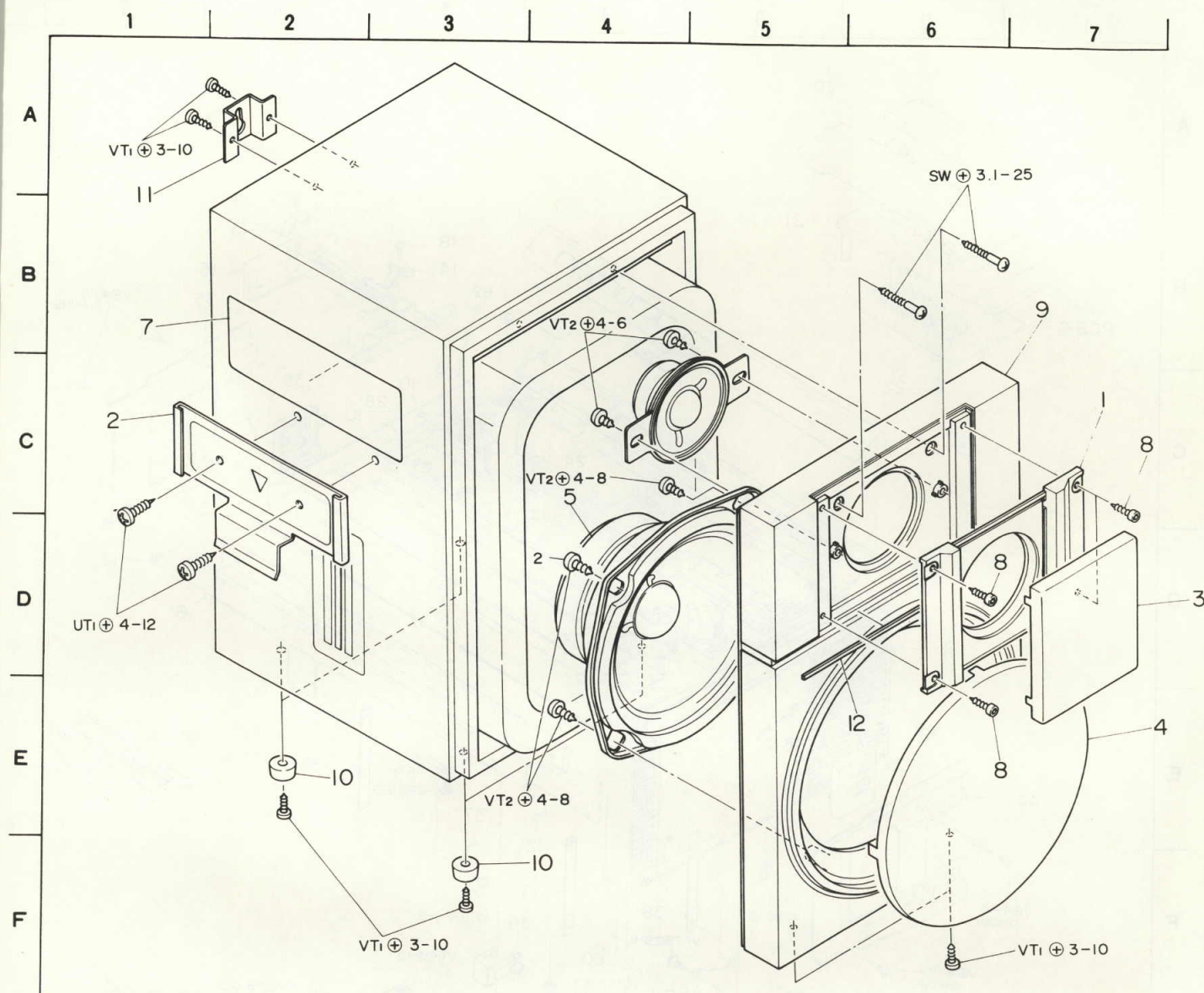


## DIAL CORD STRINGING





# EXPLODED VIEW SC-100

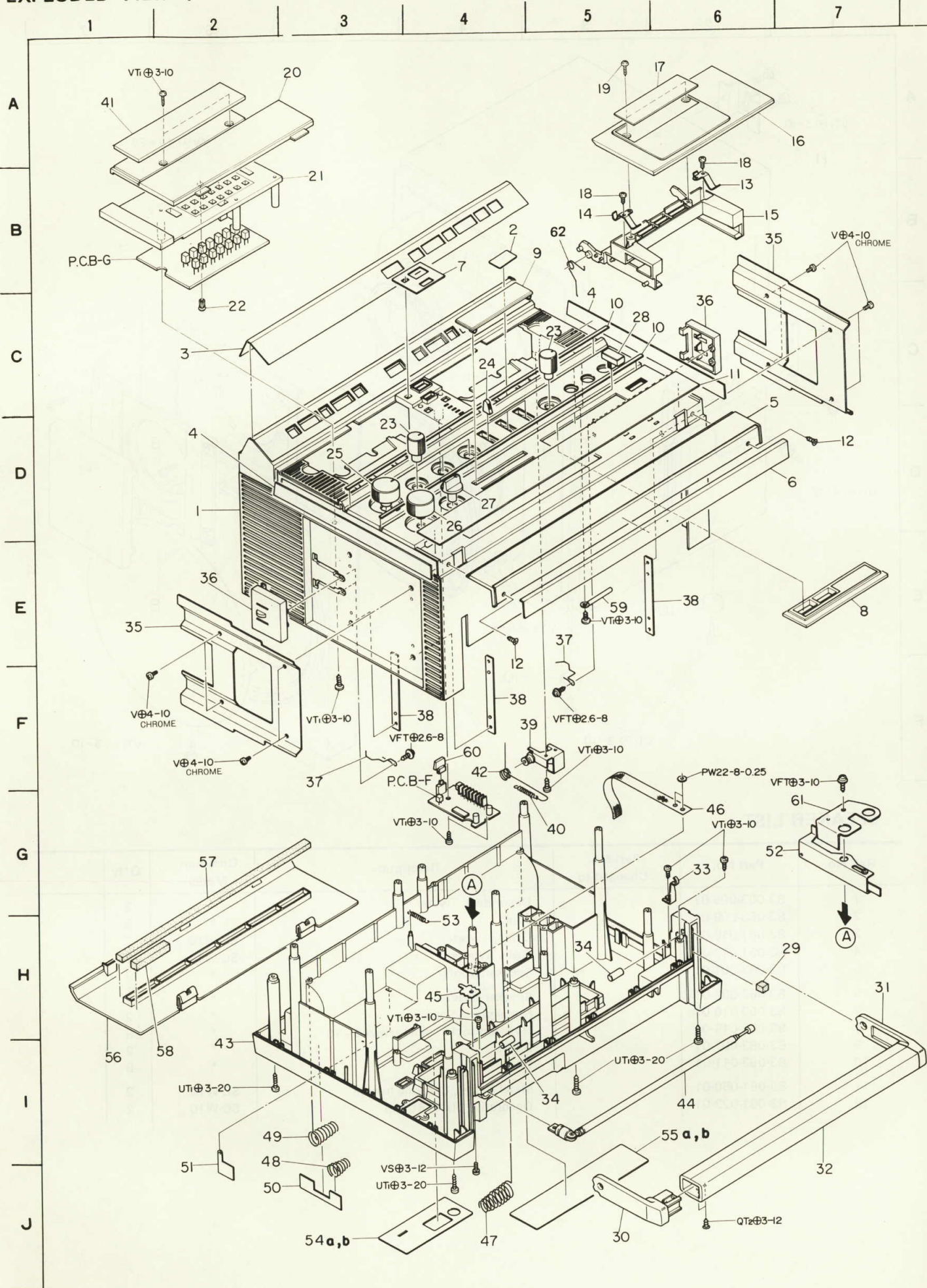


## SPEAKER LIST

| Ref. No. | Part No.      | Part No.<br>Changed to | Description                    | Common<br>Model | Q'ty |
|----------|---------------|------------------------|--------------------------------|-----------------|------|
| 1        | 83-063-008-01 |                        | Decorative, Tweter             | *               | 2    |
| 2        | 83-063-009-01 |                        | Joint                          | *               | 2    |
| 3        | 83-061-016-01 |                        | Grille, Tweeter                | SC-W10          | 2    |
| 4        | 83-061-017-01 |                        | Grille, Woofer                 | SC-W10          | 2    |
| 5        | 83-063-601-01 |                        | Speaker woofer                 | *               | 2    |
| 6        | 83-063-602-01 |                        | Speaker tweeter                | *               | 2    |
| 7        | 83-063-016-01 |                        | Name plate, Spec.              | *               | 2    |
| 8        | 83-063-015-01 |                        | Hexagon socket head screw 3-10 | *               | 8    |
| 9        | 83-063-007-01 |                        | Baffle                         | *               | 2    |
| 10       | 83-063-011-01 |                        | Foot                           | *               | 8    |
| 11       | 83-061-050-01 |                        | Metal fitting, Carrying handle | SC-W10          | 2    |
| 12       | 83-061-023-01 |                        | Decorative plate (Stripe)      | SC-W10          | 2    |



# EXPLODED VIEW-1





## MECHANICAL PARTS

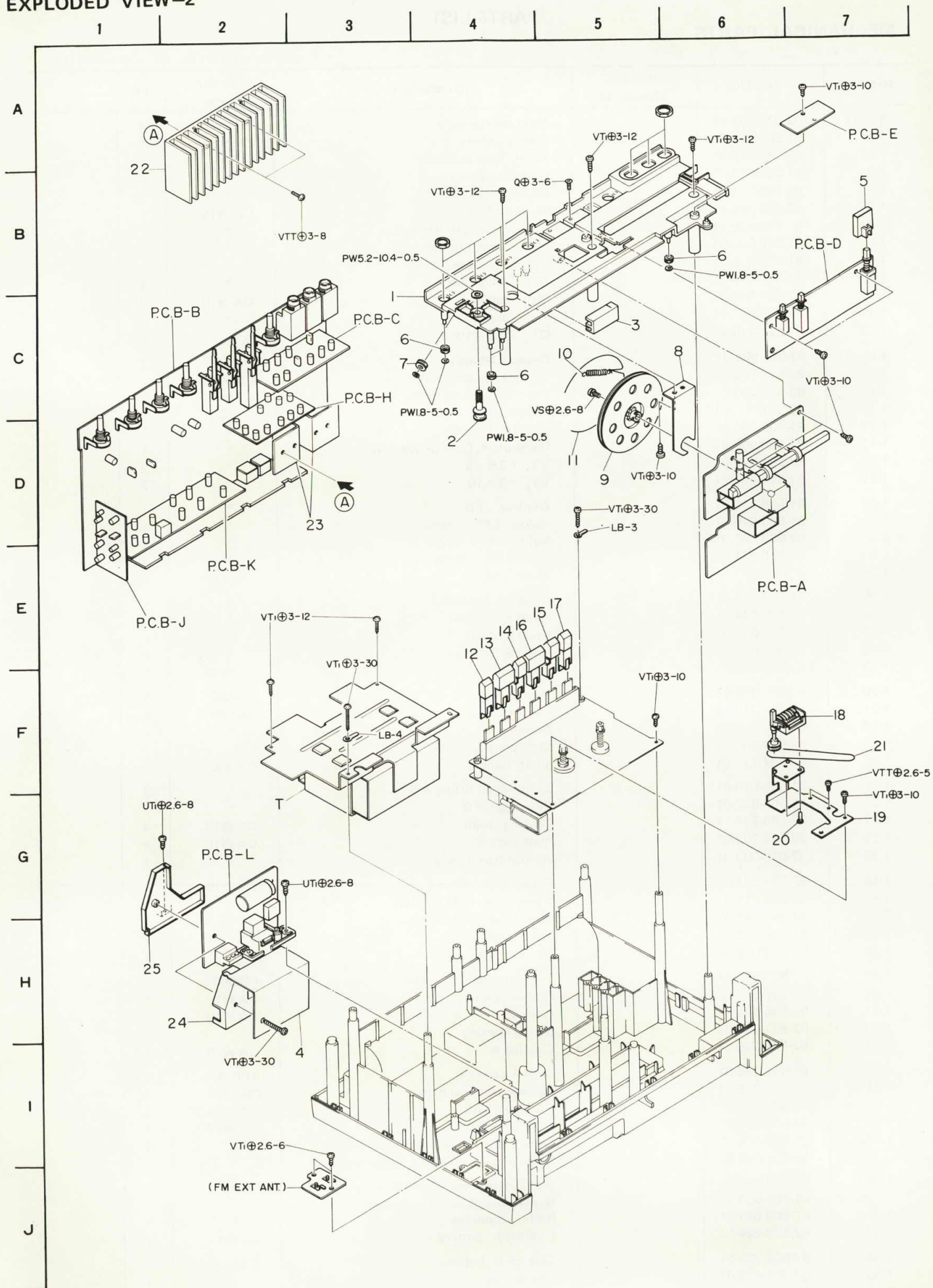
## PARTS LIST

■ \* mark in this part list shows exclusive part

| Ref. No. | Part No.      | Part No.<br>Changed to | Description                        | Common<br>Model | Q'ty |
|----------|---------------|------------------------|------------------------------------|-----------------|------|
| 1 ~ 12   | 09-017-906-01 |                        | Main cabinet ass'y                 | *               | 1    |
| 1-1      | 81-508-075-01 |                        | Cabinet, Main                      | *               | 1    |
| 1-2      | 82-648-025-01 |                        | Label, Tape indicator              |                 | 1    |
| 1-3      | 81-508-015-01 |                        | Name plate, Push-key S             | *               | 1    |
| 1-4      | 81-508-021-01 |                        | Blind name A—S                     | *               | 2    |
| 1-5      | 82-598-004-01 |                        | Window, Dial                       | CA-W10          | 1    |
| 1-6      | 81-508-020-01 |                        | Name plate, Dial window            | *               | 1    |
| 1-7      | 81-508-009-01 |                        | Name plate, Counter                | *               | 1    |
| 1-8      | 81-508-076-01 |                        | Button guide ass'y S               | *               | 1    |
| 1-9      | 81-508-077-01 |                        | AIWA badge ass'y                   | *               | 1    |
| 1-10     | 82-598-048-11 |                        | Plate, Cabinet                     | CA-W10          | 2    |
| 1-11     | 81-508-067-01 |                        | Plate, Dial                        | *               | 1    |
| 1-12     | 87-321-075-21 |                        | QT <sub>1</sub> + 2.6 - 10         |                 | 2    |
| 13 ~ 19  | 09-017-904-01 |                        | Cassette lid ass'y                 | *               | 1    |
| 1-13     | 82-592-202-01 |                        | P-spring, Cassette holder L        | CS-660          | 1    |
| 1-14     | 82-592-203-01 |                        | P-spring, Cassette holder R        | CS-660          | 1    |
| 1-15     | 82-592-003-01 |                        | Cassette box                       | CS-660          | 1    |
| 1-16     | 81-508-007-01 |                        | Window, Cassette                   | *               | 1    |
| 1-17     | 81-508-008-01 |                        | Name plate, Cassette window        | *               | 1    |
| 1-18     | 87-351-072-01 |                        | VT <sub>1</sub> + 2.6 - 5          |                 | 2    |
| 1-19     | 87-351-096-21 |                        | VT <sub>1</sub> + 3 - 10           |                 | 2    |
| 1-20     | 81-508-010-01 |                        | Window, LED                        | *               | 1    |
| 1-21     | 81-508-016-01 |                        | Holder, LED window                 | *               | 1    |
| 1-22     | 87-085-090-01 |                        | Nylon rivet 3 - 6.5                |                 | 1    |
| 1-23     | 81-508-031-01 |                        | Knob 15-S, volume                  | *               | 4    |
| 1-24     | 82-563-014-11 |                        | Knob, Toggle                       | CS-990          | 3    |
| 1-25     | 81-508-024-01 |                        | Knob 25-S, Volume                  | *               | 1    |
| 1-26     | 81-508-035-01 |                        | Knob S, Tuning                     | *               | 1    |
| 1-27     | 81-508-033-01 |                        | Knob S, Band                       | *               | 1    |
| 1-28     | 81-508-025-01 |                        | Knob S, Selector                   | *               | 2    |
| 1-29     | 82-598-243-01 |                        | G cushion                          | CA-W10          | 1    |
| 1-30     | 82-587-012-01 |                        | Handle R                           | CS-880          | 1    |
| 1-31     | 82-587-013-01 |                        | Handle L                           | CS-880          | 1    |
| 1-32     | 81-508-003-01 |                        | Handle glip                        | *               | 1    |
| 1-33     | 82-534-203-01 |                        | Click plate spring R               |                 | 1    |
| 1-34     | 82-587-212-01 |                        | Shaft, Handle                      | CS-880          | 2    |
| 1-35     | 81-508-019-01 |                        | Joint, Metal fitting A-S           | *               | 2    |
| 1-36     | 81-508-022-01 |                        | Boss speaker S                     | *               | 2    |
| 1-37     | 82-598-234-11 |                        | T-spring, Joint                    | CA-W10          | 4    |
| 1-38     | 82-598-203-01 |                        | Plate nut                          | CA-W10          | 4    |
| 1-39     | 87-078-003-01 |                        | Air damp unit ass'y                |                 | 1    |
| 1-40     | 82-598-241-01 |                        | E-spring, Air-damp B               | CA-W10          | 1    |
| 1-41     | 81-508-011-01 |                        | Name plate, LED window             | *               | 1    |
| 1-42     | 87-096-045-01 |                        | Dial string                        |                 | 1    |
| 1-43     | 81-508-002-01 |                        | Back cover                         | *               | 1    |
| 1-44     | 87-043-058-01 |                        | Whip antenna                       |                 | 1    |
| 1-45     | 82-587-220-01 |                        | Terminal plate, Antenna            | CS-880          | 1    |
| 1-46     | 82-598-033-01 |                        | Ribbon, Battery                    | CA-W10          | 1    |
| 1-47     | 82-598-221-01 |                        | C-spring B                         | CA-W10          | 1    |
| 1-48     | 82-222-036-01 |                        | Spring, Battery                    |                 | 1    |
| 1-49     | 82-598-220-11 |                        | C-spring A                         | CA-W10          | 1    |
| 1-50     | 82-551-213-01 |                        | Battery contact                    | TPR-935         | 1    |
| 1-51     | 82-587-215-01 |                        | Battery terminal plate             | CS-880          | 1    |
| 1-52     | 82-589-235-21 |                        | REC lever ass'y                    | CA-W10          | 1    |
| 1-53     | 82-598-231-01 |                        | E-spring, REC                      | CA-W10          | 1    |
| 1-54a    | 81-508-045-01 |                        | Name plate, AC jack (E model only) | *               | 1    |
| b        | 81-508-066-01 |                        | Name plate, AC jack (K model only) | *               | 1    |
| 1-55a    | 81-508-064-01 |                        | Name plate, Spec. (E model only)   | *               | 1    |
| b        | 81-508-065-01 |                        | Name plate, Spec. (K model only)   | *               | 1    |
| 1-56     | 81-508-023-01 |                        | Battery room lid                   | *               | 1    |
| 1-57     | 82-598-224-01 |                        | Cushion A, Battery                 | CA-W10          | 1    |
| 1-58     | 82-598-225-01 |                        | Cushion B, Battery                 | CA-W10          | 1    |
| 1-59     | 87-038-039-01 |                        | Wire binder                        |                 | 1    |
| 1-60     | 82-598-022-01 |                        | Knob, REC MUTE                     | CA-W10          | 1    |
| 1-61     | 82-587-218-11 |                        | Plate, REC A                       | CA-W10          | 1    |
| 1-62     | 82-587-218-11 |                        | T-spring, Cassette lid             | CS-880          | 1    |



# EXPLODED VIEW-2





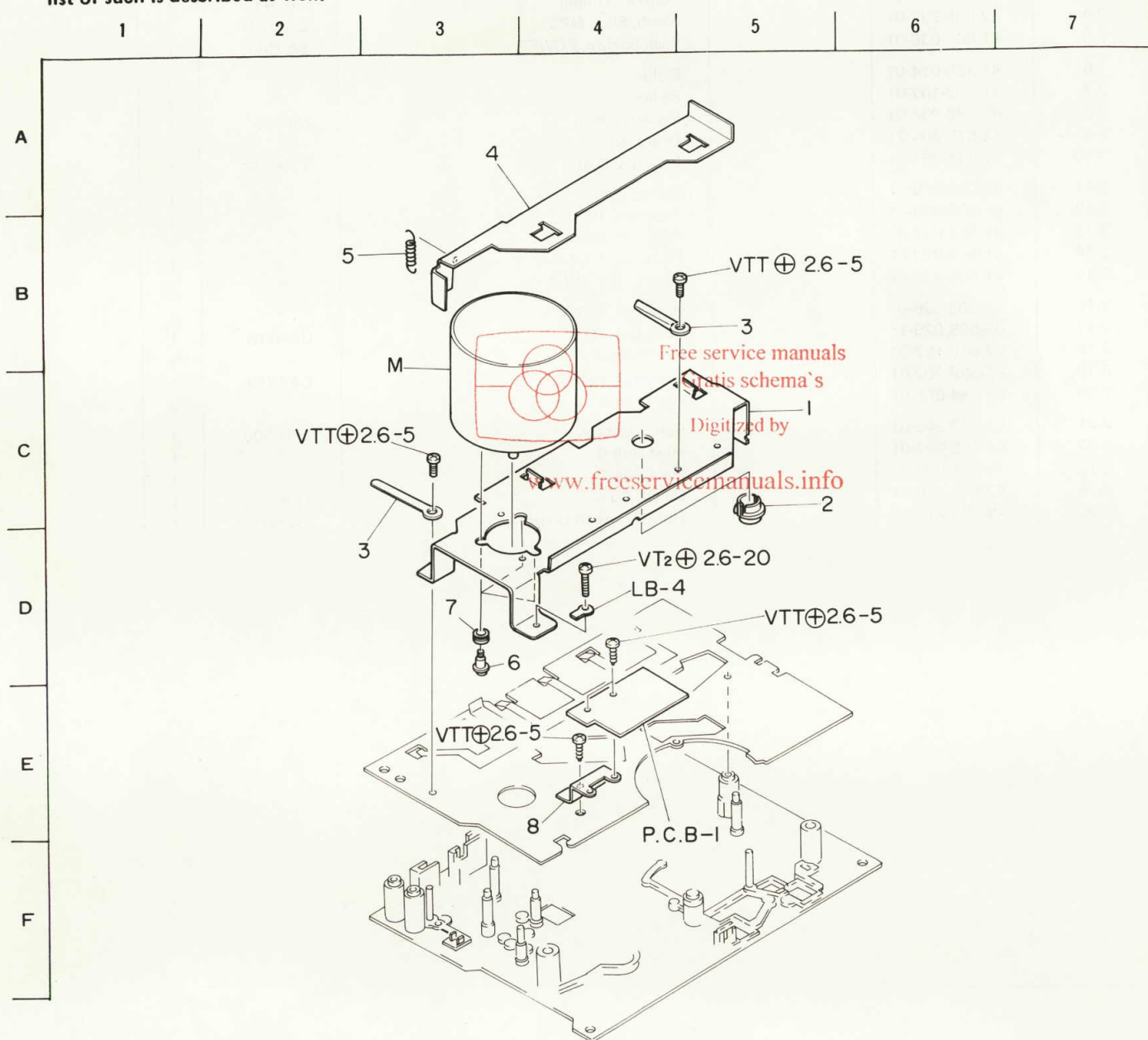
| Ref. No. | Part No.      | Part No.<br>Changed to | Description           | Common<br>Model | Q'ty |
|----------|---------------|------------------------|-----------------------|-----------------|------|
| 2-1      | 82-598-201-01 |                        | Casshis, Radio        | CA-W10          | 1    |
| 2-2      | 82-598-226-11 |                        | Shaft, Tuning         | CA-W10          | 1    |
| 2-3      | 82-598-009-21 |                        | Pointer, Tuning       | CA-W10          | 1    |
| 2-4      | 82-598-037-01 |                        | Knob, Slide MPS       | CA-W10          | 1    |
| 2-5      | 81-508-036-01 |                        | Push-button, POWER    | SA-C80          | 1    |
| 2-6      | 81-385-014-01 |                        | Roller                |                 | 4    |
| 2-7      | 81-302-107-01 |                        | Roller                |                 | 1    |
| 2-8      | 82-588-204-01 |                        | Holder, Drum          | CS-770          | 1    |
| 2-9      | 82-570-204-21 |                        | Drum, Dial            |                 | 1    |
| 2-10     | 82-541-291-01 |                        | E-spring, Dial        | TPR-950         | 1    |
| 2-11     | 87-096-045-01 |                        | String, Dial          |                 | 1    |
| 2-12     | 81-508-030-01 |                        | Push-key, PAUSE S     | *               | 1    |
| 2-13     | 81-508-027-01 |                        | Push-key, STOP S      | *               | 1    |
| 2-14     | 81-508-028-01 |                        | Push-key, FF S        | *               | 1    |
| 2-15     | 81-508-029-01 |                        | Push-key, REW S       | *               | 1    |
| 2-16     | 81-508-026-01 |                        | Push-key, PLAY S      | *               | 1    |
| 2-17     | 82-598-020-11 |                        | Push-key, REC         | CA-W10          | 1    |
| 2-18     | 87-040-157-01 |                        | Counter ass'y         |                 | 1    |
| 2-19     | 82-598-202-01 |                        | Holder, Counter       | CA-W10          | 1    |
| 2-20     | 87-084-088-01 |                        | Nylon riyet           |                 | 2    |
| 2-21     | 82-548-205-01 |                        | Belt, Counter         | TPR-200         | 1    |
| 2-22     | 81-508-607-01 |                        | Heat sink C           | *               | 1    |
| 2-23     | 81-508-609-01 |                        | Heat sink D           | *               | 1    |
| 2-24     | 82-551-246-01 |                        | Cover, Fuse           | TPR-935         | 1    |
| 2-25     | 82-598-217-11 |                        | Holder, cirucit board | CA-W10          | 1    |



**EXPLODED VIEW-3**

As the MD-3 Mechanism is adopted in this model, the exploded view is omitted --- See the supplement MD-3 Mechanism manual in case of repair and parts order.

The following is the exploded view of the exclusive mechanism and the motor attachments. The part-code list of such is described as well.



| Ref. No. | Part No.      | Part No.<br>Changed to | Description           | Common<br>Model  | Q'ty |  |
|----------|---------------|------------------------|-----------------------|------------------|------|--|
| 3-1      | 82-585-281-31 |                        | Holder, Motor         | CA-W10<br>CS-880 | 1    |  |
| 3-2      | 82-585-326-11 |                        | Thrust bearing B      |                  | 1    |  |
| 3-3      | 87-038-039-01 |                        | Wire binder           |                  | 2    |  |
| 3-4      | 82-598-218-01 |                        | Slide plate REC       |                  | 1    |  |
| 3-5      | 82-587-241-01 |                        | E-spring, Slide plate |                  | 1    |  |
| 3-6      | 87-081-483-01 |                        | Motor screw, M2.6     |                  | 3    |  |
| 3-7      | 87-087-029-01 |                        | Rubber cushion        |                  | 3    |  |
| 3-8      | 82-585-404-01 |                        | Holder, circuit board |                  | 1    |  |



# ACCESSORIES/PACKAGE

| Ref. No. | Part No.      | Part No.<br>Changed to | Description                         | Common<br>Model | Q'ty |  |
|----------|---------------|------------------------|-------------------------------------|-----------------|------|--|
| 1        | 81-508-853-01 |                        | Printed indiv., Packing             | *               | 1    |  |
| 2        | 81-508-856-01 |                        | Cushion R down, Printed indiv.      | *               | 1    |  |
| 3        | 81-508-857-01 |                        | Cushion L down rinted indiv.        | *               | 1    |  |
| 4        | 81-508-858-01 |                        | Cushion R up, Printed indiv.        | *               | 1    |  |
| 5        | 81-508-859-01 |                        | Cushion L up, Printed indiv.        | *               | 1    |  |
| 6        | 87-056-628-01 |                        | Poly-vinyl sack                     |                 | 1    |  |
| 7        | 81-508-905-01 |                        | Instructions booklet                | *               | 1    |  |
| 8        | 87-051-171-11 |                        | Poly-vinyl sack                     |                 | 1    |  |
| 9        | 87-056-009-51 |                        | Distributors list                   |                 | 1    |  |
| 10       | 87-056-008-11 |                        | Label, AC power cord (K model only) |                 | 1    |  |
| 11       | 87-056-016-01 |                        | Tag, Main voltage (K model only)    |                 | 1    |  |
| 12       | 83-063-001-01 |                        | Speaker, SC-100                     |                 | 1    |  |
| 13a      | 87-034-883-01 |                        | AC power cord (E model only)        |                 | 1    |  |
| 13b      | 87-034-871-01 |                        | AC power cor (K model only)         |                 | 1    |  |
| 14       | 87-034-972-01 |                        | Connection cord CW-2534SK           |                 | 1    |  |
| 15       | 87-056-535-01 |                        | Air cap sack                        |                 | 1    |  |