CFD-S05

SERVICE MANUAL

Ver. 1.0 2010.03

Australian Model
Singapore Model
Taiwan Model
Korea Model
Thai Model

CD Section	Model Name Using Similar Mechanism	NEW
	Optical Pick-up Name	DA11MMVGP
TC Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	MF-S05V

SPECIFICATIONS

CD player section

System
Compact disc digital audio system
Laser diode properties
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Number of channels
2
Frequency response
20 Hz - 20,000 Hz +1/–2 dB
Wow and flutter
Below measurable limit

Radio section

Frequency range
FM: 87.5 MHz - 108 MHz
Except SP model:
AM: 531 kHz - 1,602 kHz
SP model:
AM: 531 kHz - 1,602 kHz (9 kHz step)
530 kHz - 1,610 kHz (10 kHz step)
IF (AUS, TH model)
FM: 128 kHz
AM: 45 kHz
Antennas
FM: Telescopic antenna
AM: Built-in ferrite bar antenna

Cassette-corder section

Recording system
4-track 2 channel stereo
Fast winding time
Approx. 150 s (sec.) with Sony cassette C-60
Frequency response
TYPE I (normal): 80 Hz - 10,000 Hz

General

Speaker
Full range: 8 cm dia., 4 Ω, cone type (2)
Outputs
Headphones jack (stereo minijack):
For 16 Ω - 32 Ω impedance headphones
Input
AUDIO IN jack (stereo minijack)

– Continued on next page –

CD RADIO CASSETTE-CORDER

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Sony Corporation
Audio&Video Business Group
Published by Sony Techno Create Corporation

SONY®

Power output
1.7 W + 1.7 W (at 4 Ω, 10% harmonic distortion)
Power requirements
For CD radio cassette-corder:
120 V AC, 60 Hz (TW model)
230 V AC, 50 Hz (AUS model)
220 V AC, 50 Hz (TH model)
220 V AC, 60 Hz (KR model)
230 V AC - 240 V AC, 50 Hz (SP model)
9 V DC, 6 R14 (size C) batteries
Power consumption
AC 13 W
Battery life
For CD radio cassette-corder:

FM recording
Sony R14P: approx. 4.5 h
Sony alkaline LR14: approx. 19 h
Tape playback
Sony R14P: approx. 2.5 h
Sony alkaline LR14: approx. 13 h
CD playback
Sony R14P: approx. 1 h
Sony alkaline LR14: approx. 8 h

Dimensions
Approx. 365 mm × 134 mm × 230 mm (w/h/d)
(incl. projecting parts)
Mass
Approx. 2.7 kg (incl. batteries)
Supplied accessory
AC power cord (1)

Design and specifications are subject to change without notice.

- Abbreviation
  AUS : Australian model
  KR : Korean model
  SP : Singapore model
  TH : Thai model
  TW : Taiwan model

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pickup block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON DUALDISCS

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

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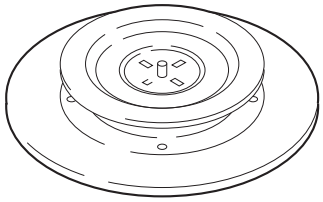
SECTION 1
SERVICING NOTES

CHUCK PLATE JIG ON REPAIRING

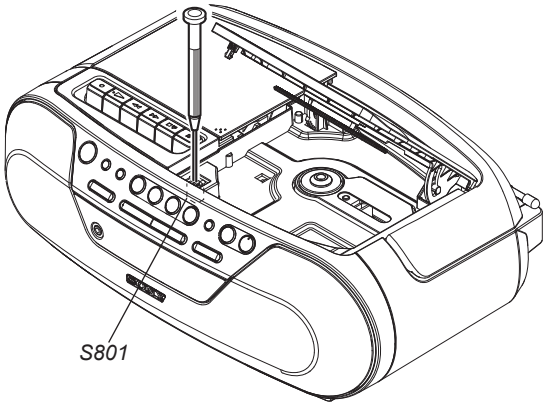
On repairing CD section, playing a disc without the lid (CD), use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1

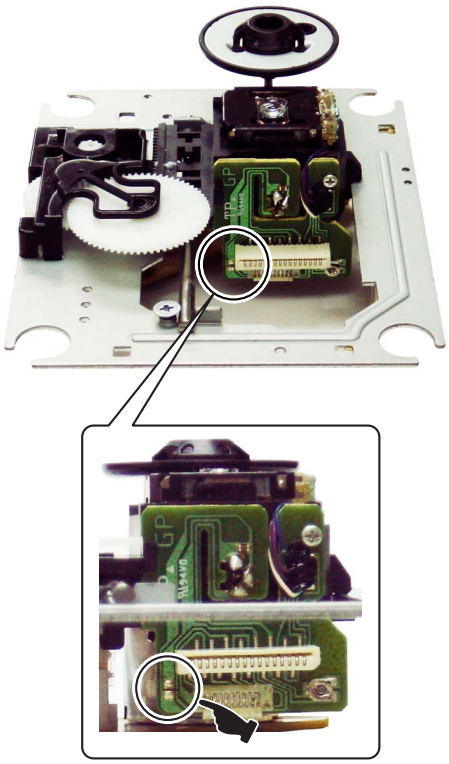


LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Turn ON the [OPERATE] button and press [CD] button to CD position.
2. Open the CD lid.
3. Turn on S801 with screwdriver, etc. as following figure.
4. Press the [► ▮▮] (CD) button.
5. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
   Objective lens moves up and down three times for focus search.



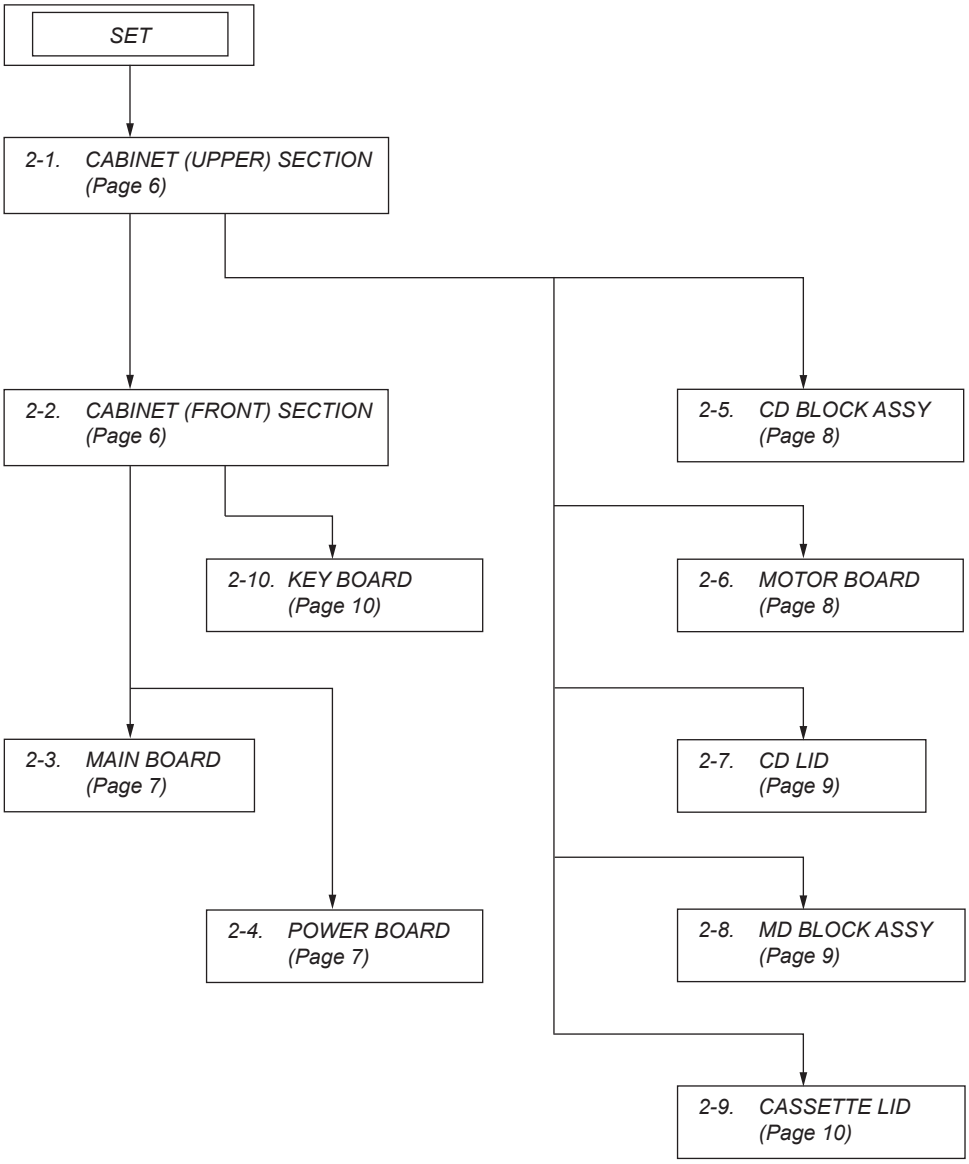
PRECAUTION WHEN INSTALLING A NEW OP UNIT/ PRECAUTION BEFORE UNSOLDERING THE STATIC ELECTRICITY PREVENTION SOLDER BRIDGE



When installing a new OP unit, be sure to connect the flexible printed circuit board first of all before removing the static electricity prevention solder bridge by unsoldering.
Remove the static electricity prevention solder bridge by unsoldering after the flexible printed circuit board has already been connected.
(Do not remove nor unsolder the solder bridge as long as the OP unit is kept standalone.)

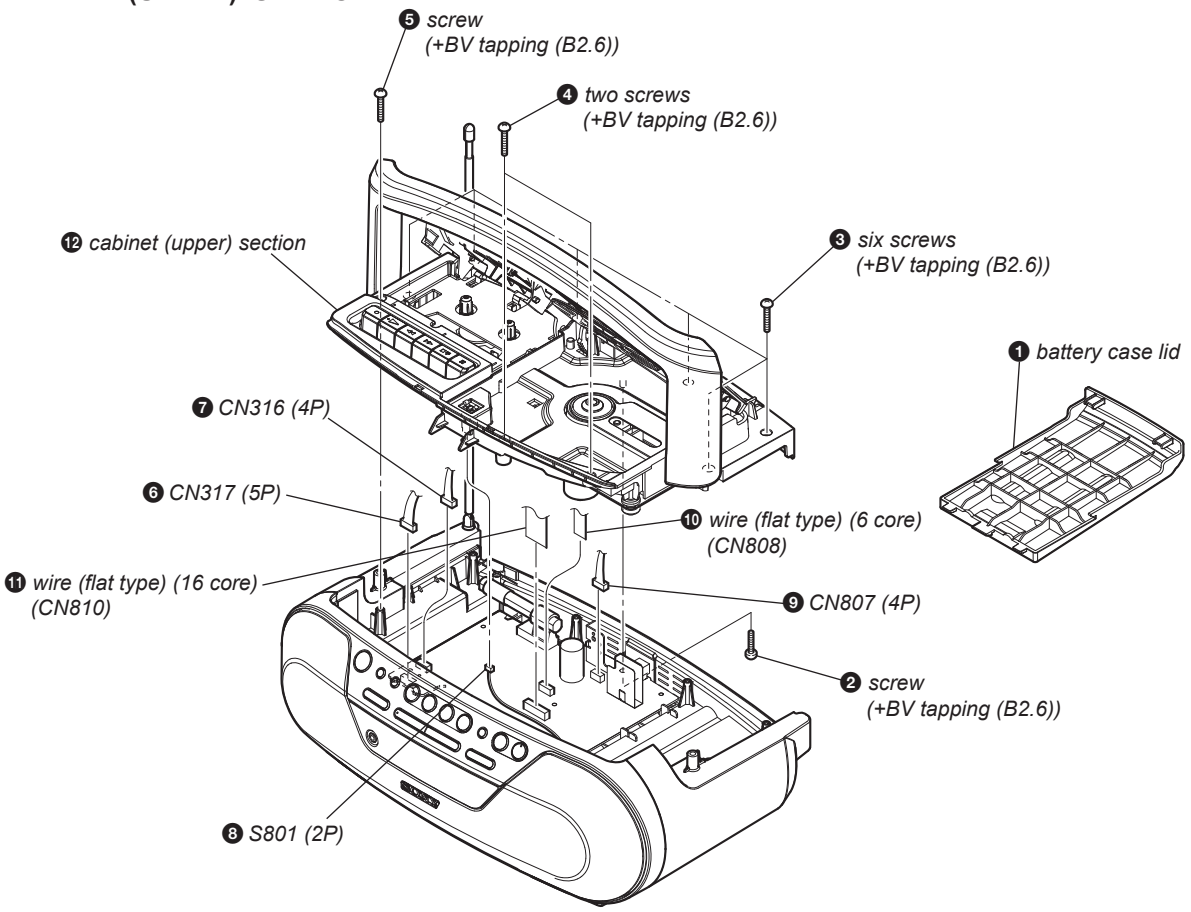
SECTION 2
DISASSEMBLY

- This set can be disassembled in the order shown below.

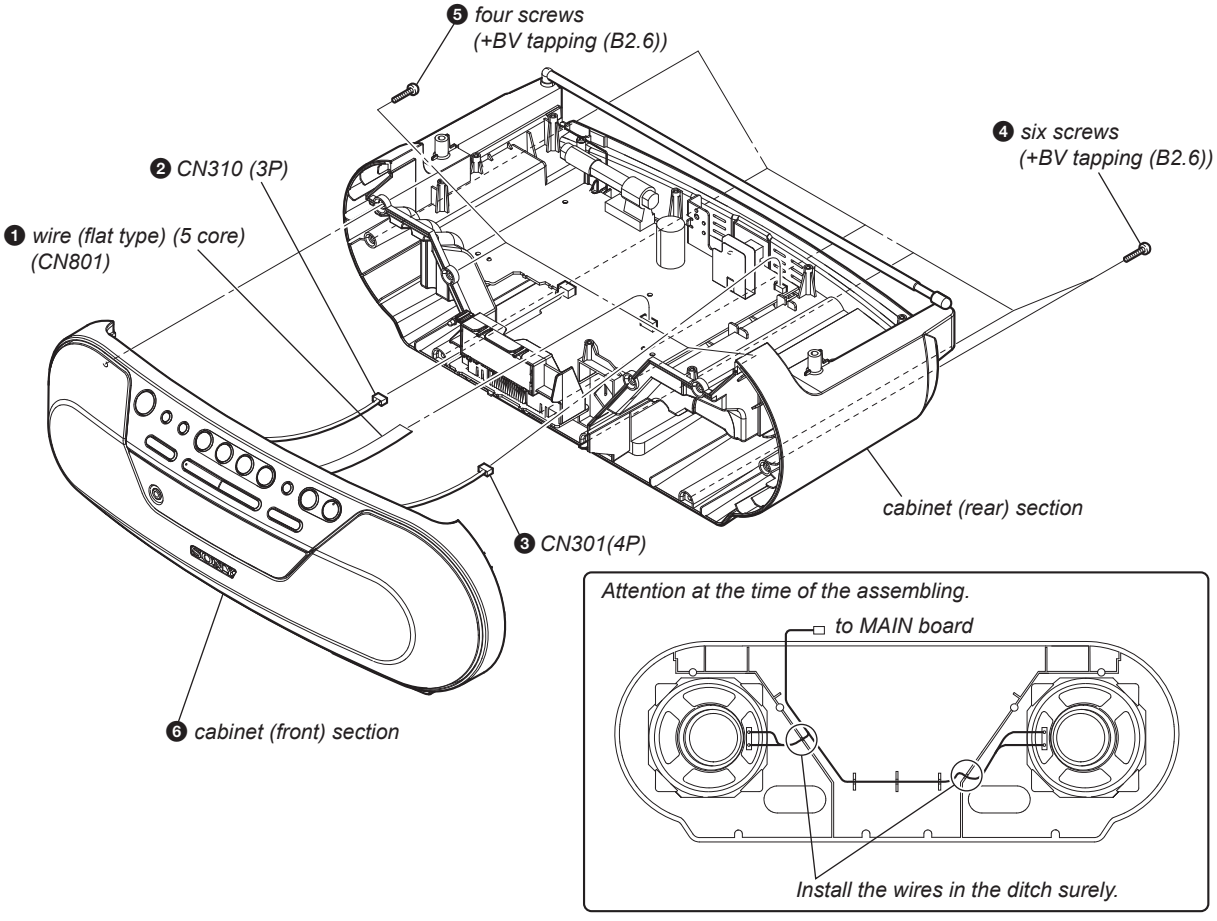


Note: Follow the disassembly procedure in the numerical order given.

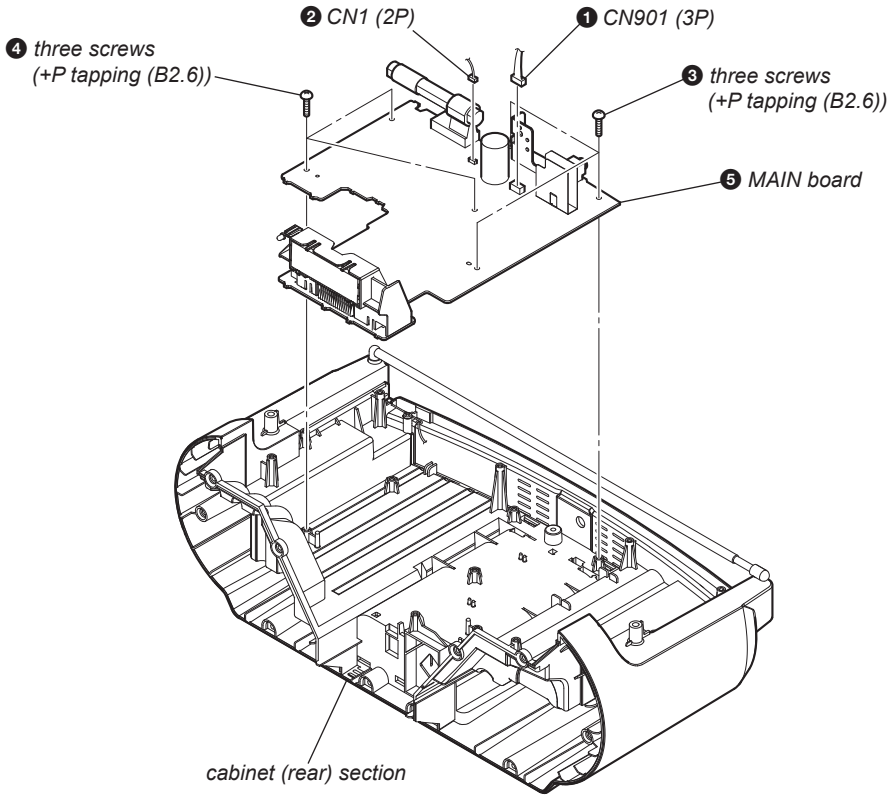
2-1. CABINET (UPPER) SECTION



2-2. CABINET (FRONT) SECTION



2-3. MAIN BOARD



2-4. POWER BOARD