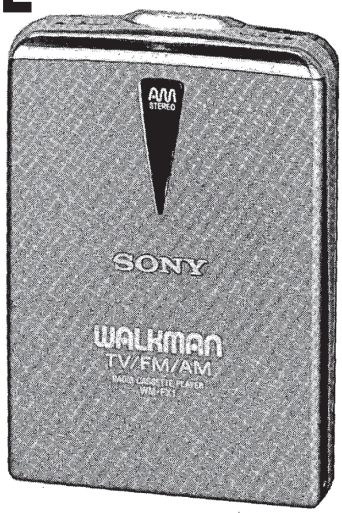
WM-FX1

SERVICE MANUAL

Ver 1.1 2002. 01



E Model
Australian Model
Tourist Model

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MF-WMFX1-112

SPECIFICATIONS

Radio section

Frequency range

FM : 87.5 – 108 MHz (EXCEPT JE model)
76.0 – 90.0 MHz (JE model)
AM : 531 – 1,602 kHz (EXCEPT JE model)
531 – 1,710 kHz (JE model)
TV : 1ch – 12ch (MONO) (JE model)

Tape section

Frequency response (Dolby NR* off)
Playback: 30–18,000 Hz
Output
Headphones (REMOTE jack)
Load impedance 8–300 ohms
Power output
4 mW + 4 mW (16 ohms)
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

General

Power requirements
1.5 V
Rechargeable battery
One R6 (size AA) battery
Dimensions (w/h/d)
Approx. 79.7 x 111.8 x 23.2 mm, incl. projecting parts and controls
Mass
Approx. 180 g
Approx. 270 g incl. rechargeable battery, headphones with remote control and cassette

Supplied accessories
Battery case (1)
Stereo headphones with remote control (1)
Ear adaptors (2)
Battery charger (1)
AC plug adaptor (1) (excluding Australian model)
Rechargeable battery (NH-9WM (S), 1.2 V, 1,000 mAh, Ni-MH) (1)
Carrying pouch (1)

Design and specifications are subject to change without notice.

Battery life	(Approx. hours)	
	Sony alkaline AM3 (N)	Sony SUM-3 (NS)
Tape playback	25	8
Radio reception	27	8.5

Battery life	(Approx. hours)
Rechargeable battery (NH-9WM (S))	
Tape playback	12 36 (with Sony alkaline AM3 (N))
Radio reception	13 38 (with Sony alkaline AM3 (N))

Battery life	(Approx. hours)
Rechargeable battery (NC-6WM)	
Tape playback	8
Radio reception	8.5

Remove the rechargeable battery if inserted and attach the battery case and connect the AC power adaptor (AC-E15HG not supplied) to the DC IN 1.5 V of the battery case and to the mains. Do not use any other AC power adaptor.

• Abbreviation
JE : Tourist model.

RADIO CASSETTE PLAYER

9-959-783-12
2002A1600-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

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 the 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.

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.

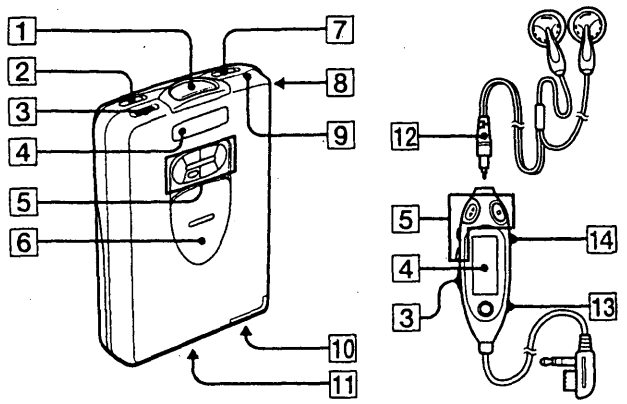
TABLE OF CONTENTS

- Abbreviation
  JE : Tourist model.

SECTION 1
GENERAL

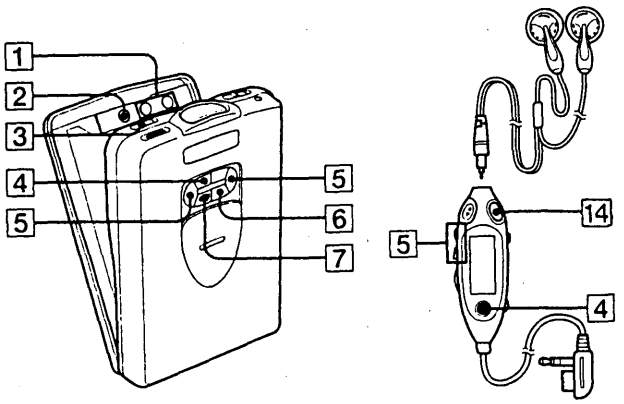
PARTS IDENTIFICATION

Tape Player and General section



1 OPEN buttons
2 DD DOLBY NR switch
3 VOL (Volume) knob
4 Display window
5 Tape operation buttons
6 HOLD cover
7 ⇄ (Play back mode) • BL SKIP (blank skip) switch
8 REMOTE ∩ jack
9 BATT (battery) indicator
10 Rechargeable battery case
11 Battery connecting points (for supplied battery case)
12 Micro plug
13 DBB/AVLS switch
14 HOLD switch

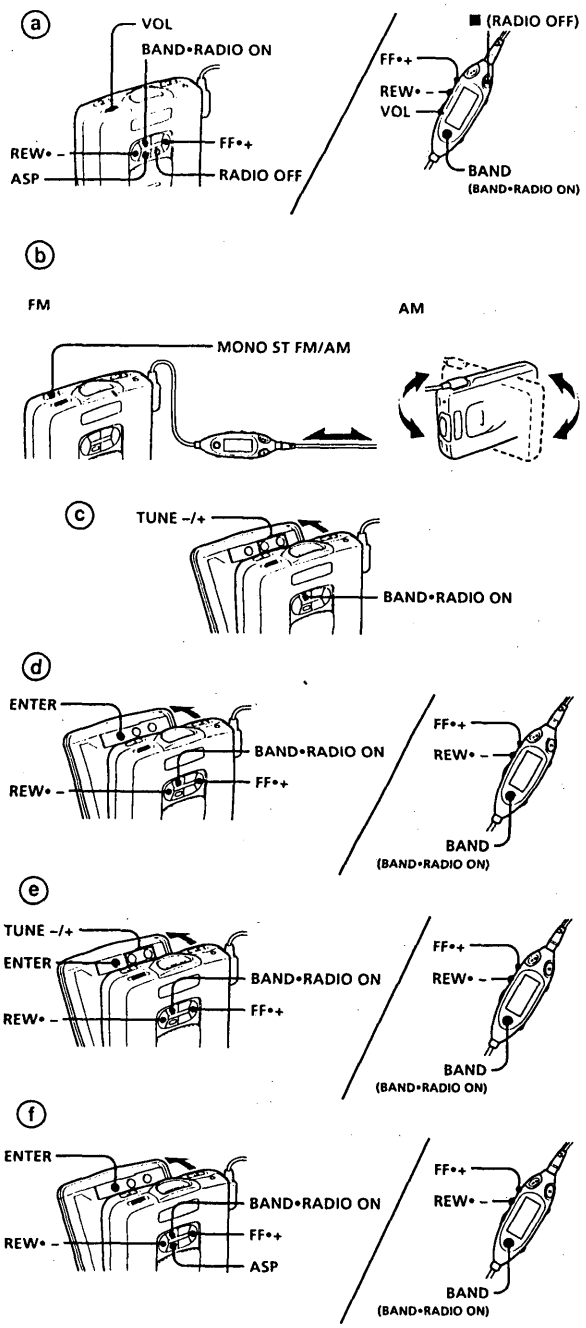
RADIO SECTION



1 TUNE +, – button
2 ENTER button
3 MONO ST FM/AM switch
4 BAND • RADIO ON button
5 FF • +, REW • – button
6 ■ • RADIO OFF botton

This section is extracted from instruction manual.

E



Listening to the Radio (see Fig. E-ⓐ)

1 Press BAND•RADIO ON to turn on the radio.

2 Press ASP to preset the receivable stations.
The Walkman starts searching and storing stations.

3 After the FM frequency and "PRESET 1" light, press BAND•RADIO ON repeatedly to select AM or FM.

4 Press FF•+ or REW•– to select the preset number you wish to listen to and adjust the volume using the VOL control.
To turn off the radio, press RADIO OFF.
Next time you listen to the radio in the same frequency area, you can skip step 2.

To improve the broadcast reception (see Fig. E-ⓑ)

- For AM: Reorient the Walkman horizontally.
- For FM: Extend the headphones cord, the aerial. If the reception is still not good, set the MONO ST (monaural/stereo) FM/AM selector* to MONO.
  * You tune to the AM stereo broadcast in Japan only.

What the ASP button does —ASP (Auto Station Preset function)

You can store and preset the receivable stations by simply pressing the ASP button. When you press the ASP button, the Walkman searches and stores receivable stations (both AM and FM) automatically.
If the stations were not stored, or you want to preset stations manually, see "Tuning in the Radio Manually" or "Storing Radio Stations Manually and Receiving the Stations" as following.

Tuning in the Radio Manually (Manual tuning) (see Fig. E-ⓒ)

Turn on the radio and select the desired band. Then press TUNE +/– inside the cassette holder. If you press and hold TUNE +/– for more than a few seconds, the Walkman will start tuning the stations automatically.

Tuning in and Storing Radio Stations Automatically and Receiving the Stations (Auto-Memory Scanning function) (see Fig. E-ⓓ)

1 Press BAND•RADIO ON to turn on the radio.
2 Press BAND•RADIO ON repeatedly to select AM or FM.
3 Press ENTER inside the cassette holder until "A" appears in the display window.
The Walkman starts searching and storing stations.
4 After "PRESET" and the preset number appear, tune in a station using FF•+ or REW•–.

Storing Radio Stations Manually and Receiving the Stations (Manual-Memory function) (see Fig. E-ⓔ)

1 Tune in a station you wish to store.
2 Press ENTER inside the cassette holder. "PRESET" and a preset number flash in the display window.
3 While "PRESET" and the preset number are flashing, select a preset number on which you wish to store a station using FF•+ or REW•–.
4 While "PRESET" and the preset number are flashing, press ENTER.
5 Tune in a station using FF•+ or REW•–.

Notes

- If you cannot complete step 3 or 4 while the indications are flashing, repeat from step 2.
- If you preset automatically using the ASP button, the stations stored will be erased.

Receiving Stations Outside Your Country (see Fig. E-ⓕ)

1 Press and hold ENTER inside the cassette holder and press BAND•RADIO ON to turn on the radio. "AREA 1" flashes in the display window.
2 While "AREA 1" is flashing, press FF•+ or REW•– repeatedly to select either area "USA" (USA and Canada) or "1"–"9" (Japan)* and then press ENTER.
  * "1"–"9"shows the areas in Japan.
3 Press ASP to store the radio stations (both AM and FM) automatically.
The Walkman starts searching and storing stations.
4 Press BAND•RADIO ON to select the desired band and press FF•+ or REW•– to select a station.

To cancel the stored station

Operate the Walkman according to the steps in "Storing Radio Stations Manually and Receiving the Stations" from step 1 to step 3. When you enter a preset number, select "–," and press the ENTER button while "–" is flashing.

SECTION 2
SERVICE NOTE

[Service Mode]

Mode which enables the mechanism to be operated with the MAIN board opened.

1. Setting
1) Refer to "Disassembly" and remove the cabinet and open the MAIN board.
2) Connect the MAIN board to the motor and plunger using a jumper wire. Use "Extension tool (1-769-143-11)) (one set 10 tools)" to make connection simple.
3) Short-circuit the TP101 by soldering. (TAPE SW)
4) Turn OFF the BL SKIP switch (S902) of the SW FLEXIBLE (MODE) board.
5) While short-circuiting the service mode land (TP104) using tweezers, etc. supply 1.2V to the battery + and – terminals from the stabilized power supply.

Note : After completing the repair, desolder and return the original state.

2. Preset State
This state must be set to set the PLAY, FF, and REW modes.
1) Check that the lever (NR SW) is at the center and N/R switch (S701) is at the center. If not, set the preset state as follows.
2) Move the N/R switch (S701) according to the side faced by the lever (NR SW).
3) The lever (NRSW) will work when the stabilized power supply switch is turned off once and turned on again. Move the N/R switch (S701) according to the movements of the lever and set to the center position.
Perform step 5) of the setting again. When timing is difficult, place the board on top, push S701 from the top with your finger and adjust so that S701 moves according to the movements of the lever (NR SW).

3. FF REW Mode
1) Check the "2. Preset State" and press the FF switch and REW switch.

4. PLAY Mode
1) Check the "2. Preset State".
2) When the ◁▷ switch is pressed, the lever (NRSW) moves once to the N side and then moves to the R side. When the N/R switch (S701) is moved according to the movements of the lever (NR SW), the PLAY mode (R side) is set. When the ◁▷ switch is pressed another time, and the N/R switch (S701) is moved according to the movements of the lever (NRSW), the PLAY mode (N side) is set.

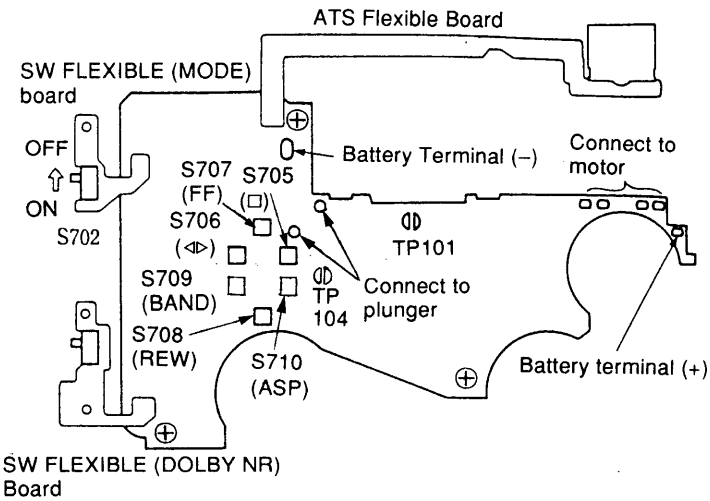
Note 1 : If the above cannot be performed, start again from preset.

Note 2 : Use the remote control ◁▷, □, FF, and REW switches as much as possible. If the remote control is not available, do not touch S705 to S708 with the hand and use something with a round tip to press them.

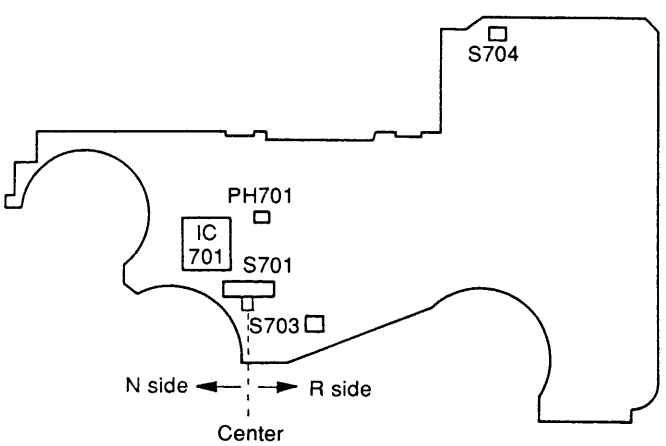
Note 3 : By using a headphone, the timing for moving S701 can be known by the beep.

[MAIN Board]

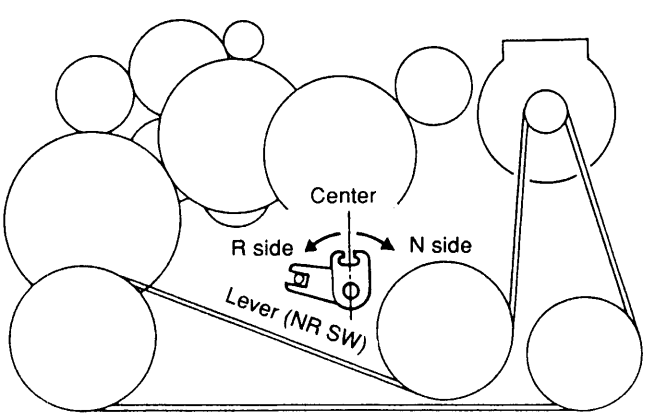
— Conductor Side —



— Component Side —

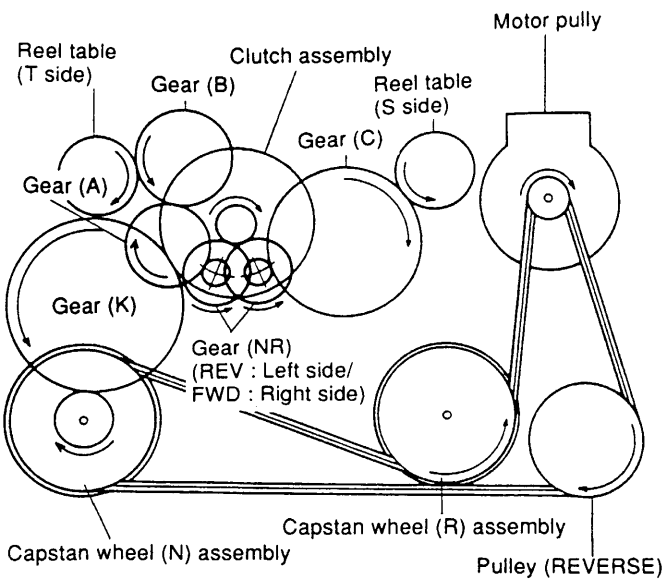


[Lever (NR SW)]

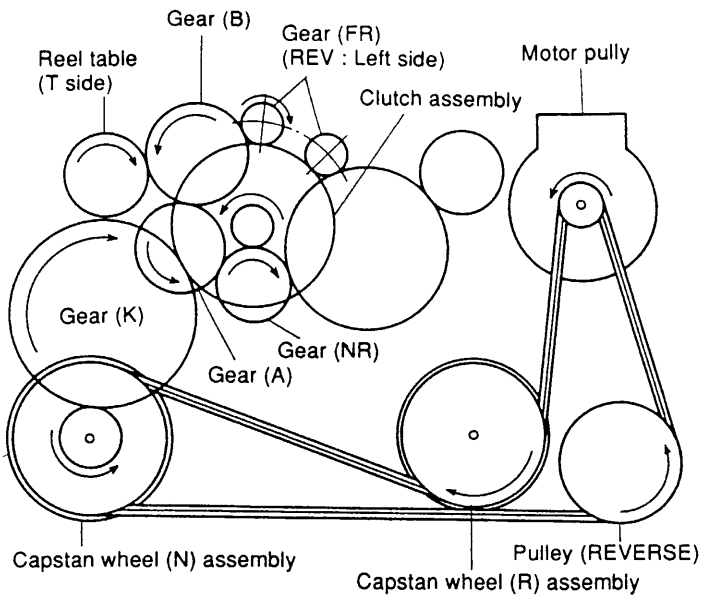


[Rotation system]

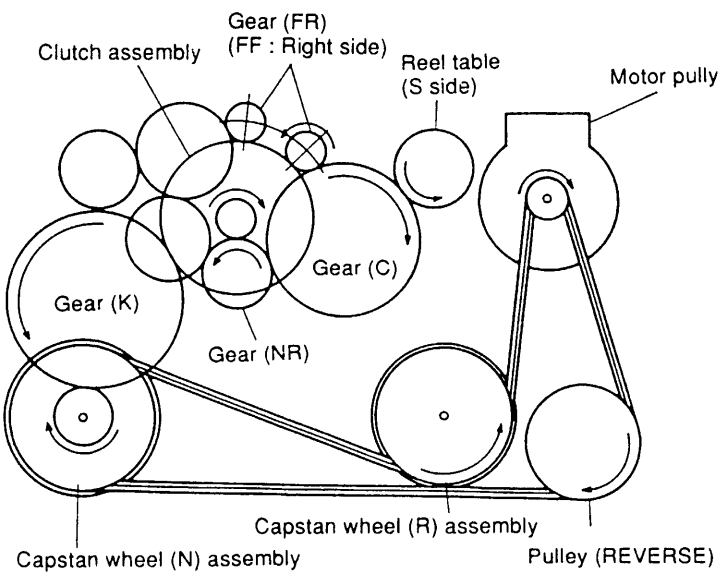
Rotation system during PLAY.



Rotation system during REW.



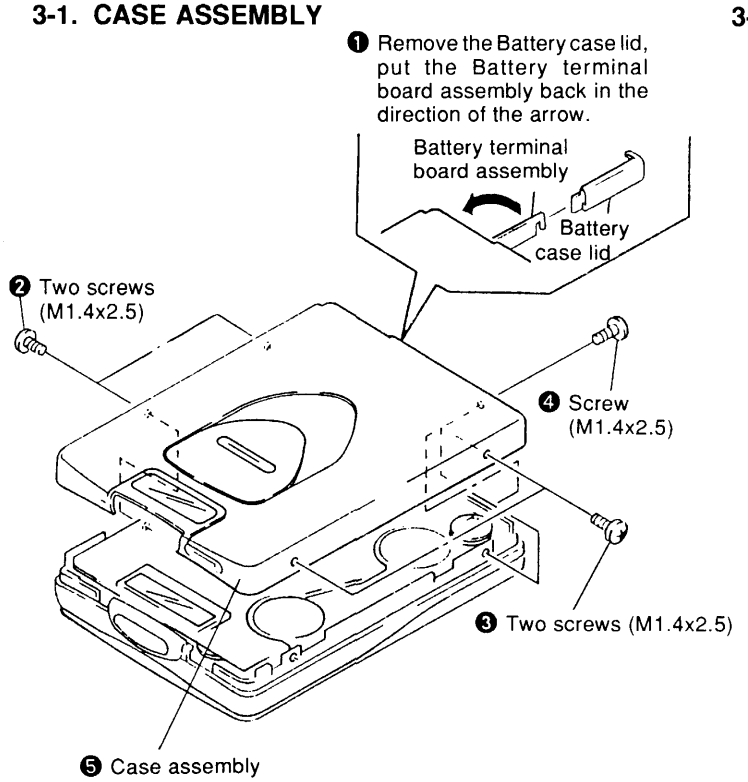
Rotation system during FF.



SECTION 3
DISASSEMBLY

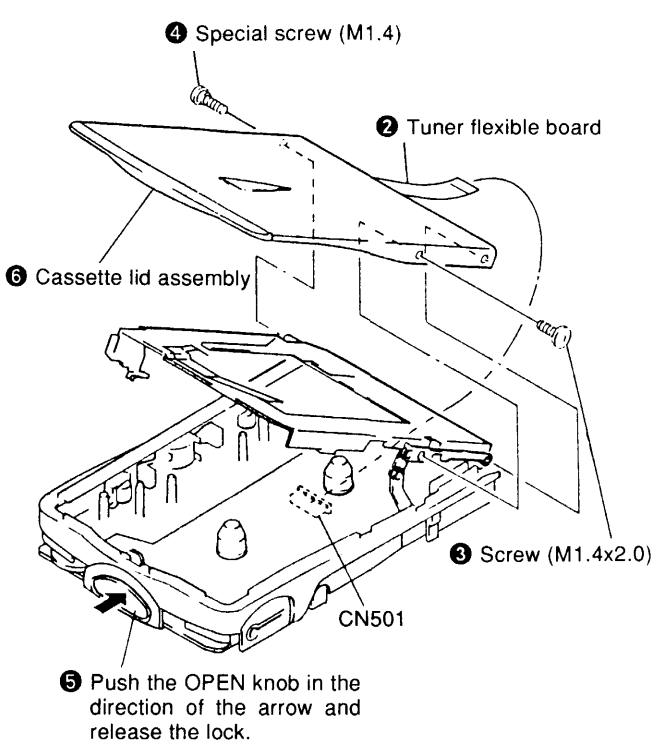
• Remove by priority of number as ❶ in the figure.

3-1. CASE ASSEMBLY

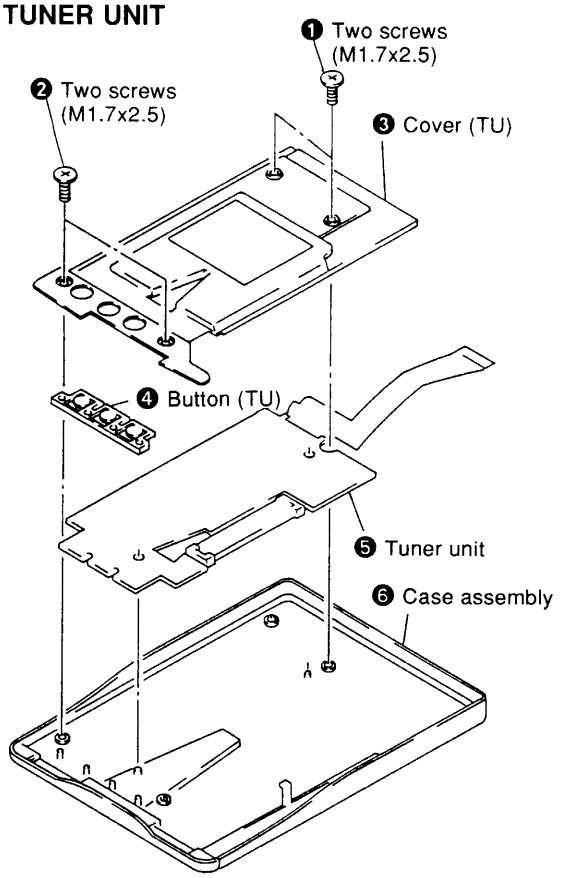


3-2. CASSETTE LID ASSEMBLY

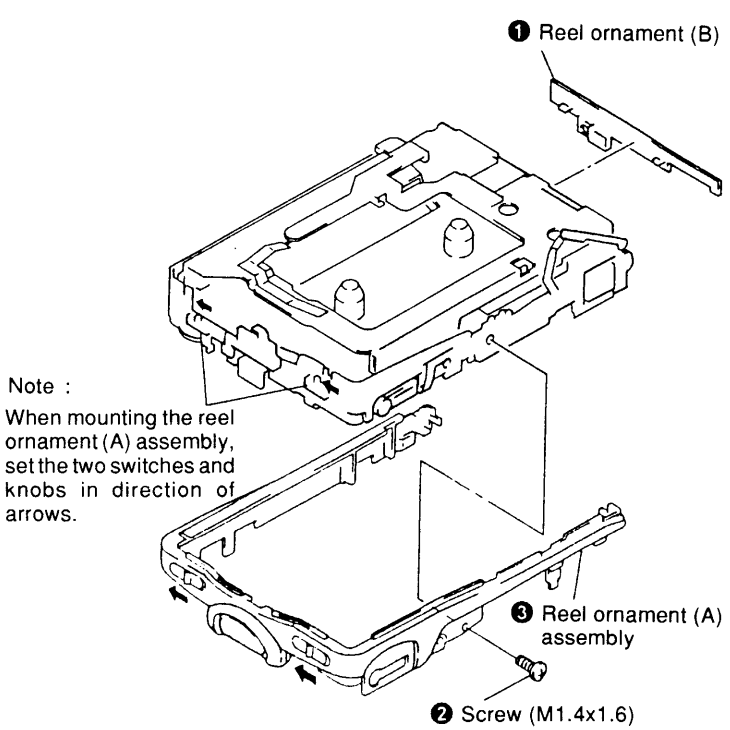
❶ Remove the case assembly



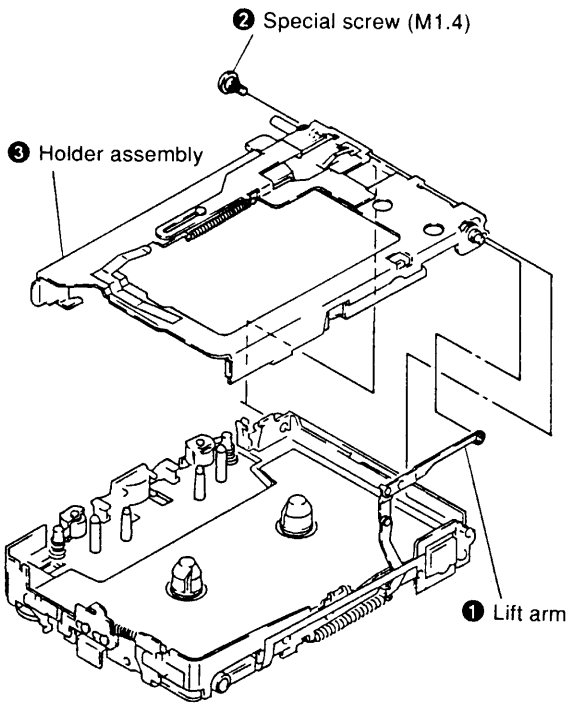
3-3. TUNER UNIT



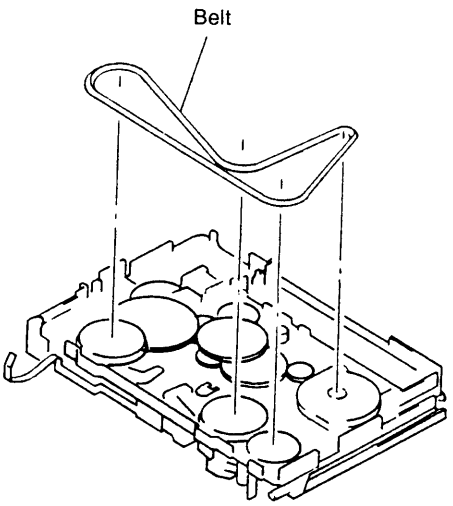
3-4. REEL ORNAMENT



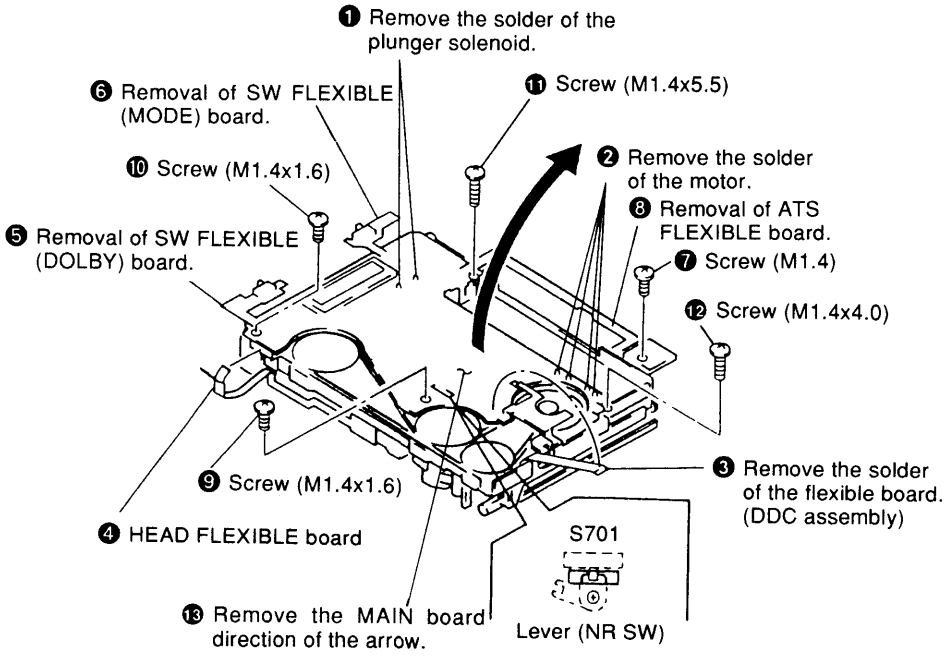
3-5. HOLDER ASSEMBLY



3-7. BELT



3-6. MAIN BOARD



Note : Confirm if the switch lever installs itself in the groove of a lever (NR SW) for assembling.

SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Before adjusting, clean the following parts with a piece of cotton moistened with alcohol.
   playback head pinch roller
   rubber belt capstan
2. Demagnetize the playback head using a head demagnetizer.
3. Do not use a magnetized screwdriver for adjustments.
4. After adjusting, apply screw-locking compound onto the adjusted parts.
5. Unless specified otherwise, use a specified voltage (1.3V) to perform the adjustments.

[Torque Measurement]

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	18 — 28 g • cm
FWD Back tension		0.5 — 3.0 g • cm
REV	CQ-102RC	18 — 28 g • cm
REV Back tension		0.5 — 3 g • cm
FF	CQ-201B	More than 40 g • cm
REW		

SECTION 5.
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Specified voltage : 1.3V.
2. Switch position
   DOLBY NR switch : OFF
   EX DBB switch : NORM (Only remote control)

Cassette Section

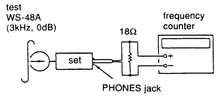
Test tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

0dB = 0.775V

[Tape speed adjustment]

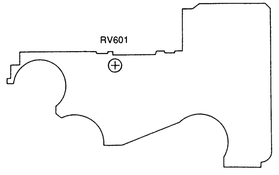
Procedure :



1. Play back WS-48A (tape center part) in the FWD state and adjust RV601 so that the frequency counter reading becomes 3000 ± 10 Hz.
2. Play back WS-48A (tape center) in the REV state. Check that the frequency counter reading is within 2.5% of the reading of step 1.

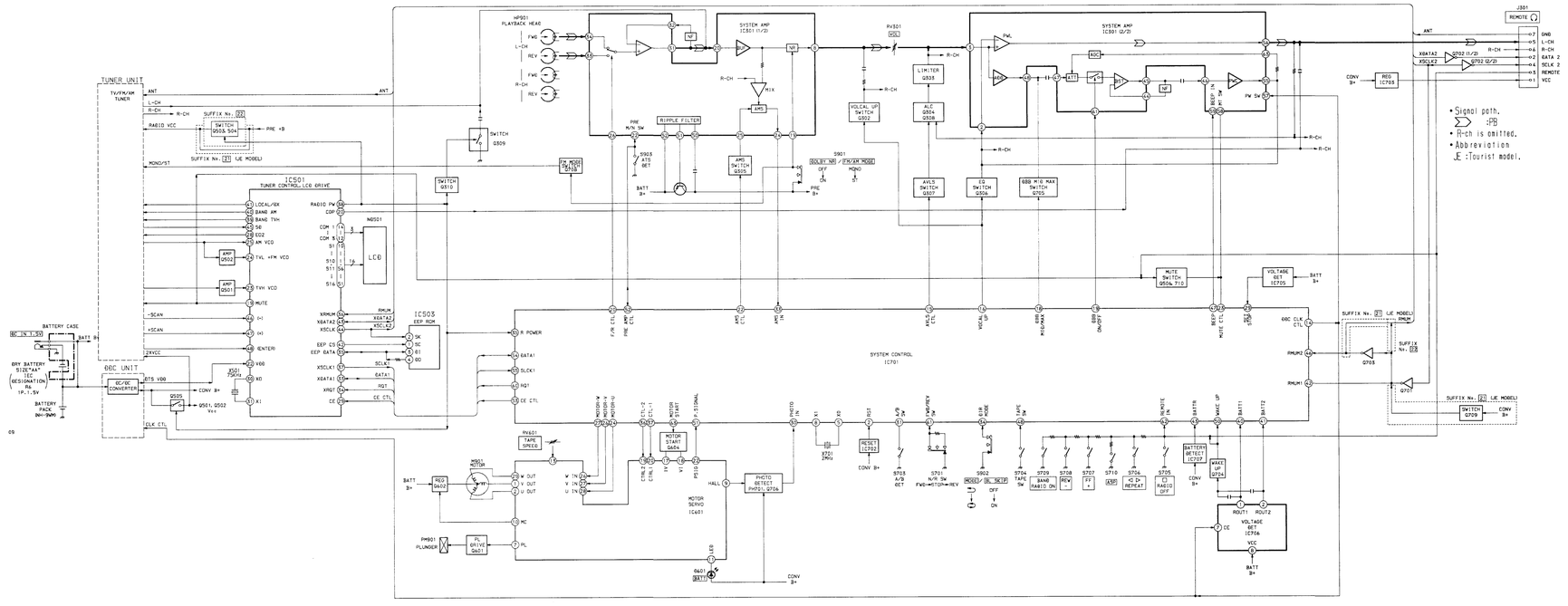
Adjustment Point :

MAIN BOARD (Side B)



SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM

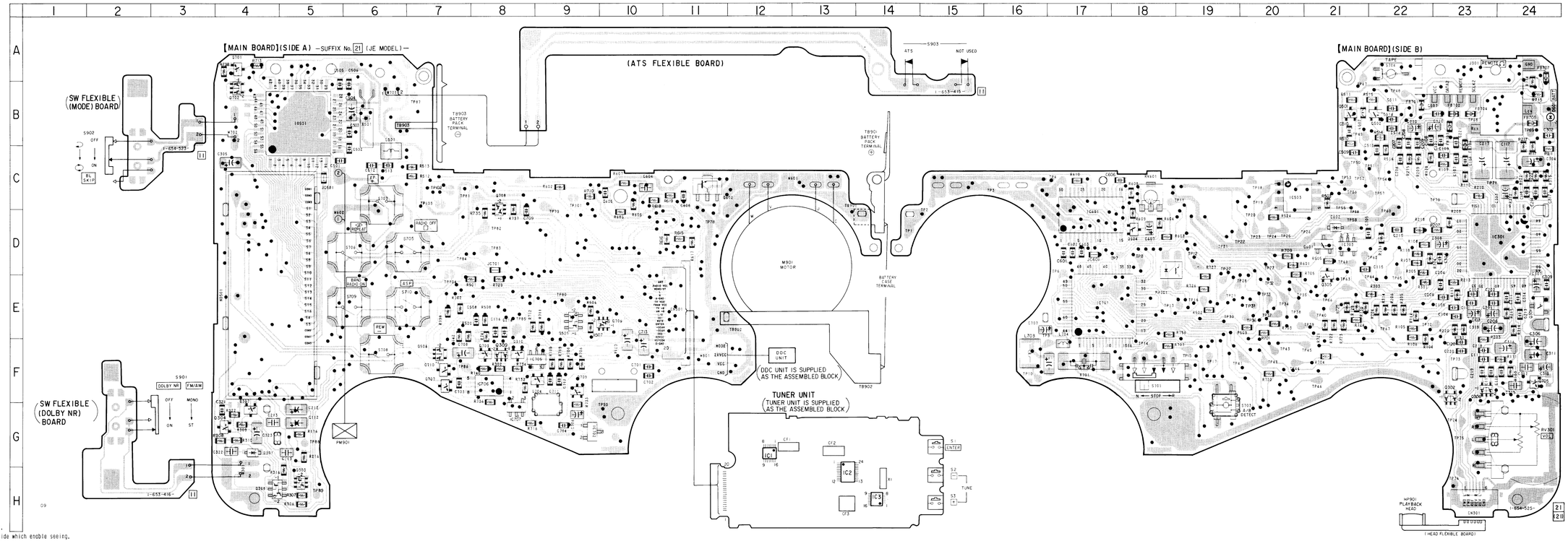


6-2. PRINTED WIRING BOARD — MAIN board suffix No. 21 (JE model) —

• See page 25 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location
D301	G-4
D601	B-24
D602	D-21
IC301	D-23
IC501	B-5
IC503	C-20
IC601	D-17
IC701	E-17
IC702	G-9
IC703	D-21
IC705	F-9
IC706	F-8
IC707	G-8
PH701	E-18
Q301	E-24
Q302	F-23
Q303	H-5
Q304	G-4
Q305	E-21
Q306	F-23
Q307	G-4
Q308	H-4
Q309	F-8
Q310	F-8
Q501	B-21
Q502	B-22
Q505	E-9
Q506	F-7
Q601	D-21
Q602	C-11
Q604	D-18
Q701	A-4
Q702	B-4
Q703	F-8
Q704	F-9
Q705	F-24
Q706	E-10
Q707	F-7
Q708	C-8
Q709	F-9
Q710	F-7



NOTE

- ● : Through hole.
- △ : Internal component.
- : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)

• Abbreviation
JE : Tourist model.

6-3. PRINTED WIRING BOARD — MAIN board suffix No. 22 —

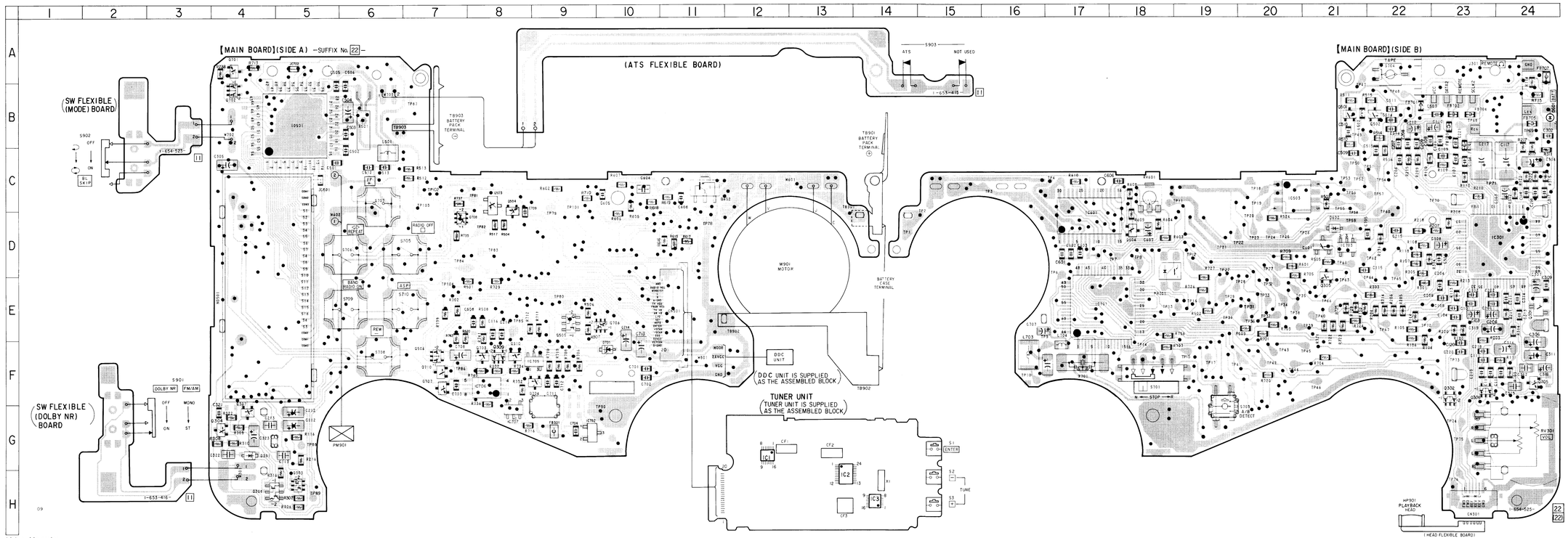
• See page 25 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location
D301	G-4
D601	B-24
D602	D-21
D701	F-10
IC301	D-23
IC501	B-5
IC503	C-20
IC601	D-17
IC701	E-17
IC702	G-9
IC703	D-21
IC705	F-9
IC706	F-8
IC707	G-8
PH701	E-18
Q301	E-24
Q302	F-23
Q303	H-5
Q304	G-4
Q305	E-21
Q306	F-23
Q307	G-4
Q308	H-4
Q309	F-8
Q310	F-8
Q501	B-21
Q502	B-22
Q503	C-8
Q504	C-8
Q505	E-9
Q506	F-7
Q601	D-21
Q602	C-11
Q604	D-18
Q701	A-4
Q702	B-4
Q703	F-8
Q704	F-9
Q705	F-24
Q706	E-10
Q707	F-7
Q708	D-7
Q710	F-7

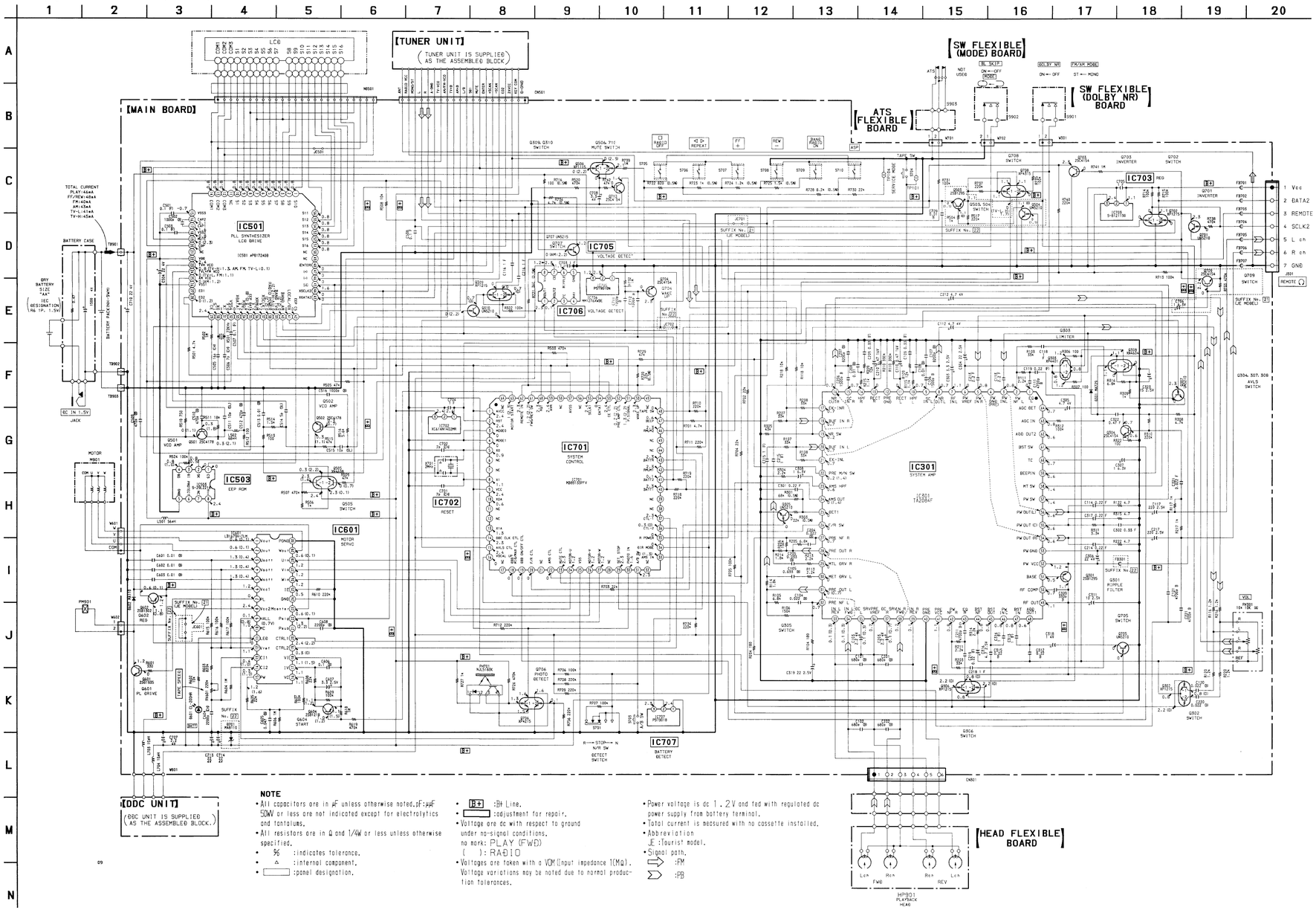
NOTE

- ● : Through hole.
- △ : Internal component.
- ▒ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)



6-4. SCHEMATIC DIAGRAM

• See page 26 for IC Pin Functions. (IC501, 701)

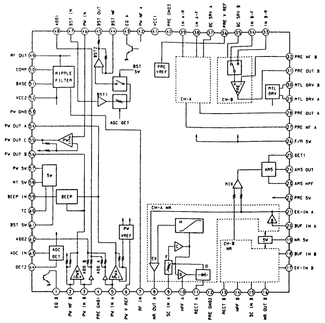


NOTE

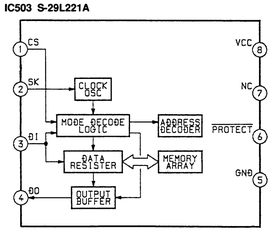
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- ▭ : adjustment for repair.
- Voltage are dc with respect to ground under no-signal conditions.
  no mark: PLAY (FWD)
  ( ): RADIO
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Power voltage is dc 1.2V and fed with regulated dc power supply from battery terminal.
- Total current is measured with no cassette installed.
- Abbreviation
  J : Tourist model.
- Signal path.
  ⇨ : FM
  ⇦ : PB

• **IC Block Diagrams**

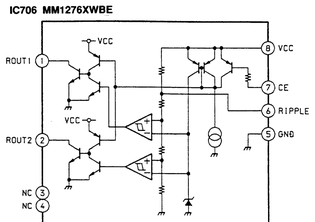
IC301 TA2084F



IC503 S-29L221A

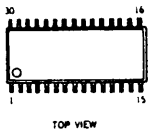


IC706 MM1276XWBE

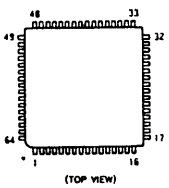


6-5. SEMICONDUCTOR LEAD LAYOUTS

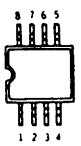
LB1679V-TLM



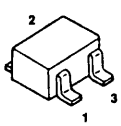
MB89133PFV-G-229BND
TA2084F



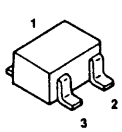
MM1276XWBE
S-29L221ADFE-TB



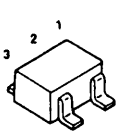
PST9010NL



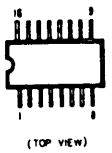
PST9018NL



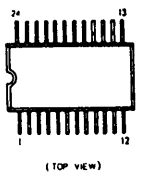
S-81211SG-QA-T1



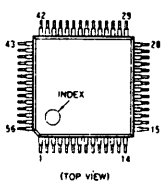
TA2040AFN
TA8182FN



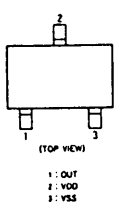
TA8153FN



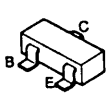
μPD1724GB-688-1A7



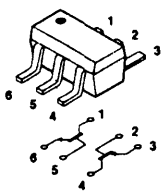
XC61AN1402MX



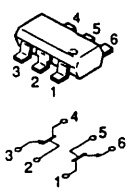
UN5210-R
UN5215-RS-TX
2SA1586-YG
2SB1295-UL6
2SC4154-F
2SC4178-F13
2SD1935-CT6



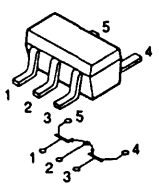
XN4604-TX



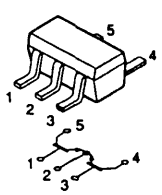
XN4608



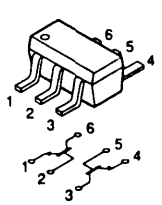
XP1115



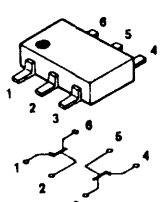
XP1215-TXE



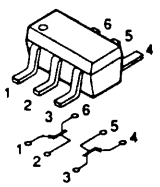
XP4215-TXE



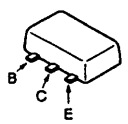
XP4315-TXE



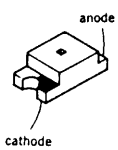
XP4401



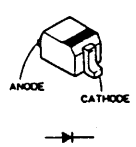
2SB1302-S



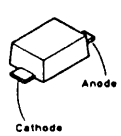
CL-200HR-C-TSL



MA110

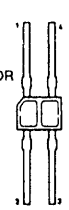


MA729
MA8110



NJL5183K-F20-TE1

1. ANODE
2. CATHODE
3. EMITTER
4. COLLECTOR



6-6. IC PIN FUNCTIONS

- **IC501 TUNER CONTROLLER/LCD DRIVE (μPD1724GB)**

Pin No.	Pin Name	I/O	Function
1 to 10	S10 to S1	O	LCD segment signal output pin
11	NC	–	Not used
12 to 14	COM3 to COM1	O	LCD common signal output pin
15	VSS3	–	Pins connecting capacitors for doubler circuits generating the LCD drive voltage
16	CAP2	–	
17	CAP1	–	
18	VSS2	–	
19	MUTE	O	Generates 1.12 kHz pulses when using as a VDP
20	CGP	O	BEEP signal output terminal
21	NC	–	Not used
22	VDD	–	The internal reset circuit functions when supplied with 0V to 1.5V
23	TVH VCO	I	Partial oscillation frequency input pin (direct dividing method) (HIGH IMP when CE is low)
24	TVL+FM VCO	I	Partial oscillation frequency input pin (pulse swallow method) (PULL DOWN when CE is low)
25	AM VCO	I	
26	VSS1	–	GND
27	E01	O	Not used
28	E02	O	When the frequency obtained by frequency dividing the partial oscillation frequency is higher than the reference frequency: HIGH output. When Lower: LOW output. When the same: HIGH-IMP.
29	CE	I	The internal reset circuit functions when LOW becomes HIGH
30	XO	O	Connected to the liquid crystal oscillator Oscillates 75 kHz liquid crystals
31	XI	I	
32	VSS4	–	Connected to the regulator circuit capacitor
33	XDATA1	I	Data from the main microprocessor
34	XRQT	I	Pin inputting requests from the main microprocessor
35	EEP DATA	I/O	Pin for communicating data with EEPROM
36	XRMUM	I	With remote control: HIGH potential. No remote control: LOW potential
37	XSCLK1	O	Serial clock output pin for communicating with the main microprocessor
38	RADIO POWER	O	HIGH potential when RADIO is ON
39	BAND TVH	O	Become HIGH potential when TV channels 4 to 12 are received
40	BAND AM	O	Outputs HIGH potential only during AM reception
41	LOCAL/DX	O	LOCAL: HIGH output. DX: LOW output.
42	EEP CS	O	CS control pin for the EEPROM
43	XDATA2	O	Remote control data output pin
44	XSCLK2	O	Remote control EEPROM serial clocks
45	SD	I	No broadcasting station: HIGH output. With: LOW output
46	(-)	I	Manual reception frequency down button
47	(+)	I	Manual reception frequency up button
48	(ENTER)	I	Used for manual preset, etc.
49, 50	NC	–	Not used
51 to 56	S16 to S11	O	LCD segment signal output pin

• **IC701 System Controller (MB8913PFV)**

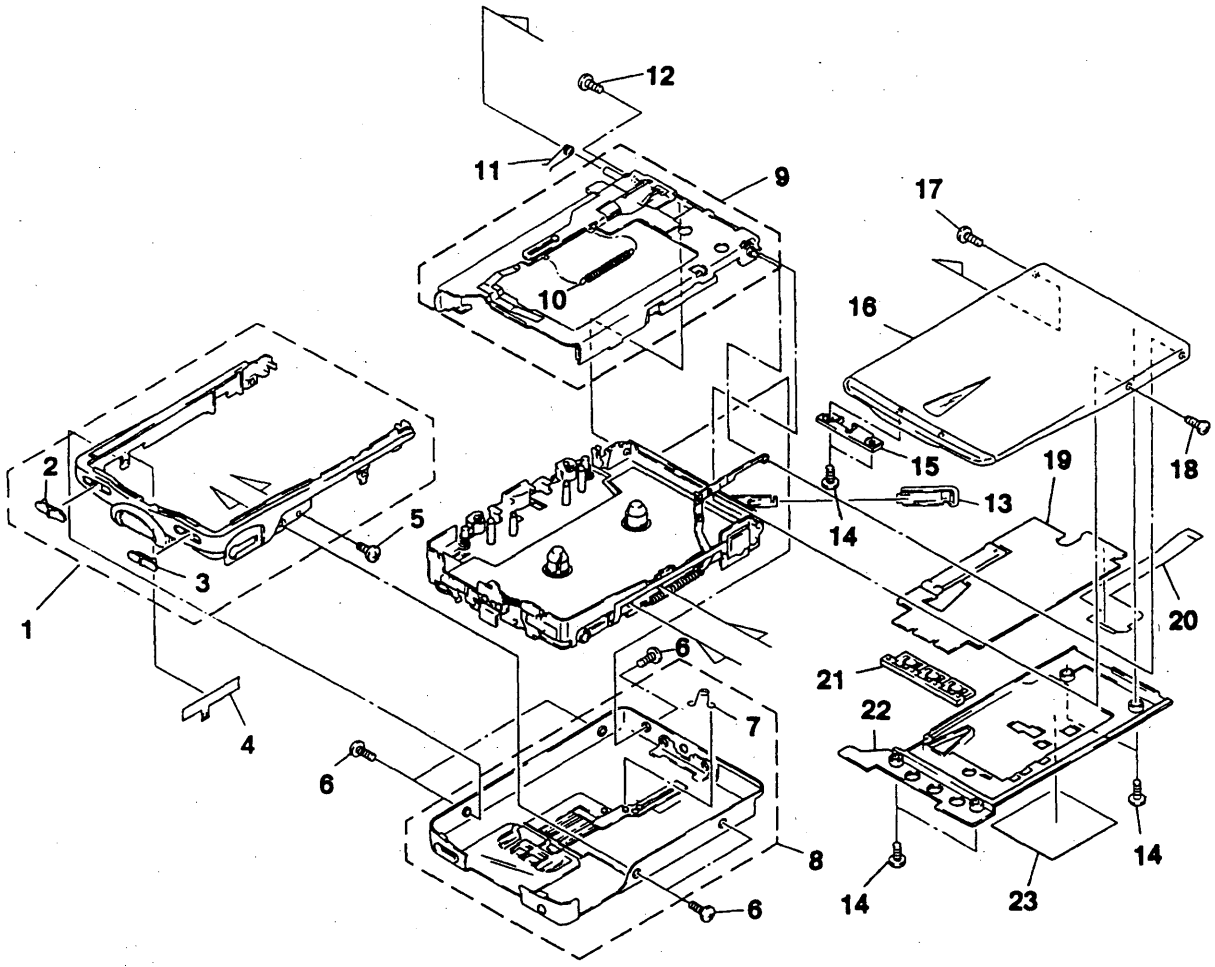
Pin No.	Pin Name	I/O	Function
1	AVCC	–	Analog section power supply
2	RST	I	Reset
3	MODE0	I	Operation mode specified input (Connected to GND)
4	MODE1	I	Operation mode specified input (Connected to GND)
5	X0	–	High speed clock connection (2 MHz ceramics oscillator)
6	NC	–	Not used
7	NC	–	Not used
8	X1	–	High speed clock connection (2 MHz ceramics oscillator)
9	VCC	–	Logic section power supply
10	X0A	–	Low speed clock connection (Not used)
11	NC	–	Not used
12	NC	–	Not used
13	X1A	–	Low speed clock connection (Not used)
14	DDC CLK CTL	O	DDC oscillation frequency change output (L:Waiting state)
15	AVLS CTL	O	AVLS control output (AVLS:L)
16	VOCAL UP	O	Sound quality control output (VOCAL UP:H)
17	NC	–	Not used
18	DBB MID/MAX CTL	O	Sound quality control output (DBB1:H)
19	DBB ON/OFF CTL	O	Sound quality control output (DBB1, DBB2:H)
20	F/R CTL	O	FWD:H, REV:L
21	NC	–	Not used
22	AMS CTL	O	AMS sensitivity control output (FF/REW:H)
23	MUTE CTL	O	AUDIO POWER AMP MUTING (MUTE:L)
24	MOTOR-U	O	Motor U phase control output
25	VSS	–	GND
26	MOTOR-V	O	Motor V phase control output
27	MOTOR-W	O	Motor W phase control output
28	NC	–	Not used
29	SET STOP	I	PLAY power failure STOP input
30	PHOTO IN	I	Rotation detection input
31	A/B SW	I	Tape A/B side detection SW input (Side A top:L, Side B top:H)
32	NC	–	Not used
33	AMS IN	I	Recording detection input (Music:H)
34	DIR MODE	I	DIRECTION MODE selection and BL, SKIP ON/OFF input SHUT OFF, BL SKIP OFF = L, ENDLESS, BL SKIP ON = H
35	R POWER	I	RADIO ON detection input
36	CTL2	O	Servo IC control output
37	CTL1	O	Servo IC control output
38	NC	–	Not used
39	NC	–	Not used

Pin No.	Pin Name	I/O	Function
40	BATT1	I	Power failure indication input { LEVEL1 : BATT1 = H, BATT2 = H (LOW) / LEVEL2 : BATT1 = H, BATT2 = L (MIDDLE) / LEVEL3 : BATT1 = L, BATT2 = L (HIGH)
41	BATT2	I	
42	RMUM	I	Remote control detection (Present:H, Absent:L)
43	BATTR	I	Radio BATT detection input
44	NC	–	Not used
45	NC	–	Not used
46	RMUM2	I	WAKE UP when the setting is changed from "without remote control" to "with remote control"
47	BEEP	O	Beep sound output
48	TAPE SW	I	Tape presence detection input (Present:L)
49	NC	–	Not used
50	WAKE UP	I	Stop mode release interruption
51	P-SIGNAL	I	Motor rotation control
52	PRE AMP CTL	I/O	RADIO : H, OTHER : L
53	CE CTL	O	DTS CHIP ENABLE control output
54	DATA1	O	Serial data output
55	SCLK1	I	Serial clock input
56	NC	–	Not used
57	AVSS	–	Analog section (GND)
58	NC	–	Not used
59	AVR	–	Analog section reference potential input
60	RQT	O	Request output for communicating with DTS
61	FWD/REV SW	I	F/R SW input (Analog input)
62	REMOTE IN	I	Key input (Analog input)
63	MOTOR START	O	Motor start-up control output (Motor start-up:Outputs L for 200 ms)
64	NC	–	Not used

SECTION 7
EXPLODED VIEWS

NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts color Cabinet's color
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  JE : Tourist model

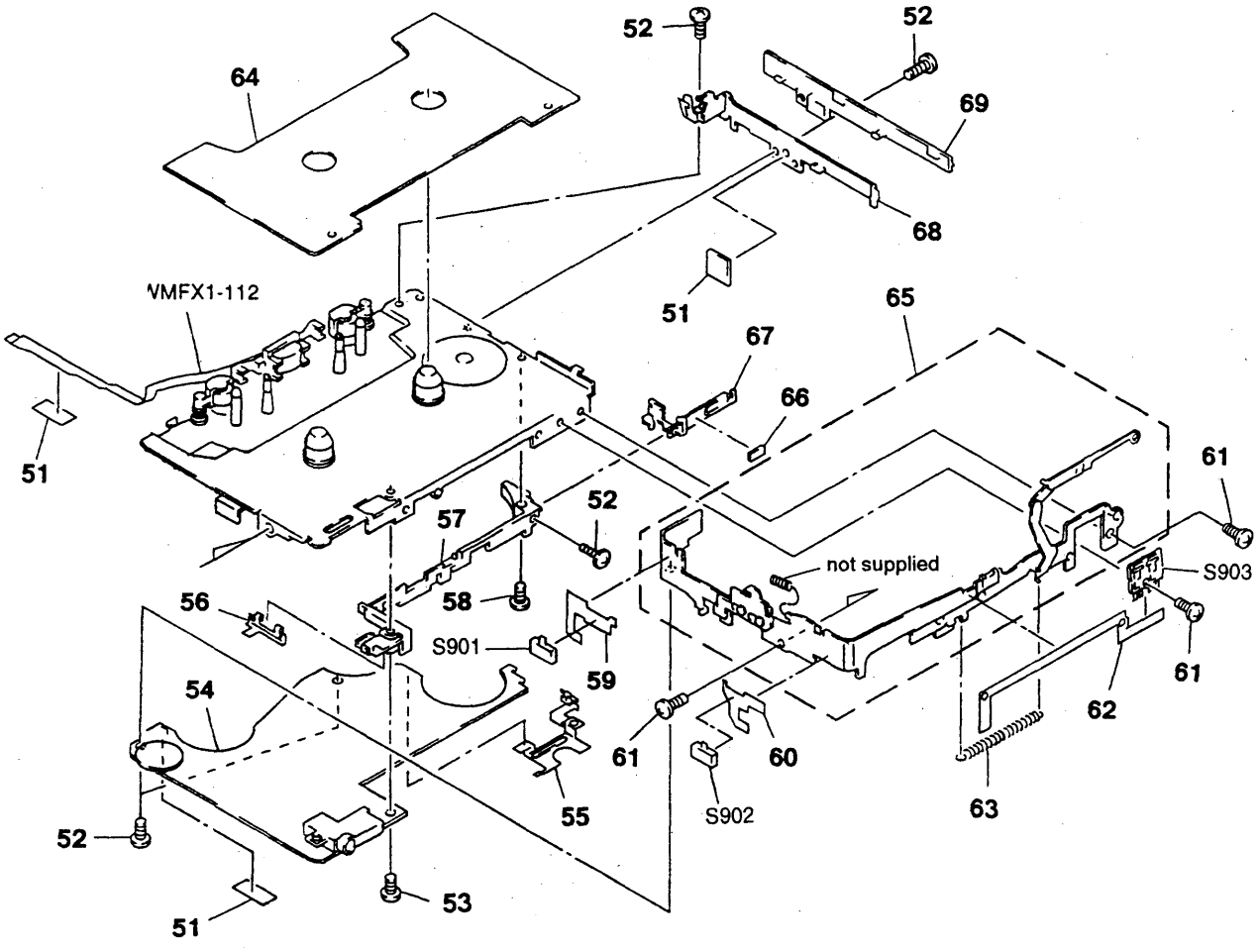
7-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	X-3369-474-1	ORNAMENT (A) ASSY (B), REEL (BLACK)	
1	X-3369-475-1	ORNAMENT (A) ASSY (HG), REEL (GRAY) (JE)	
1	X-3369-476-1	ORNAMENT (A) ASSY (H), REEL (BLUE) (JE)	
2	3-916-267-01	KNOB (DOLBY) (BLACK).. (BLACK, GRAY)	
2	3-916-267-11	KNOB (DOLBY) (GRAY).. (BLUE) (JE)	
3	3-916-268-01	KNOB (MODE) (BLACK).. (BLACK, GRAY)	
3	3-916-268-11	KNOB (MODE) (GRAY).. (BLUE) (JE)	
* 4	3-918-043-01	PAPER (H), SHIELD	
5	3-704-197-01	SCREW (M1.4X1.6), LOCKING	
6	3-704-197-23	SCREW (M1.4X2.5), LOCKING	
7	3-916-288-01	SPRING (HOLD)	
8	X-3369-471-1	CASE ASSY (B) (BLACK)	
8	X-3369-472-1	CASE ASSY (H) (GRAY) (JE)	
8	X-3369-473-1	CASE ASSY (L) (BLUE) (JE)	
9	X-3369-479-1	HOLDER ASSY	
10	3-916-246-01	SPRING, TENSION	
11	3-916-245-01	SPRING (LOCK LEVER)	

Ref. No.	Part No.	Description	Remark
12	3-365-630-41	SCREW (M1.4)	
13	3-919-526-01	LID, BATTERY CASE (BLACK)	
13	3-919-526-11	LID, BATTERY CASE (GRAY) (JE)	
13	3-919-526-21	LID, BATTERY CASE (BLUE) (JE)	
14	3-375-114-21	SCREW (M1.7X2.5)	
15	3-919-519-01	LOCKER, OPEN	
16	X-3369-468-1	LID ASSY (B), CASSETTE (BLACK)	
16	X-3369-469-1	LID ASSY (H), CASSETTE (GRAY) (JE)	
16	X-3369-470-1	LID ASSY (L), CASSETTE (BLUE) (JE)	
17	3-907-009-51	SCREW (M1.4)	
18	3-704-197-13	SCREW (M1.4X2.0), LOCKING	
19	1-693-265-11	TUNER UNIT	
20	1-654-522-11	TUNER FLEXIBLE BOARD	
21	3-919-520-01	BUTTON (TU)	
22	3-919-525-01	COVER (TU)	
23	3-919-510-01	SHEET (TU)	

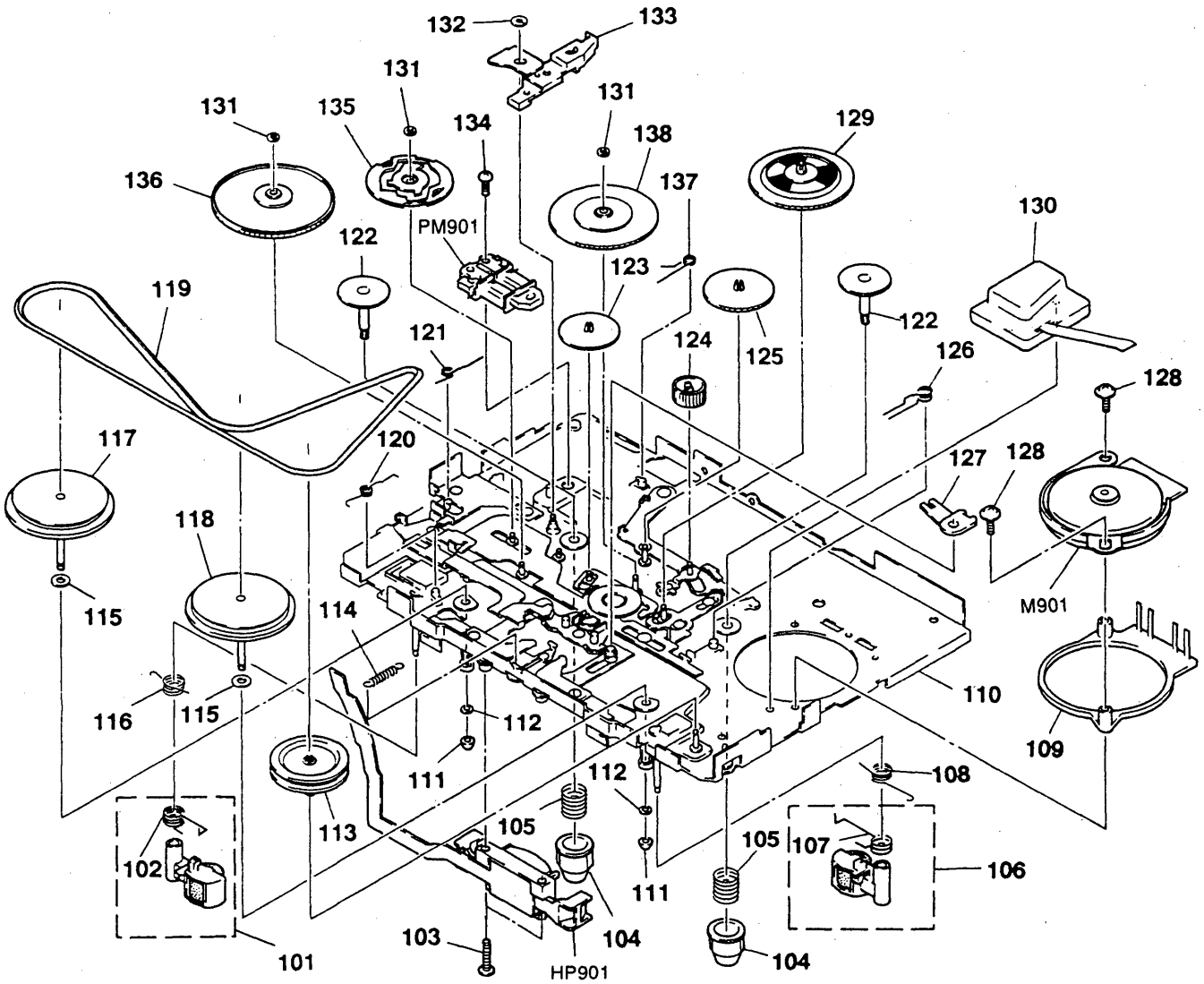
7-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
51	3-831-441-XX	SPACER, KNOB	
52	3-704-197-01	SCREW (M1.4X1.6), LOCKING	
53	3-366-746-61	SCREW (M1.4X5.5)	
54	A-3061-045-A	MAIN BOARD, COMPLETE	
55	3-919-518-01	TERMINAL BOARD	
56	3-912-020-01	TERMINAL BOARD (MINUS), BATTERY	
* 57	3-916-252-01	HOLDER, BATTERY	
58	3-704-197-61	SCREW (M1.4X4.0), LOCKING	
59	1-653-416-11	SW FLEXIBLE (DOLBY) BOARD	
60	1-654-523-11	SW FLEXIBLE (MODE) BOARD	
61	3-366-892-01	SCREW (M1.4)	
62	1-653-415-11	ATS FLEXIBLE BOARD	

Ref. No.	Part No.	Description	Remark
63	3-916-241-01	SPRING, TENSION	
64	3-916-250-01	COVER, MD	
65	X-3368-788-1	BRACKET (A) ASSY	
66	9-911-838-XX	CUSHION	
67	X-3368-789-1	TERMINAL BOARD ASSY, BATTERY	
68	X-3368-785-1	BRACKET (B) ASSY	
69	3-916-247-01	ORNAMENT (B), REEL (BLACK).. (BLACK, GRAY)	
69	3-916-247-11	ORNAMENT (B), REEL (GRAY).. (BLUE) (JE)	
S901	1-572-922-11	SWITCH, SLIDE (DOLBY NR)	
S902	1-572-922-11	SWITCH, SLIDE (BL SKIP)	
S903	1-572-580-11	SWITCH, LEAF (ATS)	

7-3. MECHANISM SECTION (MF-WMFX1-112)



Ref. No.	Part No.	Description	Remark
101	X-3368-776-1	PINCH LEVER (N) ASSY	
102	3-916-341-01	SPRING (PINCH N)	
103	3-704-413-31	SCREW (M1.4X7.2)	
104	3-916-357-01	GEAR (REEL)	
105	3-366-058-01	SPRING, COMPRESSION	
106	X-3368-777-1	PINCH LEVER (R) ASSY	
107	3-916-342-01	SPRING (PINCH R)	
108	3-916-344-01	SPRING (RETURN R)	
* 109	3-916-337-01	DECK, FIXED, TERMINAL	
110	X-3370-090-1	CHASSIS ASSY	
111	3-366-017-01	BUSHING (CAPSTAN)	
112	3-918-943-01	WASHER, STOPPER	
113	3-916-350-01	PULLEY (REVERSE)	
114	3-916-346-01	SPRING, TENSION	
115	3-386-694-01	WASHER	
116	3-916-343-01	SPRING (RETURN N)	
117	X-3368-779-1	WHEEL (N) ASSY, CAPSTAN	
118	X-3368-778-1	WHEEL (R) ASSY, CAPSTAN	
119	3-916-349-01	BELT	
120	3-916-345-01	SPRING (LOCK LEVER)	
121	3-916-340-01	SPRING (EJECT), TORSION	

Ref. No.	Part No.	Description	Remark
122	3-365-801-01	TABLE, REEL	
123	3-916-353-01	GEAR (A)	
124	3-916-352-01	GEAR (FR)	
125	3-916-354-01	GEAR (B)	
126	3-916-347-01	SPRING (NR), TORSION	
127	3-916-339-01	LEVER (NRSW)	
128	3-358-455-11	SCREW, PRECISION WASHER HEAD	
129	A-3042-517-A	GEAR (C)	
130	A-3042-533-A	DDC ASSY	
131	3-338-645-31	WASHER (0.8-2.5)	
132	3-348-953-41	WASHER	
133	3-916-338-01	LEVER (TRIGGER)	
134	3-366-521-51	SCREW (M1.4X3.5)	
135	3-916-356-01	GEAR (CAM)	
136	3-916-351-01	GEAR (K)	
137	3-916-348-01	SPRING (TRIGGER), TORSION	
138	X-3368-780-1	CLUTCH ASSY	
M901	1-698-368-11	MOTOR	
HP901	1-500-091-21	HEAD, MAGNETIC (PLAYBACK)	
PM901	1-454-674-11	SOLENOID, PLUNGER	

ATS FLEXIBLE | MAIN

SECTION 8
ELECTRICAL PARTS

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  AUS : Australian model
  JE : Tourist model

Ref.No.	Part No.	Description			Remark
	1-653-415-11	ATS FLEXIBLE BOARD			
		**********			
		< SWITCH >			
S903	1-572-580-11	SWITCH, LEAF (ATS)			
**********					
	A-3061-045-A	MAIN BOARD, COMPLETE			
		**********			
	1-537-646-11	CONDUCTIVE BOARD, CONNECTION			
	3-841-069-02	SPACER			
*	3-919-509-01	HOLDER (LCD)			
		< CAPACITOR >			
C101	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C102	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C103	1-107-815-11	TANTAL. CHIP	2.2uF	20%	4V
C104	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C105	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C106	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C107	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-165-112-11	CERAMIC CHIP	0.33uF		16V
C110	1-109-847-11	TANTAL. CHIP	0.47uF	10%	16V
C111	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C112	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C113	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C114	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C115	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C116	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C117	1-109-930-11	TANTAL. CHIP	220uF	20%	2.5V
C118	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C119	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C120	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C121	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C201	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C202	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C203	1-107-815-11	TANTAL. CHIP	2.2uF	20%	4V
C204	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C205	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C206	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C207	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C209	1-165-112-11	CERAMIC CHIP	0.33uF		16V
C210	1-109-847-11	TANTAL. CHIP	0.47uF	10%	16V
C211	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C212	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C213	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C214	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C215	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C216	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C217	1-109-930-11	TANTAL. CHIP	220uF	20%	2.5V
C218	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C219	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C220	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C221	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C301	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C302	1-165-112-11	CERAMIC CHIP	0.33uF		16V
C303	1-109-936-11	TANTAL. CHIP	3.3uF	20%	2.5V
C304	1-135-316-11	TANTAL. CHIP	22uF	20%	2.5V
C305	1-109-934-11	TANTAL. CHIP	4.7uF	20%	4V
C306	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C307	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V
C308	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V
C309	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C311	1-107-983-11	TANTAL. CHIP	10uF	20%	2.5V
C312	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C313	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C314	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C315	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C316	1-135-218-11	TANTAL. CHIP	4.7uF	20%	2.5V
C317	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C318	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V
C319	1-135-316-11	TANTAL. CHIP	22uF	20%	2.5V
C321	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C322	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C323	1-135-219-11	TANTAL. CHIP	15uF	20%	2.5V
C501	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C502	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C504	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C505	1-164-237-11	CERAMIC CHIP	16PF	5%	50V
C506	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C507	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref.No.	Part No.	Description			Remark
C508	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C509	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C510	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C511	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C512	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C514	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C515	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C516	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C605	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C606	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C607	1-109-936-11	TANTAL. CHIP	3.3uF	20%	2.5V
C608	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C701	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C702	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C703	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C704	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C705	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C706	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V (JE SUFFIX No. 21)
C707	1-107-815-11	TANTAL. CHIP	2.2uF	20%	4V
C708	1-135-221-11	TANTAL. CHIP	3.3uF	20%	4V
C709	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C710	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C711	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C712	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C713	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C714	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
		< CONNECTOR >			
CN301	1-695-942-21	CONNECTOR, FPC (ZIF) 6P			
* CN501	1-770-033-21	CONNECTOR, FPC (ZIF) 20P			
		< DIODE >			
D301	8-719-420-51	DIODE MA729			
D601	8-719-989-53	DIODE CL-200HR-C-TSL (BATT)			
D602	8-719-404-46	DIODE MA110			
D701	8-719-423-17	DIODE MA8110 (SUFFIX No. 22)			
		< FERRITE BEAD >			
FB301	1-500-113-11	BEAD, FERRITE (CHIP) (SUFFIX No. 22)			
FB701	1-500-113-11	BEAD, FERRITE (CHIP)			
FB702	1-500-113-11	BEAD, FERRITE (CHIP)			
FB703	1-500-113-11	BEAD, FERRITE (CHIP)			
FB704	1-500-113-11	BEAD, FERRITE (CHIP)			
FB705	1-500-113-11	BEAD, FERRITE (CHIP)			
FB706	1-500-113-11	BEAD, FERRITE (CHIP)			
FB707	1-414-235-11	INDUCTOR, FERRITE BEAD			
		< HEAD >			
HP901	1-500-091-21	HEAD, MAGNETIC (PLAYBACK)			
		< IC >			
IC301	8-759-295-97	IC TA2084F			
IC501	8-759-329-93	IC uPD1724GB-688-1A7			
IC503	8-759-499-36	IC S-29L221-S			
IC601	8-759-271-28	IC LB1679V-TLM			
IC701	8-759-294-24	IC MB89133LPFV-G-229BND			
IC702	8-759-163-52	IC XC61AN1402MX			
IC703	8-759-280-84	IC S-81211SG-QA-T1			
IC705	8-759-280-85	IC PST9010NL			
IC706	8-759-291-99	IC MM1276XWBE			
IC707	8-759-296-60	IC PST9018NL			
		< JACK >			
J301	1-766-512-21	JACK 7P (REMOTE ∩)			
		< JUMPER RESISTOR >			
JC501	1-216-864-11	METAL CHIP	0	5%	1/16W
JC601	1-216-864-11	METAL CHIP	0	5%	1/16W (JE SUFFIX No. 21)
JC701	1-216-864-11	METAL CHIP	0	5%	1/16W (JE SUFFIX No. 21)
JC702	1-216-864-11	METAL CHIP	0	5%	1/16W (SUFFIX No. 22)
JC703	1-249-997-11	CARBON MELF	0	5%	1/8W
		< COIL >			
L501	1-410-213-51	INDUCTOR CHIP	56uH		
L502	1-412-965-11	INDUCTOR	68N		
L703	1-414-431-11	INDUCTOR	10uH		
L704	1-412-006-31	INDUCTOR CHIP	10uH		
		< MOTOR >			
M901	1-698-368-11	MOTOR			
		< LIQUID CRYSTAL DISPLAY >			
ND501	1-810-704-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< PHOTO INTERUPTER >			
PH701	8-749-925-05	REFLECTOR NJL5183KA-F20-TE1			
		< PLUNGER SOLENOID >			
PM901	1-454-674-11	SOLENOID, PLUNGER			

MAIN

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q301	8-729-807-87	TRANSISTOR	2SB1295-UL6			
Q302	8-729-426-36	TRANSISTOR	XP1215-TXE			
Q303	8-729-427-70	TRANSISTOR	XP4401			
Q304	8-729-602-21	TRANSISTOR	2SC4154-F			
Q305	8-729-421-77	TRANSISTOR	UN5210-R			
Q306	8-729-426-36	TRANSISTOR	XP1215-TXE			
Q307	8-729-421-77	TRANSISTOR	UN5210-R			
Q308	8-729-425-25	TRANSISTOR	XN4604-TX			
Q309	8-729-426-36	TRANSISTOR	XP1215-TXE			
Q310	8-729-421-77	TRANSISTOR	UN5210-R			
Q501	8-729-117-72	TRANSISTOR	2SC4178-F13			
Q502	8-729-117-72	TRANSISTOR	2SC4178-F13			
Q503	8-729-807-87	TRANSISTOR	2SB1295-UL6 (SUFFIX No. 22)			
Q504	8-729-421-77	TRANSISTOR	UN5210-R (SUFFIX No. 22)			
Q505	8-729-402-16	TRANSISTOR	XN4608			
Q506	8-729-425-89	TRANSISTOR	XP1115			
Q601	8-729-809-46	TRANSISTOR	2SD1935-CT6			
Q602	8-729-822-60	TRANSISTOR	2SB1302-S			
Q604	8-729-230-60	TRANSISTOR	2SA1586-YG			
Q701	8-729-421-77	TRANSISTOR	UN5210-R			
Q702	8-729-426-36	TRANSISTOR	XP1215-TXE			
Q703	8-729-602-21	TRANSISTOR	2SC4154-F			
Q704	8-729-602-21	TRANSISTOR	2SC4154-F			
Q705	8-729-421-77	TRANSISTOR	UN5210-R			
Q706	8-729-427-51	TRANSISTOR	XP4215-TXE			
Q707	8-729-020-99	TRANSISTOR	UN5215-RS-TX			
Q708	8-729-425-46	TRANSISTOR	XP4315-TXE			
Q709	8-729-602-21	TRANSISTOR	2SC4154-F			(JE SUFFIX No. 21)
Q710	8-729-602-21	TRANSISTOR	2SC4154-F			
		< RESISTOR >				
R103	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R104	1-216-812-11	METAL CHIP	180	5%	1/16W	
R105	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R106	1-216-847-11	METAL CHIP	150K	5%	1/16W	
R107	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R108	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R109	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R110	1-216-852-11	METAL CHIP	390K	5%	1/16W	
R111	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R113	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R114	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R115	1-218-270-11	METAL GLAZE	1.1K	5%	1/16W	
R116	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R117	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R118	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R120	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R122	1-216-793-11	METAL GLAZE	4.7	5%	1/16W	
R203	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R204	1-216-812-11	METAL CHIP	180	5%	1/16W	
R205	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R206	1-216-847-11	METAL CHIP	150K	5%	1/16W	
R207	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R208	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R209	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R210	1-216-852-11	METAL CHIP	390K	5%	1/16W	
R211	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R213	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R214	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R215	1-218-270-11	METAL GLAZE	1.1K	5%	1/16W	
R216	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R217	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R218	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R220	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R222	1-216-793-11	METAL GLAZE	4.7	5%	1/16W	
R301	1-218-736-11	METAL CHIP	68K	0.50%	1/16W	
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R303	1-218-724-11	METAL CHIP	22K	0.50%	1/16W	
R304	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R305	1-218-295-11	METAL GLAZE	43K	5%	1/16W	
R306	1-216-809-11	METAL CHIP	100	5%	1/16W	
R307	1-216-809-11	METAL CHIP	100	5%	1/16W	
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R309	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R310	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R311	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R312	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R314	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R315	1-216-793-11	METAL GLAZE	4.7	5%	1/16W	
R316	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R322	1-216-809-11	METAL CHIP	100	5%	1/16W	
R501	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R502	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R503	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W	(SUFFIX No. 22)
R505	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R506	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R507	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R508	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R509	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R510	1-218-484-11	METAL GLAZE	750	5%	1/16W	
R511	1-216-836-11	METAL CHIP	18K	5%	1/16W	
R512	1-216-809-11	METAL CHIP	100	5%	1/16W	
R513	1-216-809-11	METAL CHIP	100	5%	1/16W	
R514	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	
R515	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R516	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	

MAIN | SW FLEXIBLE (DOLBY) | SW FLEXIBLE (MODE)

Ref. No.	Part No.	Description				Remark
R517	1-216-849-11	METAL CHIP	220K	5%	1/16W	
						(SUFFIX No. 22)
R520	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R524	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R601	1-216-815-11	METAL CHIP	330	5%	1/16W	
R602	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R603	1-216-856-11	METAL CHIP	820K	5%	1/16W	
R604	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R605	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R606	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R607	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R608	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R609	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R610	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R615	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R616	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R617	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R618	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R619	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R701	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R702	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R703	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R704	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R705	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R706	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R707	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R708	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R709	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R710	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R711	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R712	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R713	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R714	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R716	1-218-668-11	METAL CHIP	100	0.50%	1/16W	
R718	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R719	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R720	1-218-724-11	METAL CHIP	22K	0.50%	1/16W	
R721	1-218-836-11	METAL CHIP	360	0.50%	1/16W	
R722	1-218-845-11	METAL CHIP	820	0.50%	1/16W	
R723	1-218-692-11	METAL CHIP	1K	0.50%	1/16W	
R724	1-218-694-11	METAL CHIP	1.2K	0.50%	1/16W	
R725	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R726	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R727	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R728	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W	
R729	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R730	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R731	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R732	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R733	1-216-853-11	METAL CHIP	470K	5%	1/16W	
						(JE SUFFIX No. 21)
R734	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R735	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R736	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W	
R737	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R738	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R739	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R740	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R741	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R742	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R756	1-216-849-11	METAL CHIP	220K	5%	1/16W	
		< VARIABLE RESISTOR >				
RV301	1-223-711-21	RES, VAR (VOL)				
RV601	1-223-715-21	RES, ADJ 220K				
		< SWITCH >				
S701	1-572-581-11	SWITCH, SLIDE (N/R DETECT)				
S703	1-692-933-41	SWITCH, PUSH (1 KEY) (A/B DETECT)				
S704	1-692-849-21	SWITCH, PUSH (1 KEY) (TAPE)				
S705	1-692-453-11	SWITCH, KEY BOARD (□)				
S706	1-692-453-11	SWITCH, KEY BOARD (◁ ▷)				
S707	1-692-453-11	SWITCH, KEY BOARD (FF)				
S708	1-692-453-11	SWITCH, KEY BOARD (REW)				
S709	1-692-453-11	SWITCH, KEY BOARD (BAND)				
S710	1-692-453-11	SWITCH, KEY BOARD (ASP)				
		< VIBRATOR >				
X501	1-577-262-11	VIBRATOR, CRYSTAL (72kHz)				
X701	1-579-867-21	VIBRATOR, CERAMIC (2MHz)				

****

1-653-416-11 SW FLEXIBLE (DOLBY) BOARD

****

< SWITCH >

S901 1-572-922-11 SWITCH, SLIDE (DOLBY NR)

****

1-654-523-11 SW FLEXIBLE (MODE) BOARD

****

< SWITCH >

S902 1-572-922-11 SWITCH, SLIDE (BL SKIP)

****

TUNER FLEXIBLE | TUNER UNIT

Ref.No.	Part No.	Description	Remark
	1-654-522-11	TUNER FLEXIBLE BOARD	
		**********	
**********			
	1-693-265-11	TUNER UNIT	
		**********	
		< FILTER >	
CF1	1-579-214-21	FILTER, CERAMIC	
CF2	1-579-214-21	FILTER, CERAMIC	
CF3	1-760-522-21	FILTER, CERAMIC	
		< DIODE >	
D2	8-719-050-97	DIODE MA357(E)-(EX).SO	
D4	8-719-050-97	DIODE MA357(E)-(EX).SO	
		< IC >	
IC1	8-759-245-96	IC TA8182FN	
IC2	8-759-231-03	IC TA8153FN	
IC3	8-759-290-04	IC TA2040AFN	
		< VIBRATOR >	
X1	1-760-523-21	OSCILLATOR, CERAMIC	
**********			
		MISCELLANEOUS	
		**********	
19	1-693-265-11	TUNER UNIT	
20	1-654-522-11	TUNER FLEXIBLE BOARD	
59	1-653-416-11	SW FLEXIBLE (DOLBY) BOARD	
60	1-654-523-11	SW FLEXIBLE (MODE) BOARD	
62	1-653-415-11	ATS FLEXIBLE BOARD	
130	A-3042-533-A	DDC ASSY	
HP901	1-500-091-21	HEAD, MAGNETIC (PLAYBACK)	
M901	1-698-368-11	MOTOR	
PM901	1-454-674-11	SOLENOID, PLUNGER	
S901	1-572-922-11	SWITCH, SLIDE (DOLBY NR)	
S902	1-572-922-11	SWITCH, SLIDE (BL SKIP)	
S903	1-572-580-11	SWITCH, LEAF (ATS)	
**********			

Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-776-11	REMOTE CONTROL UNIT	
	1-528-539-11	BATTERY CASE	
⚠	1-528-579-11	BATTERY CHARGER (BC-9HG) (AUS)	
⚠	1-528-580-11	BATTERY CHARGER (BC-7HT) (E, JE)	
	1-528-590-11	BATTERY, NICKEL HYDROGEN	
⚠	1-569-007-11	ADAPTER, CONVERSION 2P (E, JE)	
*	3-376-784-01	CUSHION (E, AUS)	
*	3-376-784-11	CUSHION (JE)	
	3-759-775-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E, AUS)	
	3-759-775-41	MANUAL, INSTRUCTION (JAPANESE, ENGLISH) (JE)	
	3-759-775-51	MANUAL, INSTRUCTION (KOREAN) (JE)	
	3-916-249-01	CASE, CARRYING	
*	3-919-198-01	INDIVIDUAL CARTON	
	8-953-537-90	HEADPHONE MDR-E741MP//K SET	
	X-3329-657-1	ATTACHMENT	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Printing Method for Large Sized Documents Such As Circuit Diagrams

Printing the page that exceeds A4-size two pages (or letter size) is possible by specifying the print range. (Acrobat Reader Version 4.0 or later)

1. The enlarged print is made, if a smaller range than A4 size is specified and the A4 size is selected as a print paper.
2. Almost real sized print is made, if the range is specified, meeting the print paper size.
3. The reduced print is made, if a larger range than the print paper size is specified.

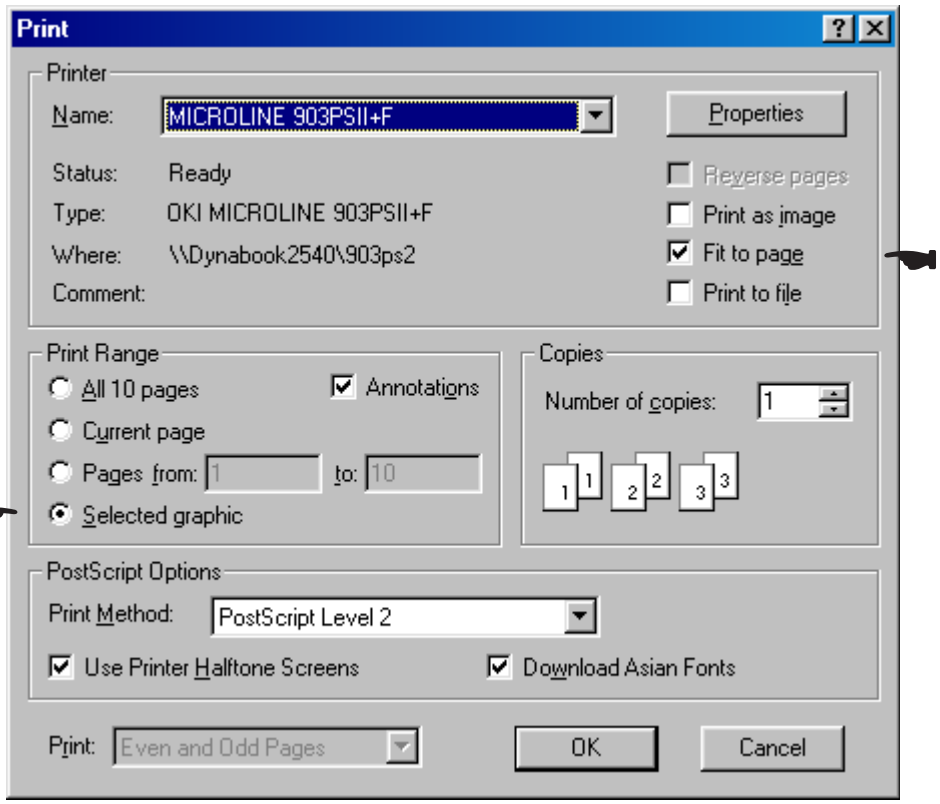
Printing by Specifying a Range

In printing out the drawings such as a schematic diagram and a printed wiring board larger than the printed paper size, they can be printed by specifying the range. (Acrobat Reader Version 4.0 or later)

1. Display the page to be printed.
2. From the File menu, select [Page Setup] and set the paper size.
3. From the Command bar, select [Graphic Select Tool].

   (Keep pressing  , select )

4. Dragging the cursor, enclose the range on the page to be printed.
5. From the File menu, select [Print] and make sure that the [Selected Graphic] is already checked. Also, if [Fit to page] is checked, the selected range is enlarged or reduced (and rotated as necessary) meeting the paper size.



6. To cancel the printed range, click an arbitrary position on the screen.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	1995.02	New
1.1	2002.01	Correction of Part No. for IC 503 (SPM-01041)