

# WM-FS497/FS499

## SERVICE MANUAL

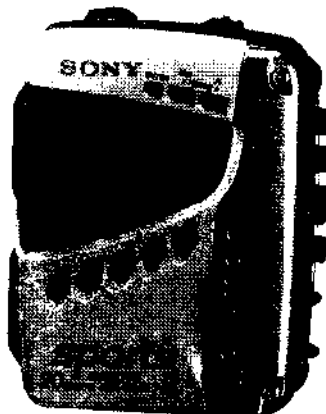



Photo : WM-FS497

*US Model*  
*Canadian Model*  
WM-FS497/FS499  
*AEP Model*  
*E Model*  
WM-FS497

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Model Name Using Similar Mechanism	WM-EX362/EX364
Tape Transport Mechanism Type	MF-WMEX342-114

### SPECIFICATIONS

#### Frequency range

For US/Canadian area indication:  
FM: 87.5 - 108MHz (0.1MHz step)  
AM: 530 - 1710kHz (10kHz step)  
For AEP, E area indication:  
FM : 87.5 - 108MHz (0.05MHz step)  
AM: 531 - 1601kHz (9kHz step)

#### IF

FM: 10.7 MHz  
MW/LW: 450 kHz

#### Aerials

FM: Telescopic aerial  
MW/LW: Built-in ferrite bar aerial

#### Power requirements

3V DC batteries (size AA) R6 × 2

#### Dimensions

99.8 × 119.7 × 43.4 mm (4 × 4<sup>3</sup>/<sub>4</sub> × 1<sup>3</sup>/<sub>4</sub> inches)  
(w/h/d) incl. projecting parts and controls

#### MASS

Approx. 295g (10.5 oz)  
Approx. 395g (14.0 oz) incl. batteries, a cassette and headphones

#### Supplied accessories

• Stereo headphones (1) / Belt clip (1) / Hand strap (1) / Strap loop (1)

Design and specifications are subject to change without notice.

## RADIO CASSETTE PLAYER

# SONY®



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### 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

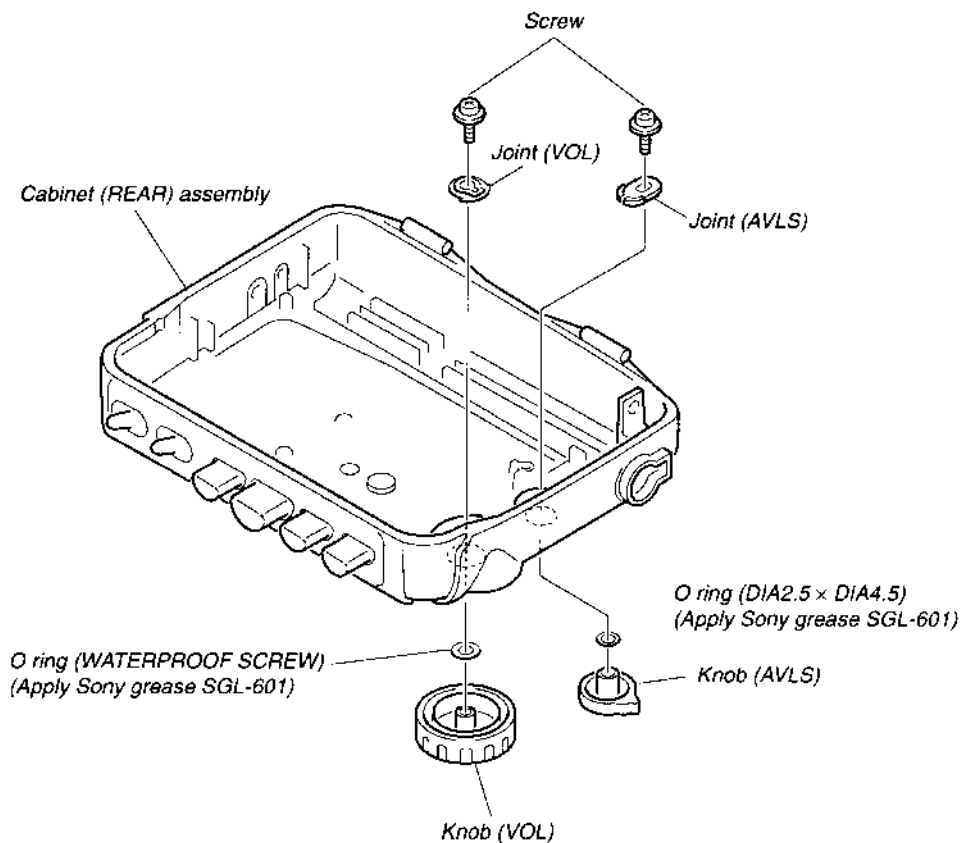
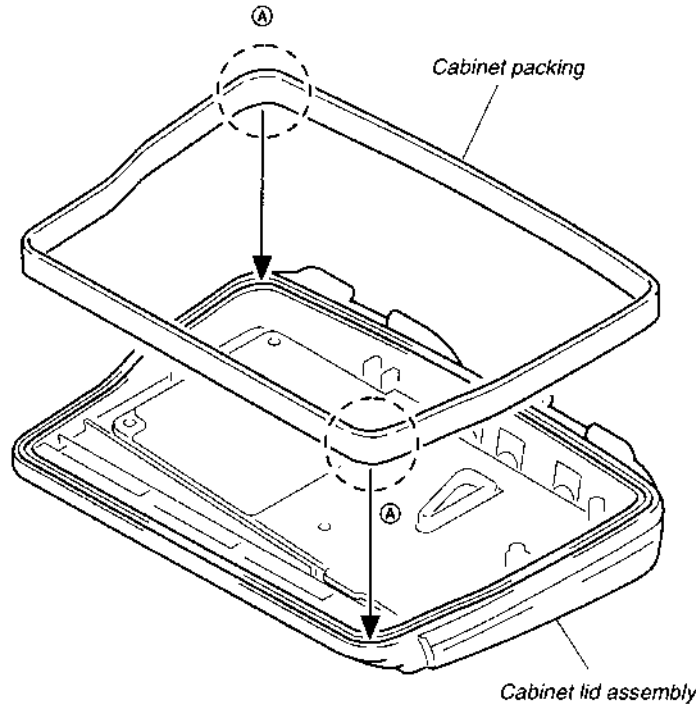
- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

# SECTION 1 SERVICE NOTE

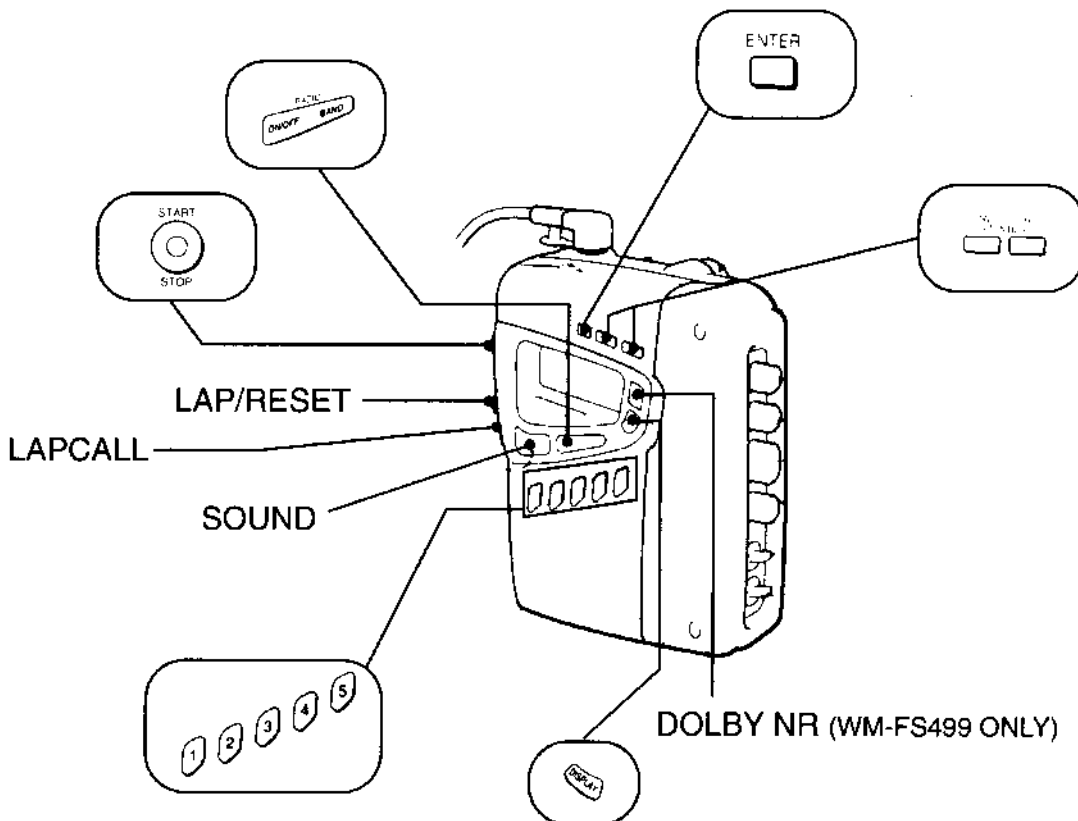
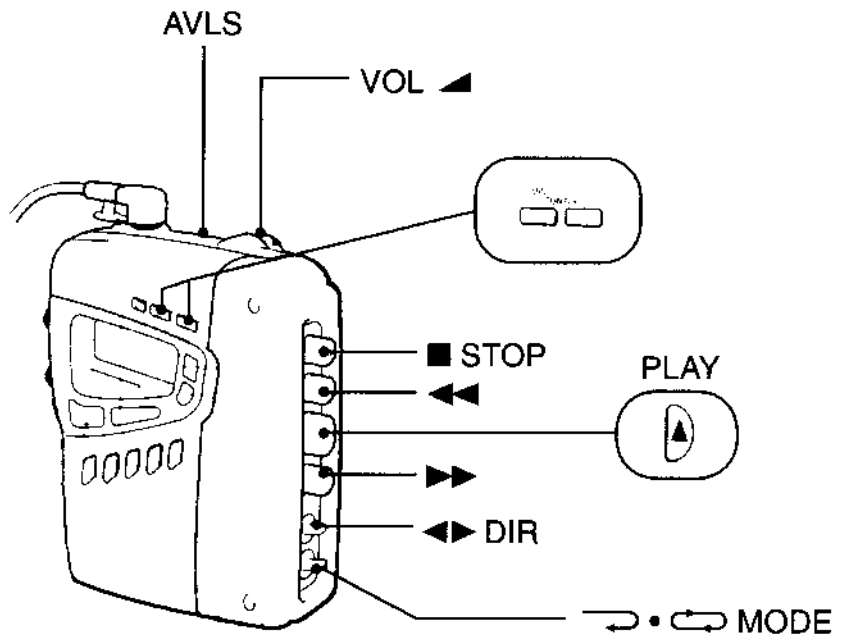
## WATERPROOFED SECTION

**NOTE :** In case the parts in the figure are removed for repair, treat them to protect from water drop following the instructions in the figure (spread grease, bond etc.)

- sony grease SGL-601 : 7-651-000-10



## SECTION 2 GENERAL

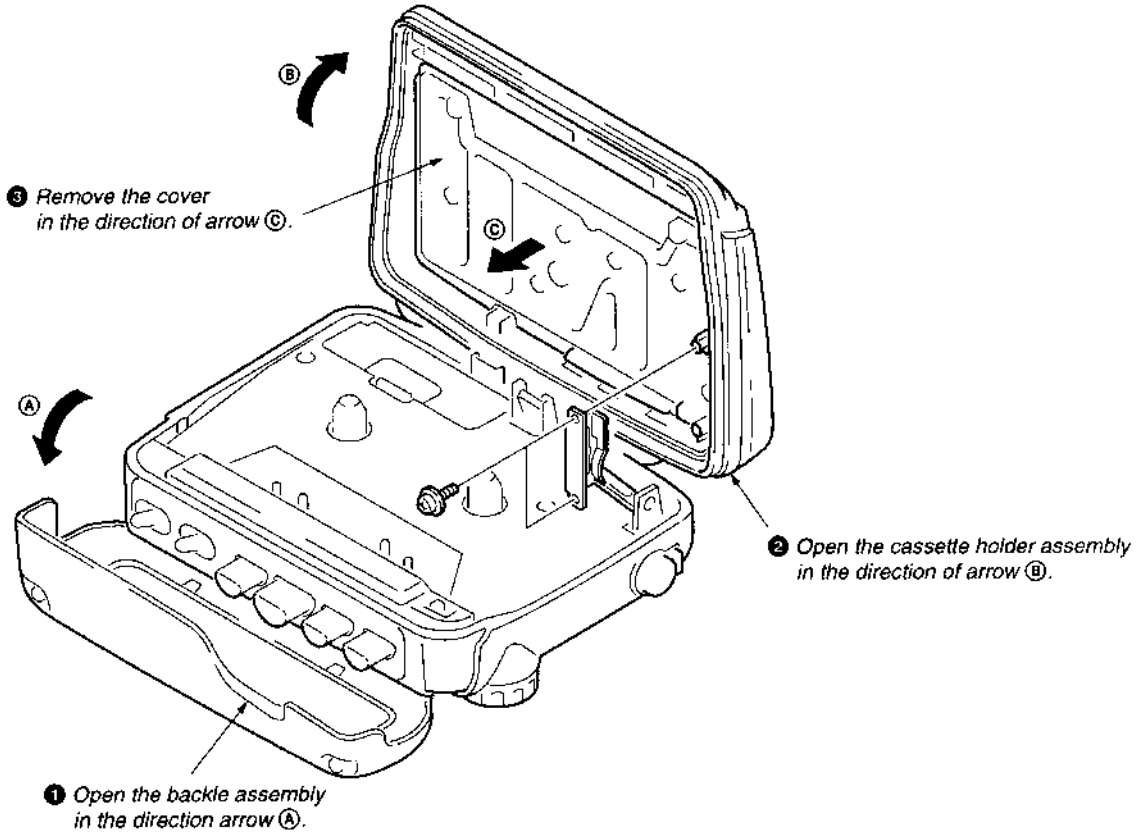


## SECTION 3 DISASSEMBLY

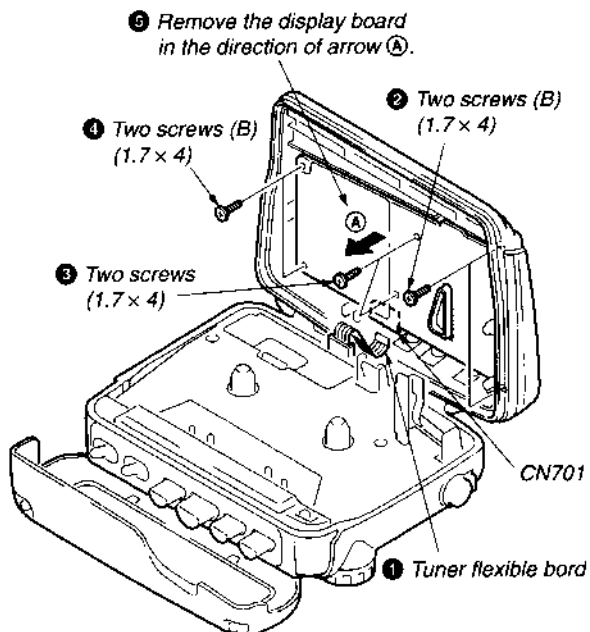
**Note :** Follow the disassembly procedure in the numerical order given.

SET → COVER → DISPLAY BOARD → CASSETTE HOLDER ASSEMBLY  
 ↳ CHASSIS ASSEMBLY → MAIN BOARD AND MECHANISM DECK

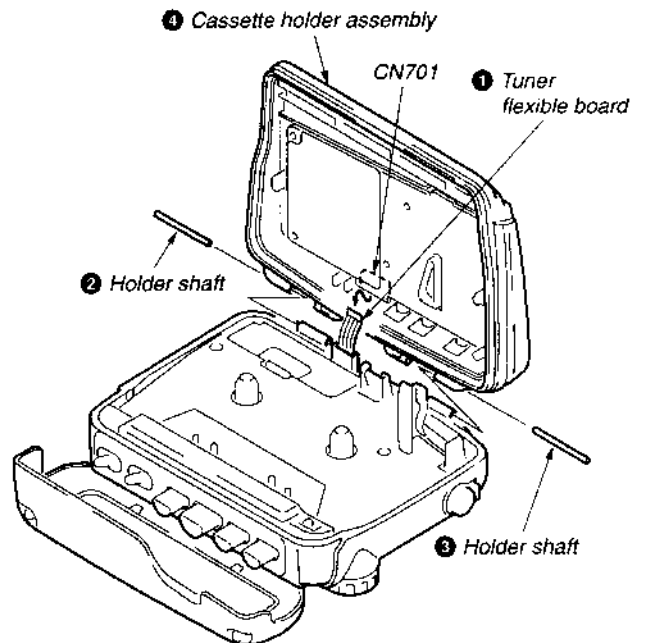
### 3-1. COVER



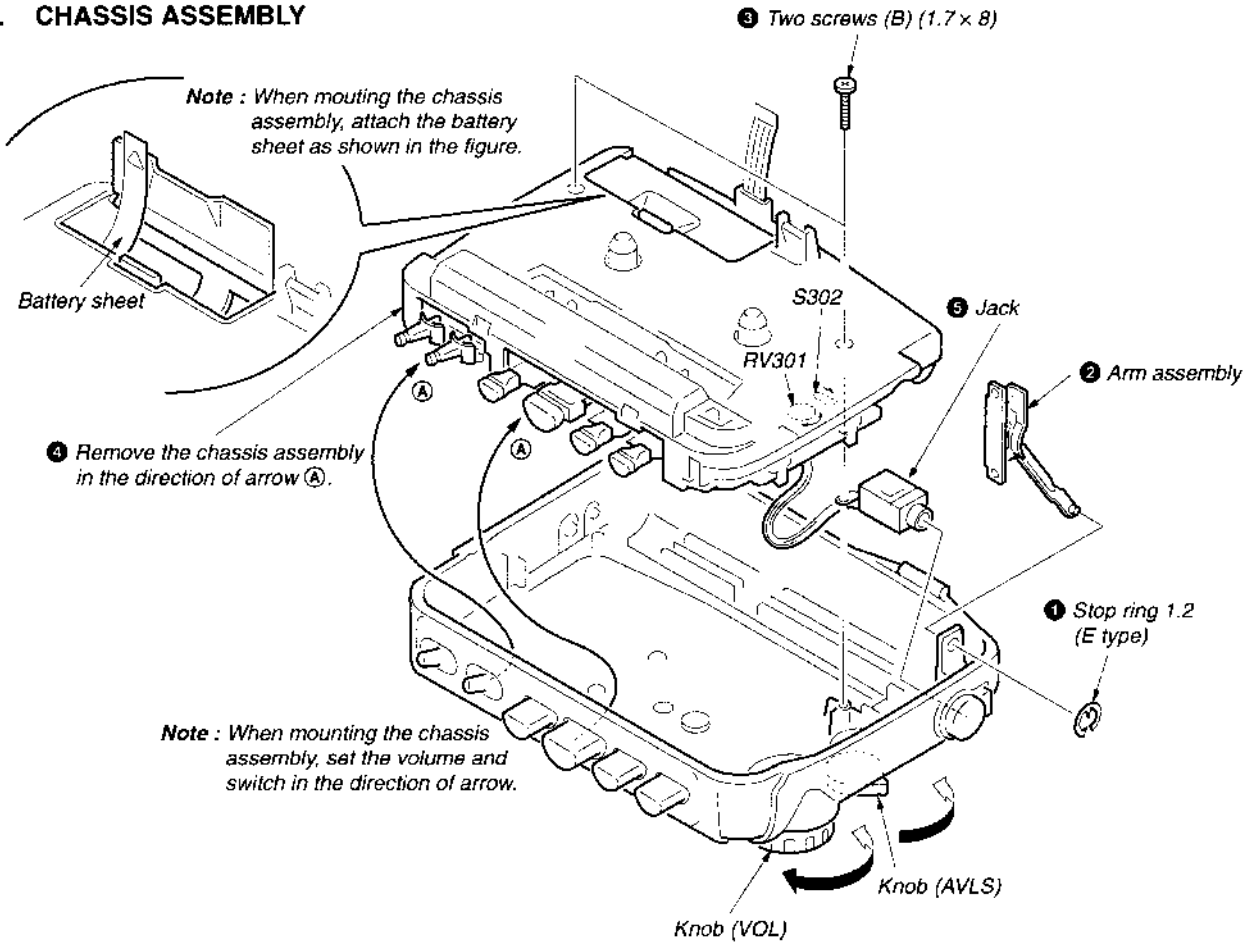
### 3-2. DISPLAY BOARD



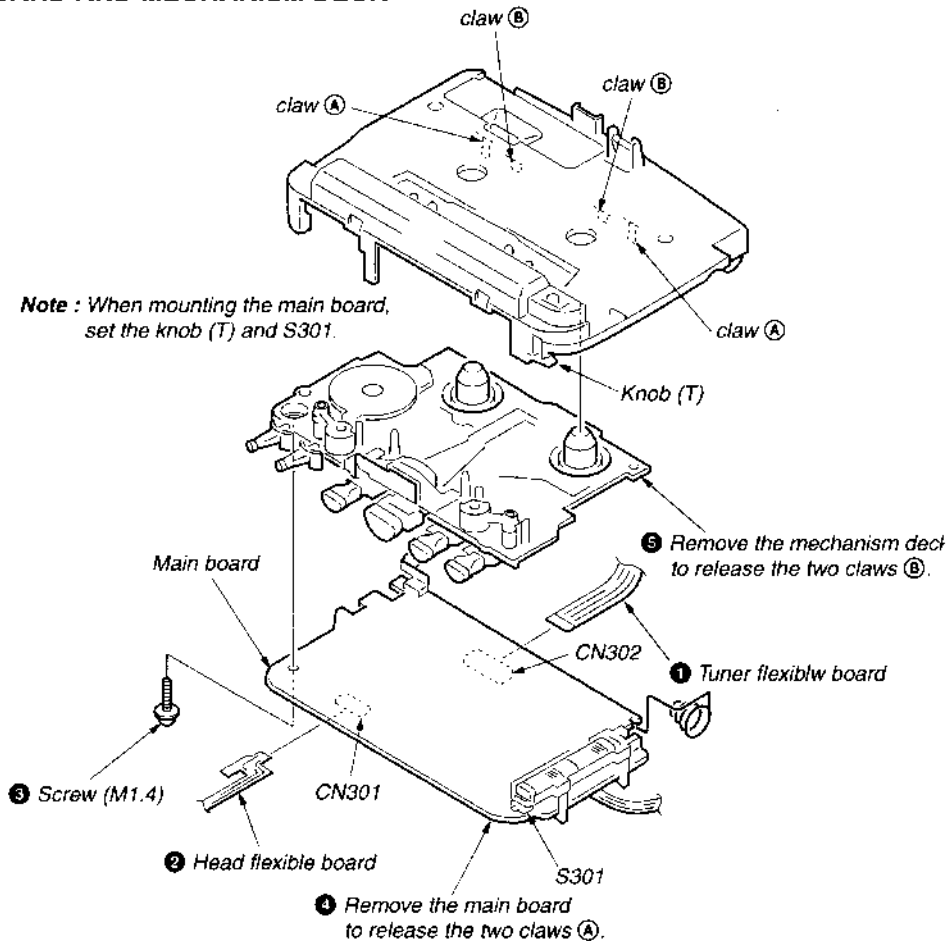
### 3-3. CASSETTE HOLDER ASSEMBLY



### 3-4. CHASSIS ASSEMBLY



### 3-5. MAIN BOARD AND MECHANISM DECK



# SECTION 4 ADJUSTMENTS

## 4-1. MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
 

playback head	pinch roller
capstan	rubber belt
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (2.5 V) unless otherwise noted.

### Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	20 - 42 g • cm (0.28 - 0.58 oz • inch)
FWD back tension		less than 2 g • cm (less than 0.03 oz • inch)
REV	CQ-102RC	20 - 42 g • cm (0.28 - 0.58 oz • inch)
REV back tension		less than 2 g • cm (less than 0.03 oz • inch)
FF, REW	CQ-201B	more than 60 g • cm (more than 0.83 oz • inch)

## 4-2. ELECTRICAL ADJUSTMENTS

### PRECAUTION

- Supplied voltage : 2.5V ± 0.1V
- Switch and control position
 

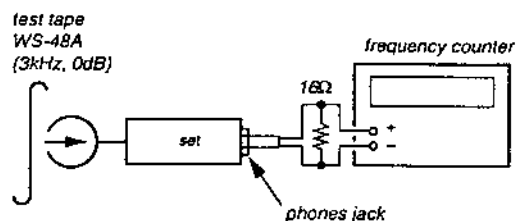
TAPE switch	: NORMAL
VOLUME control	: MAX
ALVS switch	: OFF
DOLBY switch	: OFF
SOUND switch	: NORMAL

### Test Tape

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

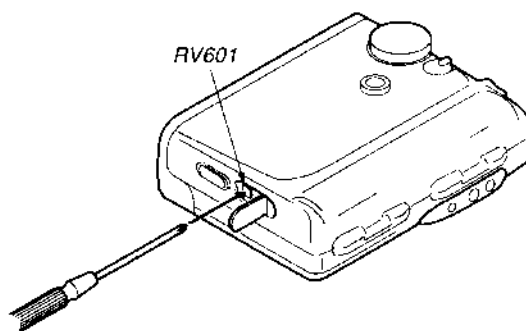
### Tape Speed Adjustment

#### Procedure :



1. Playback WS-48A (tape center part) in the REV state and adjust RV601 so that the frequency counter reading becomes 3.000Hz ± 10Hz.
2. Playback WS-48A (tape center) in the FWD state. Check that frequency counter reading is within 1.5% of the reading of step 1.

#### Adjustment Location :



## TUNER SECTION

### FM SECTION

setting :

- RADIO switch : ON
- BAND switch : FM
- FM SENS switch : DX (US, Canadian model)
- FM MODE switch : STEREO

(EXCEPT US, Canadian model)

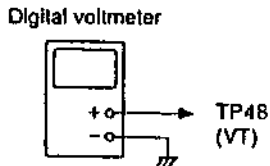
### VCO ADJUSTMENT

setting :

- RADIO switch : ON
- BAND switch : FM
- FM SENS switch : DX (US, Canadian model)
- FM MODE switch : STEREO

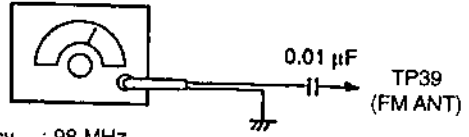
(EXCEPT US, Canadian model)

### FM TUNING VOLTAGE ADJUSTMENT



FM TUNING VOLTAGE ADJUSTMENT	
Adjust for a $1.50 \pm 0.03$ Vdc reading on Digital voltmeter	
L6	
87.5 MHz	

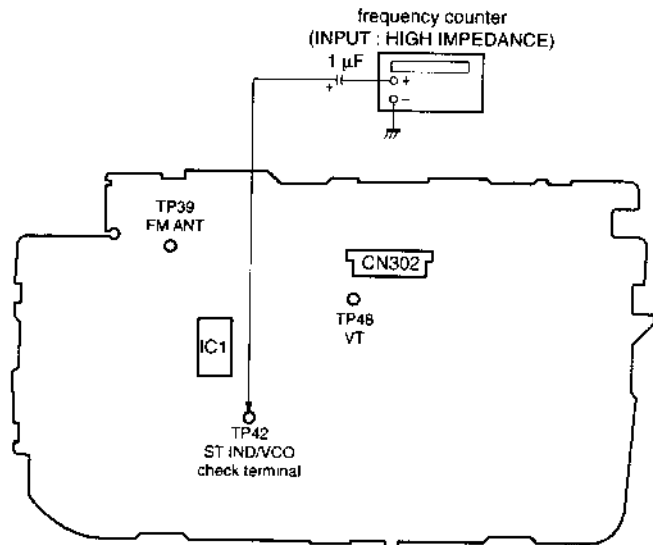
### FM RF signal generator



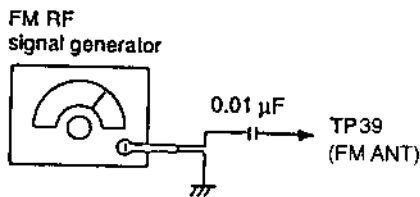
Carrier frequency : 98 MHz  
 Modulation : no modulation  
 Output level : 65 dBµV (1778 µV)

1. Connect the frequency counter to TP39 and GND as shown the figure below.
2. Turn the set to 98 MHz.
3. Adjust RVI for 76 kHz  $\pm$  50 Hz reading on frequency counter.

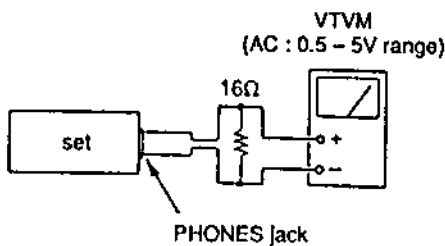
### [MAIN BOARD] (SIDE B)



### FM TRACKING ADJUSTMENT



Modulation : 1kHz, 75kHz  
 Output level : as low as possible.



- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L5	CT1
87.5 MHz	108 MHz

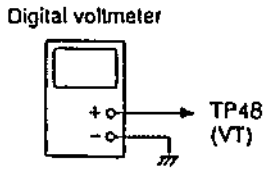


**AM SECTION**

setting :

RADIO switch : ON  
 BAND switch : AM

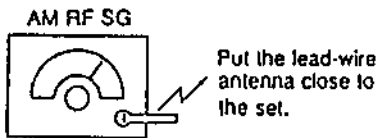
**AM TUNING VOLTAGE ADJUSTMENT**



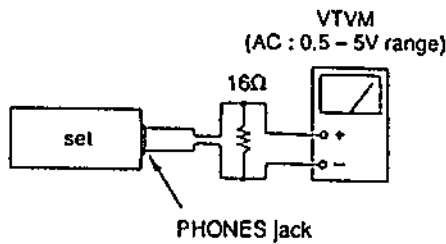
<b>AM TUNING VOLTAGE ADJUSTMENT</b>	
Adjust for a $1.50 \pm 0.03$ Vdc reading on Digital voltmeter	
L8	
530 (531) kHz	

( ) : EXCEPT US, Canadian model

**AM IF ADJUSTMENT, AM TRACKING ADJUSTMENT**



Modulation : 400Hz 30%  
 Output level : as low as possible.



- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

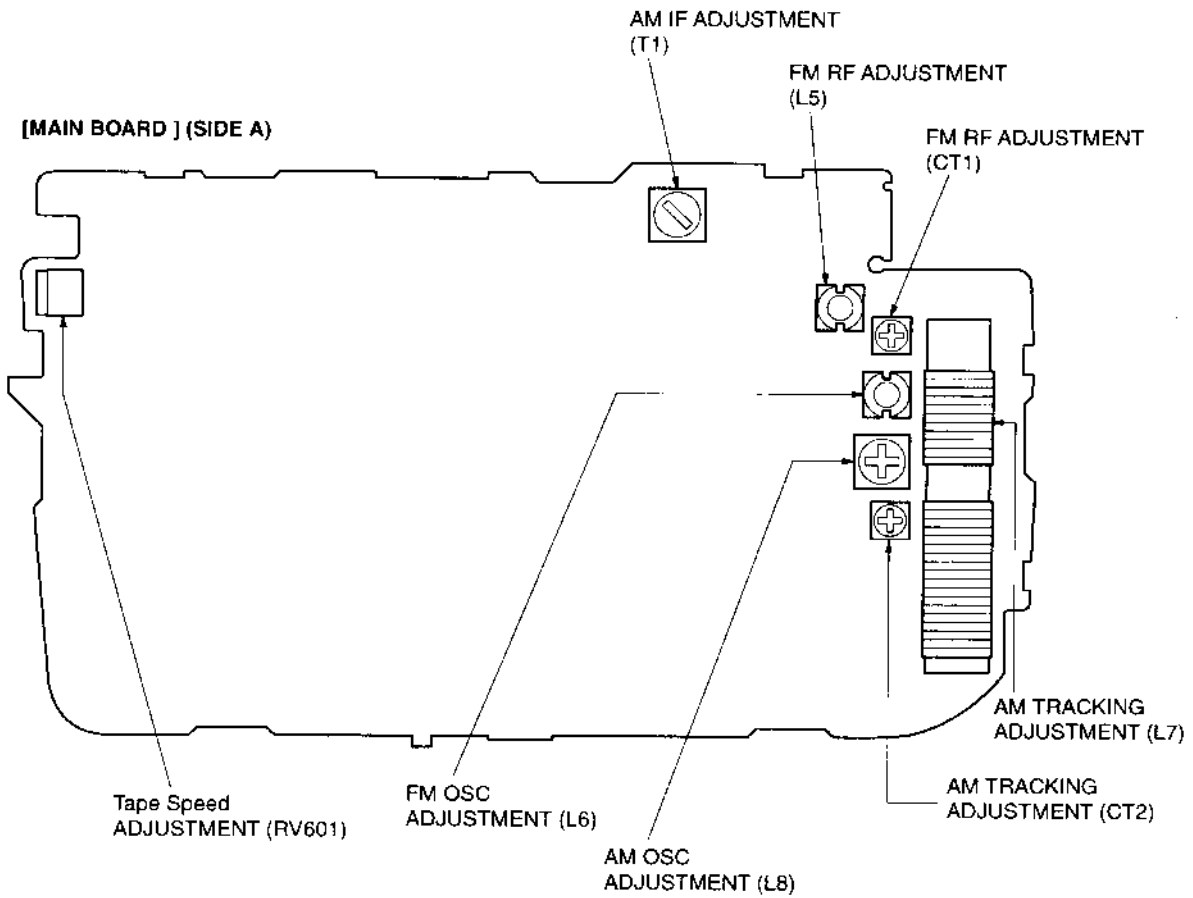
<b>AM IF ADJUSTMENT</b>	
Adjust for a maximum reading on VTVM.	
T1	
1000 (999) kHz	

( ) : EXCEPT US, Canadian model

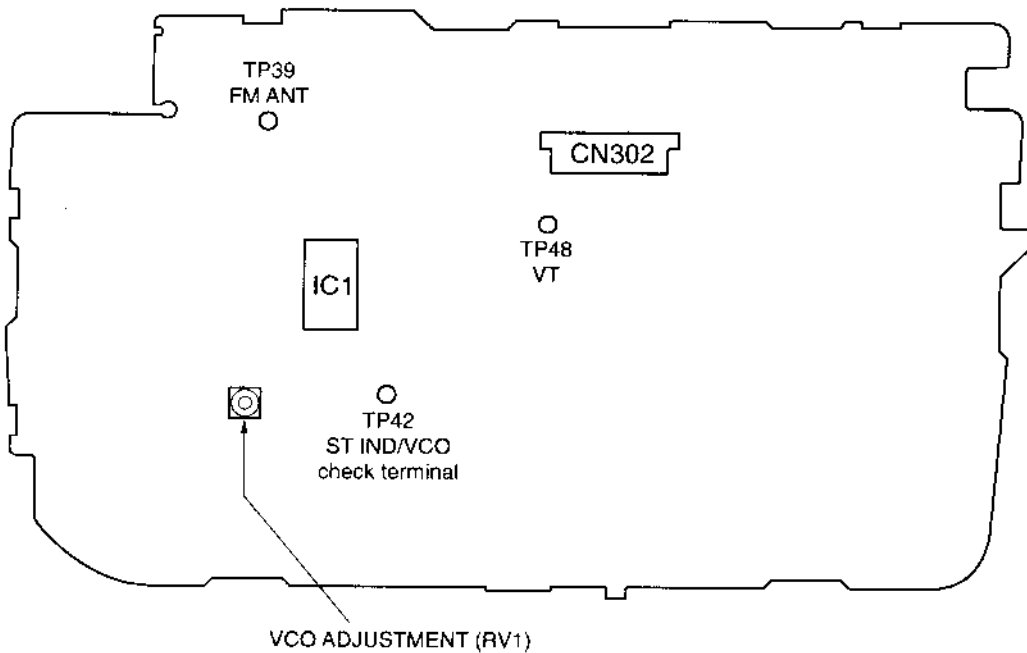
<b>AM TRACKING ADJUSTMENT</b>	
Adjust for a maximum reading on VTVM.	
L7	CT2
620 (621) kHz	1400 (1395) kHz

( ) : EXCEPT US, Canadian model

Adjustment Part Location Diagram :

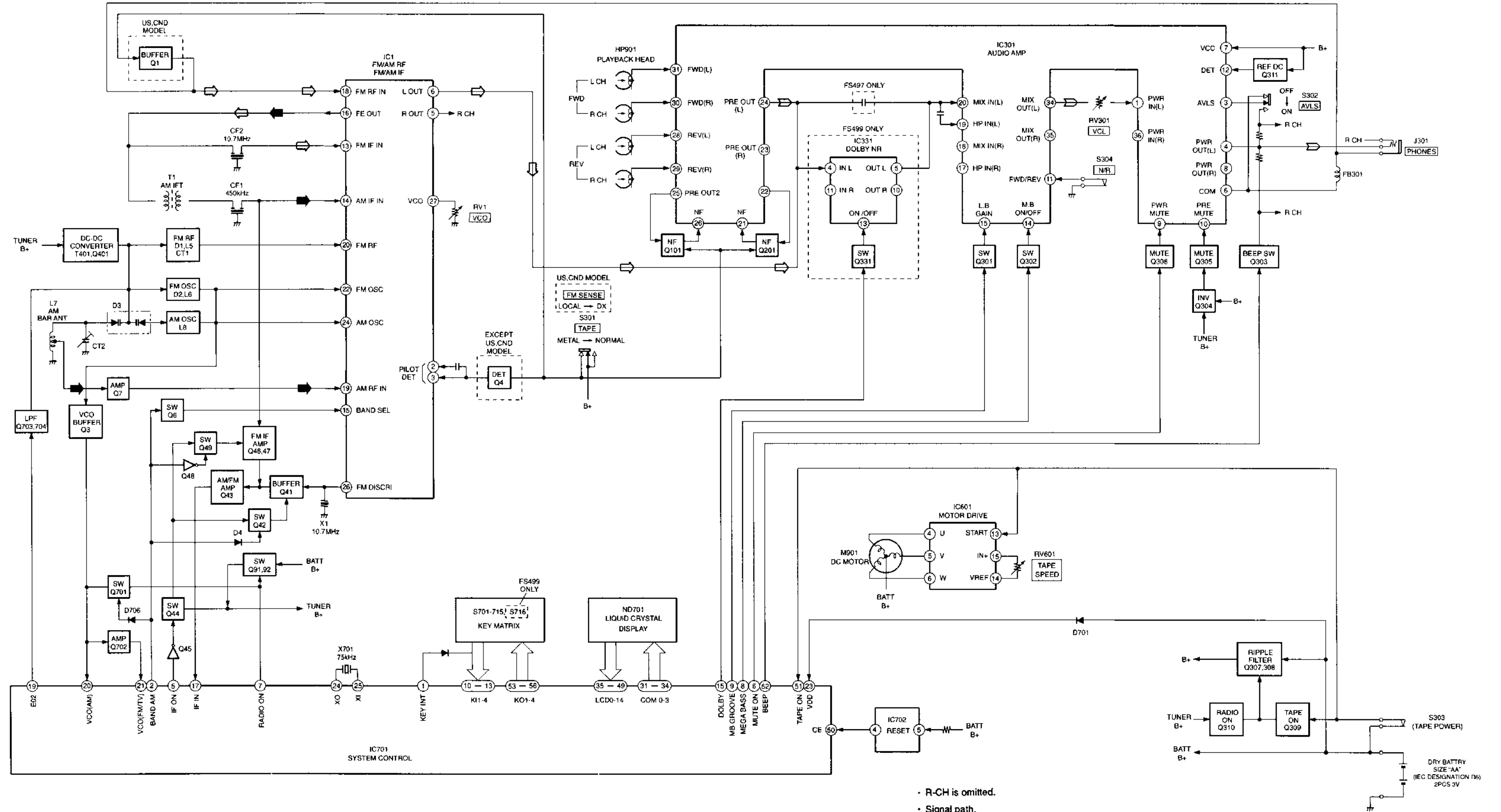


**[MAIN BOARD ] (SIDE B)**



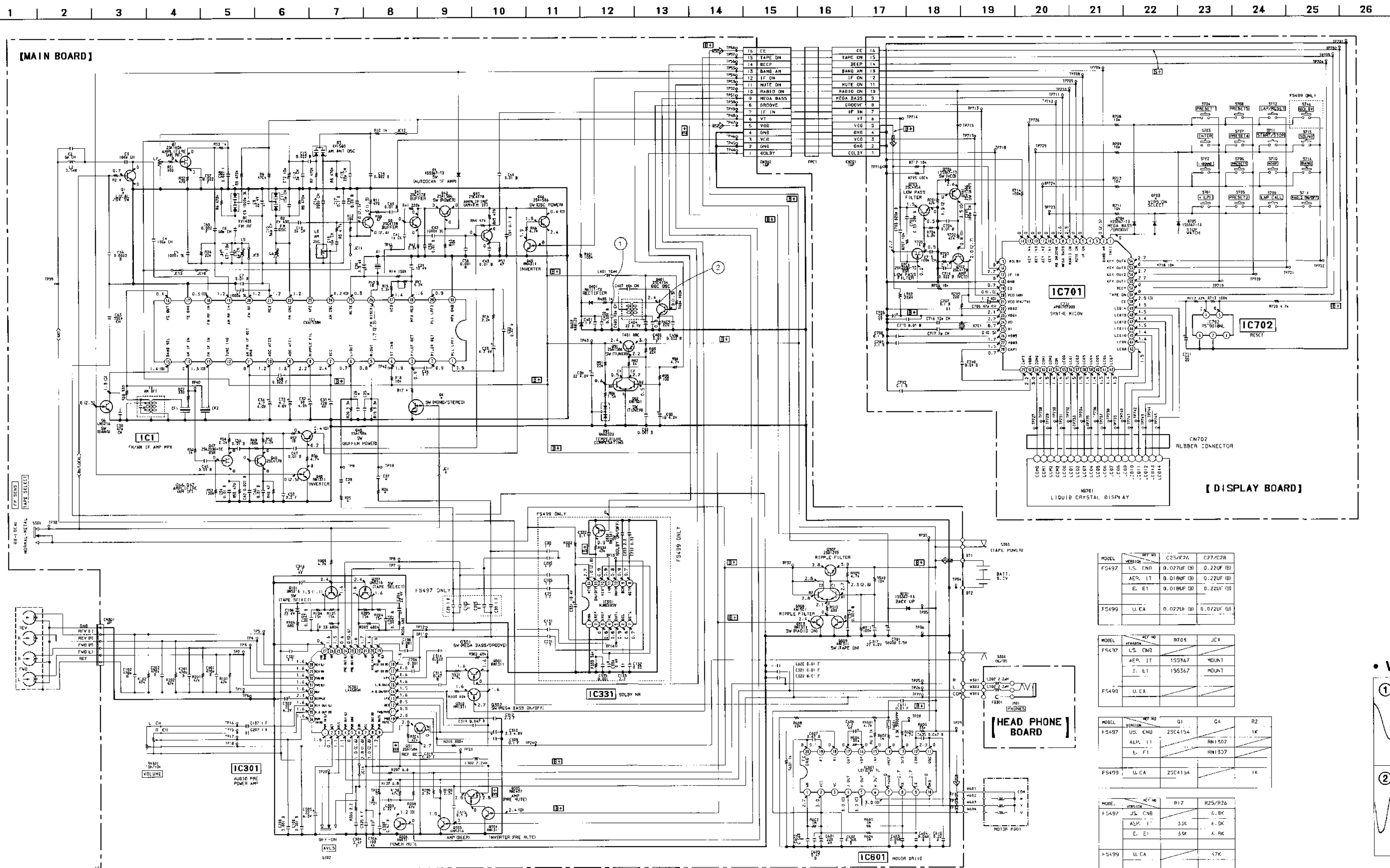
SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM



- R-CH is omitted.
- Signal path.
- ◻ : FM
- ▣ : AM
- ◻ : TV
- ◻ : PB
- CND : Canadian model.

5-2. SCHEMATIC DIAGRAM



**NOTE**

- All capacitors are in  $\mu$ F unless otherwise noted.  $\mu$ F:  $\mu$ F, 50WV or less are not indicated except for electrolytics and  $\mu$ W values.
- All resistors are in  $\Omega$  and  $\frac{1}{4}$ W or less unless otherwise specified.

- B+** : B+ Line.
- ADJ.** : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions, unless otherwise noted.
- no mark: FM
- ( ) : AM
- \* : can not be measured.

- Voltages are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Power voltage is dc 3.0V or less with regulated dc power supply from battery terminal.
- Total current is measured with no cassette installed.

- Signal both.
- $\rightarrow$  : FM
- $\curvearrowright$  : PB (CHECK A)

- Abbreviation
- CND : model
- IT : Italian model
- EI : A part of "E" model, that shows no manufacturing country on the CABINET (REAR).

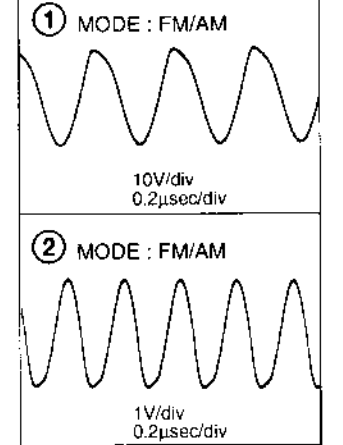
MODEL	REF. NO.	C25/C26	C27/C28
FS497	U.S. I/ND	0.027 $\mu$ F (3)	0.22 $\mu$ F (3)
	ALP. IT	0.018 $\mu$ F (3)	0.22 $\mu$ F (3)
	E. E1	0.018 $\mu$ F (3)	0.22 $\mu$ F (3)
FS499	U. CA	0.027 $\mu$ F (3)	0.22 $\mu$ F (3)

MODEL	REF. NO.	R704	JC1
FS497	U.S. I/ND	150K $\Omega$	MOUNT
	ALP. IT	150K $\Omega$	MOUNT
	E. E1	150K $\Omega$	MOUNT
FS499	U. CA	25C4134	1K

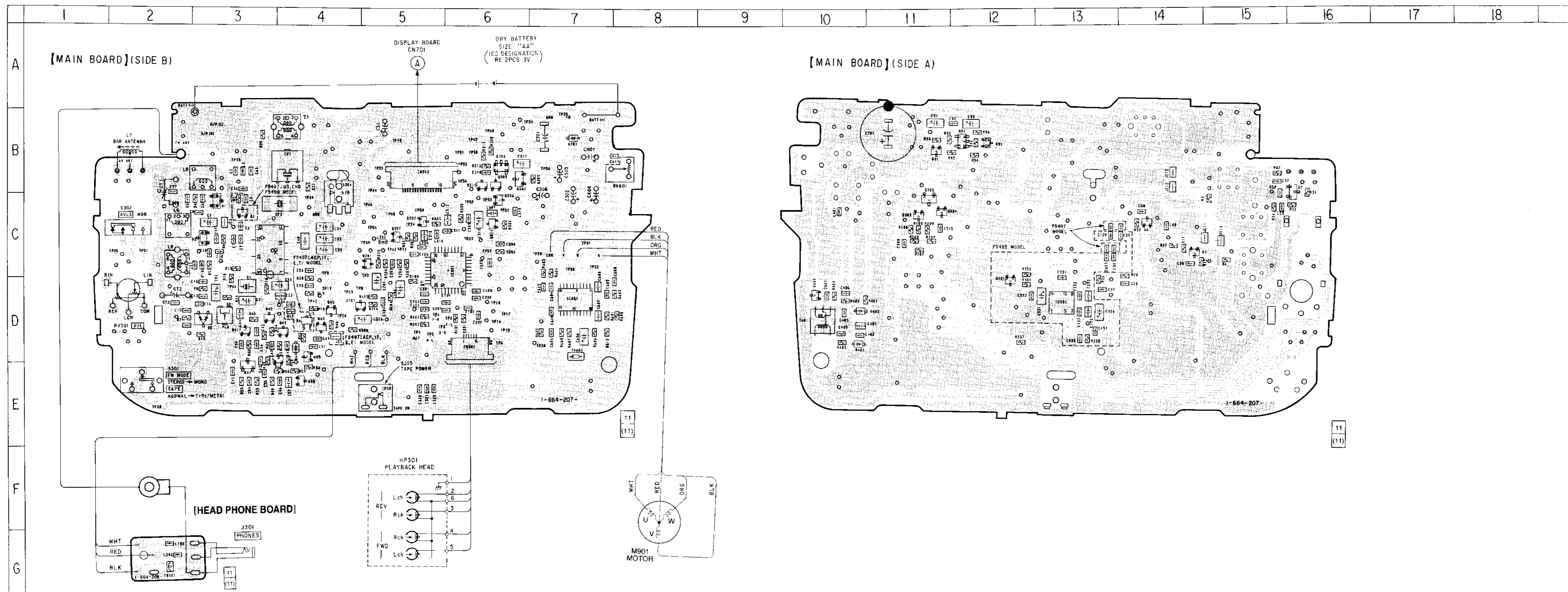
MODEL	REF. NO.	Q1	C4	R2
FS497	U.S. I/ND	Z5C4134		1K
	ALP. IT	RN1307		
	E. E1	HN1307		
FS499	U. CA	Z5C4134		1K

MODEL	REF. NO.	R17	R25/R26
FS497	U.S. I/ND	55K	6.5K
	ALP. IT	55K	6.5K
	E. E1	55K	6.5K
FS499	U. CA	47K	

**Waveforms**



5-3. PRINTED WIRING BOARD — MAIN SECTION —



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	C-3	Q46	D-3
D2	C-3	Q47	E-3
D3	D-3	Q48	E-4
D4	D-4	Q49	D-4
D91	B-12	Q91	B-11
D301	E-6	Q92	B-12
D302	E-6	Q101	D-4
D303	E-6	Q201	C-5
D401	D-10	Q301	C-5
D402	D-10	Q302	C-5
D701	D-7	Q303	C-11
IC1	C-3	Q304	C-11
IC301	C-6	Q305	C-11
IC331	D-13	Q306	C-6
IC601	D-7	Q307	B-6
Q1	C-3	Q308	B-6
Q3	C-14	Q309	B-6
Q4	D-4	Q310	B-6
Q6	C-14	Q311	C-6
Q7	C-16	Q331	D-12
Q41	D-3	Q401	D-10
Q42	D-3		
Q43	D-4		
Q44	D-4		
Q45	D-4		

**Note :**

- — : Parts extracted from the component side.
- Δ : Internal component.
- [Pattern] : Pattern from the side which enable seeing.

• Abbreviation  
 CND : model  
 IT : Italian model  
 E1 : A part of "E" model, that shows no manufacturing country on the CABINET (REAR).

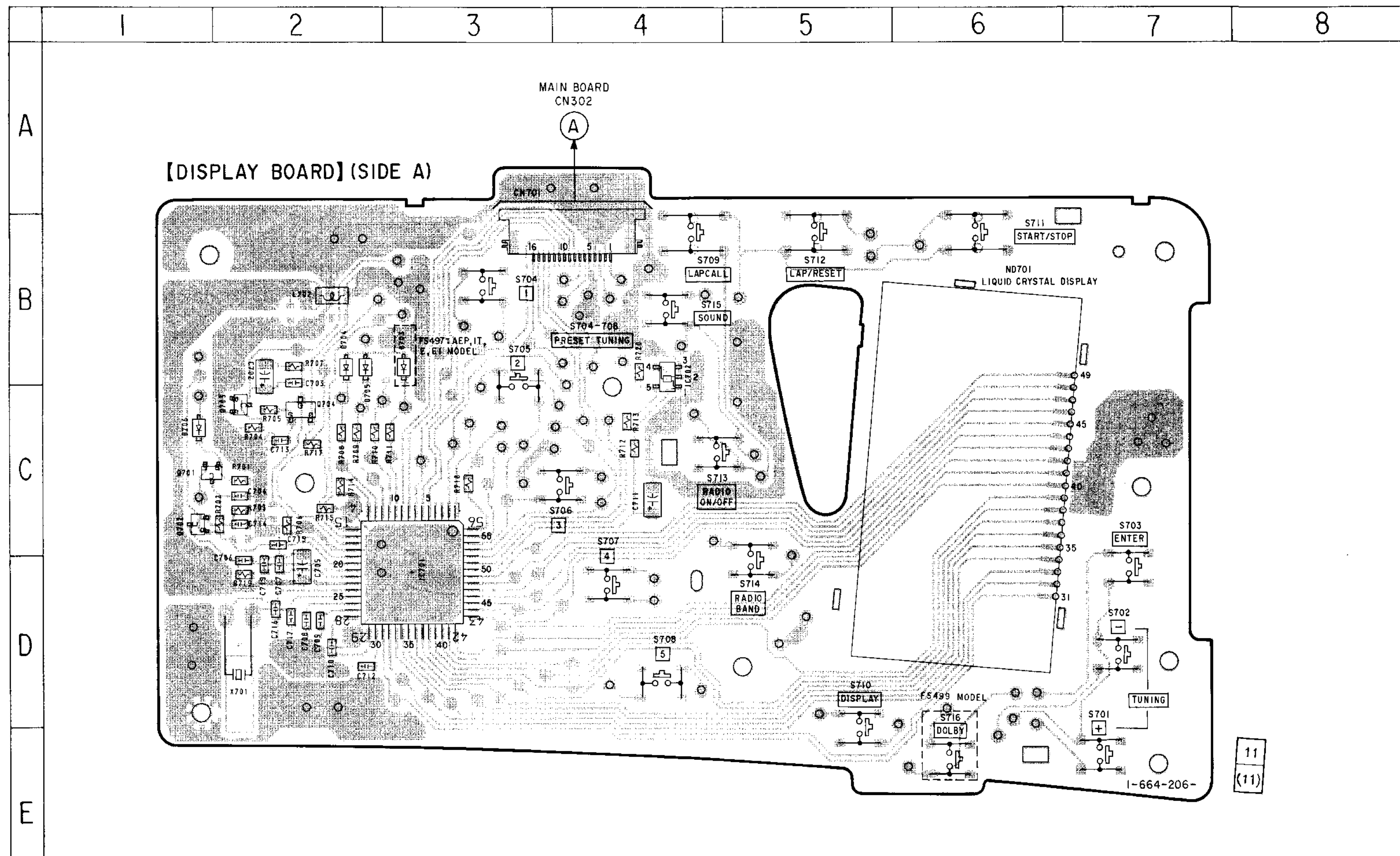
5-4. PRINTED WIRING BOARD — DISPLAY SECTION —

• Semiconductor Location

Ref. No.	Location
D706	C-1
D704	B-2
D705	B-2
D703	B-3
Q701	C-2
Q702	C-1
Q703	C-2
Q704	C-2
IC701	D-3
IC702	B-4

Note :  
 • — : Parts extracted from the component side.  
 • Δ : Internal component.  
 • — : Pattern from the side which enable seeing.

• Abbreviation  
 CND : model  
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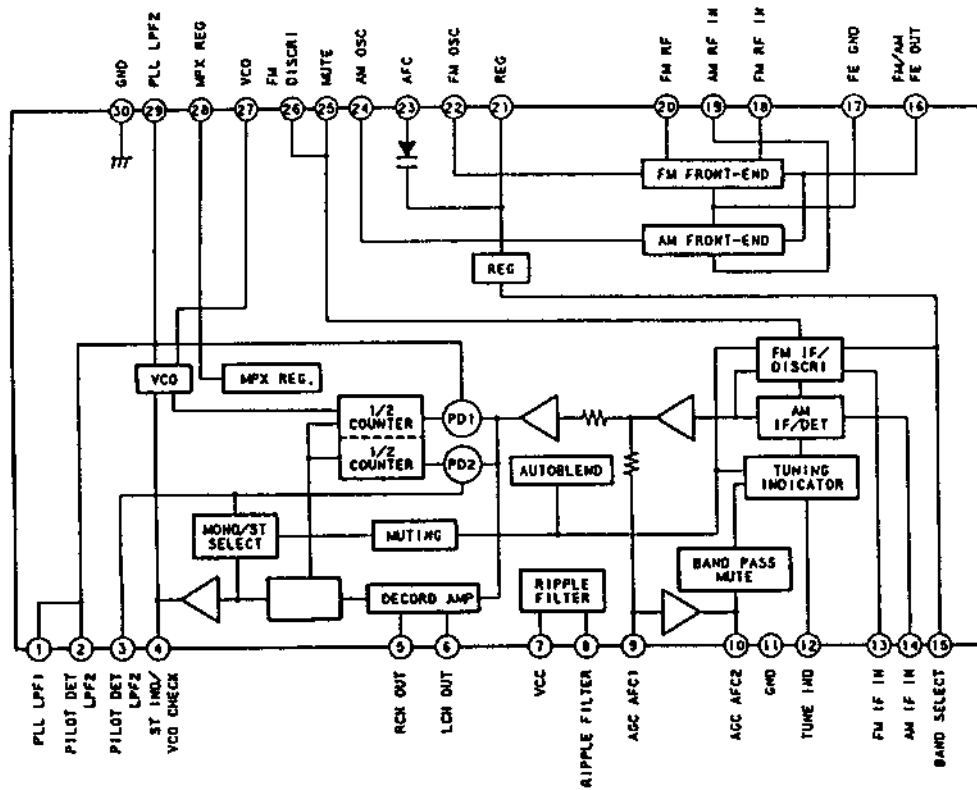


• IC PIN FUNCTION  
 • IC701 μPD17072GB-540-1A7 (ND DRIVE, SYSTEM CONTROL)

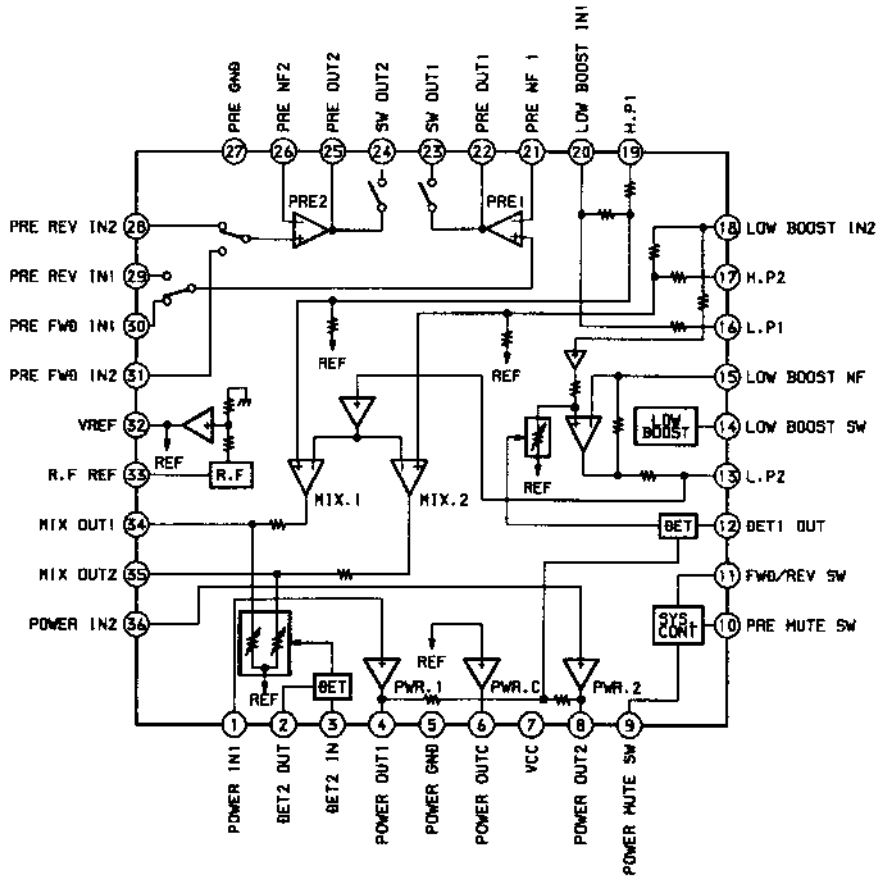
Pin No.	Pin name	I/O	Description
1	INIT	O	Key initial terminal.
2	BAND AM	O	BAND AM ON selection output.
3		-	Not used (Open).
4		-	Not used (Open).
5	IF ON	O	IF ON/OFF control.
6	MUTE	O	Mute signal output.
7	RADIO ON	O	Radio power ON/OFF control.
8	MEGA BASS	O	MEGA BASS ON/OFF output.
9		O	GROOVE/MEGA BASS control.
10	KEY IN 1	I	Key input.
11	KEY IN 2	I	Key input.
12	KEY IN 3	I	Key input.
13	KEY IN 4	I	Key input.
14		-	Not used (pull down).
15	DOLBY	O	Dolby ON/OFF control.
16	MODEL	I	Model select ON/OFF terminal.
17	IF IN	I	IF signal input.
18	GND	-	Ground.
19	EO	O	PLL error output.
20	VCO (AM)	I	AM VCO input.
21	VCO (FM/TV)	I	FM VCO input.
22	V <sub>DD2</sub>	-	Power supply terminal (+3V).
23	V <sub>DD1</sub>	-	Power supply terminal (+3V).
24	X0	-	System clock oscillator (75kHz).
25	X1	-	System clock oscillator (75kHz).
26	V <sub>DD5</sub>	-	Power supply (+3V).
27	V <sub>DD3</sub>	-	Power supply (+3V).
28	CAP 1	-	Pins connecting capacitors for doubler circuits generating the ND drive voltage.
29	CAP 2	-	Pins connecting capacitors for doubler circuits generating the ND drive voltage.
30	V <sub>DD4</sub>	-	Power supply (+3V).
31 - 34	COM 0 - 3	O	ND common output.
35 - 49	LCD 0 - 14	O	ND segment drive output.
50	CE	I	The internal reset circuit functions when low becomes high.
51	TAPE ON	I	TAPE ON signal input.
52	BEEP	O	BEEP signal output.
53	KEY OUT 1	O	Key scan output.
54	KEY OUT 2	O	Key scan output.
55	KEY OUT 3	O	Key scan output.
56	KEY OUT 4	O	Key scan output.

• IC Block Diagrams

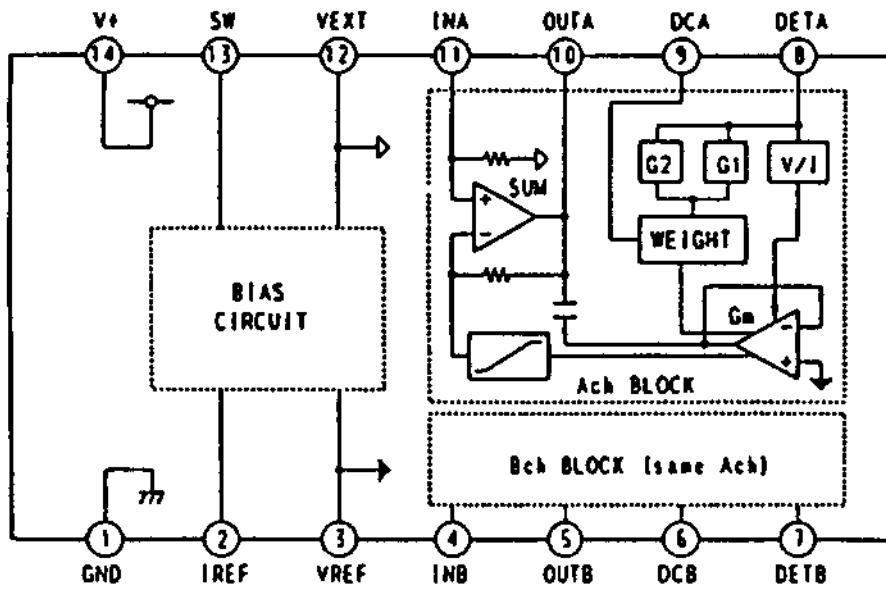
IC1 CX1538N



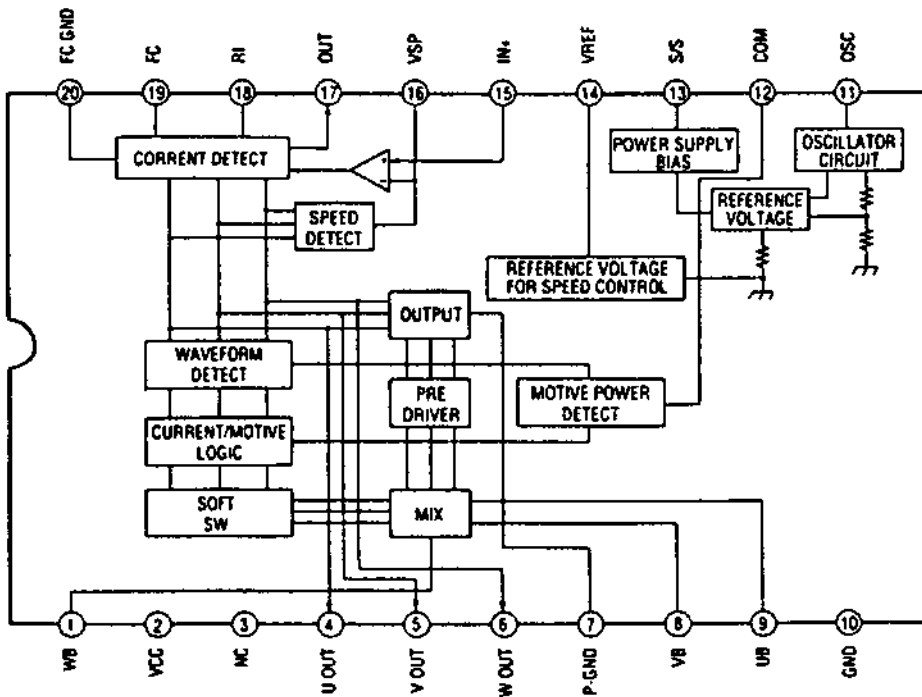
IC301 LA4585M-TLM



IC331 NJM2185VT-TE2



IC601 LB1979V-TLM



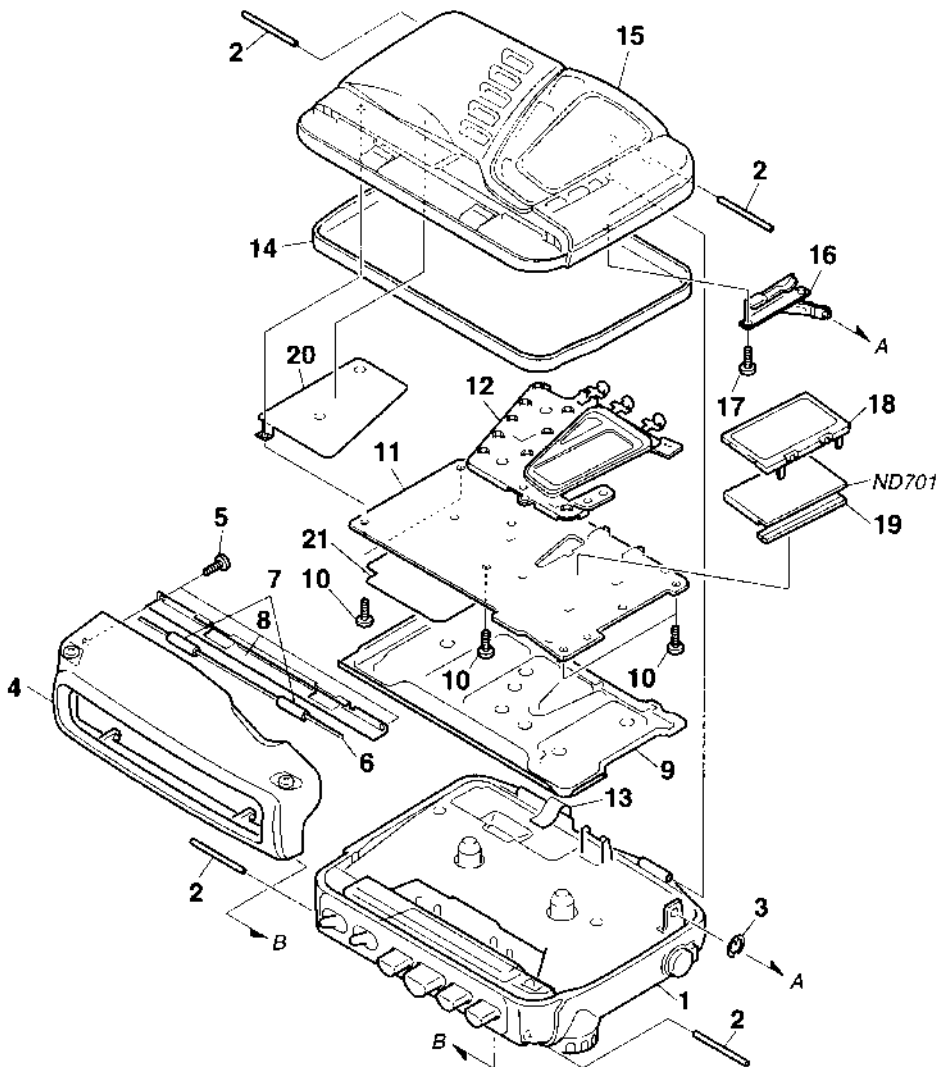


## SECTION 6 EXPLODED VIEWS

**Note:**

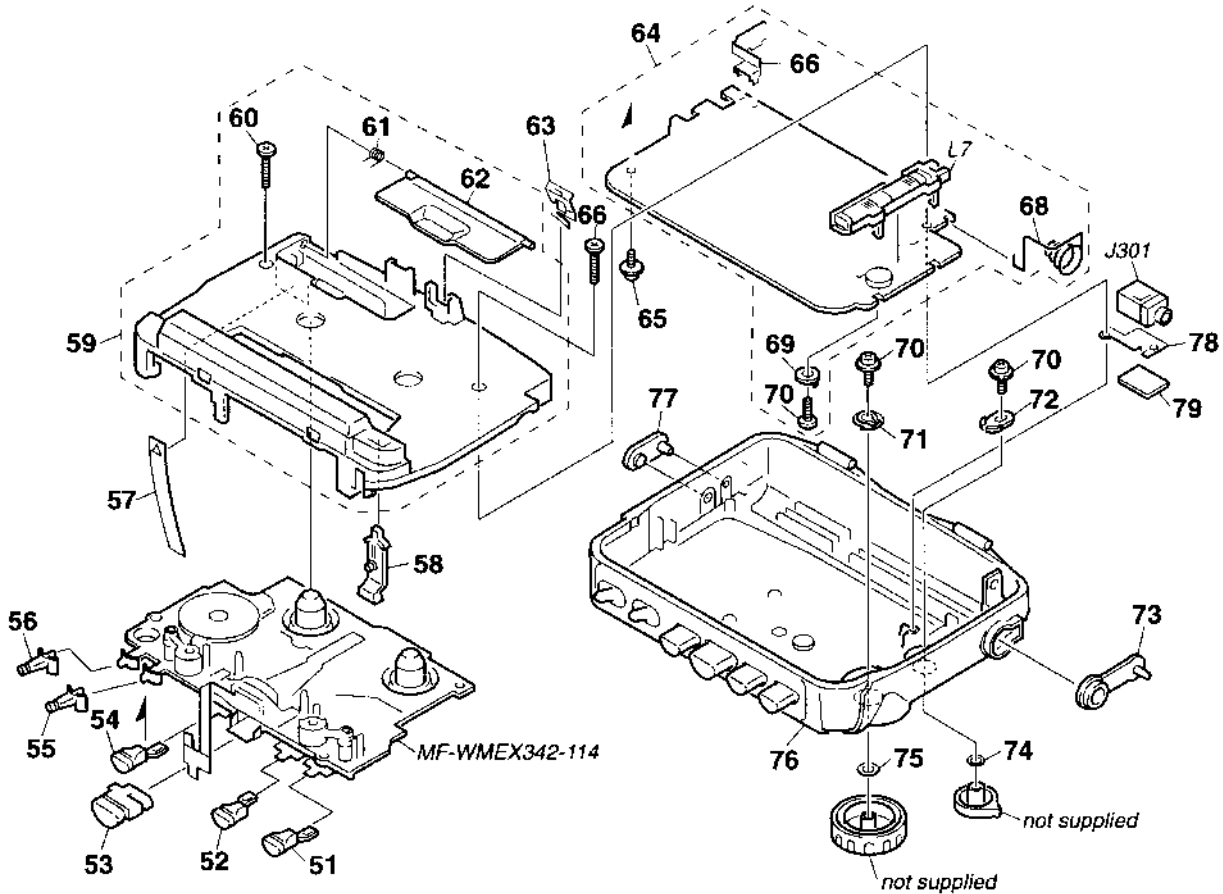
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
 CND : model  
 IT : Italian model  
 E1 : A part of "E" model, that shows no manufacturing country on the CABINET (REAR).

### 6-1. CASSETTE LID AND DISPLAY BOARD SECTION



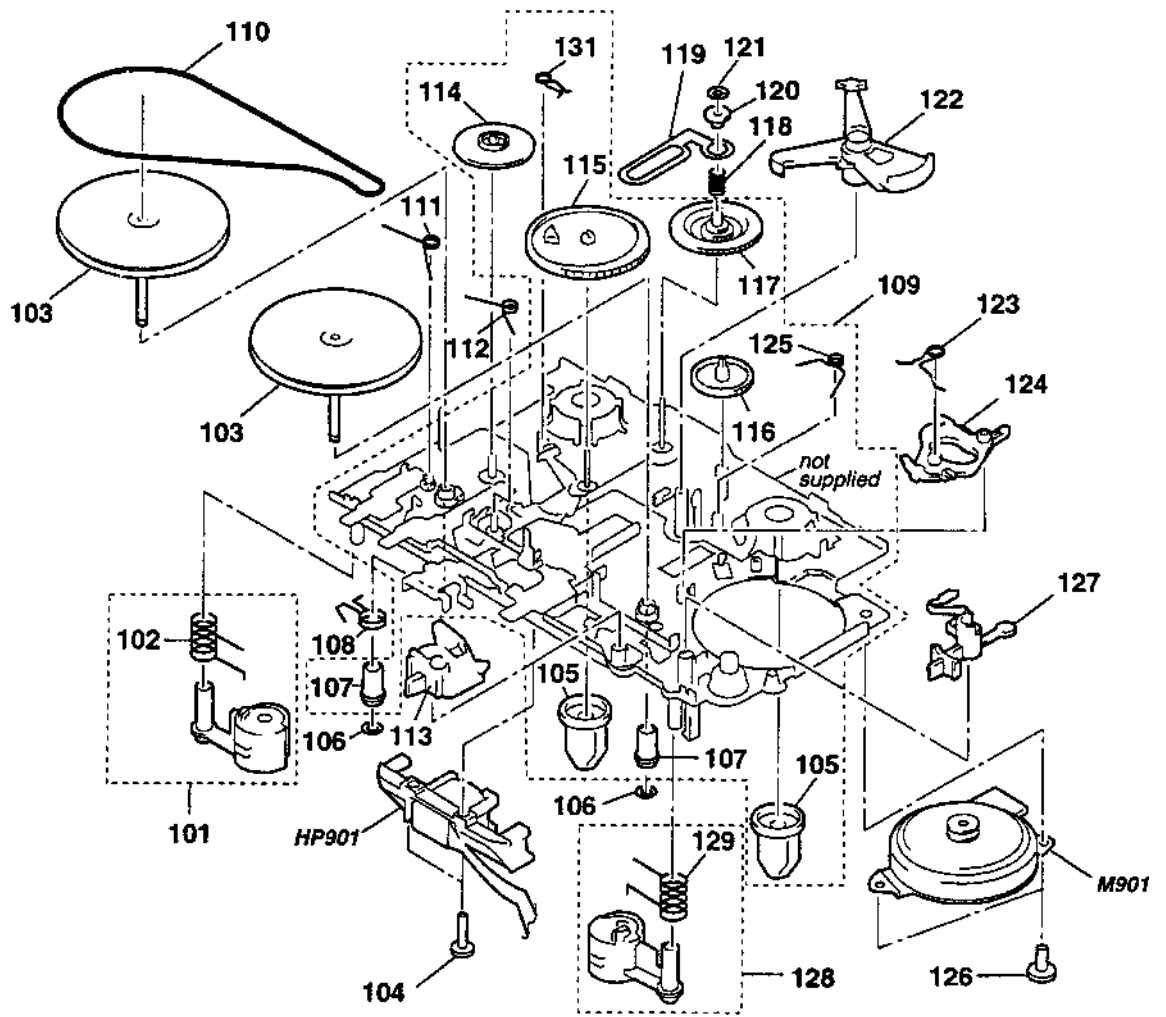
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	A-3010-514-A	CABINET (REAR) ASSY (FS499:US)		11	A-3016-958-A	DISPLAY BOARD, COMPLETE (FS499:CND)	
1	A-3010-518-A	CABINET (REAR) ASSY (FS497:US,CND,E)		* 12	3-012-983-11	ESCUTCHEON (LCD) (FS497:E,E1)	
1	A-3010-521-A	CABINET (REAR) ASSY (FS497:AEP,IT)		* 12	3-012-983-11	ESCUTCHEON (LCD) (FS497:US,CND,AEP,IT)	
1	A-3010-522-A	CABINET (REAR) ASSY (FS497:E1)		* 12	3-012-983-01	ESCUTCHEON (LCD) (FS499:US)	
1	A-3050-373-A	CABINET (REAR) ASSY (FS499:CND)		* 12	3-012-983-21	ESCUTCHEON (LCD) (FS499:CND)	
2	3-009-868-01	SHAFT (HOLDER)		13	1-664-501-11	PC BOARD, FLEXIBLE (TUNER)	
3	7-624-101-04	STOP RING 1.2 (E TYPE)		14	3-922-849-11	PACKING, CABINET (FS497/FS499:US)	
4	3-008-986-01	BUCKLE		14	3-922-849-21	PACKING, CABINET (FS499:CND)	
5	3-318-203-61	SCREW (B1.7X4), TAPPING		15	X-3373-626-1	HOLDER (CASSETTE) SUB ASSY (FS499:US)	
6	3-009-869-01	SHAFT (ROLLER)		15	X-3373-771-1	HOLDER (CASSETTE) SUB ASSY (FS497)	
7	3-009-870-01	ROLLER (BUCKLE)		15	X-3373-886-1	HOLDER (CASSETTE) SUB ASSY (FS499:CND)	
8	3-008-999-01	RETAINER (ROLLER SHAFT)		16	X-3369-989-1	ARM ASSY	
9	3-008-985-01	COVER		17	3-342-759-41	SCREW (B1.7X4), TAPPING	
10	3-318-203-62	SCREW (B1.7X4), TAPPING		* 18	3-008-998-01	CASE (LCD)	
11	A-3016-947-A	DISPLAY BOARD, COMPLETE (FS499:US)		19	3-017-616-01	CONDUCTIVE BOARD, CONNECTION	
11	A-3016-949-A	DISPLAY BOARD, COMPLETE (FS497:US,CND)		20	3-016-133-01	PLATE, SHILD (B)	
11	A-3016-950-A	DISPLAY BOARD, COMPLETE (FS497:AEP,IT)		21	3-016-132-01	PLATE, SHIELD (A)	
11	A-3016-951-A	DISPLAY BOARD, COMPLETE (FS497:E,E1)		ND701	1-801-538-21	DISPLAY PANEL, LIQUID CRYSTAL	

## 6-2. REAR CABINET AND MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	3-921-860-01	BUTTON (STOP)		66	3-921-878-01	TERMINAL BOARD, BATTERY	
52	3-921-861-01	BUTTON (FF)		68	3-921-877-01	SPRING, BATTERY COIL	
53	3-921-859-01	BUTTON (PLAY)		* 69	3-921-876-01	JOINT (B) (FS497:US,CND)	
54	3-921-862-01	BUTTON (REW)		70	3-318-201-01	SCREW (B) (1.4X3), TAPPING	
55	3-921-863-01	KNOB (DIR)		70	3-381-629-01	SCREW, (B) (1.4X3), TAPPING (FS497:US,CND)	
56	3-921-864-01	KNOB (MODE)		71	3-921-868-01	JOINT (VOL)	
57	3-922-445-01	SHEET, BATTERY		72	3-921-869-01	JOINT (AVLS)	
58	3-921-879-01	KNOB (T) (FS497/FS499:US)		73	3-386-371-01	PACKING, HP JACK	
58	3-921-879-11	KNOB (T) (FS499:CND)		74	3-326-560-02	RING (DIA. 2.5XDIA. 4.5), O	
59	X-3373-763-1	CHASSIS SUB ASSY (FS497:US,CND,FS499)		75	3-012-927-01	RING, O	
59	X-3373-764-1	CHASSIS SUB ASSY (FS497:AEP,IT,E,E1)		76	X-3373-511-1	CABINET (REAR) SUB ASSY (FS497:E1)	
60	3-318-203-31	SCREW (B1.7X8), TAPPING		76	X-3373-627-1	CABINET (REAR) SUB ASSY (FS499:US)	
61	3-926-267-01	SPRING, TORSION		76	X-3373-629-1	CABINET (REAR) SUB ASSY (FS497:AEP,IT)	
62	3-921-875-11	LID, BATTERY CASE		76	X-3373-630-1	CABINET (REAR) SUB ASSY (FS497:US,CND,E)	
63	3-009-872-01	SPRING, CASSETTE RETAINER		76	X-3373-887-1	CABINET (REAR) SUB ASSY (FS499:CND)	
64	A-3016-944-A	MAIN BOARD, COMPLETE (FS499)		77	3-922-447-01	PACKING, DC JACK	
64	A-3016-945-A	MAIN BOARD, COMPLETE (FS497:US,CND)		78	3-009-874-01	TERMINAL BOARD (H/P-JACK)	
64	A-3016-948-A	MAIN BOARD, COMPLETE (FS497:AEP,IT,E,E1)		79	1-664-208-11	HEADPHONE BOARD	
65	3-921-955-01	SCREW (M1.4), TOOTH (WH)		J301	1-778-224-11	JACK (SMALL TYPE) (WATERPROOF) (PHONES)	
				L7	1-501-917-11	ANTENNA, FERRITE-ROD	

**6-3. MECHANISM SECTION  
(MT-WMEX342-114)**



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	X-3369-749-1	PINCH LEVER (N) ASSY		118	3-920-990-01	SPRING (UD), COMPRESSION	
102	3-920-996-01	SPRING (PINCH N)		119	3-921-335-01	WASHER, LEVER	
103	X-3369-747-1	WHEEL ASSY, CAPSTAN		120	3-923-530-01	SLEEVE (M)	
104	3-704-197-71	SCREW (M1.4)		121	3-728-091-01	WASHER, STOPPER	
105	3-921-042-01	GEAR (REEL)		122	3-921-052-01	LEVER (A), DETECTION	
106	3-921-797-01	WASHER		123	3-920-994-11	SPRING (D SELECTION)	
107	3-921-003-01	BEARING		124	3-921-022-01	LEVER (B), DETECTION	
108	3-920-993-01	SPRING (NR)		125	3-938-628-01	SPRING (PLAY-CP)	
110	3-938-657-11	BELT		126	3-703-816-31	SCREW (M1.4), SPECIAL HEAD	
111	3-920-992-01	SPRING (STOP)		127	3-921-023-01	LEVER, M SELECTION	
112	3-013-142-01	SPRING (FR-CP)		128	X-3369-748-1	PINCH LEVER (R) ASSY	
113	3-921-053-01	LEVER, D SELECTION		129	3-920-997-01	SPRING (PINCH R)	
114	3-921-043-01	GEAR (D)		131	3-933-324-01	SPRING (FR LEVER)	
115	X-3369-752-1	CLUTCH ASSY		HP901	1-500-404-11	HEAD, MAGNETIC (PLAYBACK)	
116	3-920-999-01	GEAR (A)		M901	1-698-839-11	MOTOR	
117	3-921-050-01	GEAR (B)					

# DISPLAY

## SECTION 7 ELECTRICAL PARTS LIST

**Note:**

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

- Abbreviation  
 CND : model  
 IT : Italian model  
 E1 : A part of "E" model, that shows no manufacturing country on the CABINET (REAR).

- 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.
- CAPACITORS:  
 uF:  $\mu$ F

- RESISTORS  
 All resistors are in ohms.  
 METAL: metal-film resistor  
 METAL OXIDE: Metal Oxide-film resistor  
 F: nonflammable
- COILS  
 uH:  $\mu$ H
- SEMICONDUCTORS  
 In each case, u:  $\mu$ , for example:  
 uA...:  $\mu$ A... ; uPA... :  $\mu$ PA... ;  
 uPB... :  $\mu$ PB... ; uPC... :  $\mu$ PC... ;  
 uPD... :  $\mu$ PD...

Ref. No.	Part No.	Description	Remarks
	A-3016-947-A	DISPLAY BOARD, COMPLETE (FS499:US) *****	
	A-3016-949-A	DISPLAY BOARD, COMPLETE (FS497:US,CND) *****	
	A-3016-950-A	DISPLAY BOARD, COMPLETE (FS497:AEP,IT) *****	
	A-3016-951-A	DISPLAY BOARD, COMPLETE (FS497:E,E1) *****	
	A-3016-958-A	DISPLAY BOARD, COMPLETE (FS499:CND) *****	
		< CAPACITOR >	
C702	1-110-501-11	CERAMIC CHIP 0.33uF 10% 16V	
C703	1-164-473-11	CERAMIC CHIP 820PF 10% 50V	
C704	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C705	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C706	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C707	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C708	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C709	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C710	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C711	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C712	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C713	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C714	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C715	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C716	1-162-916-11	CERAMIC CHIP 12PF 5% 50V	
C717	1-162-912-11	CERAMIC CHIP 7PF 0.5PF 50V	
C719	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
		< CONNECTOR >	
CN701	1-766-584-11	CONNECTOR, FPC (ZIF) 16P	
		< DIODE >	
D703	8-719-049-09	DIODE 1SS367-T3SONY (FS497:AEP,IT,E,E1)	
D704	8-719049-09	DIODE 1SS367-T3SONY	
D705	8-719-049-09	DIODE 1SS367-T3SONY	
D706	8-719-049-09	DIODE 1SS367-T3SONY	
		< IC >	
IC701	8-759-455-07	IC UPD17072GB-540-1A7	
IC702	8-759-296-60	IC PST9018NL	
		< COIL >	
L702	1-410-946-31	INDUCTOR CHIP 22uH	
		< LIQUED CRYSTAL DISPLAY >	
ND701	1-801-538-21	DISPLAY PANEL, LIQUID CRYSTAL	

Ref. No.	Part No.	Description	Remarks
		< TRANSISTOR >	
Q701	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q702	8-729-117-73	TRANSISTOR 2SC4178-F14	
Q703	8-729-602-21	TRANSISTOR 2SC4154-F	
Q704	8-729-220-93	TRANSISTOR 2SK209-G	
		< RESISTOR >	
R701	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R702	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R703	1-216-805-11	METAL CHIP 47 5% 1/16W	
R704	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R705	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R706	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R707	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R708	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R709	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R710	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R711	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R712	1-216-837-11	METAL CHIP 22K 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	
R717	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R718	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R719	1-216-813-11	METAL CHIP 220 5% 1/16W	
R720	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
		< SWITCH >	
S701	1-771-105-11	SWITCH, TACTILE (+ (UP))	
S702	1-771-105-11	SWITCH, TACTILE (- (DOWN))	
S703	1-771-105-11	SWITCH, TACTILE (ENTER)	
S704	1-771-105-11	SWITCH, TACTILE (PRESET1)	
S705	1-771-105-11	SWITCH, TACTILE (PRESET2)	
S706	1-771-105-11	SWITCH, TACTILE (PRESET3)	
S707	1-771-105-11	SWITCH, TACTILE (PRESET4)	
S708	1-771-105-11	SWITCH, TACTILE (PRESET5)	
S709	1-692-088-51	SWITCH, TACTILE (LAP CALL)	
S710	1-771-105-11	SWITCH, TACTILE (MODE)	
S711	1-692-088-51	SWITCH, TACTILE (START/STOP)	
S712	1-692-088-51	SWITCH, TACTILE (LAP/RESET)	
S713	1-771-105-11	SWITCH, TACTILE (RADIO ON/OFF)	
S714	1-771-105-11	SWITCH, TACTILE (BAND)	
S715	1-771-105-11	SWITCH, TACTILE (SOUND)	
S716	1-771-105-11	SWITCH, TACTILE (DOLBY) (FS499)	
		< VIBRATOR >	
X701	1-760-666-11	VIBRATOR, CRYSTAL (75kHz)	

Ref. No.	Part No.	Description	Remarks
*	1-664-208-11	HEADPHONE BOARD *****	
	3-009-874-01	TERMINAL BOARD (H/P-JACK) < FERRITE BEAD >	
FB301	1-414-235-11	INDUCTOR, FERRITE BEAD < JACK >	
J301	1-778-224-11	JACK (SMALL TYPE)(WATERPROOF)(PHONES) < COIL >	
L102	1-412-983-11	INDUCTOR 2.2uH	
L202	1-412-983-11	INDUCTOR 2.2uH	
*****			
	A-3016-944-A	MAIN BOARD, COMPLETE (FS499) *****	
	A-3016-945-A	MAIN BOARD, COMPLETE (FS497:US,CND) *****	
	A-3016-948-A	MAIN BOARD, COMPLETE (FS497:AEP,IT,E,E1) *****	
	1-501-917-11	ANTENNA, FERRITE-ROD	
*	3-381-629-01	SCREW, (B) (1.4X3), TAPPING	
	3-921-876-01	JOINT (B)	
	3-921-877-01	SPRING, BATTERY COIL	
	3-921-878-01	TERMINAL BOARD, BATTERY < CAPACITOR >	
C1	1-164-357-11	CERAMIC CHIP 1000PF 5% 50V	
C2	1-162-910-11	CERAMIC CHIP 5PF 0.25PF 50V	
C3	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C4	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C5	1-164-357-11	CERAMIC CHIP 1000PF 5% 50V	
C6	1-162-925-11	CERAMIC CHIP 68PF 5% 50V	
C7	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C8	1-164-357-11	CERAMIC CHIP 1000PF 5% 50V	
C9	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C10	1-162-924-11	CERAMIC CHIP 56PF 5% 50V	
C11	1-162-917-11	CERAMIC CHIP 15PF 5% 50V	
C12	1-162-908-11	CERAMIC CHIP 3PF 0.25PF 50V	
C13	1-162-919-11	CERAMIC CHIP 22PF 5% 50V	
C14	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C15	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C16	1-164-392-11	CERAMIC CHIP 390PF 5% 50V	
C17	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C18	1-162-907-11	CERAMIC CHIP 2PF 0.25PF 50V	
C19	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C20	1-135-221-11	TANTAL. CHIP 3.3uF 20% 4V	
C21	1-135-201-11	TANTALUM CHIP 10uF 20% 4V	
C22	1-107-823-11	CERAMIC CHIP 0.47uF 10% 16V	
C23	1-109-935-11	TANTAL. CHIP 4.7uF 20% 4V	
C24	1-115-156-11	CERAMIC CHIP 1uF 10V	
C25	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V (FS499)	
C25	1-104-700-11	CERAMIC CHIP 0.027uF 10% 16V (FS497:US,CND)	
C25	1-104-509-11	CERAMIC CHIP 0.018uF 10% 16V (FS497:AEP,IT,E,E1)	

Ref. No.	Part No.	Description	Remarks
C26	1-104-509-11	CERAMIC CHIP 0.018uF 10% 16V (FS497:AEP,IT,E,E1)	
C26	1-104-700-11	CERAMIC CHIP 0.027uF 10% 16V (FS497:US,CND)	
C26	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V (FS499)	
C27	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V (FS499)	
C27	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V (FS497)	
C28	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V (FS497)	
C28	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V (FS499)	
C29	1-115-156-11	CERAMIC CHIP 1uF 10V	
C30	1-115-156-11	CERAMIC CHIP 1uF 10V	
C31	1-124-434-00	ELECT 220uF 20% 4V	
C32	1-135-201-11	TANTALUM CHIP 10uF 20% 4V	
C33	1-109-935-11	TANTAL. CHIP 4.7uF 20% 4V	
C34	1-109-935-11	TANTAL. CHIP 4.7uF 20% 4V	
C36	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C37	1-162-911-11	CERAMIC CHIP 6PF 0.5PF 50V	
C38	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C39	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C41	1-163-217-11	CERAMIC CHIP 1PF 0.25PF 50V	
C42	1-164-357-11	CERAMIC CHIP 1000PF 5% 50V	
C43	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C44	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C45	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C46	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C47	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C48	1-163-063-00	CERAMIC CHIP 0.022uF 50V	
C49	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C50	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C51	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C52	1-164-505-11	CERAMIC CHIP 2.2uF 16V	
C54	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C55	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C56	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C57	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C58	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C59	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C62	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C63	1-164-392-11	CERAMIC CHIP 390PF 5% 50V	
C91	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C92	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C93	1-135-201-11	TANTALUM CHIP 10uF 20% 4V	
C101	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C102	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C103	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
C104	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C105	1-115-156-11	CERAMIC CHIP 1uF 10V	
C106	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C107	1-115-156-11	CERAMIC CHIP 1uF 10V	
C108	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C131	1-115-156-11	CERAMIC CHIP 1uF 10V (FS499)	

# MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C132	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V (FS499)	C605	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V
C133	1-164-505-11	CERAMIC CHIP	2.2uF 16V (FS499)	C606	1-135-187-21	TANTAL. CHIP	2.2uF 20% 4V
C201	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C607	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V
C202	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C608	1-110-563-11	CERAMIC CHIP	0.068uF 10% 16V
C203	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C609	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V
C204	1-104-847-11	TANTAL. CHIP	22uF 20% 4V	C610	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V
C205	1-115-156-11	CERAMIC CHIP	1uF 10V	C611	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C206	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C701	1-125-639-11	CAPACITOR	56000uF 3.5V
C207	1-115-156-11	CERAMIC CHIP	1uF 10V			< FILTER >	
C208	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	CF1	1-579-823-21	FILTER, CERAMIC	
C231	1-115-156-11	CERAMIC CHIP	1uF 10V (FS499)	CF2	1-767-362-11	FILTER, CERAMIC	
C232	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V (FS499)			< TRIMMER >	
C233	1-164-505-11	CERAMIC CHIP	2.2uF 16V (FS499)	CT1	1-141-463-11	CAP, ADJ	10PF
C301	1-115-156-11	CERAMIC CHIP	1uF 10V	CT2	1-141-463-11	CAP, ADJ	10PF
C302	1-126-153-11	ELECT	22uF 20% 6.3V			< CONNECTOR >	
C303	1-126-153-11	ELECT	22uF 20% 6.3V	CN301	1-695-942-21	CONNECTOR, FPC (ZIF) 6P	
C304	1-113-619-11	CERAMIC CHIP	0.47uF 10V	CN302	1-766-584-11	CONNECTOR, FPC (ZIF) 16P	
C305	1-115-156-11	CERAMIC CHIP	1uF 10V			< DIODE >	
C306	1-124-433-00	ELECT	100uF 20% 4V	D1	8-719-032-80	DIODE KV1430-TL	
C307	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	D2	8-719-032-80	DIODE KV1430-TL	
C308	1-165-128-11	CERAMIC CHIP	0.22uF 16V	D3	8-719-951-05	DIODE KV1560	
C309	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D4	8-719-049-09	DIODE 1SS367-T3SONY	
C310	1-135-221-11	TANTAL. CHIP	3.3uF 20% 4V	D91	8-719-941-86	DIODE DAN202U	
C311	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	D401	8-719-404-49	DIODE MA111	
C312	1-164-505-11	CERAMIC CHIP	2.2uF 16V	D402	8-719-056-89	DIODE UDZ-TE-17-12B	
C313	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	D701	8-719-049-09	DIODE 1SS367-T3SONY	
C314	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V			< IC >	
C315	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	IC1	8-752-072-12	IC CXA1538N	
C316	1-109-935-11	TANTAL. CHIP	4.7uF 20% 4V	IC301	8-759-332-89	IC LA4585M-TLM	
C317	1-104-847-11	TANTAL. CHIP	22uF 20% 4V	IC331	8-759-275-48	IC NJM2185V-TE2 (FS499)	
C318	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC601	8-759-447-73	IC LB1979V-TLM	
C319	1-113-619-11	CERAMIC CHIP	0.47uF 10V			< JUMPER RESISTOR >	
C320	1-162-974-11	CERAMIC CHIP	0.01uF 50V	JC1	1-216-295-91	CONDUCTOR, CHIP (2012)	(FS497:AEP,IT,E,E1)
C321	1-162-974-11	CERAMIC CHIP	0.01uF 50V	JC3	1-216-295-91	CONDUCTOR, CHIP (2012)	
C322	1-162-974-11	CERAMIC CHIP	0.01uF 50V	JC10	1-216-295-91	CONDUCTOR, CHIP (2012)	
C331	1-135-201-11	TANTALUM CHIP	10uF 20% 4V (FS499)	JC11	1-216-295-91	CONDUCTOR, CHIP (2012)	
C332	1-164-360-11	CERAMIC CHIP	0.1uF 16V (FS499)	JC12	1-216-295-91	CONDUCTOR, CHIP (2012)	
C334	1-135-201-11	TANTALUM CHIP	10uF 20% 4V (FS499)	JC13	1-216-295-91	CONDUCTOR, CHIP (2012)	
C335	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (FS499)			< COIL >	
C401	1-164-346-11	CERAMIC CHIP	1uF 16V	L2	1-412-967-31	INDUCTOR 0.1uH	
C402	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	L5	1-415-966-11	COIL (RF)	
C403	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	L6	1-415-963-11	COIL (OSC)	
C404	1-126-153-11	ELECT	22uF 20% 6.3V	L7	1-501-917-11	ANTENNA, FERRITE-ROD	
C405	1-162-974-11	CERAMIC CHIP	0.01uF 50V	L8	1-415-962-11	COIL (OSC)	
C406	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	L302	1-412-983-11	INDUCTOR 2.2uH	
C407	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	L401	1-412-991-11	INDUCTOR 10uH	
C601	1-124-434-00	ELECT	220uF 20% 4V				
C602	1-110-563-11	CERAMIC CHIP	0.068uF 10% 16V				
C603	1-110-563-11	CERAMIC CHIP	0.068uF 10% 16V				
C604	1-110-563-11	CERAMIC CHIP	0.068uF 10% 16V				

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< TRANSISTOR >					
Q1	8-729-602-21	TRANSISTOR 2SC4154-F (FS497:US,CND,FS499)		R25	1-216-841-11	METAL CHIP 47K	5% 1/16W (FS499)
Q3	8-729-117-73	TRANSISTOR 2SC4178-F14		R26	1-216-831-11	METAL CHIP 6.8K	5% 1/16W (FS497)
Q4	8-729-014-04	TRANSISTOR RN1307-TE85L (FS497:AEP,IT,E,E1)		R26	1-216-841-11	METAL CHIP 47K	5% 1/16W (FS499)
Q6	8-729-421-26	TRANSISTOR UN5216		R27	1-216-815-11	METAL CHIP 330	5% 1/16W
Q7	8-729-117-83	TRANSISTOR 2SK160A-K25		R28	1-216-815-11	METAL CHIP 330	5% 1/16W
				R30	1-216-805-11	METAL CHIP 47	5% 1/16W
Q41	8-729-117-73	TRANSISTOR 2SC4178-F14		R31	1-216-809-11	METAL CHIP 100	5% 1/16W
Q42	8-729-230-60	TRANSISTOR 2SA1586-YG		R32	1-216-817-11	METAL CHIP 470	5% 1/16W
Q43	8-729-117-73	TRANSISTOR 2SC4178-F14		R33	1-216-821-11	METAL CHIP 1K	5% 1/16W
Q44	8-729-230-60	TRANSISTOR 2SA1586-YG		R34	1-216-837-11	METAL CHIP 22K	5% 1/16W
Q45	8-729-014-12	TRANSISTOR RN1311-TE85L		R41	1-216-849-11	METAL CHIP 220K	5% 1/16W
Q46	8-729-117-73	TRANSISTOR 2SC4178-F14		R42	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
Q47	8-729-220-93	TRANSISTOR 2SK209-G		R43	1-216-833-11	METAL CHIP 10K	5% 1/16W
Q48	8-729-014-12	TRANSISTOR RN1311-TE85L		R44	1-216-841-11	METAL CHIP 47K	5% 1/16W
Q49	8-729-230-60	TRANSISTOR 2SA1586-YG		R45	1-216-817-11	METAL CHIP 470	5% 1/16W
Q91	8-729-230-60	TRANSISTOR 2SA1586-YG		R46	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
Q92	8-729-402-13	TRANSISTOR XN1501		R48	1-216-805-11	METAL CHIP 47	5% 1/16W
Q101	8-729-421-26	TRANSISTOR UN5216		R49	1-216-845-11	METAL CHIP 100K	5% 1/16W
Q201	8-729-421-26	TRANSISTOR UN5216		R50	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
Q301	8-729-014-12	TRANSISTOR RN1311-TE85L		R51	1-216-805-11	METAL CHIP 47	5% 1/16W
Q302	8-729-014-12	TRANSISTOR RN1311-TE85L		R52	1-216-821-11	METAL CHIP 1K	5% 1/16W
Q303	8-729-421-26	TRANSISTOR UN5216		R53	1-216-845-11	METAL CHIP 100K	5% 1/16W
Q304	8-729-014-12	TRANSISTOR RN1311-TE85L		R54	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
Q305	8-729-207-73	TRANSISTOR RN2407		R55	1-216-817-11	METAL CHIP 470	5% 1/16W
Q306	8-729-014-12	TRANSISTOR RN1311-TE85L		R56	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
Q307	8-729-807-86	TRANSISTOR 2SB1295-UL5		R57	1-216-797-11	METAL CHIP 10	5% 1/16W
Q308	8-729-402-13	TRANSISTOR XN1501		R91	1-216-837-11	METAL CHIP 22K	5% 1/16W
Q309	8-729-014-12	TRANSISTOR RN1311-TE85L		R92	1-216-821-11	METAL CHIP 1K	5% 1/16W
Q310	8-729-014-12	TRANSISTOR RN1311-TE85L		R93	1-216-837-11	METAL CHIP 22K	5% 1/16W
Q311	8-729-230-60	TRANSISTOR 2SA1586-YG		R94	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
Q331	8-729-014-12	TRANSISTOR RN1311-TE85L (FS499)		R95	1-216-809-11	METAL CHIP 100	5% 1/16W
Q401	8-729-602-21	TRANSISTOR 2SC4154-F		R96	1-216-823-11	METAL CHIP 1.5K	5% 1/16W
		< RESISTOR >		R101	1-216-841-11	METAL CHIP 47K	5% 1/16W
R2	1-216-821-11	METAL CHIP 1K	5% 1/16W (FS497:US,CND,FS499)	R102	1-216-841-11	METAL CHIP 47K	5% 1/16W
R3	1-216-853-11	METAL CHIP 470K	5% 1/16W	R103	1-216-855-11	METAL CHIP 680K	5% 1/16W
R4	1-216-853-11	METAL CHIP 470K	5% 1/16W	R104	1-216-835-11	METAL CHIP 15K	5% 1/16W
R5	1-216-829-11	METAL CHIP 4.7K	5% 1/16W	R105	1-216-835-11	METAL CHIP 15K	5% 1/16W
R6	1-216-853-11	METAL CHIP 470K	5% 1/16W	R106	1-216-819-11	METAL CHIP 680	5% 1/16W
R7	1-216-853-11	METAL CHIP 470K	5% 1/16W	R107	1-216-795-11	METAL GLAZE 6.8	5% 1/16W
R8	1-216-853-11	METAL CHIP 470K	5% 1/16W	R108	1-216-841-11	METAL CHIP 47K	5% 1/16W
R9	1-216-853-11	METAL CHIP 470K	5% 1/16W	R109	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
R10	1-216-821-11	METAL CHIP 1K	5% 1/16W	R201	1-216-841-11	METAL CHIP 47K	5% 1/16W
R11	1-216-817-11	METAL CHIP 470	5% 1/16W	R202	1-216-841-11	METAL CHIP 47K	5% 1/16W
R12	1-216-833-11	METAL CHIP 10K	5% 1/16W	R203	1-216-855-11	METAL CHIP 680K	5% 1/16W
R13	1-216-797-11	METAL CHIP 10	5% 1/16W	R204	1-216-835-11	METAL CHIP 15K	5% 1/16W
R14	1-216-847-11	METAL CHIP 150K	5% 1/16W	R205	1-216-835-11	METAL CHIP 15K	5% 1/16W
R15	1-216-827-11	METAL CHIP 3.3K	5% 1/16W	R206	1-216-819-11	METAL CHIP 680	5% 1/16W
R16	1-216-825-11	METAL CHIP 2.2K	5% 1/16W	R207	1-216-795-11	METAL GLAZE 6.8	5% 1/16W
R17	1-216-839-11	METAL CHIP 33K	5% 1/16W (FS497:AEP,IT,E,E1)	R208	1-216-841-11	METAL CHIP 47K	5% 1/16W
R18	1-216-833-11	METAL CHIP 10K	5% 1/16W	R209	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
R19	1-216-827-11	METAL CHIP 3.3K	5% 1/16W	R301	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R20	1-216-827-11	METAL CHIP 3.3K	5% 1/16W	R302	1-216-843-11	METAL CHIP 68K	5% 1/16W
R25	1-216-831-11	METAL CHIP 6.8K	5% 1/16W (FS497)	R303	1-216-833-11	METAL CHIP 10K	5% 1/16W
				R304	1-216-841-11	METAL CHIP 47K	5% 1/16W
				R305	1-216-851-11	METAL CHIP 330K	5% 1/16W
				R306	1-216-789-11	METAL CHIP 2.2	5% 1/16W

## MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R308	1-216-829-11	METAL CHIP	4.7K 5%	1/16W		< THERMISTOR >	
R309	1-216-829-11	METAL CHIP	4.7K 5%	1/16W			
R310	1-216-833-11	METAL CHIP	10K 5%	1/16W	TH601	1-810-794-11	THERMISTOR, POSITIVE
R311	1-216-845-11	METAL CHIP	100K 5%	1/16W		< VIBRATOR >	
R312	1-216-819-11	METAL CHIP	680 5%	1/16W			
R331	1-216-841-11	METAL CHIP	47K 5%	1/16W (FS499)	X1	1-767-312-11	FILTER, CERAMIC (DISCRIMINATOR)
R332	1-216-797-11	METAL CHIP	10 5%	1/16W (FS499)		MISCELLANEOUS	
R333	1-218-729-11	METAL CHIP	36K 0.50%	1/16W (FS499)		*****	
R401	1-216-845-11	METAL CHIP	100K 5%	1/16W	13	1-664-501-11	PC BOARD, FLEXIBLE (TUNER)
R403	1-216-821-11	METAL CHIP	1K 5%	1/16W	HP901	1-500-404-11	HEAD, MAGNETIC
R404	1-216-845-11	METAL CHIP	100K 5%	1/16W	L7	1-501-917-11	ANTENA, FRRITE-ROD
R405	1-216-813-11	METAL CHIP	220 5%	1/16W	J301	1-778-224-11	JACK (SMALL TYPE)(WATERPROOF)(PHONES)
R601	1-216-821-11	METAL CHIP	1K 5%	1/16W	M901	1-698-839-11	MOTOR
R602	1-216-857-11	METAL CHIP	1M 5%	1/16W	ND701	1-801-538-21	DISPLAY BOARD, LIQUID CRYSTAL
R603	1-216-857-11	METAL CHIP	1M 5%	1/16W		*****	
R604	1-216-857-11	METAL CHIP	1M 5%	1/16W		ACCESSORIES & PACKING MATERIALS	
R605	1-216-839-11	METAL CHIP	33K 5%	1/16W		*****	
R606	1-216-845-11	METAL CHIP	100K 5%	1/16W		3-016-296-01	STOPPER (BUCKLE)(FS497:US/FS499:US)
R607	1-216-821-11	METAL CHIP	1K 5%	1/16W		3-016-377-01	INDIVIDUAL CARTON (FS497:E)
R608	1-216-833-11	METAL CHIP	10K 5%	1/16W		3-326-162-02	WASHER, POLYETHYLENE, SLIT
R609	1-216-829-11	METAL CHIP	4.7K 5%	1/16W		3-378-331-01	SCREW, CARRYING CASE
R610	1-216-821-11	METAL CHIP	1K 5%	1/16W		3-858-917-11	MANUAL, INSTRUCTION (ENGLISH) (FS497:US,CND,FS499)
		< VARIABLE RESISTOR >				3-858-917-21	MANUAL, INSTRUCTION (FRENCH) (FS497:CND,FS499:CND)
RV1	1-223-258-21	RES, ADJ, CERMET 4.7K				3-858-917-31	MANUAL, INSTRUCTION (ENGLISH,FRENCH,GERMAN,ITALIAN) (FS497:AEP,IT)
RV301	1-230-593-11	RES, VAR, CARBON 10K/10K(VOLUME)				3-858-917-41	MANUAL, INSTRUCTION (SPANISH,DUTCH,SWEDISH,PORTUGUESE) (FS497:AEP)
RV601	1-241-916-11	RES, ADJ, CARBON 4.7K				3-858-917-51	MANUAL, INSTRUCTION (ENGLISH,SPANISH,CHINESE,KOREAN) (FS497:E)
		< SWITCH >				3-858-917-61	MANUAL, INSTRUCTION (ENGLISH,SPANISH,CHINESE,KOREAN) (FS497:E1)
S301	1-762-624-11	SWITCH, SLIDE(FM SENS.TAPE SELCT)				3-933-997-01	CLIP (BELT)
S302	1-570-397-11	SWITCH, SLIDE(AVLS)				3-933-998-31	BAND (FS499:CND)
S303	1-762-302-11	SWITCH, PUSH (1 KEY)(TAPE POWER)				8-952-478-90	HEADPHONE MDR-E215/Y SET (FS497:AEP,IT,E,E1)
S304	1-572-288-11	SWITCH, PUSH (N/R)				8-953-142-90	HEADPHONE MDR-W14G//K SET (FS497:US,CND,FS499)
		< TRANSFORMER >					
T1	1-415-960-11	TRANSFORMER, IF (FS497:AEP,IT,E,E1,FS499)					
T401	1-449-021-21	TRANSFORMER, DC/DC CONVERTER					



# WM-FS497/FS499

**SONY**

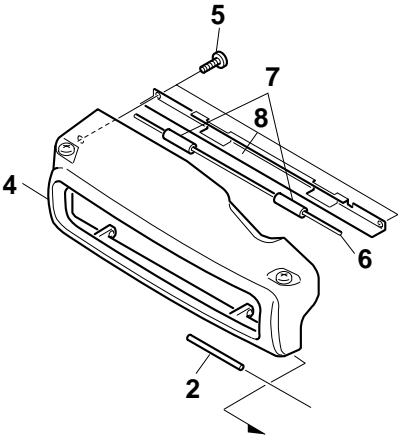
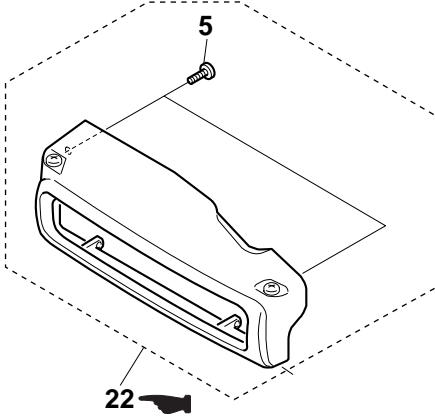

## SERVICE MANUAL

*US Model*  
*Canadian Model*  
 WM-FS497/FS499  
*AEP Model*  
*E Model*  
 WM-FS497

### CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT																												
27	<table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>3-008-986-01</td> <td>BUCKLE</td> </tr> <tr> <td>6</td> <td>3-009-869-01</td> <td>SHAFT (ROLLER)</td> </tr> <tr> <td>7</td> <td>3-009-870-01</td> <td>ROLLER (BUCKLE)</td> </tr> <tr> <td>8</td> <td>3-008-999-01</td> <td>RETAINER (ROLLER SHAFT)</td> </tr> <tr> <td>22</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> 	Ref. No.	Part No.	Description	4	3-008-986-01	BUCKLE	6	3-009-869-01	SHAFT (ROLLER)	7	3-009-870-01	ROLLER (BUCKLE)	8	3-008-999-01	RETAINER (ROLLER SHAFT)	22	_____	_____	<table border="1"> <thead> <tr> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>X-3373-976-1</td> <td>BUCKLE ASSY</td> </tr> </tbody> </table> 	Part No.	Description	_____	_____	_____	_____	_____	_____	_____	_____	X-3373-976-1	BUCKLE ASSY
Ref. No.	Part No.	Description																														
4	3-008-986-01	BUCKLE																														
6	3-009-869-01	SHAFT (ROLLER)																														
7	3-009-870-01	ROLLER (BUCKLE)																														
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X-3373-976-1	BUCKLE ASSY																															
29	<table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>109</td> <td>X-3371-589-1</td> <td>CHASSIS (COMP) ASSY</td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	109	X-3371-589-1	CHASSIS (COMP) ASSY	<table border="1"> <thead> <tr> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>X-3372-958-1</td> <td>CHASSIS COMP ASSY (GL-C)</td> </tr> </tbody> </table> 	Part No.	Description	X-3372-958-1	CHASSIS COMP ASSY (GL-C)																				
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109	X-3371-589-1	CHASSIS (COMP) ASSY																														
Part No.	Description																															
X-3372-958-1	CHASSIS COMP ASSY (GL-C)																															

(SPC-97012)

# WM-FS497/FS499

**SONY**<sup>®</sup>

## SERVICE MANUAL

*US Model  
Canadian Model*

*WM-FS497/FS499*

*AEP Model*

*E Model*

*WM-FS497*

## SUPPLEMENT-1

File this supplement with the Service Manual.

Subject : Central and South America  
model added. (WM-FS497 only)

- WM-FS497 central and south America model is similar to the earlier WM-FS497. (US model)
- Refer to WM-FS497/FS499 SERVICE MANUAL (9-923-196-11) for information not contained in this SERVICE MANUAL.

### Exploded Views

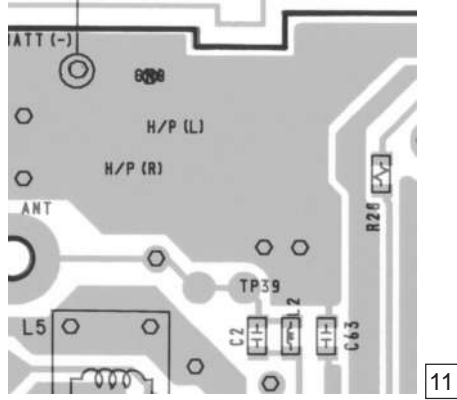
Page	WM-FS497 Central and South America model		
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
28	64	A-3016-974-A	MAIN BOARD, COMPLETE

### ELECTRICAL PARTS LIST

Page	WM-FS497 Central and South America model					
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			
31		A-3016-974-A	MAIN BOARD, COMPLETE			
	C40	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
	JC2	1-216-295-91	CONDUCTOR CHIP (2012)			
	Q2	8-729-421-26	TRANSISTOR	UN5216		
34	ACCESSORIES & PACKING MATERIALS					
		3-858-917-71	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE)			
		8-952-478-90	HEADPHONE MDR-E215/Y SET			

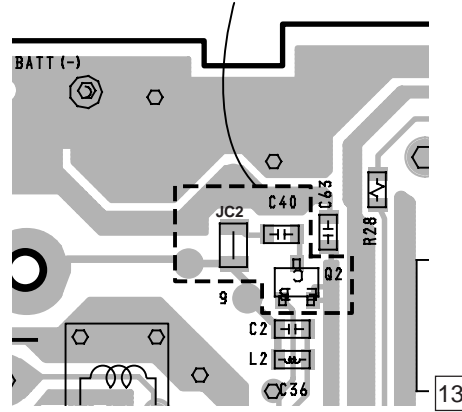
PRINTED WIRING BOARD — MAIN SECTION —

Page 17 (B-3)



WM-FS497 (US model)

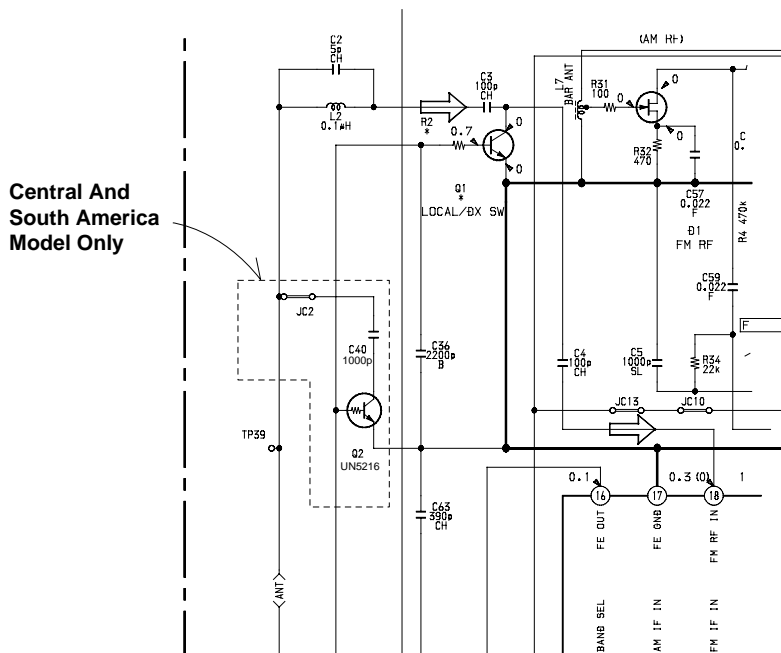
WM-FS497 Central and South America model only



WM-FS497 (Central and America model)

SCHEMATIC DIAGRAM

Page 14 (E-3)



# WM-FS497/FS499

**SONY**<sup>®</sup>

## SERVICE MANUAL

Ver 1.0 1998.07

*US Model  
Canadian Model*

*WM-FS497/FS499*

*AEP Model*

*E Model*

*WM-FS497*

## SUPPLEMENT-2

File this supplement with the Service Manual.

**Subject : CHANGE OF MOTOR**

(ENG-98005)

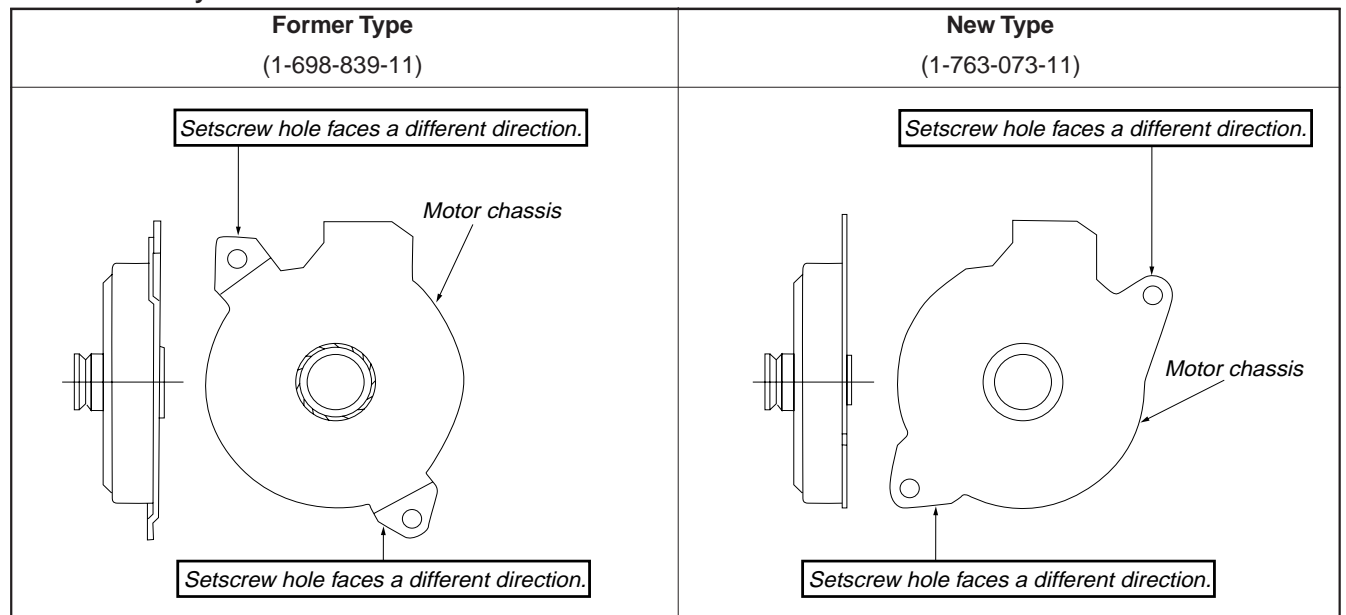
### CHANGE OF MOTOR

A new motor has been issued for this equipment.

However, the maintenance deck and the outer cabinet are not compatible with this new motor and must also be replaced the same product when you replace the motor.

You can identify these different sets by the shape of the motor.

#### ● How to identify the Motor



● **EXPLODED VIEWS** (Service Manual See page 29, 34 )

**DIFFERENT PARTS LIST**

➤ : Indicates different portion

Former Type					New Type		
Page	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
	M901	1-698-839-11	MOTOR		1-763-073-11	MOTOR	
29,34							

**CHANGED PARTS LIST**

Before change					After change		
Page	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
29	111	3-920-992-01	SPRING (STOP)		3-015-436-01	SPRING (STOP)	
	115	X-3369-752-1	CLUTCH ASSY		X-3375-837-1	CLUTCH ASSY	
	124	3-921-022-01	LEVER (B), DETECTION		3-929-419-01	LEVER (BR), DETECTION	

# WM-FS497/FS499

**SONY**<sup>®</sup>

## SERVICE MANUAL

Ver. 1.0 1998. 10

*US Model  
Canadian Model*

*WM-FS497/FS499*

*AEP Model*

*E Model*

*WM-FS497*

## SUPPLEMENT-3

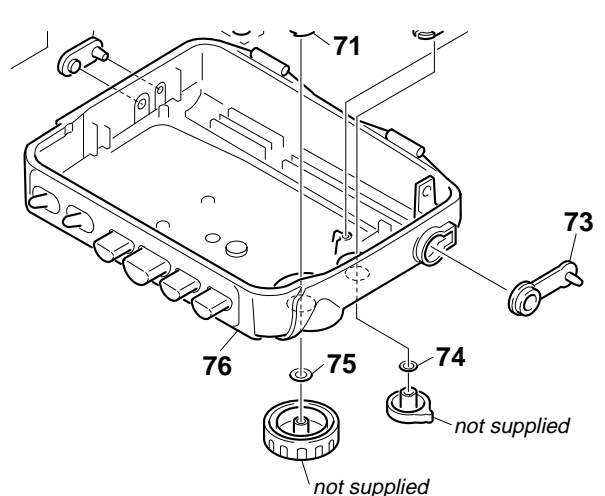
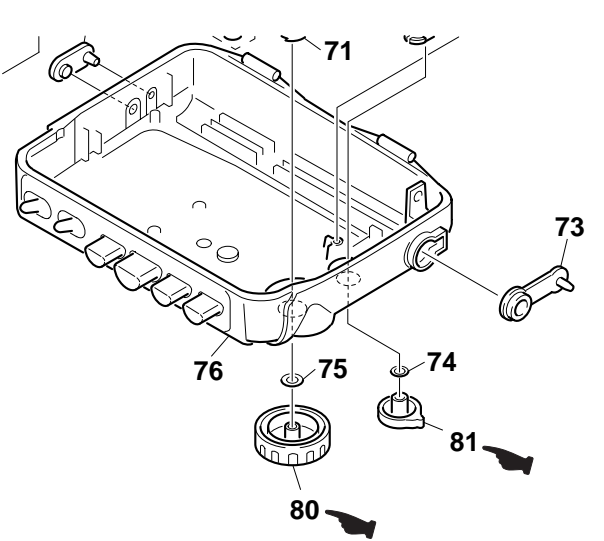
File this supplement with the Service Manual.

**Subject :**

- Black color added. (FS499: US model)
- Correction

Page	Before Change			After Change	
	Ref. No.	Part No.	Description	Part No.	Description
27	1	A-3010-514-A	CABINET (REAR) ASSY (FS499:US)	A-3010-514-A	CABINET (REAR) ASSY (YELLOW) (FS499:US)
	1	A-3010-518-A	CABINET (REAR) ASSY (FS497:US,CND,E)	A-3010-518-A	CABINET (REAR) ASSY (YELLOW) (FS497:US,CND,E)
	1	A-3010-521-A	CABINET (REAR) ASSY (FS497:AEP,IT)	A-3010-521-A	CABINET (REAR) ASSY (YELLOW) (FS497:AEP,IT)
	1	A-3010-522-A	CABINET (REAR) ASSY (FS497:E1)	A-3010-522-A	CABINET (REAR) ASSY (YELLOW) (FS497:E1)
	1	A-3050-373-A	CABINET (REAR) ASSY (FS499:CND)	A-3050-373-A	CABINET (REAR) ASSY (BLACK) (FS499)
	* 12	3-012-983-11	ESCUTCHEON (LCD) (FS497:E,E1)	3-012-983-11	ESCUTCHEON (LCD) (YELLOW) (FS497)
	* 12	3-012-983-11	ESCUTCHEON (LCD) (FS497:US,CND,AEP,IT)		
	* 12	3-012-983-01	ESCUTCHEON (LCD) (FS499:US)	3-012-983-01	ESCUTCHEON (LCD) (YELLOW) (FS499:US)
	* 12	3-012-983-21	ESCUTCHEON (LCD) (FS499:CND)	3-012-983-21	ESCUTCHEON (LCD) (BLACK) (FS499)
	14	3-922-849-11	PACKING, CABINET (FS497,FS499:US)	3-922-849-11	PACKING, CABINET (YELLOW) (FS497,FS499:US)
	14	3-922-849-21	PACKING, CABINET (FS499:CND)	3-922-849-21	PACKING, CABINET (BLACK) (FS499)
	15	X-3373-626-1	HOLDER (CASSETTE) SUB ASSY (FS499:US)	X-3374-394-1	HOLDER (CASSETTE) ASSY (YELLOW) (FS499:US)
	15	X-3373-771-1	HOLDER (CASSETTE) SUB ASSY (FS497)	X-3374-453-1	HOLDER (CASSETTE) ASSY (FS497)
	15	X-3373-886-1	HOLDER (CASSETTE) SUB ASSY (FS499:CND)	X-3374-396-1	HOLDER (CASSETTE) ASSY (BLACK) (FS499)
28	76	X-3373-511-1	CABINET (REAR) SUB ASSY (FS497:E1)	X-3374-401-1	CABINET ASSY REAR (YELLOW) (FS497:E1)
	76	X-3373-627-1	CABINET (REAR) SUB ASSY (FS499:US)	X-3374-395-1	CABINET ASSY REAR (YELLOW) (FS499:US)
	76	X-3373-629-1	CABINET (REAR) SUB ASSY (FS497:AEP,IT)	X-3374-400-1	CABINET ASSY REAR (YELLOW) (FS497:AEP,IT)
	76	X-3373-630-1	CABINET (REAR) SUB ASSY (FS497:US,CND,E)	X-3374-454-1	CABINET ASSY REAR (YELLOW) (FS497:US,CND,E)
	76	X-3373-887-1	CABINET (REAR) SUB ASSY (FS499:CND)	X-3374-397-1	CABINET ASSY REAR (BLACK) (FS499)

 : indicates corrected portion.

Page	Before Change	After Change																									
28	 <p>71</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>not supplied</p> <p>not supplied</p> <table border="1" data-bbox="159 851 574 1008"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>80</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>80</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>81</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>81</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	80	-----	-----	80	-----	-----	81	-----	-----	81	-----	-----	 <p>71</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>80</p> <p>81</p> <table border="1" data-bbox="798 851 1404 1008"> <thead> <tr> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3-008-990-01</td> <td>KNOB (VOL) (YELLOW) (FS497, FS499:US)</td> </tr> <tr> <td>3-008-990-11</td> <td>KNOB (VOL) (BLACK) (FS499)</td> </tr> <tr> <td>3-008-991-01</td> <td>KNOB (AVLS) (YELLOW) (FS497, FS499:US)</td> </tr> <tr> <td>3-008-991-11</td> <td>KNOB (AVLS) (BLACK) (FS499)</td> </tr> </tbody> </table>	Part No.	Description	3-008-990-01	KNOB (VOL) (YELLOW) (FS497, FS499:US)	3-008-990-11	KNOB (VOL) (BLACK) (FS499)	3-008-991-01	KNOB (AVLS) (YELLOW) (FS497, FS499:US)	3-008-991-11	KNOB (AVLS) (BLACK) (FS499)
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