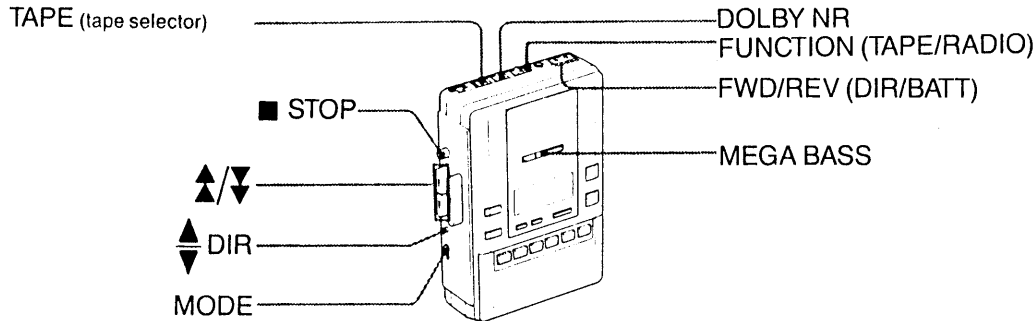


WM-AF65/BF65

SERVICE MANUAL REVISED (WM-AF65)

US Model
Canadian Model
WM-AF65

AEP Model
UK Model
E Model
WM-BF65



SPECIFICATIONS

Radio section

Frequency range FM: 87.5—108 MHz
AM: 531—1,602 kHz (9 kHz step)
530—1,610 kHz (10 kHz step)
Antenna FM: Headphone cord antenna
AM: Built-in ferrite bar antenna

Tape player section

Frequency response (Dolby NR off)
40—14,000 Hz (Normal)
40—16,000 Hz (CrO₂/METAL)
Power Output 5 mW + 5 mW 16Ω at DC operation
Output headphones (stereo minijack): load impedance 8—200Ω
Power requirements 3 V DC
Two R6 (size AA) batteries
DC IN 3 V jack accepts:
Optional Sony EBP-500B battery case for use with size R20 (D) batteries
Optional Sony AC-D2M AC power adaptor available in Canada for use on 120 V AC, 60 Hz available in the United Kingdom for use on 240 V AC, 50 Hz available in European countries for use on 220 V AC, 50 Hz available in other countries for use on 120 V AC, 60 Hz or 220 V AC, 50 Hz
Optional Sony DCC-70 car battery cord for use with 12 V car battery
Battery life Approx. 9 hours on tape playback and approx. 36 hours on FM reception, using Sony alkaline batteries AM3 (N)
Dimensions Approx. 85.7 × 121.5 × 37.4 mm (w/h/d)
(3¹/₂ × 4⁵/₄ × 1¹/₂ inches)
incl. projecting parts and controls
Weight Approx. 285 g (10.1 oz)
incl. batteries
Accessories supplied Belt clip (1)
For WM-AF65 Stereo headphones (open-air type, 1)
For WM-BF65 European and UK model: Stereo headphones (open-air type, 1)
other model: Stereo earphones (open-air type, 1)

Model Name Using Similar Mechanism	WM-AF55
Tape Transport Mechanism Type	WM-AF65MDT

Ear adaptors are attached on the stereo earphones. If the earphones do not fit your ears, detach the ear adaptors.

Note on stereo earphones
Put the cord behind your neck.
The knot cannot be moved.

Design and specification subject to change without notice.

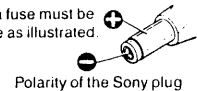
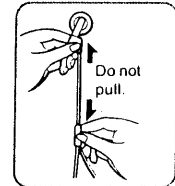
Note

This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.


Optional Accessories

AC power adaptor AC-D2M Battery case EBP-500B Car battery cord DCC-70
Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information about the optional accessories available in your country.

Note: If a car battery cord not manufactured by Sony is used, a fuse must be installed in the battery cord and the polarity of the plug must be as illustrated.



Polarity of the Sony plug

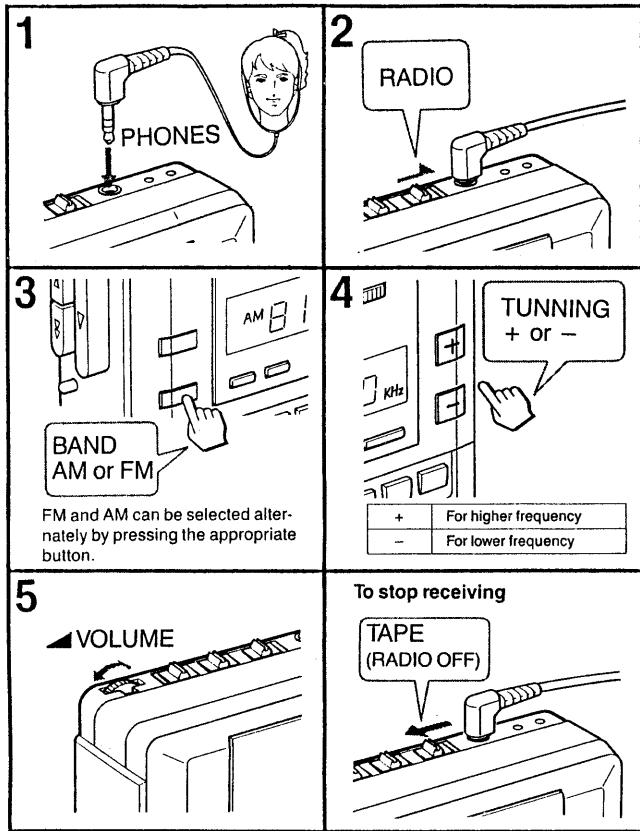
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.



RADIO CASSETTE PLAYER
SONY®

SECTION 1 GENERAL

1-1. RADIO RECEPTION



On operation

- When you press the + or - button for more than half a second, the automatic tuning begins, and then stops automatically when a station is received.
- To stop automatic tuning, press the + or - button again.
- When scanning reaches the end of the band during automatic tuning, it will return to the other side of the band and continue to scan.
- The STEREO indicator appears on the display when receiving a stereo broadcast on the band.

Notes

- The automatic tuning function may occasionally miss the best setting for a radio station. In this happens, press the + or - button to adjust the tuning.
- You should remove the cassette tape if it has a metallic cassette shell or labels. Such cassettes may cause interference or difficulty in tuning.

To Improve Receiving Condition

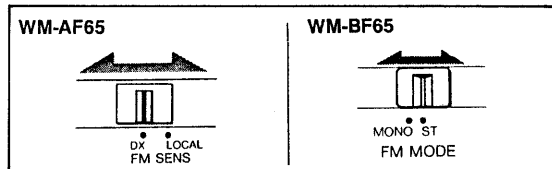
FM	Since the headphone or earphone cord serves as an FM antenna, extend it for better reception.
AM	Since the reception is affected by the direction of the unit, rotate the unit horizontally for optimum reception.

To Improve FM Sensitivity

Use the FM SENS or FM MODE selector.

For WM-AF65	Normally set to DX. If a very strong station signal causes noise, set to LOCAL. The noise will be reduced.
For WM-BF65	Normally set to FM ST. When it is hard to hear the broadcast due to noise, set to MONO. The reception will be more stable and noise will be reduced. In this mode, there is no stereo effect.

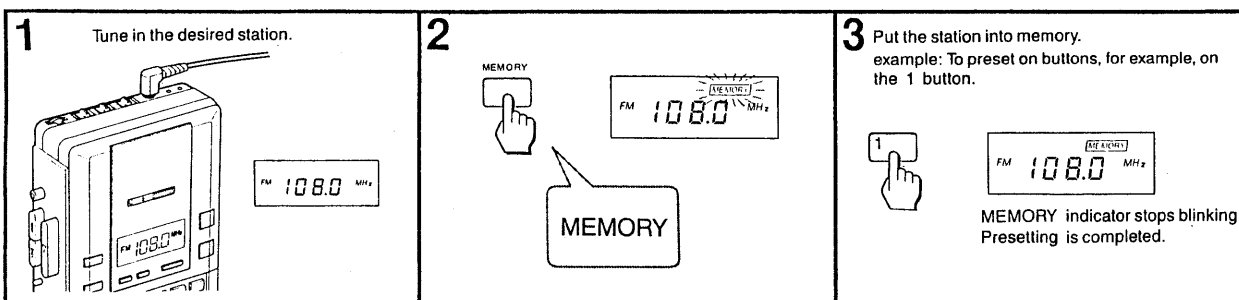
To Improve FM Sensitivity



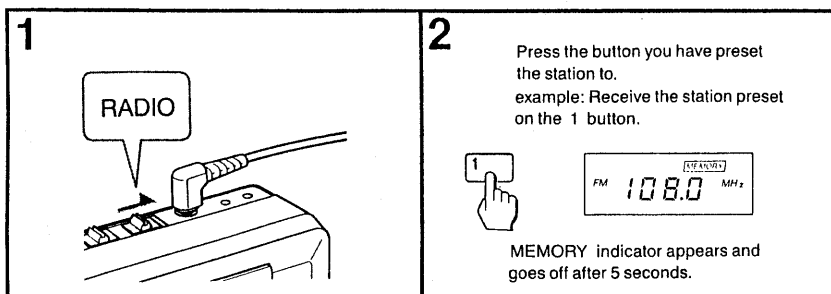
1-2. PRESET TUNING

You can preset up to 10 AM and FM stations.
Preset a station while the MEMORY indicator blinks for 10 seconds.

Presetting the Stations



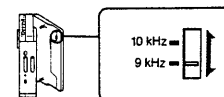
Receiving the Preset Stations



On operation

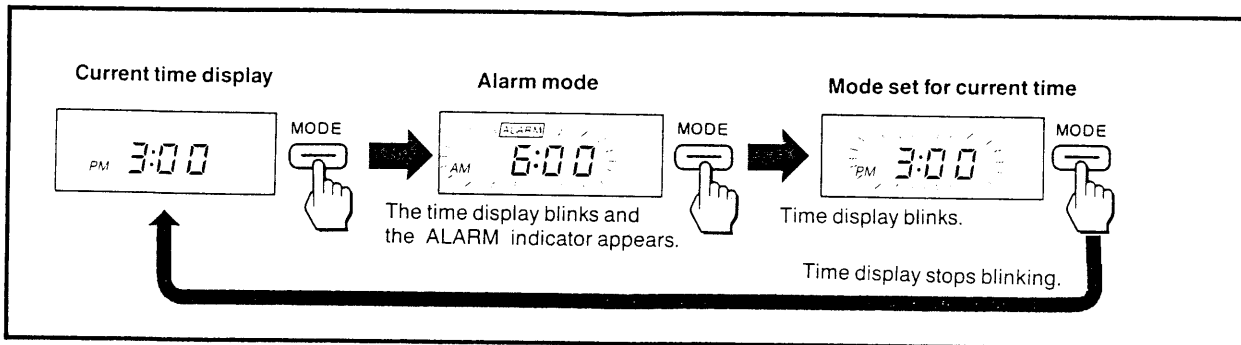
- To stop the presetting operation just after pressing the MEMORY button, press the button again. The MEMORY indicator goes off.
- To preset or to receive the station on buttons from six to ten, press the +5 button before pressing the buttons from one to five. The +5 indicator appears on the display and goes off after 5 seconds together with MEMORY indicator.

Changing the AM Tuning Interval and Initialization



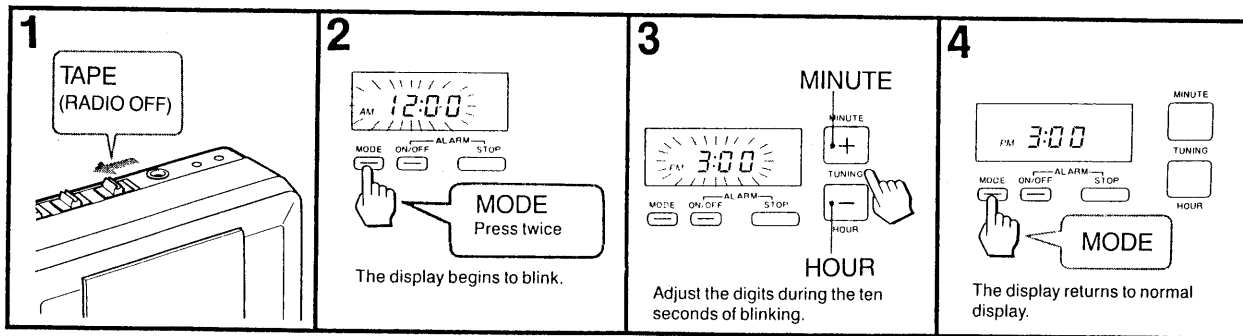
1-3. CLOCK OPERATION

How to Use MODE button



The alarm mode and the mode set for current time will automatically return to the current time display after about 10 seconds.

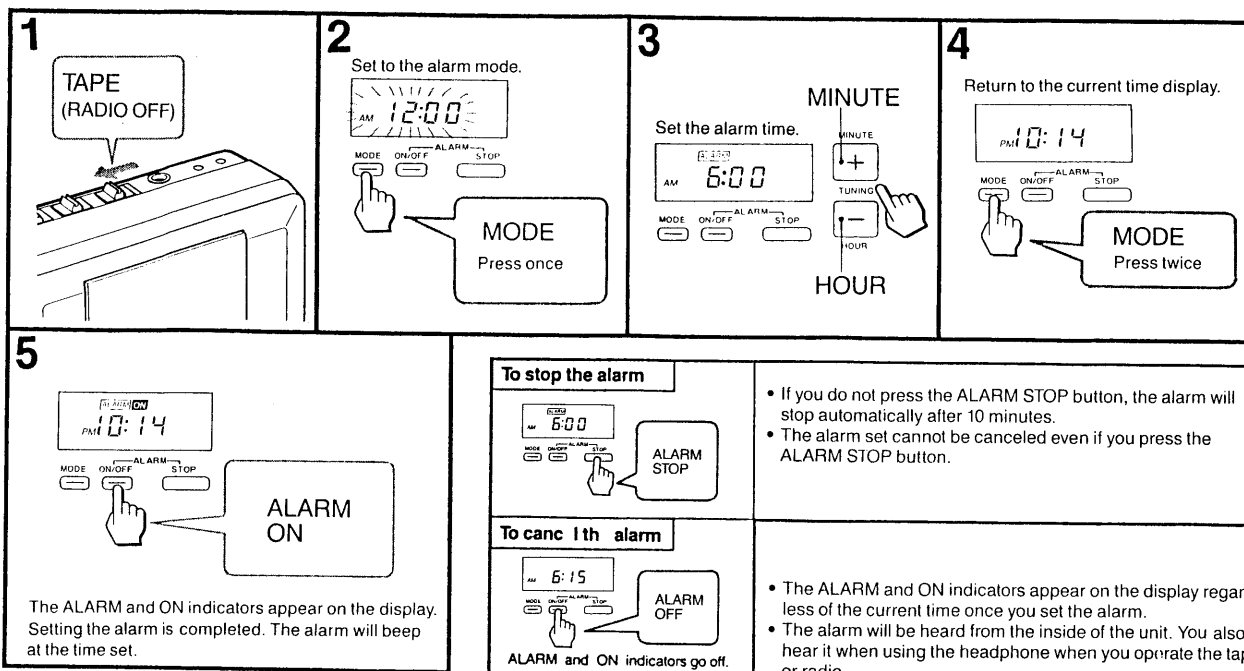
Setting the Current Time



- If you keep pressing the HOUR and MINUTE buttons, the digits advance in sequence.
- The hour display does not advance even if the minute display returns to "00" after "59".

- The hour display is on a 12-hour cycle.
- Replace the batteries within 10 minutes, or the time you set will be canceled.

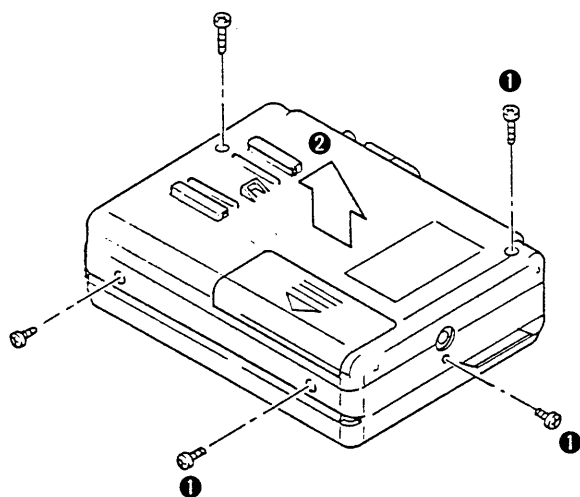
Setting the Alarm



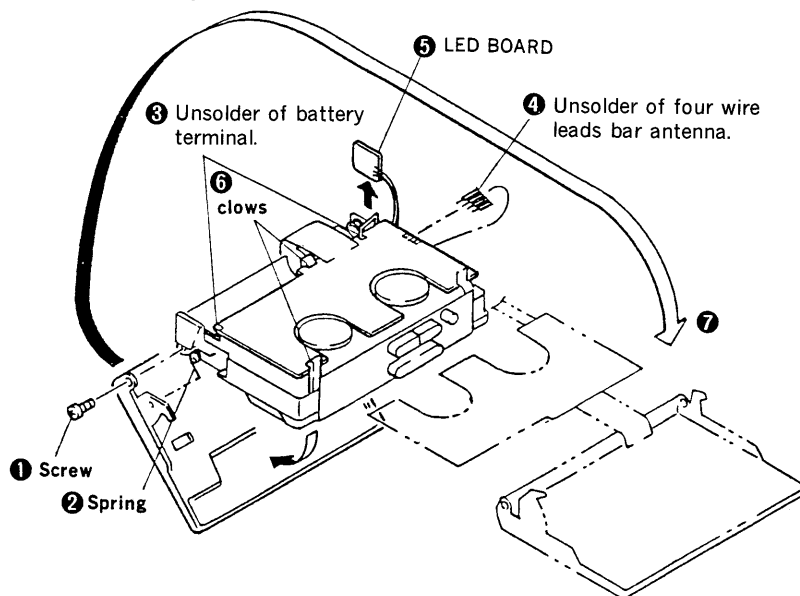
SECTION 2 DISASSEMBLY

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

Cabinet



How to open the board



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

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

playback head	pinch roller
capstan	rubber belts
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 (2.5V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	22 – 55 g·cm (0.30 – 0.76 oz·inch)
FWD Back Tension		less than 3 g·cm (less than 0.04 oz·inch)
REV	CQ-102RB	22 – 55 g·cm (0.30 – 0.76 oz·inch)
REV Back Tension		less than 3 g·cm (less than 0.04 oz·inch)
FF, REW	CQ-201B	more than 60 g·cm (more than 0.83 oz·inch)

Tape Tension Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	more than 55 g·cm (more than 0.76 oz·inch)
REV	CQ-403R	

SECTION 4 ELECTRICAL ADJUSTMENTS

CASSETTE SECTION

Playback Head Azimuth Check

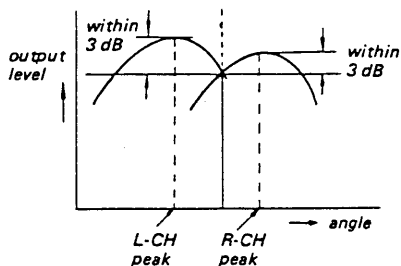
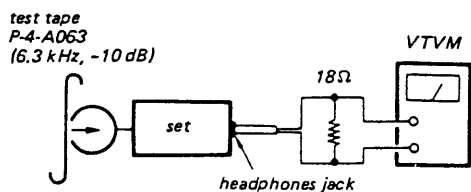
Perform this check both in FWD and REV mode.

Note: This set is not featured the head azimuth adjustment.

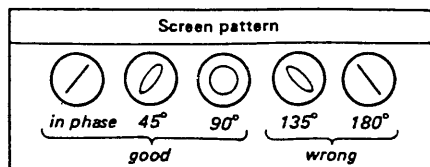
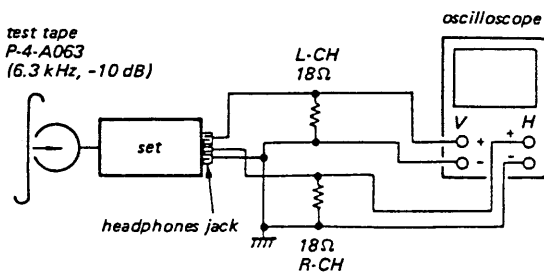
When replacing the head, check the both L-ch and R-ch output levels and also those phases.

Procedure:

1. Level Check
Mode: playback



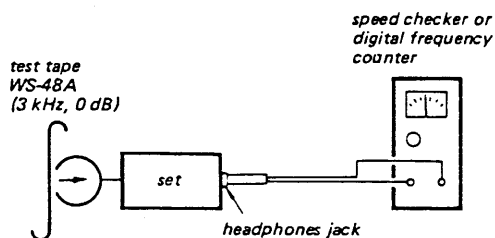
2. Phase Check
Mode: playback



Tape Speed Adjustment

Procedure:

Mode: playback

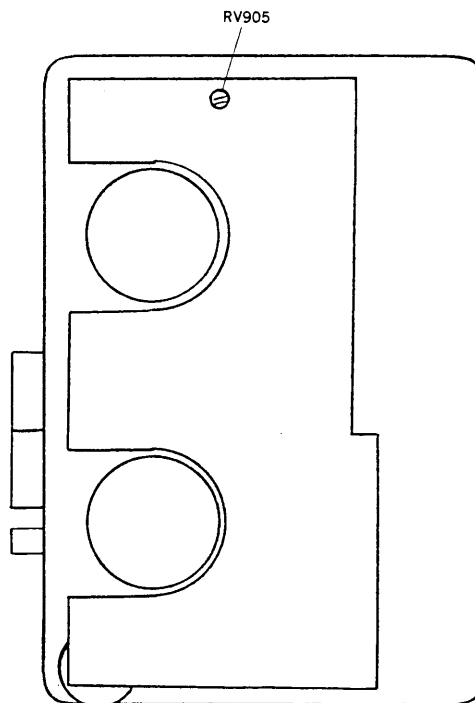


Specification:

speed checker	digital frequency counter
±1%	2,970 - 3,030 Hz

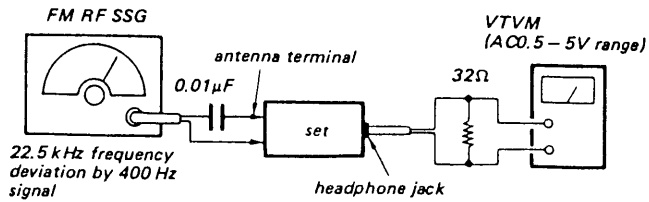
Frequency difference between the beginning and the end of the tape should be within ±2.5% (±75 Hz).

Adjustment Location:



RADIO SECTION

• FM SECTION



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

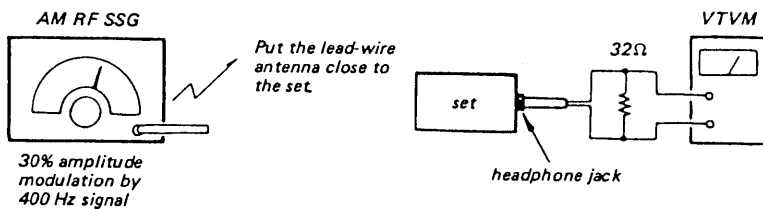
FM IF Alignment

SG and set frequency	Adjustment part	Reading on VTVM
10.7MHz	T101	maximum

FM Tracking Adjustment

SG and set frequency	Adjustment part	Reading on VTVM
90.0MHz	L001	maximum
106.0MHz	C003	

• AM SECTION



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

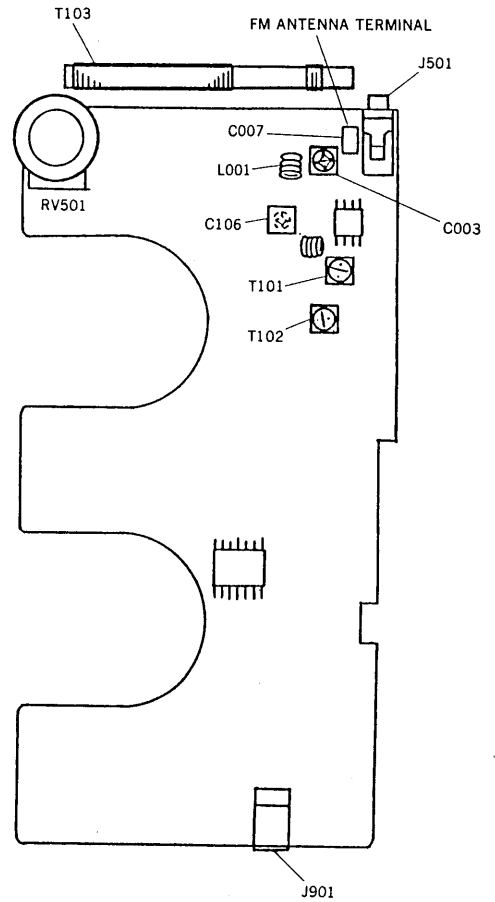
MW IF Alignment

SG and set frequency	Adjustment part	Reading on VTVM
450 kHz (SG)	T102	maximum

MW Tracking Adjustment

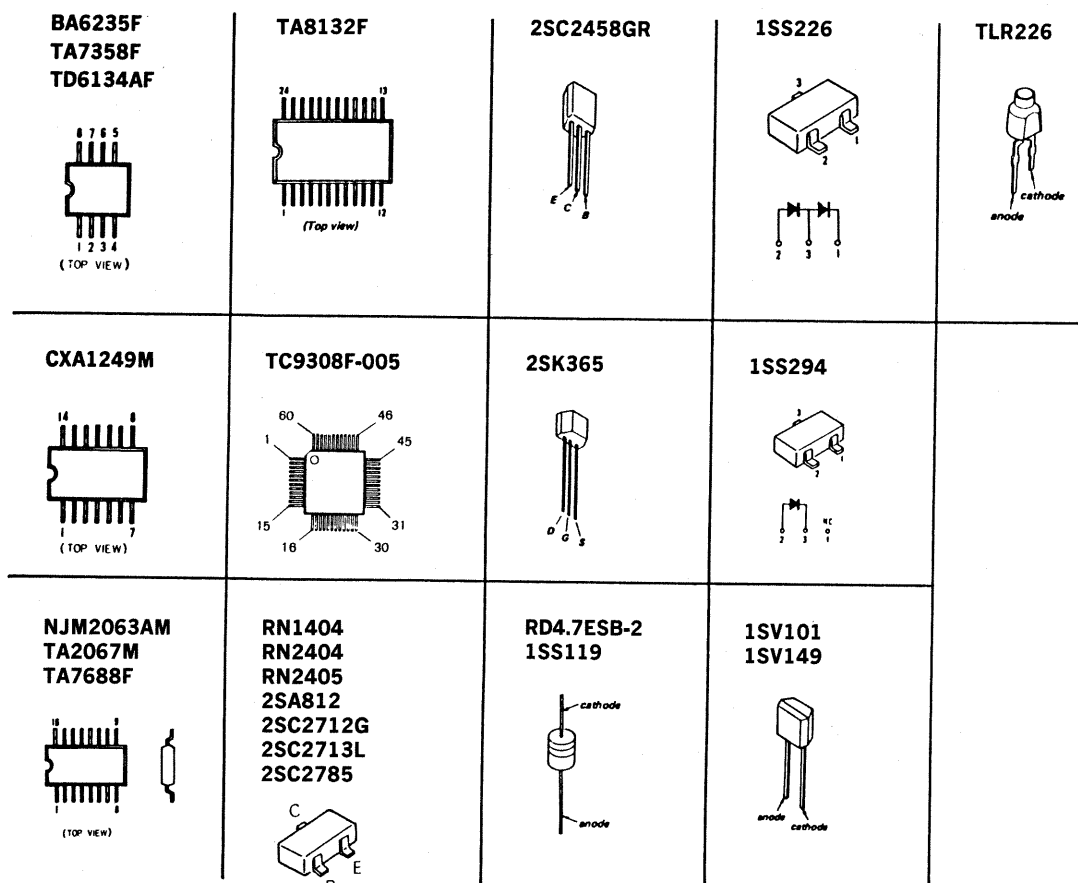
SG and set frequency	Adjustment part	Reading on VTVM
600 kHz	T103	maximum
1,400 kHz	C106	

Adjustment Location: MAIN BOARD



SECTION 5
DIAGRAMS

5-1. SEMICONDUCTOR LEAD LAYOUTS



Semiconductor Location

Ref.No.	Location
D001	C-13
D002	C-13
D101	C-14
D102	D-13
D301	B-10
D302	B-11
D401	E-16
D921	J-14
D922	J-13
D923	I-13
IC001	C-24
IC101	E-13
IC301	C-22
IC401	G-14
IC501	J-22
IC601	H-23
IC701	C-5
IC702	B-4
IC901	J-21
Q103	F-16
Q104	F-15
Q201	F-13
Q402	F-16
Q602	I-14
Q703	B-3
Q704	C-3
Q705	B-5
Q706	B-4
Q921	J-13
Q922	J-13
Q923	J-13

Note:
 All capacitors are in μF unless otherwise noted. pF : μF
 50WV or less are not indicated except for electrolytics
 and tantalums.
 All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise
 specified.
 Δ : internal component.
B+: B+ Line
 \square : adjustment for repair.
 • Total current measured with no cassette installed.
 • Power voltage is dc 3 V and fed with regulated dc power
 supply from external power voltage jack.
 Voltage and waveforms are dc with respect to ground in
 playback mode.
 no mark: TAPE PB
 () : FM
 < > : AM
 Voltages are taken with a VOM (input impedance 10M Ω)
 Voltage variations may be noted due to normal produc-
 tion tolerances.
 Signal path.
 \square : FM
 \square : PB

Switches:

Ref.No.	Switch	Position
S001-1	FM SENS/FM MODE	LOCAL/ST
S001-2	DOLBY NR	ON
S301	TAPE	NORM
S302	DIR	FWD
S701	MEGA BASS	NORM
S702	AM STEP FREQ	9kHz
S703	KEY BOARD SWITCH	OFF
S716		OFF
S901	FUNCTION	TAPE
S902	TC POWER	OFF

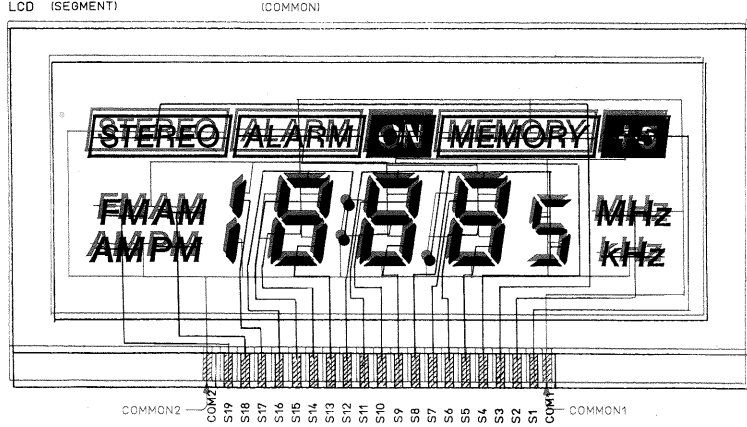
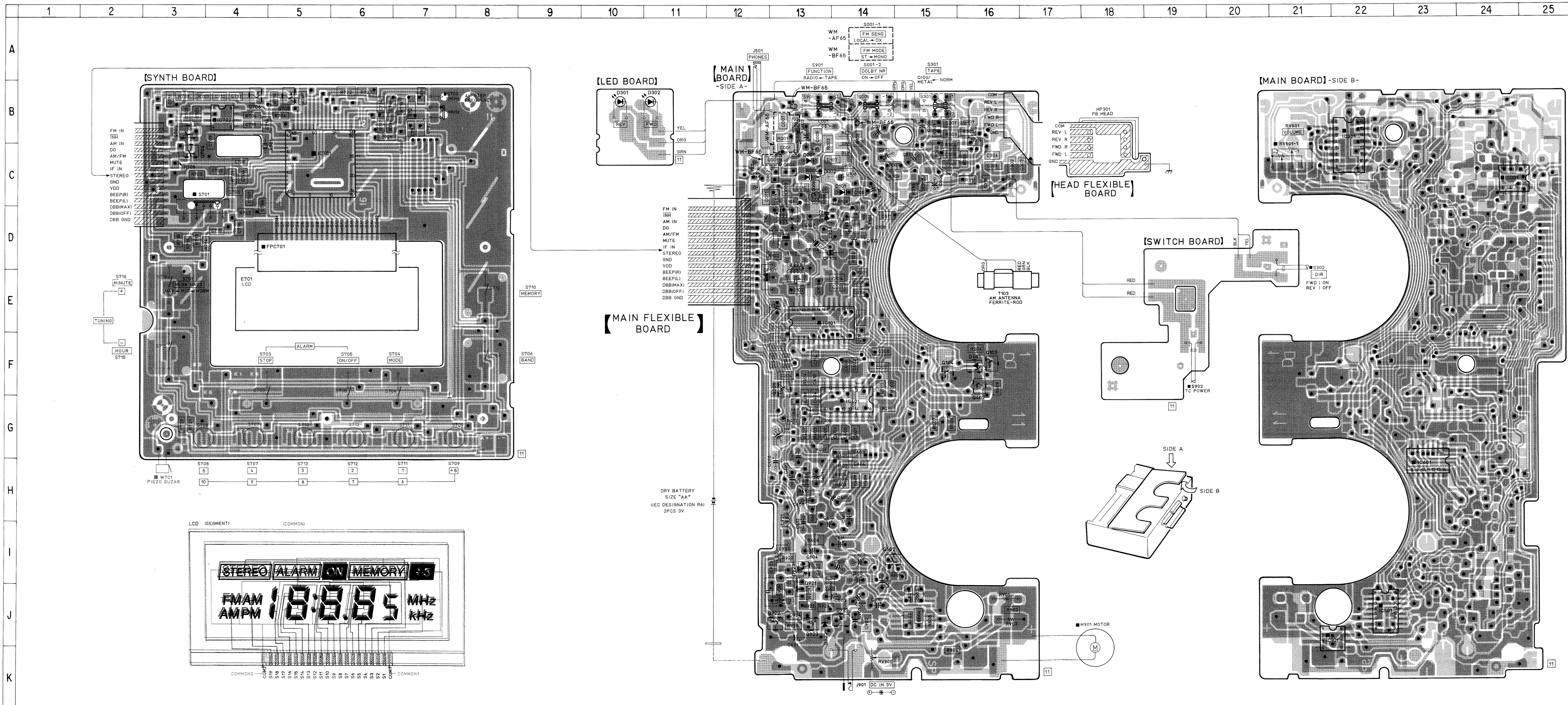
Note:
 • : parts extracted from the conductor side.
 ■ : parts mounted on the conductor side.
 \square : indicates side identified with part number.
 : Through hole.
 \square : Pattern on the side which is seen.
 \square : Pattern of the rear side.

SEE ADDITIONAL
SEE INFORMATION

SEE ADDITIONAL
SEE INFORMATION

SEE ADDITIONAL
SEE INFORMATION

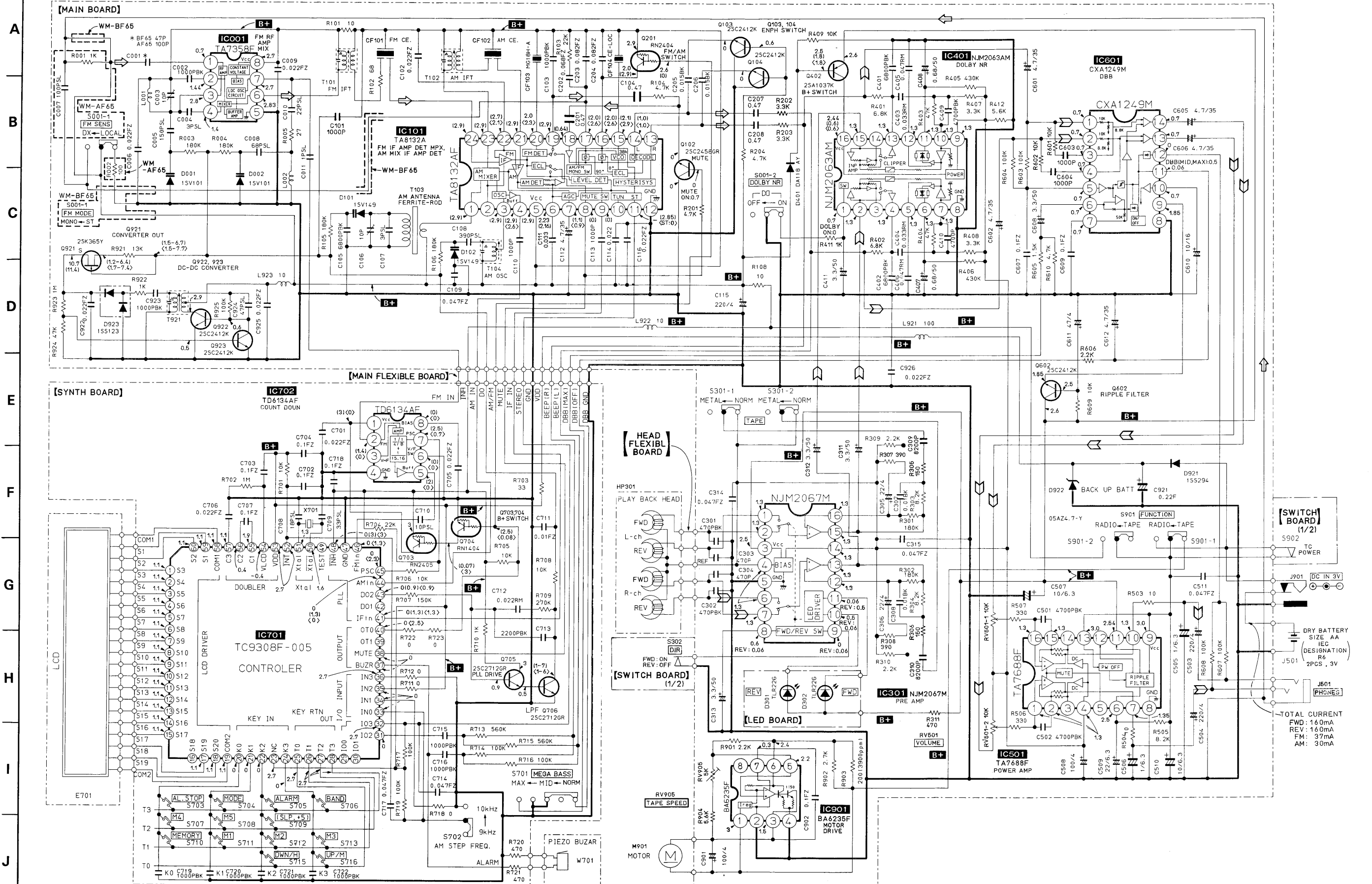
5-2. PRINTED WIRING BOARDS



SEE ADDITIONAL INFORMATION

SEE ADDITIONAL INFORMATION

1 2 3 6 7 8 9 10 11 12 14 15



SECTION 6 EXPLODED VIEWS

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

The construction parts of an assembled part are indicated with a collation number in the remark column.

Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

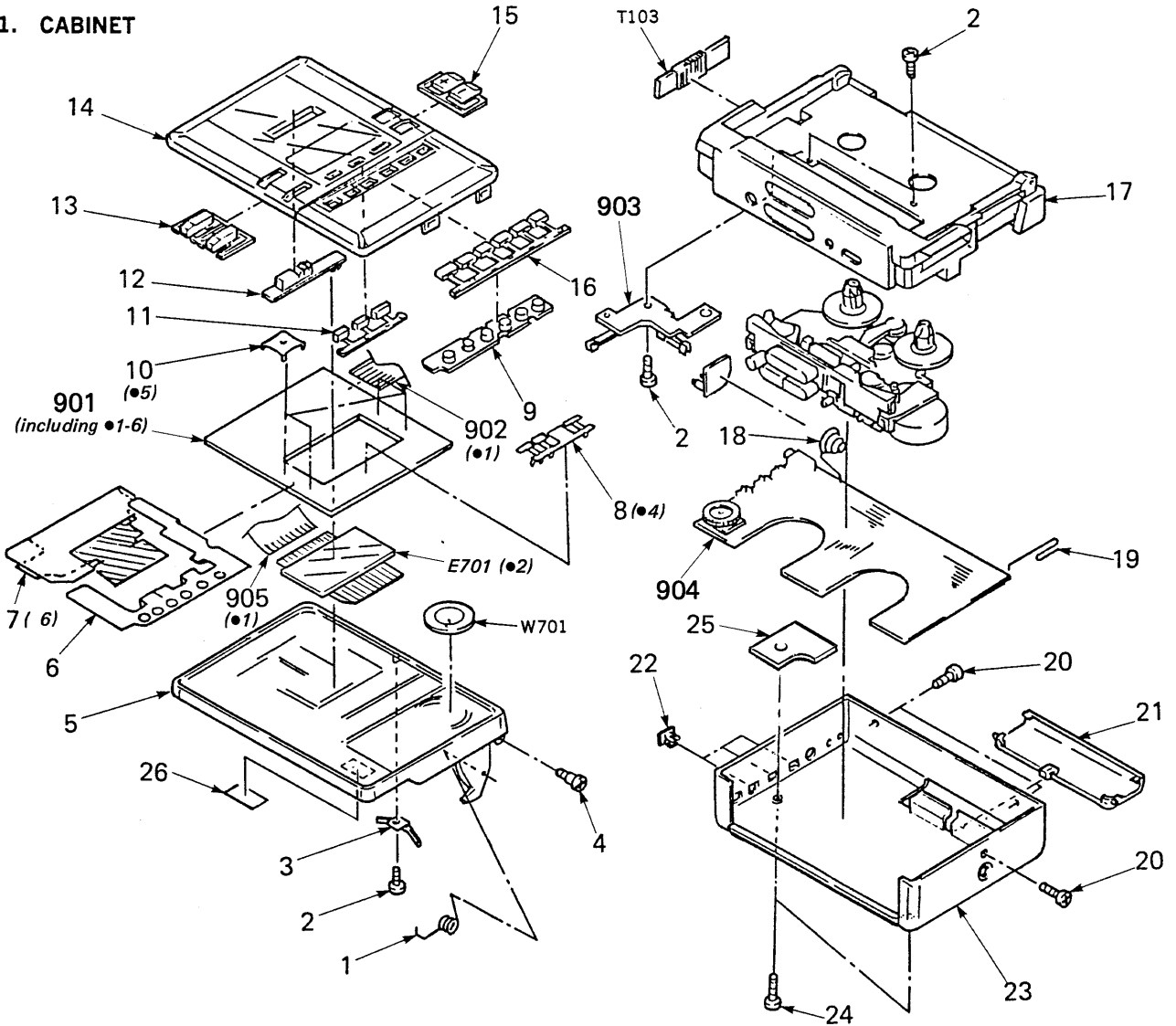
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
- ↑

Cabinet's Color

↑

Parts' Color

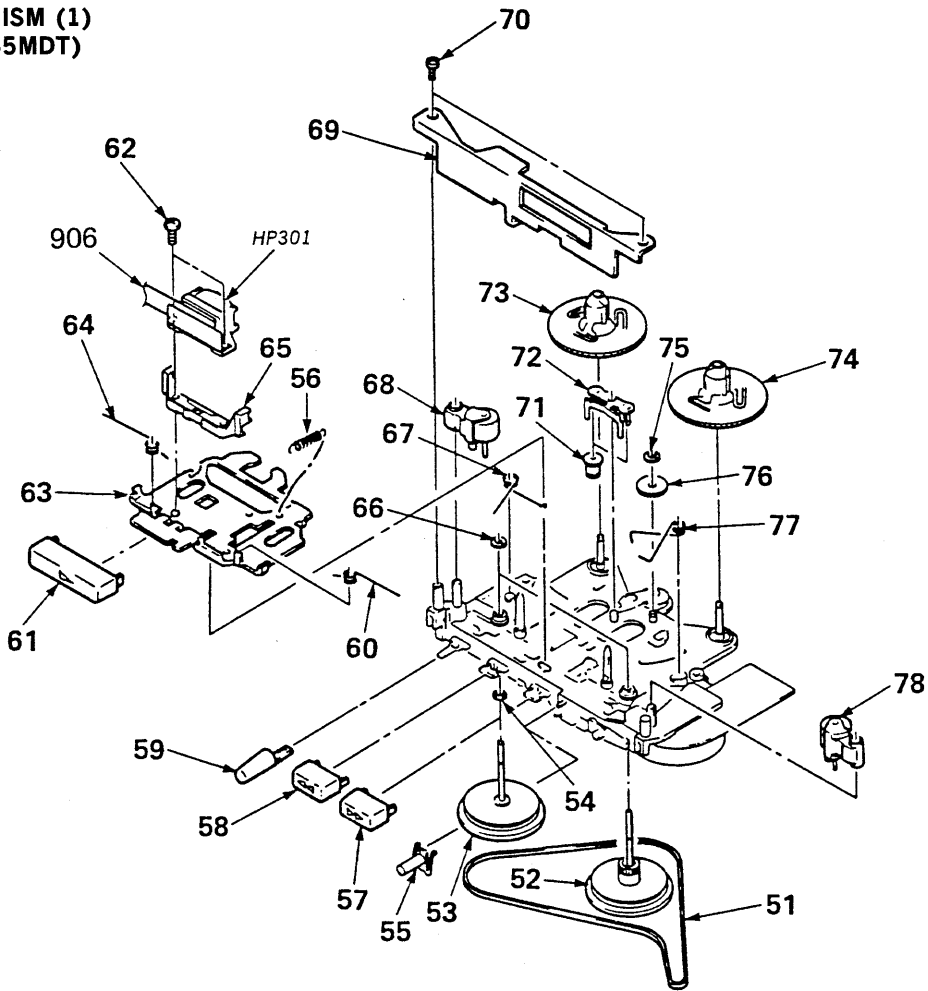
6-1. CABINET



Ref.No	Part No.	Description	Remarks
1	3-394-915-01	SPRING, TORSION	
2	3-394-921-01	SCREW, TAPPING, + HOLE	
3	3-394-922-01	SPRING	
4	3-394-912-01	SCREW, TAPPING, STEP	
5	3-394-942-01	CABINET (FRONT)	
6	3-394-923-01	SHEET, GROUND	
7	3-394-932-01	SHEET, SHIELD	
8	3-394-930-01	CONTACT, SPRING	
9	3-394-928-01	SWITCH, RUBBER	
10	3-394-931-01	SPRING	
11	3-394-926-01	BUTTON, ALARM	
12	3-394-927-01	KNOB, DDB	
13	3-394-934-01	BUTTON, BAND	
14	3-394-929-01	PANEL ASSY, FRONT	
15	3-394-935-01	BUTTON, TUNING	
16	3-394-936-01	BUTTON, CHANNEL	
17	3-394-941-01	(WM-AF65)....CABINET (CENTER)	
	3-352-764-01	(WM-BF65)....CABINET (CENTER)	
18	3-394-914-01	SPRING	

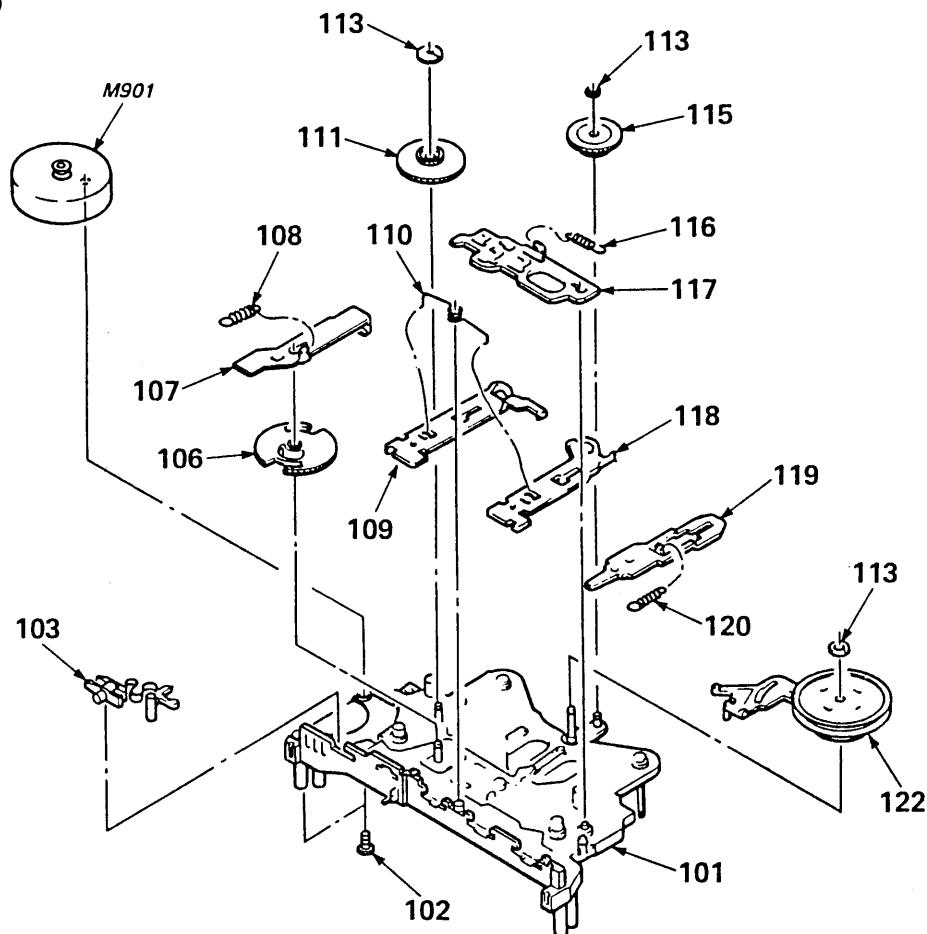
Ref.No	Part No.	Description	Remarks
19	3-394-913-01	TERMINAL (PLUS), POWER	
20	3-394-924-01	SCREW, TAPPING, + HOLE	
21	3-394-933-01	LID, BATTERY CASE	
22	3-394-916-01	KNOB, SLIDE SWITCH	
23	3-394-940-01	(WM-AF65)....CABINET (BACK)	
	3-352-765-01	(WM-BF65)....CABINET (BACK)	
24	3-394-925-01	SCREW, TAPPING, + HOLE 1.7X4	
25	3-352-773-01	LABEL, PC PLATE SERVICE	
26	3-352-772-01	LABEL, SERIAL NO	
901	1-589-167-11	PCB ASSY, SYNTHESIZER	
902	1-630-716-11	PC BOARD, MAIN FLEXIBLE	
903	1-630-965-11	PC BOARD, SWITCH	
904	1-589-168-11	(WM-AF65)....PCB ASSY, MAIN	
	1-589-168-21	(WM-BF65)....PCB ASSY, MAIN	
905	1-568-556-11	CONNECTOR LCD FLEXIBLE	
E701	1-808-748-11	LCD	
T103	1-402-436-11	ANTENNA, FERRITE-ROD	
W701	1-529-076-11	BUZZER	

6-2. MECHANISM (1)
(WM-AF65MDT)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	3-341-267-01	BELT, CAPSTAN		66	3-321-483-11	RING, RETAINING	
52	X-3335-635-1	FLYWHEEL (T) ASSY		67	3-341-270-01	SPRING (R)	
53	X-3335-636-1	FLYWHEEL ASSY		68	X-3335-624-1	PINCH LEVER (R) ASSY	
54	3-701-437-11	WASHER (242T), TEFLON		69	3-341-762-01	HOLDER, S	
55	3-341-294-01	BUTTON (DIR)		70	3-893-942-21	SCREW (1.7 X 5), TAPPING (B)	
56	3-341-271-01	SPRING, TENSION		71	3-341-275-01	GEAR, FR	
57	3-394-918-01	BUTTON (F)		72	3-341-701-01	LEVER, FR	
58	3-394-919-01	BUTTON (R)		73	3-341-291-01	GEAR, S REEL	
59	3-394-920-01	BUTTON (STOP)		74	3-341-290-01	GEAR, T REEL	
60	3-341-276-11	SPRING (N)		75	3-341-752-01	WASHER, POLYETHYLENE (t=0.13)	
61	3-394-917-01	BUTTON (P)			3-341-752-11	WASHER, POLYETHYLENE (t=0.25)	
62	3-704-252-21	SCREW (M1.4 X 3.8)		76	3-341-265-01	GEAR, R	
63	3-341-711-01	LEVER, PLAY		77	3-341-763-01	SPRING	
64	3-341-277-11	SPRING (R)		78	X-3335-623-1	PINCH LEVER (N) ASSY	
65	3-341-702-01	GUIDE, TAPE		HP301	1-543-523-11	HEAD, MAGNETIC (PLAY BACK)	
				906	1-623-643-11	PC BOARD, HEAD FLEXIBLE	

6-3. MECHANISM (2)
(WM-AF65MDT)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	A-3163-146-A	CHASSIS ASSY		113	3-341-753-01	WASHER, POLYETHYLENE (t=0.13)	
102	3-335-797-31	SCREW (M 1.4 X 3), TOOTHED LOCK			3-341-753-11	WASHER, POLYETHYLENE (t=0.25)	
103	3-341-293-01	LEVER, MODE		115	3-341-266-01	GEAR, T	
106	3-341-292-01	GEAR, CAM		116	3-341-272-01	SPRING, TENSION	
107	3-341-299-01	LEVER, DIR		117	3-341-298-01	PLATE, LOCK	
108	3-341-274-01	SPRING (POWER TENSION), TENSION		118	3-341-296-01	LEVER, REW	
109	3-341-295-01	LEVER, FF		119	3-341-297-01	LEVER, STOP	
110	3-341-268-01	SPRING		120	3-341-273-01	SPRING, TENSION	
111	3-341-289-01	GEAR, DECELERATION		122	A-3239-894-A	WHEEL ASSY, MIDWAY	
				M901	X-3346-745-1	MOTOR BLOCK, ASSY	

SECTION 7 ELECTRICAL PARTS LIST

SEE ADDITIONAL
INFORMATION

NOTE:

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.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,UPC...: μ PC, UPD...: μ PD...

Ref.No	Part No.	Description	Ref.No	Part No.	Description			
901	1-589-167-11	PCB ASSY, SYNTHESIZER	C308	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
902	1-630-716-11	PC BOARD, MAIN FLEXIBLE	C309	1-163-020-00	CERAMIC CHIP	8200PF	10%	50V
903	1-630-965-11	PC BOARD, SWITCH	C310	1-163-020-00	CERAMIC CHIP	8200PF	10%	50V
904	1-589-168-11	(WM-AF65)....PCB ASSY, MAIN	C311	1-126-162-11	ELECT	3.3MF	20%	35V
	1-589-168-21	(WM-BF65)....PCB ASSY, MAIN	C312	1-126-162-11	ELECT	3.3MF	20%	35V
905	1-568-556-11	CONNECTOR LCD FLEXIBLE	C313	1-126-162-11	ELECT	3.3MF	20%	35V
906	1-623-643-11	PC BOARD, HEAD FLEXIBLE	C314	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
		CAPACITOR	C315	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C001	1-163-117-00	(WM-AF65).... CERAMIC CHIP	C401	1-163-019-00	CERAMIC CHIP	6800PF	10%	50V
			C402	1-163-019-00	CERAMIC CHIP	6800PF	10%	50V
C001	1-163-109-00	(WM-BF65).... CERAMIC CHIP	C403	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
			C404	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C002	1-163-141-00	CERAMIC CHIP	C405	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C003	1-141-405-11	CAP, ADJ	C406	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C004	1-163-086-00	CERAMIC CHIP	C407	1-123-902-11	ELECT	0.68MF	20%	50V
			C408	1-123-902-11	ELECT	0.68MF	20%	50V
C005	1-163-121-00	CERAMIC CHIP	C409	1-163-017-00	CERAMIC CHIP	4700PF	10%	50V
C006	1-163-037-11	CERAMIC CHIP	C410	1-163-017-00	CERAMIC CHIP	4700PF	10%	50V
C007	1-163-117-00	(WM-AF65).... CERAMIC CHIP	C411	1-126-162-11	ELECT	3.3MF	20%	35V
			C501	1-163-017-00	CERAMIC CHIP	4700PF	10%	50V
C008	1-163-113-00	CERAMIC CHIP	C502	1-163-017-00	CERAMIC CHIP	4700PF	10%	50V
C009	1-163-037-11	CERAMIC CHIP	C503	1-124-434-00	ELECT	220MF	20%	4V
			C504	1-124-434-00	ELECT	220MF	20%	4V
C010	1-163-101-00	CERAMIC CHIP	C505	1-131-347-00	TANTALUM	1MF	20%	25V
C011	1-163-083-00	CERAMIC CHIP	C506	1-131-347-00	TANTALUM	1MF	20%	25V
C101	1-163-141-00	CERAMIC CHIP	C507	1-131-383-11	ELECT	10MF	20%	6.3V
C102	1-163-037-11	CERAMIC CHIP	C508	1-126-177-11	ELECT	100MF	20%	6.3V
C103	1-163-141-00	CERAMIC CHIP	C509	1-124-598-11	ELECT	22MF	20%	25V
			C510	1-131-383-11	ELECT	10MF	20%	6.3V
C104	1-162-637-11	CERAMIC CHIP	C511	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C105	1-163-019-00	CERAMIC CHIP	C601	1-126-094-11	ELECT	4.7MF	20%	25V
C106	1-141-406-11	CAP, ADJ	C602	1-126-094-11	ELECT	4.7MF	20%	25V
C107	1-163-086-00	CERAMIC CHIP	C603	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V
C108	1-163-131-00	CERAMIC CHIP	C604	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V
			C605	1-126-094-11	ELECT	4.7MF	20%	25V
C109	1-163-809-11	CERAMIC CHIP	C606	1-126-094-11	ELECT	4.7MF	20%	25V
C110	1-163-141-00	CERAMIC CHIP	C607	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C111	1-163-989-11	CERAMIC CHIP	C608	1-126-162-11	ELECT	3.3MF	20%	35V
C112	1-126-094-11	ELECT	C609	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C113	1-163-141-00	CERAMIC CHIP	C610	1-131-383-11	ELECT	10MF	20%	6.3V
			C611	1-124-589-11	ELECT	47MF	20%	10V
C114	1-163-037-11	CERAMIC CHIP	C612	1-126-094-11	ELECT	4.7MF	20%	25V
C115	1-124-434-00	ELECT	C701	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C116	1-163-037-11	CERAMIC CHIP	C702	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C201	1-162-637-11	CERAMIC CHIP	C703	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C202	1-163-833-00	CERAMIC CHIP	C704	1-163-038-00	CERAMIC CHIP	0.1MF		25V
			C705	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C203	1-163-020-00	CERAMIC CHIP	C706	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C204	1-163-020-00	CERAMIC CHIP	C707	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C205	1-163-023-00	CERAMIC CHIP	C708	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C206	1-163-023-00	CERAMIC CHIP	C709	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C207	1-162-637-11	CERAMIC CHIP	C710	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
			C711	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C208	1-162-637-11	CERAMIC CHIP	C712	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C301	1-163-133-00	CERAMIC CHIP	C713	1-164-161-11	CERAMIC CHIP	2200PF	10%	50V
C302	1-163-133-00	CERAMIC CHIP						
C303	1-163-133-00	CERAMIC CHIP						
C304	1-163-133-00	CERAMIC CHIP						
C305	1-126-153-11	ELECT						
C306	1-126-153-11	ELECT						
C307	1-163-021-00	CERAMIC CHIP						

SEE ADDITIONAL
INFORMATION

Ref.No	Part No.	Description							
C714	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V				
C715	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C716	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C717	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V				
C718	1-163-038-00	CERAMIC CHIP	0.1MF		25V				
C719	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C720	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C721	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C722	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C901	1-126-177-11	ELECT	100MF	20%	6.3V				
C902	1-163-038-00	CERAMIC CHIP	0.1MF		25V				
C921	1-125-486-11	CAP DOUBLE LAYERS	0.22F		5.5V				
C922	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V				
C923	1-163-141-00	CERAMIC CHIP	1000PF	5%	50V				
C924	1-163-109-00	CERAMIC CHIP	47PF	5%	50V				
C925	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V				
C926	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V				
CF101	1-577-512-11	FILTER, CERAMIC							
CF102	1-577-513-11	FILTER, CERAMIC							
CF103	1-577-514-11	FILTER, CERAMIC							
CF104	1-577-091-11	FILTER, CERAMIC							
D001	8-719-800-09	DIODE 1SV101							
D002	8-719-800-09	DIODE 1SV101							
D101	8-719-800-50	DIODE 1SV149							
D102	8-719-800-50	DIODE 1SV149							
D301	8-719-212-26	DIODE TLR226							
D302	8-719-212-26	DIODE TLR226							
D401	8-719-911-19	DIODE 1SS119							
D921	8-719-820-61	DIODE 1SS294							
D922	8-719-109-81	DIODE RD4.TESB-2							
D923	8-719-800-76	DIODE 1SS226							
E701	1-808-748-11	LCD							
HP301	1-543-523-11	HEAD MAGNETIC (PLAYBACK)							
IC001	8-759-206-37	IC TA7358F							
IC101	8-759-234-29	IC TA8132F							
IC301	8-759-711-00	IC NJM2067M							
IC401	8-759-701-07	IC NJM2063AM							
IC501	8-759-200-95	IC TA7688F							
IC601	8-759-805-09	IC CXA1249M							
IC701	8-759-234-30	IC TC9308F-005BR							
IC702	8-759-234-27	IC TD6134AF							
IC901	8-759-939-70	IC BA6235F							
J501	1-563-857-11	JACK (PHONES)							
J901	1-568-503-11	JACK, EXTERNAL POWER (DC IN 3V)							
L001	1-422-627-11	COIL, AIRE-CORE							
L002	1-422-626-11	COIL, AIRE-CORE							
L921	1-412-145-11	INDUCTOR, SMALL TYPE	100UH						
L922	1-412-144-11	INDUCTOR, SMALL TYPE	10UH						
L923	1-412-144-11	INDUCTOR, SMALL TYPE	10UH						
M901	X-3346-745-1	MOTOR BLOCK, ASSY							
Q102	8-729-119-78	TRANSISTOR 2SC2785							
Q103	8-729-271-32	TRANSISTOR 2SC2713L							
Q104	8-729-271-32	TRANSISTOR 2SC2713L							
Q201	8-729-207-70	TRANSISTOR RN2404							
Q402	8-729-100-76	TRANSISTOR 2SA812							
Q602	8-729-271-32	TRANSISTOR 2SC2713L							
Q703	9-988-347-01	TRANSISTOR RN2405							
Q704	8-729-207-58	TRANSISTOR RN1404							
Q705	8-729-271-22	TRANSISTOR 2SC2712G							
Q706	8-729-271-22	TRANSISTOR 2SC2712G							
Q921	8-729-207-05	TRANSISTOR 2SK365-GR							
Q922	8-729-271-32	TRANSISTOR 2SC2713L							
Q923	8-729-271-32	TRANSISTOR 2SC2713L							
R001	1-216-049-00	(WM-AF65)							
		METAL CHIP	1K	5%	1/10W				
R002	1-216-025-00	(WM-AF65)							
		METAL CHIP	100	5%	1/10W				
R003	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R004	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R005	1-216-011-00	METAL CHIP	27	5%	1/10W				
R101	1-216-001-00	METAL CHIP	10	5%	1/10W				
R102	1-216-021-00	METAL CHIP	68	5%	1/10W				
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W				
R104	1-216-065-00	METAL CHIP	4.7K	5%	1/10W				
R105	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R106	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R108	1-216-001-00	METAL CHIP	10	5%	1/10W				
R201	1-216-065-00	METAL CHIP	4.7K	5%	1/10W				
R202	1-216-061-00	METAL CHIP	3.3K	5%	1/10W				
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W				
R204	1-216-065-00	METAL CHIP	4.7K	5%	1/10W				
R301	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R302	1-216-103-00	METAL CHIP	180K	5%	1/10W				
R303	1-216-071-00	METAL CHIP	8.2K	5%	1/10W				
R304	1-216-071-00	METAL CHIP	8.2K	5%	1/10W				
R305	1-216-029-00	METAL CHIP	150	5%	1/10W				
R306	1-216-029-00	METAL CHIP	150	5%	1/10W				
R307	1-216-039-00	METAL CHIP	390	5%	1/10W				
R308	1-216-039-00	METAL CHIP	390	5%	1/10W				
R309	1-216-057-00	METAL CHIP	2.2K	5%	1/10W				
R310	1-216-057-00	METAL CHIP	2.2K	5%	1/10W				
R311	1-216-041-00	METAL CHIP	470	5%	1/10W				
R401	1-216-069-00	METAL CHIP	6.8K	5%	1/10W				
R402	1-216-069-00	METAL CHIP	6.8K	5%	1/10W				
R403	1-216-089-00	METAL CHIP	47K	5%	1/10W				
R404	1-216-089-00	METAL CHIP	47K	5%	1/10W				
R405	1-216-112-00	METAL CHIP	430K	5%	1/10W				
R406	1-216-112-00	METAL CHIP	430K	5%	1/10W				
R407	1-216-061-00	METAL CHIP	3.3K	5%	1/10W				
R408	1-216-061-00	METAL CHIP	3.3K	5%	1/10W				
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R411	1-216-049-00	METAL CHIP	1K	5%	1/10W				
R412	1-216-067-00	METAL CHIP	5.6K	5%	1/10W				
R503	1-216-001-00	METAL CHIP	10	5%	1/10W				
R504	1-216-001-00	METAL CHIP	10	5%	1/10W				
R505	1-216-071-00	METAL CHIP	8.2K	5%	1/10W				
R506	1-216-037-00	METAL CHIP	330	5%	1/10W				
R507	1-216-037-00	METAL CHIP	330	5%	1/10W				
R601	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R603	1-216-097-00	METAL CHIP	100K	5%	1/10W				
R604	1-216-097-00	METAL CHIP	100K	5%	1/10W				
R605	1-216-053-00	METAL CHIP	1.5K	5%	1/10W				
R606	1-216-057-00	METAL CHIP	2.2K	5%	1/10W				
R607	1-216-097-00	METAL CHIP	100K	5%	1/10W				
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W				
R609	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R610	1-216-065-00	METAL CHIP	4.7K	5%	1/10W				
R701	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R702	1-216-121-00	METAL CHIP	1M	5%	1/10W				
R703	1-216-013-00	METAL CHIP	33	5%	1/10W				
R704	1-216-081-00	METAL CHIP	22K	5%	1/10W				
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R706	1-216-073-00	METAL CHIP	10K	5%	1/10W				
R707	1-216-101-00	METAL CHIP	150K	5%	1/10W				

SEE ADDITIONAL
SEE INFORMATION

Ref.No	Part No.	Description			
R708	1-216-073-00	METAL CHIP	10K	5%	1/10W
R709	1-216-107-00	METAL CHIP	270K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-295-00	METAL CHIP	0	5%	1/10W
R712	1-216-295-00	METAL CHIP	0	5%	1/10W
R713	1-216-115-00	METAL CHIP	560K	5%	1/10W
R714	1-216-097-00	METAL CHIP	100K	5%	1/10W
R715	1-216-115-00	METAL CHIP	560K	5%	1/10W
R716	1-216-097-00	METAL CHIP	100K	5%	1/10W
R717	1-216-097-00	METAL CHIP	100K	5%	1/10W
R718	1-216-295-00	METAL CHIP	0	5%	1/10W
R719	1-216-097-00	METAL CHIP	100K	5%	1/10W
R720	1-216-041-00	METAL CHIP	470	5%	1/10W
R721	1-216-041-00	METAL CHIP	470	5%	1/10W
R722	1-216-295-00	METAL CHIP	0	5%	1/10W
R723	1-216-295-00	METAL CHIP	0	5%	1/10W
R901	1-808-731-11	THERMISTER POSITIVE	2.2K		
R902	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R903	1-808-732-11	THERMISTOR POSITIVE	200		
R904	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R921	1-216-076-00	METAL CHIP	13K	5%	1/10W
R922	1-216-049-00	METAL CHIP	1K	5%	1/10W
R923	1-216-121-00	METAL CHIP	1M	5%	1/10W
R924	1-216-089-00	METAL CHIP	47K	5%	1/10W
R925	1-216-097-00	METAL CHIP	100K	5%	1/10W
RV501	1-238-587-11	VAR, CARBON 10K (VOLUME)			
RV905	1-230-599-11	VAR, CARBON 5K (TAPE SPEED)			
S001	1-571-963-11	SWITCH, SLIDE (AF65, FM SENS/DOLBY) (BF65, FM MODE/DOLBY)			
S301	1-571-963-11	SWITCH, SLIDE (TAPE)			
S302	1-571-943-11	SWITCH, LEAF (DIR)			
S701	1-571-121-12	SWITCH, SLIDE (MEGA BASS)			
S702	1-571-120-11	SWITCH, SLIDE (AM STEP)			
S901	1-571-963-11	SWITCH, SLIDE (FUNCTION)			
S902	1-571-943-11	SWITCH, LEAF (TC POWER)			
T101	1-404-859-11	TRANSFORMER, IF (FM)			
T102	1-404-860-11	TRANSFORMER, IF (AM)			
T103	1-402-436-11	ANTENNA, FERRITE ROD			
T104	1-406-343-11	COIL (OSC) (AM)			
T921	1-449-671-11	TRANSFORMER, DC-DC CONVERTER			
W701	1-529-076-11	BUZZER			
X701	1-577-464-11	VIBRATOR, CRYSTAL			

Part No. Description

ACCESSORY & PACKING MATERIALS

3-394-937-01	CLIP, BELT
3-394-938-01	(WM-AF65)....BOX, INDIVIDUAL
3-352-767-01	(WM-BF65)....BOX, INDIVIDUAL
3-394-939-01	CUSHION
3-750-018-22	(US)....MANUAL, INSTRUCTION
3-750-018-12	(CND, UK, E, AEP, IT)....MANUAL, INSTRUCTION
3-750-018-41	(AEP, IT)....MANUAL, INSTRUCTION
8-952-260-90	(EXCEPT FOR E)....MDR-W10L, HEADPHONES
8-952-350-90	(E)....MDR-E454, HEADPHONES

- CND : Canadian model
- IT : Italian model

WM-AF65/BF65

SONY[®] SERVICE MANUAL

US Model
Canadian Model
WM-AF65

AEP Model
UK Model
E Model
WM-BF65

SUPPLEMENT-1

File this supplement-1 with the service manual.

Subject :

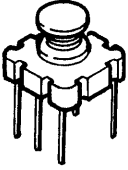
This is to give notice that maked change for design.

- SYNTH board's pattern was maked change sharply.
- Similar, LED and MAIN boards was maked modify.
- The parts was changed as shown below.

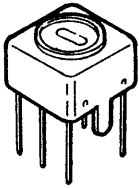
Ref. No.	Former	New
C110, 113	1-163-141-00 CERAMIC CHIP 1000PF 50V	1-163-117-00 CERAMIC CHIP 100PF 50V
C117	not used	1-163-101-00 CERAMIC CHIP 220PF 50V
C508	1-126-177-11 ELECT 100MF 6.3V	1-124-434-00 ELECT 220MF 4V
R005	1-216-011-00 METAL CHIP 27 1/10W	1-216-005-00 METAL CHIP 15 1/10W
R108	1-216-001-00 METAL CHIP 10 1/10W	1-216-007-00 METAL CHIP 18 1/10W
R311	1-216-041-00 METAL CHIP 470 1/10W	not used (Short)
R312, 313	not used	1-216-041-00 METAL CHIP 470 1/10W
R720	1-216-041-00 METAL CHIP 470 1/10W	not used (Short)
R721	1-216-041-00 METAL CHIP 470 1/10W	1-216-049-00 METAL CHIP 1K 1/10W
R724	not used	1-216-065-00 METAL CHIP 4.7K 1/10W
R727	not used	1-216-295-00 METAL CHIP 0 1/10W
R729	not used	1-216-049-00 METAL CHIP 1K 1/10W
R926	not used	1-216-049-00 METAL CHIP 1K 1/10W
* T104 Refer to page 2.	1-406-343-11 COIL (OSC) AM	1-406-369-11 COIL (OSC) AM

※ Note on T104 (COIL OSC AM) Replacement.

Check form when replacing T104.



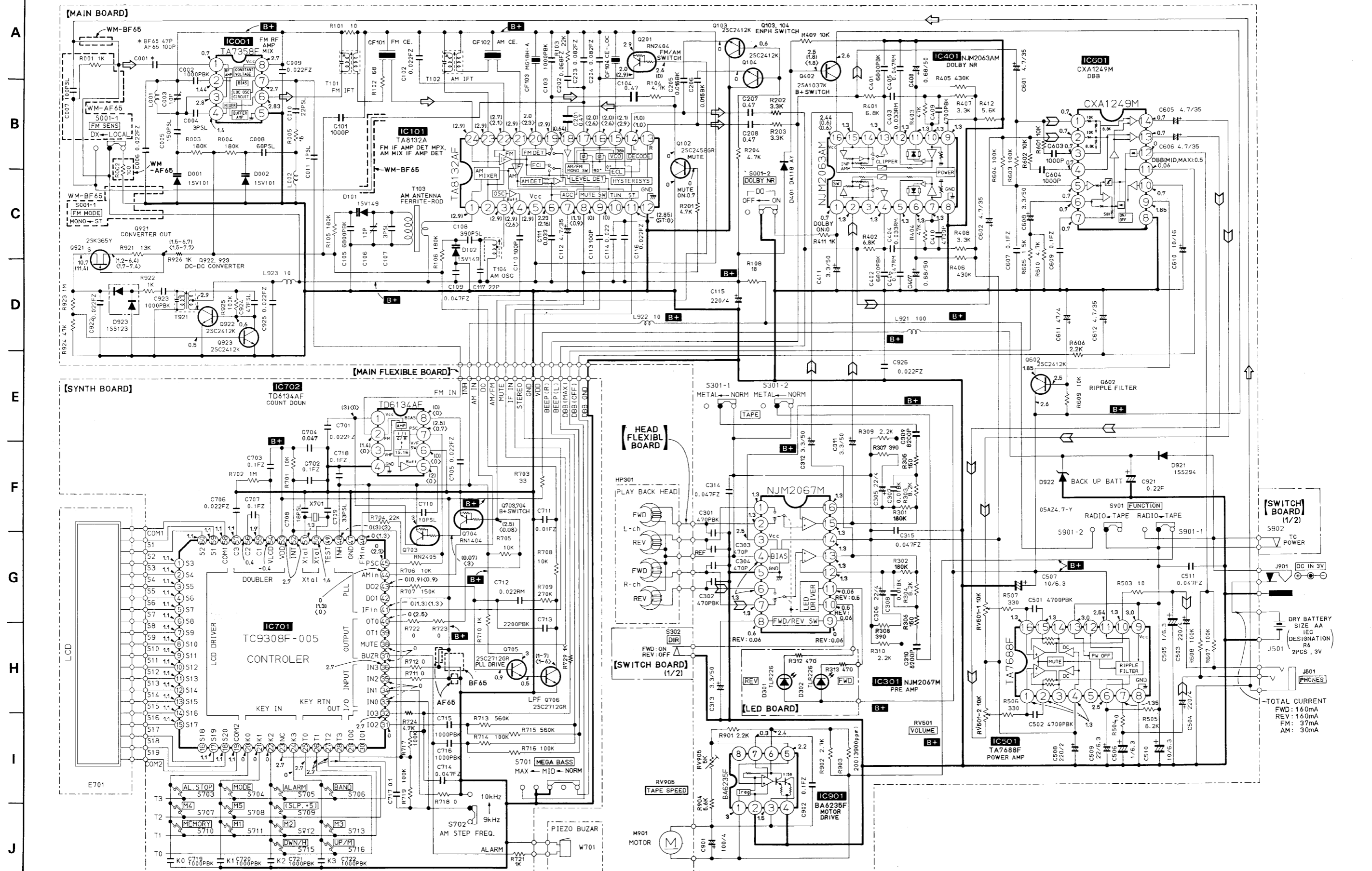
Former
(Serial No. : less than 121,000)
1-406-343-11



New
(serial No. : more than 121,001)
1-406-369-11

• SCHEMATIC DIAGRAM

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

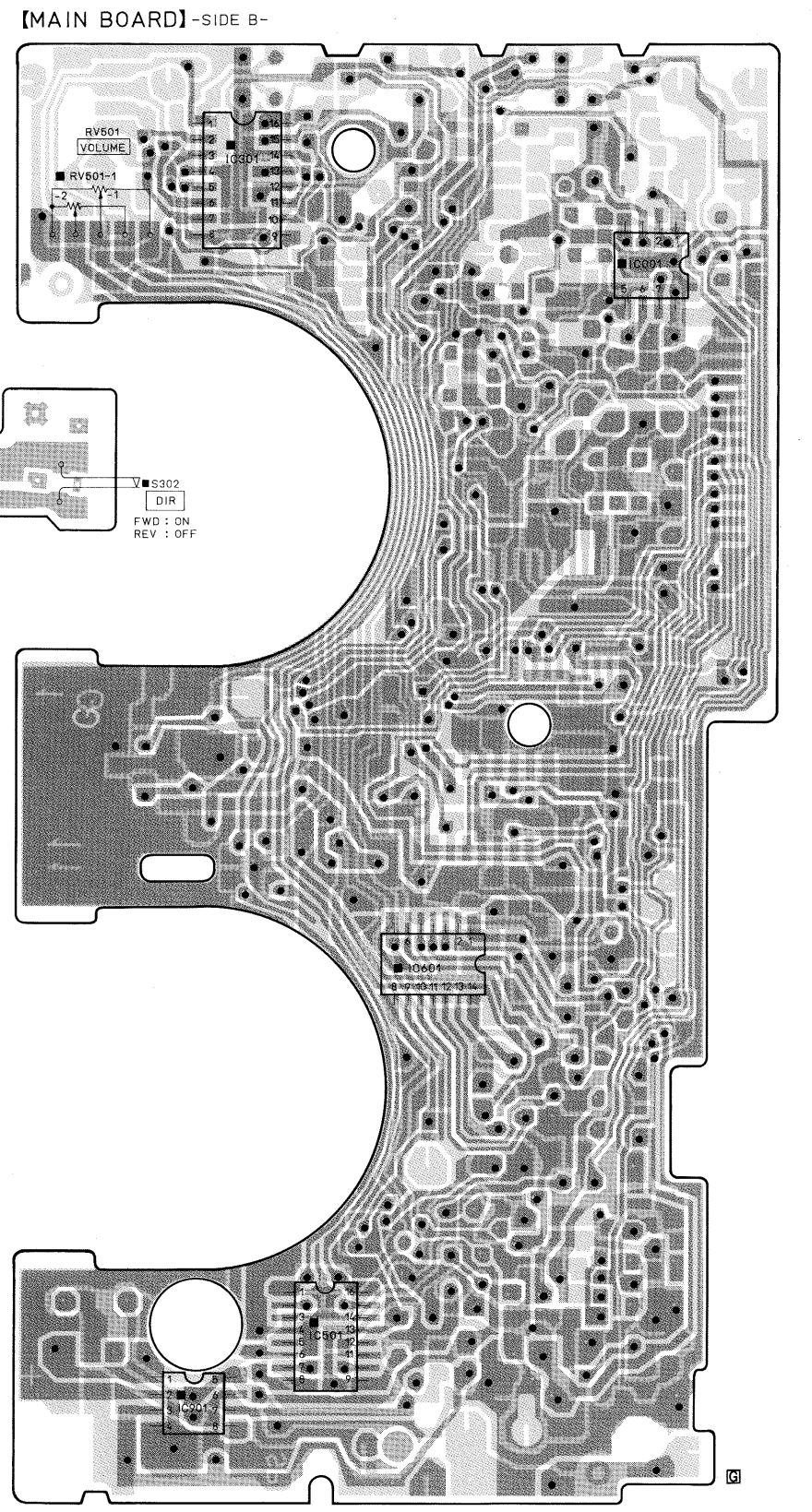
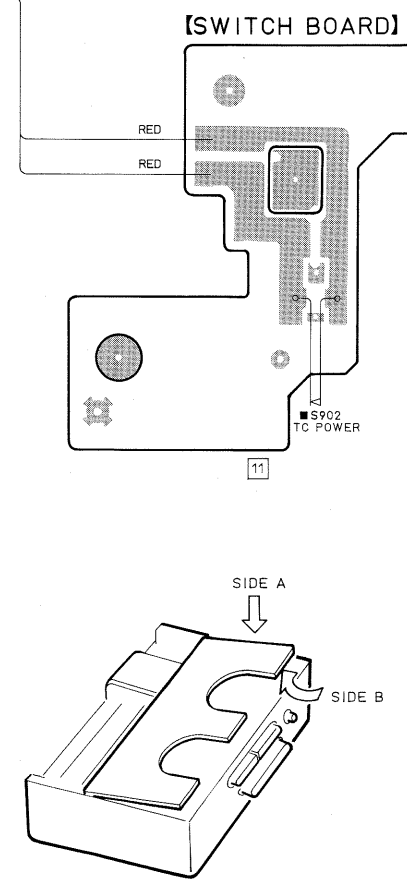
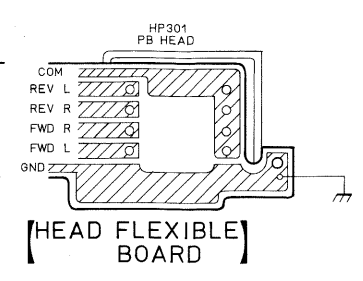
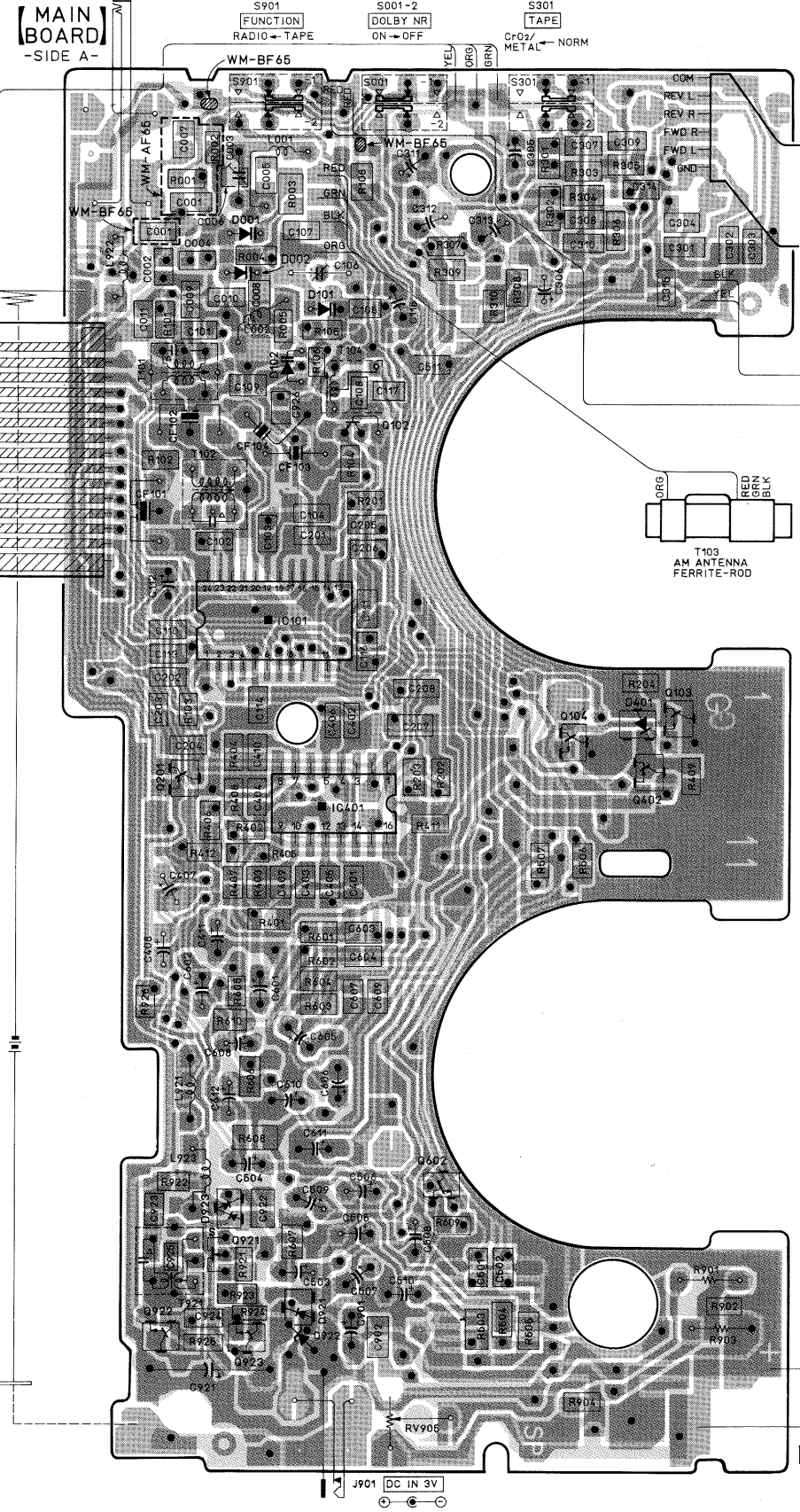
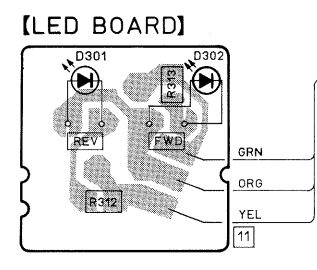
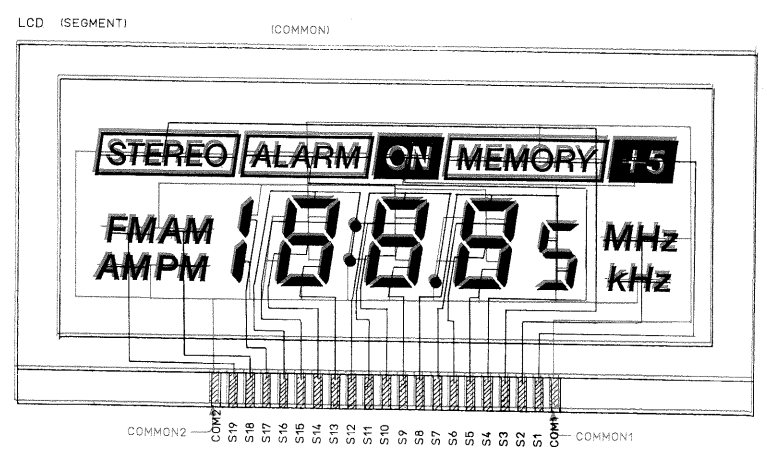
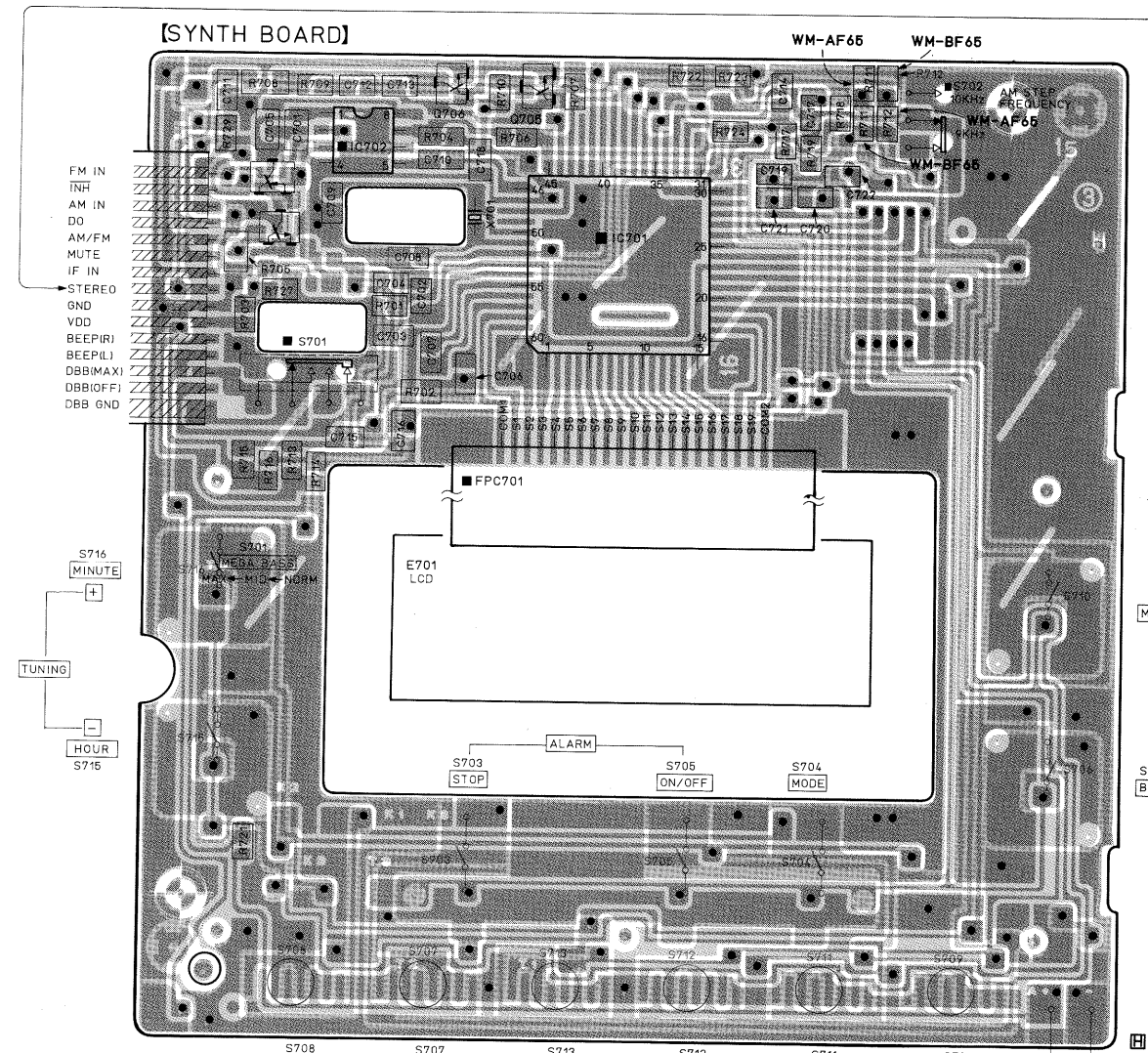


TOTAL CURRENT
 FWD: 160mA
 REV: 160mA
 FM: 37mA
 AM: 30mA

PRINTED WIRING BOARDS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

A
B
C
D
E
F
G
H
I
J
K



WM-AF65 / BF65

SONY® SERVICE MANUAL

US Model
Canadian Model
WM-AF65

AEP Model
UK Model
E Model
WM-BF65

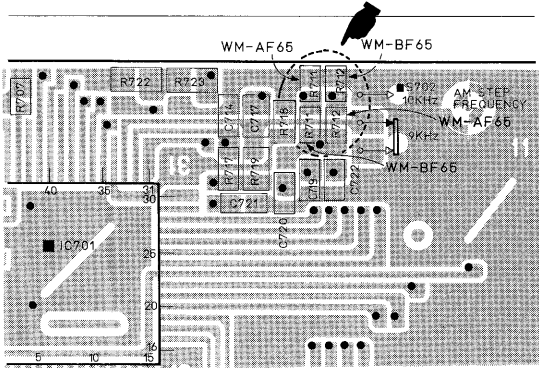
CORRECTION-1

Please correct your Service Manual

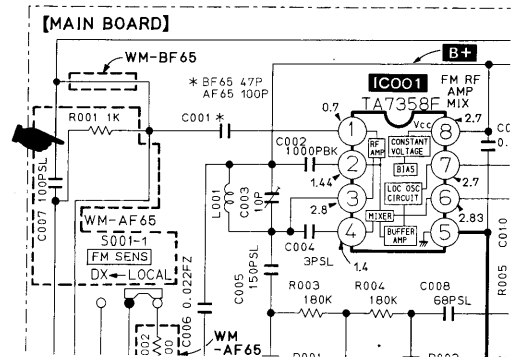
 : Corrected portion.

SERVICE MANUAL SECTION 5 DIAGRAMS

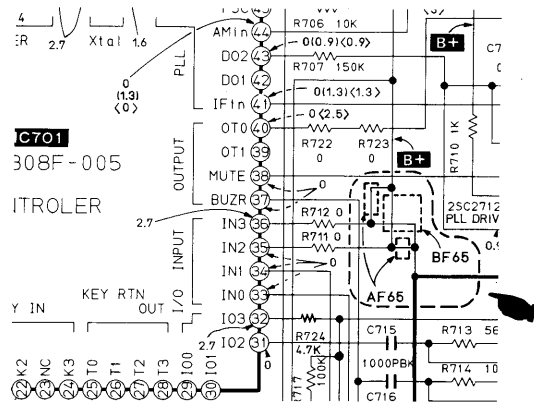
Page 8, 5-2 PRINTED WIRING BOARDS
LOCATION : 7-B



Page 11, 5-3 SCHEMATIC DIAGRAMS
LOCATION : 1-B



LOCATION : 5-H



SECTION 6 EXPLODED VIEWS

Page	Incorrect				Correct			
	No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
13	17	3-394-941-01	(WM-AF65)....CABINET (CENTER)		17	3-394-941-11	(WM-AF65)....CABINET (CENTER)	
	17	3-352-764-01	(WM-BF65)....CABINET (CENTER)		17	3-394-941-31	(WM-BF65)....CABINET (CENTER)	
	23	3-394-940-01	(WM-AF65)....CABINET (BACK)		23	3-394-940-11	(WM-AF65)....CABINET (BACK)	
	23	3-352-765-01	(WM-BF65)....CABINET (BACK)		23	3-394-940-31	(WM-BF65)....CABINET (BACK)	

SECTION 7 ELECTRICAL PARTS LIST —ACCESSORY & PACKING MATERIALS—

Page	Incorrect				Correct			
	No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
18		3-394-938-01	(WM-AF65)....BOX INDIVIDUAL			3-351-584-01	(WM-AF65)....BOX INDIVIDUAL	

WM-AF65/BF65

SONY SERVICE MANUAL

US Model
Canadian Model
WM-AF65

AEP Model
UK Model
E Model
WM-BF65

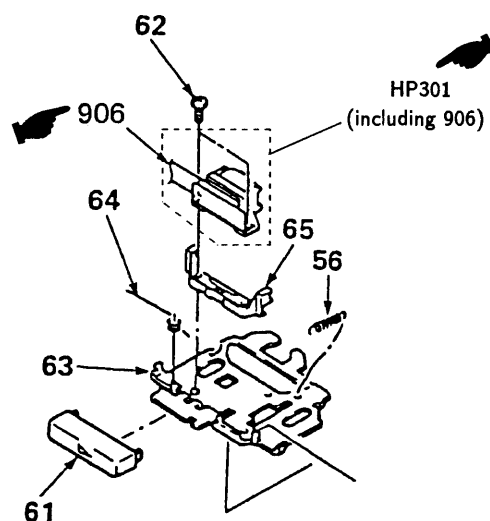
CORRECTION- 2

Correct your service manual as shown below.

 : indicates corrected portion.

6-2. MECHANISM (1)
(WM-AF65MDT)

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
14	HP301	1-543-523-11	HEAD, MAGNETIC (PLAY BACK)	1-543-523-11	HEAD, MAGNETIC (PLAY BACK) <u>(including 906)</u>
	906	1-623-643-11	PC BOARD, HEAD FLEXIBLE	<u>1-644-895-11</u>	PC BOARD, HEAD FLEXIBLE



WM-AF65/BF65


SONY SERVICE MANUAL

*US Model
Canadian Model
WM-AF65*

*AEP Model
UK Model
E Model
WM-BF65*

CORRECTION- 3

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
13	905	1-568-556-11	CONNECTOR, LCD FLEXIBLE	— not supplied — They are contained with in PCB ASSY, SYNTHESIZER (901).	
	E701	1-808-748-11	LCD		
16	905	1-568-556-11	CONNECTOR, LCD FLEXIBLE		
17	E701	1-808-748-11	LCD		