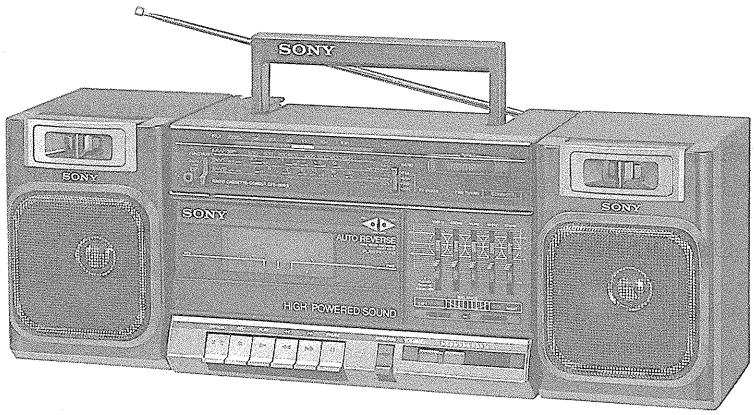
CFS-1100S

SERVICE MANUAL

E Model



SPECIFICATIONS

Tuner frequency range:

	FM	MW	SW
Saudi Arabia model	87.6 – 107 MHz	530 – 1,605 kHz	SW1: 2.3 – 7 MHz SW2: 7 – 22 MHz
E model	87.6 – 108 MHz		

Antennas: FM/SW: Telescopic
MW : Built-in ferrite bar

Frequency response:
80 – 8,000 Hz (Type 1)

Speakers: Two way: tweeter 2 cm (¾ in.) dia.
full range 10 cm (4 in.) dia.
Impedance: 6 ohms
Nominal power handling capacity: 10 W
Maximum power handling capacity: 15 W

Maximum power outputs:
15 W (7.5 W + 7.5 W)

Inputs: Two external microphone input jacks (minijack)
sensitivity 0.775 mV for low impedance microphone

Outputs: Headphones jack (stereo minijack)
for 8 – 300 ohm impedance headphones
Speaker connectors for supplied 6 ohm impedance speaker only

Power requirements:
110 – 120 V, 220 – 240 V AC adjustable, 50/60 Hz
9 V DC, six R20 (Size D) batteries

Power consumption:
30 W

Model Name Using Similar Mechanism Set	CFS-1010S
Tape Transport Mechanism Type	MF-1100-78D

Battery life:

Batteries	FM recording
Sony SUM-1 (NS)	approx. 16 hours
Sony AM1 alkaline	approx. 25 hours

Dimensions: Approx. 501 x 179 x 168 mm (w/h/d)
(19¾ x 7⅛ x 6⅝ inches)
incl. speakers, projecting parts and controls, not incl. handle

Weight: Approx. 4.7 kg (10 lb 6 oz) incl. speakers, batteries

Accessory supplied AC power cord (1)

RADIO CASSETTE-CORDER

SONY®

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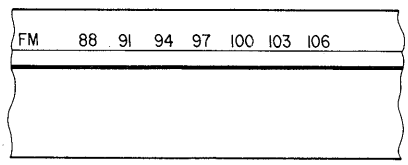
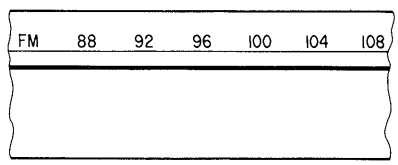
MODEL IDENTIFICATION

— Dial Scale —

E model



Saudi Arabia model



SERVICING NOTES

Note for Main Mounted Board Replacement

Replacement part of main mounted board is set for E model.

When replacing main mounted board of Saudi Arabia model, change the parts as shown below.

Ref. No.	E model (replacement part)	Saudi Arabia model
C8	ceramic capacitor 22pF (1-102-959-00)	ceramic capacitor 30pF (1-102-603-00)

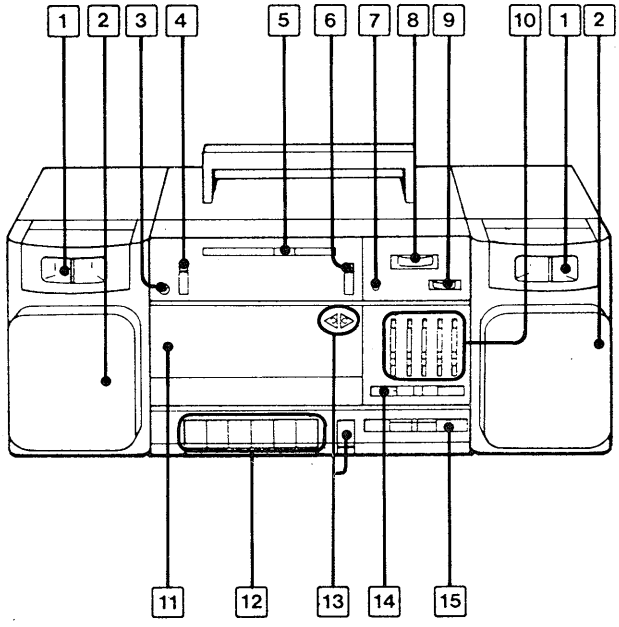
SAFETY-RELATED COMPONENT WARNING!!

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

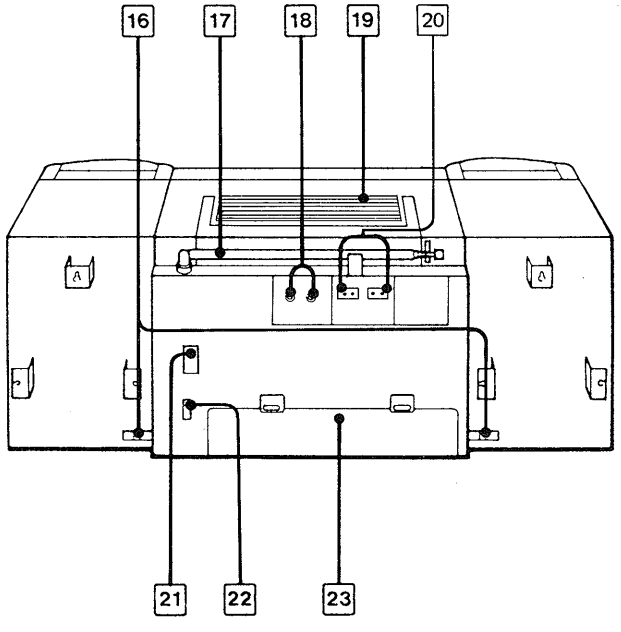
SECTION 1
GENERAL

LOCATION OF CONTROLS

– Front –



– Rear –



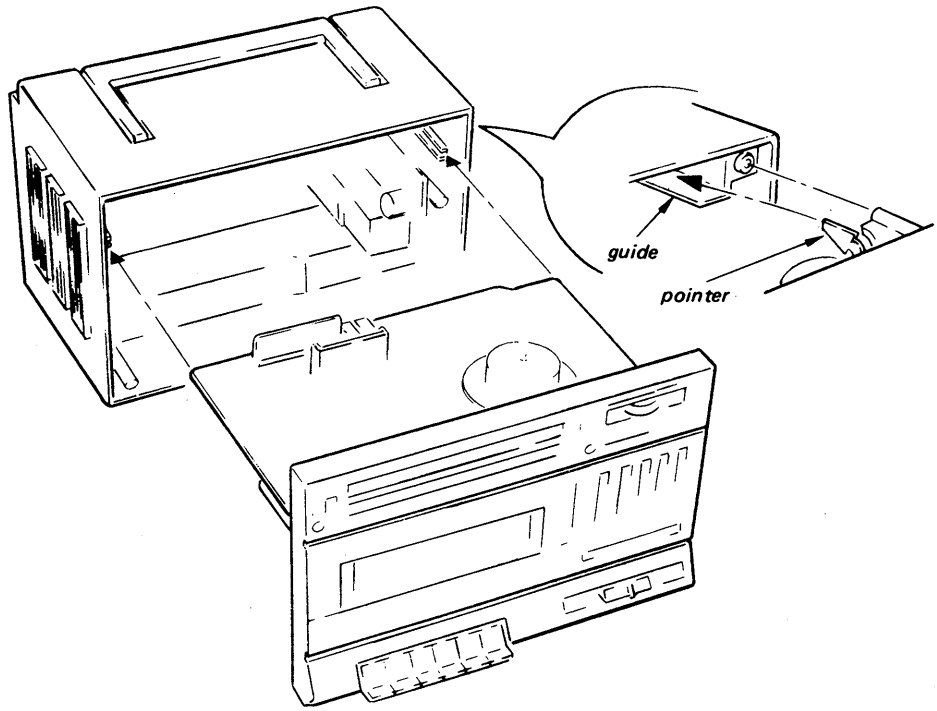
1. **Tweeters**
2. **Full range**
3. **(headphones) jack (stereo minijack)**
4. **FUNCTION selector (RADIO/TAPE (RADIO OFF))**
   When the unit is not in use, set to TAPE (RADIO OFF).
5. **Dial scale and pointer**
6. **BAND selector (FM/MW/SW1/SW2)**
7. **FM STEREO indicator**
   Lights to show stereo reception. Use to find best tuning.
8. **TUNING knob**
   Turn to select the frequency of the desired station.
9. **FINE TUNING knob**
   For extra-sharp short wave reception.
10. **5 BAND GRAPHIC EQUALIZER controls**
    Use to adjust tone response according to listening room or listening material.
11. **Cassette holder**
12. **Tape operation buttons**
    ■≙ STOP/EJECT
    ● REC (Record)—pressing this will automatically depress ► PLAY.
    ► PLAY
    ◄◄ Leftward fast winding
    ►► Rightward fast winding
    ❚❚ PAUSE
13. **◄|► DIRECTION button and indicators**
    Button changes tape direction during play. Left (REV) indicator shows leftward tape transport; right (FWD) indicator shows rightward tape transport.
    OPR/BATT (operation/battery) indicator
    Shows unit is in use; intensity of glow shows battery level.
14. **BALANCE control**
    Use to adjust stereo imaging, especially when speakers are not symmetrically placed.
15. **VOLUME control**
16. **Speaker locks**
17. **Telescopic antenna**
18. **EXT MIC (external microphone input) jacks**
    Left and right minijacks. Use to record sound from external microphone (s).
19. **Ventilation holes**
    For adequate air circulation to prevent internal heat build-up.
20. **SPEAKER connectors**
21. **AC IN socket**
22. **VOLTAGE SELECTOR**
    110–120V/ 220–240V
23. **Battery compartment**

SECTION 2
DISASSEMBLY AND SETTING

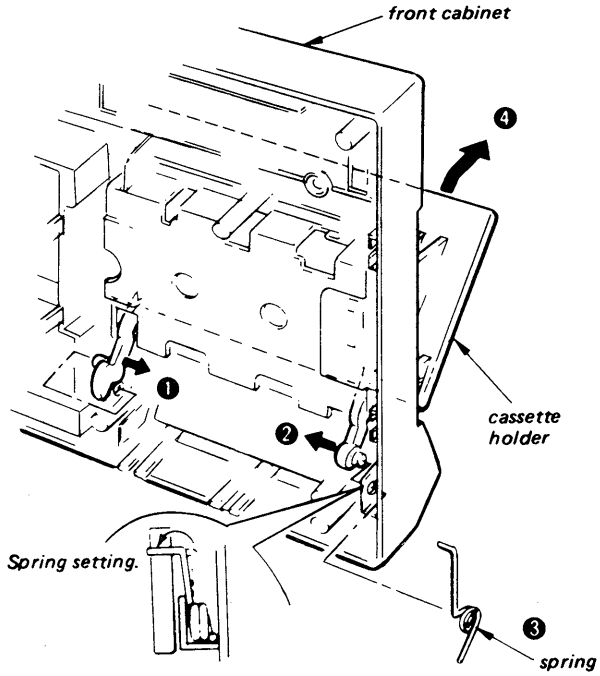
Note: Follow the disassembly procedure in the numerical order given.

2-1. PRE-CAUTION FOR REAR CABINET SETTING

1. Insert the edge of the pointer in the rear cabinet guide.
2. Insert the both side of main board in the rear cabinet hole.

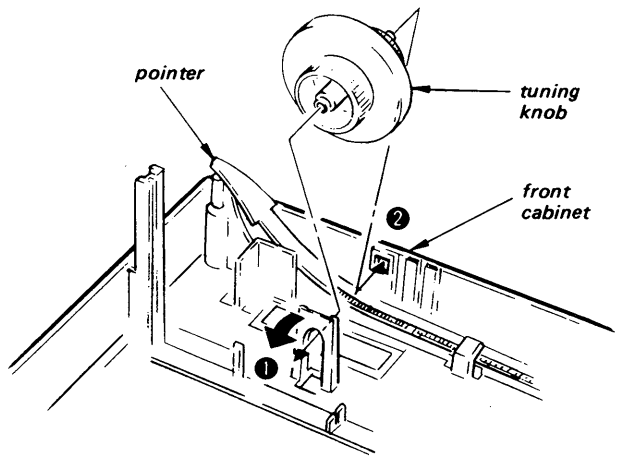


2-2. CASSETTE HOLDER REMOVAL AND SETTING



2-3. TUNING KNOB REMOVAL AND SETTING

- When setting, check that the tuning knob is completely in the hole ❷



2-4. POINTER SETTING

❶ Release the two locks of main board, then slightly hold up.

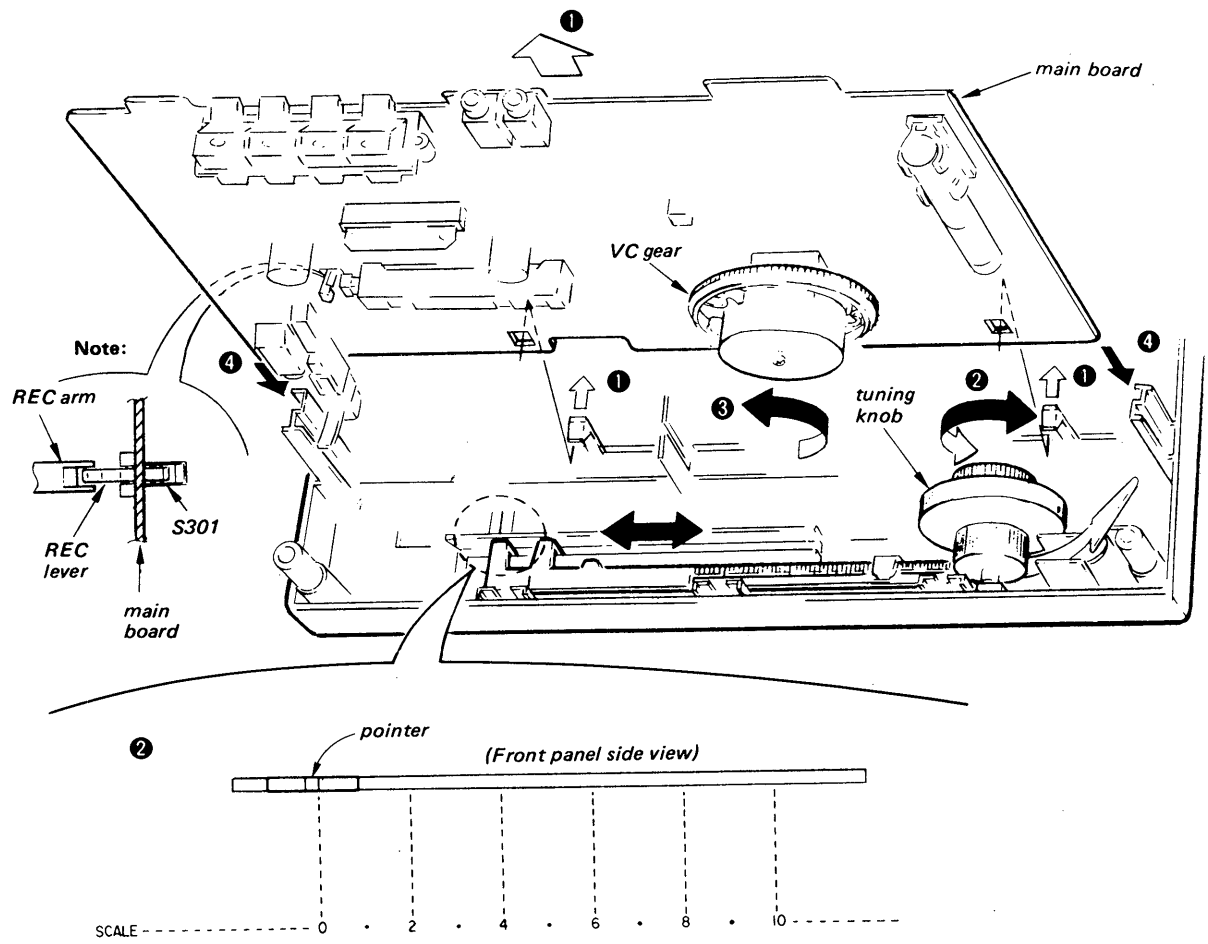
Note: Pay attention to the REC arm and the REC lever.

❷ Turn the tuning knob right and left, then set the pointer to the position as illustrated below.

❸ Fully turn the VC gear counterclockwise.

❹ Lock it by pushing main board.

Note: Check that the REC arm gear into the REC lever.



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
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 unless otherwise noted.
6. The adjustments should be performed in the order given in this service manual.
   The adjustments should be performed for both L-CH and R-CH.

Torque Measurement

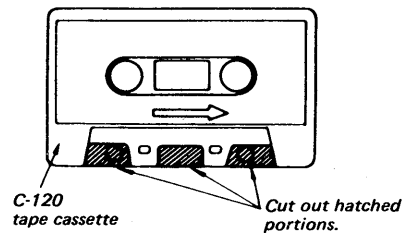
Mode	Torque meter	Meter reading
FWD	CQ-102C	24 – 70 g•cm (0.33 – 0.97 oz•inch)
FWD Back Tension		2 – 6 g•cm (0.028 – 0.083 oz•inch)
REV	CQ-102RC	24 – 70 g•cm (0.33 – 0.97 oz•inch)
REV Back Tension		2 – 6 g•cm (0.028 – 0.083 oz•inch)
FF	CQ-201B	more than 85 g•cm (more than 1.18 oz•inch)
REW		85 – 150 g•cm (1.18 – 2.08 oz•inch)

Tape Tension Measurement

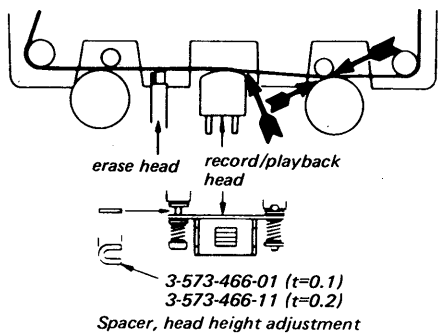
Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 110 g (more than 3.88 oz)
REV	CQ-403R	

Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In record mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions of arrow.



SECTION 4
ELECTRICAL ADJUSTMENTS

Test tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	tape speed adjustment
P-4-A063	6.3 kHz, -10 dB	head azimuth adjustment

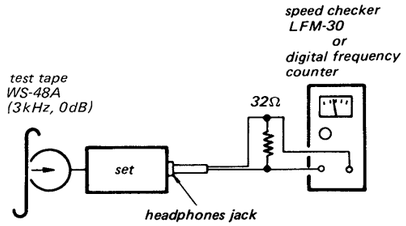
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

Mode: playback

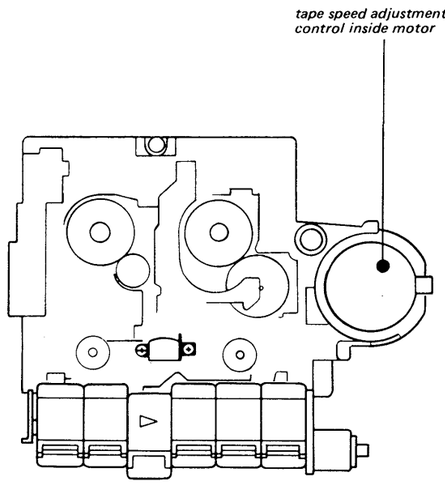


Specification:

Speed checker	Digital frequency counter
-2.5 to +1.5%	2,925 to 3,045 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

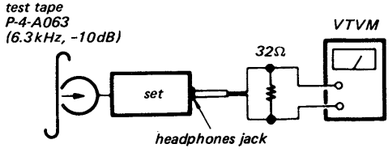
Adjustment Location:



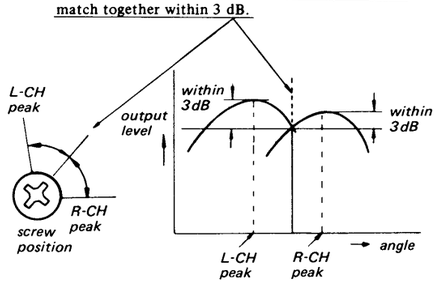
Record/playback Head Azimuth Adjustment

Procedure:

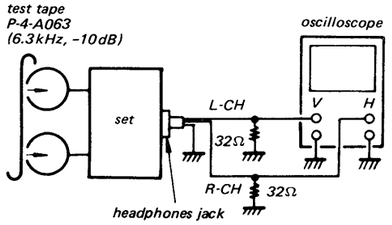
1. Mode: FWD playback

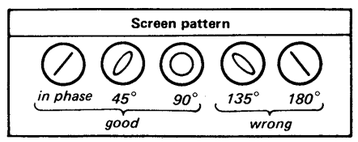


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 3 dB.

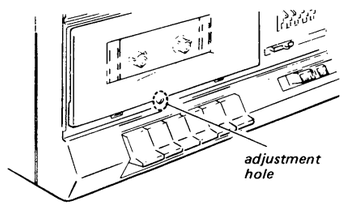


3. Phase Check
Mode: FWD playback

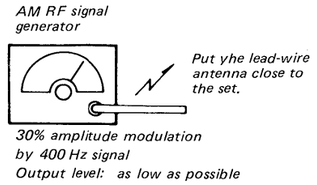




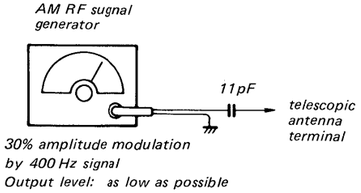
Adjustment Location:



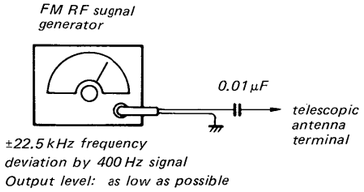
MW

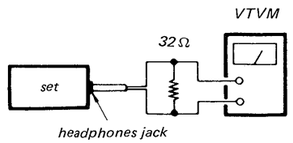


SW



FM





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

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CFT1	455 kHz

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT4	1,680 kHz
L11	520 kHz

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT3	1,400 kHz
L6	600 kHz

SW1 FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT8	7.3 MHz
L10	2.25 MHz

SW1 TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT6	6 MHz
L7	3 MHz

SW2 FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT7	22.5 MHz
L9	6.8 MHz

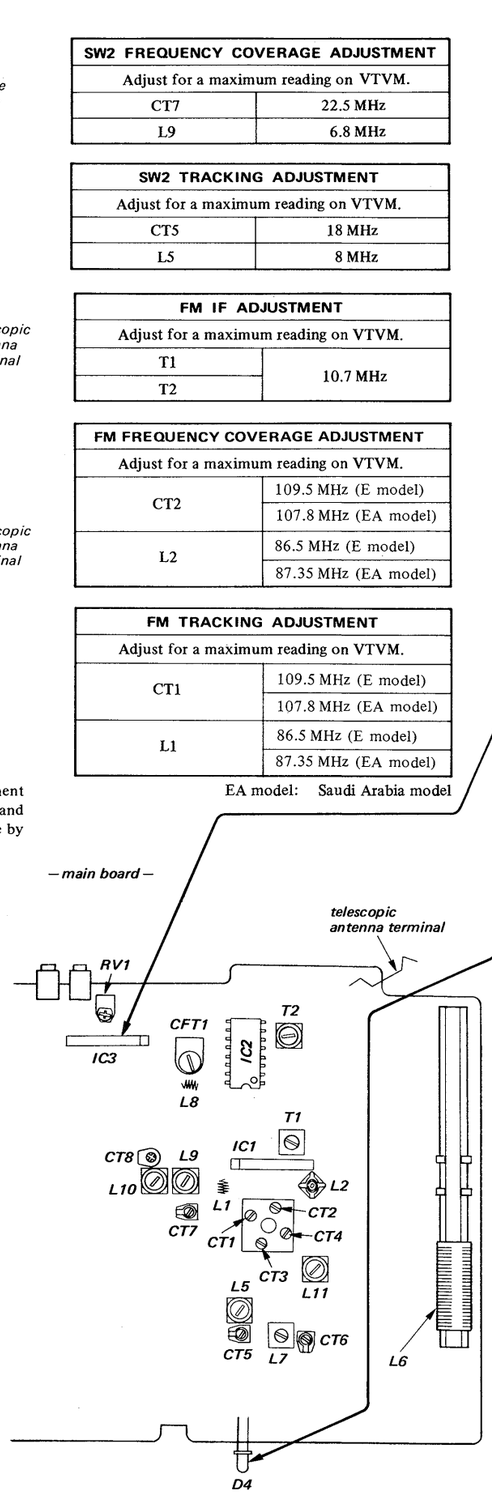
SW2 TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT5	18 MHz
L5	8 MHz

FM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T1	10.7 MHz
T2	

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT2	109.5 MHz (E model)
	107.8 MHz (EA model)
L2	86.5 MHz (E model)
	87.35 MHz (EA model)

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT1	109.5 MHz (E model)
	107.8 MHz (EA model)
L1	86.5 MHz (E model)
	87.35 MHz (EA model)

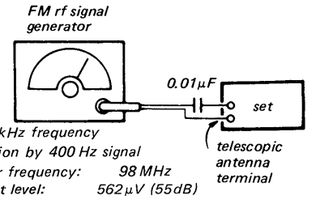
EA model: Saudi Arabia model

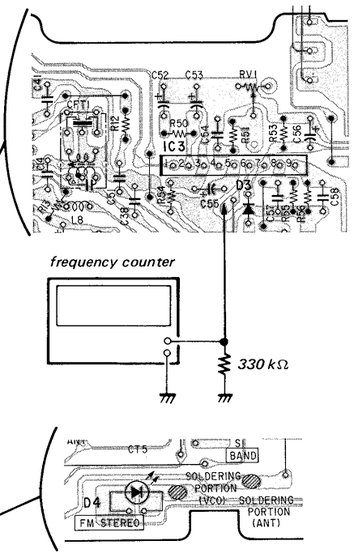


VCO Adjustment

A) Regular Method

Procedure:



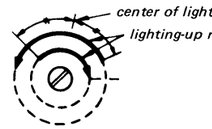


1. Remove the soldering portion (VCO) as shown above. Connect the frequency counter with pin (6) of IC3.
2. Turn the set to 98 MHz.
3. Adjust RV1 for 38 kHz ± 150 Hz on the counter.
4. After adjustment, re-solder the soldering portion.

B) Simple Method

Procedure:

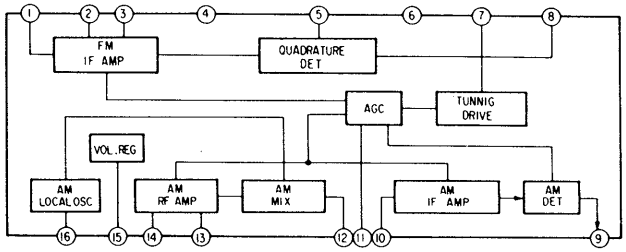
1. Turn the set to the FM stereo boardcasting signal.
2. Turn RV1 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RV1 at the center of the lighting-up range of both turns as shown below.



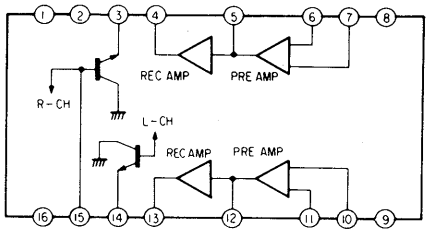
SECTION 5
DIAGRAMS

5-1. IC BLOCK DIAGRAMS

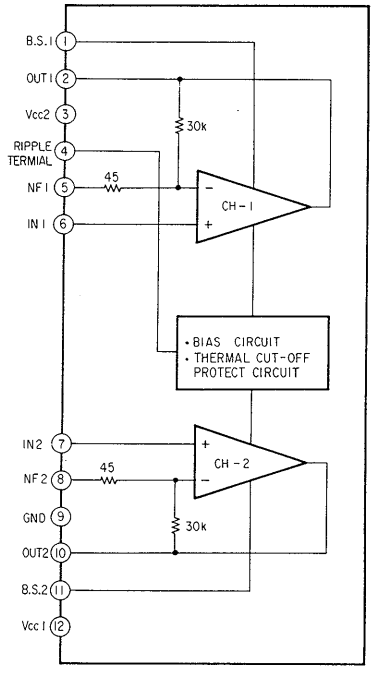
IC2 LA1260S (AM FRONT-END, FM/AM IF AMP)



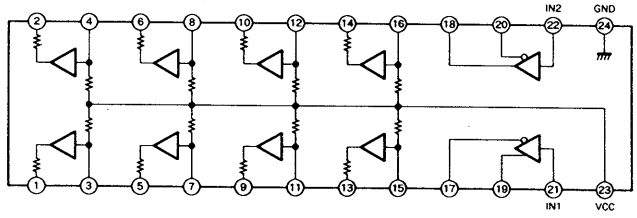
IC301 TA7668BP (PRE/REC AMP)



IC101, 201 TA8207K (POWER AMP)



IC601 BA3824LS (GRAPHIC EQUALIZER)



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- : printed resistor.
- : fusible resistor.
- Switch with sliding contact indicated by hatched lines shows shorting type.

- : adjustmnet for repair.
- Total current is measured with no cassette installed.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM (( )): PLAY
  ( ): AM
  < >: REC
  [ ]: FF/REW
- Voltages are taken with a VOM (50kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : FM
- Switches:

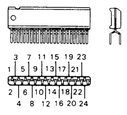
Ref. No.	Switch	Position
S1	BAND	FM
S301	REC/PB	PB
S302	FUNCTION	TAPE
S401	DIRECTION	FWD
S701	MD POWER	OFF
S702	FF/REW	OFF
S801	VOLTAGE SELECTOR	220 – 240

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	C-5	IC3	B-8
D3	C-9	IC101	C-12
D4	F-8	IC201	C-10
D5	C-8	IC301	E-12
D6	D-8	IC601	E-2
D302	C-13	Q301	F-12
D303	F-12	Q302	C-13
D701	G-3	Q303	B-14
D702	G-3	Q304	B-14
D703	I-2	Q401	F-1
D801	D-17	Q501	F-1
IC1	D-7	Q701	I-2
IC2	B-7	Q702	I-2

● Semiconductor Lead Layouts

BA3824LS



LA1260S
TA7668BP

TA7343AP
TA7358AP

TA8207K

DTC143TS
2SA1115P

2SC1815-GR

2SD773

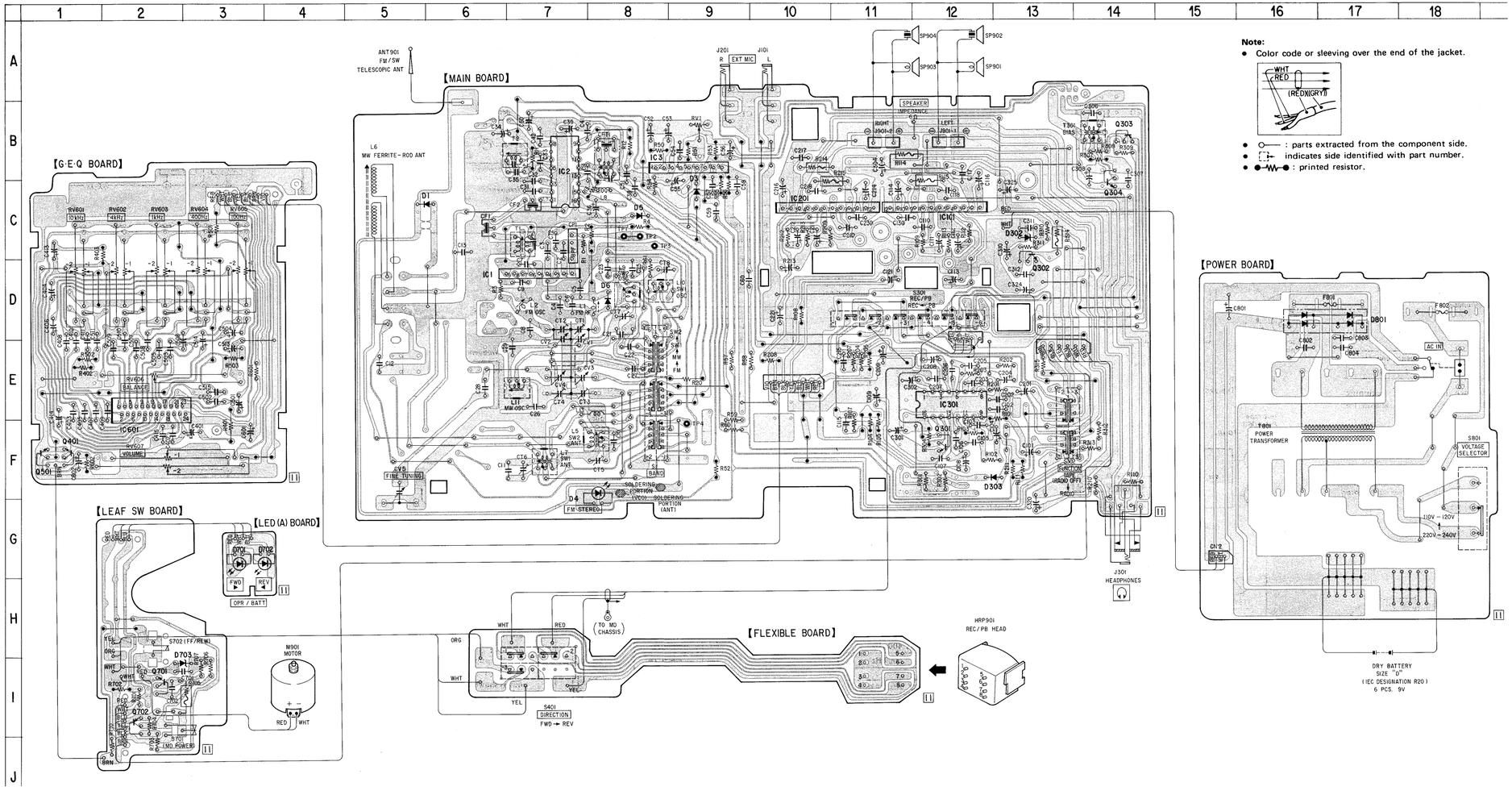
2SD1761-E

D3SB10

SLR-34VR5

RD6.2ES-B2
RD8.2ES-B2
1SS119

5-2. PRINTED WIRING BOARDS



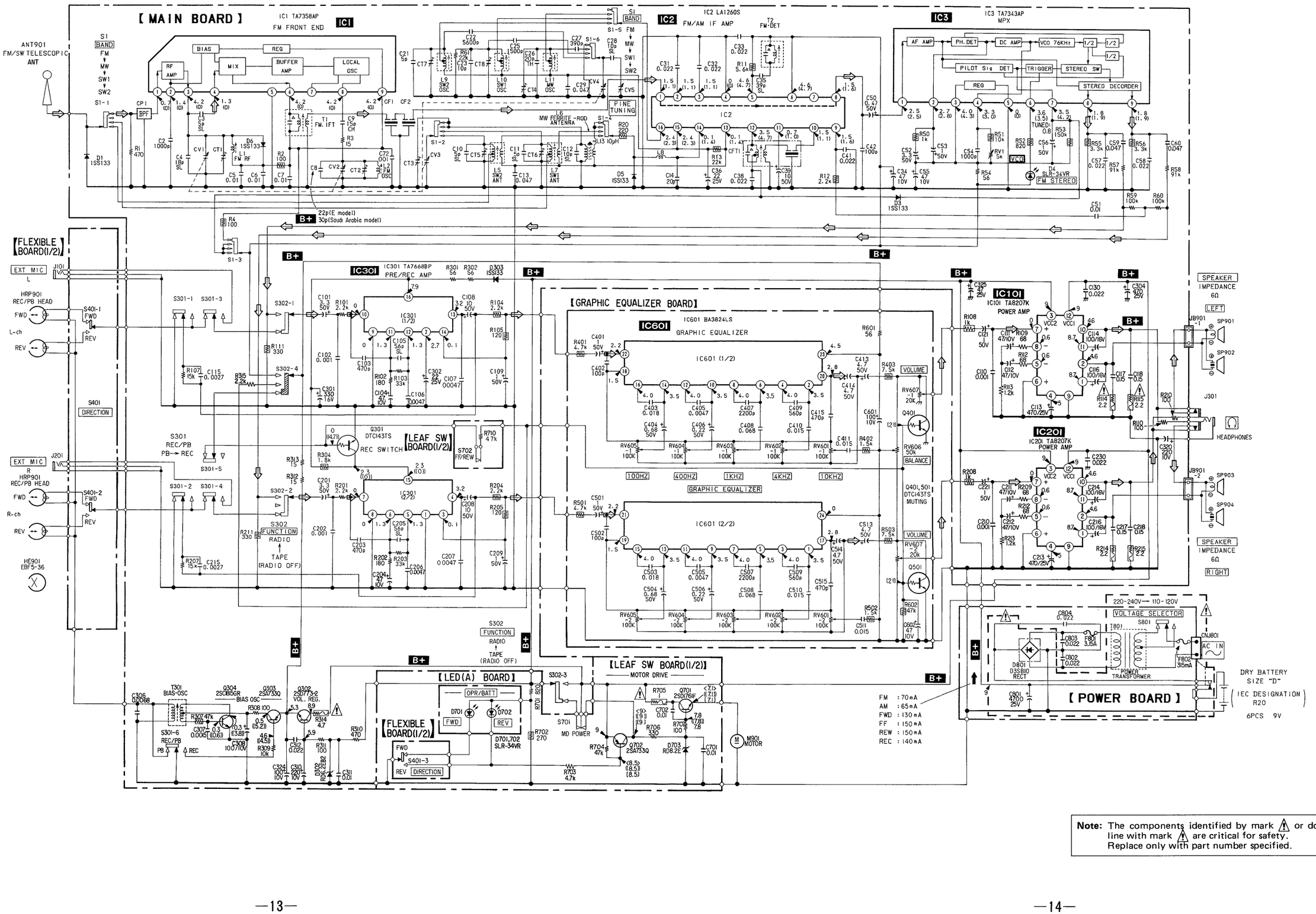
Note:

- Color code or sleeving over the end of the jacket.

- ○— : parts extracted from the component side.
- ⊡ indicates side identified with part number.
- ●-W-● : printed resistor.

5-3. SCHEMATIC DIAGRAM

- **Refer to page 9 for IC block diagram and notes.**



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

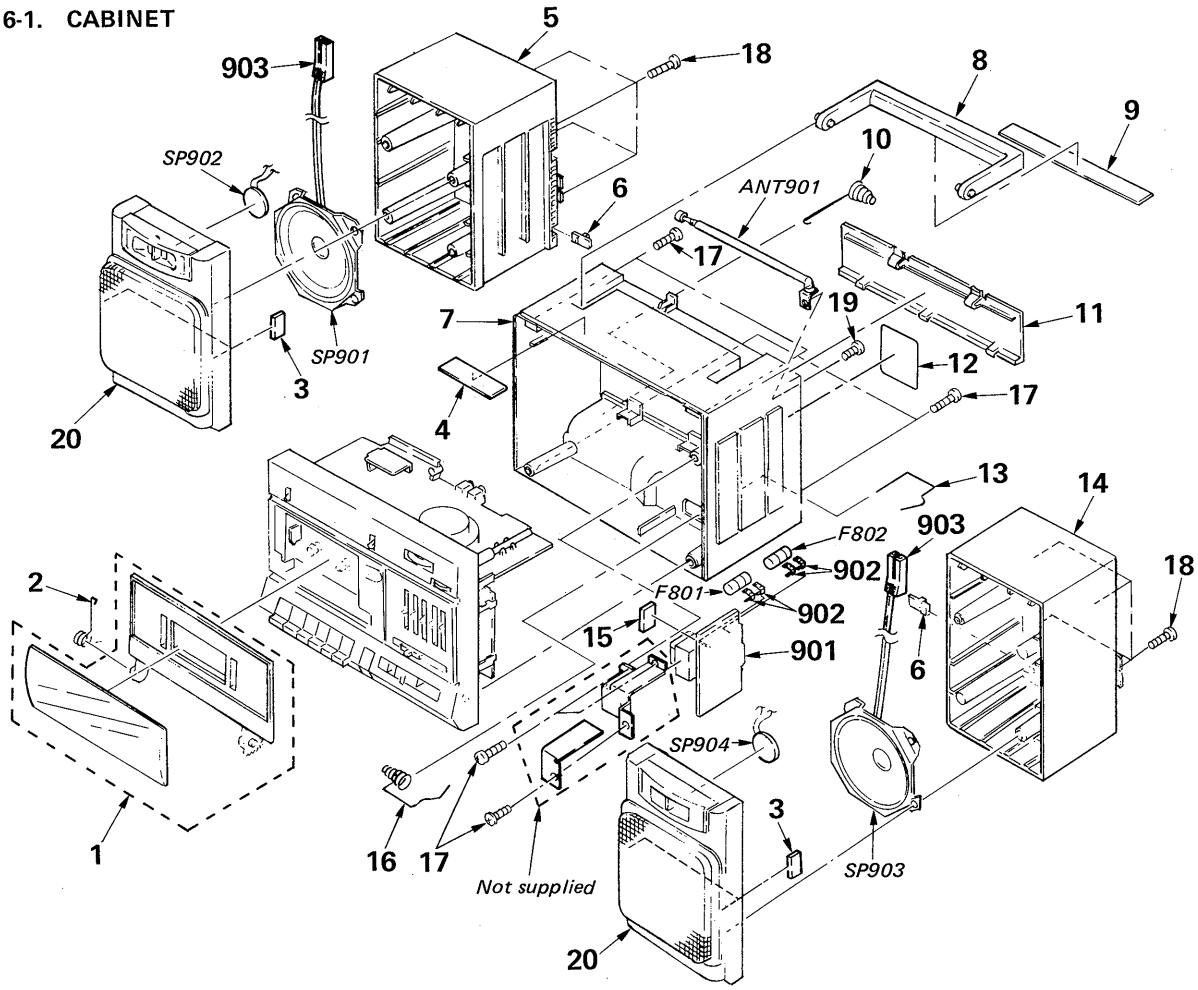
SECTION 6
EXPLODED VIEWS

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

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

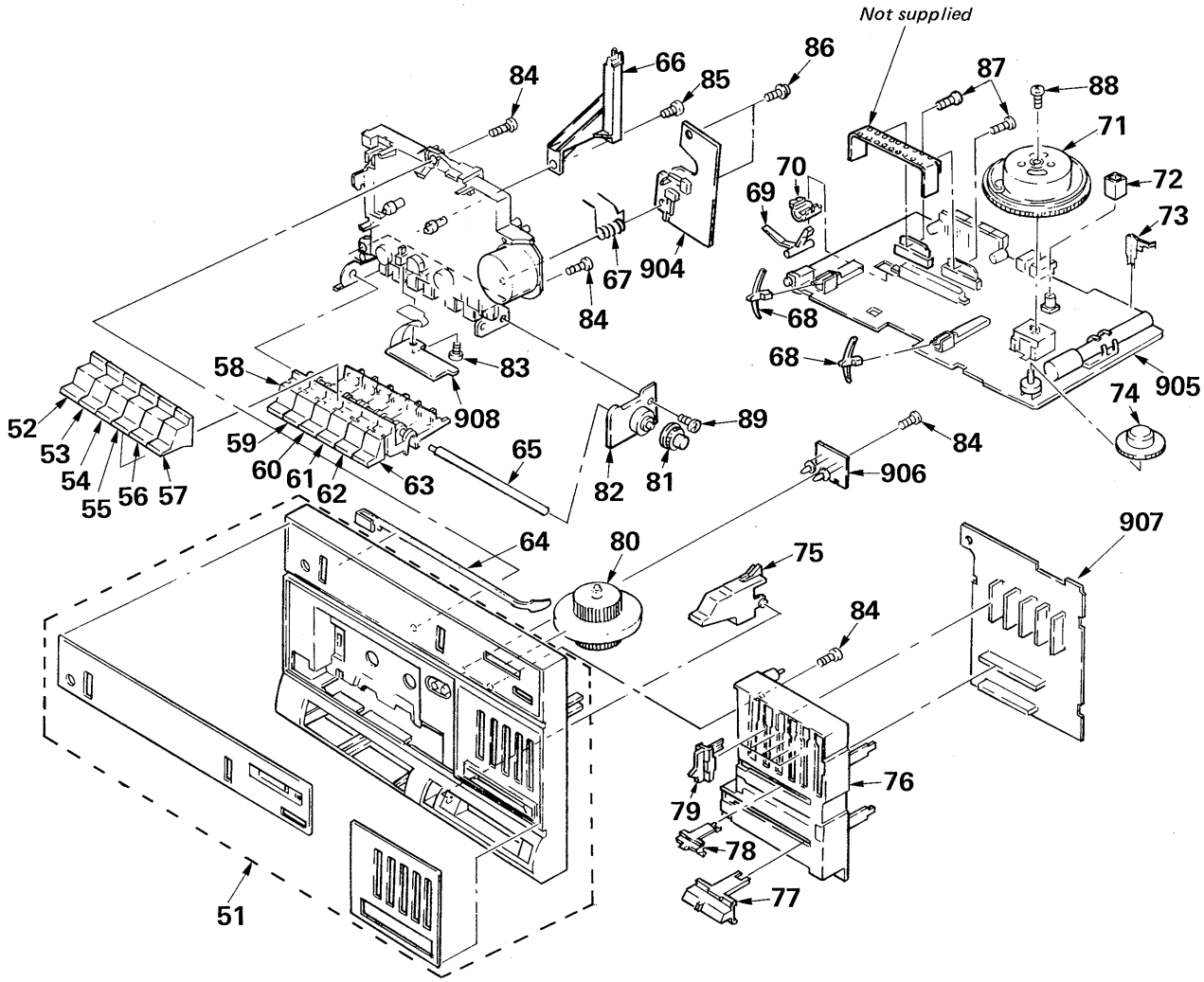
6-1. CABINET



No.	Part No.	Description	Remarks
1	X-3340-221-1	HOLDER ASSY, CASSETTE	
2	3-340-283-01	SPRING	
3	*3-338-547-01	CUSHION (A)	
4	4-884-927-00	LABEL (SYSTEM), CAUTION	
5	3-319-549-51	BOX (REAR) (LEFT), SPK	
6	3-319-598-01	CLAW, LOCK, SPK	
7	3-340-285-01	(E).....CABINET (REAR)	
	3-340-285-11	(Saudi Arabia)...CABINET (REAR)	
8	3-322-351-61	HANDLE	
9	3-340-248-01	PLATE, BLIND	
10	3-340-209-01	TERMINAL, BATTERY	
11	3-322-314-21	LID, BATTERY CASE	
12	3-340-288-01	(Saudi Arabia)...LABEL, MODEL NUMBER	
13	3-340-203-01	TERMINAL, PLUS	
14	3-319-548-51	BOX (REAR) (RIGHT), SPK	
15	9-911-843-XX	CUSHION (B)	

No.	Part No.	Description	Remarks
16	3-340-204-01	TERMINAL, MINUS	
17	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
18	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
19	7-682-550-04	SCREW +B 3X12	
20	X-3340-202-1	BOX (FRONT) ASSY, SPK	
901	1-627-484-11	PC BOARD, POWER	
902	1-533-183-11	HOLDER, FUSE	
903	1-559-620-11	CORD (WITH CONNECTOR)	
ANT901	1-501-306-11	ANTENNA, TELESCOPIC	
F801	⚠1-532-237-00	FUSE, TIME-LAG (3.15A)	
F802	⚠1-532-235-00	FUSE, TIME-LAG (3.15mA)	
SP901	1-544-004-11	SPEAKER	
SP902	1-529-058-11	BUZZER	
SP903	1-544-004-11	SPEAKER	
SP904	1-529-058-11	BUZZER	

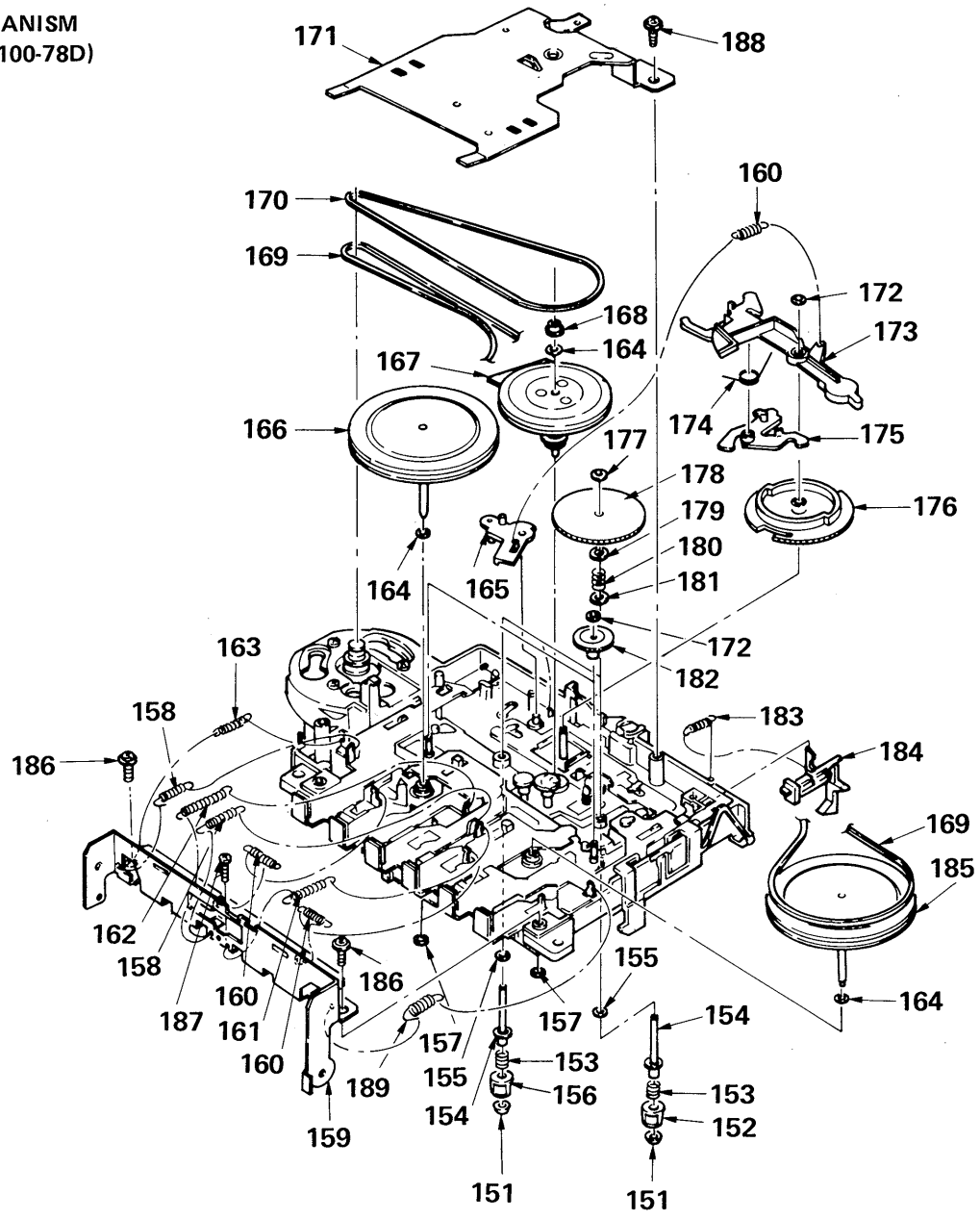
6-2. FRONT CABINET AND EACH BOARD



No.	Part No.	Description	Remarks
51	X-3340-222-1	(E).....PANEL ASSY	
	X-3340-223-1	(Saudi Arabia)...PANEL ASSY	
52	3-340-212-01	BUTTON, STOP	
53	3-340-213-01	BUTTON, REC	
54	3-340-214-01	BUTTON, PLAY	
55	3-340-215-01	BUTTON, REW	
56	3-340-216-01	BUTTON, FF	
57	3-340-217-01	BUTTON, PAUSE	
58	3-340-241-01	BASE, STOP BUTTON	
59	3-340-242-01	BASE, REC BUTTON	
60	3-340-243-01	BASE, PLAY BUTTON	
61	3-340-245-01	BASE, REW BUTTON	
62	3-340-244-01	BASE, FF BUTTON	
63	3-340-246-01	BASE, PAUSE BUTTON	
64	3-340-211-01	POINTER	
65	3-319-513-01	SHAFT, MD BUTTON	
66	*3-340-268-01	ARM, REC	
67	3-321-533-01	SPRING	
68	3-340-207-01	KNOB, FUNCTION	
69	3-322-317-01	LEVER, REC	
70	3-322-316-01	BRACKET, REC LEVER	
71	3-340-222-01	GEAR, VC	
72	*3-887-524-00	PLATE, SHIELD	

No.	Part No.	Description	Remarks
73	*3-340-202-01	TERMINAL BOARD, ANTENNA	
74	3-340-201-01	KNOB, FINE TUNE	
75	3-340-270-01	BUTTON, DIRECTION	
76	*3-340-275-01	CHASSIS, MOLD	
77	3-340-219-11	KNOB, VOL	
78	3-340-220-01	KNOB, BALANCE	
79	3-340-221-11	KNOB, GEQ	
80	3-340-218-11	KNOB, TUNING	
81	3-319-592-01	GEAR, SE	
82	*3-340-269-01	BEARING, SE	
83	7-627-553-28	SCREW, PRECISION +P 2X2.5	
84	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
85	7-621-770-XX	SCREW +BVTT 2.6X8 (S)	
86	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	
87	7-682-144-01	SCREW +P 3X3	
88	7-621-770-67	SCREW +P 2.6X6	
89	7-682-546-04	SCREW +P 3X5	
904	*1-627-482-11	PC BOARD, LEAF SW	
905	*A-3270-527-A	MOUNTED PCB, MAIN	
906	*1-627-485-11	PC BOARD, LED	
907	*A-3279-785-A	MOUNTED PCB, VR	
908	1-625-445-11	PC BOARD, FLEXIBLE	

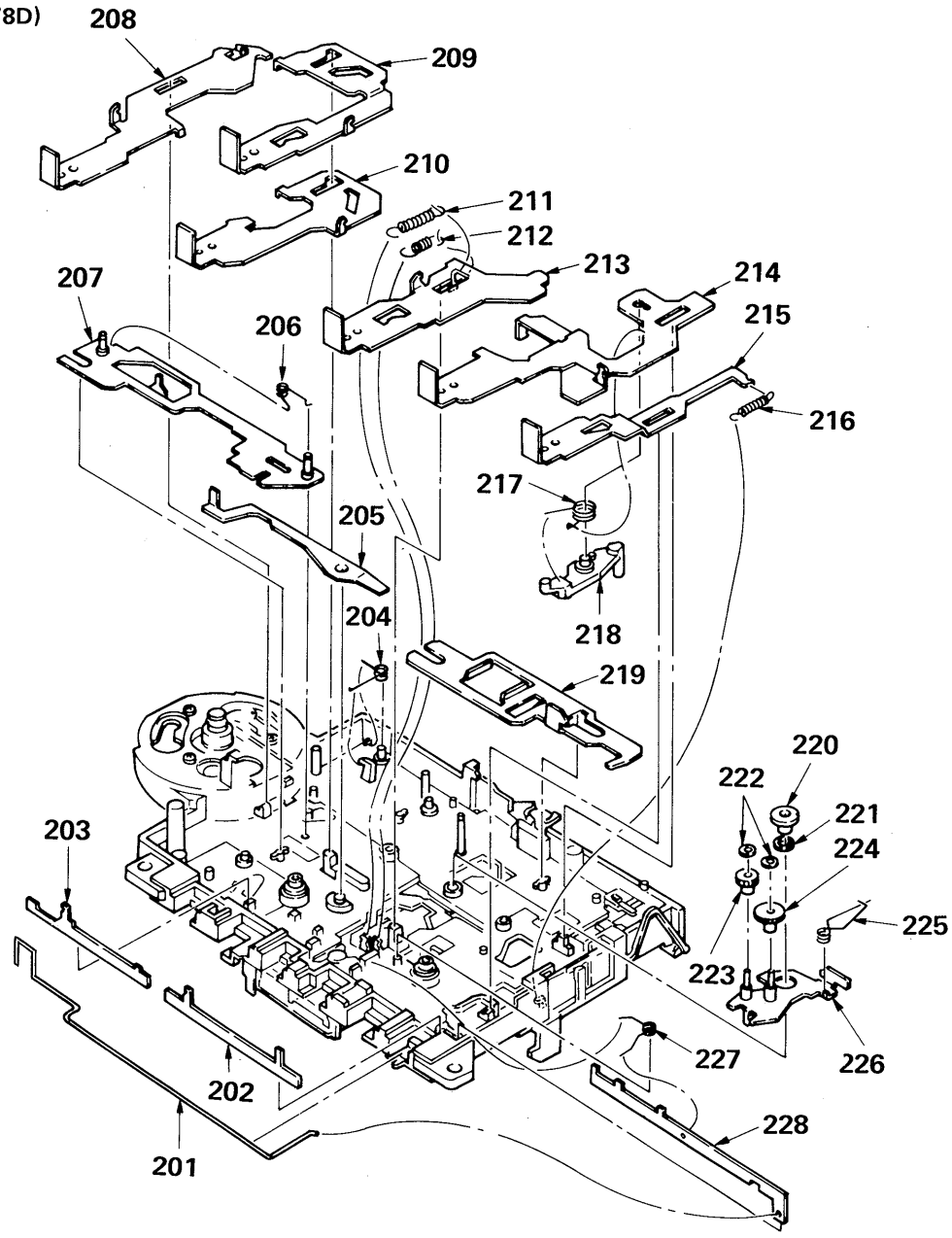
6-3. MECHANISM (MF-1100-78D)



No.	Part No.	Description	Remarks
151	3-307-362-00	CAP, REEL	
152	3-307-363-00	CLAW (N), REEL	
153	3-321-531-01	SPRING, COMPRESSION	
154	X-3321-501-1	BUSHING ASSY, REEL TABLE	
155	3-545-715-00	WASHER	
156	3-307-447-00	CLAW (R), REEL	
157	3-325-698-01	RING, RETAINING	
158	3-322-522-01	SPRING, TENSION	
159	*3-322-702-01	RETAINER (B), LEVER	
160	3-322-527-01	SPRING, TENSION	
161	3-322-526-01	SPRING, TENSION (POWER TENSION)	
162	3-328-103-01	SPRING, TENSION	
163	3-530-260-00	SPRING, TENSION	
164	3-701-437-11	WASHER	
165	3-330-827-01	LEVER (B), GEAR LOCK	
166	*X-3341-303-1	FLYWHEEL (FW) ASSY	
167	X-3322-540-1	DETECTION BLOCK ASSY	
168	3-322-566-01	BEARING, PULLEY	
169	3-322-533-01	BELT, CAPSTAN	
170	3-657-035-XX	BELT, COUNTER	

No.	Part No.	Description	Remarks
171	*3-322-519-01	RETAINER, THRUST	
172	3-307-948-01	WASHER, NYLON	
173	3-330-833-01	LEVER (C), OA	
174	3-322-534-01	SPRING	
175	3-330-826-01	LEVER (D), OA	
176	3-322-553-01	GEAR, CAM	
177	3-578-223-21	WASHER, NYLON	
178	3-322-508-01	GEAR, REEL	
179	3-322-660-01	WASHER (B)	
180	3-321-541-01	SPRING, COMPRESSION	
181	3-322-659-01	WASHER (A)	
182	3-322-556-01	GEAR, FR	
183	3-313-384-01	SPRING, TENSION	
184	3-322-511-01	CLAW, ERASING PROTECTION	
185	*X-3341-302-1	FLYWHEEL (RV) ASSY	
186	7-687-233-11	SCREW (+ PTPWH) (2.6X6)	
187	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT	
188	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
189	3-322-691-01	SPRING, TENSION	

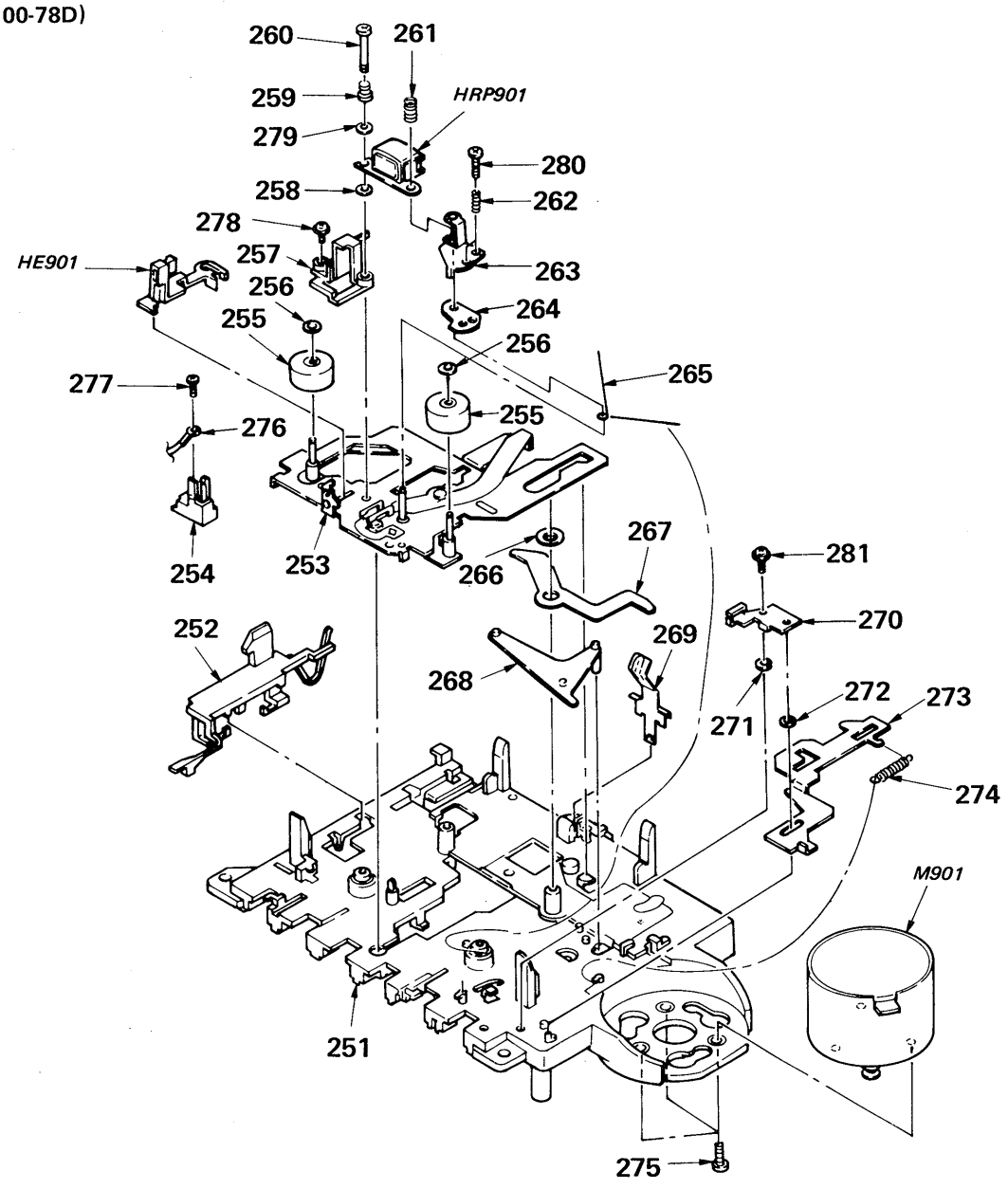
6-4. MECHANISM (MF-1100-78D)



No.	Part No.	Description	Remarks
201	*3-321-514-01	LEVER, SWITCH, POWER	
202	*3-322-588-01	PLATE (A), LOCK	
203	*3-322-587-01	PLATE (B), LOCK	
204	3-322-577-01	SPRING	
205	*3-322-517-01	LEVER, AMS	
206	3-322-578-01	SPRING	
207	*X-3322-505-1	LEVER ASSY, FR	
208	*3-330-829-21	LEVER (C), PAUSE BUTTON	
209	*3-322-515-21	LEVER, REW BUTTON	
210	*3-322-585-21	LEVER, FF BUTTON	
211	3-322-693-01	SPRING, TENSION	
212	3-322-520-01	SPRING, TENSION	
213	*3-322-584-21	LEVER, PLAY BUTTON	
214	*3-322-591-21	LEVER, REC BUTTON	

No.	Part No.	Description	Remarks
215	*3-322-583-21	LEVER, STOP BUTTON	
216	3-322-528-01	SPRING, TENSION	
217	3-322-575-01	SPRING	
218	3-322-554-01	ARM, REC LOCK	
219	*3-322-586-01	LEVER, DIRECTION	
220	3-322-513-01	COLLAR	
221	3-322-689-01	RING	
222	3-570-615-00	POLY-WASHER (DIA.1.2)	
223	3-343-145-01	GEAR (B), FWD	
224	3-343-146-01	GEAR (A), FWD	
225	3-322-576-01	SPRING	
226	*X-3339-320-1	ARM ASSY (M), FWD GEAR	
227	3-322-579-01	SPRING	
228	*3-322-589-01	LEVER, SWITCH	

6-5. MECHANISM (MF-1100-78D)



No.	Part No.	Description	Remarks
251	A-3102-109-A	CHASSIS ASSY, MECHANICAL	
252	3-322-701-01	LEVER (B), EJECT	
253	X-3337-810-1	CHASSIS (R) ASSY, HEAD	
254	3-326-625-01	RETAINER, PC BOARD	
255	3-703-597-41	PINCH ROLLER, STANDARD	
256	3-307-948-01	WASHER, NYLON	
257	*3-339-701-01	GUIDE, TAPE	
258	3-573-466-01	SPACER, HEAD (t=0.1)	
	3-573-466-11	SPACER, HEAD (t=0.2)	
259	3-318-106-01	SPRING (H), COMPRESSION	
260	3-322-567-11	SCREW, PAN, STEP	
261	3-341-163-01	SPRING, COMPRESSION	
262	3-322-531-01	SPRING, COMPRESSION	
263	*3-341-161-01	LEVER, AZIMUTH	
264	3-326-622-01	RETAINER, AZIMUTH	
265	3-341-164-01	SPRING	
266	3-701-443-11	WASHER	

No.	Part No.	Description	Remarks
267	*3-322-590-01	LEVER, DIRECTION RELEASE	
268	3-322-514-01	LINK (A)	
269	3-340-277-01	SPRING (M)	
270	*3-337-884-11	GUIDE (D), WIRING	
271	3-338-465-01	COLLAR (M)	
272	3-701-437-11	WASHER	
273	*3-322-594-01	LEVER, MANUAL BUTTON	
274	3-322-528-01	SPRING, TENSION	
275	7-621-259-35	SCREW +P 2.6X5	
276	7-623-505-01	LUG, 2	
277	7-621-255-65	SCREW +P 2X10	
278	7-621-772-20	SCREW +B 2X5	
279	7-688-001-01	W 2, SMALL	
280	7-627-851-27	SCREW, PRECISION +P 1.4X5	
281	7-685-105-19	SCREW (2X8), + PTPWH	
HE901	A-3114-042-A	ARM ASSY, EBF	
HRP901	1-543-389-41	HEAD, MAGNETIC (REC/PB)	
M901	A-3133-210-A	MOTOR ASSY	

SECTION 7
ELECTRICAL PARTS LIST

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: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

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

Ref.No.	Part No.	Description			
901	*1-627-484-11	PC BOARD, POWER			
902	1-533-183-11	HOLDER, FUSE			
903	1-559-620-11	CORD (WITH CONNECTOR)			
904	*1-627-482-11	PC BOARD, LEAF SW			
905	*A-3270-527-A	MOUNTED PCB, MAIN			
906	*1-627-485-11	PC BOARD, LED			
907	*A-3279-785-A	MOUNTED PCB, VR			
908	1-625-445-11	PC BOARD, FLEXIBLE			
ANT901	1-501-306-11	ANTENNA, TELESCOPIC			
C2	1-161-039-00	CERAMIC	0.001MF	10%	25V
C3	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C4	1-102-953-00	CERAMIC	18PF	5%	50V
C5	1-101-004-00	CERAMIC	0.01MF		50V
C6	1-101-004-00	CERAMIC	0.01MF		50V
C7	1-101-004-00	CERAMIC	0.01MF		50V
C8	1-102-603-00	(Saudi Arabia)..CERAMIC	30PF	5%	20V
C8	1-102-959-00	(E).....CERAMIC	22PF	5%	50V
C9	1-102-951-00	CERAMIC	15PF	5%	50V
C10	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C11	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C12	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C13	1-161-021-11	CERAMIC	0.047MF	10%	25V
C14	1-102-958-00	CERAMIC	20PF	5%	50V
C21	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C22	1-104-095-00	POLYSTYRENE	0.0056MF	5%	50V
C23	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C25	1-104-228-00	POLYSTYRENE	0.0015MF	5%	50V
C26	1-102-958-00	CERAMIC	20PF	5%	50V
C27	1-104-067-00	POLYSTYRENE	390PF	5%	50V
C28	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C29	1-161-021-11	CERAMIC	0.047MF	10%	25V
C31	1-101-005-00	CERAMIC	0.022MF		50V
C32	1-101-005-00	CERAMIC	0.022MF		50V
C33	1-101-005-00	CERAMIC	0.022MF		50V
C34	1-124-446-11	ELECT	47MF	20%	10V
C35	1-102-965-00	CERAMIC	39PF	5%	50V
C36	1-126-233-11	ELECT	22MF	20%	25V
C38	1-101-005-00	CERAMIC	0.022MF		50V
C39	1-123-875-11	ELECT	10MF	20%	50V
C41	1-161-055-00	CERAMIC	0.022MF	10%	25V
C42	1-102-106-00	CERAMIC	100PF	10%	50V
C50	1-124-902-00	ELECT	0.47MF	20%	50V
C51	1-161-051-00	CERAMIC	0.01MF	10%	25V
C52	1-123-382-00	ELECT	3.3MF	20%	50V

Ref.No.	Part No.	Description			
C53	1-124-499-11	ELECT	1MF	20%	50V
C54	1-130-471-00	FILM	0.001MF	5%	50V
C55	1-124-446-11	ELECT	47MF	20%	10V
C56	1-124-499-11	ELECT	1MF	20%	50V
C57	1-161-055-00	CERAMIC	0.022MF	10%	25V
C58	1-161-055-00	CERAMIC	0.022MF	10%	25V
C59	1-161-021-11	CERAMIC	0.047MF	10%	25V
C60	1-161-021-11	CERAMIC	0.047MF	10%	25V
C72	1-101-004-00	CERAMIC	0.01MF		50V
C101	1-123-382-00	ELECT	3.3MF	20%	50V
C102	1-161-039-00	CERAMIC	0.001MF	10%	25V
C103	1-102-114-00	CERAMIC	470PF	10%	50V
C104	1-124-446-11	ELECT	47MF	20%	10V
C105	1-101-884-00	CERAMIC	56PF	5%	50V
C106	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C107	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C108	1-123-875-11	ELECT	10MF	20%	50V
C109	1-124-499-11	ELECT	1MF	20%	50V
C110	1-161-039-00	CERAMIC	0.001MF	10%	25V
C111	1-124-446-11	ELECT	47MF	20%	10V
C112	1-124-446-11	ELECT	47MF	20%	10V
C113	1-124-480-11	ELECT	470MF	20%	25V
C114	1-126-101-11	ELECT	100MF	20%	16V
C115	1-102-122-00	CERAMIC	0.0027MF	10%	50V
C116	1-126-101-11	ELECT	100MF	20%	16V
C117	1-130-497-00	MYLAR	0.15MF	5%	50V
C118	1-130-497-00	MYLAR	0.15MF	5%	50V
C121	1-124-499-11	ELECT	1MF	20%	50V
C130	1-101-005-00	CERAMIC	0.022MF		50V
C201	1-123-382-00	ELECT	3.3MF	20%	50V
C202	1-161-039-00	CERAMIC	0.001MF	10%	25V
C203	1-102-114-00	CERAMIC	470PF	10%	50V
C204	1-124-446-11	ELECT	47MF	20%	10V
C205	1-101-884-00	CERAMIC	56PF	5%	50V
C206	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C207	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C208	1-123-875-11	ELECT	10MF	20%	50V
C209	1-124-499-11	ELECT	1MF	20%	50V
C210	1-161-039-00	CERAMIC	0.001MF	10%	25V
C211	1-124-446-11	ELECT	47MF	20%	10V
C212	1-124-446-11	ELECT	47MF	20%	10V
C213	1-124-480-11	ELECT	470MF	20%	25V
C214	1-126-101-11	ELECT	100MF	20%	16V
C215	1-102-122-00	CERAMIC	0.0027MF	10%	50V
C216	1-126-101-11	ELECT	100MF	20%	16V

Ref.No.	Part No.	Description			
C217	1-130-497-00	MYLAR	0.15MF	5%	50V
C218	1-130-497-00	MYLAR	0.15MF	5%	50V
C221	1-124-499-11	ELECT	1MF	20%	50V
C230	1-101-005-00	CERAMIC	0.022MF		50V
C301	1-124-119-00	ELECT	330MF	20%	16V
C302	1-126-233-11	ELECT	22MF	20%	25V
C304	1-124-480-11	ELECT	470MF	20%	25V
C306	1-130-481-00	MYLAR	0.0068MF	5%	50V
C307	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C308	1-124-443-00	ELECT	100MF	20%	10V
C310	1-126-176-11	ELECT	220MF	20%	10V
C311	1-101-004-00	CERAMIC	0.01MF		50V
C312	1-101-005-00	CERAMIC	0.022MF		50V
C320	1-126-176-11	ELECT	220MF	20%	10V
C324	1-124-443-00	ELECT	100MF	20%	10V
C325	1-124-477-11	ELECT	47MF	20%	25V
C401	1-124-499-11	ELECT	1MF	20%	50V
C402	1-102-106-00	CERAMIC	100PF	10%	50V
C403	1-161-054-00	CERAMIC	0.018MF	10%	25V
C404	1-124-254-00	ELECT	0.68MF	20%	50V
C405	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C406	1-124-464-11	ELECT	0.22MF	20%	50V
C407	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C408	1-161-023-00	CERAMIC	0.068MF	10%	25V
C409	1-102-115-00	CERAMIC	560PF	10%	50V
C410	1-161-053-00	CERAMIC	0.015MF	10%	25V
C411	1-161-053-00	CERAMIC	0.015MF	10%	25V
C413	1-124-927-11	ELECT	4.7MF	20%	50V
C414	1-124-927-11	ELECT	4.7MF	20%	50V
C415	1-102-114-00	CERAMIC	470PF	10%	50V
C501	1-124-499-11	ELECT	1MF	20%	50V
C502	1-102-106-00	CERAMIC	100PF	10%	50V
C503	1-161-054-00	CERAMIC	0.018MF	10%	25V
C504	1-124-254-00	ELECT	0.68MF	20%	50V
C505	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C506	1-124-464-11	ELECT	0.22MF	20%	50V
C507	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C508	1-161-023-00	CERAMIC	0.068MF	10%	25V
C509	1-102-115-00	CERAMIC	560PF	10%	50V
C510	1-161-053-00	CERAMIC	0.015MF	10%	25V
C511	1-161-053-00	CERAMIC	0.015MF	10%	25V
C513	1-124-927-11	ELECT	4.7MF	20%	50V
C514	1-124-927-11	ELECT	4.7MF	20%	50V
C515	1-102-114-00	CERAMIC	470PF	10%	50V
C601	1-124-443-00	ELECT	100MF	20%	10V
C602	1-124-446-11	ELECT	47MF	20%	10V
C701	1-101-004-00	CERAMIC	0.01MF		50V
C702	1-101-004-00	CERAMIC	0.01MF		50V
C801 ⚠	1-124-564-11	ELECT	4700MF	20%	25V
C802	1-101-005-00	CERAMIC	0.022MF		50V
C803	1-101-005-00	CERAMIC	0.022MF		50V
C804	1-101-005-00	CERAMIC	0.022MF		50V
CF1, CF2	1-567-802-71	FILTER, CERAMIC			
CFT1	1-236-047-11	ENCAPSULATED COMPONENT			
⚠CNJ801	1-526-838-11	INLET, AC 2P			

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

Ref.No.	Part No.	Description
CNP1	*1-564-778-11	PLUG, CONNECTOR (2.5MM) 4P
CNP2	*1-564-777-11	PLUG, CONNECTOR (2.5MM) 2P
CNP3	*1-564-779-11	PLUG, CONNECTOR (2.5MM) 6P
CNP4	*1-506-709-11	PLUG, CONNECTOR (2.5MM) 7P
CP1	1-235-911-11	FILTER, BAND PASS
CT1-4, CV1-4	1-151-498-11	CAP, VAR, POLYETHYLENE
CT5	1-141-290-41	CAP, VAR FILM TRIMMER
CT6	1-141-290-41	CAP, VAR FILM TRIMMER
CT7	1-141-290-41	CAP, VAR FILM TRIMMER
CT8	1-141-290-41	CAP, VAR FILM TRIMMER
CV5	1-141-324-11	CAP, VAR, TRIMMER
D1	8-719-911-19	DIODE 1SS119
D3	8-719-911-19	DIODE 1SS119
D4	8-719-945-41	DIODE SLR-34VR5
D5	8-719-911-19	DIODE 1SS119
D6	8-719-911-19	DIODE 1SS119
D302	8-719-109-93	DIODE RD6.2ES-B2
D303	8-719-911-19	DIODE 1SS119
D701	8-719-945-41	DIODE SLR-34VR5
D702	8-719-945-41	DIODE SLR-34VR5
D703	8-719-110-08	DIODE RD8.2ES-B2
D801 ⚠	8-719-500-32	DIODE D3SB10
F801 ⚠	1-532-237-00	FUSE, TIME-LAG (3.15A)
F802 ⚠	1-532-235-00	FUSE, TIME-LAG (3.15mA)
HE901	A-3114-042-A	ARM ASSY, EBF
HRP901	1-543-389-41	HEAD, MAGNETIC (REC/PB)
IC1	8-759-204-03	IC TA7358AP
IC2	8-759-801-24	IC LA1260S
IC3	8-759-203-87	IC TA7343AP
IC101	8-759-230-13	IC TA8207K
IC201	8-759-230-13	IC TA8207K
IC301	8-759-205-91	IC TA7668BP
IC601	8-759-970-44	IC BA3824LS
J101	1-507-777-00	JACK, SMALL TYPE (EXT MIC L)
J201	1-507-777-00	JACK, SMALL TYPE (EXT MIC R)
J301	1-566-891-11	JACK (HEADPHONES)
J901	1-537-114-11	TERMINAL BOARD
L1	1-422-317-31	COIL (FM RF)
L2	1-459-736-11	COIL (WITH CORE)(FM OSC)
L5	1-402-249-11	COIL, SW2 ANT
L6	1-402-263-11	ANTENNA, FERRITE-ROD (MW)
L7	1-402-251-11	COIL, ANT (SW1)
L8	*1-409-293-00	COIL, AIR CORE
L9	1-406-221-11	COIL, SW2 OSC
L10	1-406-220-11	COIL, OSC (SW1)
L11	1-406-059-00	COIL, OSC (MW)
L13	1-408-563-00	INDUCTOR 10UH
M901	A-3133-210-A	MOTOR ASSY
Q301	8-729-900-74	TRANSISTOR DTC143TS
Q302	8-729-177-32	TRANSISTOR 2SD773
Q303	8-729-600-60	TRANSISTOR 2SA1115P
Q304	8-729-281-53	TRANSISTOR 2SC1815GR
Q401	8-729-900-74	TRANSISTOR DTC143TS
Q501	8-729-900-74	TRANSISTOR DTC143TS
Q701	8-729-904-27	TRANSISTOR 2SD1761-E
Q702	8-729-600-60	TRANSISTOR 2SA1115P

Ref.No.	Part No.	Description			
R1	1-249-413-11	CARBON	470	5%	1/4W
R2	1-249-405-11	CARBON	100	10%	1/32W
R3	1-249-395-11	CARBON	15	5%	1/4W
R4	1-249-405-11	CARBON	100	10%	1/32W
R11	1-249-426-11	CARBON	5.6K	10%	1/32W
R12	1-249-421-11	CARBON	2.2K	10%	1/32W
R13	1-249-433-11	CARBON	22K	10%	1/32W
R20	1-249-409-11	CARBON	220	10%	1/32W
R50	1-249-417-11	CARBON	1K	10%	1/32W
R51	1-249-429-11	CARBON	10K	10%	1/32W
R52	1-249-416-11	CARBON	820	10%	1/32W
R53	1-215-473-00	CARBON	150K	10%	1/32W
R54	1-249-402-11	CARBON	56	5%	1/4W
R55	1-249-423-11	CARBON	3.3K	10%	1/32W
R56	1-249-423-11	CARBON	3.3K	10%	1/32W
R57	1-247-878-00	CARBON	91K	5%	1/4W
R58	1-247-878-00	CARBON	91K	5%	1/4W
R59	1-249-441-11	CARBON	100K	5%	1/4W
R60	1-249-441-11	CARBON	100K	5%	1/4W
R61	1-249-433-11	CARBON	22K	5%	1/4W
R101	1-249-421-11	CARBON	2.2K	5%	1/4W
R102	1-249-408-11	CARBON	180	5%	1/4W
R103	1-249-435-11	CARBON	33K	5%	1/4W
R104	1-249-421-11	CARBON	2.2K	10%	1/32W
R105	1-249-406-11	CARBON	120	10%	1/32W
R107	1-249-431-11	CARBON	15K	5%	1/4W
R108	1-249-417-11	CARBON	1K	10%	1/32W
R109	1-249-403-11	CARBON	68	5%	1/4W
R110	1-249-405-11	CARBON	100	5%	1/4W
R111	1-249-411-11	CARBON	330	10%	1/32W
R112	1-249-403-11	CARBON	68	5%	1/4W
R113	1-249-418-11	CARBON	1.2K	5%	1/4W
R114 ⚠	1-217-639-00	FUSIBLE	2.2	5%	1/4W F
R115 ⚠	1-217-639-00	FUSIBLE	2.2	5%	1/4W F
R201	1-249-421-11	CARBON	2.2K	5%	1/4W
R202	1-249-408-11	CARBON	180	5%	1/4W
R203	1-249-435-11	CARBON	33K	5%	1/4W
R204	1-249-421-11	CARBON	2.2K	10%	1/32W
R205	1-249-406-11	CARBON	120	10%	1/32W
R207	1-249-431-11	CARBON	15K	5%	1/4W
R208	1-249-417-11	CARBON	1K	10%	1/32W
R209	1-249-403-11	CARBON	68	5%	1/4W
R210	1-249-405-11	CARBON	100	5%	1/4W
R211	1-249-411-11	CARBPN	330	10%	1/32W
R212	1-249-403-11	CARBON	68	5%	1/4W
R213	1-249-418-11	CARBON	1.2K	5%	1/4W
R214 ⚠	1-217-639-00	FUSIBLE	2.2	5%	1/4W F
R215 ⚠	1-217-639-00	FUSIBLE	2.2	5%	1/4W F
R301	1-249-402-11	CARBON	56	5%	1/4W
R302	1-249-402-11	CARBON	56	5%	1/4W
R304	1-249-420-11	CARBON	1.8K	10%	1/32W
R307	1-249-437-11	CARBON	47K	10%	1/32W
R308	1-249-405-11	CARBON	100	5%	1/4W
R309	1-249-429-11	CARBON	10K	5%	1/4W
R310	1-249-413-11	CARBON	470	5%	1/4W
R311	1-249-405-11	CARBON	100	5%	1/4W
R312	1-249-395-11	CARBON	15	5%	1/4W
R313	1-249-395-11	CARBON	15	5%	1/4W
R314 ⚠	1-217-641-00	FUSIBLE	4.7	5%	1/4W F
R315	1-249-421-11	CARBON	2.2K	5%	1/4W
R401	1-249-425-11	CARBON	4.7K	10%	1/32W
R402	1-249-419-11	CARBON	1.5K	10%	1/32W
R403	1-215-442-00	CARBON	7.5K	10%	1/32W
R501	1-249-425-11	CARBON	4.7K	10%	1/32W
R502	1-249-419-11	CARBPN	1.5K	10%	1/32W
R503	1-215-442-00	CARBON	7.5K	10%	1/32W
R601	1-249-402-11	CARBON	56	5%	1/4W
R602	1-249-437-11	CARBON	47K	10%	1/32W

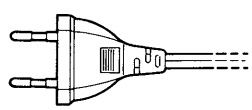
Ref.No.	Part No.	Description			
R701	1-249-416-11	CARBON	820	5%	1/4W
R702	1-249-410-11	CARBON	270	10%	1/32W
R703	1-249-425-11	CARBON	4.7K	5%	1/4W
R704	1-249-437-11	CARBON	47K	5%	1/4W
R705 ⚠	1-217-637-00	FUSIBLE	1	5%	1/4W F
R706	1-249-411-11	CARBON	330	5%	1/4W
R707	1-249-405-11	CARBON	100	5%	1/4W
R710	1-249-425-11	CARBON	4.7K	5%	1/4W
RV1	1-228-993-00	RES, ADJ, CARBON 5K			
RV601	1-237-275-11	RES, VAR, SLIDE 100K/100K (10kHz)			
RV602	1-237-275-11	RES, VAR, SLIDE 100K/100K (4kHz)			
RV603	1-237-275-11	RES, VAR, SLIDE 100K/100K (1kHz)			
RV604	1-237-275-11	RES, VAR, SLIDE 100K/100K (400Hz)			
RV605	1-237-275-11	RES, VAR, SLIDE 100K/100K (100Hz)			
RV606	1-237-568-11	RES, VAR, SLIDE 50K (BALANCE)			
RV607	1-238-280-11	RES, VAR, SLIDE 20K/20K (VOLUME)			
S1	1-554-916-11	SWITCH, LEVER SLIDE (BAND)			
S301	1-570-934-11	SWITCH, SLIDE (REC/PB)			
S302	1-570-932-11	SWITCH, LEVER SLIDE (FUNCTION)			
S401	1-570-943-11	SWITCH, SLIDE (DIRECTION)			
S701	1-570-441-11	SWITCH, LEAF (MD POWER)			
S702	1-570-012-11	SWITCH, LEAF (FF/REW)			
S801 ⚠	1-552-921-00	SWITCH, POWER (VOLTAGE SELECTOR)			
SP901	1-544-004-11	SPEAKER			
SP902	1-529-058-11	BUZZER			
SP903	1-544-004-11	SPEAKER			
SP904	1-529-058-11	BUZZER			
T1	1-403-872-00	I.F.T CONVERTER FM (SMALL TYPE)			
T2	1-404-249-00	COIL, FM DETECTOR			
T301	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR			
T801 ⚠	1-449-384-11	TRANSFORMER, POWER			

ACCESSORY & PACKING MATERIAL

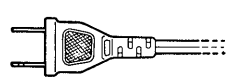
⚠ 1-506-401-00	(Saudi Arabia)...ADAPTOR, CONVERSION
⚠ 1-526-565-00	(E23)...AC PLUG ADAPTOR
⚠ 1-559-050-11	(E12).....CORD, POWER
⚠ 1-559-048-11	(E23).....CORD, POWER
⚠ 1-555-234-00	(Saudi Arabia)...CORD, POWER
3-786-340-11	MANUAL, INSTRUCTION
*3-340-237-01	CUSHION
*3-340-238-01	SHEET (A), PROTECTION
*3-340-239-01	SHEET (B), PROTECTION
*3-340-287-11	(E).....INDIDUAL CARTON
*3-340-287-01	(Saudi Arabia)...INDIDUAL CARTON
4-884-927-00	LABEL (SYSTEM), CAUTION

AC POWER CORD

- **E12 model**
  Euro-plug
  (1-559-050-11)



- **E23 model**
  Parallel blade plug
  (1-559-048-11)



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

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Audio Group

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