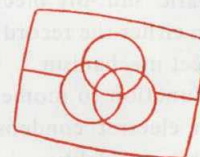
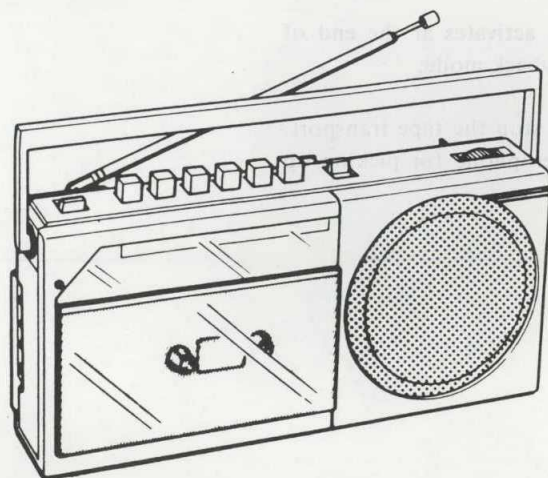


# CFM-100L

## SERVICE MANUAL

AEP Model  
UK Model



Free service manuals  
Gratis schema's

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**NOTE:**  
SUPPLIED AC POWER ADAPTOR IS  
NOT SERVICEABLE.  
WHEN IT IS DAMAGED, ORDER NEW  
ONE.

### SPECIFICATIONS

#### Radio section

Frequency range FM 88 – 106MHz  
MW 530 – 1,600 kHz (566 – 187 m)  
LW 150 – 250 kHz (2000 – 1200m)

Antennas FM: Telescopic antenna  
MW/LW: Built-in ferrite bar antenna

#### Dimensions

Approx. 286 x 142 x 69 mm (w/h/d)  
(11<sup>3</sup>/<sub>8</sub> x 5<sup>5</sup>/<sub>8</sub> x 2<sup>3</sup>/<sub>4</sub> inches)  
incl. projecting parts and controls  
not incl. handle

#### Weight

Approx. 1.5 kg (3 lb 5 oz)  
incl. batteries

#### Accessory supplied

AC power adaptor (1)

Design and specifications subject to change without notice.

#### Tape recorder section and general

Recording system 2-track 1-channel monaural  
Fast winding time Approx. 1 min. 30 sec. with Sony C-60 cassette  
Frequency response 100 – 8,000 Hz  
Speaker Approx. 9.2 cm (3<sup>5</sup>/<sub>8</sub> inches) dia.  
Power output 2W (at 10% harmonic distortion)  
Input Microphone input jack (minijack)  
sensitivity 1.25 mV (-56 dB)  
for low impedance microphone

Output Earphone jack (minijack)  
for 8-ohm earphone or load impedance  
10 kilohms or higher

Power requirements 6 V dc, four batteries, IEC designation R14  
(size C)  
UK model: 240 V ac, 50Hz with the supplied  
ac power adaptor  
AEP model: 220 V ac, 50Hz with the supplied  
ac power adaptor

Power consumption 8W ac with the supplied ac power adaptor  
Battery life Approx. 6.5 hours of recording  
Approx. 7 hours of playback  
with Sony SUM-2(NS) New super batteries  
Approx. 13 hours of recording  
Approx. 14 hours of playback  
with Sony Eveready AM2 Alkaline batteries

0 dB = 0.775 V

Tape Transport Mechanism Type	MDS-12V2
-------------------------------	----------

#### SAFETY-RELATED COMPONENT WARNING!!

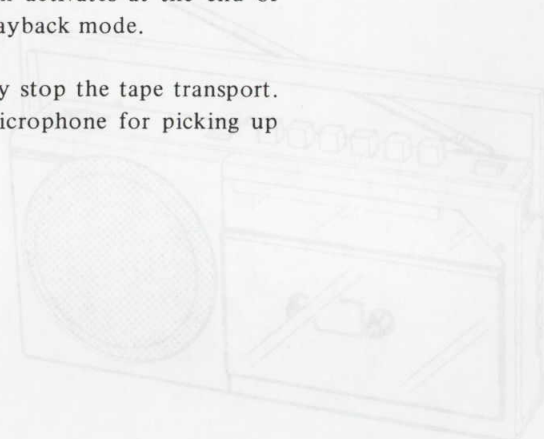
COMPONENTS IDENTIFIED BY SHADING AND MARK  
⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE  
PARTS LIST ARE CRITICAL TO SAFE OPERATION.  
REPLACE THESE COMPONENTS WITH SONY PARTS  
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS  
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

FM/MW/LW  
CASSETTE-CORDER  
**SONY**®



### FEATURES

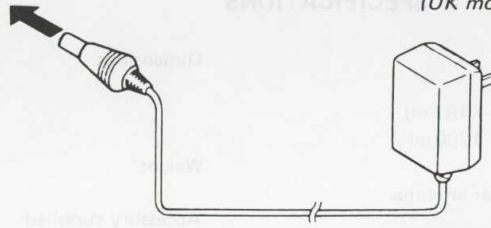
- The cassette-corder combined with a high-quality radio.
- With the Sony variable level recording monitor system, a program to be recorded may be listened to at any desired sound volume and tone control settings without affecting the recording.
- Automatic shut-off mechanism activates at the end of the tape in either the record or playback mode.
- Soft-eject mechanism
- Pause function to momentarily stop the tape transport.
- Built-in electret condenser microphone for picking up sound with true fidelity.



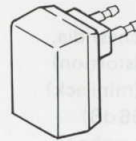
### HOW TO USE

Connect the AC-180T as illustrated.

- 1 to the Sony CFM-100L cassette-corder external power input jack (6 V dc)
- 2 to a mains outlet (240 V ac, 60 Hz) (UK model)



- 2 to a mains outlet (220 V ac, 50 Hz) (AEP model)

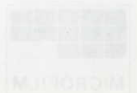


0.4B - 0.735V

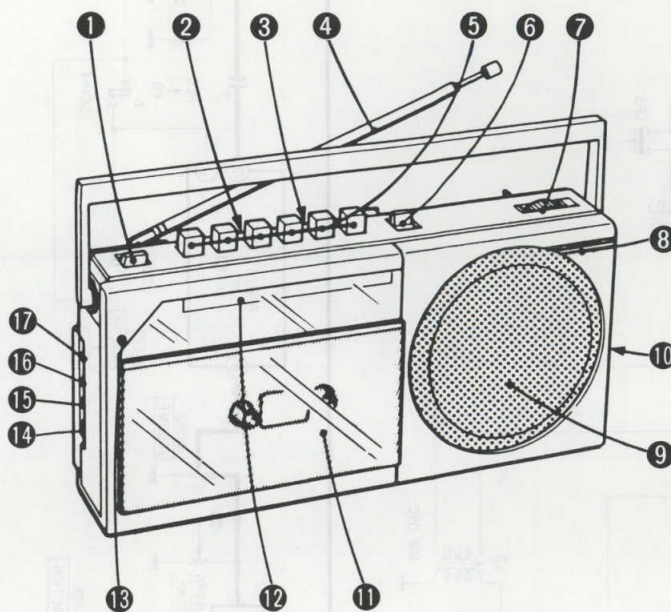
MDS-12V2	Tape Transport Mechanism Type
----------	-------------------------------

#### Notes:

- When the AC-180T is connected to your CFM-100L cassette-corder the internal battery supply is switched to mains supply.
- Be sure to remove the AC-180T from the mains outlet and the external power input jack of your CFM-100L cassette-corder when the AC-180T is not in use.



## LOCATION AND FUNCTION OF CONTROLS

**1 FUNCTION selector:**

**RADIO:** For listening to or recording radio programs.

**TAPE RADIO OFF:** For playing back the tape, or for recording from the built-in microphone or from the EXT MIC jack.

When the set is not in use, be sure to set this selector to **TAPE RADIO OFF**.

**2 VOLUME control:** Slide towards right for more volume.

**3 TONE control:** Slide towards right for more treble, and towards left for less treble.

**4 Telescopic antenna:** Used for the FM reception.

**5 Tape operation mode select buttons**

**PAUSE:** Depress to momentarily stop the tape during recording or playback. To restart, press it again.

To stop the tape for an extended time, or when in fast forward or rewind mode, use the STOP/EJECT button.

**REC:** Depress to record.

**FF (fast forward):** Depress to advance the tape rapidly.

**PLAY:** Depress for playback.

**STOP/EJECT:** Press to stop the tape and to release the locked button. Press again to open the cassette holder.

**REW (rewind):** Depress to rewind the tape.

**6 BAND selector:** Choose the desired band.

**FM:** For listening to or recording FM broadcasts.

**MW:** For listening to or recording MW broadcasts.

**LW (For type 1 and 2 models):** For listening to or recording LW broadcasts.

**7 TUNING knob:** Turn to select the frequency of the desired station, as marked on the dial scale.

**8 Built-in microphone**

**9 Speaker**

**10 Battery compartment (rear):** Insert four IEC designation R14 batteries (size C).

**11 Cassette holder**

**12 Dial scale**

**13 Operation/battery indicator:** Lights up to show operation. During battery operation, if the batteries become weak, the light will glow faintly. When the batteries are completely exhausted, the indicator will not light. In this case replace all the batteries with new ones.

**14 ISS (Interference suppress switch)**

While recording FM, MW or LW programs, if a beat (whistling noise) is heard, which does not occur before depressing the REC button, set this switch to 1 or 2.

**15 DC IN 6 V (external power input) jack**

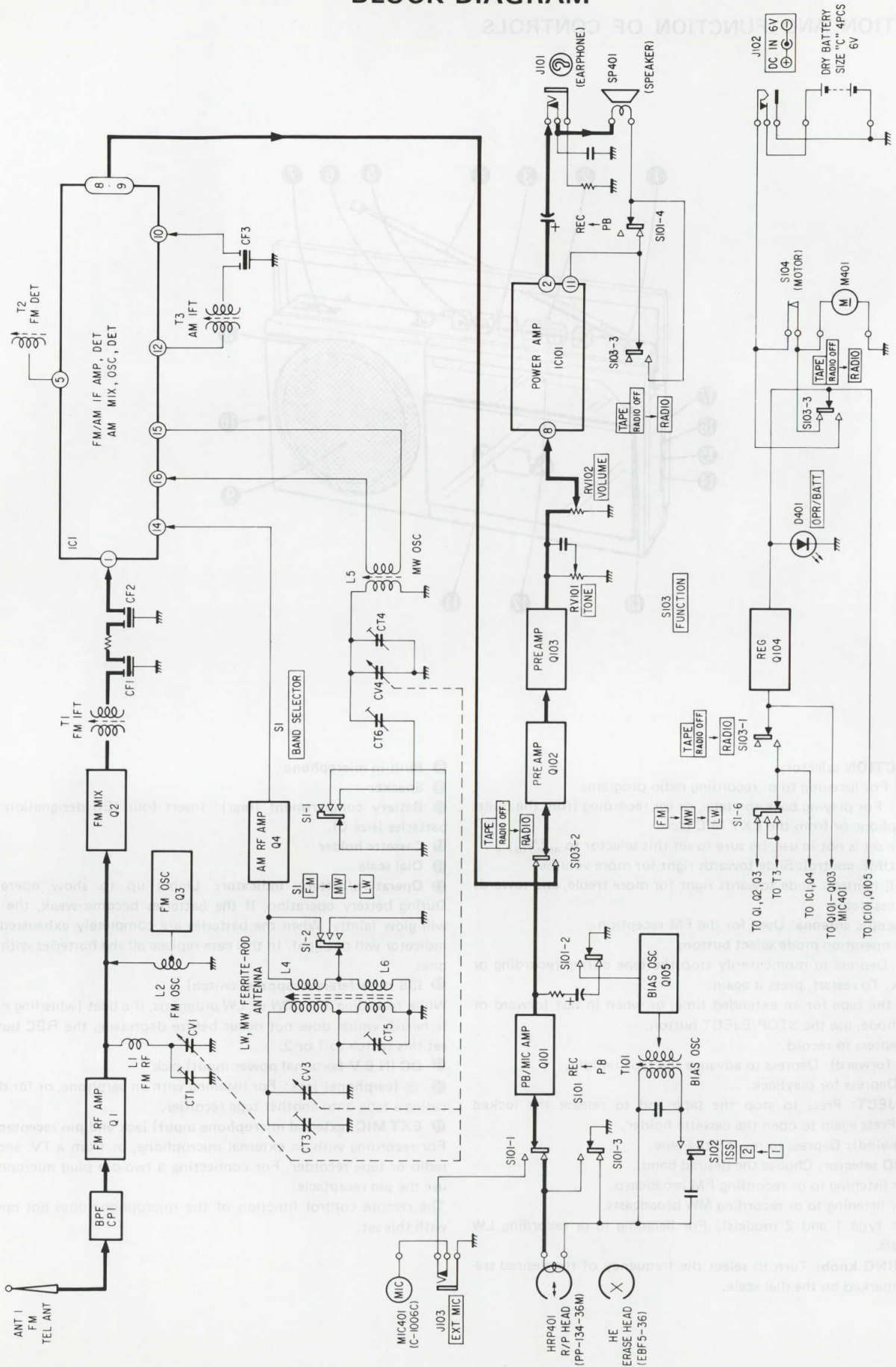
**16  $\otimes$  (earphone) jack:** For listening with an earphone, or for duplicating a tape onto another tape recorder.

**17 EXT MIC (external microphone input) jack and pin receptacle**

For recording with an external microphone, or from a TV, another radio or tape recorder. For connecting a two-pin plug microphone, use the pin receptacle.

The remote control function of the microphone does not operate with this set.

# SECTION 1 BLOCK DIAGRAM



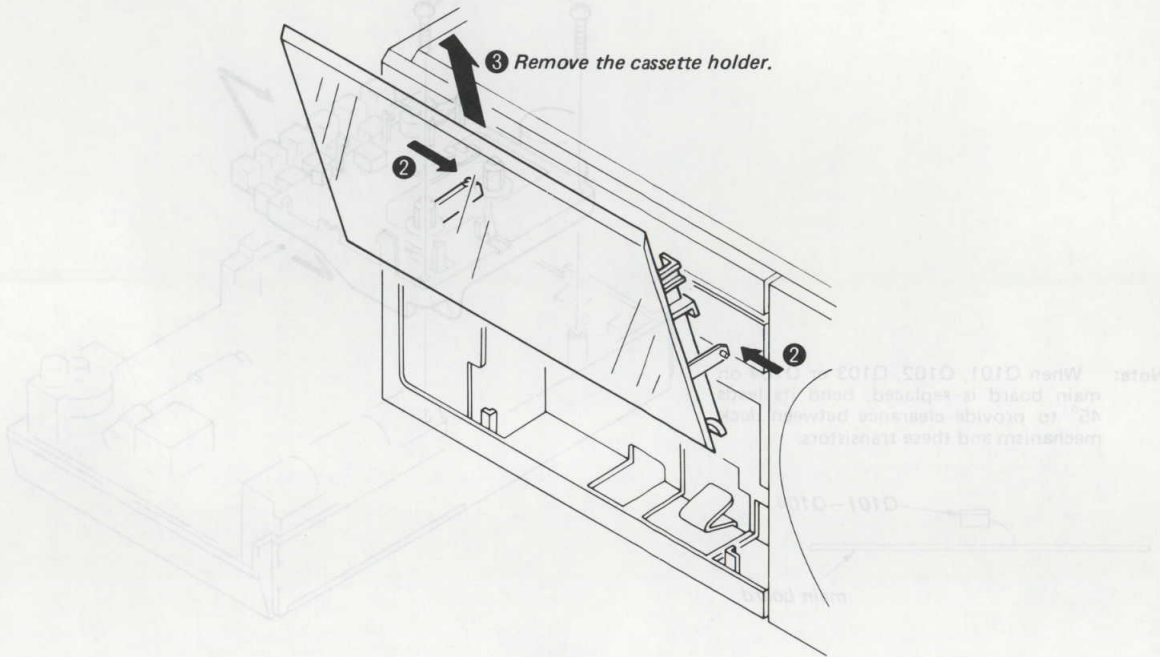
# SECTION 2 DISASSEMBLY

## 2-1. REMOVAL

- Follow the disassembly procedure in the numerical order given.

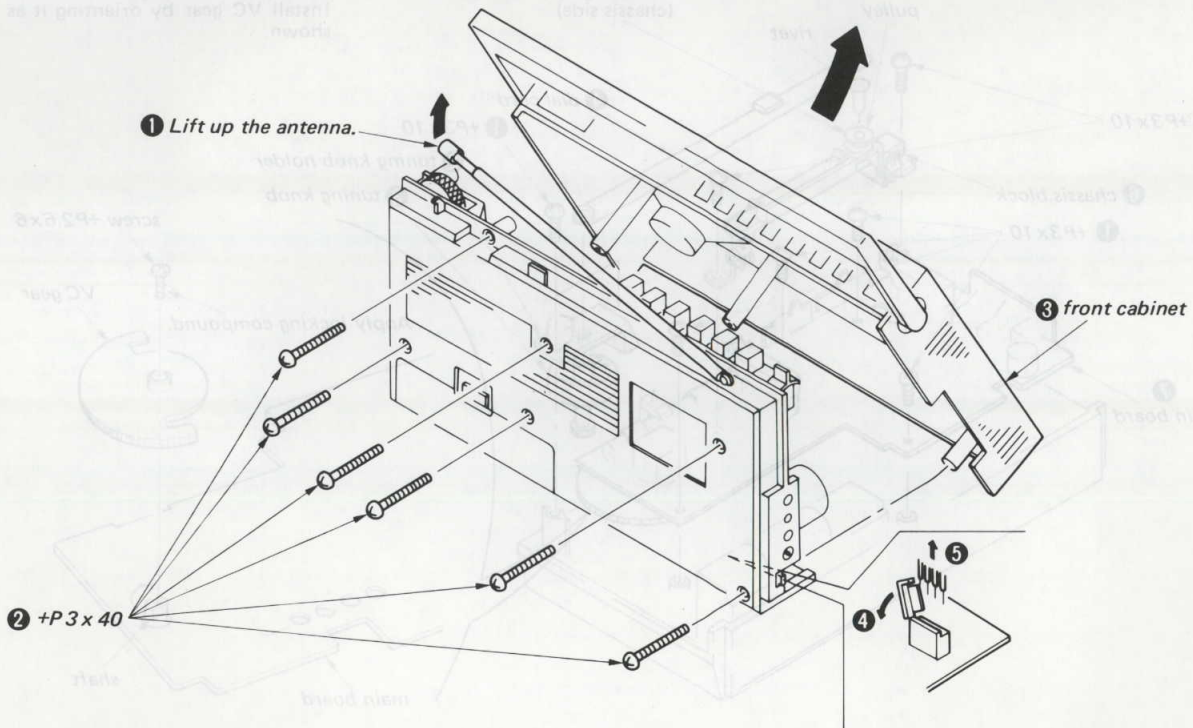
### CABINET REMOVAL (1)

- 1 Push STOP/EJECT button to open the cassette holder.



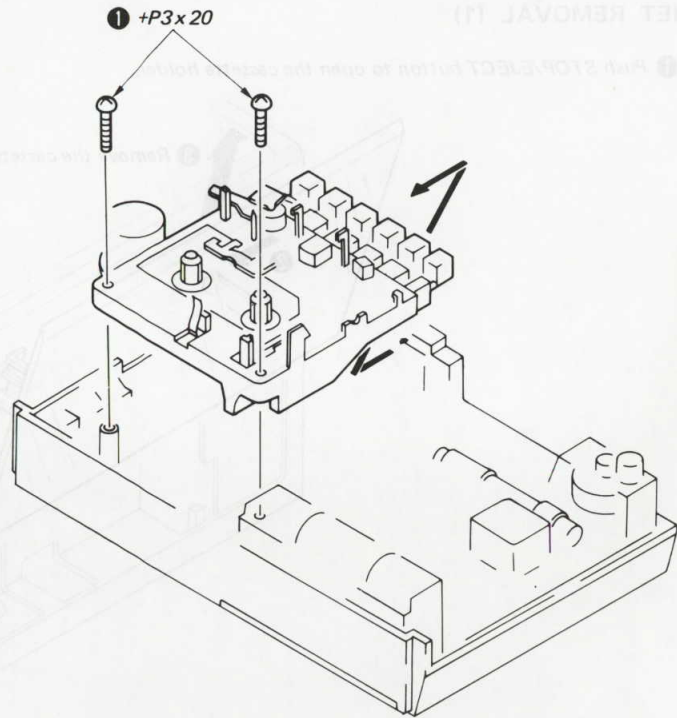
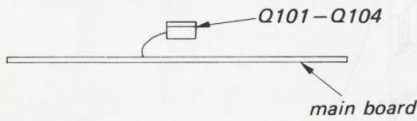
### CABINET REMOVAL (2)

- 1 Lift up the antenna.



### DECK MECHANISM REMOVAL

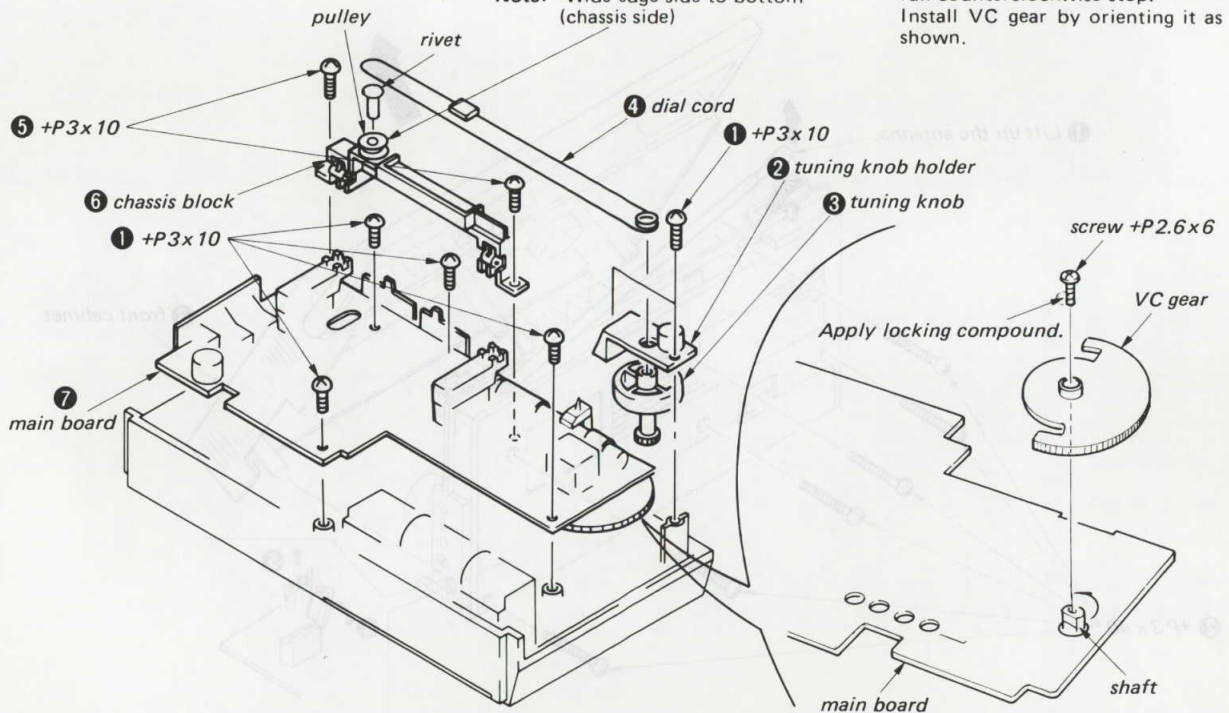
**Note:** When Q101, Q102, Q103 or Q104 on main board is replaced, bend its leads 45° to provide clearance between deck mechanism and these transistors.



### MAIN BOARD REMOVAL

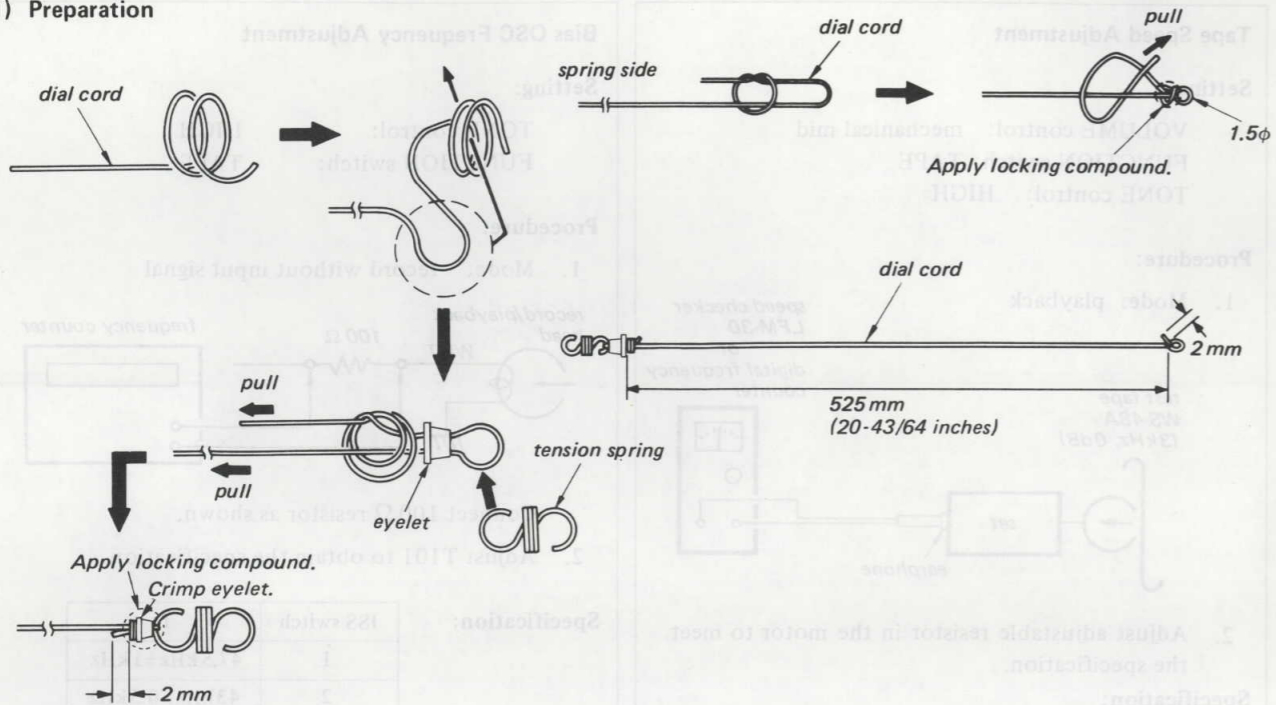
**Note:** Wide edge side to bottom (chassis side)

**Note:** Reinstalling VC gear:  
Set shaft of tuning capacitor to its full-counterclockwise stop.  
Install VC gear by orienting it as shown.

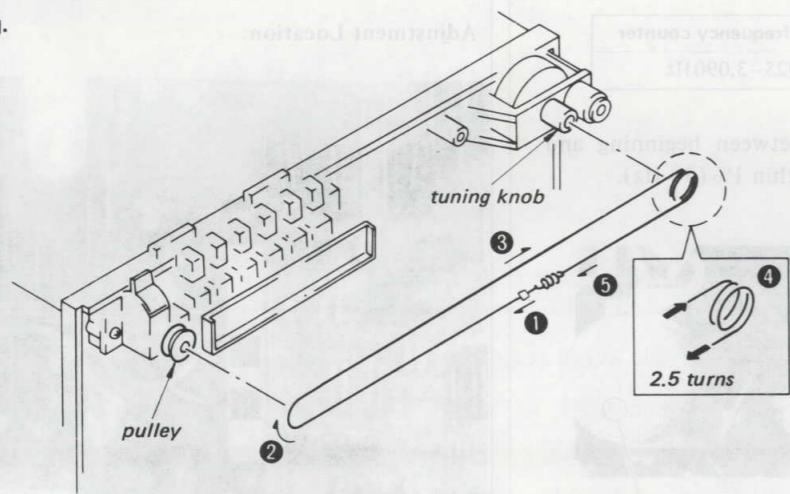


2-2. DIAL CORD STRINGING

(1) Preparation

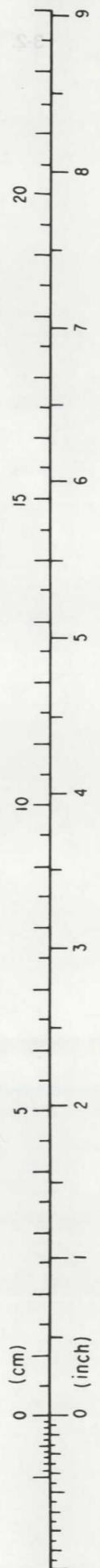
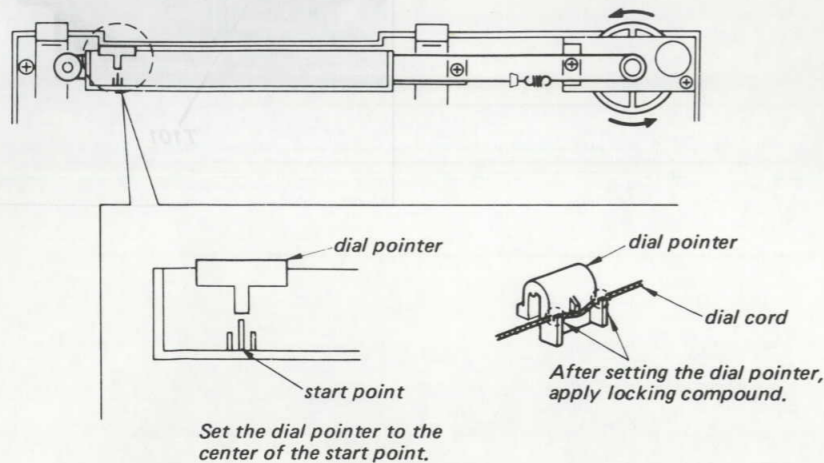


(2) Stringing.



(3) Pointer Setting.

Turn the tuning knob fully counterclockwise.



SECTION 3  
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

TAPE RECORDER SECTION

FUNCTION switch: TAPE

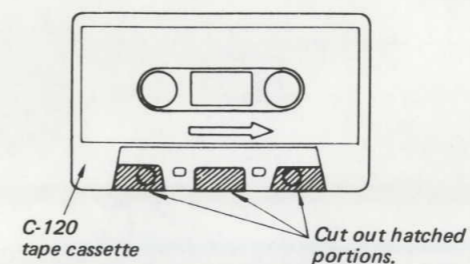
PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:  
 record/playback head      pinch roller  
 erase head                      rubber belts  
 capstan                          idlers
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

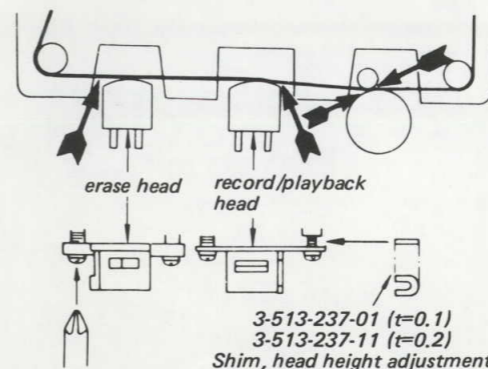
Head Height Adjustment

— Playback Mode —

- Prepare an adjustment cassette as shown below.

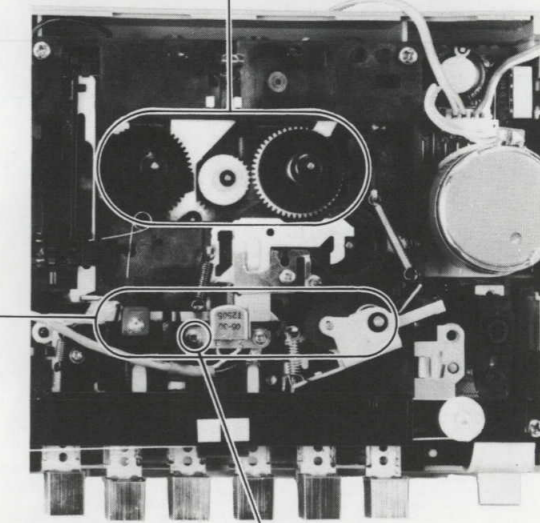


- In record mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by arrows.



Torque Measurement

Mode	Cassette type torque meter	Torque
Forward	CQ-102C	25-50 g-cm (0.34-0.69 oz-inch)
Fast Forward	CQ-201B	65-120 g-cm (0.9-1.67 oz-inch)
Rewind	CQ-201B	65-120 g-cm (0.9-1.67 oz-inch)
Back Tension	CQ-102C	2.3-4.8 g-cm (0.03-0.07 oz-inch)
Tape Pulling Force	CQ-403A	More than 200 g (more than 7.05 oz)



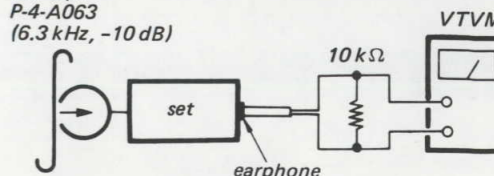
Record/playback Head Azimuth Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

- Mode: Playback  
 test tape  
 P-4-A063  
 (6.3 kHz, -10 dB)



- Turn the adjustment screw to obtain the maximum reading on VTVM.
- After the adjustment, lock the adjustment screw with suitable locking compound.

**CFM-100L CFM-100L**

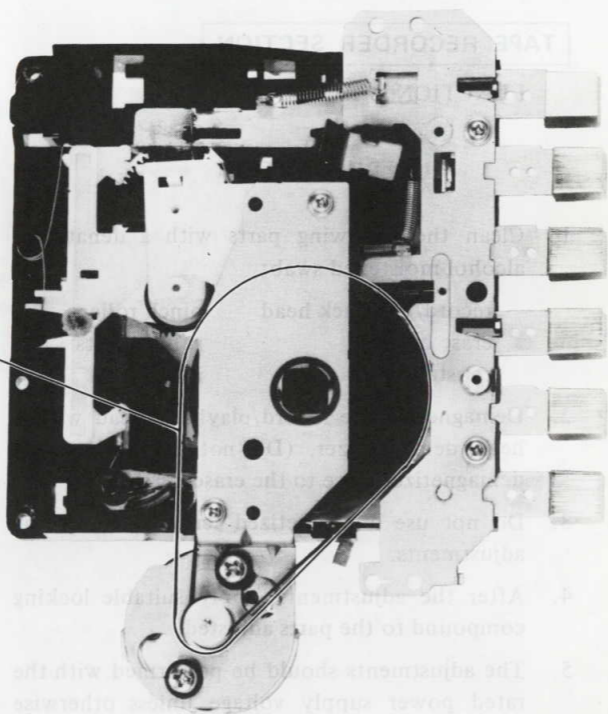
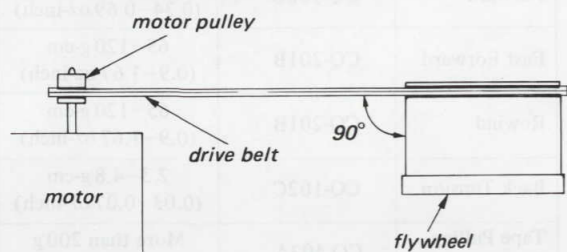
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**Motor Pulley Height Adjustment**

After replacing the motor pulley or the flywheel, this adjustment should be performed.

**Procedure:**

1. Keep the set horizontal.
2. Adjust the motor pulley height so that the drive belt is straight without twist.



**3-2. ELECTRICAL ADJUSTMENTS**

**TAPE RECORDER SECTION**

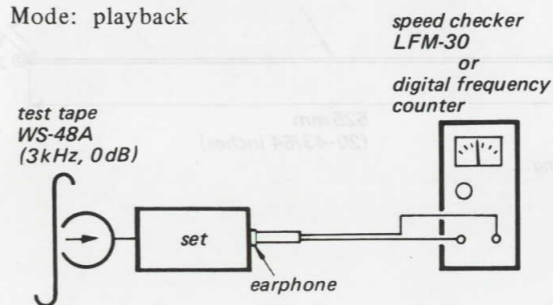
**Tape Speed Adjustment**

**Setting:**

- VOLUME control: mechanical mid
- FUNCTION switch: TAPE
- TONE control: HIGH

**Procedure:**

1. Mode: playback



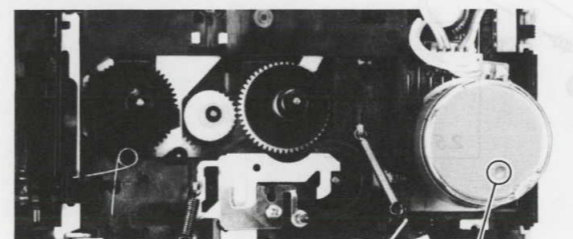
2. Adjust adjustable resistor in the motor to meet the specification.

**Specification:**

Speed checker	Digital frequency counter
+3%--2.5%	2,925-3,090 Hz

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

**Adjustment Location:**



adjustable resistor in the motor

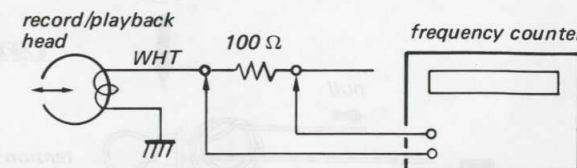
**Bias OSC Frequency Adjustment**

**Setting:**

- TONE control: HIGH
- FUNCTION switch: TAPE

**Procedure:**

1. Mode: record without input signal



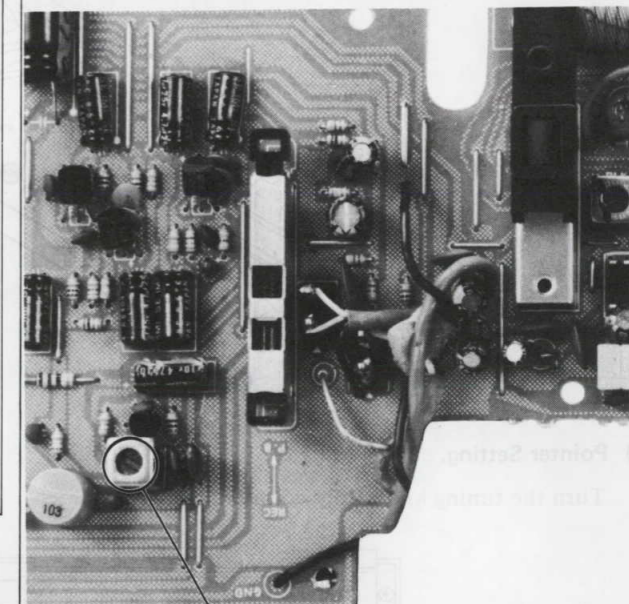
Connect 100 Ω resistor as shown.

2. Adjust T101 to obtain the specification.

**Specification:**

ISS switch	f
1	47.5 kHz ± 1 kHz
2	43 kHz ± 0.5 kHz

**Adjustment Location:**



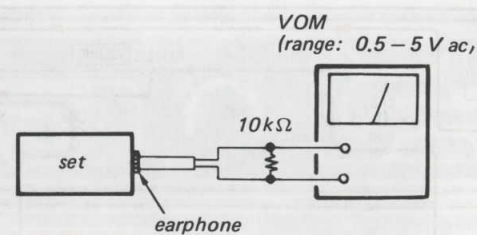
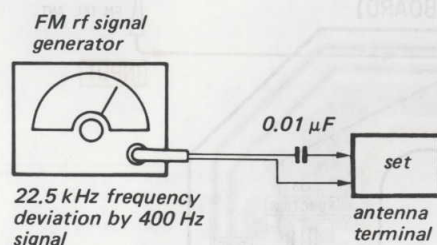
T101



**FM SECTION**

**Setting:**

- FUNCTION switch: RADIO
- BAND SELECTOR: FM
- VOLUME control: mechanical center
- TONE control: mechanical center

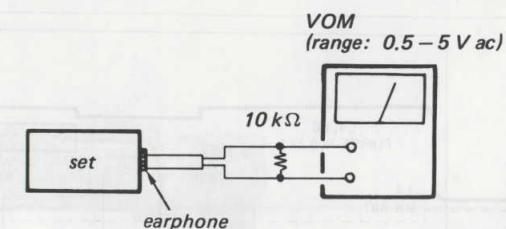
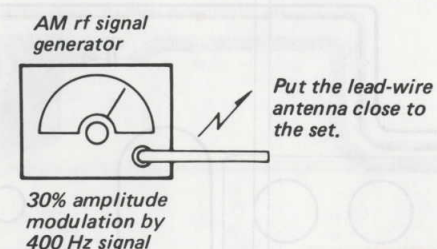


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

**MW/LW SECTION**

**Setting:**

- FUNCTION switch: RADIO
- BAND SELECTOR: MW or LW
- VOLUME control: mechanical center
- TONE control: mechanical center



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

- Repeat the MW and LW tracking adjustments several times alternately.

**FM IF ALIGNMENT 2**  
Adjust for a minimum reading on distortion meter.  
10.7 MHz  
T2

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
87.35 MHz	107.8 MHz
L1	CT1

FM IF ALIGNMENT 1 (10.7 MHz with modulation)	
T1	10.7 MHz
Adjust for a maximum reading on VOM.	

FM FREQUENCY COVERAGE ADJUSTMENT	
CT2	107.8 MHz
L2	87.35 MHz
Adjust for a maximum reading on VOM.	

BAND	
LW	↑
MW	↑
FM	↑

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
240 kHz	160 kHz
CT5	L6

AM IF ALIGNMENT	
T3	455 kHz
Adjust for a maximum reading on VOM.	

LW FREQUENCY COVERAGE ADJUSTMENT	
dial minimum frequency	CT6
should be below 150 kHz	259 kHz (dial max.)
Adjust for a maximum reading on VOM.	

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
600 kHz	1,400 kHz
L4	CT3

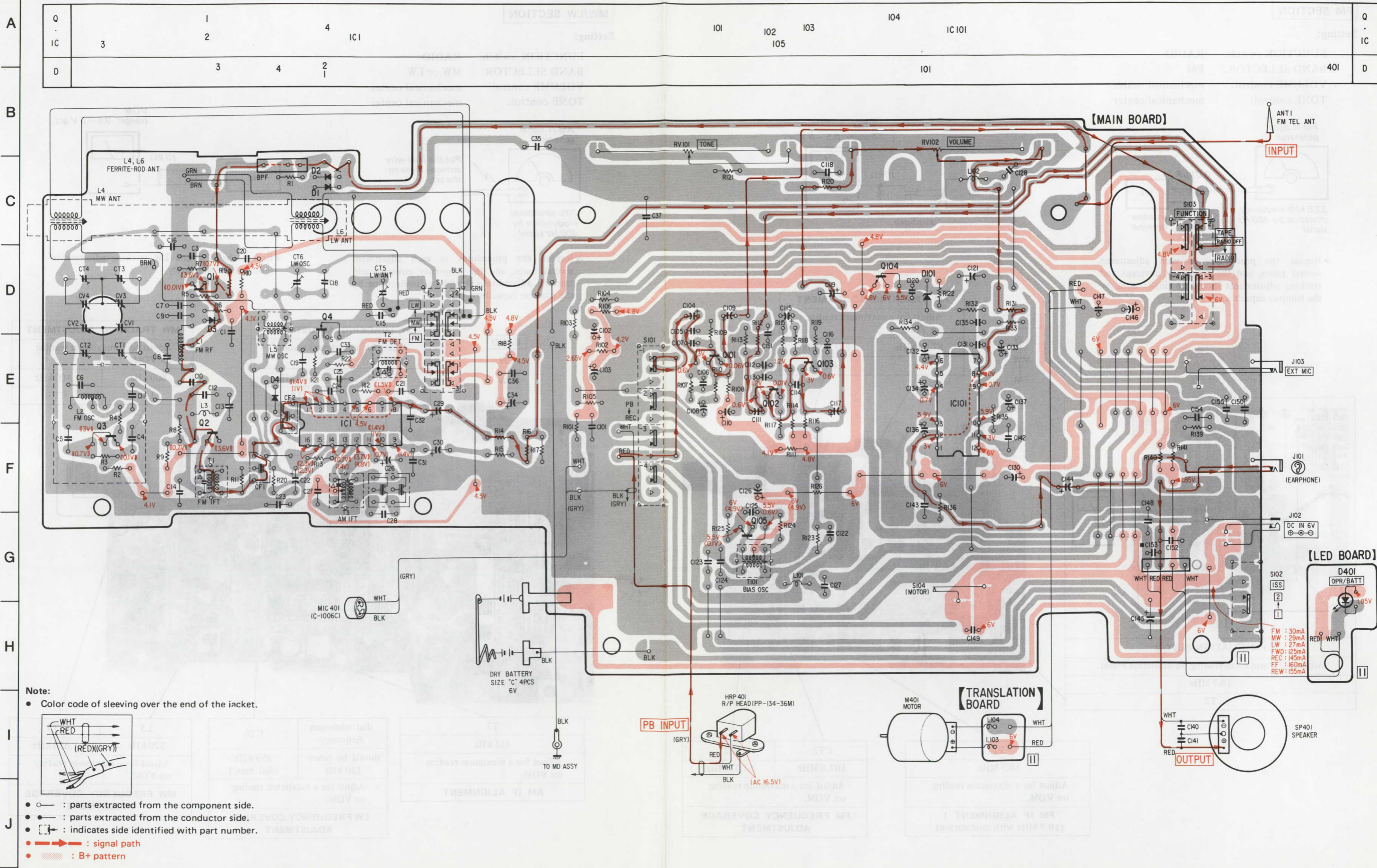
MW FREQUENCY COVERAGE ADJUSTMENT	
L5	520 kHz
CT4	1,650 kHz
Adjust for a maximum reading on VOM.	

BAND	
LW	↑
MW	↑
FM	↑

SECTION 4 DIAGRAMS

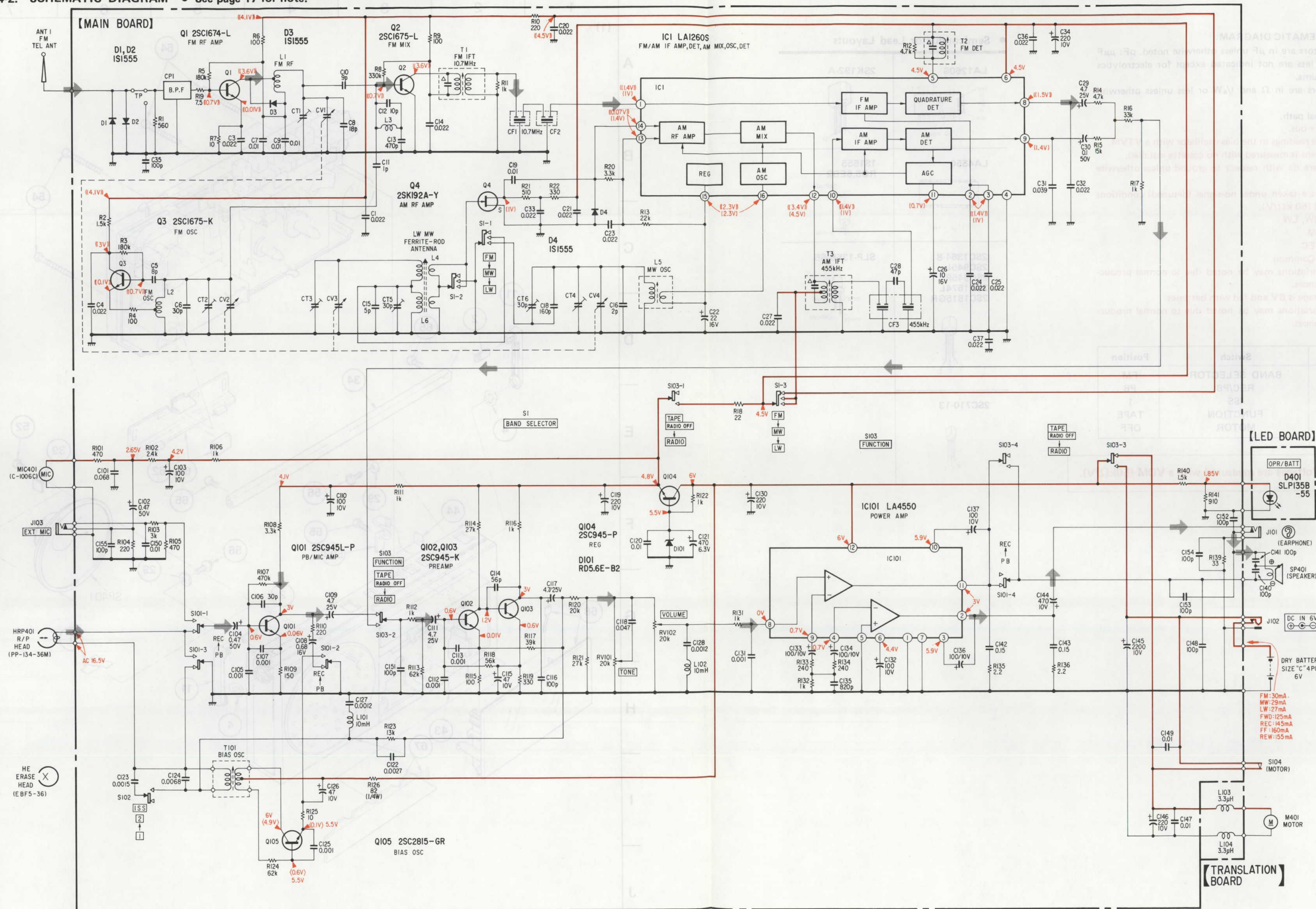
CFM-100L CFM-100L

4-1. MOUNTING DIAGRAM • See page 17 for Semoconductor Lead Layouts.



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4-2. SCHEMATIC DIAGRAM • See page 17 for note.



CFM-100L CFM-100L

SECTION 5  
EXPLODED VIEWS AND PARTS LIST

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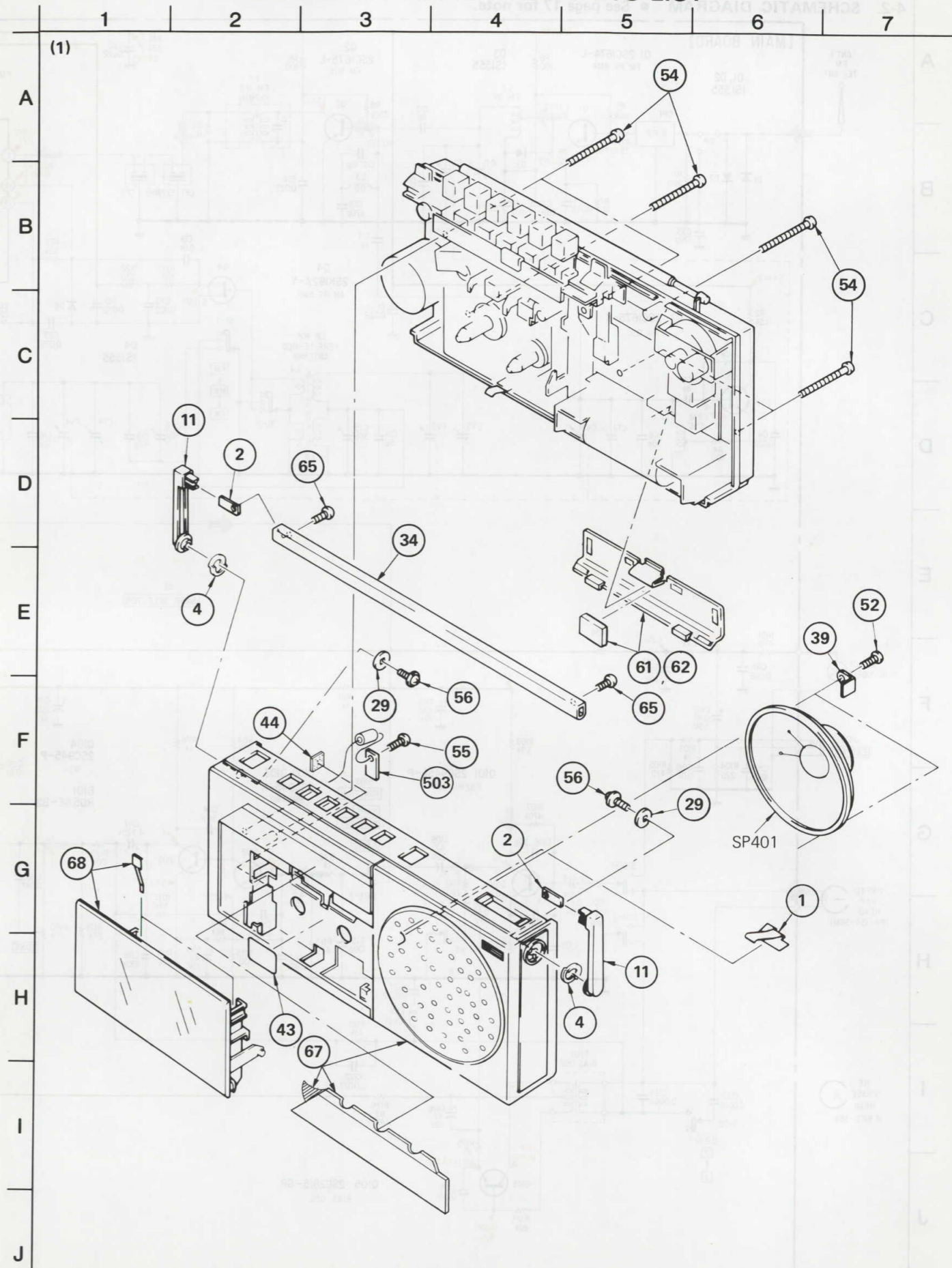
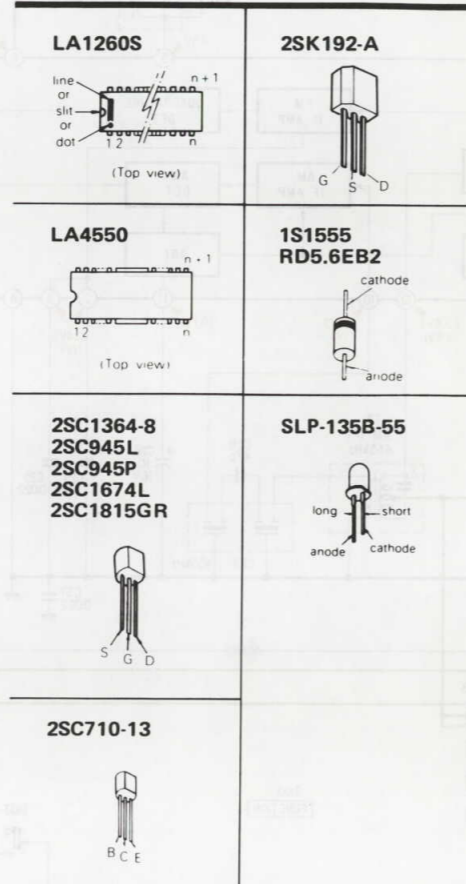
**Note for SCHEMATIC DIAGRAM:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- $\rightarrow$  : signal path.
- $\text{---}$  : B+ bus.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with VOM (50  $\text{k}\Omega/\text{V}$ ).
- ( ) : MW, LW
- ( ( ) ) : FM
- < > : REC
- no mark: Common
- Voltage variations may be noted due to normal production tolerances.
- Power voltage is 6V and fed with batteries.
- Voltage variations may be noted due to normal production tolerances.
- Switches

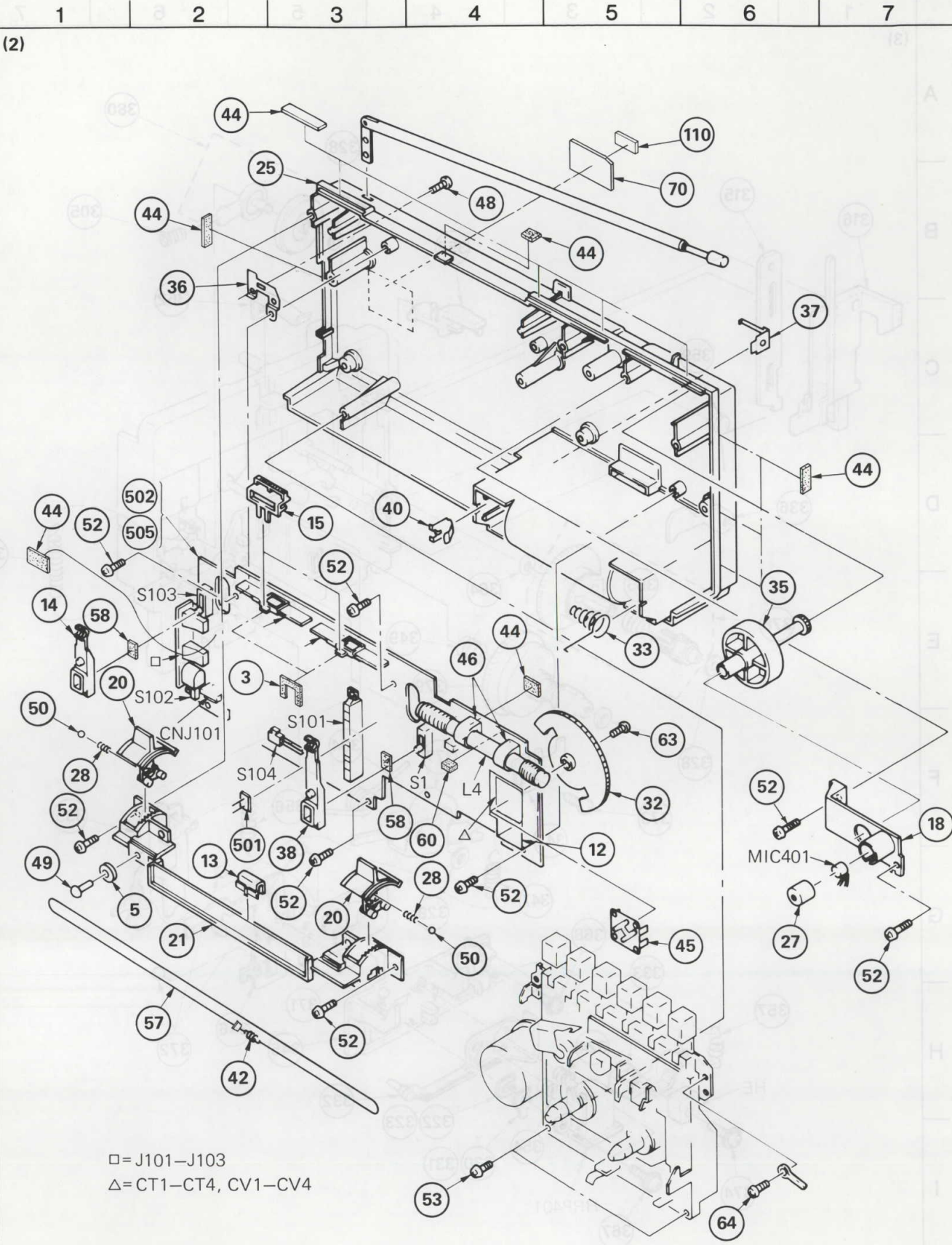
Ref. No.	Switch	Position
S1	BAND SELECTOR	FM
S101	REC/PB	PB
S102	ISS	1
S103	FUNCTION	TAPE
S104	MOTOR	OFF

**Note: Voltages are measured with a VOM (50k $\Omega$ /V).**

• Semiconductor Lead Layouts

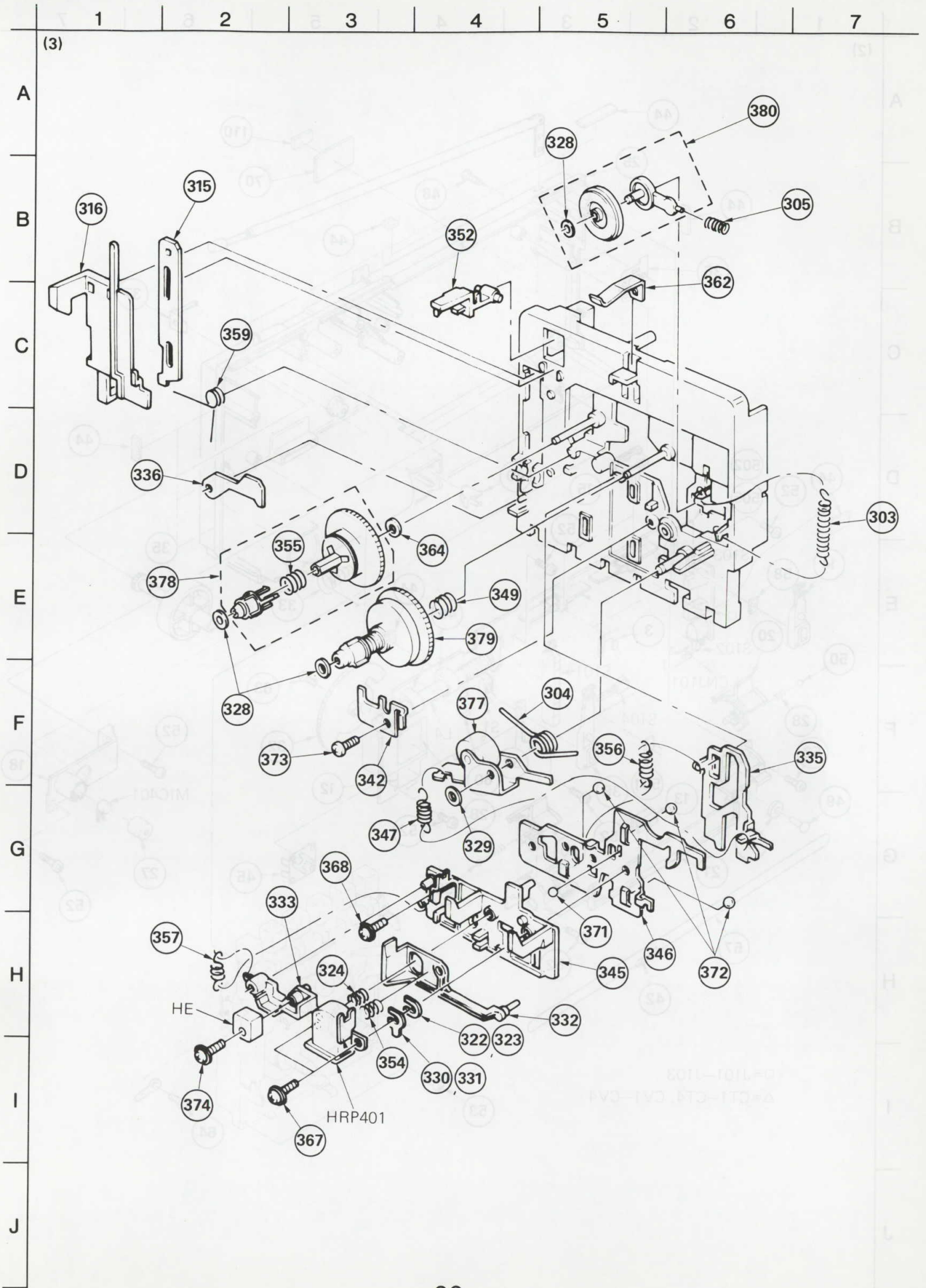


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# CFM-TOOL

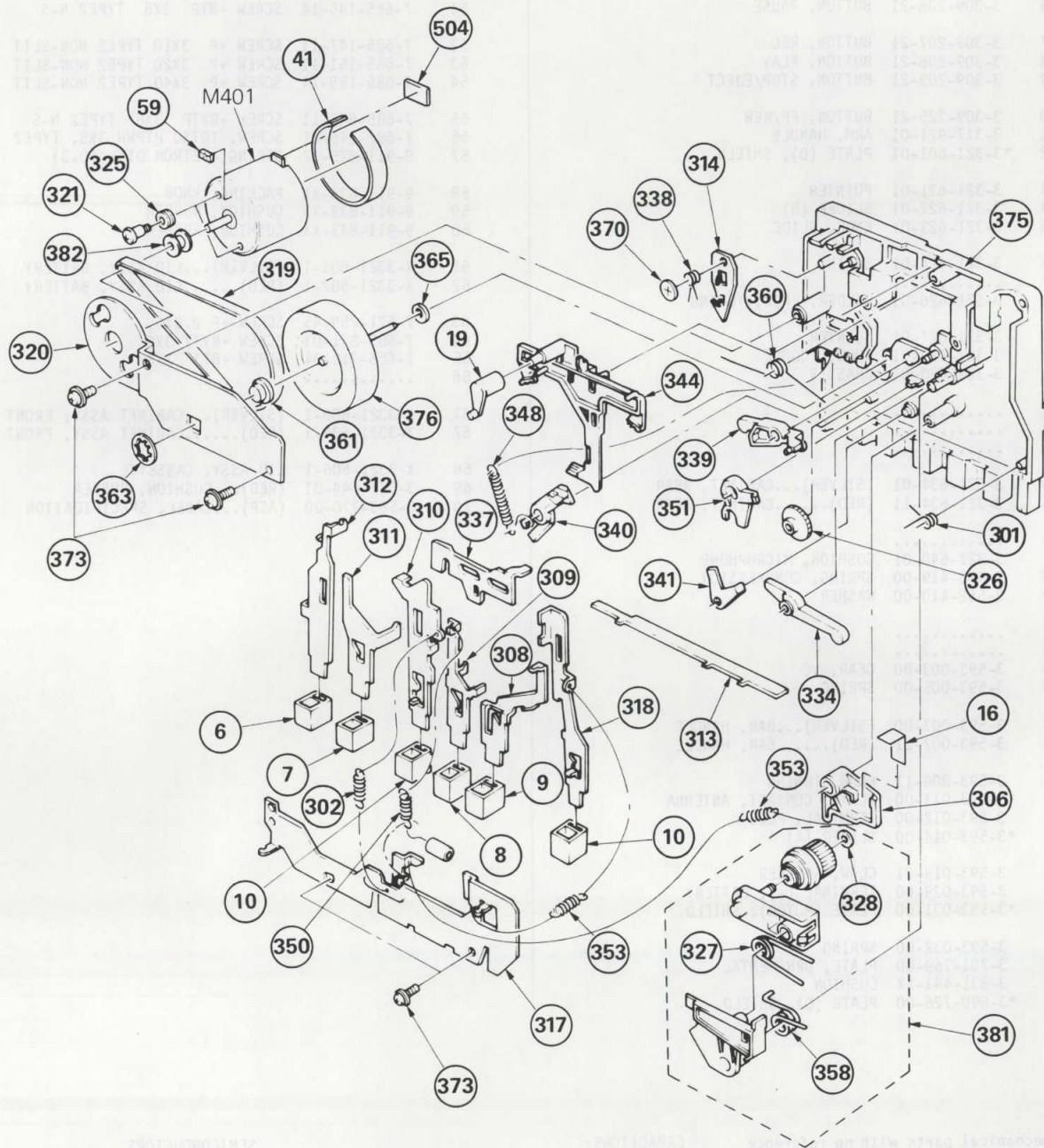
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1 2 3 4 5 6 7

(4)



## GENERAL SECTION

No.	Part No.	Description
1	3-321-628-01	SPRING
2	*3-302-313-00	BRACKET, HANDLE
3	3-302-340-00	RETAINER, RUBBER, KNOB
4	3-302-341-00	SPACER, HANDLE SHAFT
5	3-304-109-00	PULLEY
6	3-309-206-21	BUTTON, PAUSE
7	3-309-207-21	BUTTON, REC
8	3-309-208-21	BUTTON, PLAY
9	3-309-209-21	BUTTON, STOP/EJECT
10	3-309-225-21	BUTTON, FF/REW
11	3-317-921-01	ARM, HANDLE
12	*3-321-601-01	PLATE (D), SHIELD
13	3-321-621-01	POINTER
14	3-321-622-01	SLIDER (B)
15	3-321-623-01	KNOB, SLIDE
16	3-321-624-01	SPRING
17	.....	
18	3-321-626-01	HOLDER, KNOB, TUNING
19	3-321-627-01	JOINTER
20	3-321-629-01	KNOB, TOGGLE
21	3-321-630-01	CHASSIS
22	.....	
23	.....	
24	.....	
25	3-321-634-01	(SILVER)...CABINET, REAR
25	3-321-634-11	(RED).....CABINET, REAR
26	.....	
27	3-321-640-01	CUSHION, MICROPHONE
28	3-485-419-00	SPRING, COMPRESSION
29	3-552-410-00	WASHER
30	.....	
31	.....	
32	3-593-003-00	GEAR, VC
33	3-593-005-00	SPRING
34	3-593-007-00	(SILVER)...BAR, HANDLE
34	3-593-007-21	(RED).....BAR, HANDLE
35	3-593-008-11	KNOB, TUNING
36	*3-593-011-00	PLATE, CONTACT, ANTENNA
37	3-593-012-00	TERMINAL, PLUS
38	*3-593-014-00	SLIDER (A)
39	3-593-019-01	CLAW, SPEAKER
40	3-593-029-00	TERMINAL (-), BATTERY
41	*3-593-031-00	PLATE (MOTOR), SHIELD
42	3-593-032-00	SPRING
43	3-701-769-00	PLATE, ORNAMENTAL
44	3-831-441-XX	CUSHION
45	*3-890-726-00	PLATE (C), SHIELD

## GENERAL SECTION

No.	Part No.	Description
46	3-982-416-00	HOLDER, ANTENNA
47	.....	
48	7-621-770-XX	SCREW +B 2.6X8
49	7-625-214-60	RIVET 3X8
50	7-671-113-02	STEEL BALL 3
51	7-685-145-14	SCREW +BTP 3X6 TYPE2 N-S
52	7-685-147-11	SCREW +P 3X10 TYPE2 NON-SLIT
53	7-685-151-11	SCREW +P 3X20 TYPE2 NON-SLIT
54	7-685-155-14	SCREW +P 3X40 TYPE2 NON-SLIT
55	7-685-645-11	SCREW +BVTP 3X6 TYPE2 N-S
56	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
57	9-911-825-32	STRING, TETRON DIAL (0.3)
58	9-911-838-XX	PACKING, KNOB
59	9-911-839-XX	CUSHION, RUBBER
60	9-911-843-XX	CUSHION, RUBBER
61	X-3321-601-1	(SILVER)...LID ASSY, BATTERY
62	X-3321-602-1	(RED).....LID ASSY, BATTERY
63	7-621-259-45	SCREW +P 2.6X6
64	7-685-871-01	SCREW +BVTT 3X6
65	7-685-712-34	SCREW +BTT 3X6
66	.....	
67	X-3321-603-1	(SILVER)...CABINET ASSY, FRONT
67	X-3321-604-1	(RED).....CABINET ASSY, FRONT
68	X-3321-606-1	LID ASSY, CASSETTE
69	3-321-644-01	(RED)...CUSHION, RUBBER
70	0-583-770-00	(AEP)...LABEL, SPECIFICATION

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## CAPACITORS:

- All capacitors are in  $\mu\text{F}$ . Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu\text{F}$ , PF:  $\mu\mu\text{F}$ .

## COILS

- MMH : mH, UH :  $\mu\text{H}$

## SEMICONDUCTORS

- In each case, U :  $\mu$ , for example:  
UA...:  $\mu\text{A}$ ..., UPA...:  $\mu\text{PA}$ ...,  
UPC...:  $\mu\text{PC}$ ,  
UPD...:  $\mu\text{PD}$ ...



ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	△.1-446-569-11	(AEP)...ADAPTOR, AC; AC-180T
102	△.1-446-568-11	(UK)...ADAPTOR, AC; AC-180T
103	3-321-613-01	CUSHION (RIGHT)
104	3-321-614-01	CUSHION (LEFT)
105	3-321-615-11	(UK)...INDIVIDUAL CARTON
105	3-321-615-21	(AEP)...INDIVIDUAL CARTON
106	3-321-641-01	SLEEVE (B), ADAPTOR
107	.....	
108	3-701-632-01	BAG, PLASTIC
109	3-703-539-01	INSTRUCTION, FTZ
110	*3-703-593-01	LABEL, FTZ (11585)(SMALL)
111	3-760-047-11	MANUAL, INSTRUCTION
112	3-760-047-41	(AEP).....MANUAL, INSTRUCTION
113	3-985-622-01	SHEET (MIRROR MAT), PROTECTION
114	3-321-612-01	BAG, PLASTIC

MECHANISM SECTION

No.	Part No.	Description
301	3-309-001-00	SPRING
302	3-309-002-00	SPRING, TENSION
303	3-309-003-00	SPRING, TENSION
304	3-309-004-00	SPRING
305	3-309-005-00	SPRING, COMPRESSION
306	3-309-007-00	LEVER (T), REC
307	3-309-009-00	SPACER, MOTOR
308	*3-309-010-00	LEVER, STOP BUTTON
309	*3-309-011-00	LEVER, FWD BUTTON
310	*3-309-012-00	LEVER, FF BUTTON
311	*3-309-013-00	LEVER, REC BUTTON
312	*3-309-014-00	LEVER, PAUSE BUTTON
313	*3-309-015-11	PLATE, LOCK, BUTTON
314	3-309-017-00	PLATE, LOCK, PAUSE
315	3-309-018-00	LEVER (T), RECORD PREVENTION
316	3-309-019-00	LEVER, EJECT
317	*3-309-025-11	RETAINER, LEVER
318	*3-309-026-00	LEVER, REW BUTTON
319	3-309-029-11	BELT, CAPSTAN
320	*3-309-030-01	RETAINER, T.M.
321	3-489-077-31	SCREW, MOTOR STOPPER
322	3-513-237-01	PLATE (t=0.1)
323	3-513-237-11	PLATE (t=0.2)
324	3-539-237-00	SPRING (3), COMPRESSION
325	3-553-029-00	CUSHION, MOTOR
326	3-558-620-11	GEAR, REWIND
327	3-558-652-00	SPRING
328	3-558-708-01	WASHER, STOPPER
329	3-558-708-21	WASHER, STOPPER
330	3-558-737-11	SHIM, RP HEAD (t=0.2)
331	3-558-737-21	SHIM, RP HEAD (t=0.3)
332	3-561-802-00	TENSION (PU)
333	3-561-817-00	LEVER, ERASE HEAD
334	3-561-818-00	LEVER, REVIEW
335	*3-561-824-00	LEVER, RP
336	3-561-825-11	LEVER, ERASE
337	*3-561-831-00	LEVER (B), RECORD
338	3-561-832-00	SPRING
339	3-561-839-00	LEVER, FF
340	3-561-845-00	LEVER, S.OFF RELEASE
341	3-561-849-00	LEVER (A), RECORD
342	3-561-852-00	SPRING
343	3-561-852-11	SPRING
344	3-561-857-11	LEVER, BRAKE
345	3-561-858-11	BRACKET, HEAD

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CAPACITORS:

All capacitors are in  $\mu\text{F}$ . Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu\text{F}$ , PF:  $\mu\text{PF}$ .

COILS

MMH : mH, UH :  $\mu\text{H}$

SEMICONDUCTORS

In each case, U :  $\mu$ , for example:  
UA...:  $\mu\text{A}$ ..., UPA...:  $\mu\text{PA}$ ..., UPC...:  $\mu\text{PC}$ ,  
UPD...:  $\mu\text{PD}$ ...

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

## MECHANISM SECTION

No.	Part No.	Description
346	3-561-859-00	BASE (L), HEAD
347	3-561-883-00	SPRING, TENSION
348	3-561-884-00	SPRING, TENSION
349	3-561-886-00	SPRING, COMPRESSION
350	3-561-897-00	SPRING, TENSION
351	3-563-909-00	LEVER (D), RECORD
352	3-564-301-00	LEVER (A), RECORD PREVENTION
353	3-564-331-00	SPRING, TENSION
354	3-564-332-00	SPRING, COMPRESSION
355	3-564-333-11	SPRING, COMPRESSION
356	3-570-206-00	SPRING, TENSION
357	3-570-231-00	SPRING, TENSION
358	3-570-234-00	SPRING
359	3-570-235-00	SPRING
360	3-570-241-00	SPRING
361	3-573-467-00	RETAINER (D), THRUST
362	3-579-019-00	SPRING
363	*3-638-192-00	RING, RETAINING (TYPE CS)
364	3-701-437-11	WASHER
365	3-701-438-11	WASHER, 2.5
366	3-701-441-01	WASHER
367	3-701-465-00	SCREW, WASHER HEAD TAP TIGHT
368	3-701-466-00	SCREW, WASHER HEAD TAP TIGHT
369	7-621-955-55	SCREW, TOTSU PWH 2X8
370	7-624-190-11	STOP RING 3, TYPE-CS
371	7-671-112-02	STEEL, BALL 2MM
372	7-671-113-02	BALL, STEEL 3MM
373	7-685-134-14	SCREW, TOTSU PTPWH 2.6X8, TYPE2
374	7-687-202-21	TOTSU PTPWH 2X4, TYPE 2, SLIT
375	A-3102-048-A	CHASSIS (T2) ASSY, MECHANICAL
376	A-3109-019-A	FLYWHEEL ASSY
377	A-3110-008-A	PINCH ROLLER ASSY
378	A-3130-027-B	TABLE ASSY, REEL, SUPPLY
379	A-3130-029-A	TABLE ASSY, REEL, TAKE-UP
380	A-3136-031-A	IDLER COMPLETE ASSY, FWD
381	A-3136-032-A	IDLER COMPLETE ASSY, FR
382	X-3564-301-5	PULLEY (2400), MOTER

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	*1-535-115-00	TERMINAL
502	*1-613-173-00	PC BOARD, MAIN
503	*1-613-174-11	PC BOARD, LED
504	*	PC BOARD, TRANSLATION
505	*A-3235-349-A	PC BOARD ASSY, MAIN
ANT1	1-501-273-00	ANTENNA, TELESCOPIC
C1	1-161-055-00	CERAMIC 0.022MF 10% 25V
C3	1-161-055-00	CERAMIC 0.022MF 10% 25V
C4	1-161-055-00	CERAMIC 0.022MF 10% 25V
C5	1-102-865-00	CERAMIC 8PF 0.5PF 50V
C6	1-102-644-21	CERAMIC 30PF 5% 50V
C7	1-161-013-00	CERAMIC 0.01MF 10% 25V
C8	1-102-953-00	CERAMIC 18PF 5% 50V
C9	1-161-013-00	CERAMIC 0.01MF 10% 25V
C10	1-102-946-00	CERAMIC 9PF 0.5PF 50V
C11	1-102-934-00	CERAMIC 1PF 0.25PF 50V
C12	1-102-947-00	CERAMIC 10PF 5% 50V
C13	1-102-824-00	CERAMIC 470PF 5% 50V
C14	1-161-055-00	CERAMIC 0.022MF 10% 25V
C15	1-102-942-00	CERAMIC 5PF 5% 50V
C16	1-161-979-00	CERAMIC 2PF 0.25PF 50V
C17	1-102-508-00	CERAMIC 10PF 0.5PF 50V
C18	1-103-706-00	POLYSTYRENE 160PF 5% 50V
C19	1-161-013-00	CERAMIC 0.01MF 10% 25V
C20	1-161-055-00	CERAMIC 0.022MF 10% 25V
C21	1-161-055-00	CERAMIC 0.022MF 10% 25V
C22	1-123-330-00	ELECT 22MF 20% 16V
C23	1-161-055-00	CERAMIC 0.022MF 10% 25V
C24	1-161-055-00	CERAMIC 0.022MF 10% 25V
C25	1-161-055-00	CERAMIC 0.022MF 10% 25V
C26	1-123-356-00	ELECT 10MF 20% 16V
C27	1-161-055-00	CERAMIC 0.022MF 10% 25V
C28	1-101-880-00	CERAMIC 47PF 5% 50V
C29	1-123-369-00	ELECT 4.7MF 20% 25V
C30	1-123-607-00	ELECT 0.1MF 20% 50V
C31	1-161-058-00	CERAMIC 0.039MF 10% 25V
C32	1-161-055-00	CERAMIC 0.022MF 10% 25V
C33	1-161-055-00	CERAMIC 0.022MF 10% 25V
C34	1-123-308-00	ELECT 220MF 20% 10V
C35	1-102-106-00	CERAMIC 100PF 10% 50V
C36	1-161-055-00	CERAMIC 0.022MF 10% 25V
C37	1-161-055-00	CERAMIC 0.022MF 10% 25V
C101	1-161-023-00	CERAMIC 0.068MF 10% 25V
C102	1-123-379-00	ELECT 0.47MF 20% 50V
C103	1-123-307-00	ELECT 100MF 20% 10V

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- MF:  $\mu\text{F}$ , PF:  $\mu\text{F}$ .

## COILS

- MMH : mH, UH :  $\mu\text{H}$

## SEMICONDUCTORS:

- In each case, U :  $\mu$ , for example: UA...:  $\mu\text{A}$ ..., UPA...:  $\mu\text{PA}$ ..., UPC...:  $\mu\text{PC}$ , UPD...:  $\mu\text{PD}$ ...

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Value	Tol.	Vol.
C104	1-123-379-00	ELECT	0.47MF	20%	50V
C105	1-102-074-00	CERAMIC	0.001MF	10%	50V
C106	1-102-962-00	CERAMIC	30PF	5%	50V
C107	1-102-074-00	CERAMIC	0.001MF	10%	50V
C108	1-131-415-00	TANTALUM	0.68MF	20%	16V
C109	1-123-369-00	ELECT	4.7MF	20%	25V
C110	1-123-307-00	ELECT	100MF	20%	10V
C111	1-123-369-00	ELECT	4.7MF	20%	25V
C112	1-102-074-00	CERAMIC	0.001MF	10%	50V
C113	1-102-074-00	CERAMIC	0.001MF	10%	50V
C114	1-101-884-00	CERAMIC	56PF	5%	50V
C115	1-123-306-00	ELECT	47MF	20%	10V
C116	1-102-106-00	CERAMIC	100PF	10%	50V
C117	1-123-369-00	ELECT	4.7MF	20%	25V
C118	1-161-059-00	CERAMIC	0.047MF	10%	25V
C119	1-123-308-00	ELECT	220MF	20%	10V
C120	1-161-013-00	CERAMIC	0.01MF	10%	25V
C121	1-123-298-00	ELECT	470MF	20%	10V
C122	1-161-044-00	CERAMIC	0.0027MF	10%	25V
C123	1-106-176-00	MYLAR	0.0015MF	5%	50V
C124	1-106-192-00	MYLAR	0.0068MF	5%	50V
C125	1-161-039-00	CERAMIC	0.001MF	10%	25V
C126	1-123-306-00	ELECT	47MF	20%	10V
C127	1-161-002-00	MYLAR	0.0012MF	5%	50V
C128	1-161-002-00	MYLAR	0.0012MF	5%	50V
C130	1-123-308-00	ELECT	220MF	20%	10V
C131	1-102-074-00	CERAMIC	0.001MF	10%	50V
C132	1-123-307-00	ELECT	100MF	20%	10V
C133	1-123-307-00	ELECT	100MF	20%	10V
C134	1-123-307-00	ELECT	100MF	20%	10V
C135	1-102-117-00	CERAMIC	820PF	10%	50V
C136	1-123-307-00	ELECT	100MF	20%	10V
C137	1-123-307-00	ELECT	100MF	20%	10V
C140	1-102-106-00	CERAMIC	100PF	10%	50V
C141	1-102-106-00	CERAMIC	100PF	10%	50V
C142	1-130-497-00	MYLAR	0.15MF	10%	50V
C143	1-130-497-00	MYLAR	0.15MF	10%	50V
C144	1-123-310-00	ELECT	470MF	20%	10V
C145	1-123-325-00	ELECT	2200MF	20%	10V
C146	1-123-308-00	ELECT	220MF	20%	10V
C147	1-161-013-00	CERAMIC	0.01MF	10%	25V
C148	1-102-106-00	CERAMIC	100PF	10%	50V
C149	1-161-013-00	CERAMIC	0.01MF	10%	25V
C150	1-161-013-00	CERAMIC	0.01MF	10%	25V
C151	1-102-106-00	CERAMIC	100PF	10%	50V
C152	1-102-106-00	CERAMIC	100PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Value	Tol.	Vol.
C153	1-102-106-00	CERAMIC	100PF	10%	50V
C154	1-102-074-00	CERAMIC	0.001MF	10%	50V
C155	1-102-106-00	CERAMIC	100PF	10%	50V
CF1	1-527-808-00	FILTER, CERAMIC			
CF2	1-527-808-00	FILTER, CERAMIC			
CF3	1-527-865-00	FILTER, CERAMIC			
CNJ101*	1-561-440-00	SOCKET, CONNECTOR 4P			
CP1	1-231-720-00	FILTER, BANDPASS			
CT1-4	1-151-390-31	CAP, TUNING, POLYETHYLENE			
CT5	1-141-245-00	TRIMMER, CERAMIC			
CT6	1-141-245-00	TRIMMER, CERAMIC			
CV1	1-151-390-31	CAP, TUNING, POLYETHYLENE			
CV2	1-151-390-31	CAP, TUNING, POLYETHYLENE			
CV3	1-151-390-31	CAP, TUNING, POLYETHYLENE			
CV4	1-151-390-31	CAP, TUNING, POLYETHYLENE			
D1	8-719-815-55	DIODE 1S1555			
D2	8-719-815-55	DIODE 1S1555			
D3	8-719-815-55	DIODE 1S1555			
D4	8-719-815-55	DIODE 1S1555			
D101	8-719-156-07	DIODE RD5.6E-B			
D401	8-719-903-39	DIODE SLP135B-55			
HE	8-658-096-02	HEAD, ERASE EBF 5-36			
HRP	8-829-336-41	HEAD, RECORD/PLAYBACK (PP-134-36M)			
IC1	8-759-801-24	IC LA1260S			
IC101	1-806-908-11	IC LA4550			
J101	1-507-783-00	JACK, 3 GANG (EARPHONE)			
J102	1-507-783-00	JACK, 3 GANG (DC IN 6V)			
J103	1-507-783-00	JACK, 3 GANG (EXT MIC)			
L1	1-426-180-11	COIL, FM RF			
L2	*1-425-792-00	COIL, FM OSC			
L3	*1-409-293-00	COIL, AIR CORE			
L4	1-402-118-11	ANTENNA, FERRITE-ROD (LW/MW)			
L5	1-406-043-00	COIL, MW OSC			
L6	1-402-118-11	ANTENNA, FERRITE-ROD (LW/MW)			
L101	1-408-655-00	MICRO INDUCTOR 10MMH			
L102	1-408-655-00	MICRO INDUCTOR 10MMH			
L103	1-408-111-00	MICRO INDUCTOR 3.3UH			
L104	1-408-111-00	MICRO INDUCTOR 3.3UH			
M401	1-541-222-00	MOTOR, DC			
MIC401	1-542-066-11	MICROPHONE, ELECTRET CONDENSER			
Q1	8-729-167-42	TRANSISTOR 2SC1674			
Q2	8-729-671-13	TRANSISTOR 2SC710-13			
Q3	8-729-671-13	TRANSISTOR 2SC710-13			

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MF:  $\mu$ F, PF:  $\mu$ MF.

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MMH : mH, UH :  $\mu$ H

SEMICONDUCTORS

In each case, U :  $\mu$ , for example:  
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UPC...:  $\mu$ PC,  
UPD...:  $\mu$ PD...

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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
Q4	8-729-200-66	TRANSISTOR 2SK192A				
Q101	8-729-101-93	TRANSISTOR 2SC945L				
Q102	8-729-663-48	TRANSISTOR 2SC1364-8				
Q103	8-729-663-48	TRANSISTOR 2SC1364-8				
Q104	8-729-663-48	TRANSISTOR 2SC1364-8				
Q105	8-729-281-53	TRANSISTOR 2SC1815-GR				
R1	1-247-825-00	CARBON	560	5%	1/6W	
R2	1-247-835-00	CARBON	1.5K	5%	1/6W	
R3	1-247-885-00	CARBON	180K	5%	1/6W	
R4	1-247-807-00	CARBON	100	5%	1/6W	
R5	1-247-885-00	CARBON	180K	5%	1/6W	
R6	1-247-807-00	CARBON	100	5%	1/6W	
R7	1-247-783-00	CARBON	10	5%	1/6W	
R8	1-247-891-00	CARBON	330K	5%	1/6W	
R9	1-247-807-00	CARBON	100	5%	1/6W	
R10	1-247-815-00	CARBON	220	5%	1/6W	
R11	1-247-831-00	CARBON	1K	5%	1/6W	
R12	1-247-847-00	CARBON	4.7K	5%	1/6W	
R13	1-247-863-00	CARBON	22K	5%	1/6W	
R14	1-247-847-00	CARBON	4.7K	5%	1/6W	
R15	1-247-859-00	CARBON	15K	5%	1/6W	
R16	1-247-867-00	CARBON	33K	5%	1/6W	
R17	1-247-831-00	CARBON	1K	5%	1/6W	
R18	1-247-791-00	CARBON	22	5%	1/6W	
R19	1-247-780-00	CARBON	7.5	5%	1/6W	
R20	1-247-843-00	CARBON	3.3K	5%	1/6W	
R21	1-247-824-00	CARBON	510	5%	1/6W	
R22	1-247-819-00	CARBON	330	5%	1/6W	
R101	1-247-823-00	CARBON	470	5%	1/6W	
R102	1-247-840-00	CARBON	2.4K	5%	1/6W	
R103	1-247-842-00	CARBON	3K	5%	1/6W	
R104	1-247-815-00	CARBON	220	5%	1/6W	
R105	1-247-823-00	CARBON	470	5%	1/6W	
R106	1-247-831-00	CARBON	1K	5%	1/6W	
R107	1-247-895-00	CARBON	470K	5%	1/6W	
R108	1-247-843-00	CARBON	3.3K	5%	1/6W	
R109	1-247-811-00	CARBON	150	5%	1/6W	
R110	1-247-815-00	CARBON	220	5%	1/6W	
R111	1-247-831-00	CARBON	1K	5%	1/6W	
R112	1-247-831-00	CARBON	1K	5%	1/6W	
R113	1-247-874-00	CARBON	62K	5%	1/6W	
R114	1-247-865-00	CARBON	27K	5%	1/6W	
R115	1-247-807-00	CARBON	100	5%	1/6W	
R116	1-247-831-00	CARBON	1K	5%	1/6W	
R117	1-247-869-00	CARBON	39K	5%	1/6W	
R118	1-247-873-00	CARBON	56K	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R119	1-247-819-00	CARBON	330	5%	1/6W	
R120	1-247-862-00	CARBON	20K	5%	1/6W	
R121	1-247-865-00	CARBON	27K	5%	1/6W	
R122	1-247-831-00	CARBON	1K	5%	1/6W	
R123	1-247-858-00	CARBON	13K	5%	1/6W	
R124	1-247-874-00	CARBON	62K	5%	1/6W	
R125	1-247-783-00	CARBON	10	5%	1/6W	
R126	1-247-105-00	CARBON	82	5%	1/4W	
R131	1-247-831-00	CARBON	1K	5%	1/6W	
R132	1-247-831-00	CARBON	1K	5%	1/6W	
R133	1-247-816-00	CARBON	240	5%	1/6W	
R134	1-247-815-00	CARBON	220	5%	1/6W	
R135	1-247-767-00	CARBON	2.2	5%	1/6W	
R136	1-247-767-00	CARBON	2.2	5%	1/6W	
R139	1-247-795-00	CARBON	33	5%	1/6W	
R140	1-247-835-00	CARBON	1.5K	5%	1/6W	
R141	1-247-830-00	CARBON	910	5%	1/6W	
RV101	1-230-533-11	RES, VAR, SLIDE 20K (TONE)				
RV102	1-230-532-11	RES, VAR, SLIDE 20K (VOLUME)				
S1	1-570-015-00	SWITCH, SLIDE (BAND SELECTOR)				
S101	1-554-948-11	SWITCH, SLIDE (REC/PB)				
S102	1-552-370-00	SWITCH, SLIDE (ISS)				
S103	1-570-015-11	SWITCH, SLIDE (FUNCTION)				
S104	1-554-284-00	SWITCH, LEAF (MOTOR)				
SP401	1-503-375-11	SPEAKER				
T1	1-403-872-00	I.F.T, FM				
T2	1-404-249-00	COIL, FM DETECTOR				
T3	1-404-552-11	TRANSFORMER, AM IF				
T101	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR				

NOTE:

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

All capacitors are in  $\mu$ F. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu$ F, PF:  $\mu$ F.

COILS

MMH : mH, UH :  $\mu$ H

SEMICONDUCTORS

In each case, U :  $\mu$ , for example:  
UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,  
UPC...:  $\mu$ PC,  
UPD...:  $\mu$ PD...