

# WM-F17

## SERVICE MANUAL

US Model  
Canadian Model



SEE SEPARATE MANUAL  
FOR THE MDR-010L HEADPHONES.

PHOTO: US Model

### SPECIFICATIONS

#### Radio section

Frequency range FM: 87.6 – 108 MHz  
AM: 530 – 1,605 kHz  
Antenna FM: Headphone cord antenna  
AM: Built-in ferrite bar antenna

#### Tape recorder section and general

Tape track 4-track 2-channel stereo  
Fast winding time Approx. 3 min. with Sony C-60 cassette  
Frequency response 40 – 15,000 Hz (with the PB EQ selector set to METAL/CrO<sub>2</sub>)  
40 – 15,000 Hz (with the PB EQ selector set to NORM)  
Input External microphone input (stereo minijack) (PLUG IN POWER)  
sensitivity 2.5 mV (-50dBs) for low impedance microphone  
Output Headphones jack (stereo minijack)  
load impedance 32 ohms  
Power output 15 mW + 15 mW  
(at 10% harmonic distortion) at DC operation  
Power requirements 3 V DC  
two size AA (R6) batteries  
DC IN 3 V jack accepts:  
optional Sony AC-D2M AC power adaptor for use on 120 V AC, 60 Hz  
optional Sony EBP-500A battery case for use on two size D (R20) batteries  
optional Sony DCC-70 car battery cord for use with 12 V car battery

Tape Transport Mechanism Type	MF-WMF17-06
Similar Mechanism Set	WM-F17

#### Battery life

(hours)

Batteries	FM reception	Tape playback	FM recording (headphones)	Recording (microphone)
Sony batteries SUM-3 (NS)	Approx. 23	Approx. 3.5	Approx. 2.5	Approx. 3
Sony Alkaline batteries AM3 (N)	Approx. 45	Approx. 10	Approx. 6	Approx. 8.5

For maximum performance we recommend the use of alkaline batteries.

Dimensions Approx. 95 x 145.5 x 37.5 mm (w/h/d)  
(3 3/4 x 5 3/4 x 1 1/2 inches)  
incl. projecting parts and controls  
Weight Approx. 350 g (12.3 oz)  
incl. batteries, not incl. other accessories

#### Supplied accessories

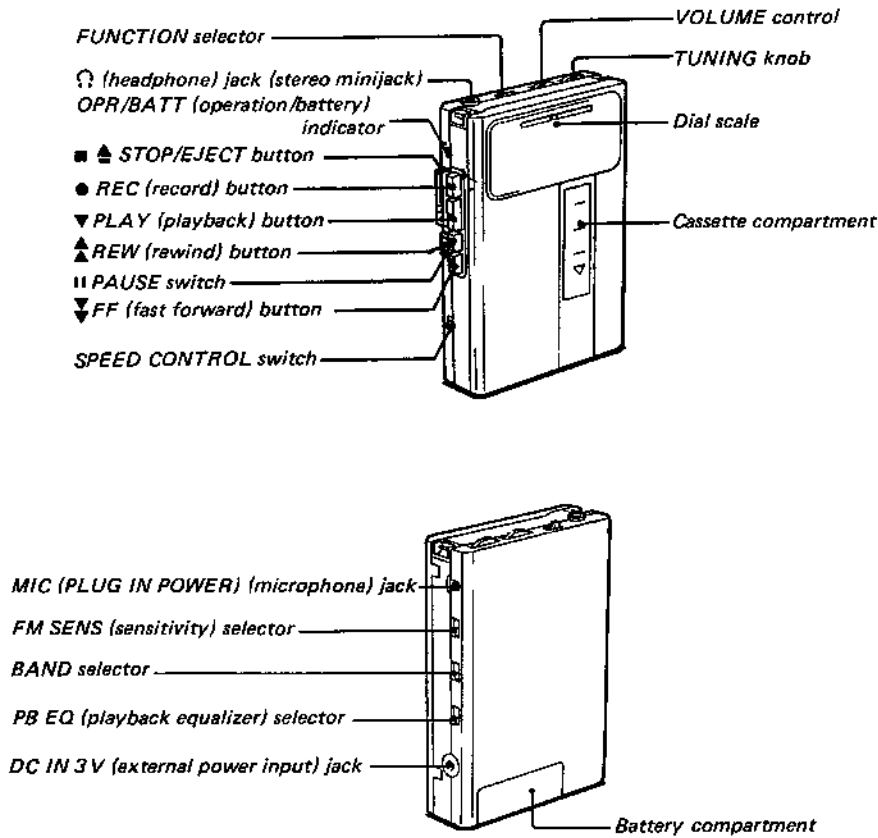
Stereo headphones (open-air type, 1)  
Electret condenser stereo microphone (1)  
Microphone stand (1)  
Shoulder strap (1)

# FM/AM STEREO CASSETTE-CORDER SONY®



TC

## PARTS IDENTIFICATION



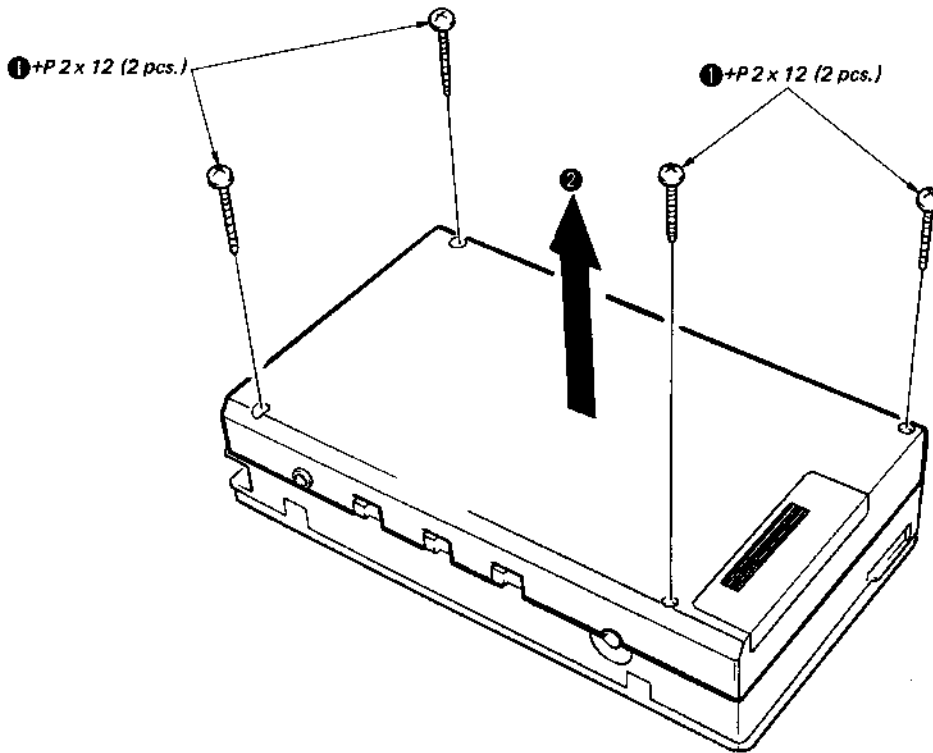
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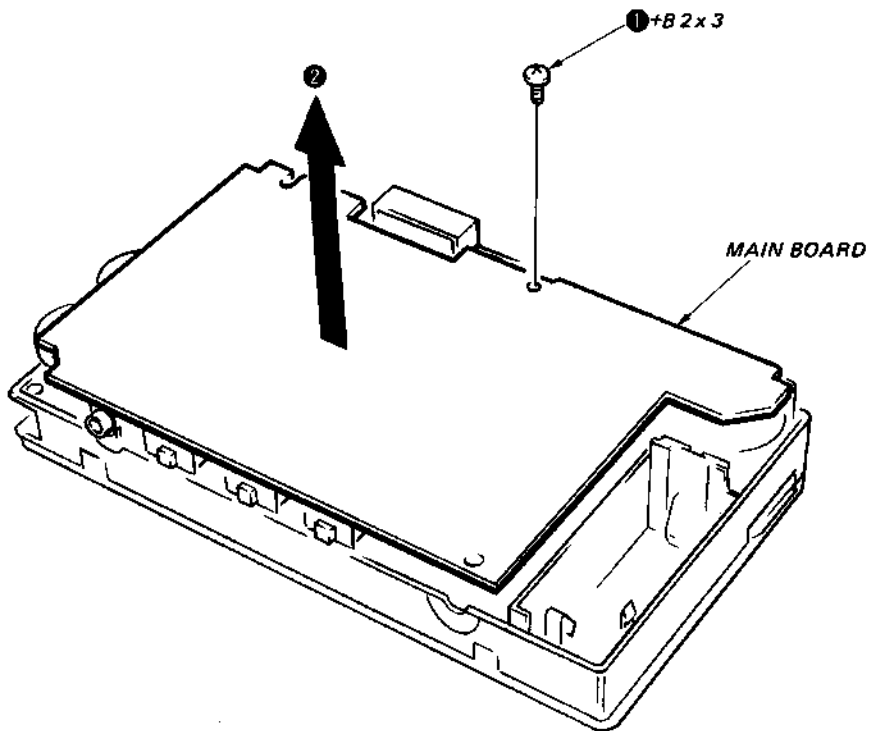
### SECTION 1 DISASSEMBLY

• Follow the disassembly procedure in the numerical order given.

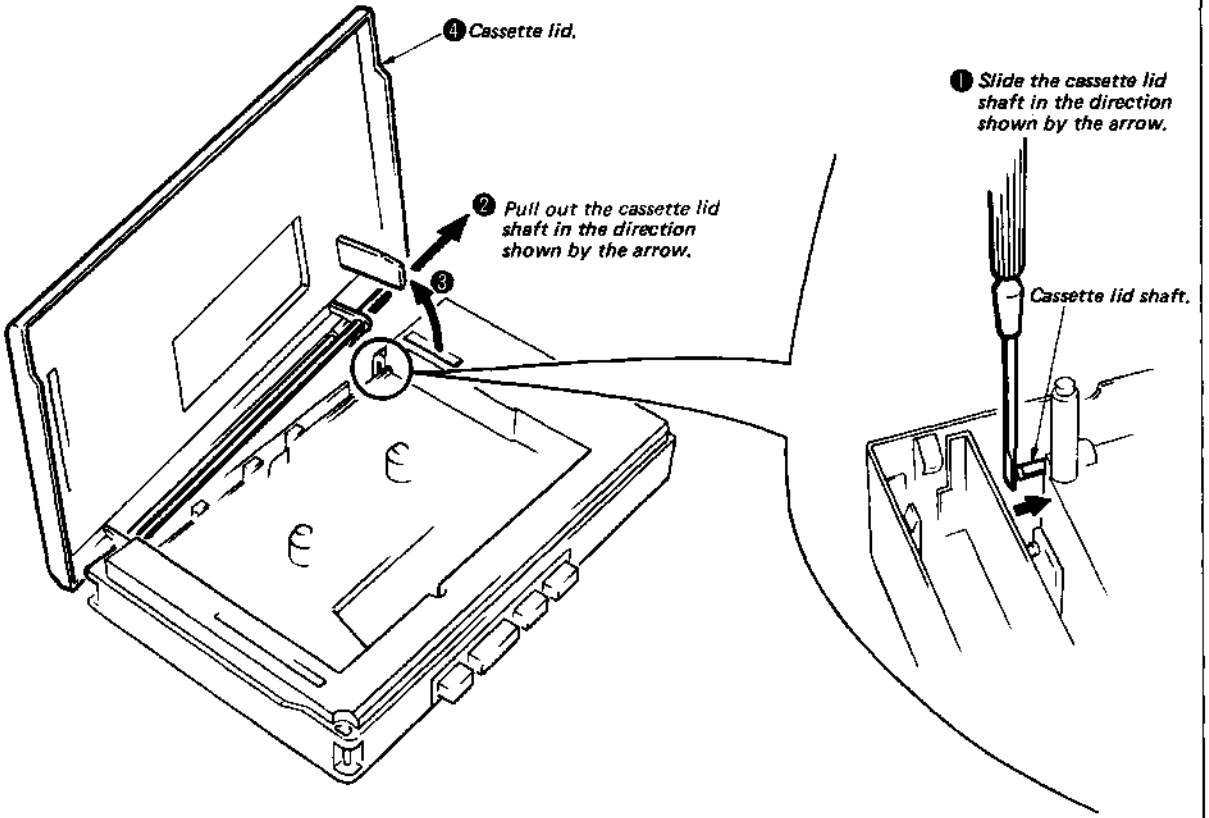
#### REAR CABINET



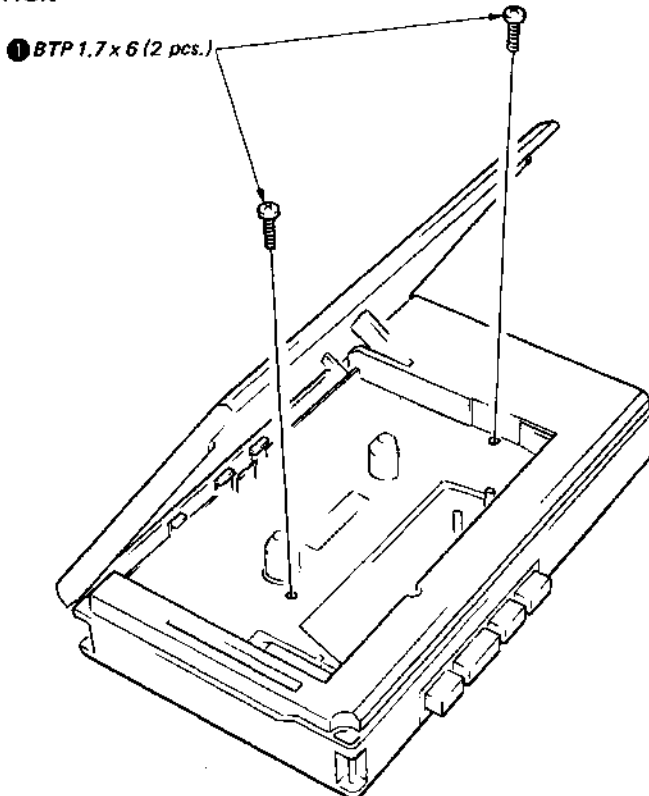
#### MAIN BOARD



**CASSETTE LID**



**MECHANISM SECTION**



**SECTION 2  
ADJUSTMENTS**

**2-1. MECHANICAL ADJUSTMENTS AND MEASUREMENT**

**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.

power supply voltage: 3 V dc  
SPEED CONTROL knob: center click

**Torque Measurement**

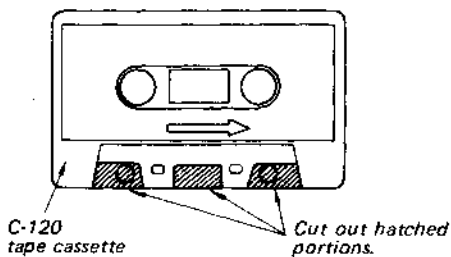
Torque	Meter Reading	Torque Meter
Forward	22 – 40 g·cm (0.30 – 0.55 oz·inch)	CQ-102C
Back Tension	2 – 4 g·cm (0.03 – 0.05 oz·inch)	CQ-102C
Fast Forward and Rewind	67.5 – 95 g·cm (0.93 – 1.31 oz·inch)	CQ-201B

**Tape Tension Measurement**

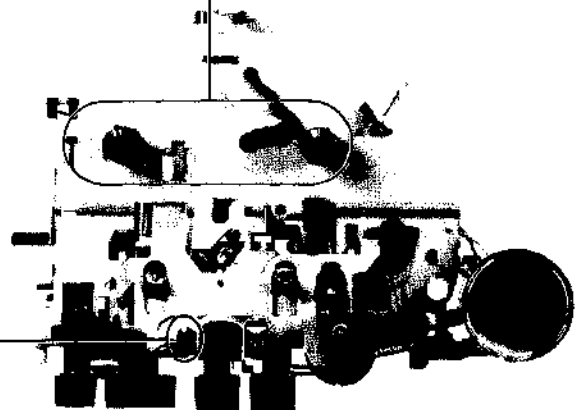
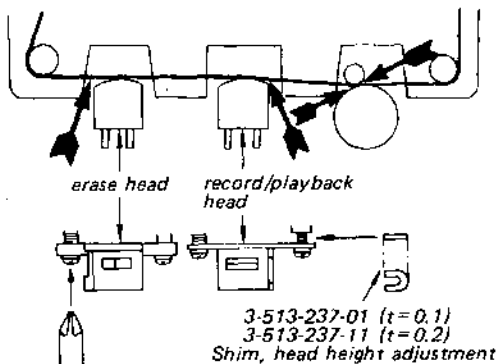
Meter	Meter Reading
CQ-403A	More than 120 g (4.23 oz)

**Head Height Adjustment**

1. Prepare an adjustment cassette as shown below.



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



2-2. ELECTRICAL ADJUSTMENTS

**Record/playback Head Azimuth Adjustment**

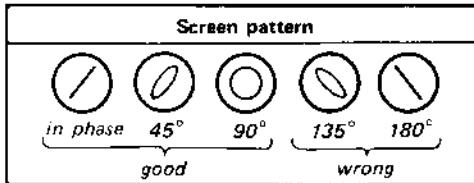
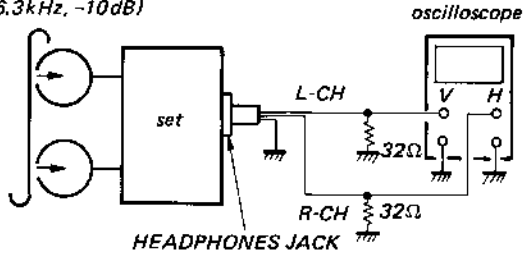
**Setting:**

SPEED CONTROL switch: NORMAL

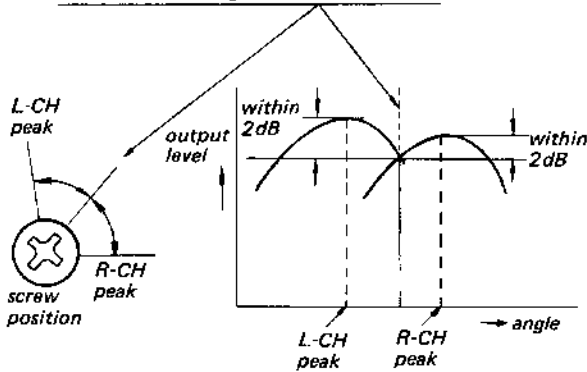
**Procedure:**

1. Mode: playback

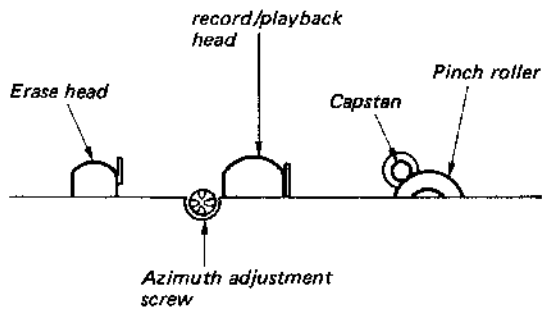
test tape  
P-4-A063  
(6.3kHz, -10dB)



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 2dB.



**Adjustment Location:**



**Tape Speed Adjustment**

**Setting:**

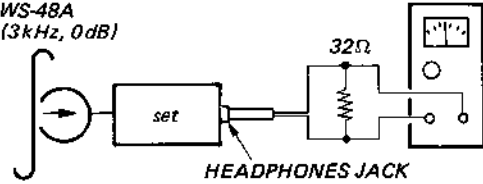
SPEED CONTROL switch: NORMAL

**Procedure:**

- Mode: playback

test tape  
WS-48A  
(3kHz, 0dB)

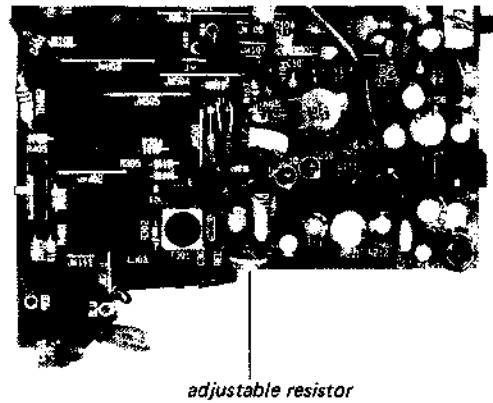
speed checker  
LFM-30  
or  
digital frequency  
counter



**Specification:**

Speed checker	Digital frequency counter
-0.3% to +0.3%	2,990 - 3,010 Hz

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

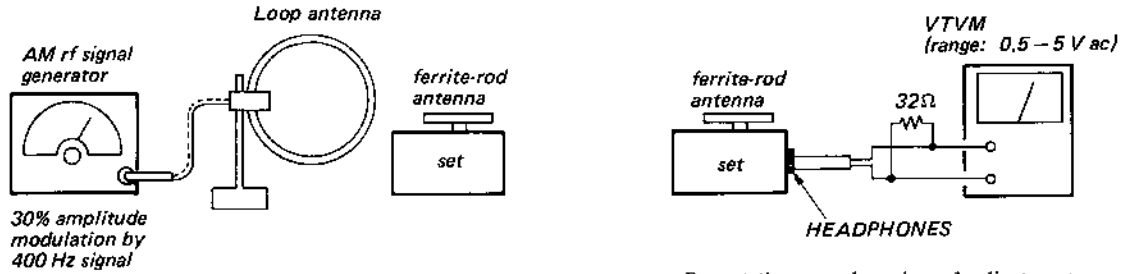


**AM SECTION**

**Setting:**

FUNCTION selector: RADIO  
 BAND selector: AM

**Procedure:**



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

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T1	600 kHz
CT4	1,400 kHz

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

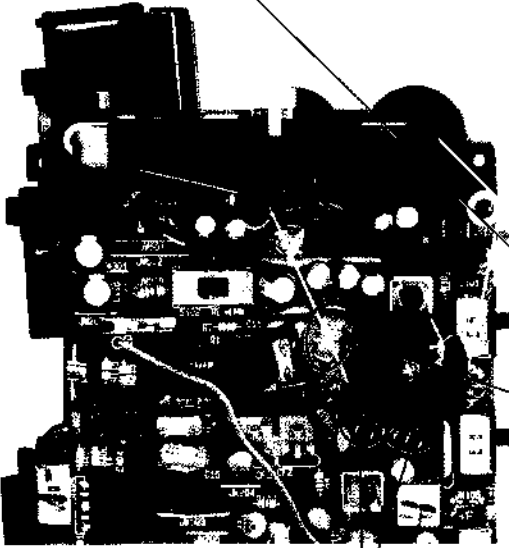
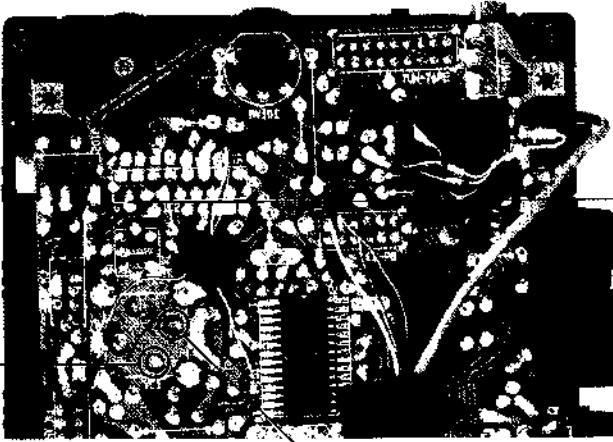
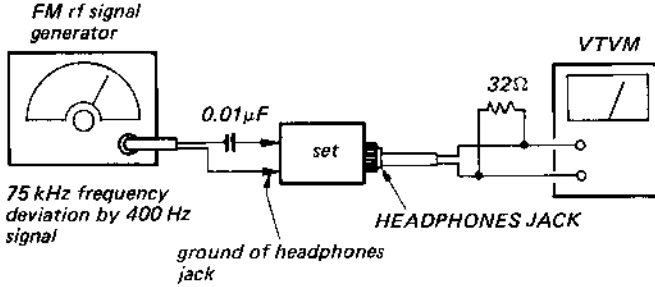
AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T2	520 kHz
CT3	1,680 kHz

## FM SECTION

### Setting:

FUNCTION switch: RADIO  
 BAND SELECT switch: FM

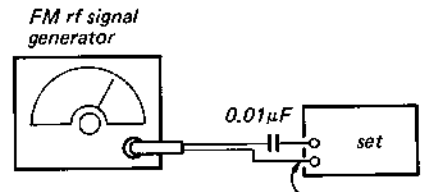
### Procedure:



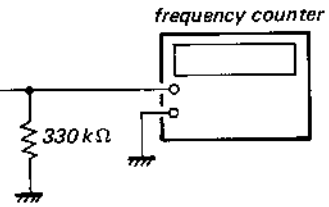
### VCO Adjustment

#### A) Regular Method

#### Procedure:



Carrier frequency: 98 MHz  
 Modulation: 400 Hz, 30%  
 Output level: 562  $\mu$ V (55 dB)



1. Tune the set to 98 MHz.
2. Adjust VR1 for 19 kHz  $\pm$  100 Hz on the counter.

### FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

CT1	108.5 MHz
L1	87.1 MHz

CT2	L2, 3
108.5 MHz	87.1 MHz
Adjust for a maximum reading on VTVM.	
TRACKING ADJUSTMENT	



SECTION 3 DIAGRAMS

WM-F46 WM-F46

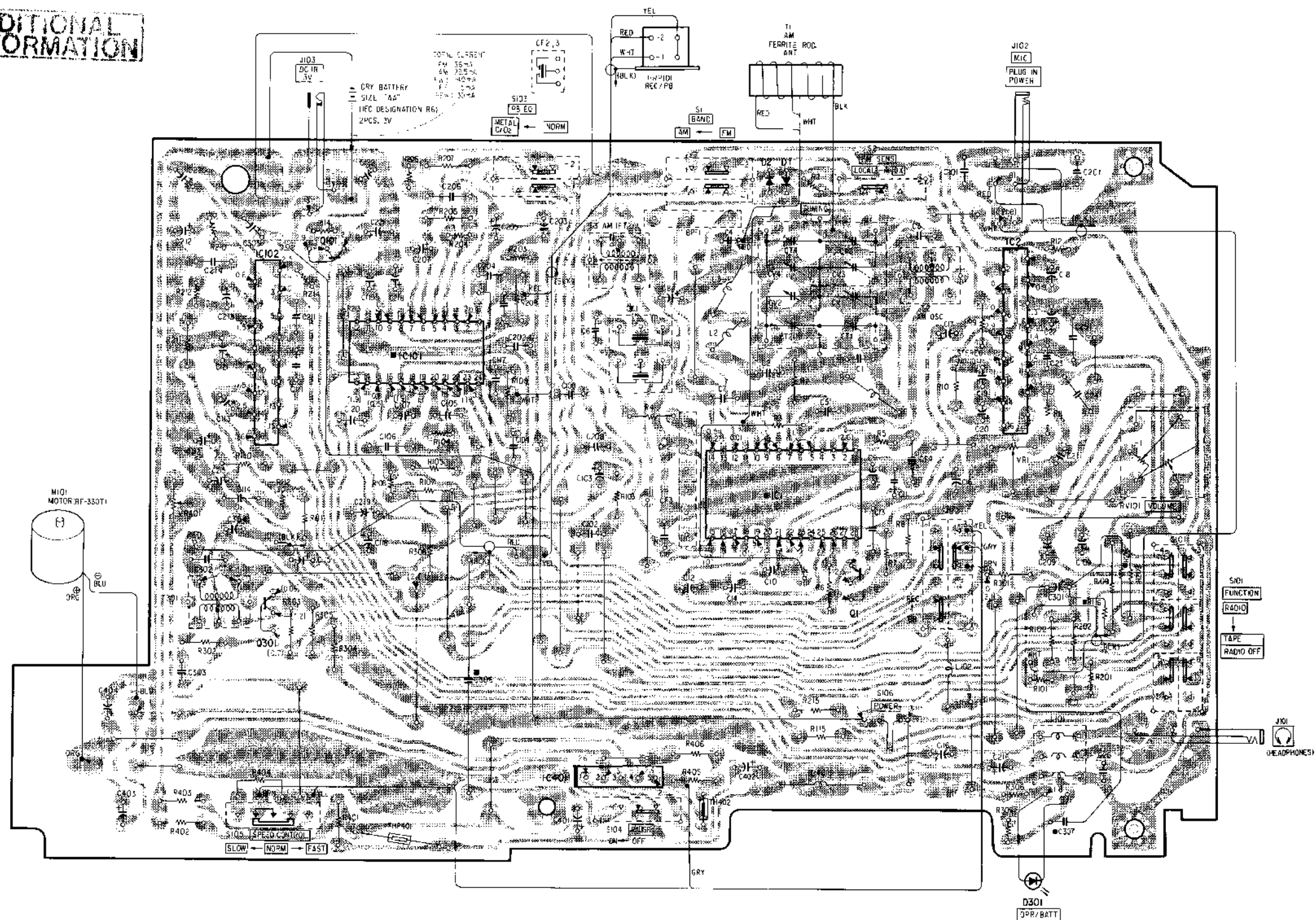
SEE ADDITIONAL INFORMATION

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

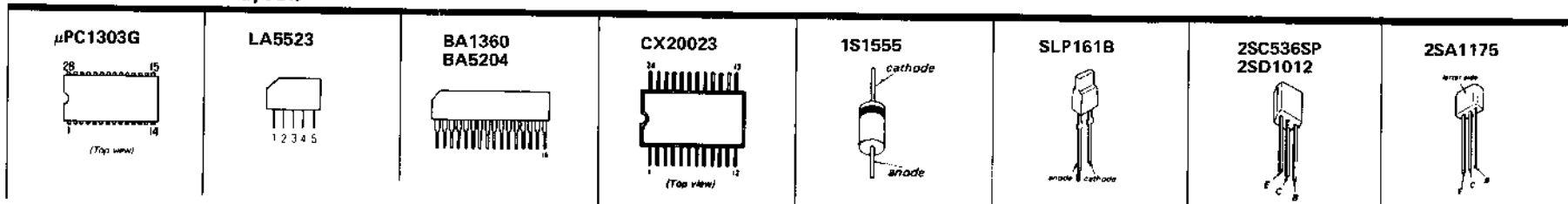
3-1. MOUNTING DIAGRAM

SEE ADDITIONAL INFORMATION

Q IC	D
	2 1
IC1	
IC2	
IC102	
IC101	
IC1	
301	
IC401	
	3 4
	301

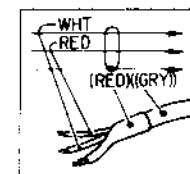


Semiconductor Lead Layouts



Note:

• Color code of sleeving over the end of the jacket.



- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : part mounted on the conductor side.



REVISED

SEE ADDITIONAL INFORMATION

SECTION 4 EXPLODED VIEWS AND PARTS LIST

WM-F46 WM-F46

SEE ADDITIONAL INFORMATION

REVISED

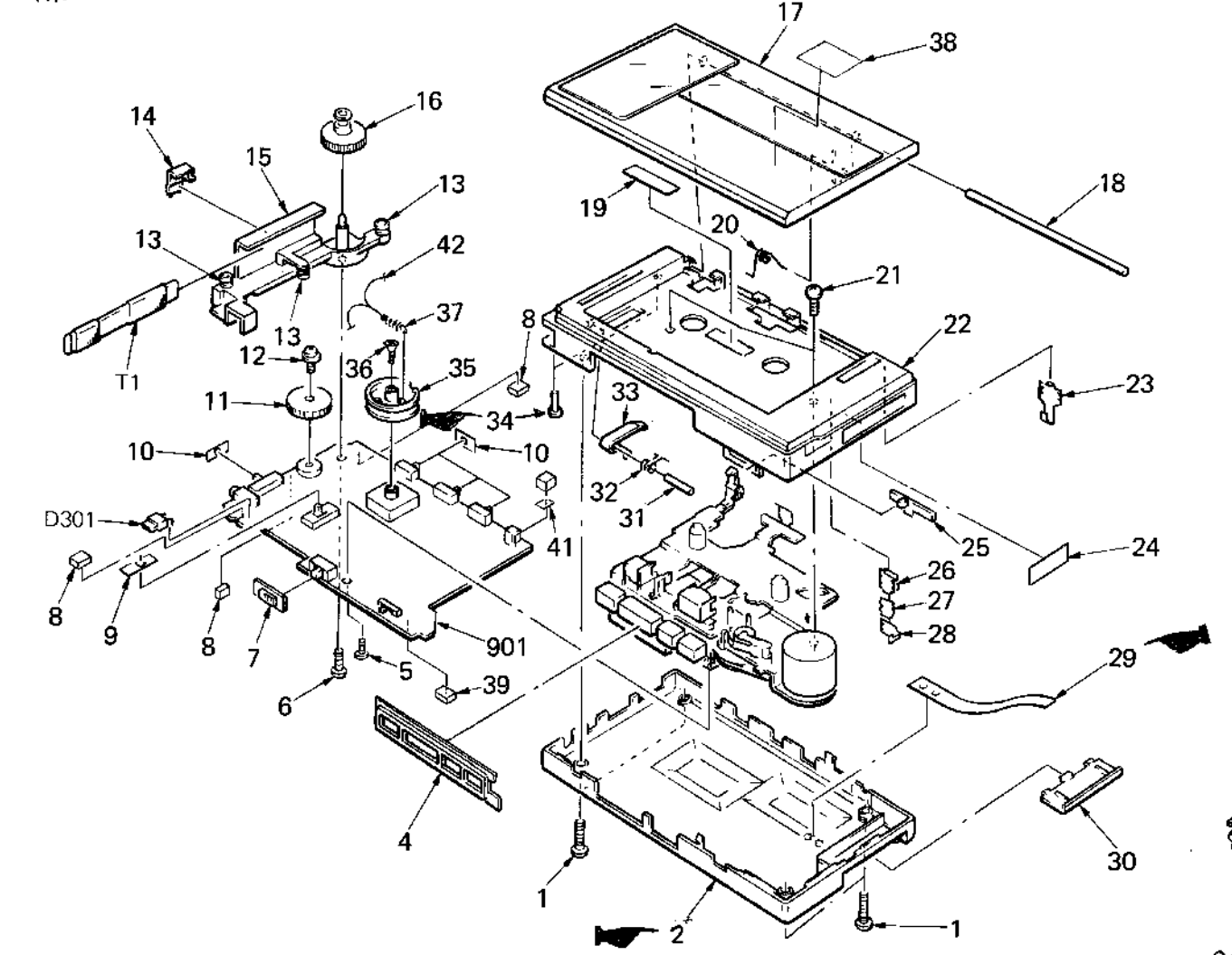
WM-F46 WM-F46

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

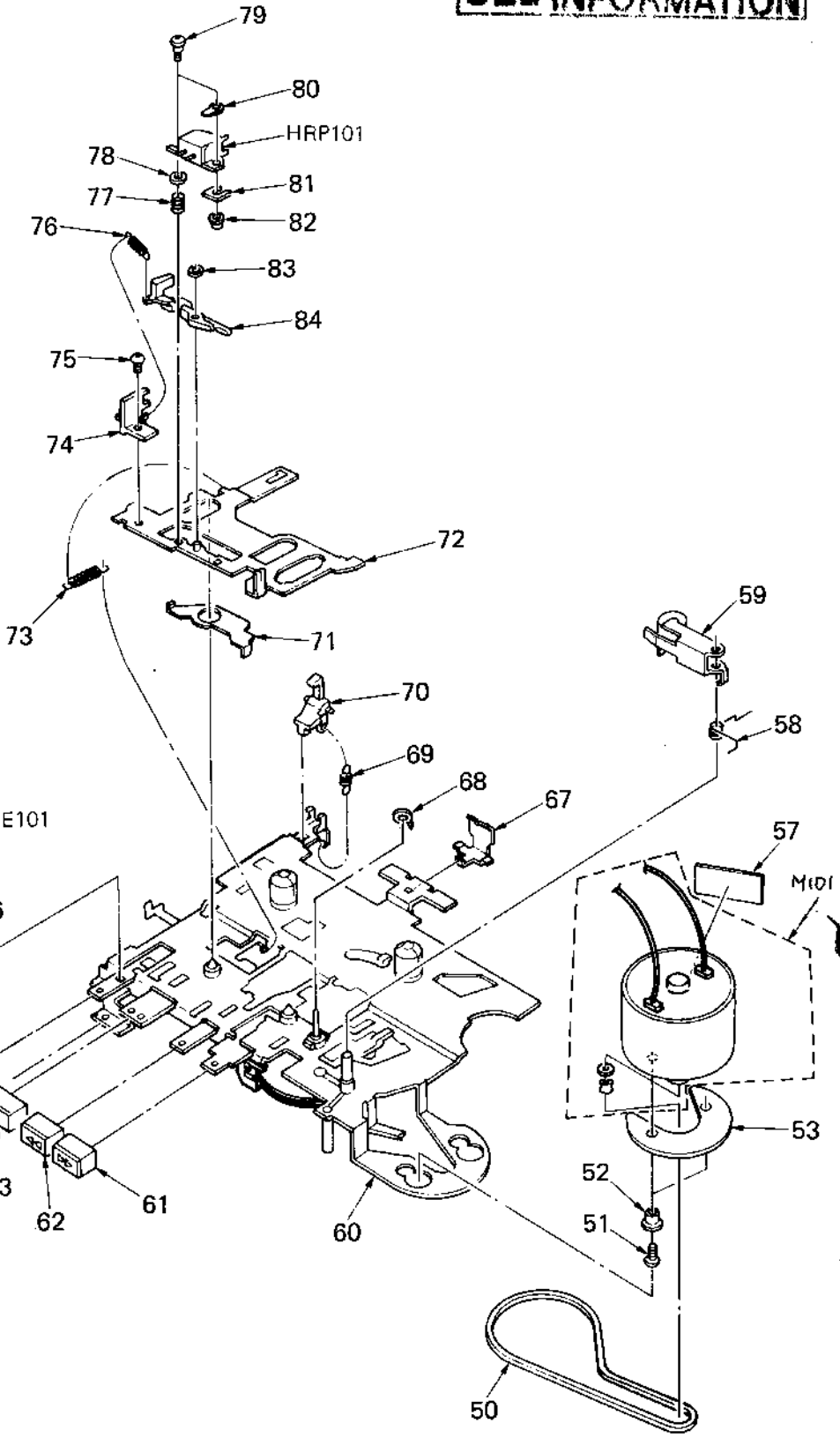
Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

(1).



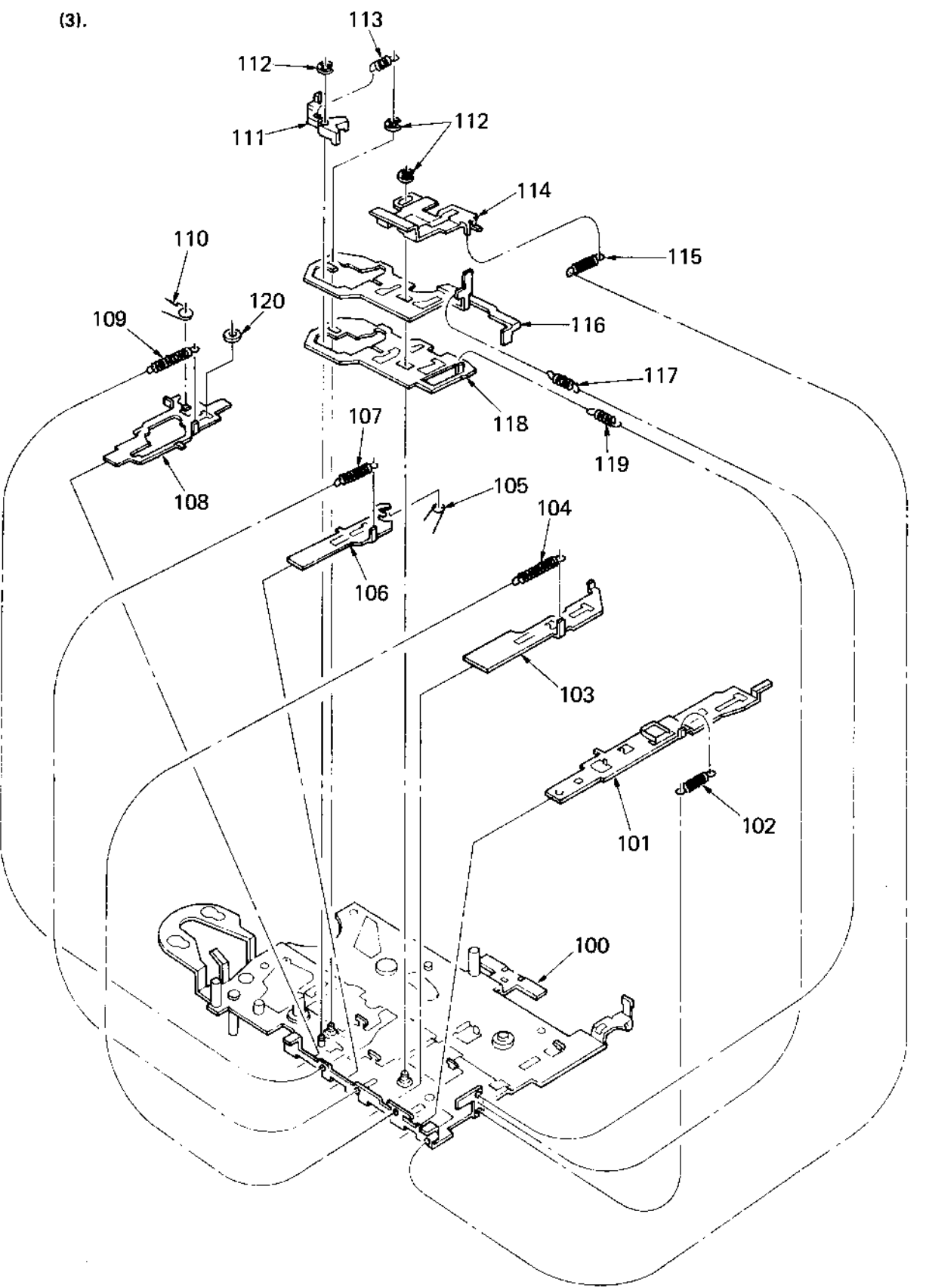
No.	Part No.	Description	Remarks
1	7-685-107-19	SCREW #P 2X12 TYPE2 SLIT	
2	3-317-280-21	CABINET (REAR)	
3	3-317-270-01	PANEL, CONTROL	
4	3-317-270-01	PANEL, CONTROL	
5	7-621-772-08	SCREW #B 2X3	
6	7-685-105-19	TPG #P 2X8, TYPE 2, NON-SLIT	
7	3-317-264-01	BUTTON, PAUSE	
8	9-911-840-XX	CUSHION (A)	
9	9-911-863-XX	SHEET, INSULATING	
10	3-305-653-00	PLATE (A), BLIND	
11	3-327-003-01	KNOB, VOL	
12	3-703-502-31	SCREW	
13	3-881-911-00	PULLEY	
14	3-317-260-01	POINTER	
15	3-317-278-01	CHASSIS, DIAL	
16	3-317-261-01	KNOB, TUN	
17	X-3335-632-1 (US).....LID ASSY, CASSETTE		
	X-3335-632-2 (Canadian).....LID ASSY, CASSETTE		
18	*3-327-012-01	SHAFT, CASSETTE LID	
19	3-578-101-00	PLATE, ORNAMENTAL	
20	3-317-262-01	SPRING	
21	3-318-203-11	SCREW (Ø1.7X6), TAPPING	
22	3-317-279-31 (US, Canadian).....	CABINET (FRONT)	
23	3-319-009-01	TERMINAL BOARD (A), BATTERY	
24	3-527-213-00	LABEL, SERIAL NUMBER	
25	3-317-263-01	KNOB, SLIDE	
26	3-319-010-01	TERMINAL BOARD (C), BATTERY	
27	3-309-443-00	SPRING, LEAF	
28	3-319-011-01	TERMINAL BOARD (D), BATTERY	
29	9-911-816-01	RIBBON, BATTERY	
30	3-317-276-21	LID, BATTERY CASE	
31	3-703-357-06	PIN, PARALLEL (DIA. 1.6X14)	
32	3-318-215-01	SPRING	
33	3-321-022-01	LEVER, EJECT	
34	3-327-008-01	SHAFT, BELT	
35	*3-317-266-01	DRUM, DIAL	
36	3-880-990-00	SCREW (1.7X3), FLAT, (+) SPECIAL	
37	3-317-268-01	SPRING, TENTION	
38	3-703-707-01	STICKER, SONY SYMBOL (21)	
39	9-911-845-XX	CUSHION	
40	3-831-441-11	CUSHION (B)	
41	9-911-863-XX	SHEET, JACK, DC	
42	9-911-825-52	STRING, DIAL Ø.3MM	
901	*A-3215-858-A	PC BOARD ASSY, MAIN	
T1	1-402-180-11	ANTENNA, FERRITE-ROD (MW)	



No.	Part No.	Description
50	3-313-568-01	BELT
51	7-627-552-67	SCREW, PRECISION #P 1.7X4.5
52	*3-318-310-01	COLLAR, MOTOR
53	*3-318-254-11	CUSHION, MOTOR
57	3-831-441-XX	CUSHION
58	3-318-275-01	SPRING
59	A-3110-010-A	PINCH LEVER ASSY
60	*X-3317-230-1	CHASSIS ASSY, OUTSART
61	3-317-274-01	BUTTON, FF
62	3-317-275-01	BUTTON, REM
63	3-317-272-01	BUTTON, PLAY
64	3-317-273-01	BUTTON, REC
65	3-317-271-01	BUTTON, STOP
66	3-318-285-01	BRACKET, ERASE HEAD
67	3-318-269-01	SPRING
68	*3-318-353-01	CONDUCTOR (2)
69	3-318-336-01	SPRING, TENSION
70	3-318-286-01	LEVER, ERASING PROTECTION
71	*3-318-267-01	LEVER, CR
72	X-3318-222-1	CHASSIS ASSY, HEAD
73	3-565-927-00	SPRING, TENSION
74	3-318-287-01	GUIDE, TAPE
75	7-627-552-07	SCREW, PRECISION #P 1.7X2.5
76	3-318-238-01	SPRING, TENSION
77	3-318-237-01	SPRING, COMPRESSION
78	7-688-001-01	W 2, SMALL
79	3-318-240-01	SCREW (1.4), SPECIAL
80	7-623-505-01	LUG, 2
81	3-578-138-01	SHIM (t=0.1)
	3-578-138-11	SHIM (t=0.2)
	3-578-138-21	SHIM (t=0.3)
82	3-318-309-01	SPACER, HEAD
83	3-570-615-00	POLY-WASHER (DIA.1.2)
84	3-318-252-01	ARM, DETECTION
HE101	B-658-096-02	HEAD, ERASE EBFS-36
HRP101	1-543-257-11	HEAD, RECORD/PLAYBACK
M101	X-3317-284-1	MOTOR KIT ASSY

No.	Part No.	Description
100	*X-3317-230-1	CHASSIS ASSY, OUTSART
101	*X-3317-229-1	LEVER ASSY, REC
102	3-318-247-01	SPRING, TENSION
103	*3-318-290-01	LEVER, PLAY
104	3-318-246-01	SPRING, TENSION
105	3-318-277-01	SPRING, REW
106	3-318-292-01	LEVER, REM
107	3-318-251-01	SPRING, TENSION
108	3-318-291-01	LEVER, FR
109	3-318-250-01	SPRING, TENSION
110	3-318-276-01	SPRING
111	3-318-296-01	LEVER, SHUT-OFF
112	7-624-101-01	RING, RETAINING E-1.2
113	3-318-351-01	SPRING, TENSION
114	*3-318-293-01	LEVER, STOP
115	3-547-669-00	SPRING, TENSION
116	*3-317-253-01	LEVER, SW
117	3-318-248-01	SPRING, TENSION
118	*3-318-294-01	PLATE, LOCK
119	3-331-403-01	SPRING, TENSION
120	3-701-437-01	WASHER

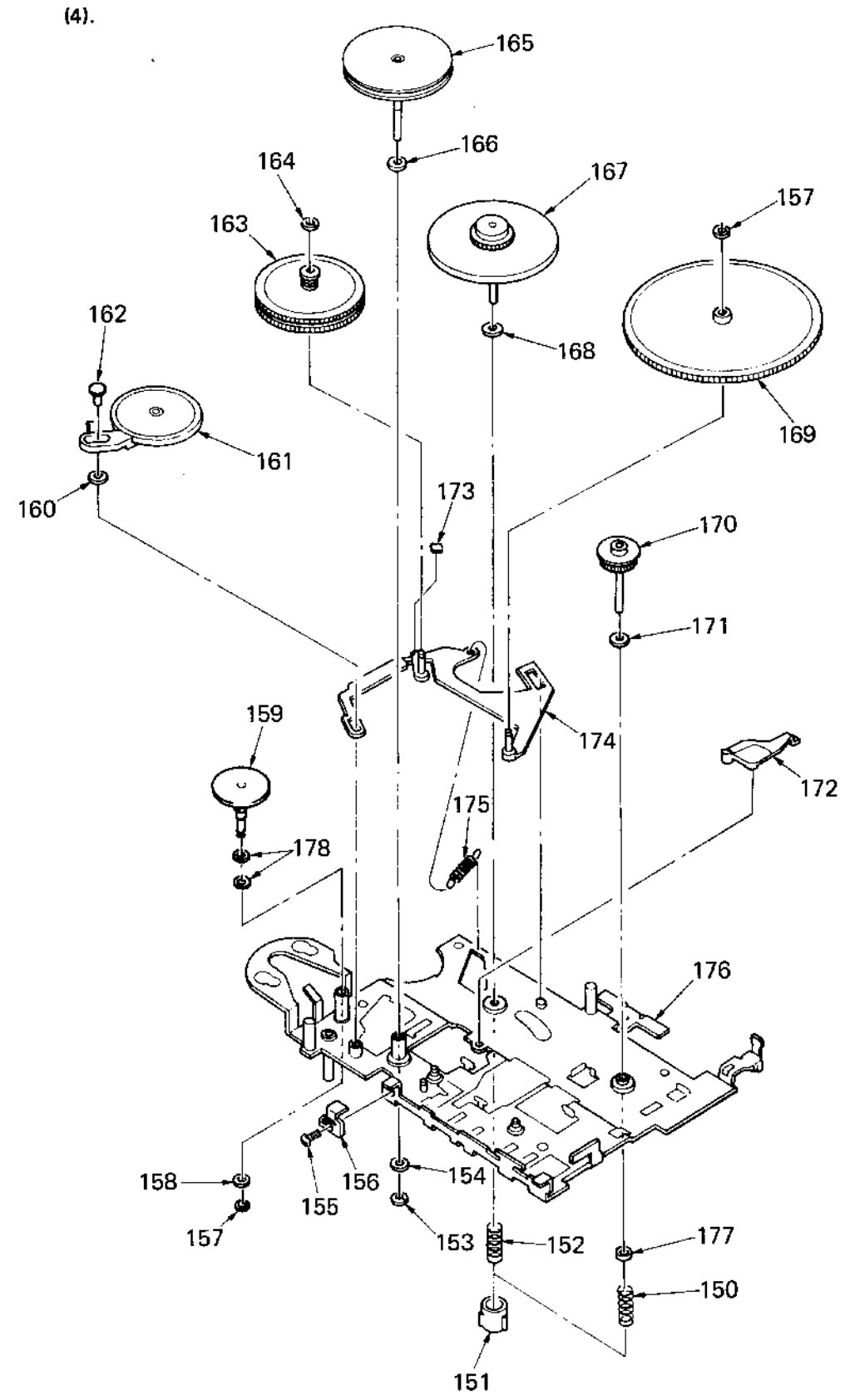
(3).



No.	Part No.	Description
57	3-831-441-XX	CUSHION
58	3-318-275-01	SPRING
59	A-3110-010-A	PINCH LEVER ASSY
60	*X-3317-230-1	CHASSIS ASSY, OUTSART
61	3-317-274-01	BUTTON, FF
62	3-317-275-01	BUTTON, REM
63	3-317-272-01	BUTTON, PLAY
64	3-317-273-01	BUTTON, REC
65	3-317-271-01	BUTTON, STOP
66	3-318-285-01	BRACKET, ERASE HEAD
67	3-318-269-01	SPRING
68	*3-318-353-01	CONDUCTOR (2)
69	3-318-336-01	SPRING, TENSION
70	3-318-286-01	LEVER, ERASING PROTECTION
71	*3-318-267-01	LEVER, CR
72	X-3318-222-1	CHASSIS ASSY, HEAD
73	3-565-927-00	SPRING, TENSION
74	3-318-287-01	GUIDE, TAPE
75	7-627-552-07	SCREW, PRECISION #P 1.7X2.5
76	3-318-238-01	SPRING, TENSION
77	3-318-237-01	SPRING, COMPRESSION
78	7-688-001-01	W 2, SMALL
79	3-318-240-01	SCREW (1.4), SPECIAL
80	7-623-505-01	LUG, 2
81	3-578-138-01	SHIM (t=0.1)
	3-578-138-11	SHIM (t=0.2)
	3-578-138-21	SHIM (t=0.3)
82	3-318-309-01	SPACER, HEAD
83	3-570-615-00	POLY-WASHER (DIA.1.2)
84	3-318-252-01	ARM, DETECTION
HE101	B-658-096-02	HEAD, ERASE EBFS-36
HRP101	1-543-257-11	HEAD, RECORD/PLAYBACK
M101	X-3317-284-1	MOTOR KIT ASSY

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100	*X-3317-230-1	CHASSIS ASSY, OUTSART
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104	3-318-246-01	SPRING, TENSION
105	3-318-277-01	SPRING, REW
106	3-318-292-01	LEVER, REM
107	3-318-251-01	SPRING, TENSION
108	3-318-291-01	LEVER, FR
109	3-318-250-01	SPRING, TENSION
110	3-318-276-01	SPRING
111	3-318-296-01	LEVER, SHUT-OFF
112	7-624-101-01	RING, RETAINING E-1.2
113	3-318-351-01	SPRING, TENSION
114	*3-318-293-01	LEVER, STOP
115	3-547-669-00	SPRING, TENSION
116	*3-317-253-01	LEVER, SW
117	3-318-248-01	SPRING, TENSION
118	*3-318-294-01	PLATE, LOCK
119	3-331-403-01	SPRING, TENSION
120	3-701-437-01	WASHER

(4).



No.	Part No.	Description	Remarks
150	3-321-024-01	SPRING, COMPRESSION	
151	3-308-836-02	CAP, REEL, T	
152	3-318-241-01	SPRING, COMPRESSION	
153	3-318-236-01	WASHER, POLY, SLIT	
154	3-701-437-01	WASHER (t=0.13)	
155	3-318-203-11	SCREW (Ø1.7X6), TAPPING	
156	*3-317-267-01	BRACKET, PC BOARD	
157	3-570-615-00	POLY-WASHER (DIA.1.2)	
158	3-701-436-11	WASHER, 1.6 (t=0.25)	
159	X-3319-004-1	WHEEL ASSY, REVERSE	
160	3-827-323-11	WASHER (DIA. 3.1)	
161	X-3318-210-1	LEVER ASSY, FWD IDLER	
162	3-318-324-01	BUSHING, IDLER LEVER	
163	X-3318-207-1	GEAR (A) ASSY, FR	
164	3-578-265-11	WASHER, STOPPER	
165	X-3313-509-1	FLYWHEEL ASSY	
166	3-701-437-11	WASHER (t=0.25)	
167	X-3325-619-1	CLUTCH ASSY	
168	3-701-437-41	WASHER (t=0.35)	
169	3-318-265-01	GEAR (B), FR	
170	X-3318-204-1	GEAR ASSY, REW	
171	X-3318-437-21	WASHER (t=0.5)	
172	3-318-286-01	ARM, FF	
173	3-831-441-XX	CUSHION	
174	X-3318-208-1	LEVER ASSY, FR	
175	3-318-243-01	SPRING, TENSION	
176	*X-3317-230-1	CHASSIS ASSY, OUTSART	
177	3-325-690-01	WASHER, B, T	
178	3-701-436-01	WASHER, 1.6 (t=0.13)	

SEE INFORMATION

WM-F46

## SECTION 5 ELECTRICAL PARTS LIST

## NOTE:

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...

ELECTRICAL PARTS						ELECTRICAL PARTS					
Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
901	*A-3215-858-A	PC BOARD ASSY, MAIN				C119	1-123-618-00	ELECT	22MF	20%	6.3V
BPF1	1-235-142-00	FILTER, BAND PASS				C120	1-123-306-00	ELECT	47MF	20%	6.3V
C1	1-102-883-00	CERAMIC	27PF	5%	50V	C121	1-123-661-00	ELECT	100MF	20%	6.3V
C2	1-102-515-00	CERAMIC	24PF	5%	50V	C122	1-124-433-00	ELECT	100MF	20%	4V
C3	1-102-746-00	CERAMIC	8PF	0.5PF	50V	C201	1-161-013-00	CERAMIC	0.01MF	10%	25V
C4	1-102-743-00	CERAMIC	3PF	0.25PF	50V	C202	1-102-074-00	CERAMIC	0.001MF	10%	50V
C5	1-102-934-00	CERAMIC	1PF	0.25PF	50V	C203	1-123-611-00	ELECT	1MF	20%	50V
C6	1-102-521-00	CERAMIC	43PF	5%	50V	C204	1-161-040-00	CERAMIC	0.0012MF	10%	25V
C7	1-102-074-00	CERAMIC	0.001MF	10%	50V	C205	1-124-229-00	ELECT	33MF	20%	6.3V
C8	1-123-617-00	ELECT	10MF	20%	16V	C206	1-161-057-00	CERAMIC	0.033MF	10%	25V
C9	1-123-617-00	ELECT	10MF	20%	16V	C207	1-124-252-00	ELECT	0.33MF	20%	50V
C10	1-123-369-00	ELECT	4.7MF	20%	25V	C208	1-161-013-00	CERAMIC	0.01MF	10%	25V
C11	1-102-117-00	CERAMIC	820PF	10%	50V	C209	1-123-611-00	ELECT	1MF	20%	50V
C12	1-123-618-00	ELECT	22MF	20%	6.3V	C211	1-161-047-00	CERAMIC	0.0047MF	10%	50V
C13	1-161-022-00	CERAMIC	0.056MF	10%	25V	C212	1-124-224-00	ELECT	47MF	20%	6.3V
C14	1-123-617-00	ELECT	10MF	20%	16V	C213	1-123-306-00	ELECT	47MF	20%	6.3V
C15	1-161-013-00	CERAMIC	0.01MF	10%	25V	C214	1-108-579-00	MYLAR	0.01MF	5%	50V
C16	1-124-434-00	ELECT	220MF	20%	4V	C215	1-131-421-00	TANTALUM	1.5MF	20%	6.3V
C17	1-123-611-00	ELECT	1MF	20%	50V	C216	1-124-433-00	ELECT	100MF	20%	4V
C18	1-123-611-00	ELECT	1MF	20%	50V	C217	1-161-043-00	CERAMIC	0.0022MF	10%	25V
C19	1-124-464-11	ELECT	0.22MF	20%	50V	C218	1-131-392-00	TANTALUM	33MF	10%	3.15V
C20	1-124-465-00	ELECT	0.47MF	20%	50V	C219	1-123-617-00	ELECT	10MF	20%	16V
C21	1-104-077-00	POLYSTYRENE	0.001MF	5%	50V	C220	1-124-442-00	ELECT	330MF	20%	6.3V
C22	1-123-369-00	ELECT	4.7MF	20%	25V	C221	1-123-661-00	ELECT	100MF	20%	6.3V
C23	1-102-074-00	CERAMIC	0.001MF	10%	50V	C301	1-124-224-00	ELECT	47MF	20%	6.3V
C24	1-161-052-00	CERAMIC	0.012MF	10%	25V	C302	1-130-514-00	MYLAR	0.0068MF	10%	50V
C25	1-161-052-00	CERAMIC	0.012MF	10%	25V	C303	1-161-039-00	CERAMIC	0.001MF	10%	25V
C26	1-102-106-00	CERAMIC	100PF	10%	50V	C304	1-123-306-00	ELECT	47MF	20%	6.3V
C101	1-161-013-00	CERAMIC	0.01MF	10%	25V	C305	1-124-442-00	ELECT	330MF	20%	6.3V
C102	1-102-074-00	CERAMIC	0.001MF	10%	50V	C306	1-102-106-00	CERAMIC	100PF	10%	50V
C103	1-123-611-00	ELECT	1MF	20%	50V	C307	1-102-106-00	CERAMIC	100PF	10%	50V
C104	1-161-040-00	CERAMIC	0.0012MF	10%	25V	C401	1-131-418-00	TANTALUM	1MF	20%	10V
C105	1-124-229-00	ELECT	33MF	20%	6.3V	C402	1-124-442-00	ELECT	330MF	20%	6.3V
C106	1-161-057-00	CERAMIC	0.033MF	10%	25V	C403	1-131-384-00	TANTALUM	15MF	10%	6.3V
C107	1-124-252-00	ELECT	0.33MF	20%	50V	C404	1-131-387-00	TANTALUM	47MF	10%	6.3V
C108	1-161-013-00	CERAMIC	0.01MF	10%	25V	CF1	1-527-865-00	FILTER, CERAMIC			
C109	1-123-611-00	ELECT	1MF	20%	50V	CF2	1-567-051-61	FILTER, CERAMIC			
C111	1-161-047-00	CERAMIC	0.0047MF	10%	50V	CF3	1-567-051-61	FILTER, CERAMIC			
C112	1-123-306-00	ELECT	47MF	20%	6.3V	CF4	1-567-051-61	FILTER, CERAMIC			
C113	1-123-306-00	ELECT	47MF	20%	6.3V	CV1-4	1-151-437-00	CAP, TUNING, POLYETHYLENE (INCLUDING CT1-4)			
C114	1-108-579-00	MYLAR	0.01MF	5%	50V	D1	8-719-815-55	DIODE 1S1555			
C115	1-131-421-00	TANTALUM	1.5MF	20%	6.3V	D2	8-719-815-55	DIODE 1S1555			
C116	1-124-433-00	ELECT	100MF	20%	4V	D301	8-719-901-96	DIODE SLP161B (OPR/BATT)			
C117	1-161-043-00	CERAMIC	0.0022MF	10%	25V	HE101	8-658-096-02	HEAD, ERASE ERF5-36			
C118	1-123-617-00	ELECT	10MF	20%	16V	HRP101	1-543-267-11	HEAD, RECORD/PLAYBACK			

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC1	1-807-018-11	IC UPC1303G
IC2	1-806-901-11	IC BA1360
IC101	8-759-915-90	IC CX20023
IC102	1-806-902-11	IC BA5204
IC401	8-759-801-12	IC LA5523
J101	1-507-950-11	JACK (SMALL TYPE)(HEADPHONES)
J102	1-507-950-41	JACK (SMALL TYPE)(MIC)
J103	1-507-723-00	JACK, EXTENTION POWER (DC IN 3V)
L1	*1-406-161-11	COIL, FM OSCILLATOR
L2	*1-426-074-00	COIL, FM RF (A)
L3	1-406-042-00	COIL, FM OSC
L101	1-409-365-00	COIL, TRAP OR
L101	1-409-382-11	COIL, TRAP
L102	1-408-284-00	MICRO INDUCTOR 10UH
L401	1-408-284-00	MICRO INDUCTOR 10UH
M101	X-3317-234-1	MOTOR KIT ASSY
Q1	8-729-117-54	TRANSISTOR 2SA1175
Q101	8-729-853-63	TRANSISTOR 2SC536SP
Q301	8-729-811-24	TRANSISTOR 2SD1012
R1	1-249-419-11	CARBON 1.5K 5% 1/6W
R2	1-247-804-00	CARBON 75 5% 1/6W
R3	1-249-441-11	CARBON 100K 5% 1/6W
R4	1-249-421-11	CARBON 2.2K 5% 1/6W
R5	1-247-817-00	CARBON 270 5% 1/6W
R6	1-249-418-11	CARBON 1.2K 5% 1/6W
R7	1-249-423-11	CARBON 3.3K 5% 1/6W
R8	1-249-423-11	CARBON 3.3K 5% 1/6W
R9	1-249-429-11	CARBON 10K 5% 1/6W
R10	1-249-417-11	CARBON 1K 5% 1/6W
R11	1-249-429-11	CARBON 10K 5% 1/6W
R12	1-247-783-00	CARBON 10 5% 1/6W
R101	1-247-851-00	CARBON 6.8K 5% 1/6W
R102	1-249-417-11	CARBON 1K 5% 1/6W
R103	1-249-405-11	CARBON 100 5% 1/6W
R104	1-249-415-11	CARBON 680 5% 1/6W
R105	1-249-441-11	CARBON 100K 5% 1/6W
R106	1-249-420-11	CARBON 1.8K 5% 1/6W
R107	1-247-838-00	CARBON 2K 5% 1/6W
R108	1-249-429-11	CARBON 10K 5% 1/6W
R109	1-247-872-00	CARBON 51K 5% 1/6W
R110	1-247-830-00	CARBON 910 5% 1/6W
R111	1-247-770-00	CARBON 3 5% 1/6W
R112	1-247-775-00	CARBON 4.7 5% 1/6W
R114	1-247-819-00	CARBON 330 5% 1/6W
R115	1-247-842-00	CARBON 3K 5% 1/6W
R116	1-249-415-11	CARBON 680 5% 1/6W
R201	1-247-851-00	CARBON 6.8K 5% 1/6W
R202	1-249-417-11	CARBON 1K 5% 1/6W
R203	1-249-405-11	CARBON 100 5% 1/6W
R204	1-249-415-11	CARBON 680 5% 1/6W
R205	1-249-441-11	CARBON 100K 5% 1/6W
R206	1-247-837-00	CARBON 1.8K 5% 1/6W
R207	1-247-838-00	CARBON 2K 5% 1/6W
R208	1-249-429-11	CARBON 10K 5% 1/6W
R209	1-247-872-00	CARBON 51K 5% 1/6W
R210	1-247-830-00	CARBON 910 5% 1/6W
R211	1-247-770-00	CARBON 3 5% 1/6W
R212	1-247-775-00	CARBON 4.7 5% 1/6W
R213	1-210-825-00	CARBON 3.3M 5% 1/4W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
R214	1-247-814-00	CARBON 200 5% 1/6W
R215	1-247-842-00	CARBON 3K 5% 1/6W
R216	1-249-415-11	CARBON 680 5% 1/6W
R301	1-247-852-00	CARBON 7.5K 5% 1/6W
R302	1-249-431-11	CARBON 15K 5% 1/6W
R303	1-247-775-00	CARBON 4.7 5% 1/6W
R304	1-247-790-00	CARBON 20 5% 1/6W
R305	1-247-794-00	CARBON 30 5% 1/6W
R306	1-247-816-00	CARBON 240 5% 1/6W
R307	1-249-419-11	CARBON 1.5K 5% 1/6W
R308	1-249-429-11	CARBON 10K 5% 1/6W
R401	1-249-424-11	CARBON 3.9K 5% 1/6W
R402	1-249-431-11	CARBON 15K 5% 1/6W
R403	1-249-417-11	CARBON 1K 5% 1/6W
R404	1-249-425-11	CARBON 4.7K 5% 1/6W
R405	1-249-430-11	CARBON 12K 5% 1/6W
R406	1-249-434-11	CARBON 27K 5% 1/6W
RV101	1-230-485-21	RES, VAR, CARBON 10K/10K (VOLUME)
S1	1-554-222-00	SWITCH, SLIDE (BAND)
S2	1-554-611-00	SWITCH, SLIDE (FM SENS)
S101	1-554-122-00	SWITCH, SLIDE (FUNCTION)
S102	1-570-387-11	SWITCH, SLIDE (REC/PB)
S103	1-554-222-00	SWITCH, SLIDE (PB EQ)
S104	1-554-611-00	SWITCH, SLIDE (PAUSE)
S105	1-570-386-11	SWITCH, SLIDE (SPEED CONTROL)
S106	1-553-817-00	SWITCH, LEAF (MOTOR POWER)
T1	1-402-180-11	ANTENNA, FERRITE-ROD (MW)
T2	1-406-062-00	COIL, MW OSC
T3	1-404-636-11	COIL, MW IF
T301	1-433-276-00	TRANSFORMER, BIAS OSCILLATOR
TH402	1-800-279-21	THERMISTOR 5K
THP401	1-806-881-11	THERMISTOR (POSITIVE)
VR1	1-230-502-11	RES, ADJ, CARBON 5K (VCO)
VR401	1-230-775-11	RES, ADJ, CARBON 10K (SPEED)

## ACCESSORY &amp; PACKING MATERIAL

Part No.	Description
1-542-071-11	MICROPHONE (C-3001)
3-317-281-01	SPACER
3-317-282-01	CUSHION
3-317-283-01	(US)...INDIVIDUAL CARTON
3-321-020-01	BELT, SHOULDER
3-338-354-01	LABEL, MODEL NUMBER
3-527-213-00	LABEL, SERIAL NUMBER
3-570-631-81	BAG, PROTECTION
3-701-616-00	BAG, POLYETHYLENE
3-701-622-00	BAG, POLYETHYLENE
3-701-624-00	BAG, POLYETHYLENE
3-703-707-01	STICKER, SONY SYMBOL (21)
*3-764-430-01	INSTRUCTION, DBP CAUTION
3-769-043-21	MANUAL, INSTRUCTION
3-769-043-31	(Canadian)...MANUAL, INSTRUCTION
3-795-748-21	(US)...SAFETY INSTRUCTIONS, HEADPHONE
8-952-268-90	HEADPHONE MDR-010L SET
X-3324-613-1	STAND ASSY, MICROPHONE

Sony Corporation  
Audio Group

9-952-678-11

(Including 9-952-678-91)

-22-

English  
87D0640-1  
Printed in Japan  
©1987.4

# WM-F46

## SERVICE MANUAL

*US Model  
Canadian Model*

No. 1  
May, 1987

## SUPPLEMENT

File this supplement with the service manual.

**SUBJECT: Changes on Mounting and Schematic Diagrams,  
Exploded Views, Parts List and Dial-Cord  
Stringing.**

### 1. CHANGES ON ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C9	1-124-233-00	ELECT            10MF            20%    16V (low-profile type)
C405	1-102-074-00	CERAMIC            0.001MF        10%    50V
THP401	1-807-222-11	THERMISTOR (POSITIVE) (110Ω) (FOR MABUCHI MOTOR ONLY)

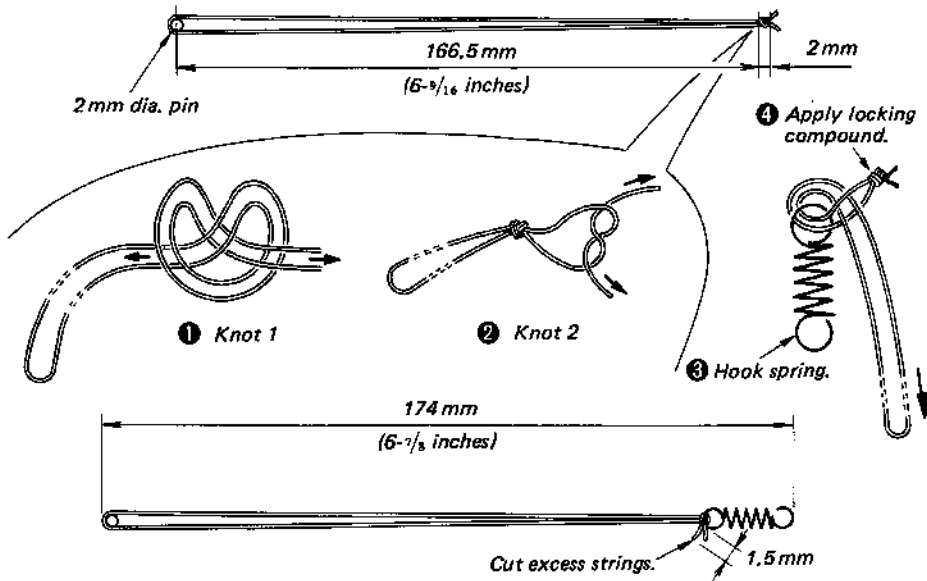
**FM/AM  
STEREO CASSETTE-CORDER  
SONY®**

**TC**

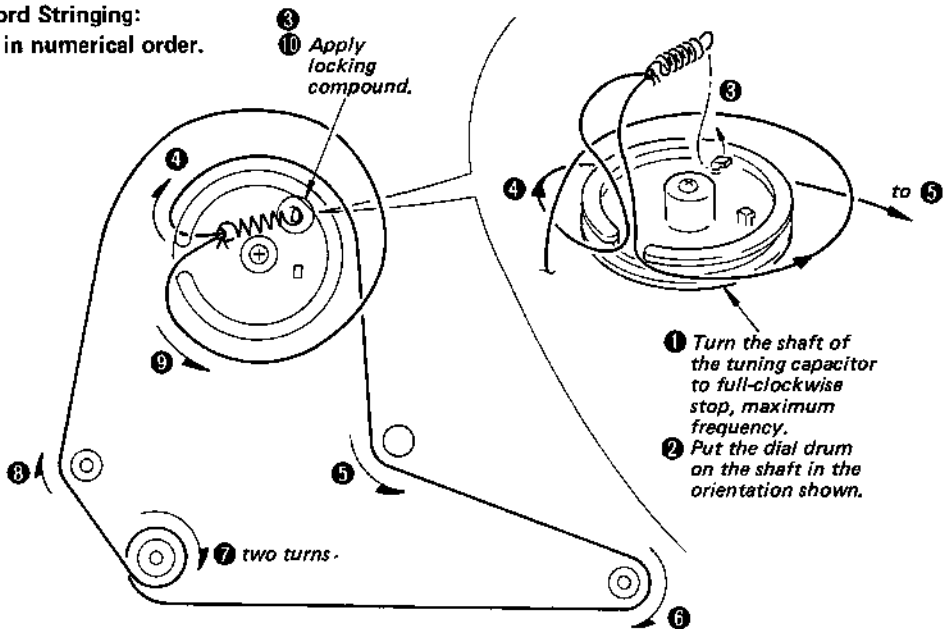


**2. DIAL-CORD STRINGING**

**2-1. Dial-cord preparation:**

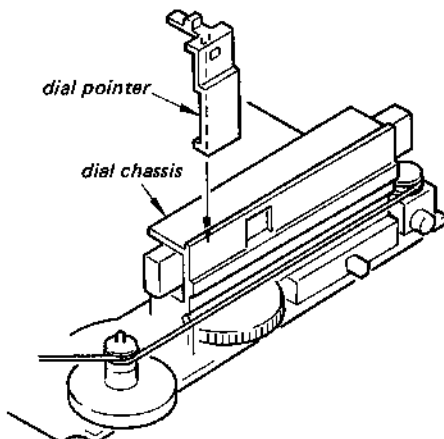


**2-2. Dial-cord Stringing:  
String in numerical order.**

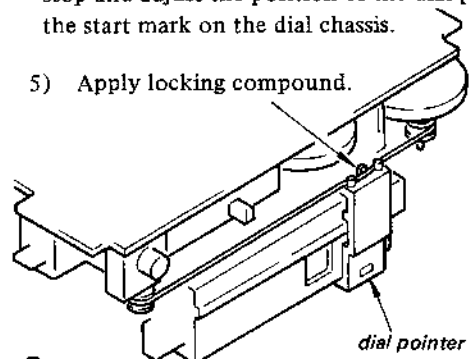


**2-3. Dial-pointer setting:**

1) Put the dial pointer on the dial chassis.



- 2) Turn the TUNING knob to move the dial pointer to the half-way position.
- 3) Put the dial cord on the dial pointer.
- 4) Turn the TUNING knob to the lowest-frequency stop and adjust the position of the dial pointer to the start mark on the dial chassis.
- 5) Apply locking compound.



3. MOUNTING DIAGRAM

■: CHANGED PORTIONS

A

B

C

D

E

F

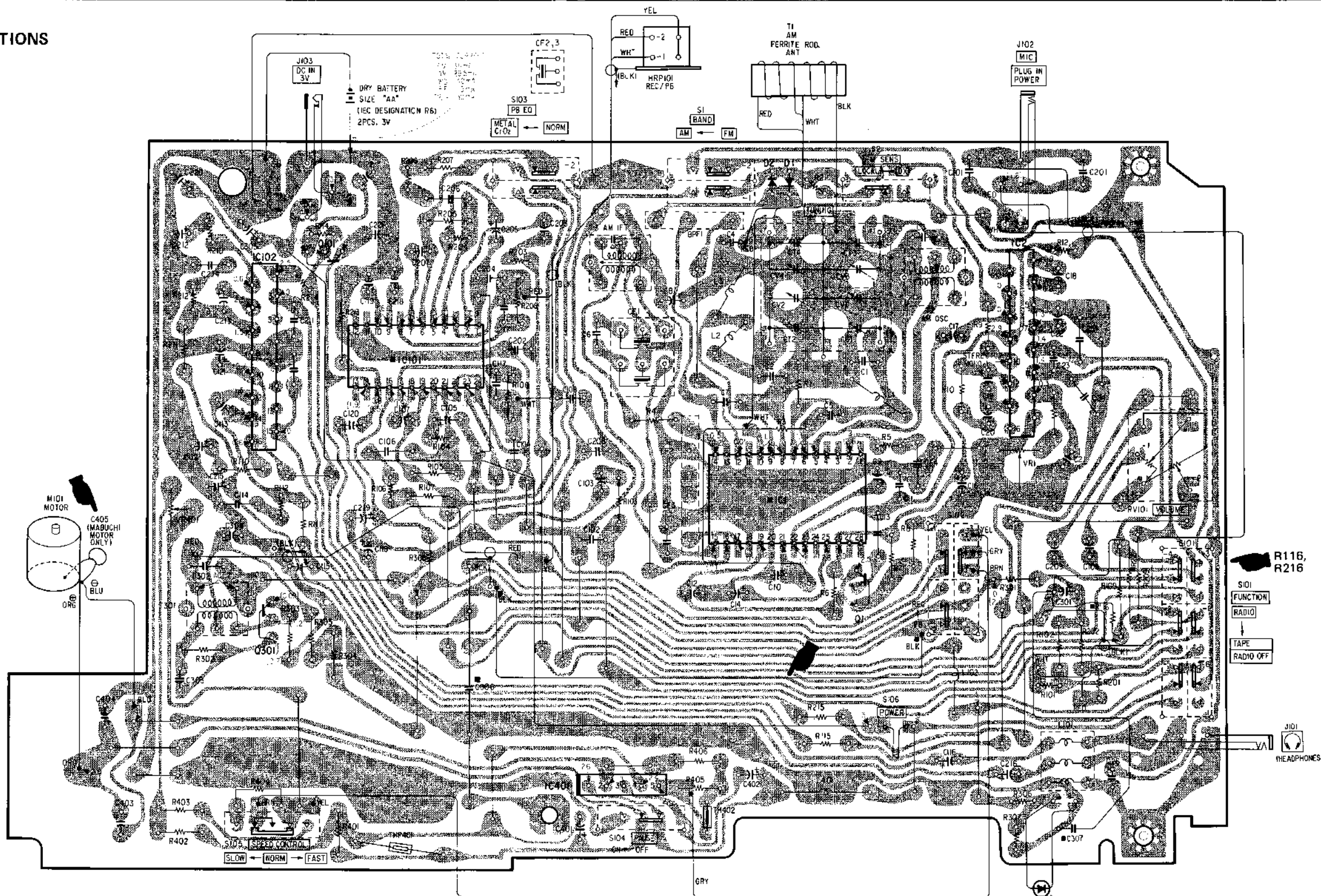
G

H

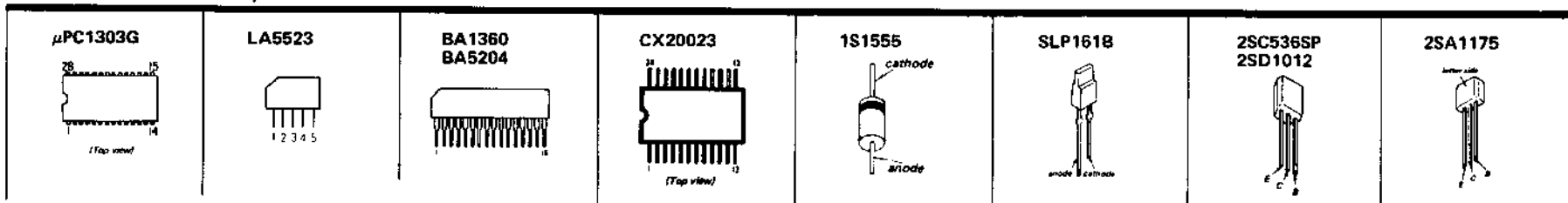
I

J

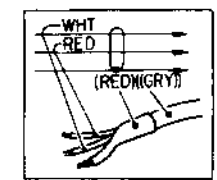
Q · IC	D
	2 1
IC1	
IC102	
IC101	
IC1	
301	
IC401	
	3 4
	301



Semiconductor Lead Layouts



Note: Color code of sleeving over the end of the jacket.



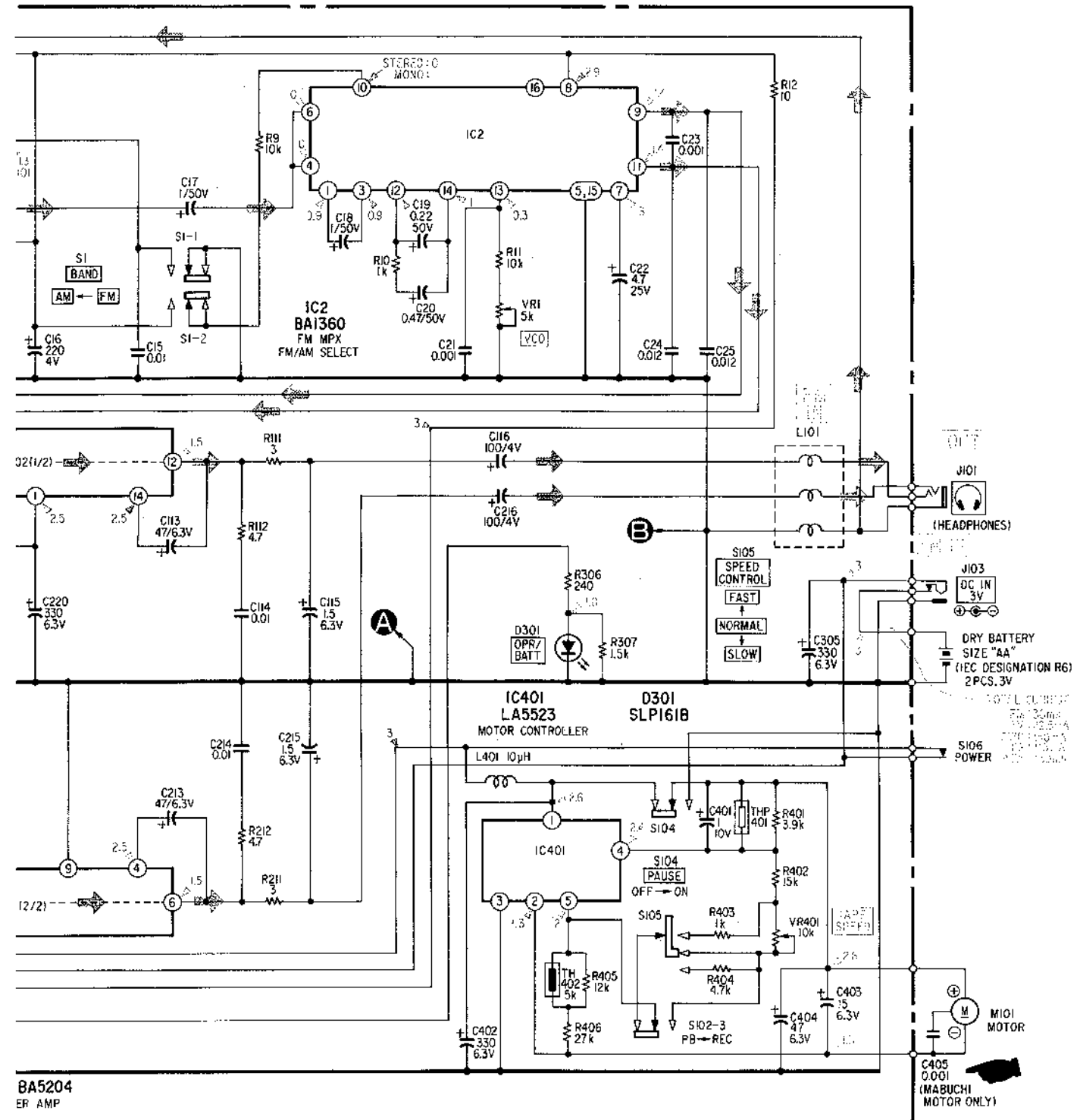
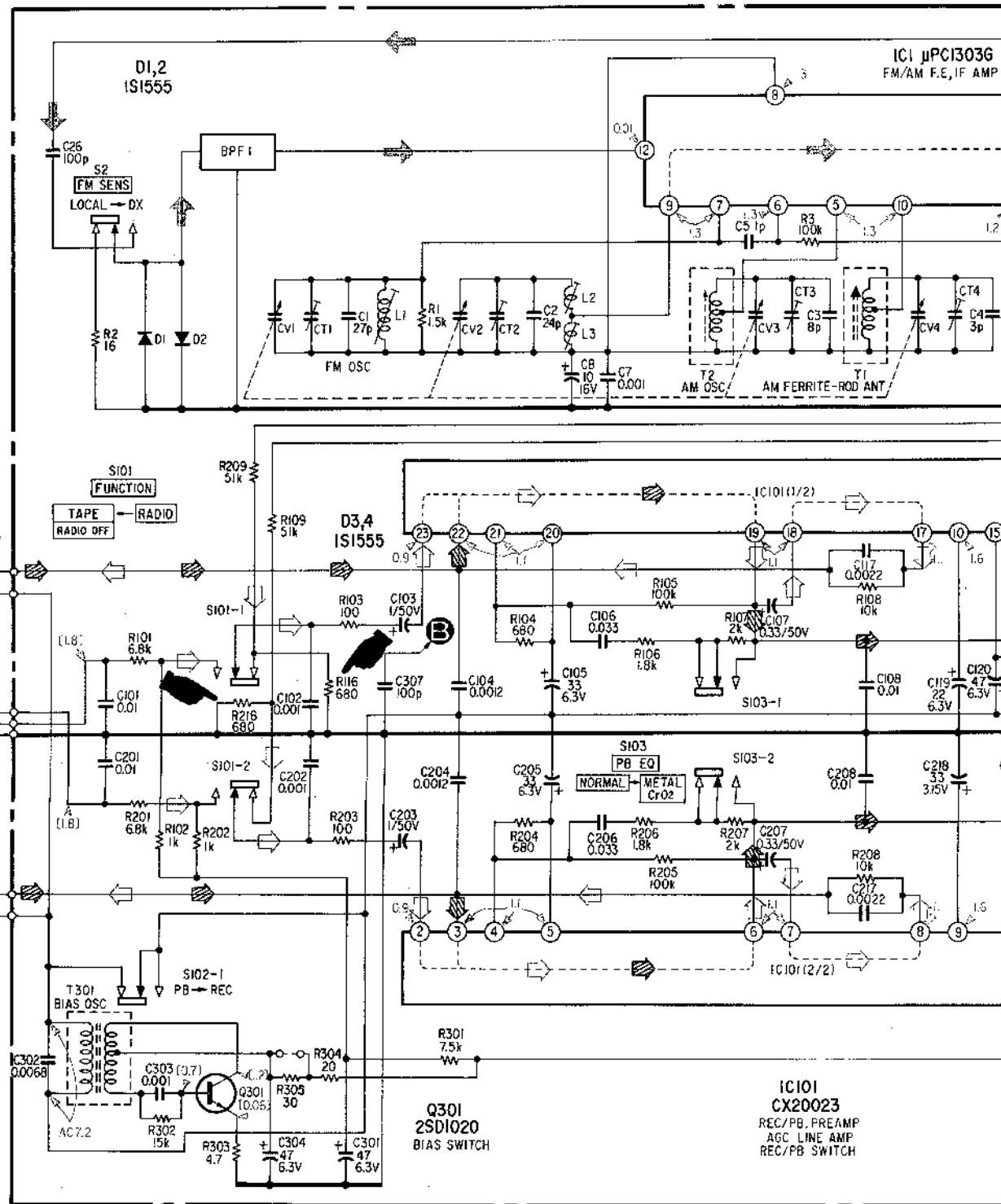
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : part mounted on the conductor side.



4. SCHEMATIC DIAGRAM

◀: CHANGED PORTIONS

A  
B  
C  
D  
E  
F  
G  
H  
I  
J



5. EXPLODED VIEWS AND PARTS LIST

**REVISED**

SUPPLEMENT No. 1

**WM-F46**

**WM-F46**

SUPPLEMENT No. 1

**REVISED**

☞ : CHANGED PORTIONS

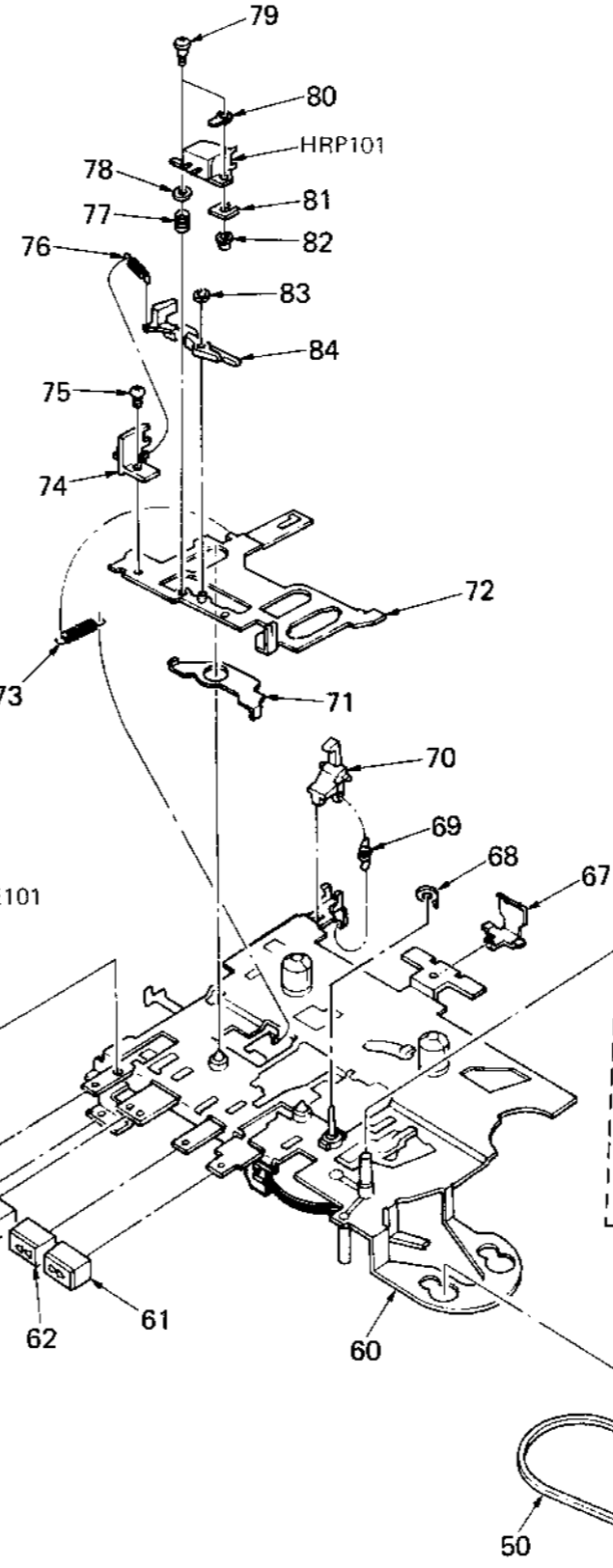
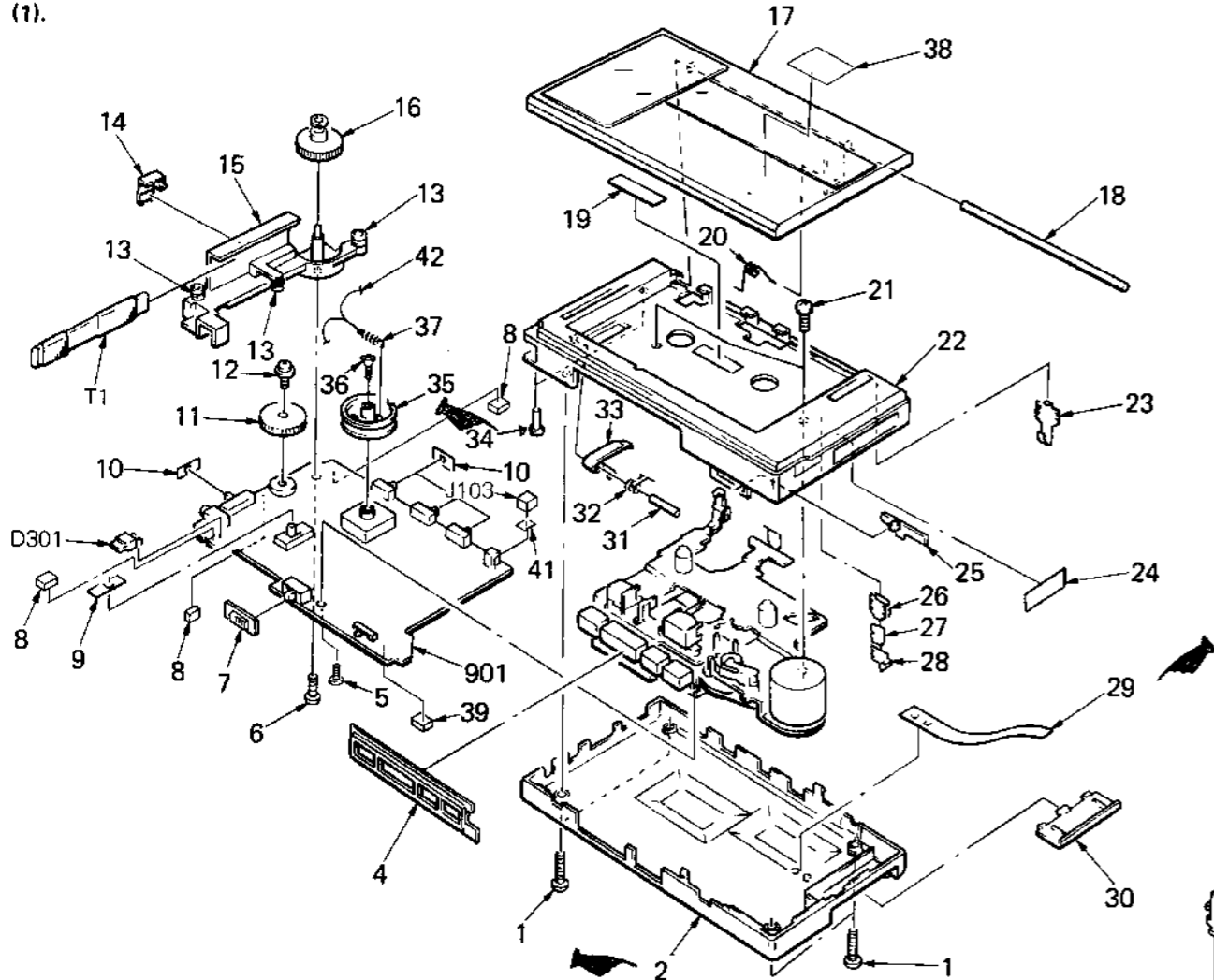
NOTE:

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.

The construction parts of an assembled part are indicated with a collation number in the remark column. (2).

(1).



No.	Part No.	Description	Remarks
1	7-685-107-19	SCREW +P 2X12 TYPE2 SLIT	
2	3-317-280-21	CABINET (RFAR)	
4	3-317-270-01	PANEL, CONTROL	
5	7-621-772-08	SCREW +B 2X3	
6	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT	
7	3-317-264-01	BUTTON, PAUSE	
8	9-911-840-XX	CUSHION (A)	
9	9-911-863-XX	SHEET, INSULATING	
10	3-305-653-00	PLATE (A), BLIND	
11	3-327-003-01	KNOB, VOL	
12	3-703-502-31	SCREW	
13	3-881-911-00	PULLEY	
14	3-317-260-01	POINTER	
15	3-317-278-01	CHASSIS, DIAL	
16	3-317-261-01	KNOB, TUN	
17	X-3335-632-1 (US).....LID ASSY, CASSETTE X-3335-632-2 (Canadian)...LID ASSY, CASSETTE		
18	*3-327-012-01	SHAFT, CASSETTE LID	
19	3-578-101-00	PLATE, ORNAMENTAL	
20	3-317-262-01	SPRING	
21	3-318-203-11	SCREW (Ø1.7X6), TAPPING	
22	3-317-279-31	(US, Canadian) CABINET (FRONT)	

No.	Part No.	Description	Remarks
23	3-319-009-01	TERMINAL BOARD (A), BATTERY	
24	3-527-213-00	LABEL, SERIAL NUMBER	
25	3-317-263-01	KNOB, SLIDE	
26	3-319-010-01	TERMINAL BOARD (C), BATTERY	
27	3-309-443-00	SPRING, LEAF	
28	3-319-011-01	TERMINAL BOARD (D), BATTERY	
29	9-911-816-01	RIBBON, BATTERY	
30	3-317-276-21	LID, BATTERY CASE	
31	3-703-357-06	PIN, PARALLEL (DIA. 1.6X14)	
32	3-318-215-01	SPRING	
33	3-321-022-01	LEVER, EJECT	
34	3-327-008-01	SHAFT, BELT	
35	*3-317-266-01	DRUM, DIAL	
36	3-880-990-00	SCREW (1.7X3), FLAT, (+) SPECIAL	
37	3-317-268-01	SPRING, TENSION	
38	3-703-707-01	STICKER, SONY SYMBOL (21)	
39	9-911-845-XX	CUSHION	
40	3-831-441-11	CUSHION (B)	
41	9-911-863-XX	SHEET, JACK, DC	
42	9-911-825-52	STRING, DIAL 0.3MM	
901	*A-3215-858-A	PC BOARD ASSY, MAIN	
T1	1-402-180-11	ANTENNA, FERRITE-ROD (MW)	

No.	Part No.	Description	Remarks
50	3-313-568-01	BELT	
51	7-627-552-67	SCREW, PRECISION +P 1.7X4.5	
52	*3-318-310-01	COLLAR, MOTOR	
53	*3-318-254-11	CUSHION, MOTOR	
57	3-831-441-XX	CUSHION	
58	3-318-275-01	SPRING	
59	A-3110-010-A	PINCH LEVER ASSY	
60	*X-3317-230-1	CHASSIS ASSY, OUTSART	
61	3-317-274-01	BUTTON, FF	
62	3-317-275-01	BUTTON, REW	
63	3-317-272-01	BUTTON, PLAY	
64	3-317-273-01	BUTTON, REC	
65	3-317-271-01	BUTTON, STOP	
66	3-318-285-01	BRACKET, ERASE HEAD	
67	3-318-269-01	SPRING	
68	*3-318-353-01	CONDUCTOR (2)	
69	3-318-336-01	SPRING, TENSION	
70	3-318-286-01	LEVER, ERASING PROTECTION	
71	*3-318-267-01	LEVER, CR	
72	X-3318-222-1	CHASSIS ASSY, HEAD	
73	3-565-927-00	SPRING, TENSION	
74	3-318-287-01	GUIDE, TAPE	
75	7-627-552-07	SCREW, PRECISION +P 1.7X2.5	
76	3-318-238-01	SPRING, TENSION	
77	3-318-237-01	SPRING, COMPRESSION	
78	7-688-001-01	W 2, SMALL	
79	3-318-240-01	SCREW (1.4), SPECIAL	
80	7-623-505-01	LUG, 2	
81	3-578-138-01 SHIM (t=0.1) 3-578-138-11 SHIM (t=0.2) 3-578-138-21 SHIM (t=0.3)		
82	3-318-309-01	SPACER, HEAD	
83	3-570-615-00	POLY-WASHER (DIA.1.2)	
84	3-318-252-01	ARM, DETECTION	
85	3-321-057-01	SPRING, GROUNDING	
HE101	8-658-096-02	HEAD, ERASE EBF5-36	
HRP101	1-543-267-11	HEAD, RECORD/PLAYBACK	
M101	X-3317-234-1	MOTOR KIT ASSY	

Sony Corporation  
Audio Group

English  
87F0640-1  
Printed in Japan  
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# WM-F46

## **SONY® SERVICE MANUAL**

*US Model  
Canadian Model*

### **SUPPLEMENT-2**

File this supplement with the service manual.

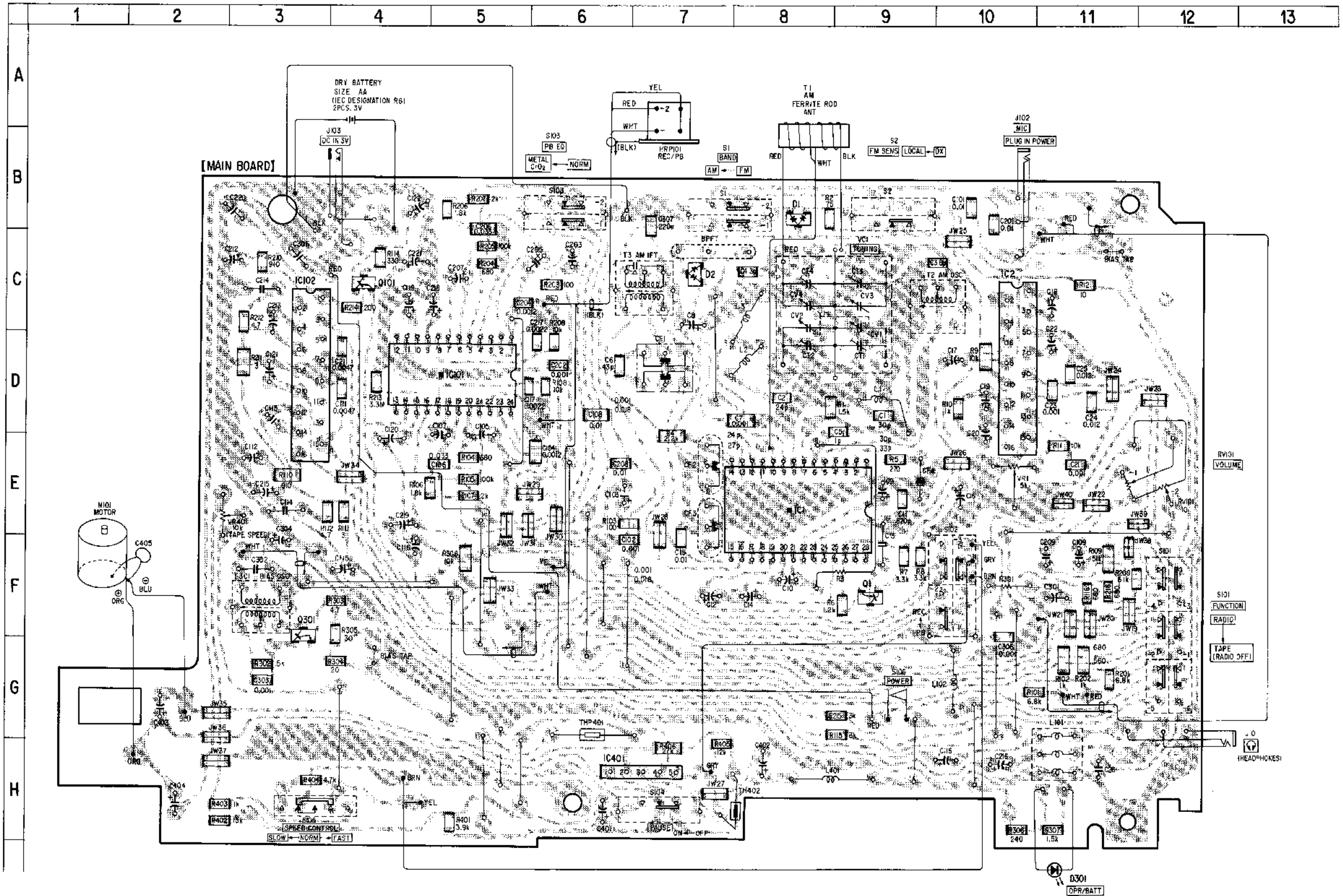
**SUBJECT: CHIP components are employed on  
the new printed wiring board.**



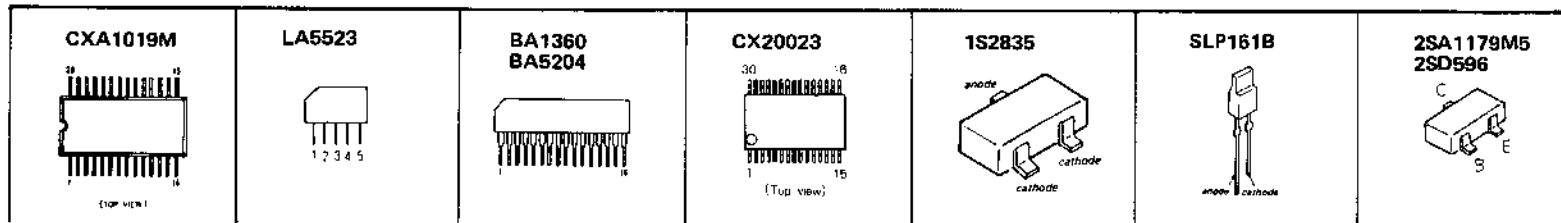
1. PRINTED WIRING BOARD

• Semiconductor Lead Layouts

Ref. No.	Location
D1	B-8
D2	C-7
D301	I-11
IC1	E-8
IC2	C-10
IC101	D-5
IC102	C-3
IC401	H-6
Q1	F-9
Q101	C-4
Q301	F-3

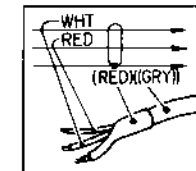


Semiconductor Lead Layouts

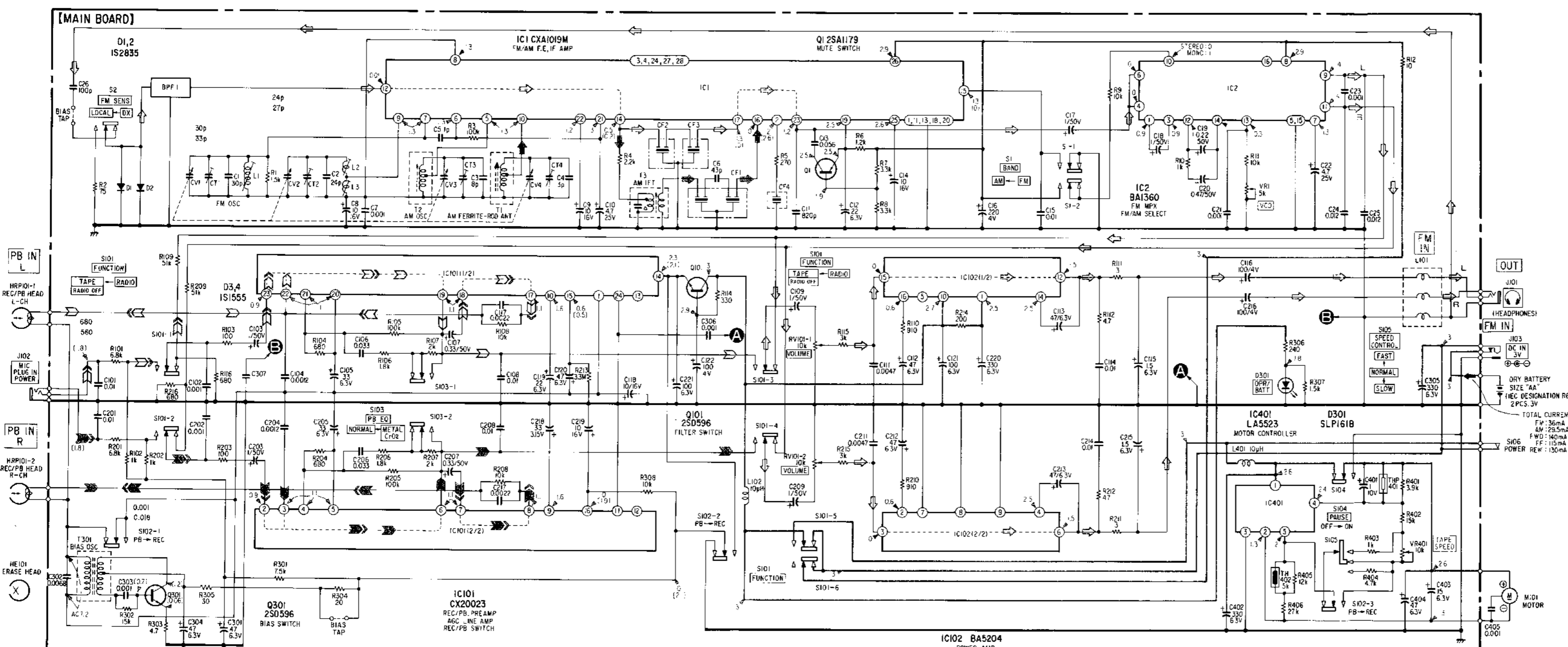


Note:

- Color code or sleeving over the end of the jacket.
- ○ : parts extracted from the component side.
- ● : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.

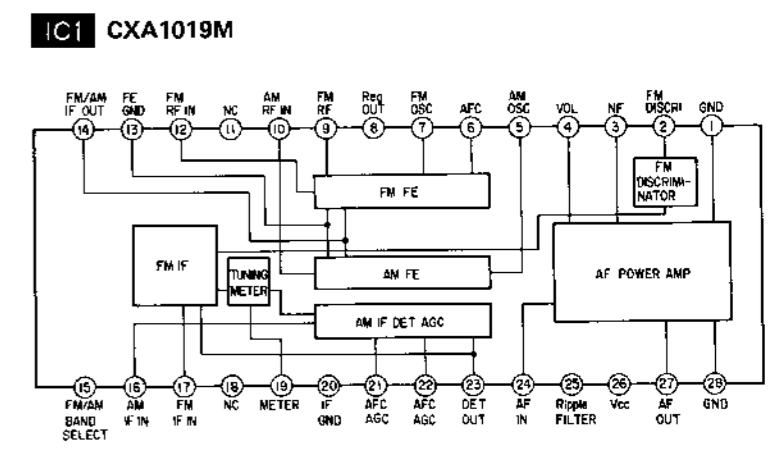


2. SCHEMATIC DIAGRAM



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - $\Delta$ : internal component.
  - $\square$ : B+ bus.
  - $\square$ : adjustment for repair.
  - Total current is measured with no cassette installed.
  - Power voltage is dc 3 V and fed with required dc power supply from DC IN jack
  - Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark: FM
  - ( ): MW
  - ( ): REC
  - Voltages are taken with a VOM (50 k $\Omega$ /V).
  - Voltage variations may be noted due to normal production tolerances.
  - Signal path.
  - AM
  - FM (L-CH)
  - FM (R-CH)
  - PB (L-CH)
  - PB (R-CH)
  - REC (L-CH)
  - REC (R-CH)

Ref. No.	Switch	Position
S1	BAND	FM
S2	FM SENS	DX
S101	FUNCTION	RADIO
S102	REC/PB	PB
S103	PB EQ	NORMAL
S104	PAUSE	NORMAL
S105	SPEED CONTROL	NORMAL
S106	POWER	OFF



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

## RESISTORS

All resistors are in ohms.

- F: nonflammable

## 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...

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
901	A-3216-398-A	PC BOARD ASSY, MAIN				C118	1-124-462-00	ELECT	10MF	20%	16V
BPF1	1-235-142-00	FILTER, BAND PASS				C119	1-124-638-11	ELECT	22MF	20%	6.3V
C1	1-163-104-00	CERAMIC CHIP 30PF	5%	50V		C120	1-124-224-00	ELECT	47MF	20%	6.3V
C2	1-163-102-00	CERAMIC CHIP 24PF	5%	50V		C121	1-123-661-00	ELECT	100MF	20%	6.3V
C3	1-163-091-00	CERAMIC CHIP 8PF	0.25PF	50V		C122	1-124-433-00	ELECT	100MF	20%	4V
C4	1-163-086-00	CERAMIC CHIP 3PF	0.25PF	50V		C201	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C5	1-163-083-00	CERAMIC CHIP 1PF	0.25PF	50V		C202	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C6	1-163-108-00	CERAMIC CHIP 43PF	5%	50V		C203	1-123-611-00	ELECT	1MF	20%	50V
C7	1-163-205-00	CERAMIC CHIP 0.001MF	10%	50V		C204	1-163-143-00	CERAMIC CHIP	0.0012MF	10%	50V
C8	1-124-462-00	ELECT	10MF	20%	16V	C205	1-124-229-00	ELECT	33MF	20%	6.3V
C9	1-124-462-00	ELECT	10MF	20%	16V	C206	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V
C10	1-124-245-00	ELECT	4.7MF	20%	25V	C207	1-124-252-00	ELECT	0.33MF	20%	50V
C11	1-163-139-00	CERAMIC CHIP 820PF	10%	50V		C208	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C12	1-124-638-11	ELECT	22MF	20%	6.3V	C209	1-123-611-00	ELECT	1MF	20%	50V
C13	1-161-060-00	CERAMIC	0.056MF	10%	25V	C211	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C14	1-124-462-00	ELECT	10MF	20%	16V	C212	1-124-224-00	ELECT	47MF	20%	6.3V
C15	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V	C213	1-124-224-00	ELECT	47MF	20%	6.3V
C16	1-124-434-00	ELECT	220MF	20%	4V	C214	1-130-483-00	MYLAR	0.01MF	5%	50V
C17	1-123-611-00	ELECT	1MF	20%	50V	C215	1-131-421-00	TANTALUM	1.5MF	20%	6.3V
C18	1-123-611-00	ELECT	1MF	20%	50V	C216	1-124-433-00	ELECT	100MF	20%	4V
C19	1-124-464-11	ELECT	0.22MF	20%	50V	C217	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C20	1-124-465-00	ELECT	0.47MF	20%	50V	C218	1-131-386-00	TANTALUM	33MF	10%	3.15V
C21	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	C219	1-124-462-00	ELECT	10MF	20%	16V
C22	1-124-245-00	ELECT	4.7MF	20%	25V	C220	1-124-442-00	ELECT	330MF	20%	6.3V
C23	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V	C221	1-123-661-00	ELECT	100MF	20%	6.3V
C24	1-163-022-00	CERAMIC CHIP	0.012MF	10%	50V	C301	1-124-224-00	ELECT	47MF	20%	6.3V
C25	1-163-022-00	CERAMIC CHIP	0.012MF	10%	50V	C302	1-130-481-00	MYLAR	0.0068MF	10%	50V
C26	1-102-106-00	CERAMIC	100PF	10%	50V	C303	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C101	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V	C304	1-124-224-00	ELECT	47MF	20%	6.3V
C102	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V	C305	1-124-442-00	ELECT	330MF	20%	6.3V
C103	1-123-611-00	ELECT	1MF	20%	50V	C306	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C104	1-163-207-00	CERAMIC CHIP	0.0012MF	10%	50V	C307	1-163-125-00	CERAMIC CHIP	220PF	10%	50V
C105	1-124-229-00	ELECT	33MF	20%	6.3V	C401	1-131-413-00	TANTALUM	1MF	20%	10V
C106	1-163-034-00	CERAMIC CHIP	0.033MF	10%	25V	C402	1-124-442-00	ELECT	330MF	20%	6.3V
C107	1-124-252-00	ELECT	0.33MF	20%	50V	C403	1-131-384-41	TANTALUM	15MF	10%	6.3V
C108	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V	C404	1-131-387-00	TANTALUM	47MF	10%	6.3V
C109	1-123-611-00	ELECT	1MF	20%	50V	C405	1-161-039-00	CAP, CERAMIC	0.001MF		
C111	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	CF1	1-527-865-00	FILTER, CERAMIC			
C112	1-124-224-00	ELECT	47MF	20%	6.3V	CF2	1-567-051-61	FILTER, CERAMIC			
C113	1-124-224-00	ELECT	47MF	20%	6.3V	CF3	1-567-051-61	FILTER, CERAMIC			
C114	1-130-483-00	MYLAR	0.01MF	5%	50V	CF4	1-567-051-61	FILTER, CERAMIC			
C115	1-131-421-00	TANTALUM	1.5MF	20%	6.3V	D1	8-719-100-03	DIODE 1S2835			
C116	1-124-433-00	ELECT	100MF	20%	4V	D2	8-719-100-03	DIODE 1S2835			
C117	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V	D301	8-719-901-96	DIODE SLP161B			

**REVISED****SUPPLEMENT-2****WM-F46**

Ref.No.	Part No.	Description
HE101	8-658-096-02	HEAD, ERASE EBF5-36
HRP101	1-543-267-21	HEAD, RECORD/PLAYBACK
IC1	8-752-030-15	IC CXA1019M
IC2	1-806-901-11	IC BA1360
IC101	8-759-915-90	IC CX20023
IC102	1-806-902-11	IC BA5204
IC401	8-759-801-12	IC LA5523
J101	1-562-917-11	JACK (SMALL TYPE)(HEADPHONES)
J102	1-507-950-41	JACK (SMALL TYPE)(MIC)
J103	1-507-723-00	JACK, EXTENTION POWER (DC IN 3V)
JW19	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW20	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW21	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW22	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW23	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW24	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW25	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW26	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW27	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW28	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW29	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW30	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW31	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW32	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW33	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW34	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW35	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW36	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW37	1-216-296-00	METAL GLAZE 0 5% 1/8W
JW38	1-216-295-00	METAL GLAZE 0 5% 1/10W
JW39	1-216-295-00	METAL GLAZE 0 5% 1/10W
JW40	1-216-295-00	METAL GLAZE 0 5% 1/10W
L1	1-406-161-11	COIL, FM OSCILLATOR
L2	1-426-074-00	COIL, FM RF (A)
L3	1-406-042-00	COIL, FM OSC
L101	1-409-365-00	COIL, TRAP
L102	1-408-117-00	INDUCTOR 10UH
L401	1-408-117-00	INDUCTOR 10UH
M101	X-3317-234-1	MOTOR KIT ASSY
Q1	8-729-800-91	TRANSISTOR 2SA1179M5
Q101	8-729-159-64	TRANSISTOR 2SD596
Q301	8-729-159-64	TRANSISTOR 2SD596

Ref.No.	Part No.	Description
R1	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R2	1-216-022-00	METAL GLAZE 75 5% 1/10W
R3	1-249-441-11	CARBON 100K 5% 1/4W
R4	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W
R5	1-216-035-00	METAL GLAZE 270 5% 1/10W
R6	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W
R7	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R8	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R9	1-216-222-00	METAL GLAZE 10K 5% 1/8W
R10	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R11	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R12	1-216-001-00	METAL GLAZE 10 5% 1/10W
R101	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R102	1-216-198-00	METAL GLAZE 1K 5% 1/8W
R103	1-216-025-00	METAL GLAZE 100 5% 1/10W
R104	1-216-045-00	METAL GLAZE 680 5% 1/10W
R105	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R106	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W
R107	1-216-056-00	METAL GLAZE 2K 5% 1/10W
R108	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R109	1-216-239-00	METAL GLAZE 51K 5% 1/8W
R110	1-216-197-00	METAL GLAZE 910 5% 1/8W
R111	1-216-303-11	METAL GLAZE 3 5% 1/10W
R112	1-216-308-00	METAL GLAZE 4.7 5% 1/10W
R114	1-216-037-00	METAL GLAZE 330 5% 1/10W
R115	1-216-060-00	METAL GLAZE 3K 5% 1/10W
R116	1-216-045-00	METAL GLAZE 680 5% 1/10W
R201	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R202	1-216-198-00	METAL GLAZE 1K 5% 1/8W
R203	1-216-025-00	METAL GLAZE 100 5% 1/10W
R204	1-216-045-00	METAL GLAZE 680 5% 1/10W
R205	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R206	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W
R207	1-216-056-00	METAL GLAZE 2K 5% 1/10W
R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R209	1-216-090-00	METAL GLAZE 51K 5% 1/10W
R210	1-216-048-00	METAL GLAZE 910 5% 1/10W
R211	1-216-137-00	METAL GLAZE 3 5% 1/8W
R212	1-216-308-00	METAL GLAZE 4.7 5% 1/10W
R213	1-216-133-00	METAL GLAZE 3.3M 5% 1/10W
R214	1-216-032-00	METAL GLAZE 200 5% 1/10W
R215	1-216-060-00	METAL GLAZE 3K 5% 1/10W
R216	1-216-045-00	METAL GLAZE 680 5% 1/10W
R301	1-215-442-00	CARBON 7.5K 5% 1/4W
R302	1-216-077-00	METAL GLAZE 15K 5% 1/10W



Ref.No.	Part No.	Description			
R303	1-216-308-00	METAL GLAZE	4.7	5%	1/10W
R304	1-216-008-11	METAL GLAZE	20	5%	1/10W
R305	1-216-012-00	METAL GLAZE	30	5%	1/10W
R306	1-216-034-00	METAL GLAZE	240	5%	1/10W
R307	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R308	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R401	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R402	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R403	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R404	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R405	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R406	1-216-232-00	METAL GLAZE	27K	5%	1/8W
RV101	1-230-485-21	RES, VAR, CARBON 10K/10K (VOLUME)			
S1	1-554-222-00	SWITCH, SLIDE (BAND)			
S2	1-554-222-00	SWITCH, SLIDE (FM SENS)			
S101	1-554-122-00	SWITCH, SLIDE (FUNCITON)			
S102	1-570-387-11	SWITCH, SLIDE (REC/PB)			
S103	1-554-222-00	SWITCH, SLIDE (PB EQ)			
S104	1-554-222-00	SWITCH, SLIDE (PAUSE)			
S105	1-570-386-11	SWITCH, SLIDE (SPEED CONTROL)			
S106	1-553-817-00	SWITCH, LEAF (POWER)			
T1	1-402-180-21	ANTENNA, FERRITE-ROD (MW)			
T2	1-406-062-31	COIL, MW OSC			
T3	1-404-636-11	COIL, MW IF			
T301	1-433-276-00	TRANSFORMER, BIAS OSCILLATOR			
TH402	1-800-279-21	THERMISTOR 5K			
THP401	1-807-222-11	THERMISTOR (POSITIVE)			
VC1	1-151-437-00	CAP, TUNING, POLYETHYLENE (TUNING)			
VR1	1-230-502-21	RES, ADJ, CARBON 5K (VCO)			
VR401	1-230-775-11	RES, ADJ, CARBON 10K (TAPE SPEED)			