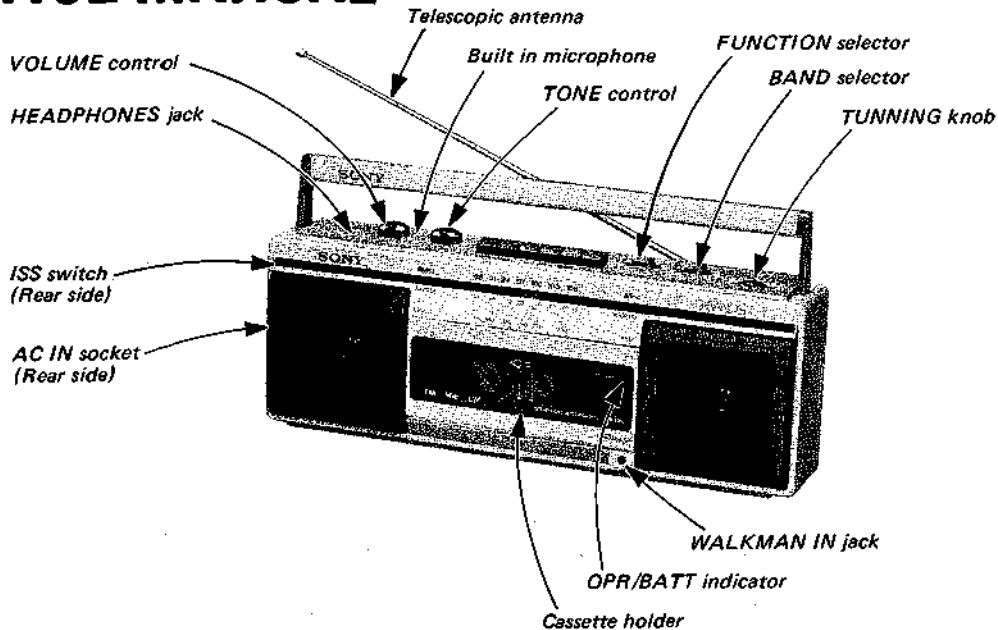


# CFS-230L

## SERVICE MANUAL

AEP Model  
UK Model



### SPECIFICATIONS

Tape Transport Mechanism Type MF-230L/S

#### Radio section

Frequency range FM 87.6–107 MHz  
MW 530–1,605 kHz  
LW 150–255 kHz

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

#### Tape recorder section and general

Recording system 4-track 2-channel stereo  
Fast winding time Approx. 1 min. 30 sec. with Sony cassette C-60

Frequency response 80–8,000 Hz

Speakers Full range 9 cm (4 inches) dia. x 2  
Power output 2W + 2W (at 10% harmonic distortion) at dc operation

Inputs WALKMAN IN (line input) jack (stereo minijack)  
sensitivity 78 mV  
input impedance 47 kilohms

Outputs Headphones jack (stereo minijack) for 8–300 ohm impedance headphones

Power requirements 9 V dc, six IEC designation R14 batteries (size C)  
UK model: 240V ac, 50Hz  
AEP model: 220V ac, 50Hz

Power consumption 12 W ac

#### Battery life (hours)

Batteries	FM recording
Sony New Super SUM-2(NS)	8
Sony Eveready AM2 alkaline	18

#### Dimensions


Approx. 436 x 163 x 93 mm (w/h/d)  
(17½x6½x3¾ inches)  
incl. projecting parts and controls  
not incl. handle

#### Weight

Approx. 2.5 kg (5 lb 9 oz) incl. batteries

0 dB = 0.775 V

#### 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.

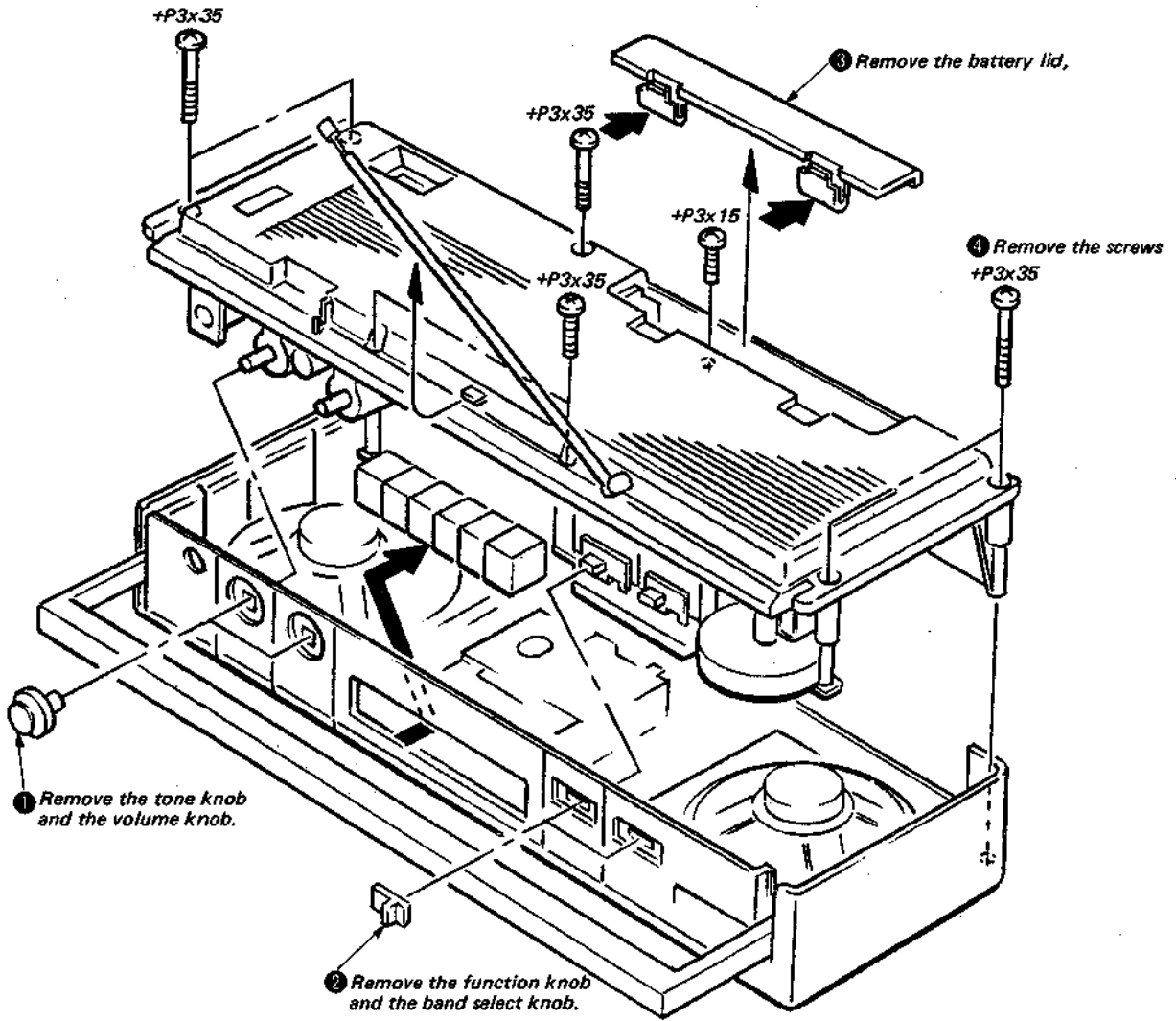
FM/MW/LW STEREO  
CASSETTE CORDER  
**SONY**®



TC

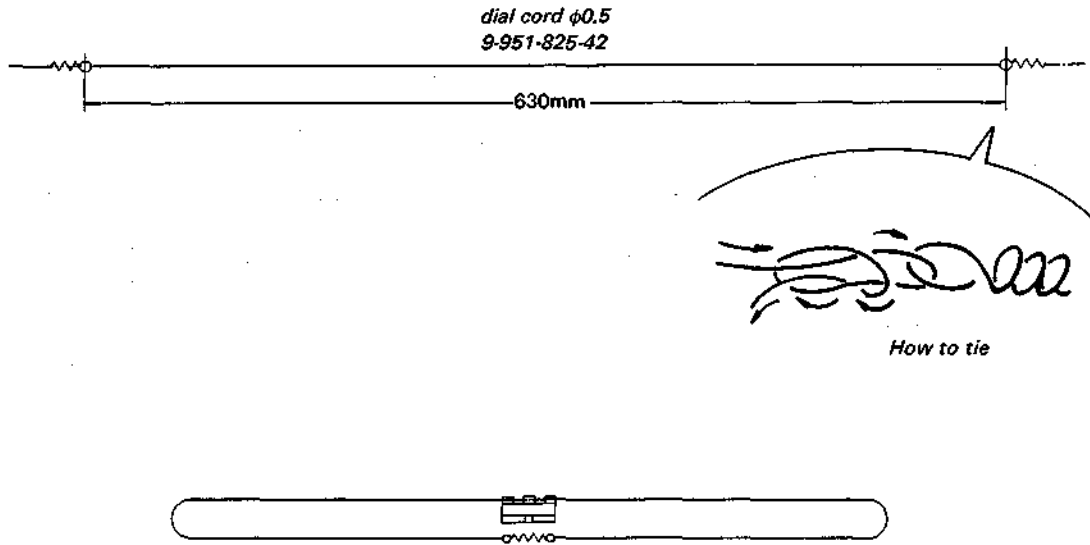
**SECTION 1  
DISASSEMBLY**

**CABINET REMOVAL**

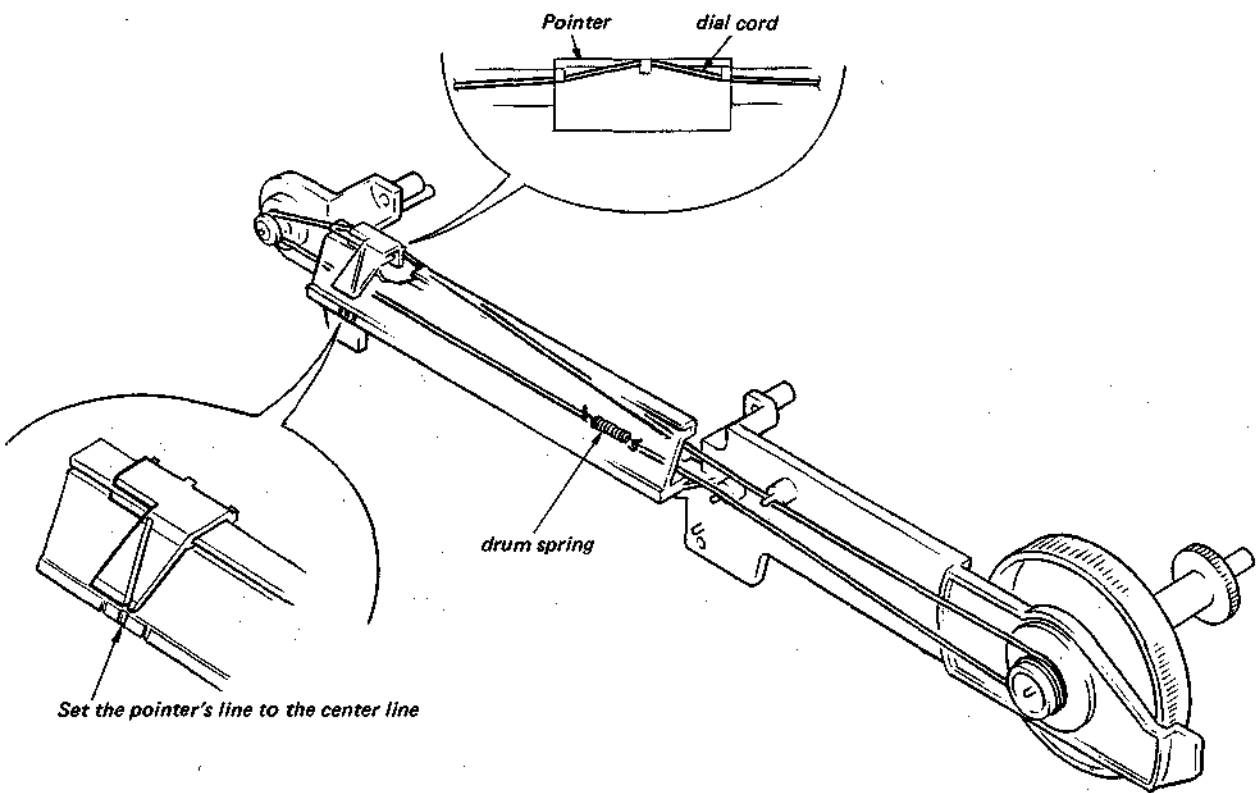


## SECTION 2 DIAL CORD STRINGING

### 1. Dial cord preparation



### 2. Dial cord stringing and pointer setting



**SECTION 3  
ADJUSTMENTS**

**3-1. MECHANICAL ADJUSTMENTS**

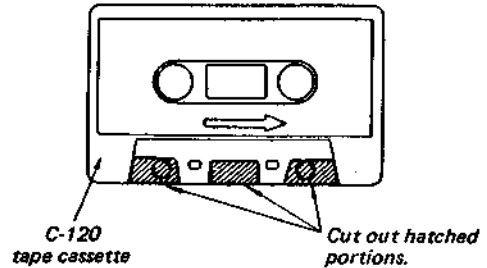
**PRECAUTION**

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

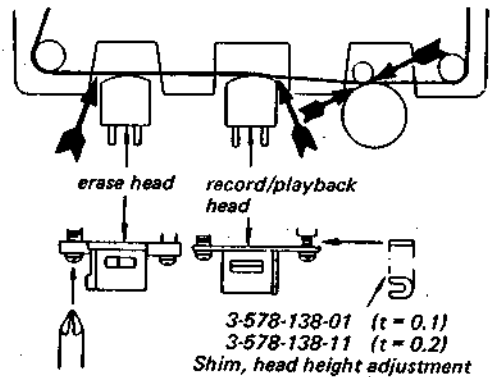
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable 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.

**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.

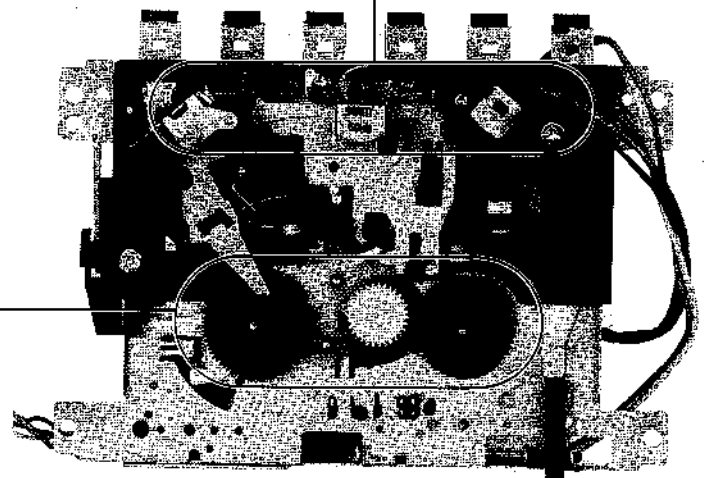


**Torque Measurement**

Torque	Torque meter	Meter reading
Forward	CQ-102C	30-60 g·cm (0.42-0.83 oz·inch)
Rewind	CQ-201B	50-150 g·cm (0.69-2.07 oz·inch)
Fast Forward	CQ-201B	50-150 g·cm (0.69-2.07 oz·inch)
Back Tension	CQ-102C	1-4 g·cm (0.0138-0.055 oz·inch)

**Tape Pulling Force Measurement.**

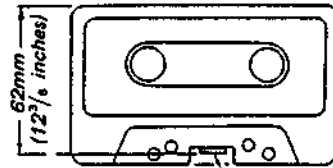
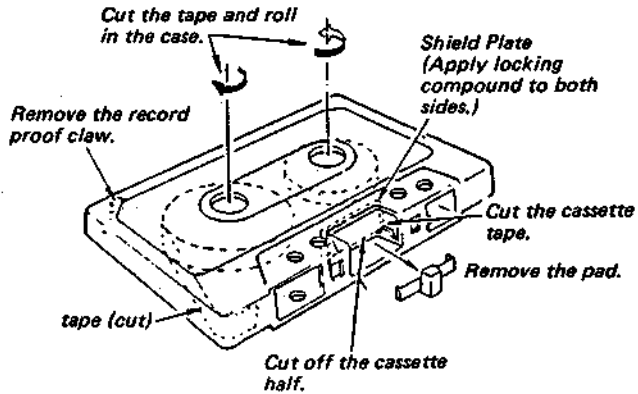
Meter	Meter reading
CQ-403	more than 80 g (more than 2.81 oz)



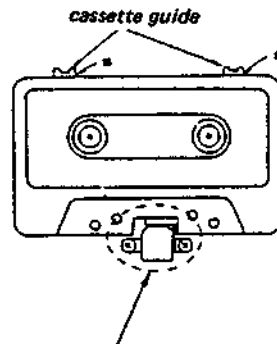
**REC/PB Head Installation and Position Adjustment**

- This adjustment is necessary for the CUE detection of AMS.

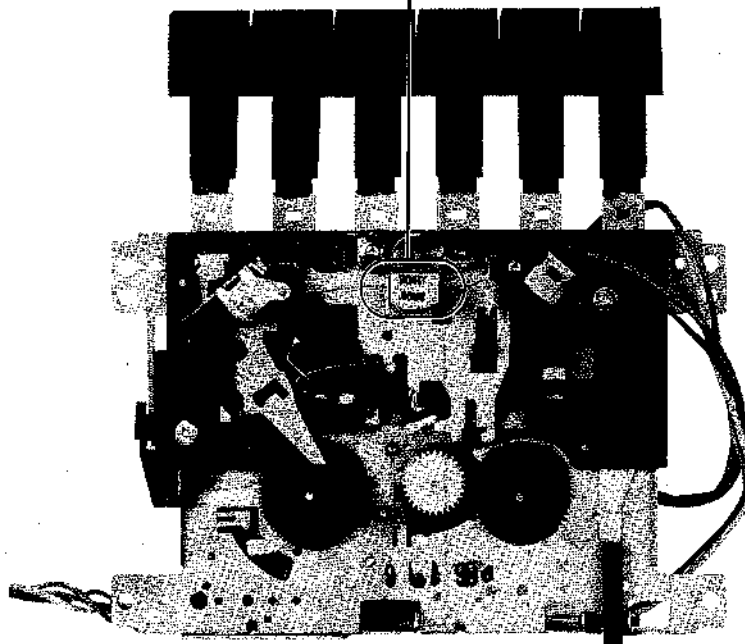
**1. Cassette Tape Preparation**



Spacer (Prepare a suitable material and install it so that the distance marked by \* is 62mm (2 3/8 inches) and apply locking compound.)



2. Set the cassette tape into the set and install the head so that the edge of the head is in contact with the spacer when pressing the FWD button and FF button or the FWD button and REW button at the same time. (At this time, the portion marked by ■ is in contact with the cassette). Then, perform the REC/PB head Azimuth Adjustment and apply locking compound to an installation screw.



## 3-2. ELECTRICAL ADJUSTMENTS

### CASSETTE SECTION

#### Tape Speed Adjustment

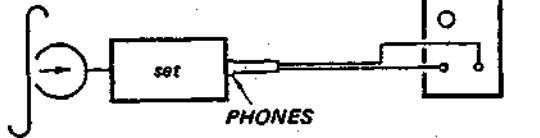
##### Setting:

VOLUME control: mechanical mid

##### Procedure:

Mode: playback

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

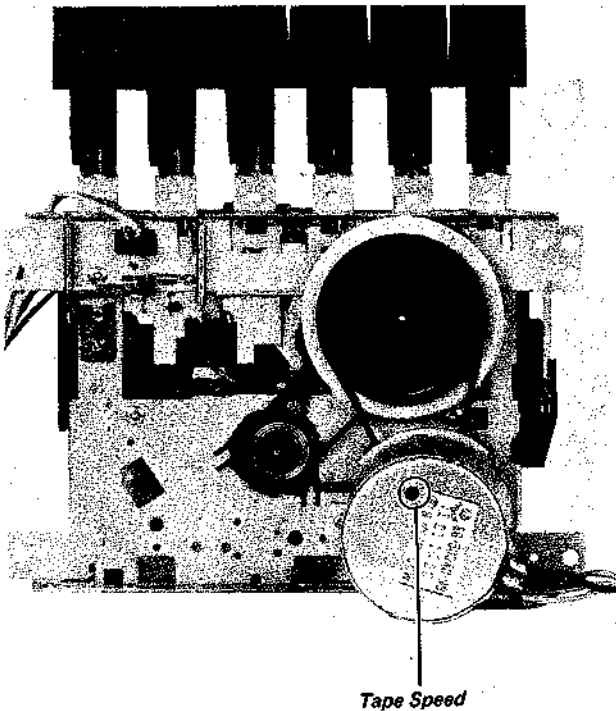


##### Specification:

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

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

##### Adjustment Location:

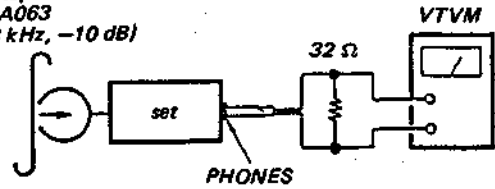


#### Record/playback Head Azimuth Adjustment

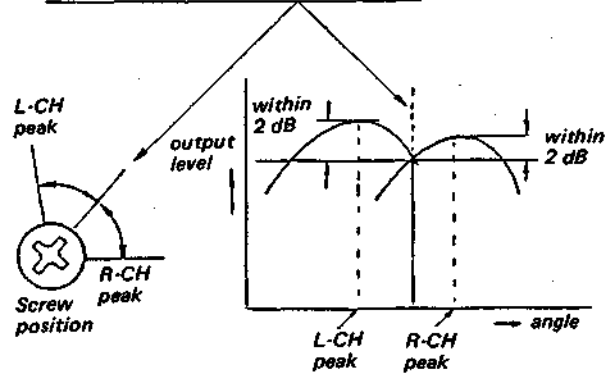
##### Procedure:

1. Mode: playback

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



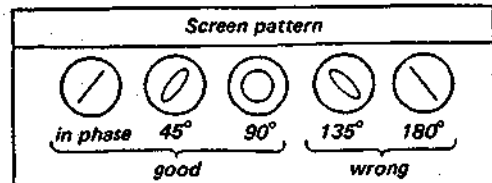
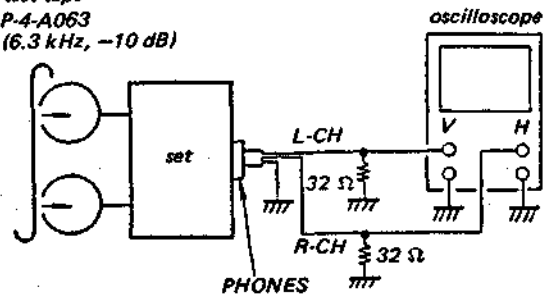
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.



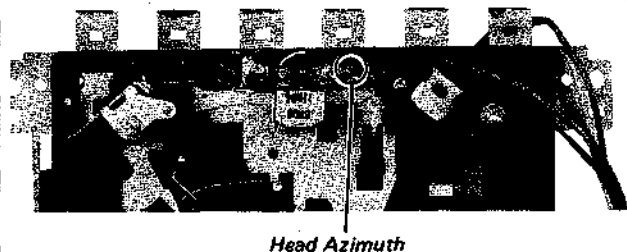
3. Phase Check

Mode: playback

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



##### Adjustment Location:



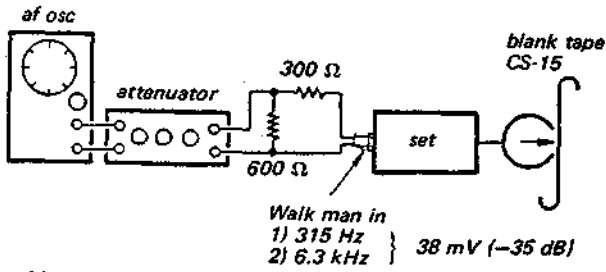
**Record Bias Adjustment**

**Setting:**

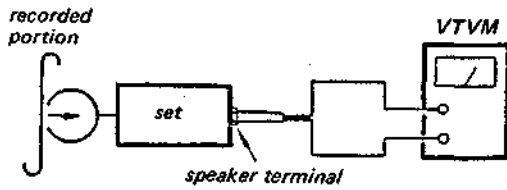
TONE control: MAX  
 FUNCTION switch: TAPE

**Procedure:**

1. Mode: record



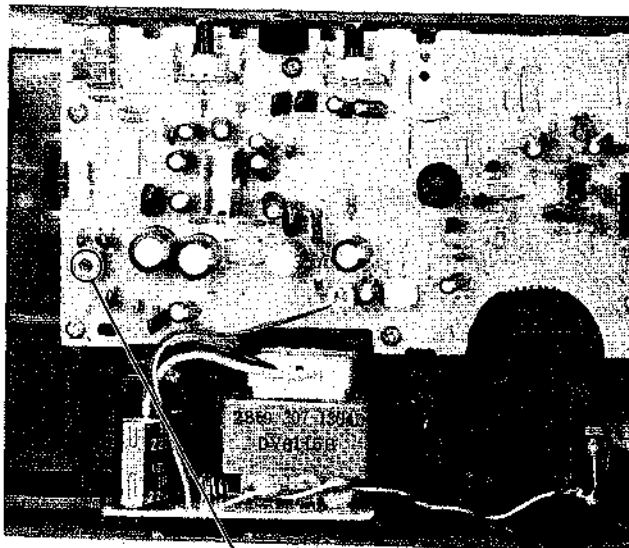
2. Mode: playback



3. Confirm that the 6.3 kHz playback signal level is  $1 \pm 3$  dB relative to the 315 Hz signal level. If necessary, adjust L301 and repeat steps 1-3.

**Adjustment Location:**

- main board -



L301

## RADIO SECTION

### • MW/LW Section

Setting:

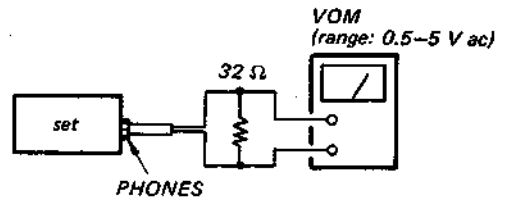
FUNCTION Selector: RADIO  
BAND Selector: MW/LW

AM rf signal generator



Put the lead-wire antenna close to the set.

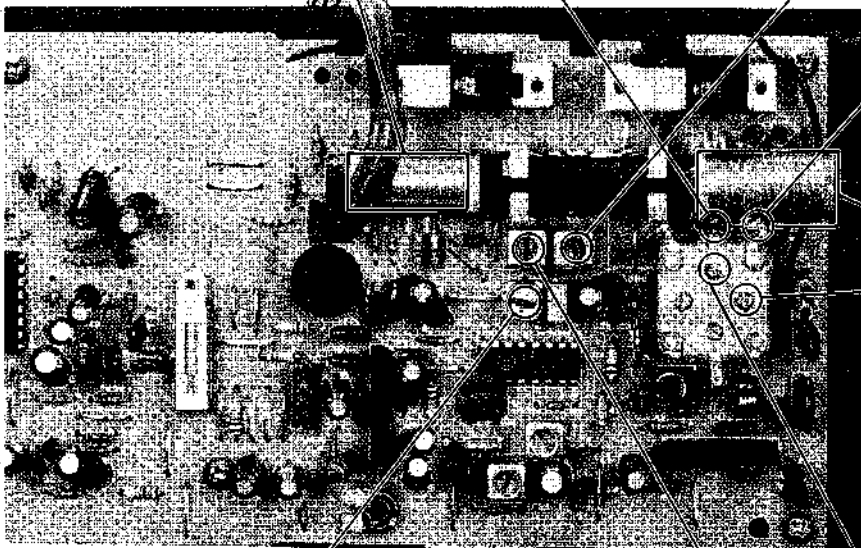
30% amplitude modulation by 400 Hz signal  
output . . . . 60 - 70 dB



- 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.	
620 kHz	1,400 kHz
L4	CT3

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
145 kHz	265 kHz
L6	CT5



LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L7	160 kHz
CT6	250 kHz

T2
460 kHz
Adjust for a maximum reading on VTVM.
<b>AM IF ALIGNMENT</b>

L5	CT4
515 kHz	1,680 kHz
Adjust for a maximum reading on VTVM.	
<b>AM FREQUENCY COVERAGE ADJUSTMENT</b>	



● FM Section

Setting:

FUNCTION Selector: RADIO  
 BAND Selector: FM

FM rf signal generator

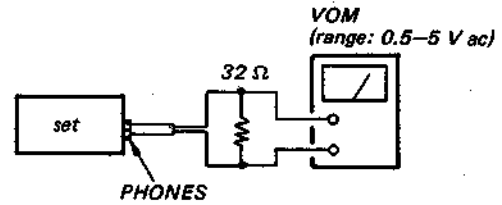


±22.5 kHz frequency deviation by 400 Hz signal output . . . . 15 - 25 dB

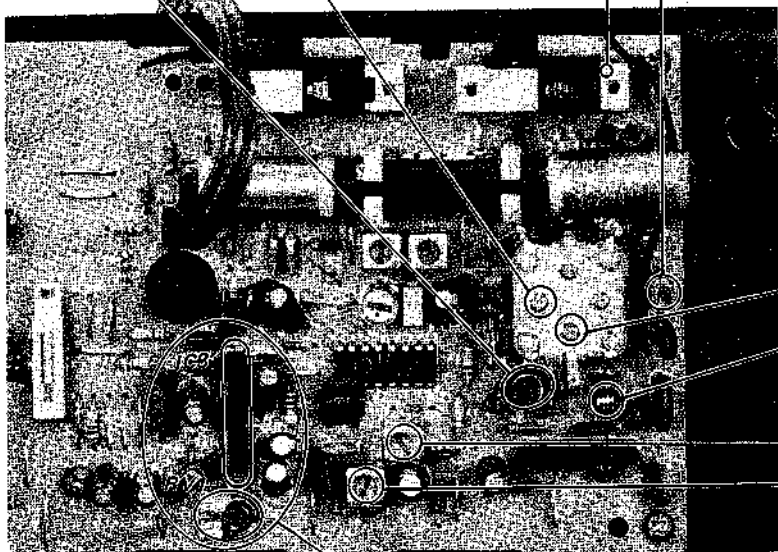
**FM FREQUENCY COVERAGE ADJUSTMENT**

Adjust for a maximum reading on VTVM.

87.35 MHz	108.25 MHz
L2	CT2



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



**FM TRACKING ADJUSTMENT**

Adjust for a maximum reading on VTVM.

CT1	108.25 MHz
L1	87.35 MHz

**FM IF ALIGNMENT**

Adjust for a maximum reading on VTVM.

T3	10.7 MHz
T1	

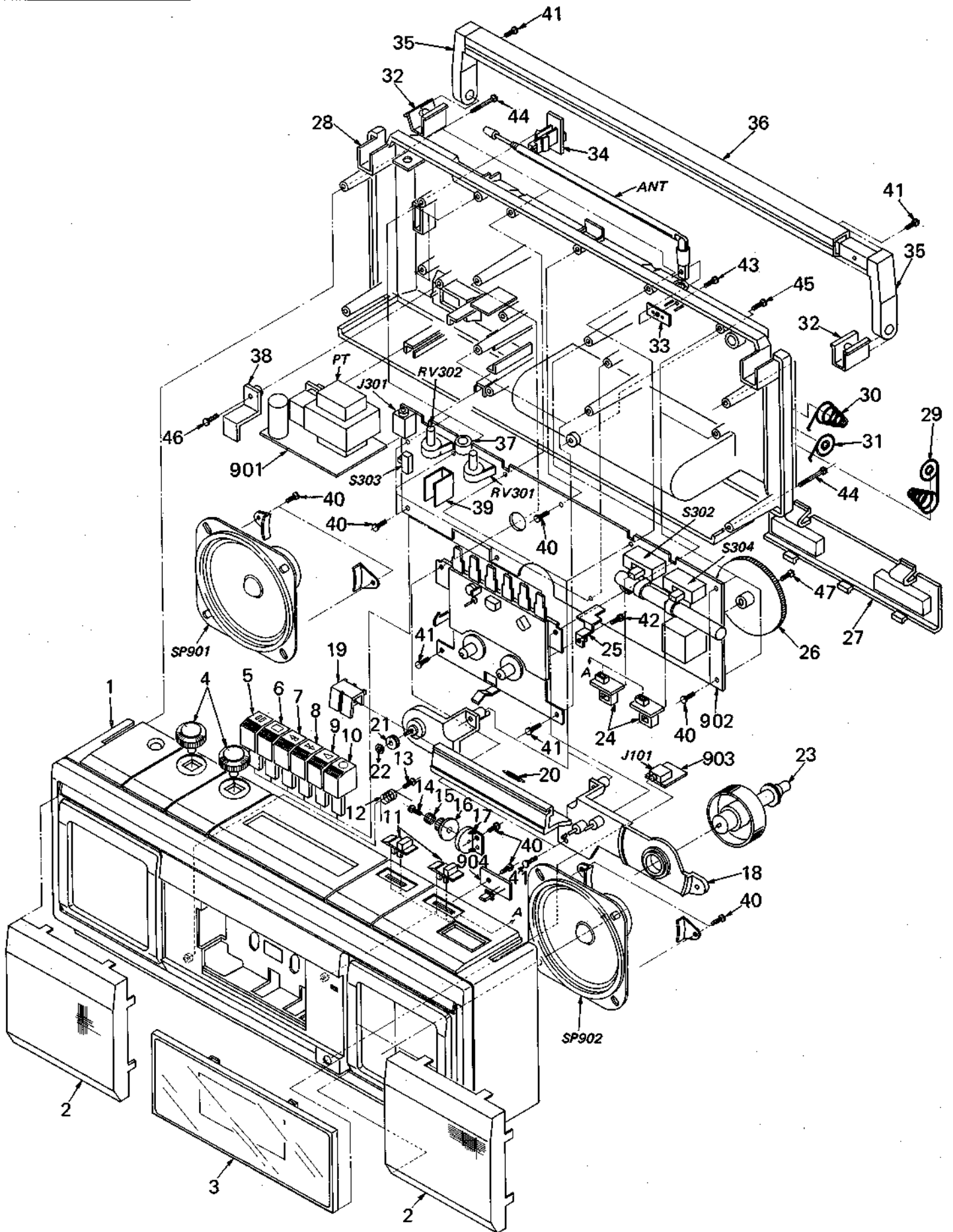
**VCO Adjustment**

Procedure:

1. Cut the pattern **A**
2. Adjust RV1 for 38 kHz ±200 Hz on the counter.
3. After the adjustment, solder the pattern **A**



# CFS-230L




**SECTION 4  
EXPLODED VIEWS**

**NOTE:**

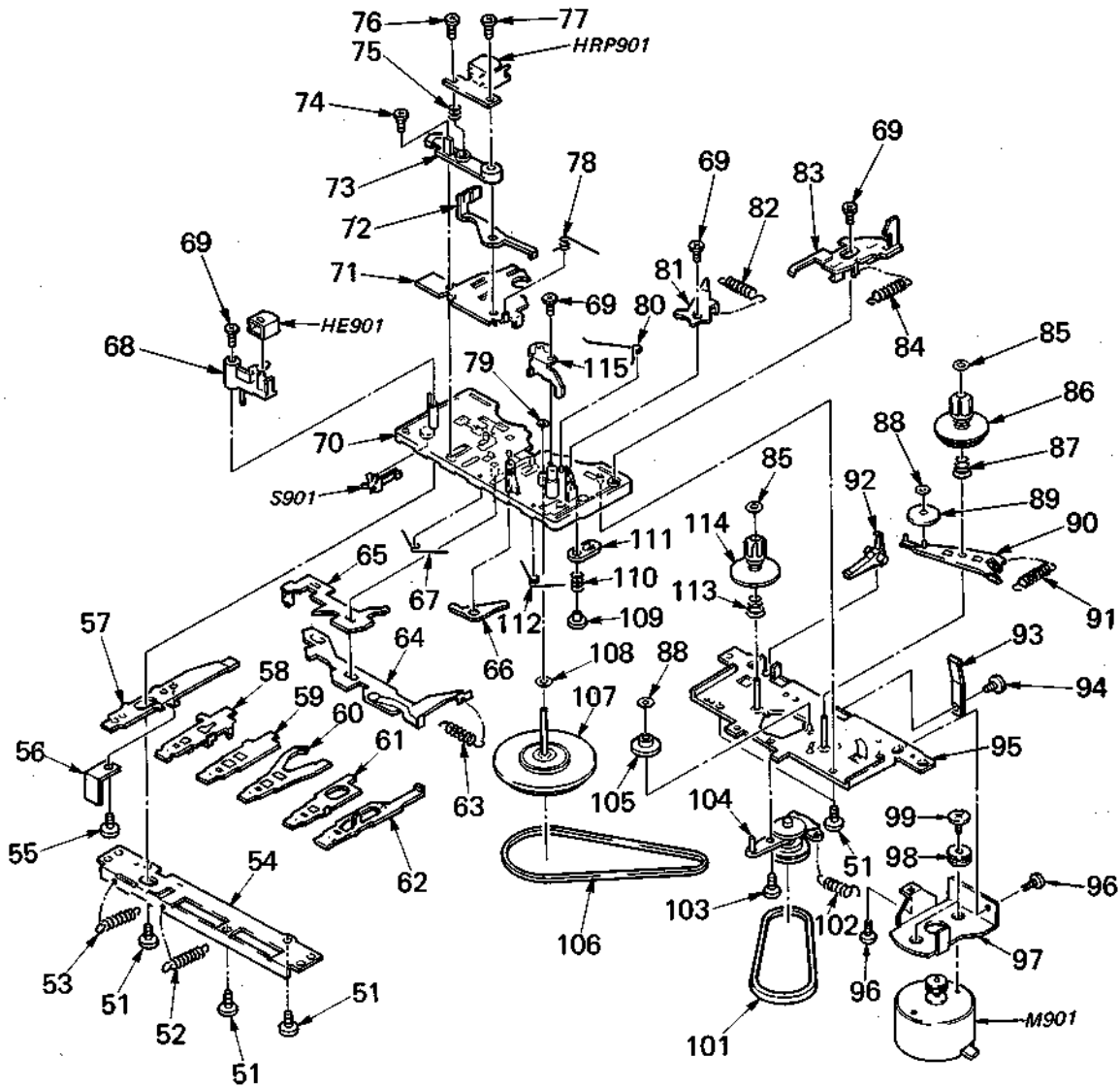
The mechanical parts with no reference number in the exploded views are not supplied.

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.

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

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-597-510-01	CABINET-FRONT ASSY		25	*3-597-522-01	SPRING-RECORD	
2	3-597-548 01	GRILLE, SPEAKER		26	3-597-547-01	WHEEL, DRUM	
3	X-3597-411-1	CASSETTE LID ASSY		27	X-3597-412-1	BATTERY LID ASSY	
4	3-597-512-01	KNOB-ROTARY		28	3-597-535-01	CABINET-BACK	
5	3-597-523-01	KNOB-DECK PAUSE		29	3-597-422-01	SPRING BATTERY (+ -)	
6	3-597-524-01	KNOB-DECK STOP		30	3-597-423-01	SPRING BATTERY (-)	
7	3-597-525-01	KNOB-DECK FF		31	3-597-424-01	SPRING BATTERY (+)	
8	3-597-526-01	KNOB-DECK REW		32	3-597-532-01	GUIDE-HANDLE	
9	3-597-527-01	KNOB-DECK PLAY		33	3-597-452-01	BRACKET ANTENNA	
10	3-597-528-01	KNOB-DECK REC		34	3-597-537-01	KNOB-LEVER	
11	3-597-511-01	KNOB-SELECTOR		35	3-597-530-01	HANDLE-BEAM	
12	3-597-514-01	SPRING-DOOR		36	3-597-531-01	HANDLE-BAR	
13	7-685-646-29	SCREW +BV 3X8		37	3-597-451-01	MICROPHONE HOLDER	
14	7-685-792-04	SCREW +PTP 2.6X6		38	*3-597-465-01	AC SOCKET COVER	
15	3-597-517-01	SPRING-DAMPER		39	*3-597-431-01	HEAT SINK	
16	3-597-515-01	DAMPER-GEAR		40	7-685-646-29	SCREW +BV 3X8	
17	3-597-516-01	HOLDER-DAMPER, GEAR		41	7-685-248-29	SCREW +KTP 3X12 TYPE2 SLIT	
18	3-597-518-01	CHASSIS-MAIN		42	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
19	3-597-519-01	POINTER		43	7-685-752-04	SCREW +PTT 3X8	
20	*3-597-529-01	SPRING-DIAL		44	7-682-556-09	SCREW +B 3X35	
21	*3-597-520-01	WHEEL-DIAL (A)		45	7-685-650-11	SCREW +BVTP 3X16 TYPE2 N-S	
22	*3-597-521-01	WASHER-STOPPING		46	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
23	3-597-536-01	KNOB-TUNING		47	7-685-792-04	SCREW +PTT 2.6X6 (S)	
24	3-597-533-01	HOLDER-SELECTOR					



No.	Part No.	Description	Remarks
51	7-685-103-24	SCREW +P 2X5 TYPE2 SLIT	
52	3-598-877-01	PLAY BUTTON LEVER SP (S)	
53	3-598-829-01	BUTTON LEVER SPRING (A)	
54	*3-390-225-01	CHASSIS, SUB	
55	3-598-862-01	+PS 2X3	
56	*3-598-831-01	REC SPRING PLATE	
57	3-390-218-01	LEVER, REC BUTTON	
58	*3-390-221-01	LEVER, PLAY BUTTON	
59	*3-390-222-01	LEVER, REW BUTTON	
60	*3-390-223-01	LEVER, FF BUTTON	
61	*3-390-219-01	LEVER, STOP BUTTON	
62	*X-3598-105-1	LEVER ASSY, PAUSE BUTTON	
63	3-598-832-01	ACTUATOR SPRING	
64	X-3598-107-1	ACTUATOR ASSY, PUSH BUTTON	
65	*3-598-816-01	SWITCH PLATE	
66	*3-598-823-01	REW LEVER	
67	3-598-879-01	BUTTON LEVER SPRING (E)	
68	3-598-842-01	MG ARM	
69	3-598-844-01	P.M.E. SCREW	
70	X-3598-106-1	BASE ASSY, MAIN	
71	*3-598-880-01	HEAD PANEL	
72	*X-3598-803-1	SENSING PLATE ASSY	
73	3-598-839-01	HEAD BASE	
74	7-621-772-38	SCREW +B 2X6	
75	3-598-845-01	SPRING	
76	7-621-772-30	SCREW +B 2X6	
77	7-627-553-88	SCREW, PRECISION +P 2X7	
78	3-598-882-01	PINCH ROLLER SPRING	
79	3-598-868-01	P WASHER CUT (1.55X3.8X0.5)	
80	3-598-881-01	HEAD PANEL SPRING (S)	
81	*3-598-878-01	AUTO LEVER	
82	3-598-834-01	AUTO LEVER SPRING	
83	3-598-859-01	EJECT SLIDE LEVER	
84	3-598-860-01	EJECT SLIDE LEVER SP	
85	3-598-867-01	P WASHER CUT (1.2X3X0.4)	

No.	Part No.	Description	Remarks
86	X-3598-809-1	TAKE-UP REEL ASSY	
87	3-598-852-01	BACK TENSION SPRING	
88	3-598-866-01	P WASHER CUT (1.2X3X0.25)	
89	3-596-940-01	GEAR, T ROLLER	
90	X-3598-808-1	TAKE-UP GEAR PLATE ASSY	
91	3-598-884-01	T.G. PLATE SPRING	
92	3-598-851-01	RECORD SAFETY LEVER	
93	3-390-227-01	SPRING, PACK	
94	7-621-555-12	SCREW +K 2X3	
95	*X-3598-813-1	REEL BASE ASSY	
96	7-685-781-04	SCREW +PTT 2X4 (S)	
97		BRACKET, MOTOR	
98		MOTOR RUBBER	
99	3-598-855-01	MOTOR COLLER SCREW	
100	3-598-858-01	MAT	
101	3-598-883-01	RF BELT	
102	3-598-847-01	RF PULLEY ARM SPRING	
103	3-596-945-01	SCREW, ARM COLLAR	
104	X-3598-812-1	RF PULLEY ARM ASSY	
105	3-596-941-01	GEAR, FF	
106	3-390-226-01	BELT, MAIN	
107	X-3598-806-1	FLYWHEEL ASSY	
108	3-598-869-01	P WASHER CUT (2.05X4X0.4)	
109	3-598-826-01	PAUSE STOPPER	
110	3-598-825-01	PAUSE LEVER SPRING	
111	*3-598-824-01	PAUSE LEVER	
112	3-390-224-01	SPRING (C), BUTTON LEVER	
113	3-598-850-01	BACK TENSION SPRING	
114	X-3598-810-1	SUPPLY REEL ASSY	
115	X-3598-804-1	PINCH ROLLER ASSY	
HE901	1-543-279-11	E. HEAD	
HRP901	1-543-280-11	R.P. HEAD	
M901	3-597-507-01	MOTOR	

## 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:  $\mu$ F, PF:  $\mu$ P.

## 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...

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

## ELECTRICAL PARTS

Ref.No.	Part No.	Description				
901	*1-619-508-11	PC BOARD, POWER				
902	A-3260-432-A	PC BOARD, MAIN ASSY				
903	1-619-690-11	PC BOARD, WM IN JACK				
904	1-619-689-11	PC BOARD, LED				
905	*1-506-877-11	WAFER, CONNECTOR 5P				
906	*1-506-902-11	WAFER, CONNECTOR 4P				
907	*1-508-796-00	PIN, CONNECTOR 2P				
908	*1-508-797-00	PIN, CONNECTOR 4P				
ANT	1-501-346-11	ANTENNA, TELESCOPIC				
BPF1	1-567-687-11	FILTER, CERAMIC				
C1	1-101-455-00	CERAMIC	0.001NF	20%	50V	
C2	1-102-961-00	CERAMIC	27PF	5%	50V	
C3	1-102-864-00	CERAMIC	5PF	0.5PF	50V	
C4	1-101-005-00	CERAMIC	0.022MF		50V	
C5	1-102-114-00	CERAMIC	470PF	10%	50V	
C6	1-102-514-00	CERAMIC	22PF	5%	50V	
C7	1-102-720-00	CERAMIC	22PF	5%	50V	
C9	1-102-744-00	CERAMIC	4PF	0.25PF	50V	
C10	1-101-005-00	CERAMIC	0.022MF		50V	
C11	1-101-005-00	CERAMIC	0.022MF		50V	
C12	1-123-379-00	ELECT	0.47MF	20%	50V	
C13	1-101-005-00	CERAMIC	0.022MF		50V	
C14	1-101-005-00	CERAMIC	0.022MF		50V	
C15	1-101-005-00	CERAMIC	0.022MF		50V	
C17	1-123-356-00	ELECT	10MF	20%	16V	
C19	1-123-356-00	ELECT	10MF	20%	16V	
C21	1-123-307-00	ELECT	100MF	20%	10V	
C22	1-101-361-00	CERAMIC	150PF	5%	50V	
C23	1-123-369-00	ELECT	4.7MF	20%	50V	
C24	1-101-005-00	CERAMIC	0.022MF		50V	
C25	1-136-161-00	MYLAR	0.047MF	10%	50V	
C28	1-123-380-00	ELECT	1MF	20%	50V	
C29	1-123-382-00	ELECT	3.3MF	20%	50V	
C30	1-104-077-00	POLYSTYRENE	1000PF	5%	50V	
C31	1-123-369-00	ELECT	4.7MF	20%	50V	
C32	1-130-485-00	MYLAR	0.015MF	5%	50V	
C33	1-130-485-00	MYLAR	0.015MF	5%	50V	
C34	1-102-973-00	CERAMIC	100PF	5%	50V	
C35	1-102-973-00	CERAMIC	100PF	5%	50V	
C36	1-103-701-00	STYROL	100PF	5%	50V	
C101	1-123-382-00	ELECT	3.3MF	20%	50V	
C102	1-123-382-00	ELECT	3.3MF	20%	50V	
C103	1-101-455-00	CERAMIC	0.001MF	20%	50V	
C104	1-102-973-00	CERAMIC	100PF	5%	50V	
C105	1-102-973-00	CERAMIC	100PF	5%	50V	
C106	1-123-307-00	ELECT	100MF	20%	10V	

## ELECTRICAL PARTS


Ref.No.	Part No.	Description				
C107	1-101-884-00	CERAMIC	56PF	5%	50V	
C108	1-102-102-00	CERAMIC	0.0047MF	20%	50V	
C109	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C110	1-102-102-00	CERAMIC	0.0047MF	20%	50V	
C111	1-123-356-00	ELECT	10MF	20%	16V	
C112	1-130-488-00	MYLAR	0.027MF	5%	50V	
C113	1-123-356-00	ELECT	10MF	20%	16V	
C114	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C115	1-123-307-00	ELECT	100MF	20%	10V	
C116	1-123-307-00	ELECT	100MF	20%	10V	
C117	1-123-311-00	ELECT	1000MF	20%	10V	
C118	1-136-165-00	MYLAR	0.1MF	10%	50V	
C120	1-123-608-00	ELECT	0.22MF	20%	50V	
C121	1-123-369-00	ELECT	4.7MF	20%	50V	
C122	1-102-973-00	CERAMIC	100PF	5%	50V	
C201	1-123-382-00	ELECT	3.3MF	20%	50V	
C202	1-123-382-00	ELECT	3.3MF	20%	50V	
C203	1-101-455-00	CERAMIC	0.001MF	20%	50V	
C204	1-102-973-00	CERAMIC	100PF	5%	50V	
C205	1-102-973-00	CERAMIC	100PF	5%	50V	
C206	1-123-307-00	ELECT	100MF	20%	10V	
C207	1-101-884-00	CERAMIC	56PF	5%	50V	
C208	1-102-102-00	CERAMIC	0.0047MF	20%	50V	
C209	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C210	1-102-102-00	CERAMIC	0.0047MF	20%	50V	
C211	1-123-356-00	ELECT	10MF	20%	16V	
C212	1-130-488-00	MYLAR	0.027MF	5%	50V	
C213	1-123-356-00	ELECT	10MF	20%	16V	
C214	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C215	1-123-307-00	ELECT	100MF	20%	10V	
C216	1-123-307-00	ELECT	100MF	20%	10V	
C217	1-123-311-00	ELECT	1000MF	20%	10V	
C218	1-136-165-00	MYLAR	0.1MF	10%	50V	
C220	1-123-608-00	ELECT	0.22MF	20%	50V	
C221	1-123-369-00	ELECT	4.7MF	20%	50V	
C222	1-102-973-00	CERAMIC	100PF	5%	50V	
C301	1-123-307-00	ELECT	100MF	20%	10V	
C303	1-123-307-00	ELECT	100MF	20%	10V	
C304	1-123-678-12	ELECT(BLOCK)	10MF	20%	16V	
C305	1-123-332-00	ELECT(BLOCK)	47MF	20%	16V	
C306	1-123-321-00	ELECT	220MF	20%	16V	
C307	1-123-310-00	ELECT	470MF	20%	10V	
C309	1-123-307-00	ELECT	100MF	20%	10V	
C310	1-136-149-00	MYLAR	0.0047MF	10%	50V	
C311	1-130-476-00	MYLAR	0.0027MF	5%	50V	
C313	1-136-153-00	MYLAR	0.01MF	10%	50V	

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C314	1-101-455-00	CERAMIC	0.001MF	20%	50V
C315	1-123-679-11	ELECT	22MF		16V
C316	1-123-332-00	ELECT(BLOCK)	47MF	20%	16V
C317	1-102-109-00	CERAMIC	180PF	10%	50V
C318	1-101-005-00	CERAMIC	0.022MF		25V
C319	1-123-307-00	ELECT	100MF	20%	10V
C320	1-101-005-00	CERAMIC	0.022MF		50V
C321	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C403	1-103-703-11	POLYSTYRENE	120PF	5%	50V
C404	1-103-711-00	POLYSTYRENE	270PF	5%	50V
C405	1-102-971-00	CERAMIC	82PF	5%	50V
C406	1-102-971-00	CERAMIC	82PF	5%	50V
C901	1-101-005-00	CERAMIC	0.022MF		50V
C902	1-101-005-00	CERAMIC	0.022MF		50V
C903	1-101-005-00	CERAMIC	0.022MF		50V
C904	1-101-005-00	CERAMIC	0.022MF		50V
C905	1-123-325-00	ELECT	2200MF	20%	16V
CF1	1-567-689-11	FILTER, CERAMIC (FM)			
CF2	1-567-688-11	FILTER, CERAMIC			
CV	1-151-536-11	CAP, VAR, POLYETHYLENE			
D1	8-719-815-55	DIODE 1S1555			
D2	8-719-911-06	DIODE 1SS106			
D301	8-719-168-88	DIODE R06.8F-B			
D901	8-719-200-02	DIODE 10E2			
D902	8-719-200-02	DIODE 10E2			
D903	8-719-200-02	DIODE 10E2			
D904	8-719-200-02	DIODE 10E2			
IC1	8-759-204-03	IC TA7358AP			
IC2	8-759-801-24	IC LA1260S			
IC3	8-759-203-87	IC TA7343AP			
IC301	8-759-205-91	IC TA7668BP			
IC302	1-806-909-11	IC LA4555			
J101	1-563-020-11	JACK, HEADPHONE			
J301	1-563-019-11	JACK, HEADPHONE			
L1	*1-422-278-11	COIL			
L2	1-421-880-11	COIL			
L4	1-402-227-11	ANTENNA, FERRITE-ROD (MM/LW)			
L5	1-406-213-11	COIL, MW OSC			
L6	1-404-687-11	COIL-7CAN			
L7	1-402-233-11	COIL, ANT			
L301	1-404-685-11	COIL-7CAN			
MIC901	1-542-075-11	MICROPHONE, CONDENSER			

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q301	8-729-606-33	TRANSISTOR 2SC2603-F			
Q302	8-729-606-33	TRANSISTOR 2SC2603-F			
Q303	8-729-606-33	TRANSISTOR 2SC2603-F			
Q304	8-729-606-33	TRANSISTOR 2SC2603-F			
Q305	8-729-606-33	TRANSISTOR 2SC2603-F			
Q306	8-729-606-33	TRANSISTOR 2SC2603-F			
R1	1-249-429-11	CARBON	10K	5%	1/6W
R2	1-247-795-00	CARBON	33	5%	1/6W
R3	1-249-421-11	CARBON	2.2K	5%	1/6W
R4	1-247-879-00	CARBON	100K	5%	1/6W
R5	1-247-879-00	CARBON	100K	5%	1/6W
R7	1-249-419-11	CARBON	1.5K	5%	1/6W
R8	1-247-851-00	CARBON	6.8K	5%	1/6W
R9	1-249-421-11	CARBON	2.2K	5%	1/6W
R10	1-247-831-00	CARBON	1K	5%	1/6W
R11	1-247-849-00	CARBON	5.6K	5%	1/6W
R12	1-247-831-00	CARBON	1K	5%	1/6W
R13	1-247-887-00	CARBON	220K	5%	1/6W
R14	1-249-423-11	CARBON	3.3K	5%	1/6W
R15	1-249-423-11	CARBON	3.3K	5%	1/6W
R16	1-247-875-00	CARBON	68K	5%	1/6W
R17	1-247-875-00	CARBON	68K	5%	1/6W
R18	1-247-877-00	CARBON	82K	5%	1/6W
R19	1-247-877-00	CARBON	82K	5%	1/6W
R20	1-249-433-11	CARBON	22K	5%	1/6W
R21	1-247-083-00	CARBON	10	5%	1/4W
R102	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-247-819-00	CARBON	330	5%	1/6W
R104	1-249-421-11	CARBON	2.2K	5%	1/6W
R105	1-247-809-00	CARBON	120	5%	1/6W
R106	1-247-869-00	CARBON	39K	5%	1/6W
R107	1-249-432-11	CARBON	18K	5%	1/6W
R108	1-247-859-00	CARBON	15K	5%	1/6W
R109	1-247-853-00	CARBON	8.2K	5%	1/6W
R110	1-249-421-11	CARBON	2.2K	5%	1/6W
R112	1-247-767-00	CARBON	2.2	5%	1/6W
R113	1-249-405-11	CARBON	100	5%	1/6W
R114	1-249-437-11	CARBON	47K	5%	1/6W
R115	1-247-819-00	CARBON	330	5%	1/6W
R116	1-249-414-11	CARBON	560	5%	1/6W
R117	1-247-831-00	CARBON	1K	5%	1/6W
R202	1-247-831-00	CARBON	1K	5%	1/6W
R203	1-247-819-00	CARBON	330	5%	1/6W
R204	1-249-421-11	CARBON	2.2K	5%	1/6W
R205	1-247-809-00	CARBON	120	5%	1/6W


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

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R206	1-247-869-00	CARBON	39K	5%	1/6W
R207	1-249-432-11	CARBON	18K	5%	1/6W
R208	1-247-859-00	CARBON	15K	5%	1/6W
R209	1-247-853-00	CARBON	8.2K	5%	1/6W
R210	1-249-421-11	CARBON	2.2K	5%	1/6W
R212	1-247-767-00	CARBON	2.2	5%	1/6W
R213	1-249-405-11	CARBON	100	5%	1/6W
R214	1-249-437-11	CARBON	47K	5%	1/6W
R215	1-247-819-00	CARBON	330	5%	1/6W
R216	1-249-414-11	CARBON	560	5%	1/6W
R217	1-247-831-00	CARBON	1K	5%	1/6W
R301	1-247-831-00	CARBON	1K	5%	1/6W
R302	1-249-435-11	CARBON	33K	5%	1/6W
R303	1-249-405-11	CARBON	100	5%	1/6W
R304	1-213-127-00	METAL OXIDE	47	5%	1W F
R305	1-247-817-00	CARBON	270	5%	1/6W
R306	1-247-831-00	CARBON	1K	5%	1/6W
R307	1-247-837-00	CARBON	1.8K	5%	1/6W
R308	1-247-849-00	CARBON	5.6K	5%	1/6W
R309	1-247-795-00	CARBON	33	5%	1/6W
R310	1-247-831-00	CARBON	1K	5%	1/6W
R311	1-249-429-11	CARBON	10K	5%	1/6W
R312	1-247-831-00	CARBON	1K	5%	1/6W
R314	1-247-891-00	CARBON	330K	5%	1/6W
R316	1-247-851-00	CARBON	6.8K	5%	1/6W
R317	1-249-437-11	CARBON	22K	5%	1/6W
RV1	1-228-724-00	RES, ADJ, CARBON 10K			
RV301	1-237-308-11	RES, VAR, CARBON 50K (TONE)			
RV302	1-237-307-11	RES, VAR, CARBON 50K (VOLUME)			
S301	1-570-425-11	SWITCH, SLIDE (PLAY/RECORD)			
S302	1-570-631-11	SWITCH, SLIDE (FUNCTION)			
S303	1-570-699-11	SWITCH, SLIDE (ISS/MODE)			
S304	1-570-631-11	SWITCH, SLIDE (BAND)			
S901		SWITCH, LEAF (MOTOR)			
S902		SWITCH, LEAF (AC/BATT)			
SP901	1-503-661-11	SPEAKER			
SP902	1-503-661-11	SPEAKER			
T1	1-404-639-11	FM IFT			
T2	1-404-638-11	AM IFT			
T3	1-404-640-11	FM DET			
TP1	*3-597-534-11	TAP-STUD			

## ACCESSORY &amp; PACKING MATERIAL

Part No.	Description
3-527-213-00	LABEL, SERIAL NUMBER
3-565-234-00	POLYETHYLENE, FORMED (250X400)
3-597-433-01	BAG, POLYETHYLENE
3-597-503-01	INDIVIDUAL CARTON
3-597-504-01	MASTER CARTON, 2 SETS
3-597-505-01	INDIVIDUAL CARTON
3-597-506-01	MASTER CARTON, 2 SETS
3-703-707-01	STICKER, SONY SYMBOL (21)
3-760-751-11	MANUAL, INSTRUCTION
*3-764-430-01	INSTRUCTION, DBP CAUTION

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

# SONY

## FM/MW/LW STEREO CASSETTE CORDER

### CFS-230L

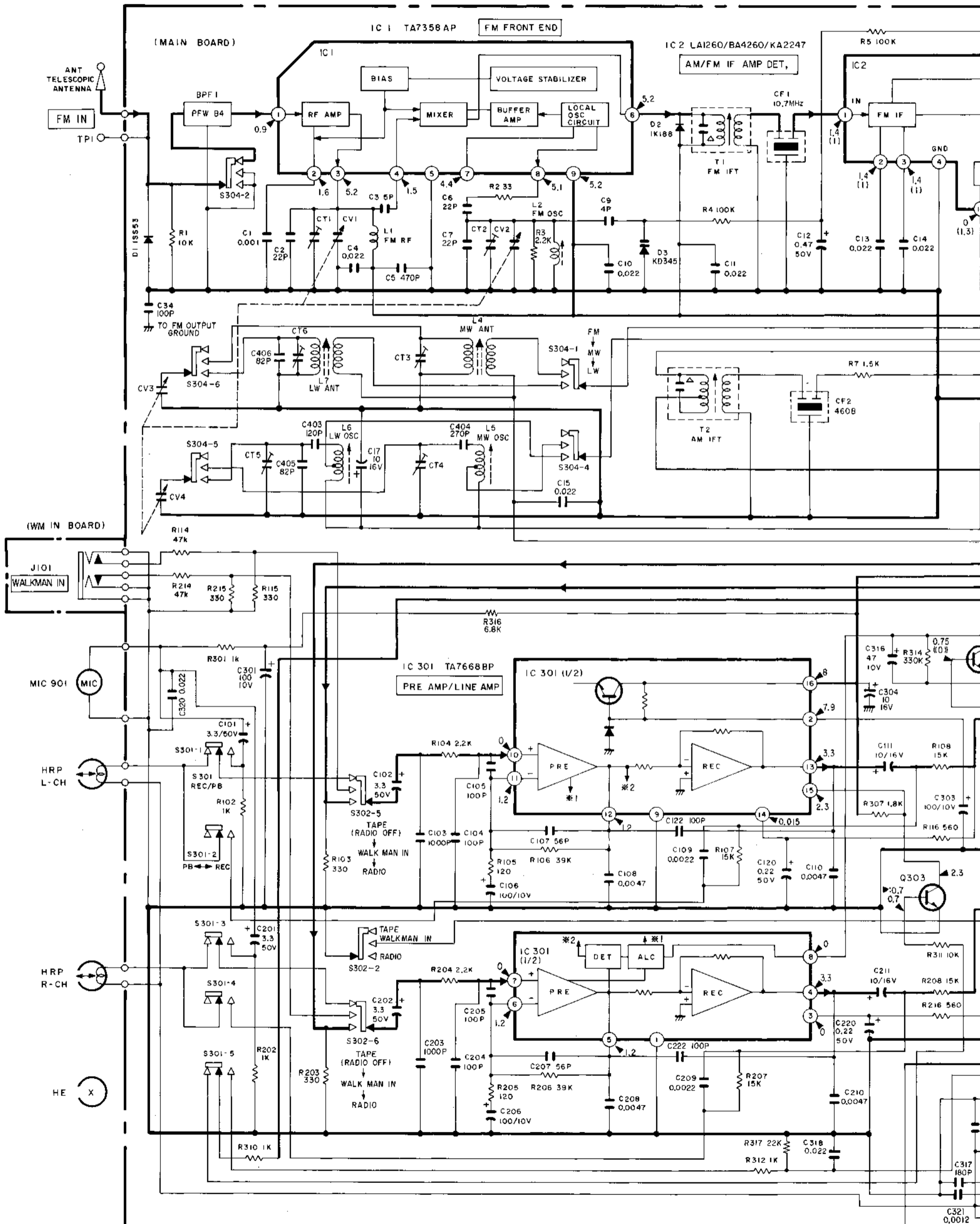
SCHMATIC DIAGRAM

AEP Model  
UK Model

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

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\rightarrow$ : signal path.



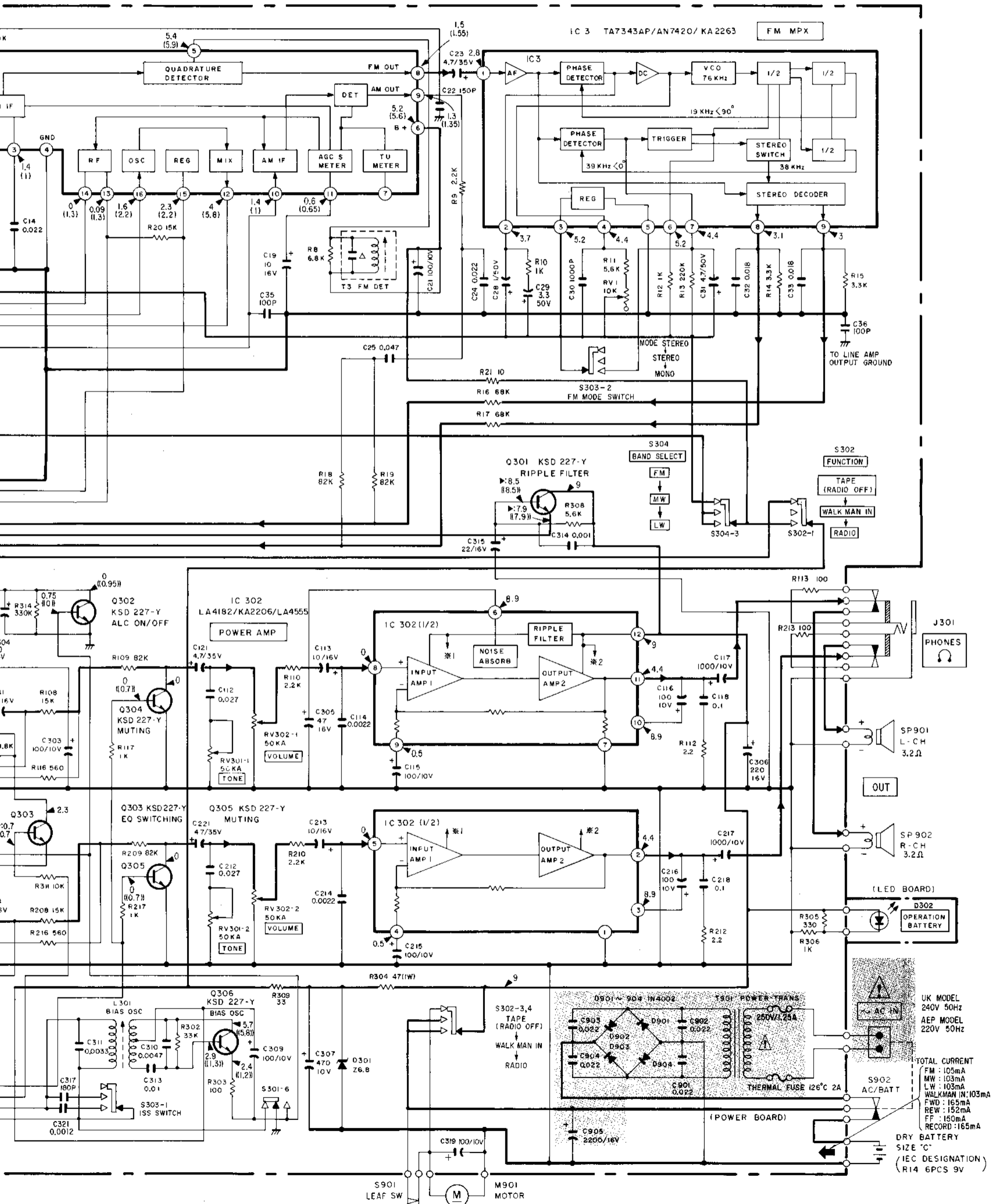


Unless otherwise noted, pF:  $\mu\mu\text{F}$   
 Rated except for electrolytics  
 $\frac{1}{4}\text{W}$  or less unless otherwise

• Switch

Ref. No.	Switch	Position
S301	REC/PB	PB
S302	FUNCTION	TAPE (RADIO OFF)
S303	FM MODE	STEREO
S304	BAND	FM
S901	MOTOR	OFF
S902	AC/DC	DC

- : B+ bus.
  - : adjustment for repair
  - Total current is measured with no cassette installed.
  - Power voltage is 9 V and fed with regulated dc power supply from battery terminal.
  - Voltages are dc with respect to ground with no-signal (detuned) conditions with VOM (DC 50k $\Omega$ /V).
  - Voltage variations may be noted due to normal production tolerances.
- Radio section                      Amplifier section  
 no mark : FM                      no mark : STOP  
 ( ) : AM                              ( ) : WALKMAN IN



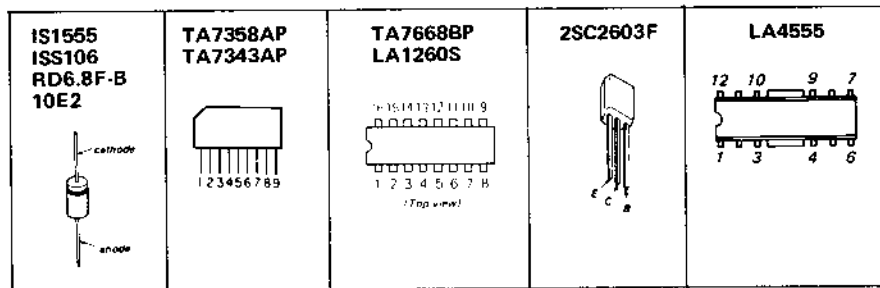
UK MODEL 240V 50Hz  
 AEP MODEL 220V 50Hz

TOTAL CURRENT  
 FM : 105mA  
 MW : 103mA  
 LW : 103mA  
 WALKMAN IN: 103mA  
 FWD : 165mA  
 REW : 152mA  
 FF : 150mA  
 RECORD : 165mA

DRY BATTERY  
 SIZE "C"  
 (IEC DESIGNATION)  
 (R14 6PCS 9V)

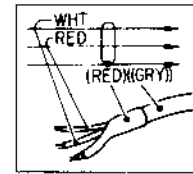
# SEMICONDUCTOR LOCATION

No.	Location	Ref. No.	Location	Ref. No.	Location
01	E-13	Q301	D-6	D1	D-14
02	D-12	Q302	C-8	D2	F-12
	D-11	Q303	E-9	D3	D-13
	D-8	Q304	D-6	D301	E-4
	D-3	Q305	D-6	D302	A-6
		Q306	E-2	D901	H-3
				D902	G-3
				D903	G-2
				D904	H-2



### Note:

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



- ○ : parts extracted from the component side.

# MOUNTING DIAGRAMS

