

WM-FX141

SERVICE MANUAL

US Model
AEP Model
E Model

Ver 1.3 1999.05

With SUPPLEMENT-1 (9-923-296-81)

With SUPPLEMENT-2 (9-923-296-82)



Model Name Using Similar Mechanism	WM-FX101
Tape Transport Mechanism Type	MF-WMFX103-48

SPECIFICATIONS

Radio Frequency

FM : 87.6 – 108 MHz (US, Chilean, Latin America, Central and South America Models)

: 65.0 – 107.9MHz (East European Model)

: 87.6 – 107.9 MHz (Other Models)

AM : 530 – 1,710 kHz (US, Chilean, Latin America, Central and South America Models)

: 531 – 1,602kHz (Other Models)

Power requirements

3V DC batteries R6 (size AA) × 2

External DC 3V power sources

Battery life

(Approximate hours)

Battery	Playback	Radio
Sony alkaline LR6 (SG)	16 hrs	48 hrs
Sony R6P (SR)	4.5 hrs	16 hrs

Dimensions

93.9 × 118.5 × 35.9 mm (w/h/d)

(3³/₄ × 4³/₄ × 1³/₁₆ in.) incl. projecting parts

Mass

205g (7.3 oz) incl.batteries

Supplied accessories

- Stereo headphones or earphones (1)
- Belt clip (1)

Design and specifications are subject to change without notice.

RADIO CASSETTE PLAYER

SONY®



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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

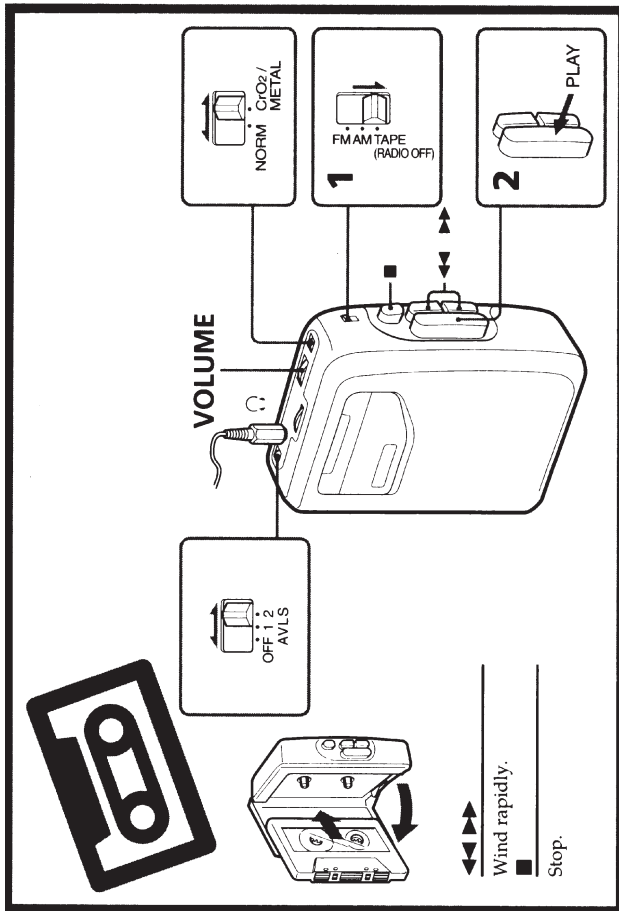
SECTION 1 GENERAL

This section is extracted from instruction manual.

Using the AVLS feature

The AVLS selector allows you to limit the maximum volume of your Walkman personal stereo without degrading the sound quality.

- When the AVLS selector is set to either position 1 or 2, the volume will be kept at a moderate level without the degradation of the sound quality, even if you attempt to turn the volume up higher.
- When the AVLS selector is set to either position 1 or 2, the playback sound may be distorted or unstable according to the music (especially bass boosted part). If this happens, turn down the volume.
- When the AVLS selector is turned off, you will be able to enjoy the full volume capability of your Walkman personal stereo.



About batteries

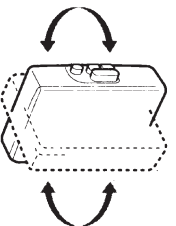
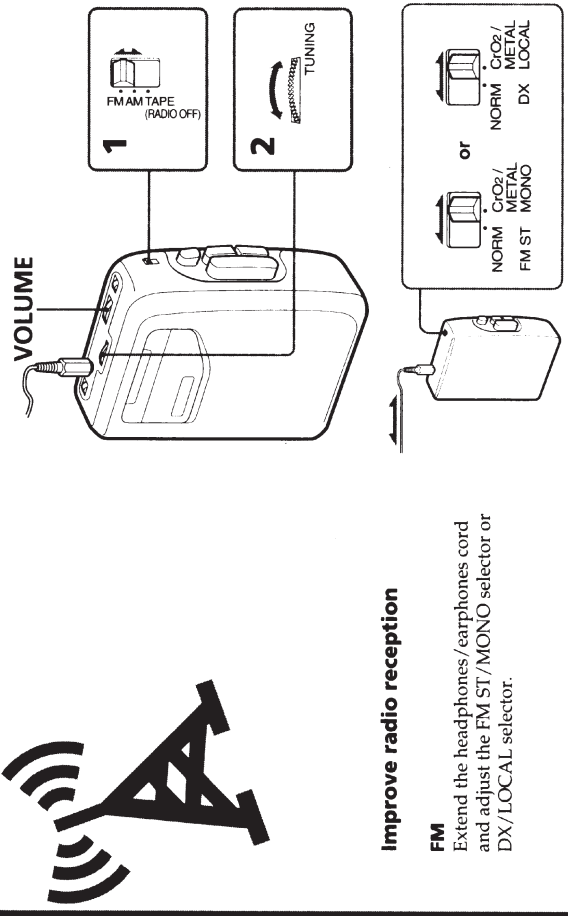
- When you are not going to use your Walkman for a long time, remove the batteries to prevent damage from battery leakage and corrosion.

About external power

You can connect the following external power sources through the DC IN 3 V jack located on the bottom. (When you plug a cord into the DC IN 3 V jack, the internal batteries are automatically bypassed.)

- House current using an AC-E30HG AC power adaptor

When Listening to the Radio
If you have inserted a cassette with a metallic shell or label, and interference in radio reception occurs, remove the cassette.



AM
Rotate the Walkman.

If you have any question or problem concerning your Walkman, please consult your nearest Sony dealer.

Note

Use only the recommended AC-E30HG AC power adaptor (not supplied). Do not use any other AC power adaptor.



SECTION 2 DISASSEMBLY

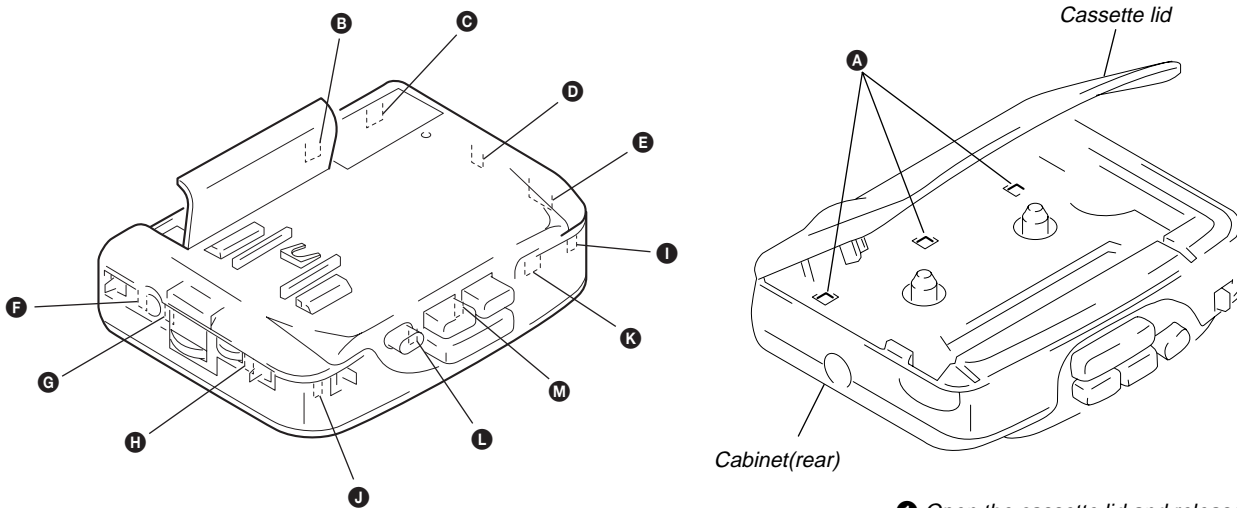
Note : Disassemble the unit in the order as shown below.

Cabinet (Rear) → Mechanism deck and main board

- └ Main board
- └ Cassette lid
- └ Dial pointer setting

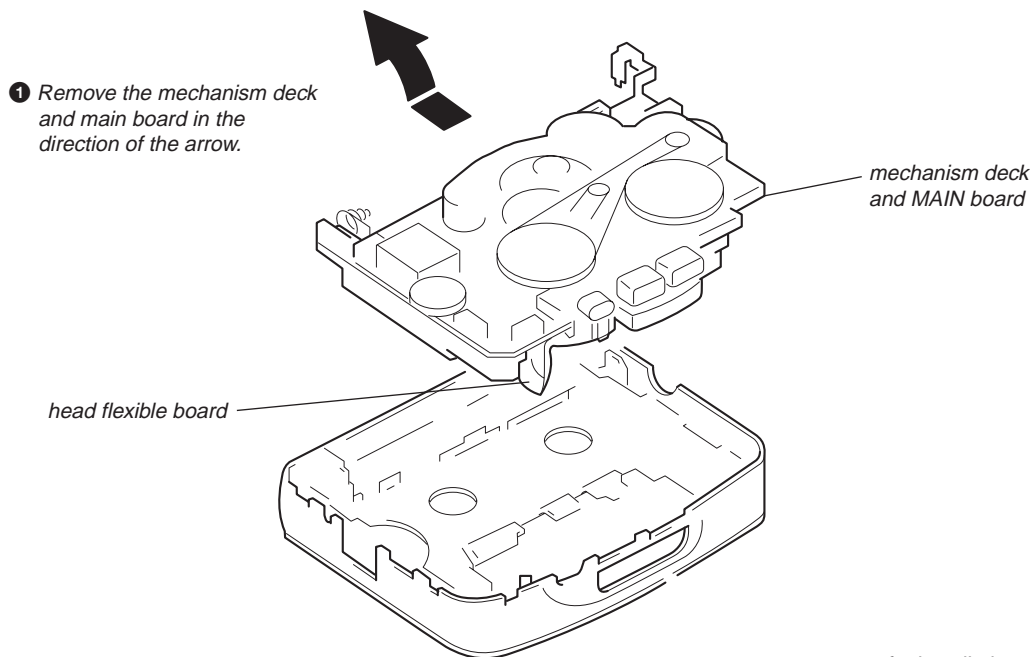
Note : Follow the disassembly procedure in the numerical order given.

2-1. CABINET (REAR)



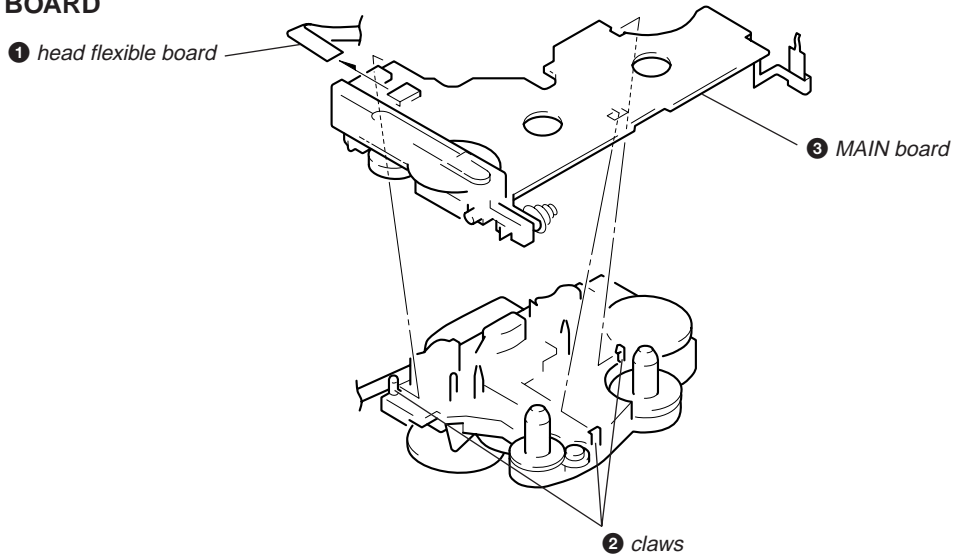
- 1 Open the cassette lid and release claw **A**.
- 2 Remove the cabinet(rear). (Release all claws **B** from **M** in alphabetical order.)

2-2. MECHANISM DECK AND MAIN BOARD

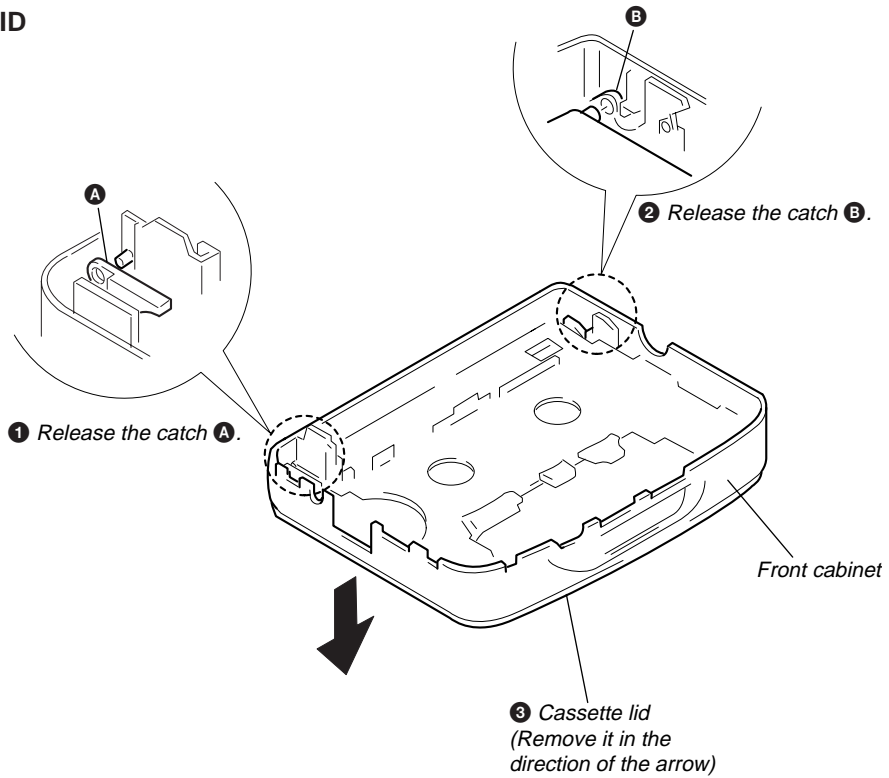


* note for installation :
Make sure to put the head flexible board to ditch before install the mechanism deck and MAIN board.

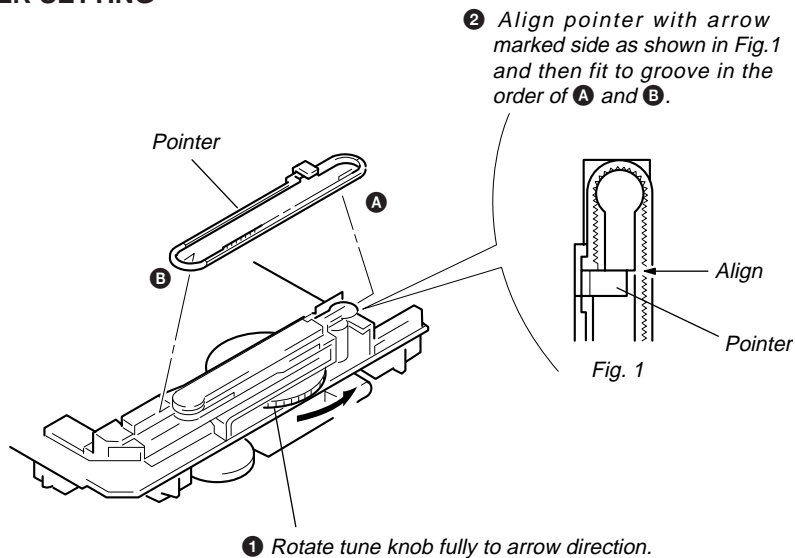
2-3. MAIN BOARD



2-4. CASSETTE LID



2-5. DIAL POINTER SETTING



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

Precaution

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

playback head	pinch roller
capstan	rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (2.5V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	20 to 42 g•cm (0.28 to 0.58 oz•inch)
FWD Back Tension		less than 2 g•cm (less than 0.03 oz•inch)
FF, REW	CQ-201B	more than 60 g•cm (more than 0.83 oz•inch)

3-2. ELECTRICAL ADJUSTMENTS

Precaution

- Supplied voltage : 2.5V
- Switch and control position
 TAPE switch : NORM
 VOLUME control : maximum
 AVLS switch : OFF

TAPE SECTION

0dB=0.775V

- FUNCTION switch : TAPE

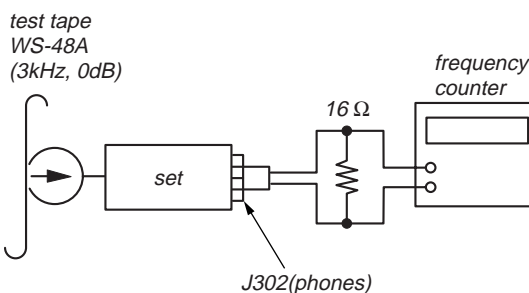
Test tape

Type	Signal	Used for
WS-48A	3kHz, 0dB	Tape Speed Adjustment

Tape speed adjustment

Tape selection adjustment : NORM

Procedure :



Adjustment Value: normal tape speed

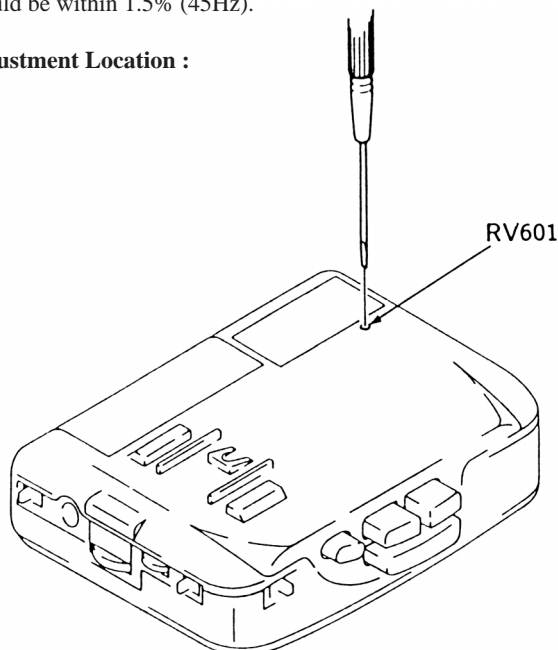
Adjust the tape speed adjustment RV601, so that the frequency counter reading becomes 3,000Hz.

Specification Value:

Digital frequency counter
2,945 to 3,015Hz

Frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz).

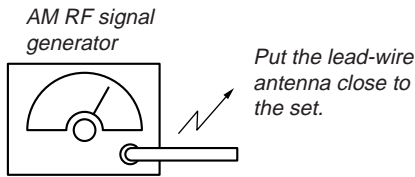
Adjustment Location :



TUNER SECTION

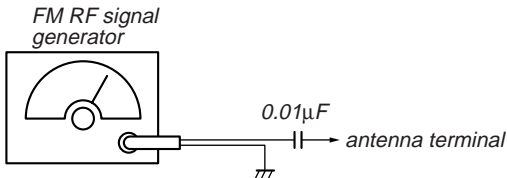
0 dB = 1 μV

[AM]
BAND: AM
Signal generator

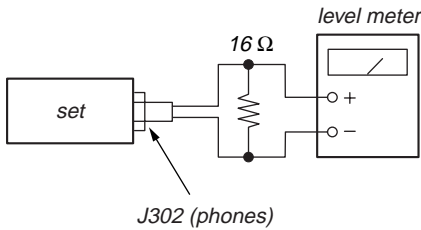


30% amplitude modulation by 400Hz signal.
Output level : as low as possible

[FM]
BAND : FM
Signal generator



75kHz(100%) amplitude modulation by 1kHz signal.
Output level: as low as possible



- Repeat the procedures in each adjustment several times for the maximum level meter indication.
- The frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	455kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	620kHz(800kHz)
CT1	1,400kHz(1,300kHz)

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L4	505kHz(516.5kHz)
CT4	1,750kHz(1,631.5kHz)

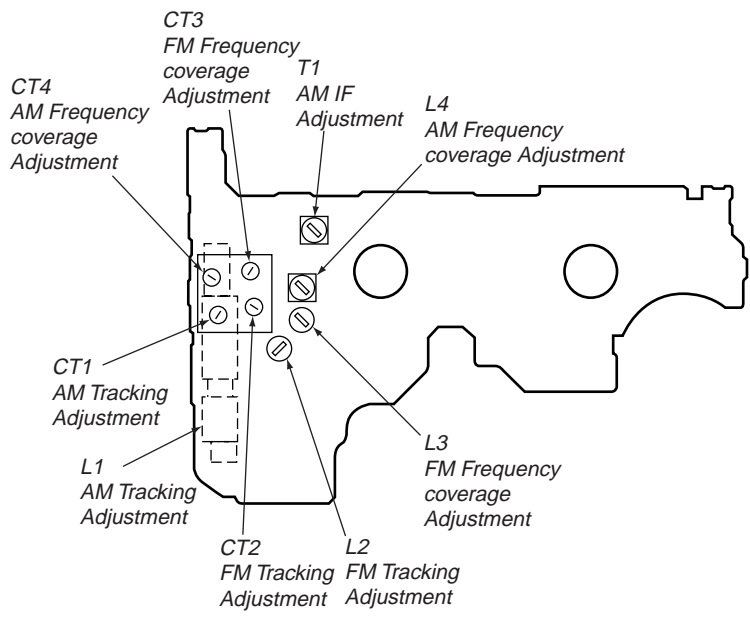
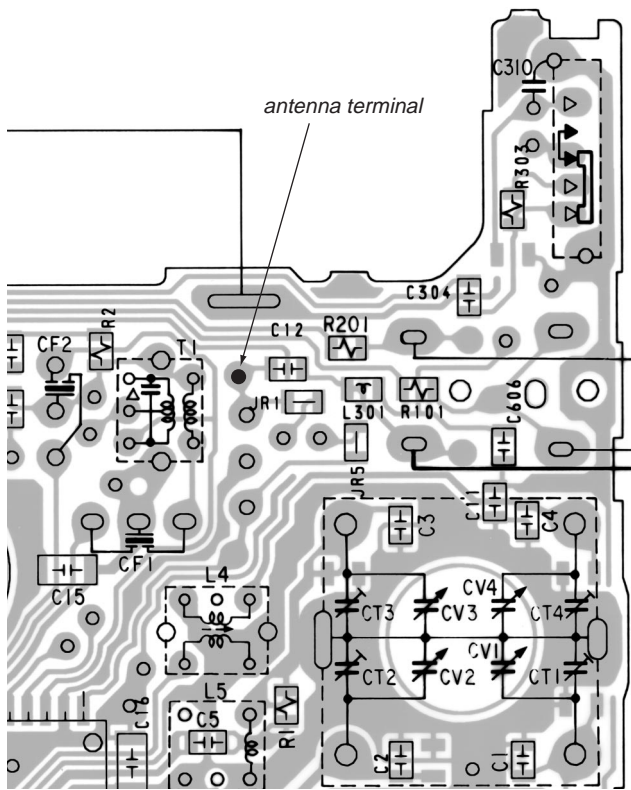
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L2	86.0MHz[64MHz]
CT2	109.5MHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3	86.0MHz[64MHz]
CT3	109.5MHz

() :E, Mexican, East European, AEP
[] : East European

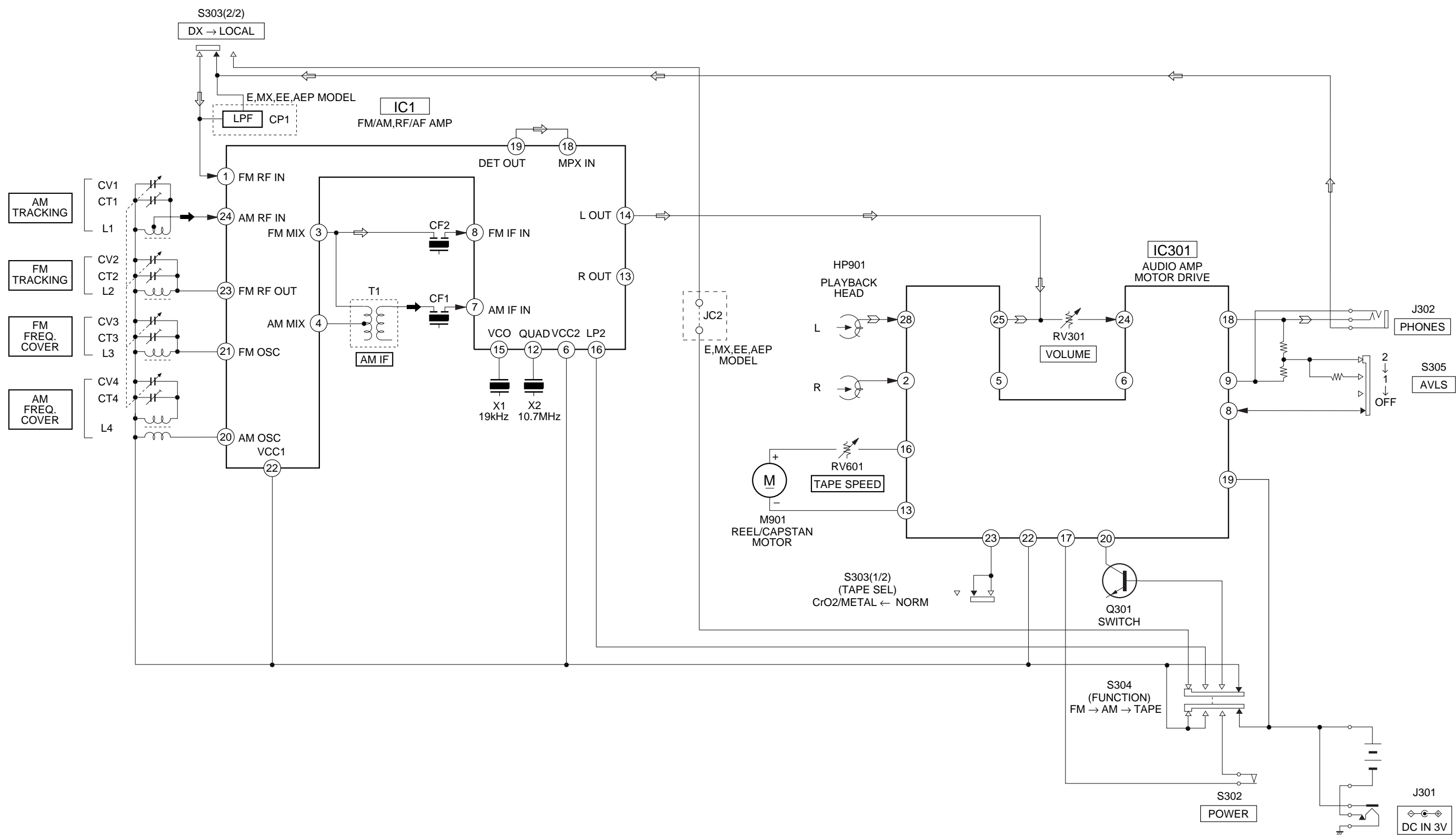
Adjustment Location: Main board (See page 8)

Adjustment Location : Main board



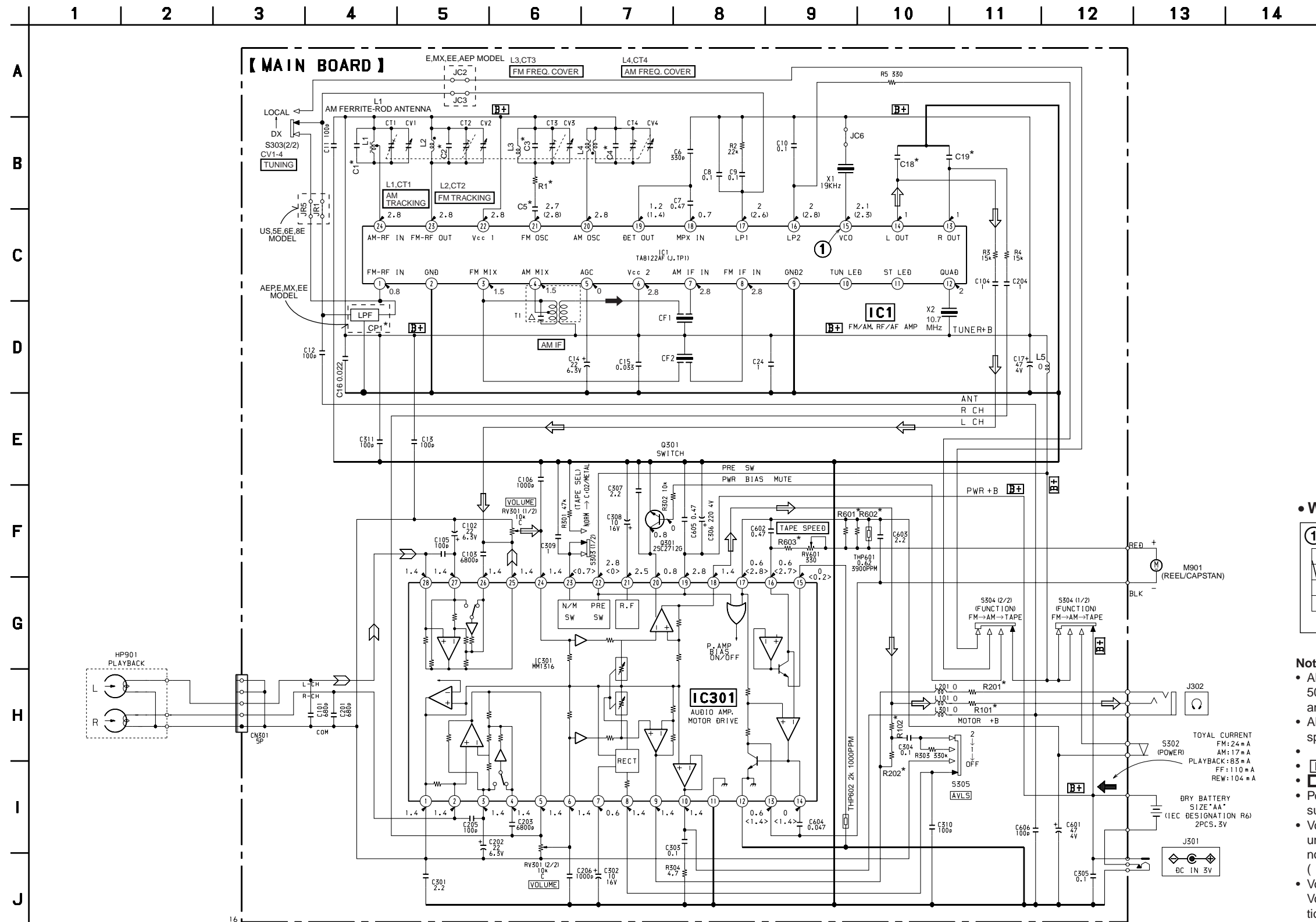
SECTION 4
DIAGRAM

4-1. BLOCK DIAGRAM

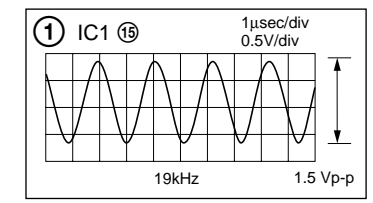


- Signal path
 - ⇨ : FM
 - ➔ : AM
 - ⊃ : PB
- Abbreviation
 - EE : East European model
 - MX : Mexican model

4-2. SCHEMATIC DIAGRAM — MAIN SECTION —



• Waveform

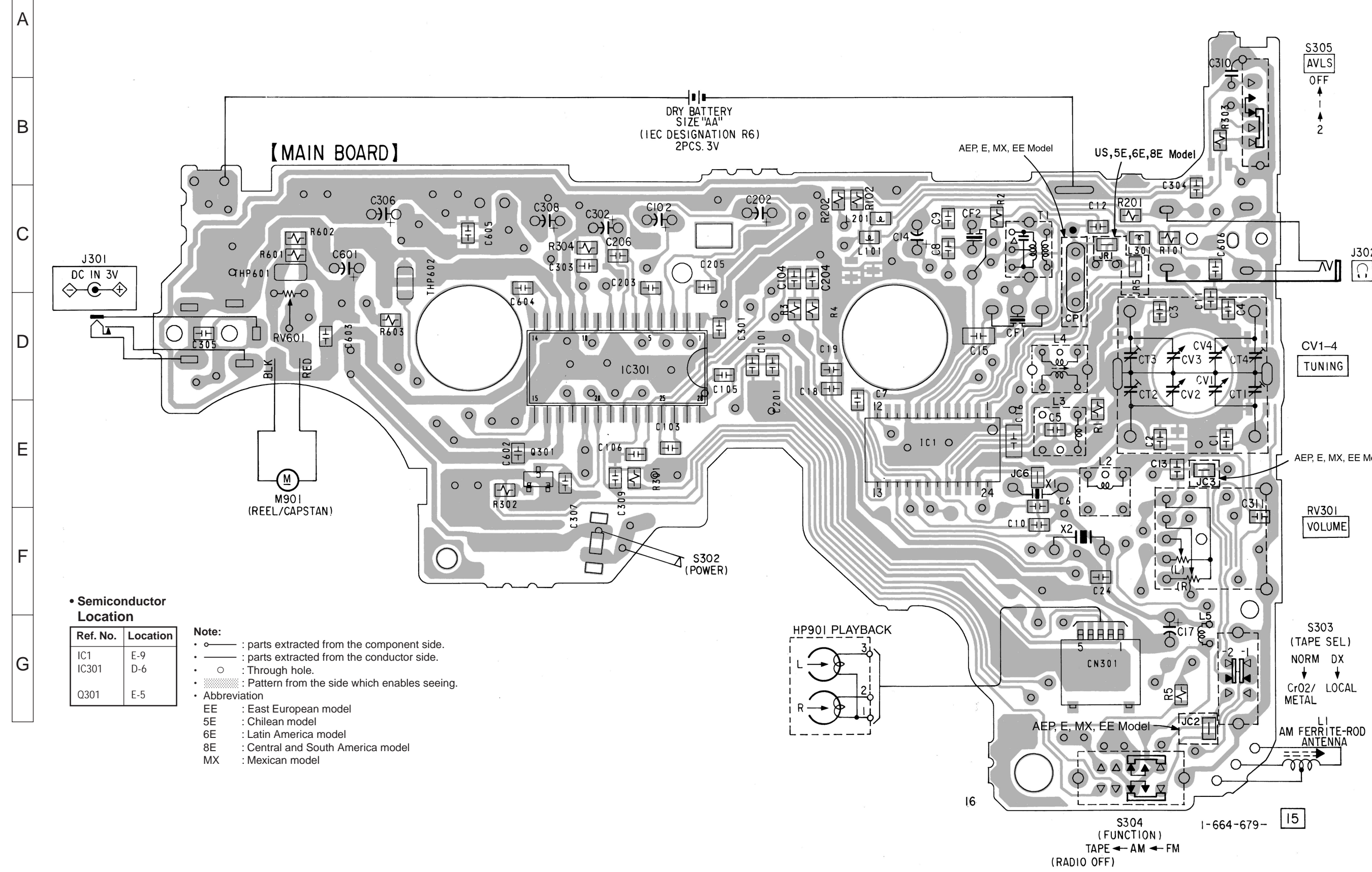


- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
 - Δ : internal component.
 - B+** : B+ Line.
 - \square : adjustment for repair.
 - Power voltage is dc 3V and fed with regulated dc power supply from external power voltage jack (J301).
 - Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 - no mark : FM
 - () : PB
 - Voltages are taken with a VOM (Input impedance $10\text{ M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with an oscilloscope.
 - Signal path.
 - \rightarrow : FM
 - \rightarrow : AM
 - \rightarrow : PB
 - Abbreviation
 - EE : East European model
 - 5E : Chilean model
 - 6E : Latin America model
 - 8E : Central and South America model
 - MX : Mexican model

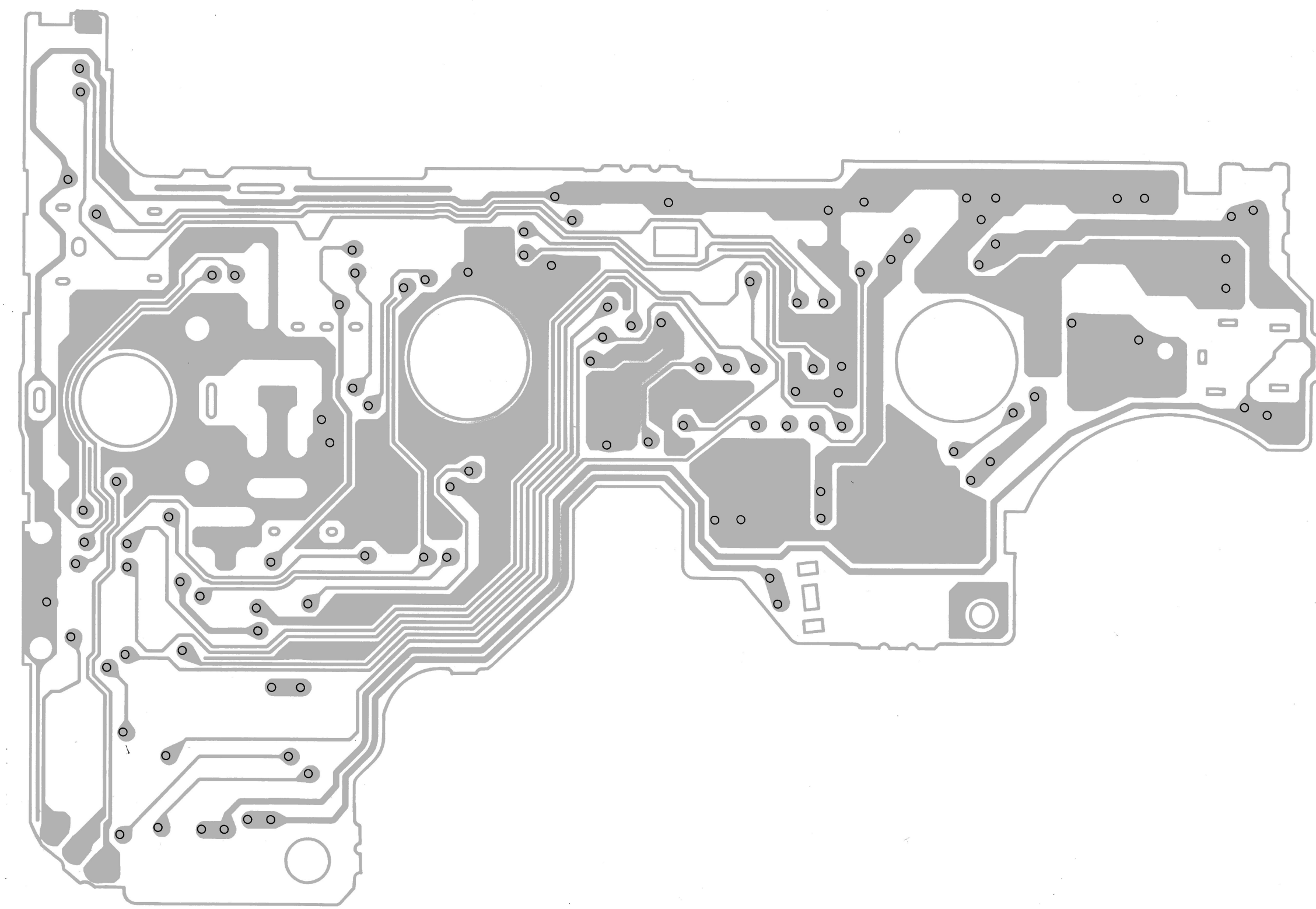
	C1	C2	C3	C4	C5	C18,C19	R1	R101,R201	R102,R202	R601	R602	R603
US,5E,6E,8E	1PF	18PF	22PF	6PF	33PF	0.018uF	22	0	180k	3.9	5.6	750
E,MX,AEP	1PF	18PF	22PF	6PF	33PF	0.012uF	22	10	39k	1.5	2.2	680
EE	3PF	6PF	8PF	9PF	0.0022uF/100v	0.012uF	18	0	180k	1.5	2.2	680

4-3. PRINTED WIRING BOARD — MAIN SECTION —

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

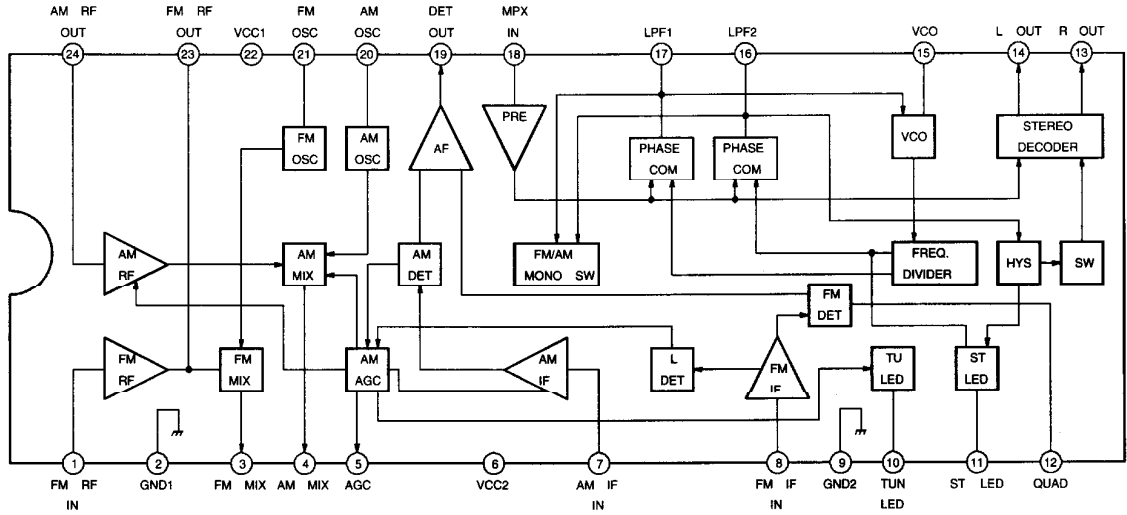


- Semiconductor Location**
- | Ref. No. | Location |
|----------|----------|
| IC1 | E-9 |
| IC301 | D-6 |
| Q301 | E-5 |
- Note:**
- — : parts extracted from the component side.
 - — : parts extracted from the conductor side.
 - : Through hole.
 - : Pattern from the side which enables seeing.
- Abbreviation**
- EE : East European model
 - 5E : Chilean model
 - 6E : Latin America model
 - 8E : Central and South America model
 - MX : Mexican model



4-4. IC BLOCK DIAGRAM

IC1 TA8122AF

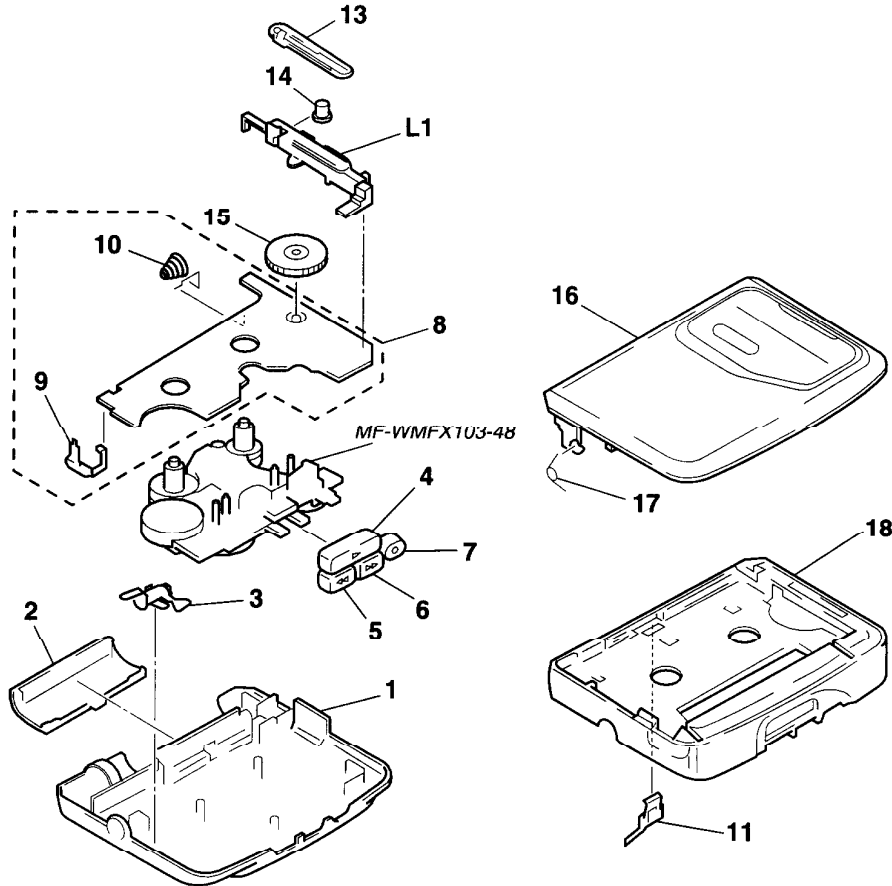


SECTION 5 EXPLODED VIEWS

NOTE:

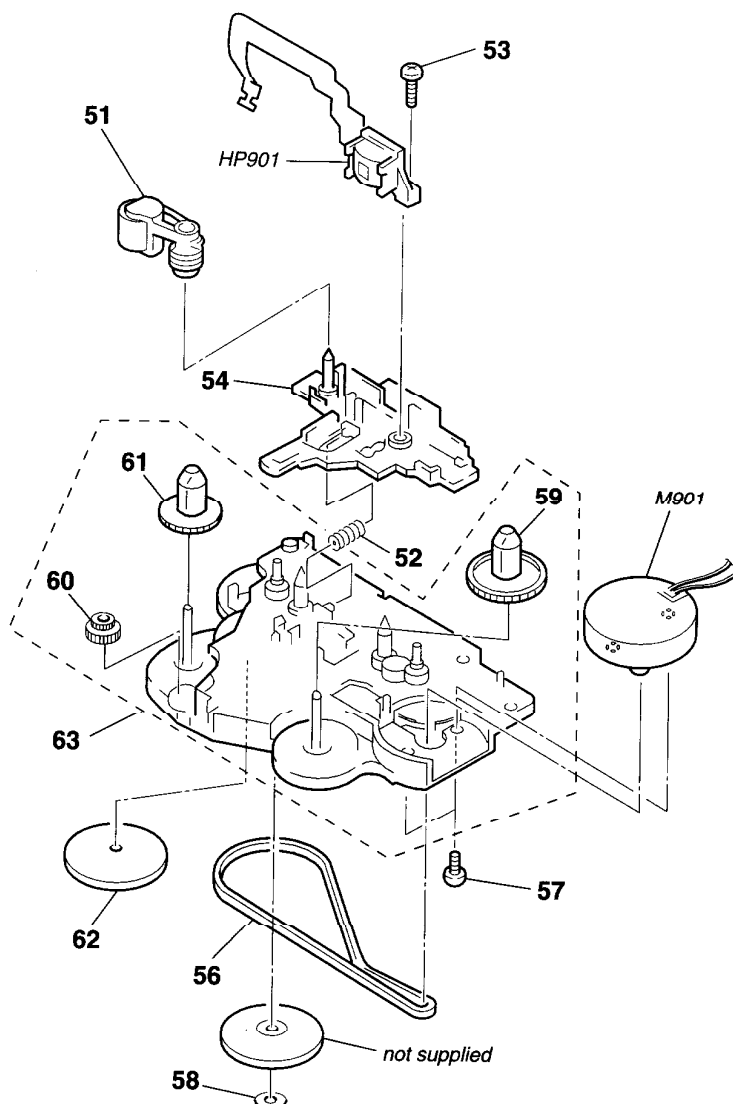
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
 EE : East European model
 5E : Chilean model
 6E : Latin America model
 8E : Central and South America model
 MX : Mexican model

5-1. CABINET AND BOARD SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	3-910-921-41	CABINET (REAR) (CF-0)		11	3-364-675-01	SPRING (CASSETTE)	
2	3-910-899-11	LID, BATT		13	3-910-911-01	POINTER	
3	3-910-896-01	GROUND, MOTOR		14	3-933-675-01	GEAR (TUNE)	
4	3-910-538-01	BUTTON (PLAY)		15	3-910-902-12	KNOB (TUNE)	
5	3-910-540-11	BUTTON (REW)		16	X-3375-408-1	HOLDER (CF-U), CASSETTE ASSY	(US, 5E, 6E, 8E)
6	3-910-539-11	BUTTON (FF)		16	X-3375-604-1	HOLDER ASSY, CASSETTE (E, MX, AEP)	
7	3-910-541-11	BUTTON (STOP)		16	X-3375-605-1	HOLDER ASSY, CASSETTE (EE)	
8	A-3016-889-A	MAIN BOARD, COMPLETE (US, 5E, 6E, 8E)		17	3-910-903-01	SPRING, TORSION	
8	A-3021-093-A	MAIN BOARD, COMPLETE (EE)		18	3-910-920-41	CABINET (FRONT) (CFO) (US, 5E, 6E, 8E)	
8	A-3021-094-A	MAIN BOARD, COMPLETE (E, MX, AEP)		18	3-910-920-01	CABINET (FRONT) (CFO) (EE, E, MX, AEP)	
9	3-910-894-01	TERMINAL (+), BATTERY		L1	X-3371-847-1	ANTENNA SUB ASSY, FERRITE-ROD	
10	3-910-895-01	TERMINAL (-), BATTERY					

5-2. MECHANISM SECTION (MF-WMFX103-48)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
51	X-3367-902-1	ARM (N) ASSY, PINCH		59	3-364-320-01	GEAR (S REEL)	
52	3-364-328-01	SPRING, COMPRESSION		60	3-909-727-01	GEAR (REVERSE)	
53	3-910-635-01	SCREW		61	3-910-640-01	GEAR (T REEL)	
54	3-910-647-01	LEVER (PR/O), PLAY		62	X-3367-905-1	CLUTCH ASSY	
56	3 354 868-01	DELT		63	X-3368-729-1	CHASSIS ASSY	
57	3-352-758-21	SCREW (M1.7), TOOTHED LOCK		HP901	1-500-115-11	HEAD, MAGNETIC (PLAYBACK)	
58	3-321-483-11	RING, RETAINING		M901	1-698-353-11	MOTOR, DC (REEL/CAPSTAN)(WITH PULLEY)	

MAIN

**SECTION 6
ELECTRICAL PARTS LIST**

NOTE:

When indicating parts by reference number, please include the board name.

- Abbreviation
 EE : East European model
 5E : Chilean model
 6E : Latin America model
 8E : Central and South America model
 MX : Mexican model

- 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.
- XX, X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
 uF: μ F

- RESISTORS
 All resistors are in ohms.
 METAL: metal-film resistor
 METAL OXIDE: Metal Oxide-film resistor
 F: nonflammable
- COILS
 uH: μ H
- SEMICONDUCTORS
 In each case, u: μ , for example:
 uA...: μ A..., uPA..., μ PA...,
 uPB..., μ PB..., uPC..., μ PC...,
 uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	A-3016-889-A	MAIN BOARD, COMPLETE (US, 5E, 6E, 8E) *****		C106	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
	A-3021-093-A	MAIN BOARD, COMPLETE (EE) *****		C201	1-163-007-11	CERAMIC CHIP 680PF 10%	50V
	A-3021-094-A	MAIN BOARD, COMPLETE (E, MX, AEP) *****		C202	1-126-153-11	ELECT 22uF 20%	6.3V
	3-910-894-01	TERMINAL (+), BATTERY		C203	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
	3-910-895-01	TERMINAL (-), BATTERY		C204	1-164-234-11	CERAMIC CHIP 1uF	10V
		< CAPACITOR >		C205	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1	1-163-083-00	CERAMIC CHIP 1PF	50V (EXCEPT EE)	C206	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C1	1-163-086-00	CERAMIC CHIP 3PF	50V (EE)	C301	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C2	1-163-099-00	CERAMIC CHIP 18PF	5% 50V (EXCEPT EE)	C302	1-126-157-11	ELECT 10uF	20% 16V
C2	1-163-089-00	CERAMIC CHIP 6PF	50V (EE)	C303	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C3	1-163-101-00	CERAMIC CHIP 22PF	5% 50V (EXCEPT EE)	C304	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C3	1-163-091-00	CERAMIC CHIP 8PF	50V (EE)	C305	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C4	1-163-089-00	CERAMIC CHIP 6PF	50V (EXCEPT EE)	C306	1-124-434-00	ELECT 220uF	20% 4V
C4	1-163-092-00	CERAMIC CHIP 9PF	0.25PF 50V (EE)	C307	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C5	1-163-239-11	CERAMIC CHIP 33PF	5% 50V (EXCEPT EE)	C308	1-126-157-11	ELECT 10uF	20% 16V
C5	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V (EE)	C309	1-164-234-11	CERAMIC CHIP 1uF	10V
C6	1-163-003-11	CERAMIC CHIP 330PF	10% 50V	C310	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C7	1-164-005-11	CERAMIC CHIP 0.47uF	25V	C311	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C8	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C601	1-126-154-11	ELECT 47uF	20% 6.3V
C9	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C602	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C10	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C603	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C11	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C604	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C12	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C605	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C13	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C606	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C14	1-126-153-11	ELECT 22uF	20% 6.3V			< FILTER >	
C15	1-163-078-11	CERAMIC CHIP 0.033uF	10% 25V	CF1	1-577-072-11	FILTER, CERAMIC	
C16	1-163-063-91	CERAMIC CHIP 0.022uF	10% 50V	CF2	1-567-097-61	FILTER, CERAMIC	
C17	1-126-154-11	ELECT 47uF	20% 6.3V	CP1	1-239-813-21	FILTER, BAND PASS (EE)	
C18	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V (US, 5E, 6E, 8E)	CP1	1-236-711-21	FILTER, BAND PASS (E, MX, AEP)	
C18	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V (EE, E, MX, AEP)			< CONNECTOR >	
C19	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V (US, 5E, 6E, 8E)	CN301	1-569-252-21	HOUSING, CONNECTOR (FPC) 5P	
C19	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V (EE, E, MX, AEP)			< VARIABLE CAPACITOR >	
C24	1-164-234-11	CERAMIC CHIP 1uF	10V	CT1-4	1-141-567-11	CAP, VAR (EXCEPT EE)	
C101	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	CT1-4	1-141-568-11	CAP, VAR (EE)	
C102	1-126-153-11	ELECT 22uF	20% 6.3V	CV1-4	1-141-567-11	CAP, VAR (EXCEPT EE)	
C103	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	CV1 4	1 141 568 11	CAP, VAR (EE)	
C104	1-164-234-11	CERAMIC CHIP 1uF	10V			< IC >	
C105	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC1	8-759-230-39	IC TA8122AF	
				IC301	8-759-497-06	IC MM1316AFBE	
						< JACK >	
				J301	1-750-061-11	JACK, DC (POLARITY UNIFIED TYPE)	(DC IN 3V)
				J302	1-565-287-11	JACK (⊘)	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< JUMPER CAPACITOR >					
JC2	1-216-295-91	SHORT	0 (EE, E, MX, AEP)	R601	1-217-905-11	RES, CHIP	1.5 5% 1/10W (EE, E, MX, AEP)
JC3	1-216-295-91	SHORT	0 (EE, E, MX, AEP)	R602	1-216-309-00	METAL CHIP	5.6 5% 1/10W (US, 5E, 6E, 8E)
JC6	1-216-295-91	SHORT	0	R602	1-217-905-11	METAL CHIP	1.5 5% 1/10W (EE, E, MX, AEP)
		< JUMPER RESISTOR >					
JR1	1-216-295-91	SHORT	0 (US, 5E, 6E, 8E)	R603	1-216-046-00	METAL CHIP	750 5% 1/10W (US, 5E, 6E, 8E)
JR5	1-216-295-91	SHORT	0 (US, 5E, 6E, 8E)	R603	1-216-045-00	METAL CHIP	680 5% 1/10W (EE, E, MX, AEP)
JR7	1-216-296-91	SHORT	0 (US, 5E, 6E, 8E)				
		< COIL >				< VARIABLE RESISTOR >	
L2	1-460-120-11	COIL (WITH CORE)	(EXCEPT EE)	RV301	1-223-609-21	RES, VAR, CARBON	10K/10K
L2	1-426-578-11	COIL (WITH CORE)	(EE)	RV601	1-241-028-11	RES, ADJ, CARBON	330
L3	1-403-696-11	COIL (WITH CORE)	(EXCEPT EE)			< SWITCH >	
L3	1-409-655-11	COIL (WITH CORE)	(EE)	S302	1-571-986-11	SWITCH, LEAF	(POWER)
L4	1-406-408-11	COIL (OSC)	(EXCEPT EE)	S303	1-692-298-11	SWITCH, SLIDE	(TAPE SEL)
L4	1-406-409-11	COIL (OSC)	(EE)	S304	1-692-299-11	SWITCH, SLIDE	(FM/AM TAPE)
L5	1-500-245-11	INDUCTOR CHIP	0uH	S305	1-692-898-11	SWITCH, SLIDE	(AVLS)
L101	1-500-245-11	INDUCTOR CHIP	0uH			< TRANSFORMER >	
L201	1-500-245-11	INDUCTOR CHIP	0uH	T1	1-404-949-11	TRANSFORMER, IF	
L301	1-500-245-11	INDUCTOR CHIP	0uH			< THERMISTOR(POSITIVE) >	
		< TRANSISTOR >		THP601	1-809-279-11	THERMISTOR, POSITIVE	
Q301	8-729-230-49	TRANSISTOR	2SC2712-YG	THP602	1-810-764-11	THERMISTOR, POSITIVE	
		< RESISTOR >				< VIBRATOR >	
R1	1-216-009-00	METAL CHIP	22 5% 1/10W (EXCEPT EE)	X1	1-577-091-11	OSCILLATOR, CRYSTAL	(19kHz)
R1	1-216-609-11	METAL CHIP	18 0.5% 1/10W (EE)	X2	1-567-097-61	FILTER, CERAMIC	(10.7MHz)
R2	1-216-081-00	METAL CHIP	22K 5% 1/10W	*****			
R3	1-216-077-00	METAL CHIP	15K 5% 1/10W			MISCELLANEOUS	
R4	1-216-077-00	METAL CHIP	15K 5% 1/10W			*****	
R5	1-216-037-00	METAL CHIP	330 5% 1/10W	L1	X-3371-847-1	ANTENNA SUB ASSY, BAR	
R101	1-216-295-91	SHORT	0 (EXCEPT E, MX)	HP901	1-500-115-11	HEAD, MAGNETIC	(PLAYBACK)
R101	1-216-001-00	METAL CHIP	10 5% 1/10W (E, MX)	M901	1-698-353-13	MOTOR, DC (REEL/CAPSTAN)	(WITH PULLEY)
R102	1-216-103-00	METAL CHIP	180K 5% 1/10W (EXCEPT E, MX)	*****			
R102	1-216-689-11	METAL CHIP	39K 0.5% 1/10W (E, MX)			ACCESSORIES & PACKING MATERIALS	
R201	1-216-295-91	SHORT	0 (EXCEPT E, MX)			*****	
R201	1-216-001-00	METAL CHIP	10 5% 1/10W (E, MX)	1-505-521-11	HEADPHONE (MDR-023)	(US, E, EE, 8E, AEP)	
R202	1-216-103-00	METAL CHIP	180K 5% 1/10W (EXCEPT E, MX)	8-953-224-90	HEADPHONE (MDR-E802)	(5E, 6E, MX)	
R202	1-216-689-11	METAL CHIP	39K 0.5% 1/10W (E, MX)	3-346-518-01	CLIP, BELT		
R301	1-216-089-91	RES, CHIP	47K 5% 1/10W	3-860-407-21	MANUAL, INSTRUCTION	(ENGLISH) (US, EE, E)	
R302	1-216-073-00	METAL CHIP	10K 5% 1/10W	3-860-407-31	MANUAL, INSTRUCTION	(SPANISH, PORTUGUESE) (5E, 6E, 8E, MX)	
R303	1-216-109-00	METAL CHIP	330K 5% 1/10W	3-860-407-61	MANUAL, INSTRUCTION	(ENGLISH, POLISH, GREEK, THAI, CZECH, BRAZILIAN, HUNGARIAN, RUSSIAN)	(AEP)
R304	1-216-308-00	METAL CHIP	4.7 5% 1/10W				
R601	1-216-306-11	METAL CHIP	3.9 5% 1/10W (US, 5E, 6E, 8E)				

WM-FX141

SONY

SERVICE MANUAL

*US Model
E Model
East European Model
Chinese Model*

SUPPLEMENT-2

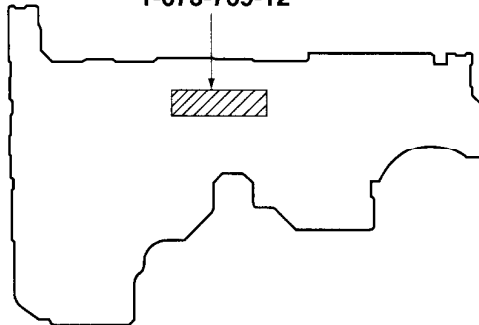
File this supplement with the Service Manual.

Subject : Main board modified (US model)

NEW TYPE IDENTIFICATION

[MAIN BOARD] (Component Side)

1-673-769-12



SECTION 1 ELECTRICAL ADJUSTMENT

• **US Model (Refer to page 7)**

TUNER SECTION

0 dB = 1 μ V

- Repeat the procedures in each adjustment several times for the maximum level meter indication.
- The frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	455kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	620kHz
CT1	1,400kHz

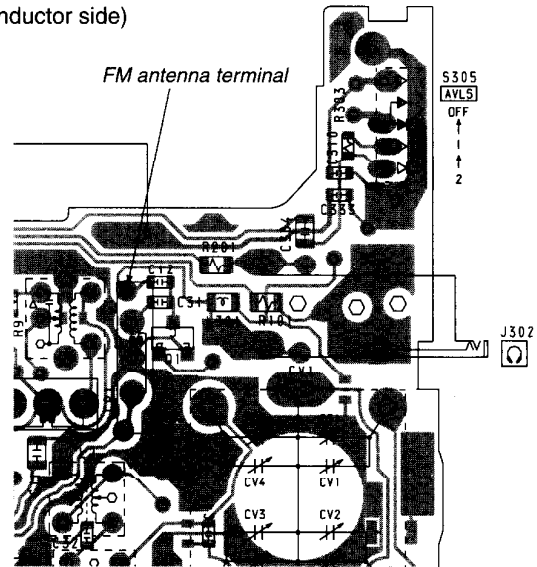
AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L4	505kHz
CT4	1,750kHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L2	86.0MHz
CT2	109.5MHz

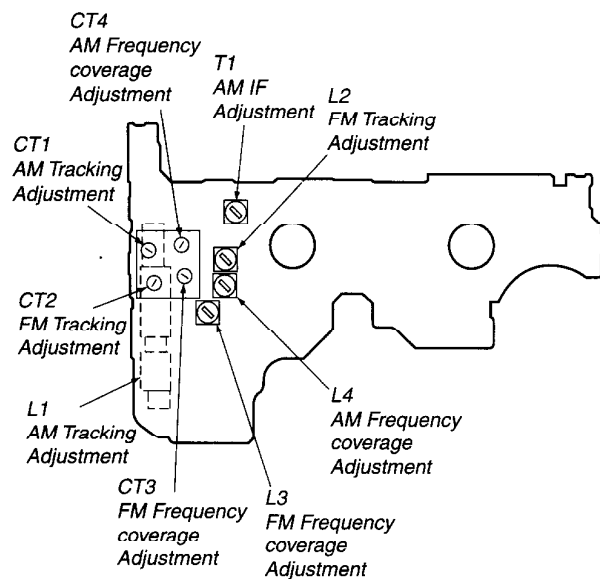
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3	86.0MHz
CT3	109.5MHz

Adjustment Location : Main board

(Conductor side)

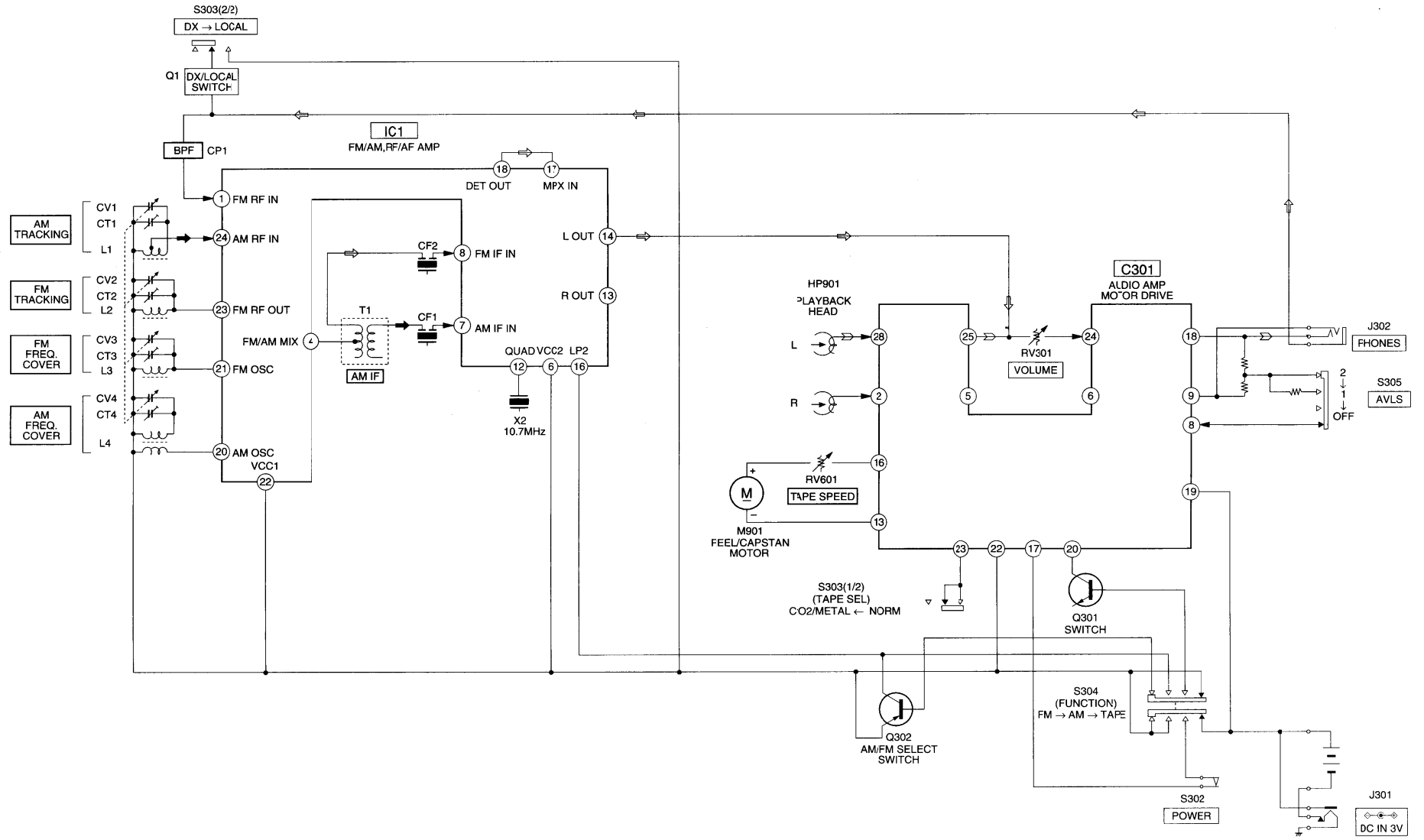


(Component side)



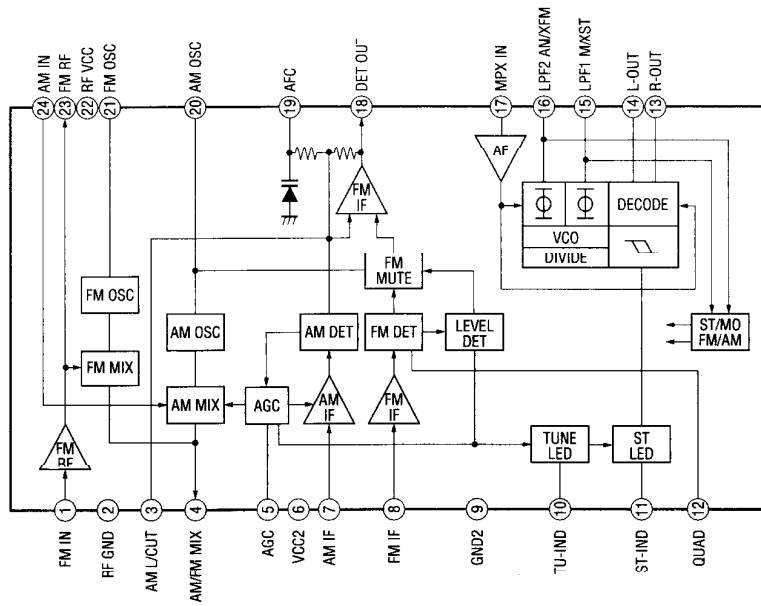
SECTION 2
DIAGRAMS

2-1. BLOCK DIAGRAM

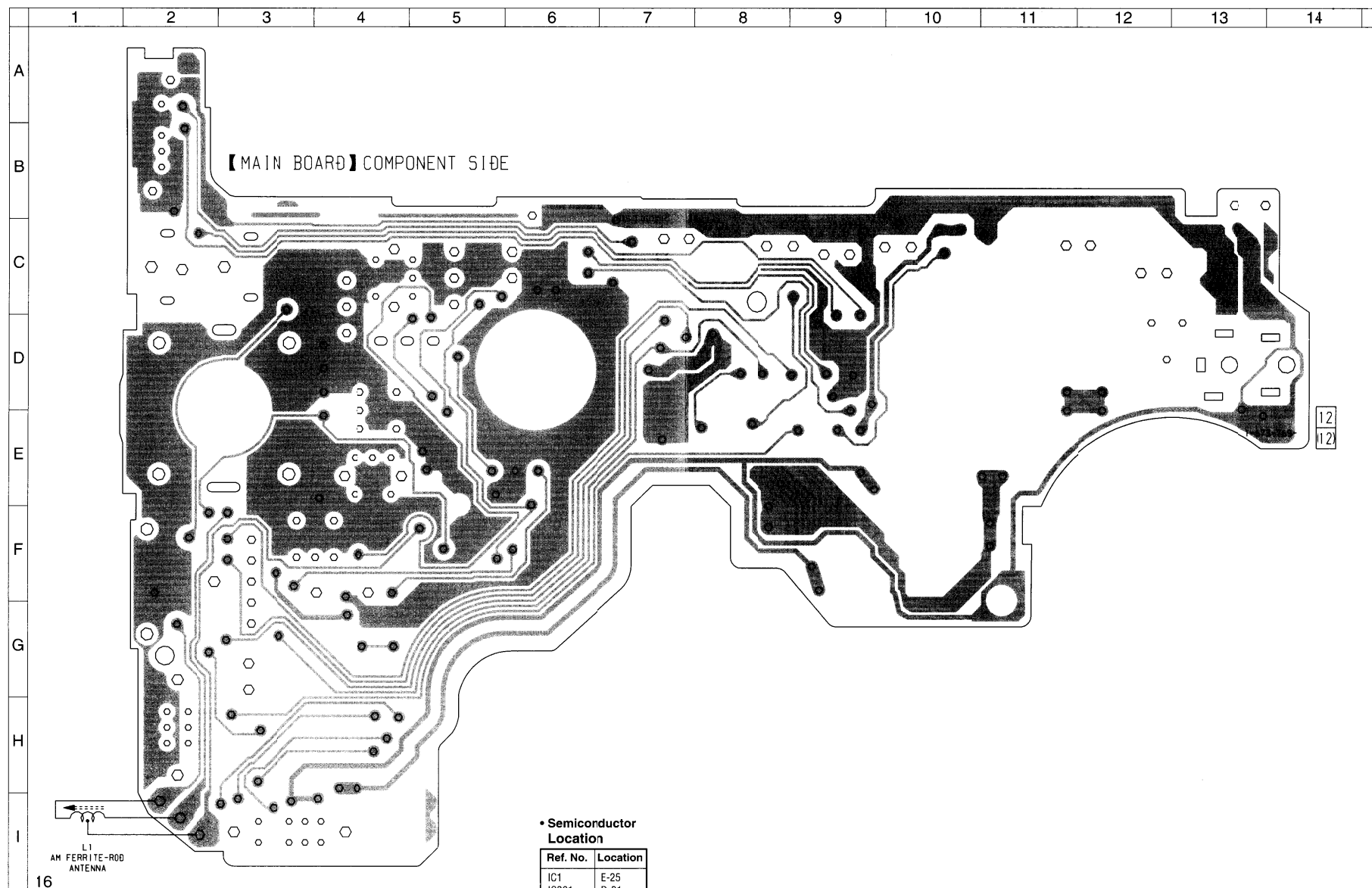


2-2. IC BLOCK DIAGRAM

IC1 TA2111F-EL

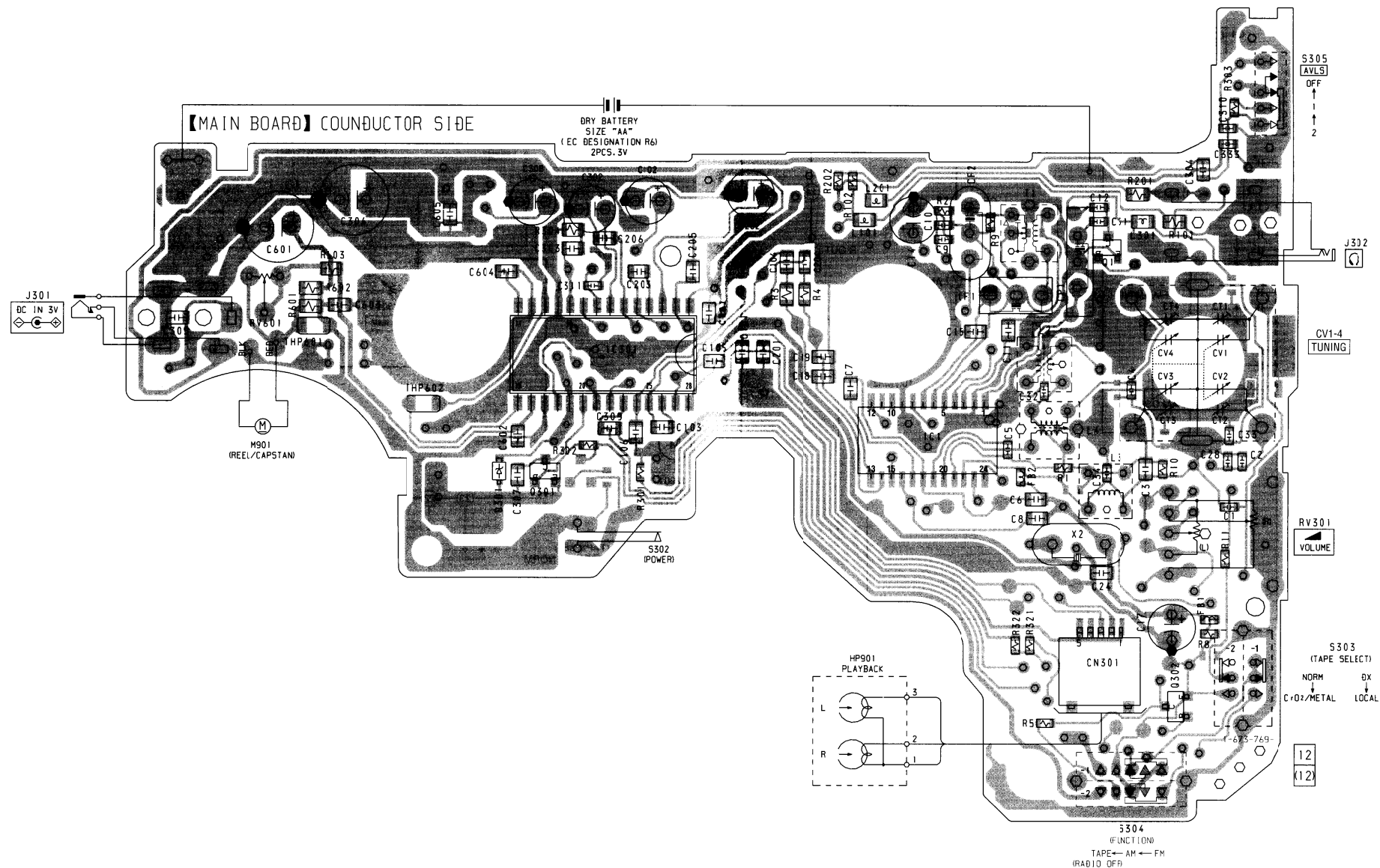


2-3. PRINTED WIRING BOARD



• Semiconductor Location

Ref. No.	Location
IC1	E-25
IC301	D-21
Q1	C-27
Q301	F-21
Q302	H-27



2-4. SCHEMATIC DIAGRAM

