

# SRF-M37

## SERVICE MANUAL

*E Model*

Ver 1.0 2003.03



### SPECIFICATIONS

Time display:  
24-hour system

Frequency range

Band	SRF-M37	Channel step
FM	87.5-108 MHz	0.1 MHz
AM	530-1 710 kHz	10 kHz
	531-1 710 kHz	9 kHz

**Battery Life** (Approx. hours) (JEITA\*)

When using	FM	AM	MW/LW
Sony alkaline LR 03 (size AAA)	35	52	52
Sony R03 (size AAA)	14	21	21

\* Measured by JEITA (Japan Electronics and Information Technology Industries Association) standards. The actual battery life may vary depending on the circumstance of the unit.

**Output**

⌀ jack (ø 3.5 mm, stereo minijack) load impedance 24 Ω (North American model), 16 Ω (Other models)

**Power output**

2.8 mW + 2.8 mW (at 10 % harmonic distortion)

**Power requirements**

1.5 V DC, one R03 (size AAA) battery

**Dimensions**

Approx. 83 × 63 × 32 mm (w/h/d)

(3 3/8 × 2 1/2 × 1 5/16 inches) incl. projecting parts and controls

Approx. 83 × 63 × 25 mm (w/h/d)

(3 3/8 × 2 1/2 × 1 inches) not incl. projecting parts and controls

**Mass**

Approx. 94 g (3.32 oz.) incl. battery and belt clip.

**Accessories Supplied**

Stereo headphones (1): North American model

Stereo earphones (1): Other models

Belt Clip (1)

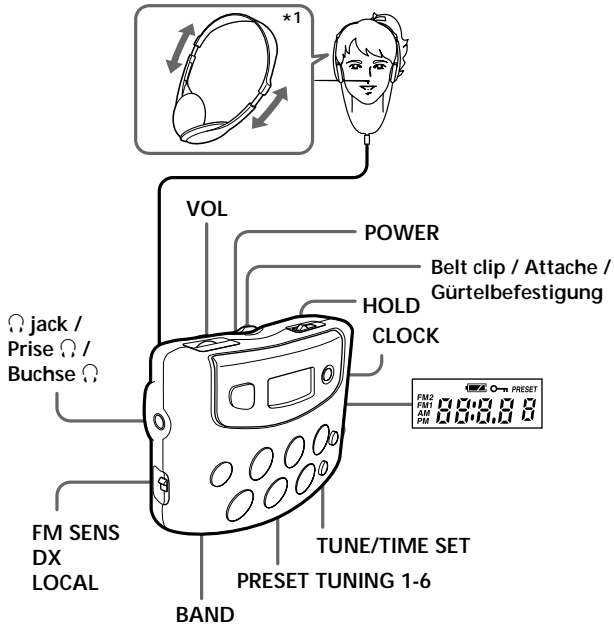
Design and specifications are subject to change without notice.

## FM STEREO/AM PLL SYNTHESIZED RADIO

9-877-168-01  
2003C167800-1  
© 2003.03


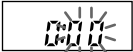
**Sony Corporation**  
Personal Audio Company  
Published by Sony Engineering Corporation

# SONY®



## Setting the Clock

The display will flash "AM 12:00" or "0:00" when the battery is first inserted.

- 1 Hold down **CLOCK** for more than 2 seconds.  
The beep sounds and the hour flashes in the display. 
- 2 Press **TUNE/TIME SET +** or **-** until the correct hour appears in the display.  
Each press changes the digit(s) by one.  
When you keep the button pressed, the digit(s) change rapidly.
- 3 Press **CLOCK**.  
The beep sounds and the minute starts to flash.  
Repeat step 2 to set the minute. After setting the minute, press **CLOCK** again. The two beeps sound and the clock starts from 0 seconds. 

The clock system varies depending on the model you own.

12-hour system: "AM 12:00" = midnight

24-hour system: "0:00" = midnight

### Notes on chip component replacement

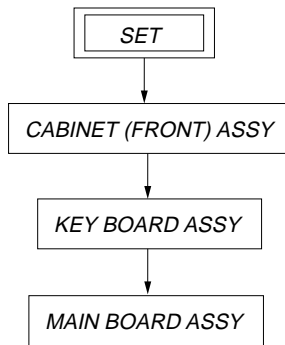
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### 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.

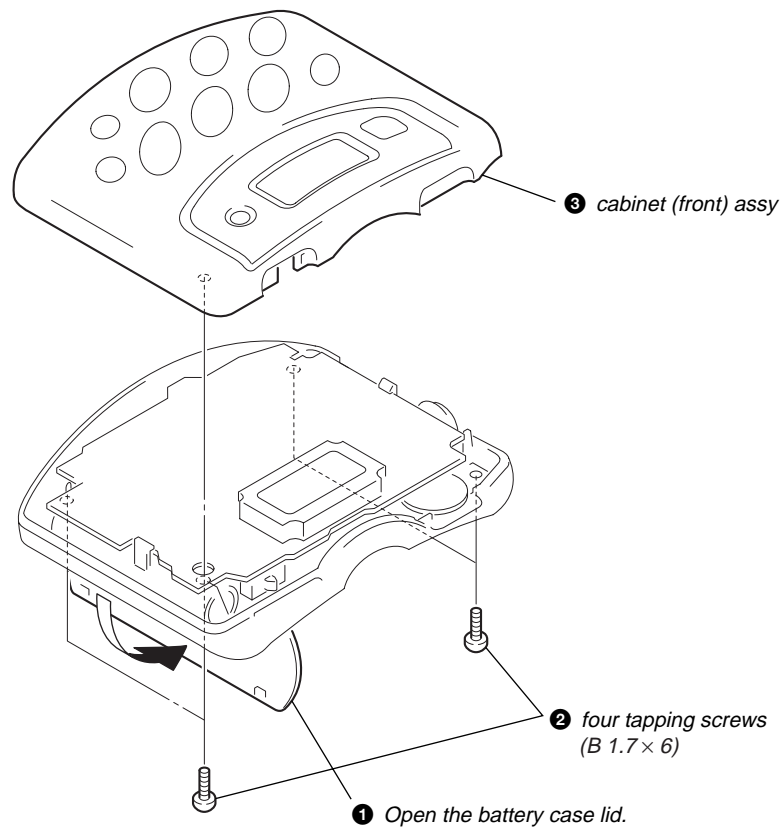
## SECTION 2 DISASSEMBLY

- This set can be disassembled in the order shown below.

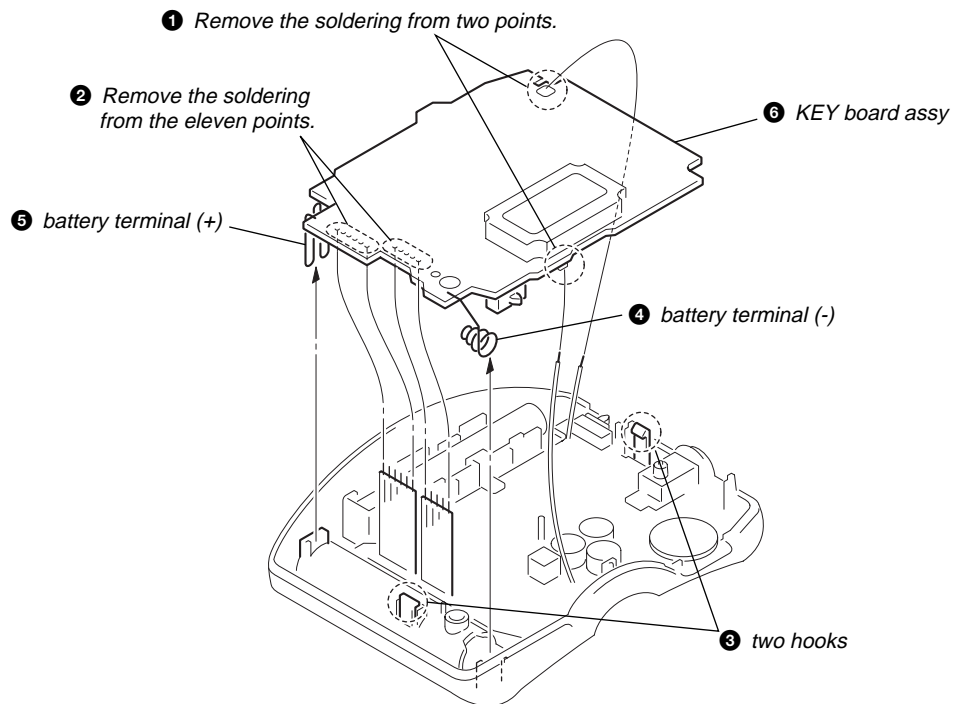


**Note :** Follow the disassembly procedure in the numerical order given.

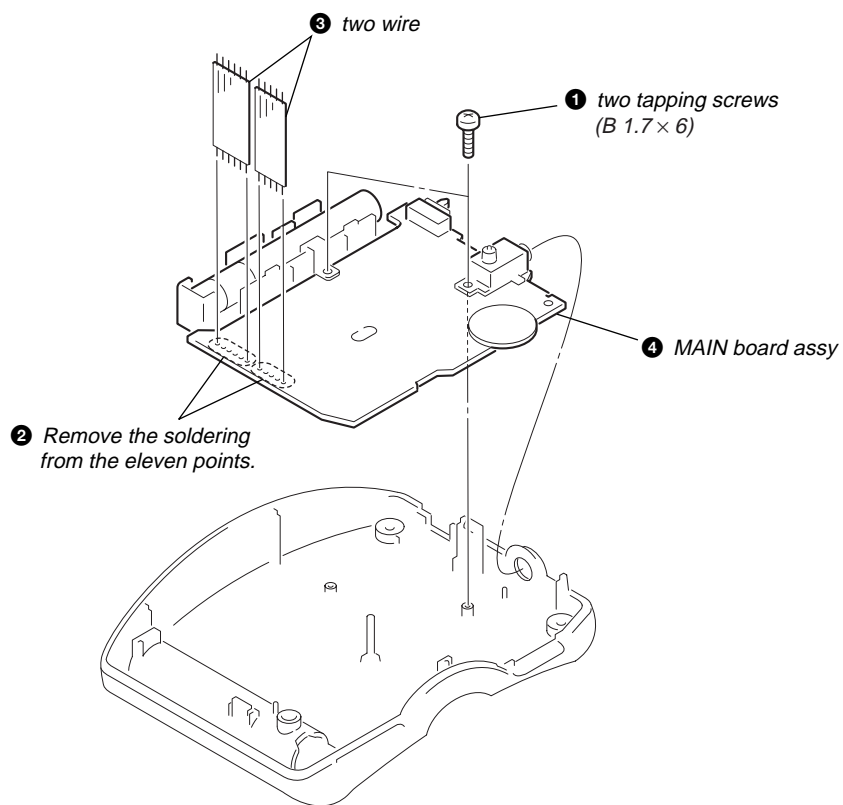
### 2-1. Cabinet (Front) Assy



2-2. KEY Board Assy



2-3. MAIN Board Assy



## SECTION 3 ADJUSTMENTS

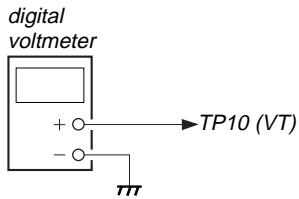
### AM Section

**Setting:**

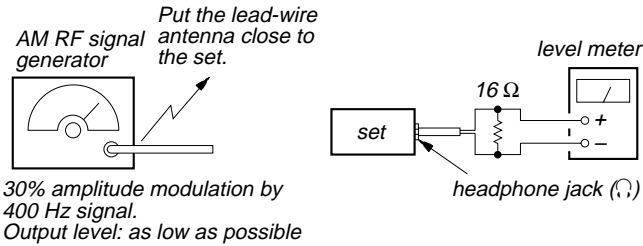
BAND switch: AM

**Connection:**

For AM frequency coverage adjustment and FM frequency coverage check.



**Connection:**



AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a reading on digital voltmeter.		
L4	530 kHz	1.3V ± 0.1V
Confirm	1,710 kHz	8.1V ± 0.3V

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
CT2	1480 kHz
L3	590 kHz

FM FREQUENCY COVERAGE CHECK		
Check a reading on digital voltmeter.		
Confirm	87.5 MHz	6.9V ± 0.3V
Confirm	108.0 MHz	12.1V ± 0.3V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
CT1	108.0 MHz
L1	87.5 MHz

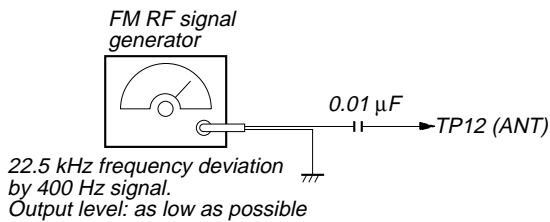
### FM Section

**Setting:**

BAND switch: FM

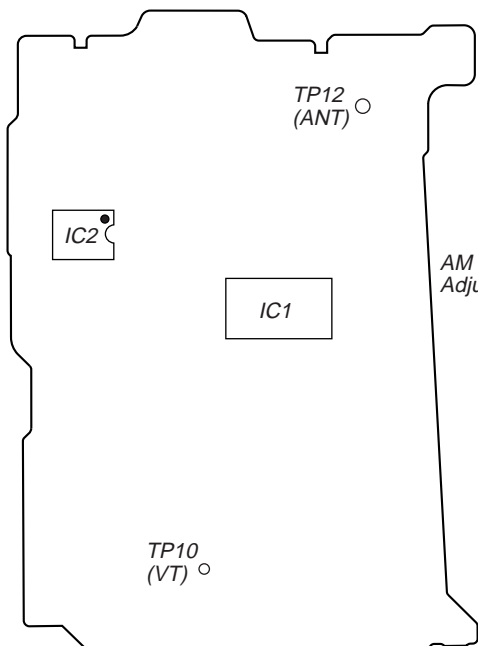
FM SENS switch: DX

**Connection:**

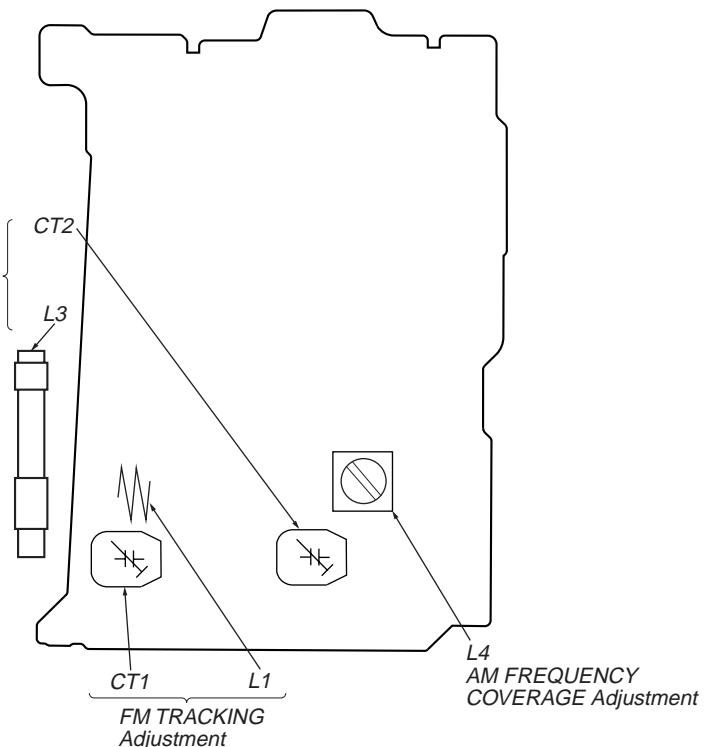


### Adjustment Location

【MAIN】BOARD  
(Conductor side)








【MAIN】BOARD  
(Component side)




## SECTION 4 DIAGRAMS

### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
-  : panel designation.
-  : B+ Line.
-  : adjustment for repair.
- Power voltage is dc 1.5 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - < : AM
  - > : AM
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- **Signal path.**
  -  : FM
  -  : AM

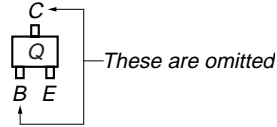
### Note on Printed Wiring Board:

-  : parts extracted from the conductor side.
-  : Pattern from the side which enables seeing.
-  : Carbon pattern.

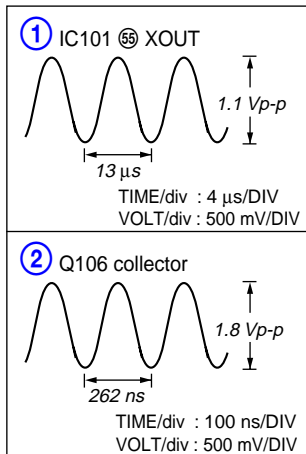
#### Caution:

Pattern face side: Parts on the pattern face side seen from (Side B) the pattern face are indicated.  
 Parts face side: Parts on the parts face side seen from (Side A) the parts face are indicated.

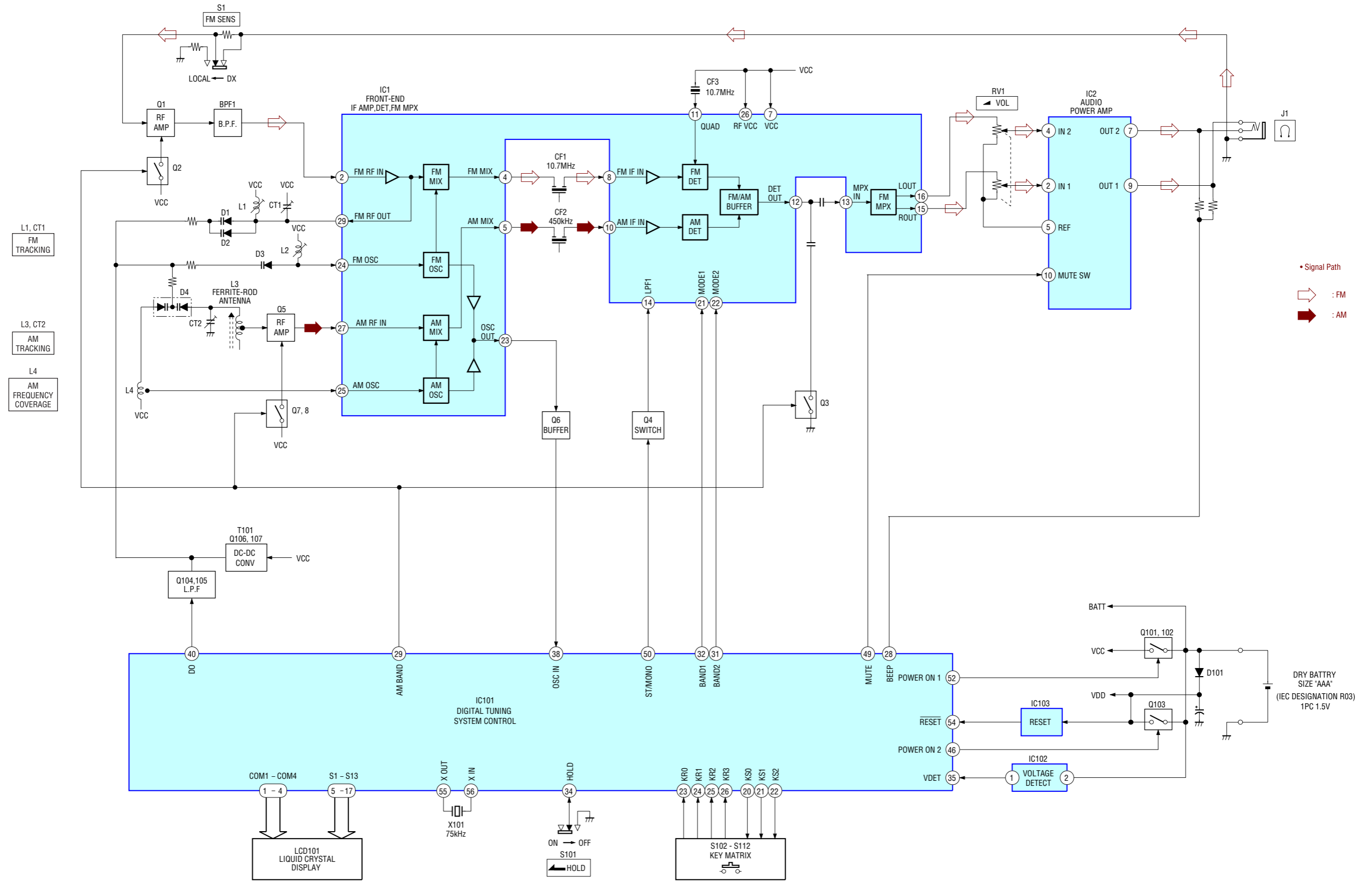
### • Indication of transistor



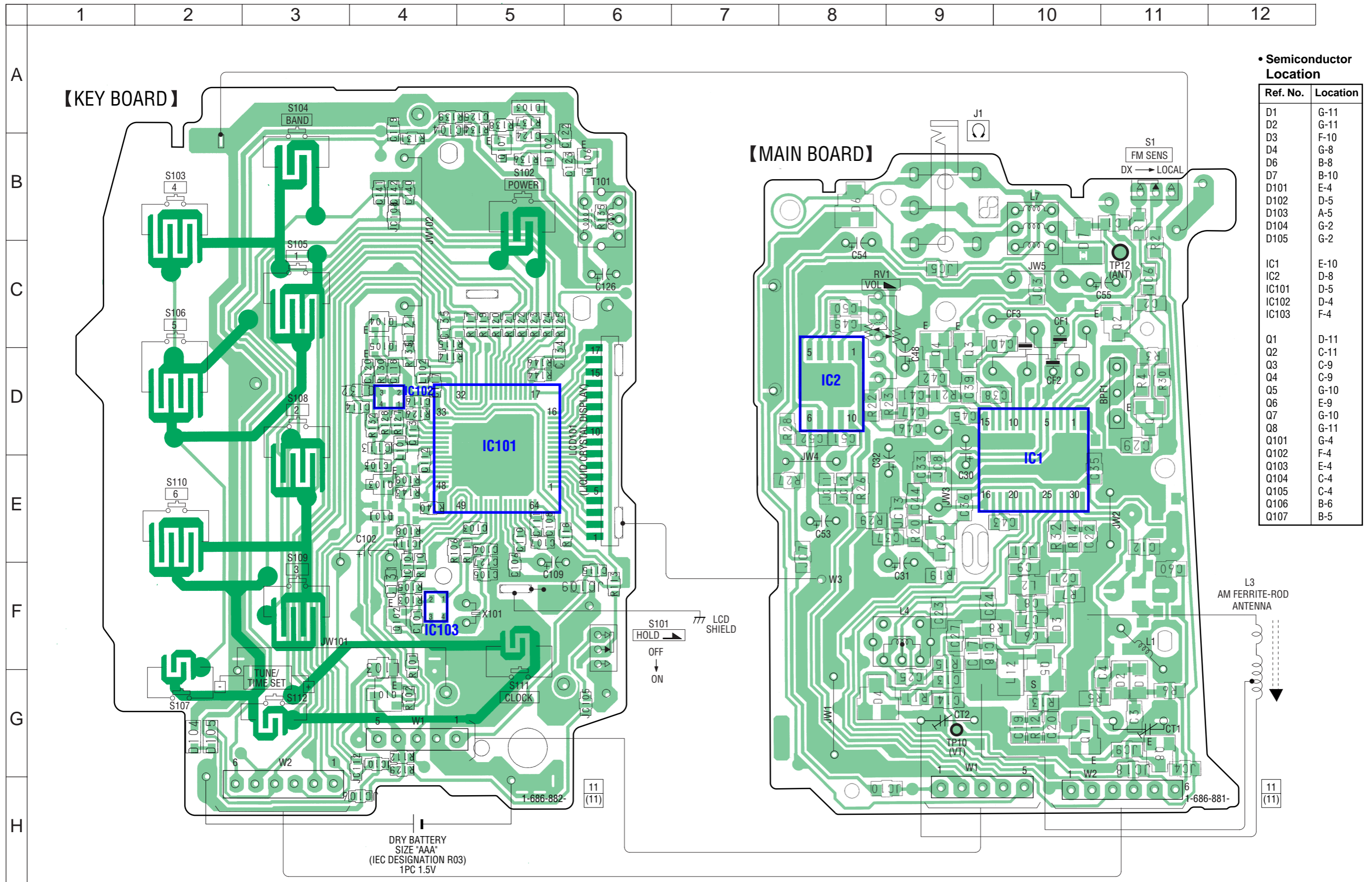
### • Waveform



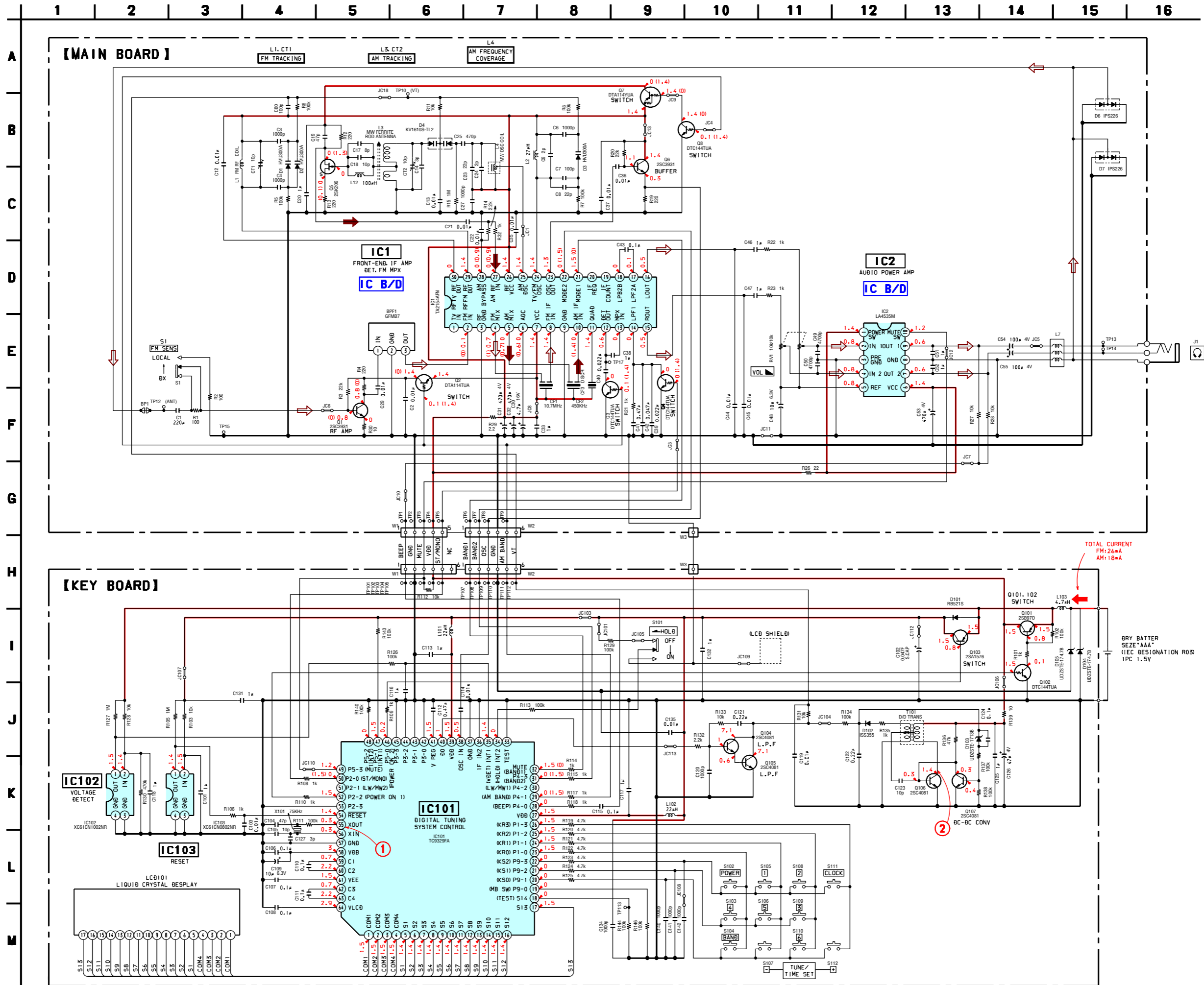
4-1. Block Diagram



4-2. Printed Wiring Boards

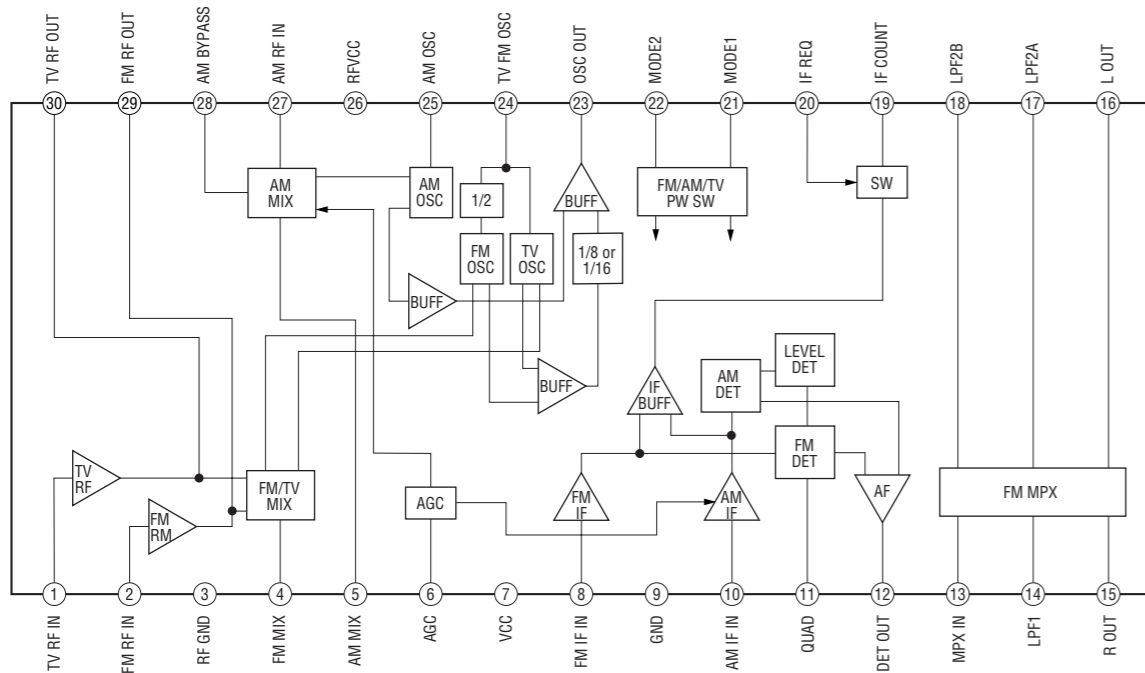


4-3. Schematic Diagram • See page 6 for Waveforms. • See page 10 for IC Block Diagrams.

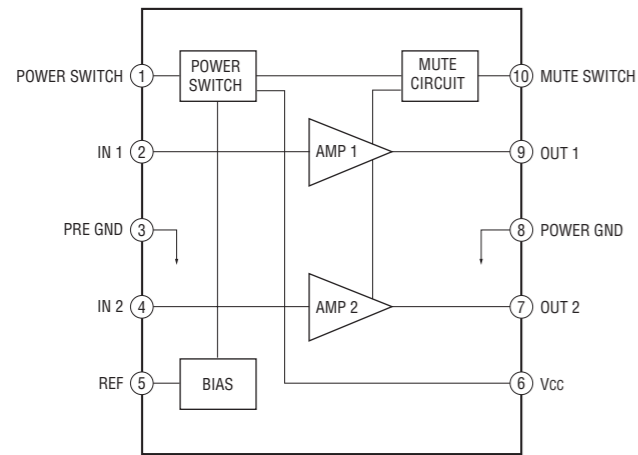


4-4. IC Block Diagrams

IC1 TA2154AFN-EL



IC2 LA4535M-TE-L



4-5. IC Pin Function Description

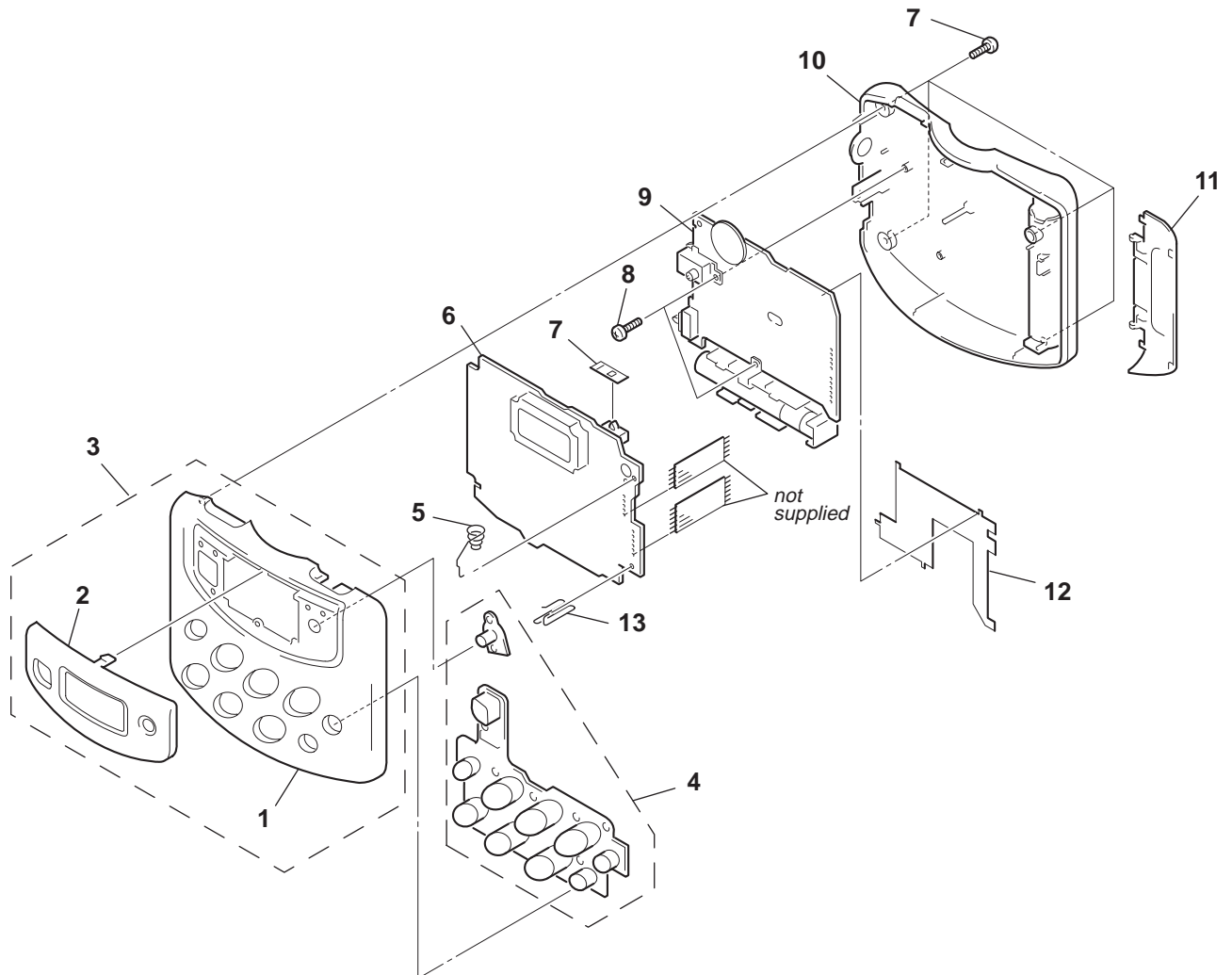
• IC101 TC9329FA-123 (DIGITAL TUNING, SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1 to 4	COM1 to COM4	O	LCD common output
5 to 17	S1 to S13	O	LCD segment output
18	TEST	I	Test mode control signal input ("H" : test mode)
19	MB SW	I	Not used
20 to 22	KS0 to KS2	O	Key source
23 to 26	KR0 to KR3	I	Key return
27	VDD	—	Power supply terminal
28	BEEP	O	Beep signal output
29	AM BAND	O	Band selection signal output ("H" : AM)
30	LW/MW1	O	Not used
31	BAND2	O	Band selection signal output ("L" : FM)
32	BAND1	O	Band selection signal output ("L" : AM)
33	TEST	I	Not used (connected to the ground)
34	HOLD	I	HOLD switch signal input("L" : hold on)
35	VDET	I	1.0V battery voltage detection signal input ("L" : lower than 1.0V)
36	IF IN2	I	Not used
37	GND	—	Ground terminal
38	OSC IN	I	Programmable counter input terminal
39	VDD	—	Power supply terminal
40	DO	O	Phase comparator output
41	V REG	—	Phase comparator constant voltage supply
42 to 45	P3-0 to P3-3	—	Not used
46	POWER ON 2	O	Power supply control signal output ("L" : radio on)
47, 48	INT1, INT2	I	Destination setting terminal
49	MUTE	O	Muting control signal output ("L" : muting on)
50	ST/MONO	O	Stereo/mono selection signal output
51	LW/MW2	O	Not used
52	POWER ON 1	O	Power supply control signal output ("H" : radio on)
53	P2-3	—	Not used
54	RESET	I	Reset signal input ("L" : microcomputer reset)
55	XOUT	O	External crystal resonator terminal (75kHz)
56	XIN	I	External crystal resonator terminal (75kHz)
57	GND	—	Ground terminal
58	VDB	—	Power voltage step-up terminal
59	C1	—	Voltage doubler boosting capacitor terminal
60	C2	—	Voltage doubler boosting capacitor terminal
61	VEE	—	1.5V constant voltage power supply output for LCD drive
62	C3	—	Voltage doubler boosting capacitor terminal
63	C4	—	Voltage doubler boosting capacitor terminal
64	VLCD	—	3.0V constant voltage power supply output for LCD drive

## 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.



<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>
1	3-247-142-11	CABINET (FRONT)		8	3-318-203-11	SCREW (B1.7X6), TAPPING	
2	3-247-144-01	PANEL (FRONT)		*	9	A-3347-447-A	MAIN BOARD, COMPLETE
3	X-3383-581-1	CABINET(FRONT) ASSY		10	3-247-143-11	CABINET (REAR)	
4	1-786-468-21	SWITCH, RUBBER KEY (PRESET)		11	3-247-145-01	LID, BATTERY CASE	
5	3-247-150-01	TERMINAL (-), BATTERY		12	3-250-687-01	SHIELD (B)	
* 6	A-3347-451-A	KEY BOARD, COMPLETE		13	3-247-149-01	TERMINAL (+), BATTERY	
7	3-247-153-01	SHEET (HOLD)					

**KEY**

**SECTION 6  
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.
- -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:  $\mu$ F
- **RESISTORS**  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- **COILS**  
uH:  $\mu$ H

- **SEMICONDUCTORS**  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...,  $\mu$ PA...,  
uPB...,  $\mu$ PB..., uPC...,  $\mu$ PC...,  
uPD...,  $\mu$ PD...

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-3347-451-A	KEY BOARD, COMPLETE *****				< IC >	
	1-694-972-11	CONDUCTIVE BOARD, CONNECTION		IC101	6-802-891-01	IC TC9329FA-123	
	3-247-146-01	HOLDER (LCD)		IC102	8-759-690-96	IC XC61CN1002NR	
		< CAPACITOR >		IC103	6-701-978-01	IC XC61CN0802NR	
C101	1-115-156-11	CERAMIC CHIP	1uF 10V	JC101	1-216-864-11	METAL CHIP	0 5% 1/16W
C102	1-125-701-11	DOUBLE LAYER	0.047F 5.5V	JC103	1-216-864-11	METAL CHIP	0 5% 1/16W
C103	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	JC104	1-216-864-11	METAL CHIP	0 5% 1/16W
C104	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	JC105	1-216-864-11	METAL CHIP	0 5% 1/16W
C105	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	JC106	1-216-864-11	METAL CHIP	0 5% 1/16W
C106	1-164-156-11	CERAMIC CHIP	0.1uF 25V	JC107	1-216-864-11	METAL CHIP	0 5% 1/16W
C107	1-164-156-11	CERAMIC CHIP	0.1uF 25V	JC108	1-216-864-11	METAL CHIP	0 5% 1/16W
C108	1-164-156-11	CERAMIC CHIP	0.1uF 25V	JC109	1-216-864-11	METAL CHIP	0 5% 1/16W
C109	1-126-157-11	ELECT	10uF 20% 16V	JC110	1-216-864-11	METAL CHIP	0 5% 1/16W
C110	1-164-156-11	CERAMIC CHIP	0.1uF 25V	JC112	1-216-864-11	METAL CHIP	0 5% 1/16W
C111	1-164-156-11	CERAMIC CHIP	0.1uF 25V	JC113	1-216-864-11	METAL CHIP	0 5% 1/16W
C112	1-113-619-11	CERAMIC CHIP	0.47uF 10V			< COIL >	
C113	1-115-156-11	CERAMIC CHIP	1uF 10V	L101	1-412-995-21	INDUCTOR	22uH
C114	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	L102	1-412-995-21	INDUCTOR	22uH
C115	1-164-156-11	CERAMIC CHIP	0.1uF 25V	L103	1-469-845-11	INDUCTOR	4.7uH
C116	1-115-156-11	CERAMIC CHIP	1uF 10V			< LIQUID CRYSTAL DISPLAY >	
C117	1-115-156-11	CERAMIC CHIP	1uF 10V	LCD101	1-805-123-11	DISPLAY PANEL, LIQUID CRYSTAL	
C118	1-115-156-11	CERAMIC CHIP	1uF 10V			< TRANSISTOR >	
C119	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	Q101	8-729-046-89	TRANSISTOR	2SB970-S(TX).S0
C120	1-115-416-11	CERAMIC CHIP	0.001uF 5.00% 25V	Q102	8-729-029-15	TRANSISTOR	DTC144TUA-T106
C121	1-127-715-91	CERAMIC CHIP	0.22uF 10% 16V	Q103	8-729-026-52	TRANSISTOR	2SA1576A-T106-R
C122	1-165-128-11	CERAMIC CHIP	0.22uF 16V	Q104	8-729-905-35	TRANSISTOR	2SC4081T106R
C123	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	Q105	8-729-905-35	TRANSISTOR	2SC4081T106R
C124	1-164-156-11	CERAMIC CHIP	0.1uF 25V	Q106	8-729-905-35	TRANSISTOR	2SC4081T106R
C125	1-115-156-11	CERAMIC CHIP	1uF 10V	Q107	8-729-905-35	TRANSISTOR	2SC4081T106R
C126	1-124-589-11	ELECT	47uF 20% 16V			< RESISTOR >	
C127	1-162-908-11	CERAMIC CHIP	3PF 0.25PF 50V	R101	1-216-821-11	METAL CHIP	1K 5% 1/16W
C131	1-115-156-11	CERAMIC CHIP	1uF 10V	R102	1-216-845-11	METAL CHIP	100K 5% 1/16W
C132	1-115-156-11	CERAMIC CHIP	1uF 10V	R103	1-216-833-11	METAL CHIP	10K 5% 1/16W
C134	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R105	1-216-857-11	METAL CHIP	1M 5% 1/16W
C135	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	R106	1-216-821-11	METAL CHIP	1K 5% 1/16W
C140	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R108	1-216-821-11	METAL CHIP	1K 5% 1/16W
C141	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R109	1-216-821-11	METAL CHIP	1K 5% 1/16W
C142	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R110	1-216-821-11	METAL CHIP	1K 5% 1/16W
		< DIODE >		R111	1-216-845-11	METAL CHIP	100K 5% 1/16W
D101	8-719-071-34	DIODE	RB521S-30-TE61	R112	1-216-833-11	METAL CHIP	10K 5% 1/16W
D102	8-719-988-61	DIODE	1SS355TE-17				
D103	8-719-083-63	DIODE	UDZSTE-1713B				
D104	8-719-083-60	DIODE	UDZSTE-174.7B				
D105	8-719-083-60	DIODE	UDZSTE-174.7B				

KEY

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R113	1-216-845-11	METAL CHIP	100K 5% 1/16W	C12	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R114	1-216-821-11	METAL CHIP	1K 5% 1/16W	C13	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R115	1-216-821-11	METAL CHIP	1K 5% 1/16W	C14	1-162-908-11	CERAMIC CHIP	3PF 0.25PF 50V
R117	1-216-821-11	METAL CHIP	1K 5% 1/16W	C17	1-162-913-11	CERAMIC CHIP	8PF 0.50PF 50V
R118	1-216-821-11	METAL CHIP	1K 5% 1/16W	C18	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V
R119	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C19	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
R120	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C20	1-115-156-11	CERAMIC CHIP	1uF 10V
R121	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C21	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R122	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C22	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R123	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C23	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
R124	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C24	1-162-907-11	CERAMIC CHIP	2PF 0.25PF 50V
R125	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C25	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
R126	1-216-845-11	METAL CHIP	100K 5% 1/16W	C27	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
R127	1-216-857-11	METAL CHIP	1M 5% 1/16W	C29	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R128	1-216-833-11	METAL CHIP	10K 5% 1/16W	C30	1-124-259-11	ELECT	4.7uF 20.00% 16V
R129	1-216-845-11	METAL CHIP	100K 5% 1/16W	C31	1-126-518-11	ELECT	470uF 20.00% 4V
R130	1-216-853-11	METAL CHIP	470K 5% 1/16W	C32	1-126-518-11	ELECT	470uF 20.00% 4V
R131	1-216-833-11	METAL CHIP	10K 5% 1/16W	C33	1-115-156-11	CERAMIC CHIP	1uF 10V
R132	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	C35	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R133	1-216-833-11	METAL CHIP	10K 5% 1/16W	C36	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R134	1-216-845-11	METAL CHIP	100K 5% 1/16W	C37	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R135	1-216-821-11	METAL CHIP	1K 5% 1/16W	C38	1-115-156-11	CERAMIC CHIP	1uF 10V
R136	1-216-841-11	METAL CHIP	47K 5% 1/16W	C39	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V
R137	1-216-845-11	METAL CHIP	100K 5% 1/16W	C40	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V
R138	1-216-845-11	METAL CHIP	100K 5% 1/16W	C41	1-113-619-11	CERAMIC CHIP	0.47uF 10V
R139	1-216-797-11	METAL CHIP	10 5% 1/16W	C42	1-165-176-11	CERAMIC CHIP	0.047uF 10.00% 16V
R140	1-216-845-11	METAL CHIP	100K 5% 1/16W	C43	1-164-156-11	CERAMIC CHIP	0.1uF 25V
R143	1-216-845-11	METAL CHIP	100K 5% 1/16W	C44	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R144	1-216-845-11	METAL CHIP	100K 5% 1/16W	C45	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R146	1-216-845-11	METAL CHIP	100K 5% 1/16W	C46	1-115-156-11	CERAMIC CHIP	1uF 10V
		< SWITCH >		C47	1-115-156-11	CERAMIC CHIP	1uF 10V
S101	1-771-722-11	SWITCH, SLIDE (HOLD)		C48	1-126-157-11	ELECT	10uF 20% 16V
		< TRANSFORMER >		C49	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
T101	1-439-578-11	TRANSFORMER, DC/DC CONVERTER		C50	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
		< VIBRATOR >		C51	1-115-156-11	CERAMIC CHIP	1uF 10V
X101	1-767-388-11	VIBRATOR, CRYSTAL (75kHz)		C52	1-115-156-11	CERAMIC CHIP	1uF 10V
		*****		C53	1-126-518-11	ELECT	470uF 20.00% 4V
		*****		C54	1-124-584-00	ELECT	100uF 20% 10V
*	A-3347-447-A	MAIN BOARD, COMPLETE		C55	1-124-584-00	ELECT	100uF 20% 10V
		*****		C60	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
		*****				< FILTER >	
	3-247-147-01	HOLDER (ANT)		CF1	1-795-846-21	FILTER, CERAMIC	
	3-247-148-01	HOLDER (H/P)		CF2	1-795-323-11	FILTER, CERAMIC	
		< FILTER >		CF3	1-795-845-21	DISCRIMINATOR, CERAMIC	
BPF1	1-236-711-21	FILTER, BAND PASS				< TRIMMER >	
		< CAPACITOR >		CT1	1-141-601-11	CAP, ADJ	
				CT2	1-141-601-11	CAP, ADJ	
						< DIODE >	
C1	1-164-230-11	CERAMIC CHIP	220PF 5.00% 50V	D1	8-719-987-50	DIODE HVU-300A-TRU	
C2	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	D2	8-719-987-50	DIODE HVU-300A-TRU	
C3	1-115-416-11	CERAMIC CHIP	0.001uF 5.00% 25V	D3	8-719-987-50	DIODE HVU-300A-TRU	
C4	1-115-416-11	CERAMIC CHIP	0.001uF 5.00% 25V	D4	6-500-187-01	DIODE KV1610STL2	
C6	1-115-416-11	CERAMIC CHIP	0.001uF 5.00% 25V	D6	8-719-062-51	DIODE 1PS226-115	
C7	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	D7	8-719-062-51	DIODE 1PS226-115	
C8	1-162-919-11	CERAMIC CHIP	22PF 5% 50V				
C9	1-162-907-11	CERAMIC CHIP	2PF 0.25PF 50V				

**MAIN**

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC1	6-703-664-01	IC TA2154AFN-EL	
IC2	6-700-362-01	IC LA4535M-TE-L	
		< JACK >	
J1	1-770-894-11	JACK ( ♂ )	
		< CONDUCTOR >	
JC1	1-216-864-11	METAL CHIP	0 5% 1/16W
JC3	1-216-864-11	METAL CHIP	0 5% 1/16W
JC4	1-216-864-11	METAL CHIP	0 5% 1/16W
JC5	1-216-864-11	METAL CHIP	0 5% 1/16W
JC6	1-216-864-11	METAL CHIP	0 5% 1/16W
JC7	1-216-864-11	METAL CHIP	0 5% 1/16W
JC8	1-216-864-11	METAL CHIP	0 5% 1/16W
JC9	1-216-864-11	METAL CHIP	0 5% 1/16W
JC10	1-216-864-11	METAL CHIP	0 5% 1/16W
JC11	1-216-864-11	METAL CHIP	0 5% 1/16W
JC12	1-216-864-11	METAL CHIP	0 5% 1/16W
JC13	1-216-864-11	METAL CHIP	0 5% 1/16W
JC18	1-216-864-11	METAL CHIP	0 5% 1/16W
		< COIL >	
L1	1-428-768-11	COIL, AIR-CORE	
L2	1-414-684-11	INDUCTOR 27NH	
L3	1-456-251-11	COIL, FERRITE-ROD ANTENNA (MW)	
L4	1-456-250-11	COIL, OSCILLATION (MW)	
L7	1-411-393-11	COIL, TRAP	
L12	1-412-963-11	INDUCTOR 100uH	
		< TRANSISTOR >	
Q1	8-729-423-52	TRANSISTOR 2SC3931-C-TX	
Q2	8-729-028-74	TRANSISTOR DTA114TUA-T106	
Q3	8-729-029-15	TRANSISTOR DTC144TUA-T106	
Q4	8-729-029-15	TRANSISTOR DTC144TUA-T106	
Q5	8-729-109-44	TRANSISTOR 2SK209Y-TE85L	
Q6	8-729-423-52	TRANSISTOR 2SC3931-C-TX	
Q7	8-729-028-76	TRANSISTOR DTA114YUA-T106	
Q8	8-729-029-15	TRANSISTOR DTC144TUA-T106	
		< RESISTOR >	
R1	1-216-809-11	METAL CHIP	100 5% 1/16W
R2	1-216-809-11	METAL CHIP	100 5% 1/16W
R3	1-216-837-11	METAL CHIP	22K 5% 1/16W
R4	1-216-813-11	METAL CHIP	220 5% 1/16W
R5	1-216-845-11	METAL CHIP	100K 5% 1/16W
R6	1-216-845-11	METAL CHIP	100K 5% 1/16W
R7	1-216-845-11	METAL CHIP	100K 5% 1/16W
R8	1-216-845-11	METAL CHIP	100K 5% 1/16W
R11	1-216-833-11	METAL CHIP	10K 5% 1/16W
R12	1-216-813-11	METAL CHIP	220 5% 1/16W
R13	1-216-813-11	METAL CHIP	220 5% 1/16W
R14	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R15	1-216-857-11	METAL CHIP	1M 5% 1/16W
R19	1-216-813-11	METAL CHIP	220 5% 1/16W
R20	1-216-837-11	METAL CHIP	22K 5% 1/16W

Ref. No.	Part No.	Description	Remarks
R21	1-216-821-11	METAL CHIP 1K	5% 1/16W
R22	1-216-821-11	METAL CHIP 1K	5% 1/16W
R23	1-216-821-11	METAL CHIP 1K	5% 1/16W
R26	1-216-801-11	METAL CHIP 22	5% 1/16W
R27	1-216-833-11	METAL CHIP 10K	5% 1/16W
R28	1-216-833-11	METAL CHIP 10K	5% 1/16W
R29	1-216-789-11	METAL CHIP 2.2	5% 1/16W
R30	1-216-797-11	METAL CHIP 10	5% 1/16W
R32	1-216-821-11	METAL CHIP 1K	5% 1/16W
		< VARIABLE RESISTOR >	
RV1	1-227-540-11	RES, VAR, CARBON 10K/10K (VOL)	
		< SWITCH >	
S1	1-771-722-11	SWITCH, SLIDE (FM SENS)	
*****			
		MISCELLANEOUS	
*****			
4	1-786-468-21	SWITCH, RUBBER KEY (PRESET)	
*****			
		ACCESSORIES	
*****			
	3-048-389-21	CLIP, BELT	
	3-249-146-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, DUTCH, SPANISH, PORTUGUESE)	
	8-954-008-93	RECEIVER, EAR MDR-E808LP/C1 SET	

MEMO

