

# ICF-M770L/M770S/M770SL

## SERVICE MANUAL

Ver 1.1 2002.06



Photo: ICF-M770SL

*AEP Model*  
ICF-M770L/M770SL

*UK Model*  
ICF-M770L

*Italian Model*  
*East European Model*  
ICF-M770S

### SPECIFICATIONS

Time display: 24-hour system

Frequency range:

Band	ICF-M770L	ICF-M770S	ICF-M770SL	Channel step
FM	87.5 – 108 MHz	87.5 – 108 MHz	87.5 – 108 MHz	0.05 MHz
SW	—	5 800 – 15 900 kHz	5 800 – 15 900 kHz	5 kHz
MW	531 – 1 602 kHz	531 – 1 602 kHz	—	9 kHz
LW	153 – 279 kHz	—	153 – 279 kHz	9 kHz

Speaker: 12 cm (4¾ inches), 8 Ω

Power output: 350 mW (at 10% harmonic distortion)

Output: Ⓞ (earphone) jack (ø 3.5 mm minijack)

Power requirements:

220–230 V AC, 50Hz

6 V DC, four R20 (size D) batteries

Dimensions:

Approx. 277 × 156 × 71.5 mm (w/h/d)

(Approx. 11 × 6¼ × 2¾ inches) incl. projecting parts and controls

Mass: Approx. 1 540 g (3lb 6 oz) incl. batteries

Supplied accessories: AC power cord (1)

Design and specifications are subject to change without notice.

ICF-M770L

**FM/MW/LW PLL SYNTHESIZED**

ICF-M770S

**FM/SW/MW PLL SYNTHESIZED**

ICF-M770SL

**FM/SW/LW PLL SYNTHESIZED**

9-873-657-02  
2002F0500-1  
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Personal Audio Company  
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**SONY®**

**SECTION 1  
SERVICING NOTE**

**TABLE OF CONTENTS**

**1. SERVICING NOTE** ..... 2

**2. GENERAL** ..... 3

**3. DISASSEMBLY**

3-1. Disassembly Flow ..... 4

3-2. Cabinet Rear Assy ..... 4

3-3. Chassis Assy ..... 5

3-4. MAIN Board ..... 5

**4. ELECTRICAL ADJUSTMENTS** ..... 6

**5. DIAGRAMS**

5-1. Block Diagram ..... 8

5-2. Note for Printed Wiring Boards and Schematic Diagrams ..... 9

5-3. Printed Wiring Boards  
– MAIN/JACK/POWER/INLET Boards – ..... 10

5-4. Schematic Diagram  
– MAIN/JACK/POWER/INLET Boards – ..... 11

5-5. Printed Wiring Board – KEY Board – ..... 12

5-6. Schematic Diagram – KEY Board – ..... 13

5-7. IC Pin Function Description ..... 14

**6. EXPLODED VIEWS**

6-1. Cabinet (Front) Section ..... 15

6-2. Cabinet (Rear) Section ..... 16

6-3. Chassis Section ..... 17

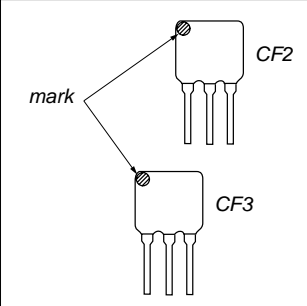
**7. ELECTRICAL PARTS LIST** ..... 18

**HOW TO CHANGED THE CERAMIC FILTERS**

This model is used two ceramic filters of CF2 and CF3.

You must use same type of color marked ceramic filters in order to meet same specifications.

Therefore, the ceramic filter must be changed two pieces together since it's supply two pieces in one package as a spare parts.



Mark	Center frequency
red	10.70 MHz
blue	10.67 MHz
orange	10.73 MHz
black	10.64 MHz
white	10.76 MHz

**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.

**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  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.

SECTION 2  
GENERAL

This section is extracted from instruction manual.

**A** Rear  
Arrière  
Rückseite  
Parte posterior  
Achterkant

R20 (size D) × 4  
R20 (D) × 4  
R20 (Größe D) × 4  
R20 (tamaño D) × 4  
R20 (D) × 4

Insert **⊖** side of the battery first.  
Insérez la borne **⊖** de la pile en premier.  
Legen Sie die Batterien mit dem Minuspol **⊖** zuerst ein.  
Inserte primero el lado **⊖** de la pila.  
Breng de **⊖** kant van de batterij eerst in.

**B**

To AC IN  
Vers AC IN  
An AC IN  
A AC IN  
Naar AC IN

To a wall outlet  
Vers une prise murale  
An eine Netzsteckdose  
A la toma de pared  
Naar een stopcontact

AC power cord  
Cordon d'alimentation secteur  
Netzkabel  
Cable de alimentación de CA  
Netsnoer

Setting the Clock

"0:00" will flash in the display when the batteries are installed or the AC power cord is plugged in for the first time.  
The clock can be adjusted only when the radio is turned off.

- 1 Press **mb/CLOCK** (**CLOCK** for ICF-M770L) for more than 2 seconds.  
The "hour" starts flashing.
- 2 Turn **TUNE/TIME SET** to set the hour for the current time, then press **mb/CLOCK** (**CLOCK** for ICF-M770L).  
The "minute" starts flashing.
- 3 Turn **TUNE/TIME SET** to set the minute for the current time, then press **mb/CLOCK** (**CLOCK** for ICF-M770L).  
The clock starts operating, and "—" starts flashing.

To set the current time exactly to the second, adjust the minute and then press **mb/CLOCK** (**CLOCK** for ICF-M770L) to synchronize with a time signal (such as the telephone time signal).

How to Adjust the Time Digits

When you turn **TUNE/TIME SET** to **⤴** or **⤵**, the time digits move forward or backward by one step, and when you turn it to **⤴** or **⤵**, the time digits move rapidly.

- Notes
- If you do not operate **mb/CLOCK** (**CLOCK** for ICF-M770L) or **TUNE/TIME SET** within 65 seconds, the clock setting mode will be cancelled.
  - 24-hour system: "0:00" = midnight, "12:00" = noon

Using the Backlight Function

Press **LIGHT** to turn on the backlight.  
To turn off the backlight, press **LIGHT** again.

When operating the unit on batteries  
The backlight will turn off automatically after 30 seconds to save the batteries. However, if you operate the radio while the backlight is lit, it will stay on for another 30 seconds.  
To turn off the backlight before the time has elapsed, press **LIGHT**.

CLOCK for ICF-M770L  
CLOCK pour ICF-M770L  
CLOCK beim ICF-M770L  
CLOCK para ICF-M770L  
CLOCK voor ICF-M770L

Telescopic Antenna  
Antenne télescopique  
Teleskopantenne  
Antena telescópica  
Telescoopantenne

TUNE/TIME SET  
VOL  
TONE

Ⓜ jack  
Ⓜ Prise  
Ⓜ Buchse  
Ⓜ Toma  
Ⓜ aansluiting

\* The PRESET TUNING 4 button has a tactile dot.  
\* La touche PRESET TUNING 4 a un point tactile.  
\* Auf der PRESET TUNING-Taste 4 befindet sich ein fühlbarer Punkt.  
\* La tecla PRESET TUNING 4 tiene un punto táctil.  
\* De PRESET TUNING 4 toets is voorzien van een voelstip.

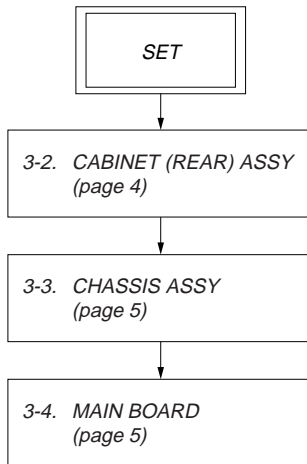
**C**

FM SW MW/LW

## SECTION 3 DISASSEMBLY

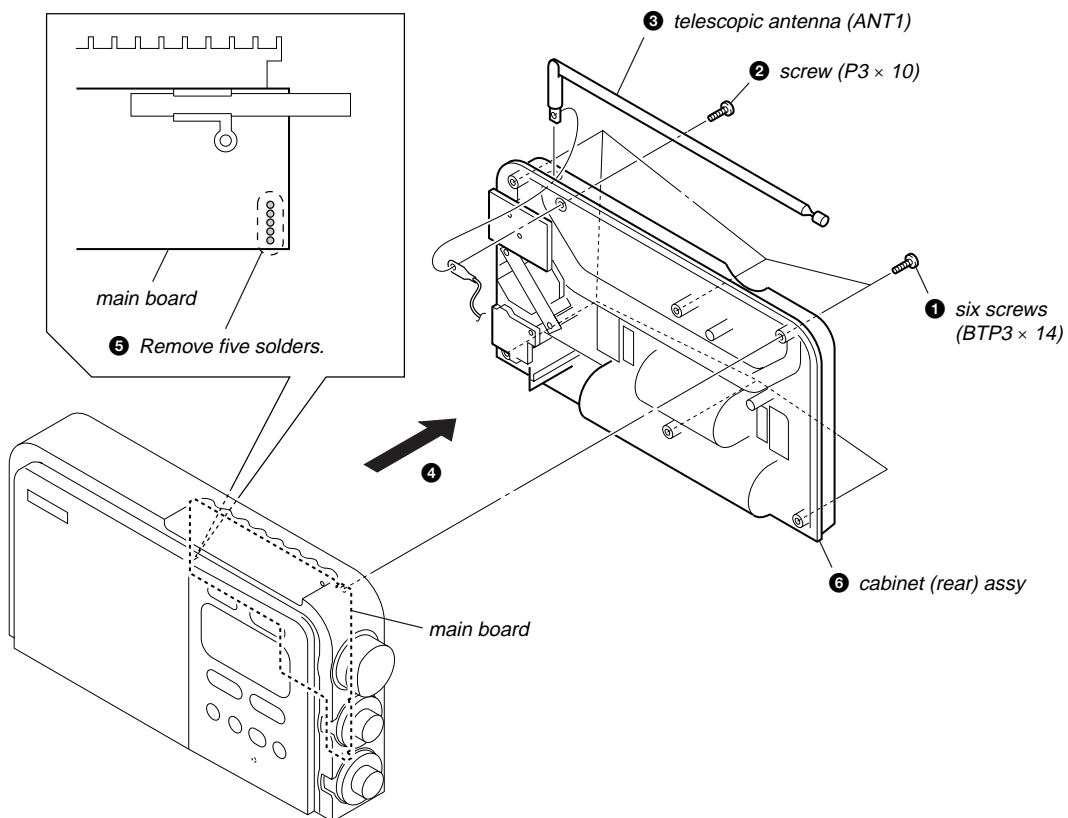
• This set can be disassembled in the order shown below.

### 3-1. DISASSEMBLY FLOW

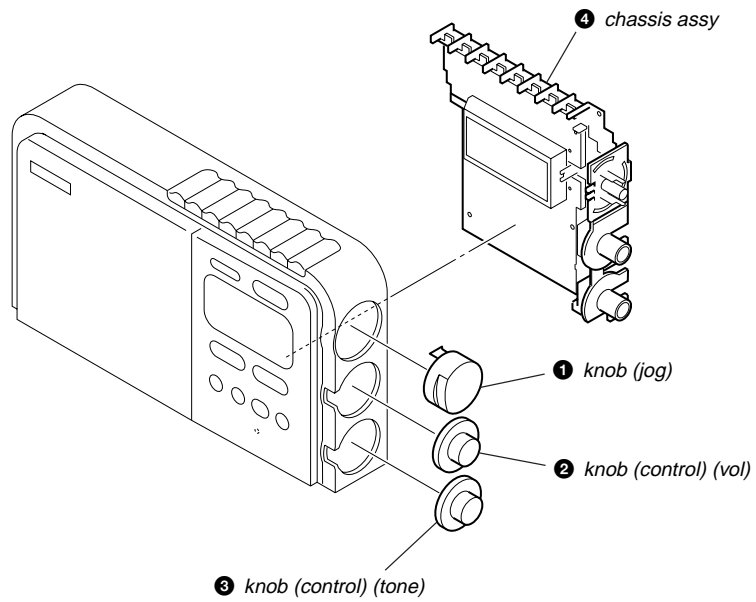


**Note:** Follow the disassembly procedure in the numerical order given.

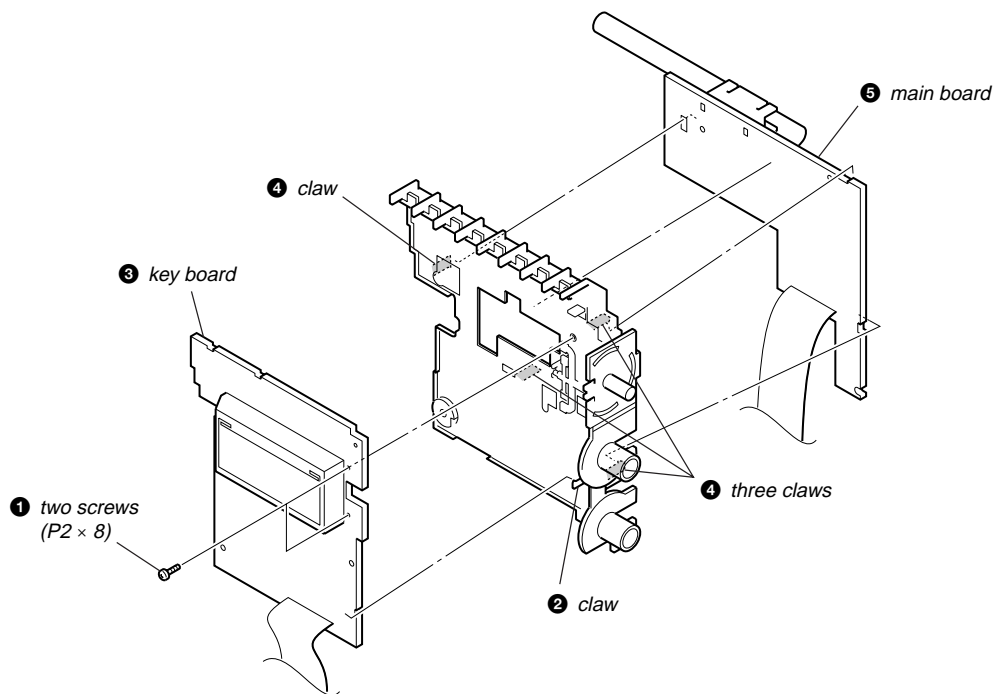
### 3-2. CABINET (REAR) ASSY



3-3. CHASSIS ASSY



3-4. MAIN BOARD



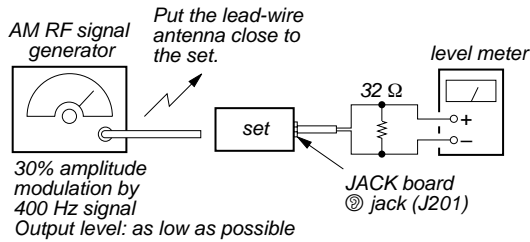
SECTION 4  
ELECTRICAL ADJUSTMENTS

0 dB=1 μV

[MW/LW]

Setting:

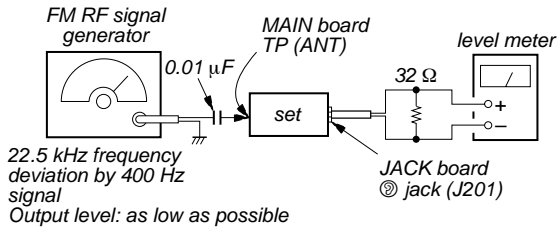
BAND switch: MW or LW



[FM]

Setting:

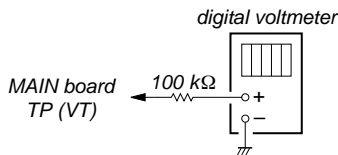
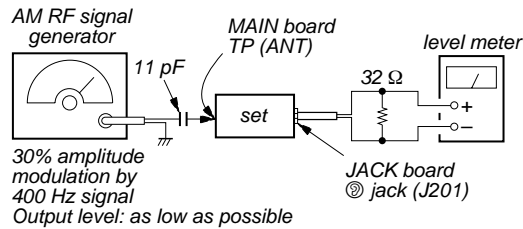
BAND switch: FM



[SW] (ICF-M770S/M770SL)

Setting:

BAND switch: SW



- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
- Remove FM/SW antenna in FM/SW adjustment.

no mark : common  
( ): ICF-M770L  
[ ]: ICF-M770S  
<< >>: ICF-M770SL

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter	
T1	450 kHz

MW VT VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
(L8) [L10]	531 kHz	2.5 ± 0.1 V [2.8 ± 0.1 V]
Confirmation	1,602 kHz	9.6 ± 1.0 V

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
(L5-1) [L5]	603 kHz
(CT1) [CT2]	1,404 kHz

LW VT VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
(CT3) <<[L10]>>	153 kHz	2.2 ± 0.1 V <<2.8 ± 0.1 V>>
Confirmation	279 kHz	8.6 ± 1.0 V

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
(L5-2) <<[L5]>>	162 kHz
CT2	243 kHz

FM VT VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L14	87.5 MHz	2.9 ± 1.0 V
Confirmation	108 MHz	9.1 ± 1.0 V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L12, 13	87.5 MHz
CT4	108 MHz

SW VT VOLTAGE ADJUSTMENT*		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L8	5,800 kHz	2.7 ± 0.1 V
Confirmation	15,900 kHz	9.1 ± 1.0 V

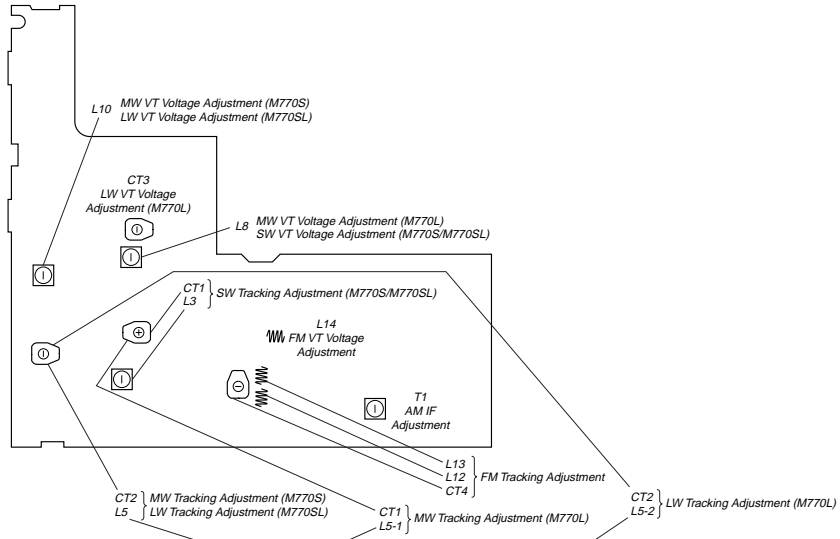
SW TRACKING ADJUSTMENT*	
Adjust for a maximum reading on level meter	
L3	5,800 kHz
CT1	15,900 kHz

\*: ICF-M770S/M770SL

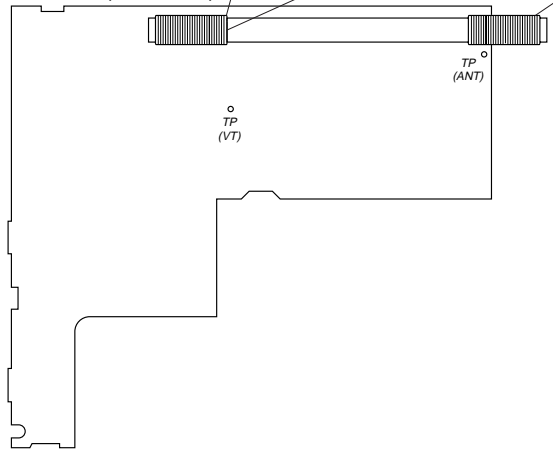
Adjustment Location: MAIN board (See page 7)

Adjustment Location:

- MAIN BOARD (Component Side) -

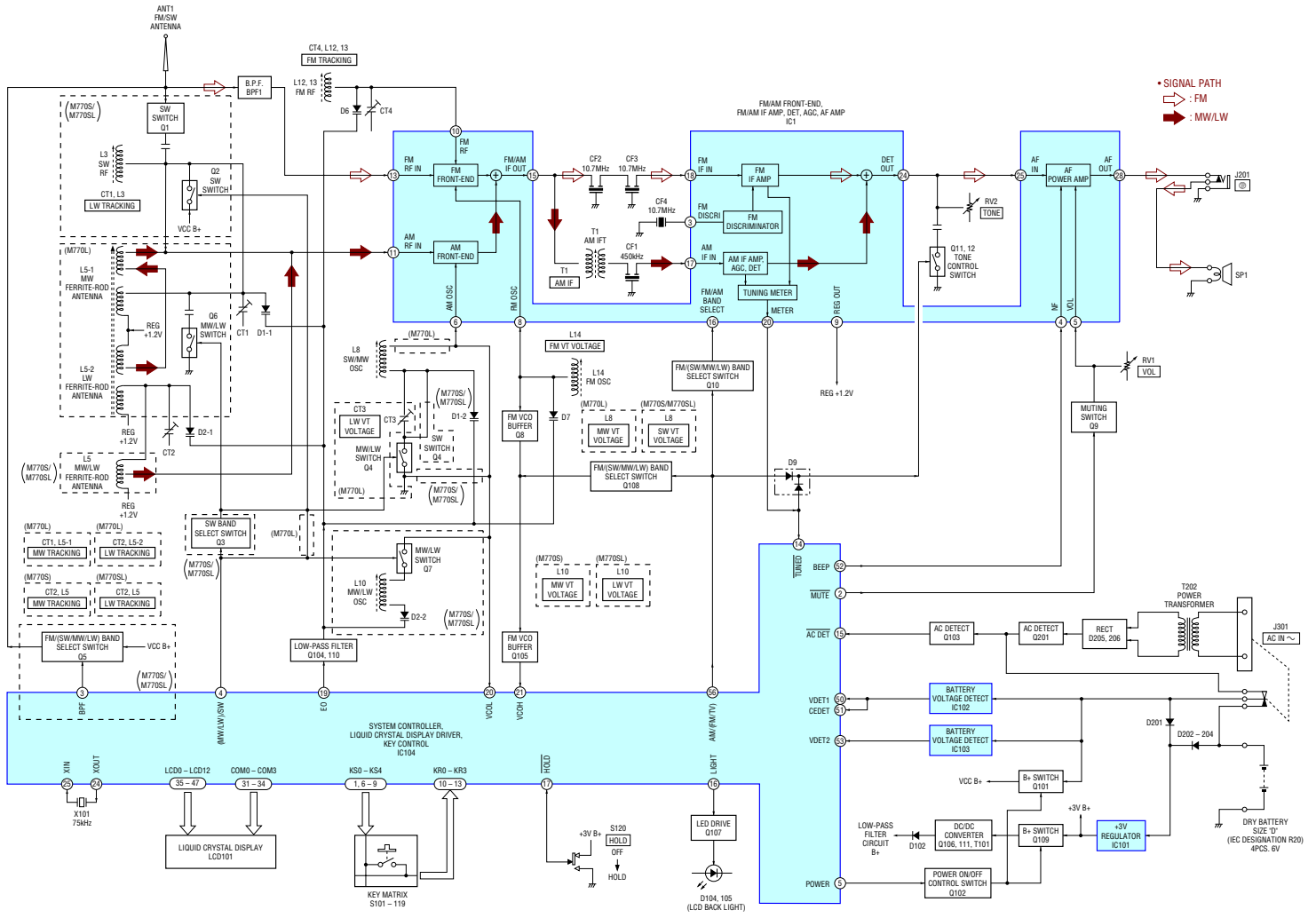


- MAIN BOARD (Conductor Side) -



SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM





5-2. NOTE FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : indicates side identified with part number.
- △ : internal component.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

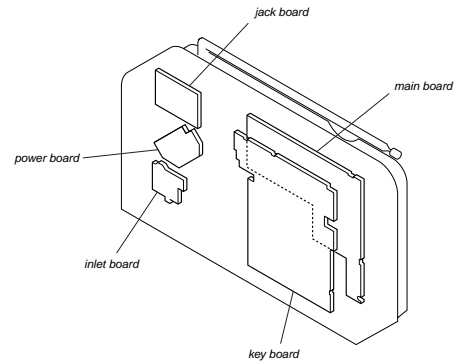
Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\Delta$  : internal component.
- □ : panel designation.

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

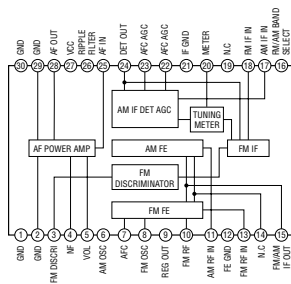
- : B+ Line.
- : adjustment for repair.
- Power voltage is dc 6 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground in no-signal (detuned) conditions.
- no mark : FM
- ( ) : SW
- [ ] : MW
- { } : LW
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). 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
- ➡ : MW/LW

• Circuit Boards Location



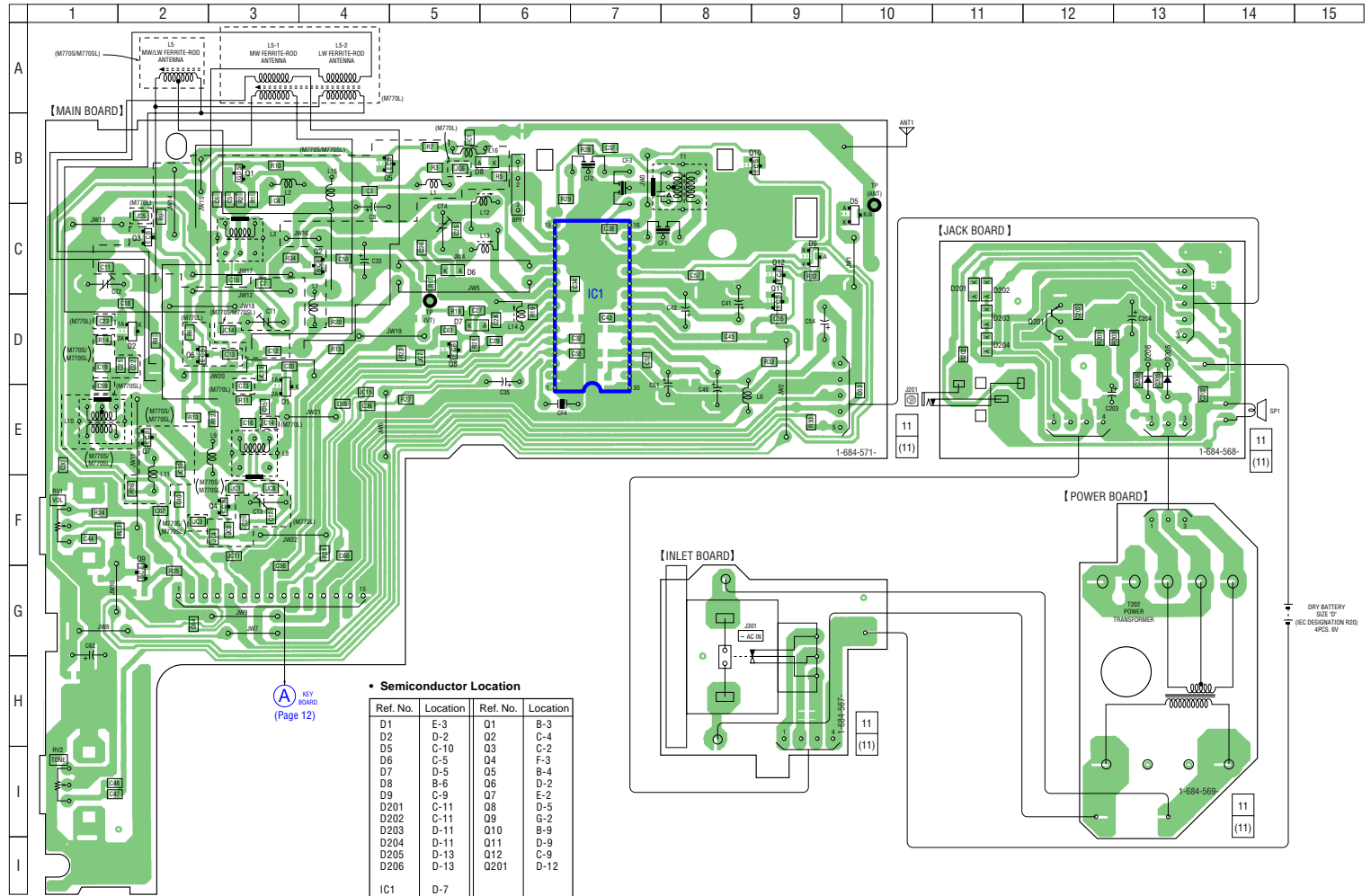
• IC Block Diagram

IC1 CXA1019S

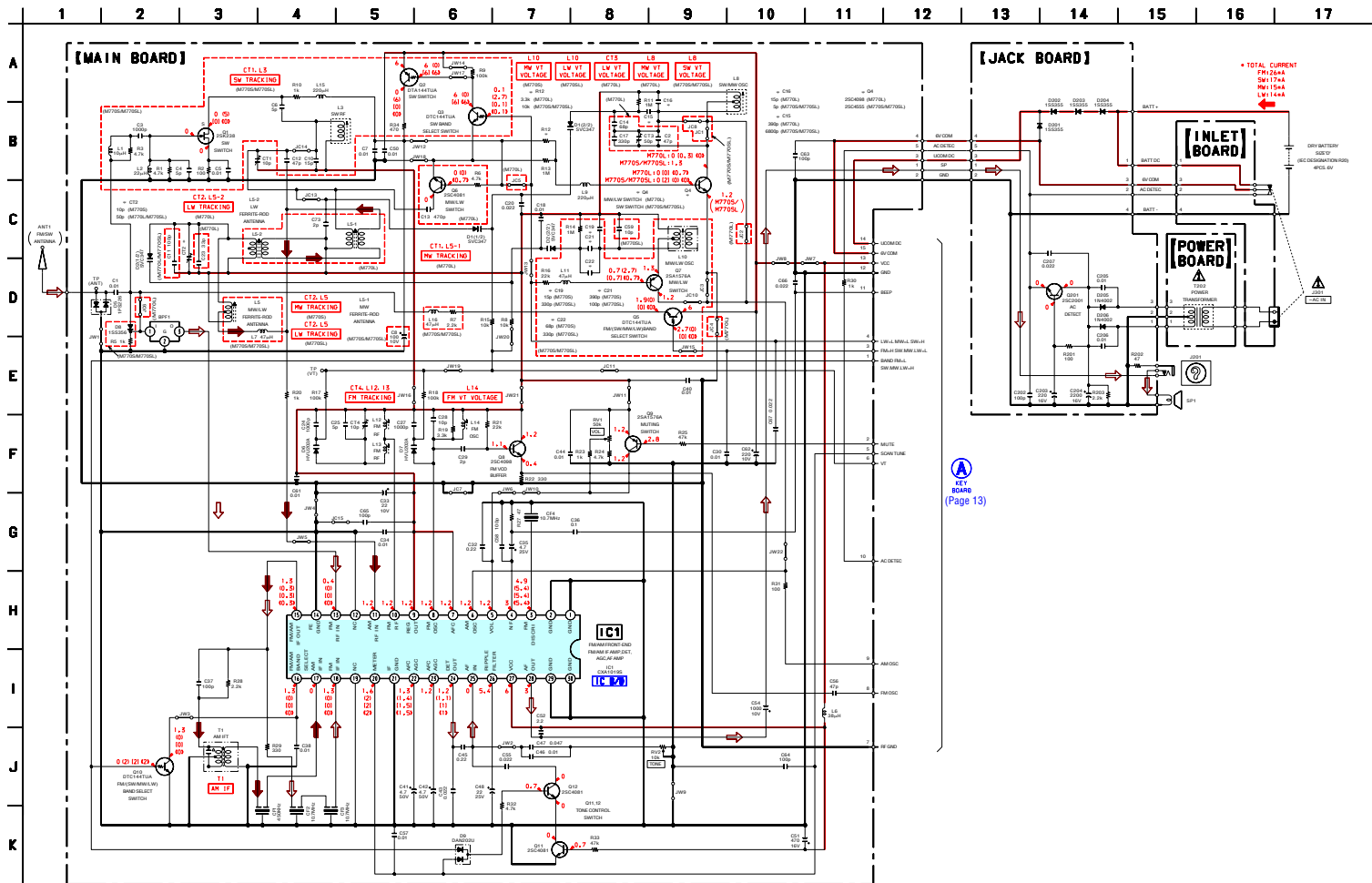


ICF-M770L/M770S/M770SL

5-3. PRINTED WIRING BOARDS – MAIN/JACK/POWER/INLET Boards – • See page 9 for Circuit Boards Location.



5-4. SCHEMATIC DIAGRAM – MAIN/JACK/POWER/INLET Boards – • See page 9 for IC Block Diagram.

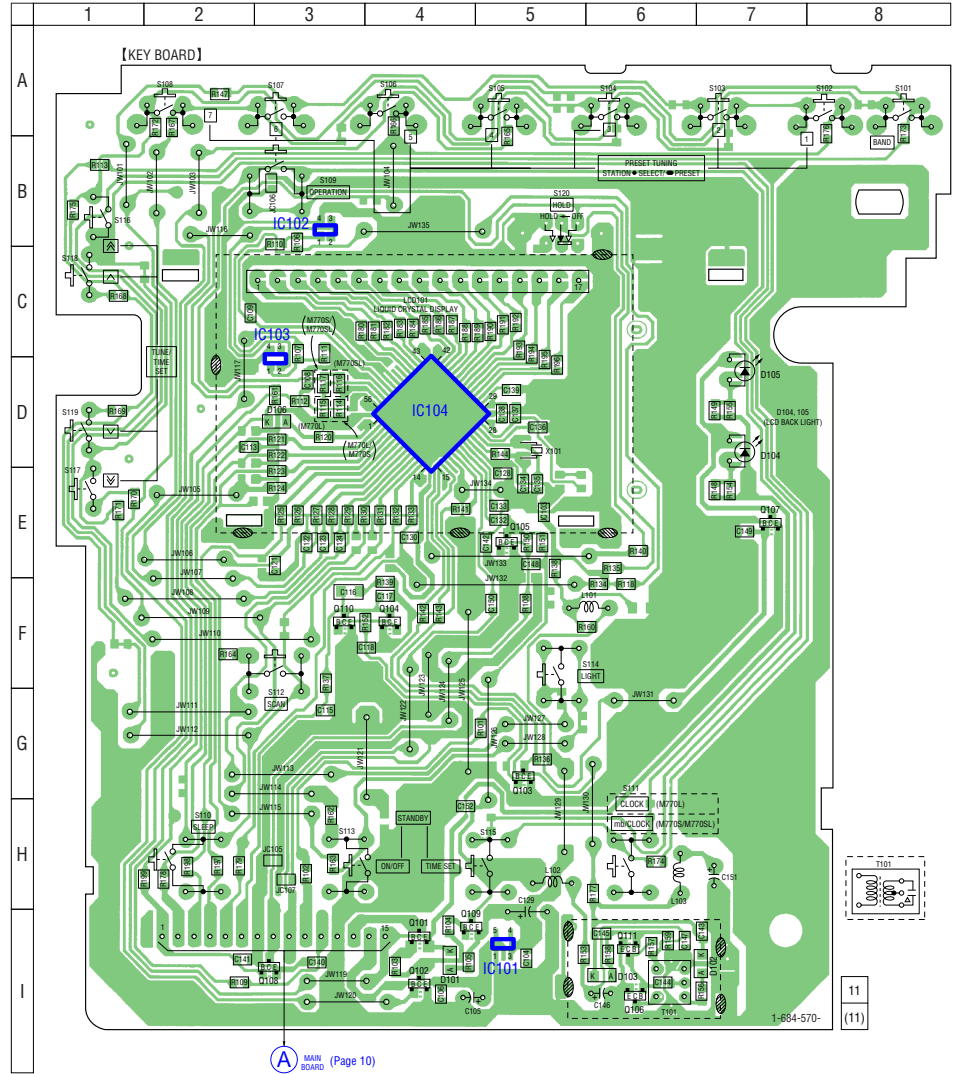


The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

5-5. PRINTED WIRING BOARD – KEY Board – • See page 9 for Circuit Boards Location.

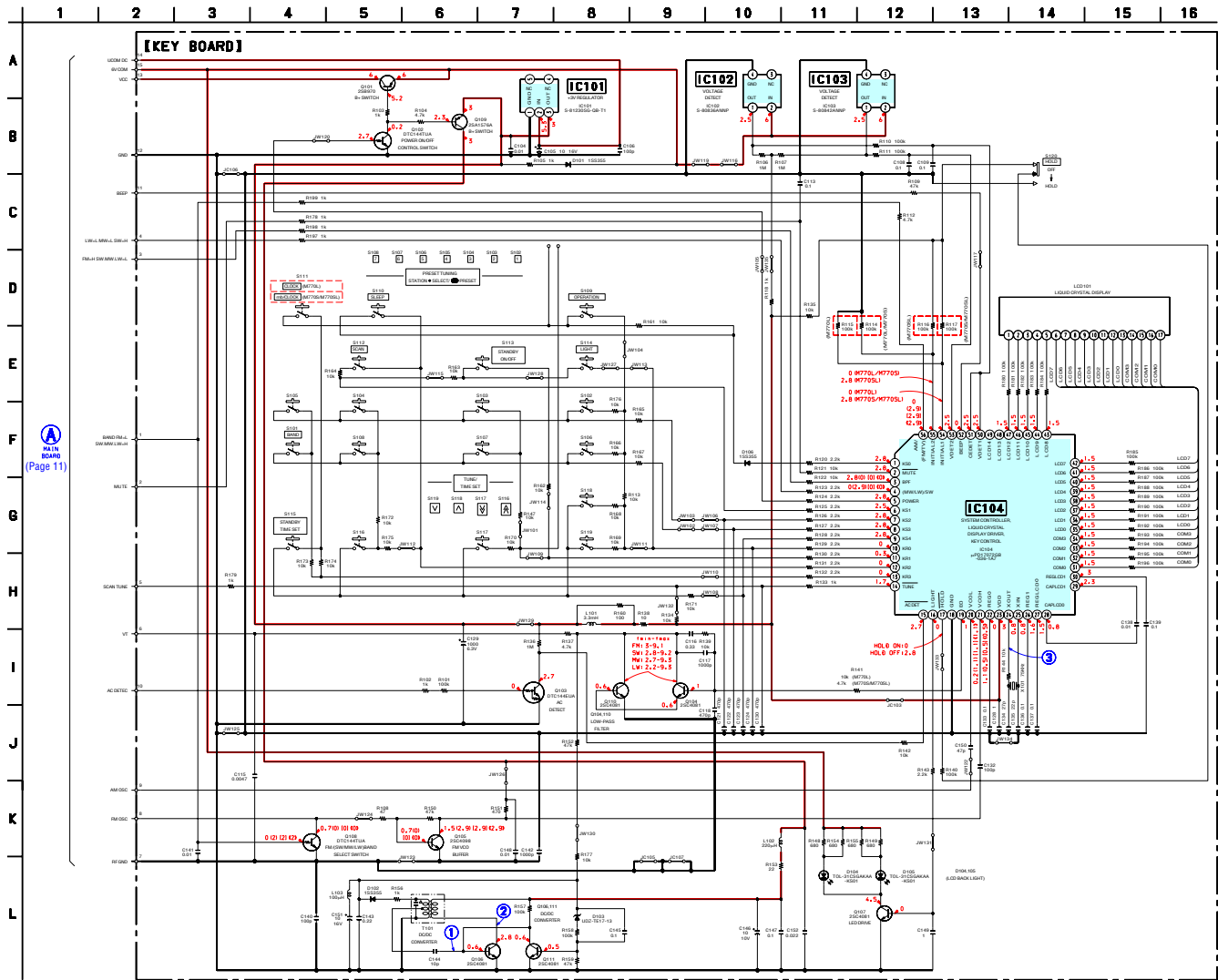
• Semiconductor Location

Ref. No.	Location
D101	I-4
D102	I-7
D103	I-6
D104	D-7
D105	D-7
D106	D-3
IC101	I-5
IC102	B-3
IC103	D-3
IC104	D-4
Q101	I-4
Q102	I-4
Q103	G-5
Q104	F-4
Q105	E-5
Q106	I-6
Q107	E-7
Q108	I-3
Q109	I-4
Q110	F-3
Q111	I-6



(A) MAIN BOARD (Page 10)

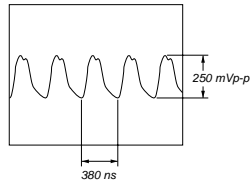
5-6. SCHEMATIC DIAGRAM – KEY Board – • See page 14 for Waveforms.



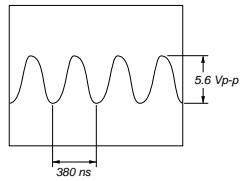
ICF-M770L/M770S/M770SL

• Waveforms  
– KEY Board –

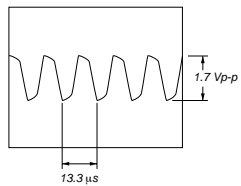
① Q106 (Base), Q111 (Collector)



② Q106 (Collector)



③ IC104 @ (XOUT)



5-7. IC PIN FUNCTION DESCRIPTION

• KEY BOARD IC104 μPD17027GB-036-1A7  
(SYSTEM CONTROLLER, LIQUID CRYSTAL DISPLAY DRIVER, KEY CONTROL)

Pin No.	Pin Name	I/O	Description
1	KS0	O	Key source signal output
2	MUTE	O	Muting on/off control signal output "L": muting on
3	BPF	O	Band selection signal output "L": SW/MW/LW, "H": FM Used for the ICF-M770S/770SL (ICF-M770L: Not used)
4	(MW/LW)/SW	O	Band selection signal output "L": MW/LW, "H": SW
5	POWER	O	Power on/off control signal output for the tuner section "H": radio power on
6 to 9	KS1 to KS4	O	Key source signal output
10 to 13	KR0 to KR3	I	Key return signal input
14	TUNED	I	Tuning detection signal input "L": tuned
15	AC DET	I	AC voltage detection signal input "L": AC detected
16	LIGHT	O	LED drive signal output of the liquid crystal display back light "H": LED on
17	HOLD	O	HOLD switch input terminal "L": hold on
18	GND	—	Ground terminal
19	EO	O	PLL frequency synthesizer charge pump output
20	VCOL	I	SW/MW/LW VCO input terminal
21	VCOH	I	FM VCO input terminal
22	REG0	O	Voltage regulator output terminal for the PLL
23	VDD	—	Power supply terminal (+3V)
24	XOUT	O	System clock output terminal (75 kHz)
25	XIN	I	System clock input terminal (75 kHz)
26	REG1	O	Voltage regulator output terminal for the oscillator circuit
27	REGLCD0	—	Connection terminal of doubler circuit capacitor for liquid crystal display drive power supply
28	CAPLCD0	—	Connection terminal of doubler circuit capacitor
29	CAPLCD1	—	Connection terminal of doubler circuit capacitor
30	REGLCD1	—	Connection terminal of doubler circuit capacitor for liquid crystal display drive power supply
31 to 34	COM0 to COM3	O	Common drive signal output to the liquid crystal display
35 to 47	LCD0 to LCD12	O	Segment drive signal output to the liquid crystal display
48, 49	LCD13, LCD14	O	Segment drive signal output to the liquid crystal display Not used
50	VDET1	I	Voltage detection signal input "L": 2.5V or less
51	CEDET	I	Voltage detection signal input "L": 2.5V or less
52	BEEP	O	Beep sound drive signal output
53	VDET2	I	Voltage detection signal input "L": 2.9V or less
54	INITIAL1	I	Model setting input terminal "L": ICF-M770L, "H": ICF-M770S/M770SL
55	INITIAL2	I	Model setting input terminal "L": ICF-M770L/M770S, "H": ICF-M770SL
56	AM(FM/TV)	O	Band selection signal output "L": FM, "H": SW/MW/LW

# SECTION 6 EXPLODED VIEWS

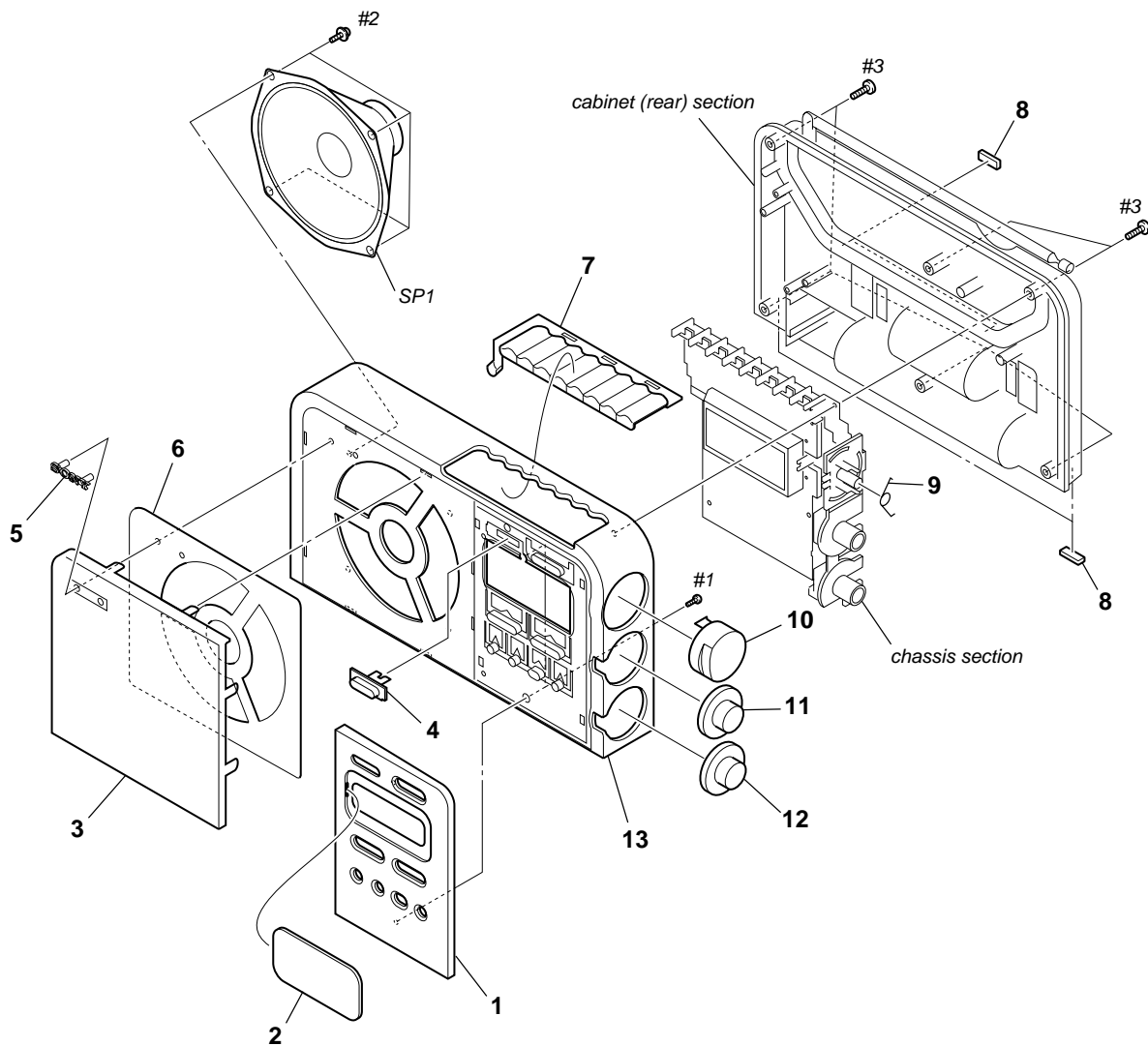
**NOTE:**

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  
  ↑  ↑  
  Parts Color  Cabinet's Color

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Accessories are given in the last of the electrical parts list.
- When "NET, SPEAKER (Ref. 3)" is being replaced, "EMBLEM (5-A), SONY (Ref. 5)" needs to be replaced also.

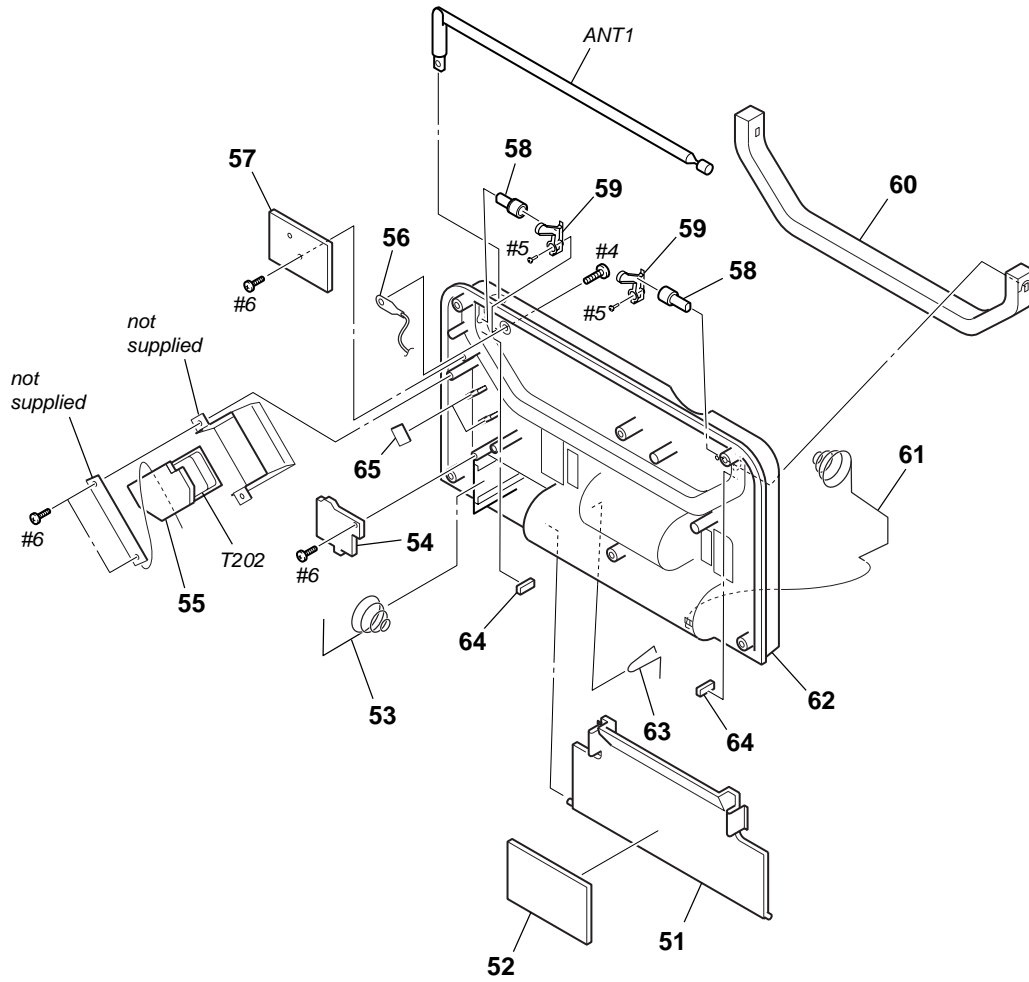
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

## 6-1. CABINET (FRONT) SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-237-047-01	PANEL (M770SL)		9	3-013-190-01	SPRING (JOG), RING	
1	3-237-047-11	PANEL (M770S)		10	3-237-049-01	KNOB (JOG)	
1	3-237-047-21	PANEL (M770L)		11	3-237-050-01	KNOB (CONTROL) (VOL)	
2	3-237-052-01	PLATE, TRANSPARENT		12	3-237-050-11	KNOB (CONTROL) (TONE)	
3	3-237-061-01	NET, SPEAKER		13	3-237-021-01	CABINET (FRONT)	
4	3-237-057-01	KNOB (HOLD)		SP1	1-825-130-11	SPEAKER (12cm)	
5	4-925-334-41	EMBLEM (5-A), SONY		#1	7-685-105-14	TAPPING +P 2X8 NON-SLIT	
6	3-237-062-01	SHEET, SPEAKER		#2	7-685-903-21	SCREW +PTPWH 3X8 (TYPE2)	
7	3-237-048-01	BUTTON (PRESET)		#3	7-685-549-14	SCREW +BTP3X14 TYPE2 N-S	
8	3-014-055-01	FOOT, RUBBER					

6-2. CABINET (REAR) SECTION

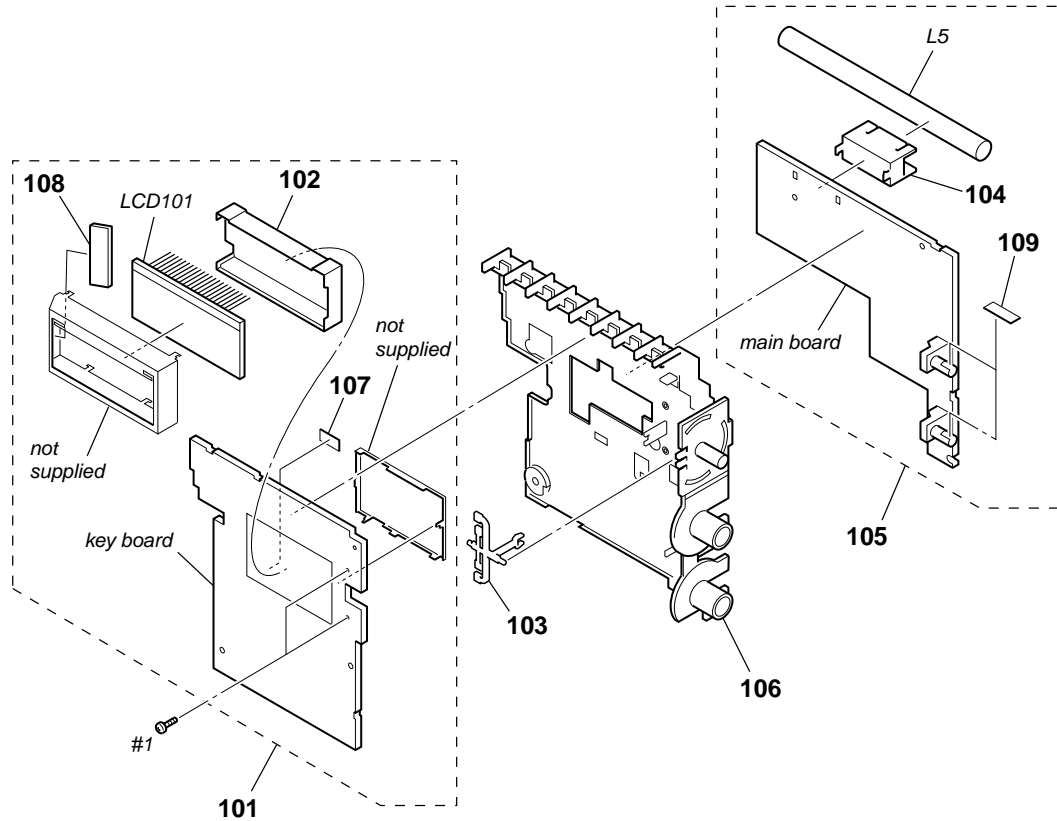


The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-237-053-01	LID, BATTERY CASE		61	3-237-065-01	TERMINAL (+/-), BATTERY	
52	3-939-499-01	CUSHION (BATT)		62	3-237-022-01	CABINET (REAR)	
53	3-237-064-01	TERMINAL (-), BATTERY		63	3-237-063-01	TERMINAL (+), BATTERY	
* 54	1-684-567-11	INLET BOARD		64	3-244-251-01	CUSHION (A)	
* 55	1-684-569-11	POWER BOARD		65	3-880-474-01	CUSHION, 15X5X0.3	
56	3-228-709-01	PLATE, ANTENNA CONTACT		ANT1	1-501-321-51	ANTENNA, TELESCOPIC	
* 57	1-684-568-11	JACK BOARD		$\Delta$ T202	1-435-614-11	TRANSFORMER, POWER	
58	3-237-056-01	SHAFT (HANDLE)		#4	7-682-149-13	SCREW +P 3X10	
59	3-237-336-01	SPRING (HANDLE) (R)		#5	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
60	3-237-054-01	HANDLE		#6	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	



6-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3021-849-A	KEY BOARD, COMPLETE (M770SL)		106	3-237-023-01	CHASSIS	
* 101	A-3021-855-A	KEY BOARD, COMPLETE (M770S)		* 107	3-010-281-01	SPACER (B)	
101	A-3021-877-A	KEY BOARD, COMPLETE (M770L)		108	3-244-087-01	SHEET (A)	
102	3-237-051-01	HOLDER, LCD		109	3-559-407-01	CUSHION, STOPPER	
103	3-237-055-01	ARM (JOG)		L5	1-428-955-11	COIL, FERRITE-ROD ANTENNA (MW) (M770S)	
104	3-237-058-01	HOLDER (FERRITE-ROD ANTENNA)		L5	1-428-956-11	COIL, FERRITE-ROD ANTENNA (M770L)	
* 105	A-3021-848-A	MAIN BOARD, COMPLETE (M770SL)		L5	1-501-954-21	ANTENNA, FERRITE-ROD (LW) (M770SL)	
* 105	A-3021-854-A	MAIN BOARD, COMPLETE (M770S)		LCD101	1-804-671-11	DISPLAY PANEL, LIQUID CRYSTAL	
105	A-3021-876-A	MAIN BOARD, COMPLETE (M770L)		#1	7-685-105-14	TAPPING +P 2X8 NON-SLIT	

SECTION 7  
ELECTRICAL PARTS LIST

INLET JACK KEY

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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked "\*\*\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA. . :  $\mu$ A. .      uPA. . :  $\mu$ PA. .  
uPB. . :  $\mu$ PB. .    uPC. . :  $\mu$ PC. .  
uPD. . :  $\mu$ PD. .
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-684-567-11	INLET BOARD *****		*	A-3021-849-A	KEY BOARD, COMPLETE (M770SL)	
		< JACK >		*	A-3021-855-A	KEY BOARD, COMPLETE (M770S)	
$\Delta$ J301	1-526-838-31	INLET, AC 2P (~ AC IN) *****		*	A-3021-877-A	KEY BOARD, COMPLETE (M770L) *****	
*	1-684-568-11	JACK BOARD *****				< CAPACITOR >	
		< CAPACITOR >		C104	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C202	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	C105	1-104-396-11	ELECT 10uF 20%	16V
C203	1-126-934-11	ELECT 220uF 20%	16V	C106	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C204	1-126-768-11	ELECT 2200uF 20%	16V	C108	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C205	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C109	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C206	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C113	1-115-156-11	CERAMIC CHIP 1uF	10V
C207	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V	C115	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
		< DIODE >		C116	1-110-501-11	CERAMIC CHIP 0.33uF 10%	16V
D201	8-719-988-61	DIODE 1SS355TE-17		C117	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
D202	8-719-988-61	DIODE 1SS355TE-17		C118	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
D203	8-719-988-61	DIODE 1SS355TE-17		C121	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
D204	8-719-988-61	DIODE 1SS355TE-17		C122	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
D205	8-719-052-88	DIODE 1N4002		C123	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
D206	8-719-052-88	DIODE 1N4002		C124	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
		< JACK >		C128	1-115-156-11	CERAMIC CHIP 1uF	10V
J201	1-563-836-21	JACK (⊙)		C129	1-126-916-11	ELECT 1000uF 20%	6.3V
		< TRANSISTOR >		C130	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
Q201	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2		C132	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
		< RESISTOR >		C133	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R201	1-216-809-11	METAL CHIP 100 5%	1/10W	C134	1-162-920-11	CERAMIC CHIP 27PF 5%	50V
R202	1-216-805-11	METAL CHIP 47 5%	1/10W	C135	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
R203	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	C136	1-164-156-11	CERAMIC CHIP 0.1uF	25V
*****				C137	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C138	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
				C139	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C140	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
				C141	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
				C142	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
				C143	1-165-128-11	CERAMIC CHIP 0.22uF	16V
				C144	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
				C145	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C146	1-124-261-00	ELECT 10uF 20%	50V
				C147	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C148	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
				C149	1-115-156-11	CERAMIC CHIP 1uF	10V

## KEY

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C150	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	R111	1-216-845-11	METAL CHIP	100K 5% 1/10W
C151	1-104-396-11	ELECT	10uF 20% 16V	R112	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
C152	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	R113	1-216-833-11	METAL CHIP	10K 5% 1/10W
		< DIODE >		R114	1-216-845-11	METAL CHIP	100K 5% 1/10W (M770L/M770S)
D101	8-719-988-61	DIODE	1SS355TE-17	R115	1-216-845-11	METAL CHIP	100K 5% 1/10W (M770L)
D102	8-719-988-61	DIODE	1SS355TE-17				
D103	8-719-083-63	DIODE	UDZSTE-1713B				
D104	6-500-040-01	LED	TOL-31CSGAKAA-KS01 (LCD BACK LIGHT)	R116	1-216-845-11	METAL CHIP	100K 5% 1/10W (M770SL)
D105	6-500-040-01	LED	TOL-31CSGAKAA-KS01 (LCD BACK LIGHT)	R117	1-216-845-11	METAL CHIP	100K 5% 1/10W (M770S/M770SL)
D106	8-719-988-61	DIODE	1SS355TE-17	R118	1-216-821-11	METAL CHIP	1K 5% 1/10W
		< IC >		R120	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
IC101	8-759-198-63	IC	S-81230SG-QB-T1	R121	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC102	6-702-128-01	IC	S-80836ANNP-ED0-T2	R122	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC103	8-759-582-91	IC	S-80842ANNP-ED6-T2	R123	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
IC104	6-801-726-01	IC	uPD17072GB-036-1A7	R124	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
		< RESISTOR >		R125	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
JC103	1-216-864-11	SHORT CHIP	0	R126	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
JC105	1-216-864-11	SHORT CHIP	0				
JC106	1-216-864-11	SHORT CHIP	0	R127	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
JC107	1-216-864-11	SHORT CHIP	0	R128	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
		< COIL >		R129	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
L101	1-410-065-11	INDUCTOR	3.3mH	R130	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
L102	1-410-525-11	INDUCTOR	220uH	R131	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
L103	1-410-521-11	INDUCTOR	100uH				
		< LIQUID CRYSTAL DISPLAY >		R132	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
LCD101	1-804-671-11	DISPLAY PANEL,	LIQUID CRYSTAL	R133	1-216-821-11	METAL CHIP	1K 5% 1/10W
		< TRANSISTOR >		R134	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q101	8-729-046-89	TRANSISTOR	2SB970-S (TX).S0	R135	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q102	8-729-029-15	TRANSISTOR	DTC144TUA-T106	R136	1-216-857-11	METAL CHIP	1M 5% 1/10W
Q103	8-729-029-14	TRANSISTOR	DTC144EUA-T106				
Q104	8-729-905-35	TRANSISTOR	2SC4081-R	R137	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q105	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ	R138	1-216-797-11	METAL CHIP	10 5% 1/10W
Q106	8-729-905-35	TRANSISTOR	2SC4081-R	R139	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q107	8-729-905-35	TRANSISTOR	2SC4081-R	R140	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q108	8-729-029-15	TRANSISTOR	DTC144TUA-T106	R141	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (M770S/M770SL)
Q109	8-729-026-52	TRANSISTOR	2SA1576A-T106-R				
Q110	8-729-905-35	TRANSISTOR	2SC4081-R	R141	1-216-833-11	METAL CHIP	10K 5% 1/10W (M770L)
Q111	8-729-905-35	TRANSISTOR	2SC4081-R	R142	1-216-833-11	METAL CHIP	10K 5% 1/10W
		< RESISTOR >		R143	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R101	1-216-845-11	METAL CHIP	100K 5% 1/10W	R144	1-216-833-11	METAL CHIP	10K 5% 1/10W
R102	1-216-821-11	METAL CHIP	1K 5% 1/10W	R147	1-216-833-11	METAL CHIP	10K 5% 1/10W
R103	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R104	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R148	1-216-819-11	METAL CHIP	680 5% 1/10W
R105	1-216-821-11	METAL CHIP	1K 5% 1/10W	R149	1-216-819-11	METAL CHIP	680 5% 1/10W
R106	1-216-857-11	METAL CHIP	1M 5% 1/10W	R150	1-216-841-11	METAL CHIP	47K 5% 1/10W
R107	1-216-857-11	METAL CHIP	1M 5% 1/10W	R151	1-216-817-11	METAL CHIP	470 5% 1/10W
R108	1-216-805-11	METAL CHIP	47 5% 1/10W	R152	1-216-841-11	METAL CHIP	47K 5% 1/10W
R109	1-216-841-11	METAL CHIP	47K 5% 1/10W				
R110	1-216-845-11	METAL CHIP	100K 5% 1/10W	R153	1-216-801-11	METAL CHIP	22 5% 1/10W
				R154	1-216-819-11	METAL CHIP	680 5% 1/10W
				R155	1-216-819-11	METAL CHIP	680 5% 1/10W
				R156	1-216-821-11	METAL CHIP	1K 5% 1/10W
				R157	1-216-845-11	METAL CHIP	100K 5% 1/10W
				R158	1-216-845-11	METAL CHIP	100K 5% 1/10W
				R159	1-216-841-11	METAL CHIP	47K 5% 1/10W
				R160	1-216-809-11	METAL CHIP	100 5% 1/10W
				R161	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R162	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R163	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R164	1-216-833-11	METAL CHIP	10K 5% 1/10W

# ICF-M770L/M770S/M770SL

KEY	MAIN
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R165	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R166	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R167	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R168	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R169	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R170	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R171	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R172	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R173	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R174	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R175	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R176	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R177	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R178	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R179	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R180	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R181	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R182	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R183	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R184	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R185	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R186	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R187	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R188	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R189	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R190	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R191	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R192	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R193	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R194	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R195	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R196	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R197	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R198	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R199	1-216-821-11	METAL CHIP	1K 5% 1/10W				
		< SWITCH >					
S101	1-554-088-00	SWITCH, KEY BOARD (BAND)					
S102	1-554-088-00	SWITCH, KEY BOARD (1)					
S103	1-554-088-00	SWITCH, KEY BOARD (2)					
S104	1-554-088-00	SWITCH, KEY BOARD (3)					
S105	1-554-088-00	SWITCH, KEY BOARD (4)					
S106	1-554-088-00	SWITCH, KEY BOARD (5)					
S107	1-554-088-00	SWITCH, KEY BOARD (6)					
S108	1-554-088-00	SWITCH, KEY BOARD (7)					
S109	1-771-906-11	SWITCH, KEY BOARD (OPERATION)					
S110	1-771-906-11	SWITCH, KEY BOARD (SLEEP)					
S111	1-771-906-11	SWITCH, KEY BOARD (CLOCK) (M770L)					
S111	1-771-906-11	SWITCH, KEY BOARD (mb/CLOCK) (M770S/M770SL)					
S112	1-771-906-11	SWITCH, KEY BOARD (SCAN)					
S113	1-771-906-11	SWITCH, KEY BOARD (STANDBY ON/OFF)					
S114	1-771-906-11	SWITCH, KEY BOARD (LIGHT)					
S115	1-771-906-11	SWITCH, KEY BOARD (STANDBY TIME SET)					
S116	1-786-267-21	SWITCH, TACT (TUNE/TIME SET ∞)					
S117	1-786-267-21	SWITCH, TACT (TUNE/TIME SET ∽)					
S118	1-786-267-21	SWITCH, TACT (TUNE/TIME SET ^)					
S119	1-786-267-21	SWITCH, TACT (TUNE/TIME SET v)					
S120	1-571-850-91	SWITCH, SLIDE (HOLD)					
		< TRANSFORMER >					
T101	1-449-138-91	TRANSFORMER, DC/DC CONVERTER					
		< VIBRATOR >					
X101	1-767-517-11	VIBRATOR, CRYSTAL (75kHz)					
		*****					
*	A-3021-848-A	MAIN BOARD, COMPLETE (M770SL)					
*	A-3021-854-A	MAIN BOARD, COMPLETE (M770S)					
*	A-3021-876-A	MAIN BOARD, COMPLETE (M770L)					
		*****					
		3-237-058-01	HOLDER (FERRITE-ROD ANTENNA)				
		< BAND PASS FILTER >					
BPF1	1-236-022-11	FILTER, BAND PASS					
		< CAPACITOR >					
C1	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V				
C2	1-162-923-11	CERAMIC CHIP	47PF 5% 50V (M770L)				
C3	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V (M770S/M770SL)				
C4	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V (M770S/M770SL)				
C5	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (M770S/M770SL)				
C6	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V (M770S/M770SL)				
C7	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V				
C8	1-126-382-11	ELECT	100uF 20% 10V (M770S/M770SL)				
C10	1-162-917-11	CERAMIC CHIP	15PF 5% 50V (M770S/M770SL)				
C11	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (M770L/M770SL)				
C12	1-162-923-11	CERAMIC CHIP	47PF 5% 50V (M770S/M770SL)				
C13	1-164-315-11	CERAMIC CHIP	470PF 5% 50V (M770L)				
C14	1-162-925-11	CERAMIC CHIP	68PF 5% 50V (M770L)				
C15	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V (M770S/M770SL)				
C15	1-164-392-11	CERAMIC CHIP	390PF 5% 50V (M770L)				
C16	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V (M770S/M770SL)				
C16	1-162-917-11	CERAMIC CHIP	15PF 5% 50V (M770L)				
C17	1-162-959-11	CERAMIC CHIP	330PF 5% 50V (M770L)				
C18	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V				
C19	1-162-917-11	CERAMIC CHIP	15PF 5% 50V (M770S)				
C19	1-162-959-11	CERAMIC CHIP	330PF 5% 50V (M770SL)				
C20	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C21	1-162-927-11	CERAMIC CHIP	100PF 5%	50V (M770SL)		< TRIMMER >	
C21	1-164-392-11	CERAMIC CHIP	390PF 5%	50V (M770S)	CT1	1-141-601-11	CAP, ADJ 10PF
C22	1-162-925-11	CERAMIC CHIP	68PF 5%	50V (M770S)	CT2	1-141-622-11	CAP, ADJ 50PF (M770L/M770SL)
					CT3	1-141-601-11	CAP, ADJ 10PF (M770S)
					CT4	1-141-622-11	CAP, ADJ 50PF (M770L)
							CAP, ADJ 10PF
C22	1-162-959-11	CERAMIC CHIP	330PF 5%	50V (M770SL)		< DIODE >	
C23	1-162-921-11	CERAMIC CHIP	33PF 5%	50V (M770L)	D1	8-719-072-59	DIODE SVC347S-TL
C24	1-115-416-11	CERAMIC CHIP	0.001uF 5%	25V	D2	8-719-072-59	DIODE SVC347S-TL
C25	1-162-910-11	CERAMIC CHIP	5PF 0.25PF	50V	D5	8-719-062-51	DIODE 1PS226-115
C27	1-115-416-11	CERAMIC CHIP	0.001uF 5%	25V	D6	8-719-084-67	DIODE HVU202ATRU
					D7	8-719-084-67	DIODE HVU202ATRU
C28	1-162-915-11	CERAMIC CHIP	10PF 0.5PF	50V			
C29	1-162-907-11	CERAMIC CHIP	2PF 0.25PF	50V	D8	8-719-044-76	DIODE 1SS356-TW11 (M770S/M770SL)
C30	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	D9	8-719-941-86	DIODE DAN202U
C32	1-115-467-11	CERAMIC CHIP	0.22uF 10%	10V			< IC >
C33	1-126-514-11	ELECT	22uF 20%	10V	IC1	8-752-037-02	IC CXA1019S
C34	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V			< RESISTOR >
C35	1-126-163-11	ELECT	4.7uF 20%	50V	JC1	1-216-864-11	SHORT CHIP 0 (M770S/M770SL)
C36	1-164-156-11	CERAMIC CHIP	0.1uF	25V	JC2	1-216-864-11	SHORT CHIP 0 (M770L)
C37	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	JC3	1-216-864-11	SHORT CHIP 0 (M770S/M770SL)
C38	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	JC4	1-216-864-11	SHORT CHIP 0 (M770L)
					JC5	1-216-864-11	SHORT CHIP 0 (M770L)
C40	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	JC6	1-216-864-11	SHORT CHIP 0 (M770L)
C41	1-126-963-11	ELECT	4.7uF 20%	50V	JC7	1-216-864-11	SHORT CHIP 0
C42	1-126-963-11	ELECT	4.7uF 20%	50V	JC8	1-216-864-11	SHORT CHIP 0 (M770S/M770SL)
C43	1-164-227-11	CERAMIC CHIP	0.022uF 10%	25V	JC10	1-216-864-11	SHORT CHIP 0 (M770S/M770SL)
C44	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	JC11	1-216-864-11	SHORT CHIP 0
C45	1-115-467-11	CERAMIC CHIP	0.22uF 10%	10V	JC13	1-216-864-11	SHORT CHIP 0
C46	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	JC14	1-216-864-11	SHORT CHIP 0 (M770S/M770SL)
C47	1-165-176-11	CERAMIC CHIP	0.047uF 10%	16V	JC15	1-216-864-11	SHORT CHIP 0
C48	1-128-551-11	ELECT	22uF 20%	25V			< COIL >
C50	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	L1	1-410-509-11	INDUCTOR 10uH (M770S/M770SL)
C51	1-126-935-11	ELECT	470uF 20%	16V	L2	1-410-513-11	INDUCTOR 22uH (M770S/M770SL)
C52	1-164-505-11	CERAMIC CHIP	2.2uF	16V	L3	1-409-513-31	COIL (OSC) (M770S/M770SL)
C54	1-126-926-11	ELECT	1000uF	10V	L5	1-428-955-11	COIL, FERRITE-ROD ANTENNA (MW) (M770S)
C55	1-164-227-11	CERAMIC CHIP	0.022uF 10%	25V	L5	1-428-956-11	COIL, FERRITE-ROD ANTENNA (M770L)
C56	1-162-923-11	CERAMIC CHIP	47PF 5%	50V			
C57	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	L5	1-501-954-21	ANTENNA, FERRITE-ROD (LW) (M770SL)
C58	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	L6	1-410-294-31	INDUCTOR 38uH
C59	1-162-915-11	CERAMIC CHIP	10PF 0.5PF	50V (M770SL)	L7	1-410-517-11	INDUCTOR 47uH (M770S/M770SL)
					L8	1-406-485-11	COIL (OSC) (M770L)
C61	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	L8	1-409-513-31	COIL (OSC) (M770S/M770SL)
C62	1-126-176-11	ELECT	220uF 20%	10V			
C63	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	L9	1-410-525-11	INDUCTOR 220uH
C64	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	L10	1-406-485-11	COIL (OSC) (M770S/M770SL)
C65	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	L11	1-410-517-11	INDUCTOR 47uH (M770S/M770SL)
C66	1-164-227-11	CERAMIC CHIP	0.022uF 10%	25V	L12	1-422-131-00	COIL, FM OSCILLATION
C67	1-164-227-11	CERAMIC CHIP	0.022uF 10%	25V	L13	1-428-290-11	COIL, AIR-CORE
C73	1-162-907-11	CERAMIC CHIP	2PF 0.25PF	50V (M770L)	L14	1-456-020-11	COIL, AIR-CORE
					L15	1-410-525-11	INDUCTOR 220uH (M770S/M770SL)
					L16	1-410-521-11	INDUCTOR 100uH (M770S/M770SL)
							< TRANSISTOR >
CF1	1-578-677-21	FILTER, CRYSTAL (450kHz)	(M770L)		Q1	8-729-123-86	FET 2SK238-K16 (M770S/M770SL)
CF1	1-795-323-11	FILTER, CERAMIC (450kHz)	(M770S/M770SL)				
CF2	1-567-390-11	FILTER, CERAMIC (10.7MHz)					
CF3	1-567-390-11	FILTER, CERAMIC (10.7MHz)					
CF4	1-567-050-00	FILTER, CERAMIC (10.7MHz)					

&lt; CERAMIC FILTER &gt;

# ICF-M770L/M770S/M770SL

Ver 1.1

<b>MAIN</b>	<b>POWER</b>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q2	8-729-028-92	TRANSISTOR	DTA144TUA-T106 (M770S/M770SL)	R32	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
Q3	8-729-029-15	TRANSISTOR	DTC144TUA-T106 (M770S/M770SL)	R33	1-216-841-11	METAL CHIP 47K 5%	1/10W
Q4	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ (M770L)	R34	1-216-817-11	METAL CHIP 470 5%	1/10W (M770S/M770SL)
Q4	8-729-034-58	TRANSISTOR	2SC4555-6.7-TL (M770S/M770SL)			< VARIABLE RESISTOR >	
Q5	8-729-029-15	TRANSISTOR	DTC144TUA-T106 (M770S/M770SL)	RV1	1-225-498-11	RES, VAR, CARBON 50K (VOL)	
Q6	8-729-905-35	TRANSISTOR	2SC4081-R (M770L)	RV2	1-225-499-11	RES, VAR, CARBON 10K (TONE)	
Q7	8-729-026-52	TRANSISTOR	2SA1576A-T106-R (M770S/M770SL)			< TRANSFORMER >	
Q8	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ	T1	1-404-902-51	TRANSFORMER, IF (M770L)	
Q9	8-729-026-52	TRANSISTOR	2SA1576A-T106-R	T1	1-435-886-21	TRANSFORMER, IF (M770S/M770SL)	
Q10	8-729-029-15	TRANSISTOR	DTC144TUA-T106	*****			
Q11	8-729-905-35	TRANSISTOR	2SC4081-R	*	1-684-569-11	POWER BOARD	*****
Q12	8-729-905-35	TRANSISTOR	2SC4081-R			< TRANSFORMER >	
		< RESISTOR >					
R1	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (M770S/M770SL)	△ T202	1-435-614-11	TRANSFORMER, POWER	*****
R2	1-216-809-11	METAL CHIP	100 5% 1/10W (M770S/M770SL)			MISCELLANEOUS	*****
R3	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (M770S/M770SL)				
R5	1-216-821-11	METAL CHIP	1K 5% 1/10W (M770S/M770SL)	ANT1	1-501-321-51	ANTENNA, TELESCOPIC	
R6	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (M770L)	SP1	1-825-130-11	SPEAKER (12cm)	*****
R7	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (M770S/M770SL)			ACCESSORIES	*****
R8	1-216-833-11	METAL CHIP	10K 5% 1/10W	△	1-751-115-11	CORD, POWER (M770L: UK)	
R9	1-216-845-11	METAL CHIP	100K 5% 1/10W (M770S/M770SL)	△	1-696-562-11	CORD, POWER (M770L: AEP/M770S/M770SL)	
R10	1-216-821-11	METAL CHIP	1K 5% 1/10W (M770S/M770SL)		3-238-575-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, GERMAN, DUTCH)	
R11	1-216-857-11	METAL CHIP	1M 5% 1/10W		3-238-575-21	MANUAL, INSTRUCTION (SWEDISH, ITALIAN, PORTUGUESE, FINNISH) (AEP, Italian)	
R12	1-216-827-11	METAL CHIP	3.3K 5% 1/10W (M770L)		3-238-575-31	MANUAL, INSTRUCTION (POLISH) (East European)	
R12	1-216-833-11	METAL CHIP	10K 5% 1/10W (M770S/M770SL)				
R13	1-216-857-11	METAL CHIP	1M 5% 1/10W				
R14	1-216-857-11	METAL CHIP	1M 5% 1/10W (M770S/M770SL)				
R15	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R16	1-216-837-11	METAL CHIP	22K 5% 1/10W (M770S/M770SL)				
R17	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R18	1-216-845-11	METAL CHIP	100K 5% 1/10W				
R19	1-216-827-11	METAL CHIP	3.3K 5% 1/10W				
R20	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R21	1-216-837-11	METAL CHIP	22K 5% 1/10W				
R22	1-216-815-11	METAL CHIP	330 5% 1/10W				
R23	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R24	1-216-829-11	METAL CHIP	4.7K 5% 1/10W				
R25	1-216-841-11	METAL CHIP	47K 5% 1/10W				
R27	1-216-805-11	METAL CHIP	47 5% 1/10W				
R28	1-216-825-11	METAL CHIP	2.2K 5% 1/10W				
R29	1-216-815-11	METAL CHIP	330 5% 1/10W				
R30	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R31	1-216-809-11	METAL CHIP	100 5% 1/10W				

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MEMO

