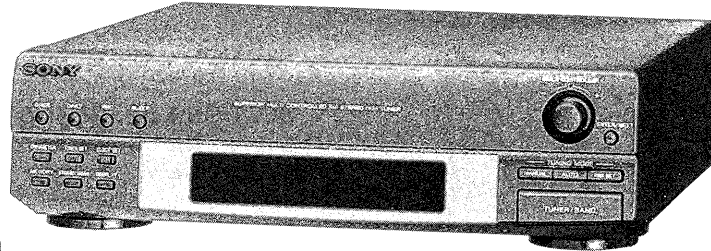


# ST-EX100

## SERVICE MANUAL

AEP Model  
UK Model  
E Model



This set is the tuner section in  
MHC-EX50/EX70AV/EX90/  
EX100AV.

Photo : E mode (SILVER)

### SPECIFICATIONS

#### FM stereo, FM/AM superheterodyne tuner

##### FM tuner section

Tuning range 87.5 – 108.0 MHz  
(50 kHz step)  
Aerial FM lead aerial  
Aerial terminals 75 ohm unbalanced  
Intermediate frequency 10.7 MHz

##### AM tuner section

Tuning range  
Italian model:  
AM: 522 – 1,611 kHz  
(with the interval set at  
9 kHz)  
German model:  
AM: 531 – 1,602 kHz  
(with the interval set at  
9 kHz)

##### E, Saudi Arabia, Thailand models:

AM: 531 – 1,602 kHz  
(with the interval set at  
9 kHz)  
530 – 1,710 kHz  
(with the interval set at  
10 kHz)

##### Other models:

MW: 531 – 1,602 kHz  
(with the interval set at  
9 kHz)  
LW: 153 – 279 kHz  
(with the interval set at  
3 kHz)  
Aerial AM loop aerial,  
External aerial  
terminals  
Intermediate frequency 450 kHz  
Dimensions  
Approx. 280 x 82.5 x 285 mm  
(11 1/8 x 3 1/4 x 11 1/4 in) (w/h/d)  
incl. projecting parts and controls  
Mass Approx. 1.5 kg  
(3 lb 4 oz)

FM STEREO/FM-AM TIMER TUNER

**SONY**®



## MODEL IDENTIFICATION

— Back Panel —



- 4-978-999-0□...E model
- 4-978-999-1□...AEP, UK, German, Italian, CIS model  
(Made in France)
- 4-978-999-2□...AEP, UK model (Made in Malaysia)
- 4-978-999-3□...Saudi Arabia model
- 4-978-999-4□...Thailand model

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1.	SERVICING NOTE .....	3
SECTION 2.	GENERAL .....	4
SECTION 3.	DISASSEMBLY	
3-1.	Panel Board .....	5
3-2.	Back Panel, Main Board and Polar Board .....	5
SECTION 4.	ELECTRICAL ADJUSTMENTS .....	6
SECTION 5.	DIAGRAMS	
5-1.	IC Block Diagrams .....	8
5-2.	Printed Wiring Board .....	11
5-3.	Schematic Diagram .....	13
5-4.	IC Pin Function	
	• IC201 System Control (μPD78013GC) .....	17
SECTION 6.	EXPLODED VIEW .....	19
SECTION 7.	ELECTRICAL PARTS LIST .....	20

### 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 1

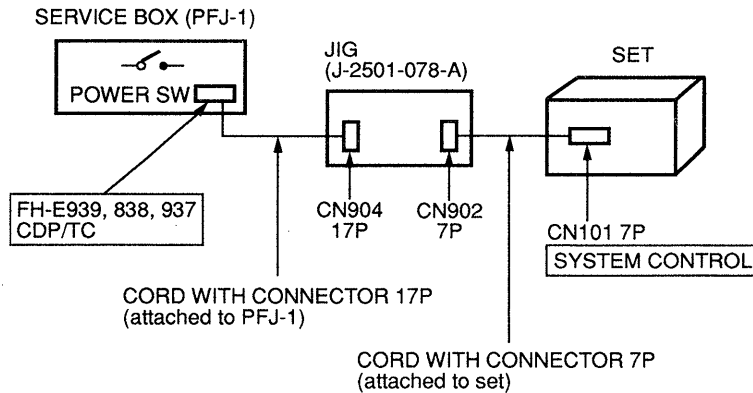
## SERVICING NOTE

### How to operate with a single unit.

Normally, this set is not operated with its own.

The exclusive jig (J-2501-078-A) and service box (PFJ-1) are necessary to operate the set with a single unit.

Turn the power set of the service box ON. Then press the ENTER/NEXT button and SLEEP button at the same time to turn the power on.



### • KEY/FL tube/LED check mode.

To enter KEY/FL/LED check mode, press the ENTER/NEXT and REC buttons at the same time.

Under mode, every time when press any key or turn MULTI CONTROLLER knob, change to next situation.

- ① All LED indicators light on
- ② All FL tube indicators light on
- ③ A part of FL tube light on mode 1. (Indicated ST-SEG)
- ④ A part of FL tube light on mode 2. (Indicated RDS-SEG)
- ⑤ KEY check mode

### Note :

- 1) All LED light on mode is kept, when buttons which is pressed to enter all LED light on mode, release same time. When release them separate timing, it is moved to next All LED light on mode.
- 2) After all LED light on mode, light on point remove one by one, when any button pressed or MULTI CONTROLLER knob turned.
- 3) Under KEY check mode, every time buttons pressed numerical value of "KEY" in FL tube increase. And that time, numerical value of "ECCR" increase when MULTI CONTROLLER button turn to + direction, and it decrease turn to - direction.

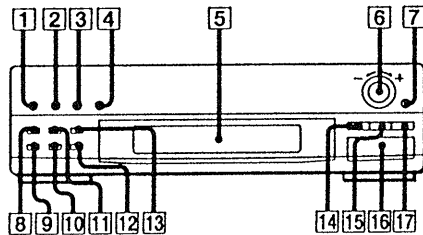
When you want to finish this mode, unplug the power of amplifire or turn off PFJ-1 of POWER switch.

## SECTION 2 GENERAL

This section is extracted  
from instruction manual.

### Index to Parts and Controls

#### Front Panel

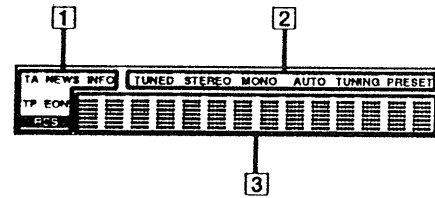


- 1 ONCE button\* (25, 26)
- 2 DAILY button\* (25, 26)
- 3 REC button\* (26)
- 4 SLEEP button\* (25)
- 5 Display window (6, 10, 25)
- 6 MULTI CONTROLLER\*  
(6, 10, 11, 13, 26)
- 7 ENTER/NEXT button\* (6, 11, 26)
- 8 CHARACTER button (11)
- 9 EON (Enhanced Other Networks)  
button (12) (AEP, UK, G, IT)  
MEMORY button (E, EA, CIS, TH)
- 10 PTY (Programme Type) button (13)  
(AEP, G, IT, UK)  
STEREO/MONO button  
(E, EA, CIS, TH)
- 11 TIMER SET button (25)
- 12 DISPLAY button (11, 12)
- 13 CLOCK SET button (6)
- 14 STEREO/MONO button (10)  
MANUAL button (E, EA, CIS, TH)
- 15 TUNING MODE button (10)  
(AEP, UK, G, IT)  
AUTO button  
(E, EA, CIS, TH)
- 16 TUNER/BAND button (10, 18, 30)
- 17 MEMORY button (11)  
(AEP, UK, G, IT)  
PRESET button (E, EA, CIS, TH)

• Abbreviation

- G : German model.
- IT : Italian model.
- EA : Saudi Arabia model.
- TH : Thailand model

#### Display Window

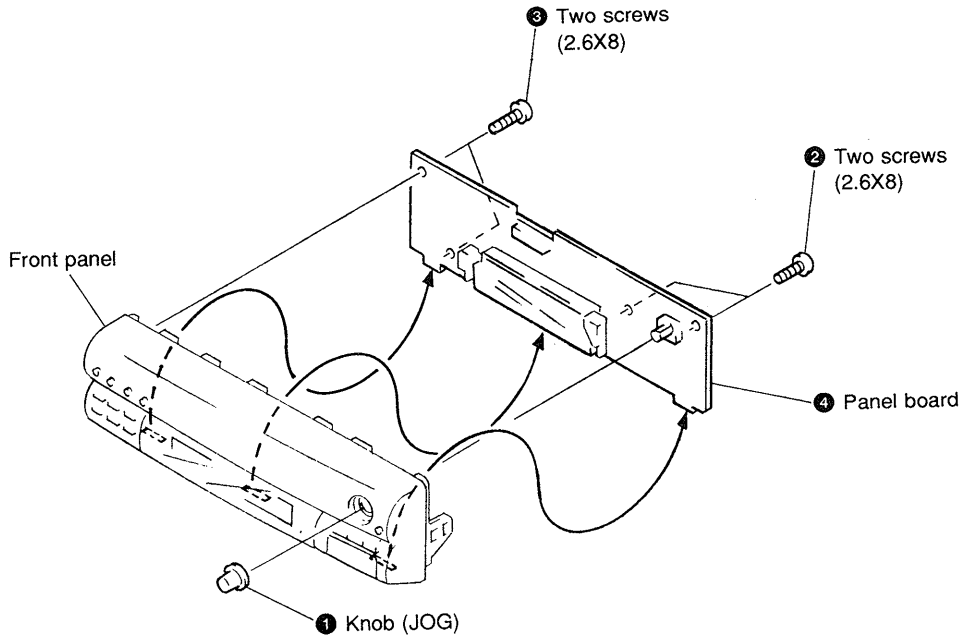


- 1 RDS service indications (12) (AEP, UK, G, IT)
- 2 Tuner indication (10)
- 3 Frequency/station name/time/timer  
indication (6, 10, 11, 25)

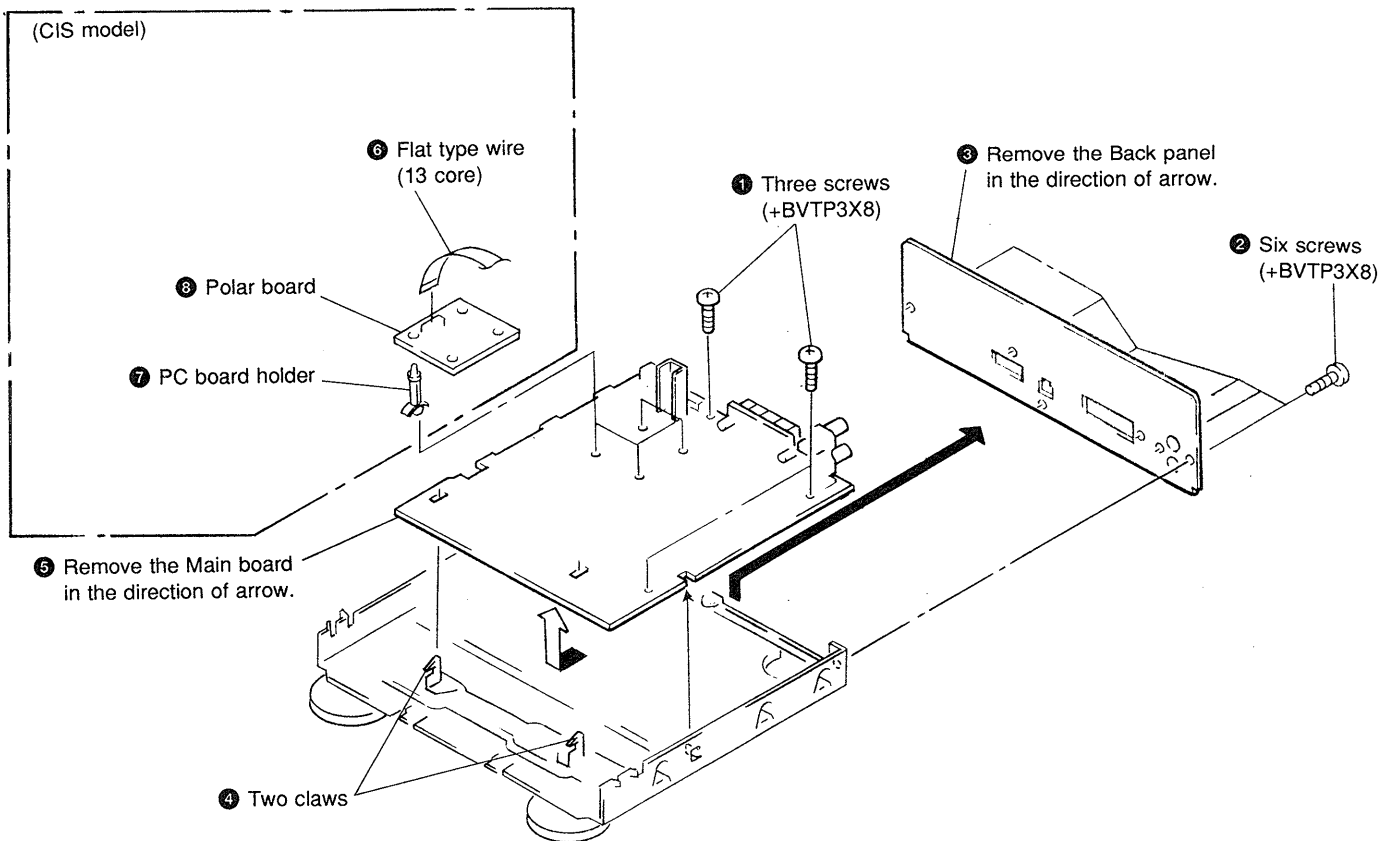
## SECTION 3 DISASSEMBLY

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

### 3-1. PANEL BOARD



### 3-2. BACK PANEL, MAIN BOARD AND POLAR BOARD



## SECTION 4

### ELECTRICAL ADJUSTMENTS

#### Precautions in Repairing

If the front unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

The FM TUNED level must be adjusted after the AM TUNED level adjustment has completed.

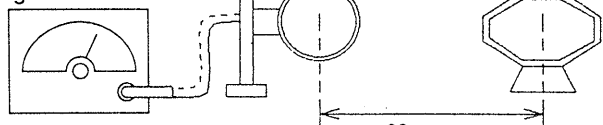
#### AM SECTION

#### AM Tuning Level Adjustment

##### Setting :

BAND switch : MW (AM)

AM RF signal generator      loop antenna      loop antenna supplied accessories



30% amplitude modulation by 400Hz signal  
 field strength dB ( $\mu\text{V}/\text{m}$ ) = RF SSG output level dB ( $\mu\text{V}/\text{m}$ ) -26dB.

Carrier frequency : 999kHz (at 9k step)  
 1,000kHz (at 10k step)

Output level : 25dB $\mu$

##### Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes 55dB $\mu$ /m.
2. Tune the set to 999kHz or 1,000 kHz.
3. Adjust RV1 so that the TUNED indicator goes on.

**Adjustment Location :** MAIN board. (See page 7)

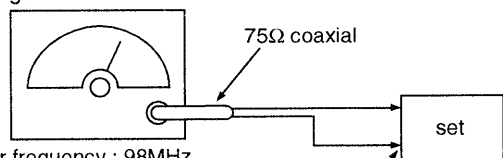
#### FM SECTION

#### FM Tuning Level Adjustment

##### Setting :

BAND switch : FM

FM RF signal generator



Carrier frequency : 98MHz  
 Moduration : AUDIO 1kHz, 75kHz deviation (100%)  
 Output level : 26dB $\mu$  (17.8 $\mu\text{V}$ )

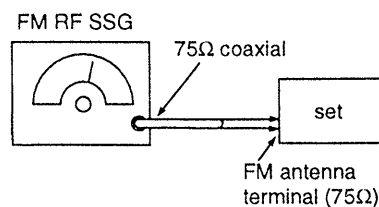
##### Procedure :

1. Tune the set to 98MHz.
2. Adjust RV2 so that the TUNED indicator goes on.

**Adjustment Location :** MAIN board. (See page 7)

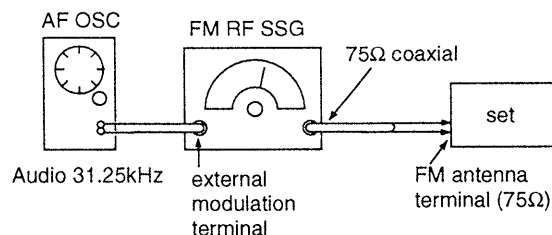
#### FM Polar Adjustment (CIS model only)

##### Connection 1 :



Carrier frequency : 69MHz  
 Output level : 1mV (60dB $\mu$ ) (at 75 $\Omega$  open)  
 Modulation : AUDIO 1kHz, 10kHz deviation

##### Connection 2 :



Carrier frequency : 69MHz  
 Output level : 1mV (60dB $\mu$ ) (at 75 $\Omega$  open)  
 Modulation : AUDIO 31.25kHz, 10kHz deviation (EXTERNAL MODULATION)

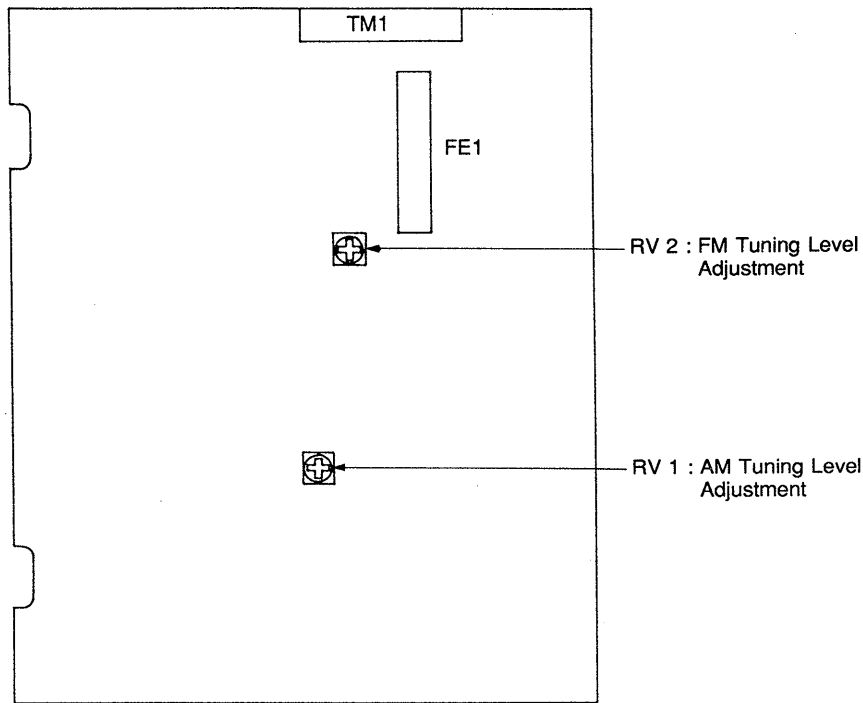
##### Procedure :

1. Set the modulation of FM RF SSG to AUDIO 1 kHz, 10 kHz deviation according to "Connection 1".
2. Tune the set to 69 MHz.
3. Adjust the RV1702 so that the reading of frequency counter connected to TP1702 becomes within 31.25 kHz  $\pm$  0.05 kHz. (VCO frequency adjustment)
4. Then record the reading of the level meter connected to TP1701.
5. Set the modulation of FM RF SSG to AUDIO 31.25 kHz, 10 kHz deviation according to "Connection 2".
6. Tune the set to 69 MHz.
7. Set the CT1701 to be mechanical center.
8. Adjust the L1701 so that the reading of the level meter connected to TP1701 becomes maximum. Then adjust the CT1701 so that the reading of the level meter connected to TP1701 becomes maximum. (SUB CARRIER PEAK Adjustment)
9. Adjust the RV1701 so that the level at the moment becomes 14 dB higher value than the level recorded in step 4. (SUB CARRIER LEVEL Adjustment)

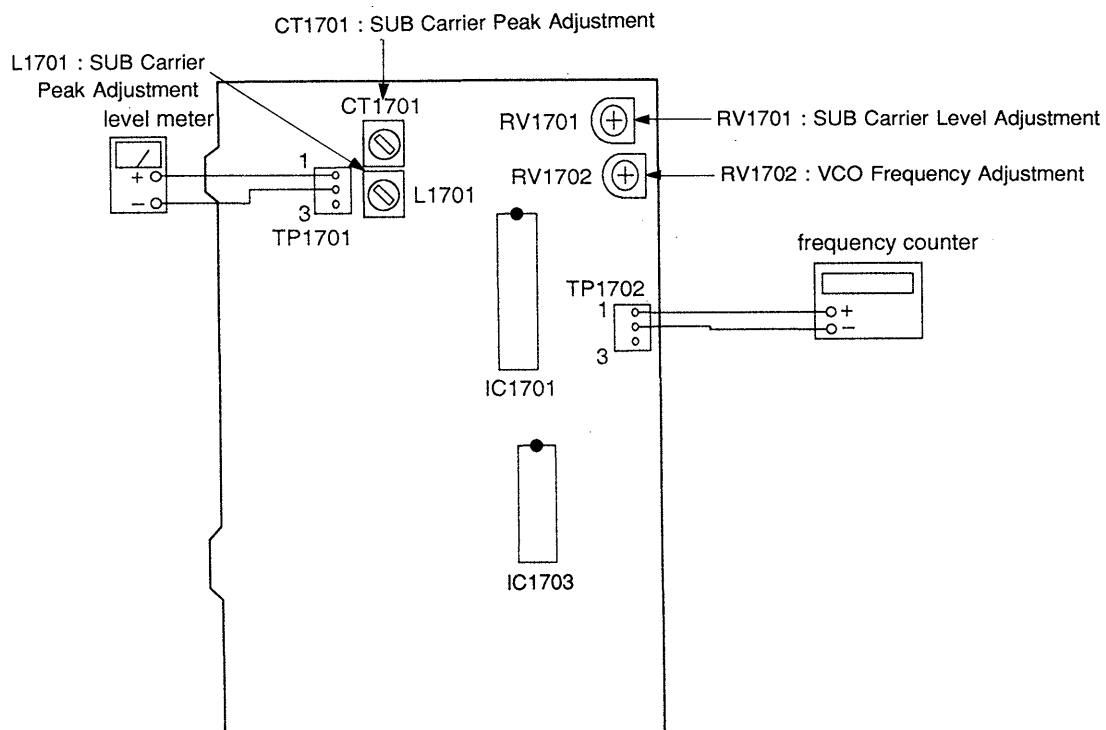
**Adjustment Location :** Polar board. (See page 7)

**Adjustment Location**

**[MAIN BOARD] — Component side —**



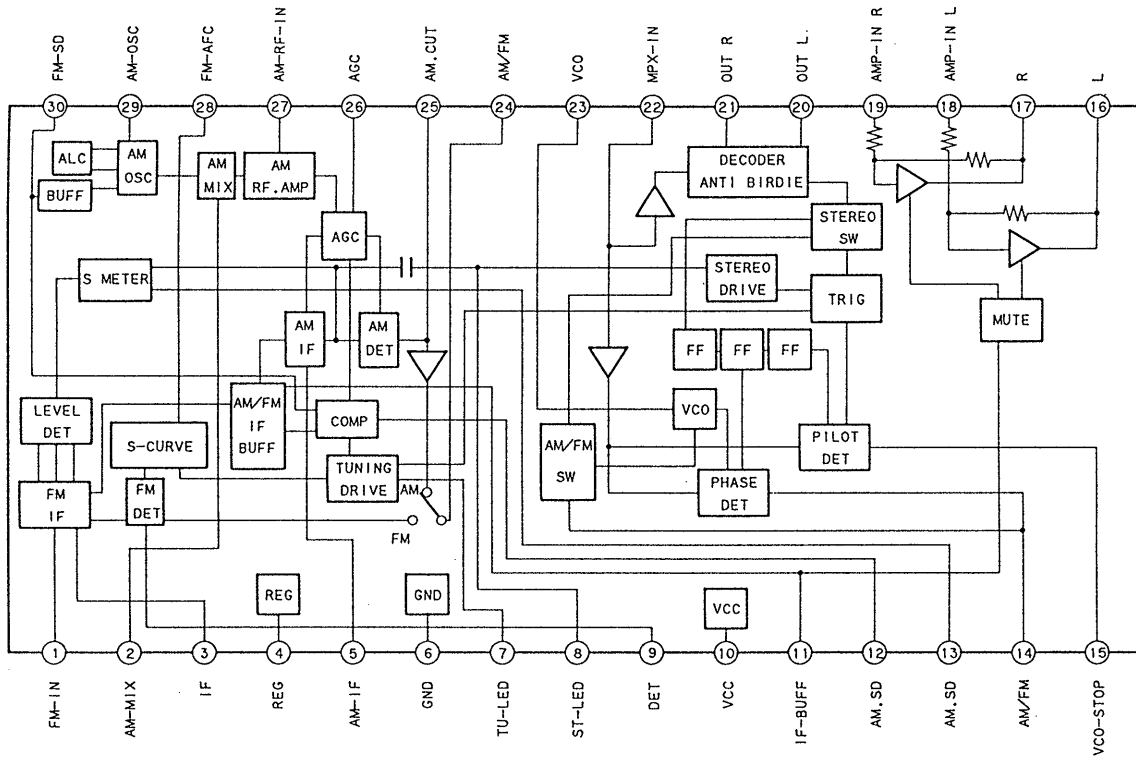
**[POLAR BOARD] — Component side —**



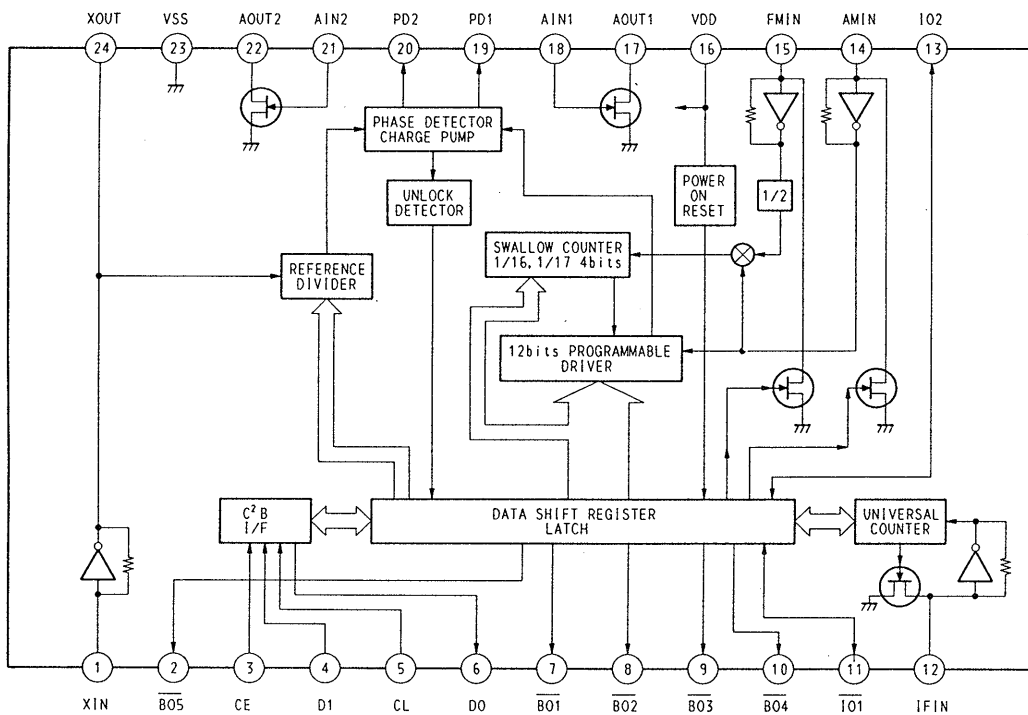
# SECTION 5 DIAGRAMS

## 5-1. IC BLOCK DIAGRAMS

**IC1 LA1835**

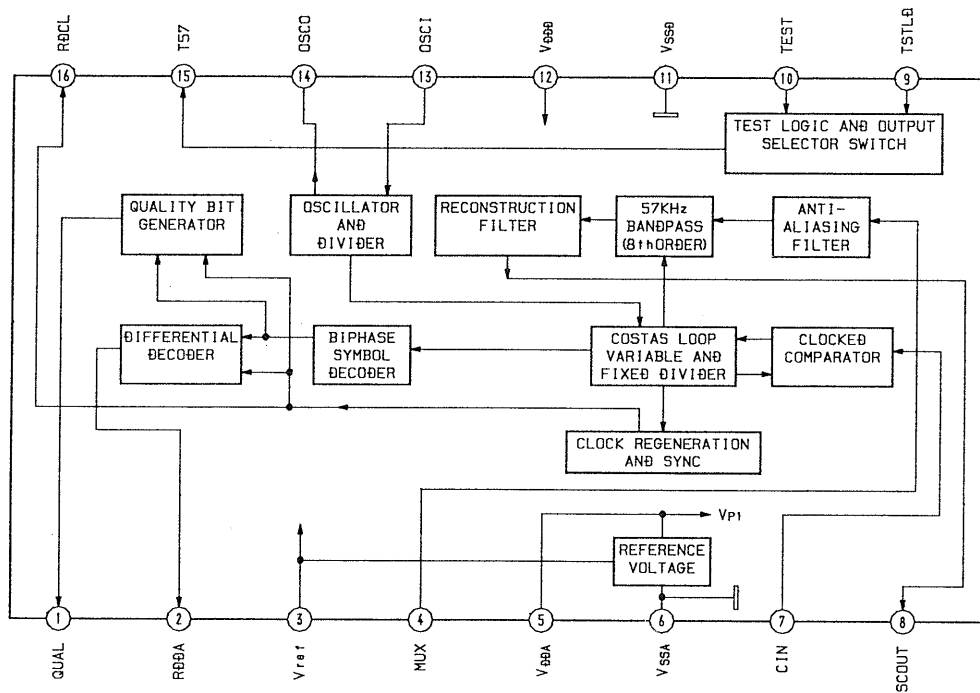


**IC51 LC72130**

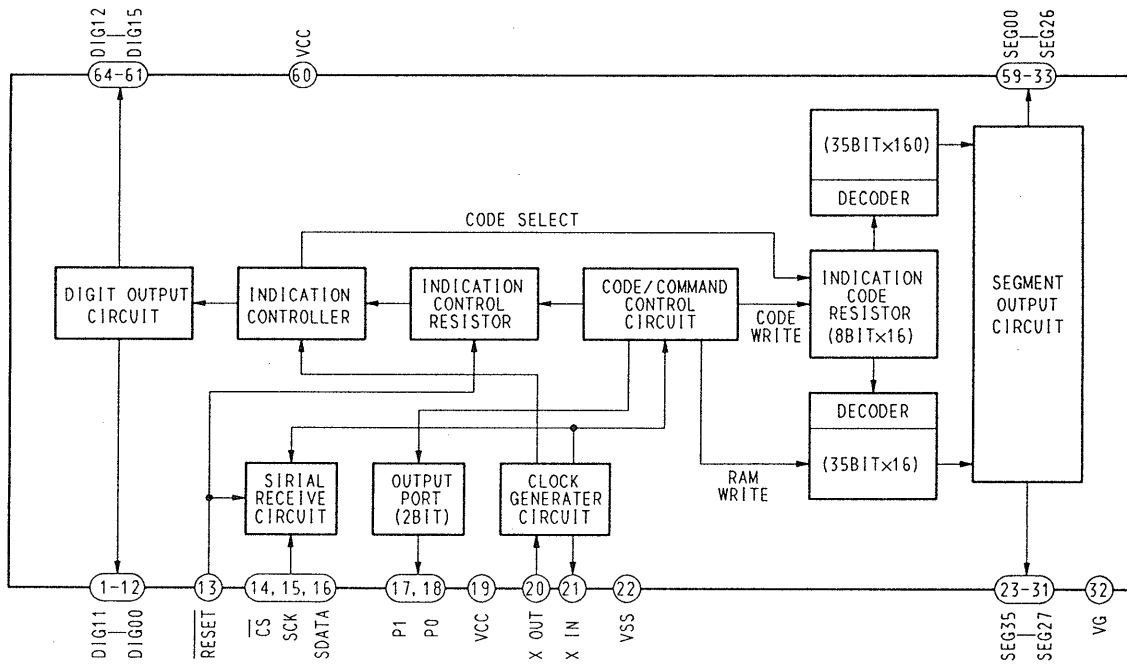




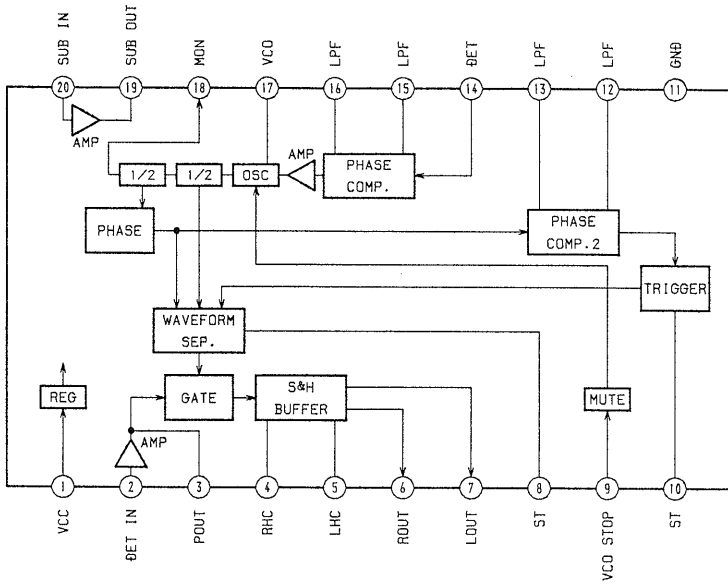
IC302 SAA6579



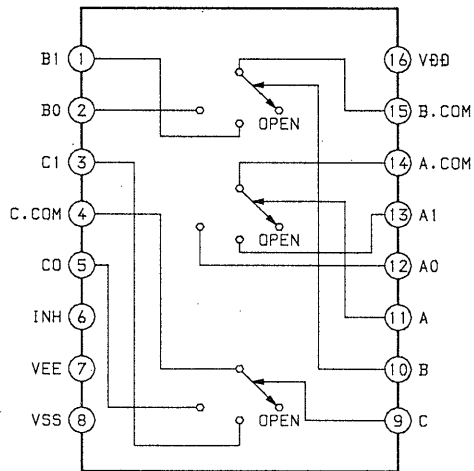
IC601 M66004M6FP



**IC1701 IR3R42**



**IC1703 MC14053BCP**

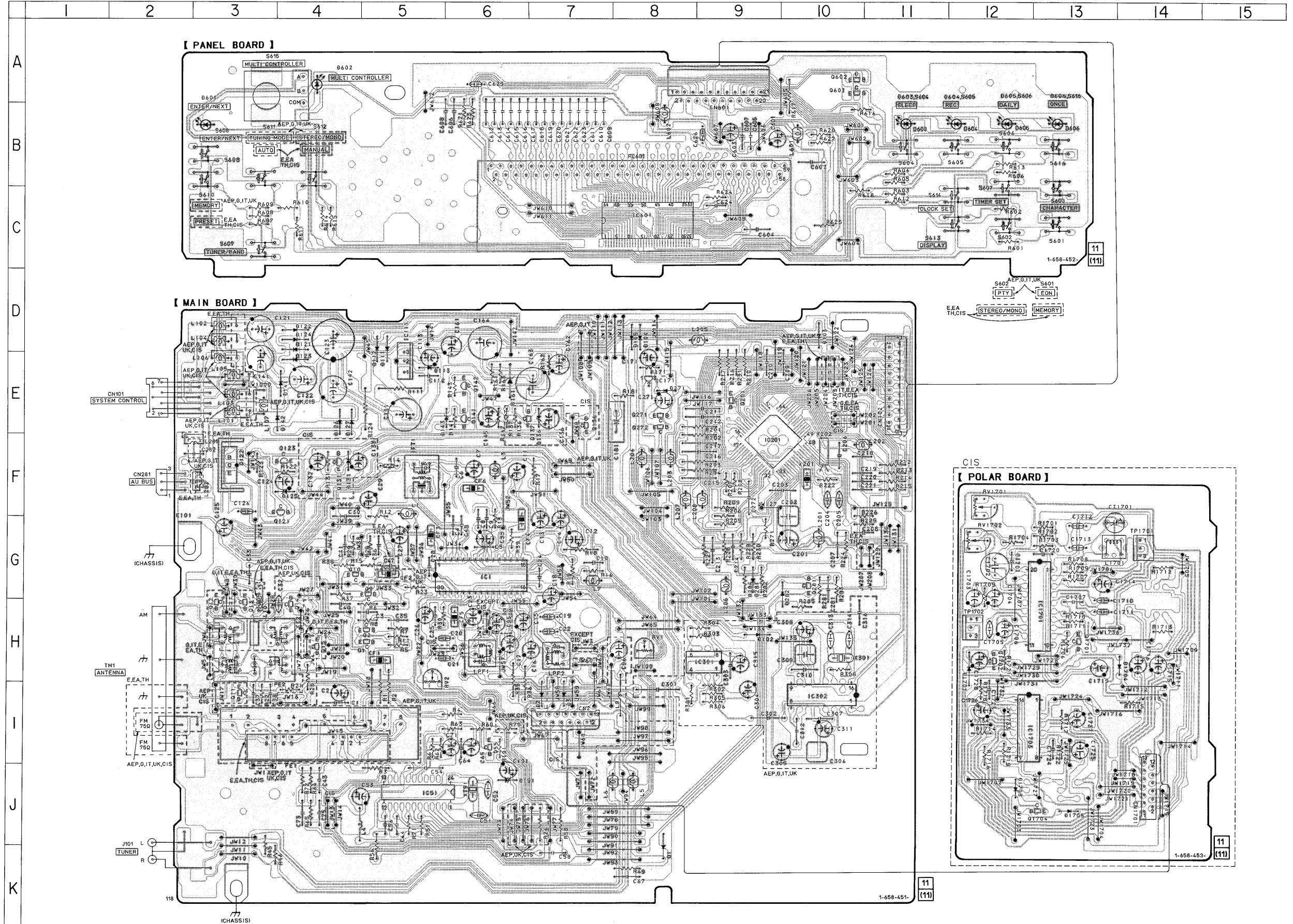


5-2. PRINTED WIRING BOARD

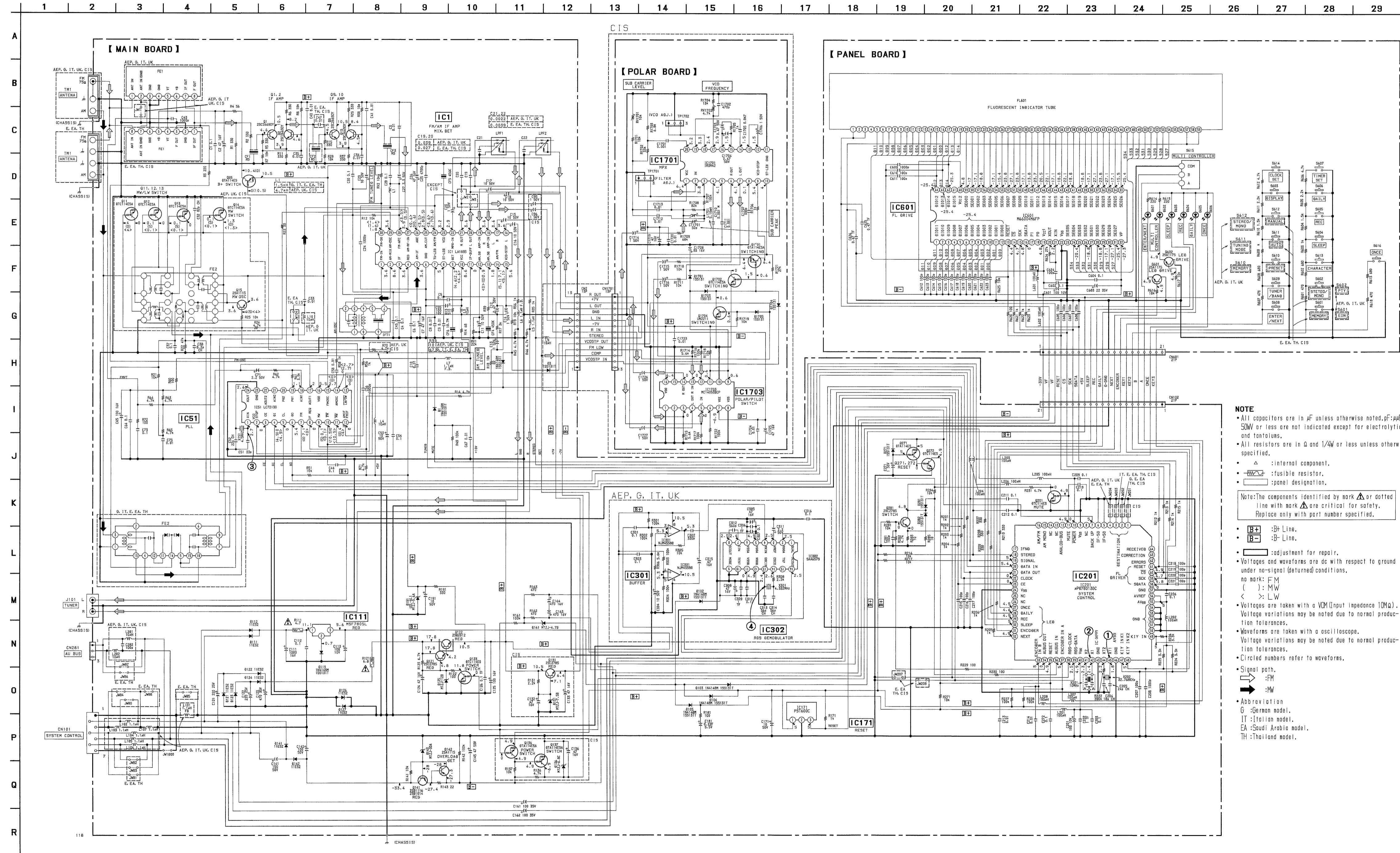
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	K-8	IC1	G-6
D2	I-7	IC51	J-5
D3	I-7	IC111	E-5
D102	H-9	IC171	E-8
D103	D-10	IC201	F-9
D104	D-8	IC301	H-9
D105	D-8	IC302	I-10
D111	D-5	IC601	C-8
D112	D-5	IC1701	H-3
D113	E-5	IC1703	I-12
D121	E-4		
D122	D-4	Q1	H-5
D123	E-4	Q2	H-5
D124	D-4	Q9	G-5
D125	F-4	Q10	G-4
D126	E-4	Q11	I-3
D127	E-4	Q12	H-3
D131	F-4	Q13	H-3
D136	E-7	Q14	H-4
D141	E-4	Q15	H-4
D142	E-4	Q55	I-6
D143	E-6	Q121	F-4
D161	E-6	Q122	F-3
D191	J-6	Q123	F-4
D271	E-8	Q131	F-4
D281	G-9	Q136	E-7
D282	G-10	Q137	E-7
D601	B-3	Q141	E-6
D602	A-4	Q142	E-6
D603	B-11	Q201	E-9
D604	B-12	Q271	E-8
D605	B-12	Q272	E-8
D606	B-13	Q281	G-10
D1701	H-12	Q601	A-10
D1703	J-12	Q602	A-10
D1704	H-14	Q1701	H-13
D1705	J-13	Q1702	H-12
		Q1704	J-13

- Note:**
- : parts extracted from the component side.
  - : parts extracted from the conductor side.
  - △ : internal component.
  - : Pattern from the side which enable seeing.
- Abbreviation**
- G : German model.
  - IT : Italian model.
  - EA : Saudi Arabia model.
  - TH : Thailand model.

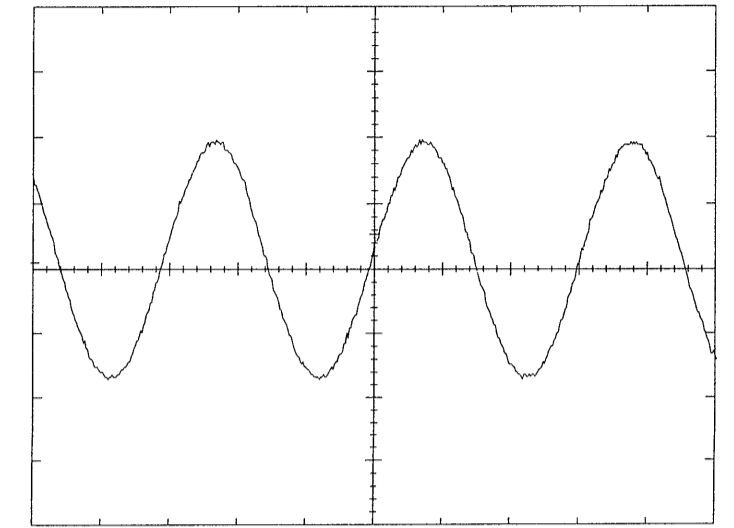


5-3. SCHEMATIC DIAGRAM  
• See page 8 for IC Block Diagrams.  
• See page 17 for IC Pin Function. (IC201)

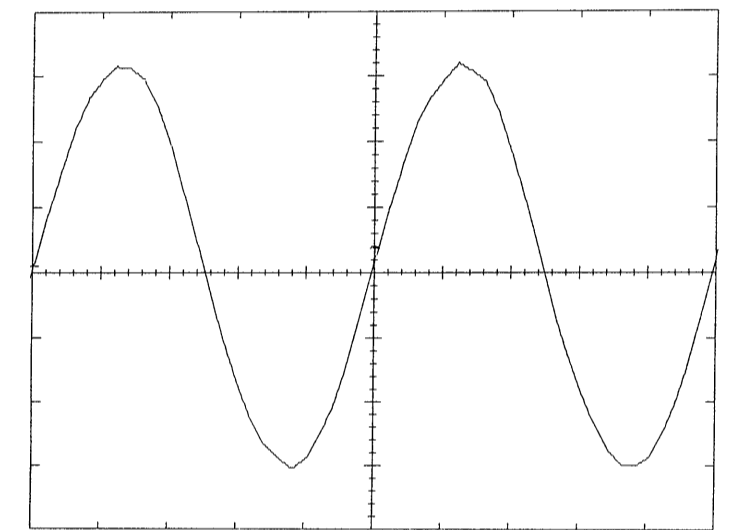


• Waveforms

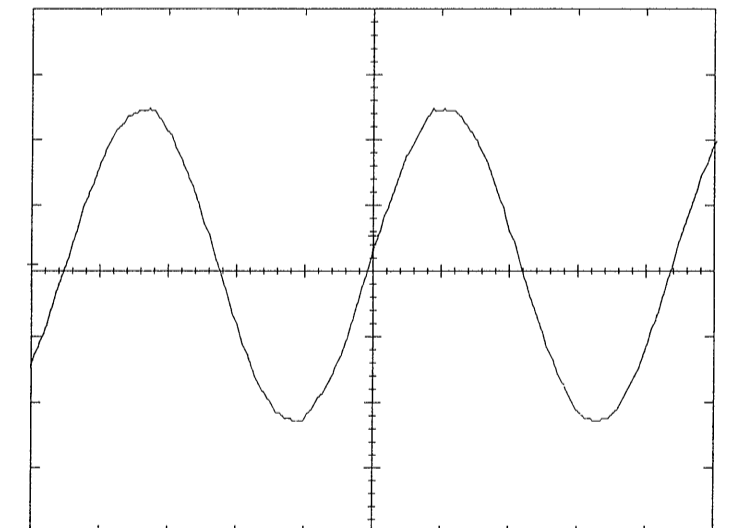
① IC201 @ pin 1.8 Vp-p 32.768 kHz



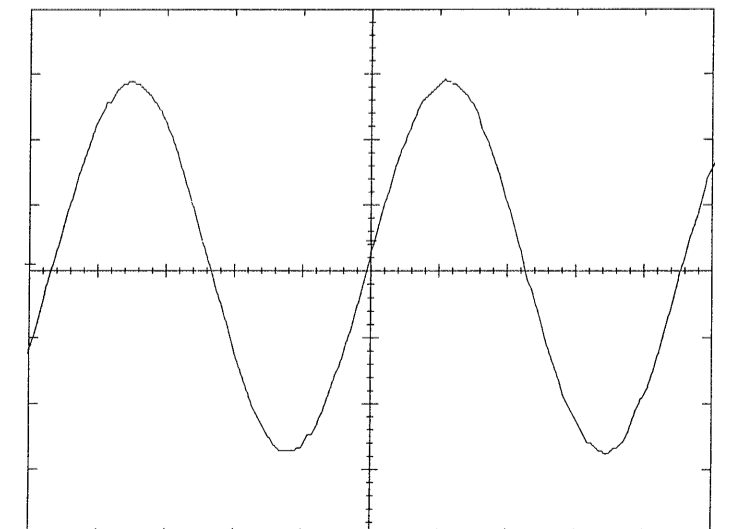
② IC201 @ pin 3.1 Vp-p 10 MHz



③ IC51 ① pin 2.4 Vp-p 4.5 MHz



④ IC302 @ pin 2.8 Vp-p 4.332 MHz



**NOTE**  
• All capacitors are in  $\mu\text{F}$  unless otherwise noted; pF:  $\mu\text{F}$  50W or less are not indicated except for electrolytics and tantalums.  
• All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.  
•  $\Delta$ : internal component.  
•  $\square$ : fusible resistor.  
•  $\square$ : 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.  
•  $\square$ : B+ Line.  
•  $\square$ : B- Line.  
•  $\square$ : adjustment for repair.  
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
( ): 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  
• Abbreviation  
G : German model.  
IT : Italian model.  
EA : Saudi Arabia model.  
TH : Thailand model.

## 5-4. IC PIN FUNCTION

### • IC201 SYSTEM CONTROL ( $\mu$ PD78013GC)

Pin No.	Pin Name	I/O	Function
1	DESTINATION	I	Destination selection input.
2	DESTINATION	I	
3	DESTINATION	I	
4	DESTINATION	I	
5	IF +50	I	Not used. (Ground)
6	IF -50	O	
7	BACK UP	I	Back up mode input.
8	NC	-	Not used. (open)
9	Vss	-	Ground
10	POWER	O	Power ON/OFF switch control.
11	MUTE	O	Mute output.
12	ANALOG BUS	-	Not used. (open)
13	NC	-	
14	NC	-	
15	AM MONO	-	
16	AM/FM	-	
17	IFNG	-	
18	STEREO	I	STEREO signal input.
19	SIGNAL	I	TUNED signal input.
20	DATA IN	I	Data input. (LC72130, PLL)
21	DATA OUT	O	Data output. (LC72130, PLL)
22	CLOCK	O	Clock output. (LC72130, PLL)
23	CE	O	Chip Enable output. (LC72130, PLL)
24	Vss	-	Ground
25	NC	-	Not used. (open)
26	NC	-	
27	ONCE	O	LED drive output.
28	DAILY	O	
29	REC	O	
30	SLEEP	O	
31	ENCODER	O	
32	NEXT	O	
33	ENCODER IN B	I	ENCODER input. (B)
34	AU BUS OUT	O	Audio bus output.
35	RESET	I	SYSTEM RESET input.
36	AU BUS IN	I	Audio bus input.
37	ENCODER IN A	I	ENCODER input. (A)
38	RDS-CLOCK	I	RDS clock input.
39	RDS-DATA	I	RDS data input.
40	VDD	-	Power supply 5V.

Pin No.	Pin Name	I/O	Function
41	X2	O	} System main clock. (10 MHz)
42	X1	I	
43	GND	—	Ground
44	XT2	O	} System sub clock. (32.768 kHz)
45	XT1	I	
46	GND	—	Ground
47	KEY IN K1	I	} Key input. (analog)
48	KEY IN K2	I	
49	KEY IN	I	
50	GND	—	} Ground
51	GND	—	
52	GND	—	
53	GND	—	
54	GND	—	
55	AVDD	—	Analog power supply +5V.
56	AVREF	—	Analog system reference voltage input.
57	GND	—	Ground
58	SDATA	O	Fluorescent tube data output. (IC601)
59	SCK	O	Fluorescent tube clock output. (IC601)
60	$\overline{CS}$	O	Fluorescent tube chip select signal output. (IC601)
61	RESET	O	Fluorescent tube reset signal output. (IC601)
62	ERRORS	I	} Note used. (open)
63	CORRECTION	O	
64	RECEIVED	O	

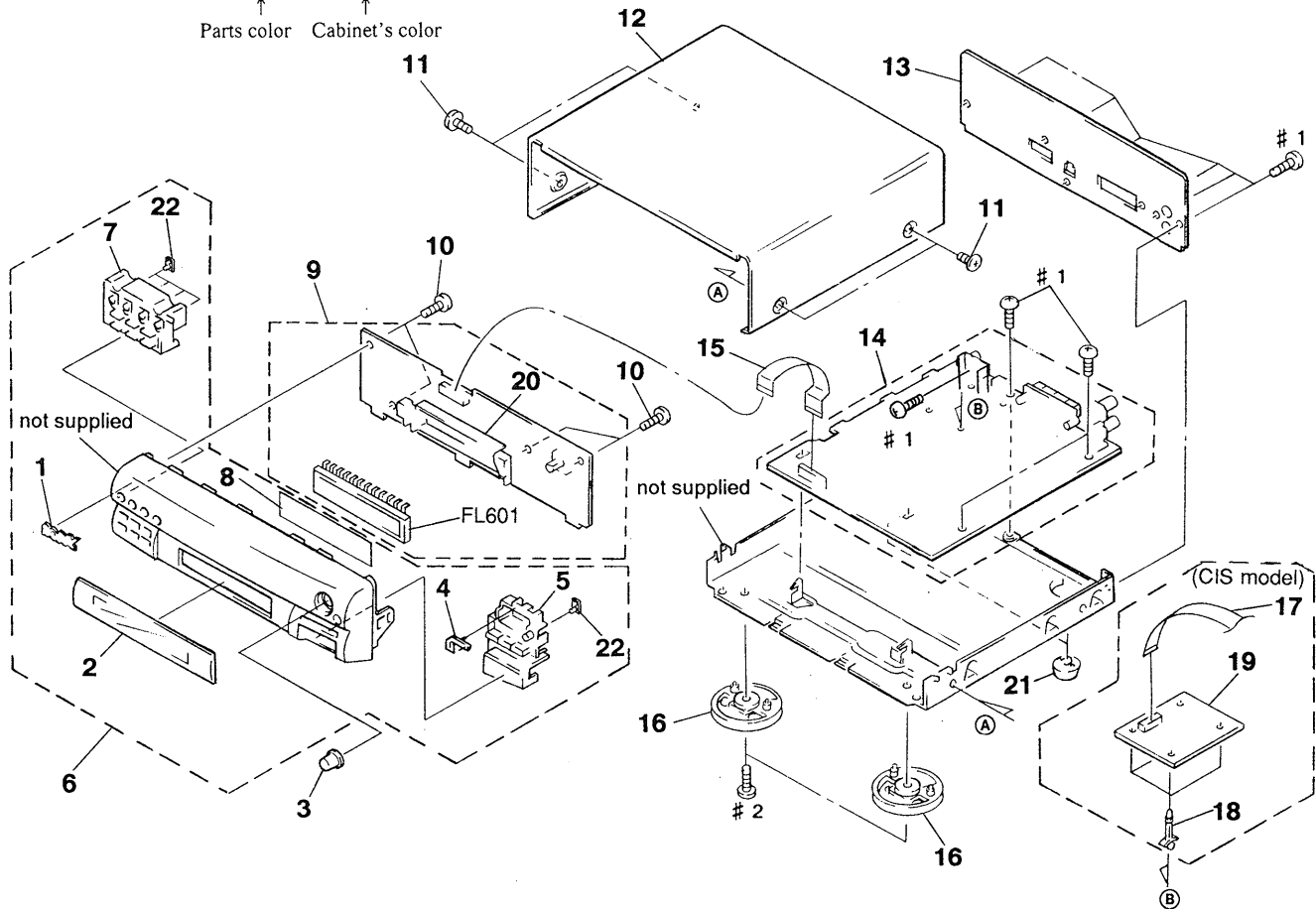
# SECTION 6 EXPLODED VIEW

**NOTE:**

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE) ... (RED)

- 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  
G : German model  
IT : Italian model  
EA : Saudi Arabia model  
TH : Thailand model



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-962-708-11	EMBLEM (4-A), SONY		11	3-363-099-01	SCREW (CASE 3 TP2)	
2	X-4946-909-1	WINDOW (FL) ASSY (for SILVER)		* 12	4-970-927-21	CASE (BLACK)	
2	X-4946-912-1	WINDOW (FL) ASSY (for BLACK)		* 12	4-970-927-41	CASE (SILVER)	
3	4-977-680-11	KNOB (JOG) (GRAY)... (SILVER)		* 13	4-978-999-01	PANEL, BACK (E)	
3	4-977-680-21	KNOB (JOG) (BLACK)... (BLACK)		* 13	4-978-999-11	PANEL, BACK (Made in France) (AEP, UK, G, IT, CIS)	
4	4-977-705-11	INDICATOR (JOG)		* 13	4-978-999-21	PANEL, BACK (Made in Malaysia) (AEP, UK)	
5	4-977-704-11	BUTTON (BAND) (GRAY)... (SILVER) (AEP, UK, G, IT)		* 13	4-978-999-31	PANEL, BACK (EA)	
5	4-977-704-21	BUTTON (BAND) (GRAY)... (SILVER) (E, CIS, EA, TH)		* 13	4-978-999-41	PANEL, BACK (TH)	
5	4-977-704-31	BUTTON (BAND) (BLACK)... (BLACK) (AEP, UK, G, IT)		* 14	A-4378-850-A	MAIN BOARD, COMPLETE (E, EA, TH)	
6	X-4946-594-1	PANEL ASSY (S), FRONT (SILVER) (E, EA)		* 14	A-4378-863-A	MAIN BOARD, COMPLETE (AEP, UK)	
6	X-4946-834-1	PANEL ASSY (BP), FRONT (BLACK) (AEP, UK, G, IT)		* 14	A-4378-865-A	MAIN BOARD, COMPLETE (G)	
6	X-4946-956-1	PANEL ASSY (SP), FRONT (SILVER) (CIS, TH)		* 14	A-4389-478-A	MAIN BOARD, COMPLETE (IT)	
6	X-4946-965-1	PANEL ASSY (SP), FRONT (SILVER) (AEP, UK, G, IT)		* 14	A-4389-479-A	MAIN BOARD, COMPLETE (CIS)	
7	4-977-703-11	BUTTON (TIMER) (GRAY)... (SILVER) (AEP, UK, G, E, CIS, EA, TH)		15	1-773-144-11	WIRE (FLAT TYPE) (21 CORE)	
7	4-977-703-21	BUTTON (TIMER) (BLACK)... (BLACK) (AEP, UK, G, IT)		16	4-977-699-11	LEG (F)	
8	4-979-353-11	FILTER (MD)		17	1-751-688-11	WIRE (FLAT TYPE) (13 CORE) (CIS)	
* 9	A-4378-851-A	PANEL BOARD, COMPLETE (E, EA, TH)		18	4-924-098-91	HOLDER, PC BOARD (CIS)	
* 9	A-4378-864-A	PANEL BOARD, COMPLETE (AEP, UK, G, IT, CIS)		* 19	A-4389-480-A	POLAR BOARD, COMPLETE (CIS)	
* 9	4-951-620-01	SCREW (2.6X8), +BVTP		* 20	4-979-798-01	HOLDER (FL)	
10				21	4-965-822-01	FOOT	
				22	4-977-674-11	INDICATOR (ENTER)	
				FL601	1-517-368-11	INDICATOR TUBE, FLUORESCENT	

**MAIN**

**SECTION 7  
ELECTRICAL PARTS LIST**

NOTE:

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 name.

- 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.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable

- 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
- Abbreviation  
G : German model  
IT : Italian model  
EA : Saudi Arabia model  
TH : Thailand model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4378-863-A	MAIN BOARD, COMPLETE (AEP, UK) *****		C21	1-137-436-11	FILM 0.0039uF 5% 50V (E, EA, TH, CIS)	
*	A-4378-850-A	MAIN BOARD, COMPLETE (E, EA, TH) *****		C22	1-137-389-11	FILM 0.0022uF 5% 100V (AEP, G, IT, UK)	
*	A-4378-865-A	MAIN BOARD, COMPLETE (G) *****		C22	1-137-436-11	FILM 0.0039uF 5% 50V (E, EA, TH, CIS)	
*	A-4389-478-A	MAIN BORAD, COMPLETE (IT) *****		C23	1-124-903-11	ELECT 1uF 20% 50V	
*	A-4389-479-A	MAIN BOARD, COMPLETE (CIS) *****		C24	1-162-294-31	CERAMIC 0.001uF 10% 50V	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S		C25	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
		< CAPACITOR >		C26	1-126-967-11	ELECT 47uF 20% 16V	
C1	1-164-159-21	CERAMIC 0.1uF 50V		C27	1-126-962-11	ELECT 3.3uF 20% 50V	
C2	1-126-967-11	ELECT 47uF 20% 16V		C28	1-164-159-21	CERAMIC 0.1uF 50V	
C3	1-162-306-11	CERAMIC 0.01uF 30% 16V		C29	1-126-964-11	ELECT 10uF 20% 50V	
C4	1-164-159-21	CERAMIC 0.1uF 50V		C30	1-164-159-21	CERAMIC 0.1uF 50V	
C5	1-164-159-21	CERAMIC 0.1uF 50V		C32	1-102-527-11	CERAMIC 82PF 5% 50V (AEP, UK, CIS)	
C6	1-164-159-21	CERAMIC 0.1uF 50V		C33	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C7	1-126-967-11	ELECT 47uF 20% 16V		C35	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C8	1-162-306-11	CERAMIC 0.01uF 30% 16V		C36	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C9	1-162-306-11	CERAMIC 0.01uF 30% 16V		C37	1-164-159-21	CERAMIC 0.1uF 50V	
C10	1-162-306-11	CERAMIC 0.01uF 30% 16V		C38	1-162-198-31	CERAMIC 8.2PF 10% 50V	
C11	1-126-964-11	ELECT 10uF 20% 50V		C40	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C12	1-124-902-00	ELECT 0.47uF 20% 50V		C41	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C13	1-124-903-11	ELECT 1uF 20% 50V		C43	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C14	1-124-903-11	ELECT 1uF 20% 50V		C44	1-164-159-21	CERAMIC 0.1uF 50V	
C15	1-126-964-11	ELECT 10uF 20% 50V		C45	1-164-159-21	CERAMIC 0.1uF 50V	
C16	1-126-964-11	ELECT 10uF 20% 50V		C47	1-102-129-00	CERAMIC 0.01uF 10% 50V (E, EA, TH, CIS)	
C17	1-126-964-11	ELECT 10uF 20% 50V		C51	1-102-518-11	CERAMIC 33PF 5% 50V	
C18	1-126-964-11	ELECT 10uF 20% 50V		C52	1-102-959-00	CERAMIC 22PF 5% 50V	
C19	1-136-160-00	FILM 0.039uF 5% 50V (AEP, G, IT, UK)		C53	1-126-964-11	ELECT 10uF 20% 50V	
C19	1-136-158-00	FILM 0.027uF 5% 50V (E, EA, TH, CIS)		C54	1-164-159-21	CERAMIC 0.1uF 50V	
C20	1-136-160-00	FILM 0.039uF 5% 50V (AEP, G, IT, UK)		C55	1-126-933-11	ELECT 100uF 20% 10V	
C20	1-136-158-00	FILM 0.027uF 5% 50V (E, EA, TH, CIS)		C56	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C21	1-137-389-11	FILM 0.0022uF 5% 100V (AEP, G, IT, UK)		C58	1-162-306-11	CERAMIC 0.01uF 30% 16V	
				C64	1-164-159-21	CERAMIC 0.1uF 50V	
				C65	1-126-933-11	ELECT 100uF 20% 16V	
				C67	1-162-306-11	CERAMIC 0.01uF 30% 16V	
				C71	1-124-925-11	ELECT 2.2uF 20% 100V	
				C73	1-164-159-21	CERAMIC 0.1uF 50V	
				C75	1-162-306-11	CERAMIC 0.01uF 30% 16V	
				C95	1-124-903-11	ELECT 1uF 20% 50V (CIS)	



Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark
C96	1-124-903-11	ELECT	1uF	20%	50V (CIS)	C302	1-162-288-31	CERAMIC	330PF 10% 50V (AEP, G, IT, UK)
C111	1-126-952-11	ELECT	1000uF	20%	16V				
C112	1-164-159-21	CERAMIC	0. 1uF		50V				
C113	1-126-933-11	ELECT	100uF	20%	10V	C303	1-164-159-21	CERAMIC	0. 1uF 50V (AEP, G, IT, UK)
C121	1-104-666-11	ELECT	220uF	20%	25V	C304	1-126-964-11	ELECT	10uF 20% 50V (AEP, G, IT, UK)
C122	1-104-666-11	ELECT	220uF	20%	25V				
C123	1-126-951-11	ELECT	470uF	20%	35V	C305	1-126-967-11	ELECT	47uF 20% 16V (AEP, G, IT, UK)
C124	1-126-967-11	ELECT	47uF	20%	16V				
C125	1-126-933-11	ELECT	100uF	20%	16V	C306	1-136-177-00	FILM	1uF 5% 50V (AEP, G, IT, UK)
C126	1-136-165-00	FILM	0. 1uF	5%	50V	C307	1-164-159-21	CERAMIC	0. 1uF 50V (AEP, G, IT, UK)
C132	1-126-967-11	ELECT	47uF	20%	16V (CIS)				
C133	1-126-967-11	ELECT	47uF	20%	16V (CIS)				
C136	1-126-967-11	ELECT	47uF	20%	16V (CIS)	C308	1-126-967-11	ELECT	47uF 20% 16V (AEP, G, IT, UK)
C141	1-126-968-11	ELECT	100uF	20%	50V	C309	1-136-177-00	FILM	1uF 5% 50V (AEP, G, IT, UK)
C142	1-126-968-11	ELECT	100uF	20%	50V				
C145	1-126-967-11	ELECT	47uF	20%	50V	C310	1-164-159-21	CERAMIC	0. 1uF 50V (AEP, G, IT, UK)
C161	1-126-948-11	ELECT	100uF	20%	35V	C311	1-124-925-11	ELECT	2. 2uF 20% 100V (AEP, G, IT, UK)
C162	1-126-948-11	ELECT	100uF	20%	35V				
C163	1-126-935-11	ELECT	470uF	20%	16V	C312	1-162-291-31	CERAMIC	560PF 10% 50V (AEP, G, IT, UK)
C164	1-126-935-11	ELECT	470uF	20%	16V				
C171	1-126-964-11	ELECT	10uF	20%	50V	C313	1-101-884-00	CERAMIC	56PF 5% 50V (AEP, G, IT, UK)
C181	1-125-705-11	CAPACITOR	0. 22F	0	5. 5V				
C191	1-126-964-11	ELECT	10uF	20%	50V	C314	1-101-884-00	CERAMIC	56PF 5% 50V (AEP, G, IT, UK)
C201	1-126-933-11	ELECT	100uF	20%	10V				
C202	1-136-177-00	FILM	1uF	5%	50V	C315	1-126-967-11	ELECT	47uF 20% 16V (AEP, G, IT, UK)
C203	1-164-159-21	CERAMIC	0. 1uF		50V				
C204	1-102-953-00	CERAMIC	18PF	5%	50V	C316	1-164-159-21	CERAMIC	0. 1uF 50V (AEP, G, IT, UK)
C205	1-102-960-00	CERAMIC	24PF	5%	50V				
C206	1-164-159-21	CERAMIC	0. 1uF		50V				
C207	1-162-282-31	CERAMIC	100PF	10%	50V				< FILTER >
C208	1-162-294-31	CERAMIC	0. 001uF	10%	50V	CF1	1-579-374-71	FILTER, CERAMIC	(AEP, G, IT, UK)
C209	1-164-159-21	CERAMIC	0. 1uF		50V	CF1	1-567-389-11	FILTER, CERAMIC	(E, EA, TH, CIS)
C210	1-164-159-21	CERAMIC	0. 1uF		50V	CF2	1-760-393-11	FILTER, CERAMIC	(AEP, G, IT, UK)
C211	1-164-159-21	CERAMIC	0. 1uF		50V	CF3	1-760-393-11	FILTER, CERAMIC	(AEP, G, IT, UK)
C212	1-164-159-21	CERAMIC	0. 1uF		50V	CF3	1-567-389-11	FILTER, CERAMIC	(E, EA, TH, CIS)
C213	1-162-306-11	CERAMIC	0. 01uF	30%	16V	CF4	1-527-981-00	FILTER, CERAMIC	
C214	1-162-306-11	CERAMIC	0. 01uF	30%	16V	CF5	1-577-075-11	OSCILLATOR, CERAMIC	
C215	1-162-282-31	CERAMIC	100PF	10%	50V	CF6	1-760-220-11	FILTER, CERAMIC	
C216	1-162-282-31	CERAMIC	100PF	10%	50V				< CONNECTOR >
C217	1-162-282-31	CERAMIC	100PF	10%	50V	* CN2	1-568-832-11	SOCKET, CONNECTOR 13P	(CIS)
C218	1-162-282-31	CERAMIC	100PF	10%	50V	CN101	1-770-158-21	HOUSING, CONNECTOR 7P	(SYSTEM CONTROL)
C219	1-162-282-31	CERAMIC	100PF	10%	50V	CN102	1-568-838-11	SOCKET, CONNECTOR 21P	
C220	1-162-282-31	CERAMIC	100PF	10%	50V	* CN281	1-565-561-11	PIN, CONNECTOR 3P	(AU BUS)
C221	1-162-282-31	CERAMIC	100PF	10%	50V				< DIODE >
C271	1-124-903-11	ELECT	1uF	20%	50V	D1	8-719-815-85	DIODE	1S1585
C272	1-164-159-21	CERAMIC	0. 1uF		50V	D2	8-719-815-85	DIODE	1S1585
C281	1-162-282-31	CERAMIC	100PF	10%	50V	D3	8-719-815-85	DIODE	1S1585 (CIS)
C282	1-162-282-31	CERAMIC	100PF	10%	50V (AEP, G, IT, UK, CIS)	D102	8-719-815-85	DIODE	1S1585 (AEP, G, IT, UK)
C301	1-164-159-21	CERAMIC	0. 1uF		50V (AEP, G, IT, UK)	D103	8-719-815-85	DIODE	1S1585

# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D104	8-719-815-85	DIODE 1S1585		L4	1-410-509-11	INDUCTOR 10uH	
D105	8-719-815-85	DIODE 1S1585		L5	1-410-397-21	FERRITE BEAD INDUCTOR	
D111	8-719-200-82	DIODE 11ES2		L6	1-410-397-21	FERRITE BEAD INDUCTOR	
D112	8-719-200-82	DIODE 11ES2		L7	1-410-397-21	FERRITE BEAD INDUCTOR	
D113	8-719-815-85	DIODE 1S1585		L9	1-410-509-11	INDUCTOR 10uH (CIS)	
D121	8-719-200-82	DIODE 11ES2		L10	1-414-183-41	INDUCTOR 10uH (AEP, G, IT, UK)	
D122	8-719-200-82	DIODE 11ES2		L101	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D123	8-719-200-82	DIODE 11ES2		L102	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D124	8-719-200-82	DIODE 11ES2		L103	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D125	8-719-110-31	DIODE RD12ES-B2		L104	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D126	8-719-200-82	DIODE 11ES2		L105	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D127	8-719-200-82	DIODE 11ES2		L106	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D131	8-719-921-63	DIODE MTZJ-7. 5B (CIS)		L107	1-410-397-21	FERRITE BEAD INDUCTOR (AEP, G, IT, UK, CIS)	
D136	8-719-109-97	DIODE RD6. 8ES-B2 (CIS)		L201	1-414-189-31	INDUCTOR 100uH	
D141	8-719-200-82	DIODE 11ES2		L202	1-414-189-31	INDUCTOR 100uH	
D142	8-719-200-82	DIODE 11ES2		L203	1-410-521-11	INDUCTOR 100uH	
D143	8-719-982-19	DIODE MTZJ-30A		L204	1-410-521-11	INDUCTOR 100uH	
D161	8-719-010-34	DIODE UZ-4. 7BSC		L205	1-410-521-11	INDUCTOR 100uH	
D191	8-719-109-88	DIODE RD5. 6ES-B1		L206	1-410-521-11	INDUCTOR 100uH	
D271	8-719-815-85	DIODE 1S1585		L207	1-410-521-11	INDUCTOR 100uH	
D281	8-719-815-85	DIODE 1S1585		L208	1-410-521-11	INDUCTOR 100uH	
D282	8-719-815-85	DIODE 1S1585		L281	1-410-509-11	INDUCTOR 10uH (AEP, G, IT, UK, CIS)	
< FRONTEND >				L282	1-410-509-11	INDUCTOR 10uH (AEP, G, IT, UK, CIS)	
FE1	1-693-253-21	FRONT END (4 GANG) (AEP, G, IT, UK)		< FILTER >			
FE1	1-693-090-51	FRONT END (FM) (2 GANG) (E, EA, TH)		LPF1	1-239-597-11	FILTER, LOW PASS	
FE1	1-693-244-21	FRONT END (3 GANG) (CIS)		LPF2	1-239-597-11	FILTER, LOW PASS	
FE2	1-233-514-11	ENCAPSULATED COMPONENT (AEP, UK, CIS)		< TRANSISTOR >			
FE2	1-239-634-11	ENCAPSULATED COMPONENT, AM. RF (G, IT, E, EA, TH)		Q1	8-729-230-99	TRANSISTOR 2SC2669-0Y	
< IC >				Q2	8-729-230-99	TRANSISTOR 2SC2669-0Y	
IC1	8-759-176-03	IC LA1835		Q9	8-729-230-99	TRANSISTOR 2SC2669-0Y	
IC51	8-759-288-54	IC LC72130		Q10	8-729-230-99	TRANSISTOR 2SC2669-0Y	
IC111	8-759-231-53	IC TA7805S		Q11	8-729-029-67	TRANSISTOR DTC114ESA-TP (AEP, UK, CIS)	
IC171	8-759-165-80	IC PST600C-T		Q12	8-729-029-67	TRANSISTOR DTC114ESA-TP (AEP, UK, CIS)	
IC201	8-759-338-81	IC uPD78013GC-652-AB8		Q13	8-729-029-67	TRANSISTOR DTC114ESA-TP (AEP, UK, CIS)	
IC301	8-759-634-51	IC M5218AP (AEP, G, IT, UK)		Q14	8-729-029-67	TRANSISTOR DTC114ESA-TP (AEP, UK, CIS)	
IC302	8-759-169-99	IC SAA6579 (AEP, G, IT, UK)		Q15	8-729-119-76	TRANSISTOR 2SA1175-HFE (AEP, UK, CIS)	
< IFT >				Q55	8-729-029-21	TRANSISTOR DTA114ESA-TP	
IFT1	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)		Q121	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< JACK >				Q122	8-729-209-15	TRANSISTOR 2SD2012	
J101	1-770-272-11	JACK, PIN 2P (TUNER)		Q123	8-729-029-67	TRANSISTOR DTC114ESA-TP	
< COIL >				Q131	8-729-119-78	TRANSISTOR 2SC2785-HFE (CIS)	
L1	1-407-500-00	INDUCTOR 4. 7mH (AEP, UK, CIS)		Q136	8-729-029-21	TRANSISTOR DTA114ESA-TP (CIS)	
L1	1-410-688-31	INDUCTOR 1. 5mH (G, IT, E, EA, TH)		Q137	8-729-029-21	TRANSISTOR DTA114ESA-TP (CIS)	
L3	1-414-183-41	INDUCTOR 10uH		Q141	8-729-118-00	TRANSISTOR 2SB1116-L	
				Q142	8-729-119-76	TRANSISTOR 2SA1175-HFE	
				Q201	8-729-029-67	TRANSISTOR DTC114ESA-TP	
				Q271	8-729-029-21	TRANSISTOR DTA114ESA-TP	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q272	8-729-029-67	TRANSISTOR	DTC114ESA-TP	R70	1-249-425-11	CARBON	4.7K 5% 1/4W
Q281	8-729-119-78	TRANSISTOR	2SC2785-HFE				(AEP, UK, CIS)
		< RESISTOR >		R71	1-249-425-11	CARBON	4.7K 5% 1/4W
R1	1-249-411-11	CARBON	330 5% 1/4W	R72	1-247-807-31	CARBON	100 5% 1/4W
R2	1-249-411-11	CARBON	330 5% 1/4W	△R111	1-217-641-00	FUSIBLE	4.7 5% 1/4W F
R3	1-247-815-91	CARBON	220 5% 1/4W	△R121	1-217-642-81	FUSIBLE	6.8 5% 1/4W F
R4	1-249-402-11	CARBON	56 5% 1/4W	R122	1-247-807-31	CARBON	100 5% 1/4W
R5	1-249-411-11	CARBON	330 5% 1/4W	R123	1-249-425-11	CARBON	4.7K 5% 1/4W
R6	1-249-411-11	CARBON	330 5% 1/4W	R131	1-249-421-11	CARBON	2.2K 5% 1/4W (CIS)
R7	1-249-432-11	CARBON	18K 5% 1/4W	R136	1-249-425-11	CARBON	4.7K 5% 1/4W (CIS)
R8	1-249-432-11	CARBON	18K 5% 1/4W	R137	1-249-429-11	CARBON	10K 5% 1/4W (CIS)
R11	1-249-411-11	CARBON	330 5% 1/4W	R141	1-249-429-11	CARBON	10K 5% 1/4W
R12	1-249-429-11	CARBON	10K 5% 1/4W	R142	1-249-441-11	CARBON	100K 5% 1/4W
R13	1-249-442-11	CARBON	510 5% 1/4W	R143	1-247-791-91	CARBON	22 5% 1/4W
R14	1-249-403-11	CARBON	68 5% 1/4W	R161	1-249-441-11	CARBON	100K 5% 1/4W
R15	1-249-411-11	CARBON	330 5% 1/4W	R162	1-249-413-11	CARBON	470 5% 1/4W
R16	1-249-425-11	CARBON	4.7K 5% 1/4W	R163	1-249-413-11	CARBON	470 5% 1/4W
R17	1-247-842-11	CARBON	3K 5% 1/4W	R171	1-249-417-11	CARBON	1K 5% 1/4W
R18	1-249-429-11	CARBON	10K 5% 1/4W	R181	1-247-807-31	CARBON	100 5% 1/4W
R19	1-249-429-11	CARBON	10K 5% 1/4W	R191	1-249-411-11	CARBON	330 5% 1/4W
R21	1-249-429-11	CARBON	10K 5% 1/4W	R201	1-249-417-11	CARBON	1K 5% 1/4W
R22	1-249-437-11	CARBON	47K 5% 1/4W	R202	1-249-417-11	CARBON	1K 5% 1/4W
R23	1-249-399-11	CARBON	33 5% 1/4W	R203	1-249-417-11	CARBON	1K 5% 1/4W
R24	1-249-425-11	CARBON	4.7K 5% 1/4W	R204	1-249-417-11	CARBON	1K 5% 1/4W
			(AEP, UK, CIS)	R205	1-249-417-11	CARBON	1K 5% 1/4W
R25	1-249-429-11	CARBON	10K 5% 1/4W	R206	1-249-417-11	CARBON	1K 5% 1/4W
			(AEP, UK, CIS)	R207	1-249-411-11	CARBON	330 5% 1/4W
R28	1-249-432-11	CARBON	18K 5% 1/4W	R208	1-249-411-11	CARBON	330 5% 1/4W
R29	1-249-411-11	CARBON	330 5% 1/4W	R209	1-249-411-11	CARBON	330 5% 1/4W
R35	1-249-417-11	CARBON	1K 5% 1/4W	R210	1-249-411-11	CARBON	330 5% 1/4W
R36	1-249-417-11	CARBON	1K 5% 1/4W	R212	1-249-417-11	CARBON	1K 5% 1/4W
R37	1-249-411-11	CARBON	330 5% 1/4W	R213	1-249-417-11	CARBON	1K 5% 1/4W
R38	1-249-432-11	CARBON	18K 5% 1/4W	R214	1-249-417-11	CARBON	1K 5% 1/4W
R39	1-249-393-11	CARBON	10 5% 1/4W	R215	1-249-417-11	CARBON	1K 5% 1/4W
			(AEP, UK, CIS)	R216	1-249-429-11	CARBON	10K 5% 1/4W
R39	1-249-401-11	CARBON	47 5% 1/4W	R217	1-249-429-11	CARBON	10K 5% 1/4W
			(G, IT, E, EA, TH)	R222	1-247-893-11	CARBON	390K 5% 1/4W
R45	1-249-425-11	CARBON	4.7K 5% 1/4W	R224	1-249-423-11	CARBON	3.3K 5% 1/4W
R46	1-249-425-11	CARBON	4.7K 5% 1/4W	R225	1-249-423-11	CARBON	3.3K 5% 1/4W
R49	1-249-441-11	CARBON	100K 5% 1/4W	R226	1-249-423-11	CARBON	3.3K 5% 1/4W
R51	1-249-429-11	CARBON	10K 5% 1/4W	R227	1-249-441-11	CARBON	100K 5% 1/4W
R56	1-249-417-11	CARBON	1K 5% 1/4W	R228	1-249-441-11	CARBON	100K 5% 1/4W
R58	1-249-417-11	CARBON	1K 5% 1/4W	R229	1-247-807-31	CARBON	100 5% 1/4W
R60	1-249-405-11	CARBON	100 5% 1/4W	R230	1-247-807-31	CARBON	100 5% 1/4W
R61	1-249-423-11	CARBON	3.3K 5% 1/4W	R231	1-249-425-11	CARBON	4.7K 5% 1/4W
R62	1-249-425-11	CARBON	4.7K 5% 1/4W	R271	1-249-429-11	CARBON	10K 5% 1/4W
R63	1-249-425-11	CARBON	4.7K 5% 1/4W	R281	1-249-429-11	CARBON	10K 5% 1/4W
R64	1-249-425-11	CARBON	4.7K 5% 1/4W	R282	1-249-425-11	CARBON	4.7K 5% 1/4W
R65	1-249-425-11	CARBON	4.7K 5% 1/4W	R283	1-249-393-11	CARBON	10 5% 1/4W
				R284	1-249-429-11	CARBON	10K 5% 1/4W

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

**MAIN**

**PANEL**

Ref. No.	Part No.	Description	Remark
R285	1-249-393-11	CARBON 10 5% 1/4W	
R301	1-249-441-11	CARBON 100K 5% 1/4W (AEP, G, IT, UK)	
R302	1-249-441-11	CARBON 100K 5% 1/4W (AEP, G, IT, UK)	
R303	1-249-441-11	CARBON 100K 5% 1/4W (AEP, G, IT, UK)	
R304	1-249-441-11	CARBON 100K 5% 1/4W (AEP, G, IT, UK)	
R305	1-249-429-11	CARBON 10K 5% 1/4W (AEP, G, IT, UK)	
R306	1-249-426-11	CARBON 5.6K 5% 1/4W (AEP, G, IT, UK)	
R308	1-249-421-11	CARBON 2.2K 5% 1/4W (AEP, G, IT, UK)	
< VARIABLE RESISTOR >			
RV1	1-238-601-11	RES, ADJ, CARBON 22K	
RV2	1-238-600-11	RES, ADJ, CARBON 10K	
< TERMINAL >			
TM1	1-537-488-11	TERMINAL BOARD (ANTENNA) (AEP, G, IT, UK, CIS)	
TM1	1-537-238-21	TERMINAL BOARD (ANTENNA) (E, EA, TH)	
< VIBRATOR >			
X201	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	
X202	1-567-098-41	VIBRATOR, CRYSTAL (32.768KHz)	
X301	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz) (AEP, G, IT, UK)	
XT51	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
*****			
*	A-4378-851-A	PANEL BOARD, COMPLETE (E, EA, TH) *****	
*	A-4378-864-A	PANEL BOARD, COMPLETE (AEP, G, IT, UK, CIS) *****	
*	4-979-798-01	HOLDER (FL)	
< CAPACITOR >			
C601	1-126-933-11	ELECT 100uF 20% 10V	
C602	1-164-159-21	CERAMIC 0.1uF 50V	
C603	1-104-667-11	ELECT 22uF 20% 35V	
C604	1-164-159-21	CERAMIC 0.1uF 50V	
C605	1-162-282-31	CERAMIC 100PF 10% 50V	
C606	1-162-282-31	CERAMIC 100PF 10% 50V	
C607	1-162-282-31	CERAMIC 100PF 10% 50V	
C608	1-162-282-31	CERAMIC 100PF 10% 50V	
C609	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C610	1-162-282-31	CERAMIC 100PF 10% 50V	

Ref. No.	Part No.	Description	Remark
C611	1-162-282-31	CERAMIC 100PF 10% 50V	
C612	1-162-282-31	CERAMIC 100PF 10% 50V	
C613	1-162-282-31	CERAMIC 100PF 10% 50V	
C614	1-162-282-31	CERAMIC 100PF 10% 50V	
C615	1-162-282-31	CERAMIC 100PF 10% 50V	
C616	1-162-282-31	CERAMIC 100PF 10% 50V	
C617	1-162-282-31	CERAMIC 100PF 10% 50V	
C618	1-162-282-31	CERAMIC 100PF 10% 50V	
C619	1-162-282-31	CERAMIC 100PF 10% 50V	
C620	1-162-282-31	CERAMIC 100PF 10% 50V	
C621	1-162-282-31	CERAMIC 100PF 10% 50V	
C622	1-162-282-31	CERAMIC 100PF 10% 50V	
C623	1-162-282-31	CERAMIC 100PF 10% 50V	
C624	1-162-282-31	CERAMIC 100PF 10% 50V	
C625	1-136-173-00	FILM 0.47uF 5% 50V	
C626	1-136-173-00	FILM 0.47uF 5% 50V	
< CONNECTOR >			
* CN601	1-568-864-11	SOCKET, CONNECTOR 21P	
< DIODE >			
D601	8-719-046-44	DIODE SEL5221S (ENTER/NEXT)	
D602	8-719-046-46	DIODE SEL5221S-TH8F (MULTI CONTROLLER)	
D603	8-719-046-43	DIODE SEL5421E-TP15 (SLEEP)	
D604	8-719-046-44	DIODE SEL5221S (REC)	
D605	8-719-046-43	DIODE SEL5421E-TP15 (DAILY)	
D606	8-719-046-43	DIODE SEL5421E-TP15 (ONCE)	
< FLUORESCENT INDICATOR >			
FL601	1-517-368-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC601	8-759-261-63	IC M66004M6FP	
< COIL >			
L601	1-414-189-31	INDUCTOR 100uH	
L602	1-414-189-31	INDUCTOR 100uH	
< TRANSISTOR >			
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q602	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R601	1-249-413-11	CARBON 470 5% 1/4W	
R602	1-249-415-11	CARBON 680 5% 1/4W	
R603	1-249-417-11	CARBON 1K 5% 1/4W	
R604	1-249-419-11	CARBON 1.5K 5% 1/4W	
R605	1-249-421-11	CARBON 2.2K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R606	1-249-425-11	CARBON 4.7K 5% 1/4W	
R607	1-249-413-11	CARBON 470 5% 1/4W	
R608	1-249-415-11	CARBON 680 5% 1/4W	
R609	1-249-417-11	CARBON 1K 5% 1/4W	
R610	1-249-419-11	CARBON 1.5K 5% 1/4W	
R611	1-249-421-11	CARBON 2.2K 5% 1/4W	
R612	1-249-425-11	CARBON 4.7K 5% 1/4W	
R613	1-249-415-11	CARBON 680 5% 1/4W	
R614	1-247-815-91	CARBON 220 5% 1/4W	
R615	1-247-815-91	CARBON 220 5% 1/4W	
R616	1-249-429-11	CARBON 10K 5% 1/4W	
R617	1-249-429-11	CARBON 10K 5% 1/4W	
R618	1-249-413-11	CARBON 470 5% 1/4W	
R620	1-247-807-31	CARBON 100 5% 1/4W	
R621	1-249-417-11	CARBON 1K 5% 1/4W	
R622	1-249-417-11	CARBON 1K 5% 1/4W	
R623	1-249-417-11	CARBON 1K 5% 1/4W	
R624	1-249-434-11	CARBON 27K 5% 1/4W	
R625	1-249-429-11	CARBON 10K 5% 1/4W	
< SWITCH >			
S601	1-554-303-21	SWITCH, TACTILE (AEP, G, IT, UK: EON) (E, EA, TH, CIS: MEMORY)	
S602	1-554-303-21	SWITCH, TACTILE (AEP, G, IT, UK: PTY) (E, EA, TH, CIS: STEREO/MONO)	
S603	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S604	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S605	1-554-303-21	SWITCH, TACTILE (REC)	
S606	1-554-303-21	SWITCH, TACTILE (DAILY)	
S607	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S608	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)	
S609	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)	
S610	1-554-303-21	SWITCH, TACTILE (AEP, G, IT, UK: MEMORY) (E, EA, TH, CIS: PRESET)	
S611	1-554-303-21	SWITCH, TACTILE (E, EA, TH, CIS: AUTO) (AEP, G, IT, UK: TUNING MODE)	
S612	1-554-303-21	SWITCH, TACTILE (E, EA, TH, CIS: MANUAL) (AEP, G, IT, UK: STEREO/MONO)	
S613	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S614	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S615	1-473-403-11	ENCODER, ROTARY (MULTI CONTROLLER)	
S616	1-554-303-21	SWITCH, TACTILE (ONCE)	
*****			
*	A-4389-480-A	POLAR BOARD, COMPLETE (CIS)	
*****			
< CAPACITOR >			
C1701	1-162-294-31	CERAMIC 0.001uF 10% 50V (CIS)	
C1702	1-130-014-00	FILM 470PF 5% 50V (CIS)	
C1703	1-124-902-00	ELECT 0.47uF 20% 50V (CIS)	

Ref. No.	Part No.	Description	Remark
C1704	1-124-902-00	ELECT 0.47uF 20% 50V (CIS)	
C1705	1-101-006-00	CERAMIC 0.047uF 50V (CIS)	
C1706	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1707	1-162-288-31	CERAMIC 330PF 10% 50V (CIS)	
C1710	1-137-364-11	FILM 0.001uF 5% 50V (CIS)	
C1711	1-137-364-11	FILM 0.001uF 5% 50V (CIS)	
C1712	1-130-736-11	FILM 0.01uF 5% 50V (CIS)	
C1713	1-130-736-11	FILM 0.01uF 5% 50V (CIS)	
C1714	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1715	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1716	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1719	1-126-967-11	ELECT 47uF 20% 16V (CIS)	
C1720	1-162-306-11	CERAMIC 0.01uF 30% 16V (CIS)	
C1723	1-162-306-11	CERAMIC 0.01uF 30% 16V (CIS)	
C1724	1-162-306-11	CERAMIC 0.01uF 30% 16V (CIS)	
C1725	1-126-967-11	ELECT 47uF 20% 16V (CIS)	
C1726	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1727	1-124-903-11	ELECT 1uF 20% 50V (CIS)	
C1728	1-126-966-11	ELECT 33uF 20% 16V (CIS)	
< CONNECTOR >			
* CN1701	1-568-832-11	SOCKET, CONNECTOR 13P (CIS)	
< TRIMMER >			
CT1701	1-141-260-00	CAP, TRIMMER 50PF (CIS)	
< DIODE >			
D1701	8-719-815-85	DIODE 1S1585 (CIS)	
D1703	8-719-815-85	DIODE 1S1585 (CIS)	
D1704	8-719-815-85	DIODE 1S1585 (CIS)	
D1705	8-719-815-85	DIODE 1S1585 (CIS)	
< IC >			
IC1701	8-759-063-04	IC IR3R42 (CIS)	
IC1703	8-759-140-53	IC uPD4053BC (CIS)	
< COIL >			
L1701	1-409-497-11	COIL (FILTER) (CIS)	
< TRANSISTOR >			
Q1701	8-729-029-21	TRANSISTOR DTA114ESA-TP (CIS)	
Q1702	8-729-029-67	TRANSISTOR DTC114ESA-TP (CIS)	
Q1704	8-729-029-67	TRANSISTOR DTC114ESA-TP (CIS)	
< RESISTOR >			
R1701	1-249-432-11	CARBON 18K 5% 1/4W (CIS)	
R1702	1-249-435-11	CARBON 33K 5% 1/4W (CIS)	
R1703	1-249-427-11	CARBON 6.8K 5% 1/4W (CIS)	
R1704	1-247-858-11	CARBON 13K 5% 1/4W (CIS)	

**POLAR**

Ref. No.	Part No.	Description	Remark		
R1705	1-249-417-11	CARBON	1K	5%	1/4W (CIS)
R1706	1-249-417-11	CARBON	1K	5%	1/4W (CIS)
R1707	1-249-441-11	CARBON	100K	5%	1/4W (CIS)
R1708	1-249-440-11	CARBON	82K	5%	1/4W (CIS)
R1709	1-249-439-11	CARBON	68K	5%	1/4W (CIS)
R1710	1-249-429-11	CARBON	10K	5%	1/4W (CIS)
R1711	1-249-429-11	CARBON	10K	5%	1/4W (CIS)
R1714	1-249-426-11	CARBON	5.6K	5%	1/4W (CIS)
R1715	1-249-426-11	CARBON	5.6K	5%	1/4W (CIS)
R1716	1-249-441-11	CARBON	100K	5%	1/4W (CIS)
R1717	1-249-441-11	CARBON	100K	5%	1/4W (CIS)
R1718	1-249-429-11	CARBON	10K	5%	1/4W (CIS)
R1719	1-249-429-11	CARBON	10K	5%	1/4W (CIS)
R1721	1-249-434-11	CARBON	27K	5%	1/4W (CIS)
R1722	1-249-441-11	CARBON	100K	5%	1/4W (CIS)

## &lt; VARIABLE RESISTOR &gt;

RV1701 1-238-600-11 RES, ADJ, CARBON 10K (CIS)  
RV1702 1-238-599-11 RES, ADJ, CARBON 4.7K (CIS)

## &lt; TEST PIN &gt;

\* TP1701 1-560-061-00 PIN, CONNECTOR 3P (CIS)  
\* TP1702 1-560-061-00 PIN, CONNECTOR 3P (CIS)

\*\*\*\*\*

MISCELLANEOUS  
\*\*\*\*\*

15 1-773-144-11 WIRE (FLAT TYPE) (21 CORE)  
17 1-751-688-11 WIRE (FLAT TYPE) (13 CORE) (CIS)  
FL601 1-517-368-11 INDICATOR TUBE, FLUORESCENT

\*\*\*\*\*

ACCESSORIES & PACKING MATERIALS  
\*\*\*\*\*

\* 4-980-539-01 CUSHION (UPPER)  
\* 4-980-540-01 CUSHION (LOWER)

\*\*\*\*\*

\*\*\*\*\*  
HARDWARE LIST  
\*\*\*\*\*

#1 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S  
#2 7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S

# ST-EX100

**SONY**

## SERVICE MANUAL

*AEP Model  
UK Model  
E Model*

### SUPPLEMENT-1

File this supplement with the service manual.

**Subject: SERVICING NOTE ADDITION**

#### Switching the Channel Step 9 kHz/10 kHz

1. Turn off the power of the unit.
2. While pressing the **ENTER/NEXT** button, press the **SYSTEM POWER** button of the amplifier section to turn on the power.

The value switches between 9 kHz and 10 kHz steps each time the above is carried out.

#### NOTE:

- 1) Take note not to switch the above when not required.
- 2) This switching cannot be performed when power is supplied using service box (PFJ-1).