

ST-SB920

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

FM tuner section

Frequency range	87.5 – 108.0 MHz
Aerial terminals	75 Ω , unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	at 26 dB quieting (mono) 10.3 dBf, 0.9 μ V/75 Ω at 46 dB quieting (stereo) 38.5 dBf, 23 μ V/75 Ω
Usable sensitivity (IHF) S/N	10.3 dBf, 0.9 μ V/75 Ω at 40 kHz deviation 80 dB (mono), 76 dB (stereo)
Harmonic distortion	WIDE 0.035 % (mono), 0.045 (stereo) NARROW 0.055 % (mono), 0.075 (stereo)
Frequency response	30 Hz – 15 kHz (+0.3/-0.7 dB)
Separation	50 dB at 1 kHz
Selectivity	at 400 kHz WIDE 85 dB NARROW 90 dB at 300 kHz WIDE 45 dB NARROW 70 dB
Output	at 40 kHz deviation 600 mV

AM tuner section

Frequency range	MW: 522 – 1,611 kHz (9 kHz step) LW: 144 – 288 kHz (1 kHz step)
Intermediate frequency	450 kHz
Usable Sensitivity	(with AM loop aerial) MW: 200 μ V/m LW: 700 μ V/m
Signal-to-noise ratio	MW: 54 dB (50 mV/m, 999 kHz) LW: 50 dB (50 mV/m, 216 kHz)
Harmonic distortion	0.3% (50 mV/m, 400 Hz)
Selectivity	50 dB

General

Power requirements	220 – 230 V, AC 50/60 Hz
Power consumption	12 W
Input impedance	75 Ω
Input connector	IEC-male
Dimensions	430 \times 86 \times 295 mm (w/h/d)
Weight	3.95
Supplied accessories	Audio cord (1) AM loop aerial (1) FM wire aerial (1) EON connecting cord (1)

Design and specifications are subject to change without notice.

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FM STEREO FM-AM TUNER



SONY®

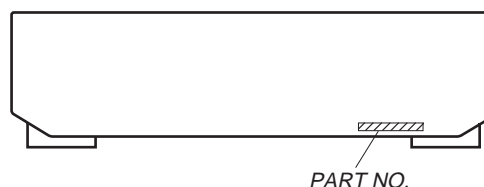
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SAFETY-RELATED COMPONENT WARNING!!

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.

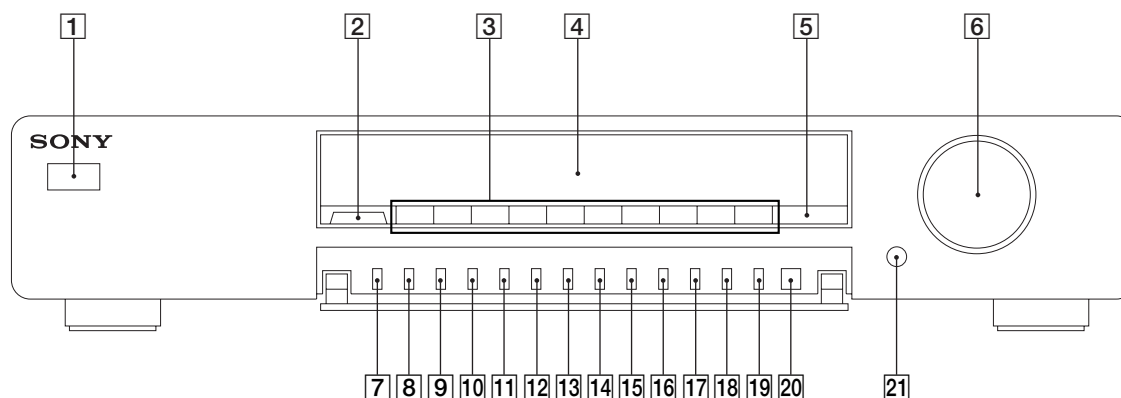
MODEL IDENTIFICATION — BACK PANEL —



PARTS No.	MODEL
4-998-494-0□	AEP model
4-998-494-1□	UK model

SECTION 1 GENERAL

Location of Controls



- | | |
|--------------------------------------|------------------------------|
| 1 POWER switch (①) | 12 MEMORY button |
| 2 SHIFT button | 13 BAND button |
| 3 Numeric button | 14 ON/OFF button |
| 4 Display window | 15 ANTENNA button |
| 5 DIRECT button | 16 FM MODE button |
| 6 TUNING/SELECT knob | 17 CHARACTER button |
| 7 DISPLAY button | 18 MENU button |
| 8 PTY button | 19 RETURN button |
| 9 TA button | 20 ENTER button |
| 10 NEWS/INFO button | 21 TUNING MODE button |
| 11 AUTO-BETICAL SELECT button | |

SECTION 2 TEST MODE

1. Circuit Check Mode

Set to the reception frequency that the circuit can receive STEREO RDS stations. (Set the input level to above 70 dB.)

This enables circuit check to be performed in any of the reception modes-FM, AM (MW, LW). Set to a desired band before setting the test mode.

1. Turn OFF the power.
2. While pressing [4] and [AUTO-BETICAL SELECT] together, turn ON [ⓐ].

- The items in the following table will be checked automatically in order every 2 seconds.

Display	Items	DISPLAY		NG
		FM RDS	AM (MW, LW)	
Tuned	AST signal = LOW	OK or NG		IC251 NG, RV251 adjustments
IF Frq	IF COUNT OK	OK or NG	OK or NG	FE101, IC251 NG, or IF count buffer amp (Q251, Q401) NG
Sig Level	SI LEVELh 70dB	OK or NG	OK or NG	IC221 NG, RV221 adjustments
Stereo	ST signal = LOW	OK or NG		IC301 NG, RV301 adjustments
RDS Signal	RDS DATA OK	OK or NG		IC801 NG

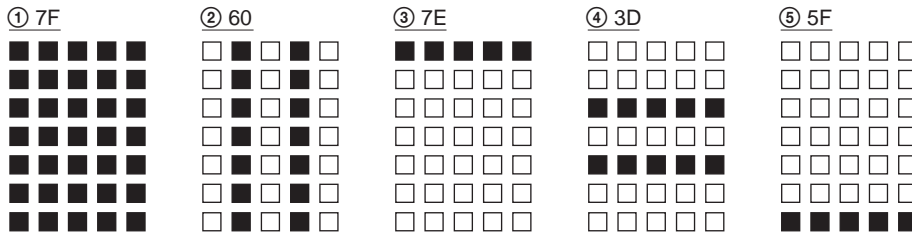
NOTE : The preset data will be erased when this test mode is used. Therefore, take down the data before setting this mode and preset the data again after completing operations in this mode.

2. Display Tube Check and KEY Check mode

1. Turn OFF the power.
2. While pressing [1] and [AUTO-BETICAL SELECT] together, turn ON [ⓐ].
3. While continuously pressing [1] and [AUTO-BETICAL SELECT] together, check the following.

Microcomputer version indication (1 sec) → All light up “7F” → Dot area only “60” → Dot area only “7E”
↑ Dot area only “5F” ← Dot area only “3D”
↓

Indication test pattern



* The indication test pattern from ② to ⑤ are indicated on only even grids.

The display changes every 1 sec.

4. Release [1] and [AUTO-BETICAL SELECT]. The KEY CHECK mode will be set.
5. All key numbers will be displayed.
Key Number : 27
6. Each time the key is pressed, the key number will be counted down.
Each key will be counted only once, at the first time.
7. When all keys have been pressed, the process will end.

3. Entering the Factory Preset (In case perform just to write memory of the Factory Preset.)

NOTE : As contents of the Factory Preset will be written into memory after completing this check mode, delete contents of memory according to 4. Forced RESET.

1. Turn OFF the power.
2. While pressing [3] and [AUTO-BETICAL SELECT] together, turn ON [ⓐ].

4. Forced RESET (Used to delete the contents of Factory Preset when it is written into the preset memory.)

Clears all the RAMs and sets the initial state

1. Turn OFF the power.
2. While pressing [5] and [AUTO-BETICAL SELECT] together, turn ON [ⓐ].
3. When “All clear” is indicated on the display tube, it means that “Forced Reset” has been completed.

SECTION 3 ELECTRICAL ADJUSTMENTS

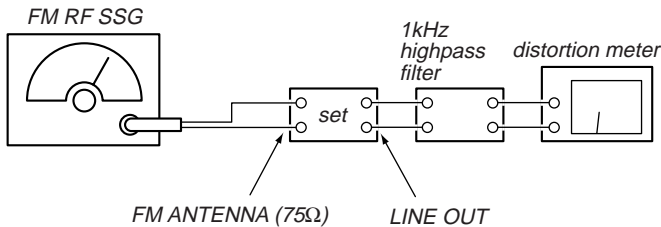
Precautions in Repairing

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

Set "IF : WIDE" after the all adjustments.

FM SECTION

0dB = 1μV



- Standard Setting of FM Stereo RF Signal Generator.

STEREO STANDARD SIGNAL	MONAURAL STANDARD SIGNAL
Carrier frequency : 98MHz Modulation : Audio 1kHz Main channel (L+R) : 33.75kHz deviation Sub channel (L-R) : 33.75kHz deviation Pilot : 7.5kHz Deviation	Carrier frequency : 98MHz Modulation : Audio 1kHz 75kHz deviation

How to switch IF BAND : WIDE/NARROW and ANT ATT : ON/OFF

Method 1:

- Set the reception mode to FM.
- Push the **MENU** button and turn the **TUNING/SELECT** to indicate "Reception" on the fluorescent display tube, then press the **ENTER** button.
- Rotate the **TUNING/SELECT** knob in the clockwise direction. (Proceeds onto the step 5 when rotated in the counterclockwise direction.)
- Turn the **TUNING/SELECT** knob to indicate "ANT ATT : OFF" on the fluorescent display tube, then press the **ENTER** button.
- Turn the **TUNING/SELECT** knob to indicate "IF : NARROW" or "IF : WIDE" on the fluorescent display tube, then press the **ENTER** button.
When the IF BAND : NARROW is set, "NARROW" is indicated on the fluorescent display tube.
- Set WIDE after the operation.

* When set to standby for inputs using the **TUNING/SELECT** knob, "SELECT" is indicated on the fluorescent display tube.

Method 2:

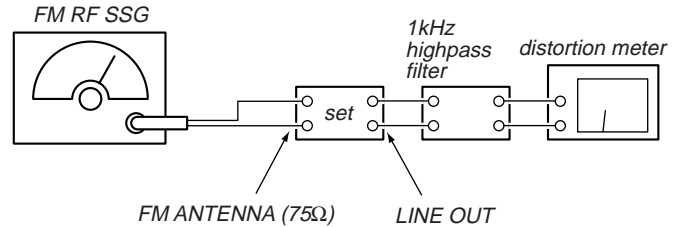
After the test modes "2. Display Tube Check and KEY Check mode" or "3. Entering the Factory Preset", "IF : NARROW" and "IF : WIDE" are switched every time pressing RETURN button the IF BAND : NARROW is set "NARROW" is indicated on the fluorescent display tube.

Likewise, the mode can be switched between "ANT ATT : ON" and "ANT ATT : OFF". When set to ANT ATT : ON, the fluorescent display tube indicates ANT ATT.

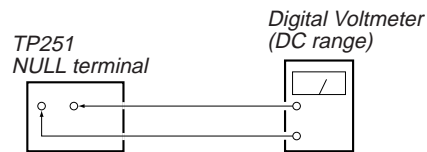
FM Discriminator ADJUSTMENT (NULL and MONO Distortion Adjustment)

Setting:

IF BAND : WIDE
ANT ATT : OFF



Modulation : Monaural Standard signal
Output level : 6mV (76dB) (at 75 Ω open)



Procedure:

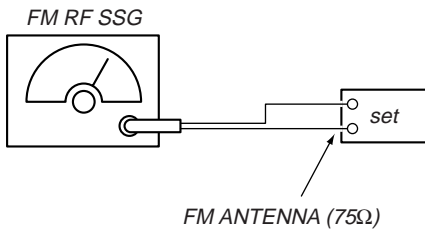
- Tune the set to 98 MHz.
- Adjust IFT252 for 0V reading on the digital voltmeter.
..... NULL
- Adjust IFT253 for a minimum reading on the distortion meter.
..... MONO Distortion (THD)
- Repeat the adjustments of 2 and 3 several times.

Note : When replacing the ceramic filter, perform this alignment.

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Stereo Level Adjustment

Setting:
IF BAND : WIDE
ANT ATT : OFF



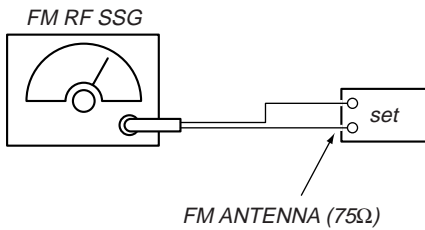
Modulation : Stereo Standard signal
Output level : 18 μ V (25dB) (at 75 Ω open)

Procedure:

1. Tune the set to 98 MHz.
2. Adjust RV251 to the point (moment) when the "STEREO" indicator will change from going off to going on.

Narrow Gain Adjustment

Setting:
IF BAND : NARROW
ANT ATT : OFF



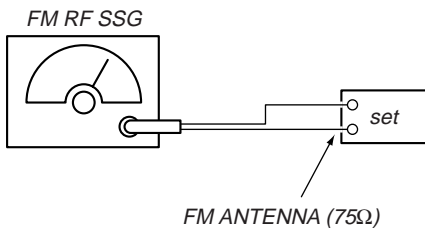
Modulation : Stereo Standard signal
Output level : 18 μ V (25dB) (at 75 Ω open)

Procedure:

1. Tune the set to 98 MHz.
2. Set "IF BAND : NARROW" according to the procedure of "How to switch IF BAND WIDE/NARROW" on page 6.
3. Adjust RV231 to the point (moment) when the "STEREO" indicator will change from going off to going on.

FM Meter Level Adjustment

Setting:
IF BAND : WIDE
ANT ATT : OFF



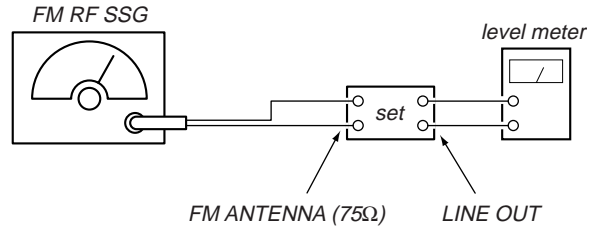
Modulation : Stereo Standard signal
Output level : 3mV (76dB) (at 75 Ω open)

Procedure:

1. Tune the set to 98 MHz.
2. Press **[DISPLAY]** button to display the digital signal, then adjust RV221 to be display as "SIG 70dB".

Stereo Separation Adjustment

Setting:
IF BAND : WIDE



Modulation : Stereo Standard signal
Output level : 6mV (76dB) (at 75 Ω open)

Procedure:

1. Refer to "How to switch IF BAND WIDE/NARROW" on page 6.

FM stereo Signal generator Output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV301 for minimum reading on Level meter
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV301 for minimum reading on Level meter

L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separation : Ⓒ – Ⓓ

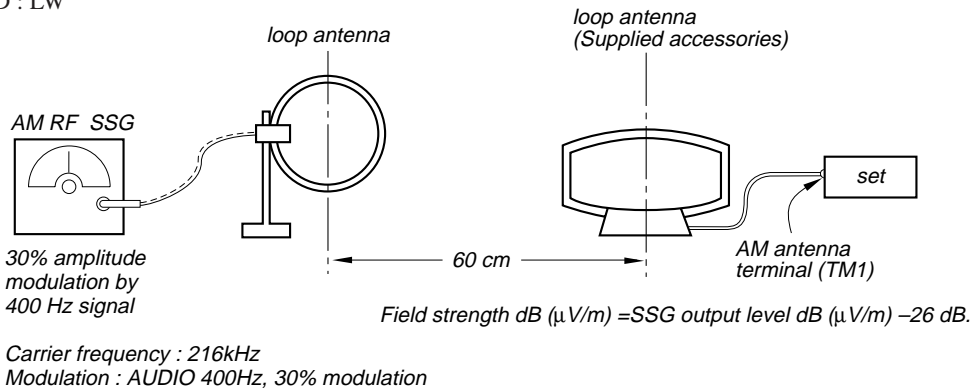
The separations of both channels should be equal.

AM SECTION

AM Meter Level Adjustment

Setting:

BAND : LW

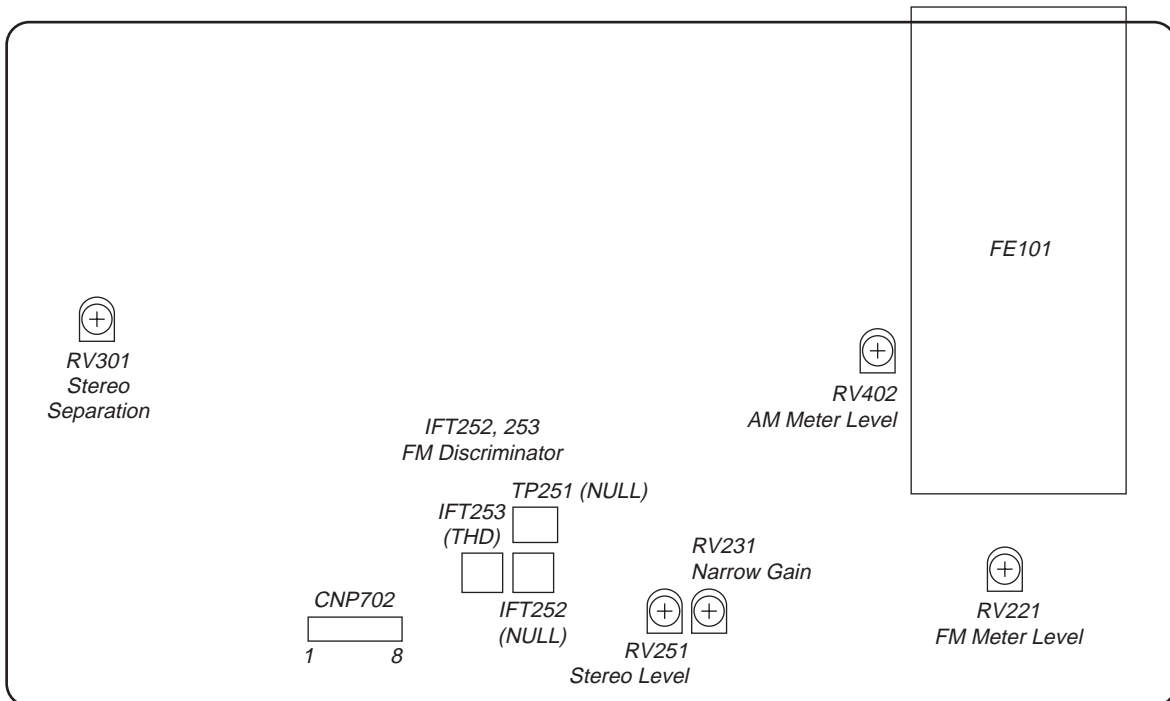


Procedure:

1. Set AM RF signal generator so that the AM antenna input level becomes $74\text{dB}\mu\text{m}$.
2. Adjust RV402 so that 1 to 10 indication bars light up on the signal meter.

Adjustment Location

[TUNER BOARD] — Component Side —



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THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - \triangle : internal component.
 - \square : panel designation

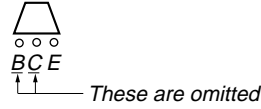
Note:
 The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
 Replace only with part number specified.

- $\boxed{\text{B+}}$: B+ Line.
- $\boxed{\text{B-}}$: B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : MW
- < : LW
- > : LW
- * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- \Rightarrow : FM
- \rightarrow : AM

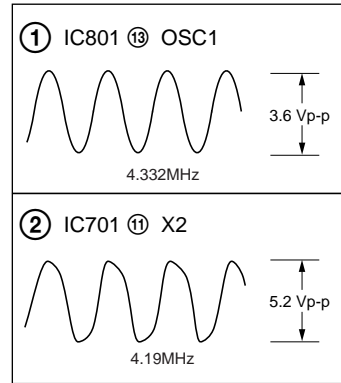
For printed wiring boards.

- Note:**
- \circ : parts extracted from the component side.
 - \square : Pattern from the side which enables seeing.

• Indication of transistor

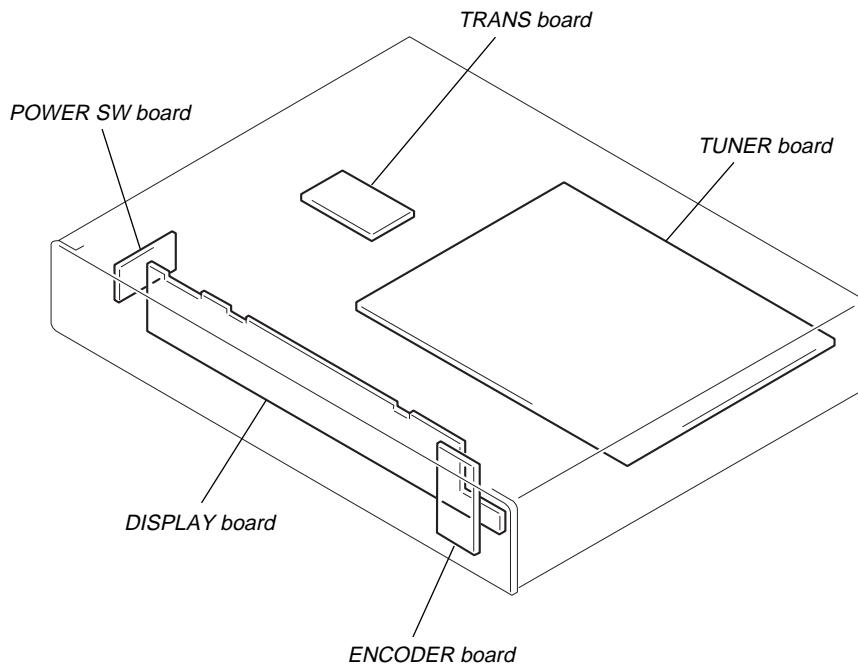


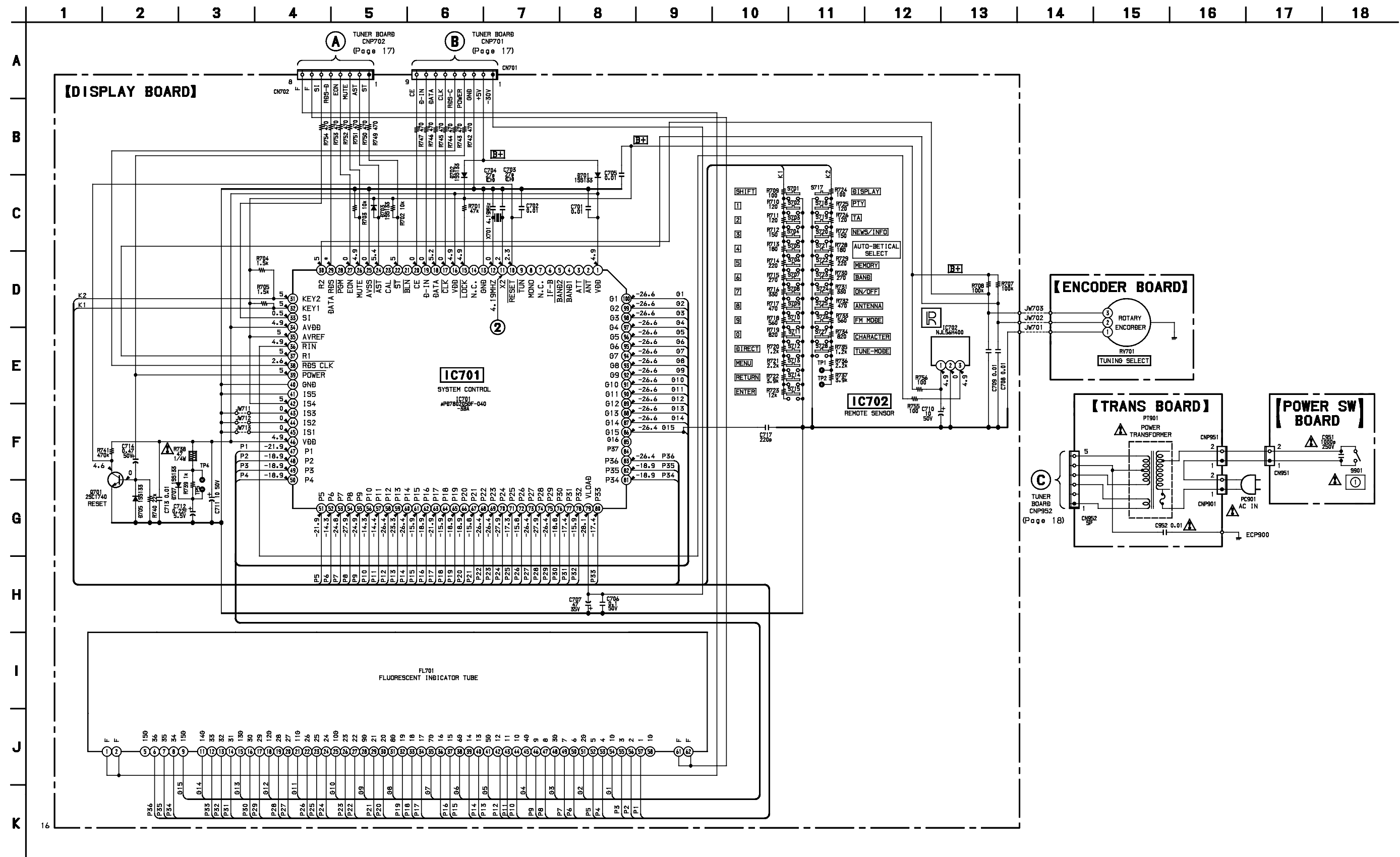
• Waveforms



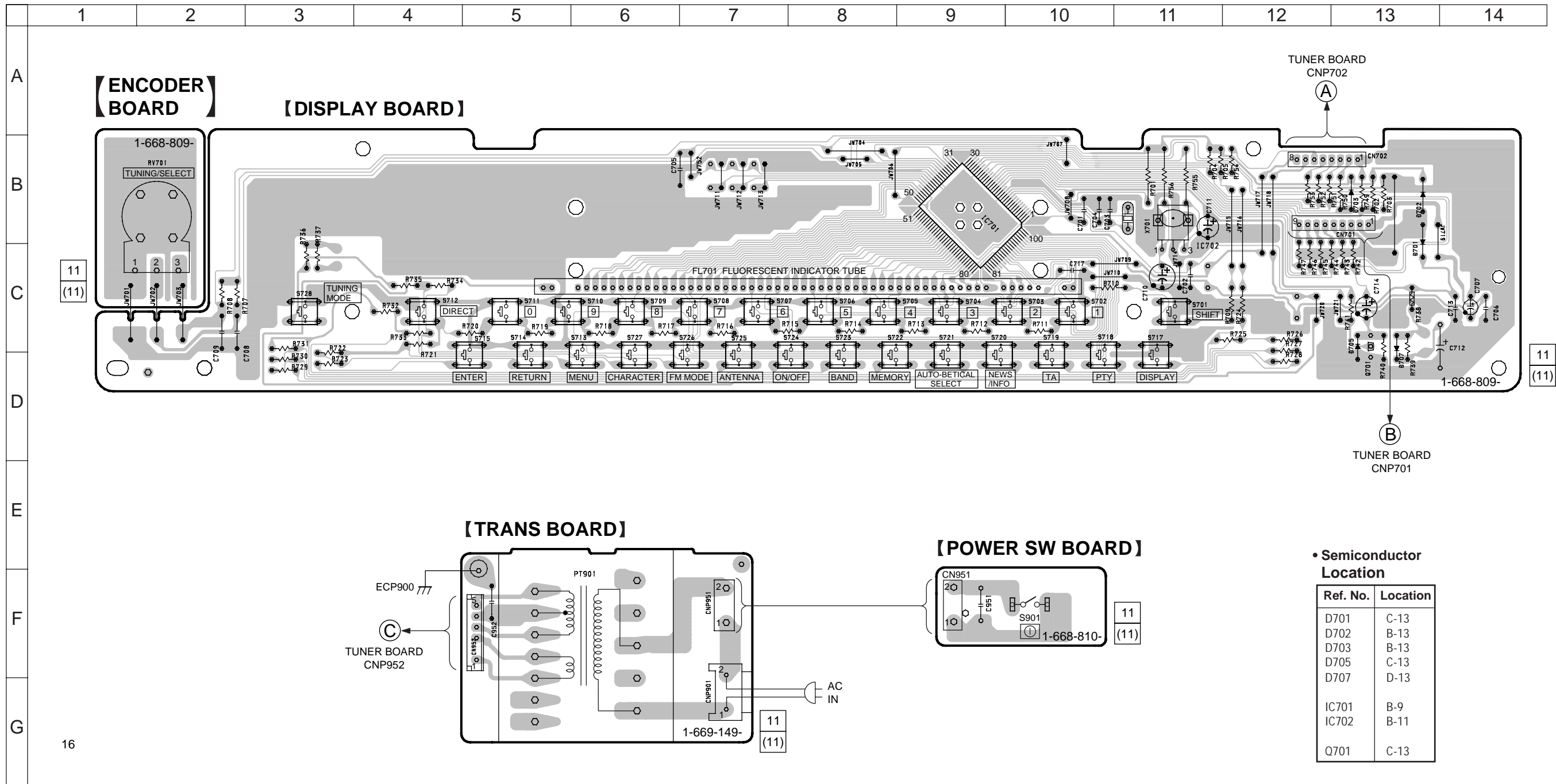
**SECTION 4
 DIAGRAMS**

4-1. CIRCUIT BOARDS LOCATION





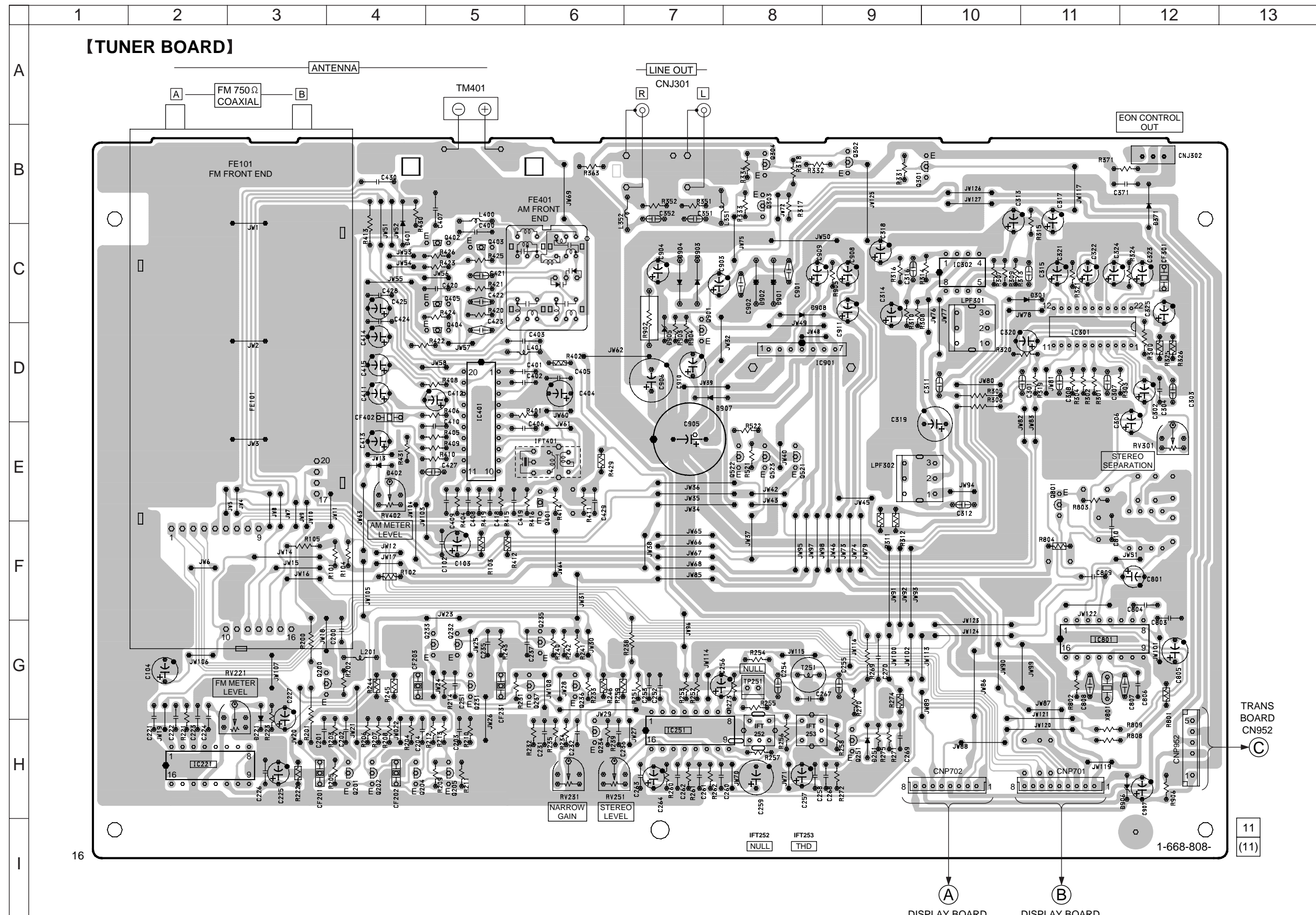
4-3. PRINTED WIRING BOARD – DISPLAY SECTION – • See page 8 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D701	C-13
D702	B-13
D703	B-13
D705	C-13
D707	D-13
IC701	B-9
IC702	B-11
Q701	C-13

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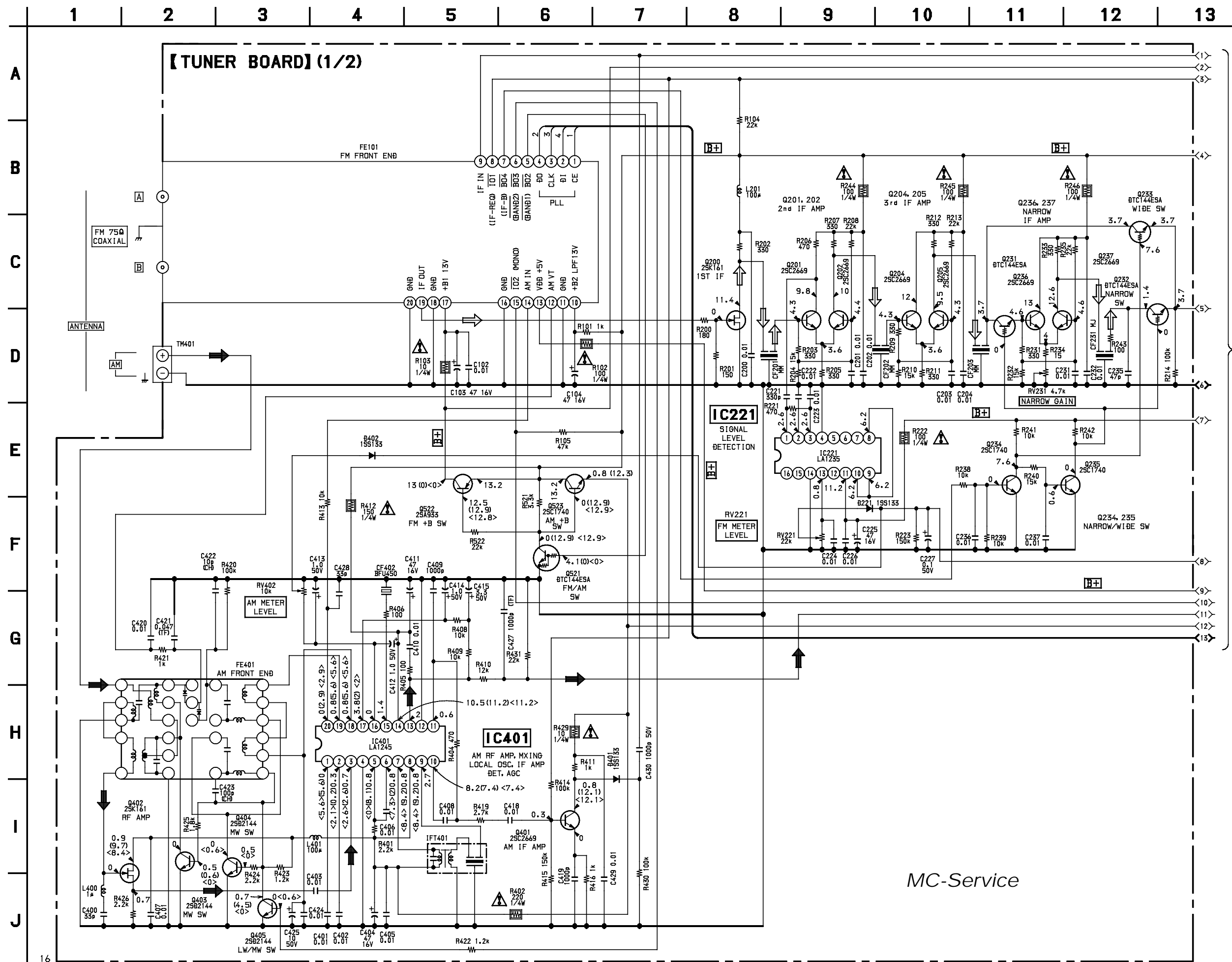


• Semiconductor Location

Ref. No.	Location
D221	H-3
D251	H-9
D301	C-11
D371	B-12
D401	C-4
D402	E-4
D901	C-8
D902	C-8
D903	C-7
D904	C-7
D905	D-7
D906	H-12
D907	D-7
D908	C-8
IC221	H-2
IC251	H-7
IC301	D-11
IC302	C-10
IC401	D-5
IC801	G-11
IC901	D-8
Q200	G-3
Q201	H-4
Q202	H-4
Q204	H-4
Q205	H-5
Q231	G-5
Q232	G-5
Q233	G-4
Q234	H-6
Q235	G-6
Q236	G-6
Q237	G-6
Q251	H-9
Q301	B-10
Q302	B-9
Q303	B-8
Q304	B-8
Q401	E-6
Q402	C-5
Q403	C-5
Q404	D-5
Q405	C-5
Q521	E-8
Q522	E-8
Q523	E-8
Q801	E-11
Q901	D-7

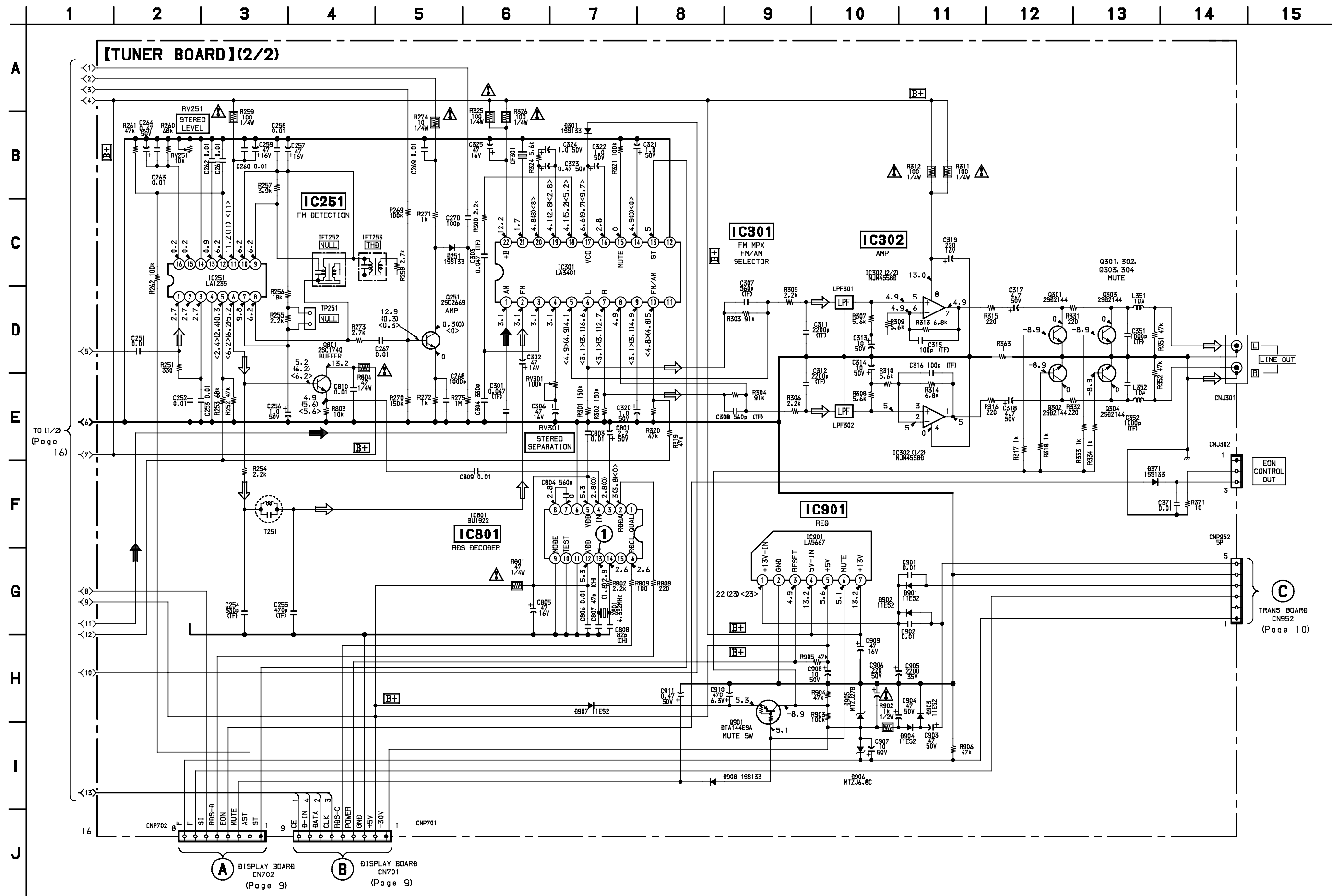
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4-5. SCHEMATIC DIAGRAM - TUNER SECTION (1/2) - • See page 20 for IC Block Diagrams.



TO (2/2)
(Page 17)

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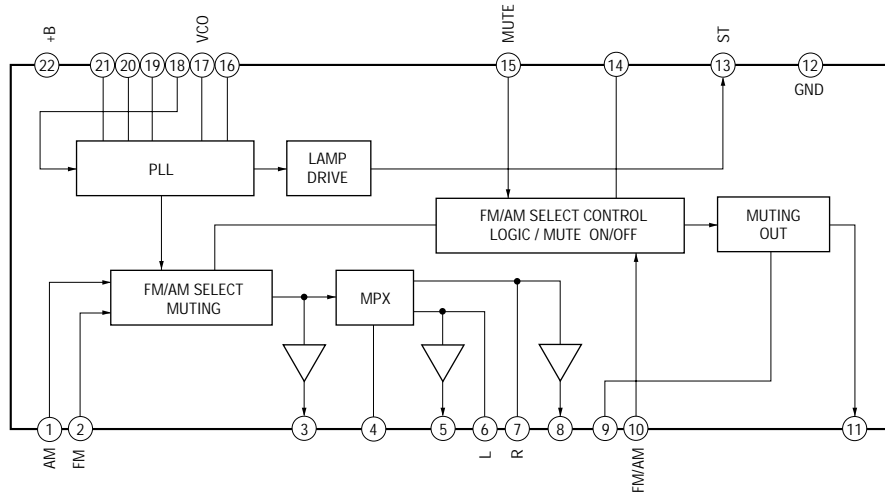
4-7. IC PIN FUNCTION (DISPLAY BOARD)

• IC701 System Control (μ PD780205GF-040-3BA)

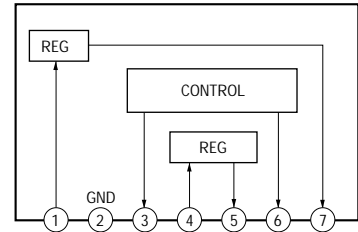
Pin No.	Pin Name	I/O	Function
1	VDD	—	Power supply (+5V).
2	$\overline{\text{ANT}}$	—	Not used. (Open)
3	$\overline{\text{ATT}}$	—	Not used. (Open)
4	$\overline{\text{BAND1}}$	—	Not used. (Open)
5	$\overline{\text{BAND2}}$	—	Not used. (Open)
6	IF-B	—	Not used. (Open)
7	NC	—	Not used. (Open)
8	MONO	—	Not used. (Open)
9	$\overline{\text{TUN}}$	—	Not used. (Open)
10	$\overline{\text{RESET}}$	I	System reset input.
11	X2	O	Oscillation signal output (4.19MHz).
12	X1	I	Oscillation signal input (4.19MHz).
13	GND	—	Ground.
14	NC	—	Not used. (Open)
15	$\overline{\text{LOCK}}$	I	Lock signal input.
16	VDD	—	Power supply (+5V).
17	$\overline{\text{CLK}}$	O	PLL clock to FE101.
18	DATA	O	PLL data to FE101.
19	D-IN	I	PLL data from FE101.
20	CE	O	PLL Latch to FE101.
21	$\overline{\text{BLN}}$	—	Not used. (Open)
22	$\overline{\text{ST}}$	I	Stereo display detection.
23	CAL	—	Not used. (Open)
24	AST	I	Auto stop signal detection.
25	AVSS	—	Ground.(Analog)
26	MUTE	O	Muting signal output.
27	EON	O	External control.
28	$\overline{\text{PGM}}$	—	Not used. (Open)
29	DATA RDS	I	RDS data input.
30	R2	O	Rotary encoder phase detection.
31	KEY 2	I	Key input.
32	KEY 1	I	Key input.
33	SI	I	Signal input.
34	AVDD	—	Analog power supply (+5V).
35	AVREF	I	Reference voltage (+5V).
36	$\overline{\text{RIN}}$	I	Remote control input.
37	R1	I	Rotary encoder number of rotation detection.
38	$\overline{\text{RDS CLK}}$	I	RDS data clock input.
39	$\overline{\text{POWER}}$	I	Power supply ON/OFF monitor.
40	GND	—	Ground.
41 to 46	IS 1 to 5	I	Model detection.
47 to 78	P1 to P32	O	Fluorescent indicator tube, segment drive.
79	V LOAD	—	Power supply (-30V).
80 to 84	P33 to P37	O	Drives indication tube.
85 to 100	G1 to G16	O	Fluorescent indicator tube, grid drive.

4-8. IC BLOCK DIAGRAMS (TUNER BOARD)

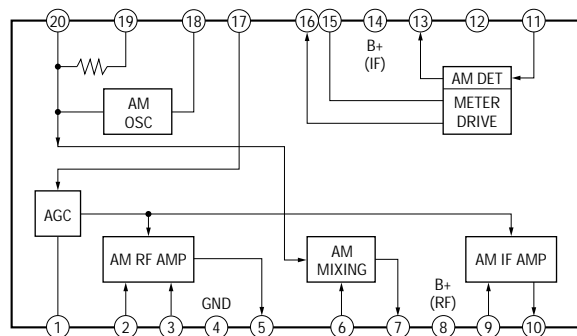
IC301 LA3401



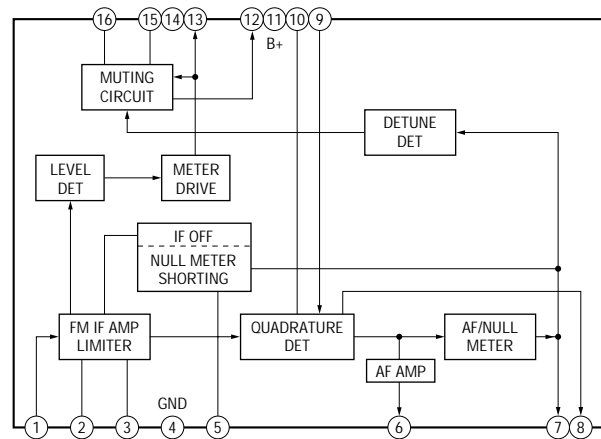
IC901 LA5667



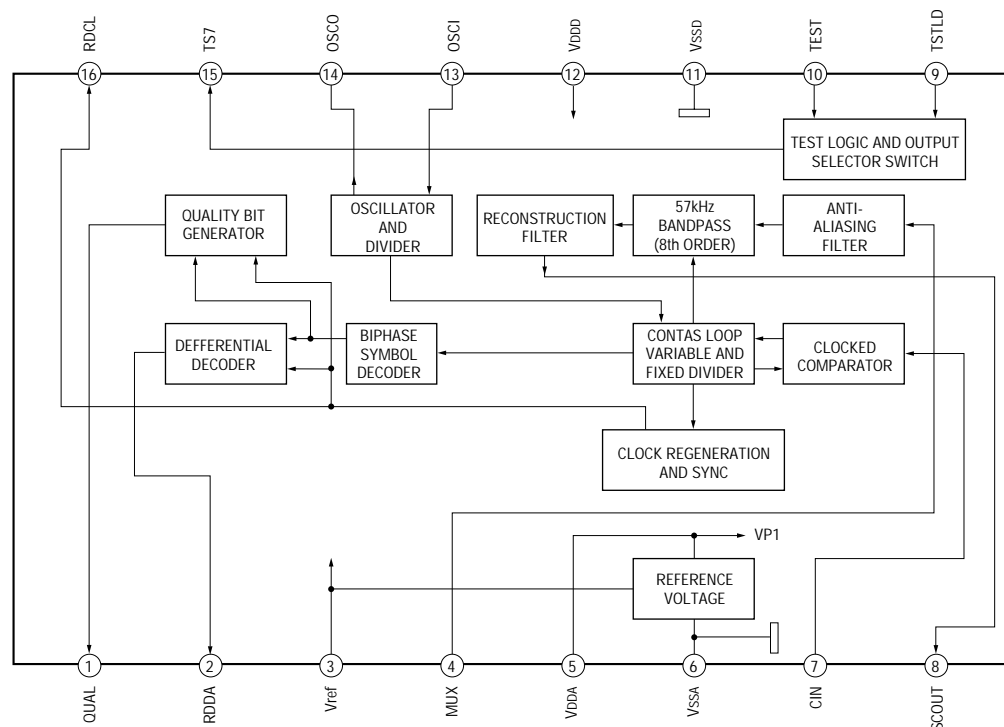
IC401 LA1245



IC221, IC251 LA1235



IC801 BU1992



SECTION 5 EXPLODED VIEWS

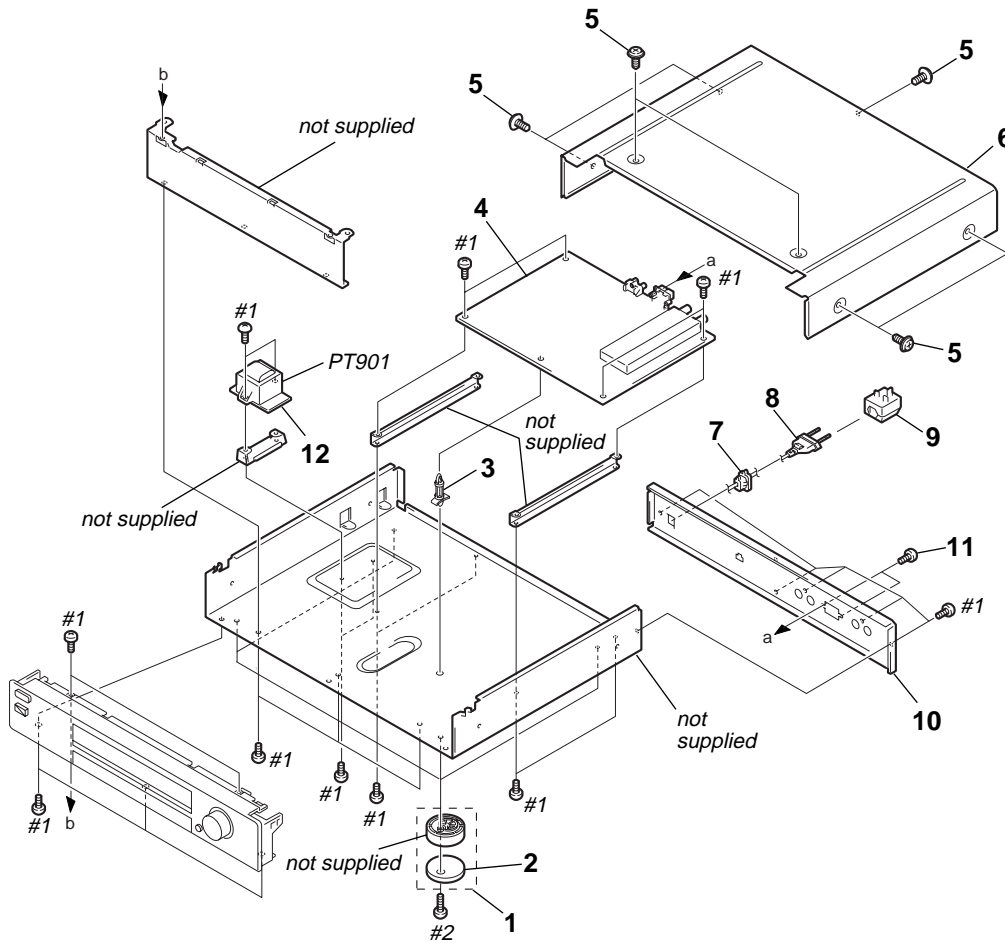
NOTE:

- -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.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts of Color Cabinet's Color
- 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.

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

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

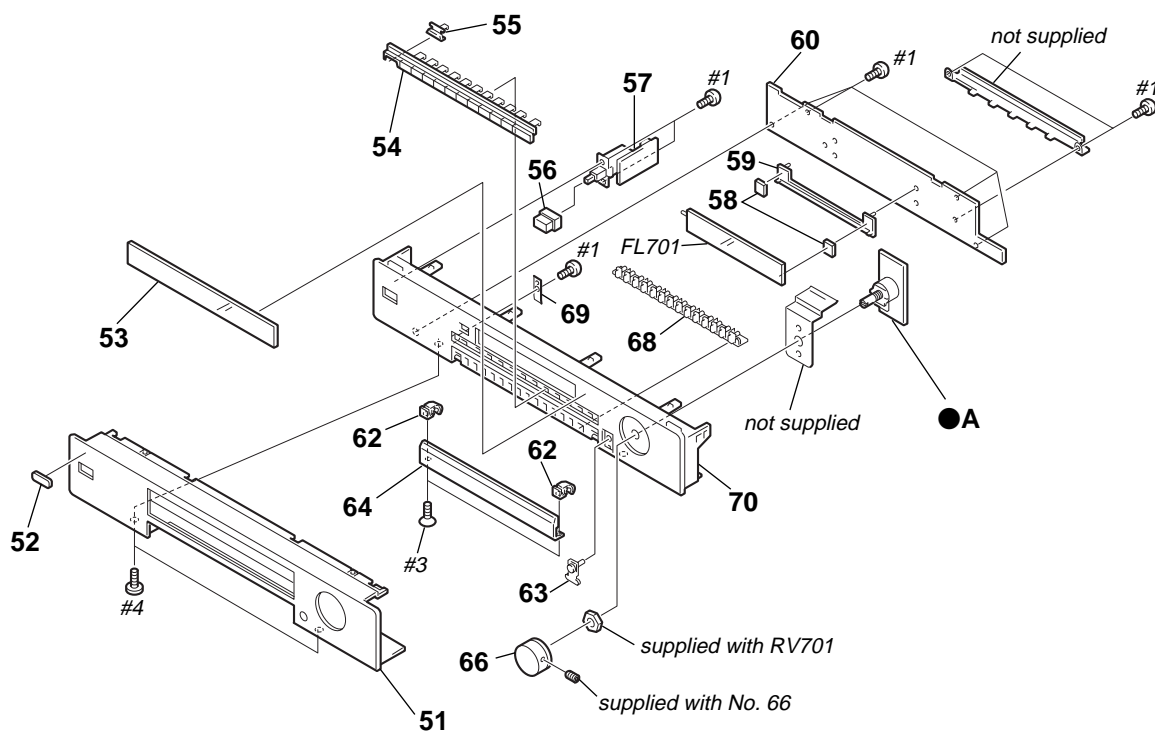
5-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	X-4949-523-1	FOOT ASSY (F50180S)		7	3-703-244-00	BUSHING, CORD	
2	4-970-124-01	CUSHION (F50180S)		Δ 8	1-575-651-21	CORD, POWER	
* 3	3-703-353-06	SUPPORT, PC BOARD		Δ 9	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
* 4	A-4407-370-A	TUNER BOARD, COMPLETE		* 10	4-998-494-01	PANEL, BACK (AEP)	
5	3-710-901-01	SCREW, TAPPING (SILVER)		* 10	4-998-494-11	PANEL, BACK (UK)	
5	3-710-901-11	SCREW, TAPPING (BLACK)		11	3-704-515-01	SCREW (BV/RING)	
* 6	4-998-495-01	CASE (407026) (BLACK)		* 12	1-669-149-11	TRANS BOARD	
6	4-998-495-21	CASE (407026) (SILVER)		Δ PT901	1-423-525-11	TRANSFORMER, POWER	

5-2. PANEL AND DISPLAY SECTION

●A : ENCODER BOARD (supplied with DISPLAY BOARD)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-998-493-01	PANEL, FRONT (BLACK)		62	4-998-485-11	HINGE (SILVER)	
51	4-998-493-11	PANEL, FRONT (SILVER)		63	4-998-488-01	BUTTON (C) (BLACK)	
52	4-942-568-41	EMBLEM (NO.5), SONY		63	4-998-488-11	BUTTON (C) (SILVER)	
53	4-998-489-01	PLATE (C), INDICATION		64	4-998-492-01	DOOR (BLACK)	
54	4-998-486-01	BUTTON (A)		64	4-998-492-11	DOOR (SILVER)	
55	4-999-566-01	BUTTON (S)		66	4-998-491-01	KNOB (R41) (BLACK)	
56	3-024-055-01	BUTTON (POWER)(BLACK)		66	4-998-491-11	KNOB (R41) (SILVER)	
56	3-024-055-21	BUTTON (POWER)(SILVER)		68	4-998-487-01	BUTTON (B) (BLACK)	
* 57	1-668-810-11	POWER SW BOARD		68	4-998-487-11	BUTTON (B) (SILVER)	
* 58	4-998-481-01	INSULATED PLATE (DS)		69	4-998-484-01	SPRING, CLICK	
* 59	4-945-292-01	HOLDER,INDICATION TUBE		70	4-998-490-01	BASE, PANEL (BLACK)	
* 60	A-4407-371-A	DISPLAY BOARD, COMPLETE		70	4-998-490-11	BASE, PANEL (SILVER)	
62	4-998-485-01	HINGE (BLACK)		FL701	1-517-177-21	FLUORESCENT INDICATOR TUBE	

DISPLAY

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4407-371-A	DISPLAY BOARD, COMPLETE ***** (including ENCODER BOARD)		R707	1-249-441-11	CARBON 100K	5% 1/4W
				R708	1-249-441-11	CARBON 100K	5% 1/4W
				R709	1-247-807-31	CARBON 100	5% 1/4W
				R710	1-249-406-11	CARBON 120	5% 1/4W F
				R711	1-249-406-11	CARBON 120	5% 1/4W F
*	4-945-292-01	HOLDER, INDICATION TUBE		R712	1-249-407-11	CARBON 150	5% 1/4W F
	4-998-481-01	INSULATED PLATE (DS)		R713	1-249-408-11	CARBON 180	5% 1/4W F
		< CAPACITOR >		R714	1-247-815-91	CARBON 220	5% 1/4W
C701	1-162-306-11	CERAMIC 0.01uF 20%	16V	R715	1-249-410-11	CARBON 270	5% 1/4W F
C702	1-162-306-11	CERAMIC 0.01uF 20%	16V	R716	1-249-411-11	CARBON 330	5% 1/4W
C703	1-162-209-31	CERAMIC 27PF 5%	50V	R717	1-249-413-11	CARBON 470	5% 1/4W F
C704	1-162-209-31	CERAMIC 27PF 5%	50V	R718	1-249-414-11	CARBON 560	5% 1/4W F
C705	1-162-306-11	CERAMIC 0.01uF 20%	16V	R719	1-249-416-11	CARBON 820	5% 1/4W F
C706	1-164-159-21	CERAMIC 0.1uF	50V	R720	1-249-418-11	CARBON 1.2K	5% 1/4W F
C707	1-126-947-11	ELECT 47uF 20%	35V	R721	1-249-421-11	CARBON 2.2K	5% 1/4W F
C708	1-162-306-11	CERAMIC 0.01uF 20%	16V	R722	1-249-424-11	CARBON 3.9K	5% 1/4W F
C709	1-162-306-11	CERAMIC 0.01uF 20%	16V	R723	1-249-430-11	CARBON 12K	5% 1/4W
C710	1-126-964-11	ELECT 10uF 20%	50V	R724	1-247-807-31	CARBON 100	5% 1/4W
C711	1-126-964-11	ELECT 10uF 20%	50V	R725	1-249-406-11	CARBON 120	5% 1/4W F
C712	1-104-905-11	CAPACITOR 0.22F	5.5V	R726	1-249-406-11	CARBON 120	5% 1/4W F
C713	1-162-306-11	CERAMIC 0.01uF 20%	16V	R727	1-249-407-11	CARBON 150	5% 1/4W F
C714	1-126-959-11	ELECT 0.47uF 20%	50V	R728	1-249-408-11	CARBON 180	5% 1/4W F
C717	1-162-286-21	CERAMIC 220PF 10%	50V	R729	1-247-815-91	CARBON 220	5% 1/4W
		< FILTER >		R730	1-249-410-11	CARBON 270	5% 1/4W F
FL701	1-517-177-21	INDICATOR TUBE, FLUORESCENT		R731	1-249-411-11	CARBON 330	5% 1/4W
		< DIODE >		R732	1-249-413-11	CARBON 470	5% 1/4W F
D701	8-719-991-33	DIODE 1SS133T-77		R733	1-249-414-11	CARBON 560	5% 1/4W F
D702	8-719-991-33	DIODE 1SS133T-77		R734	1-249-416-11	CARBON 820	5% 1/4W F
D703	8-719-991-33	DIODE 1SS133T-77		R735	1-249-418-11	CARBON 1.2K	5% 1/4W F
D705	8-719-991-33	DIODE 1SS133T-77		R736	1-249-421-11	CARBON 2.2K	5% 1/4W F
D707	8-719-991-33	DIODE 1SS133T-77		R737	1-249-424-11	CARBON 3.9K	5% 1/4W F
		< IC >		Δ R738	1-249-401-11	CARBON 47	5% 1/4W F
IC701	8-759-495-96	IC uPD780205GF-040-3BA		R739	1-249-417-11	CARBON 1K	5% 1/4W F
IC702	8-749-014-66	IC NJL56H400A		R740	1-247-863-91	CARBON 22K	5% 1/4W
		< TRANSISTOR >		R741	1-247-895-91	CARBON 470K	5% 1/4W
Q701	8-729-119-78	TRANSISTOR 2SC403SP-51		R742	1-249-413-11	CARBON 470	5% 1/4W F
		< RESISTOR >		R743	1-249-413-11	CARBON 470	5% 1/4W F
R701	1-249-437-11	CARBON 47K 5%	1/4W	R744	1-249-413-11	CARBON 470	5% 1/4W F
R702	1-249-429-11	CARBON 10K 5%	1/4W	R745	1-249-413-11	CARBON 470	5% 1/4W F
R703	1-249-429-11	CARBON 10K 5%	1/4W	R746	1-249-413-11	CARBON 470	5% 1/4W F
R704	1-249-419-11	CARBON 1.5K 5%	1/4W F	R747	1-249-413-11	CARBON 470	5% 1/4W F
R705	1-249-419-11	CARBON 1.5K 5%	1/4W F	R749	1-249-413-11	CARBON 470	5% 1/4W F
				R750	1-249-413-11	CARBON 470	5% 1/4W F
				R751	1-249-413-11	CARBON 470	5% 1/4W F
				R752	1-249-413-11	CARBON 470	5% 1/4W F
				R753	1-249-413-11	CARBON 470	5% 1/4W F
				R754	1-249-413-11	CARBON 470	5% 1/4W F
				R755	1-247-807-31	CARBON 100	5% 1/4W
				R756	1-247-807-31	CARBON 100	5% 1/4W

DISPLAY **POWER SW** **TRANS** **TUNER**

Ref. No.	Part No.	Description	Remarks
		< VARIABLE RESISTOR >	
RV701	1-466-336-21	ENCODER, ROTARY (TUNING/SELECT)	
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (SHIFT)	
S702	1-554-303-21	SWITCH, TACTILE (1)	
S703	1-554-303-21	SWITCH, TACTILE (2)	
S704	1-554-303-21	SWITCH, TACTILE (3)	
S705	1-554-303-21	SWITCH, TACTILE (4)	
S706	1-554-303-21	SWITCH, TACTILE (5)	
S707	1-554-303-21	SWITCH, TACTILE (6)	
S708	1-554-303-21	SWITCH, TACTILE (7)	
S709	1-554-303-21	SWITCH, TACTILE (8)	
S710	1-554-303-21	SWITCH, TACTILE (9)	
S711	1-554-303-21	SWITCH, TACTILE (0)	
S712	1-554-303-21	SWITCH, TACTILE (DIRECT)	
S713	1-554-303-21	SWITCH, TACTILE (MENU)	
S714	1-554-303-21	SWITCH, TACTILE (RETURN)	
S715	1-554-303-21	SWITCH, TACTILE (ENTER)	
S717	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S718	1-554-303-21	SWITCH, TACTILE (PTY)	
S719	1-554-303-21	SWITCH, TACTILE (TA)	
S720	1-554-303-21	SWITCH, TACTILE (NEWS/INFO)	
S721	1-554-303-21	SWITCH, TACTILE (AUTO-BETICAL SELECT)	
S722	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S723	1-554-303-21	SWITCH, TACTILE (BAND)	
S724	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
S725	1-554-303-21	SWITCH, TACTILE (ANTENNA)	
S726	1-554-303-21	SWITCH, TACTILE (FM MODE)	
S727	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S728	1-554-303-21	SWITCH, TACTILE (TUNING MODE)	
		< VIBRATOR >	
X701	1-760-422-11	VIBRATOR, CRYSTAL (4.19MHz)	

*	1-668-810-11	POWER SW BOARD	

		< CAPACITOR >	
△ C951	1-113-915-11	CERAMIC	0.001uF 20% 250V
		< SWITCH >	
△ S901	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)	

*	1-669-149-11	TRANS BOARD	

		< CAPACITOR >	
△ C952	1-162-306-11	CERAMIC	0.01uF 20% 16V
		< CONNECTOR >	
CNP901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP951	1-564-321-00	PIN, CONNECTOR 2P	

Ref. No.	Part No.	Description	Remarks
		< EARTH >	
ECP900	1-690-880-51	LEAD (WITH CONNECTOR)	
		< TRANSFORMER >	
△ PT901	1-423-525-11	TRANSFORMER, POWER	

*	A-4407-370-A	TUNER BOARD, COMPLETE	

	7-685-872-09	SCREW +BVTT 3 × 8 (S)	
		< CAPACITOR >	
C102	1-162-306-11	CERAMIC	0.01uF 20% 16V
C103	1-126-967-11	ELECT	47uF 20% 16V
C104	1-126-967-11	ELECT	47uF 20% 16V
C200	1-162-306-11	CERAMIC	0.01uF 20% 16V
C201	1-162-306-11	CERAMIC	0.01uF 20% 16V
C202	1-162-306-11	CERAMIC	0.01uF 20% 16V
C203	1-162-306-11	CERAMIC	0.01uF 20% 16V
C204	1-162-306-11	CERAMIC	0.01uF 20% 16V
C221	1-162-288-31	CERAMIC	330PF 10% 50V
C222	1-162-306-11	CERAMIC	0.01uF 20% 16V
C223	1-162-306-11	CERAMIC	0.01uF 20% 16V
C224	1-162-306-11	CERAMIC	0.01uF 20% 16V
C225	1-126-967-11	ELECT	47uF 20% 16V
C226	1-162-306-11	CERAMIC	0.01uF 20% 16V
C227	1-126-956-91	ELECT	0.1uF 20% 50V
C231	1-162-306-11	CERAMIC	0.01uF 20% 16V
C232	1-162-306-11	CERAMIC	0.01uF 20% 16V
C235	1-162-215-31	CERAMIC	47PF 5% 50V
C236	1-162-306-11	CERAMIC	0.01uF 20% 16V
C237	1-162-306-11	CERAMIC	0.01uF 20% 16V
C251	1-162-306-11	CERAMIC	0.01uF 20% 16V
C252	1-162-306-11	CERAMIC	0.01uF 20% 16V
C253	1-162-306-11	CERAMIC	0.01uF 20% 16V
C254	1-110-341-11	MYLAR	330PF 5% 50V
C255	1-130-467-00	MYLAR	470PF 5% 50V
C256	1-126-960-11	ELECT	1uF 20% 50V
C257	1-126-967-11	ELECT	47uF 20% 16V
C258	1-162-306-11	CERAMIC	0.01uF 20% 16V
C259	1-126-967-11	ELECT	47uF 20% 16V
C260	1-162-306-11	CERAMIC	0.01uF 20% 16V
C261	1-162-306-11	CERAMIC	0.01uF 20% 16V
C262	1-162-306-11	CERAMIC	0.01uF 20% 16V
C263	1-162-306-11	CERAMIC	0.01uF 20% 16V
C264	1-126-959-11	ELECT	0.47uF 20% 50V
C267	1-162-306-11	CERAMIC	0.01uF 20% 16V
C268	1-162-294-31	CERAMIC	0.001uF 10% 50V
C269	1-162-306-11	CERAMIC	0.01uF 20% 16V
C270	1-162-282-31	CERAMIC	100PF 10% 50V
C301	1-136-161-00	FILM	0.047uF 5% 50V
C302	1-126-967-11	ELECT	47uF 20% 16V

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

TUNER

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C303	1-136-161-00	FILM	0.047uF 5% 50V	C901	1-101-004-00	CERAMIC	0.01uF 50V
C304	1-162-288-31	CERAMIC	330PF 10% 50V	C902	1-101-004-00	CERAMIC	0.01uF 50V
C306	1-126-967-11	ELECT	47uF 20% 16V	C903	1-126-967-11	ELECT	47uF 20% 50V
C307	1-130-468-00	MYLAR	560PF 5% 50V	C904	1-126-967-11	ELECT	47uF 20% 50V
C308	1-130-468-00	MYLAR	560PF 5% 50V	C905	1-126-953-11	ELECT	2200uF 20% 35V
C311	1-130-475-00	MYLAR	0.0022uF 5% 50V	C906	1-126-969-11	ELECT	220uF 20% 50V
C312	1-130-475-00	MYLAR	0.0022uF 5% 50V	C907	1-126-964-11	ELECT	10uF 20% 50V
C313	1-126-964-11	ELECT	10uF 20% 50V	C908	1-126-964-11	ELECT	10uF 20% 50V
C314	1-126-964-11	ELECT	10uF 20% 50V	C909	1-126-967-11	ELECT	47uF 20% 16V
C315	1-110-335-11	MYLAR	100PF 5% 50V	C910	1-126-935-11	ELECT	470uF 20% 6.3V
C316	1-110-335-11	MYLAR	100PF 5% 50V	C911	1-126-959-11	ELECT	0.47uF 20% 50V
C317	1-126-963-11	ELECT	4.7uF 20% 50V	< FILTER >			
C318	1-126-963-11	ELECT	4.7uF 20% 50V	CF201	1-567-389-11	FILTER, CERAMIC	
C319	1-126-934-11	ELECT	220uF 20% 16V	CF202	1-567-389-11	FILTER, CERAMIC	
C320	1-126-960-11	ELECT	1uF 20% 50V	CF203	1-567-389-11	FILTER, CERAMIC	
C321	1-126-960-11	ELECT	1uF 20% 50V	CF231	1-579-554-31	FILTER, CERAMIC	
C322	1-126-960-11	ELECT	1uF 20% 50V	CF301	1-567-250-11	OSCILLATOR, CERAMIC	
C323	1-126-959-11	ELECT	0.47uF 20% 50V	CF402	1-527-981-00	FILTER, CERAMIC	
C324	1-126-960-11	ELECT	1uF 20% 50V	< JACK >			
C325	1-126-967-11	ELECT	47uF 20% 16V	CNJ301	1-778-940-11	JACK 2P (LINE OUT)	
C351	1-130-471-00	MYLAR	0.001uF 5% 50V	CNJ302	1-566-212-11	PIN, CONNECTOR 3P (EON CONTROL OUT)	
C352	1-130-471-00	MYLAR	0.001uF 5% 50V	< CONNECTOR >			
C371	1-162-306-11	CERAMIC	0.01uF 20% 16V	* CNP701	1-568-936-11	PIN, CONNECTOR 9P	
C400	1-162-211-31	CERAMIC	33PF 5% 50V	* CNP702	1-568-935-11	PIN, CONNECTOR 8P	
C401	1-162-306-11	CERAMIC	0.01uF 20% 16V	CNP952	1-766-267-11	PIN, CONNECTOR (PC BOARD) 5P	
C402	1-162-306-11	CERAMIC	0.01uF 20% 16V	< DIODE >			
C403	1-162-306-11	CERAMIC	0.01uF 20% 16V	D221	8-719-991-33	DIODE 1SS133T-77	
C404	1-126-967-11	ELECT	47uF 20% 16V	D251	8-719-991-33	DIODE 1SS133T-77	
C405	1-162-306-11	CERAMIC	0.01uF 20% 16V	D301	8-719-991-33	DIODE 1SS133T-77	
C406	1-162-306-11	CERAMIC	0.01uF 20% 16V	D371	8-719-991-33	DIODE 1SS133T-77	
C407	1-162-306-11	CERAMIC	0.01uF 20% 16V	D401	8-719-991-33	DIODE 1SS133T-77	
C408	1-162-306-11	CERAMIC	0.01uF 20% 16V	D402	8-719-991-33	DIODE 1SS133T-77	
C409	1-162-294-31	CERAMIC	0.001uF 10% 50V	D901	8-719-200-82	DIODE 11ES2	
C410	1-162-306-11	CERAMIC	0.01uF 20% 16V	D902	8-719-200-82	DIODE 11ES2	
C411	1-126-967-11	ELECT	47uF 20% 16V	D903	8-719-200-82	DIODE 11ES2	
C412	1-126-960-11	ELECT	1uF 20% 50V	D904	8-719-200-82	DIODE 11ES2	
C413	1-126-960-11	ELECT	1uF 20% 50V	D905	8-719-110-69	DIODE RD27ES-B4	
C414	1-126-960-11	ELECT	1uF 20% 50V	D906	8-719-109-97	DIODE RD6.8ES-B2	
C415	1-126-962-11	ELECT	3.3uF 20% 50V	D907	8-719-200-82	DIODE 11ES2	
C418	1-162-306-11	CERAMIC	0.01uF 20% 16V	D908	8-719-991-33	DIODE 1SS133T-77	
C419	1-162-294-31	CERAMIC	0.001uF 10% 50V	< FRONTEND >			
C420	1-162-306-11	CERAMIC	0.01uF 20% 16V	FE101	1-233-524-11	ENCAPSULATED COMPONENT	
C421	1-136-161-00	FILM	0.047uF 5% 50V	FE401	1-233-525-11	ENCAPSULATED COMPONENT	
C422	1-102-508-91	CERAMIC	10PF 0.5PF 50V	< IC >			
C423	1-102-973-00	CERAMIC	100PF 5% 50V	IC221	8-759-812-35	IC LA1235	
C424	1-162-306-11	CERAMIC	0.01uF 20% 16V	IC251	8-759-812-35	IC LA1235	
C425	1-126-964-11	ELECT	10uF 20% 50V	IC301	8-759-801-80	IC LA3401	
C427	1-130-471-00	MYLAR	0.001uF 5% 50V	IC302	8-759-634-51	IC M5218AP	
C428	1-162-211-31	CERAMIC	33PF 5% 50V	IC401	8-759-812-45	IC LA1245	
C429	1-162-306-11	CERAMIC	0.01uF 20% 16V	IC801	8-759-450-86	IC BU1922	
C430	1-162-294-31	CERAMIC	0.001uF 10% 50V	IC901	8-759-820-09	IC LA5667	
C801	1-126-961-11	ELECT	2.2uF 20% 50V				
C803	1-162-306-11	CERAMIC	0.01uF 20% 16V				
C804	1-162-291-31	CERAMIC	560PF 10% 50V				
C805	1-126-967-11	ELECT	47uF 20% 16V				
C806	1-162-306-11	CERAMIC	0.01uF 20% 16V				
C807	1-102-852-91	CERAMIC	47PF 5% 50V				
C808	1-102-527-11	CERAMIC	82PF 5% 50V				
C809	1-162-306-11	CERAMIC	0.01uF 20% 16V				
C810	1-162-306-11	CERAMIC	0.01uF 20% 16V				

TUNER

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< IFT >		R205	1-249-411-11	CARBON	330 5% 1/4W
IFT252	1-404-845-11	COIL, DISCRI (PRIMARY)		R206	1-249-413-11	CARBON	470 5% 1/4W F
IFT253	1-404-846-11	COIL, DISCRI (SECONDARY)		R207	1-249-411-11	CARBON	330 5% 1/4W
IFT401	1-404-713-11	TRANSFORMER, IF		R208	1-247-863-91	CARBON	22K 5% 1/4W
		< COIL >		R209	1-249-411-11	CARBON	330 5% 1/4W
L201	1-410-521-11	INDUCTOR 100uH		R210	1-249-431-11	CARBON	15K 5% 1/4W
L351	1-410-509-11	INDUCTOR 10uH		R211	1-249-411-11	CARBON	330 5% 1/4W
L352	1-410-509-11	INDUCTOR 10uH		R212	1-249-411-11	CARBON	330 5% 1/4W
L400	1-414-142-11	INDUCTOR 1uH		R213	1-247-863-91	CARBON	22K 5% 1/4W
L401	1-410-521-11	INDUCTOR 100uH		R214	1-249-441-11	CARBON	100K 5% 1/4W
		< FILTER >		R221	1-249-413-11	CARBON	470 5% 1/4W F
LPF301	1-235-164-00	FILTER, LOW PASS		△R222	1-249-405-11	CARBON	100 5% 1/4W F
LPF302	1-235-164-00	FILTER, LOW PASS		R223	1-247-883-00	CARBON	150K 5% 1/4W
		< TRANSISTOR >		R231	1-249-411-11	CARBON	330 5% 1/4W
Q200	8-729-216-13	TRANSISTOR 2SK161-GR		R232	1-249-431-11	CARBON	15K 5% 1/4W
Q201	8-729-230-99	TRANSISTOR 2SC2669-OY		R233	1-249-411-11	CARBON	330 5% 1/4W
Q202	8-729-230-99	TRANSISTOR 2SC2669-OY		R234	1-249-395-11	CARBON	15 5% 1/4W F
Q204	8-729-230-99	TRANSISTOR 2SC2669-OY		R235	1-247-863-91	CARBON	22K 5% 1/4W
Q205	8-729-230-99	TRANSISTOR 2SC2669-OY		R238	1-249-429-11	CARBON	10K 5% 1/4W
Q231	8-729-030-02	TRANSISTOR DTC144ESA		R239	1-249-429-11	CARBON	10K 5% 1/4W
Q232	8-729-030-02	TRANSISTOR DTC144ESA		R240	1-249-431-11	CARBON	15K 5% 1/4W
Q233	8-729-030-02	TRANSISTOR DTC144ESA		R241	1-249-429-11	CARBON	10K 5% 1/4W
Q234	8-729-119-78	TRANSISTOR 2SC403SP-51		R242	1-249-429-11	CARBON	10K 5% 1/4W
Q235	8-729-119-78	TRANSISTOR 2SC403SP-51		R243	1-247-807-31	CARBON	100 5% 1/4W
Q236	8-729-230-99	TRANSISTOR 2SC2669-OY		R244	1-249-405-11	CARBON	100 5% 1/4W F
Q237	8-729-230-99	TRANSISTOR 2SC2669-OY		R245	1-249-405-11	CARBON	100 5% 1/4W F
Q251	8-729-230-99	TRANSISTOR 2SC2669-OY		R246	1-249-405-11	CARBON	100 5% 1/4W F
Q301	8-729-922-37	TRANSISTOR 2SD2144S		R251	1-249-411-11	CARBON	330 5% 1/4W
Q302	8-729-922-37	TRANSISTOR 2SD2144S		R252	1-249-437-11	CARBON	47K 5% 1/4W
Q303	8-729-922-37	TRANSISTOR 2SD2144S		R253	1-249-439-11	CARBON	68K 5% 1/4W
Q304	8-729-922-37	TRANSISTOR 2SD2144S		R254	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q401	8-729-230-99	TRANSISTOR 2SC2669-OY		R255	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q402	8-729-231-20	TRANSISTOR 2SK161-YGR		R256	1-249-432-11	CARBON	18K 5% 1/4W
Q403	8-729-922-37	TRANSISTOR 2SD2144S		R257	1-249-424-11	CARBON	3.9K 5% 1/4W F
Q404	8-729-922-37	TRANSISTOR 2SD2144S		R258	1-249-422-11	CARBON	2.7K 5% 1/4W F
Q405	8-729-922-37	TRANSISTOR 2SD2144S		△R259	1-249-405-11	CARBON	100 5% 1/4W F
Q521	8-729-030-02	TRANSISTOR DTC144ESA		R260	1-249-439-11	CARBON	68K 5% 1/4W
Q522	8-729-026-41	TRANSISTOR 2SA933AS-QRT		R261	1-249-437-11	CARBON	47K 5% 1/4W
Q523	8-729-119-78	TRANSISTOR 2SC403SP-51		R262	1-249-441-11	CARBON	100K 5% 1/4W
Q801	8-729-119-78	TRANSISTOR 2SC403SP-51		R269	1-249-441-11	CARBON	100K 5% 1/4W
Q901	8-729-029-56	TRANSISTOR DTA144ESA		R270	1-247-883-00	CARBON	150K 5% 1/4W
		< RESISTOR >		R271	1-249-417-11	CARBON	1K 5% 1/4W F
R101	1-249-417-11	CARBON 1K 5%	1/4W F	R272	1-249-417-11	CARBON	1K 5% 1/4W F
△R102	1-249-405-11	CARBON 100 5%	1/4W F	R273	1-249-422-11	CARBON	2.7K 5% 1/4W F
△R103	1-249-393-11	CARBON 10 5%	1/4W F	△R274	1-249-393-11	CARBON	10 5% 1/4W F
R104	1-247-863-91	CARBON 22K 5%	1/4W	R275	1-247-903-00	CARBON	1M 5% 1/4W
R105	1-249-437-11	CARBON 47K 5%	1/4W	R300	1-249-421-11	CARBON	2.2K 5% 1/4W F
R200	1-249-408-11	CARBON 180 5%	1/4W F	R301	1-247-883-00	CARBON	150K 5% 1/4W
R201	1-249-407-11	CARBON 150 5%	1/4W F	R302	1-247-883-00	CARBON	150K 5% 1/4W
R202	1-249-411-11	CARBON 330 5%	1/4W	R303	1-247-878-00	CARBON	91K 5% 1/4W
R203	1-249-411-11	CARBON 330 5%	1/4W	R304	1-247-878-00	CARBON	91K 5% 1/4W
R204	1-249-431-11	CARBON 15K 5%	1/4W	R305	1-249-421-11	CARBON	2.2K 5% 1/4W F
				R306	1-249-421-11	CARBON	2.2K 5% 1/4W F
				R307	1-249-426-11	CARBON	5.6K 5% 1/4W
				R308	1-249-426-11	CARBON	5.6K 5% 1/4W

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R309	1-249-426-11	CARBON	5.6K 5%	1/4W	R905	1-249-437-11	CARBON 47K 5% 1/4W
R310	1-249-426-11	CARBON	5.6K 5%	1/4W	R906	1-249-437-11	CARBON 47K 5% 1/4W
△ R311	1-249-405-11	CARBON	100 5%	1/4W F			
△ R312	1-249-405-11	CARBON	100 5%	1/4W F		< VARIABLE RESISTOR >	
R313	1-249-427-11	CARBON	6.8K 5%	1/4W F			
R314	1-249-427-11	CARBON	6.8K 5%	1/4W F	RV221	1-241-765-11	RES, ADJ, CARBON 22K
R315	1-247-815-91	CARBON	220 5%	1/4W	RV231	1-241-763-11	RES, ADJ, CARBON 4.7K
R316	1-247-815-91	CARBON	220 5%	1/4W	RV251	1-241-764-11	RES, ADJ, CARBON 10K
R317	1-249-417-11	CARBON	1K 5%	1/4W F	RV301	1-241-767-21	RES, ADJ, CARBON 100K
R318	1-249-417-11	CARBON	1K 5%	1/4W F	RV402	1-241-764-11	RES, ADJ, CARBON 10K
						< TRANSFORMER >	
R319	1-249-437-11	CARBON	47K 5%	1/4W			
R320	1-249-437-11	CARBON	47K 5%	1/4W	T251	1-235-126-00	ENCAPSULATED COMPONENT
R321	1-249-441-11	CARBON	100K 5%	1/4W		< TERMINAL >	
R324	1-249-426-11	CARBON	5.6K 5%	1/4W			
△ R325	1-249-405-11	CARBON	100 5%	1/4W F	TM401	1-537-897-11	TERMINAL BOARD,PUSH(ANTENNA)2P
△ R326	1-249-405-11	CARBON	100 5%	1/4W F		< TEST PIN >	
R331	1-247-815-91	CARBON	220 5%	1/4W			
R332	1-247-815-91	CARBON	220 5%	1/4W			
R333	1-249-417-11	CARBON	1K 5%	1/4W F	TP251	1-766-275-11	PIN, CONNECTOR (PC BOARD) 2P
R334	1-249-417-11	CARBON	1K 5%	1/4W F		< VIBRATOR >	
R351	1-249-437-11	CARBON	47K 5%	1/4W			
R352	1-249-437-11	CARBON	47K 5%	1/4W	X801	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHZ)
R363	1-249-381-11	CARBON	1 5%	1/4W F		*****	
R371	1-249-393-11	CARBON	10 5%	1/4W F			
R401	1-249-421-11	CARBON	2.2K 5%	1/4W F		MISCELLANEOUS	

△ R402	1-249-409-11	CARBON	220 5%	1/4W F			
R404	1-249-413-11	CARBON	470 5%	1/4W F	△ 8	1-575-651-21	CORD, POWER
R405	1-247-807-31	CARBON	100 5%	1/4W	△ 9	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)
R406	1-247-807-31	CARBON	100 5%	1/4W	FL701	1-157-117-21	FLUORESCENT INDICATOR TUBE
R408	1-249-429-11	CARBON	10K 5%	1/4W		*****	
						ACCESSORIES & PACKING MATERIALS	
R409	1-249-429-11	CARBON	10K 5%	1/4W		*****	
R410	1-249-430-11	CARBON	12K 5%	1/4W			
R411	1-249-417-11	CARBON	1K 5%	1/4W F			
△ R412	1-249-407-11	CARBON	150 5%	1/4W F		1-501-594-11	ANTENNA (FM)
R413	1-249-429-11	CARBON	10K 5%	1/4W		1-501-721-11	ANTENNA (LOOP)
						1-558-271-11	CORD, CONNECTION
R414	1-249-441-11	CARBON	100K 5%	1/4W		1-765-383-11	CORD (WITH CONNECTOR)
R415	1-247-883-00	CARBON	150K 5%	1/4W		3-861-974-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)
R416	1-249-417-11	CARBON	1K 5%	1/4W F			
R419	1-249-422-11	CARBON	2.7K 5%	1/4W F		3-861-974-21	MANUAL, INSTRUCTION(AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)
R420	1-249-441-11	CARBON	100K 5%	1/4W		3-861-974-31	MANUAL, INSTRUCTION(AEP) (DANISH, FINNISH)
R421	1-249-417-11	CARBON	1K 5%	1/4W F		*****	
R422	1-249-418-11	CARBON	1.2K 5%	1/4W F			
R423	1-249-418-11	CARBON	1.2K 5%	1/4W F			
R424	1-249-421-11	CARBON	2.2K 5%	1/4W F			
R425	1-249-420-11	CARBON	1.8K 5%	1/4W F			

						HARDWARE LIST	

R426	1-249-421-11	CARBON	2.2K 5%	1/4W F	#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 IT-3
△ R429	1-249-393-11	CARBON	10 5%	1/4W F	#2	7-685-885-09	SCREW +BVTT 4 × 16 (S)
R430	1-249-441-11	CARBON	100K 5%	1/4W	#3	7-685-234-19	SCREW +KTP 2.6 × 8 TYPE2NON-SLIT
R431	1-249-429-11	CARBON	10K 5%	1/4W	#4	7-685-534-19	SCREW +BTP 2.6 × 8 TYPE2 N-S
R521	1-247-843-11	CARBON	3.3K 5%	1/4W			
R522	1-247-863-91	CARBON	22K 5%	1/4W			
△ R801	1-249-401-11	CARBON	47 5%	1/4W F			
R802	1-249-421-11	CARBON	2.2K 5%	1/4W F			
R803	1-249-429-11	CARBON	10K 5%	1/4W			
△ R804	1-249-405-11	CARBON	100 5%	1/4W F			
R808	1-247-815-91	CARBON	220 5%	1/4W			
R809	1-247-807-31	CARBON	100 5%	1/4W			
△ R902	1-247-752-11	CARBON	1K 5%	1/2W F			
R903	1-249-441-11	CARBON	100K 5%	1/4W			
R904	1-249-437-11	CARBON	47K 5%	1/4W			

MC-Service

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