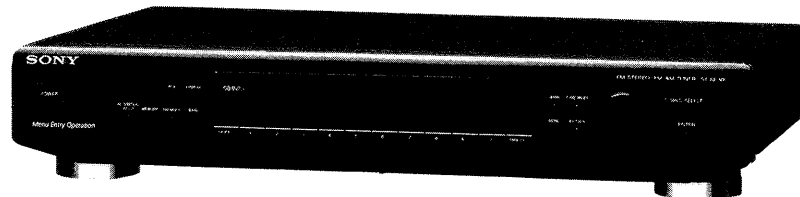


ST-SE300

SERVICE MANUAL

*AEP Model
UK Model*



SPECIFICATIONS

FM tuner section

Frequency range	87.5 - 108.0 MHz
Aerial terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	at 26 dB quieting (mono) 18.0 dBf, 2.2 μ V/75 Ω at 46 dB quieting (stereo) 40.0 dBf, 24.5 μ V/75 Ω
Usable sensitivity (IHF)	10.3 dBf, 0.9 μ V/ 75 Ω
S/N	at 40 kHz deviation 74 dB (mono), 69 dB (stereo)
Harmonic distortion	0.2 % (mono), 0.3 % (stereo)
Frequency response	30 Hz - 15 kHz (+0.3/-2.0 dB)
Separation	38 dB at 1 kHz
Selectivity	at 400 kHz 80 dB at 300 kHz 60 dB
Output	at 40 kHz deviation 400 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: 500 μ V/m LW: 2 mV/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	32 dB

General

Power requirements	220-230 V, AC 50/60 Hz
Power consumption	9 W

— Continued on page 2 —

FM STEREO/FM-AM TUNER
SONY®

Input impedance	75 ohms
Input connector	IEC-male
Dimensions	430 x 82 x 295 mm (w/h/d)
Weight	2.5 kg
Supplied accessories	Audio cord (1) AM loop aerial (1) FM wire aerial (1)

Design and specifications are subject to change without notice.

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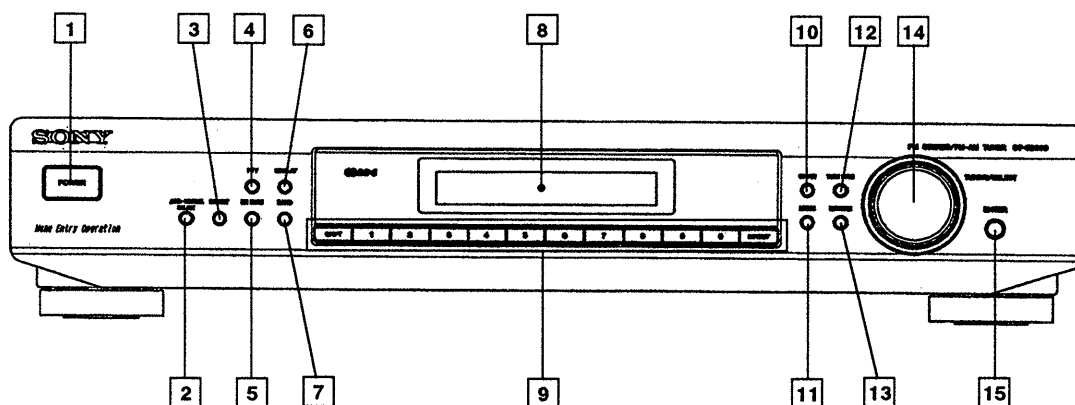
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3. ELECTRICAL ADJUSTMENTS	5
4. EXPLANATION OF IC TERMINALS	6
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  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 GENERAL

LOCATION AND FUNCTION OF CONTROLS



- | | |
|-------------------------------------|----------------------------|
| 1 POWER button | 10 CHAR button |
| 2 AUTO-BETICAL SELECT button | 11 MENU button |
| 3 MEMORY button | 12 TUNE MODE button |
| 4 PTY button | 13 RETURN button |
| 5 FM MODE button | 14 TUNING/SELECT |
| 6 DISPLAY button | 15 ENTER button |
| 7 BAND button | |
| 8 Display window | |
| 9 Numeric buttons | |
| SHIFT button | |
| 1 - 0 buttons | |
| DIRECT button | |

SECTION 2

TEST MODE

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.

1. Display Tube and Key Check Mode

1-1. Display Tube Check

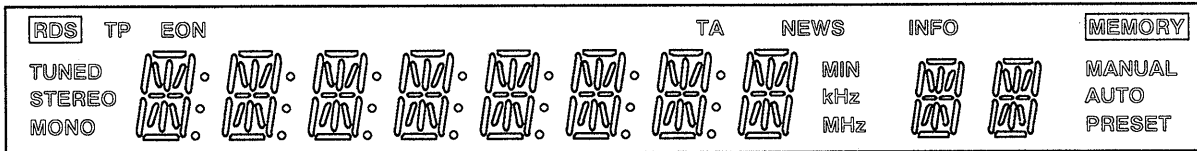
1-1-1. Turn OFF the power.

1-1-2. While pressing [1] and [AUTO-BETICAL SELECT] together, turn ON [POWER].

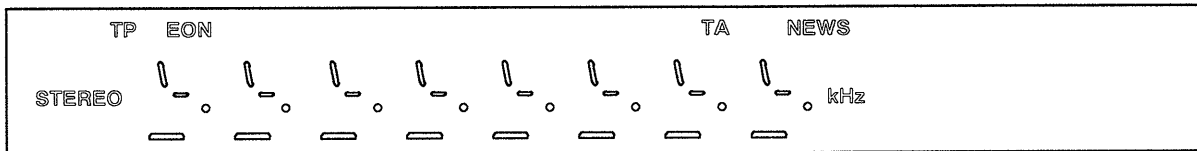
1-1-3. While continuously pressing [1] and [AUTO-BETICAL SELECT] together, check the following.

Microcomputer version indication (1 sec) → All light up (1) → 8-digit test pattern (2) → 2-digit test pattern (3)

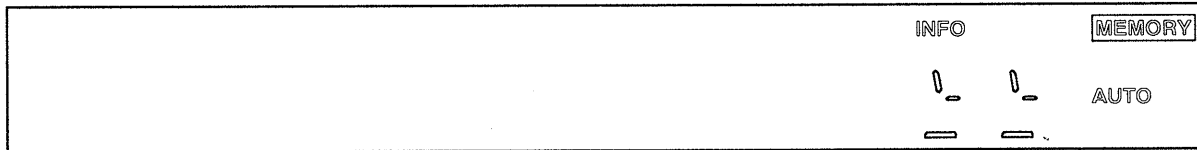
(1) All light up



(2) 8-digit test pattern



(3) 2-digit test pattern



The display changes every 500 msec.

1-2. Key Check

1-2-1. Release [1] and [AUTO-BETICAL SELECT]. The KEY CHECK mode will be set.

1-2-2. All key numbers will be displayed. Key Number : 23

1-2-3. Each time the key is pressed, the key number will be counted down.

Each key will be counted only once, at the first time.

1-2-4. When all keys have been pressed, the process will end and the factory preset will be entered.

2. Entering the Factory Preset

To skip "1. Display Tube Key Check Mode", and factory preset :

(1) Turn OFF the power.

(2) While pressing [3] and [AUTO-BETICAL SELECT] together, turn ON [POWER].

3. Circuit Check Mode

Set to the reception frequency that the circuit can receive (FM : 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 [POWER].

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

Display	Items	Display		NG
		FM RDS	AM	
TUNED	AST signal = LOW	OK or NG		FE1, IC21, IC41 NG, RV42 adjustments
IF	IF COUNT OK	OK or NG	OK or NG	FE1, IC21, IC41 NG
SIG L	SI LEVEL ≥ 70dB	OK or NG		IC221 NG, RV221 adjustments
ST	ST signal = LOW	OK or NG		IC41 NG
RDS	RDS DATA OK	OK or NG		IC202 NG

4. Forced RESET

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 [POWER].

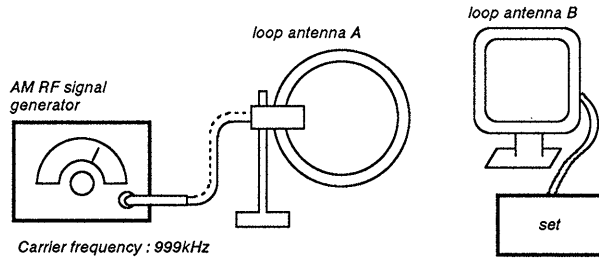
SECTION 3 ELECTRICAL ADJUSTMENTS

AM SECTION

AM Tuned Level Adjustment

Setting :

Band : MW



Procedure :

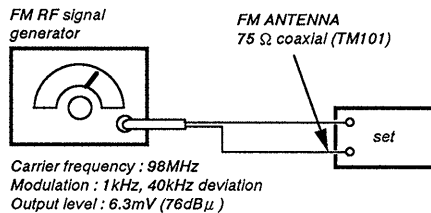
1. Set loop antenna A so that the loop antenna B input level becomes 55dB μ /m (0.6mV/m)
2. Tune the set to 999kHz (at 9kHz step) or, 1,050kHz (at 10kHz step).
3. Adjust RV41 so that the TUNED indicator goes on.

FM SECTION

FM Signal Level Adjustment

Setting :

Band : FM



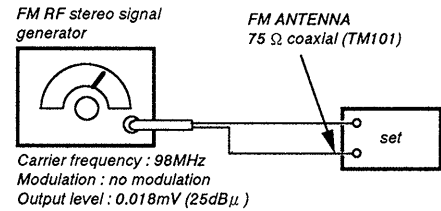
Procedure :

1. Tune the set to 98MHz.
2. Push the DISPLAY button for digital signal meter indication.
3. Adjust RV221 to the place where level and "70dB" indication lights on fluorescent tube.

FM Tuned Level Adjustment

Setting :

Band : FM

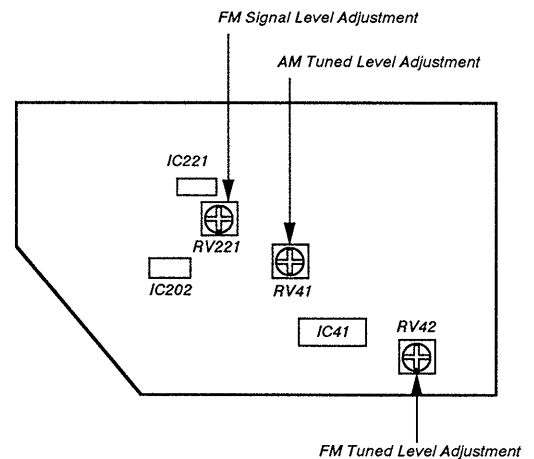


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV42 so that the TUNED indicator goes on.

Adjustment Location :

[TUNER BOARD] — Component side —



SECTION 4

EXPLANATION OF IC TERMINALS

IC701 μ PD78044AGF-155-3B9 (SYSTEM CONTROL)

Pin No.	Pin name	I/O	Description
1 – 7	7G – 1G	O	Drives indicator tube.
8	V _{DD}	–	Power supply. (+5V)
9	PLL CLOCK	O	PLL clock to IC21.
10	PLL DATA OUT	O	PLL data to IC21.
11	PLL DATA IN	I	PLL data from IC21.
12	PLL CE	O	PLL latch to IC21.
13	$\overline{\text{AST}}$	I	Auto stop signal detection.
14	$\overline{\text{ST}}$	I	Stereo display detection.
15	NC	–	Not used. (Ground)
16	NC	–	Not used. (Ground)
17	$\overline{\text{RESET}}$	I	System reset input.
18	DC. CUT	–	Not used. (Open)
19	NC	–	Not used. (Ground)
20	AV _{ss}	–	Ground.
21	$\overline{\text{MUTE}}$	O	Muting signal output.
22	NC	–	Not used. (Ground)
23	NC	–	Not used. (Ground)
24	NC	–	Not used. (Ground)
25	EON	O	EON output. (Open)
26	KEY1	I	Key input.
27	KEY2	I	Key input.
28	SI	I	Signal input.
29	AV _{DD}	–	Analog power supply. (+5V)
30	AVREF	I	Reference voltage. (+5V)
31	GND	–	Ground.
32	NC	–	Not used. (Open)
33	GND	–	Ground.
34	X1	I	Oscillation signal input. (4.19MHz)
35	X2	O	Oscillation signal output. (4.19MHz)
36	NC	–	Not used. (Ground)
37	NC	–	Not used. (Ground)
38	NC	–	Not used. (Ground)
39	NC	–	Not used. (Ground)
40	NC	–	Not used. (Ground)
41	NC	–	Not used. (Ground)
42	NC	–	Not used. (Ground)
43	RDS DATA	I	RDS data input.
44	RDS CLK	I	RDS clock input.
45	R1	I	Rotary encoder number of rotation detection.

Pin No.	Pin name	I/O	Remote Description
46	$\overline{RIN}$	I	Remote control input.
47	POWER	I	Power supply ON/OFF monitor.
48	IC	I	Signal chip mode detection.
49	NC	—	Not used. (Ground)
50	R2	O	Rotary encoder phase detection.
51	NC	—	Not used. (Ground)
52	V _{DD}	—	Power supply. (+5V)
53	IS1	I	Model detection.
54	IS2	I	Model detection.
55	IS3	I	Model detection.
56	IS4	I	Model detection.
57	GND	—	Ground.
58 – 70	P18 – P6	O	Drives indicator tube.
71	VFL	—	Power supply (– 30V) for FL701.
72 – 76	P5 – P1	O	Drives indicator tube.
77 – 80	11G – 8G	O	Drives indicator tube.

SECTION 5
DIAGRAMS

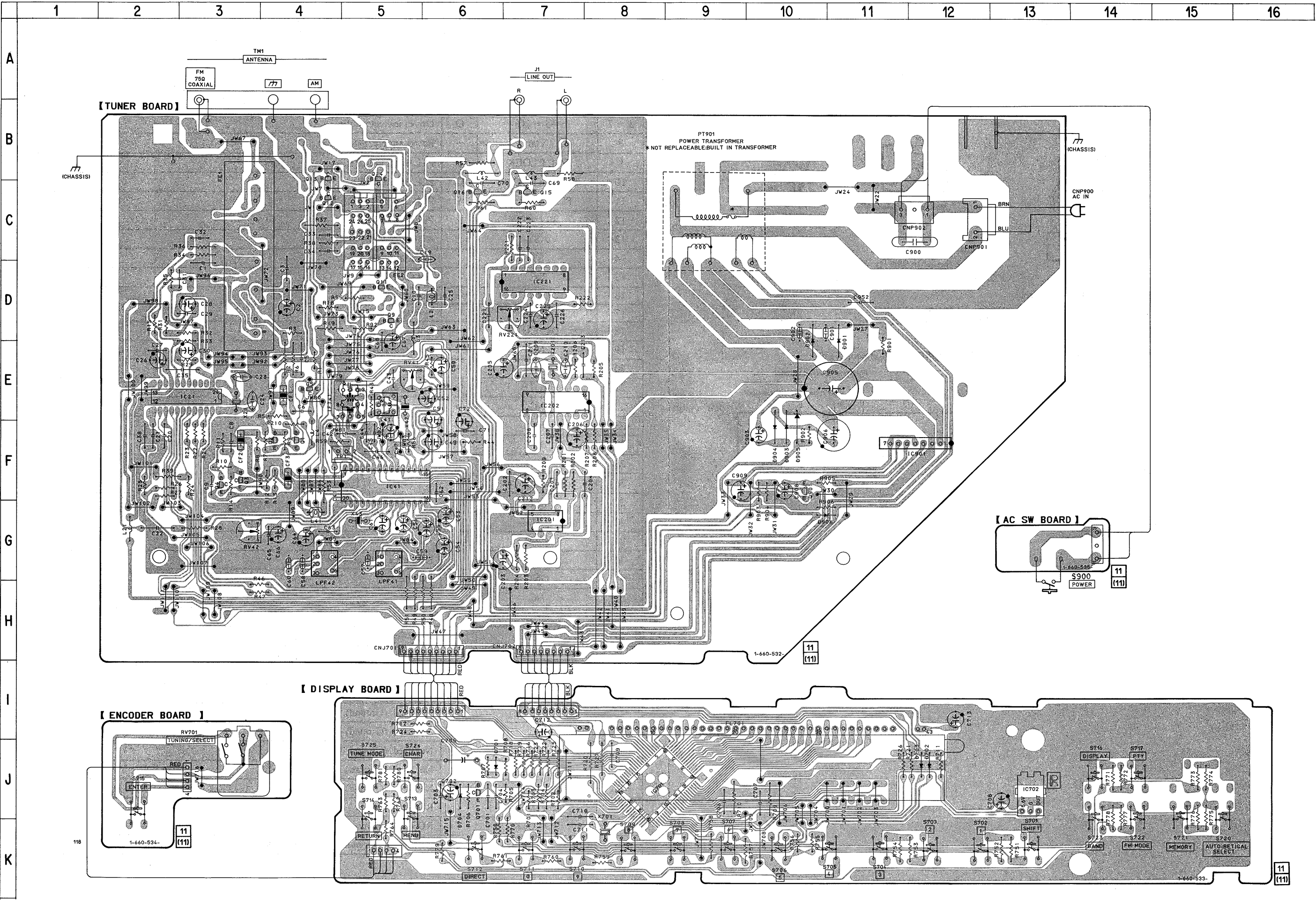
● SEMICONDUCTOR
LOCATION

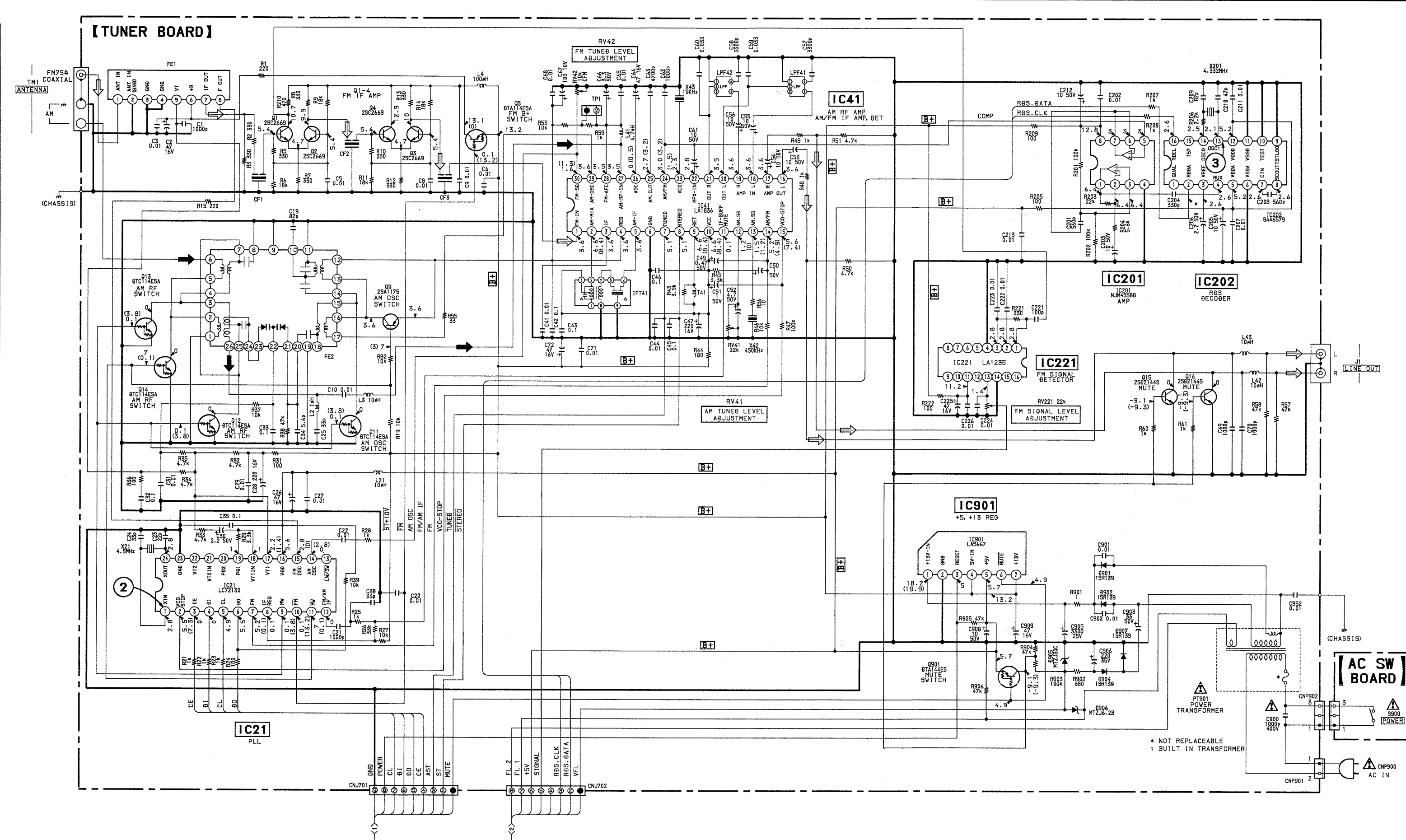
Ref. No.	Location
D701	J-6
D702	J-12
D703	J-12
D704	J-6
D901	E-11
D902	E-10
D903	F-10
D904	F-10
D905	F-10
D906	G-10
IC21	E-3
IC41	F-5
IC201	G-7
IC202	E-7
IC221	D-7
IC701	J-8
IC702	J-13
IC901	F-12
Q1	F-4
Q2	F-4
Q3	F-3
Q4	F-3
Q5	E-4
Q9	D-5
Q11	D-5
Q12	C-4
Q13	B-4
Q14	B-5
Q15	C-7
Q16	C-6
Q701	J-6
Q901	F-10

Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- ⋯ : Pattern on the side which is seen.

5-1. PRINTED WIRING BOARDS





①

2.52Vp-p 4.2MHz

IC701 ②

②

4.08Vp-p 4.5MHz

IC21 ①

③

4.48Vp-p 4.332MHz

IC202 ③

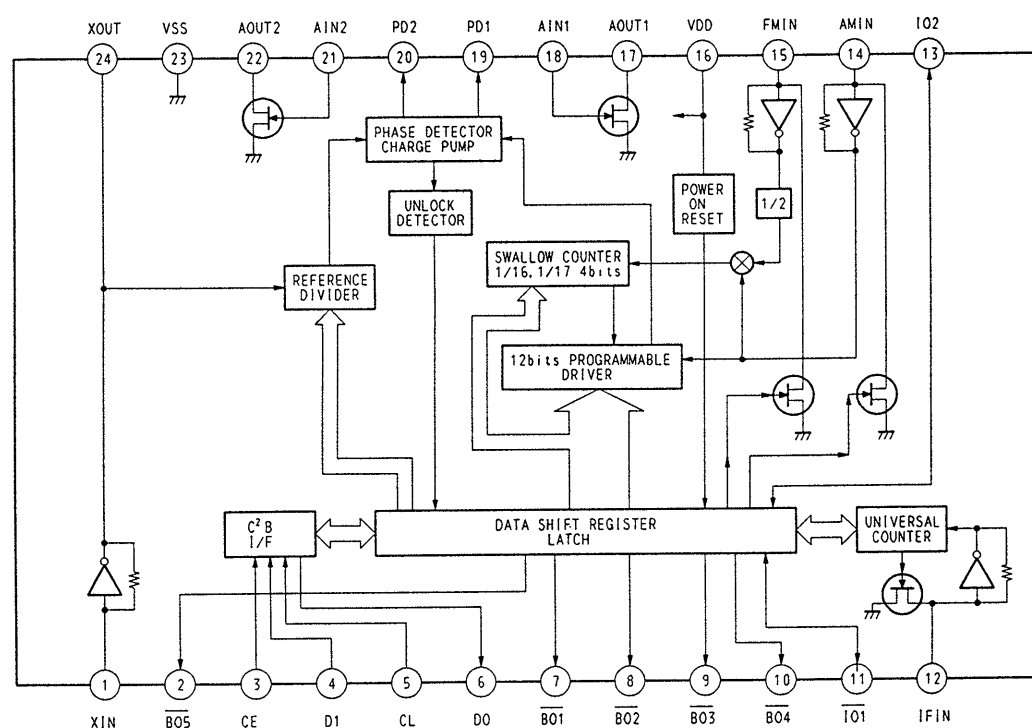
- All capacitors are in μF unless otherwise noted. μF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Δ : internal component.
-  : panel designation.

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

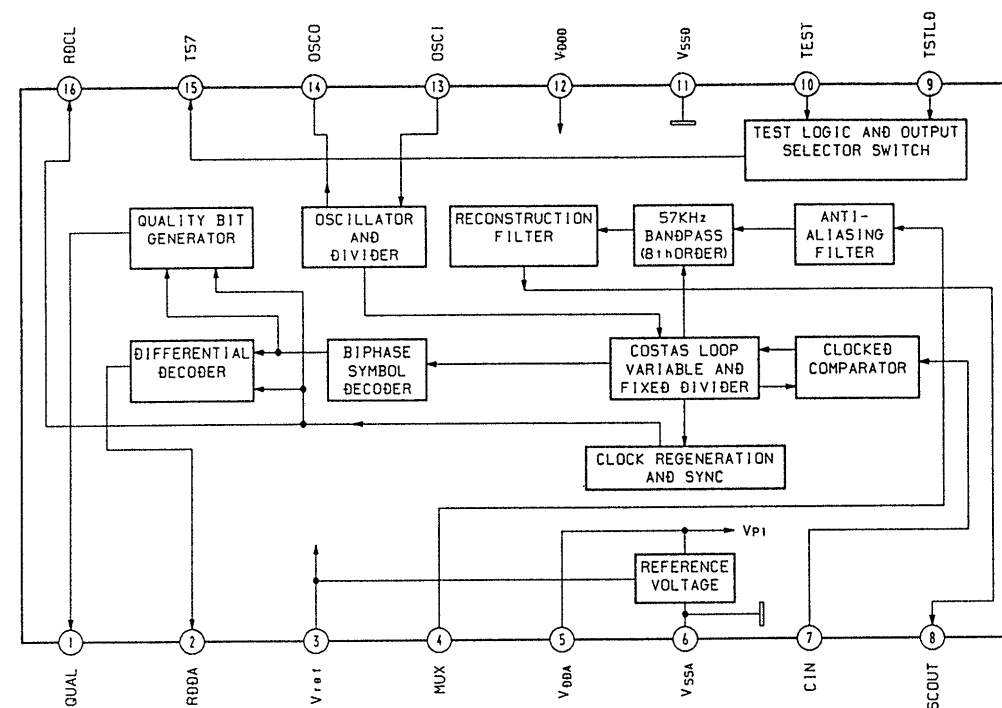
➡ : CD

• IC BLOCK DIAGRAMS

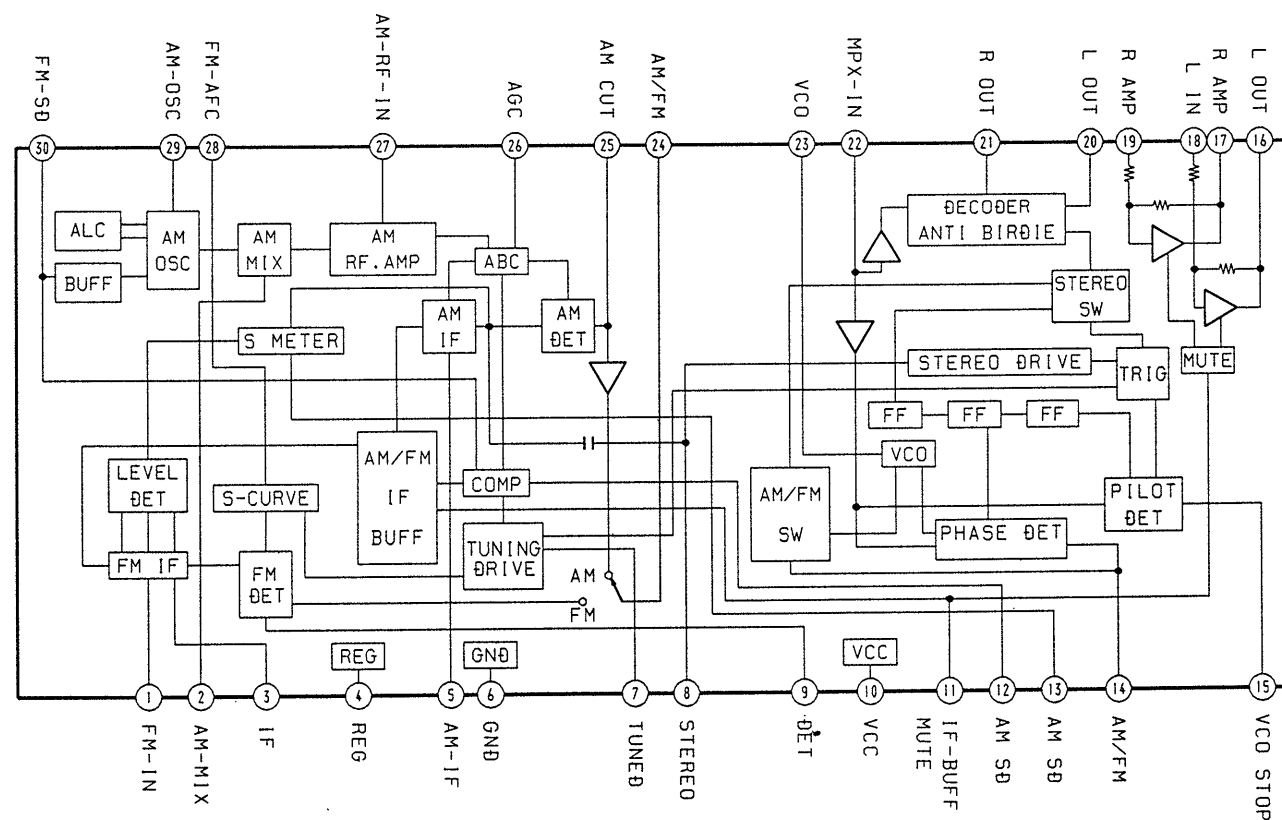
IC21 LC72130



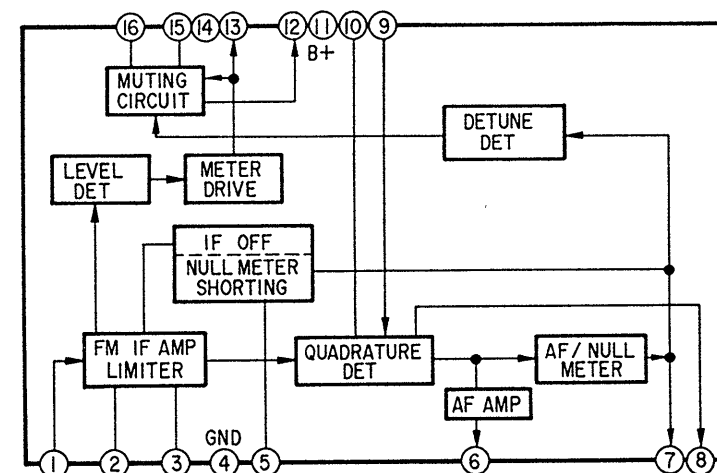
IC202 SAA6579



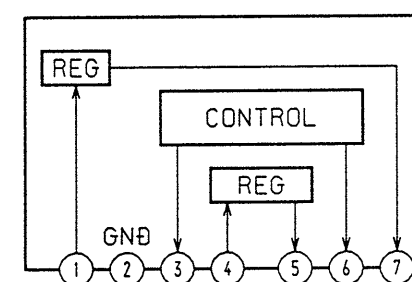
IC41 LA1836



IC221 LA1235



IC901 LA5667



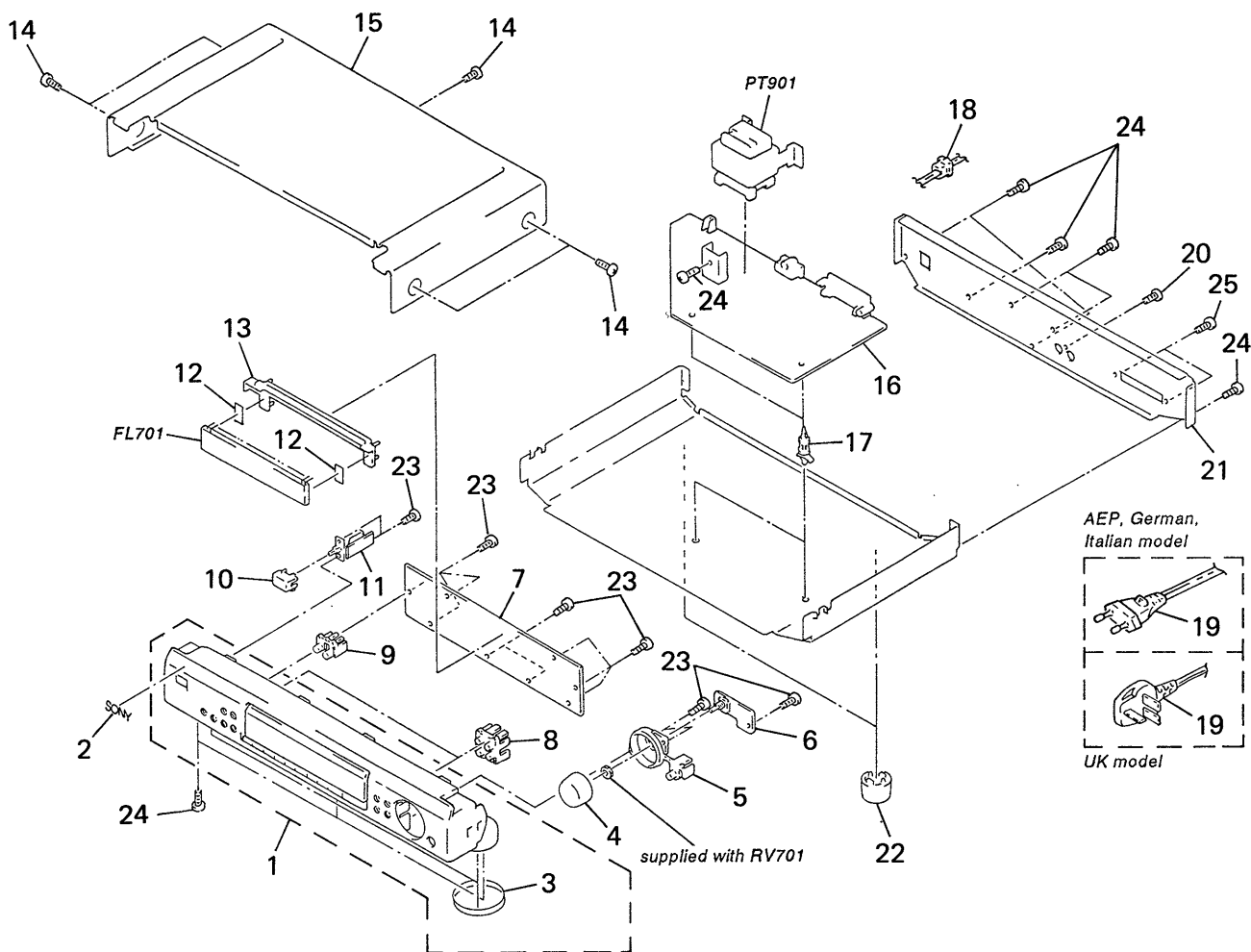
SECTION 6 EXPLODED VIEW

NOTE :

- -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.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of this parts list.

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



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4947-322-1	PANEL ASSY, FRONT		* 16	A-4389-889-A	TUNER BOARD, COMPLETE	
2	4-963-404-21	EMBLEM (5-A), SONY		* 17	3-346-265-31	HOLDER, PC BOARD	
3	4-977-593-11	RING (DIA. 50), ORNAMENTAL		18	4-966-267-11	BUSHING (FBS001), CORD	
4	X-4947-321-1	KNOB (VOL) ASSY		$\triangle$ 19	1-575-651-21	CORD, POWER (AEP,German,Italian)	
5	4-981-265-01	ESCUTCHEON		$\triangle$ 19	1-696-907-11	CORD, POWER (UK)	
* 6	1-660-534-11	ENCODER BOARD		20	3-704-515-31	SCREW (BV/RING)	
* 7	A-4389-890-A	DISPLAY BOARD, COMPLETE		* 21	4-981-268-31	PANEL, BACK (AEP,German,Italian)	
8	4-981-264-11	BUTTON (4)		* 21	4-981-268-41	PANEL, BACK (UK)	
9	4-981-264-01	BUTTON (4)		22	X-4947-207-1	FOOT ASSY (F50150S)	
10	4-977-589-21	BUTTON (POWER)		23	4-951-620-01	SCREW (2.6X8), +BVTP	
* 11	1-660-535-11	AC SW BOARD		24	7-685-646-79	SCREW +BVTP 3X8 TYPE2 TT(B)	
* 12	4-921-941-01	CUSHION (FL)		25	7-682-548-04	SCREW +BVTT 3X8 (S)	
* 13	4-979-925-01	HOLDER (FL-D)		FL701	1-517-516-11	INDICATOR TUBE, FLUORESCENT	
14	3-704-366-01	SCREW (CASE) (M3X8)		$\triangle$ PT901	1-429-467-11	TRANSFORMER, POWER	
* 15	4-978-901-51	CASE (407026)					

SECTION 7 ELECTRICAL PARTS LIST

AC SW

DISPLAY

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- 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 : μ , for example :

uA..... : μ A..... , uPA..... : μ PA.....

uPB..... : μ PB..... , uPC..... : μ PC.....

uPD..... : μ PD.....

● CAPACITORS

uF : μ F

● COILS

uH : μ H

The components identified by mark Δ or dotted line with mark Δ 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
*	1-660-535-11	AC SW BOARD *****				< IC >	
		< SWITCH >		IC701	8-759-390-90	IC uPD78044AGF-155-3B9	
				IC702	8-759-373-49	IC NJL54H400	
Δ S900	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY) (POWER) *****				< TRANSISTOR >	
*	A-4389-890-A	DISPLAY BOARD, COMPLETE *****		Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
						< RESISTOR >	
*	4-921-941-01	CUSHION (FL)		R701	1-249-419-11	CARBON 1.5K 5% 1/4W	
*	4-979-925-01	HOLDER (FL-D)		R702	1-249-419-11	CARBON 1.5K 5% 1/4W	
		< CAPACITOR >		R703	1-249-429-11	CARBON 10K 5% 1/4W	
C701	1-162-306-11	CERAMIC 0.01uF 30% 16V		R704	1-249-429-11	CARBON 10K 5% 1/4W	
C702	1-124-902-00	ELECT 0.47uF 20% 50V		R705	1-247-895-91	CARBON 470K 5% 1/4W	
C703	1-162-306-11	CERAMIC 0.01uF 30% 16V		R706	1-247-863-91	CARBON 22K 5% 1/4W	
C704	1-162-306-11	CERAMIC 0.01uF 30% 16V		R707	1-249-417-11	CARBON 1K 5% 1/4W	
C705	1-104-905-11	CAPACITOR 0.22F 5.5V		R708	1-249-401-11	CARBON 47 5% 1/4W	
C706	1-162-306-11	CERAMIC 0.01uF 30% 16V		R709	1-249-441-11	CARBON 100K 5% 1/4W	
C707	1-162-306-11	CERAMIC 0.01uF 30% 16V		R710	1-249-441-11	CARBON 100K 5% 1/4W	
C708	1-126-964-11	ELECT 10uF 20% 50V		R711	1-247-807-31	CARBON 100 5% 1/4W	
C709	1-162-306-11	CERAMIC 0.01uF 30% 16V		R716	1-247-807-31	CARBON 100 5% 1/4W	
C710	1-162-209-31	CERAMIC 27PF 5% 50V		R717	1-247-807-31	CARBON 100 5% 1/4W	
C711	1-162-209-31	CERAMIC 27PF 5% 50V		R718	1-247-807-31	CARBON 100 5% 1/4W	
C712	1-126-967-11	ELECT 47uF 20% 16V		R719	1-247-807-31	CARBON 100 5% 1/4W	
C713	1-126-965-11	ELECT 22uF 20% 50V		R720	1-247-807-31	CARBON 100 5% 1/4W	
		< DIODE >		R721	1-247-807-31	CARBON 100 5% 1/4W	
D701	8-719-815-85	DIODE 1S1585		R722	1-247-807-31	CARBON 100 5% 1/4W	
D702	8-719-815-85	DIODE 1S1585		R723	1-247-807-31	CARBON 100 5% 1/4W	
D703	8-719-815-85	DIODE 1S1585		R724	1-247-807-31	CARBON 100 5% 1/4W	
D704	8-719-815-85	DIODE 1S1585		R725	1-247-807-31	CARBON 100 5% 1/4W	
		< INDICATOR TUBE >		R726	1-247-807-31	CARBON 100 5% 1/4W	
FL701	1-517-516-11	INDICATOR TUBE, FLUORESCENT		R727	1-247-807-31	CARBON 100 5% 1/4W	
				R750	1-247-807-31	CARBON 100 5% 1/4W	
				R751	1-249-406-11	CARBON 120 5% 1/4W	
				R752	1-249-406-11	CARBON 120 5% 1/4W	
				R753	1-249-407-11	CARBON 150 5% 1/4W	
				R754	1-249-408-11	CARBON 180 5% 1/4W	

DISPLAY	ENCODER	TUNER
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Ref. No.	Part No.	Description			Remark
R755	1-247-815-91	CARBON	220	5%	1/4W
R756	1-249-410-11	CARBON	270	5%	1/4W
R757	1-249-411-11	CARBON	330	5%	1/4W
R758	1-249-413-11	CARBON	470	5%	1/4W
R759	1-249-414-11	CARBON	560	5%	1/4W
R760	1-249-416-11	CARBON	820	5%	1/4W
R761	1-249-418-11	CARBON	1.2K	5%	1/4W
R762	1-249-421-11	CARBON	2.2K	5%	1/4W
R763	1-249-424-11	CARBON	3.9K	5%	1/4W
R764	1-249-430-11	CARBON	12K	5%	1/4W
R770	1-247-807-31	CARBON	100	5%	1/4W
R771	1-249-406-11	CARBON	120	5%	1/4W
R772	1-249-406-11	CARBON	120	5%	1/4W
R773	1-249-407-11	CARBON	150	5%	1/4W
R774	1-249-408-11	CARBON	180	5%	1/4W
R775	1-247-815-91	CARBON	220	5%	1/4W
R776	1-249-410-11	CARBON	270	5%	1/4W
R777	1-249-411-11	CARBON	330	5%	1/4W
R778	1-249-413-11	CARBON	470	5%	1/4W
R779	1-249-414-11	CARBON	560	5%	1/4W
R780	1-249-416-11	CARBON	820	5%	1/4W
R781	1-249-418-11	CARBON	1.2K	5%	1/4W
< 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)			
S716	1-554-303-21	SWITCH, TACTILE (DISPLAY)			
S717	1-554-303-21	SWITCH, TACTILE (PTY)			
S720	1-554-303-21	SWITCH, TACTILE (AUTO-BETICAL SELECT)			
S721	1-554-303-21	SWITCH, TACTILE (MEMORY)			
S722	1-554-303-21	SWITCH, TACTILE (FM MODE)			
S723	1-554-303-21	SWITCH, TACTILE (BAND)			
S724	1-554-303-21	SWITCH, TACTILE (CHAR)			
S725	1-554-303-21	SWITCH, TACTILE (TUNE MODE)			
< VIBRATOR >					
X701	1-760-422-11	VIBRATOR, CRYSTAL (4.2MHz)			

Ref. No.	Part No.	Description			Remark
*	1-660-534-11	ENCODER BOARD			

< VARIABLE RESISTOR >					
RV701	1-467-703-11	ENCODER, ROTARY (TUNING/SELECT)			
< SWITCH >					
S715	1-554-303-21	SWITCH, TACTILE (ENTER)			

*	A-4389-889-A	TUNER BOARD, COMPLETE			

	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
< CAPACITOR >					
C1	1-162-294-31	CERAMIC	0.001uF	10%	50V
C2	1-126-967-11	ELECT	47uF	20%	16V
C3	1-162-306-11	CERAMIC	0.01uF	30%	16V
C5	1-162-306-11	CERAMIC	0.01uF	30%	16V
C6	1-162-306-11	CERAMIC	0.01uF	30%	16V
C8	1-162-306-11	CERAMIC	0.01uF	30%	16V
C9	1-162-306-11	CERAMIC	0.01uF	30%	16V
C10	1-162-306-11	CERAMIC	0.01uF	30%	16V
C19	1-102-527-11	CERAMIC	82PF	5%	50V
C20	1-162-306-11	CERAMIC	0.01uF	30%	16V
C21	1-162-294-31	CERAMIC	0.001uF	10%	50V
C22	1-162-306-11	CERAMIC	0.01uF	30%	16V
C23	1-102-959-00	CERAMIC	22PF	5%	50V
C24	1-102-518-11	CERAMIC	33PF	5%	50V
C25	1-162-211-31	CERAMIC	33PF	5%	50V
C26	1-126-967-11	ELECT	47uF	20%	16V
C27	1-162-306-11	CERAMIC	0.01uF	30%	16V
C28	1-126-934-11	ELECT	220uF	20%	16V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C30	1-124-925-11	ELECT	2.2uF	20%	100V
C31	1-162-306-11	CERAMIC	0.01uF	30%	16V
C32	1-164-159-21	CERAMIC	0.1uF		50V
C33	1-164-159-21	CERAMIC	0.1uF		50V
C34	1-162-196-31	CERAMIC	5.6PF	10%	50V
C35	1-164-159-21	CERAMIC	0.1uF		50V
C38	1-162-211-31	CERAMIC	33PF	5%	50V
C41	1-162-306-11	CERAMIC	0.01uF	30%	16V
C42	1-164-159-21	CERAMIC	0.1uF		50V
C43	1-164-159-21	CERAMIC	0.1uF		50V
C44	1-162-306-11	CERAMIC	0.01uF	30%	16V
C45	1-164-159-21	CERAMIC	0.1uF		50V
C46	1-164-159-21	CERAMIC	0.1uF		50V
C47	1-126-934-11	ELECT	220uF	20%	16V
C49	1-124-902-00	ELECT	0.47uF	20%	50V
C50	1-124-903-11	ELECT	1uF	20%	50V
C51	1-124-903-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C52	1-126-963-11	ELECT	4.7uF	20%	50V
C53	1-126-964-11	ELECT	10uF	20%	50V
C54	1-126-964-11	ELECT	10uF	20%	50V
C55	1-126-964-11	ELECT	10uF	20%	50V
C56	1-126-964-11	ELECT	10uF	20%	50V
C57	1-130-477-00	MYLAR	0.0033uF	5%	50V
C58	1-130-477-00	MYLAR	0.0033uF	5%	50V
C59	1-136-159-00	FILM	0.033uF	5%	50V
C60	1-136-159-00	FILM	0.033uF	5%	50V
C61	1-126-964-11	ELECT	10uF	20%	50V
C62	1-162-294-31	CERAMIC	0.001uF	10%	50V
C63	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C64	1-126-967-11	ELECT	47uF	20%	16V
C65	1-162-306-11	CERAMIC	0.01uF	30%	16V
C66	1-126-962-11	ELECT	3.3uF	20%	50V
C67	1-126-933-11	ELECT	100uF	20%	10V
C68	1-162-306-11	CERAMIC	0.01uF	30%	16V
C69	1-162-294-31	CERAMIC	0.001uF	10%	50V
C70	1-162-294-31	CERAMIC	0.001uF	10%	50V
C71	1-162-306-11	CERAMIC	0.01uF	30%	16V
C72	1-126-967-11	ELECT	47uF	20%	16V
C201	1-162-291-31	CERAMIC	560PF	10%	50V
C202	1-162-306-11	CERAMIC	0.01uF	30%	16V
C203	1-126-964-11	ELECT	10uF	20%	50V
C204	1-162-288-31	CERAMIC	330PF	10%	50V
C205	1-126-964-11	ELECT	10uF	20%	50V
C206	1-124-925-11	ELECT	2.2uF	20%	100V
C207	1-162-306-11	CERAMIC	0.01uF	30%	16V
C208	1-162-291-31	CERAMIC	560PF	10%	50V
C209	1-102-527-11	CERAMIC	82PF	5%	50V
C210	1-102-852-91	CERAMIC	47PF	5%	50V
C211	1-162-306-11	CERAMIC	0.01uF	30%	16V
C212	1-126-964-11	ELECT	10uF	20%	50V
C213	1-162-294-31	CERAMIC	0.001uF	10%	50V
C221	1-162-282-31	CERAMIC	100PF	10%	50V
C222	1-162-306-11	CERAMIC	0.01uF	30%	16V
C223	1-162-306-11	CERAMIC	0.01uF	30%	16V
C224	1-162-306-11	CERAMIC	0.01uF	30%	16V
C225	1-126-967-11	ELECT	47uF	20%	16V
C226	1-162-306-11	CERAMIC	0.01uF	30%	16V
△ C900	1-113-915-11	ELECT	0.001uF	20%	250V
C901	1-101-004-00	CERAMIC	0.01uF		50V
C902	1-101-004-00	CERAMIC	0.01uF		50V
C903	1-126-966-11	ELECT	33uF	20%	50V
C905	1-126-944-11	ELECT	3300uF	20%	25V
C906	1-126-949-11	ELECT	220uF	20%	35V
C908	1-126-964-11	ELECT	10uF	20%	50V
C909	1-126-967-11	ELECT	47uF	20%	16V
C952	1-162-306-11	CERAMIC	0.01uF	30%	16V
< FILTER >					
CF1	1-567-389-11	FILTER, CERAMIC			

Ref. No.	Part No.	Description	Remark
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC	
< CONNECTOR >			
* CNJ701	1-568-936-11	PIN, CONNECTOR 9P	
* CNJ702	1-568-935-11	PIN, CONNECTOR 8P	
CNP901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP902	1-564-321-00	PIN, CONNECTOR 2P	
< DIODE >			
D901	8-719-970-02	DIODE 1SR139-400	
D902	8-719-970-02	DIODE 1SR139-400	
D903	8-719-970-02	DIODE 1SR139-400	
D904	8-719-970-02	DIODE 1SR139-400	
D905	8-719-982-21	DIODE MTZJ-30C	
D906	8-719-109-93	DIODE RD6.2ESB2	
< FRONT END >			
FE1	1-233-541-11	FRONT END	
FE2	1-233-514-11	ENCAPSULATED COMPONENT	
< IC >			
IC21	8-759-288-54	IC LC72130	
IC41	8-759-391-37	IC LA1836	
IC201	8-759-634-51	IC M5218AP	
IC202	8-759-169-99	IC SAA6579	
IC221	8-759-812-35	IC LA1235	
IC901	8-759-820-09	IC LA5667	
< TRANSFORMER >			
IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)	
< JACK >			
J1	1-568-250-11	JACK, PIN 2P (LINE OUT)	
< COIL >			
L2	1-408-397-00	INDUCTOR 1uH	
L3	1-410-509-11	INDUCTOR 10uH	
L4	1-410-521-11	INDUCTOR 100uH	
L21	1-410-521-11	INDUCTOR 100uH	
L41	1-407-500-00	INDUCTOR 4.7mH	
L42	1-410-509-11	INDUCTOR 10uH	
L43	1-410-509-11	INDUCTOR 10uH	
< FILTER >			
LPF41	1-233-752-11	FILTER, LOW PASS	
LPF42	1-233-752-11	FILTER, LOW PASS	
< TRANSFORMER >			
△ PT901	1-429-467-11	TRANSFORMER, POWER	

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	Remark	Ref. No.	Part No.	Description	Remark
< TRANSISTOR >				R44	1-249-408-11	CARBON 180	5% 1/4W
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY		R45	1-249-423-11	CARBON 3.3K	5% 1/4W
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY		R46	1-249-429-11	CARBON 10K	5% 1/4W
Q3	8-729-230-99	TRANSISTOR 2SC2669-OY		R47	1-249-441-11	CARBON 100K	5% 1/4W
Q4	8-729-230-99	TRANSISTOR 2SC2669-OY		R48	1-249-417-11	CARBON 1K	5% 1/4W
Q5	8-729-029-21	TRANSISTOR DTA114ESA-TP		R49	1-249-417-11	CARBON 1K	5% 1/4W
Q9	8-729-119-76	TRANSISTOR 2SA1175-HFE		R50	1-249-425-11	CARBON 4.7K	5% 1/4W
Q11	8-729-029-67	TRANSISTOR DTC114ESA-TP		R51	1-249-425-11	CARBON 4.7K	5% 1/4W
Q12	8-729-029-67	TRANSISTOR DTC114ESA-TP		R53	1-249-429-11	CARBON 10K	5% 1/4W
Q13	8-729-029-67	TRANSISTOR DTC114ESA-TP		R55	1-249-399-11	CARBON 33	5% 1/4W
Q14	8-729-029-67	TRANSISTOR DTC114ESA-TP		R56	1-249-393-11	CARBON 10	5% 1/4W
Q15	8-729-922-37	TRANSISTOR 2SD2144S		R57	1-249-437-11	CARBON 47K	5% 1/4W
Q16	8-729-922-37	TRANSISTOR 2SD2144S		R58	1-249-437-11	CARBON 47K	5% 1/4W
Q901	8-729-029-56	TRANSISTOR DTA144ESA		R59	1-249-417-11	CARBON 1K	5% 1/4W
				R60	1-249-417-11	CARBON 1K	5% 1/4W
< RESISTOR >				R61	1-249-417-11	CARBON 1K	5% 1/4W
R1	1-249-409-11	CARBON 220	5% 1/4W	R92	1-249-429-11	CARBON 10K	5% 1/4W
R2	1-249-411-11	CARBON 330	5% 1/4W	R201	1-249-441-11	CARBON 100K	5% 1/4W
R3	1-249-411-11	CARBON 330	5% 1/4W	R202	1-249-441-11	CARBON 100K	5% 1/4W
R5	1-249-411-11	CARBON 330	5% 1/4W	R203	1-247-863-91	CARBON 22K	5% 1/4W
R6	1-249-432-11	CARBON 18K	5% 1/4W	R204	1-249-426-11	CARBON 5.6K	5% 1/4W
R7	1-249-411-11	CARBON 330	5% 1/4W	R206	1-249-421-11	CARBON 2.2K	5% 1/4W
R8	1-249-411-11	CARBON 330	5% 1/4W	R207	1-249-417-11	CARBON 1K	5% 1/4W
R9	1-249-432-11	CARBON 18K	5% 1/4W	R208	1-249-417-11	CARBON 1K	5% 1/4W
R10	1-249-411-11	CARBON 330	5% 1/4W	R209	1-249-405-11	CARBON 100	5% 1/4W
R11	1-249-432-11	CARBON 18K	5% 1/4W	R210	1-249-413-11	CARBON 470	5% 1/4W
R12	1-249-411-11	CARBON 330	5% 1/4W	R221	1-249-411-11	CARBON 330	5% 1/4W
R13	1-249-411-11	CARBON 330	5% 1/4W	R222	1-249-405-11	CARBON 100	5% 1/4W
R14	1-249-432-11	CARBON 18K	5% 1/4W	R901	1-249-381-11	CARBON 1	5% 1/4W
R15	1-247-815-91	CARBON 220	5% 1/4W	R902	1-249-415-11	CARBON 680	5% 1/4W
R18	1-249-429-11	CARBON 10K	5% 1/4W	R903	1-249-441-11	CARBON 100K	5% 1/4W
R19	1-249-429-11	CARBON 10K	5% 1/4W	R904	1-249-437-11	CARBON 47K	5% 1/4W
R21	1-249-417-11	CARBON 1K	5% 1/4W	R905	1-249-437-11	CARBON 47K	5% 1/4W
R22	1-249-417-11	CARBON 1K	5% 1/4W	R906	1-249-437-11	CARBON 47K	5% 1/4W
R23	1-249-417-11	CARBON 1K	5% 1/4W	< VARIABLE RESISTOR >			
R24	1-247-807-31	CARBON 100	5% 1/4W	RV41	1-238-601-11	RES, ADJ, CARBON 22K (AM TUNED LEVEL)	
R25	1-249-417-11	CARBON 1K	5% 1/4W	RV42	1-238-600-11	RES, ADJ, CARBON 10K (FM TUNED LEVEL)	
R26	1-249-435-11	CARBON 33K	5% 1/4W	RV221	1-238-601-11	RES, ADJ, CARBON 22K (FM SIGNAL LEVEL)	
R27	1-249-429-11	CARBON 10K	5% 1/4W	< TRANSFORMER >			
R28	1-249-417-11	CARBON 1K	5% 1/4W	T41	1-411-820-11	COIL (DISCRIMINATOR)	
R29	1-249-423-11	CARBON 3.3K	5% 1/4W	< TERMINAL >			
R31	1-249-405-11	CARBON 100	5% 1/4W	TM1	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)	
R32	1-249-425-11	CARBON 4.7K	5% 1/4W	< CONNECTOR >			
R33	1-249-425-11	CARBON 4.7K	5% 1/4W	TP1	1-568-951-11	PIN, CONNECTOR 2P	
R34	1-249-425-11	CARBON 4.7K	5% 1/4W				
R35	1-249-425-11	CARBON 4.7K	5% 1/4W				
R36	1-247-807-31	CARBON 100	5% 1/4W				
R37	1-249-429-11	CARBON 10K	5% 1/4W				
R38	1-249-437-11	CARBON 47K	5% 1/4W				
R39	1-249-429-11	CARBON 10K	5% 1/4W				
R43	1-249-424-11	CARBON 3.9K	5% 1/4W				

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
X21	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
X42	1-527-981-00	FILTER, CERAMIC (450KHz)	
X43	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)	
X201	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)	

MISCELLANEOUS			

△ 19	1-575-651-21	CORD, POWER (AEP,German,Italian)	
△ 19	1-696-907-11	CORD, POWER (UK)	
FL701	1-517-516-11	INDICATOR TUBE, FLUORESCENT	
△ PT901	1-429-467-11	TRANSFORMER, POWER	

ACCESSORIES & PACKING MATERIALS			

	1-501-594-11	ANTENNA (FM)	
	1-501-721-11	ANTENNA (LOOP)	
	1-558-271-11	CORD, CONNECTION	
	3-856-667-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH,PORTUGUESE)(AEP,UK)	
	3-856-667-21	MANUAL, INSTRUCTION (GERMAN,DUTCH, SWEDISH,ITALIAN)(AEP, Italian)	
	3-856-667-31	MANUAL, INSTRUCTION (DANISH,FINNISH) (AEP)	
	3-856-667-51	MANUAL, INSTRUCTION (GERMAN)(German)	
*	4-980-990-01	INDIVIDUAL CARTON	
*	4-980-991-01	CUSHION	

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

