

# STR-GX290/GX390

## SERVICE MANUAL

AEP Model



Photo : STR-GX290

### SPECIFICATIONS

#### Amplifier section

Continuous RMS power output

STR-GX390 : 50W+50W(8 ohms : AEP/4 ohms : Germany, at 40Hz–20kHz less than 0.7% total harmonic distortion)

STR-GX290 : 30W+30W(8 ohms : AEP/4 ohms : Germany, at 40Hz–20kHz less than 0.7% total harmonic distortion)

Dynamic power(DIN)

STR-GX390 : 50W+50W(8 ohms : AEP/4 ohms : Germany, at 1KHz 0.7%)

STR-GX290 : 30W+30W(8 ohms : AEP/4 ohms : Germany, at 1KHz 0.7%)

Dynamic power(IEC)

STR-GX390 : 50W+50W(8 ohms : AEP/4 ohms : Germany, at 1KHz 0.7%)

STR-GX290 : 30W+30W(8 ohms : AEP/4 ohms : Germany, at 1KHz 0.7%)

Harmonic distortion

less than 0.7% at rated output

Frequency response

PHONO : RIAA equalization curve  $\pm 0.5$ dB

CD  
VIDEO  
TAPE } 10Hz–50kHz  $\begin{matrix} +0 \\ -5 \end{matrix}$  dB

#### Inputs

	Sensitivity	Impedance	S/N (Weighting network) input level)
PHONO	2.5 mV	50 kohms	74 dB 72 dB* (A, 2.5 mV)
CD, VIDEO TAPE 1, 2	200 mV	50 kohms	95 dB 80 dB* (A, 200 mV)

\* 78 IHF

#### Outputs

REC OUT VIDEO (AUDIO) OUT	Voltage : 200 mV Impedance 10 kohms
SPEAKER A, B	Impedance 8 ohms : AEP/4 ohms : Germany–16 ohms
HEADPHONES	Accepts low and high impedance headphones

#### Tone controls

BASS :  $\pm 10$ dB at 100Hz

TREBLE :  $\pm 10$ dB at 10kHz

Variable loudness control

+6dB at 100Hz (MAX)

FM STEREO/FM-AM RECEIVER  
**SONY**<sup>®</sup>

**TABLE OF CONTENTS**

**Tuner section**

	FM tuner section	AM tuner section
Tuning range	87.5–108 MHz	531–1602 kHz
Antenna terminals	75 ohms, unbalanced	External antenna terminal
Sensitivity at 46 dB : AEP/50 dB : Germany quieting	18.3 dBf, 4.5 $\mu$ V (mono) : AEP 18.3 dBf, 2.25 $\mu$ V (mono) : Germany 38.3 dBf, 45 $\mu$ V (stereo) : AEP 38.3 dBf, 22.5 $\mu$ V (stereo) : Germany	_____
Usable sensitivity	11.2dBf, 2 $\mu$ V (IHF) : AEP 11.2 dBf, 1 $\mu$ V (IHF) : Germany	Loop antenna : 500 $\mu$ V (at 1000 kHz)
Signal-to-noise ratio	76 dB (mono) : AEP 70 dB (mono) : Germany 70 dB (stereo) : AEP 66 dB (stereo) : Germany	54 dB (at 50 mV/m)
Harmonic distortion	0.3% (mono) 0.5% (stereo) at 1 kHz	0.5% (at 50 mV/m, 400 Hz)
Selectivity	60 dB at 400 kHz	40 dB at 10 kHz : AEP 30 dB at 9 kHz : Germany
Separation	45 dB at 1 kHz	_____
Frequency response	30 Hz–15 kHz $^{+0.5}_{-2}$ dB	_____

**General**

**System**

- Tuner section : PLL quartz-locked digital synthesizer system
- Preamplifier section : low-noise NF type equalizer amp
- Power amplifier section : pure complementary SEPP

**Power requirements**

220–230 V, 50/60 Hz

**Power consumption**

100 W (STR-GX390)

**Dimensions**

430×135×300 mm (w/h/d)

**Weight**

STR-GX390 : 6.5 kg

STR-GX290 : 6.0 kg

**Accessories supplied**

FM wire antenna (1) : AEP model only

AM loop antenna (1)



Remote commander (STR-GX390 only)

RM-S103 (1)

Sony batteries SUM-3 (NS) (2)

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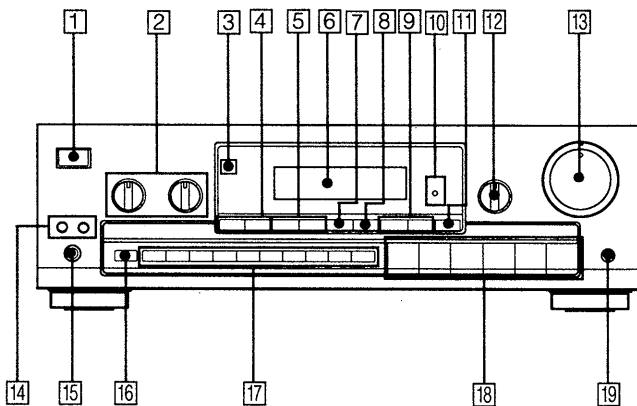
**SAFETY-RELATED COMPONENT WARNING!!**

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.

This section is extracted  
from instruction manual.

## Parts Identification

### Front Panel



- 1 **POWER** switch
- 2 **BASS/TREBLE TONE** controls  
(page 20.)
- 3 **Remote control sensor (GX390)**
- 4 **TUNING +/-** buttons  
(pages 28 and 30.)
- 5 **PRESET TUNING +/-** buttons  
(page 36.)
- 6 **Display window**
- 7 **MEMORY** button (page 32.)
- 8 **FM MODE** button (page 26.)
- 9 **FM/AM BAND** selectors  
(pages 24, 28 and 30.)
- 10 **MONITOR** indicator (page 38.)
- 11 **TUNING DIRECT** button  
(page 26.)
- 12 **BALANCE** control (page 20.)
- 13 **MASTER VOLUME** control  
(page 20.)
- 14 **SPEAKERS A/B** buttons  
(page 20.)
- 15 **HEADPHONES** jack
- 16 **SHIFT** button (pages 32 and 34.)
- 17 **Numeric** buttons  
(pages 24, 32 and 34.)
- 18 **Function** selectors
- 19 **LOUDNESS** control (page 20.)

## SECTION 2 IC PIN FUNCTION

### • $\mu$ PD75206GF-727-3BE

PIN No.	SIGNAL NAME	FUNCTION	I/O
1	RESET	Micro Computer RESET	I
2	T0	FL tube indication (invalid) digit	0
3	T1	FL tube indication digit	0
4	T2	FL tube indication digit	0
5	T3	FL tube indication digit	0
6	T4	FL tube indication digit	0
7	T5	FL tube indication digit	0
8	T6	FL tube indication digit	0
9	T7	FL tube indication digit	0
10	T8	FL tube indication digit	0
11	T9	FL tube signal indication digit	0
12	T10/PH3	SURR. C/MONITOR OUTPUT	0
13	T11/PH2	SURR. B OUTPUT	0
14	T12/PH1	SURR. A OUTPUT	0
15	T13/PH0	-20dB Muting Output	0
16	T14/S11	FL tube indication Segment/Diode	0
17	T15/S10	FL tube indication Segment/Diode	0
18	V road	FL tube pulldown power supply	-
19	V pre	FL tube driver power supply	-
20	S9	FL tube indication Segment/Diode	0
21	S8	FL tube indication Segment/Key Scan	0
22	S7	FL tube indication Segment/Key Scan	0
23	S6	FL tube indication Segment/Key Scan	0
24	S5	FL tube indication Segment/Key Scan	0
25	S4	FL tube indication Segment/Key Scan	0
26	V <sub>DD</sub>	Micro Computer power supply	-
27	S3	FL tube indication Segment/Key Scan	0
28	S2	FL tube indication Segment/Key Scan	0
29	S1	FL tube indication Segment/Key Scan	0
30	S0	FL tube indication Segment/Key Scan	0
31	P00/INT4	Signal to cut power supply	I
32	P01/SCK	Serial latch for electrical adjustment use	I



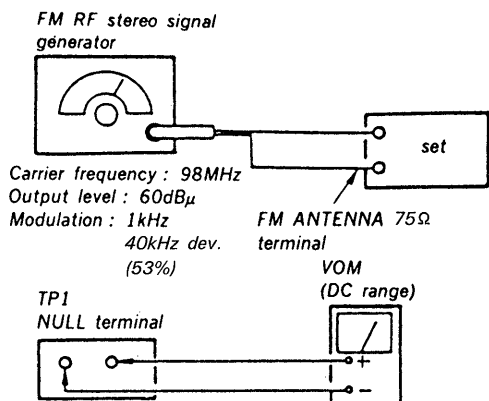
PIN No.	SIGNAL NAME	FUNCTION	I/O
33	P02/S0	Tuner Auto Stop input	I
34	P03/S1	Tuner Stereo input	I
35	P10/INT0	Remote Control Signal input	I
36	P11/INT1	Protector input	I
37	P12/INT2	System Power Key input	I
38	P13/T10	IF Data input	I
39	P20	DBFB output	O
40	P21	Video Control A	O
41	P22	Video Control B	O
42	P23/BUZ	Video Control C	O
43	P30	Protector Muting	O
44	P31	SURR. RY	O
45	P32	Standby LED Output	O
46	P33	Tuner Muting	O
47	P60	PLL/7822 Latch	O
48	P61	PLL/7822/SI Data	I/O
49	P62	PLL/7822/SI Clock	I/O
50	P63	LV1001 latch	O
51	P40	Function Muting	O
52	P41	Motor Volume UP	O
53	P42	Motor Volume DOWN	O
54	P43	Speaker Relay	O
55	PP0	Power Relay	O
56	X1	Ceramic Oscillator	-
57	X2	Ceramic Oscillator	-
58	V <sub>SS</sub>	Micro Computer GND	-
59	XT1	—	-
60	XT2	—	-
61	P50	Key Scan input	I
62	P51	Key Scan input	I
63	P52	Key Scan input	I
64	P53	Key Scan input	I

## SECTION 3 ELECTRICAL ADJUSTMENTS

### FM SECTION

#### • FM Discriminator (NULL) Adjustment

Setting :



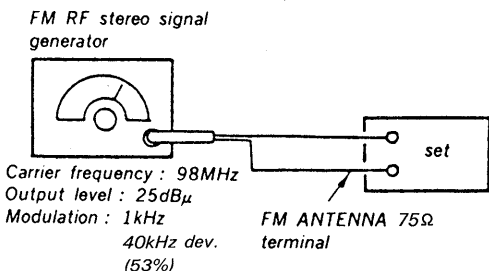
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

#### • FM Stereo Operation Level Adjustment

Setting :

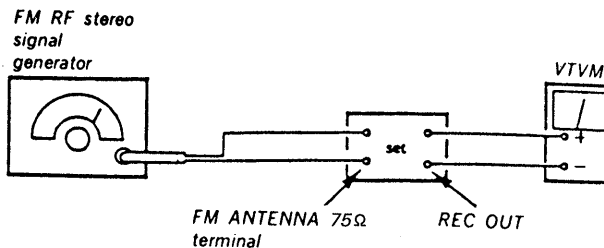


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

#### • FM Stereo Separation Adjustment

Setting :



Carrier frequency : 98MHz  
Output level : 60dB $\mu$   
Modulation :  
Audio (1kHz) : 16.25kHz dev. (21.7%)  
Pilot (19kHz) : 7.5kHz dev. (13.3%)  
Sub-channel (38kHz) : 16.25kHz dev. (21.7%)

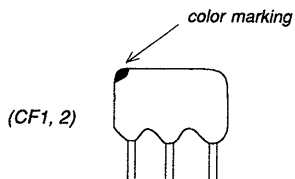
Procedure :

Tune the set to 98MHz.

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
R-CH	L-CH	Adjust RV21 for minimum reading

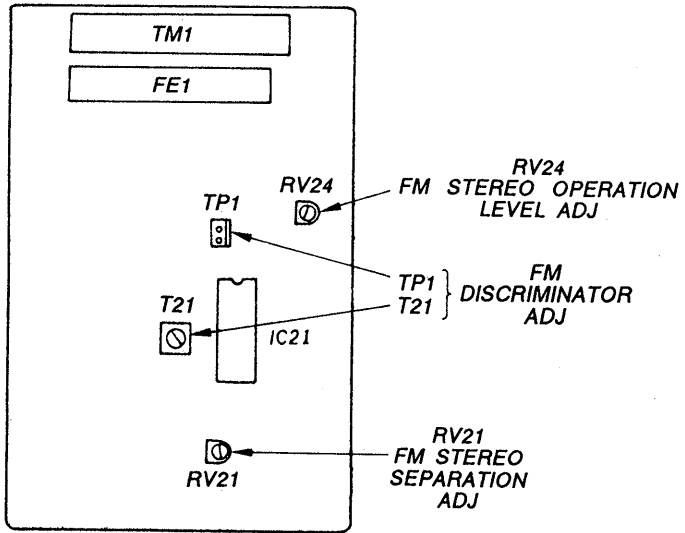
#### Note on Ceramic Filter (CF1, 2) Replacement.

This set employs two ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by (\*A, \*B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



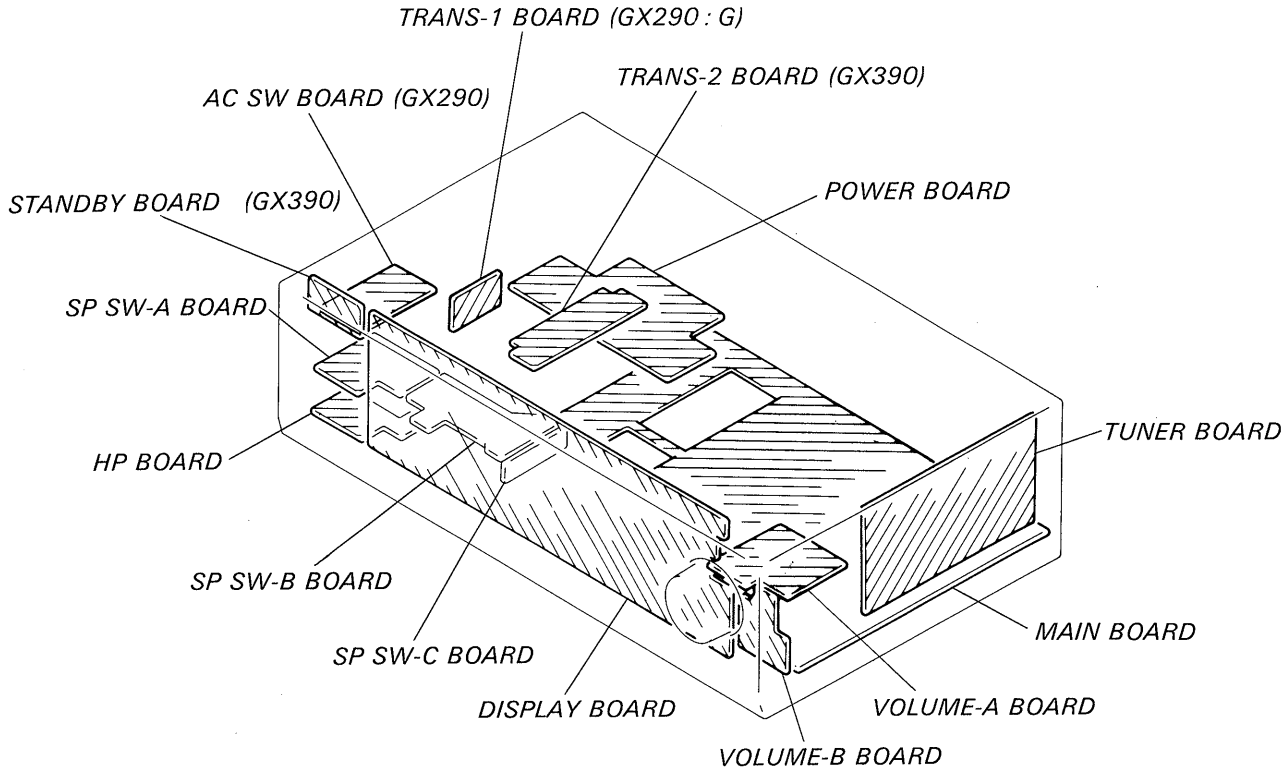
○ : short  
× : open

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center Frequency (MHz)	*A (D125)	*B (D124)	
White	10.750	×	○	10.750
Red	10.700	×	×	10.700
Black	10.650	○	○	10.650



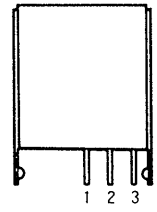
# SECTION 4 DIAGRAMS

## 4-1. CIRCUIT BOARDS LOCATION



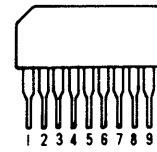
4-2. SEMICONDUCTOR LEAD LAYOUTS

GP1U52XB

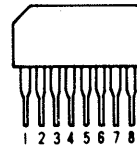


1 Vout  
2 Vcc  
3 GND

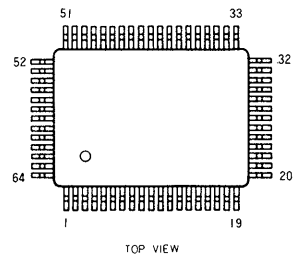
LB1493  
μPC4570HA-1



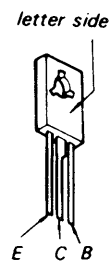
M5218AL



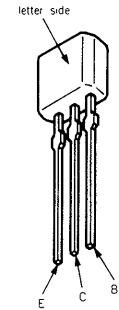
μPD75206GF-727-3BE



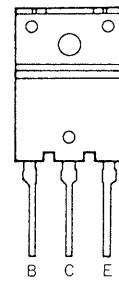
2SA1142-QPE  
2SC2682-QPE  
2SD809-K



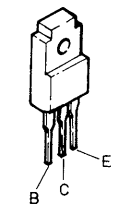
2SA1175-HFE  
2SC2785-HFE



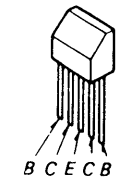
2SA1670-OP-A  
2SA1670-OY



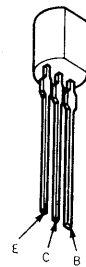
2SA1684-LK  
2SC4431-LK



2SA979-FG



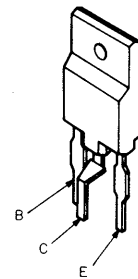
2SA988-PAFAEA



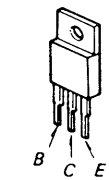
2SC2603-EF  
2SC2669-OY  
2SC3113-AB  
2SC3623A-LK  
DTA114ES  
DTA124ES  
DTC114ES  
DTC124ES



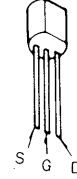
2SC4385-OP-A  
2SC4385-OY



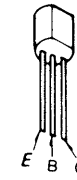
2SD2012



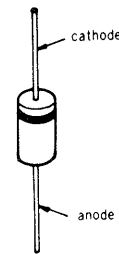
2SK246-GR3



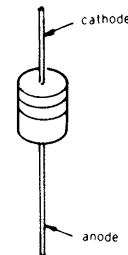
KSA708



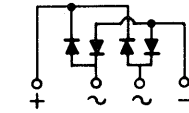
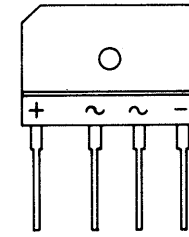
1N4148M  
UZ-12BSB  
UZ-13BSB  
UZ-4.3BSB  
UZ-6.2BSC



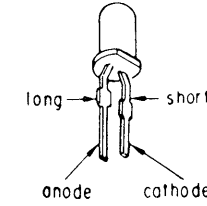
11ES2  
HZS22-2L  
HZS4ALL  
HZS6C3L  
UZL-24L



RBA402



SEL3210S-CD  
SEL3810A-CD

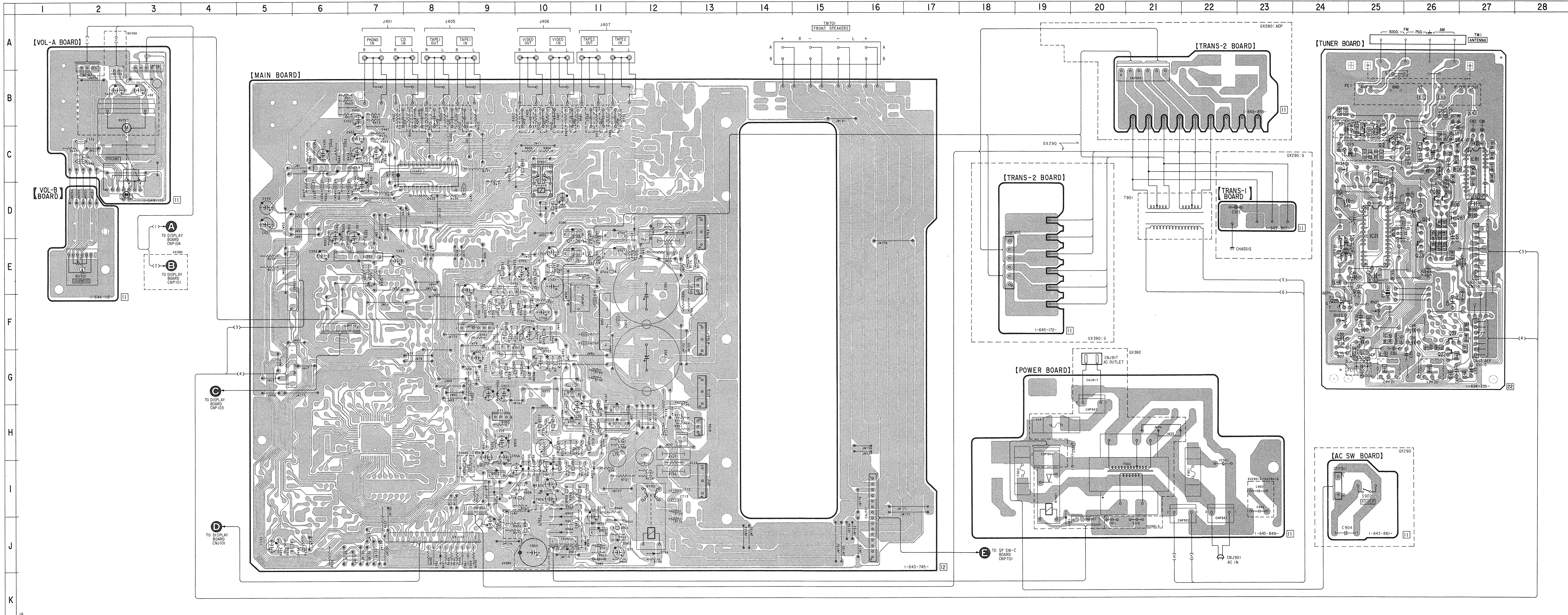




4-3. PRINTED WIRING BOARDS —MAIN Section—

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	J-8	Q408	D-10
D403	D-10	Q452	C-9
D701	F-9	Q701	F-9
D702	G-10	Q702	F-9
D703	I-11	Q703	F-10
D704	J-12	Q704	G-9
D705	I-10	Q705	H-10
D751	E-9	Q706	H-13
D752	F-10	Q707	G-10
D753	D-12	Q710	H-11
D901	J-19	Q711	H-11
D951	F-11	Q712	I-13
D952	G-9	Q713	G-13
D953	I-9	Q714	H-11
D954	I-10	Q715	H-10
D955	H-9	Q716	H-10
D956	I-9	Q717	H-10
D962	J-11	Q718	I-9
D963	J-11	Q751	E-9
D964	J-11	Q752	E-9
D965	I-10	Q753	E-10
D966	J-10	Q754	F-9
D967	J-10	Q755	D-11
D968	I-10	Q756	E-13
D969	I-10	Q757	E-11
D970	J-11	Q760	D-11
D971	J-10	Q761	E-11
D976	J-11	Q762	F-13
D977	J-10	Q763	D-13
		Q764	E-11
IC21	E-25	Q951	H-9
IC81	C-27	Q952	I-9
IC306	E-7	Q953	J-11
IC401	C-6	Q954	J-11
IC402	C-8	Q955	I-11
		Q956	I-10
Q1	C-26	Q957	I-11
Q2	C-25	Q958	I-10
Q21	F-26	Q959	I-9
Q22	G-26	Q960	J-10
Q23	E-26		
Q24	D-26		
Q25	F-24		
Q81	D-26		
Q82	D-26		
Q83	D-26		
Q84	C-26		
Q402	C-10		
Q406	J-5		



**Note:**

- — : parts extracted from the component side.
- : parts mounted on the conductor side.
- : indicates side identified with part number.
- \* , \*A , \*B : See page 6 for Note on Ceramic Filter (CF1, 2) Replacement.

G: Germany

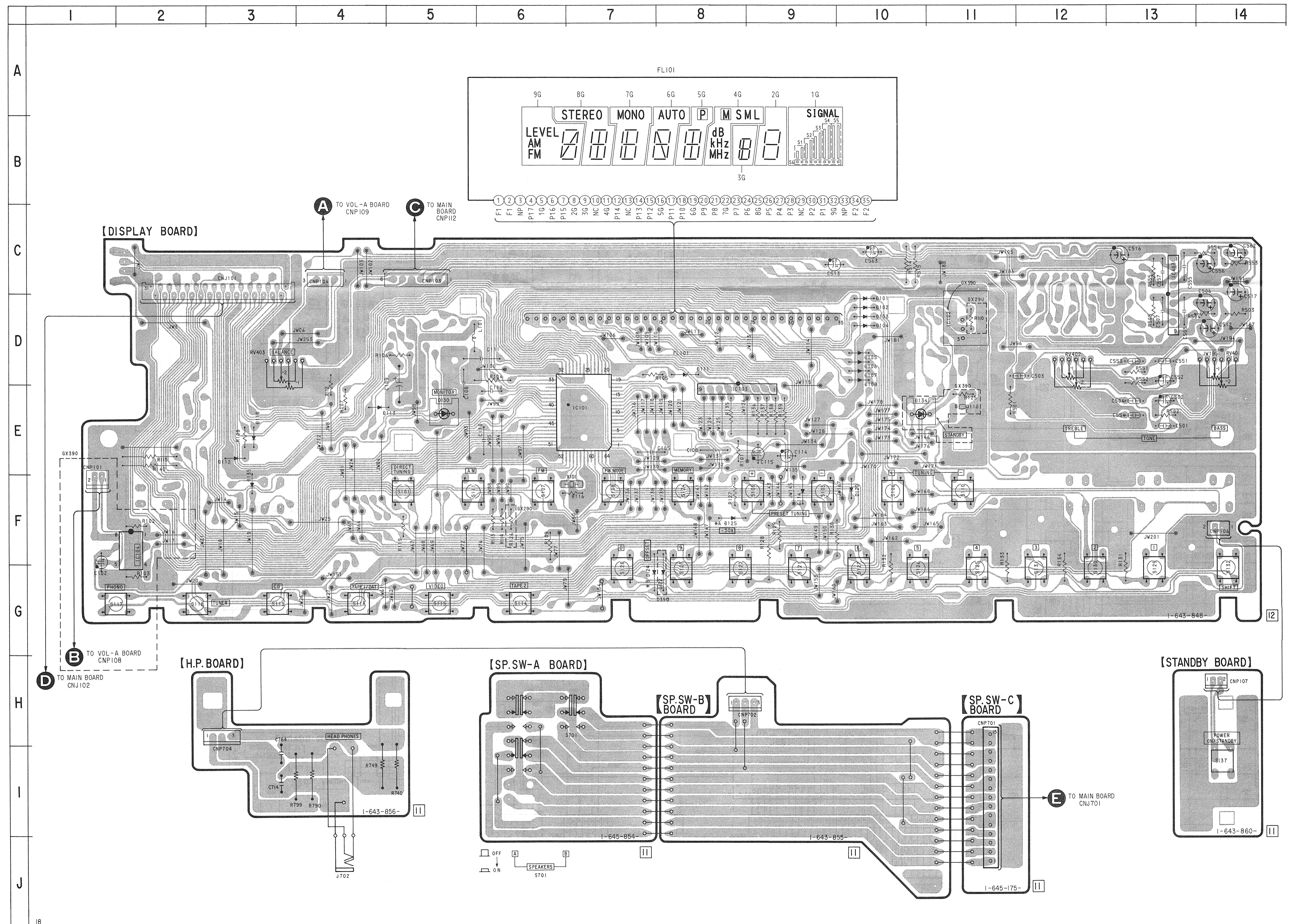






● Semiconductor Location

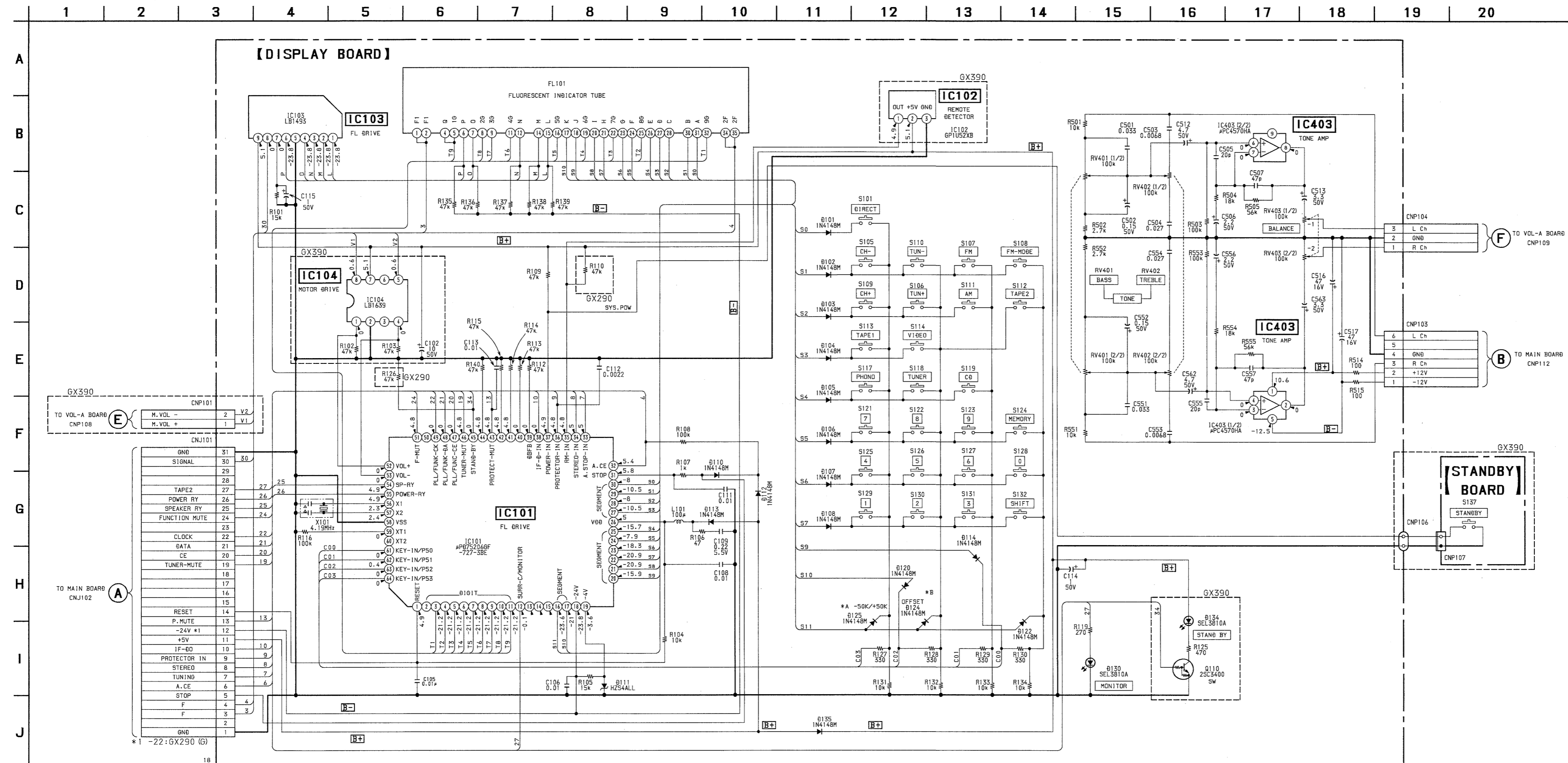
Ref. No.	Location
D101	D-10
D102	D-10
D103	D-10
D104	D-10
D105	D-10
D106	D-10
D107	D-10
D108	D-10
D110	E-3
D111	D-8
D112	E-3
D113	E-4
D114	F-9
D120	F-10
D122	G-8
D124	G-7
D125	F-8
D130	E-5
D134	E-10
D135	F-3
IC101	E-7
IC102	D-11
IC103	E-8
IC104	F-2
IC403	C-13
Q110	E-11



Note:  
 ○ : parts extracted from the component side.  
 ● : parts mounted on the conductor side.  
 □ : indicates side identified with part number.  
 \*, \*A, \*B: See page 6 for Note on Ceramic Filter (CF1, 2) Replacement.  
 G: Germany

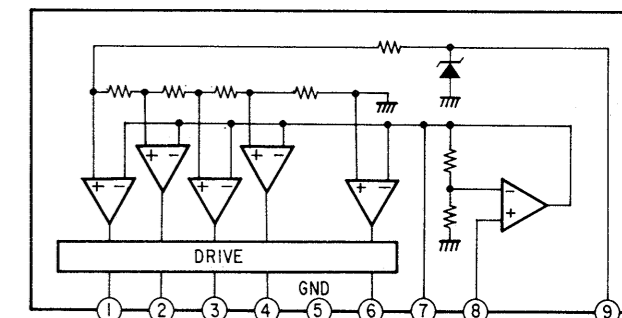


4-6. SCHEMATIC DIAGRAM - DISPLAY Section-

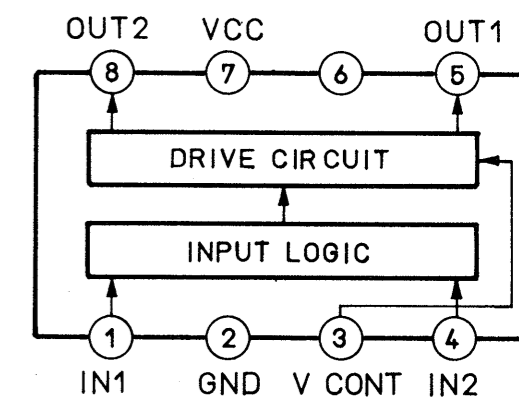


IC Block Diagrams

IC103 LB1493



IC104 LB1639

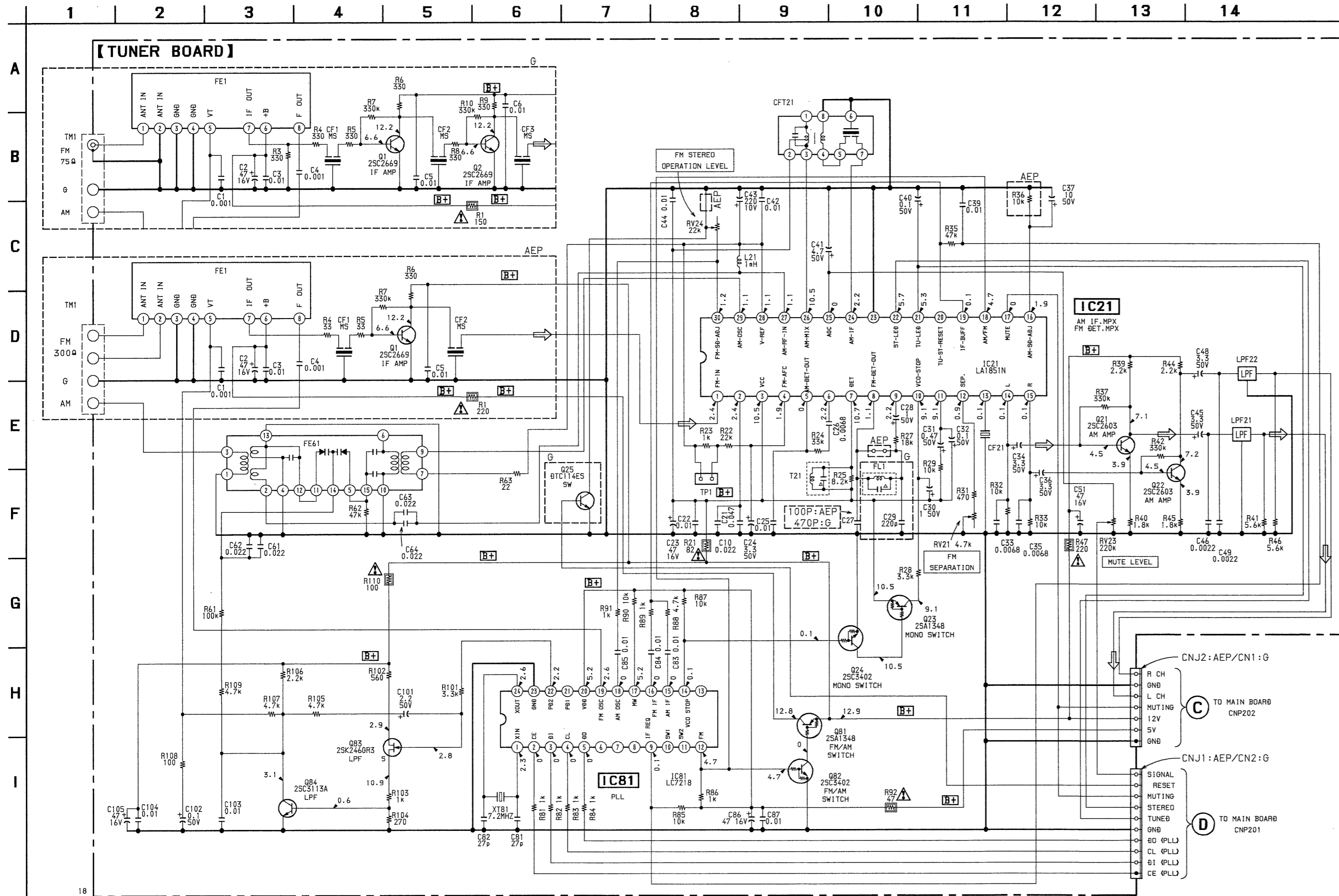


- Note:**
- \*: \*A, \*B: See page 6 for Note on Ceramic Filter (CF1, 2) Replacement.
  - All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - $\triangle$ : internal component.
  - $\square$ : nonflammable resistor.

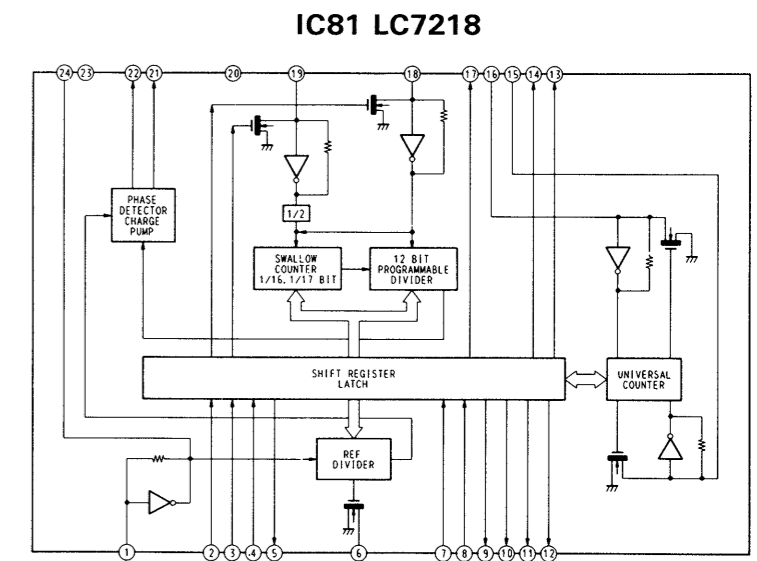
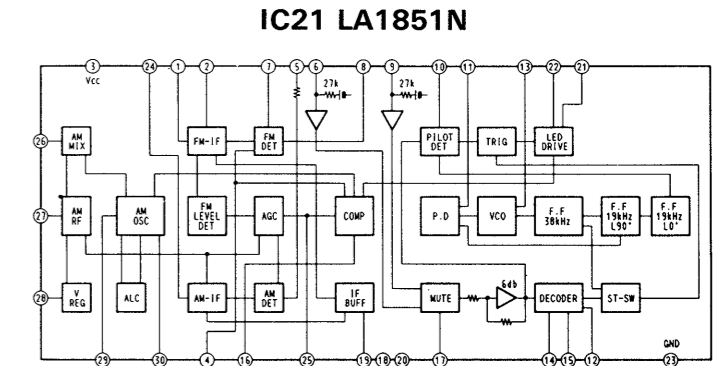
**Note:**  
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

- $\square$  B+ : B+ Line
- $\square$  B- : B- Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$  : FM
- G: Germany

4-7. SCHEMATIC DIAGRAM -TUNER Section-



● IC Block Diagrams



Note:

- \* , \*A , \*B : See page 6 for Note on Ceramic Filter (CF1, 2) Replacement.
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$  :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\triangle$  : internal component.
- $\square$  : nonflammable resistor.

Note:

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



- $\square$  : B+ Line
- $\square$  : B- Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\rightarrow$  : FM
- G:Germany

## SECTION 5 EXPLODED VIEWS

## NOTE:

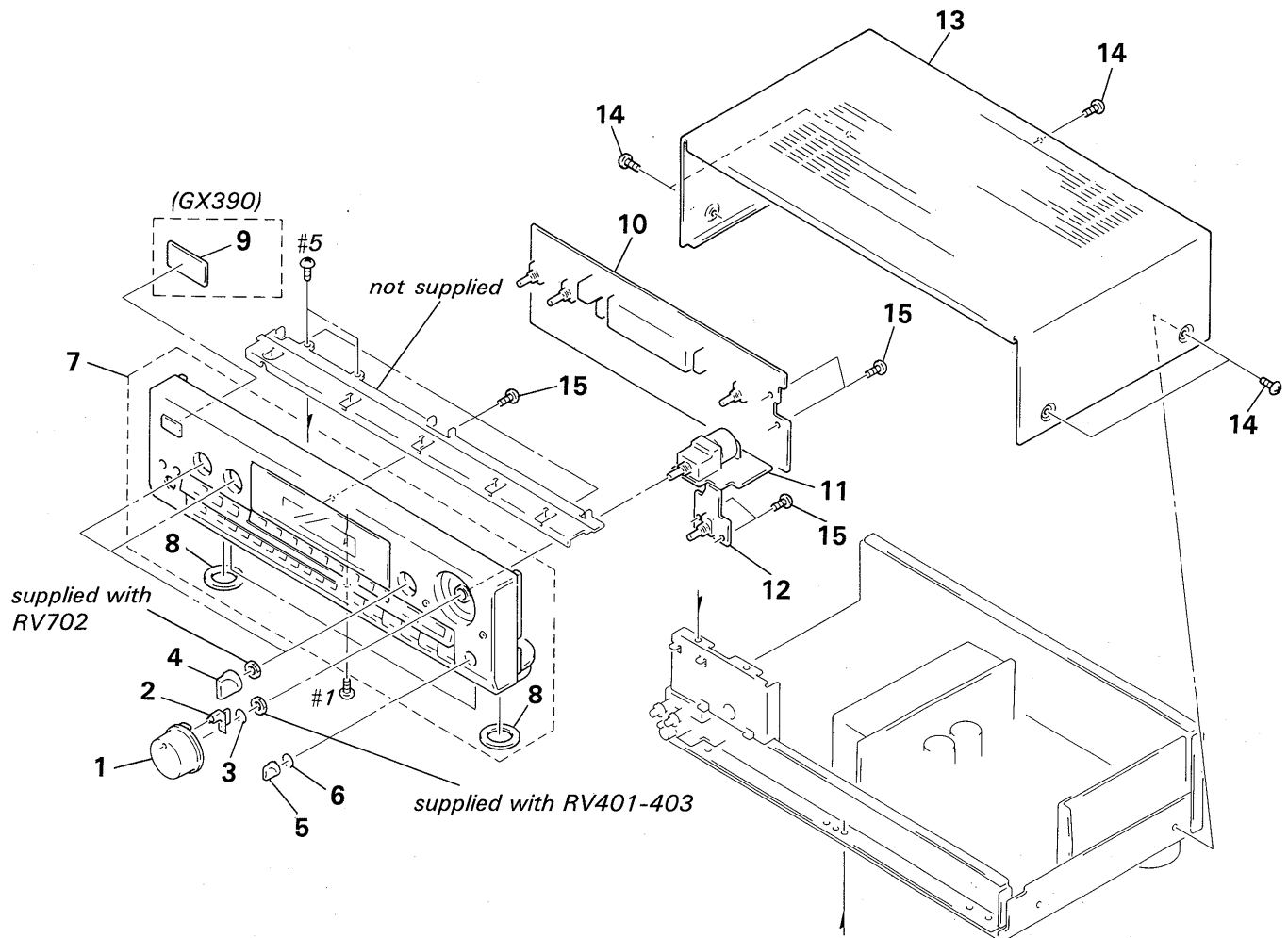
- XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE(WHITE)...(RED)  
↑                    ↑  
Parts color      Cabinet's color

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

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

G:Germany

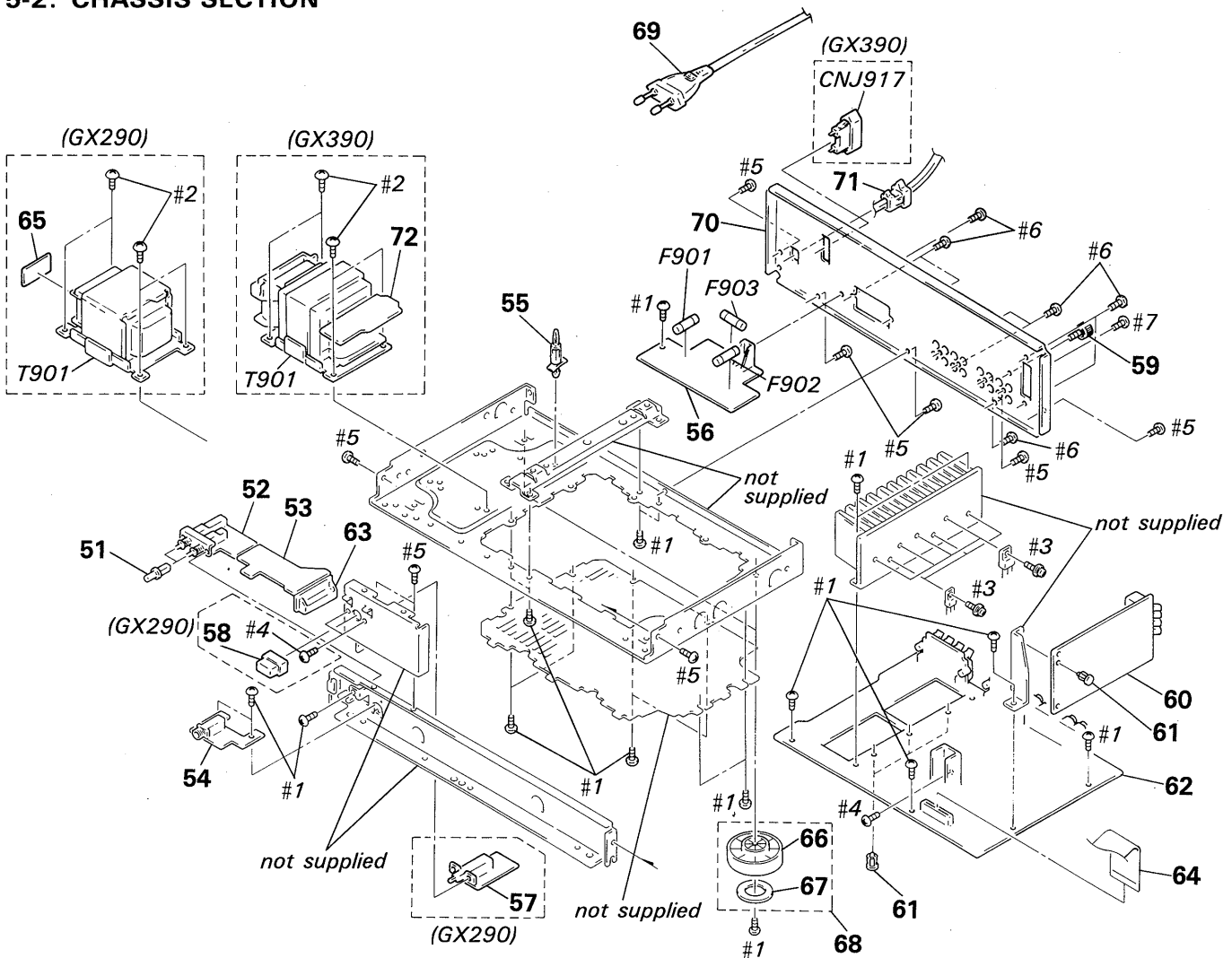
### 5-1. FRONT PANEL SECTION





Ref. No.	Part No.	Description	Remark
1	4-943-091-01	KNOB (VOL) (MASTER VOLUME) (GX390)	
1	4-943-091-11	KNOB (VOL) (MASTER VOLUME) (GX290)	
2	4-943-092-01	PLATE (VOL), LIGHT GUIDE (GX390)	
3	3-350-426-01	SPRING, RING	
4	4-951-803-01	KNOB (DIA. 21), FLAT (BASS/TREBLE/BALANCE)	
5	4-925-014-11	KNOB (DIA. 10)	
6	3-356-957-11	SPRING	
7	A-4325-679-A	PANEL ASSY, FRONT (GX290)	
7	A-4325-692-A	PANEL ASSY, FRONT (GX390)	












Ref. No.	Part No.	Description	Remark
8	4-923-836-11	CUSHION	
* 9	1-643-860-11	STANDBY BOARD (GX390)	
* 10	A-4347-754-A	DISPLAY BOARD, COMPLETE (GX290)	
* 10	A-4347-771-A	DISPLAY BOARD, COMPLETE (GX390)	
* 11	1-644-117-11	VOLUME-A BOARD	
* 12	1-644-118-11	VOLUME-B BOARD	
* 13	4-951-795-01	CASE	
14	3-704-366-01	SCREW (CASE) (M3X8)	
15	4-951-620-01	SCREW (2. 6X8), +BVTP	

## 5-2. CHASSIS SECTION



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	Remark
	51	4-951-801-01 BUTTON (S)	
*	52	1-643-854-11 SP SW-A BOARD	
*	53	1-643-855-11 SP SW-B BOARD	
*	54	1-643-856-11 HP BOARD	
*	55	4-924-098-31 HOLDER, PC BOARD	
	56	1-643-849-11 POWER BOARD	
*	57	1-643-861-11 AC SW BOARD (GX290)	
	58	4-917-460-01 KNOB, POWER (GX290)	
	59	4-947-010-01 SCREW, FEEDER FIXED	
*	60	A-4347-793-A TUNER BOARD, COMPLETE (G)	
*	60	A-4356-361-A TUNER BOARD, COMPLETE (AEP)	
	61	4-812-134-11 RIVET NYLON, 3.5	
*	62	A-4347-757-A MAIN BOARD, COMPLETE (GX290:AEP)	
*	62	A-4347-758-A MAIN BOARD, COMPLETE (GX290:G)	
*	62	A-4347-791-A MAIN BOARD, COMPLETE (GX390:AEP)	
*	62	A-4347-792-A MAIN BOARD, COMPLETE (GX390:G)	
*	63	1-645-175-11 SP SW-C BOARD	
	64	1-696-456-11 WIRE (FLAT TYPE) (31 CORE)	
*	65	1-643-857-11 TRANS-1 BOARD (GX290:G)	
	66	3-318-688-31 FOOT (F58175S)	

Ref. No.	Part No.	Description	Remark
	67	4-923-836-11 CUSHION	
	68	X-4941-292-1 FOOT ASSY (F58175S)	
	 69	1-575-651-11 CORD, POWER	
*	70	4-951-798-11 PANEL, BACK (GX390:AEP)	
*	70	4-951-798-21 PANEL, BACK (GX390:G)	
*	70	4-951-798-41 PANEL, BACK (GX290:AEP)	
*	70	4-951-798-51 PANEL, BACK (GX290:G)	
	71	3-703-244-00 BUSHING (2104), CORD	
*	72	1-643-858-11 TRANS-2 BOARD (GX390:AEP)	
*	72	1-645-172-11 TRANS-2 BOARD (GX390:G)	
	 F901	1-532-286-00 FUSE (T2. 5AL)	
	 F902	1-532-259-00 FUSE (T1. 6AL) (GX390:AEP)	
	 F902	1-532-285-00 FUSE (T1. 25AL) (GX290)	
	 F902	1-532-286-00 FUSE (T2. 5AL) (GX390:G)	
	 F903	1-532-286-00 FUSE (T2. 5AL) (GX390)	
	 CNJ917	1-526-794-11 OUTLET, AC (GX390)	
	 T901	1-450-363-11 TRANSFORMER, POWER (GX390:AEP)	
	 T901	1-450-364-21 TRANSFORMER, POWER (GX290:AEP)	
	 T901	1-450-384-11 TRANSFORMER, POWER (GX390:G)	
	 T901	1-450-385-21 TRANSFORMER, POWER (GX290:G)	

## SECTION 6 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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

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

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

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

G: Germany

Ref. No.	Part No.	Description	Remark
*	1-643-861-11	AC SW BOARD (GX290) *****	
		< CAPACITOR >	
$\triangle$ C904	1-161-744-00	CERAMIC 0.01uF 400V (GX290)	
		< CONNECTOR >	
* CNP911	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P (GX290)	
		< SWITCH >	
$\triangle$ S902	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (GX290) *****	
*	A-4347-754-A	DISPLAY BOARD, COMPLETE (GX290)	
*	A-4347-771-A	DISPLAY BOARD, COMPLETE (GX390) *****	
*	4-921-941-01	CUSHION (FL)	
*	4-942-204-01	PLATE, GROUND	
*	4-943-107-11	HOLDER (FL TUBE)	
		< CAPACITOR >	
C102	1-126-157-11	ELECT 10uF 20% 16V (GX390)	
C105	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C106	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C108	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C109	1-125-486-11	DOUBLE LAYERS 0.22F 5.5V	
C111	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C112	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C113	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C114	1-126-301-11	ELECT 1uF 20% 50V	
C115	1-126-301-11	ELECT 1uF 20% 50V	
C501	1-130-489-00	MYLAR 0.033uF 5% 50V	
C502	1-124-250-00	ELECT 0.15uF 20% 50V	
C503	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C504	1-130-488-00	MYLAR 0.027uF 5% 50V	
C505	1-162-206-31	CERAMIC 20PF 5% 50V	
C506	1-124-257-00	ELECT 2.2uF 20% 50V	
C507	1-162-215-31	CERAMIC 47PF 5% 50V	
C512	1-126-163-11	ELECT 4.7uF 20% 50V	

Ref. No.	Part No.	Description	Remark
C513	1-126-162-11	ELECT 3.3uF 20% 50V	
C516	1-124-589-11	ELECT 47uF 20% 16V	
C517	1-124-589-11	ELECT 47uF 20% 16V	
C551	1-130-489-00	MYLAR 0.033uF 5% 50V	
C552	1-124-250-00	ELECT 0.15uF 20% 50V	
C553	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C554	1-130-488-00	MYLAR 0.027uF 5% 50V	
C555	1-162-206-31	CERAMIC 20PF 5% 50V	
C556	1-124-257-00	ELECT 2.2uF 20% 50V	
C557	1-162-215-31	CERAMIC 47PF 5% 50V	
C562	1-126-163-11	ELECT 4.7uF 20% 50V	
C563	1-126-162-11	ELECT 3.3uF 20% 50V	
		< JACK >	
* CNJ101	1-568-873-11	SOCKET, CONNECTOR 31P	
		< CONNECTOR >	
* CNP101	1-568-951-11	PIN, CONNECTOR 2P (GX390)	
* CNP103	1-564-521-11	PLUG, CONNECTOR 6P	
* CNP104	1-564-518-11	PLUG, CONNECTOR 3P	
		< DIODE >	
D101	8-719-987-63	DIODE 1N4148M	
D102	8-719-987-63	DIODE 1N4148M	
D103	8-719-987-63	DIODE 1N4148M	
D104	8-719-987-63	DIODE 1N4148M	
D105	8-719-987-63	DIODE 1N4148M	
D106	8-719-987-63	DIODE 1N4148M	
D107	8-719-987-63	DIODE 1N4148M	
D108	8-719-987-63	DIODE 1N4148M	
D110	8-719-987-63	DIODE 1N4148M	
D111	8-719-985-53	DIODE HZSA4LL	
D112	8-719-987-63	DIODE 1N4148M	
D113	8-719-987-63	DIODE 1N4148M	
D114	8-719-987-63	DIODE 1N4148M	
D120	8-719-987-63	DIODE 1N4148M	
D122	8-719-987-63	DIODE 1N4148M	
D124	8-719-987-63	DIODE 1N4148M	
D125	8-719-987-63	DIODE 1N4148M	

## DISPLAY

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D130	8-719-313-72	LED SEL3810A-CD (MONITOR)		R136	1-249-437-11	CARBON 47K 5% 1/4W	
D134	8-719-313-69	DIODE SEL3210S-CD (GX390)		R137	1-249-437-11	CARBON 47K 5% 1/4W	
D135	8-719-987-63	DIODE 1N4148M		R138	1-249-437-11	CARBON 47K 5% 1/4W	
< FLUORESCENT INDICATOR TUBE >				R139	1-249-437-11	CARBON 47K 5% 1/4W	
FL101	1-519-731-11	INDICATOR TUBE, FLUORESCENT		R140	1-249-437-11	CARBON 47K 5% 1/4W	
< IC >				R501	1-249-429-11	CARBON 10K 5% 1/4W	
IC101	8-759-088-67	IC uPD75206GF-727-3BE		R502	1-249-422-11	CARBON 2.7K 5% 1/4W	
IC102	8-749-920-83	IC GPIU52XB (GX390)		R503	1-249-441-11	CARBON 100K 5% 1/4W	
IC103	8-759-800-95	IC LB1493		R504	1-249-432-11	CARBON 18K 5% 1/4W	
IC104	8-759-820-62	IC LB1639 (GX390)		R505	1-249-438-11	CARBON 56K 5% 1/4W	
IC403	8-759-112-93	IC uPC4570HA-1		R514	1-249-405-11	CARBON 100 5% 1/4W	
< COIL >				R515	1-249-405-11	CARBON 100 5% 1/4W	
L101	1-410-521-11	INDUCTOR 100uH		R551	1-249-429-11	CARBON 10K 5% 1/4W	
< TRANSISTOR >				R552	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q110	8-729-900-36	TRANSISTOR DTC124ES (GX390)		R553	1-249-441-11	CARBON 100K 5% 1/4W	
< RESISTOR >				R554	1-249-432-11	CARBON 18K 5% 1/4W	
R101	1-249-431-11	CARBON 15K 5% 1/4W		R555	1-249-438-11	CARBON 56K 5% 1/4W	
R102	1-249-437-11	CARBON 47K 5% 1/4W (GX390)		< VARIABLE RESISTOR >			
R103	1-249-437-11	CARBON 47K 5% 1/4W (GX390)		RV401	1-241-817-11	RES, VAR, CARBON 100K/100K (BASS)	
R104	1-249-429-11	CARBON 10K 5% 1/4W		RV402	1-241-817-11	RES, VAR, CARBON 100K/100K (TREBLE)	
R105	1-249-431-11	CARBON 15K 5% 1/4W		RV403	1-238-965-21	RES, VAR, CARBON 100K/100K (BALANCE)	
R106	1-249-401-11	CARBON 47 5% 1/4W		< SWITCH >			
R107	1-249-417-11	CARBON 1K 5% 1/4W		S101	1-554-303-21	SWITCH, TACTILE (DIRECT TUNING)	
R108	1-249-441-11	CARBON 100K 5% 1/4W		S105	1-554-303-21	SWITCH, TACTILE (CH -)	
R109	1-249-437-11	CARBON 47K 5% 1/4W		S106	1-554-303-21	SWITCH, TACTILE (TUNING +)	
R110	1-249-437-11	CARBON 47K 5% 1/4W (GX290)		S107	1-554-303-21	SWITCH, TACTILE (FM)	
R112	1-249-437-11	CARBON 47K 5% 1/4W		S108	1-554-303-21	SWITCH, TACTILE (FM MODE)	
R113	1-249-437-11	CARBON 47K 5% 1/4W		S109	1-554-303-21	SWITCH, TACTILE (CH +)	
R114	1-249-437-11	CARBON 47K 5% 1/4W		S110	1-554-303-21	SWITCH, TACTILE (TUNING -)	
R115	1-249-437-11	CARBON 47K 5% 1/4W		S111	1-554-303-21	SWITCH, TACTILE (AM)	
R116	1-249-441-11	CARBON 100K 5% 1/4W		S112	1-554-303-21	SWITCH, TACTILE (TAPE2)	
R119	1-249-410-11	CARBON 270 5% 1/4W		S113	1-554-303-21	SWITCH, TACTILE (TAPE1)	
R125	1-249-413-11	CARBON 470 5% 1/4W (GX390)		S114	1-554-303-21	SWITCH, TACTILE (VIDEO)	
R126	1-249-437-11	CARBON 47K 5% 1/4W (GX290)		S117	1-554-303-21	SWITCH, TACTILE (PHONO)	
R127	1-249-411-11	CARBON 330 5% 1/4W		S118	1-554-303-21	SWITCH, TACTILE (TUNER)	
R128	1-249-411-11	CARBON 330 5% 1/4W		S119	1-554-303-21	SWITCH, TACTILE (CD)	
R129	1-249-411-11	CARBON 330 5% 1/4W		S121	1-554-303-21	SWITCH, TACTILE (7)	
R130	1-249-411-11	CARBON 330 5% 1/4W		S122	1-554-303-21	SWITCH, TACTILE (8)	
R131	1-249-429-11	CARBON 10K 5% 1/4W		S123	1-554-303-21	SWITCH, TACTILE (9)	
R132	1-249-429-11	CARBON 10K 5% 1/4W		S124	1-554-303-21	SWITCH, TACTILE (MEMORY)	
R133	1-249-429-11	CARBON 10K 5% 1/4W		S125	1-554-303-21	SWITCH, TACTILE (4)	
R134	1-249-429-11	CARBON 10K 5% 1/4W		S126	1-554-303-21	SWITCH, TACTILE (5)	
R135	1-249-437-11	CARBON 47K 5% 1/4W		S127	1-554-303-21	SWITCH, TACTILE (6)	
				S128	1-554-303-21	SWITCH, TACTILE (0)	
				S129	1-554-303-21	SWITCH, TACTILE (1)	
				S130	1-554-303-21	SWITCH, TACTILE (2)	
				S131	1-554-303-21	SWITCH, TACTILE (3)	

DISPLAY

HP

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S132	1-554-303-21	SWITCH, TACTILE (SHIFT)		C403	1-162-282-31	CERAMIC 100PF 10% 50V (AEP)	
		< VIBRATOR >		C404	1-162-282-31	CERAMIC 100PF 10% 50V	
X101	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)		C405	1-124-034-51	ELECT 33uF 20% 16V	
*****							
*	1-643-856-11	HP BOARD		C406	1-130-480-00	MYLAR 0.0056uF 5% 50V	
		*****		C407	1-130-473-00	MYLAR 0.0015uF 5% 50V	
		< CAPACITOR >		C408	1-123-382-00	ELECT 3.3uF 20% 100V	
C714	1-164-089-11	CERAMIC 0.0022uF	50V	C420	1-164-159-11	CERAMIC 0.1uF 50V	
C764	1-164-089-11	CERAMIC 0.0022uF	50V	C422	1-124-477-11	ELECT 47uF 20% 25V	
		< CONNECTOR >		C423	1-124-477-11	ELECT 47uF 20% 25V	
* CNP704	1-564-518-11	PLUG, CONNECTOR 3P		C424	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
		< JACK >		C425	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
J701	1-568-515-21	JACK (LARGE TYPE) (HEADPHONES)		C426	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
		< RESISTOR >		C427	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
R740	1-247-753-11	CARBON 1.2K 5% 1/2W		C429	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
R749	1-247-753-11	CARBON 1.2K 5% 1/2W		C430	1-162-294-31	CERAMIC 0.001uF 10% 50V	
R790	1-247-753-11	CARBON 1.2K 5% 1/2W		C431	1-130-471-00	MYLAR 0.001uF 5% 50V	
R799	1-247-753-11	CARBON 1.2K 5% 1/2W		C433	1-124-925-11	ELECT 2.2uF 20% 100V	
*****							
*	A-4347-757-A	MAIN BOARD, COMPLETE (GX290:AEP)		C434	1-162-286-31	CERAMIC 220PF 10% 50V (G)	
*	A-4347-758-A	MAIN BOARD, COMPLETE (GX290:G)		C435	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
*	A-4347-791-A	MAIN BOARD, COMPLETE (GX390:AEP)		C437	1-124-907-11	ELECT 10uF 20% 50V	
*	A-4347-792-A	MAIN BOARD, COMPLETE (GX390:G)		C451	1-162-282-31	CERAMIC 100PF 10% 50V	
		*****		C452	1-123-382-00	ELECT 3.3uF 20% 100V	
	4-812-134-00	RIVET NYLON, 3.5		C453	1-162-286-31	CERAMIC 220PF 10% 50V (G)	
*	4-942-204-01	PLATE, GROUND (GX290/GX390:G)		C453	1-162-282-31	CERAMIC 100PF 10% 50V (AEP)	
*	4-953-350-01	PLATE, GROUND		C454	1-162-282-31	CERAMIC 100PF 10% 50V	
	7-682-548-04	SCREW +BVTT 3X8 (S)		C455	1-124-034-51	ELECT 33uF 20% 16V	
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3		C456	1-130-480-00	MYLAR 0.0056uF 5% 50V	
		< CAPACITOR >		C457	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C301	1-124-907-11	ELECT 10uF 20% 50V		C458	1-123-382-00	ELECT 3.3uF 20% 100V	
C302	1-162-283-31	CERAMIC 120PF 10% 50V (G)		C474	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C302	1-162-215-31	CERAMIC 47PF 5% 50V (AEP)		C475	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C303	1-124-907-11	ELECT 10uF 20% 50V		C476	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C351	1-124-907-11	ELECT 10uF 20% 50V		C477	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C352	1-162-283-31	CERAMIC 120PF 10% 50V (G)		C479	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C352	1-162-215-31	CERAMIC 47PF 5% 50V (AEP)		C484	1-162-286-31	CERAMIC 220PF 10% 50V (G)	
C353	1-124-907-11	ELECT 10uF 20% 50V		C485	1-162-282-31	CERAMIC 100PF 10% 50V (G)	
C401	1-162-282-31	CERAMIC 100PF 10% 50V		C701	1-124-927-11	ELECT 4.7uF 20% 100V	
C402	1-123-382-00	ELECT 3.3uF 20% 100V		C702	1-162-286-31	CERAMIC 220PF 10% 50V	
C403	1-162-286-31	CERAMIC 220PF 10% 50V (G)		C703	1-102-116-00	CERAMIC 680PF 10% 50V	
				C704	1-124-477-11	ELECT 47uF 20% 25V	
				C705	1-164-039-11	CERAMIC 3PF 0.25PF50V	
				C706	1-102-989-00	CERAMIC 68PF 5% 500V	
				C707	1-102-989-00	CERAMIC 68PF 5% 500V	
				C708	1-124-120-11	ELECT 220uF 20% 25V	
				C709	1-124-477-11	ELECT 47uF 20% 25V	
				C711	1-164-159-11	CERAMIC 0.1uF 50V	
				C712	1-136-161-00	FILM 0.047uF 5% 50V	
				C713	1-136-161-00	FILM 0.047uF 5% 50V	
				C715	1-101-005-00	CERAMIC 22000PF 50V (G)	

## MAIN

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark	
C716	1-101-005-00	CERAMIC	22000PF	50V (G)	C980	1-124-903-11	ELECT	1uF	20% 50V
C717	1-101-005-00	CERAMIC	22000PF	50V (G)	C981	1-161-494-00	CERAMIC	0.022uF	25V
C718	1-101-005-00	CERAMIC	22000PF	50V (G)	C982	1-161-494-00	CERAMIC	0.022uF	25V (GX390)
C719	1-101-005-00	CERAMIC	22000PF	50V (G)	C983	1-161-494-00	CERAMIC	0.022uF	25V (GX390)
C720	1-101-005-00	CERAMIC	22000PF	50V (G)	C984	1-124-557-11	ELECT	1000uF	20% 25V (GX390)
C721	1-161-494-00	CERAMIC	0.022uF	25V (G)					
C726	1-162-219-31	CERAMIC	68PF	5% 50V (G)			< JACK >		
C726	1-162-215-31	CERAMIC	47PF	5% 50V (AEP)					
C727	1-124-911-11	ELECT	220uF	20% 50V	* CNJ102	1-568-845-11	SOCKET, CONNECTOR	31P	
C751	1-124-927-11	ELECT	4.7uF	20% 100V	CNJ701	1-573-095-11	SOCKET, CONNECTOR	15P	
C752	1-162-286-31	CERAMIC	220PF	10% 50V			< CONNECTOR >		
C753	1-102-116-00	CERAMIC	680PF	10% 50V	* CNP112	1-564-509-11	PLUG, CONNECTOR	6P	
C754	1-124-477-11	ELECT	47uF	20% 25V	* CNP201	1-506-608-11	PIN, CONNECTOR	10P	
C755	1-164-039-11	CERAMIC	3PF	0.25PF50V	* CNP202	1-560-532-00	PIN, CONNECTOR	7P	
C756	1-102-989-00	CERAMIC	68PF	5% 500V	CNP952	1-564-507-11	PLUG, CONNECTOR	4P (GX390)	
C757	1-102-989-00	CERAMIC	68PF	5% 500V	* CNP954	1-564-104-00	PIN, CONNECTOR (B3P-VH)	3P	
C758	1-124-120-11	ELECT	220uF	20% 25V	* CNP956	1-564-506-11	PLUG, CONNECTOR	3P	
C759	1-124-477-11	ELECT	47uF	20% 25V			< DIODE >		
C761	1-124-472-11	ELECT	470uF	20% 10V	D401	8-719-987-63	DIODE	1N4148M	
C762	1-136-161-00	FILM	0.047uF	5% 50V	D403	8-719-987-63	DIODE	1N4148M	
C763	1-136-161-00	FILM	0.047uF	5% 50V	D701	8-719-933-41	DIODE	HZS6C3L	
C765	1-101-005-00	CERAMIC	22000PF	50V (G)	D702	8-719-987-63	DIODE	1N4148M	
C766	1-101-005-00	CERAMIC	22000PF	50V (G)	D703	8-719-987-63	DIODE	1N4148M	
C767	1-101-005-00	CERAMIC	22000PF	50V (G)	D704	8-719-987-63	DIODE	1N4148M	
C768	1-101-005-00	CERAMIC	22000PF	50V (G)	D705	8-719-987-63	DIODE	1N4148M	
C769	1-101-005-00	CERAMIC	22000PF	50V (G)	D751	8-719-933-41	DIODE	HZS6C3L	
C770	1-101-005-00	CERAMIC	22000PF	50V (G)	D752	8-719-987-63	DIODE	1N4148M	
C771	1-161-494-00	CERAMIC	0.022uF	25V (G)	D753	8-719-987-63	DIODE	1N4148M	
C776	1-162-219-31	CERAMIC	68PF	5% 50V (G)	D951	8-719-312-09	DIODE	RBA-402	
C776	1-162-215-31	CERAMIC	47PF	5% 50V (AEP)	D952	8-719-010-78	DIODE	UZ-13BSB-TP	
C951	1-106-379-12	MYLAR	0.033uF	5% 200V	D953	8-719-934-00	DIODE	HZS22-2L (GX290:G)	
C952	1-106-379-12	MYLAR	0.033uF	5% 200V	D953	8-719-002-33	DIODE	UZL-24L (GX290:AEP/GX390)	
C953	1-125-614-11	ELECT	6800uF	20% 50V	D954	8-719-987-63	DIODE	1N4148M	
C953	1-128-506-11	ELECT	6800uF	20% 50V	D955	8-719-010-74	DIODE	UZ-12BSB-TP	
C954	1-125-614-11	ELECT	6800uF	20% 50V	D956	8-719-010-29	DIODE	UZ-4.3BSB	
C954	1-128-506-11	ELECT	6800uF	20% 50V	D962	8-719-010-47	DIODE	UZ-6.2BSC	
C955	1-124-478-11	ELECT	100uF	20% 25V	D963	8-719-933-41	DIODE	HZS6C3L	
C956	1-124-910-11	ELECT	47uF	20% 50V	D964	8-719-985-53	DIODE	HZS4ALL	
C957	1-124-477-11	ELECT	47uF	20% 25V	D965	8-719-987-63	DIODE	1N4148M	
C958	1-124-910-11	ELECT	47uF	20% 50V	D966	8-719-200-82	DIODE	11ES2 (GX390)	
C959	1-124-907-11	ELECT	10uF	20% 50V	D967	8-719-200-82	DIODE	11ES2 (GX390)	
C960	1-161-494-00	CERAMIC	0.022uF	25V	D968	8-719-200-82	DIODE	11ES2 (GX390)	
C961	1-161-494-00	CERAMIC	0.022uF	25V	D969	8-719-200-82	DIODE	11ES2 (GX390)	
C962	1-124-927-11	ELECT	4.7uF	20% 100V	D970	8-719-987-63	DIODE	1N4148M (GX390)	
C975	1-124-477-11	ELECT	47uF	20% 25V	D971	8-719-987-63	DIODE	1N4148M (GX390)	
C976	1-124-477-11	ELECT	47uF	20% 25V	D976	8-719-987-63	DIODE	1N4148M (GX290)	
C977	1-124-903-11	ELECT	1uF	20% 50V	D977	8-719-987-63	DIODE	1N4148M (GX290)	
C978	1-124-464-11	ELECT	0.22uF	20% 50V					
C979	1-124-902-00	ELECT	0.47uF	20% 50V					



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< IC >					
IC306	8-759-634-50	IC M5218AL		Q762	8-729-321-30	TRANSISTOR 2SC4385-OY (GX290)	
IC401	8-759-112-93	IC uPC4570HA-1		Q763	8-729-016-66	TRANSISTOR 2SA1670-OP-A (GX390)	
IC402	8-759-805-14	IC LC7822		Q763	8-729-321-27	TRANSISTOR 2SA1670-OY (GX290)	
		< JACK >					
J401	1-695-188-21	JACK, PIN 4P		Q764	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
J405	1-695-188-21	JACK, PIN 4P		Q951	8-729-209-15	TRANSISTOR 2SD2012	
J406	1-695-188-21	JACK, PIN 4P		Q952	8-729-140-97	TRANSISTOR KSA708	
J407	1-695-188-21	JACK, PIN 4P		Q953	8-729-180-92	TRANSISTOR 2SD809-K	
		< COIL >		Q954	8-729-620-05	TRANSISTOR 2SC2603-EF	
L701	1-420-872-00	COIL, AIR CORE					
L751	1-420-872-00	COIL, AIR CORE		Q955	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< TRANSISTOR >		Q956	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK		Q957	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q406	8-729-900-63	TRANSISTOR DTA124ES		Q958	8-729-900-36	TRANSISTOR DTC124ES	
Q408	8-729-900-36	TRANSISTOR DTC124ES		Q959	8-729-904-39	TRANSISTOR DTC114TS (GX390)	
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK					
Q701	8-729-620-18	TRANSISTOR 2SA979-FG		Q960	8-729-620-05	TRANSISTOR 2SC2603-EF (GX390)	
Q702	8-729-140-82	TRANSISTOR 2SA988-PAFAEA					
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q705	8-729-141-06	TRANSISTOR 2SA1142-QPE					
Q706	8-729-209-15	TRANSISTOR 2SD2012					
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE					
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK					
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK					
Q712	8-729-016-65	TRANSISTOR 2SC4385-OP-A (GX390)					
Q712	8-729-321-30	TRANSISTOR 2SC4385-OY (GX290)					
Q713	8-729-016-66	TRANSISTOR 2SA1670-OP-A (GX390)					
Q713	8-729-321-27	TRANSISTOR 2SA1670-OY (GX290)					
Q714	8-729-140-82	TRANSISTOR 2SA988-PAFAEA					
Q715	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q716	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q717	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q718	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q751	8-729-620-18	TRANSISTOR 2SA979-FG					
Q752	8-729-140-82	TRANSISTOR 2SA988-PAFAEA					
Q753	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q754	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q755	8-729-141-06	TRANSISTOR 2SA1142-QPE					
Q756	8-729-209-15	TRANSISTOR 2SD2012					
Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE					
Q760	8-729-141-46	TRANSISTOR 2SC4431-LK					
Q761	8-729-141-37	TRANSISTOR 2SA1684-LK					
Q762	8-729-016-65	TRANSISTOR 2SC4385-OP-A (GX390)					
		< RESISTOR >					
				R302	1-247-887-00	CARBON 220K 5% 1/4W	
				R303	1-247-887-00	CARBON 220K 5% 1/4W	
				R305	1-249-416-11	CARBON 820 5% 1/4W	
				R352	1-247-887-00	CARBON 220K 5% 1/4W	
				R353	1-247-887-00	CARBON 220K 5% 1/4W	
				R355	1-249-416-11	CARBON 820 5% 1/4W	
				R401	1-249-411-11	CARBON 330 5% 1/4W	
				R402	1-249-409-11	CARBON 220 5% 1/4W	
				R403	1-249-417-11	CARBON 1K 5% 1/4W	
				R404	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R405	1-249-409-11	CARBON 220 5% 1/4W	
				R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R413	1-249-437-11	CARBON 47K 5% 1/4W	
				R414	1-247-897-11	CARBON 560K 5% 1/4W	
				R415	1-249-416-11	CARBON 820 5% 1/4W	
				R416	1-247-897-11	CARBON 560K 5% 1/4W	
				R417	1-249-437-11	CARBON 47K 5% 1/4W	
				R418	1-249-417-11	CARBON 1K 5% 1/4W	
				R419	1-247-897-11	CARBON 560K 5% 1/4W	
				R420	1-249-417-11	CARBON 1K 5% 1/4W	
				R421	1-249-408-11	CARBON 180 5% 1/4W	
				R425	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R426	1-249-437-11	CARBON 47K 5% 1/4W	
				R427	1-249-437-11	CARBON 47K 5% 1/4W	
				R430	1-249-437-11	CARBON 47K 5% 1/4W	
				R431	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R432	1-247-883-00	CARBON 150K 5% 1/4W	
				R434	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R435	1-247-883-00	CARBON 150K 5% 1/4W	
				R436	1-249-417-11	CARBON 1K 5% 1/4W	
				R437	1-249-437-11	CARBON 47K 5% 1/4W	
				R438	1-249-429-11	CARBON 10K 5% 1/4W	

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R439	1-249-437-11	CARBON	47K 5% 1/4W	R731	1-249-441-11	CARBON	100K 5% 1/4W
R440	1-249-437-11	CARBON	47K 5% 1/4W	R732	1-249-417-11	CARBON	1K 5% 1/4W
R441	1-249-413-11	CARBON	470 5% 1/4W	R733	1-249-435-11	CARBON	33K 5% 1/4W
R444	1-249-437-11	CARBON	47K 5% 1/4W	R734	1-249-427-11	CARBON	6.8K 5% 1/4W
R451	1-249-411-11	CARBON	330 5% 1/4W	△R735	1-249-397-11	CARBON	22 5% 1/4W
R452	1-249-409-11	CARBON	220 5% 1/4W	△R736	1-249-397-11	CARBON	22 5% 1/4W
R453	1-249-417-11	CARBON	1K 5% 1/4W	R737	1-249-393-11	CARBON	10 5% 1/4W
R454	1-249-425-11	CARBON	4.7K 5% 1/4W	R738	1-249-393-11	CARBON	10 5% 1/4W
R455	1-249-409-11	CARBON	220 5% 1/4W	R739	1-249-408-11	CARBON	180 5% 1/4W (GX290:G)
R457	1-249-425-11	CARBON	4.7K 5% 1/4W	R739	1-249-412-11	CARBON	390 5% 1/4W (GX290:AEP/GX390)
R463	1-249-437-11	CARBON	47K 5% 1/4W	R743	1-249-441-11	CARBON	100K 5% 1/4W
R464	1-247-897-11	CARBON	560K 5% 1/4W	R744	1-249-429-11	CARBON	10K 5% 1/4W
R465	1-249-416-11	CARBON	820 5% 1/4W	△R745	1-249-399-11	CARBON	33 5% 1/4W
R466	1-247-897-11	CARBON	560K 5% 1/4W	R746	1-249-393-11	CARBON	10 5% 1/4W (G)
R467	1-249-437-11	CARBON	47K 5% 1/4W	R747	1-249-393-11	CARBON	10 5% 1/4W (G)
R468	1-249-417-11	CARBON	1K 5% 1/4W	R748	1-249-393-11	CARBON	10 5% 1/4W (G)
R469	1-247-897-11	CARBON	560K 5% 1/4W	R751	1-249-417-11	CARBON	1K 5% 1/4W
R470	1-249-417-11	CARBON	1K 5% 1/4W	R752	1-249-434-11	CARBON	27K 5% 1/4W
R471	1-249-408-11	CARBON	180 5% 1/4W	R753	1-249-435-11	CARBON	33K 5% 1/4W
R481	1-249-425-11	CARBON	4.7K 5% 1/4W	R754	1-249-421-11	CARBON	2.2K 5% 1/4W
R486	1-249-417-11	CARBON	1K 5% 1/4W	R755	1-249-426-11	CARBON	5.6K 5% 1/4W
R701	1-249-417-11	CARBON	1K 5% 1/4W	R756	1-249-414-11	CARBON	560 5% 1/4W (GX390:AEP)
R702	1-249-434-11	CARBON	27K 5% 1/4W	R756	1-247-828-11	CARBON	750 5% 1/4W (GX290/GX390:G)
R703	1-249-435-11	CARBON	33K 5% 1/4W	R757	1-249-423-11	CARBON	3.3K 5% 1/4W
R704	1-249-421-11	CARBON	2.2K 5% 1/4W	R758	1-249-411-11	CARBON	330 5% 1/4W
R705	1-249-426-11	CARBON	5.6K 5% 1/4W	△R759	1-249-409-11	CARBON	220 5% 1/4W
R706	1-249-414-11	CARBON	560 5% 1/4W (GX390:AEP)	△R760	1-249-409-11	CARBON	220 5% 1/4W
R706	1-247-828-11	CARBON	750 5% 1/4W (GX290/GX390:G)	R761	1-249-409-11	CARBON	220 5% 1/4W
R707	1-249-423-11	CARBON	3.3K 5% 1/4W	R762	1-249-435-11	CARBON	33K 5% 1/4W
R708	1-249-411-11	CARBON	330 5% 1/4W	△R763	1-249-397-11	CARBON	22 5% 1/4W
△R709	1-249-409-11	CARBON	220 5% 1/4W	R764	1-249-427-11	CARBON	6.8K 5% 1/4W
△R710	1-249-409-11	CARBON	220 5% 1/4W	R765	1-249-406-11	CARBON	120 5% 1/4W
R711	1-249-409-11	CARBON	220 5% 1/4W	△R766	1-249-397-11	CARBON	22 5% 1/4W
R712	1-249-435-11	CARBON	33K 5% 1/4W	△R767	1-249-393-11	CARBON	10 5% 1/4W
△R713	1-249-397-11	CARBON	22 5% 1/4W	△R768	1-249-393-11	CARBON	10 5% 1/4W
R714	1-249-427-11	CARBON	6.8K 5% 1/4W	△R773	1-247-745-11	CARBON	330 5% 1/2W
R715	1-249-406-11	CARBON	120 5% 1/4W	△R774	1-249-393-11	CARBON	10 5% 1/4W
△R716	1-249-397-11	CARBON	22 5% 1/4W	△R775	1-249-393-11	CARBON	10 5% 1/4W
△R717	1-249-393-11	CARBON	10 5% 1/4W	△R776	1-217-611-00	RES, METAL PLATE	0.1
△R718	1-249-393-11	CARBON	10 5% 1/4W	△R777	1-217-611-00	RES, METAL PLATE	0.1
△R723	1-247-745-11	CARBON	330 5% 1/2W	R778	1-249-417-11	CARBON	1K 5% 1/4W
△R724	1-249-393-11	CARBON	10 5% 1/4W	R779	1-249-431-11	CARBON	15K 5% 1/4W
△R725	1-249-393-11	CARBON	10 5% 1/4W	R781	1-249-440-11	CARBON	82K 5% 1/4W
△R726	1-217-611-00	RES, METAL PLATE	0.1	△R785	1-249-397-11	CARBON	22 5% 1/4W
△R727	1-217-611-00	RES, METAL PLATE	0.1	△R786	1-249-397-11	CARBON	22 5% 1/4W
R728	1-249-417-11	CARBON	1K 5% 1/4W	R787	1-249-393-11	CARBON	10 5% 1/4W
R729	1-249-431-11	CARBON	15K 5% 1/4W	R788	1-249-393-11	CARBON	10 5% 1/4W
R730	1-249-429-11	CARBON	10K 5% 1/4W	R794	1-249-412-11	CARBON	390 5% 1/4W (GX390:AEP)
				R795	1-249-408-11	CARBON	180 5% 1/4W (GX290:G)

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

## MAIN

## POWER

## SP SW-A

## SP SW-B

Ref. No.	Part No.	Description	Remark
R795	1-249-412-11	CARBON 390 5% 1/4W (GX290:AEP/GX390)	
R796	1-249-393-11	CARBON 10 5% 1/4W (G)	
R797	1-249-393-11	CARBON 10 5% 1/4W (G)	
R798	1-249-393-11	CARBON 10 5% 1/4W (G)	
R801	1-249-412-11	CARBON 390 5% 1/4W	
R804	1-247-895-00	CARBON 470K 5% 1/4W	
R851	1-249-412-11	CARBON 390 5% 1/4W	
R854	1-247-895-00	CARBON 470K 5% 1/4W	
△R952	1-247-739-11	CARBON 100 5% 1/2W (GX390:G)	
△R952	1-247-727-11	CARBON 10 5% 1/2W F (GX290:G)	
△R952	1-247-743-11	CARBON 220 5% 1/2W F (AEP)	
R953	1-249-422-11	CARBON 2.7K 5% 1/4W	
R954	1-249-423-11	CARBON 3.3K 5% 1/4W	
△R955	1-216-450-00	METAL OXIDE 82 5% 2W F (GX390:AEP)	
△R955	1-216-448-11	METAL OXIDE 39 5% 2W F (GX290:G)	
△R955	1-215-884-11	METAL OXIDE 47 5% 2W F (GX290:AEP/GX390:G)	
△R956	1-249-405-11	CARBON 100 5% 1/4W	
R957	1-249-410-11	CARBON 270 5% 1/4W	
R958	1-249-410-11	CARBON 270 5% 1/4W	
R959	1-249-441-11	CARBON 100K 5% 1/4W	
R960	1-249-429-11	CARBON 10K 5% 1/4W	
△R963	1-249-395-11	CARBON 15 5% 1/4W	
R964	1-249-423-11	CARBON 3.3K 5% 1/4W	
R965	1-249-437-11	CARBON 47K 5% 1/4W	
R966	1-249-429-11	CARBON 10K 5% 1/4W	
R967	1-249-429-11	CARBON 10K 5% 1/4W	
R968	1-249-417-11	CARBON 1K 5% 1/4W	
R969	1-249-429-11	CARBON 10K 5% 1/4W	
R970	1-249-426-11	CARBON 5.6K 5% 1/4W	
R971	1-249-417-11	CARBON 1K 5% 1/4W	
R972	1-249-426-11	CARBON 5.6K 5% 1/4W	
R973	1-249-416-11	CARBON 820 5% 1/4W (GX390)	
R974	1-249-425-11	CARBON 4.7K 5% 1/4W (GX390)	
R975	1-249-437-11	CARBON 47K 5% 1/4W (GX390)	
		< RELAY >	
RY401	1-515-614-11	RELAY	
RY701	1-515-533-11	RELAY	
		< TERMINAL >	
TW701	1-537-376-11	TERMINAL BOARD (SP)	
		< TEST PIN >	
* TP1	1-560-060-00	PIN, CONNECTOR 2P	
* TP2	1-560-060-00	PIN, CONNECTOR 2P	
*****			

Ref. No.	Part No.	Description	Remark
*	1-643-849-11	POWER BOARD *****	
		< CAPACITOR >	
△C901	1-161-744-00	CERAMIC 0.01uF 400V (GX390)	
△C902	1-161-741-00	CERAMIC 0.001uF 10% 400V (G)	
△C903	1-161-741-00	CERAMIC 0.001uF 10% 400V (G)	
C911	1-164-159-11	CERAMIC 0.1uF 50V (GX390:G)	
C912	1-164-159-11	CERAMIC 0.1uF 50V (GX390:G)	
		< CONNECTOR >	
* CNP901	1-564-321-00	PIN, CONNECTOR 2P	
* CNP902	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
* CNP903	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P (GX390)	
* CNP904	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
CNP951	1-564-507-11	PLUG, CONNECTOR 4P (GX390)	
		< DIODE >	
D901	8-719-987-63	DIODE 1N4148M (GX390)	
		< FUSE HOLDER >	
△F901	1-533-217-31	HOLDER, FUSE	
△F902	1-533-217-31	HOLDER, FUSE	
△F903	1-533-217-31	HOLDER, FUSE (GX390)	
		< RELAY >	
△RY901	1-515-738-11	RELAY, POWER (GX390)	
		< TRANSFORMER >	
△T902	1-450-358-11	TRANSFORMER, POWER (GX390)	
		< VARISTOR >	
△VZ901	1-807-180-31	VARISTOR SNR-14A471U	
*****			
*	1-643-854-11	SP SW-A BOARD *****	
		< SWITCH >	
S701	1-571-485-11	SWITCH, PUSH (2 KEY)	
*****			
*	1-643-855-11	SP SW-B BOARD *****	
		< CONNECTOR >	
* CNP702	1-564-518-11	PLUG, CONNECTOR 3P	
*****			

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

## SP SW-C

## STANDBY

## TRANS-1

## TRANS-2

## TUNER

Ref. No.	Part No.	Description	Remark
*	1-645-175-11	SP SW-C BOARD *****	
		< CONNECTOR >	
	CNP701 1-573-109-11	PIN, CONNECTOR 15P *****	
*	1-643-860-11	STANDBY BOARD (GX390) *****	
		< SWITCH >	
	SI37 1-554-303-21	SWITCH, TACTILE (STANDBY) (GX390) *****	
		< CONNECTOR >	
*	CNP107 1-568-951-11	PIN, CONNECTOR 2P (GX390) *****	
*	1-643-857-11	TRANS-1 BOARD (GX290:G) *****	
		< CAPACITOR >	
	C913 1-164-159-11	CERAMIC 0.1uF 50V (GX290:G) *****	
*	1-643-858-11	TRANS-2 BOARD (GX390:AEP)	
*	1-645-172-11	TRANS-2 BOARD (GX390:G) *****	
		< CONNECTOR >	
*	CNP955 1-564-243-00	PIN, CONNECTOR 6P (GX390) *****	
*	A-4347-793-A	TUNER BOARD, COMPLETE (G)	
*	A-4356-361-A	TUNER BOARD, COMPLETE (AEP) *****	
		< CAPACITOR >	
	C1 1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
	C2 1-124-477-11	ELECT 47uF 20% 25V	
	C3 1-164-232-11	CERAMIC CHIP 0.01uF 50V	
	C4 1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
	C5 1-164-232-11	CERAMIC CHIP 0.01uF 50V	
	C6 1-164-232-11	CERAMIC CHIP 0.01uF 50V (G)	
	C10 1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
	C21 1-161-021-11	CERAMIC 0.047uF 10% 25V	
	C22 1-164-232-11	CERAMIC CHIP 0.01uF 50V	
	C23 1-124-477-11	ELECT 47uF 20% 25V	
	C24 1-123-382-00	ELECT 3.3uF 20% 100V	
	C25 1-164-232-11	CERAMIC CHIP 0.01uF 50V	
	C26 1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	

Ref. No.	Part No.	Description	Remark
C27	1-163-133-00	CERAMIC CHIP 470PF 5% 50V (G)	
C27	1-163-117-00	CERAMIC CHIP 100PF 5% 50V (AEP)	
C28	1-124-903-11	ELECT 1uF 20% 50V	
C29	1-163-125-00	CERAMIC CHIP 220PF 5% 50V (G)	
C30	1-124-903-11	ELECT 1uF 20% 50V	
C31	1-124-902-00	ELECT 0.47uF 20% 50V	
C32	1-124-463-00	ELECT 0.1uF 20% 50V	
C33	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C34	1-123-382-00	ELECT 3.3uF 20% 100V	
C35	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C36	1-123-382-00	ELECT 3.3uF 20% 100V	
C37	1-124-907-11	ELECT 10uF 20% 50V	
C39	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C40	1-124-463-00	ELECT 0.1uF 20% 50V	
C41	1-124-927-11	ELECT 4.7uF 20% 100V	
C42	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C43	1-126-176-11	ELECT 220uF 20% 10V	
C44	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C45	1-123-382-00	ELECT 3.3uF 20% 100V	
C46	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C48	1-123-382-00	ELECT 3.3uF 20% 100V	
C49	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C51	1-124-477-11	ELECT 47uF 20% 25V	
C61	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C62	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C63	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C64	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C81	1-102-961-00	CERAMIC 27PF 5% 50V	
C82	1-102-961-00	CERAMIC 27PF 5% 50V	
C83	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C84	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C85	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	
C102	1-124-463-00	ELECT 0.1uF 20% 50V	
C104	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C105	1-124-477-11	ELECT 47uF 20% 25V	
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC (G)	
CF21	1-577-075-11	OSCILLATOR, CERAMIC	
		< COMPOSITION CIRCUIT BLOCK >	
CF21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	

## TUNER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< CONNECTOR >					
* CN1	1-565-483-11	CONNECTOR, BOARD TO BOARD 7P (G)		R5	1-216-037-00	METAL CHIP 330 5% 1/10W (G)	
* CN2	1-565-486-11	CONNECTOR, BOARD TO BOARD 10P (G)		R5	1-216-013-00	METAL CHIP 33 5% 1/10W (AEP)	
		< JACK >		R6	1-216-037-00	METAL CHIP 330 5% 1/10W	
* CNJ1	1-565-486-11	CONNECTOR, BOARD TO BOARD 10P (AEP)		R7	1-216-109-00	METAL CHIP 330K 5% 1/10W	
* CNJ2	1-565-483-11	CONNECTOR, BOARD TO BOARD 7P (AEP)		R8	1-216-037-00	METAL CHIP 330 5% 1/10W (G)	
		< FRONTEND >		R9	1-216-037-00	METAL CHIP 330 5% 1/10W (G)	
FE1	1-465-007-11	FRONTEND (FM 4 GANG) (G)		R10	1-216-109-00	METAL CHIP 330K 5% 1/10W (G)	
FE1	1-465-006-11	FRONT END (FM) (2 GANG) (AEP)		R21	1-249-404-00	CARBON 82 5% 1/4W	
FE61	1-236-461-11	ENCAPSULATED COMPONENT		R22	1-249-462-11	CARBON 22K 5% 1/4W	
		< FILTER >		R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
FL1	1-235-126-00	ENCAPSULATED COMPONENT (G)		R24	1-216-085-00	METAL CHIP 33K 5% 1/10W	
		< IC >		R25	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
IC21	8-759-821-45	IC LA1851N		R27	1-249-461-11	CARBON 18K 5% 1/4W	
IC81	8-759-820-91	IC LC7218		R28	1-247-719-11	CARBON 3.3K 5% 1/4W	
		< COIL >		R29	1-216-073-00	METAL CHIP 10K 5% 1/10W	
L21	1-410-494-11	INDUCTOR 1MH		R31	1-216-041-00	METAL CHIP 470 5% 1/10W	
		< FILTER >		R32	1-216-073-00	METAL CHIP 10K 5% 1/10W	
LPF21	1-235-164-00	FILTER, LOW PASS		R33	1-216-073-00	METAL CHIP 10K 5% 1/10W	
LPF22	1-235-164-00	FILTER, LOW PASS		R35	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		< TRANSISTOR >		R36	1-216-073-00	METAL CHIP 10K 5% 1/10W (AEP)	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY		R37	1-216-109-00	METAL CHIP 330K 5% 1/10W	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY (G)		R39	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
Q21	8-729-620-05	TRANSISTOR 2SC2603-EF		R40	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
Q22	8-729-620-05	TRANSISTOR 2SC2603-EF		R41	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
Q23	8-729-900-61	TRANSISTOR DTA114ES		R42	1-216-109-00	METAL CHIP 330K 5% 1/10W	
Q24	8-729-900-80	TRANSISTOR DTC114ES		R44	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
Q25	8-729-900-80	TRANSISTOR DTC114ES (G)		R45	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
Q81	8-729-900-61	TRANSISTOR DTA114ES		R46	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
Q82	8-729-900-80	TRANSISTOR DTC114ES		R47	1-249-409-11	CARBON 220 5% 1/4W	
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3		R61	1-216-097-00	METAL CHIP 100K 5% 1/10W	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB		R62	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		< RESISTOR >		R63	1-216-009-00	METAL CHIP 22 5% 1/10W	
R1	1-249-407-11	CARBON 150 5% 1/4W (G)		R81	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1	1-249-409-11	CARBON 220 5% 1/4W (AEP)		R82	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R3	1-216-037-00	METAL CHIP 330 5% 1/10W (G)		R83	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R4	1-216-037-00	METAL CHIP 330 5% 1/10W (G)		R84	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R4	1-216-013-00	METAL CHIP 33 5% 1/10W (AEP)		R85	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R86	1-216-049-00	METAL CHIP 1K 5% 1/10W	
				R87	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R88	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
				R89	1-216-049-00	METAL CHIP 1K 5% 1/10W	
				R90	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R91	1-216-049-00	METAL CHIP 1K 5% 1/10W	
				R92	1-249-401-11	CARBON 47 5% 1/4W	
				R101	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
				R102	1-216-043-00	METAL CHIP 560 5% 1/10W	
				R103	1-216-049-00	METAL CHIP 1K 5% 1/10W	
				R104	1-216-035-00	METAL CHIP 270 5% 1/10W	
				R105	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

## TUNER

## VOLUME-A

## VOLUME-B

Ref. No.	Part No.	Description	Remark
R106	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R107	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R108	1-216-025-00	METAL CHIP	100 5% 1/10W
R109	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R110	1-249-405-11	CARBON	100 5% 1/4W

&lt; VARIABLE RESISTOR &gt;

RV21	1-238-015-11	RES, ADJ, CARBON	4.7K
RV21	1-238-599-11	RES, ADJ, CARBON	4.7K
RV23	1-238-021-11	RES, ADJ, CARBON	220K
RV23	1-238-604-11	RES, ADJ, CARBON	220K
RV24	1-238-017-11	RES, ADJ, CARBON	22K

RV24	1-238-601-11	RES, ADJ, CARBON	22K
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&lt; TRANSFORMER &gt;

T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR
T21	1-404-880-11	TRANSFORMER, DISCRIMINATOR

&lt; TERMINAL &gt;

* TM1	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL)
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&lt; TEST PIN &gt;

* TP1	1-560-060-00	PIN, CONNECTOR 2P
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&lt; VIBRATOR &gt;

XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)
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*	1-644-117-11	VOLUME-A BOARD
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&lt; CAPACITOR &gt;

C436	1-136-163-00	FILM	0.068uF	5%	50V
C438	1-124-927-11	ELECT	4.7uF	20%	100V (GX390)
C439	1-124-927-11	ELECT	4.7uF	20%	100V (GX390)
C486	1-136-163-00	FILM	0.068uF	5%	50V

&lt; CONNECTOR &gt;

* CNP108	1-568-951-11	PIN, CONNECTOR 2P (GX390)
* CNP109	1-564-506-11	PLUG, CONNECTOR 3P
* CNP705	1-564-508-11	PLUG, CONNECTOR 5P

&lt; RESISTOR &gt;

R445	1-249-426-11	CARBON	5.6K	5%	1/4W
R495	1-249-426-11	CARBON	5.6K	5%	1/4W

Ref. No.	Part No.	Description	Remark
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&lt; VARIABLE RESISTOR &gt;

RV702	1-241-850-11	RES, VAR, CARBON 100K/100K (VOLUME) (GX390)
RV702	1-241-852-11	RES, VAR, CARBON 100K/100K (VOLUME) (GX290)

*	1-644-118-11	VOLUME-B BOARD
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&lt; VARIABLE RESISTOR &gt;

RV701	1-241-851-11	RES, VAR, CARBON 100K/100K (LOUDNESS)
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MISCELLANEOUS

64	1-696-456-11	WIRE (FLAT TYPE) (31 CORE)
△69	1-575-651-11	CORD, POWER
△CNJ917	1-526-794-11	OUTLET, AC (GX390)
△F901	1-532-286-00	FUSE (T2. 5AL)
△F902	1-532-259-00	FUSE (T1. 6AL) (GX390:AEP)

△F902	1-532-285-00	FUSE (T1. 25AL) (GX290)
△F902	1-532-286-00	FUSE (T2. 5AL) (GX390:G)
△F903	1-532-286-00	FUSE (T2. 5AL) (GX390)
△T901	1-450-363-11	TRANSFORMER, POWER (GX390:AEP)
△T901	1-450-364-21	TRANSFORMER, POWER (GX290:AEP)

△T901	1-450-384-11	TRANSFORMER, POWER (GX390:G)
△T901	1-450-385-21	TRANSFORMER, POWER (GX290:G)

ACCESSORIES &amp; PACKING MATERIALS

1-465-423-11	REMOTE COMMANDER (RM-S103) (GX390)
1-501-374-11	ANTENNA, LOOP (AM)
1-501-536-11	ANTENNA (FM) (AEP)
2-181-754-01	COVER, BATTERY (RM-S103) (GX390)
3-755-234-11	MANUAL, INSTRUCTION (FRENCH, GERMAN, ITALIAN, SPANISH, DUTCH, SWEDISH) (AEP)
3-755-234-41	MANUAL, INSTRUCTION (GERMAN) (G)
* 4-952-676-01	CUSHION
* 4-952-682-01	INDIVIDUAL CARTON (GX390)
* 4-952-683-01	INDIVIDUAL CARTON (GX290)

\*\*\*\*\*  
**HARDWARE LIST**  
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#1	7-682-548-09	SCREW +BVTT 3X8 (S)
#2	7-682-560-04	SCREW +BVTT 4X6 (S)

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

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#4	7-682-548-04	SCREW +BVTT 3X8 (S)	
#5	7-682-547-09	SCREW +BVTT 3X6 (S)	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#7	7-621-849-00	SCREW, TAPPING	

