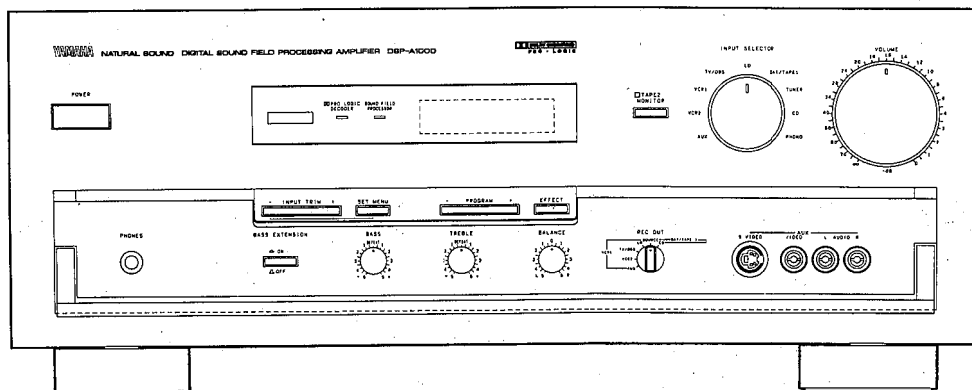
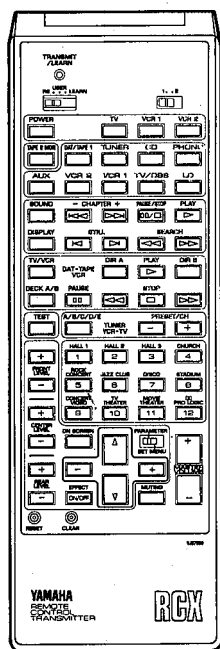


DIGITAL SOUND FIELD PROCESSING AMPLIFIER

DSP-A1000

SERVICE MANUAL



DSP-A1000

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that all service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

■ CONTENTS

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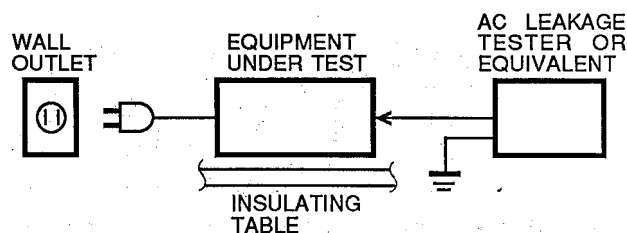
100384

YAMAHA

YAMAHA CORPORATION
P.O. Box 1, Hamamatsu, Japan

0.29K-126 © Printed in Japan '91.1

1. **Critical Components Information.**
Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
2. **Leakage Current Measurement (For 120V Models Only).**
When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
 - Leakage current must not exceed 0.5mA.
 - Be sure to test for leakage with the AC plug in both polarities.



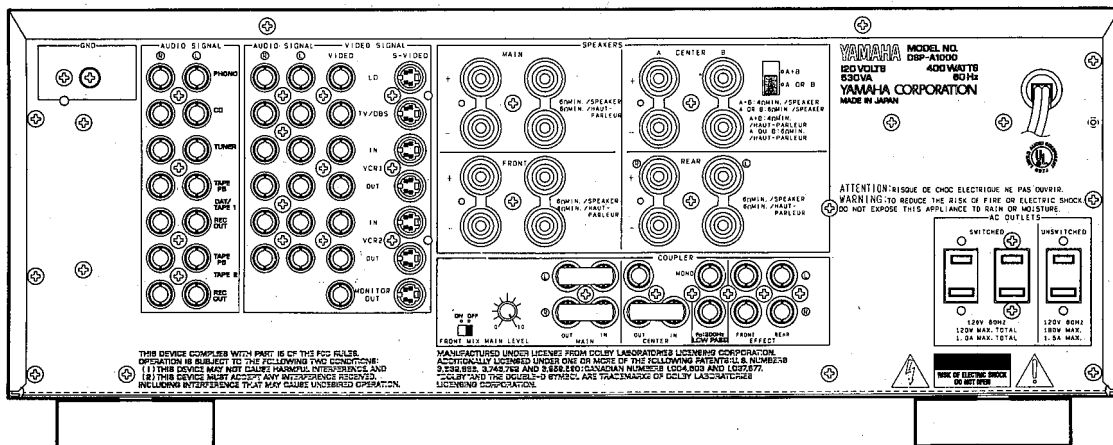
This amplifier product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature.

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

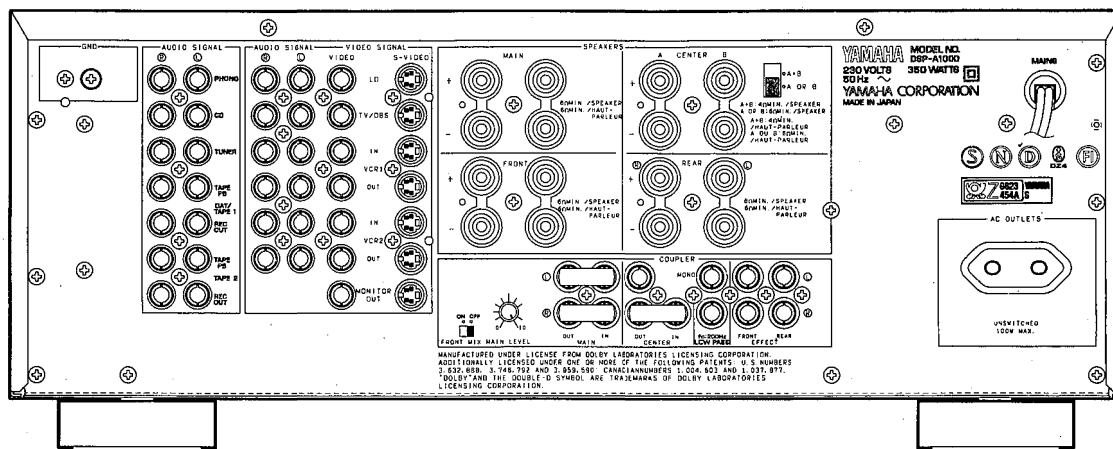
Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

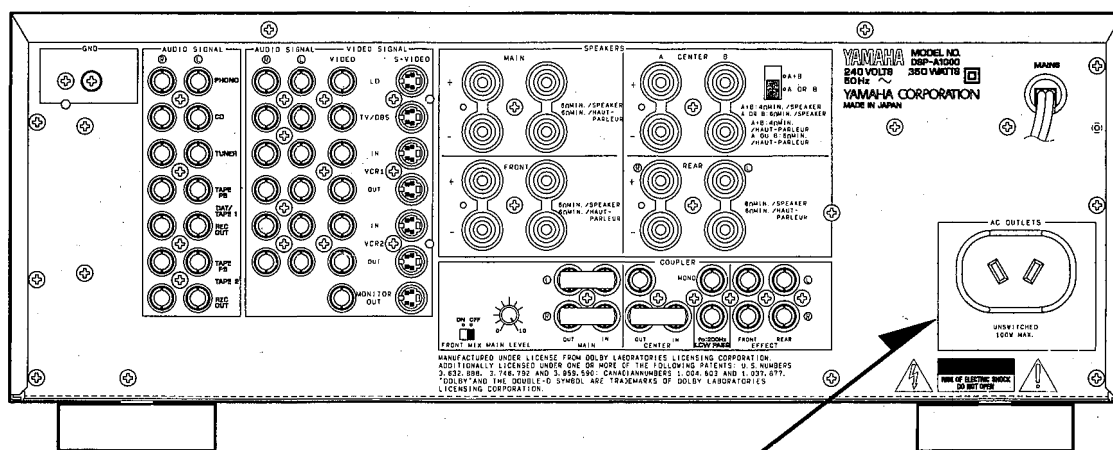
▼ USA & Canadian models



▼ European model

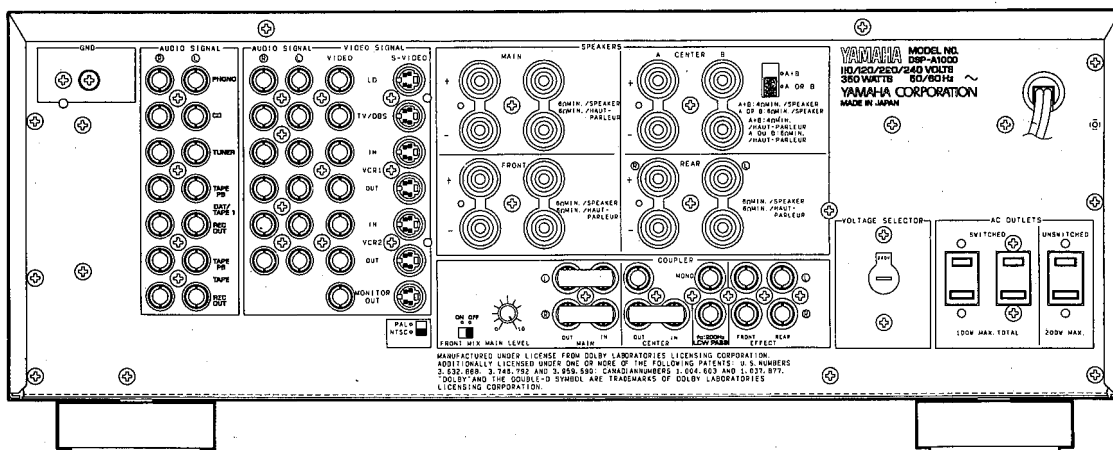


▼ Australian & British models



British model only

▼ General model



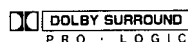
SPECIFICATIONS

Minimum RMS Output Power Per Channel	
Main (20Hz—20kHz 0.015% THD 8Ω/6Ω)	80W/100W
Center (20Hz—20kHz 0.015% THD 8Ω/6Ω)	
(U, C, R models)	80W/100W
(A, B, G models)	100W/100W
Front, Rear Effect (20Hz—20kHz 0.05% THD 8Ω/6Ω)	
(U, C, R models)	25W/30W
(A, B, G models)	22W/26W
Dynamic Power Per Channel	
(by IHF Dynamic Headroom Measuring Method)	
(U, C, R models) Main (8Ω/6Ω)	130W/160W
(A, B, G models) Main (8Ω/6Ω/4Ω)	75W/90W/110W
DIN Standard Output Power Per Channel (G model) (Main)	
Main (1kHz 0.7% THD 4Ω)	130W
Dynamic Headroom (U, C, R models) (Main)	
Main (8Ω/6Ω)	2.1dB/2/0dB
IEC Power (G model)	
Main (1kHz 0.015% THD 8Ω/6Ω)	85W/105W
Damping Factor	
Main (1kHz 8Ω)	120
Input Sensitivity/Impedance	
Phono MM	2.5mV/47kΩ
CD/TUNER/TAPE/LD/VCR/TV•DBS	150mV/47kΩ
MAIN IN/CENTER IN	1.0mV/47kΩ
Maximum Input Signal (1kHz 0.01% THD)	
Phono MM	140mV
Output Level/Impedance	
REC OUT	150mV/1kΩ
PRE OUT (MAIN L, R, CENTER)	1V/1.2kΩ
PRE OUT (FRONT L, R, CENTER)	1V/1.2kΩ
PRE OUT (LOW PASS)	0.4V/1.2kΩ
PRE OUT (MONO)	0.6V/1.2kΩ
Maximum Voltage Output (20Hz—20kHz 0.005% THD)	
PRE OUT (MAIN L, R)	3V
Headphone Jack Rated Output/Impedance	
Output Level 0.03% THD 1kHz RL=8Ω	0.25V
Impedance	100Ω
Frequency Response (20Hz—20kHz)	
CD/TUNER/TAPE/LD/VCR/TV•DBS	0±1.0dB
MAIN IN	0±1.0dB
RIAA Equalization Deviation	
Phono MM	0±0.5dB
Total Harmonic Distortion (20Hz—20kHz)	
Phono MM to REC OUT, 3V	0.01%
CD/TUNER/TAPE/LD/VCR/TV•DBS to PRE OUT (MAIN L, R), 3V	0.005%
MAIN IN to SP out (MAIN L, R, CENTER)	
40W/8Ω	0.005%
50W/6Ω	0.005%
Signal-to-Noise Ratio (IHF-A Network)	
Phono MM (Input Shorted)	More than 86dB
CD/TUNER/TAPE/LD/VCR/TV•DBS (Input Shorted)	More than 96dB
Residual Separation (Vol—30dB)	
Phono MM Input shorted	
1kHz/10kHz	More than 70dB/55dB
CD/TUNER/TAPE/LD/VCR/TV•DBS Input 5.1kΩ Terminated	
1kHz/10kHz	More than 60dB/45dB
Tone Control Characteristics	
Bass	
Boost/Cut	±10dB (50Hz)
Turnover frequency	350Hz
Treble	
Boost/Cut	±10dB (20Hz)
Turnover frequency	3.5kHz
BASS EXTENSION	+7dB (70Hz)
AUDIO MUTING	—20dB
Video	
Video Signal Type	
(U, C models)	NTSV
(A, B, G models)	PAL
(R model)	NTSC/PAL

Video Signal Level	1Vp-p75Ω
S-Video Signal Level	
Y	1Vp-p75Ω
C	0.286Vp-p75Ω
Maximum Input Level	More than 1.5Vp-p
Frequency response	5—10MHz, —3dB
Power Supply	
U, C models	AC120V 60Hz
A, B models	AC240V 50Hz
G model	AC230V 50Hz
R model	Ac110/120/220/240V 60/50Hz
Power Consumption	
U model	400W
C model	400W, 530VA
A, B, G, R models	350W
AC Outlets	
2 Switched Outlets	
(U, C models)	120W max. total
(R model)	100W max. total
1 Switched Outlets	
(A, B, G models)	100W max. total
1 Unswitched Outlets	
(U, C models)	180W max. total
(R model)	200W max. total
Dimensions (W x H x D)	
	435 x 170 x 468.5mm
	(17-1/8" x 6-11/16" x 18-7/16")
Weight	
	20.0kg (44 lbs. 0 oz)

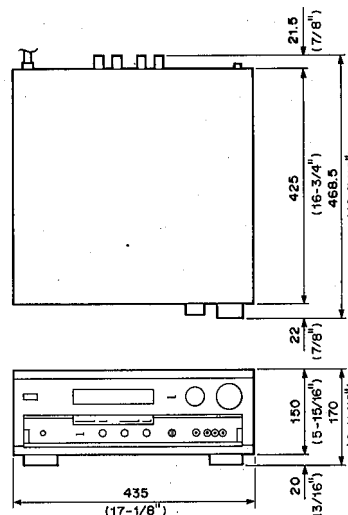
*Specifications are subject to change without notice.

U U. S. A. model
 C Canadian model
 B British model
 A Australian model
 G European model
 R General model



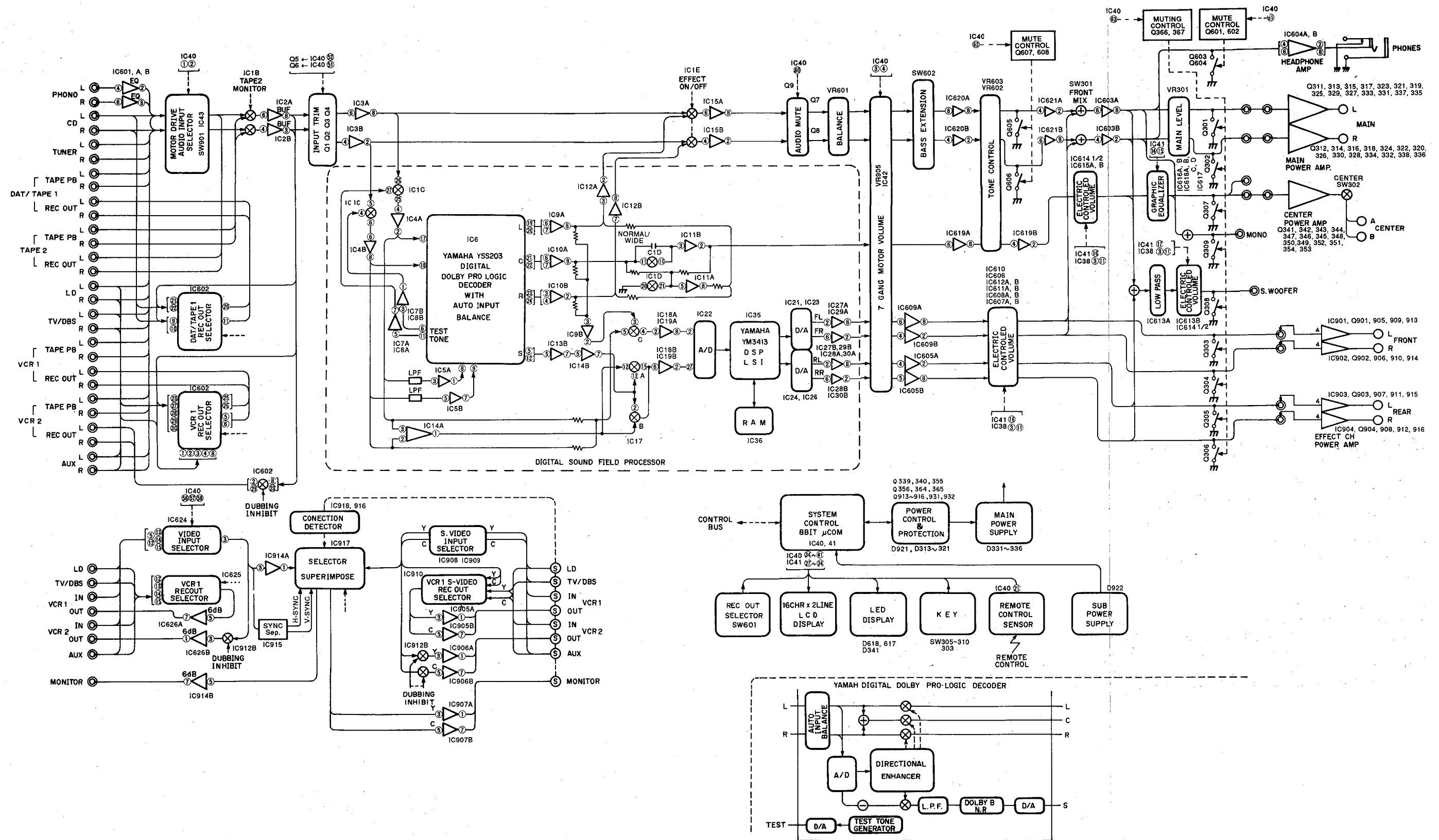
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DIMENSIONS

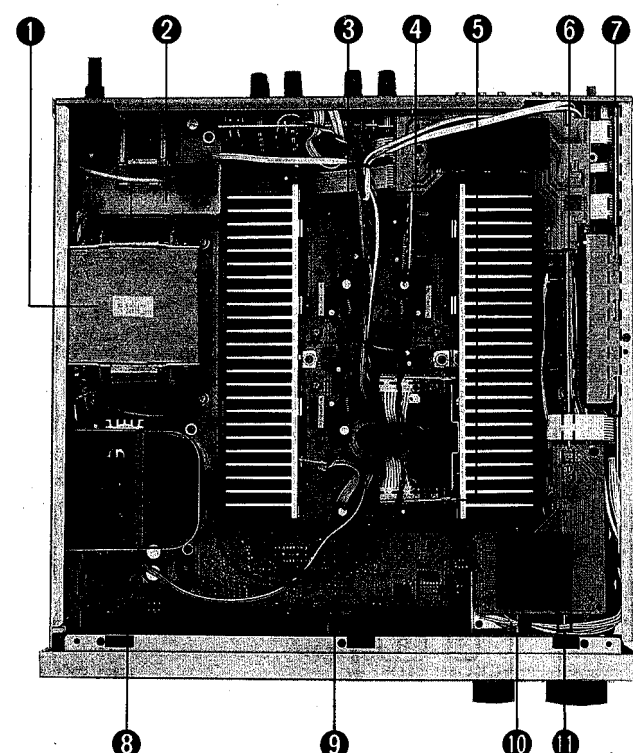


Unit : mm (inch)

■ BLOCK DIAGRAM



■ INTERNAL VIEW



- ① POWER TRANSFORMER
- ② EFFECT CIRCUIT BOARD (6)
- ③ MAIN CIRCUIT BOARD (1)
- ④ EFFECT CIRCUIT BOARD (4)
- ⑤ EFFECT CIRCUIT BOARD (3)
- ⑥ FUNCTION CIRCUIT BOARD (1)
- ⑦ DSP CIRCUIT BOARD
- ⑧ MAIN CIRCUIT BOARD (3)
- ⑨ FUNCTION CIRCUIT BOARD (2)
- ⑩ EFFECT CIRCUIT BOARD (5)
- ⑪ EFFECT CIRCUIT BOARD (7)

■ DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- a. Remove 4 screws (①) and 2 screws (②) and then remove the Top Cover in Fig. 1.

2. Removal of Bottom Cover

- a. Remove 12 screws (③) and then remove the Bottom Cover in Fig. 1.

3. Removal of Front Panel

- a. Remove 6 knobs in Fig. 1.
- b. Remove 3 screws (④) and then the remove the Front Panel in Fig. 1. For this removal, also remove connectors (#7, #9—#14) as necessary. (Refer to Fig. 4 Bottom Side Wire Connection Diagram.)

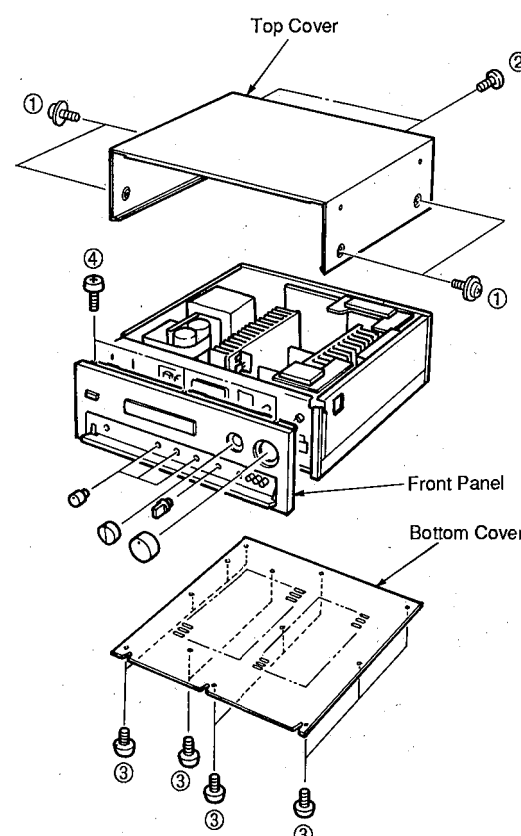


Fig. 1

4. Removal of DSP Circuit Board

- a. Remove 9 screws (⑤) and then remove the Frame R (upper) in Fig. 2.
- b. Remove 3 screws (⑥) and then remove the Effect Circuit Board (2) by lifting it up gradually in Fig. 2. For this removal, also remove connectors (#1, #2, #21—#23) as necessary. (Fig. 5 Wiring Diagram)
- c. Remove 3 connectors of the Effect Circuit Board (1).
- d. Remove 1 plastic rivet (⑦) and 1 screw (⑧) and then remove the Effect Circuit Board (1) by lifting it up gradually in Fig. 2.
- e. Remove 5 screws (⑨) and then remove the DSP Circuit Board (with shield case DSP) in Fig. 2. For this removal, also remove connectors (#19, #20, #30—#38) as necessary. (Fig. 4, Fig. 5 Wiring Diagram)

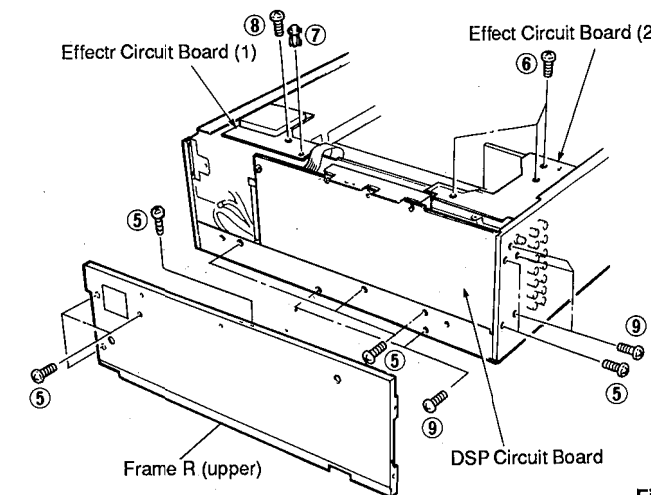


Fig. 2

5. Removal of Function circuit Board (1)

- a. Remove 4 screws (⑩) and 2 plastic rivets (⑪) and then remove the Function Circuit Board (1) in Fig. 3. For this removal, also remove connectors (#17, #18, #41, #42) as necessary. (Fig. 5 Wiring Diagram)

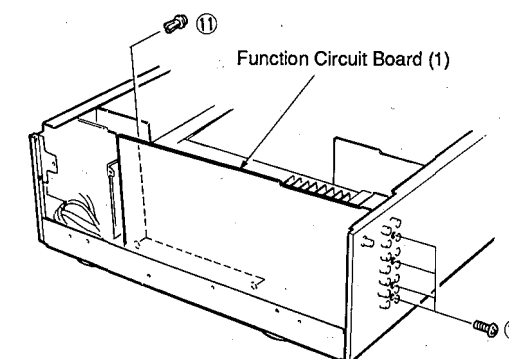


Fig. 3

● WIRING DIAGRAM

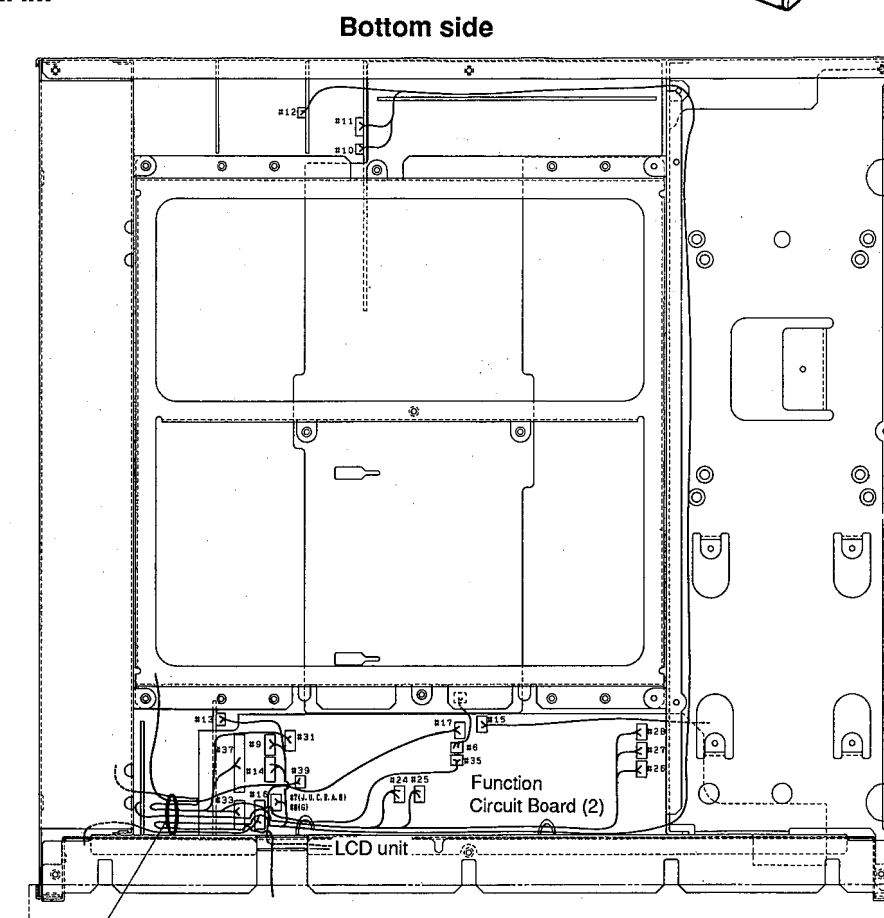


Fig. 4

Top side

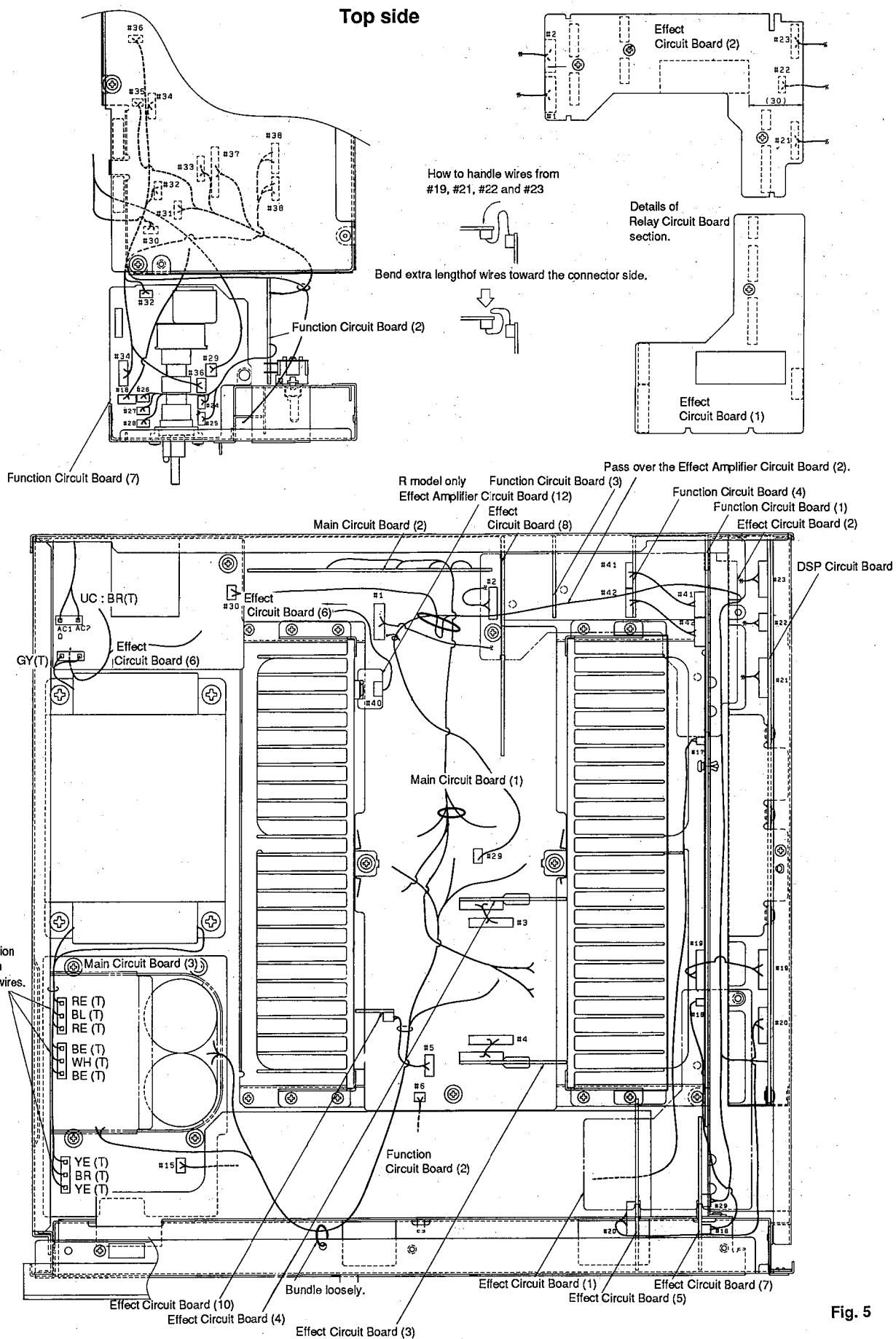


Fig. 5

ADJUSTMENTS

● IDLING CURRENT ADJUSTMENT

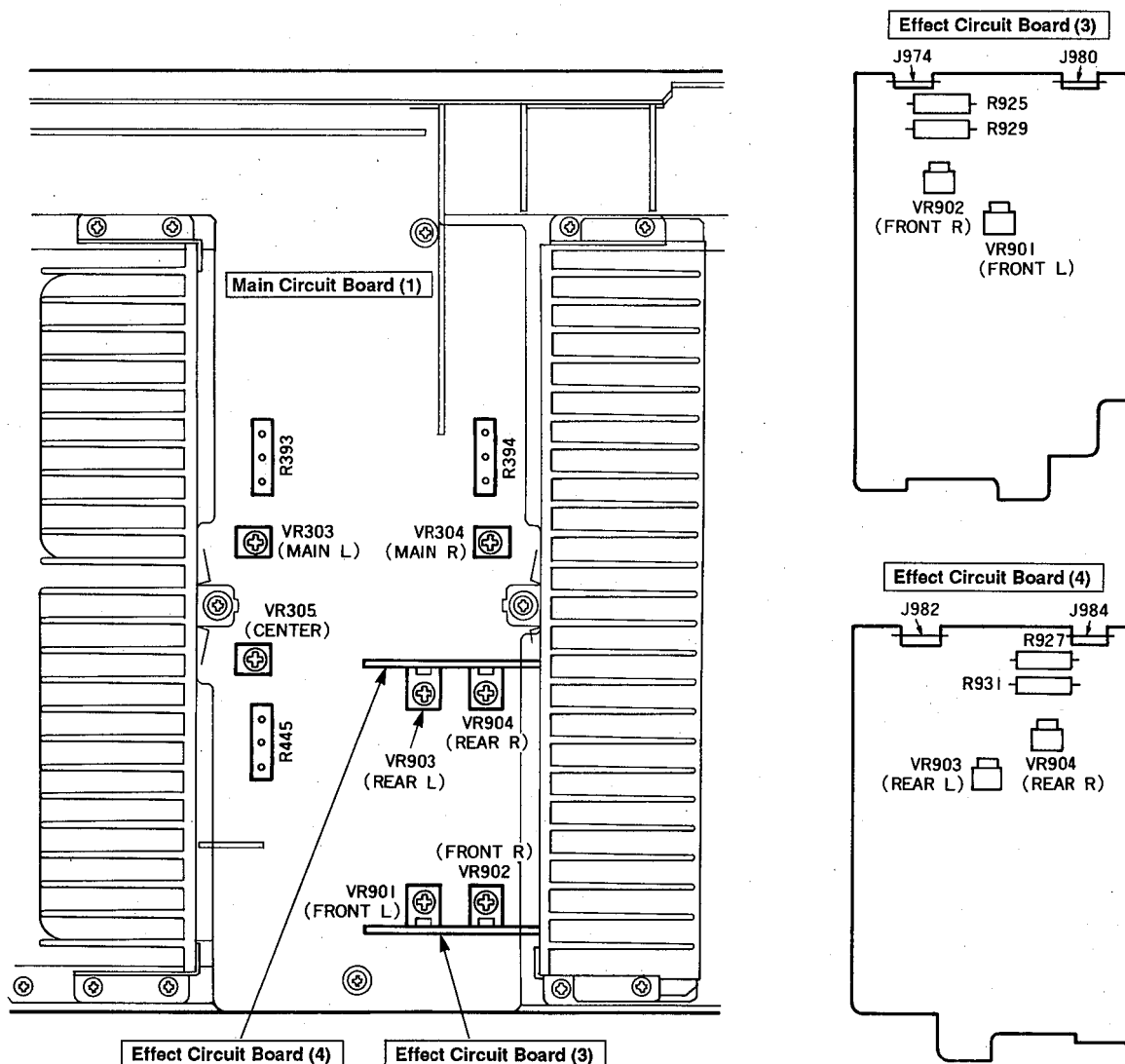
Before this adjustment, wait for 2 minutes with no signal applied after the power is turned ON.

Item	Test Point	Adjustment point	Rating (DC)
MAIN L	Between terminals of R393, at the center and one end	VR303	2.5mV~5mV
MAIN R	Between terminals of R394, at the center and one end	VR404	
CENTER	Between terminals of R445, at the center and one end	VR305	2.5mV~5mV
FRONT L	Between terminals of R925 or R929, at both ends	VR901	
FRONT R	Between J974 and J980	VR902	2.5mV~5mV
REAR L	Between terminals of R927, or R931, at both ends	VR903	
REAR R	Between J982 and J984	VR904	

Note :

1. When the rear panel has been removed, the ground wire of the input/output pin jack becomes loose. Connect it to the chassis by using a lead wire.
2. When the Effect Circuit Board (2) has been removed, protection operation becomes effective to prevent the power from coming ON.

● Test Point



■ TEST SIGNAL PROGRAM

The test signal program has been programmed in this set to facilitate inspection and measurement.

1. Starting test Signal Program

While pressing 3 keys of INPUT TRIM (+), SET MENU and PROGRAM (-), press the power switch to turn ON the power, and the diagnosis program is activated. When the program is started, it causes the LCD to display as follows and performs the LED lighting check and the LCD check at once.

* DIAGNOSTICS *
2. DSP RAM THR

● LED lighting check

All OFF (including Led back light)
STANDBY (G model only)
PRO LOGIC INDICATOR
DSP INDICATOR
TAPE 2 MONITOR
VOLUME

After the indicators and lamps light in the above sequence, the LCD back light and the STANDBY Indicator (for G model only) turn ON again.

(The LED of the INPUT knob is always ON.)

● LCD Check

After LED lighting check, all dots of the LCD turn ON and the Above message "2. DSP RAM THR" is displayed again.

2. Connect of Test Signal Program

Unless other wire specified, the conditopns of the signal program are as follows.

* FRONT LEVEL	+10dB
* REAR LEVEL	+10dB
* CENTER LEVEL	+10dB
SUB WOOFER LEVEL	0dB
INPUT TRIM	0dB
CENTER GEQ	FLAT (0dB 5 Band All)
PRO LOGIC MODE	NORMAL
CENTER MODE	WIDE
MUTING	OFF

* Adjustable by means control.

2-1. Cancellation of Test Signal Program (Hall 1 key)

The normal mode is recovered from the test signal program. Then all the back-up data are automatically intized. (The test signal program can be cancelled also by turning OFF the power switch.)

● Memory initialization

Each condition is set as follows.

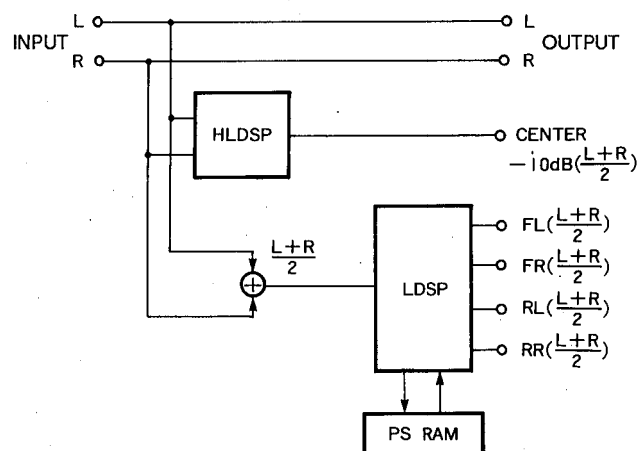
PROGRAM	1. CONCERT HALL 1
PARAMETER	Initialized value
PRO LOGIC MODE	Normal
CENTER MODE	NRML
CENTER GEQ	All bands flat
SUB WOOFER	0dB
COLOR No.	1
TAPE 2 MONITOR	OFF
FRONT LEVEL	0dB
CENTER LEVEL	0dB
REAR LEVEL	0dB
INPUT TRIM	0dB
MUTING	OFF
EFFECT	ON

2-2. DSP RAM THROUGH (Hall 2 key)

The following message appears on the LCD.

* DIAGNOSTICS *
2. DSP RAM THR

Inputs and outputs of the DSP are as follows.

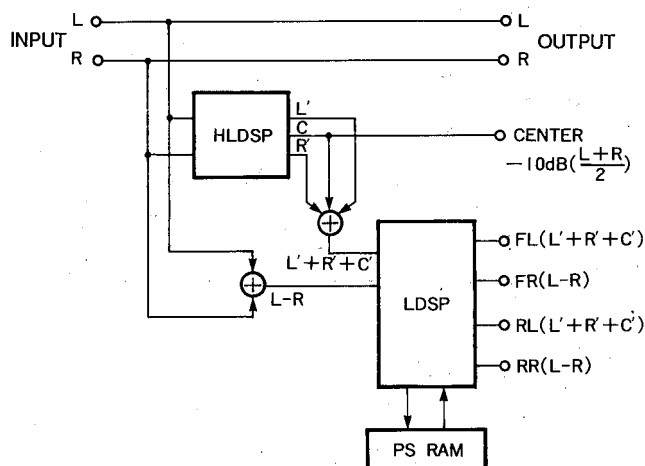


*) HLDSP undergoes Steering OFF and outputs $-10\text{dB} \cdot \frac{L+R}{2}$ from the center through manual mix.

*) LDSP receives $\frac{L+R}{2}$ input from A/D and then outputs as it to FL, FR, RL and RR.

The following message appears on the LCD.

Inputs and outputs of DSP are as follows.


$$L \text{ output } L' = -20\text{dB} \cdot \left(\frac{L+R}{2} \right)$$

$$R \text{ output } R' = -20\text{dB} \cdot \left(\frac{L+R}{L} \right)$$

$$C' = -10\text{dB} \cdot \left(\frac{L+R}{2}\right), C' = \frac{2}{3} \cdot C$$

$$L' + R' + C' = \frac{L+R}{2}$$

$$L' + R' + C' = \frac{L+R}{2}$$

*) LDSP provides a composite output of 3 HLDSP outputs FL and RL, and L-R output from A/D to FR and RR.

The protection function is activated and the power turns OFF when :

1. DC occurs in the output the power amplifier
2. An abnormal current flows to the power amplifier due to such reason as short circuit in the speaker
3. $\pm 15V$ is abnormal
4. $\pm 5V$ is abnormal
5. $\pm B$ is abnormal

The protection circuit consists of a microcomputer (IC40), an interface (IC41), Q364, 365 and a peripheral diode.

The function of each element is as follows.

- a) **Q364, 365** : Detecting abnormality and sending that signal to the microcomputer (IC40)
- b) **PRT (17) terminal of microcomputer (IC40)** : Input terminal for the signal from Q364, 365
- c) **PRL (32) terminal of microcomputer (IC40)** : Output terminal for the signal to the power ON/OFF relay
- d) **SRY (37) terminal of interface (IC41)** : Output terminal for the ON/OFF signal to the speaker protection relay

The microcomputer does not detect abnormality for 3 or 4 seconds after the power is turned ON. During this time, abnormality can be located by checking the above listed conditions 1 to 5. Before this check, however, make sure to check that is no danger of ignition or fuming.

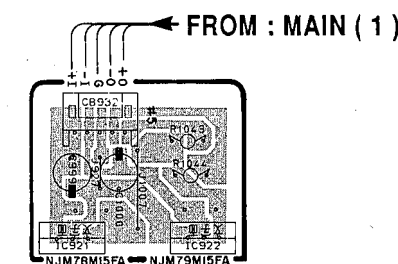
PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

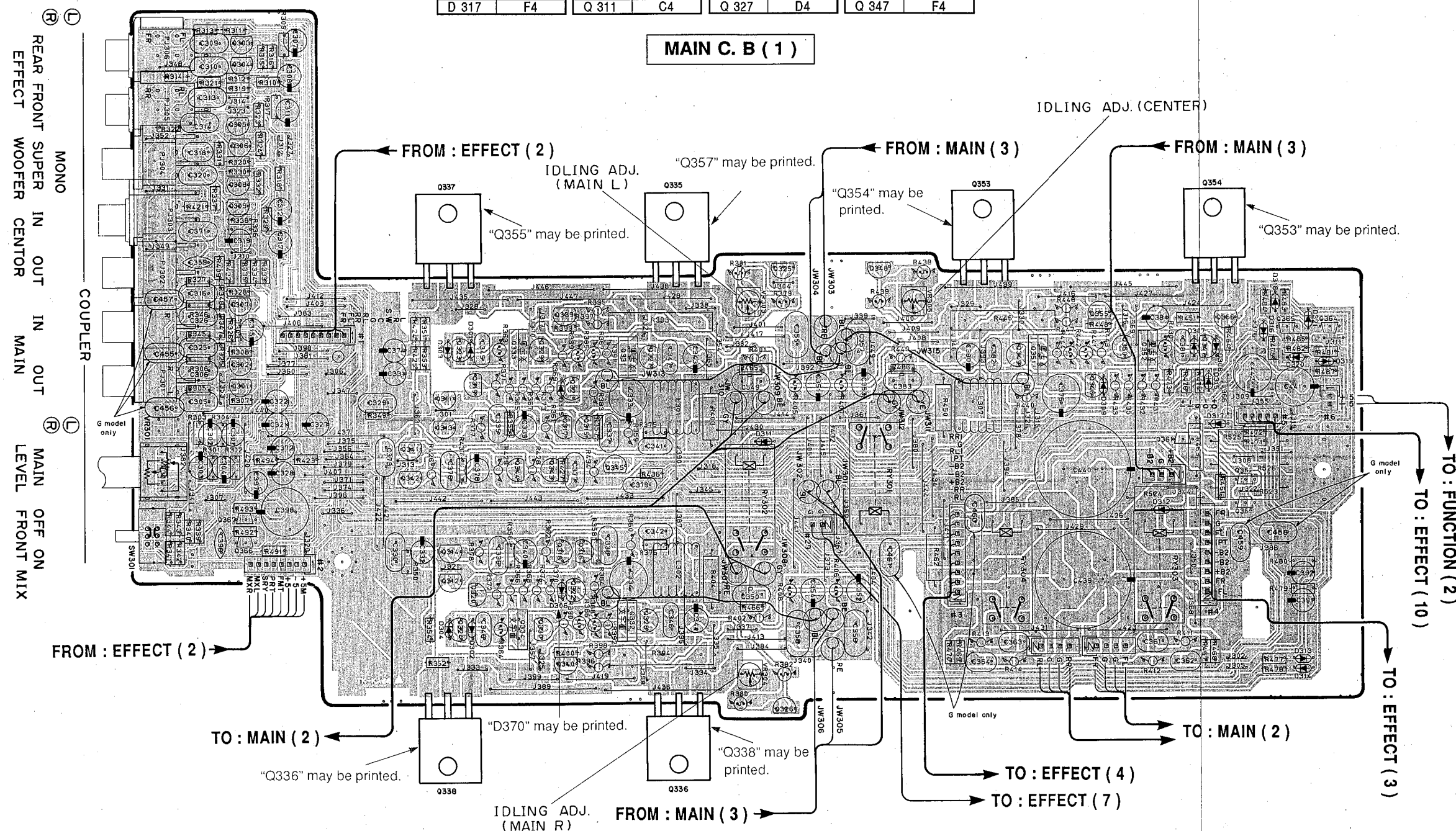
Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D 301	C4	D 318	G3	Q 312	C5	Q 328	D5	Q 348	E3
D 302	C5	D 319	G4	Q 313	C4	Q 329	C4	Q 349	E3
D 303	C4	D 320	G4	Q 314	C4	Q 330	C5	Q 350	F4
D 304	C5	D 321	G4	Q 315	D4	Q 331	D4	Q 351	E4
D 305	C4	IC921	F2	Q 316	D4	Q 332	D5	Q 352	F4
D 306	C5	IC922	G2	Q 317	C4	Q 333	C4	Q 355	F4
D 307	F4	Q 301	B4	Q 318	C4	Q 334	C5	Q 356	F4
D 308	F4	Q 302	B4	Q 319	C4	Q 339	C5	Q 361	F4
D 309	F4	Q 303	B2	Q 320	C5	Q 340	C5	Q 362	F4
D 311	D4	Q 304	B2	Q 321	D4	Q 341	C4	Q 363	F4
D 312	F4	Q 305	B3	Q 322	D5	Q 342	C4	Q 364	G4
D 313	G5	Q 306	B3	Q 323	C4	Q 343	C4	Q 365	G4
D 314	G5	Q 307	B3	Q 324	C5	Q 344	C4	Q 366	B4
D 315	F4	Q 308	B3	Q 325	D3	Q 345	D4	Q 367	B4
D 316	F4	Q 309	B3	Q 326	D5	Q 346	F4		
D 317	F4	Q 311	C4	Q 327	D4	Q 347	F4		

EFFECT C. B (10)



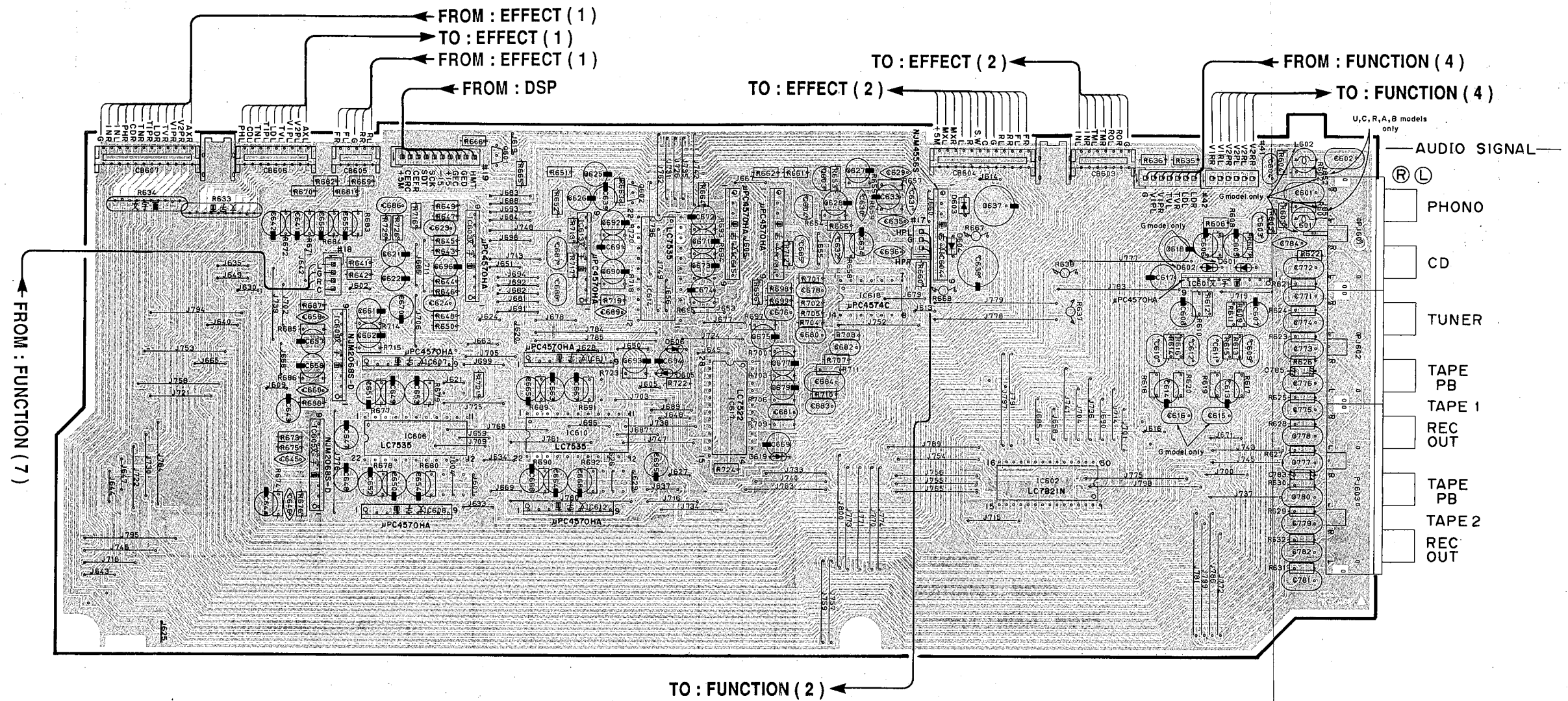
MAIN C. B (1)



PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

FUNCTION C. B (1)



Note) * Marked

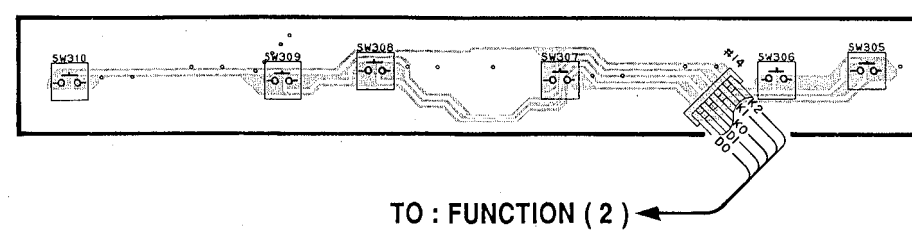
	U, C, R, A, B	G
R601, 602	SHORT	2.2K
L601, 602	OPEN	220μH
C615, 616	OPEN	1000P
D601, 602	OPEN	1SS133

MAIN C. B (7)

Semiconductor Location

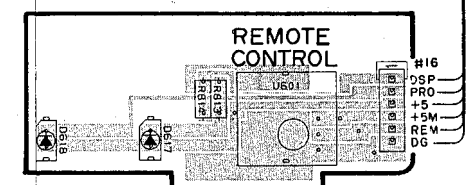
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D 603	E2	IC604	E2	IC614	D2
D 604	E2	IC605	B3	IC615	D2
D 605	D3	IC606	C3	IC616	D2
D 606	D3	IC607	C3	IC617	D3
D 617	F5	IC608	C3	IC618	E2
D 618	F5	IC609	B3	Q 601	C2
D 619	D3	IC610	C3	Q 602	D2
IC601	F2	IC611	C3	Q 603	D2
IC602	E3	IC612	C3	Q 604	D2
IC603	C2	IC613	C2		

- INPUT TRIM + SET MENU - PROGRAM + EFFECT



FUNCTION C. B (5)

TO : FUNCTION (2)



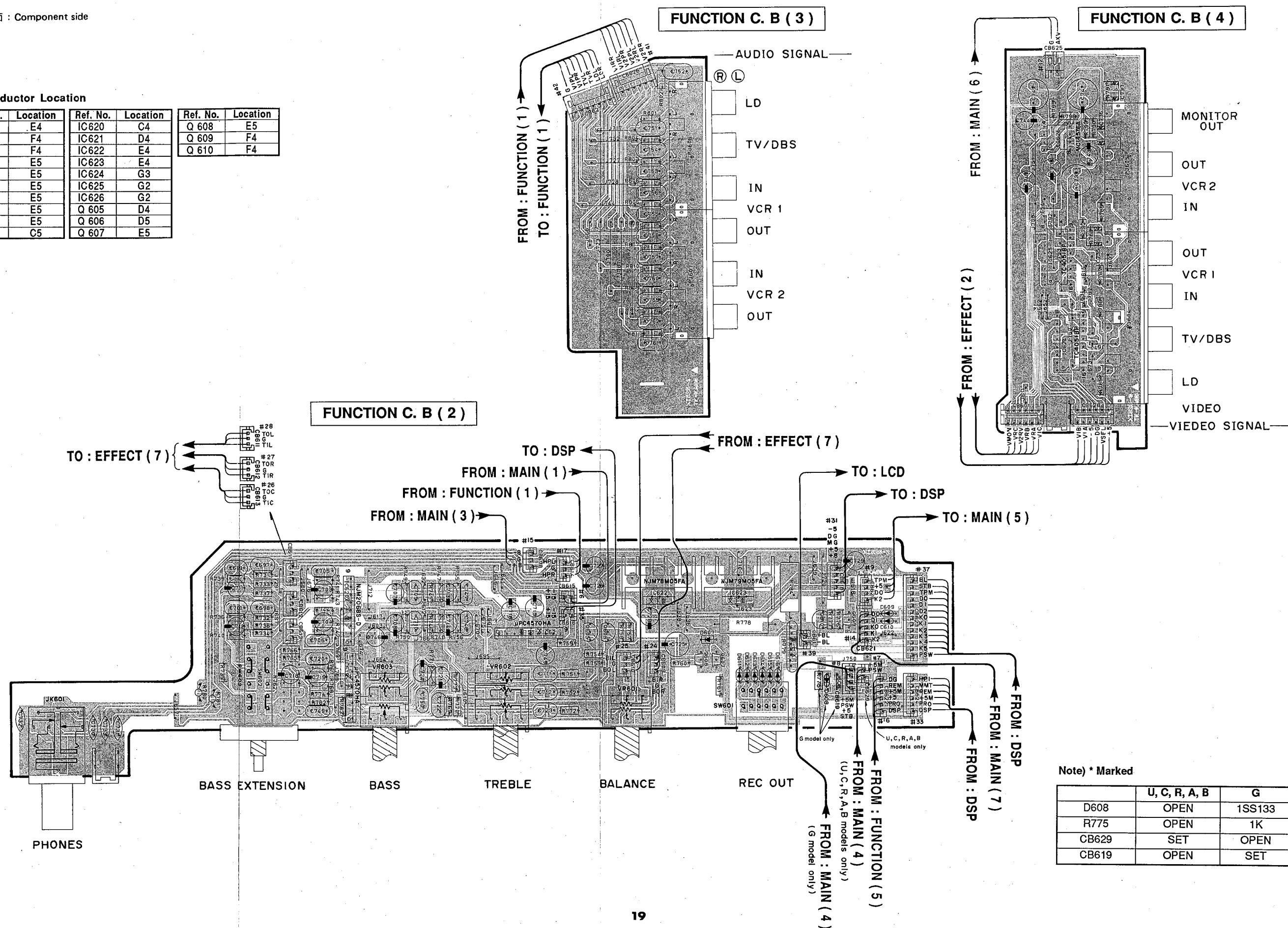
SOUND FIELD PROCESSOR PRO LOGIC DECODER

■ PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

● Semiconductor Location

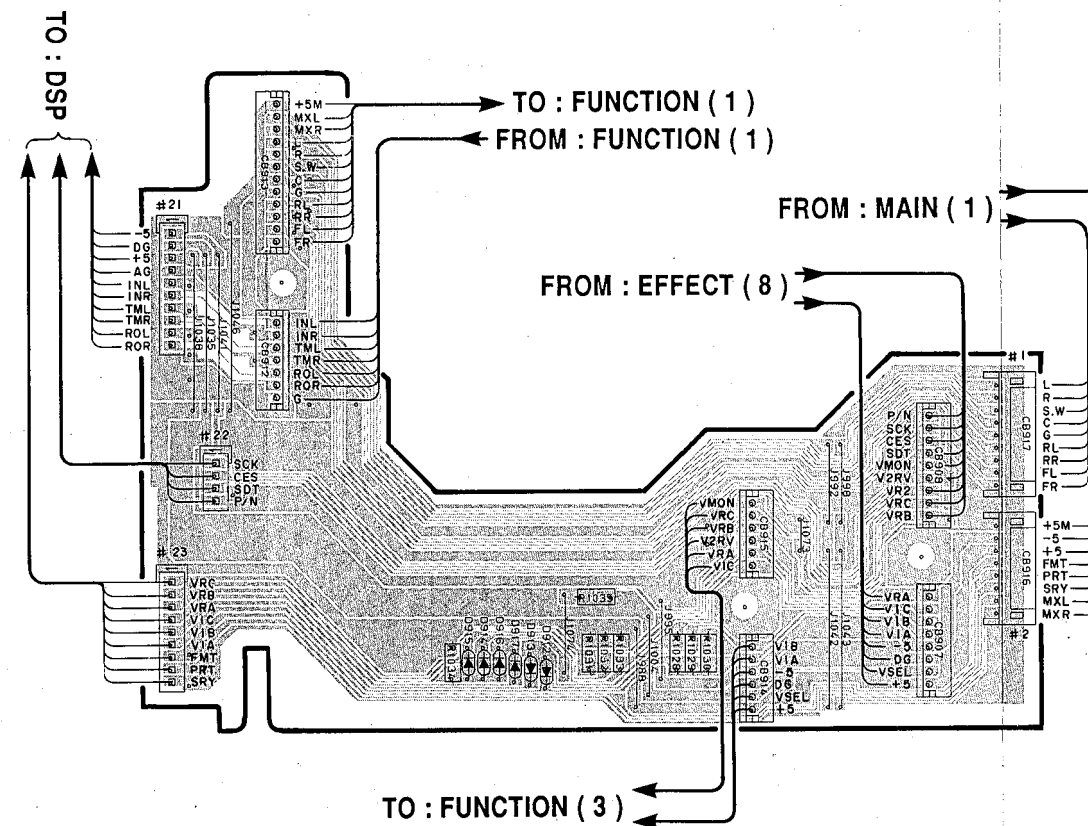
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D 607	E4	IC620	C4	Q 608	E5
D 609	F4	IC621	D4	Q 609	F4
D 610	F4	IC622	E4	Q 610	F4
D 611	E5	IC623	E4		
D 612	E5	IC624	G3		
D 613	E5	IC625	G2		
D 614	E5	IC626	G2		
D 615	E5	Q 605	D4		
D 616	E5	Q 606	D5		
IC619	C5	Q 607	E5		



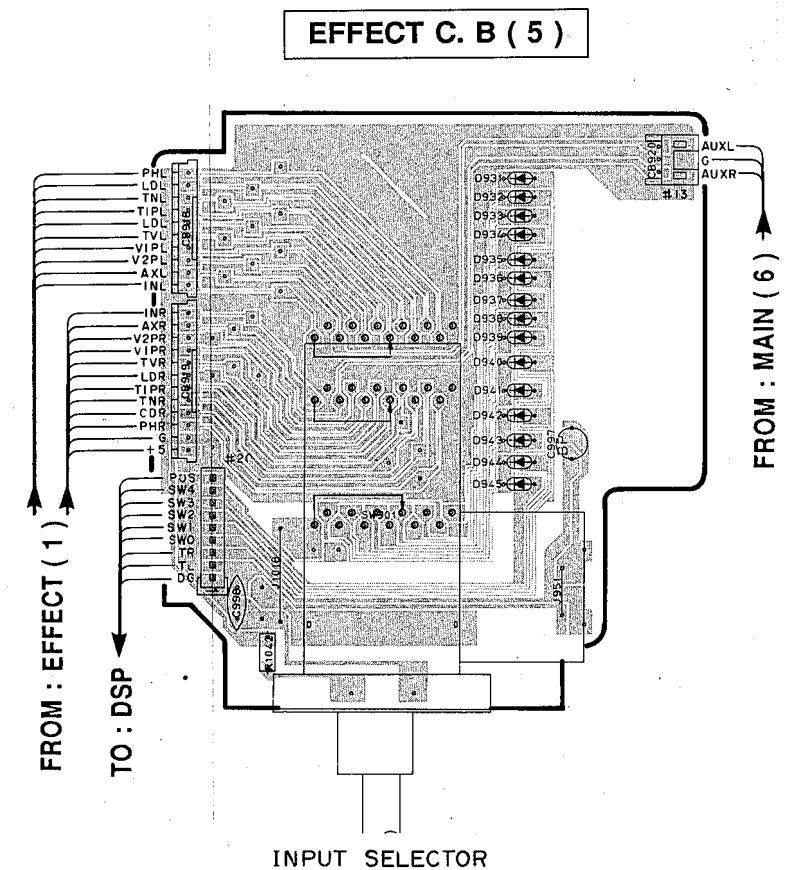
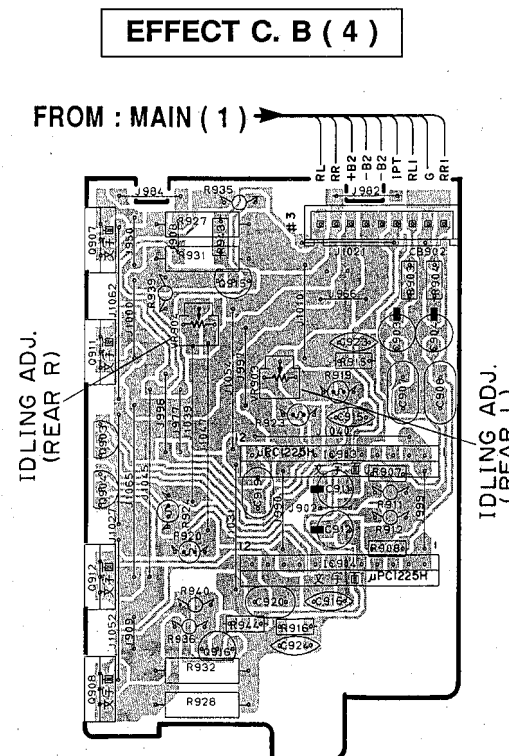
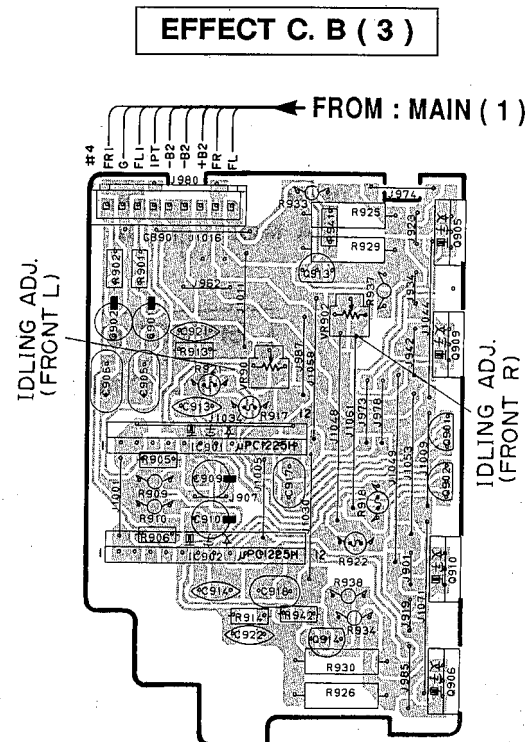
Note) * Marked

	U, C, R, A, B	G
D608	OPEN	1SS133
R775	OPEN	1K
CB629	SET	OPEN
CB619	OPEN	SET

● Semiconductor Location



Ref. No.	Location	Ref. No.	Location
D 912	E3	IC901	B5
D 913	E3	IC902	B5
D 914	E3	IC903	D5
D 915	E3	IC904	D5
D 916	E3	Q 901	C5
D 917	E3	Q 902	C5
D 931	G4	Q 903	D5
D 932	G4	Q 904	D5
D 933	G4	Q 905	C4
D 934	G4	Q 906	C6
D 935	G4	Q 907	D4
D 936	G4	Q 908	D6
D 937	G4	Q 909	C5
D 938	G4	Q 910	C5
D 939	G4	Q 911	D5
D 940	G5	Q 912	D5
D 941	G5	Q 913	B5
D 942	G5	Q 914	B5
D 943	G5	Q 915	D5
D 944	G5	Q 916	D5
D 945	G5		



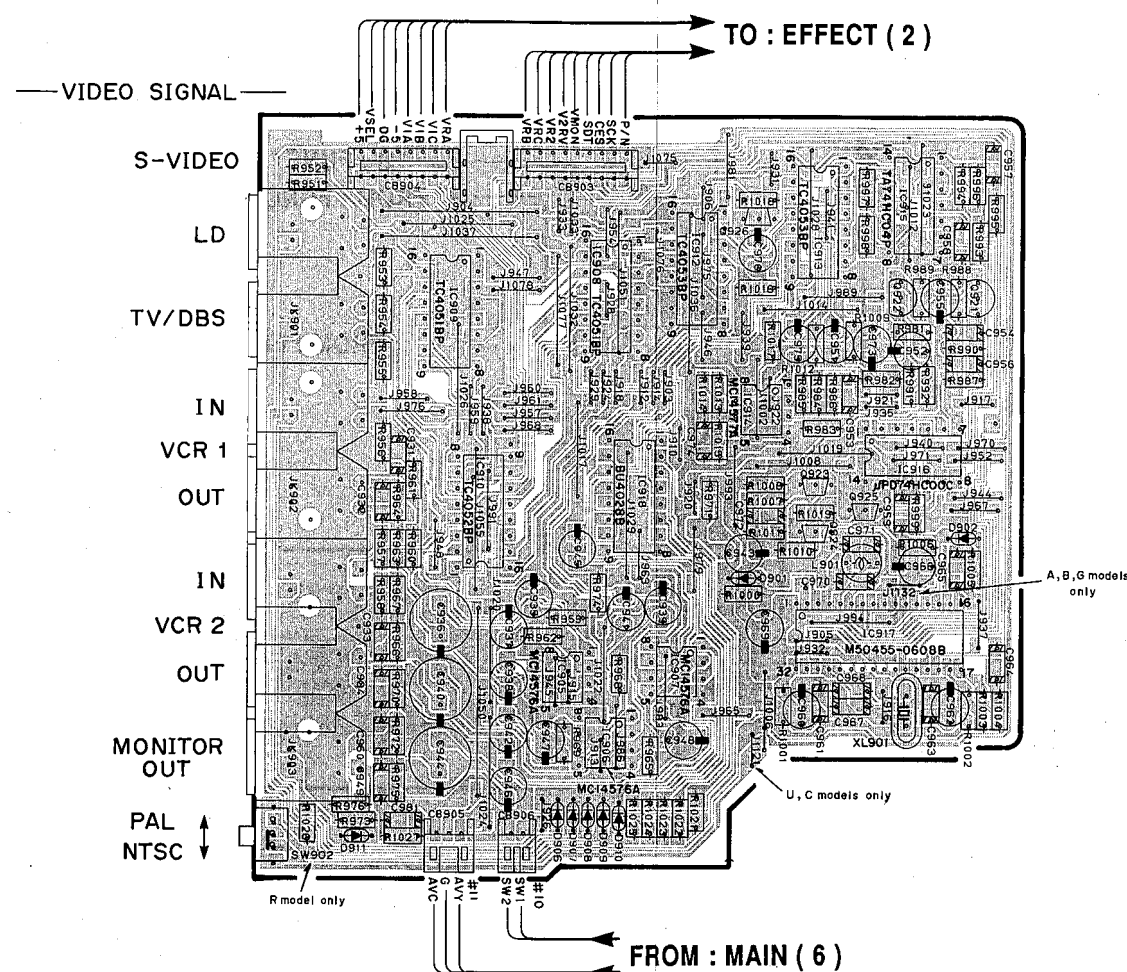
■ PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

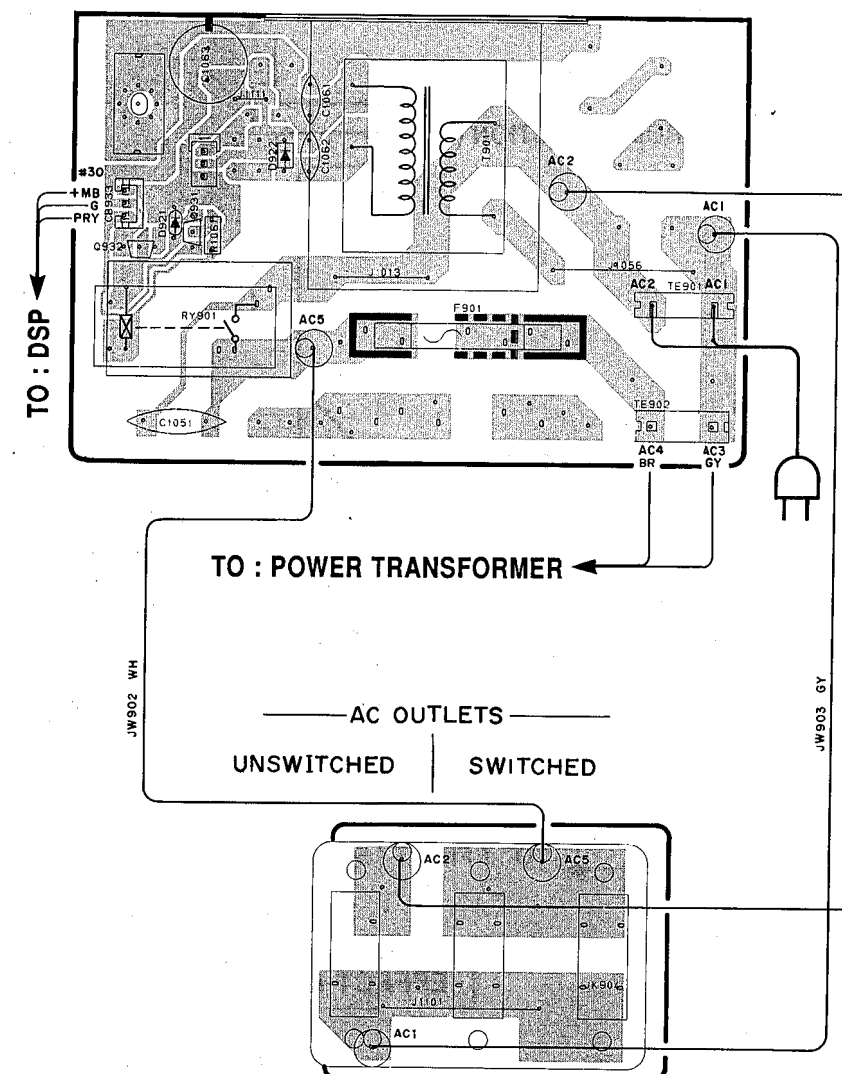
● Semiconductor Location

Ref. No.	Location
D 901	E3
D 902	E3
D 906	D3
D 907	D3
D 908	D3
D 909	D3
D 910	D3
D 911	D3
D 921	F2
D 922	G2
IC905	D3
IC906	D3
IC907	D3
IC908	D2
IC909	D2
IC910	D2
IC912	E2
IC913	E2
IC914	E2
IC915	E2
IC916	E2
IC917	E3
IC918	D2
Q 921	E2
Q 922	E2
Q 923	E2
Q 924	E3
Q 925	E2
Q 926	E2
Q 931	F2
Q 932	F2

EFFECT C. B (8)



EFFECT C. B (6)



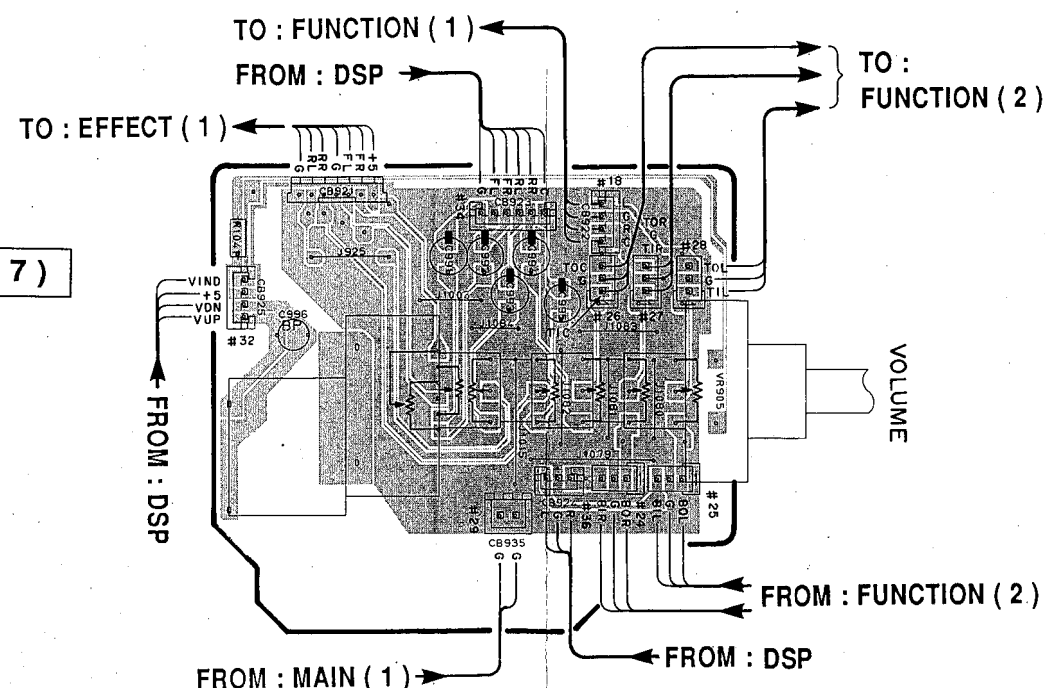
120V 60Hz
180W MAX.
1.5A MAX.

120V 60Hz
120W MAX. TOTAL
1.0A MAX. TOTAL

EFFECT C. B (9)

● U, C models

EFFECT C. B (7)

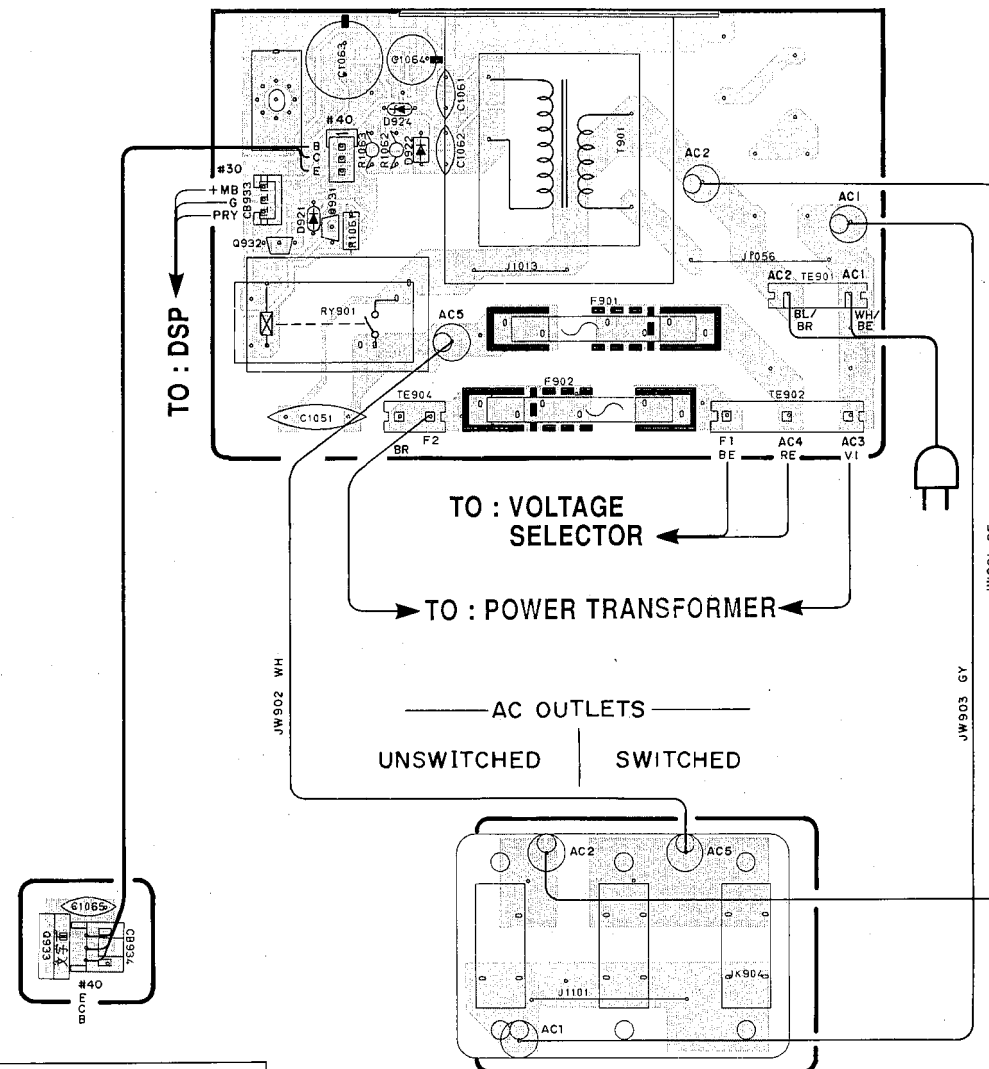


■ PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

EFFECT C. B (6)

- R model



EFFECT C. B (12)

- R model

200W MAX.

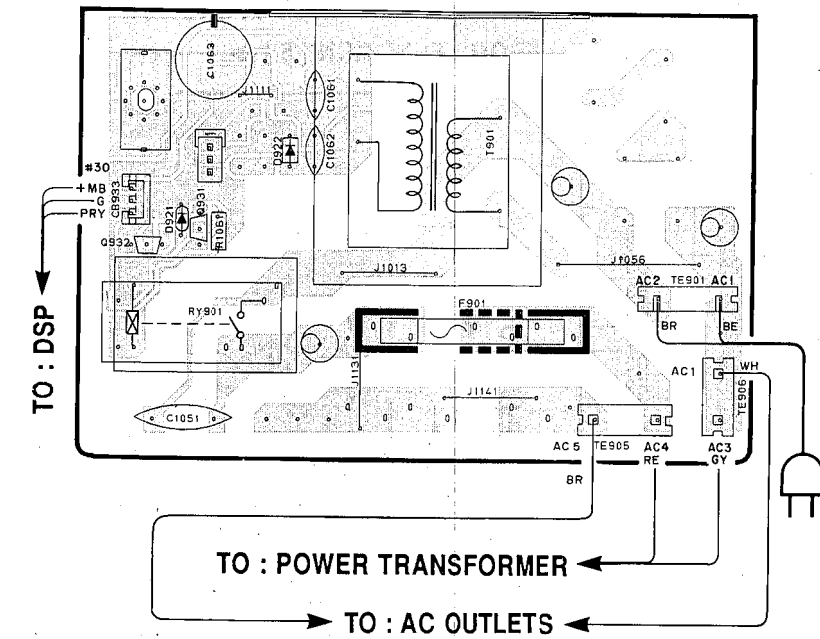
100W MAX. TOTAL

EFFECT C. B (9)

- R model

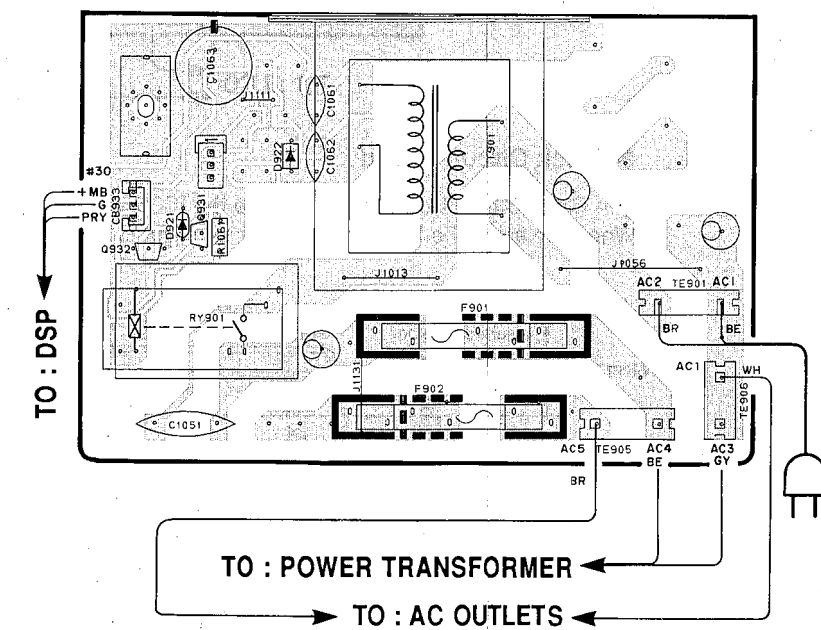
EFFECT C. B (6)

- **A, B models**



EFFECT C. B (5)

- **G model**



■ PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

(A) to (J) : WAVEFORM OF TEST POINT (See page 42 and 43)

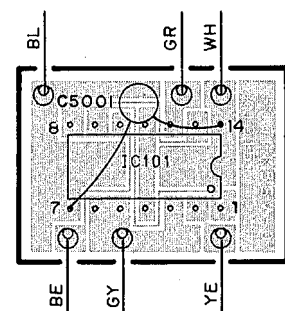
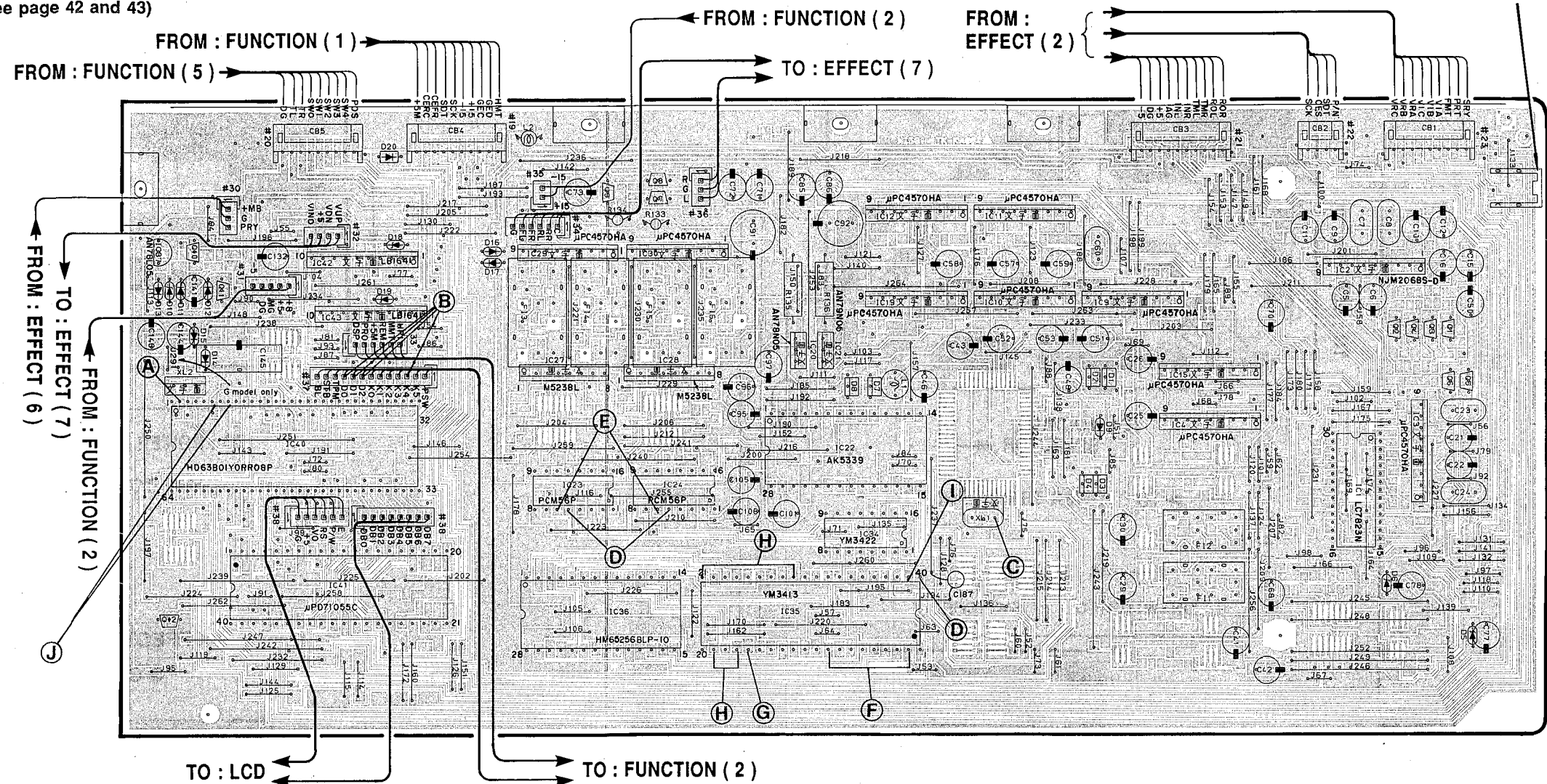
DSP C. B

When the DSP Circuit Board has been removed, the ground wire becomes loose. The connect it to the chassis by means of a lead wire or the like.

● Semiconductor Location

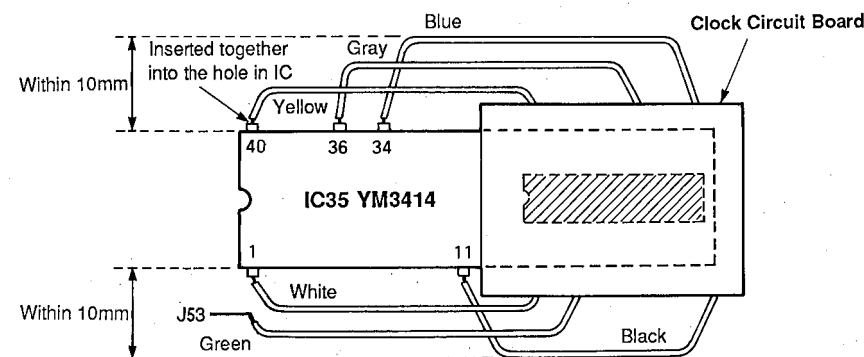
Ref. No.	Location	Ref. No.	Location
D 1	F3	IC 20	E3
D 2	F3	IC 21	E3
D 3	F3	IC 22	E3
D 4	F3	IC 23	D3
D 5	G4	IC 24	E3
D 6	G3	IC 27	D3
D 7	E3	IC 28	E3
D 8	E3	IC 29	D2
D 9	F3	IC 30	E2
D 10	C2	IC 34	E3
D 11	C2	IC 35	E3
D 12	C2	IC 36	D3
D 13	C2	IC 37	C2
D 14	C3	IC 40	C3
D 15	C2	IC 41	C3
D 16	D2	IC 42	C2
D 17	D2	IC 43	C2
D 18	D2	Q 1	G2
D 19	D2	Q 2	G2
D 20	D2	Q 3	G2
IC 1	G3	Q 4	G2
IC 2	G2	Q 5	G3
IC 3	G3	Q 6	G3
IC 4	F3	Q 7	E2
IC 9	F2	Q 8	E2
IC 10	F2	Q 9	D2
IC 11	F2	Q 10	C2
IC 12	E2	Q 11	C2
IC 15	F3	Q 12	C3
IC 19	E2		

CLOCK C. B

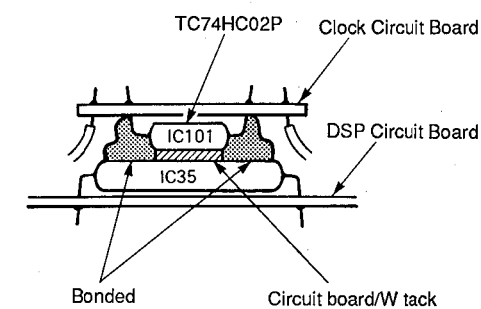


● Clock Circuit Board

The Clock Circuit Board is attached to the IC35 as shown in the figure. When replacing the IC35, be sure not to forget to reattach it.



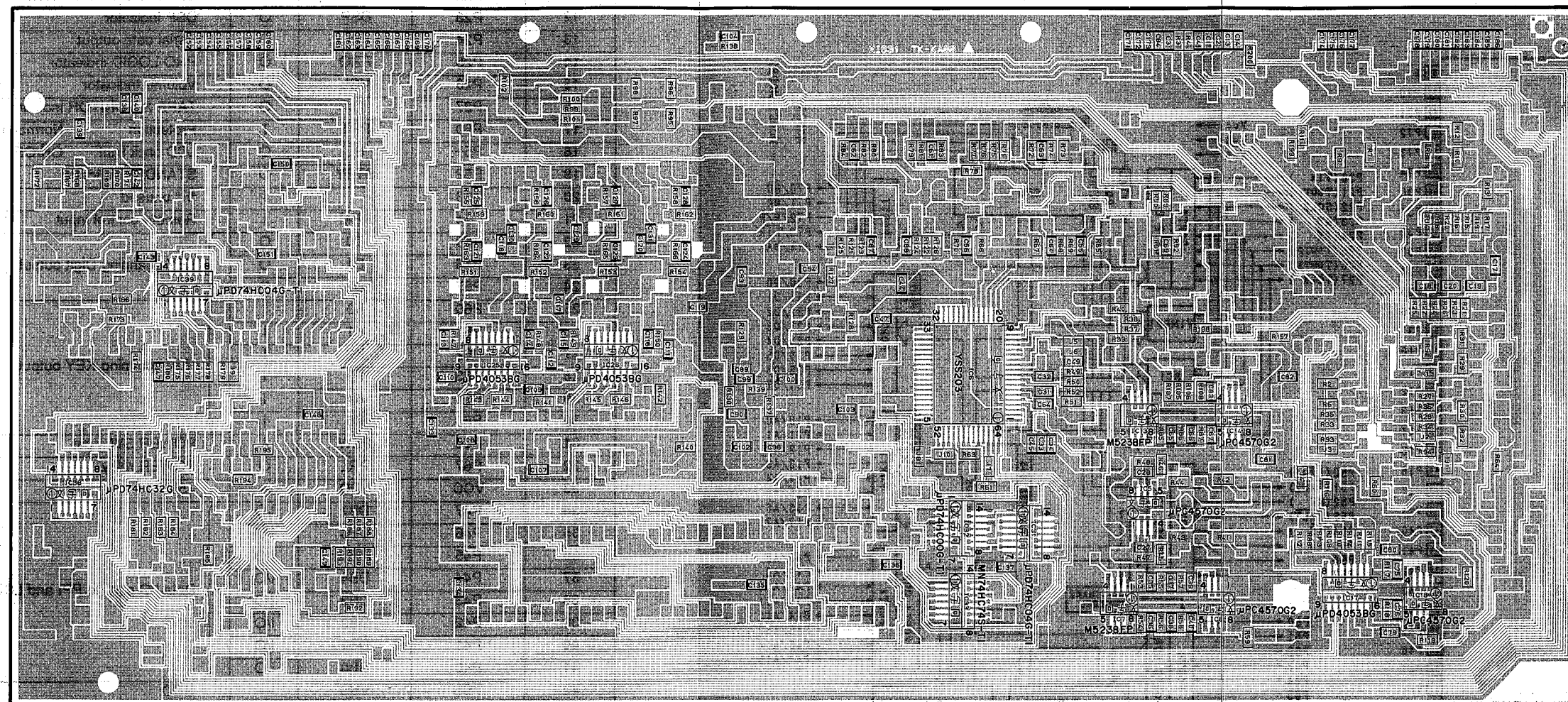
Note : Arrange wires so that they will not spread too far out (beyond 10mm from the end face of IC35). When installing the DSP Circuit Board to the shield case, be careful not to allow the wire to be caught by the cut in the shield case.



PRINTED CIRCUIT BOARD (Foil side)

Note) 文字面 : Component side

DSP C. B

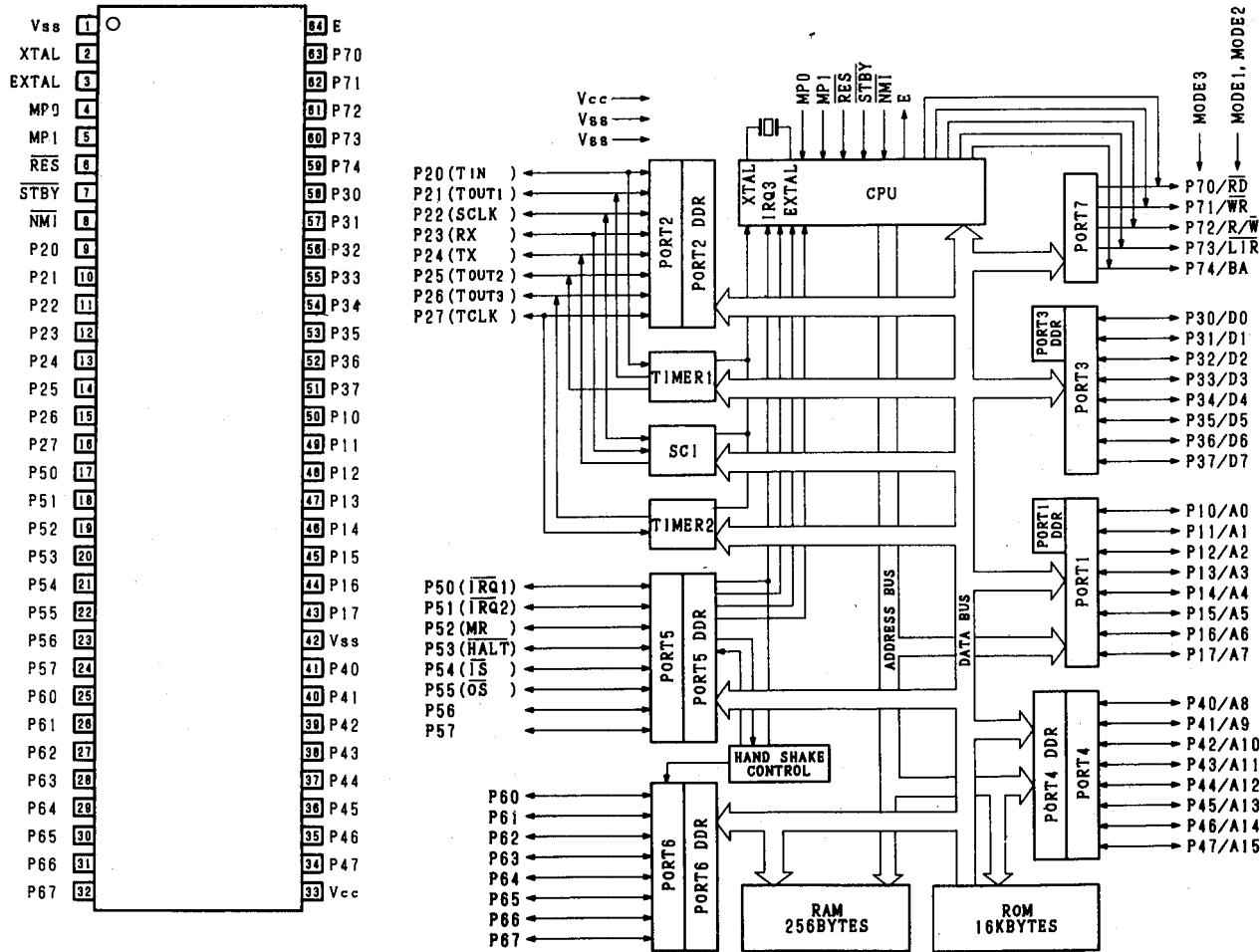


● Semiconductor Location

Ref. No.	Location
IC 5	F3
IC 6	E3
IC 7	F4
IC 8	F4
IC 13	F3
IC 14	F3
IC 17	G4
IC 18	G4
IC 25	C3
IC 26	C3
IC 31	E3
IC 32	E3
IC 33	E4
IC 38	B3
IC 39	B2

IC DATA

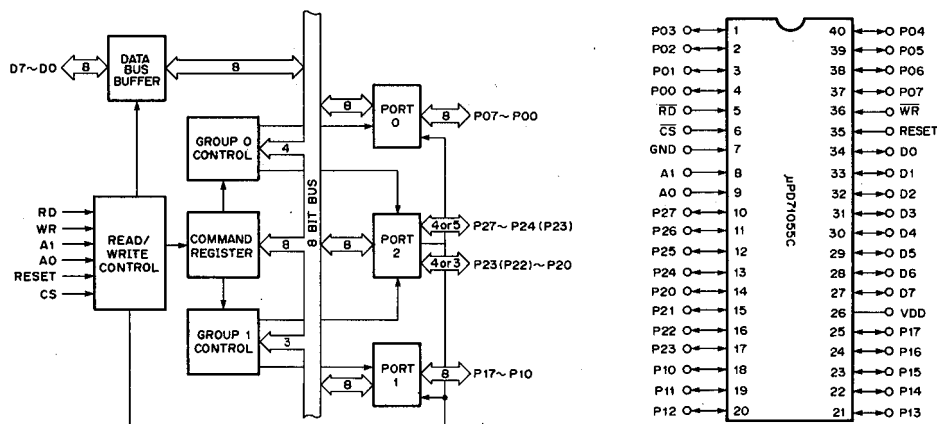
IC40 : HD637B01YOP or HD63B01YORS11P
8 bit μ -COM



Pin No.	Pin Name	Symbol	I/O	Function
1	VSS	VSS	—	GND
2	XTAL	XTAL	—	Oscillator (8MHz)
3	EXTAL	EXTAL	I	
4	MP0	MP0	I	"H" mode setting
5	MP1	MP1	I	
6	RES	RES	I	Reset input
7	STBY	STBY	I	"H" unused
8	NMI	PDET	I	POWER ON/OFF detection

Pin No.	Pin Name	Symbol	I/O	Function
9	P20	PMOD	I	POWER mode For G model/others
10	P21	SSEL	O	SCI select LDSP/others
11	P22	SCLK	O	Serial data transfer clock
12	P23	DSP	O	DSP indicator
13	P24	TX	O	Serial data output
14	P25	PRO	O	PRO-LOGIC indicator
15	P26	VOL	O	Volume Indicator
16	P27	TM	O	TAPE 2 MONITOR indicator
17	P50	PRT	I	Protection Normal/abnormal
18	P51	BL	O	LCD back light ON/OFF
19	P52	STBY	O	STANDBY indicator
20	P53		I	"H" unused
21	P54	REM	I	Remote control input
22	P55	D0	O	KEY scanning Digit output
23	P56	D1	O	
24	P57	D2	O	KEY scanning KEY output
25	P60	K0	I	
26	P61	K1	I	
27	P62	K2	I	
28	P63	K3	I	
29	P64	K4	I	Data I/O port (to PPI and LCD)
30	P65	K5	I	
31	P66	PSW	I	
32	P67	PRL	O	
33	VCC	VDD	—	
34	P47	DB7	I/O	
35	P46	DB6	I/O	GND
36	P45	DB5	I/O	
37	P44	DB4	I/O	
38	P43	DB3	I/O	
39	P42	DB2	I/O	
40	P41	DB1	I/O	
41	P40	DB0	I/O	LCD control
42	VSS	VSS	—	
43	P17	E	O	
44	P16	R/W	O	PPI control
45	P15	RS	O	
46	P14	A0	O	
47	P13	A1	O	INPUT TRIM
48	P12	WR	O	
49	P11	CS	O	
50	P10	RD	O	Video REC OUT select
51	P37	IT1	O	
52	P36	ITO	O	
53	P35	VRC	O	Video INPUT select
54	P34	VRB	O	
55	P33	VRA	O	
56	P32	VIC	O	Initial clear
57	P31	VIB	O	
58	P30	VIA	O	
59	P74	IC	O	Audio muting
60	P73	ANT	O	Headphone muting
61	P72	HMT	O	Main muting
62	P71	MMT	O	Full muting
63	P70	FMT	O	Open (unused)
64	E	E	—	

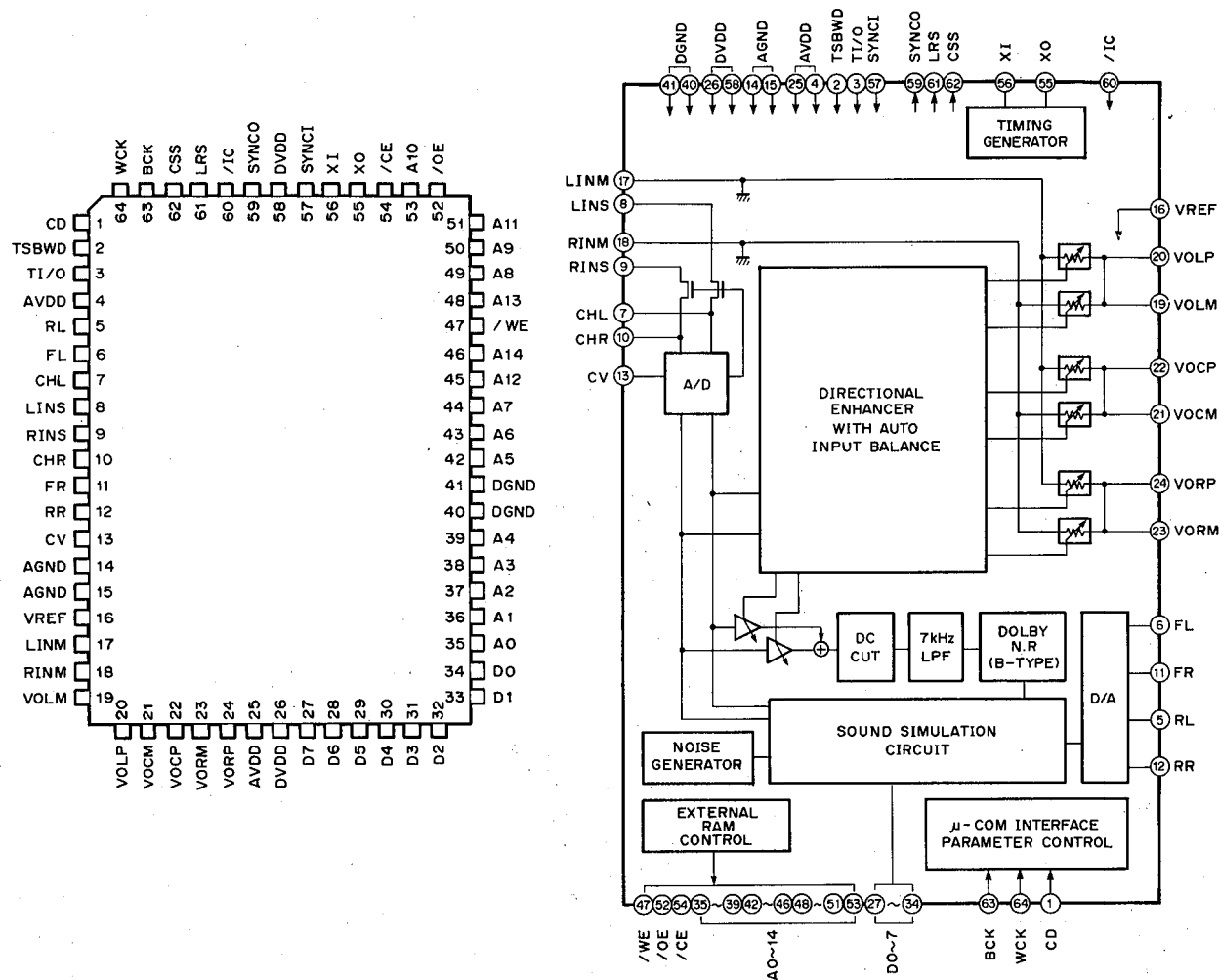
IC41 : μ PD71055C or MSM82C55A-2RS
Programmable Peripheral Interface



Pin No.	Pin Name	I/O	Function
1	P03	O	Turn Left Input Selector
2	P02	O	Turn Right Input Selector
3	P01	O	Vol. Down
4	P00	O	Vol. Up
5	RD	—	Read
6	CS	—	Chip select
7	GND	—	Port select
8	A1	—	
9	A0	—	
10	P27	O	CESR chip enable for LC7823
11	P26	O	CES chip select for M50455
12	P25	O	WCK word clock for YSS203
13	P24	O	CRS chip select for YM3413
14	P20	O	GED center GEQ data
15	P21	O	GEC center GEQ clock
16	P22	O	CEFR chip enable front/rear effect VOL
17	P23	O	CEFR chip enable center/super woofer VOL
18	P10	I	SW0 input selector data input
19	P11	I	SW1 input selector data input
20	P12	I	SW2 input selector data input
21	P13	I	SW3 input selector data input
22	P14	I	SW4 input selector data input
23	P15	I	POS input selector position input
24	P16	I	P/N Pal/NTSC determination
25	P17	I	HPI Headphone input status
26	VDD	—	+5V
27	D7	I/O	Data bus
28	D6	I/O	
29	D5	I/O	
30	D4	I/O	
31	D3	I/O	
32	D2	I/O	
33	D1	I/O	
34	D0	I/O	
35	RESET	—	Reset
36	WR	—	Write
37	P07	O	Speaker relay
38	P06	O	Surround signal passage selector.
39	P05	O	
40	P04	O	

IC6 : YSS203

Digital Dolby Pro Logic Decoder with Auto Input Balance



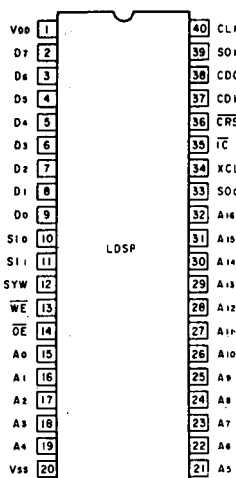
Pin No.	Pin Name	I/O	Function
1	CD	Its	Serial data of parameter data input
2	TSBWD	Ic	LSI test terminal Normally connected to DVDD
3	TI/O	Ic	LSI test terminal Normally connected to /CSS terminal
4	AVDD	A—	+5V power supply (D/A, A/D section)
5	RL	AO	RL channel D/A output
6	FL	AO	FL channel D/A output
7	CHL	A—	LINS input Sample/hold Capacitor external terminal
8	LINS	AI	L channel A/D input
9	RINS	AI	R channel A/D input
10	CHR	A—	RINS input Sample/hold Capacitor external terminal
11	FR	AO	FR channel D/A input
12	RR	AO	RR channel D/A input
13	CV	AO	A/D, multiplying DAC center voltage
14	AGND	A—	Ground (D/A, A/D section)
15	AGND	A—	Ground (Multiplying DAC section)
16	VREF	AI	Multiplying DAC reference voltage input
17	LINM	AI	L channel Multiplying DAC input
18	RINM	AI	R channel Multiplying DAC input
19	VOLM	AO	L channel operation amplifier, connected to (—) terminal
20	VOLP	AO	L channel operation amplifier, connected to (+) terminal

Pin No.	Pin Name	I/O	Function
21	VOCM	AO	C channel operation amplifier, connected to (–) terminal
22	VOCP	AO	C channel operation amplifier, connected to (+) terminal
23	VORM	AO	R channel operation amplifier, connected to (–) terminal
24	VORP	AO	R channel operation amplifier, connected to (+) terminal
25	AVDD	A—	+5V power supply (multiplying DAC section)
26	DVDD	—	+5V power supply (digital section)
27	D7	I/Ot	External delay RAM data terminal
28	D6	I/Ot	External delay RAM data terminal
29	D5	I/Ot	External delay RAM data terminal
30	D4	I/Ot	External delay RAM data terminal
31	D3	I/Ot	External delay RAM data terminal
32	D2	I/Ot	External delay RAM data terminal
33	D1	I/Ot	External delay RAM data terminal
34	D0	I/Ot	External delay RAM data terminal
35	A0	O	External data RAM address terminal
36	A1	O	External data RAM address terminal
37	A2	O	External data RAM address terminal
38	A3	O	External data RAM address terminal
39	A4	O	External data RAM address terminal
40	DGND	—	Ground (digital section)
41	DNND	—	Ground (digital section)
42	A5	O	External data RAM address terminal
43	A6	O	External data RAM address terminal
44	A7	O	External data RAM address terminal
45	A12	O	External data RAM address terminal
46	A14	O	External data RAM address terminal
47	/WE	O	External delay RAM write enable terminal
48	A13	O	External delay RAM address terminal
49	A8	O	External delay RAM address terminal
50	A9	O	External delay RAM address terminal
51	A11	O	External delay RAM address terminal
52	/OE	O	External delay RAM output enable terminal
53	A10	O	External delay RAM address terminal
54	/CE	O	External delay RAM chip enable terminal
55	XO	O	Crystal oscillator connecting terminal
56	XI	I	Crystal oscillator connecting terminal
57	SYNCI	It	Test terminal for system synchronization, normally connected to DVDD
58	DVDD	—	+5V power supply (digital section)
59	SYNCO	O	Test terminal for system synchronization, normally unconnected
60	/IC	Ics	Initial clear terminal (Power ON resetting is necessary)
61	LRS	O	External automatic input balance terminal, normally left open
62	/CSS	O	External automatic input balance terminal, connected to TI/O terminal
63	BCK	Its	Bit clock for parameter data input
64	WCK	Its	Word clock for parameter data input

Note : Alphabets used in the above I/O column represent as follows.

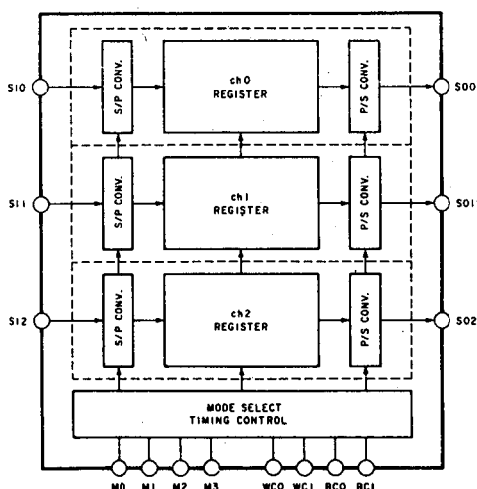
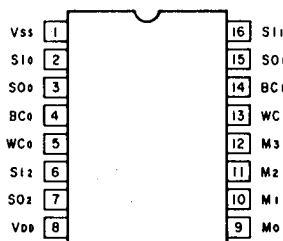
I : Input terminal O : Output terminal t : TTL level
C : CMOS level S : Schmidt input A : Analog terminal

IC35 : YM3413
LDSP



Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	VDD	—	+5V voltage supply	40	CLK	I	Master clock input
2	D7	I/O	I/O pins connected to memory data bus (8bit)	39	SO1	O	Serial data output
3	D6	I/O		38	CDO	O	CD data output
4	D5	I/O		37	CDI	I	CD data input
5	D4	I/O		36	CRS	I	CD data sync signal input
6	D3	I/O		35	IC	I	LDSP initial clear signal input
7	D2	I/O		34	XCLK	I	ACIA clock input
8	D1	I/O		33	SDO	O	Serial data output
9	D0	I/O		32	A16	O	Outputs connected to memory address bus
10	SI0	I	Serial data input	31	A15	O	
11	SI1	I		30	A14	O	
12	SYW	I	System sync signal input	29	A13	O	
13	WE	O	Read/write signal to memory input	28	A12	O	
14	OE	O	Pin connected to memory OE term	27	A11	O	
15	A0	O	Outputs connected to memory address bus	26	A10	O	
16	A1	O		25	A9	O	
17	A2	O		24	A8	O	
18	A3	O		23	A7	O	
19	A4	O		22	A6	O	
20	VSS	O	GND 0V	21	A5	O	

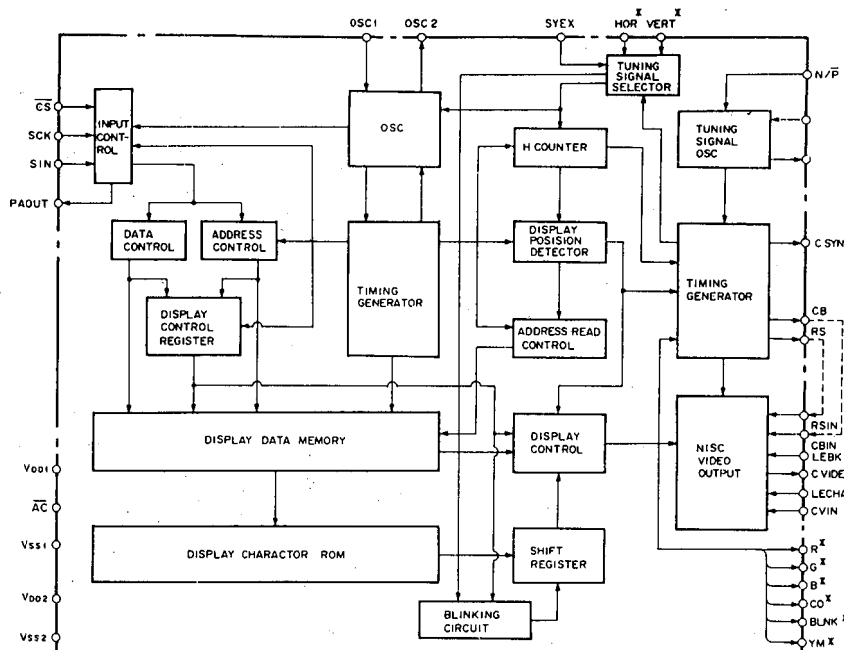
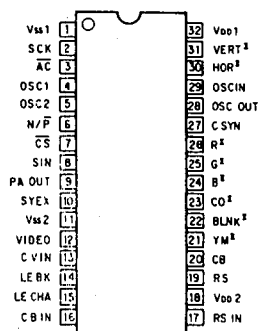
IC34 : YM3422
Digital Signal Format Converter



Pin No.	Pin Name	I/O	Function
1	VSS	—	GND terminal
2	SI0	IN	Serial data input (ch 0)
3	SO0	OUT	Serial data output (ch 0)
4	BC0	IN	Bit clock input
5	WC0	IN	System synchronized signal input
6	SI2	IN	Serial data input (ch 0)
7	SO2	OUT	Serial data output (ch 0)
8	VDD	—	Voltage supply (+5V)
9	MO	IN	Mode select signal
10	M1	IN	
11	M2	IN	
12	M3	IN	
13	WC1	IN	System synchronized signal input (Word clock)
14	BC1	IN	Bit clock input
15	SC1	IN	Serial data output (ch 1)
16	SI1	OUT	Serial data input (ch 1)

IC917 : M50455-060SP

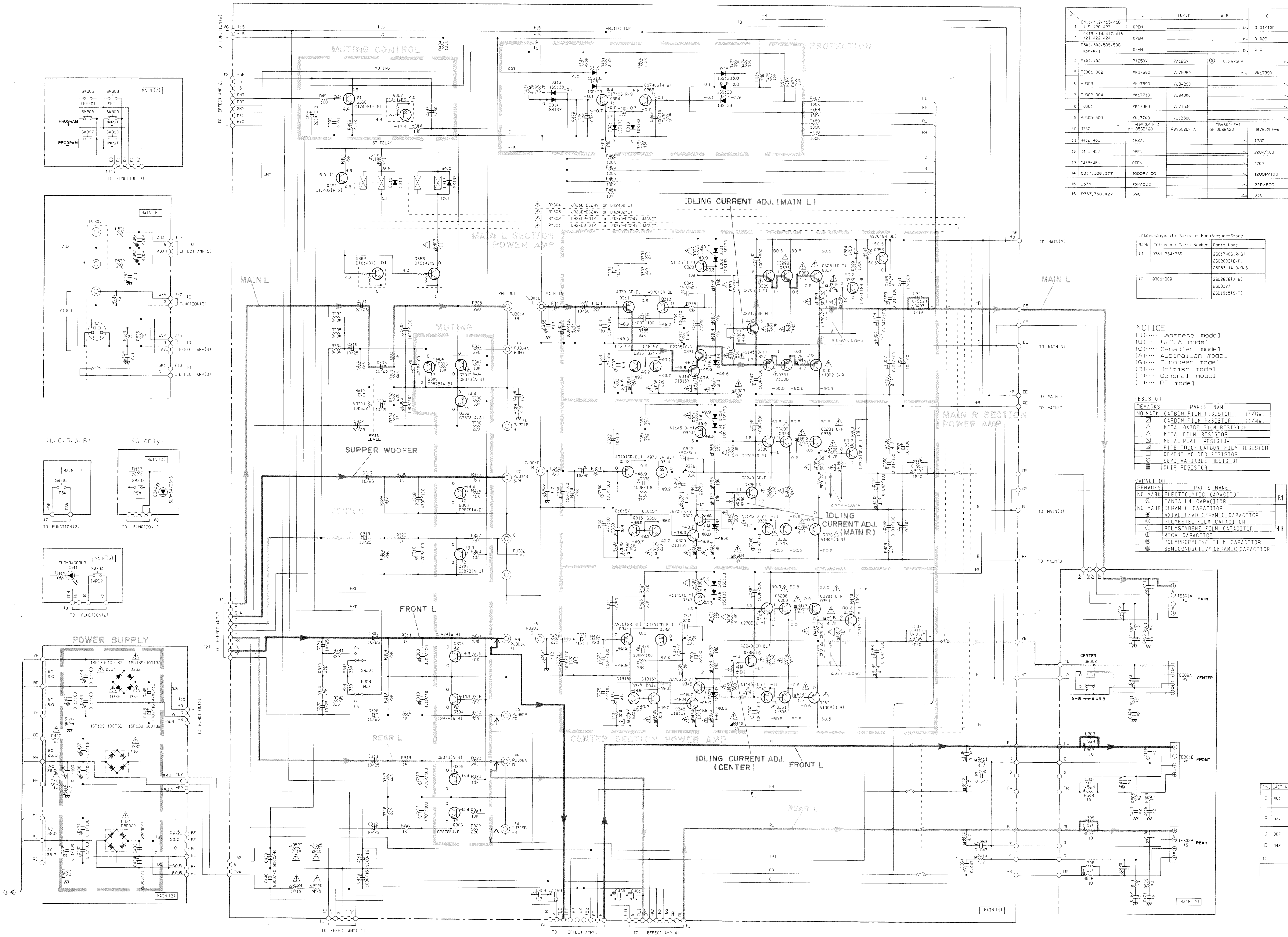
Supper Impose



Pin No.	Pin Name	Pin Description	Function
1	VSS 1	Earth terminal	Connect with GND by digital system earth terminal
2	SCX	Serial clock input	When it is SC terminal "L", serial data of SIN is taken in with the start-up of SCK. Hysteresis input.
3	AC	Automatic clear input	Reset IC internal circuit with "L" status. Pull-up resistance has been contained. Hysteresis input.
4	OSC 1	Oscillation circuit external terminal	External terminal for oscillation circuit for indication use. The standard oscillation frequency is about 7MHz
5	OSC 2		Display position toward horizontal direction of TV picture and letter width are determined by the oscillation frequency.
6	N/P	NISC/PAL switching input	It is NTSC or PAL system synchronized signal generation switching terminal.
7	CS	Chip selection input	Chip selection terminal. When serial data transfer is conducted, the chip selection terminal shall be "L" status.
8	SIN	Serial data input	Data and address of memory for use in the display resistor and display data are input by serial.
9	PAOUT	Parity output	It is odd number parity output, and it will detect 1 bit mistake in a word of SIN.
10	SYEX	Synchronized signal changeover input	Externally synchronized or internally synchronized signal switching terminal. Under "H" status, it becomes externally synchronized signal mode, and with "L" status, it becomes internally synchronized signal mode. SYEX composes "or" of priority of internal synchronization and EX resistor of address 243 in the display control resistor. Pull-up resistance is contained.

Pin No	Pin Name	Pin Description	Function
11	VSS 1	Earth terminal	Connect with GND by analog earth terminal.
12	VIDEO	Composite video output	It is composite video signal output terminal. Composite video signal of 2Vp-p is output. When it is super imposition, it will output increasing the volume of letter output to CVIN signal.
13	CVIN	Composite video input	It is composite video signal input terminal. When it is super impose, letter output etc. Will be increases for the composite video signal.
14	LEBK	Blanking level	It is input terminal to determine blanking level of video signal.
15	LECHA	Character level input	It is input terminal to determine the letter output level in the video signal. Color of letter is white.
16	CBIN	Color burst input	It will input transforming CB output to color burst level by external circuit.
17	RSIN	Lettering background carrier color signal input	Input is done transforming RS output to carrier color signal level of video signal by external circuit.
18	VDD 2	Power source terminal	Connect with +5V by analog system power source terminal.
19	RS	Lettering background carrier color signal output	It is carrier color signal output for the coloring of lettering background. It will output signal having phase analog for color burst signal CB. Amplitude : 5V.
20	CB	Color burst output	When it is NTSC system, it will output color burst of 3.58MHz and 4.43MHz when it is PAL system. Amplitude : 5V.
21	YM*	Brightness signal output	It is brightness signal output. Polarity selection can be done when lettering type ROM is determined.
22	BLNK*	Lettering background output	It will output lettering background signal. Polarity selection can be done when lettering type ROM is decided.
23	CO*	Lettering type output	Lettering type signal is output. Polarity selection can be done when lettering type is determined.
24	B*	Blue output	It is Blue output terminal. Polarity selection can be done when lettering type is determined.
25	H*	Green output	It is Green output terminal. Polarity selection can be done when lettering type is determined.
26	R*	Red output	It is Red output terminal. Polarity selection can be done when lettering type is determined.
27	CSYN	Composite burst output	NTSC or PAL system composite burst is output. Polarity is negative polarity, and amplitude is 4V.
28	OSCOUT	Oscillation circuit for burst generation	It is external terminal of oscillation circuit for the generation of burst. when it is NTSC system, it is 14.32MHz.
29	OSCIN		When it is PAL system, oscillation frequency of 17.73MHz is used.
30	HOR*	Horizontal burst	Horizontal selection burst is output. Hysteresis input. Polarity selection can be done when lettering type ROM is determined.
31	VERT*	Vertical burst	Vertical burst is input. Hysteresis input. Polarity selection can be done when lettering type ROM is determined.
32	VDD 2	Power source terminal	Connect with +5V by digital power source terminal.

■ SCHEMATIC DIAGRAM (MAIN)



MARK	REFERENCE PARTS NUMBER	PARTS NAME
1	C413-415, 417-418	OPEN
2	C413-414, 417-418	OPEN
3	R501-502, 505-506	OPEN
4	F401-402	7A250V
5	TB301-302	VK17850
6	PJ303	VK17890
7	PJ302-304	VK17710
8	PJ301	VK17880
9	PJ305-306	VK17700
10	D332	REVE602L-F-A
11	R452-453	1P270
12	C455-457	OPEN
13	C458-461	OPEN
14	C337, 338, 377	1000P/100
15	C379	15P/500
16	R507, 358, 427	390

MARK	REFERENCE PARTS NUMBER	PARTS NAME
F1	0301-364-366	25C17405H-SI
F2	0301-369	25C28781A-SI

NOTICE
(J)..... Japanese model
(U)..... U.S.A. model
(C)..... Canadian model
(A)..... Australian model
(G)..... European model
(B)..... British model
(P)..... General model
(P)..... P.P. model

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
□	CARBON FILM RESISTOR (1/4W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
□	METAL PLATE RESISTOR
■	FILM PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
□	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
□	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
○	AXIAL LEAD CERAMIC CAPACITOR
○	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
○	MICA CAPACITOR
○	POLYPROPYLENE FILM CAPACITOR
○	SEMICONDUCTIVE CERAMIC CAPACITOR

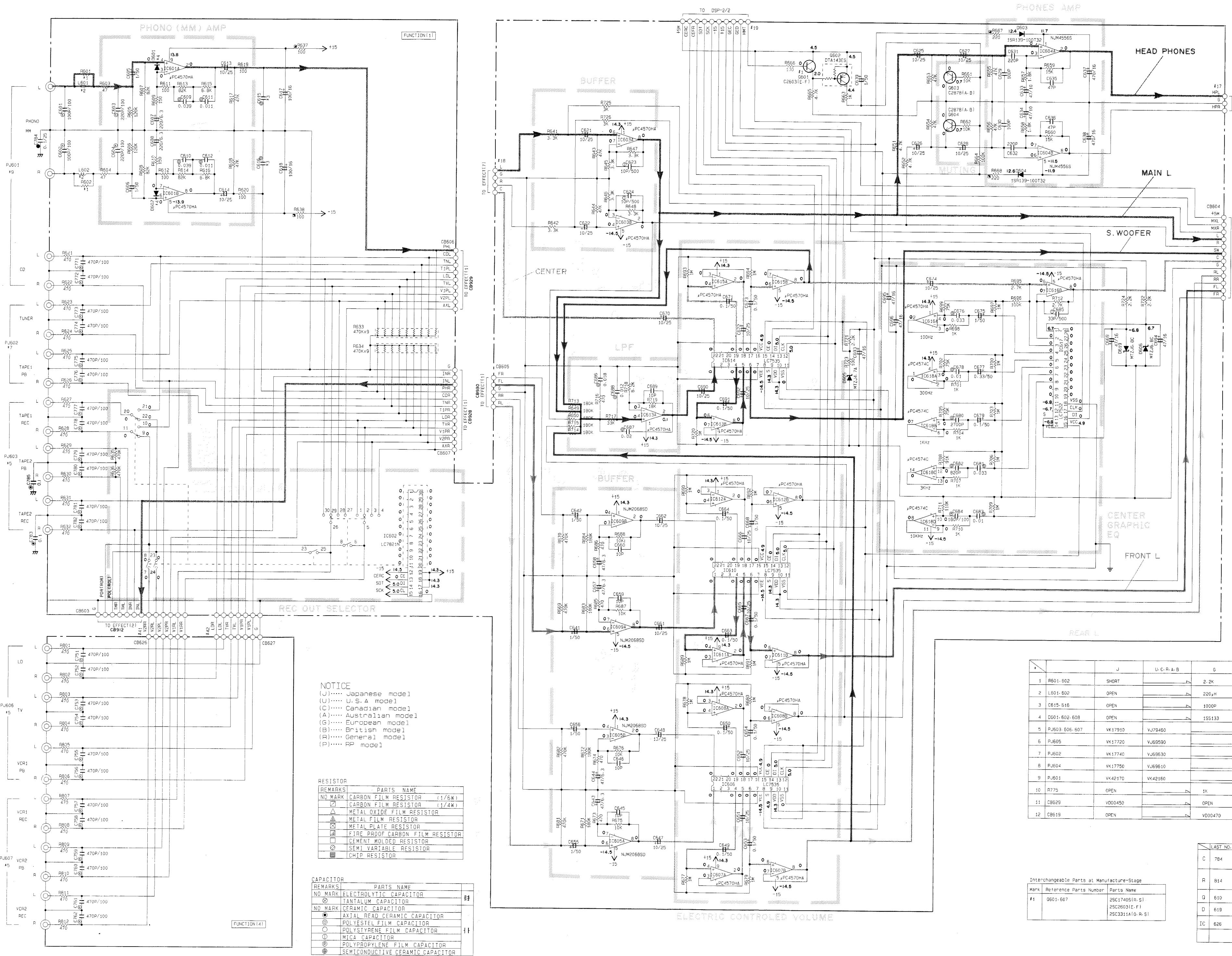
LAST NO.
C 461
R 537
D 367
D 342
IC

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

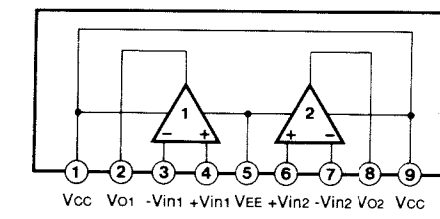
2SA970(GR, BL) 2SA1145(O, V) 2SC1740S(R, S) 2SC2603(E, F) 2SC3311A(Q, R, S) 2SC1815V 2SC2240(GR, BL) 2SC2878(A, B) 2SC3327 2SD1915(S, T)	2SC2705(O, V) DTA114ES DTC143XS	2SA1306 2SC3298	1SS133 1SR139-100T32	D5FB20	RBV602L-F-A D5SBA20
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* All voltage are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

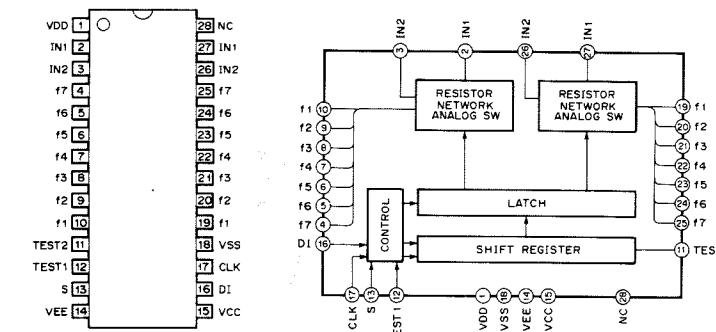
■ SCHEMATIC DIAGRAM (FUNCTION)



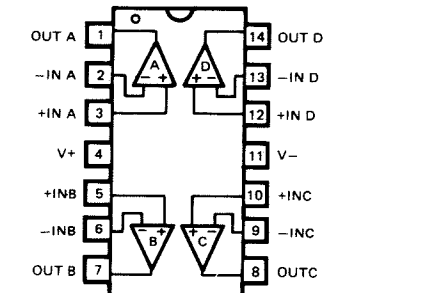
IC604 : NJM4556S
IC601, 603, 607, 608,
611-613, 615, 616 : μPC4570HA
IC605, 609 : NJM2068SD
Dual Ope-amp



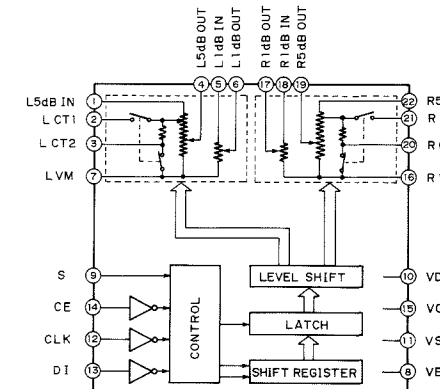
IC617 : LC7522
Graphic Equalizer



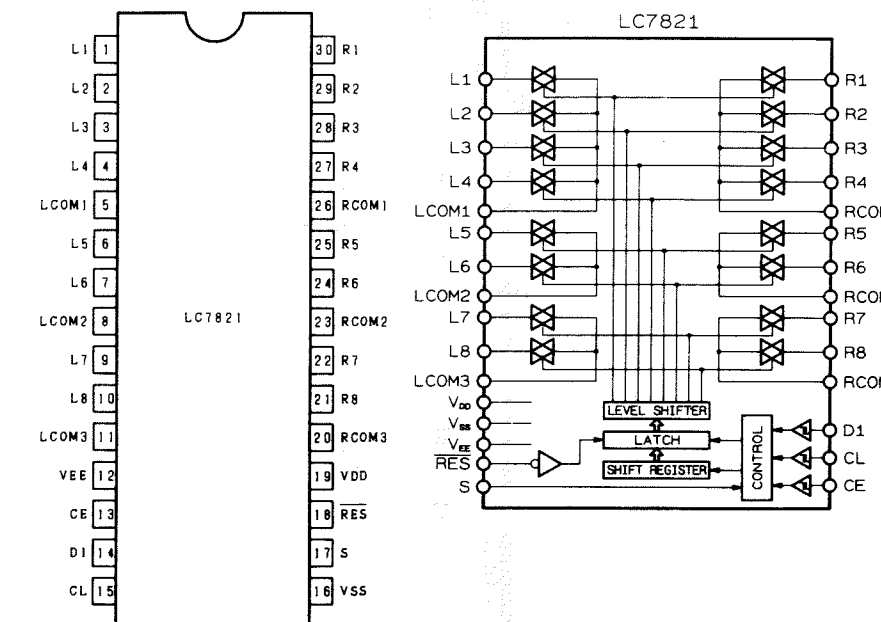
IC618 : μPC4574C
4-Channel Ope-amp



IC606, 610, 614 : LC7535
Electric Controlled Volume



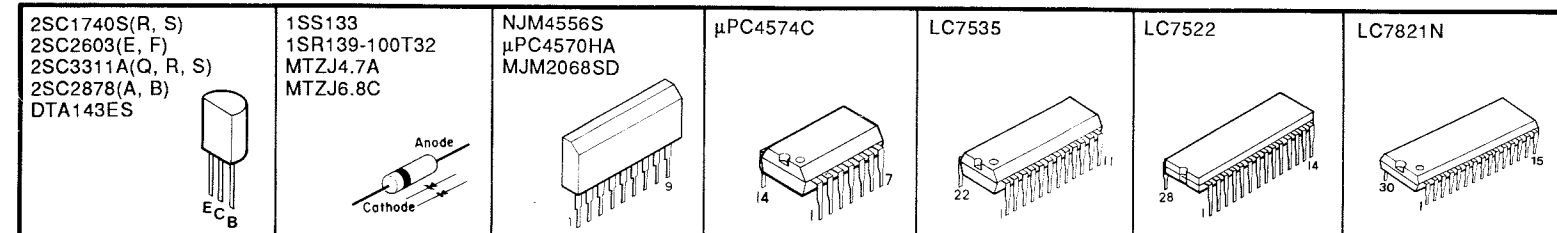
IC602 : LC7821N
Analog Function Switch



	J	U.C.R.A.B	G
1 R601-602	SHORT		2.2K
2 L601-602	OPEN		220μH
3 C615-616	OPEN		1000P
4 C601-602-608	OPEN		155133
5 P603, 606-607	VK17910	VJ79450	
6 P609	VK17720	VJ69590	
7 P602	VK17740	VJ69630	
8 P604	VK17750	VJ69610	
9 P601	VK42170	VK42160	
10 R775	OPEN		1K
11 C609	V00450		OPEN
12 C619	OPEN		V000470

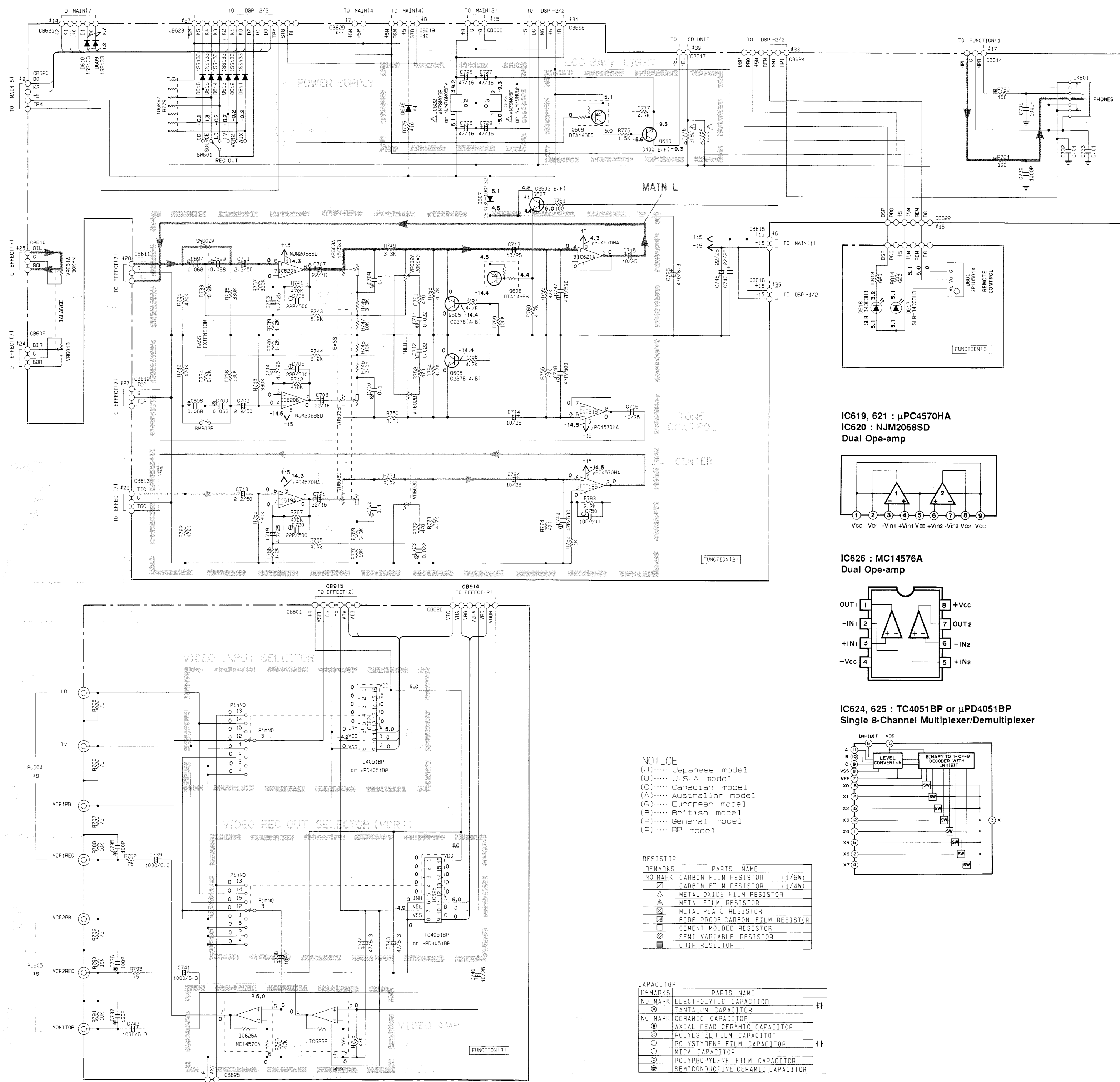
Mark	Reference Parts Number	Parts Name
1	0601-607	25C1740S(R, S) 25C2603(E, F) 25C3011A(I, O, R, S) 25C2878(A, B) DTA143ES

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

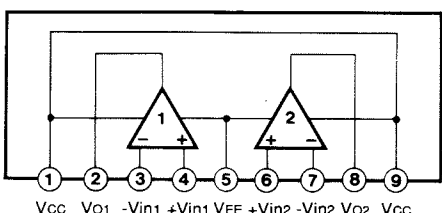


• All voltage are measured with a 10MΩ/V DC electric volt meter.
• Components having special characteristics are marked △, and must be replaced with parts having specifications equal to those originally installed.
• Schematic diagram is subject to change without notice.

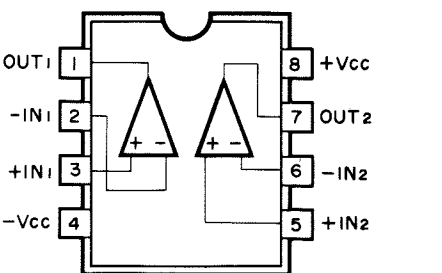
■ SCHEMATIC DIAGRAM (FUNCTION)



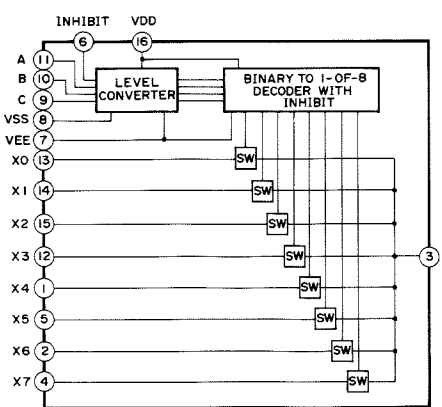
IC619, 621 : μ PC4570HA
IC620 : NJM2068SD
Dual Ope-amp



IC626 : MC14576A
Dual Ope-amp



IC624, 625 : TC4051BP or μ PD4051BP
Single 8-Channel Multiplexer/Demultiplexer



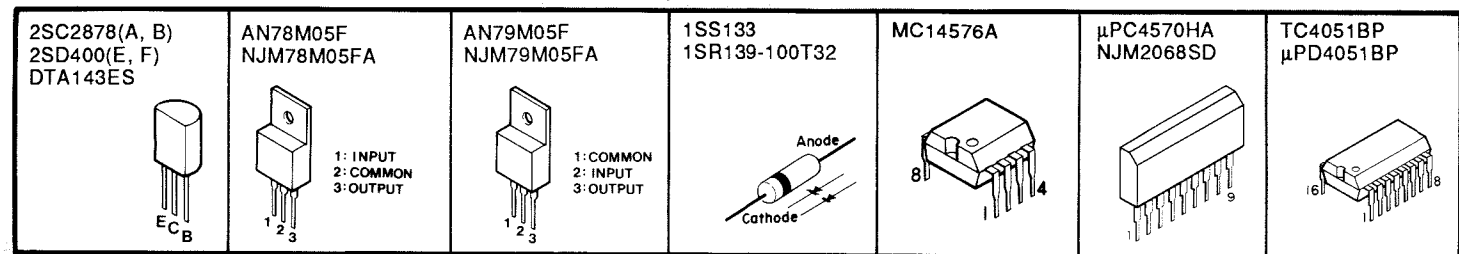
NOTICE

(J)..... Japanese model
(U)..... U.S.A model
(C)..... Canadian model
(A)..... Australian model
(G)..... European model
(S)..... British model
(P)..... AP model

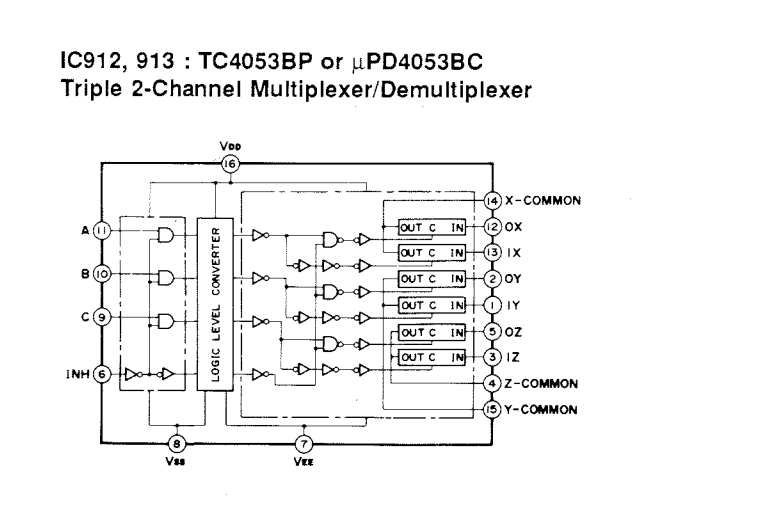
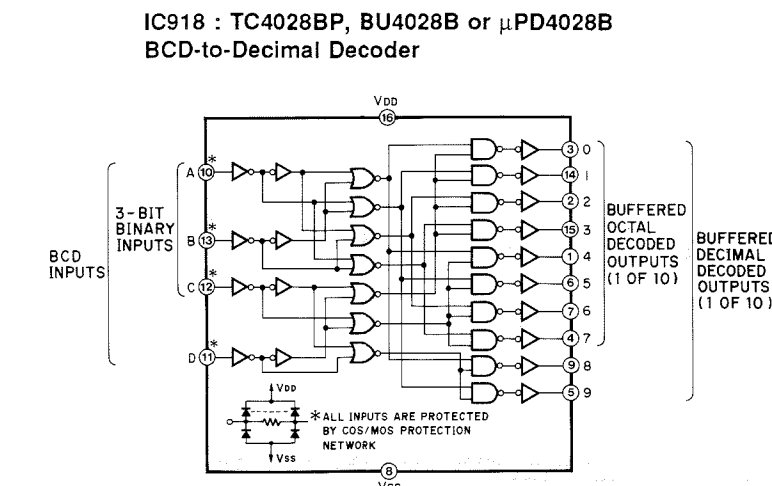
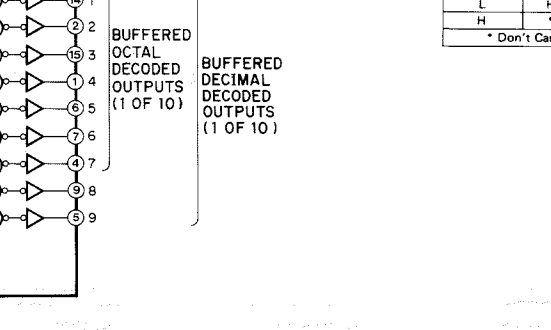
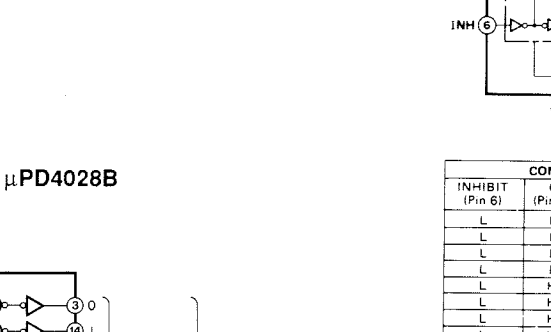
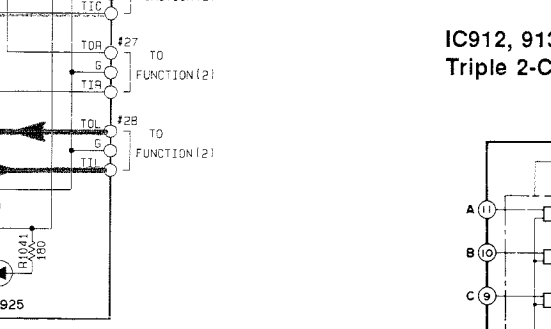
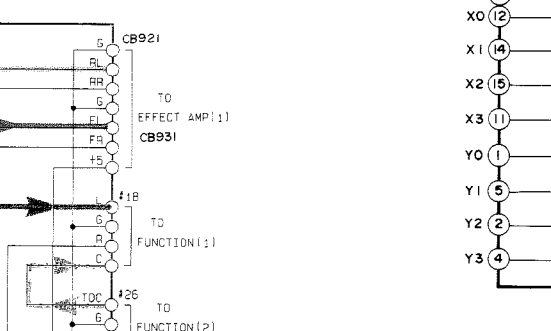
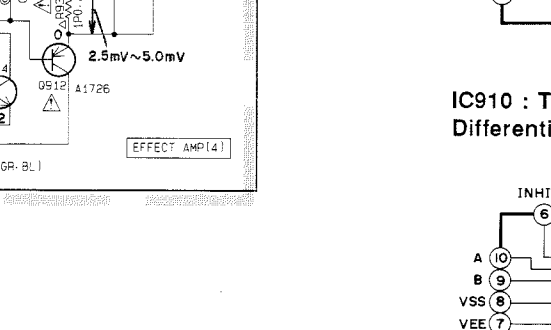
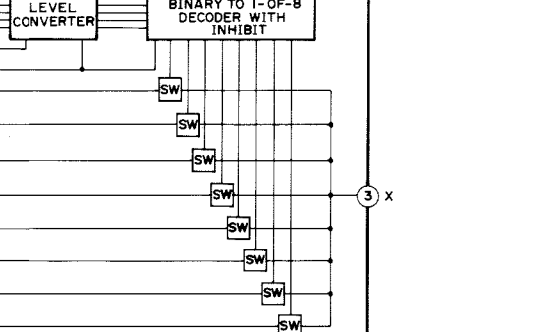
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
□	CARBON FILM RESISTOR (1/4W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
⊞	FIRE PROOF CARBON FILM RESISTOR
⊡	CEMENT WOUND RESISTOR
⊙	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	AXIAL HEAD CERAMIC CAPACITOR
⊙	POLYESTER FILM CAPACITOR
⊖	POLYSTYRENE FILM CAPACITOR
⊕	MICA CAPACITOR
⊗	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

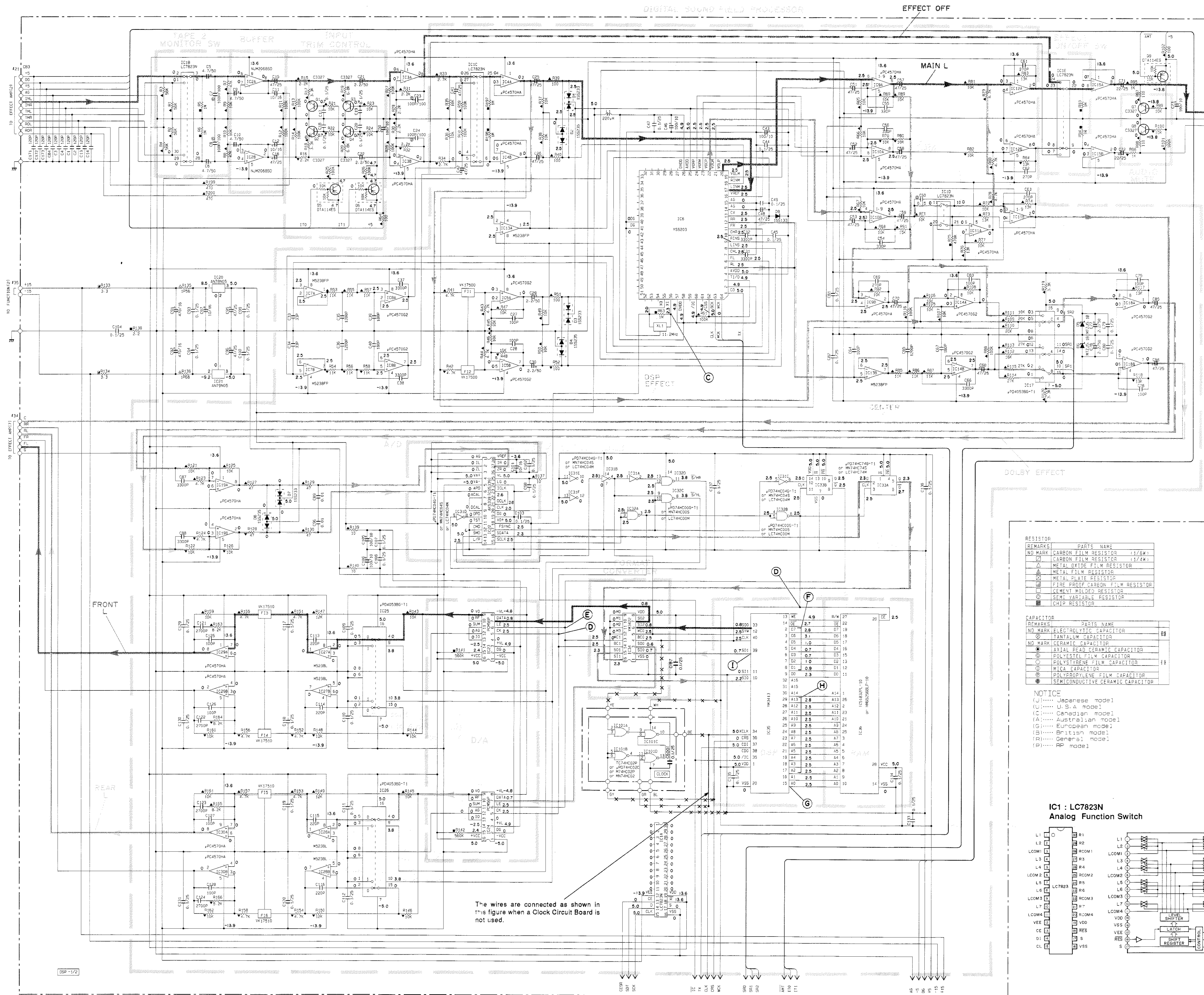


* All voltage are measured with a 10M Ω /V DC electric volt meter.
* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

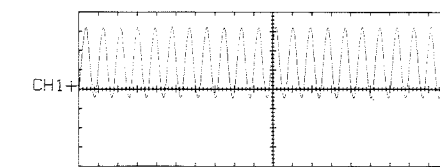


- * All voltage are measured with a 10M Ω /V DC electric voltmeter
- * Components having special characteristics are marked Δ be replaced with parts having specifications equal to those installed.
- * Schematic diagram is subject to change without notice.

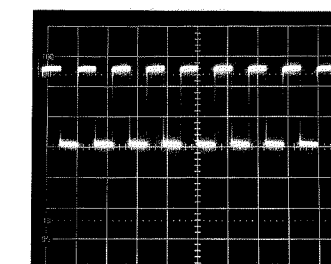
■ SCHEMATIC DIAGRAM (DSP)



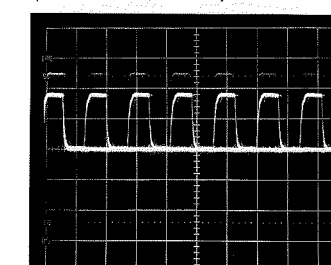
Point (C) : XI
(Pin 56 of IC6)



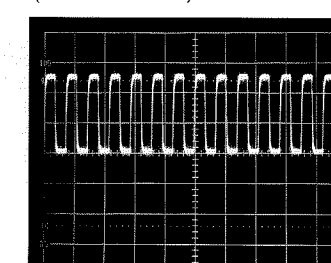
Point (E) : LE
(Pin 6 of IC23 and IC24)



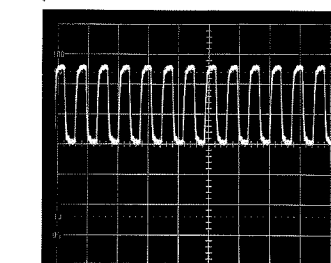
Point (F) : D7-D1
(Pin 2 to 8 of IC35)



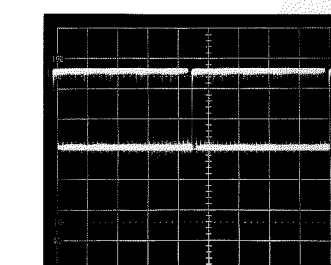
Point (G) : A0
(Pin 15 of IC35)



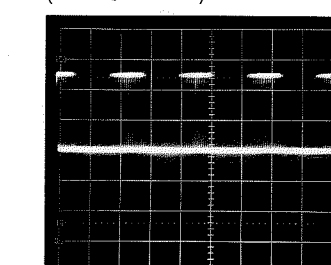
Point (D) : CLK
(Pin 40 of IC35 and Pin 5 of IC23 and IC24)



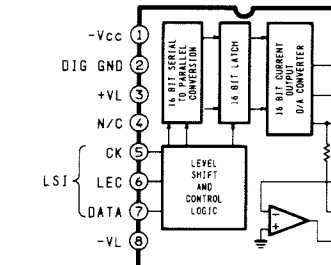
Point (H) : A2-A13
(Pin 17 to 19, 21 to 29 of IC35)



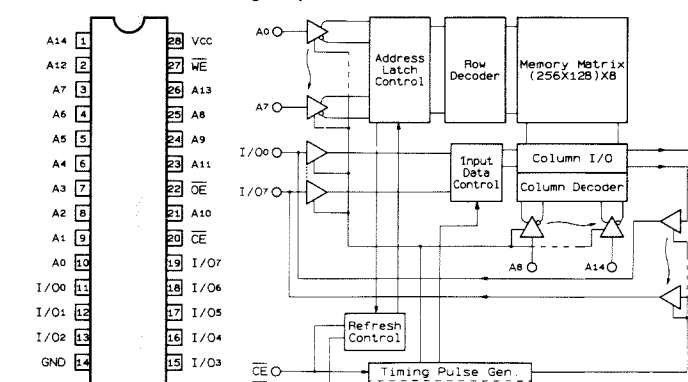
Point (I) : SDI
(Pin 39 of IC35)



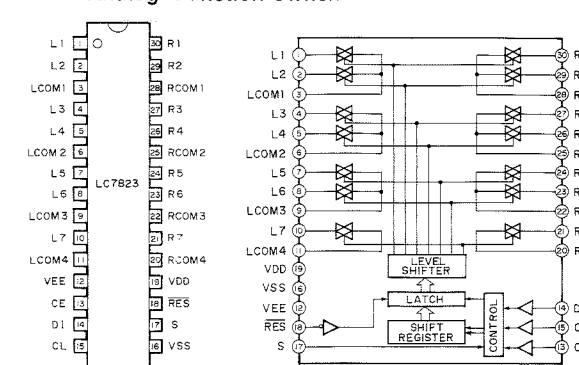
IC23, 24 : PCM56P
D/A Converter



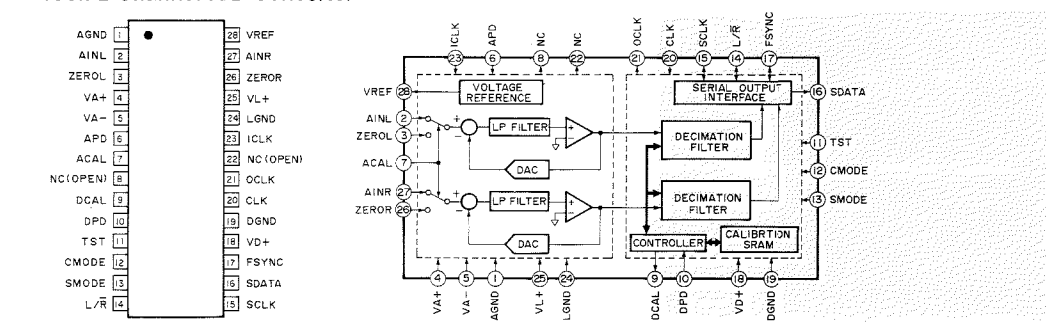
IC36 : TC51832PL-10 or HM5256BLP-10
32768-word x 8bit High Speed Pseudo Static RAM



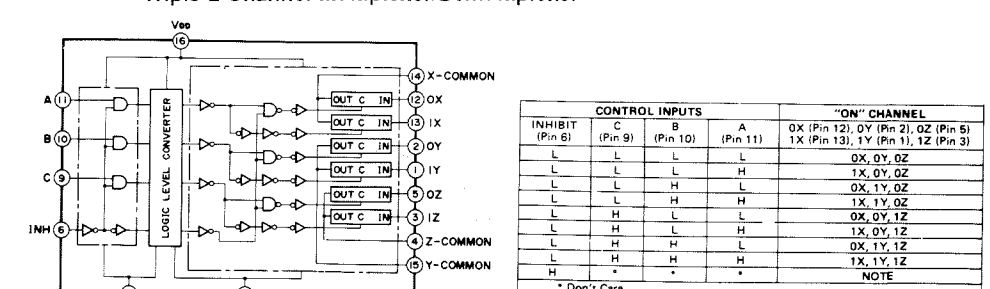
IC1 : LC7823N
Analog Function Switch



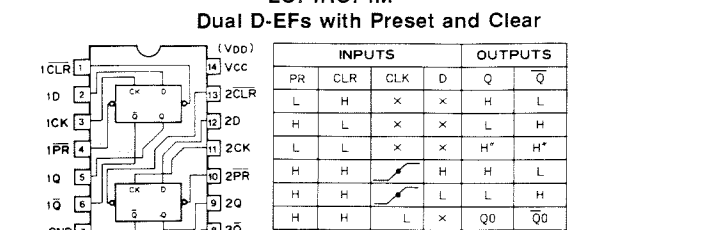
IC22 : AK5339 (CS5339)
16bit 2-Channel A/D Converter



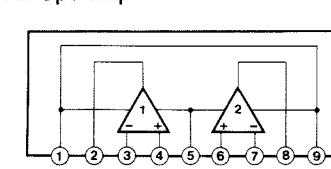
IC17, 25, 26 : PD4053BG-TI
Triple 2-Channel Multiplexer/Demultiplexer



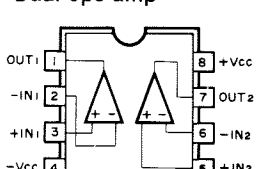
IC33 : PD74HC74G-TI, MN74HC74S or
LC74HC74M
Dual D-FFs with Preset and Clear



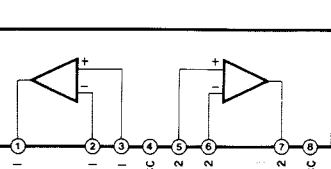
IC3, 4, 9-12, 15, 19, 29, 30 : PC4570HA
IC2 : NJM2068SD
Dual Ope-amp



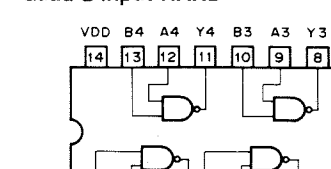
IC7, 13 : M5238FP
IC5, 8, 14, 18 : PC4570G2
Dual ope-amp



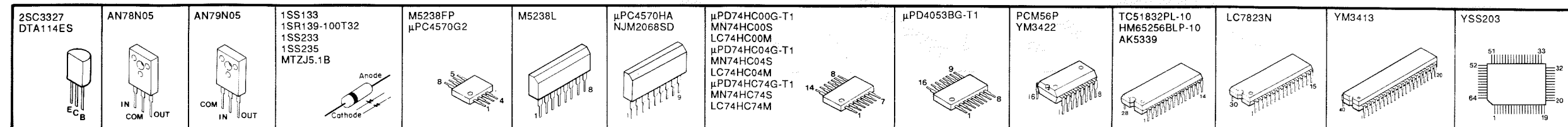
IC27, 28 : M5238L
Dual Ope-amp



IC32 : PD74HC00G-TI, MN74HC00S or
LC74HC00M
Quad 2-Input NAND



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



* All voltage are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

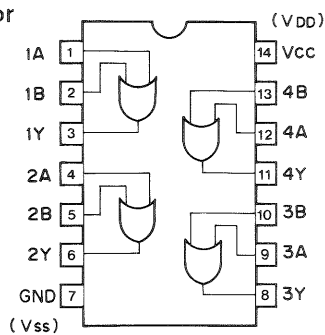
■ SCHEMATIC DIAGRAM (DSP)

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	AXIAL READ CERAMIC CAPACITOR
⊖	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⊖	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
⊖	SEMICONDUCTIVE CERAMIC CAPACITOR

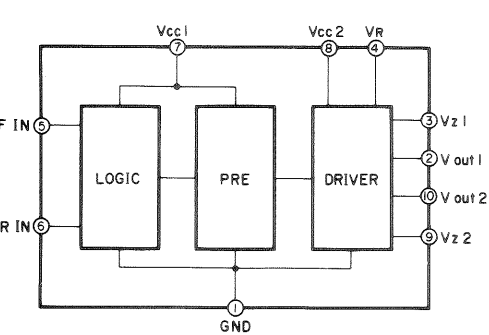
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/5W)
⊗	CARBON FILM RESISTOR (1/4W)
⊖	METAL OXIDE FILM RESISTOR
⊖	METAL FILM RESISTOR
⊖	METAL PLATE RESISTOR
⊖	FIRE PROOF CARBON FILM RESISTOR
⊖	CEMENT MOLDED RESISTOR
⊖	SEMI VARIABLE RESISTOR
⊖	CHIP RESISTOR

NOTICE
(J)..... Japanese model
(U)..... U.S.A model
(C)..... Canadian model
(A)..... Australian model
(G)..... European model
(B)..... British model
(R)..... General model
(P)..... RP model

IC38 : LC74HC32M, MN74HC32S or
μPD74HC32G-T1
Quad 2 Input OR

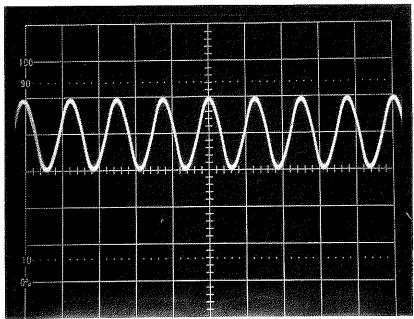


IC42, 43 : LB1641
Motor Driver



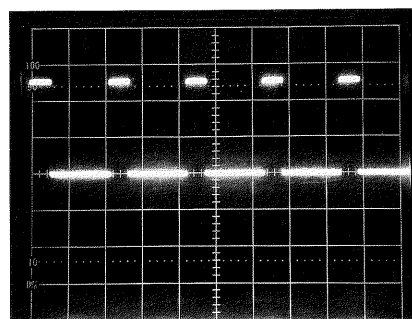
F IN	R IN	Vout1	Vout2
1	1	L	L
0	1	L	H
1	0	H	L
0	0	L	L

Point (A) : XTAL
(Pin 2 of IC40)



V : 0.2V/div DC range
H : 0.1μsec/div 10 : 1 probe

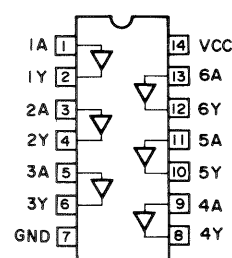
Point (B) : D0~D2, K4
(Pin 22 to 24 and 29 of IC40)



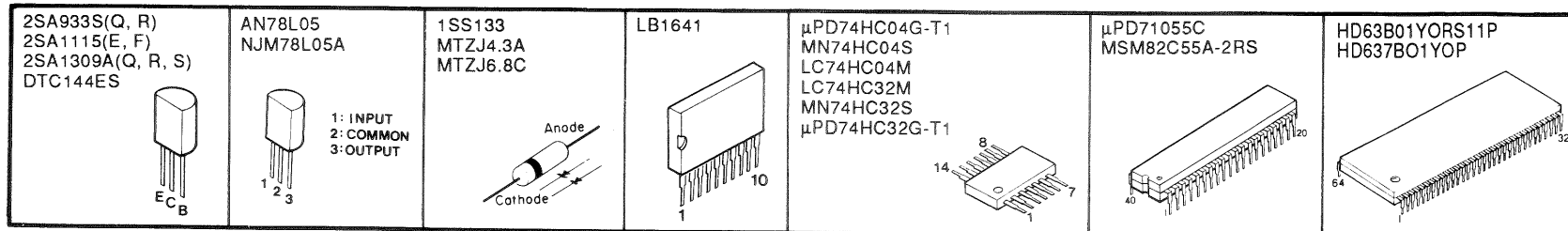
V : 2V/div DC range
H : 5msec/div 1 : 1 probe

SYSTEM CONTROL

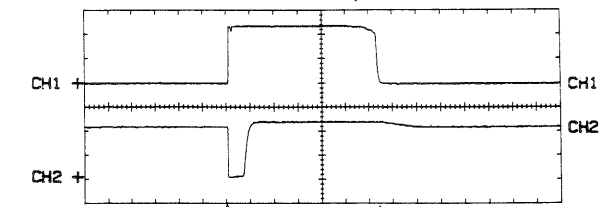
IC31, 39 : μPD74HC04G-T1,
MN74HC04S or LC74HC04M
Hex Inverter



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.



Point (J) : PDET, RES
(CH 1 : Pin 8 of IC40 CH 2 : Pin 6 of IC40)
V : 2V/div DC range
H : 100msec/div 1 : 1 probe



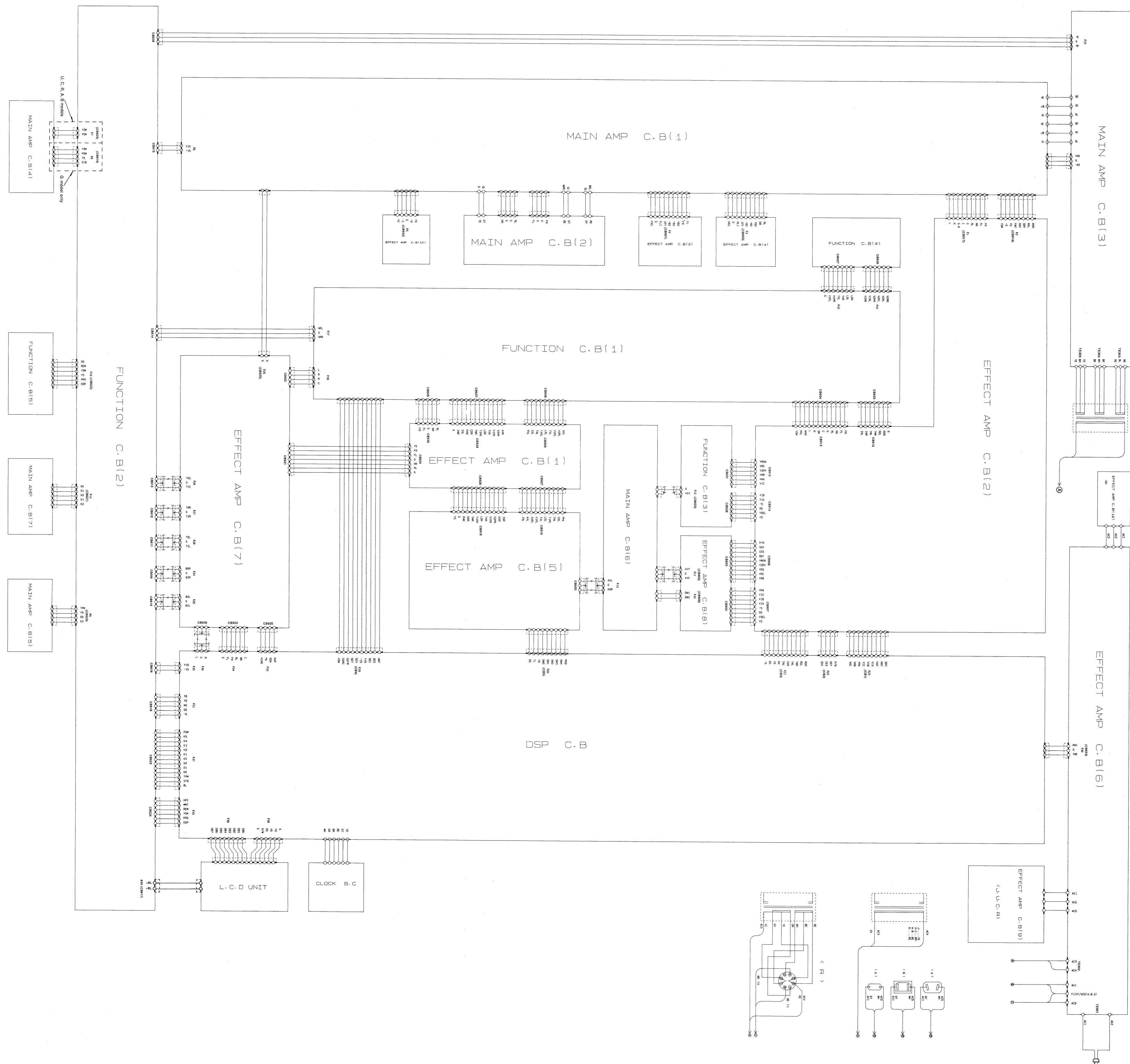
When the power cord is connected to AC outlet. When the power cord is disconnected from AC outlet.

Note : When the power switch ON/OFF will produce the above waveform.

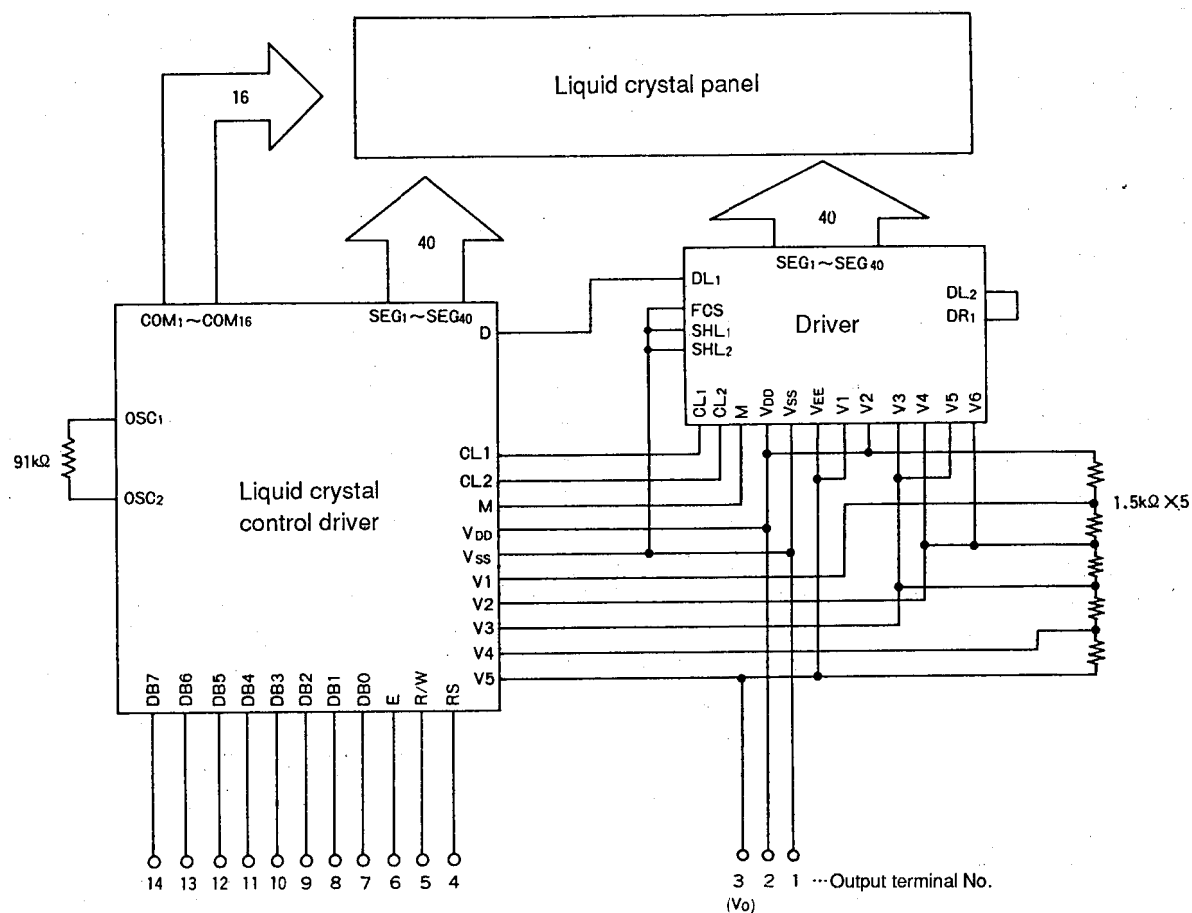
LAST NO.
C 186
R 200
Q 12
D 20
IC 43

* All voltage are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

■ INTERCONNECT WIRING DIAGRAM



LCD UNIT DATA (VK421500)



Pin No.	Pin Name	Function
1	VSS	(-) side power supply terminal, 0V
2	VDD	(+) side power supply terminal, +5V
3	VO	LCD drive voltage application terminal
4	RS	Input terminal, HI = Data, LOW = Instruction
5	R/W	Input terminal, HI = Read, LOW = Write
6	E	Input terminal, enable signal
7	DB0	Data bus line
8	DB1	
9	DB2	
10	DB3	
11	DB4	
12	DB5	
13	DB6	
14	DB7	

* The IC's used for the LCD unit are as follows.

IX607280(LC7930)

IX607290 (HD44780A00)

Any part other than IC can't be replaced individually. If replacement becomes necessary, be sure to replace as a whole unit.

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked $\triangle$ and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the parts No. of the carbon resistors, refer to P. 64.

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VK214600	DSP CIRCUIT BOARD	DSPシート		JUCRAB	
	VK214700	DSP CIRCUIT BOARD	DSPシート		G	
	FA155150	MYLAR FILM CAP	0.15uF 50V	マイラーコン	C60	
	UT452100	POLYPROPYLENE FILM CAP	100pF 100V	PPコン	C7,8,23,24	
	Vi225600	CHIP MULTILAYER CERAMIC CAP	33pF 50V	チップ積層セラコン	C33,34	
	Vi226800	CHIP MULTILAYER CERAMIC CAP	100pF 50V	チップ積層セラコン	C27,28,64,75,76,83,125-128	
	Vi227000	CHIP MULTILAYER CERAMIC CAP	120pF 50V	チップ積層セラコン	C1-4,13,14,84,138-140,152-186	
	Vi227400	CHIP MULTILAYER CERAMIC CAP	180pF 50V	チップ積層セラコン	C39,40,67	
	Vi227600	CHIP MULTILAYER CERAMIC CAP	220pF 50V	チップ積層セラコン	C113-116	
	Vi227800	CHIP MULTILAYER CERAMIC CAP	270pF 50V	チップ積層セラコン	C61-63,69	
	Vi228000	CHIP MULTILAYER CERAMIC CAP	330pF 50V	チップ積層セラコン	C54-56	
	Vi229500	CHIP MULTILAYER CERAMIC CAP	1200pF 50V	チップ積層セラコン	C35,36,65	
	Vi230300	CHIP MULTILAYER CERAMIC CAP	2700pF 50V	チップ積層セラコン	C121-124	
	Vi230500	CHIP MULTILAYER CERAMIC CAP	3300pF 50V	チップ積層セラコン	C31,32,37,38,66,87,88	
	Vi231700	CHIP MULTILAYER CERAMIC CAP	0.01uF 50V	チップ積層セラコン	C89,90	
	VD499400	CHIP MULTILAYER CERAMIC CAP	0.1uF 25V	チップ積層セラコン	C17-20,44,45,47,49,93,79-82,94,98-100,142,102-104,107-112,143,117-120,129-131,187,133-137,147-151	
	Vi840900	ELECTROLYTIC CAP	47uF 6.3V	ケミコン	C144,146	
	Vi841800	ELECTROLYTIC CAP	100uF 10V	ケミコン	C43,46,50,73,105,106,132	
	Vi842200	ELECTROLYTIC CAP	10uF 16V	ケミコン	C11,12,97,101	
	Vi842900	ELECTROLYTIC CAP	470uF 16V	ケミコン	C91,92	
	Vi843200	ELECTROLYTIC CAP	22uF 25V	ケミコン	C71,72	
	Vi843400	ELECTROLYTIC CAP	47uF 25V	ケミコン	C15,16,25,26,41,42,48,51-53,57-59,68,70,85,86,95,96	
	Vi844800	ELECTROLYTIC CAP	0.47uF 50V	ケミコン	C141	
	Vi845000	ELECTROLYTIC CAP	2.2uF 50V	ケミコン	C21,22,29,30,77,78	
	Vi845200	ELECTROLYTIC CAP	4.7uF 50V	ケミコン	C5,6,9,10	
	VK348300	ELECTROLYTIC CAP	1F 5.5V	ゴールドキャパシタ	C145	
	VB109600	COIL	220uH ELO606RA	固定コイル	L1	
	VE795500	FERRITE BEAD	B-01-RTF	フェライトビーズ	L2	
	RD253220	CHIP RESISTOR	2.2Ω 1/10W	チップ抵抗	R138	
	RD255470	CHIP RESISTOR	470Ω 1/10W	チップ抵抗	R196,195	
	RD258470	CHIP RESISTOR	470KΩ 1/8W	チップ抵抗	R75	
	RD258560	CHIP RESISTOR	560KΩ 0.1W	チップ抵抗	R141,142	
	RD259100	CHIP RESISTOR	1MΩ 1/10W	チップ抵抗	R63,93,94,180,197,198,5,6	
	Vi190100	CHIP METAL FILM RESISTOR	10Ω 1/16W	チップ金被抵抗	R137,139,140	
	Vi191700	CHIP METAL FILM RESISTOR	47Ω 1/16W	チップ金被抵抗	R127-130	
	Vi192500	CHIP METAL FILM RESISTOR	100Ω 1/16W	チップ金被抵抗	R39,40,51,52,64,102	
	Vi192600	CHIP METAL FILM RESISTOR	110Ω 1/16W	チップ金被抵抗	R97,98	
	Vi194100	CHIP METAL FILM RESISTOR	470Ω 1/16W	チップ金被抵抗	R199,200	
	Vi194900	CHIP METAL FILM RESISTOR	1KΩ 1/16W	チップ金被抵抗	R95,96,169	
	Vi195700	CHIP METAL FILM RESISTOR	2.2KΩ 1/16W	チップ金被抵抗	R15,16,29-32	

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
*	Vi195900	CHIP METAL FILM RESISTOR	2.7K Ω 1/16W	チップ金被抵抗	R33,34,170,172	
	Vi196100	CHIP METAL FILM RESISTOR	3.3K Ω 1/16W	チップ金被抵抗	R17,18,119,120	
	Vi196600	CHIP METAL FILM RESISTOR	4.7K Ω 1/16W	チップ金被抵抗	R41-44,78-80,123,124, 151-158,171,181-184, 194	
**	Vi196800	CHIP METAL FILM RESISTOR	5.6K Ω 1/16W	チップ金被抵抗	R167,168	
	Vi197000	CHIP METAL FILM RESISTOR	6.8K Ω 1/16W	チップ金被抵抗	R19,20	
	Vi197200	CHIP METAL FILM RESISTOR	8.2K Ω 1/16W	チップ金被抵抗	R163-166	
	Vi197400	CHIP METAL FILM RESISTOR	10K Ω 1/16W	チップ金被抵抗	R9,10,21-24,35-38,77, 45-50,65-72,81,82,92,	
**					99,100,105-108,111,121 122,125,126,143-146, 159-162,89,90	
	Vi197500	CHIP METAL FILM RESISTOR	11K Ω 1/16W	チップ金被抵抗	R53-58,85-87	
	Vi197600	CHIP METAL FILM RESISTOR	12K Ω 1/16W	チップ金被抵抗	R147-150	
**	Vi197700	CHIP METAL FILM RESISTOR	13K Ω 1/16W	チップ金被抵抗	R73,74,76,83,84,117, 118	
	Vi197800	CHIP METAL FILM RESISTOR	15K Ω 1/16W	チップ金被抵抗	R91	
	Vi197900	CHIP METAL FILM RESISTOR	16K Ω 1/16W	チップ金被抵抗	R112	
	Vi198100	CHIP METAL FILM RESISTOR	20K Ω 1/16W	チップ金被抵抗	R109,110	
**	Vi198400	CHIP METAL FILM RESISTOR	27K Ω 1/16W	チップ金被抵抗	R114,115,113	
	Vi199000	CHIP METAL FILM RESISTOR	47K Ω 1/16W	チップ金被抵抗	R7,8	
	Vi199200	CHIP METAL FILM RESISTOR	56K Ω 1/16W	チップ金被抵抗	R1-4	
	Vi200000	CHIP METAL FILM RESISTOR	100K Ω 1/16W	チップ金被抵抗	R11-14,25-28,59-61,88, 101,116,173-179,	
**	HV453330	FLAME PROOF CARBON RESISTOR	3.3 Ω 1/4W	不燃化カーボン抵抗	185-193 R133,134	
	HL314560	METAL OXIDE RESISTOR	56 Ω 1W	酸化金属被膜抵抗	R135	△
	HL314680	METAL OXIDE RESISTOR	68 Ω 1W	酸化金属被膜抵抗	R136	△
	XB247A00	IC	μ PC4570HA	I C	IC3,4,9-12,15,19,29,30	
**	XB248001	IC	M5238L	I C	IC27,28	
	XB496001	IC	M5238FP	I C	IC7,13	
	XE322001	IC	NJM2068S-D	I C	IC2	
	XF291A00	IC	μ PC4570G2	I C	IC5,8,14,18	
	XF494A00	IC	LB1641	I C	IC42,43	△
						△
**	iG157200	IC	AN78L05	I C	IC37	△
	XA507A00	IC	AN78N05	I C	IC20	△
	XG780A00	IC	AN79N05	I C	IC21	△
	XG758A00	IC	LC7823N	I C	IC1	△
	XB736001	IC	UPD4053BG	I C	IC17,25,26	
**	XE520A00	IC	μ PD74HC00G-T1	I C	IC32	
	XE819A00	IC	μ PD74HC04G-T1	I C	IC31,39	
	XE822001	IC	MN74HC74S-T1	I C	IC33	
	X1466A00	IC	UPD74HC32G	I C	IC38	
	XB361001	IC	UPD71055C	I C	IC41	
**	X1468B00	IC	HD63B01Y	I C	IC40	
	XG874A00	IC	HM65256BLP-10	I C	IC36	
	XB637A00	IC	PCM56P	I C	IC23,24	
	X1112A00	IC	AK5339	I C	IC22	
	XE449A00	IC	YM3413	I C	IC35	

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	XE862001	IC	YM3422	IC	IC34	
	Xi022A00	IC	YSS203(HLDSP)	IC	IC6	
	VB858300	BASE PIN	PH 4P SE	コネクタベースポスト	CB2	
	VB858800	BASE PIN	PH L-TYPE 9P SE	ベースピン	CB1,5	
	VB858900	BASE PIN	PH L-TYPE 10P SE	ベースピン	CB3,4	
	VK175000	FILTER, L. PASS	TFB-2D 18KHZ	LCフィルター	E11,2	
	VK175100	LC FILTER	PFB-2 2W 10K	LCフィルター	F13-6	
	VB657100	CERAMIC RESONATOR	8MHz	セラミック共振子	XL2	
	VK175200	CERAMIC RESONATOR	11.28MHz	セラミック共振子	XL1	
	IA093320	TRANSISTOR	2SA933S Q,R	トランジスタ	Q10	
	IC332720	TRANSISTOR	2SC3327	トランジスタ	Q1-4,7,8	
	VD678500	DIGITAL TRANSISTOR	DTA114ES	デジタルトランジスタ	Q5,6,9	
	VG722000	DIGITAL TRANSISTOR	DTC144ES	デジタルトランジスタ	Q11,12	
	IF004600	DIODE	1SS133 T-77	ダイオード	D9,11-17	
	VH770800	DIODE	1SR139-100 T-32	ダイオード	D20	
	VD450400	DIODE ARRAY	1SS233	ダイオードアレイ	D1,3,7	
	VD450500	DIODE ARRAY	1SS235	ダイオードアレイ	D2,4,8	
	VG436700	ZENER DIODE	MTZJ4.3A	ツェナーダイオード	D18,19	
	VG437400	ZENER DIODE	MTZJ5.1B	ツェナーダイオード	D5,6	
	VG438400	ZENER DIODE	MTZJ6.8C	ツェナーダイオード	D10	
	RD250000	CHIP JUMPER	0Ω 1/10W	チップ抵抗	J1-10	
	BB071360	TERMINAL, SCREW	8.3x13	ネジ端子		
	BB069510	GROUND METAL		ランド金具		
	VJ893200	SHIELD CASE		シールドケース		
	CB605620	PLASTIC RIVET	NO.1057	ブラリベット		
	EX600700	BW HEAD TAPPING SCREW	3x8 FCM3	BWヘッドタッピングネジ		
	VL000300	CLOCK CIRCUIT BOARD		クロックシート		
	IR000280	IC	M74HC02P	IC		
	VD499400	CHIP CERAMIC CAP	0.1uF 50V	チップセラコン	C5001	
	VK214000	EFFECT CIRCUIT BOARD		エフェクトシート		U, C
	VK214200	EFFECT CIRCUIT BOARD		エフェクトシート		A, B
	VK213900	EFFECT CIRCUIT BOARD		エフェクトシート		J
	VK214100	EFFECT CIRCUIT BOARD		エフェクトシート		R
	VK214300	EFFECT CIRCUIT BOARD		エフェクトシート		G
	FA154330	MYLAR FILM CAP	0.33uF 50V	マイラーコン	C917-920	
	UT452100	POLYPROPYLENE FILM CAP	100pF 100V	PPコン	C905-908	
	FI551470	CERAMIC CAP	47pF 50V	セラコン	C913-916	
	FI551180	CERAMIC CAP	18pF 50V	セラコン	C921-924	
	FI553100	CERAMIC CAP	1000pF 50V	セラコン	C1065	
	FI554100	CERAMIC CAP	0.01uF 50V	セラコン	C1061,1062	
	VF466600	CERAMIC CAP	10pF 50V	円筒セラコン	C953,956,974	
	VG276600	CERAMIC CAP	22pF 50V	円筒セラコン	C967,968	
	VG276800	CERAMIC CAP	27pF 50V	円筒セラコン	C970,971	
	VF466800	CERAMIC CAP	100pF 50V	円筒型セラコン	C931-934,949,950,959	
	VF466900	CERAMIC CAP	470pF 50V	円筒型セラコン	C957	
	VF467000	CERAMIC CAP	1000pF 50V	円筒セラコン	C954,964,965	
	VF467300	CERAMIC CAP	0.01uF 16V	円筒セラコン	C981	
	VJ599100	CERAMIC CAP	0.1uF 50V	円筒型セラコン	C958,961,963,972	
	VI841400	ELECTROLYTIC CAP	1000uF 6.3V	ケミコン	C936,940,944	
	VI841700	ELECTROLYTIC CAP	47uF 10V	ケミコン	C947,948,960,962,966	

※New Parts (新規部品)

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Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VH619500	ELECTROLYTIC CAP	47uF 10V	ケミコン	C909-912	
	Vi843100	ELECTROLYTIC CAP	10uF 25V	ケミコン	C935, 937-939, 941-943, 945, 946, 973, 975, 976, 991-995, 951	
	Vi844900	ELECTROLYTIC CAP	1uF 50V	ケミコン	C952, 955	
	VH621800	ELECTROLYTIC CAP	2.2uF 50V	ケミコン	C901-904	
	Vi845200	ELECTROLYTIC CAP	4.7uF 50V	ケミコン	C969	
	VH622100	ELECTROLYTIC CAP	10uF 50V	ケミコン	C999, 100	
	Vi846200	ELECTROLYTIC CAP	47uF 63V	ケミコン	C1064	R
	VK181000	ELECTROLYTIC CAP	1000uF 25V	ケミコン	C1063	
	UK166100	ELECTROLYTIC CAP	1uF 50V	B P ケミコン	C996, 997	
	VD930900	SEMI-CONDUCTIVE CAP	0.1uF 25V	半導体セラコン	C998	
	Fi514100	CERAMIC CAP	0.01uF VA-1	スパークキラーコン	C1051	
	Xi480A00	POWER TRANSFORMER		電源トランス	T901	J
	Xi481A00	POWER TRANSFORMER		電源トランス	T901	U, C
	Xi790A00	POWER TRANSFORMER		電源トランス	T901	R
	Xi482A00	POWER TRANSFORMER		電源トランス	T901	A, B
	Xi483A00	POWER TRANSFORMER		電源トランス	T901	G
	VB115600	COIL	15uH ELO606RA	固定コイル	L901	
	HV453100	FLAME PROOF CARBON RESISTOR	1Ω 1/4W	不燃化カーボン抵抗	R1043, 1044	
	HV456100	FLAME PROOF CARBON RESISTOR	1KΩ 1/4W	不燃化カーボン抵抗	R937-940	
	HV456270	FLAME PROOF CARBON RESISTOR	2.7KΩ 1/4W	不燃化カーボン抵抗	R933-936	
	HV456560	FLAME PROOF CARBON RESISTOR	5.6KΩ 1/4W	不燃化カーボン抵抗	R1062, 1063	R
	VK189100	FUSABLE RESISTOR	1.2KΩ 1/4W	ヒューズ抵抗	R917-920	
	VK189400	FUSABLE RESISTOR	2.7KΩ 1/4W	ヒューズ抵抗	R921-924	
	HL312220	METAL OXIDE RESISTOR	0.22Ω 1W	酸化金属被膜抵抗	R925-932	
	Vi513100	METAL FILM RESISTOR	33KΩ 1/4W	金属被膜抵抗	R913-916	
	Xi109A00	IC	MC14576A	I C	IC905-907	
	Xi110A00	IC	MC14577A	I C	IC914	
	iG067100	IC	uPC1225H	I C	IC901-904	
	XE584A00	IC	NJM78M15FA	I C	IC921	
	XG505A00	IC	NJM79M15FA	I C	IC922	
	iG001770	IC	TC4051BP	I C	IC908, 909	
	iG148700	IC	BU4028B	I C	IC918	
	iG055100	IC	TC4053BP	I C	IC912, 913	
	iR000400	IC	TC74HC04P	I C	IC915	
	iR000020	IC	UPD74HC00C	I C	IC916	
	XD132001	IC	H50455-060SP	I C	IC917	
	XA053A00	IC	TC4052BP	I C	IC910	
	KA401690	SLIDE SWITCH	SSJ312	スライド SW	SW902	R
	VK176800	ROTARY SWITCH		ロータリー SW	SW901	
	KB001490	FUSE	10A 250V	ヒューズ	F901	J, R
	VD370900	FUSE	10A 250V	ヒューズ	F901	U, C
	KB000790	FUSE	T4A 250V	ヒューズ	F901	A, B, G
	VD213900	FUSE	5A 250V	ヒューズ	F902	R
	KB003080	FUSE	T2.5A 250V	ヒューズ	F902	G
	VJ784400	RELAY	DC G4W-1112P-US-TV	リレー 12V	RY901	
	LA003870	LAPPING TERMINAL	2P L-102NE	ラッピング端子	TE901	
	LA002140	LAPPING TERMINAL	2P i-TYPE P=10	ラッピング端子	TE902	J, U, C
	LA002150	LAPPING TERMINAL	3P I-103NA	ラッピング端子	TE902	R

※New Parts (新規部品)

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Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	LA002J40	LAPPING TERMINAL	2P i-TYPE P=10	ラッピング端子	TE905	A,B,G
	LA002110	LAPPING TERMINAL	2P i-TYPE	ラッピング端子	TE904	R
	LA002000	LAPPING TERMINAL	2P i-TYPE P=7.5	ラッピング端子	TE906	A,B,G
	LB608160	AC OUTLET	3P	電源コネクタ	JK904	J,U,C,R
	VH842600	S CONNECTOR		2連 Sコネクタ	VJ902	
	VJ784800	S CONNECTOR		3連 Sコネクタ	JK903	
	Vi234500	DIN CONNECTOR		2連DNコネクタ	JK901	
	LB918020	BASE PIN	XH i-TYPE 2P TE	ベースツキポスト	CB935	
	LB918090	BASE PIN	XII 9P TE	ベースツキポスト	CB901,902	
	Vi378600	MQ CONNECTOR	8P	MQコネクタソケット	CB904	
	Vi378700	MQ CONNECTOR	9P	MQコネクタソケット	CB903	
	VA252300	MQ CONNECTOR	5P	MQコネクタ	CB930	
	Vi377600	MQ BASE PIN	6P	MQ ベースピン	CB914,915	
	VB994800	MQ CONNECTOR	B07P-MQ	MQコネクタ	CB912	
	Vi377800	MQ BASE PIN	8P	MQ ベースピン	CB907	
	VB994900	MQ CONNECTOR	B09P-MQ	MQコネクタ	CB929,908	
	VA252400	MQ CONNECTOR	12P	MQコネクタ	CB913,928	
	VK216200	FJ-L PLUG	7P	FJ-L プラグ	CB921	
	VK216500	FJ-L PLUG	10P	FJ-L プラグ	CB918	
	VK216700	FJ-L PLUG	12P	FJ-L プラグ	CB919	
	VK217000	FJ-RECEPTACLE	7P	FJ-リセプタクル	CB931	
	VK217300	FL-RECEPTACLE	10P	FJ-リセプタクル	CB927	
	VK217500	FJ-RECEPTACLE	12P	FJ-リセプタクル	CB926	
	VB858100	BASE POST	PH 2P SE	コネクタベースポスト	CB906	
	VB858200	BASE PIN	3P	ベースピン	CB920,905	
	VB858200	BASE PIN	3P	ベースピン	CB934	R
	VB858400	BASE PIN	PH L-TYPE 5P SE	ベースピン	CB932	
	VB858700	BASE PIN	PH 8P SE	ベースピン	CB916	
	VB858800	BASE PIN	PH L-TYPE 9P SE	ベースピン	CB917	
	VD004600	BASE PIN	PH 3P TE	ベースピン	CB924,933	
	VD004700	BASE PIN	PH 4P TE	ベースピン	CB922,925	
	VD004900	BASE PIN	PH 6P TE	ベースピン	CB923	
	VD980900	CRYSTAL RESONATOR	14.3181MHz	水晶振動子	XL901	J,U,C,R
	VF066800	CRYSTAL RESONATOR	17.7344MHz	水晶振動子	XL901	A,B,G
	VJ808500	PRE-SET POTENTIOMETER	B1K	半固定VR	VR901-904	
	VJ781500	POTENTIOMETER WITH MOTOR	100KYx7	7連モーターVR	VR905	
	iC053540	TRANSISTOR	2SC535 A,B,C	トランジスタ	Q921,922	
	iC174020	TRANSISTOR	2SC1740S R,S	トランジスタ	Q923,924,932,926	
	iC224000	TRANSISTOR	2SC2240 GR,BL	トランジスタ	Q901-904	
	iC224030	TRANSISTOR	2SC2240 GR,BL	トランジスタ	Q913-916	
	VC938500	TRANSISTOR	2SC3852	トランジスタ	Q933	R
	iX619590	TRANSISTOR	2SA1726 O,P,Y	トランジスタ	Q909-912	
	iX619600	TRANSISTOR	2SC4512 O,P,Y	トランジスタ	Q905-908	
	VG722000	DIGITAL TRANSISTOR	DTC144ES	デジタルトランジスタ	Q931	
	VD678500	DIGITAL TRANSISTOR	DTA114ES	デジタルトランジスタ	Q925	
	iF004600	DIODE	1SS133 T-77	ダイオード	D901,902,906-910,921,931-945,911,912-917	
	VH770800	DIODE	1SR139-100 T-32	ダイオード	D922	
	VG440400	ZENER DIODE	WTZJ13A	ツェナーダイオード	D924	R
	LB201880	FUSE HOLDER PIN	PC-FH1	ヒューズホルダピン		

*New Parts (新規部品)

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Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	BB069510	GROUND METAL	ランド金具			
	BB071360	TERMINAL, SCREW	ネジ端子			
**	VK213700	FUNCTION CIRCUIT BOARD	ファンクションシート		U, C, R, A, B	
**	VK213600	FUNCTION CIRCUIT BOARD	ファンクションシート		J	
**	VK213800	FUNCTION CIRCUIT BOARD	ファンクションシート		G	
	UA652820	MYLAR FILM CAP	820pF 50V	マイラーコン	C682	
	FA153100	MYLAR FILM CAP	1000pF 50V	マイラーコン	C615, 616	G
	FA153270	MYLAR FILM CAP	2700pF 50V	マイラーコン	C680	
	FA154100	MYLAR FILM CAP	0.01uF 50V	マイラーコン	C678, 683	
	FA154120	MYLAR FILM CAP	0.012uF 50V	マイラーコン	C688	
	FA154110	MYLAR FILM CAP	0.011uF 50V	マイラーコン	C611, 612	
	FA154180	MYLAR FILM CAP	0.018uF 50V	マイラーコン	C686	
	FA154200	MYLAR FILM CAP	0.02uF 50V	マイラーコン	C687	
	FA154220	MYLAR FILM CAP	0.022uF 50V	マイラーコン	C711, 712, 723	
	FA154330	MYLAR FILM CAP	0.033uF 50V	マイラーコン	C676, 681	
	FA154390	MYLAR FILM CAP	0.039uF 50V	マイラーコン	C609, 610	
	FA154680	MYLAR FILM CAP	0.068uF 50V	マイラーコン	C697-700	
	FA155100	MYLAR FILM CAP	0.1uF 50V	マイラーコン	C709, 710, 722	
	UT452100	POLYPROPYLENE FILM CAP	100pF 100V	P Pコン	C601, 602	
	UT452180	POLYPROPYLENE FILM CAP	180pF 100V	P Pコン	C684	
	UT452220	POLYPROPYLENE FILM CAP	220pF 100V	P Pコン	C603, 604	
	UT452470	POLYPROPYLENE FILM CAP	470pF 100V	P Pコン	C751-762, 771-782	
**	Fi551100	CERAMIC CAP	10pF 50V	セラコン	C645, 646, 659, 660, 689	
**	Fi551470	CERAMIC CAP	47pF 50V	セラコン	C635, 636	
**	Fi552100	CERAMIC CAP	100pF 50V	セラコン	C629, 630	
**	FG212220	CERAMIC CAP	220pF 50V	セラコン	C631, 632	
**	Fi553100	CERAMIC CAP	1000pF 50V	セラコン	C730, 731	
**	FG244100	CERAMIC CAP	0.01uF 50V	セラコン	C732, 733	
	VD930900	SEMI-CONDUCTIVE CAP	0.1uF 25V	半導体セラコン	C784	
	VF466800	CERAMIC CAP	100pF 50V	円筒型セラコン	C735-737	
	VJ599100	CERAMIC CAP	0.1uF 50V	円筒型セラコン	C783, 785	
	VH620200	ELECTROLYTIC CAP	47uF 16V	ケミコン	C726, 727	
	Vi840900	ELECTROLYTIC CAP	47uF 6.3V	ケミコン	C643, 644, 657, 658, 743,	
					744	
**	Vi841100	ELECTROLYTIC CAP	220uF 6.3V	ケミコン	C607, 608	
**	Vi841300	ELECTROLYTIC CAP	470uF 6.3V	ケミコン	C725	
**	Vi841400	ELECTROLYTIC CAP	1000uF 6.3V	ケミコン	C739, 741, 742	
**	Vi841700	ELECTROLYTIC CAP	47uF 10V	ケミコン	C633, 634, 728, 729	
**	Vi842300	ELECTROLYTIC CAP	22uF 16V	ケミコン	C707, 708, 721	
**	Vi842500	ELECTROLYTIC CAP	47uF 16V	ケミコン	C963-696, 669	
**	Vi842600	ELECTROLYTIC CAP	100uF 16V	ケミコン	C617, 618	
**	Vi842900	ELECTROLYTIC CAP	470uF 16V	ケミコン	C637, 638	
**	Vi843000	ELECTROLYTIC CAP	4.7uF 25V	ケミコン	C703, 704, 719	
**	Vi843100	ELECTROLYTIC CAP	10uF 25V	ケミコン	C613, 614, 621, 622, 647, 625-628, 648, 651, 652, 661, 662, 665, 666, 670, 672, 674, 690, 692, 724, 713-716, 738, 740	

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	Vi843200	ELECTROLYTIC CAP	22uF 25V	ケミコン	C745,746	
	Vi844500	ELECTROLYTIC CAP	0.1uF 50V	ケミコン	C649,650,653,654,663,664,667,668,671,673,679,691	
	Vi844700	ELECTROLYTIC CAP	0.33uF 50V	ケミコン	C677	
	Vi844900	ELECTROLYTIC CAP	1uF 50V	ケミコン	C605,606,639,641,642,655,656,675	
	Vi845000	ELECTROLYTIC CAP	2.2uF 50V	ケミコン	C701,702,718	
	FU451100	MICA CAP	10pF 500V	マイカコン	C623,624,750	
	FU451330	MICA CAP	33pF 500V	マイカコン	C685	
	FU351220	MICA CAP	22pF 500V	マイカコン	C705,706,720	
	FU451470	MICA CAP	47pF 500V	マイカコン	C747-749	
	VA983600	COIL	220uH ELF0505SKI	コイル	L601,602	G
	HV455100	FLAME PROOF CARBON RESISTOR	100Ω 1/4W	不燃化カーボン抵抗	R637,638,780,781	
	HV455220	FLAME PROOF CARBON RESISTOR	220Ω 1/4W	不燃化カーボン抵抗	R667,668	
	HL324820	METAL OXIDE RESISTOR	82Ω 2W	酸化金属被膜抵抗	R778,784	
	VK174500	RESISTOR ARRAY	RYLS7J104	抵抗アレイ	R779	
	VK228700	RESISTOR ARRAY	RYLS9J474	抵抗アレイ	R633,634	
	IG077400	IC	NJM4556S	I C	IC604	
	XB247A00	IC	uPC4570HA	I C	IC601,603,607,608,615,	
	XE322001	IC	NJM2068S-D	I C	611-613,616,619,621 IC605,609,620	
	XF971A00	IC	uPC4574C	I C	IC618	
	XE536001	IC	LC7535	I C	IC606,610,614	
	XG732A00	IC	LC7821H	I C	IC602	
	X1109A00	IC	MC14576A	I C	IC626	
	X1113A00	IC	LC7522	I C	IC617	
	XF740A00	IC	NJM78M05FA	I C	IC622	
	XE436A00	IC	NJM79M05FA	I C	IC623	
	IG001770	IC	TC4051BP	I C	IC624,625	
	VF926500	LIGHT DETECTING MODULE	GP1U501X	リモコン受光ユニット	U601	
	VJ787200	ROTARY SWITCH	SRBU16032A 1/6S	ロータリーSW	SW601	
	KA805170	PUSH SWITCH	SUN4-2NS	プッシュSW	SW602	
	VK177200	PIN JACK	3P	ピンジャック	PJ605	J
	VJ695900	PIN JACK	3P	ピンジャック	PJ605	UCRABG
	VK177400	PIN JACK	4P	ピンジャック	PJ602	J
	VJ696300	PIN JACK	4P	ピンジャック	PJ602	UCRABG
	VK177500	PIN JACK	4P	ピンジャック	PJ604	J
	VJ696100	PIN JACK	4P	ピンジャック	PJ604	UCRABG
	VK421700	PIN JACK	4P	ピンジャック	PJ601	J
	VK421600	PIN JACK	4P	ピンジャック	PJ601	UCRABG
	VK179100	PIN JACK	6P	ピンジャック	PJ603,606,607	J
	VJ794600	PIN JACK	6P	ピンジャック	PJ603,606,607	UCRABG
	VK175300	PHONES JACK		ヘッドホンジャック	JK601	
	VI378300	CONNECTOR	HQ 5P	HQコネクタソケット	CB605	
	VI378400	CONNECTOR	HQ 6P	HQコネクタソケット	CB601,628	
	VI378500	CONNECTOR	HQ 7P	HQコネクタソケット	CB603	
	VI378700	CONNECTOR	HQ 9P	HQコネクタソケット	CB606	
	VI379200	CONNECTOR	HQ 12P	HQコネクタソケット	CB604,607	
	VD004500	BASE PIN	PH 2P TE	ベースピン	CB629	JUCRAB

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VD004500	BASE PIN	PH 2P TE	ベースピン	CB615-617	
	VD004600	BASE PIN	PH 3P TE	ベースピン	CB608-614	
	VD004700	BASE PIN	PH 4P TE	ベースピン	CB620	
	VD004700	BASE PIN	PH 4P TE	ベースピン	CB619	G
	VD004800	BASE PIN	PH 5P TE	ベースピン	CB621,618	
	VD004900	BASE PIN	PH 6P TE	ベースピン	CB622,624	
	VH431000	BASE PIN	PH 13P TE	ベースピン	CB623	
	VB858100	BASE POST	PH 2P SE	コネクタベースポスト	CB625	
	VB858500	BASE PIN	PH i-TYPE 6P SE	ベースピン	CB626	
	VB858600	BASE PIN	PH L-TYPE 7P	ベースピン	CB627	
	VK174600	POTENTIOMETER	MN30K	二連ロータリーVR	VR601	
	VJ801400	ROTARY POTENTIOMETER	16Kx3	ロータリーVR	VR603	
	VK176700	ROTARY POTENTIOMETER	20Kx3	ロータリーVR	VR602	
	iC174020	TRANSISTOR	2SC1740S R,S	トランジスタ	Q601,607	
	iC287820	TRANSISTOR	2SC2878 A,B	トランジスタ	Q603-606	
	iD040040	TRANSISTOR	2SD400 E,F	トランジスタ	Q610	
	VH964100	DIGITAL TRANSISTOR	DTA143ES	デジトラ	Q602,608,609	
	iF004600	DIODE	1SS133 T-77	ダイオード	D609-616	
	iF004600	DIODE	1SS133 T-77	ダイオード	D601,602,608	G
	VH770800	DIODE	1SR139-100 T-32	ダイオード	D603,604,607	
	VG437000	ZENER DIODE	MTZJ4.7A	ツェナーダイオード	D605	
	VG438400	ZENER DIODE	MTZJ6.8C	ツェナーダイオード	D606,619	
	VF402500	LED	SLR-34DC3H3	LED	D617,618	
	BR071360	TERMINAL,SCREW	8.3x13	ネジ端子		
	BA092970	HEAT SINK		放熱器		
	ED330086	BIND HEAD SCREW	3x8 FCRM3-BL	バインド小ネジ		
	VK213000	MAIN CIRCUIT BOARD		メインシート		U,C,R
	VK213100	MAIN CIRCUIT BOARD		メインシート		A,B
	VK212900	MAIN CIRCUIT BOARD		メインシート		J
	VK213200	MAIN CIRCUIT BOARD		メインシート		G
	UA652470	MYLAR FILM CAP	470pF 50V	マイラーコン	C458-461	G
	FA154470	MYLAR FILM CAP	0.047uF 50V	マイラーコン	C361-364,318	
	VD339900	POLYPROPYLENE FILM CAP	220pF 100V	PPコン	C455-457	G
	UT452100	POLYPROPYLENE FILM CAP	100pF 100V	PPコン	C305,306,325,326,329,330,335,336,371,373,376	
	UT452470	POLYPROPYLENE FILM CAP	470pF 100V	PPコン	C309,310,313,314,316,320	
	UT453100	POLYPROPYLENE FILM CAP	1000pF 100V	PPコン	C337,338,377	JUCRAB
	UT453120	POLYPROPYLENE FILM CAP	1200pF 100V	PPコン	C337,338,377	G
	UT454100	POLYPROPYLENE FILM CAP	0.01uF 100V	PPコン	C355-358	
	UT454100	POLYPROPYLENE FILM CAP	0.01uF 100V	PPコン	C411,412,415,416,419,	G
	UT454470	POLYPROPYLENE FILM CAP	0.047uF 100V	PPコン	420,423	
	FG244100	CERAMIC CAP	0.01uF 50V	セラコン	C349,350,383	
	FG244220	CERAMIC CAP	0.022uF 50V	セラコン	C359,396	
					C413,414,417,418,421,422,424	G

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VF466900	CERAMIC CAP	470pF 50V	円筒型セラコン	C451,452	
	VJ599100	CERAMIC CAP	0.1uF 50V	円筒型セラコン	C453,454	
	Vi841800	ELECTROLYTIC CAP	100uF 10V	ケミコン	C391,392	
	VH619600	ELECTROLYTIC CAP	100uF 10V	ケミコン	C339,340,378	
	Vi843100	ELECTROLYTIC CAP	10uF 25V	ケミコン	C303,304,307,308,311,	
					312,315,317,319,321,322	
	Vi843200	ELECTROLYTIC CAP	22uF 25V	ケミコン	C301,302	
	Vi844900	ELECTROLYTIC CAP	1uF 50V	ケミコン	C384,397	
	VH622100	ELECTROLYTIC CAP	10uF 50V	ケミコン	C327,328,331,332,372,	
					374	
	VH622200	ELECTROLYTIC CAP	22uF 50V	ケミコン	C343,344,380	
	Vi846900	ELECTROLYTIC CAP	10F 100V	ケミコン	C351-354	
	VK179200	ELECTROLYTIC CAP	2200uF 6.3V	ケミコン	C398	
	VK180400	ELECTROLYTIC CAP	1000uF 16V	ケミコン	C441,442	
	VK180700	ELECTROLYTIC CAP	4700uF 16V	ケミコン	C445,446	
	VH574800	ELECTROLYTIC CAP	47uF 100V	ケミコン	C333,334,375	
	VK183300	ELECTROLYTIC CAP	8200uF 40V	ブロックケミコン	C439,440	
	VK183400	ELECTROLYTIC CAP	22000uF 71V	ブロックケミコン	C433,434	
	FU451150	MICA CAP	15pF 500V	マイカコン	C341,342	
	FU450050	MICA CAP	15pF 500V	マイカコン	C379	JUCRAB
	FU451220	MICA CAP	22pF 500V	マイカコン	C379	G
	FU352100	MICA CAP	100pF 500V	マイカコン	C345-348,381,382	
	Vi862200	POLYETHYLENE FILM CAP	0.1uF 100V	ポリエチレンコン	C431,432,437,438,435,436,443,444,447	
	VK175800	COIL	1.5uH	空芯コイル	L303-306	
	VC664100	COIL	0.91uH	空芯コイル	L301,302,307	
	VK577900	CARBON FILM RESISTOR	1.2KΩ 1/4W	カーボン抵抗	R377,378,426	
	VE009700	FUSABLE RESISTOR	4.7Ω 1/4W	ヒューズ抵抗	R405-408	△
	VK188000	FUSABLE RESISTOR	150Ω 1/4W	ヒューズ抵抗	R363,364,430	△
	VK188400	FUSABLE RESISTOR	330Ω 1/4W	ヒューズ抵抗	R387,388,442	△
	VK188700	FUSABLE RESISTOR	560Ω 1/4W	ヒューズ抵抗	R381,382,439	△
	VK189100	FUSABLE RESISTOR	1.2KΩ 1/4W	ヒューズ抵抗	R385,386,441	△
	VK189500	FUSABLE RESISTOR	3.3KΩ 1/4W	ヒューズ抵抗	R379,380,438	△
	HV453470	FLAME PROOF CARBON RESISTOR	4.7Ω 1/4W	不燃化カーボン抵抗	R389-392,401,402,443,	△
					411-414,444,449	△
	HV454100	FLAME PROOF CARBON RESISTOR	10Ω 1/4W	不燃化カーボン抵抗	R503,504,507,508	
	HV454470	FLAME PROOF CARBON RESISTOR	47Ω 1/4W	不燃化カーボン抵抗	R383,384,440	
	HV455100	FLAME PROOF CARBON RESISTOR	100Ω 1/4W	不燃化カーボン抵抗	R371,372,434	
	HV455220	FLAME PROOF CARBON RESISTOR	220Ω 1/4W	不燃化カーボン抵抗	R359-362,428,429	
	HV455680	FLAME PROOF CARBON RESISTOR	680Ω 1/4W	不燃化カーボン抵抗	R373,374,435	
	HV456100	FLAME PROOF CARBON RESISTOR	1KΩ 1/4W	不燃化カーボン抵抗	R397,398,447	
	HV456470	FLAME PROOF CARBON RESISTOR	4.7KΩ 1/4W	不燃化カーボン抵抗	R395,396,446	
	HV457150	FLAME PROOF CARBON RESISTOR	15KΩ 1/4W	不燃化カーボン抵抗	R365-370,431-433	
	HL314100	METAL OXIDE RESISTOR	10Ω 2W	酸化金属被膜抵抗	R403,404,450	
	HL315270	METAL OXIDE RESISTOR	270Ω 1W	酸化金属被膜抵抗	R462,463	JUCRAB
	HL314820	METAL OXIDE RESISTOR	82Ω 1W	酸化金属被膜抵抗	R462,463	G
	HL324100	METAL OXIDE RESISTOR	10Ω 2W	酸化金属被膜抵抗	R523-526	△
	Vi513100	METAL FILM RESISTOR	33KΩ 1/4W	金属被膜抵抗	R375,376,436	△
	VJ787600	METAL PLATE RESISTOR	MPC725 0.22±0.22	金属板抵抗	R393,394,445	△

※New Parts (新規部品)

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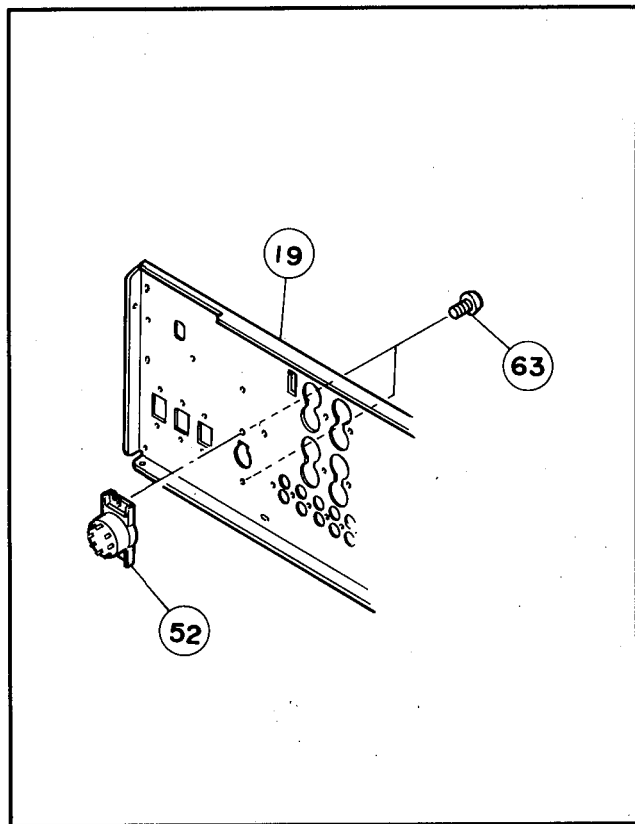
Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VJ769200	SLIDE SWITCH	ESD-2764	スライドSW	SW302	
	VJ787100	SLIDE SWITCH	SSSF12175A	スライドSW	SW301	
	VG392900	TACT SWITCH	SKHVAA	タクトSW	SW303-310	
	KB001300	FUSE	7A 250V	ヒューズ	F401,402	J
	KB001520	FUSE	7A 125V	ヒューズ	F401,402	U,C,R
	KB001760	FUSE	6.3A 250V	ヒューズ	F401,402	A,B,G
	KC001940	RELAY	DH24D2-OT(H)	リレー	RY303,304	
	KC002020	RELAY	DH24D2-OTM	リレー	RY301,302	
	LA002320	LAPPING TERMINAL	3P i-TYPE P=7.5	ラッピング端子	TE303-305	
	VK176600	SPEAKER TERMINAL		スピーカ端子	TE301,302	J
	VJ792600	SPEAKER TERMINAL		スピーカ端子	TE301,302	U,C,R,A,B
	VK178900	SPEAKER TERMINAL	8P	スピーカ端子	TE301,302	G
	VK176900	PIN JACK	1P	ピンコジャック	PJ303	J
	VJ942900	PIN JACK	1P	ピンジャック	PJ303	UCRABG
	VK177100	PIN JACK	2P	ピンジャック	PJ302,304	J
	VJ943000	PIN JACK	2P	ピンジャック	PJ302,304	UCRABG
	VK178800	PIN JACK	4P	ピンジャック	PJ301	J
	VJ715400	PIN JACK	4P	ピンジャック	PJ301	UCRABG
	VK177000	PIN JACK	2P	ピンジャック	PJ305,306	J
	VJ133600	PIN JACK	2P	ピンジャック	PJ305,306	UCRABG
	VJ788300	JACK	TCX0146	SW付きジャック板	PJ307	
	VJ692700	PRE-SET POTENTIOMETER	B330	半固定VR	VR303-305	
	VJ784500	POTENTIOMETER	B10K	二連ロータリーVR	VR301	
	IA097000	TRANSISTOR	2SA970 GR,BL	トランジスタ	Q311-314,341,342,356	
	IA130640	TRANSISTOR	2SA1306 O,Y	トランジスタ	Q331,332,351	
	VE198700	TRANSISTOR	2SA1145 O,Y	トランジスタ	Q323,324,327,328,347,349	
	IC174020	TRANSISTOR	2SC1740S R,S	トランジスタ	Q361,364-366	
	IC181511	TRANSISTOR	2SC1815 Y	トランジスタ	Q315-320,343-345	
	IC224000	TRANSISTOR	2SC2240 GR,BL	トランジスタ	Q339,340,355	
	IC287820	TRANSISTOR	2SC2878 A,B	トランジスタ	Q301-309	
	IC224030	TRANSISTOR	2SC2240 GR,BL	トランジスタ	Q325,326,348	
	IC329840	TRANSISTOR	2SC3298	トランジスタ	Q333,334,352	
	VE198800	TRANSISTOR	2SC2705 O,Y	トランジスタ	Q321,322,329,330,346,350	
	VD678500	DIGITAL TRANSISTOR	DTA114ES	デジタルトランジスタ	Q367	
	VD488500	DIGITAL TRANSISTOR	DTC143XS	デジタルトランジスタ	Q362,363	
	IF004600	DIODE	1SS133 T-77	ダイオード	D301-309,311-320,321	
	VH770800	DIODE	1SR139-100 T-32	ダイオード	D333-336	
	IH001370	DIODE BRIDGE	D5FB20	ダイオードスタック	D331	
	Vi711600	DIODE BRIDGE	RBV-602 LF-A	ダイオードブリッジ	D332	
	VF402500	LED	SLR-34DC3H3	LED	D341	
	Vi013600	LED	SLR-34VC3H3	LED	D342	G
	LB201880	FUSE HOLDER PIN	PC-FH1	ヒューズホルダピン		
	VB966900	PIN	INSA-6024	スタイルピン		
	BB069510	GROUND METAL		ランド金具		

*New Parts (新規部品)

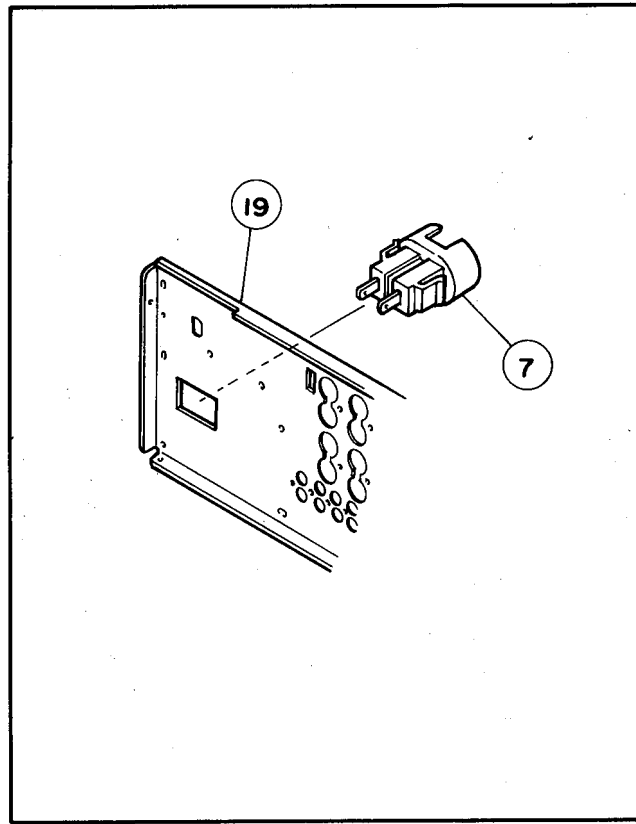
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EXPLODED VIEW

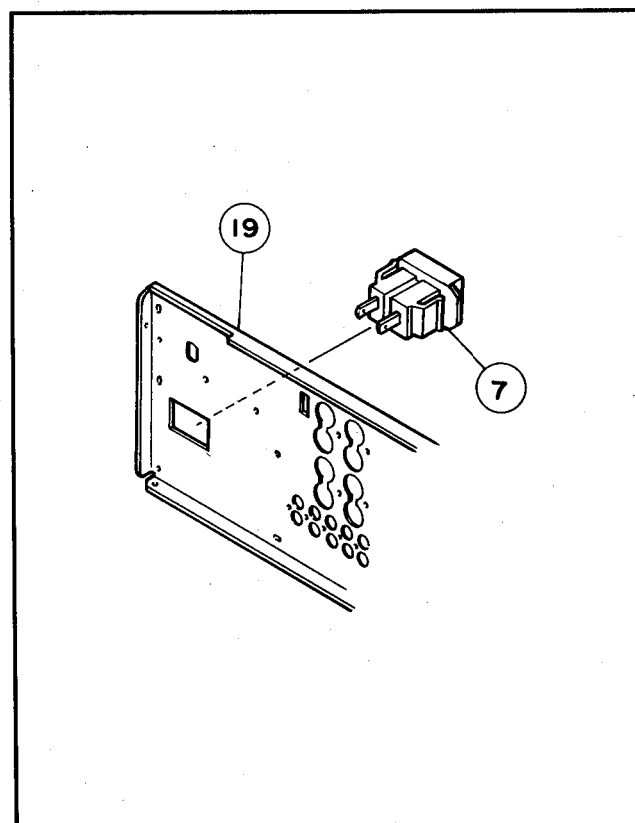
R model



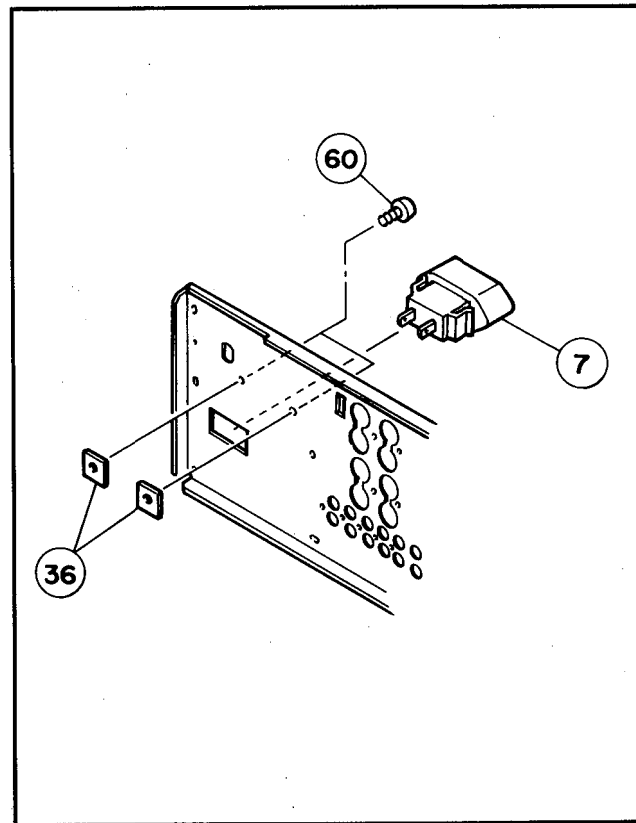
A model



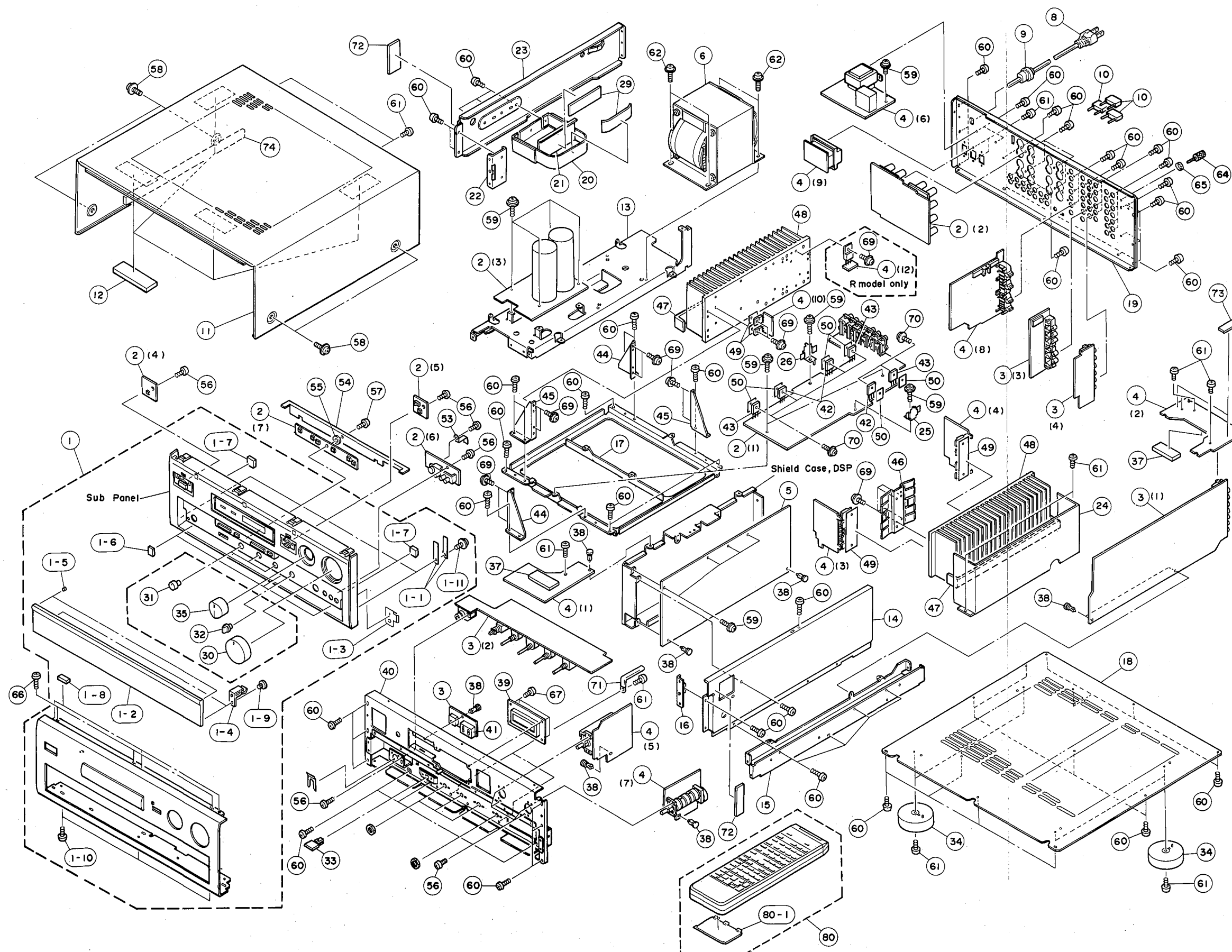
B model



G model



■ EXPLODED VIEW



MECHANICAL PARTS Note) Ø : Diameter

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
* 01	VK964500	PANEL UNIT	AVX-2000DSP	パネルユニット	BL	J
* 01	VK964700	PANEL UNIT	DSP-A1000	パネルユニット	BL	U,C,R,A,B
* 01	VK964900	PANEL UNIT	DSP-A1000	パネルユニット	BL	G
* 01	VK964600	PANEL UNIT	AVX-2000DSP	パネルユニット	T	J
* 01	VK964800	PANEL UNIT	DSP-A1000	パネルユニット	T	U,C,R,A,B
* 01	VK965000	PANEL UNIT	DSP-A1000	パネルユニット	T	G
* 01-01	VJ888200	SPRING		スプリング		
* 01-02	VJ896500	SUB PANEL		サブパネル	BL	
* 01-02	VJ896600	SUB PANEL		サブパネル	T	
* 01-03	VK889800	GROUND PLATE	R	アースプレート		
* 01-04	VJ888100	STOPPER		ストッパ	BL	
* 01-04	VJ888000	STOPPER		ストッパ	T	
01-05	CB621930	DAMPER		ダンパ	BL	
01-05	VE798100	DAMPER		ダンパ	T	
01-06	VE798200	CUSHION		クッション		
* 01-07	VK421400	DAMPER		ダンパー		
01-08	VE222600	CUSHION		クッション		
01-09	ED330066	BIND HEAD SCREW	3x6 FCM3-BL	バインド小ネジ		
01-10	EI330066	BIND HEAD TAPPING SCREW	3x6 FCM3-BL	バインドタッピングネジ		
01-11	EK336010	BW HEAD TAPPING SCREW	3x8 FCM3-BL	BWヘッドタッピングネジ		
* 02	VK212900	MAIN CIRCUIT BOARD		メインシート		J
* 02	VK213000	MAIN CIRCUIT BOARD		メインシート		U,C,R
* 02	VK213100	MAIN CIRCUIT BOARD		メインシート		A,B
* 02	VK213200	MAIN CIRCUIT BOARD		メインシート		G
* 03	VK213600	FUNCTION CIRCUIT BOARD		ファンクションシート		J
* 03	VK213700	FUNCTION CIRCUIT BOARD		ファンクションシート		U,C,R,A,B
* 03	VK213800	FUNCTION CIRCUIT BOARD		ファンクションシート		G
* 04	VK213900	EFFECT CIRCUIT BOARD		エフェクトシート		J
* 04	VK214000	EFFECT CIRCUIT BOARD		エフェクトシート		U,C
* 04	VK214100	EFFECT CIRCUIT BOARD		エフェクトシート		R
* 04	VK214200	EFFECT CIRCUIT BOARD		エフェクトシート		A,B
* 04	VK214300	EFFECT CIRCUIT BOARD		エフェクトシート		G
* 05	VK214600	DSP CIRCUIT BOARD		DSPシート		JUCRAB
* 05	VK214700	DSP CIRCUIT BOARD		DSPシート		G
* 06	Xi127A00	POWER TRANSFORMER		電源トランス		J
* 06	Xi128A00	POWER TRANSFORMER		電源トランス		U
* 06	Xi129A00	POWER TRANSFORMER		電源トランス		C
* 06	Xi131A00	POWER TRANSFORMER		電源トランス		A,B
* 06	Xi132A00	POWER TRANSFORMER		電源トランス		G
* 06	Xi130A00	POWER TRANSFORMER		電源トランス		R
07	VC826100	AC OUTLET	S2-739T	電源コネクタ		A
07	VJ775000	AC OUTLET	S2-741T-110	ACアウトレット		B
07	VJ775100	AC OUTLET	S2-729T	ACアウトレット		G
08	MG002170	POWER CORD	15A 125V	電源コード		J
08	MG002220	POWER CORD	10A 125V	電源コード		U
08	MG001630	POWER CORD	7A 250V	電源コード		R
08	MG002310	POWER CORD	7.5A 250V	電源コード		A
08	MG002330	POWER CORD	6A 300V	電源コード		B
08	MG002320	POWER CORD	2.5A 250V	電源コード		G
09	CB620200	CORD STOPPER	CM-22C	コードストッパー		U,C

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
09	CB620190	CORD STOPPER	CM-22B	コードストッパー		R,A,B,G
10	LB101890	SHORT PIN		ショートプラグ		
* 11	VJ895300	TOP COVER		トップカバー	BL	J
* 11	VJ895100	TOP COVER		トップカバー	BL	UCRABG
* 11	VJ895400	TOP COVER		トップカバー	T	J
* 11	VJ895200	TOP COVER		トップカバー	T	UCRABG
* 12	VK706800	DAMPER	TOP	ダンパー		
* 13	VJ892600	FRAME	L	フレーム		
* 14	VK380200	FRAME R/UPPER		フレーム		
* 15	VK380300	FRAME R/LOWER		フレーム		
* 16	VK380400	FRAME R/FRONT		フレーム		
* 17	VJ892800	FRAME CENTER		フレーム		
* 18	VJ893400	BOTTOM COVER		ボトムカバー		
* 19	VJ893700	REAR PANEL		リヤパネル		J
* 19	VJ893800	REAR PANEL		リヤパネル		U,C
* 19	VJ893900	REAR PANEL		リヤパネル		R
* 19	VJ894000	REAR PANEL		リヤパネル		A,B
* 19	VJ894100	REAR PANEL		リヤパネル		G
* 20	VK390900	SUPPORT		サポート		
* 21	VK391000	SUPPORT		サポート		
* 22	VJ895500	FRAME A		フレーム		
* 23	VJ895600	FRAME B		フレーム		
* 24	VK434000	SHIELD CASE B		シールドケース B		
* 25	VK434100	PUSHER, TR		TRプッシャー		
* 26	VK839200	PUSHER, TR		TRプッシャー		
* 27	VK678700	SIDE PANEL		サイドパネル		J
* 28	VK492400	SPACER		スペーサ		J
* 29	VK492200	DAMPER A		ダンパーA		
* 30	VK015100	KNOB		ノブ	BL	
* 30	VK015200	KNOB		ノブ	T	
31	VG078900	KNOB		ノブ	BL	
* 31	VJ891400	KNOB		ノブ	T	
32	VG079100	KNOB		ノブ	BL	
* 32	VJ891500	KNOB		ノブ	T	
33	VH816000	BUTTON	3/14	ボタン	BL	
33	VH816100	BUTTON	3/14	ボタン	T	
* 34	VK724100	LEG ASS'y		レッグASSY		
* 35	VK219900	KNOB		ノブ	BL	
* 35	VK220000	KNOB		ノブ	T	
36	Vi707300	DAMPER		ダンパー		G
* 37	VK493300	DAMPER C		ダンパ		
38	CB605620	PLASTIC RIVET	NO.1057	ブラリベット		
* 39	VK421500	LCD		LCD表示器		
* 40	VJ896700	SUB CHASSIS		サブシャーシ		
* 41	VK220300	PAD	LED	パッド		
42	IX801420	TRANSISTOR	2SA1302 O,R	トランジスタ	Q335,353,336	
43	IX801430	TRANSISTOR	2SC3281 O,R	トランジスタ	Q337,354,338	
* 44	VJ892300	SUPPORT	R	サポート		
* 45	VJ892400	SUPPORT	L	サポート		
* 46	VJ892500	SUPPORT	TR	サポート		

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
* 47	VK706700	DAMPER	FIN	ダンパー		
* 48	VJ892100	RADIATOR	L=90	ラジエータ		
* 49	VK065100	SHEET	20x86	シート		
* 50	VK196000	SHEET	22x29	シート		
* 51	VK195900	SHEET	19x24	シート		
52	Vi449800	VOLTAGE SELECTOR	ESE-37284-F	電圧切替器	R	△
* 53	VK015300	GROUND PLATE		アースプレート		
* 54	VK896900	FLAME/PANEL		フレーム/パネル		
55	Vi867800	SPACER	PCB	スペーサ		
56	Ei330066	BIND HEAD TAPPING SCREW	3x6 FCM3-BL	バインドタッピングネジ		
57	EX601090	BW HEAD TAPPING SCREW	3x12 FCM3-BL	BWヘッドタッピングネジ		
* 58	VC077200	SPECIAL SCREW	4x27 FCM3-BR	外装トメネジ	J	
58	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	BWH Sタイトネジ	T	UCRABG
58	EK365090	BW HEAD SCREW	4x8 ZMC2-BL	BWヘッドネジ	BL	UCRABG
59	EX600700	BW HEAD TAPPING SCREW	3x8 FCM3	BWヘッドタッピングネジ		
60	EN301010	BIND HEAD BONDING TAP. SCREW	3x8 FCM3-BL	ボンディングBタイトネジ		
61	Ei330086	BIND HEAD TAPPING SCREW	3x8 FCM3-BL	バインドタッピングネジ		
* 62	VK625000	CUP S-TYTE SCREW	5x10 ZMC2-BL	カップSタイトネジ		
63	ED330066	BIND HEAD SCREW	3x6 FCM3-BL	バインド小ネジ		
64	AA627310	GROUND TERMINAL		GNDターミナル		
65	EV265560	PLAIN WASHER	3.6x10x0.8FNM3-3G	平座金みがき丸		
66	EN335030	BONDING TAP SCREW	3x10 FCM3-BL	ボンディングタップネジ		
67	Ei326066	BIND HEAD TAPPING SCREW	2.6x6 FCM3-BL	バインドタッピングネジ		
68	EV413036	TOOTHED LOCKED WASHER	3MM FCM3-BL	歯付座金		
69	EX600250	CUP TIGHT SCREW	3x10 FCM3-BL	カップタイトネジ		
* 70	VK173200	SCREW	3x15 FCM3	ネジ		
71	CB040540	BINDING TIE	S-72B	束線止め		
* 72	VL055600	DAMPER		ダンパー		
* 73	VL127900	DAMPER		ダンパー		
* 74	VL126500	DAMPER		ダンパー		
	CB069250	BINDING TIE		束線止め		
		ACCESSORIES		付属品		
* 80	VJ979300	REMOTE CONTROL TRANSMITTER		トランスミッター	J	
* 80	VK577300	REMOTE CONTROL TRANSMITTER		トランスミッター	UCRABG	
* 80-1	CX615940	LID		電池蓋		
		DRY CELL	1.5V LR6(2S)NE	アルカリマンガン電池	J,U,C,R,A	
		DRY CELL	1.5V LR6(2S)NER	アルカリマンガン電池	B,G	

*New Parts (新規部品)

ランク : Japan only



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[SWA] [SWB]

1	3	4	5
6	7	8	9
11	12	13	14
16	17	18	19
21	22	23	24
26	28	29	30
2	31	32	33
35	36	38	39
40	41	42	43
45	46	47	48
49	50	51	52
54	55	56	57
58	59	60	
61	62	63	64

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RESET CLEAR

KEY No.	CONTROL CODE		FUNCTION
SW B	1	2	
1	7D8F	←	POWER
2	7A-06	←	DECK A/B
3	—	←	TV
4	—	←	VCR 1
5	—	←	VCR 2
6	7D-8C	←	INPUT TAPE 2 MON
7	7D-8B	←	TAPE 1
8	7D-89	←	TUNER
9	7D-87	←	CD
10	7D-88	←	PHONO
11	7D-8A	←	AUX
12	7D-82	←	VCR 2
13	7D-81	←	VCR 1
14	7D-84	←	TV/DBS
15	7D-83	←	LD
16	—	7C-12	CD/LD SOUND
17	7A-0B	7C-02	SKIP/CHAPTER -
18	7A-0A	7C-03	SKIP/CHAPTER +
19	7A-09	7C-04	PAUSE/STOP
20	7A-08	7C-05	PLAY
21	7A-0A	7C-13	DISPLAY
22	—	7C-0A	STILL ◀
23	—	7C-0B	STILL ▶
24	7A-0D	7C-06	SEARCH ◀◀
25	7A-0C	7C-07	SEARCH ▶▶
26	—	←	TAPE/VCR TV/VCR
27	7D-D7	←	STUDIUM
28	7A-07	←	DIR A
29	7A-00	←	PLAY
30	7A-40	←	TAPE DIR B

KEY No.	CONTROL CODE		FUNCTION
SW B	1	2	
31	—	←	PAUSE
32	7A-01	←	◀◀
33	7A-03	←	STOP
34	7A-02	←	▶▶
35	7D-CA	←	TEST
36	7A-12	←	TUNER/VCR PAGE
37	7D-94	←	MUTING -20dB
38	7A-11	←	-
39	7A-10	←	+
40	7D-CD	←	FRONT LEVEL +
41	7D-D0	←	HALL 1
42	7D-D1	←	HALL 2
43	7D-D2	←	HALL 3
44	7D-D3	←	CHURCH
45	7D-CE	←	FRONT LEVEL -
46	7D-D4	←	ROCK CONCERT
47	7D-D5	←	JAZZ CLUB
48	7D-D6	←	DISCO
49	7D-CB	←	CENTER LEVEL +
50	7D-D8	←	CONCERT VIDEO
51	7D-D9	←	TV THEATER
52	7D-DA	←	MOVIE THEATER
53	7D-DB	←	□ PRO LOGIC
54	7D-CC	←	CENTER LEVEL -
55	7D-C2	←	ON SCREEN
57	7D-8D	←	MASTER VOLUME +
58	7D-C8	←	REAR LEVEL +
61	7D-C9	←	REAR LEVEL -
62	7D-C1	←	EFFECT ON/OFF
64	7D-8E	←	MASTER VOLUME -

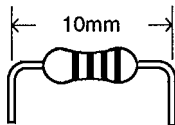
KEY No.	CONTROL CODE		FUNCTION
SW C	PARAMETER	SET MODE	
56	7D-C5	7D-9D	PARAMETER SET MENU ↑
59	7D-C7	7D-9F	PARAMETER SET MENU -
60	7D-C6	7D-9E	PARAMETER SET MENU +
63	7D-C4	7D-9C	PARAMETER SET MENU ↓

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	12 K Ω	HJ35 7120	HF85 7120
1.8 Ω	HJ35 3180	*	15 K Ω	HJ35 7150	HF85 7150
2.2 Ω	HJ35 3220	HF85 3220	18 K Ω	HJ35 7180	HF85 7180
3.3 Ω	HJ35 3330	HF85 3330	22 K Ω	HJ35 7220	HF85 7220
4.7 Ω	HJ35 3470	HF85 3470	27 K Ω	HJ35 7270	HF85 7270
5.6 Ω	HJ35 3560	HF85 3560	33 K Ω	HJ35 7330	HF85 7330
10 Ω	HJ35 4100	HF85 4100	39 K Ω	HJ35 7390	HF85 7390
15 Ω	HJ35 4150	HF85 4150	47 K Ω	HJ35 7470	HF85 7470
22 Ω	HJ35 4220	HF85 4220	56 K Ω	HJ35 7560	HF85 7560
27 Ω	HJ35 4270	HF85 4270	68 K Ω	HJ35 7680	HF85 7680
33 Ω	HJ35 4330	HF85 4330	82 K Ω	HJ35 7820	HF85 7820
39 Ω	HJ35 4390	HF85 4390	91 K Ω	HJ35 7910	HF85 7910
47 Ω	HJ35 4470	HF85 4470	100 K Ω	HJ35 8100	HF85 8100
56 Ω	HJ35 4560	HF85 4560	120 K Ω	HJ35 8120	HF85 8120
68 Ω	HJ35 4680	HF85 4680	150 K Ω	HJ35 8150	HF85 8150
82 Ω	HJ35 4820	HF85 4820	180 K Ω	HJ35 8180	HF85 8180
100 Ω	HJ35 5100	HF85 5100	220 K Ω	HJ35 8220	HF85 8220
110 Ω	HJ35 5110	HF85 5110	270 K Ω	HJ35 8270	HF85 8270
120 Ω	HJ35 5120	HF85 5120	330 K Ω	HJ35 8330	HF85 8330
150 Ω	HJ35 5150	HF85 5150	390 K Ω	HJ35 8390	HF85 8390
160 Ω	HJ35 5160	*	470 K Ω	HJ35 8470	HF85 8470
180 Ω	HJ35 5180	HF85 5180	560 K Ω	HJ35 8560	HF85 8560
220 Ω	HJ35 5220	HF85 5220	680 K Ω	HJ35 8680	HF85 8680
270 Ω	HJ35 5270	HF85 5270	820 K Ω	HJ35 8820	HF85 8820
330 Ω	HJ35 5330	HF85 5330	1.0 M Ω	HJ35 9100	HF85 9100
390 Ω	HJ35 5390	HF85 5390	1.2 M Ω	HJ35 9120	*
470 Ω	HJ35 5470	HF85 5470	1.5 M Ω	HJ35 9150	HF85 9150
510 Ω	*	HF85 5510	1.8 M Ω	HJ35 9180	HF85 9180
560 Ω	HJ35 5560	HF85 5560	2.2 M Ω	HJ35 9220	HF85 9220
680 Ω	HJ35 5680	HF85 5680	3.3 M Ω	HJ35 9330	HF85 9330
820 Ω	HJ35 5820	HF85 5820	3.9 M Ω	HJ35 9390	*
910 Ω	HJ35 5910	HF85 5910	4.7 M Ω	HJ35 9470	HF85 9470
1.0 K Ω	HJ35 6100	HF85 6100			
1.2 K Ω	HJ35 6120	HF85 6120			
1.5 K Ω	HJ35 6150	HF85 6150			
1.8 K Ω	HJ35 6180	HF85 6180			
2.0 K Ω	HJ35 6200	HF85 6200			
2.2 K Ω	HJ35 6220	HF85 6220			
2.4 K Ω	HJ35 6240	HF85 6240			
2.7 K Ω	HJ35 6270	HF85 6270			
3.0 K Ω	HJ35 6300	HF85 6300			
3.3 K Ω	HJ35 6330	HF85 6330			
3.6 K Ω	HJ35 6360	HF85 6360			
3.9 K Ω	HJ35 6390	HF85 6390			
4.7 K Ω	HJ35 6470	HF85 6470			
5.1 K Ω	HJ35 6510	HF85 6510			
5.6 K Ω	HJ35 6560	HF85 6560			
6.8 K Ω	HJ35 6680	HF85 6680			
8.2 K Ω	HJ35 6820	HF85 6820			
9.1 K Ω	HJ35 6910	HF85 6910			
10 K Ω	HJ35 7100	HF85 7100			

1/4W Type

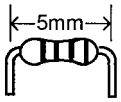
HJ35 ○○○○



10mm

1/6W Type

HF85 ○○○○



5mm