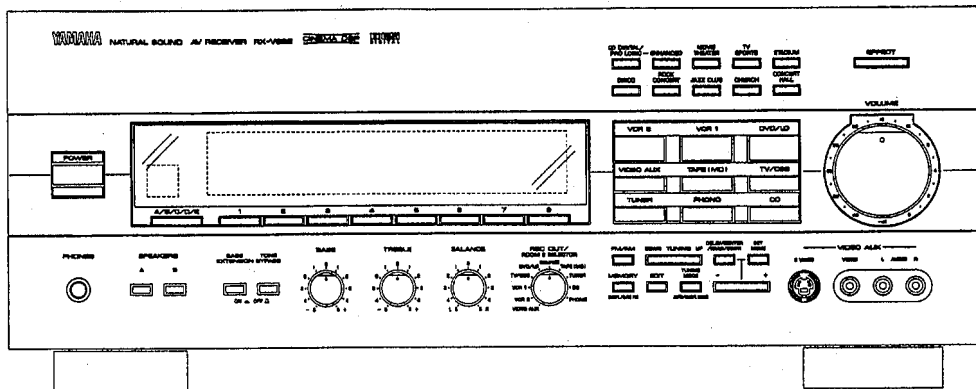
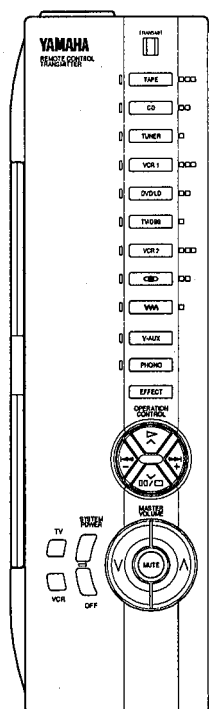


AV RECEIVER RX-V992

SERVICE MANUAL

RX-V992



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 any 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 part replacement. Recheck all work before you apply power to the unit.

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100583

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

1.74K-6421 Printed in Japan '97.7

■ TO SERVICE PERSONNEL

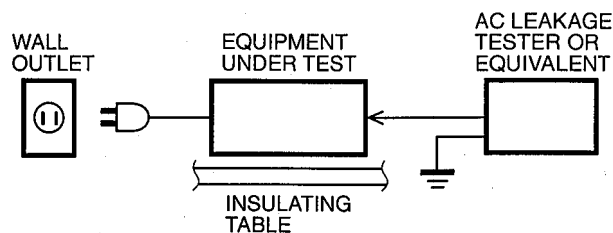
1. Critical Components Information.

Components having special characteristics are marked $\triangle$ 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.



"CAUTION"

"F303 : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 12A, 250V FUSE."

CAUTION

F303 : REPLACE WITH SAME TYPE 12A, 250V FUSE.

ATTENTION

F303 : UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE DE 12A, 250V.

WARNING: CHEMICAL CONTENT NOTICE!

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.

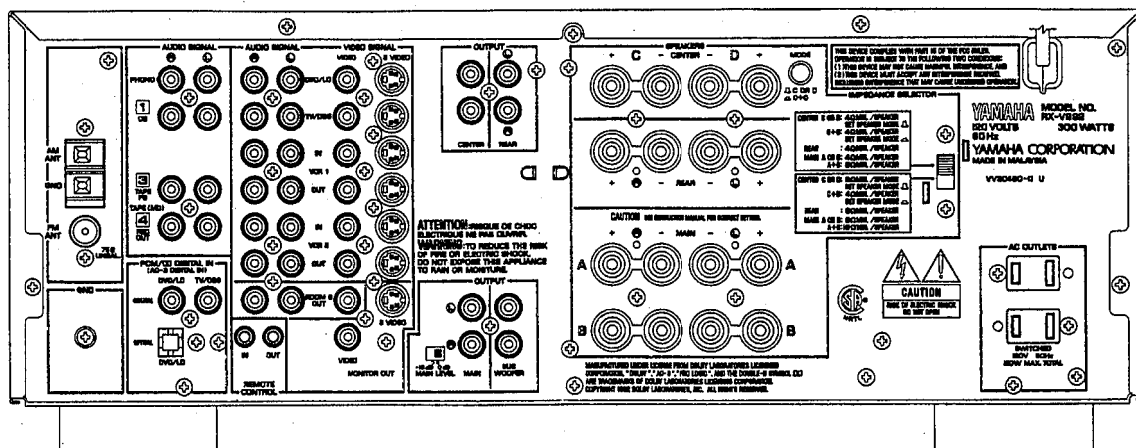
DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

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

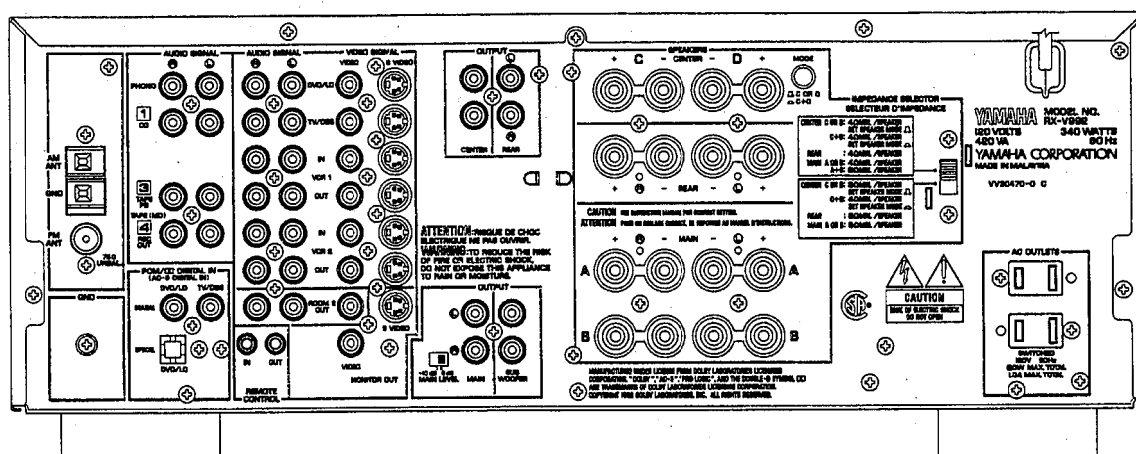
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

REAR PANELS

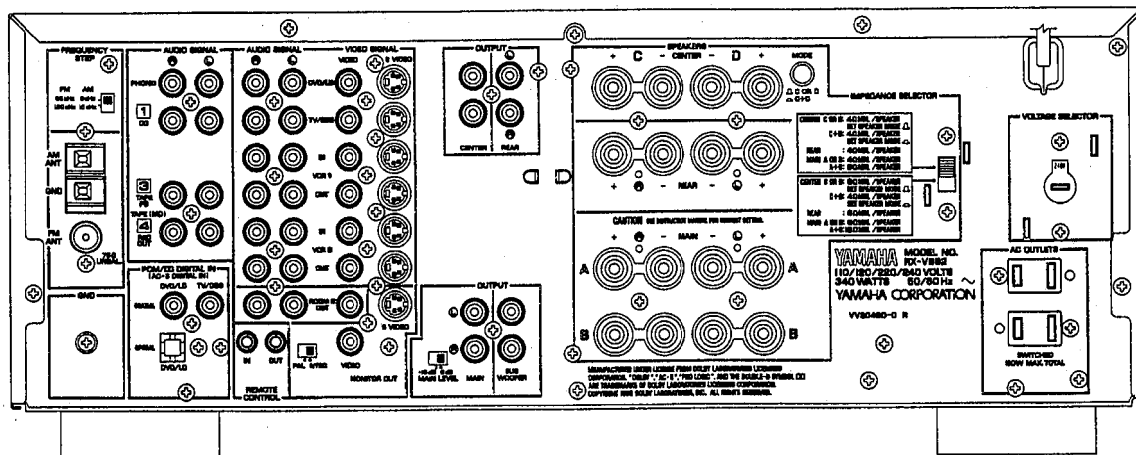
▼ U model



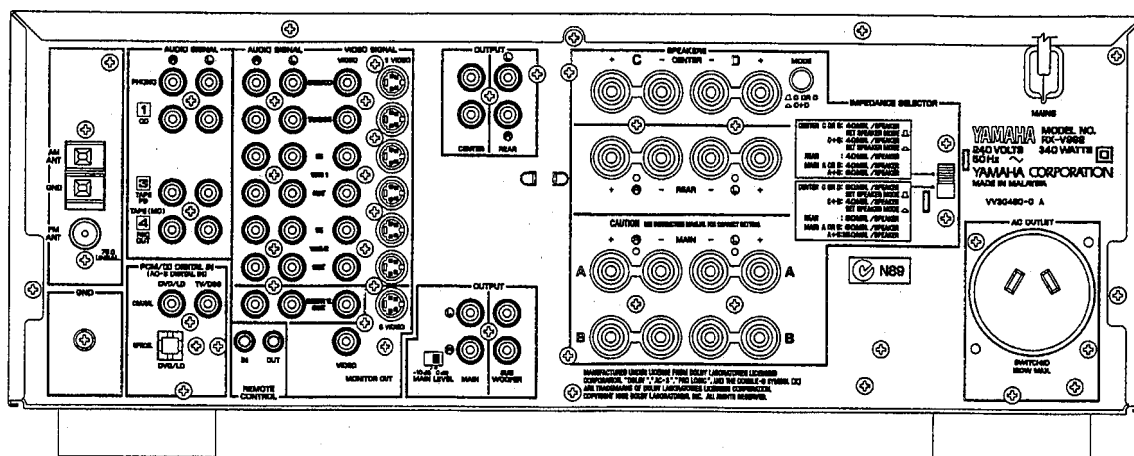
▼ C model



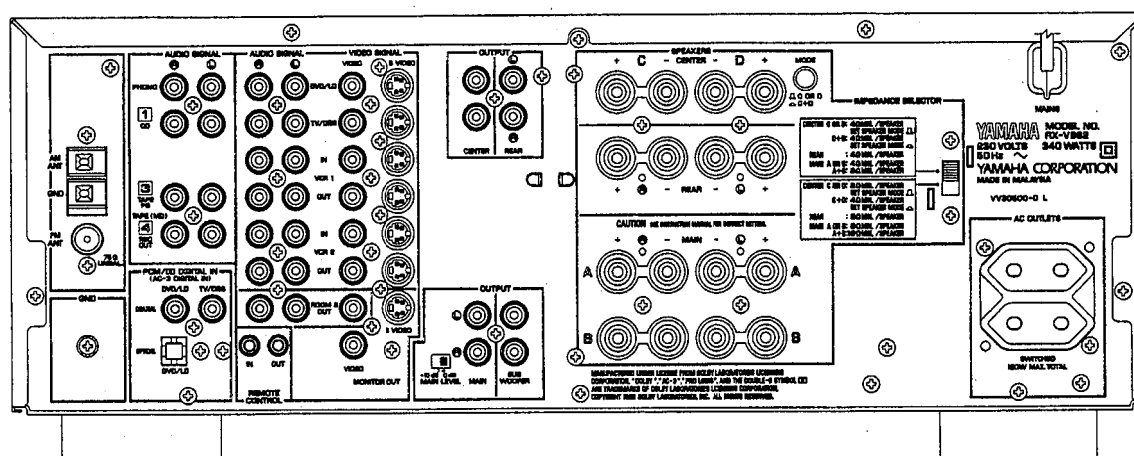
▼ R model



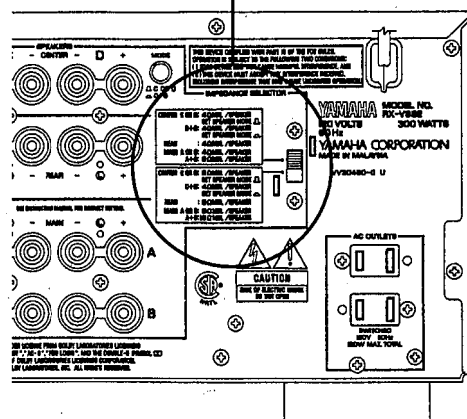
▼ A model



▼ L model

**WARNING**

Do not change the IMPEDANCE SELECTOR switch setting while the power to this unit is on, otherwise this unit may be damaged.

IMPEDANCE SELECTOR

SPECIFICATIONS

AUDIO SECTION

Minimum RMS Output Power per Channel	
MAIN, 20Hz to 20kHz, 0.04% THD, 8Ω	80W
CENTER, 20Hz to 20kHz, 0.07% THD, 8Ω	80W
REAR, 1kHz, 0.3% THD, 8Ω	80W
Maximum Power per Channel (R model only)	
MAIN, 1kHz, EIAJ, 10% THD, 8Ω	128W
Dynamic Power per Channel (IHF)	
MAIN, 8/6/4/2Ω	130/160/200/240W
Dynamic Headroom (U, C, models only)	
8Ω	2.11dB
Power Band Width	
MAIN, 0.09% THD, 40W/8Ω	10Hz to 50kHz
Damping Factor	
MAIN, 20Hz to 20kHz, 8Ω	160 or more
Input Sensitivity/Impedance	
PHONO MM	2.5mV/47kΩ
CD, etc	150mV/47kΩ
Maximum Input Signal Level	
PHONO MM, 1kHz, 0.04% THD	110mV
CD, etc, 1kHz, 0.5% THD (Effect on)	2.3V
Output Level/Impedance	
REC OUT	150mV/2.7kΩ
PRE OUT (MAIN)	2.6V/1.1kΩ
ROOM 2 OUT	150mV/1.5kΩ
SUB WOOFER (MAIN SP : SMALL)	4.0V/1.2kΩ
Headphone Jack Rated Output/Impedance	
1kHz, 150mV, 8Ω	0.5V/390Ω
Frequency Response (20Hz to 20kHz)	
CD, etc, MAIN	0±0.5dB
RIAA Equalization Deviation (20Hz to 20kHz)	
PHONO MM	0±0.5dB
Total Harmonic Distortion (20Hz to 20kHz)	
PHONO MM to REC OUT (1V)	0.02%
CD, etc to MAIN SP OUT (40W/8Ω)	0.025%
Signal-to-Noise Ratio (IHF-A-Network)	
PHONO MM, Input Shorted (5mV) REC OUT	86dB
CD, etc, Input Shorted, SP OUT (Effect off)	96dB
Residual Noise (IHF-A-Network)	
MAIN, SP OUT	170μV
Channel Separation (Vol. -30dB, Effect off)	
PHONO MM, Input Shorted, 1kHz/10kHz	60dB/55dB
CD, etc, Input 5.1kΩ Shorted, 1kHz/10kHz	60dB/45dB
Tone Control Characteristics	
BASS : Boost/cut	±10dB (50Hz)
Turnover Frequency	350Hz
TREBLE : Boost/cut	±10dB (20kHz)
Turnover Frequency	3.5kHz
Filter Characteristics	
MAIN, REAR SP SMALL : H.P.F.	fc = 90Hz, 12dB/oct.
SUB WOOFER : L.P.F.	fc = 90Hz, 24dB/oct.
Bass Extension	
	+6dB (50Hz)
Muting	
	- ∞
Gain Tracking Error (0dB to -60dB)	
	3dB
Tuner Output Level/Impedance	
FM (100% mod.)	
1kHz U, C, R models	500mV/2.2kΩ
40kHz Dev. A, L models	400mV/2.2kΩ
AM (30% mod. 1kHz)	150mV/2.2kΩ

FM SECTION

Tuning Range	
U, C models	87.5 to 107.9MHz
A, L models	87.50 to 108.00MHz
R model	87.5 to 107.9/87.50 to 108.00MHz
50dB Quieting Sensitivity (IHF, 75 Ω)	
Mono	1.55μV (15.1dBf)
Stereo	21μV (37.7dBf)
Image Response Ratio	
U, C, R models	45dB
A, L models	80dB
IF Response Ratio	
U, C, R models	70dB
A, L models	80dB
Spurious Response Ratio	
	70dB
AM Suppression Ratio	
	55dB
Capture Ratio	
	1.5dB
Alternate Channel Selectivity	
U, C, R models	85dB
Selectivity (two signals, 40kHz Dev.)	
A, L models	70dB
Signal-to-Noise Ratio	
Mono/Stereo (IHF)	
U, C, R models	80/75dB
Mono/Stereo (DIN-weighted, 40kHz Dev.)	
A, L models	75/70dB
Harmonic Distortion	
Mono/Stereo (1kHz)	
	0.1/0.2%
Stereo Separation	
1kHz	50dB
Frequency Response	
20Hz to 15kHz	0±1.5dB

AM SECTION

Tuning Range	
U, C models	530 to 1,710kHz
A, L models	531 to 1,611kHz
R model	530 to 1,710/531 to 1,611kHz
Usable Sensitivity	
	100μV/m
Selectivity	
	32dB
Signal-to-Noise Ratio	
	50dB
Image Response Ratio	
	40dB
Spurious Response Ratio	
	50dB
Harmonic Distortion (1kHz)	
	0.3%

VIDEO SECTION

Video Signal Type

U, C models	NTSC
A, L models	PAL
R model	NTSC/PAL

Video Signal Level 1Vp-p/75Ω

S-Video Signal Level

Y	1Vp-p/75Ω
C	0.286Vp-p/75Ω

Maximum Input Level 1.5Vp-p

Signal-to-Noise Ratio 50dB

Monitor Output Frequency Response .. 5Hz~10MHz, -3dB

GENERAL

Power Supply

U, C models	AC 120V, 60Hz
A model	AC 240V, 50Hz
L model	AC 230V, 50Hz
R model	AC 110/120/220/240V, 50/60Hz

Power Consumption

U model	300W
C model	340W/420VA
A, L, R models	340W

Maximum Power Consumption (R model only) 700W

AC Outlets

U, C, L, R models, Switched x 2	120W max (Total)
A model, Switched x 1	120W max

Dimensions (W x H x D) 435 x 171 x 391mm
(17-1/8" x 6-3/4" x 15-3/8")

Weight 13.8 kg (30 lbs 6oz)

Accessories

AM loop antenna	x 1
Indoor FM antenna	x 1
Remote Control Transmitter	x 1
Battery (size "AA", "R06")	x 2

* Specifications subject to change without notice.

U USA model

C Canadian model

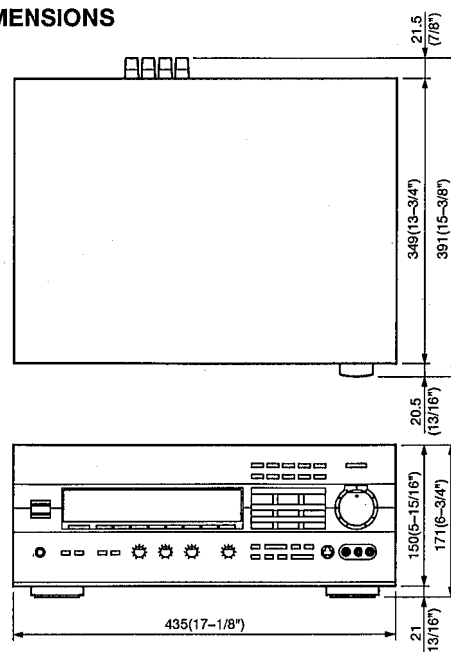
A Australian model

L Singapore model

R General model

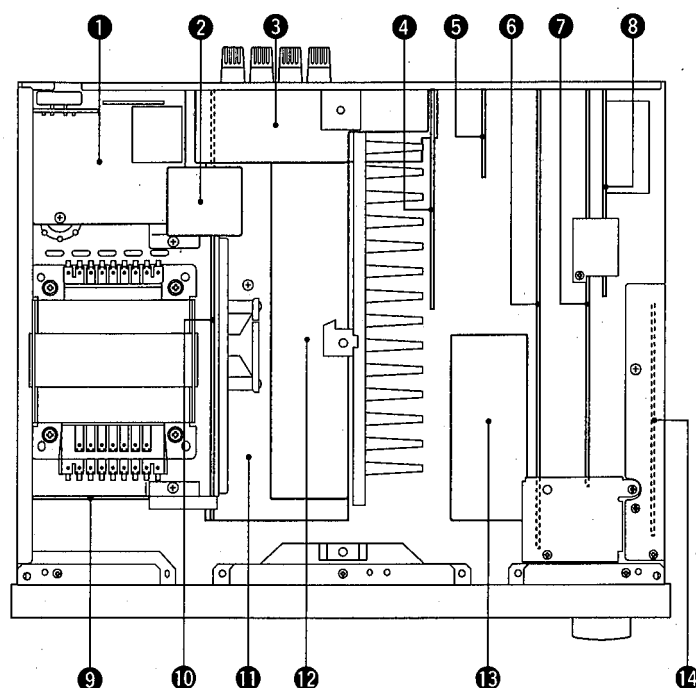
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DIMENSIONS



Units : mm (inch)

INTERNAL VIEW



- ① P. C. B. OPERATION (2)
- ② P. C. B. MAIN (7)
- ③ P. C. B. OPERATION (3)
- ④ P. C. B. VIDEO (1)
- ⑤ P. C. B. VIDEO (2)
- ⑥ P. C. B. FUNCTION (1)
- ⑦ P. C. B. FUNCTION (2)
- ⑧ P. C. B. TUNER
- ⑨ P. C. B. VIDEO (8)
- ⑩ P. C. B. MAIN (4)
- ⑪ P. C. B. MAIN (1)
- ⑫ P. C. B. MAIN (5)
- ⑬ P. C. B. VIDEO (9)
- ⑭ P. C. B. DSP

DISASSEMBLY PROCEDURES (Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- a. Remove 4 screws (①), 4 screws (②) and 2 screws (③) in Fig. 1.

2. Removal of Bottom Cover

- a. Remove 6 screws (④) in Fig. 1.

3. Removal of Front Panel

- a. Remove 5 knobs.
b. Remove 6 screws (⑤) in Fig. 1.

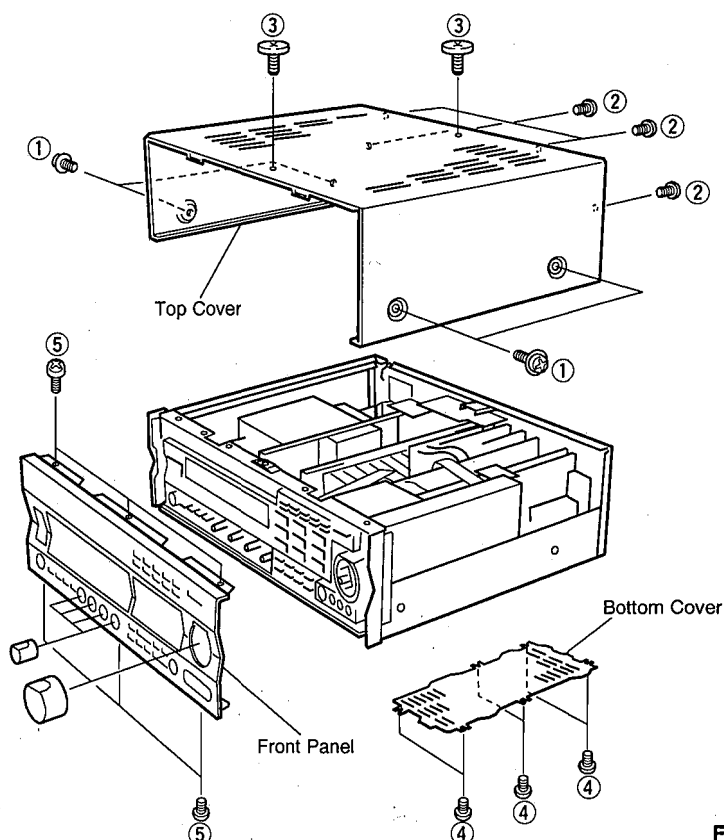


Fig. 1

■ SELF DIAGNOSIS FUNCTION

1. PURPOSE AND OPERATION

The RX-V992 has a Self Diagnosis Function to locate a faulty part, if any, by inspecting and taking measurements.

There are 15 main items in the diagnostic menu and some of them have sub-menu items as listed below.

No.	MAIN MENU	SUB MENU	CONTENTS
1	THROUGH	---	7ch. THROUGH
2	FRONT THROUGH	---	DIGITAL PS-RAM THR. FRONT MIX ON(5ch.)
3	PRO LOGIC	1. CENTER WIDE 2. CENTER NORMAL 3. CENTER PHANTOM 4. EFFECT OFF	PRO LOGIC PRO LOGIC PRO LOGIC ANALOG L/R THROUGH
4	AC3 THROUGH	---	
5	MANUAL TEST	1. TEST LEFT 2. TEST CENTER 3. TEST RIGHT 4. TEST RIGHT SUR. 5. TEST LEFT SUR. 6. TEST LFE 7. TEST FRONT LEFT 8. TEST FRONT RIGHT 9. TEST ALL	TEST NOISE TEST NOISE TEST NOISE TEST NOISE TEST NOISE TEST NOISE TEST NOISE TEST NOISE TEST NOISE 5ch. ALL
6	DISPLAY/EFFECT OFF	1. EFFECT OFF 2. VFD ALL 3. VFD OFF	ANALOG L/R THROUGH ANALOG L/R THROUGH ANALOG L/R THROUGH
7	FACTORY PRESET	1. KEEP DATA 2. FACTORY PRESET	KEEP LAST CONDITION KEEP as from FACTORY
8	AD DATA CHECK	1. KEY(CH0 - CH4) 2. PROTECTION/THERMO 3. SW/REC OUT/METER	SAME as MENU No.1 SAME as MENU No.1 SAME as MENU No.1
9	VERSION INFORMATION	1. MODEL/MARKET 2. ROM(PROGRAM)	KEEP LAST CONDITION KEEP LAST CONDITION
10	MENU EXIT & DEMO	1->2 DEMO DISPLAY	---
11	DSP STATES	1. PORT/FS/AC3 MODE 2. SUB-CODE	KEEP LAST CONDITION KEEP LAST CONDITION
12	CENTER SPEAKER	1. CENTER WIDE 2. CENTER NORMAL 3. CENTER PHANTOM	KEEP LAST CONDITION KEEP LAST CONDITION KEEP LAST CONDITION
13	REAR SPEAKER	1. REAR LARGE 2. REAR SMALL	KEEP LAST CONDITION KEEP LAST CONDITION
14	MAIN SPEAKER	1. MAIN LARGE 2. MAIN SMALL	KEEP LAST CONDITION KEEP LAST CONDITION
15	LFE/BASS OUT	1. BASS SUB WOOFER 2. BASS MAIN 3. BASS BOTH	KEEP LAST CONDITION KEEP LAST CONDITION KEEP LAST CONDITION

2. STARTING DIAGNOSIS FUNCTION

(1) Starting diagnosis function

A. Starting the program

Turn on the power while pressing the "VCR2" key and "VIDEO AUX" key on the front panel of the main unit simultaneously, and the diagnostic program will start.

After the program has started, execute the diagnostic menu No.1.

B. Settings for start-up of diagnostic program

The settings used when starting the diagnostic program are as follows.

1. EFFECT LEVEL :

CHANNEL	CENTER	REAR	SWFR	LFE
LEVEL (dB)	0	0	0	0

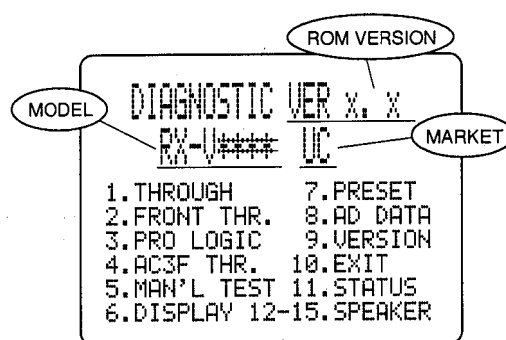
2. SPEAKER RELAY A/B : ON
3. MUTING : OFF
4. INPUT (VIDEO) : DVD/LD (DVD/LD)
5. CENTER SPEAKER : WIDE
6. REAR SPEAKER : LARGE
7. MAIN SPEAKER : LARGE
8. LFE/BASS OUT : SWFR

C. Start-up display

The diagnostic menu list appears on the monitor screen and the information of the protection function appears on the front panel display of the main unit.

● Monitor display

The version information including the list of diagnostic menu items, the model, the applicable market and the ROM version appear on the monitor display. For details of the version information, refer to (9) Version under 5. CONTENTS OF DIAGNOSIS FUNCTION.



<MONITOR DISPLAY>

● FL display at start-up of diagnostic program

When the diagnostic program has started, the history (*2) of the protection function (*1) is displayed. If the protection function has been activated in the past, the type and voltage value are displayed and after a few seconds the diagnosis function menu will appear.

(*1) If some faulty condition is detected in the excess current, the power source or the DC, the power will be turned off automatically.

(*2) To clear the history of the protection function, select "PRESET DAT" in the diagnosis menu No.7 as described later.

● History of protection function

Each case of the history of the protection function is displayed as shown below.

1 DVD/LD *NO PROTEC*

The protection function has not been activated.

1 DVD/LD *I PROTEC*

The protection function has been activated due to an overcurrent. In this state, even if the power is turned on, it will turn off immediately.

1 DVD/LD *PS PRT : 0*

The protection function has been activated due to an abnormality in the power supply. In this state, even if the power is turned on, it will turn off after 0.5 second. The reduced level of the power is indicated in the AD value. For more information on this value, refer to 5. CONTENTS OF DIAGNOSIS FUNCTION in the later section.

1 DVD/LD *DC PRT : 0*

The protection function has been activated due to a cause in the DC. In this state, even if the power is turned on, it will turn off after 2 seconds. The reduced level of the power is indicated in the AD value. For more information on this value, refer to 5. CONTENTS OF DIAGNOSIS FUNCTION in the later section.

3. OPERATION AND DISPLAY WHEN STARTING DIAGNOSIS FUNCTION

(1) Selection of diagnostic menu

The diagnostic menu and the sub-menu can be selected by using the front panel keys of the main unit or the remote control unit.

● Selection by using the front panel keys

Use the "TUNING UP DOWN" key to select the diagnostic menu and the "SET MENU" key to select the sub-menu.

● Selection by using the remote control unit

The diagnostic menu items No.1 through No.10 correspond to the sound field program keys No. 1 through No.10 and No.11 to the "EFFECT" key. The sub-menu changes at every push of the same key.

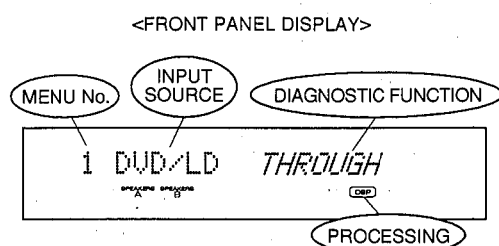
It is possible to call the sub-menu of other than the above diagnostic menu items. Refer to the table below for the key corresponding to each diagnostic menu item.

No.	MAIN MENU	REMOTE CONTROL KEYS
1	THROUGH	PRO LOGIC/DOLBY DIGITAL
2	FRONT THROUGH	ENHANCED
3	PRO LOGIC	MOVIE THEATER
4	AC3F THROUGH	TV SPORTS
5	MANUAL TEST	STADIUM
6	DISPLAY/EFFECT OFF	DISCO
7	FACTORY PRESET	ROCK CONCERT
8	AD DATA CHECK	JAZZ CLUB
9	VERSION INFORMATION	CHURCH
10	MENU EXIT & DEMO	CONCERT HALL
11	DSP STATES	EFFECT

No.	MAIN MENU	SUB MENU	REMOTE CONTROL KEY
1	THROUGH	---	TAPE PLAY
2	FRONT THROUGH	---	TAPE ◀◀
3	PRO LOGIC	2. CENTER NORMAL	TAPE ▶▶
4	AC3F THROUGH	---	TAPE STOP
5	MANUAL TEST	9. TEST ALL	TAPE REC
6	DISPLAY/EFFECT OFF	2. VFD ALL/EFFECT OFF	TAPE A/B
12	CENTER SPEAKER	1. CENTER WIDE 2. CENTER NORMAL 3. CENTER PHANTOM	TAPE DIRA CD PLAY CD PAUSE
13	REAR SPEAKER	1. REAR LARGE 2. REAR SMALL	CD ▶▶ CD ◀◀
14	MAIN SPEAKER	1. MAIN LARGE 2. MAIN SMALL	CD ▶▶ CD ◀◀
15	LFE/BASS OUT	1. BASS SUB WOOFER 2. BASS MAIN 3. BASS BOTH	PRESET + PRESET - A/B/C/D/E

(2) Menu display

The contents of the diagnostic function are displayed on the display panel.



(3) Other functions available while diagnosis function at work

Listed below are the other functions available while the diagnosis function is working.

- Selecting input source
- Adjusting effect level
- Adjusting master volume
- Muting on/ off
- Turning power off
- Selecting input source of ROOM 2

4. CANCELING DIAGNOSIS FUNCTION

To cancel the diagnosis function, turn off the power. When the power is turned on the next time, the normal mode will start.

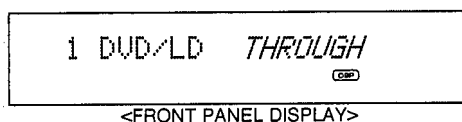
* When the diagnosis mode is canceled by using the diagnostic menu No.10 and set back to the normal mode, the photographing mode will appear on the front panel display. When the input is set to the "TUNER", all the segments of the tuning meter will light up. Also, when it is set to DVD/LD or TV/DBS, the display will be the same as when an AC3 signal is input.

5. CONTENTS OF DIAGNOSIS FUNCTION

This section describes the contents of the self diagnosis function in detail. Here the output channel names and the IC names are referred to as follows.

Main L	-> L	Main R	-> R	Center	-> C
Front L/R	-> FL/FR	Rear L/R	-> RL/RR	LFE	-> LFE
YSS245F	-> HL3	YSS243F	-> AC3F		

(1) THROUGH



There are two signal passages, one is for the analog input signal and the other is for the digital input signal. They are switched from one to the other automatically with a priority placed for the digital signal over the analog signal. When digital signals are input, the digital optical input has a priority over the digital coaxial input.

● Digital signal passage

<DOLBY DIGITAL>

- The signals from L, R, C and LFE are output through the AC3F.
- The signals from RL/RR are output through the AC3F and then the DSP section of HL3 as the L/R signals.

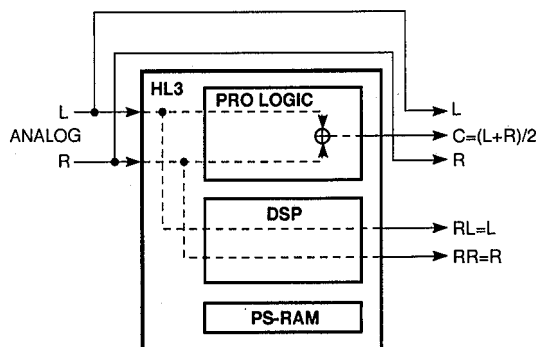
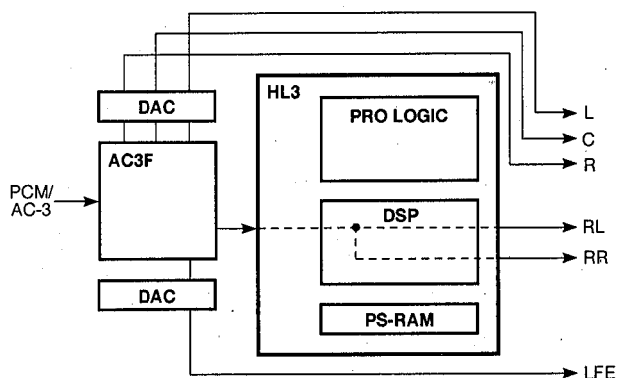
<PCM DIGITAL>

- The signals from L/R and C/LFE are output through the AC3F as the L/R signals.
- The signals from RL/RR are output through the AC3F and then the DSP section of HL3 as the L/R signals.

● Analog signal passage

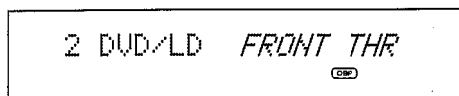
(when there is no digital signal input)

- The signals from L/R are output through the analog bypass.
- The signals from C are output through the PRO LOGIC section of HL3 as $(L + R)/2$.
- The signals from RL/RR are output through the DSP section of HL3 as the L/R signals.



(2) FRONT THROUGH

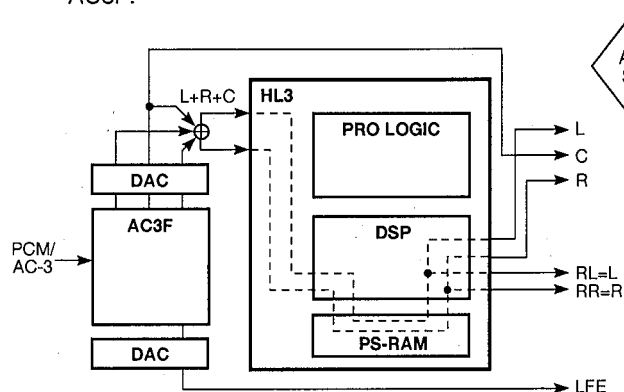
<FRONT PANEL DISPLAY>



There are two signal passages, one is for the analog input signal and the other is for the digital input signal. They are switched from one to the other automatically with a priority placed for the digital signal over the analog signal. When digital signals are input, the digital optical input has a priority over the digital coaxial input.

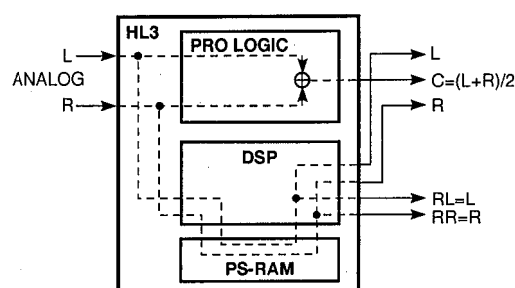
● Digital signal passage

- The signals from L, R, RL and RR are output through the DSP section of AC3F to HL3 as the L+R+C signal respectively.
- The signals from C and LFE are output through the AC3F.


● Analog signal passage

(when there is no digital signal input)

- The signals from L, R, RL and RR are output through the DSP section of HL3.
- The signals from C are output through the PRO LOGIC section of HL3 as $(L+R)/2$.



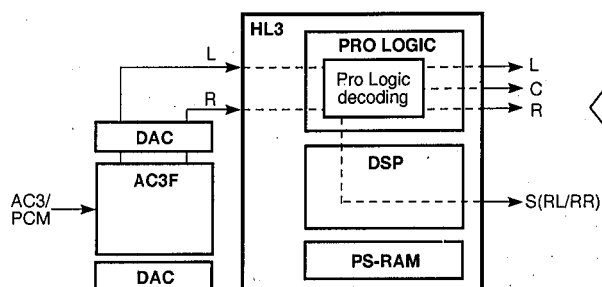
(3) PRO LOGIC

<FRONT PANEL DISPLAY>

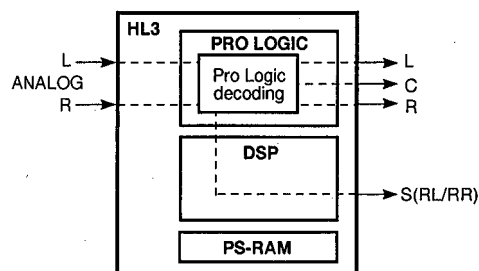
3 DVD/LD P.LGC WIDE

The PRO LOGIC function is activated when the AUTO INPUT BALANCE function is turned off. The digital and analog switching is available automatically with a priority placed for the digital signal over the analog signal. When digital signals are input, the digital optical input has a priority over the digital coaxial input.

● PRO LOGIC for digital signal

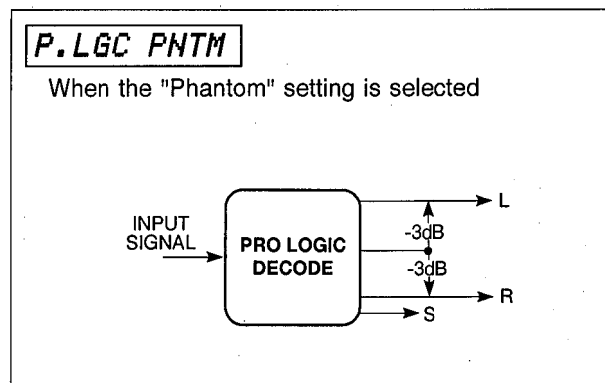
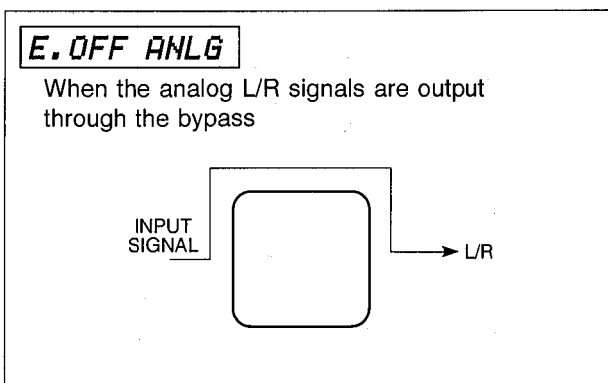
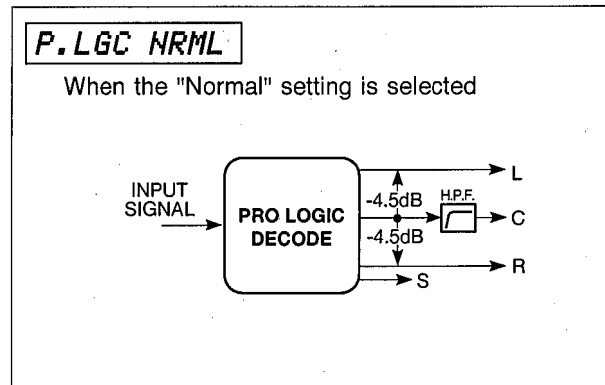
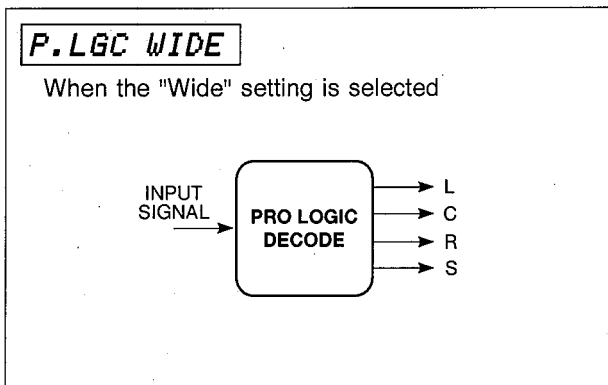


● PRO LOGIC for analog signal



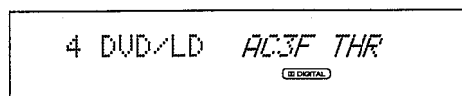
○ Sub-menu

The following 4 settings are selectable; "Normal", "Wide" and "Phantom" of the center speaker and the "Effect off" (for the analog output only).



(4) AC3F THROUGH

<FRONT PANEL DISPLAY>



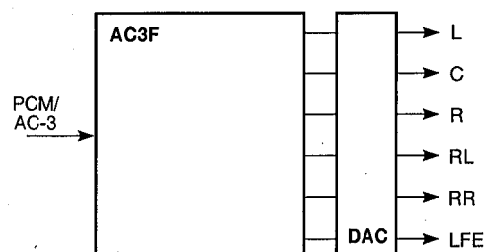
The signals from all the channels are output through the AC3F and the analog input signals are muted.

<DOLBY DIGITAL>

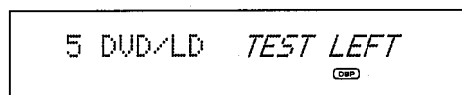
The Dolby digital signals from L, R, RL, RR, C and LFE are output through the AC3F.

<PCM DIGITAL>

The PCM digital signals input as L/R signals are output to L/R, C/LFE and RL/RR channels respectively.

**(5) MANUAL TEST TONE**

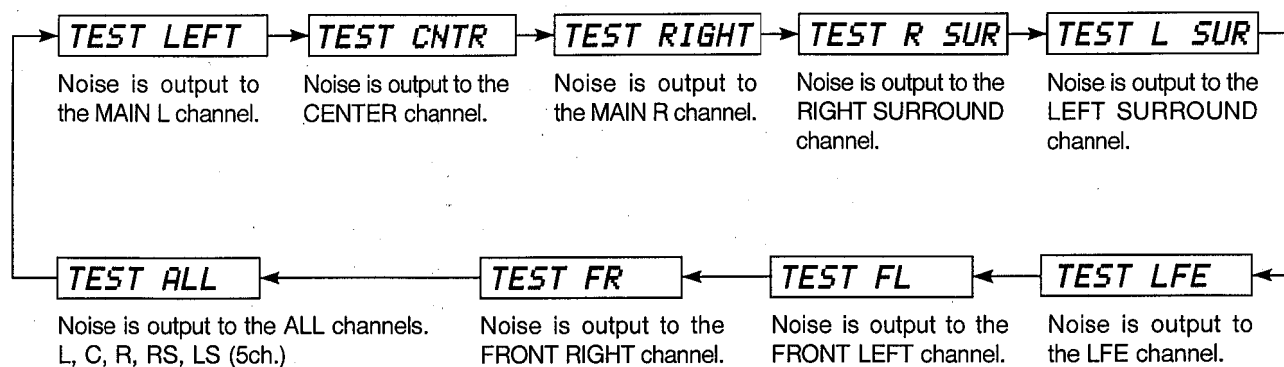
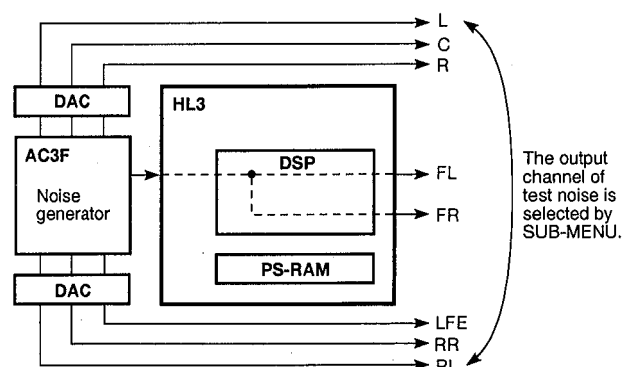
<FRONT PANEL DISPLAY>



The test noise generated by the noise generator built into the DSP is output to the channel selected by the sub-menu.

○ Sub-menu

Select the channel for the test noise output in the sequence order as shown below.



<FRONT PANEL DISPLAY>

With the model that has VFD check and the standby functions, perform the standby LED check to check the VFD driver and segments for operation. At this time, the signals from the main L/R channels are output through the analog bypass and the effect channel is muted.

Either all the segments of VFD on or off can be selected. With the model that has a standby function, the LED lights up while selecting a menu.



Date	Description	Amount	Balance	Total

All the segments of VFD turn off.

<FRONT PANEL DISPLAY>

This menu is used to reserve whether or not to set the back-up data for the effect level, delay time and so on to the factory preset state.

The back-up data is not initialized. To keep the data set by the user, check that this mode has been selected and cancel the self diagnosis function.



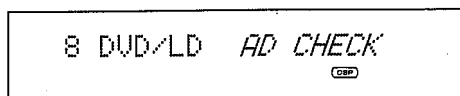
When the self diagnosis function is canceled, the back-up data is initialized to the factory preset state. For the contents of the initialization, refer to page 23.

CAUTION : Before setting to the PRESET DATA, write down the existing preset memory contents of the Tuner in a table as shown below. (This is because setting to the PRESET DATA will cause the memory contents to be as factory set, i.e., all the preset memory by the user will be erased.)

Page	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

(8) AD CONVERSION DATA

<FRONT PANEL DISPLAY>

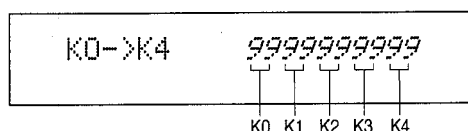


This menu is used to check the AD input port of the CPU and the resistance value to divide the voltage. The AD conversion data detected by the software is displayed in percentage in term of 5V as 100%. The signal processing content is the "THROUGH" passage of the diagnostic menu No.1.

- * When the AD value deviates from the standard value by $\pm 4\%$, normal operation will not be available. In such a case, check the partial pressure resistance constant, soldering condition, etc.

○ Sub-menu

Using this menu, it is possible to check the AD value of the Input, Rec Out, Protection, Temperature Detection (not used), PAL/NTSC switch, Frequency select switch (R model) signal meter in the tuner section. While the AD value is displayed, only selection of the diagnosis menu, turning off the power and cancellation of the diagnosis function are available.



The AD value detected when the front panel key is pressed is displayed in percentage. The AD values are assigned to the keys at 10% intervals as shown in the tables below.

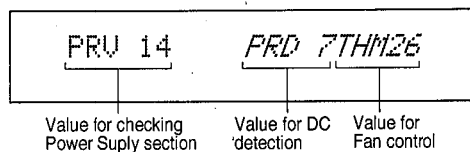
- * For the keys in the parentheses in the tables below, no AD values are assigned. They are used to select the sub menus.

AD value	90% (4.5V)	80% (4.0V)	70% (3.5V)	60% (3.0V)	50% (2.5V)
K0	MEMORY	EDIT	TUNING MODE	FM/AM	TUNING DOWN
K1			SPEAKER A	SPEAKER B	A/B/C/D/E
K2				EFFECT	PRO LOGIC
K3		PRESET 6	PRESET 7	PRESET 8	TUNER
K4				ROCK CONCERT	JAZZ CLUB

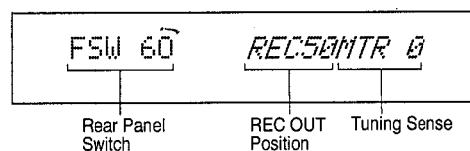
AD value	40% (2.0V)	30% (1.5V)	20% (1.0V)	10% (0.5V)	0% (0.0V)
K0	TUNING UP	DLY/LVL	DLY/LVL -	DLY/LVL +	SET MENU
K1	PRESET 1	PRESET 2	PRESET 3	PRESET 4	PRESET 5
K2	ENHANCED	MOVE THEATER	TV SPORTS	STADIUM	DISCO
K3	PHONO	CD	V-AUX	TV/DBS	TAPE
K4	CHURCH	CONCERT HALL	VCR2	VCR1	DVD/LD

PRESET : PRESET STATION
DLY/LVL : DELAY TIME / SP LEVEL





- **PRV** : The PRV value shows whether the supplied power voltage is correct or not. The voltage range for the normal operation is from 9 to 19. If the voltage exceeds this range, the protection function will be activated to turn off the power automatically.
- **PRD** : The PRD value shows whether there is an excessive DC output or not. The output range for the normal operation is from 2 to 13. If the voltage exceeds this range, the protection function will be activated to turn off the power automatically.
- **THM** : The THM value shows the detected heat sink temperature. [THM 0] is meaningless and therefore should be ignored.



- **FSW** : The FSW value shows the position of the rear panel switches such as the FREQUENCY STEP select switch (for the R model) , the PAL/NTSC select switch (for the R model).

FREQUENCT STEP	PAL/NTSC	VOLTAGE	AD VALUE
10kHz	NTSC	0.5V	10%
10kHz	PAL	1.5V	30%
9kHz	NTSC	2.5V	50%
9kHz	PAL	3.5V	70%

- **REC** : The REC value shows the REC OUT position in percentage at 10% intervals.
- **MTR** : The MTR value shows the signal sensitivity of the tuner in percentage.

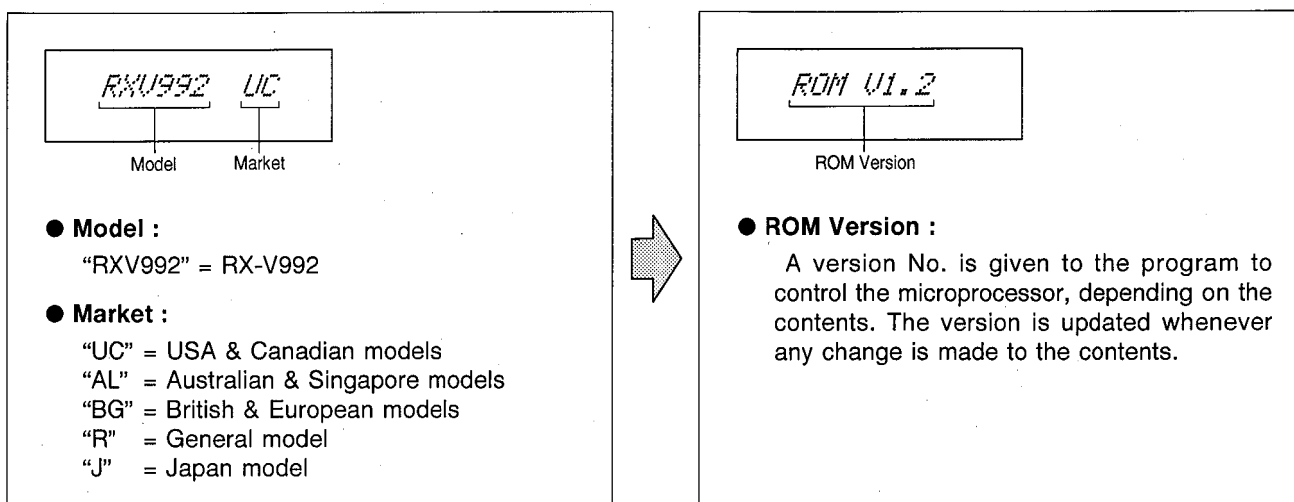
REC OUT SELECTOR	VOLTAGE	AD VALUE
PHONO	4.5V	90%
CD	4.0V	80%
TUNER	3.5V	70%
TAPE	3.0V	60%
SOURCE	2.5V	50%
DVD/LD	2.0V	40%
TV/DBS	1.5V	30%
VCR 1	1.0V	20%
VCR 2	0.5V	10%
VIDEO AUX	0.0V	0%

(9) VERSION

<FRONT PANEL DISPLAY>

9 DVD/LD RXV992 UC

Shown on the display are the model, the market and the ROM version.

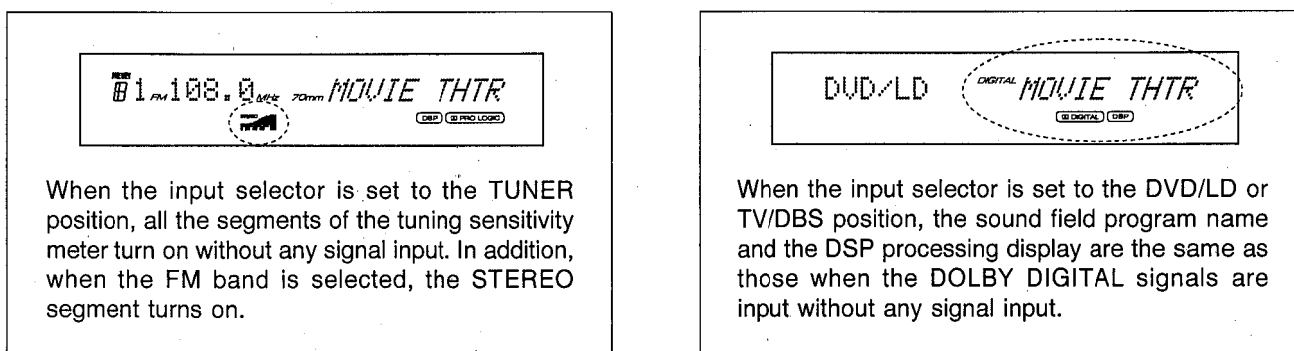
○ Sub-menu**(10) CANCELING DIAGNOSIS FUNCTION & ENTERING DEMONSTRATION DISPLAY MODE**

When the diagnosis function is canceled by using the sub-menu, the program enters the demonstration display mode. For the signal processing contents, the menu before executing this menu will be valid.

<FRONT PANEL DISPLAY>

10 DVD/LD EXIT&DEMO

DEMONSTRATION
DISPLAY



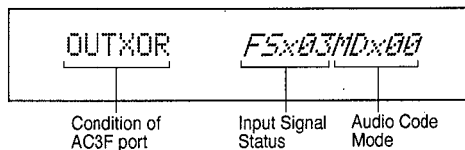
(11) STATUS DISPLAY

<FRONT PANEL DISPLAY>

11 DVD/LD STATUS CHK

Shown on the display are the digital signal and the digital processing status.

○ Sub-menu



- **OUT** : The OUT value shows the output port condition of AC3F by using the hexadecimal number (8 bits). The bit #0, 1, 2, 3, 4 and 5 when expressed in the binary number correspond to the port Nos. 102, 101, 100, 99, 98 and 97 of AC3F respectively.

#0 P102	CLOCK SELECTOR	The status becomes "1" when the effect is off and "0" otherwise during "3-sound field processing".			
#1/#2 P101/ P100	FS0/1 for DE-EMPHASIS	The status is set to match FS during reproduction of the software including PRE-EMPHASIS bit.			
		OFF	32k	44.1k	48k
		FS0	1	1	0
		FS1	0	1	0
#3 P99	DAC MUTE	The status becomes "0" when muted by DAC.			
#4 P98	DIR CLOCK SELECTOR	The status becomes "0" during analog reproduction and "1" otherwise when in the test mode.			
#5 P97	DIGITAL INPUT SELECTOR	The status becomes "0" when the DVD/LD input is selected and "1" when TV/DBS input is selected.			

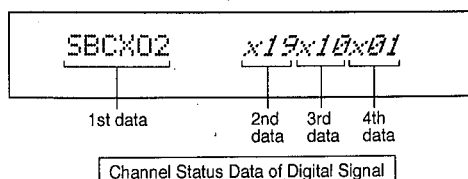
- **FS** : Shown on the display are conditions of the input signal

SIGNAL	DIGITAL			ANALOG
	32kHz	44.1kHz	48kHz	
DISPLAY DATA	x00	x01	x02	x03

- **MD** : Shown on the display are the audio codes for the Dolby digital signal. For the other signals, they become indefinite.

AUDIO CODE MODE	LtRt	1/0	2/0	3/0	2/1	3/1	2/2	3/2
DISPLAY DATA	x00	x01	x02	x03	x04	x05	x06	x07





The channel status data of the digital signal is displayed in the 4 byte data of the hexadecimal number. When there is no digital signal input, the status becomes indefinite. In the description below, the hexadecimal number data is expressed in the LSB first binary number.

● FIRST DATA

This data shows the FORMAT data and the EMPHASIS information.

When the DOLBY digital signal is input, the bit #0 is "1" and it becomes "0" when the PCM digital signal is input. When the signal source has the emphasis effect, the bit #2 status becomes "1".

● SECOND DATA

This data shows the CATEGORY code of the digital signal.

● THIRD DATA

This data shows the source and the channel No. of the digital signal.

● FOURTH DATA

This data shows the sampling frequency of the digital signal. When it is 32kHz, the status of bit #0 and #1 is "1". When it is 44.1kHz, the status of bit #0 and #1 is "0". Also, when it is 48kHz, the status of bit #0 is "0" and that of #1 is "1".

(12) CENTER SPEAKER

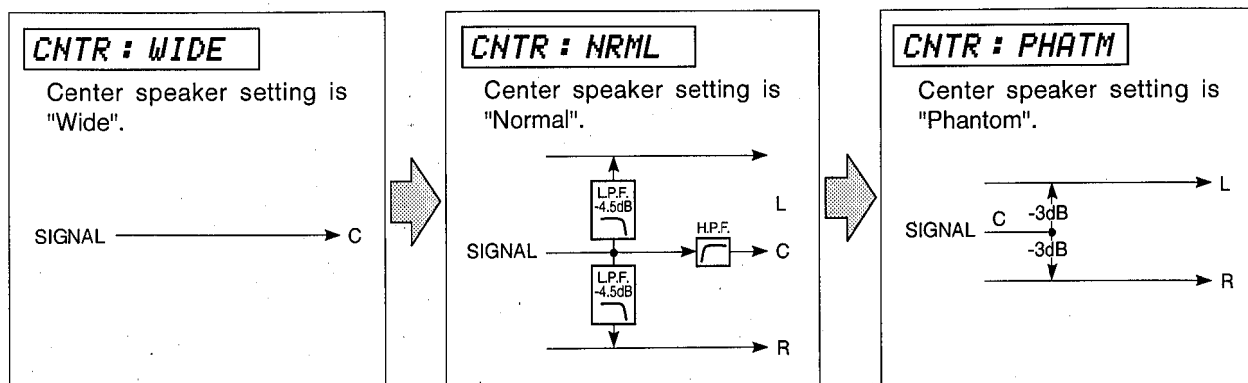
<FRONT PANEL DISPLAY>

12 DVD/LD CNTR:WIDE

The mode of the center speaker can be selected.

○ Sub-menu

The center speaker setting can be selected among WIDE, NORMAL and PHANTOM.



(13) REAR SPEAKER

<FRONT PANEL DISPLAY>

13 DVD/LD REAR: LARGE

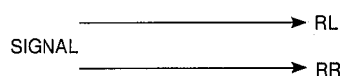
The mode of the rear speaker can be selected.

○ **Sub-menu**

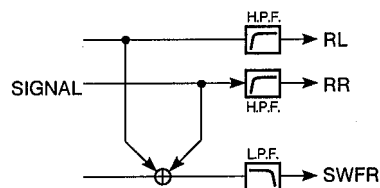
The rear speaker setting can be selected between LARGE and SMALL.

REAR : LARGE

The rear speaker setting is "Large".

**REAR : SMALL**

The rear speaker setting is "Small".

**(14) MAIN SPEAKER**

<FRONT PANEL DISPLAY>

14 DVD/LD MAIN: LARGE

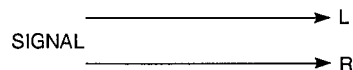
The mode of the main speaker can be selected.

○ **Sub-menu**

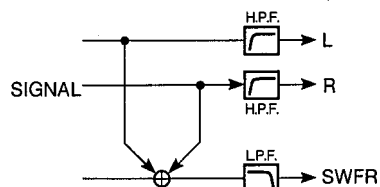
The main speaker setting can be selected between LARGE and SMALL.

MAIN : LARGE

The main speaker setting is "Large".

**MAIN : SMALL**

The main speaker setting is "Small".



(15) BASS OUT

<FRONT PANEL DISPLAY>

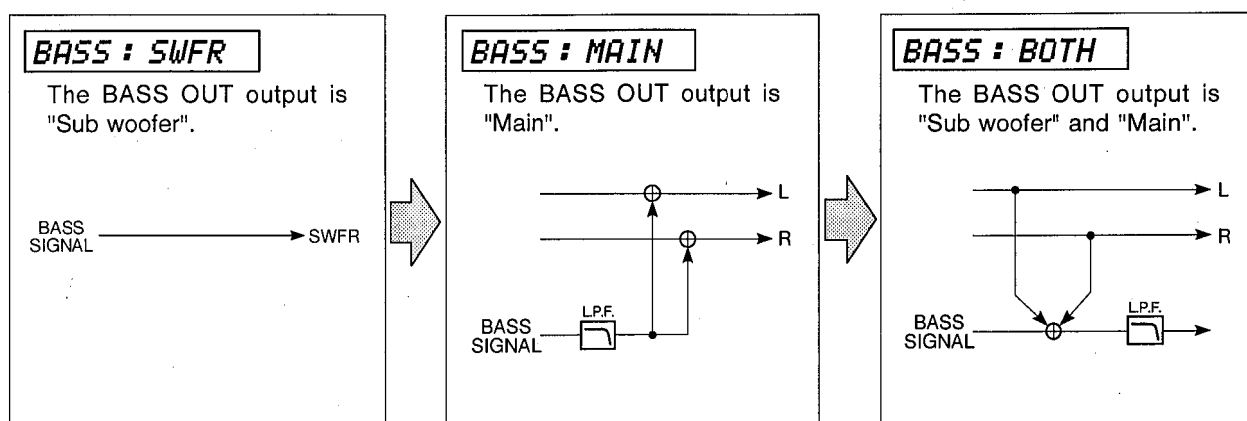
15 DVD/LD BASS:SWFR

The mode of the BASS output can be selected.

○ **Sub-menu**

The BASS output setting can be selected among SWFR, MAIN and BOTH.

The bass signal in the figures below is the low range component of LFE and the rear.



■ FACTORY PRESET

All the settings of the system are initialized on shipping. The settings are as follows.

● INPUT (VIDEO) DVD/LD (DVD/LD)

● EFFECT LEVEL

EFFECT CHANNEL	PRESET VALUE	CONTROL RANGES
CENTER	0 dB	MIN, -20dB — +10dB
RIGHT SURROUND	0 dB	MIN, -20dB — +10dB
LEFT SURROUND	0 dB	MIN, -20dB — +10dB
SUB WOOFER	0 dB	MIN, -20dB — 0dB

● DSP PROGRAM

INPUT	DSP PROGRAM
PHONO	CONCERT HALL
CD	ROCK CONCERT
TUNER	DISCO
TAPE	JAZZ CLUB
DVD/LD	70mm/DIGITAL MOVIE THEATER
TV/DBS	TV SPORTS
VCR 1	ENHANCED
VCR 2	PRO LOGIC
VIDEO AUX	ENHANCED

● SET MENU

No.	SET MENU	PRESET VALUE	SETTING RANGES
1.	CENTER DELAY	0 ms	0 ms — 5 ms
2.	DYNAMIC RANGE	MAX	MAX/STD/MIN
3.	LFE LEVEL	0 dB	-20dB — 0dB
4.	CENTER SPEAKER	NORMAL	NORMAL/WIDE/PHANTOM
5.	REAR SPEAKER	SMALL	SMALL/LARGE
6.	MAIN SPEAKER	LARGE	SMALL/LARGE
7.	LFE/BASS OUT	SWFR (SUB WOOFER)	MAIN/SWFR/BOTH
8.	INPUT MODE (TV/DBS)	AUTO	AUTO/LAST

● PRESET STATIONS

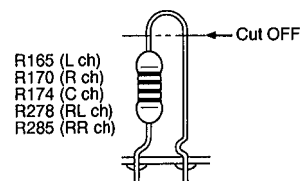
STATION		FM FACTORY PRESET DATA (MHz)				STATION		AM FACTORY PRESET DATA (kHz)			
PAGE	NO.	U, C, R	R, L, G, A, B	J		PAGE	NO.	U, C, R	R, L, G, A, B, J		
A/C/E	1	87.5	87.5	76.0		B/D	1	630	630		
	2	90.1	90.1	83.0			2	1080	1080		
	3	95.1	95.1	84.0			3	1440	1440		
	4	98.1	98.1	86.0			4	530	531		
	5	107.9	108.0	90.0			5	1710	1611		
	6	88.1	88.1	78.0			6	900	900		
	7	106.1	106.1	88.0			7	1350	1350		
	8	107.9	108.0	82.1			8	1400	1404		

■ AMP ADJUSTMENTS

● Confirmation of Idling Current

- 1) No signal applied.
- 2) Non-loaded condition.
- 3) Aging is not necessary.

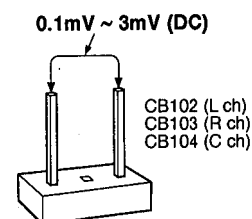
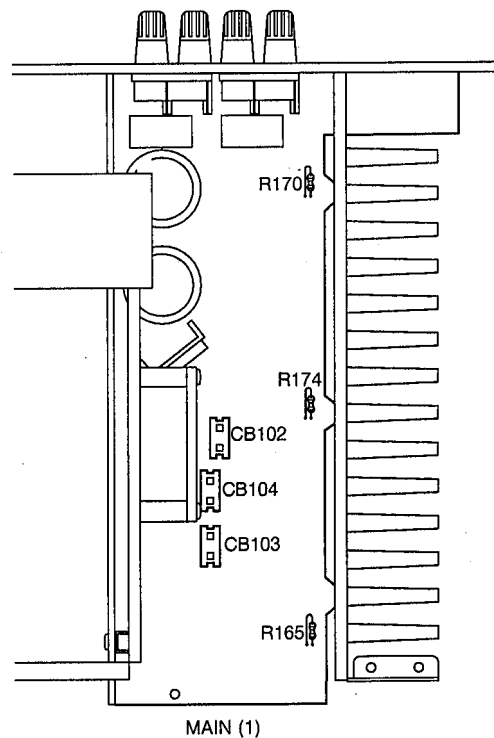
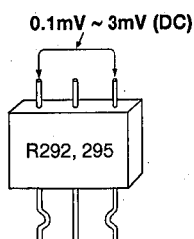
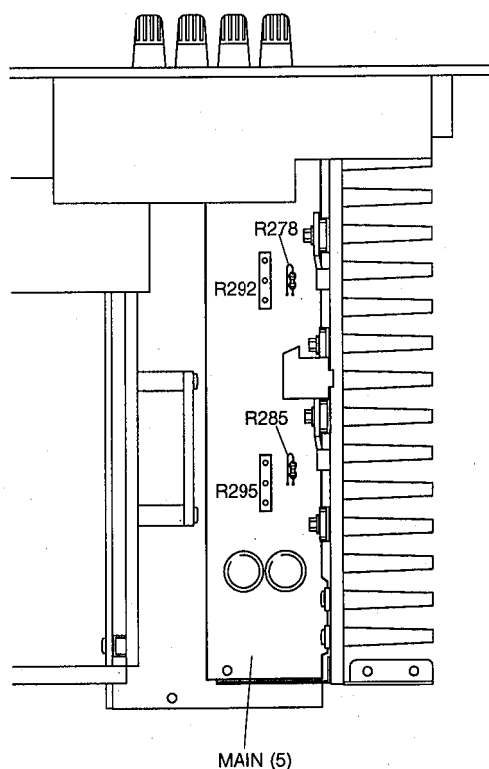
Item	Test Point	Rating (DC)	Note
MAIN L	CB102	0.1mV~3mV	If the measured voltage exceeds 3.1mV, cut the lead wire of R165(L ch), R170(R ch), R174(C ch), R278(RL ch) or R285(RR ch) and then check again if each measured value satisfies the rating.
MAIN R	CB103		
CENTER	CB104		
REAR L	R292		
REAR R	R295		



* Confirm that the idling current is 0.25mV ~ 15mV after 60 minutes.

Note)

- If R165(L ch), R170(R ch), R174(C ch), R278(RL ch) or R285(RR ch) have already been cut off and idling current does not flow, reconnect R165(820Ω), R170(820Ω), R174(820Ω), R278(820Ω) or R285(820Ω).
- Q112, Q114, Q116, Q257 and Q260 are transistors for temperature correction. Apply silicone grease to the contact surface with the heat sink.

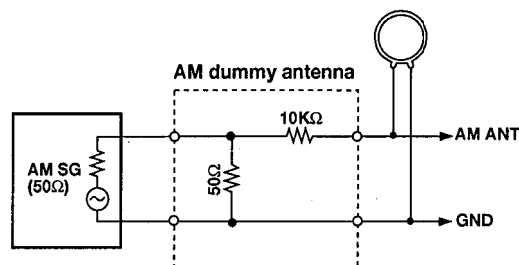
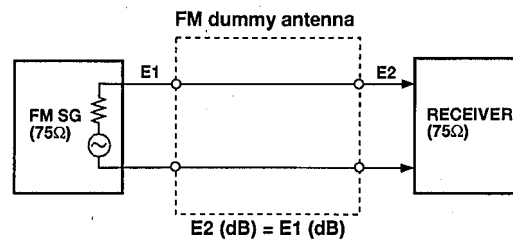
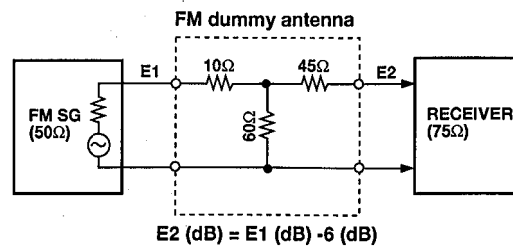


TUNER ADJUSTMENTS

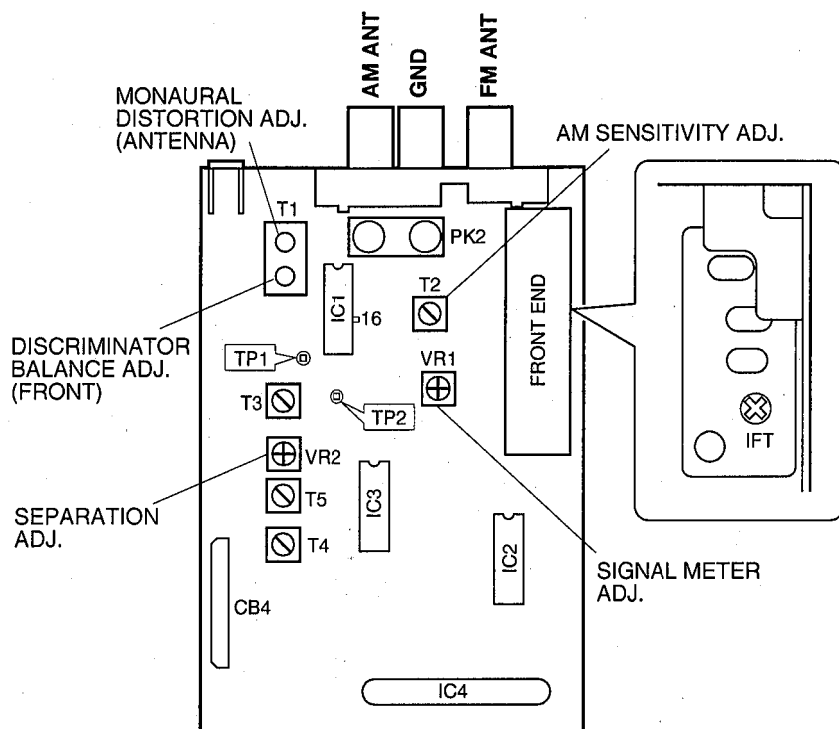
Measuring Instruments

FM signal generator (FM SG)
 Stereo signal generator (SSG)
 AM signal generator (AM SG)
 Distortion meter (DIST. M)
 AC voltmeter (ACVM)
 DC voltmeter (DCVM)
 Oscilloscope
 Low pass filter (YLF-15, $f_c=15\text{kHz}$)
 Oscillator

Dummy antenna



Test point



FM Adjustment

● Before Adjustment

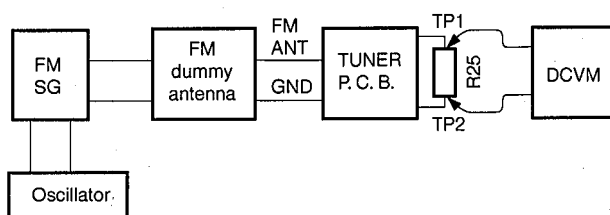
- 1) For dB, $1\mu V=0dB\mu$
Example : $60dB\mu=1mV$
- 2) 100% modulation means that the frequency deviation is $\pm 75kHz$.

- 3) Install the Matching Transformer and connect FM SG.
- 4) Set each switch to the following position unless otherwise specified.

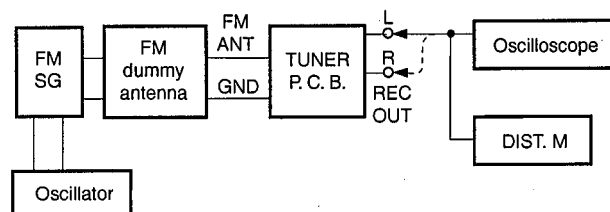
INPUT SELECTOR TUNER
 TUNING MODE AUTO

● Connection diagram (Measuring instruments)

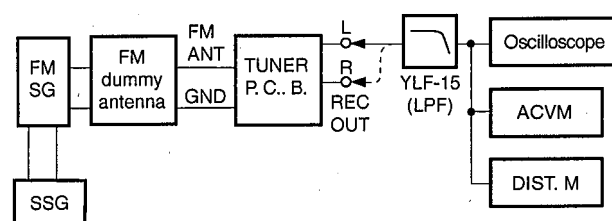
1) Discriminator balance adjustment



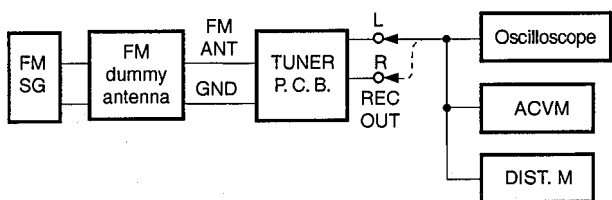
2) Monaural distortion adjustment



3) Stereo distortion adjustment/separation adjustment



4) Sensitivity Verification



Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment point	Test point	Rating
1	Rough adjustment of discriminator balance	FM ANT (75Ω) 98.1MHz ** 70dBμ MONO 1kHz 100% modulation	98.1MHz * (A-4)	T1 (Front side core)	Both ends of R25 (Between TP1 and TP2)	DC 0V±100mV
2	Rough adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-4)	T1 (Antenna side core)	REC OUT L, R	Minimize the distortion.
3	Fine adjustment of discriminator balance	Same as Step 1.	98.1MHz * (A-4)	T1 (Front side core)	Both ends of R25 (Between TP1 and TP2)	DC 0V±50mV
4	Fine adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-4)	T1 (Antenna side core)	REC OUT L, R	Minimize the distortion (to 0.25% or less).
5	Verification of discriminator balance	Same as Step 1.	98.1MHz * (A-4)	T1 (Front side core)	Both ends of R25 (Between TP1 and TP2)	DC 0V±50mV

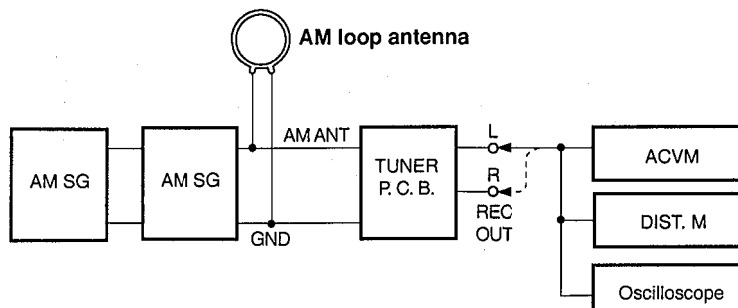
* : Execution of FACTORY PRESET (Refer to page 15.) will facilitate setting reception frequency for adjustment.

** Must be 98.1MHz ± 5kHz

See page 25 for TP locations & adjustment points.

Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
6	Adjustment of front end IFT	FM ANT (75Ω) 98.1MHz 30dBμ MONO 1kHz, 100% modulation	98.1MHz * (A-4)	Front end IFT	Pin 16 of IC1	Adjust so that the DC voltage is maximum. CAUTION : Over-adjustment of the IFT core will reduce the sensitivity. Maximum $\pm 90^\circ$
7	Verification of monaural distortion	FM ANT (75Ω) 98.1MHz 70dBμ MONO 1kHz, 100% modulation	98.1MHz * (A-4)		REC OUT L, R	0.4% or less
8	Verification of stereo distortion	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz * (A-4) * Tuning mode should be AUTO.		REC OUT L, R	1% or less • STEREO indicator should light.
9	Verification of sensitivity	FM ANT (75Ω) 88.1MHz 98.1MHz 106.1MHz MONO 1kHz Modulation off	88.1MHz * (A-6) 98.1MHz * (A-4) 106.1MHz * (A-7)		ANT (75Ω)	1) Set the tuning mode to MAN'L MONO. (Muting OFF) 2) S/N should be 30dB at each frequency of 88.1MHz, 98.1MHz, and 106.1MHz. 3) Check to ensure that the voltage at the ANT terminal is 3dBμ (14.25dBf) or less. (L only : 6dBμ or less)
10	Adjustment of Separation	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz * (A-4)	VR2	REC OUT L, R	With SSG output at L or R, the signal leakage level at the other channel should be minimized. 36dB or more
11	Adjustment of Signal meter	FM ANT (75Ω) 98.1MHz 45dBμ MONO 1kHz 30% modulation	98.1MHz * (A-4)	VR1		Adjust so that all segments light.
		-10dBμ or less				Check to ensure that signal meters turn OFF.
12	Verification of auto tuning	FM ANT (75Ω) 98.1MHz 23dBμ Stereo L or R 1kHz, 30% modulation	98.1MHz			• Automatic reception should be available when the tuning key is moved UP and DOWN. • The stereo indicator should light. • Audio muting should be applied during tuning.

* : Execution of FACTORY PRESET (Refer to page 15.) will facilitate setting reception frequency for adjustment.

AM Adjustment (This should be done after FM adjustment.)
● Connection Diagram (Measuring instruments)
1) Adjustment of sensitivity


See page 25 for TP locations & adjustment points.

Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment point	Test point	Rating
1	Adjustment of sensitivity (1440Hz)	AM ANT 1440kHz 50dB μ 1kHz 30% modulation	1440kHz * (B-3)	T2	REC OUT	Audio output should be maximized.
2	Verification of sensitivity (630kHz)	AM ANT 630kHz 50dB μ 1kHz 30% modulation	630kHz * (B-1)	T2	REC OUT	Audio output should be maximized. Repeat the Step 1 and 2.
3	Verification of sensitivity	AM ANT 630kHz 1080kHz 1440kHz 30% modulation	630kHz * (B-1) 1080kHz * (B-2) 1440kHz * (B-3)		AM ANT	Distortion should be 10% or less at each frequency. Check to ensure that the voltage at the ANT terminal is 54dB μ or less.
4	Verification of auto tuning	AM ANT 60dB μ				Auto reception should be available when the tuning key is moved UP and DOWN.

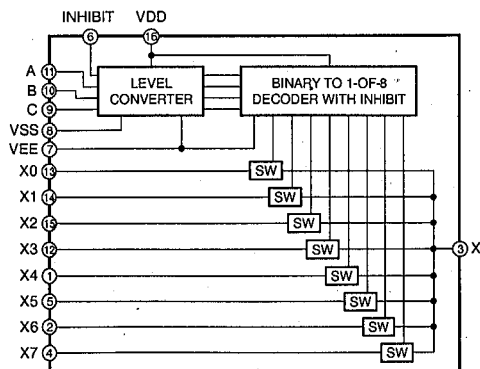
* : Execution of FACTORY PRESET (Refer to page 15.) will facilitate setting reception frequency for adjustment.

■ IC DATA

IC1 : HD6433614P
8 bit μ -COM

PA7	1	64	PA6
AVCC	2	63	PA5
PO0/AN0	3	62	PA4
PO1/AN1	4	61	PA3
PO2/AN2	5	60	PA2
PO3/AN3	6	59	PA1
PO4/AN4	7	58	PA0
PO5/AN5	8	57	P97/UD
PO6/AN6	9	56	P96/SO2
PO7/AN7	10	55	P95/SI2/CS
AVSS	11	54	P94/SCK2
TEST	12	53	P93/SO1
X2	13	52	P92/SI1
X1	14	51	P91/SCK1
VSS	15	50	P90/PWM
OSC1	16	49	P87
OSC2	17	48	P86
RES	18	47	P85
P10/IRQ0	19	46	P84
P11/IRQ1	20	45	P83
P12/IRQ2	21	44	P82
P13/IRQ3	22	43	P81
P14/IRQ4	23	42	P80
P15/IRQ5/TMOE	24	41	VCC
P16/EVENT	25	40	P40
P17	26	39	P41
P27	27	38	P42
P26	28	37	P43
P25	29	36	P44
P24	30	35	P45
P23	31	34	P20
P22	32	33	P21

IC2 : TC74HC4051AP (extended A/D input)
Analog Multiplexer/Demultiplexer



INPUT STATES				"ON" CHANNEL (S)
INHIBIT	C	B	A	
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	NONE

IC1 : HD6433614P
8 bit μ -COM

No.	PORT	Name	Function	I/O	No.	PORT	Name	Function	I/O
1	PA7	/RMT	Mute control of ROOM 2	O	64	PA6	VRC	VIDEO REC. SEL. control C	O
2	AVCC	AVCC	Power supply for A/D	+5M	63	PA5	VRB	VIDEO REC. SEL. control B	O
3	AN0	4051	Extended A/D input	AD	62	PA4	VRA	VIDEO REC. SEL. control A	O
4	AN1	PRV	Power supply error detect	AD	61	PA3	VIC	VIDEO INPUT SEL. control C	O
5	AN2	PRD	Power amplifier output DC detect	AD	60	PA2	VIB	VIDEO INPUT SEL. control B	O
6	AN3	THM	Radiator temperature detect	AD	59	PA1	VIA	VIDEO INPUT SEL. control A	O
7	AN4	VER	Model & destination discrimination input	AD	58	PA0	CES	Chip enable for super impose	O
8	P05	PRI	Power amplifier excess current detect	I	57	P97	CEL	Chip enable for IC made by SANYO (LC....)	O
9	P06	/ST	TUNER stereo detect	I	56	SO2	SDT	Send data to each type of IC	O
10	P07	O/C	COAX/OPT detect	I	55	SI2	RDT	Receive data from TUNER	I
11	AVSS	AVSS	GND for A/D	G	54	SCK2	SCK	Serial clock for each type of IC	O
12	TEST	TEST	Test terminal (unusable)	G	53	SO1	TXD	Send data to AC3F, HL3	O
13	X2	X2	Sub-clock (unused)	open	52	SI1	RXD	Receive data from AC3F	I
14	X1	X1	Sub-clock (unused)	+5M	51	SCK1	XCK	Serial clock for AC3F, HL3	O
15	VSS	VSS	GND for system	G	50	PWM	FAN	PWM output for fan drive	PWM
16	OSC1	OSC1	Ceramic oscillator connected	8M	49	P87	/CRS	Chip select for HL3	O
17	OSC2	OSC2	Ceramic oscillator connected	8M	48	P86	/CS	Chip select for AC3F	O
18	/RES	/RES	System reset	RES	47	P85	CLD	Chip select for DIR	O
19	/IRQ0	PDT	Power detect	IRQ	46	P84	CCK	Serial clock for DIR	O
20	/IRQ1	/DER	DIR lock and error detect	IRQ	45	P83	/IC	AC3F, etc. reset	O
21	/IRQ2	REM	Remote control light receive signal input	IRQ	44	P82	/ICD	DIR and FL reset	O
22	/IRQ3	RM2	External remote terminal input (unused)	IRQ	43	P81	/TMT	Tuner mute	O
23	IRQ4	AC3ER	AC3F error detect	IRQ	42	P80	CET	Chip enable for IC made by TOSHIBA (TC....)	O
24	/IRQ5	VSF	Video vertical synchronous input	IRQ	41	VCC	VCC	Power supply for system	+5BU
25	P16	PSW	Power switch main unit key input	I	40	P40	ASA	Control A of extended A/D 4051	O
26	P17	CDO	Receive data from DIR	I	39	P41	ASB	Control B of extended A/D 4051	O
27	P27	I/E	Video synchronization discrimination output	O	38	P42	ASC	Control C of extended A/D 4051	O
28	P26	PRY	Power relay control	O	37	P43		GND	G
29	P25	SPB	Relay control of main speaker B	O	36	P44	/STBY	Standby discrimination and lighting output	I/O
30	P24	SPA	Relay control of main speaker A	O	35	P45	VIND	VOL. LED lighting output	O
31	P23	SPE	Relay control of other than SP. A/B	O	34	P20	VUP	VOL.UP control output	O
32	P22	/FMT	Full mute control	O	33	P21	VDN	VOL.DOWN control output	O

* P40 through P45 are PMOS open drain input/output ports.

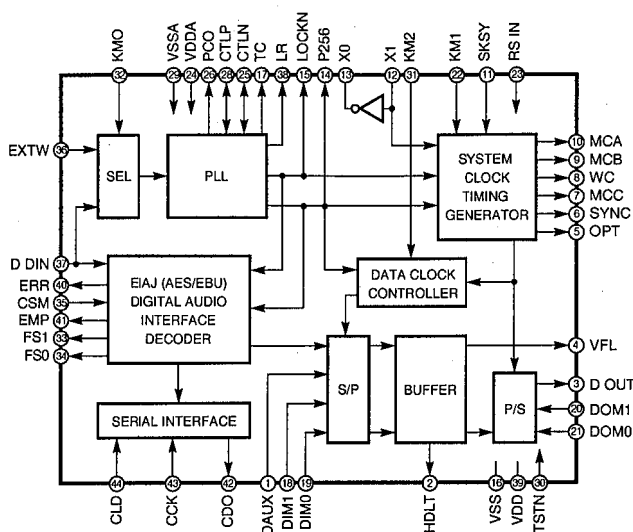
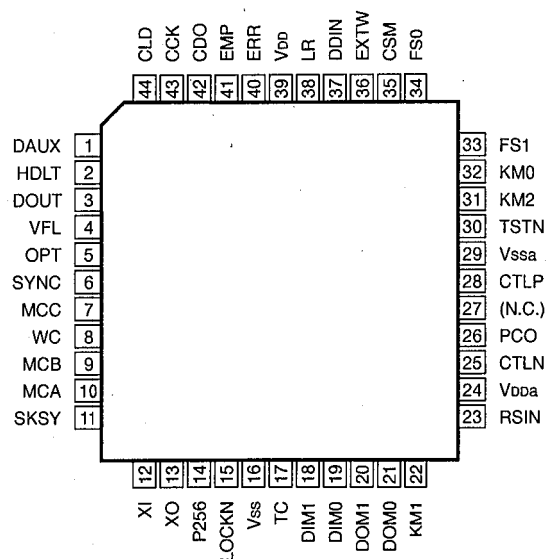
IC2 : TC74HC4051AP (extended A/D input)
Analog Multiplexer/Demultiplexer

No.	PORT	Name	Function	I/O	No.	PORT	Name	Function	I/O
1	X4	K4	DSP & INPUT key input	AD	16	VCC	VCC	(+) power supply	+5M
2	X6	REC	REC OUT SEL input	AD	15	X2	K2	SP. A/B & DSP key input	AD
3	COM	COM	Feed port to microprocessor	O	14	X1	K1	SP. A/B & PRESET key input	AD
4	X7	MTR	TUNER signal meter input	AD	13	X0	K0	TUNER & LEVEL key input	AD
5	X5	FSW *	Slide SW state input	AD	12	X3	K3	PRESET & INPUT key input	AD
6	INH	INH	All channels open at Hi level	G	11	A	ASA	Control signal A from microprocessor	I
7	VEE	VEE	(-) power supply	G	10	B	ASB	Control signal B from microprocessor	I
8	GND	GND	GND	G	9	C	ASC	Control signal C from microprocessor	I

* FSW = DEST(9kHz/10kHz) + P/N

IC3 : YM3436DK

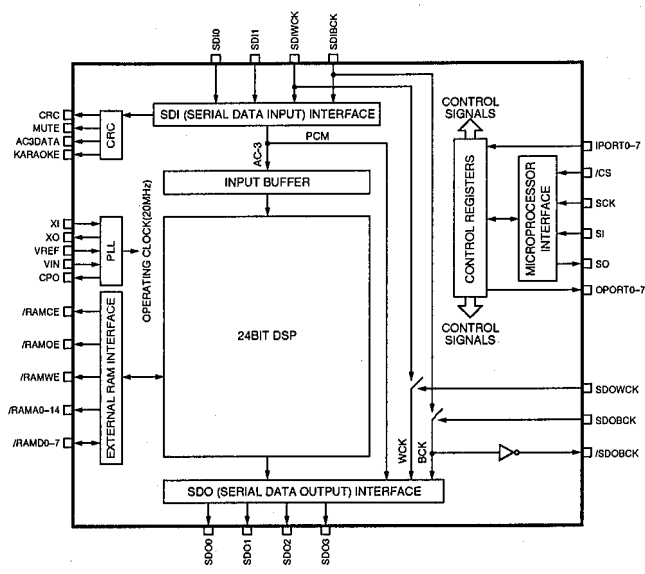
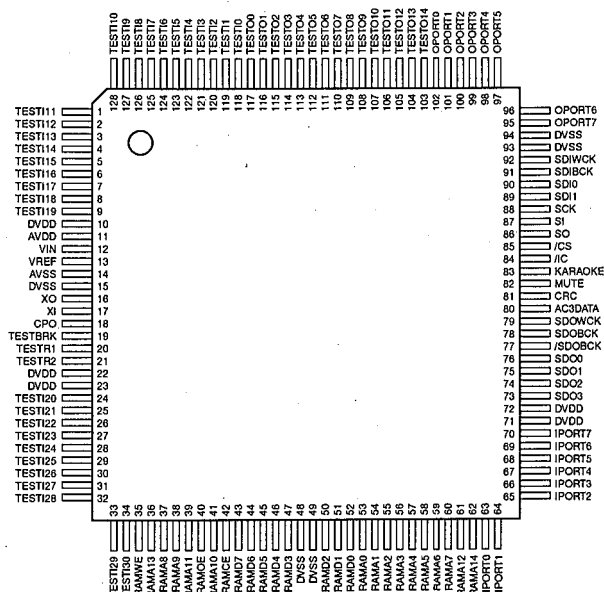
DIR (Digital Format Interface Receiver)



Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	DAUX	I	Auxiliary input for audio data	26	PCO	O	PLL phase comparison output
2	HDLT	O	Asynchronous buffer operation flag	27	(NC)		
3	DOUT	O	Audio data output	28	CTLP	I	VCO control input P
4	VFL	O	Parity flag output	29	Vssa		VCO section power (GND)
5	OPT	O	Fs x 1 Synchronous output signal for DAC	30	TSTN	I	Test terminal. Open for normal use
6	SYNC	O	Fs x 1 Synchronous output signal for DSP	31	KM2	I	Clock mode switching input 2
7	MCC	O	Fs x 64Bit clock output	32	KM0	I	Clock mode switching input 0
8	WC	O	Fs x 1Word clock output	33	FS1	O	Channel status sampling frequency display output 1
9	MCB	O	Fs x 128Bit clock output	34	FS0	O	Channel status sampling frequency display output 0
10	MCA	O	Fs x 256Bit clock output	35	CSM	I	Channel status output method selection
11	SKSY	I	Clock synchronization control input	36	EXTW	I	External synchronous auxiliary input word clock
12	XI	I	Crystal oscillator connection or external clock input	37	DDIN	I	EIAJ (AES/EBU) data input
13	XO	O	Crystal oscillator connection	38	LR	O	PLL word clock output
14	P256	O	VCO oscillator clock connection	39	VDD		Logic section power (+5V)
15	LOCKN	O	PLL lock flag	40	ERR	O	Data error flag output
16	Vss		Logic section power (GND)	41	EMP	O	Channel status emphasis control code output
17	TC	O	PLL time constant switching output	42	CDO	O	3-wire type microcomputer interface data output
18	DIM1	I	Data input mode selection	43	CCK	I	3-wire type microcomputer interface clock output
19	DIM0	I	Data input mode selection	44	CLD	I	3-wire type microcomputer interface load input
20	DOM1	I	Data output mode selection				
21	DOM0	I	Data output mode selection				
22	KM1	I	Clock mode switching input 1				
23	RSTN	I	System reset input				
24	VDDA		VCO section power (+5V)				
25	CTLN	I	VCO control input N				

IC4 : YSS243B

AC3F (AC-3 5.1ch Full Decoder)



No.	Name	I/O	Function
1	TESTI11	I+	LSI test terminal (normally unconnected)
2	TESTI12	I+	LSI test terminal (normally unconnected)
3	TESTI13	I+	LSI test terminal (normally unconnected)
4	TESTI14	I+	LSI test terminal (normally unconnected)
5	TESTI15	I+	LSI test terminal (normally unconnected)
6	TESTI16	I+	LSI test terminal (normally unconnected)
7	TESTI17	I+	LSI test terminal (normally unconnected)
8	TESTI18	I+	LSI test terminal (normally unconnected)
9	TESTI19	I+	LSI test terminal (normally unconnected)
10	DVDD		+5V power supply (digital section)
11	AVDD		+5V power supply (for analog circuit in PLL section)
12	VIN	AI	PLL input terminal, connected to CPO through external analog filter)
13	VREF	AI	PLL input terminal, connected to AVDD through external analog filter)
14	AVSS		Ground (for analog circuit in PLL section)
15	DVSS		Ground (digital section)
16	XO	O	Crystal oscillator connecting terminal
17	XI	I	Crystal oscillator connecting terminal or external clock input terminal (2.5MHz - 40.0MHz)
18	CPO	AO	PLL output terminal, connected to VIN through external analog filter)
19	TESTBRK	I+	LSI test terminal (normally unconnected)
20	TESTR1	I+	LSI test terminal (normally unconnected)
21	TESTR2	I+	LSI test terminal (normally unconnected)
22	DVDD		+5V power supply (digital section)
23	DVDD		+5V power supply (digital section)
24	TESTI20	I+	LSI test terminal (normally unconnected)
25	TESTI21	I+	LSI test terminal (normally unconnected)
26	TESTI22	I+	LSI test terminal (normally unconnected)
27	TESTI23	I+	LSI test terminal (normally unconnected)
28	TESTI24	I+	LSI test terminal (normally unconnected)
29	TESTI25	I+	LSI test terminal (normally unconnected)
30	TESTI26	I+	LSI test terminal (normally unconnected)

IC4 : YSS243B

AC3F (AC-3 5.1ch Full Decoder)

No.	Name	I/O	Function
31	TESTI27	I+	LSI test terminal (normally unconnected)
32	TESTI28	I+	LSI test terminal (normally unconnected)
33	TESTI29	I+	LSI test terminal (normally unconnected)
34	TESTI30	I+	LSI test terminal (normally unconnected)
35	/RAMWE	O	External SRAM write enable signal, "L" active
36	RAMA13	O	External SRAM address output, address 13
37	RAMA8	O	External SRAM address output, address 8
38	RAMA9	O	External SRAM address output, address 9
39	RAMA11	O	External SRAM address output, address 11
40	/RAMOE	O	External SRAM output enable signal, "L" active
41	RAMA10	O	External SRAM address output, address 10
42	/RAMCE	O	External SRAM chip enable signal, "L" active
43	RAMD7	I/O	External SRAM data terminal, data bus 7
44	RAMD6	I/O	External SRAM data terminal, data bus 6
45	RAMD5	I/O	External SRAM data terminal, data bus 5
46	RAMD4	I/O	External SRAM data terminal, data bus 4
47	RAMD3	I/O	External SRAM data terminal, data bus 3
48	DVSS		Ground (digital section)
49	DVSS		Ground (digital section)
50	RAMD2	I/O	External SRAM data terminal, data bus 2
51	RAMD1	I/O	External SRAM data terminal, data bus 1
52	RAMD0	I/O	External SRAM data terminal, data bus 0
53	RAMA0	O	External SRAM address output, address 0
54	RAMA1	O	External SRAM address output, address 1
55	RAMA2	O	External SRAM address output, address 2
56	RAMA3	O	External SRAM address output, address 3
57	RAMA4	O	External SRAM address output, address 4
58	RAMA5	O	External SRAM address output, address 5
59	RAMA6	O	External SRAM address output, address 6
60	RAMA7	O	External SRAM address output, address 7
61	RAMA12	O	External SRAM address output, address 12
62	RAMA14	O	External SRAM address output, address 14
63	IPOINT0	I+	DIR sampling frequency input 0 (FS0)
64	IPOINT1	I+	DIR sampling frequency input 1 (FS1)
65	IPOINT2	I+	General purpose input terminal
66	IPOINT3	I+	General purpose input terminal
67	IPOINT4	I+	DIR pre-emphasis detect (EMP)
68	IPOINT5	I+	General purpose input terminal
69	IPOINT6	I+	General purpose input terminal
70	IPOINT7	I+	General purpose input terminal
71	DVDD		+5V power supply (digital section)
72	DVDD		+5V power supply (digital section)
73	SDO3	O	PCM output terminal (MIX0, MIX1 output)
74	SDO2	O	PCM output terminal (C, LFE output)
75	SDO1	O	PCM output terminal (LS, RS output)
76	SDO0	O	PCM output terminal (L, R output)
77	/SDOBCK	O	Inverted signal of SDOBCK output
78	SDOBCK	I+	SDO output signal bit clock input terminal
79	SDOWCK	I+	SDO output signal word clock input terminal
80	AC3DATA	O	AC-3 bit stream data detect terminal
81	CRC	O	CRC error detect terminal (when decoding AC-3 bit stream data)

IC4 : YSS243B

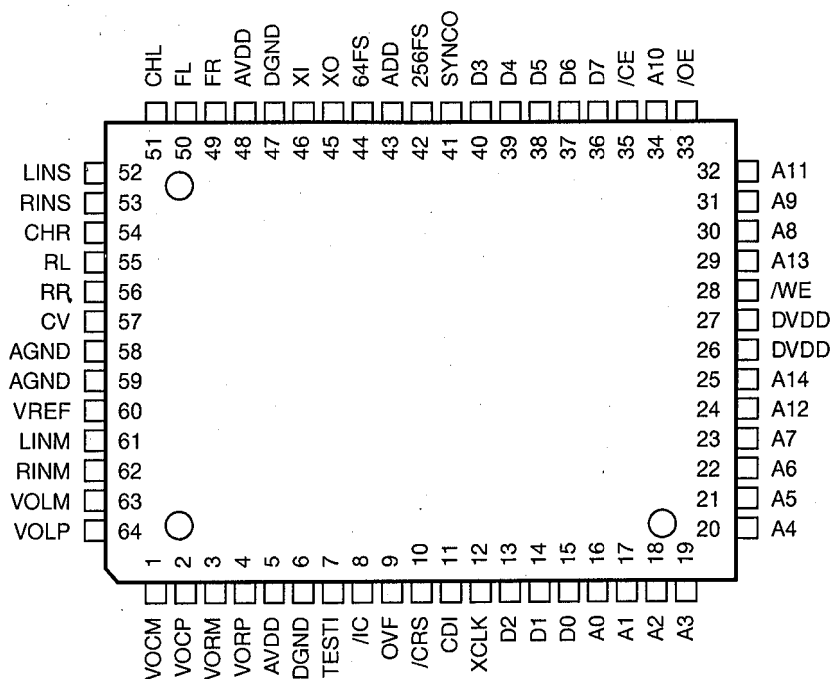
AC3F (AC-3 5.1ch Full Decoder)

No.	Name	I/O	Function
82	MUTE	O	Output data mute detect terminal
83	KARAOKE	O	AC-3 karaoke data detect terminal
84	/IC	Is	Initial clear terminal
85	/CS	Is	Microprocessor interface chip select input terminal
86	SO	O	Microprocessor interface serial data output terminal
87	SI	Is	Microprocessor interface serial data input terminal
88	SCK	Is	Microprocessor interface serial clock input terminal
89	SDI1	I	AC-3 bit stream (or PCM) data input terminal
90	SDI0	I	AC-3 bit stream (or PCM) data input terminal
91	SDIBCK	I	Bit clock input terminal for SDI input signal
92	SDIWCK	I	Word clock input terminal for SDI input signal
93	DVSS		Ground (digital section)
94	DVSS		Ground (digital section)
95	OPORT7	O	General purpose output terminal
96	OPORT6	O	DIGITAL INPUT SELECTOR control signal B (DIB)
97	OPORT5	O	DIGITAL INPUT SELECTOR control signal A (DIA)
98	OPORT4	O	Switching DIR forced internal synchronization (KM1)
99	OPORT3	O	DAC MUTE control signal (DMT)
100	OPORT2	O	De-emphasis control signal 1 to DAC (EMP1)
101	OPORT1	O	De-emphasis control signal 0 to DAC (EMP0)
102	OPORT0	O	Control signal to switch master clock of AC3F output master clock (CLKS)
103	TESTO14	O	LSI test terminal (normally unconnected)
104	TESTO13	O	LSI test terminal (normally unconnected)
105	TESTO12	O	LSI test terminal (normally unconnected)
106	TESTO11	O	LSI test terminal (normally unconnected)
107	TESTO10	O	LSI test terminal (normally unconnected)
108	TESTO9	O	LSI test terminal (normally unconnected)
109	TESTO8	O	LSI test terminal (normally unconnected)
110	TESTO7	O	LSI test terminal (normally unconnected)
111	TESTO6	O	LSI test terminal (normally unconnected)
112	TESTO5	O	LSI test terminal (normally unconnected)
113	TESTO4	O	LSI test terminal (normally unconnected)
114	TESTO3	O	LSI test terminal (normally unconnected)
115	TESTO2	O	LSI test terminal (normally unconnected)
116	TESTO1	O	LSI test terminal (normally unconnected)
117	TESTO0	O	LSI test terminal (normally unconnected)
118	TESTI0	I+	LSI test terminal (normally unconnected)
119	TESTI1	I+	LSI test terminal (normally unconnected)
120	TESTI2	I+	LSI test terminal (normally unconnected)
121	TESTI3	I+	LSI test terminal (normally unconnected)
122	TESTI4	I+	LSI test terminal (normally unconnected)
123	TESTI5	I+	LSI test terminal (normally unconnected)
124	TESTI6	I+	LSI test terminal (normally unconnected)
125	TESTI7	I+	LSI test terminal (normally unconnected)
126	TESTI8	I+	LSI test terminal (normally unconnected)
127	TESTI9	I+	LSI test terminal (normally unconnected)
128	TESTI10	I+	LSI test terminal (normally unconnected)

AI : Input AO : Output I+ : Built-in pull up resistance Is : Schmidt input

IC7 : YSS245

HL3 (Dolby-Pro-Logic Decoder + DSP)



No.	Name	I/O	Function
1	VOCM	AO	Cch multiplying DAC (-) side output, connected to (-) terminal of Cch operation amplifier
2	VOCP	AO	Cch multiplying DAC (+) side output, connected to (+) terminal of Cch operation amplifier
3	VORM	AO	Rch multiplying DAC (-) side output, connected to (-) terminal of Rch operation amplifier
4	VORP	AO	Rch multiplying DAC (+) side output, connected to (+) terminal of Rch operation amplifier
5	AVDD		+5V power supply (analog section)
6	DGND		Ground (digital section)
7	TESTI	Ic	Test terminal, connected to DGND
8	/IC	Ics	Initial clear terminal
9	OVF	O	Input (LINS, RINS or ADD) overflow detect terminal
10	/CRS	Ics	Serial microprocessor interface reset terminal
11	CDI	Ics	Serial microprocessor interface data input terminal
12	XCLK	Ics	Serial microprocessor interface clock terminal
13	D2	It/O	External PSRAM terminal, connected to external PSRAM data terminal
14	D1	It/O	External PSRAM terminal, connected to external PSRAM data terminal
15	D0	It/O	External PSRAM terminal, connected to external PSRAM data terminal
16	A0	O	External PSRAM terminal, connected to external PSRAM address terminal
17	A1	O	External PSRAM terminal, connected to external PSRAM address terminal
18	A2	O	External PSRAM terminal, connected to external PSRAM address terminal
19	A3	O	External PSRAM terminal, connected to external PSRAM address terminal
20	A4	O	External PSRAM terminal, connected to external PSRAM address terminal
21	A5	O	External PSRAM terminal, connected to external PSRAM address terminal
22	A6	O	External PSRAM terminal, connected to external PSRAM address terminal
23	A7	O	External PSRAM terminal, connected to external PSRAM address terminal
24	A12	O	External PSRAM terminal, connected to external PSRAM address terminal
25	A14	O	External PSRAM terminal, connected to external PSRAM address terminal
26	DVDD		+5V terminal (digital section)

IC7 : YSS245

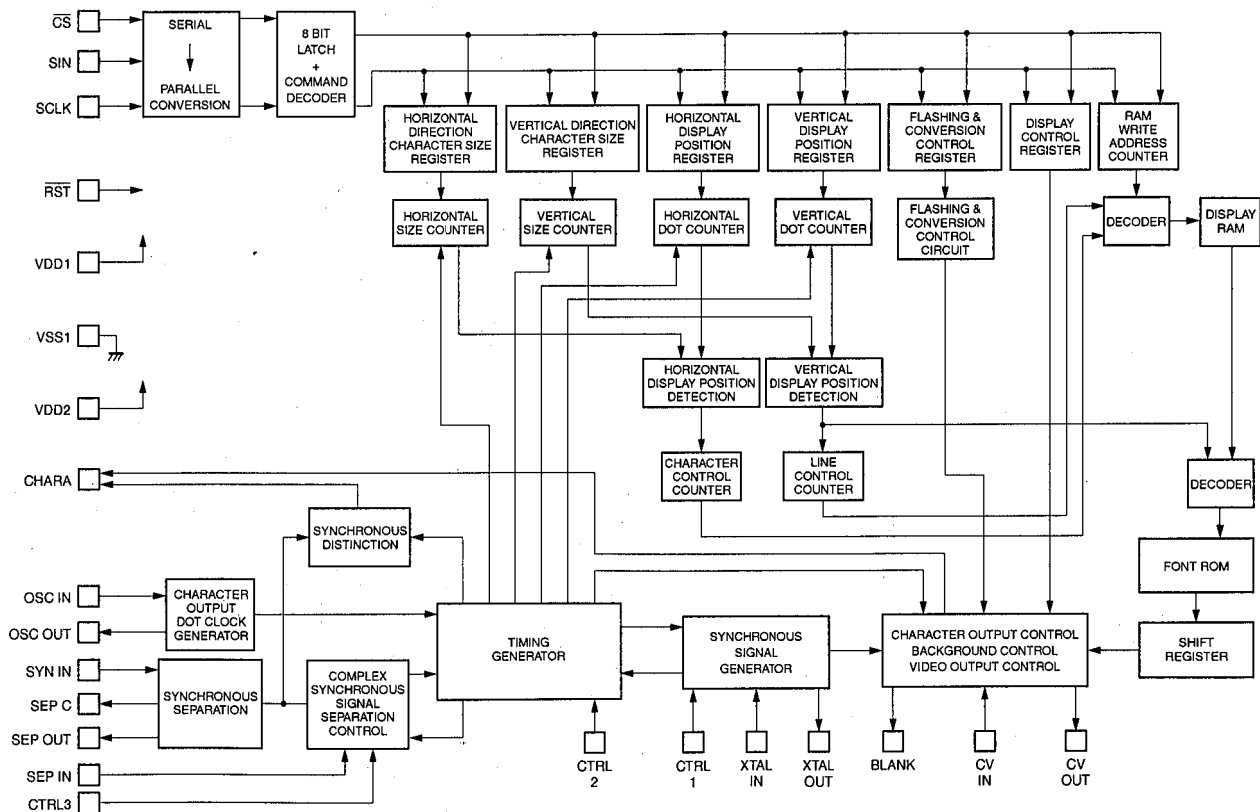
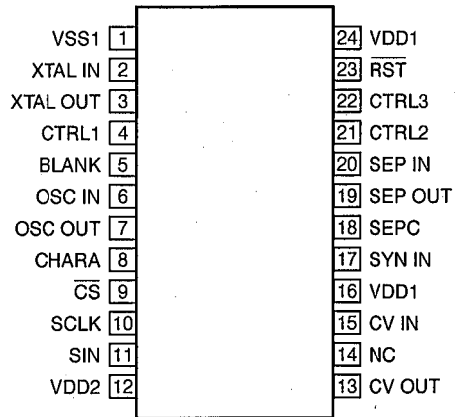
HL3 (Dolby-Pro-Logic Decoder + DSP)

No.	Name	I/O	Function
27	DVDD		+5V terminal (digital section)
28	/WE	O	External PSRAM terminal, connected to external PSRAM /WE terminal
29	A13	O	External PSRAM terminal, connected to external PSRAM address terminal
30	A8	O	External PSRAM terminal, connected to external PSRAM address terminal
31	A9	O	External PSRAM terminal, connected to external PSRAM address terminal
32	A11	O	External PSRAM terminal, connected to external PSRAM address terminal
33	/OE	O	External PSRAM terminal, connected to external PSRAM /OE terminal
34	A10	O	External PSRAM terminal, connected to external PSRAM address terminal
35	/CE	O	External PSRAM terminal, connected to external PSRAM /CE terminal
36	D7	It/O	External PSRAM terminal, connected to external PSRAM data terminal
37	D6	It/O	External PSRAM terminal, connected to external PSRAM data terminal
38	D5	It/O	External PSRAM terminal, connected to external PSRAM data terminal
39	D4	It/O	External PSRAM terminal, connected to external PSRAM data terminal
40	D3	It/O	External PSRAM terminal, connected to external PSRAM data terminal
41	SYNCO	O	fs (word) clock output terminal for external A/D converter
42	256FS	O	256fs clock output terminal for external A/D converter
43	ADD	It	Data input terminal for external A/D converter
44	64FS	O	64fs clock output terminal for external A/D converter
45	XO	O	Crystal oscillator connecting terminal
46	XI	Ic	Crystal oscillator connecting terminal (11.2896MHz)
47	DGND		Ground (digital section)
48	AVDD		+5V terminal (analog section)
49	FR	AO	FRch D/A output terminal
50	FL	AO	FLch D/A output terminal
51	CHL	AI/O	Capacitor connecting terminal for LINS input sample/hold
52	LINS	AI	Lch built-in A/D input terminal
53	RINS	AI	Rch built-in A/D input terminal
54	CHR	AI/O	Capacitor connecting terminal for RINS input sample/hold
55	RL	AO	RLch built-in D/A output terminal
56	RR	AO	RRch built-in D/A output terminal
57	CV	AO	Built-in A/D, D/A center potential output terminal
58	AGND		Ground (analog section)
59	AGND		Ground (analog section)
60	VREF	AI	Built-in multiplying DAC reference potential input terminal
61	LINM	AI	Lch built-in multiplying DAC input terminal
62	RINM	AI	Rch built-in multiplying DAC input terminal
63	VOLM	AO	Lch multiplying DAC (-) side output, connected to Lch operation amplifier (-) terminal
64	VOLP	AO	Lch multiplying DAC (+) side output, connected to Lch operation amplifier (+) terminal

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

- Ic : CMOS level input terminal
- It : TTL level input terminal
- Is : Schmidt trigger input terminal
- O : Digital output terminal
- AI : Analog input terminal
- AO : Analog output terminal

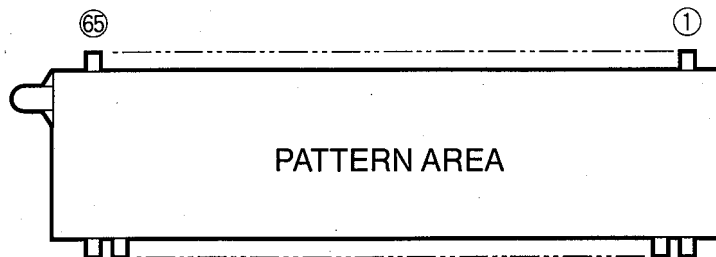
IC611 : LC74781-9626
Superimpose



Pin No.	Symbol	Terminal name	Function
1	VSS1	Ground terminal	Connection to GND (Digital system ground terminal)
2	XTAL IN	Crystal oscillation terminal	Terminal to connect the crystal of the crystal oscillator for internal synchronous signal generation and a capacitor or to input an external clock. (2fsc or 4fsc)
3	XTAL OUT		
4	CTRL1	Crystal oscillation input switching terminal	Switching terminal between the mode to input a clock externally and the mode for crystal oscillation. [L] = Crystal oscillation, [H] = External clock input
5	BLANK	Blank output terminal	Terminal to output the blank signal (character and bordering OR signal) (MOD0 : complex synchronous signal output at [H]). When resetting (RST terminal = [L]), a crystal oscillation clock is output (but not when resetting by the command).
6	OSC IN	LC oscillation terminal	Terminal to connect the coil of the oscillator for character output dot clock generation and a capacitor.
7	OSC OUT		
8	CHARA	Character output terminal	Terminal to output a character signal (MOD0 : It becomes an output terminal to judge the external synchronous signal at [H] and outputs the result after judging existence of the external synchronous signal. When a synchronous signal exists, [H] is output.) When resetting (RST terminal = [L]), a dot clock (LC oscillation) is output (but it is not output when reset by the command.)
9	/CS	Enable input terminal	Serial data input enable input terminal. The serial data input becomes enable at [L]. A pull-up resistor is built in (hysteresis input).
10	SCLK	Clock input terminal	Input terminal of clock for serial data input. A pull-up resistor is built in (hysteresis input).
11	SIN	Data input terminal	Serial data input terminal. A pull-up resistor is built in (hysteresis input).
12	VDD2	Power supply terminal	Power supply terminal for complex image signal level adjustment (Power supply for analog system)
13	CV OUT	Video signal output terminal	Output terminal for complex image signal.
14	NC		Connected to GND or unconnected.
15	CV IN	Video signal input terminal	Input terminal for complex image signal.
16	VDD1	Power supply terminal	Power supply terminal (+5V : power supply for digital system)
17	SYN IN	Synchronous separation circuit input terminal	Video signal input terminal of the built-in synchronous separation circuit (When the built-in synchronous separation circuit is not used, it becomes a horizontal synchronous signal input or a complex synchronous signal input.)
18	SEP C	Synchronous separation circuit bias voltage terminal	Terminal to monitor built-in synchronous separation circuit bias voltage.
19	SEP OUT	Complex synchronous signal output terminal	Terminal to output a complex synchronous signal of built-in synchronous separation circuit ([H] when internally synchronized at MOD1 : [H], [L] output when externally synchronized) (When the built-in synchronous separation circuit is not used, SYNIN input signal is output.)
20	SEP IN	Vertical synchronous signal input terminal	Terminal to input a vertical synchronous signal by integrating the output signal of SEPOUT terminal. Connect the integration circuit between SEPOUT terminals. Fix it to VDD1 when not used.
21	CTRL2	NTSC/PAL-M switching input terminal	Pin setting has a priority over switching of NTSC/PAL/PAL-M/PAL-N method. The NTSC method is selected after [L]= reset. NTSC/PAL/PAL-M/PAL-N method setting by a command is effective. [H] = PAL-M method.
22	CTRL3	SEPIN input control terminal	Terminal to control whether or not to input VSYNC signal into SEPIN input terminal. [L] = VSYNC inputted, [H] = VSYNC not inputted.
23	/RST	Reset input terminal	System reset input terminal. A pull-up resistor is built in (hysteresis input).
24	VDD1	Power supply terminal (+5V)	Power supply terminal (+5V : power supply for digital system)

DISPLAY DATA (VV261900)

V901 : 15-BT-28GK

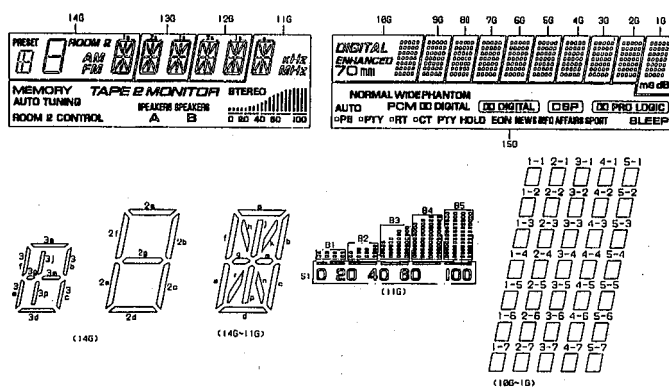


PIN CONNECTION

Pin No.	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
Connection	F2	F2	NP	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P22	P23	P24	P25	P26
Pin No.	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
Connection	P27	P28	P29	P30	P31	P32	P33	P34	P35	IC	NP	Fd	Fd	Np	IC	P36	P37	P38	P1
Pin No.	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9
Connection	P2	P3	P4	P5	P6	P7	P8	P9	P10	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G
Pin No.	8	7	6	5	4	3	2	1											
Connection	5G	4G	3G	2G	1G	NP	F1	F1											

Note 1) F1, F2 Filament 3) NC No Connection 5) 1G~15G Grid
 2) NP No Pin 4) P1~P38 Datum Line 6) IC Internal connection

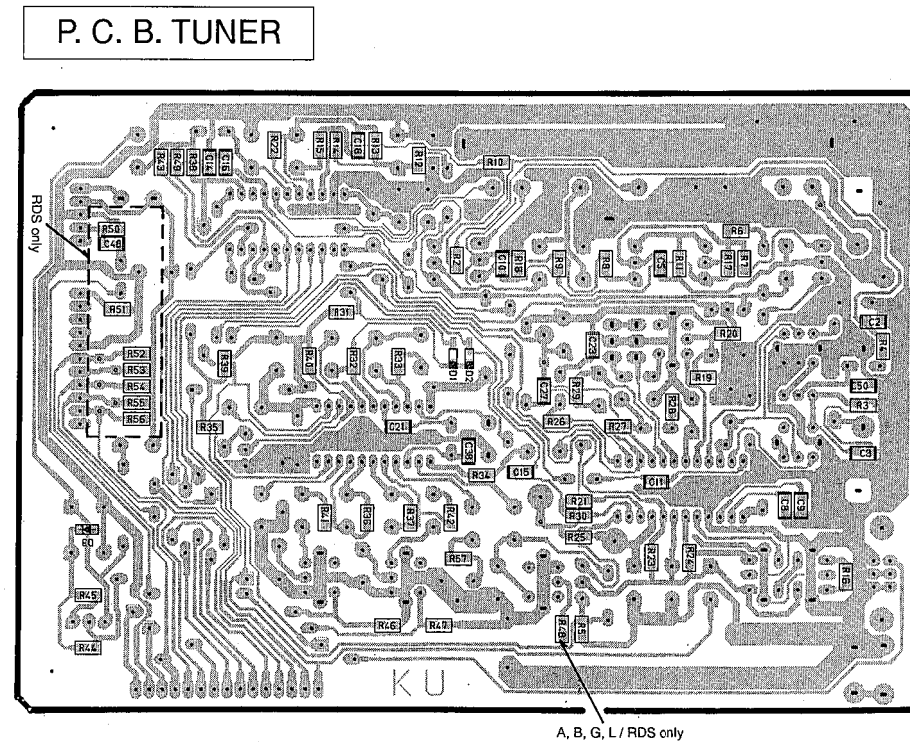
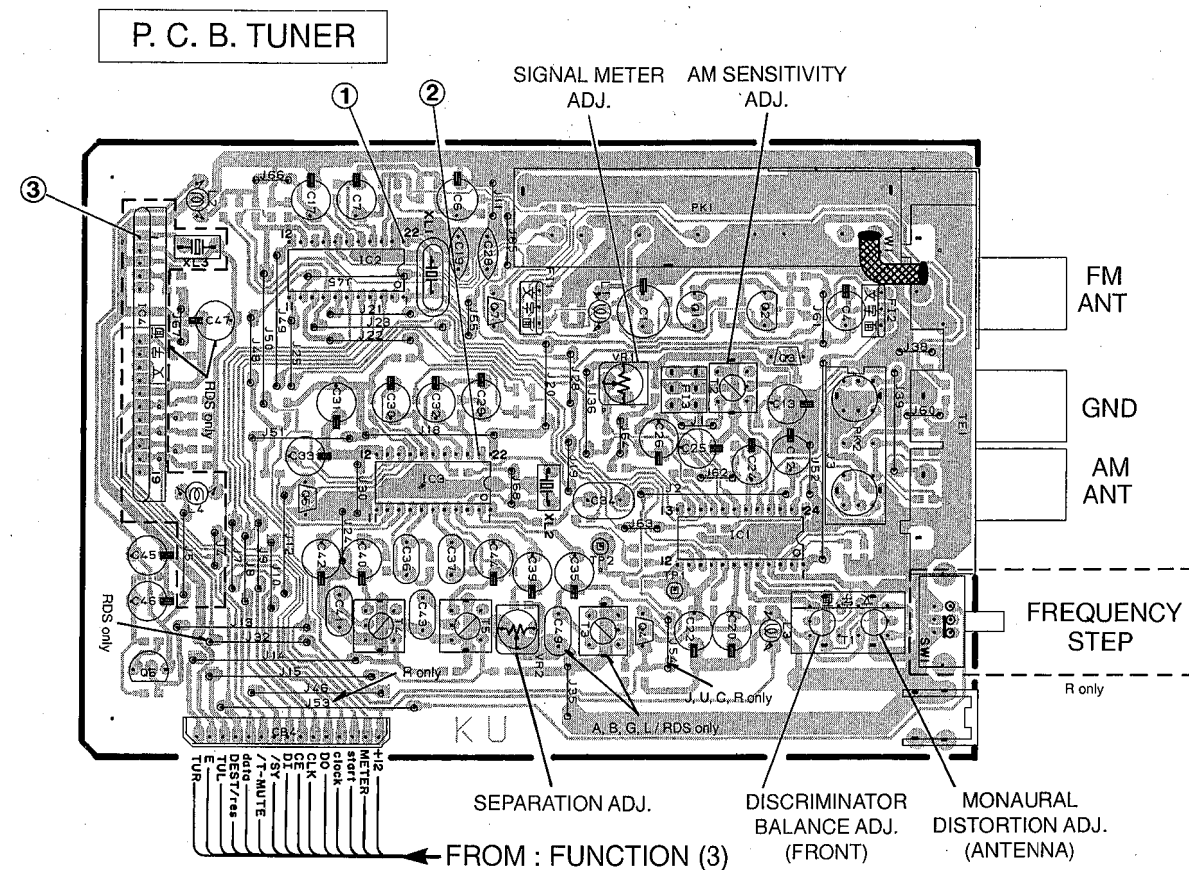
GRID ASSIGNMENT



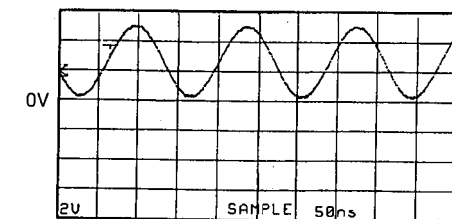
ANODE CONNECTION

	15G	14G	13G, 12G	11G	10G	9G-2G	1G
P1	-	1a	1a	a	1-1	1-1	1-1
P2	-	1h	1h	h	2-1	2-1	2-1
P3	-	1j	1j	j	3-1	3-1	3-1
P4	-	1k	1k	k	4-1	4-1	4-1
P5	-	1b	1b	b	5-1	5-1	5-1
P6	-	1f	1f	f	1-2	1-2	1-2
P7	-	1m	1m	m	2-2	2-2	2-2
P8	-	1g	1g	g	3-2	3-2	3-2
P9	-	1c	1c	c	4-2	4-2	4-2
P10	-	1e	1e	e	5-2	5-2	5-2
P11	-	1n	1n	n	1-3	1-3	1-3
P12	-	1p	1p	p	2-3	2-3	2-3
P13	NORMAL	1r	1r	r	3-3	3-3	3-3
P14	WIDE	1d	1d	d	4-3	4-3	4-3
P15	PHANTOM	ROOM 2	2a	KHz	5-3	5-3	5-3
P16	DO	AM	2h	MHz	1-4	1-4	1-4
P17	PCM	FM	2j	STEREO	2-4	2-4	2-4
P18	DIGITAL	2a	2k	B1	3-4	3-4	3-4
P19	DO DIGITAL	2b	2b	B2	4-4	4-4	4-4
P20	DBP	2f	2f	B3	5-4	5-4	5-4
P21	DO PRO LOGIC	2g	2m	B4	1-5	1-5	1-5
P22	AUTO	2c	2g	B5	2-5	2-5	2-5
P23	□ (PS)	2e	2c	S1	3-5	3-5	3-5
P24	PS	2d	2e	TAPE MONITOR	4-5	4-5	4-5
P25	□ (PTY)	PRESET	2n	2	5-5	5-5	5-5
P26	PTY	3a	2p	SPEAKERS A	1-6	1-6	1-6
P27	□ (RT)	3b, 3c	2r	SPEAKERS B	2-6	2-6	2-6
P28	RT	3d	2d	MEMORY	3-6	3-6	3-6
P29	□ (CT)	3e, 3f	-	AUTO TUNING	4-6	4-6	4-6
P30	CT	3g	-	ROOM 2 CONTROL	5-6	5-6	5-6
P31	PTY HOLD	3j, 3p	-	-	1-7	1-7	1-7
P32	EON	3m	-	-	2-7	2-7	2-7
P33	NEWS	-	-	-	3-7	3-7	3-7
P34	INFO	-	-	-	4-7	4-7	4-7
P35	AFFAIRS	-	-	-	5-7	5-7	5-7
P36	SPORT	-	-	-	DIGITAL	-	dB
P37	SLEEP	-	-	-	ENHANCED	-	mS
P38	-	-	-	-	70 mm	-	-

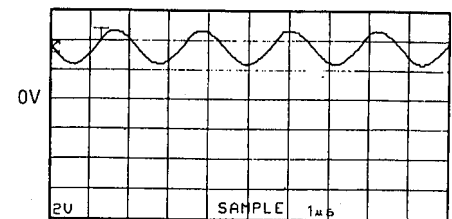
PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)



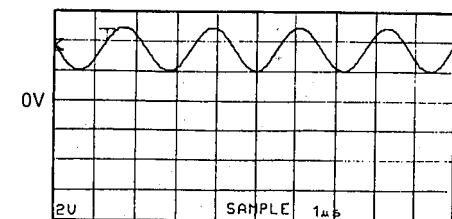
Point ① (Pin22 of IC2) FM reception
 V : 2V/div H : 50nsec/div
 DC range 1 : 1 probe



Point ② (Pin21 of IC3)
 V : 2V/div H : 1μsec/div
 DC range 1 : 1 probe

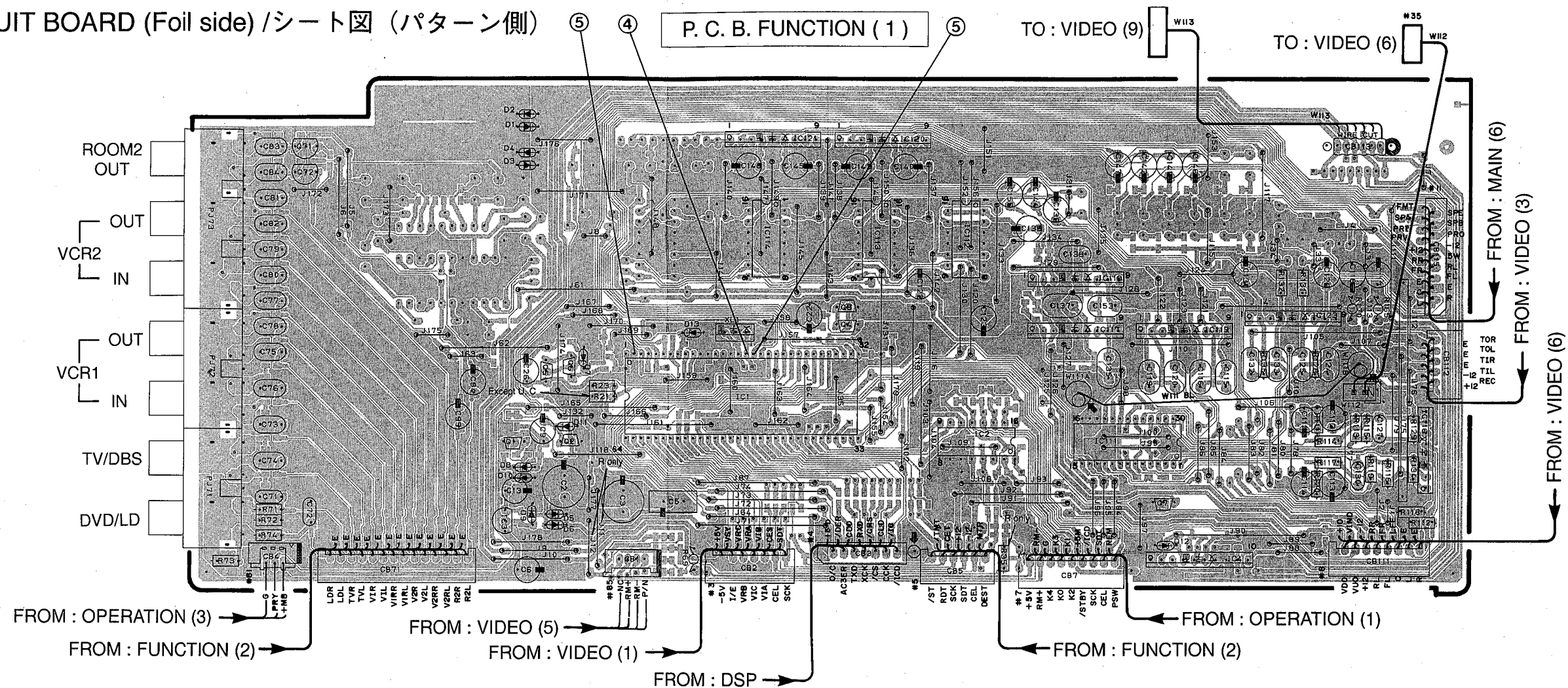


Point ③ (Pin1 of IC4)
 V : 5V/div H : 1 μsec/div
 DC range 1 : 1 probe



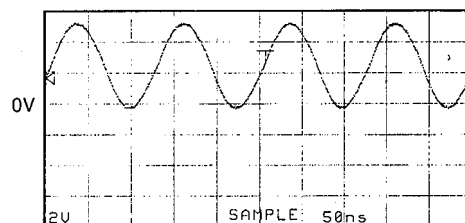
PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)

P. C. B. FUNCTION (1)



Point ④ (Pin17 of IC1)

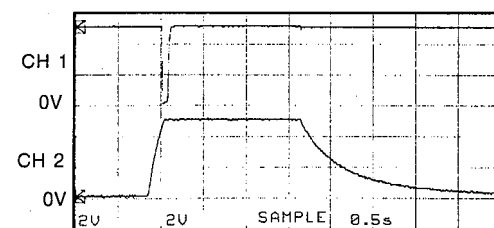
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe



Point ⑤

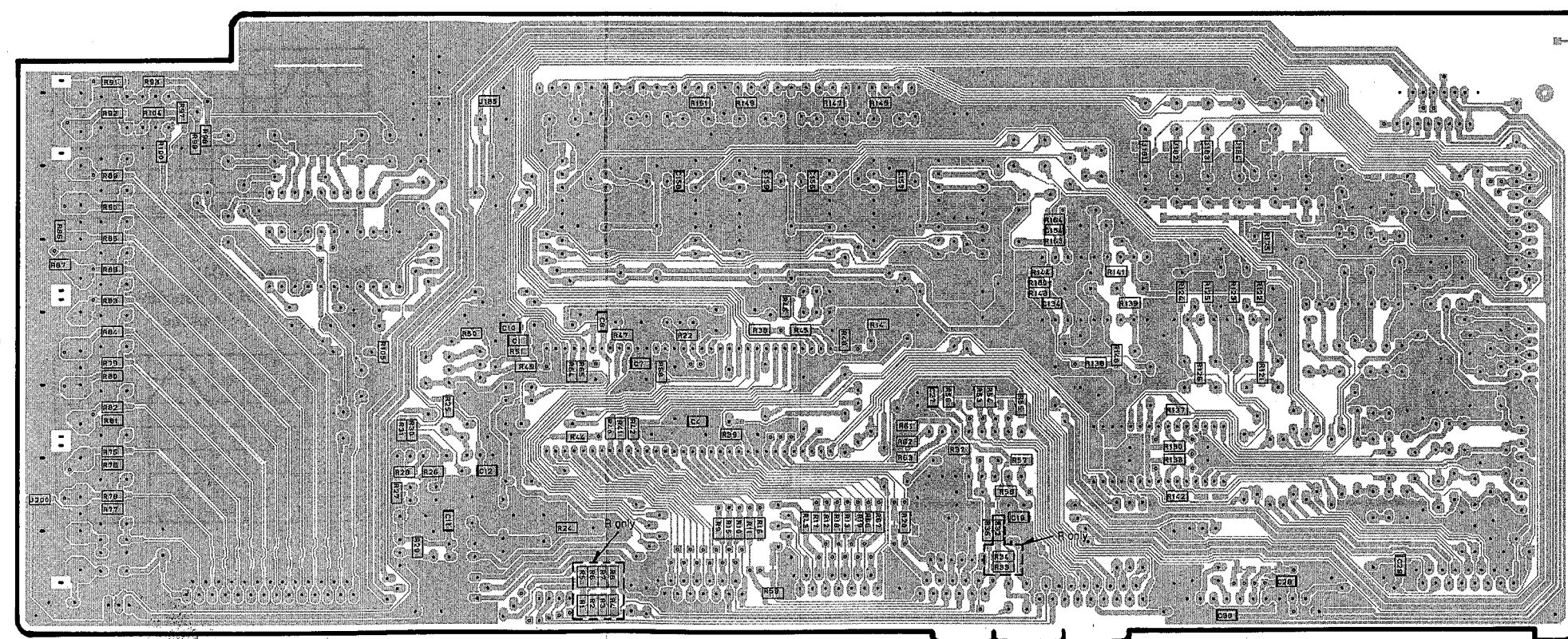
CH1 : Pin18 of IC1 V : 2V/div (CH1)
CH2 : Pin2 of IC1 V : 2V/div (CH2)

H : 0.5 sec/div DC range 1 : 1 probe
(This waveform is not available by pushing the power switch ON and OFF.)



With the POWER ON, disconnect the A/C power cord. Reconnect the A/C power cord and the above waveforms will start.

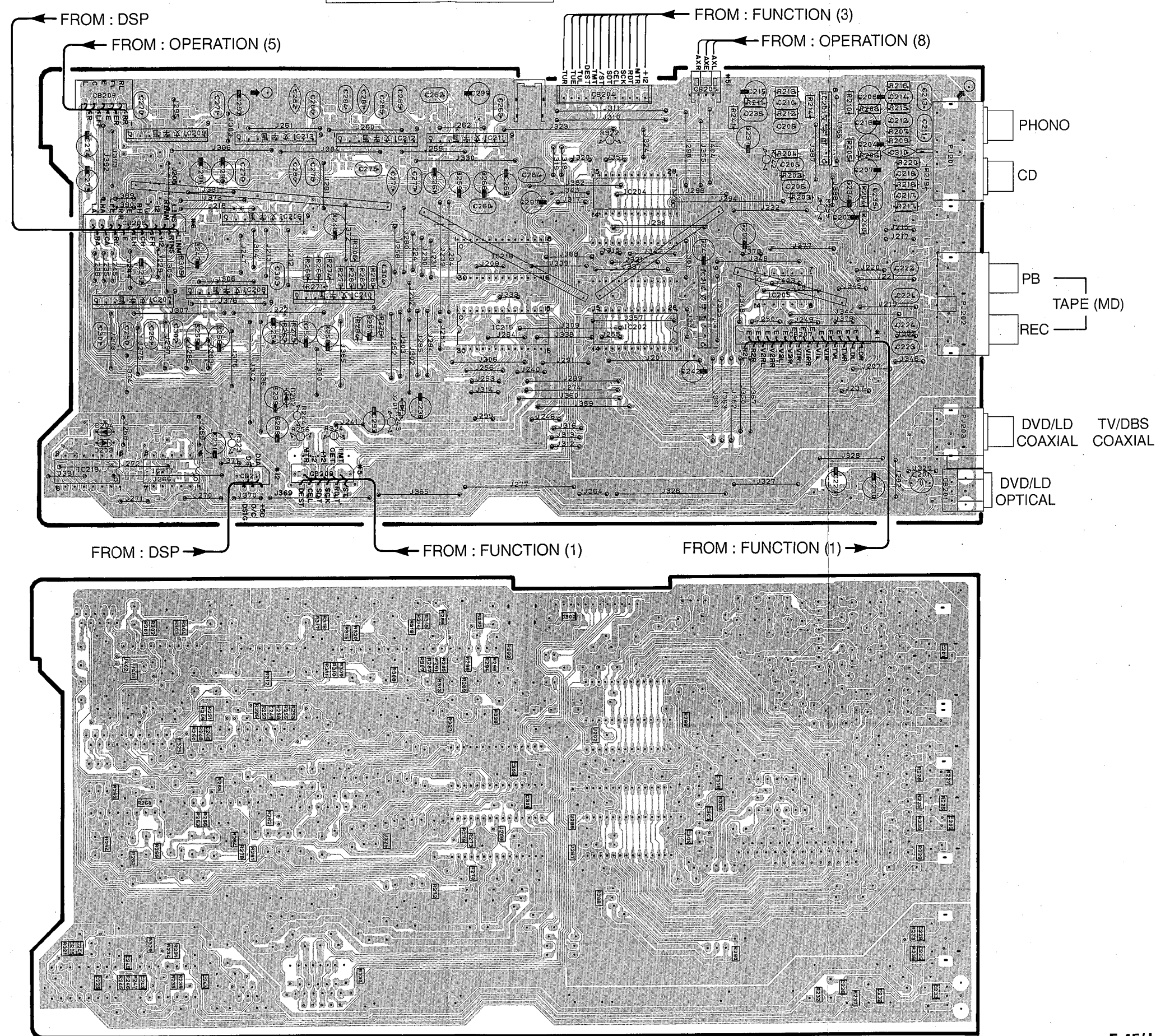
Disconnect the power cord from the AC outlet.



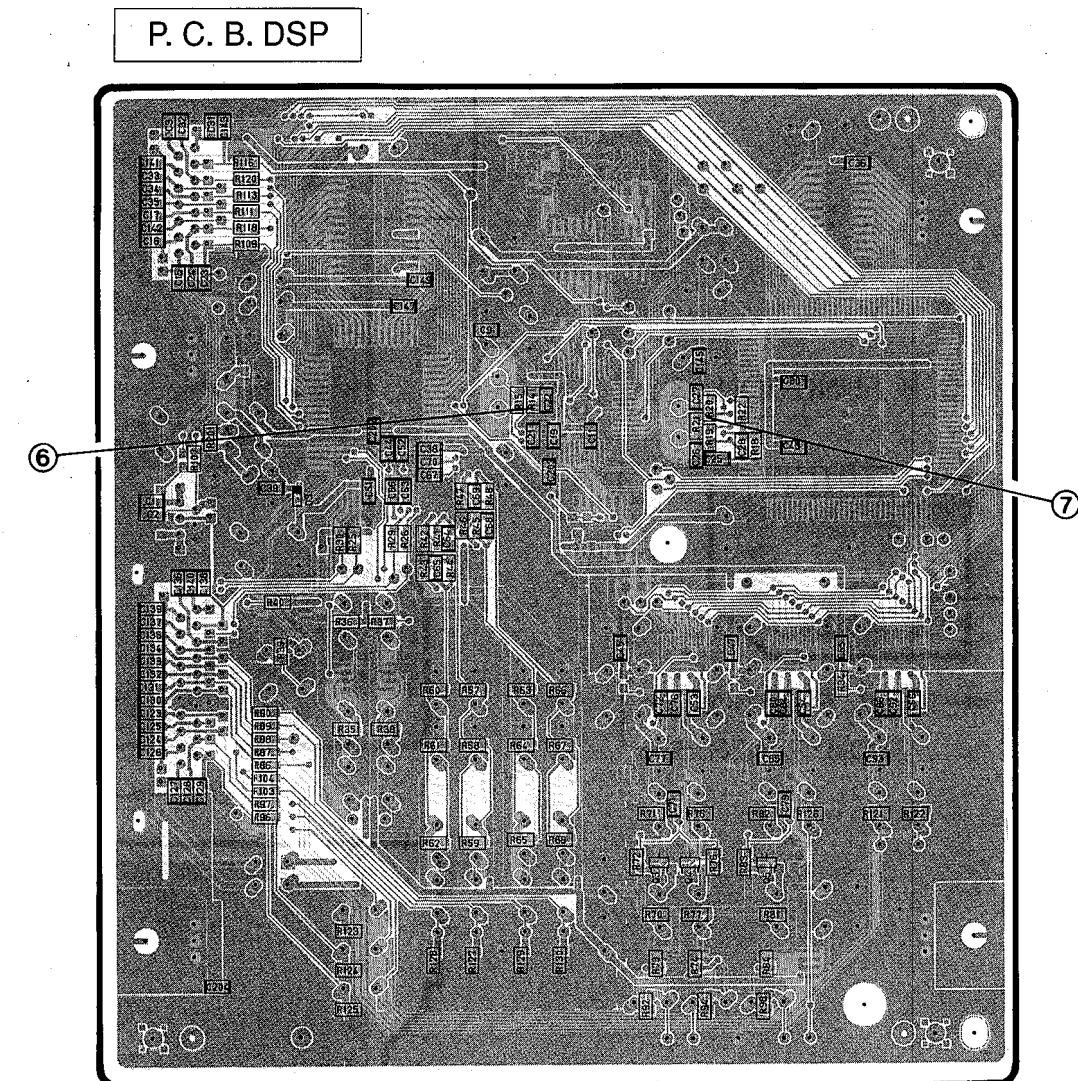
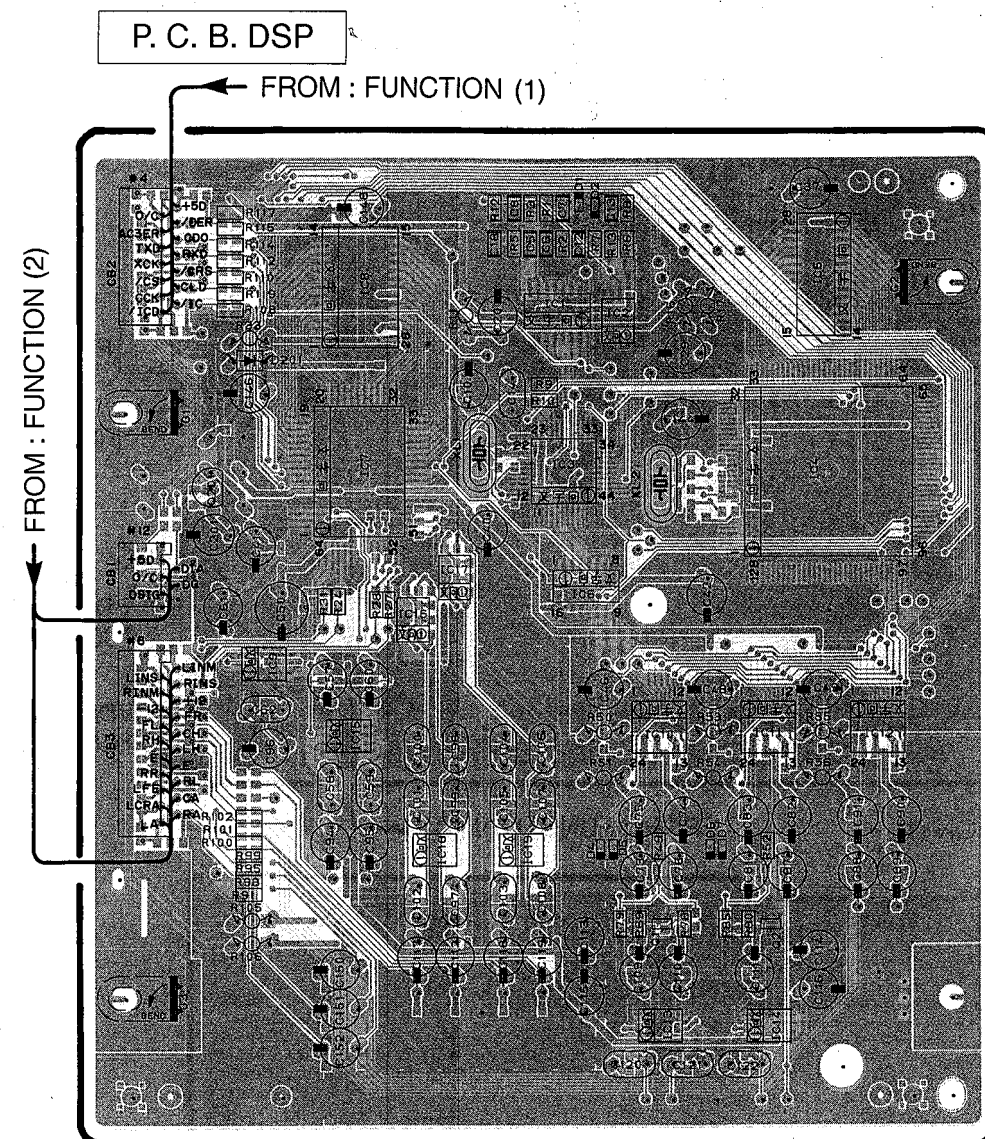
■ PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)

P. C. B. FUNCTION (2)

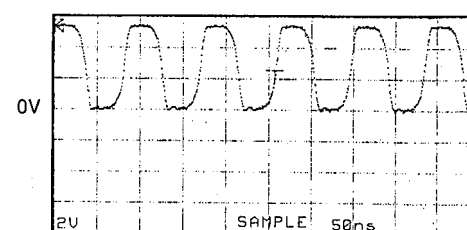
P. C. B. FUNCTION (3)



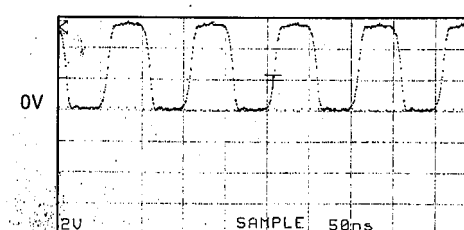
■ PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)



Point ⑥ (Pin13 of IC3)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe

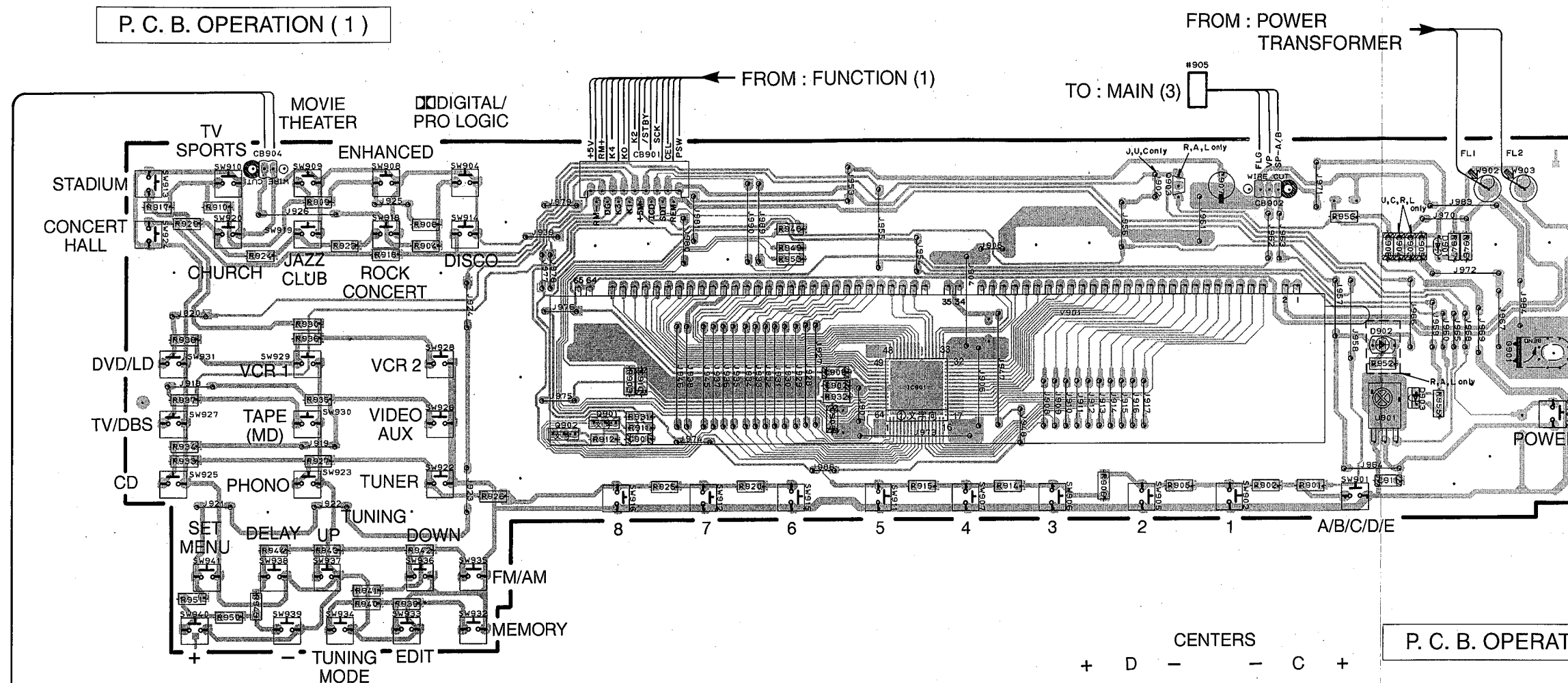


Point ⑦ (Pin16 of IC4)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe



PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)

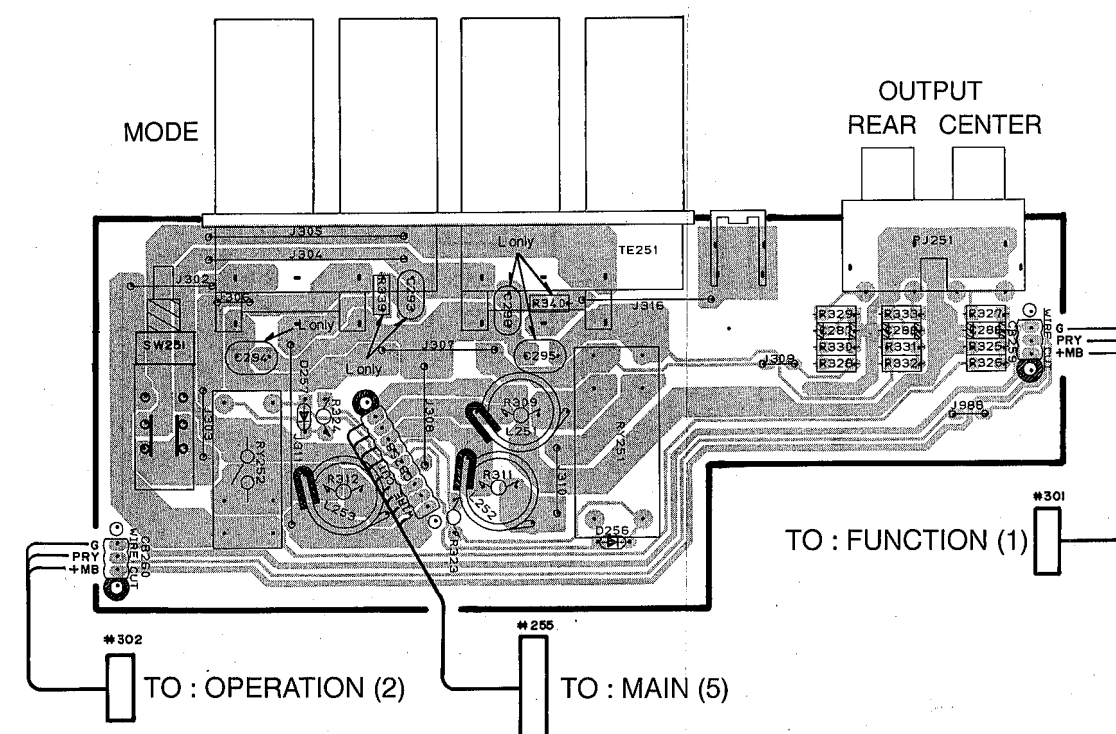
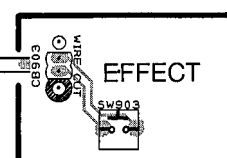
P. C. B. OPERATION (1)



P. C. B. OPERATION (3)

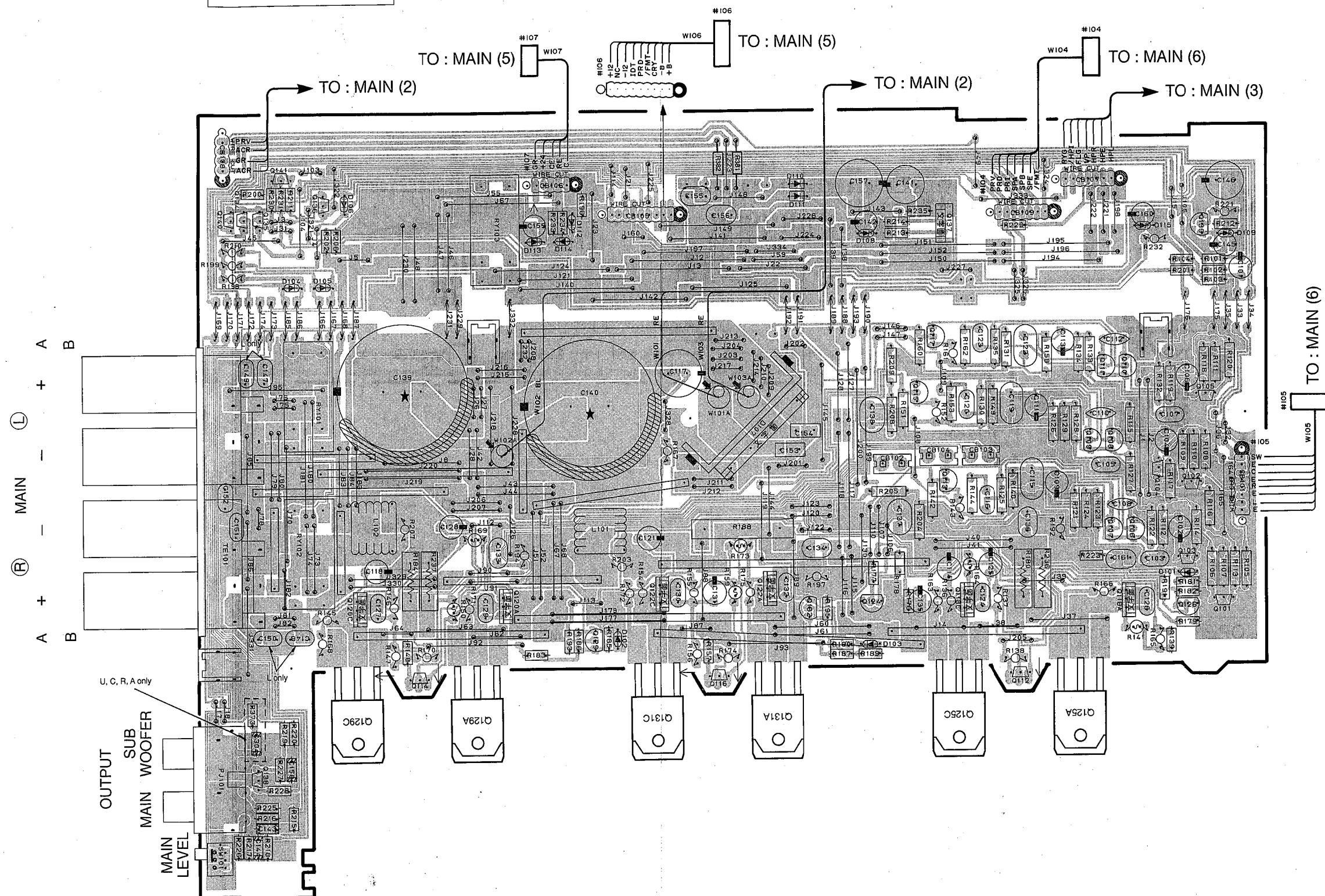
CENTERS
+ D - - C +
REAR
+ (R) - - (L) +

P. C. B. OPERATION (5)

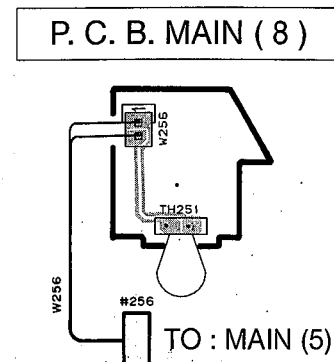
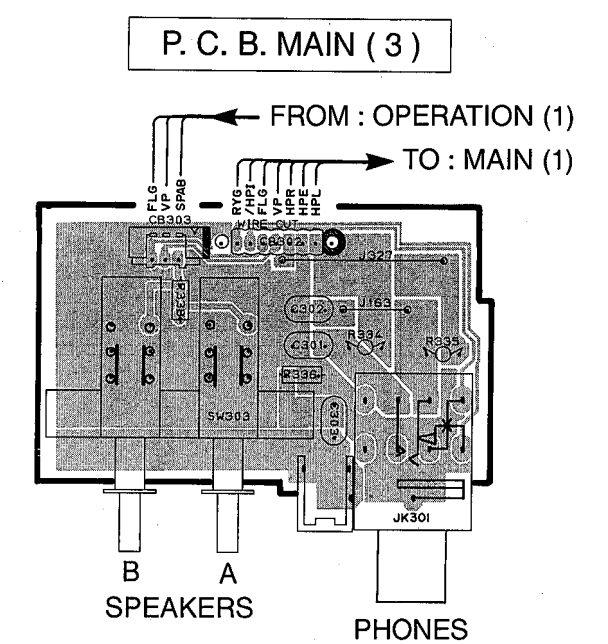
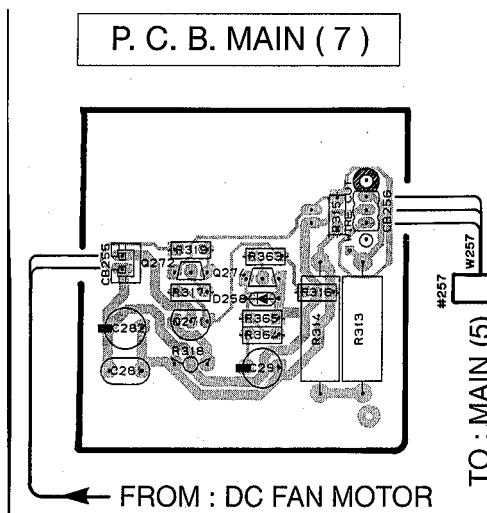
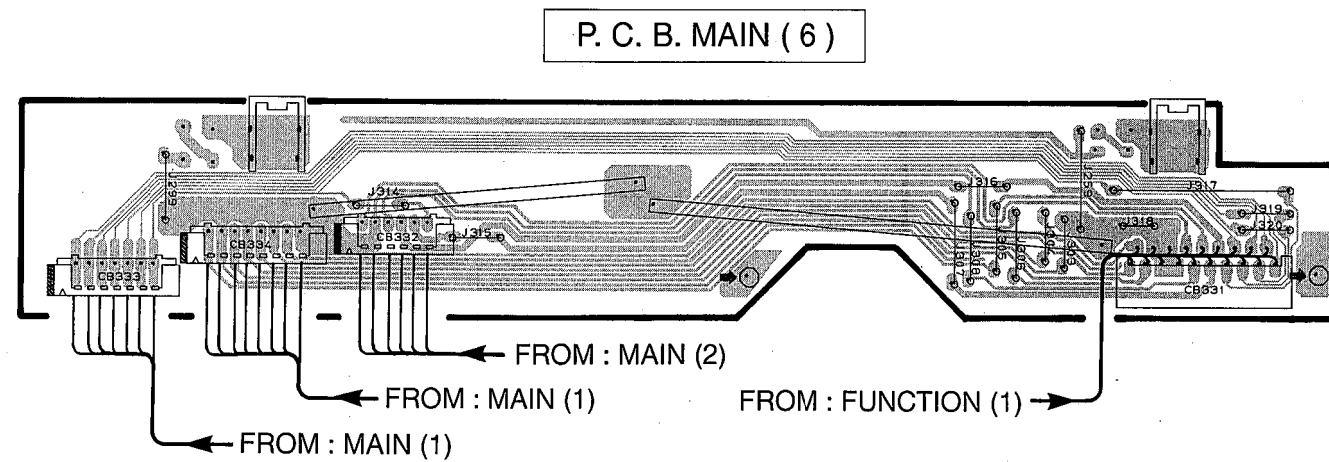
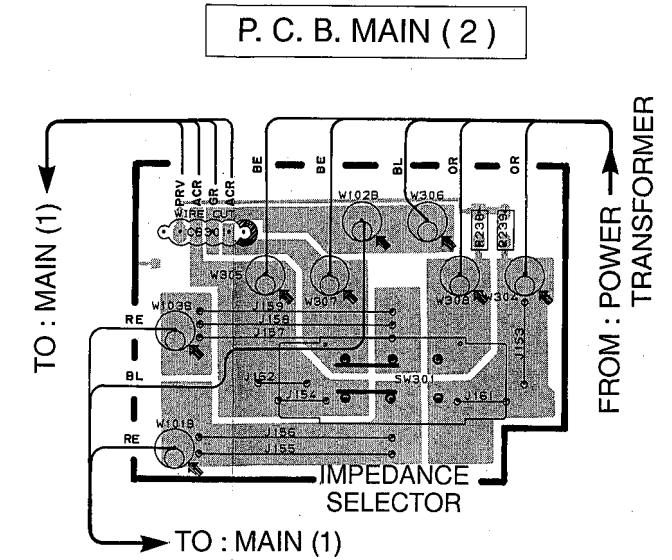
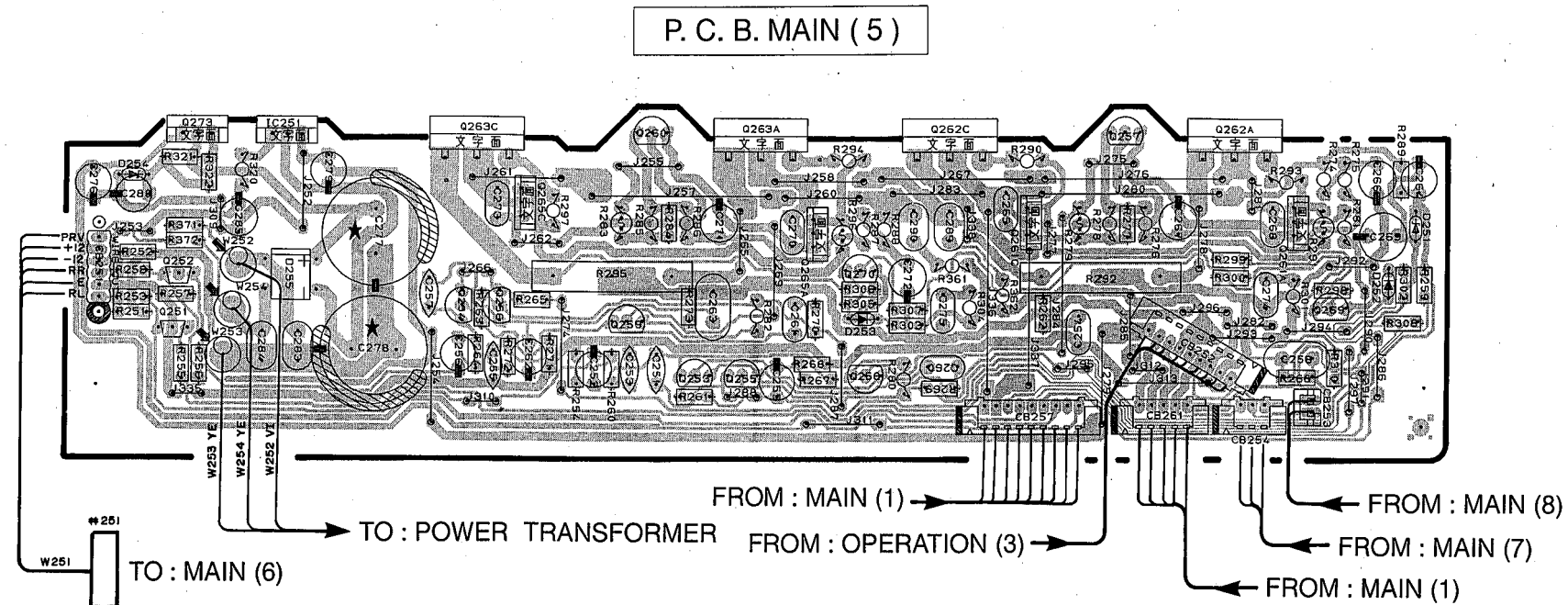


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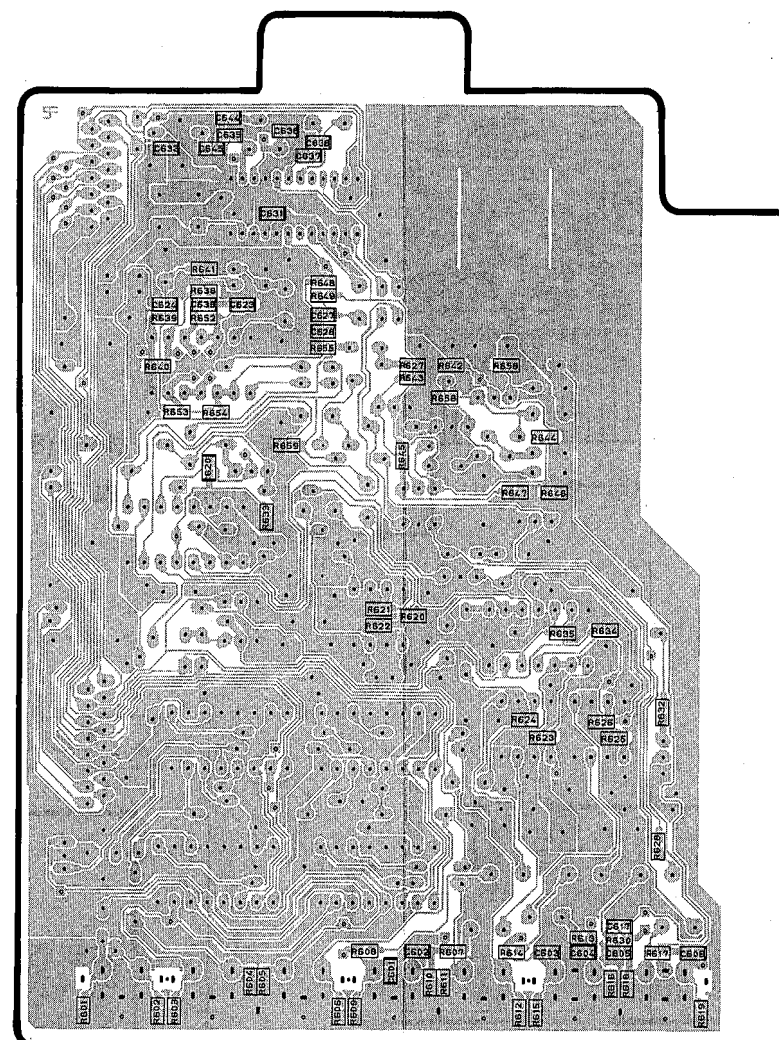
P. C. B. MAIN (1)



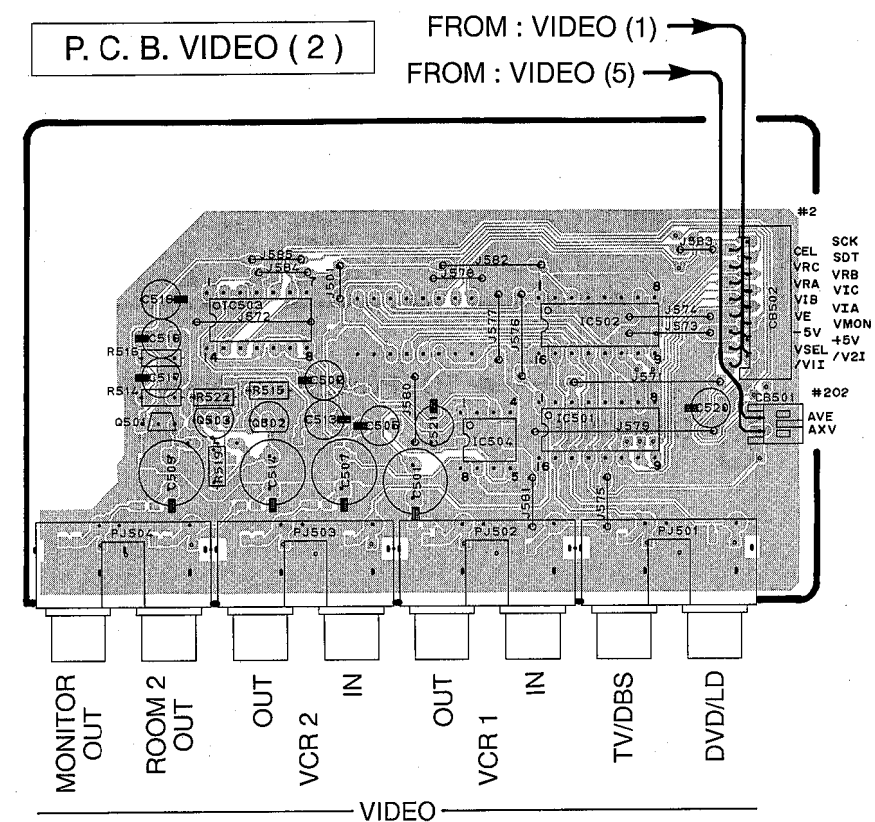
■ PRINTED CIRCUIT BOARD (Foil side) /シート図 (パターン側)



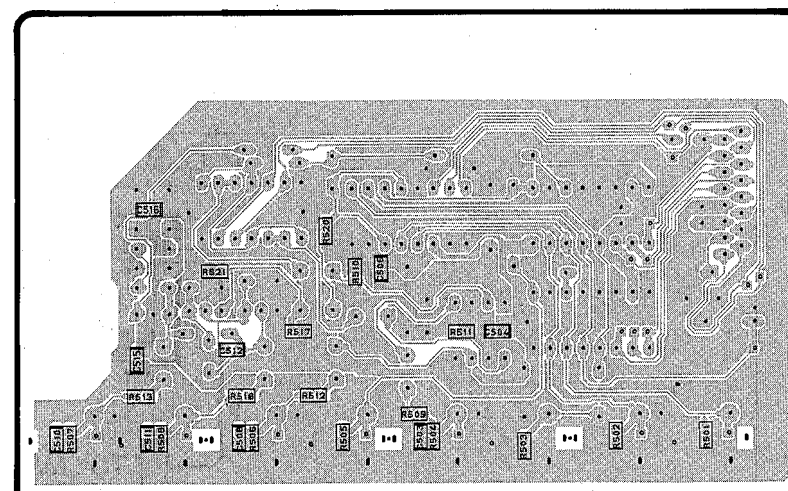
P. C. B. VIDEO (1)



P. C. B. VIDEO (2)

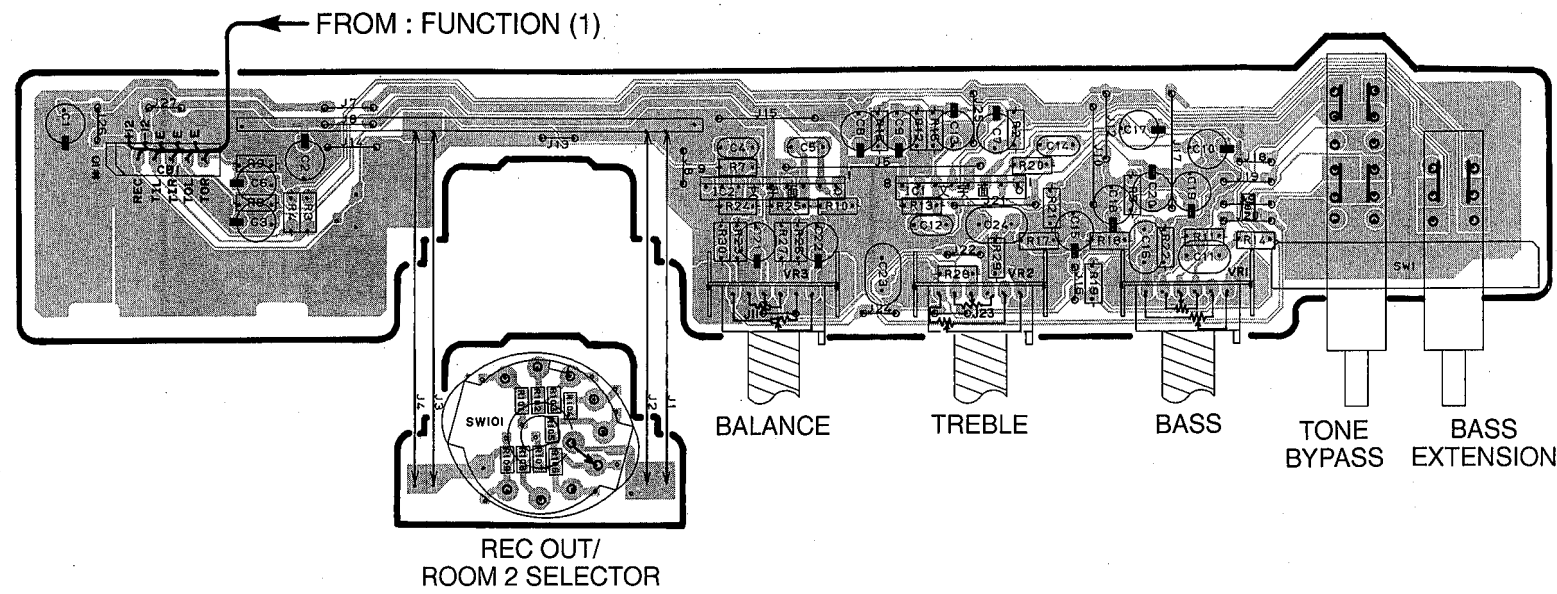


P. C. B. VIDEO (2)

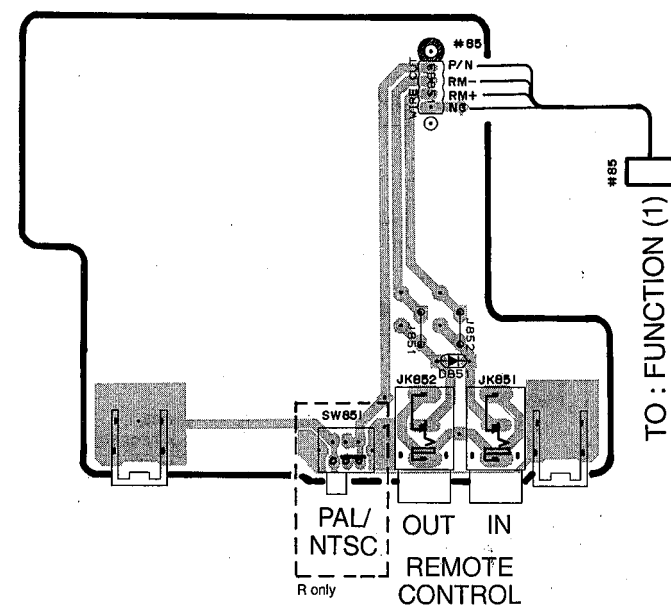


■ PRINTED CIRCUIT BOARD (Foil side) / シート図 (パターン側)

P. C. B. VIDEO (3)

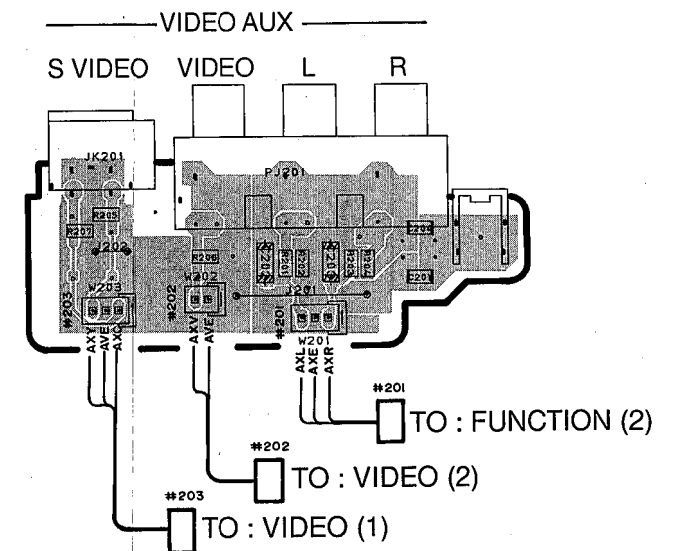


P. C. B. VIDEO (4)

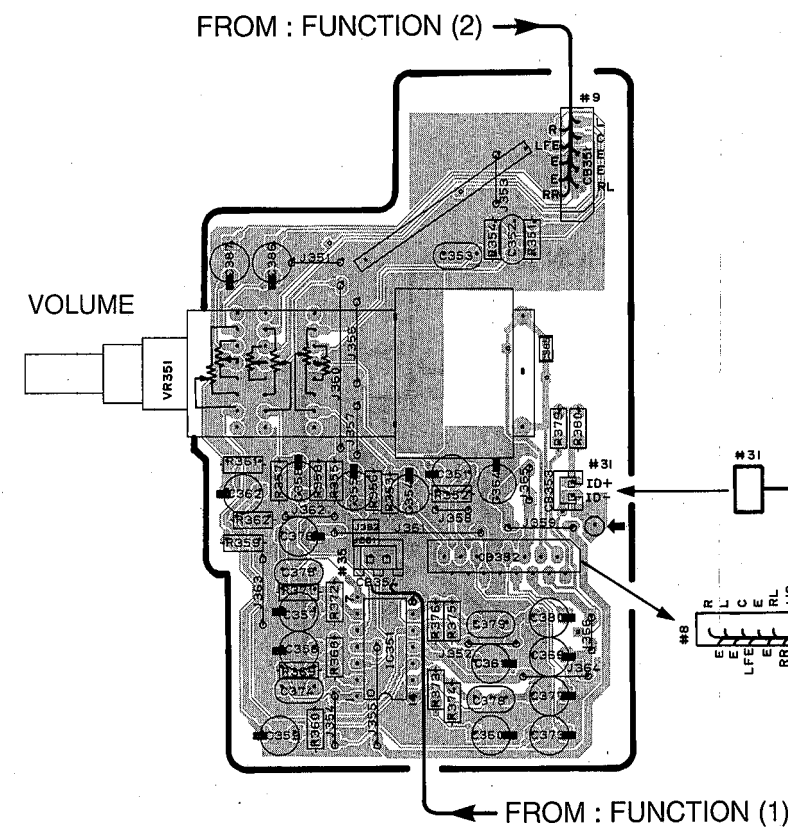


P. C. B. VIDEO (10)

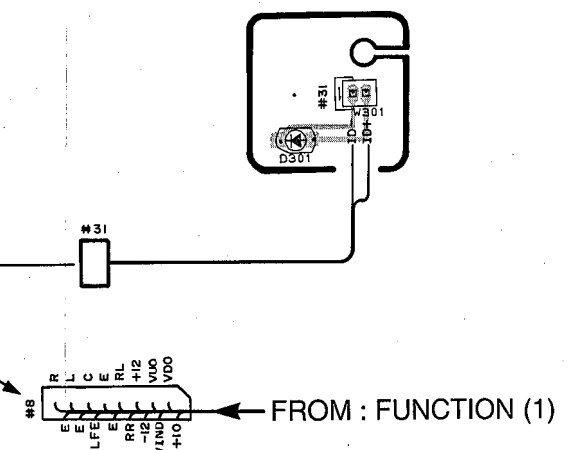
P. C. B. VIDEO (5)



P. C. B. VIDEO (6)



P. C. B. VIDEO (7)



TO: POWER TRANSFORMER

SW308

RE WH BR YE OR

F305 CB322 CB323 J985

W314 W315 W316 W317 W322 W313

SW308
VOLTAGE SELECTOR

110V	1-2/5-6
120V	2-3/6-7
240V	3-4/7-8
220V	4-5/8-1

PIN CONNECTION DIAGRAM / 半導体外形図

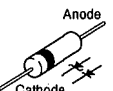
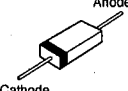
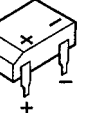
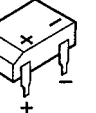
ICs

NJM78L05A	NJM79M12FA NJM79M05FA	NJM78M05FA	NJM2068L-D	μPC4570HA	LB1641	STK311-020B
MC14576CP	TC74HCU04AP HD14066BP μPC457C	HD14053BP HD74HC153P HD74HC4051P TC9299P	LA3401 LC72131	LA1266 LC74781-9626		
TC9273N-009	LC78213 LC78211	HD6433614P	LC75710NE	YSS243B		
NJM2904M-T1 NJM4558MT-1 μPC4570G2	TC74HC02AF-TP1 TC74HC157AF-TP1	AK4320-VM	LH5P832N-10 UM61256FS-15Q	YM3436DK	YSS245	

Transistors

2SA933S (Q, R) 2SC1740S (R, S) 2SC3330 (S, T) 2SC4038 (Q, R, S) 2SD1915F (S, T) DTA114ES DTA143ES DTA144ES DTC114ES DTC143XS DTC144ES 	2SA893A (D, E) 2SA970 (GR, BL) 2SA1015 (Y) 2SB647 (C, D) 	2SC535 (A, B, C) 2SC1815 (Y) 2SC1890A (D, E) 2SC2229 (O, Y) 2SC2240 (GR, BL) 2SC2878 (A, B) 	2SC4038 (Q, R, S) 	
2SC3326 (A, B) DTA144EK 	2SA1358 (O, Y) 2SC3421 (O, Y) 	2SC4495 2SD2396 (J, K) 	2SA1492 (O, P, Y) 2SC3856 (O, P, Y) 	2SA1962 (R, O) 2SC5242 (R, O) 

Diodes

1SR139-100 1SR139-400 1SS133 1SS270A 	MA8056-H MTZJ5.1A MTZJ5.1B MTZJ6.8B MTZJ8.2B MTZJ9.1B MTZJ13.0A HZS12B2TD HZS12C2TD HZS152TD HZS302TD 	1SS355 	D3SBA20 D5SBA20 	S1NB20 
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A

B

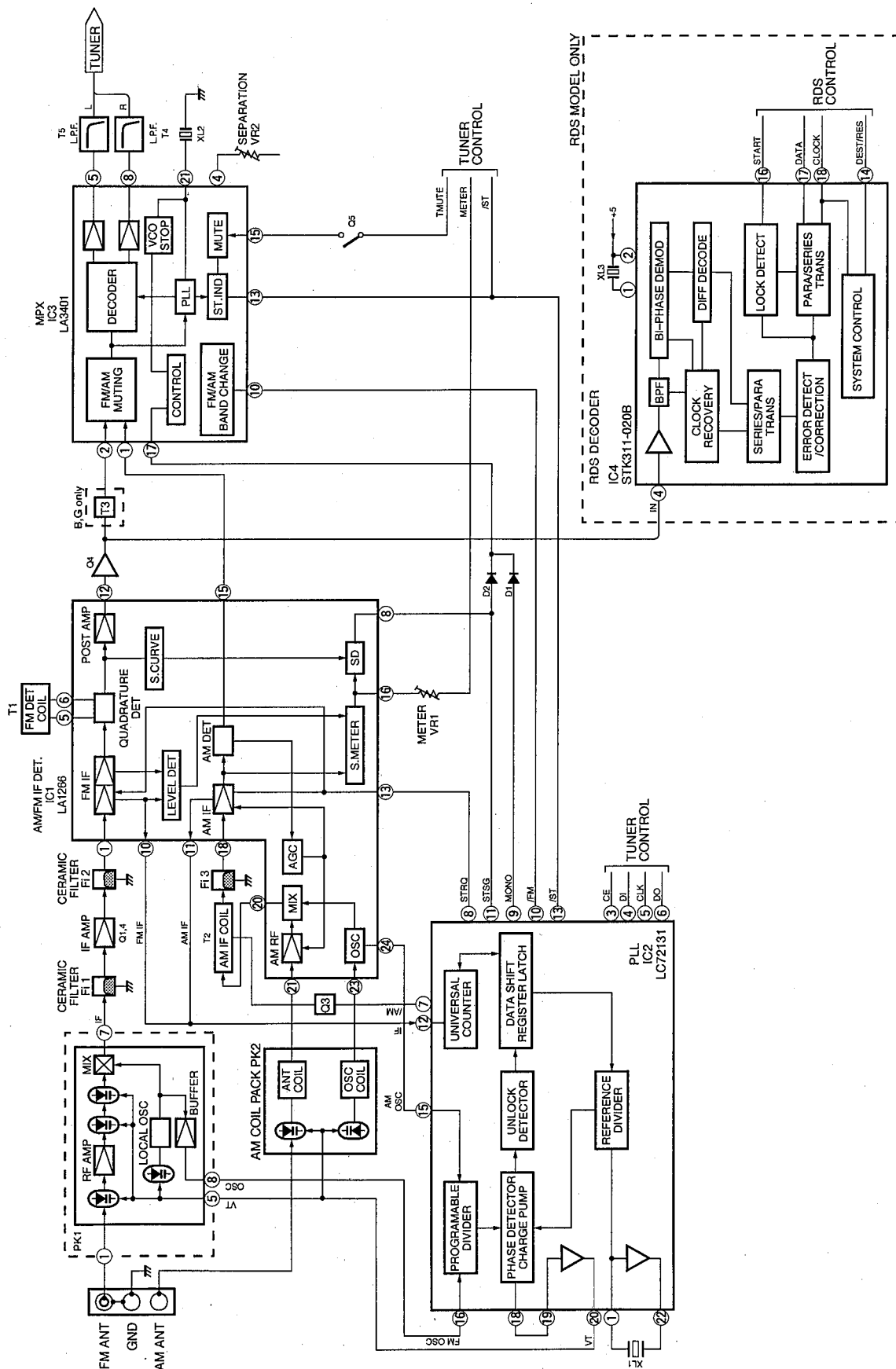
C

D

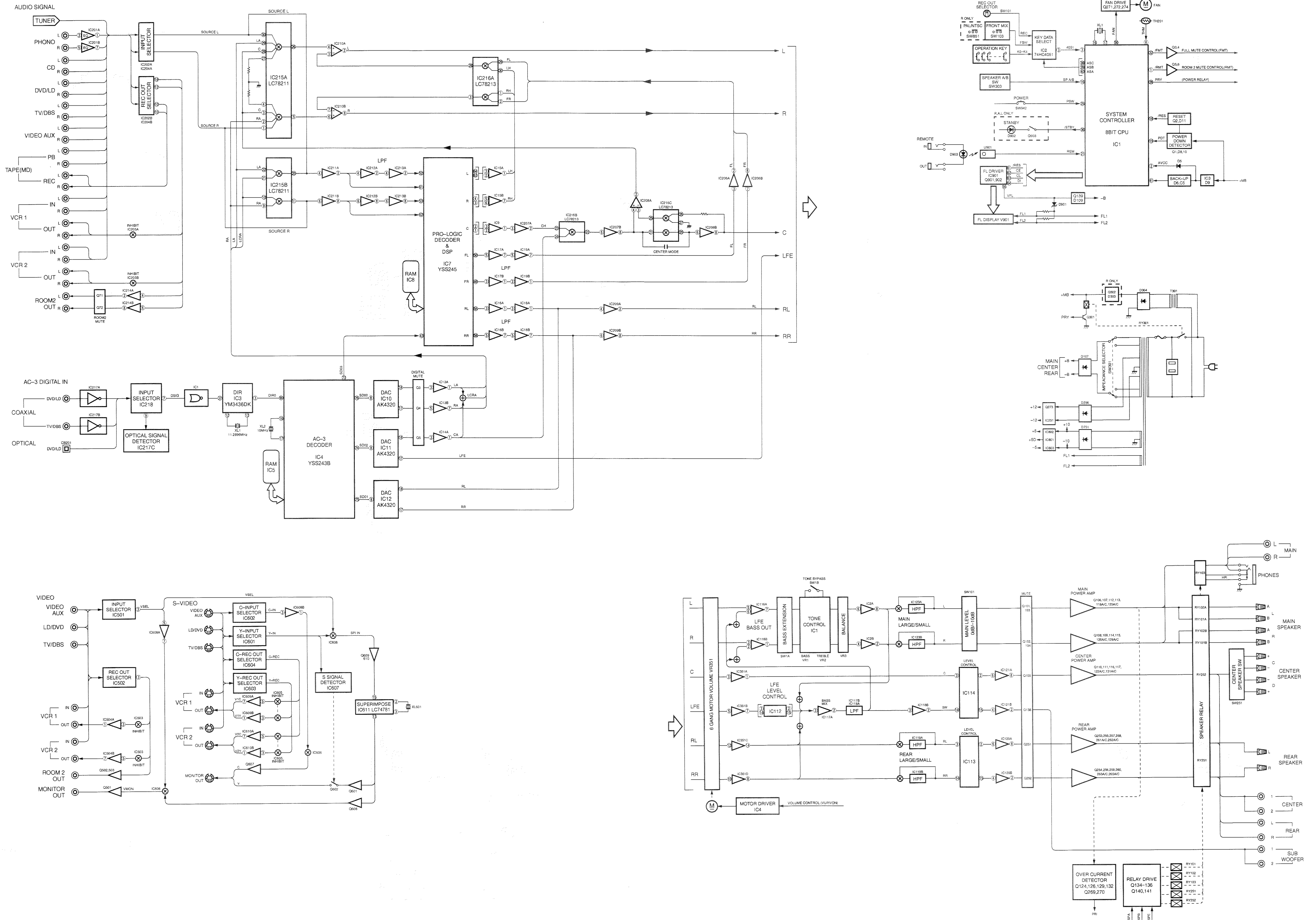
E

RX-V992/DSP-R992

BLOCK DIAGRAM / ブロックダイアグラム

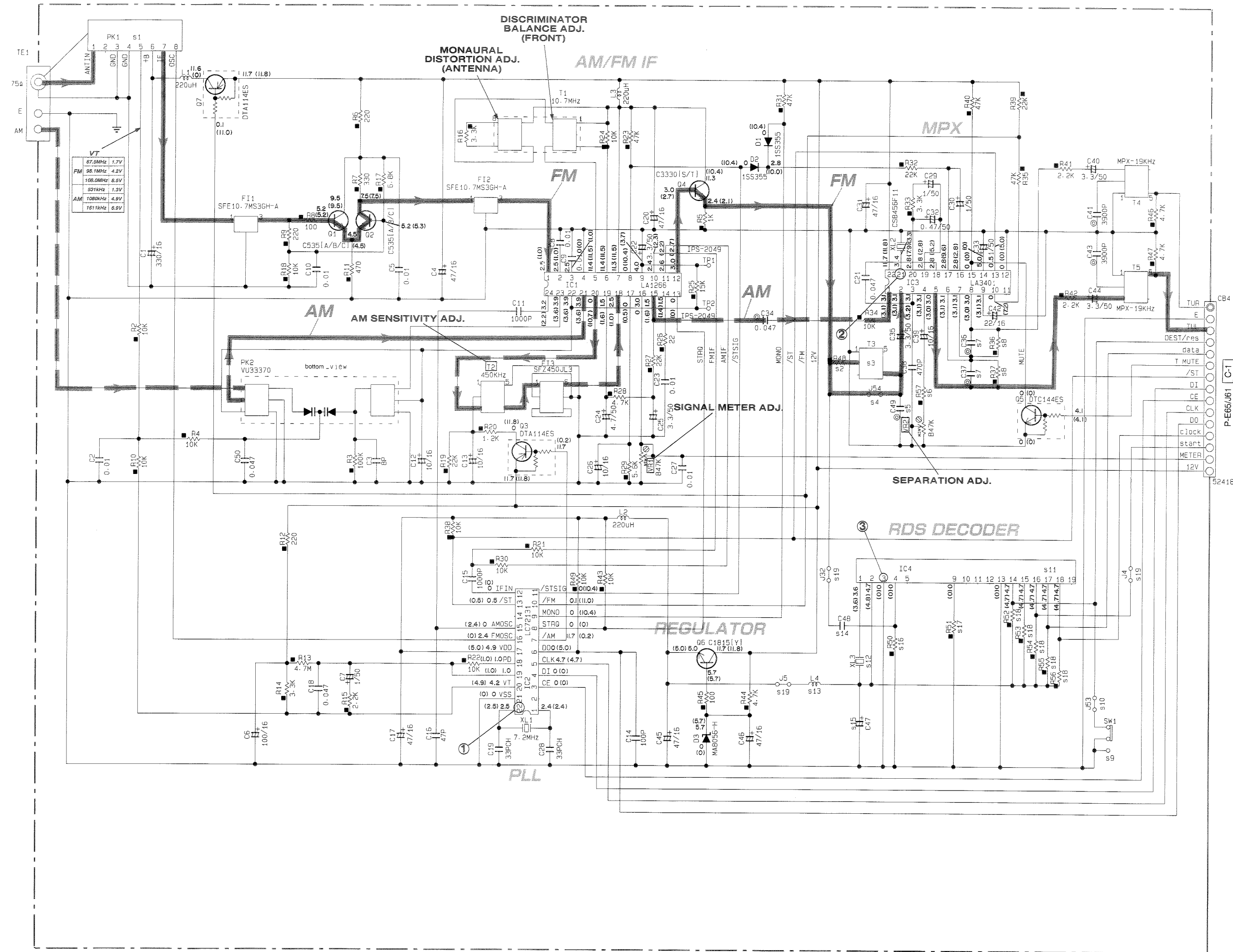


BLOCK DIAGRAM / ブロックダイアグラム



SCHEMATIC DIAGRAM (TUNER) / 総回路図

Each voltage given here represents that in the FM (98.1MHz, STEREO) reception mode but the one in the parentheses () is measured in the AM (1080kHz, MAN'L) reception mode.



CIRCUIT CHANGES BY MARKET.

S	J	U-C	R	A-B-G-L	S-G/RDS
1	PK1	VR60440	VR24220	VR24220	VR98760
2	R48				
3	T3				
4	J54				
5	C49				
6	R57	22K	22K	22K	120P
7	C36-37	680P	1000P	1000P	470P
8	R36-37	75K	75K	75K	100K
9	SW1				
10	J53				
11	IC4				
12	XL3				
13	L4				
14	C48				
15	C47				
16	R50				
17	R51				
18	R52-56				
19	J4-S-32				
20					

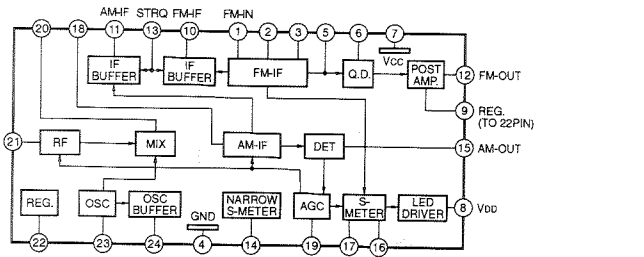
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
NO MARK	CERAMIC TUBULAR CAPACITOR
NO MARK	POLYESTER FILM CAPACITOR
NO MARK	POLYSTYRENE FILM CAPACITOR
NO MARK	MICA CAPACITOR
NO MARK	POLYPROPYLENE FILM CAPACITOR
NO MARK	SEMICONDUCTIVE CERAMIC CAPACITOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
NO MARK	CARBON FILM RESISTOR (P=10)
NO MARK	METAL OXIDE FILM RESISTOR
NO MARK	METAL FILM RESISTOR
NO MARK	METAL PLATE RESISTOR
NO MARK	FIRE PROOF CARBON FILM RESISTOR
NO MARK	CEMENT MOLDED RESISTOR
NO MARK	SEMI VARIABLE RESISTOR
NO MARK	CHIP RESISTOR

NOTICE (model)
(J)..... JAPANESE
(U)..... U.S.A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE

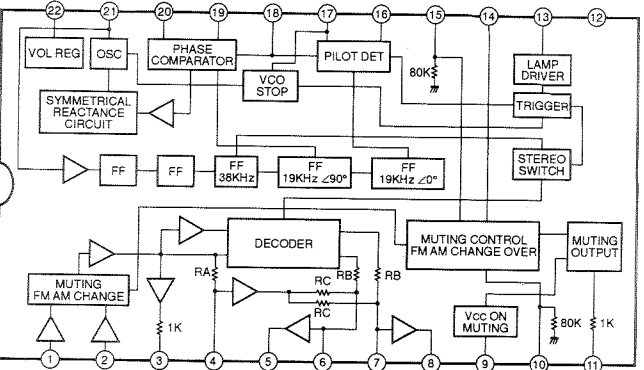
IC1 : LA1266

AM/FM IF



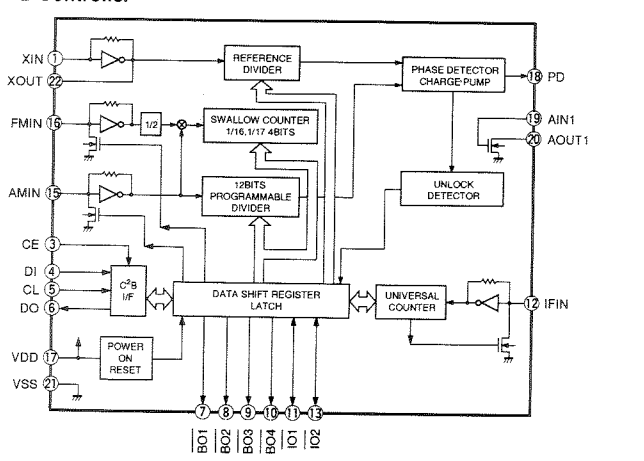
IC3 : LA3401

MPX



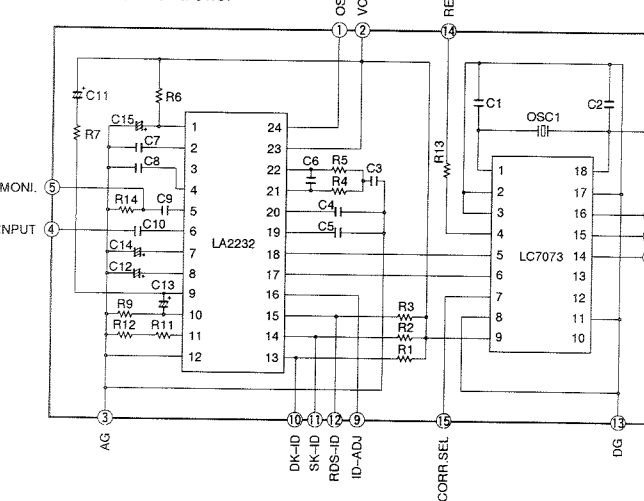
IC2 : LC72131

PLL Controller

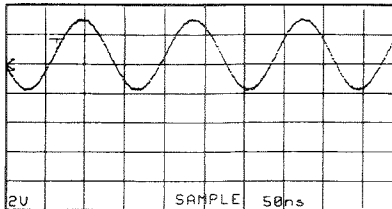


IC4 : STK311-020B

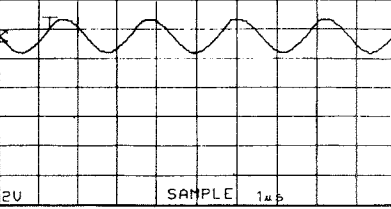
RDS Decoder & Controller



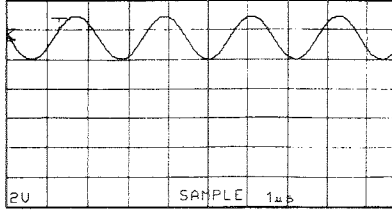
Point ① (Pin22 of IC2) FM reception
V : 2V/div H : 50nsec/div
DC range 1 : 1 probe



Point ② (Pin21 of IC3)
V : 2V/div H : 1μsec/div
DC range 1 : 1 probe

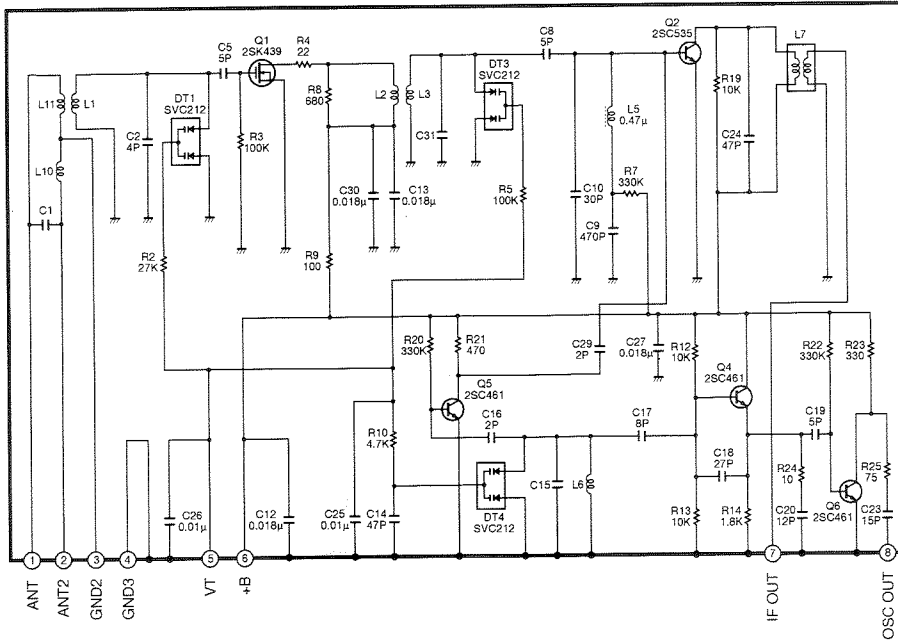


Point ③ (Pin1 of IC4)
V : 5V/div H : 1 μsec/div
DC range 1 : 1 probe

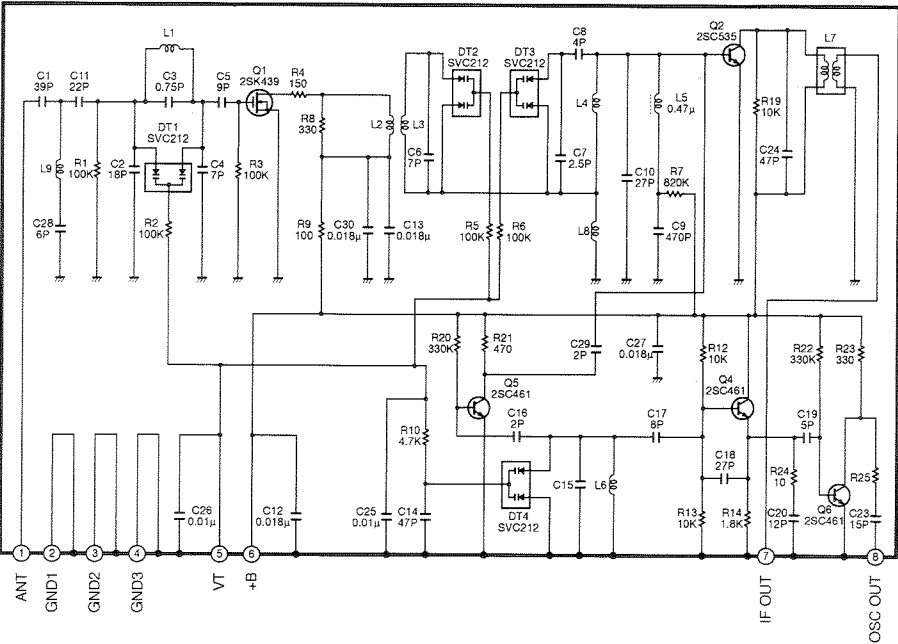


* All voltages are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

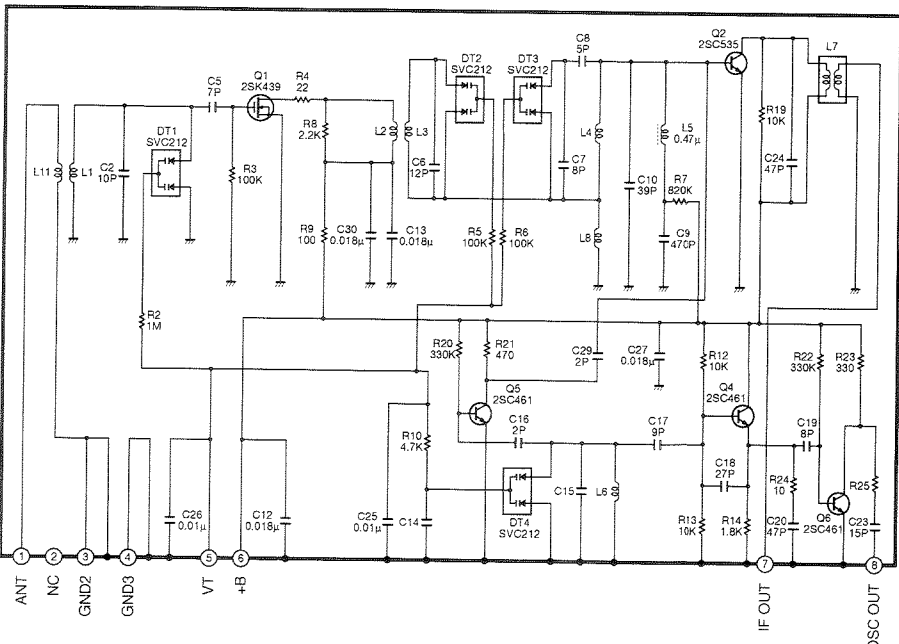
● PK1 : ENV-17298G1 (VR242200) U, C, R models



● PK1 : ENV-17297G1 (VQ987600) A, L, B, G models



● PK1 : ENV-14292G1 (VR604400) J model



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SCHEMATIC DIAGRAM (FUNCTION) / 総回路図

CAPACITOR	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
○	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
◇	POLYESTER FILM CAPACITOR
◇	POLYSTYRENE FILM CAPACITOR
◇	MICA CAPACITOR
◇	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

RESISTOR	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
△	CARBON FILM RESISTOR (P=10)
○	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
◇	METAL PLATE RESISTOR
◇	FIRE PROOF CARBON FILM RESISTOR
◇	CEMENT MOLDED RESISTOR
◇	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

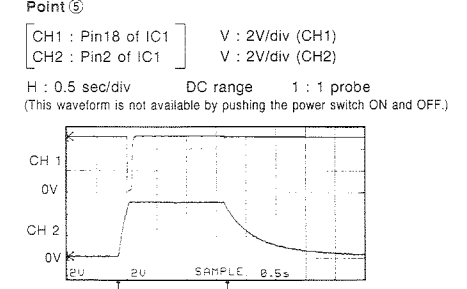
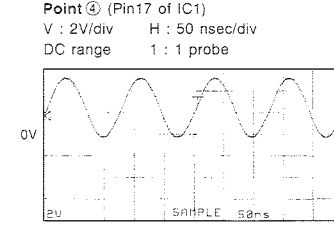
Mark	Reference Parts Number	Parts Name
K1	01-8-0-5-11	45514 18533 18536
K2		
K3		
K4	01-3-6	25493361 (G/R) 25411515 (V/I) 25413004 (G/R/S)
K5	071-72	25C28761 (A/S) 25C15129 (D/I)

Mark	Reference Parts Number	Parts Name
K6	07-13	MTJ2J-1A H2552
K7	D12	MTJ2J-1B H2552
K8	D10	MTJ2J-2B H2552
K9	07	DT514E5 UN4211

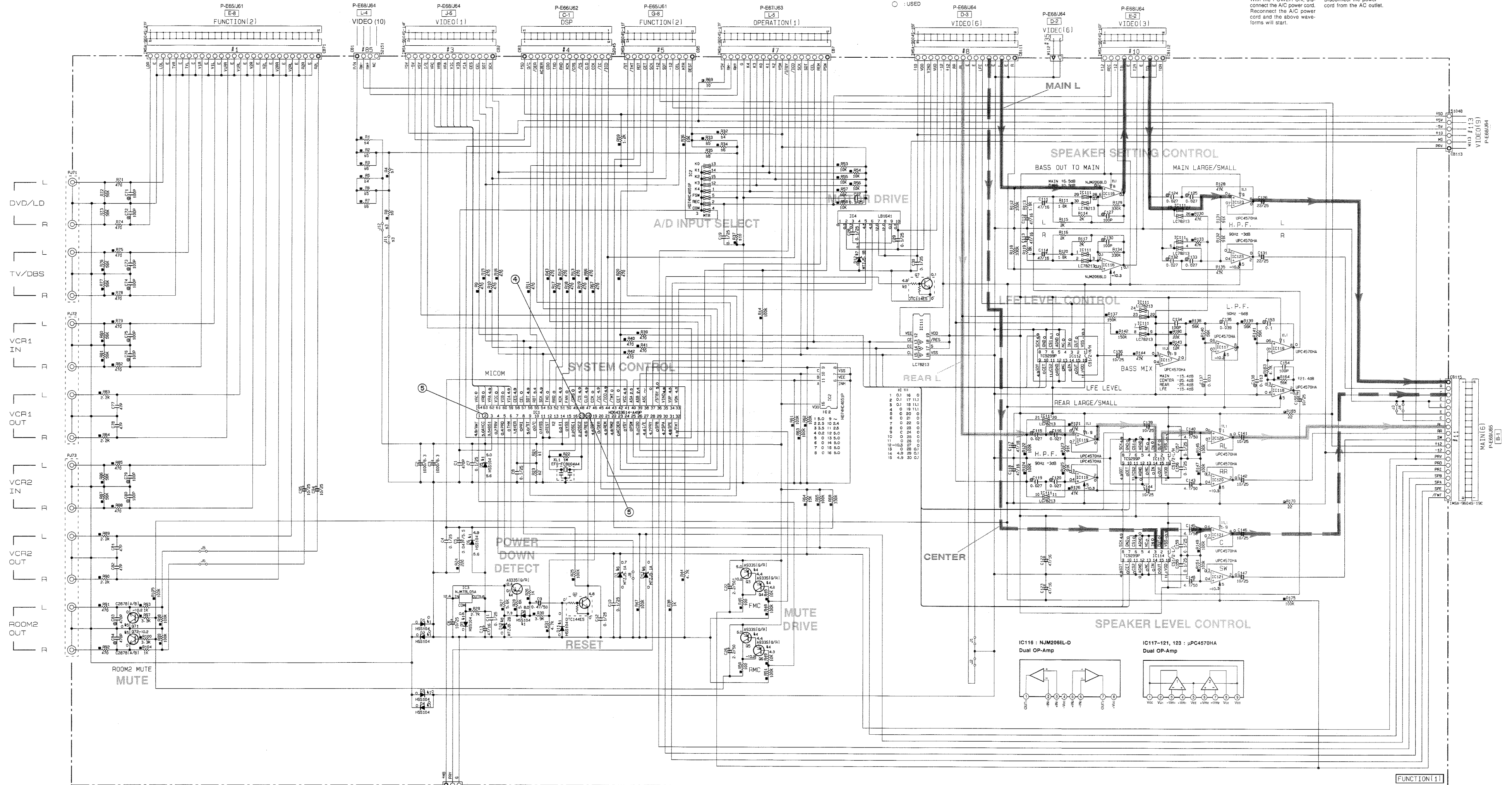
CIRCUIT CHANGES BY MARKET:

	J	U.C.	H	A.L.
1	R21	27K	39K	25K
2	R23	10K	3.9K	3.9K
3	J11-12	×	○	×
4	R11-30	×	2.2K	×
5	R2-3-39	×	27K	×
6	R3-2-34	×	150K	×
7	R4	×	12K	×
8	R25	×	12K	×
9	R6	×	HF 45712	×
10	R37	100	100	50K
11	R37	100	100	100

× : NOT USED
○ : USED

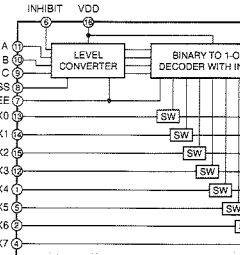


With the POWER ON, disconnect the A/C power cord from the AC outlet. Reconnect the A/C power cord and the above waveforms will start.



IC2 : HD74HC4051P

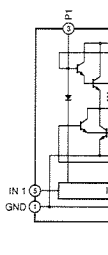
Analog Multiplexer/Demultiplexer



INPUT STATES	ON CHANNEL (B)
A B C	
0 0 0	0
0 0 1	1
0 1 0	2
0 1 1	3
1 0 0	4
1 0 1	5
1 1 0	6
1 1 1	7
1 X X	NONE

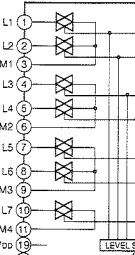
IC4 : LB1641

Motor Driver



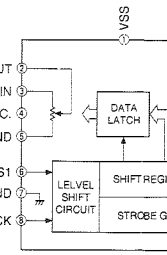
IC11 : L78213

Analog Function Switch



IC112-114 : TC9299P

Electric Controlled Volume



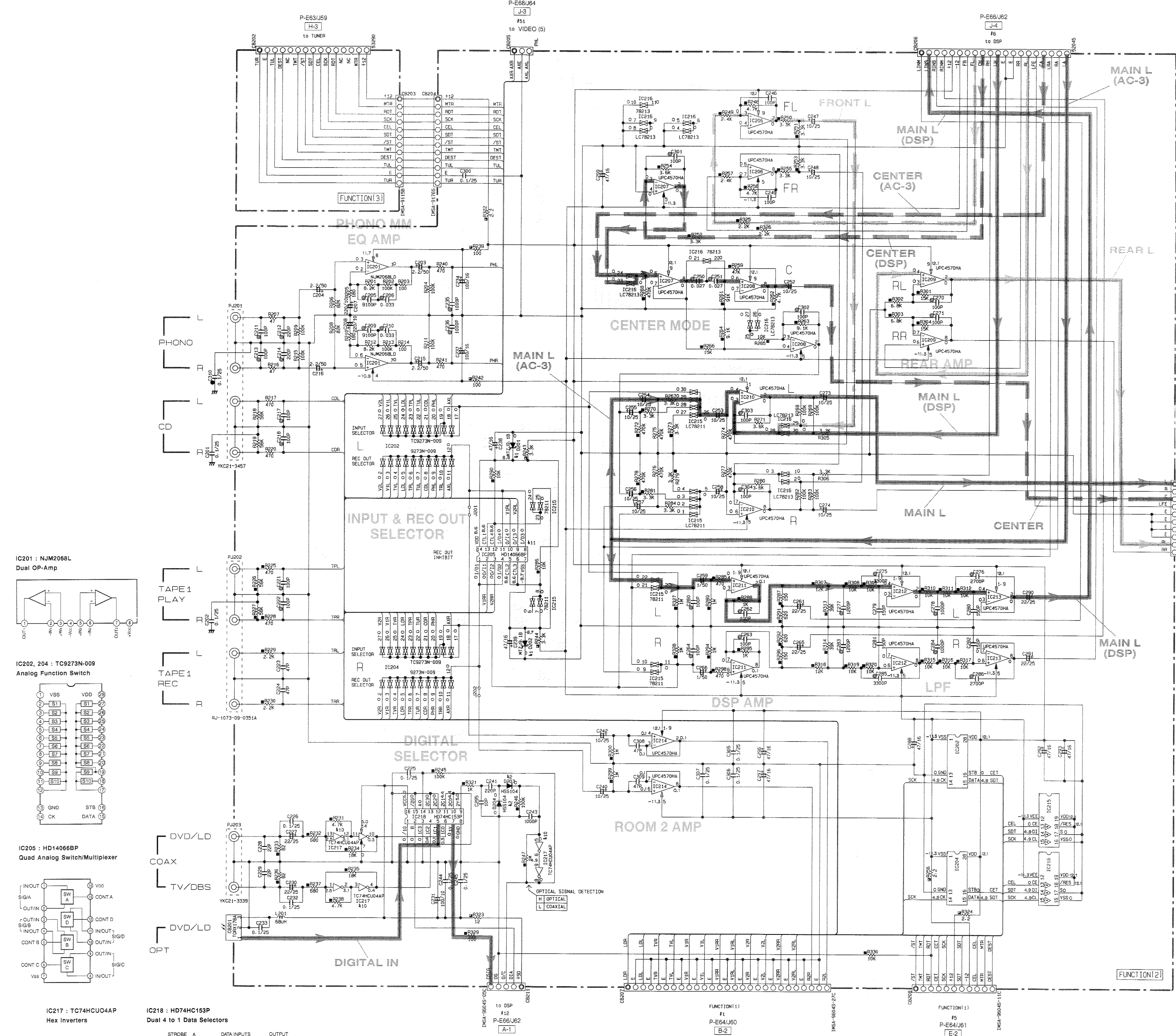
Other ICs

● IC1 : HD643814P → See page E-29/J-27

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- 本回路図は標準回路図です。改良のため予告なく変更することがございます。

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- * Schematic diagram is subject to change without notice.

SCHEMATIC DIAGRAM (FUNCTION) / 総回路図



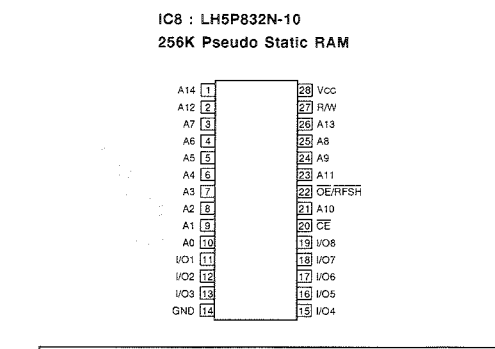
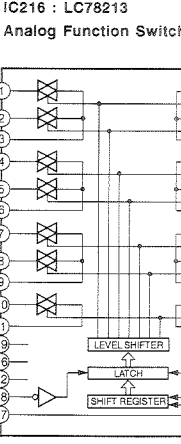
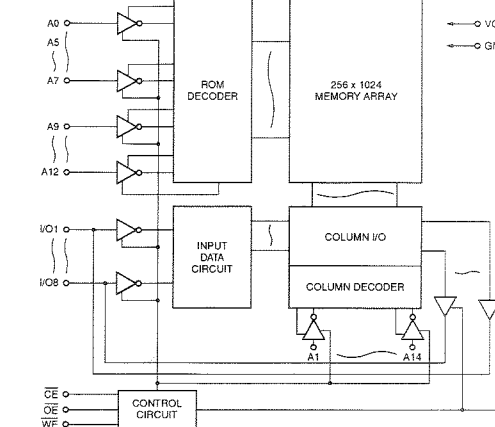
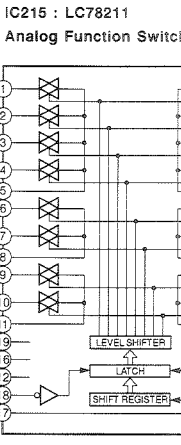
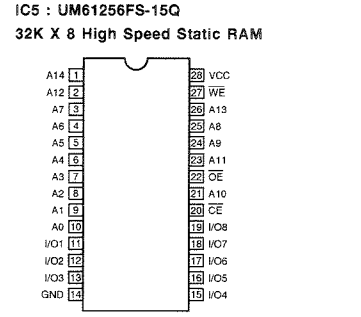
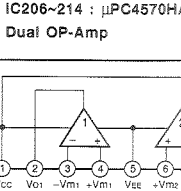
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
△	CARBON FILM RESISTOR (P=10)
□	METAL OXIDE FILM RESISTOR
◇	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
◎	CEMENT MOLDED RESISTOR
◐	SEMI VARIABLE RESISTOR
◑	CHIP RESISTOR

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

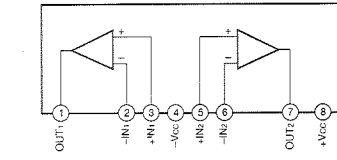
NOTICE (model)
(J)..... JAPANESE
(U)..... U.S.A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE

Mark	Reference Parts Number	Parts Name
41	0001-202	KT29-15 H259B2
42	0003-204	HSS104 18S139 18S176
43		
44		
45		
46		
47		
48		
49		
410	1C217	TC74HC04AP SN74HC04M MC74HC04N
411	1C205	H014066BP T14066BP LPD4066BC

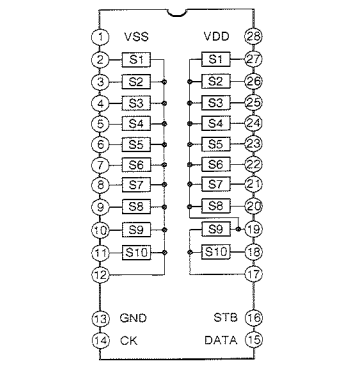
CIRCUIT CHANGES BY MARKET.				
S	J	U-C	R	A-L
1				
2				
	PWB	XT232	XT232	XT232
	PCB	Y75520	Y75530	Y75540



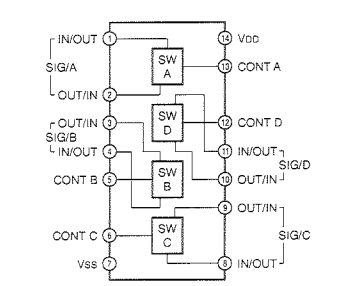
IC201: NJM2068L Dual OP-Amp



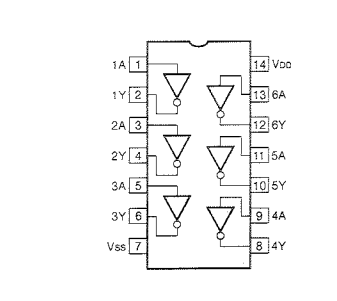
IC202, 204: TC9273N-009 Analog Function Switch



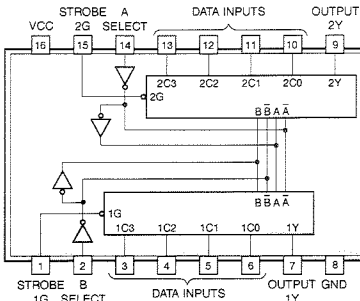
IC205: HD14066BP Quad Analog Switch/Multiplexer



IC217: TC74HC04AP Hex Inverters



IC218: HD74HC153P Dual 4 to 1 Data Selectors

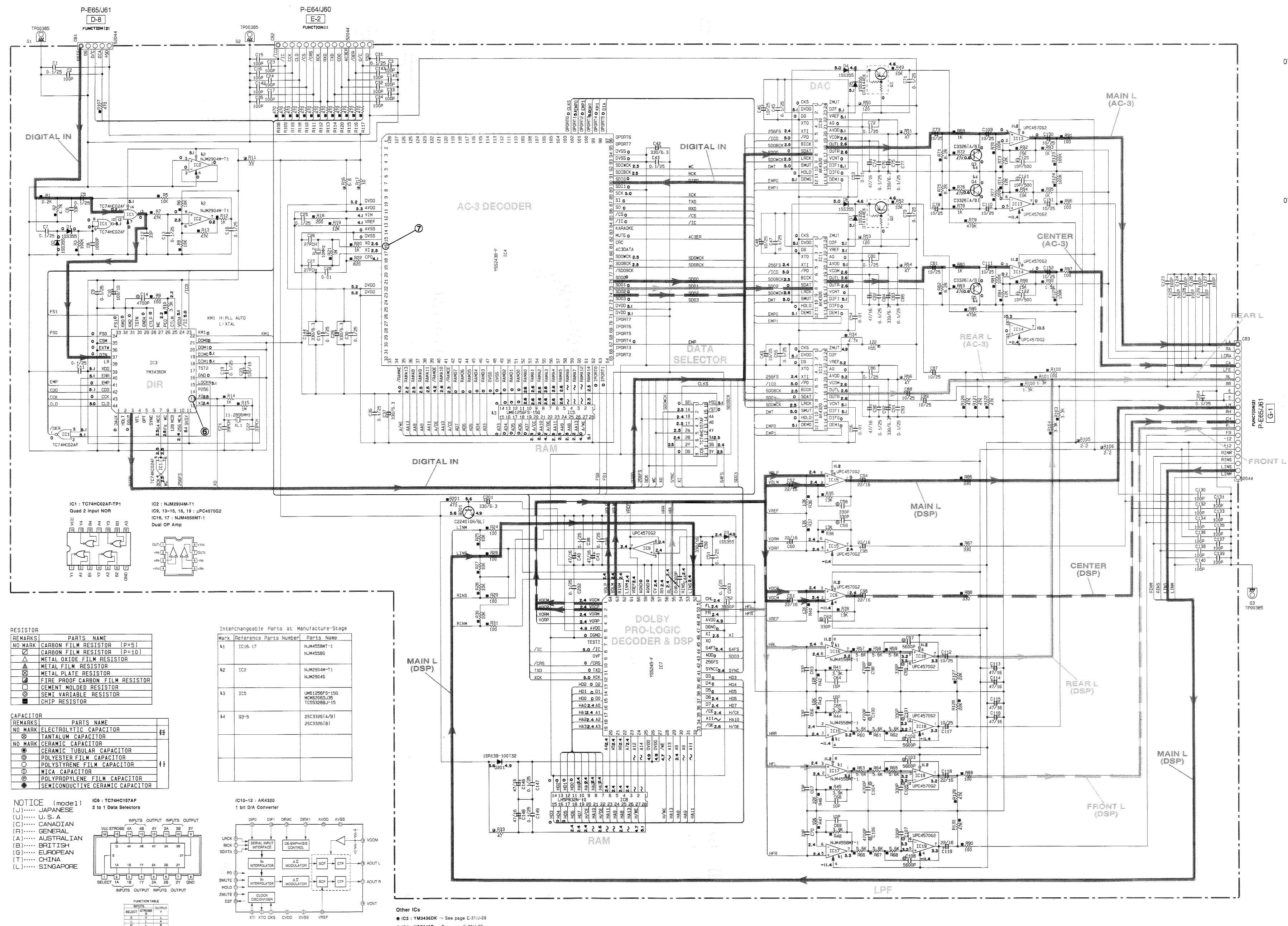


SELECT	STROBE	OUTPUT
A	A	G
B	A	H
C	A	I
D	A	J
E	A	K
F	A	L
G	A	M
H	A	N
I	A	O
J	A	P
K	A	Q
L	A	R
M	A	S
N	A	T
O	A	U
P	A	V
Q	A	W
R	A	X
S	A	Y
T	A	Z

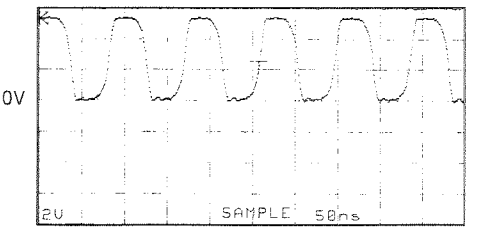
* All voltages are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
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● 本回路図は標準回路図です。改良のため予告なく変更することがございます。

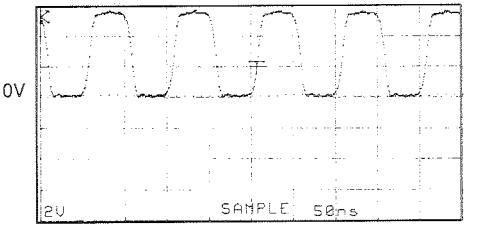
SCHEMATIC DIAGRAM (DSP) / 総回路図



Point ⑥ (Pin13 of IC3)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe



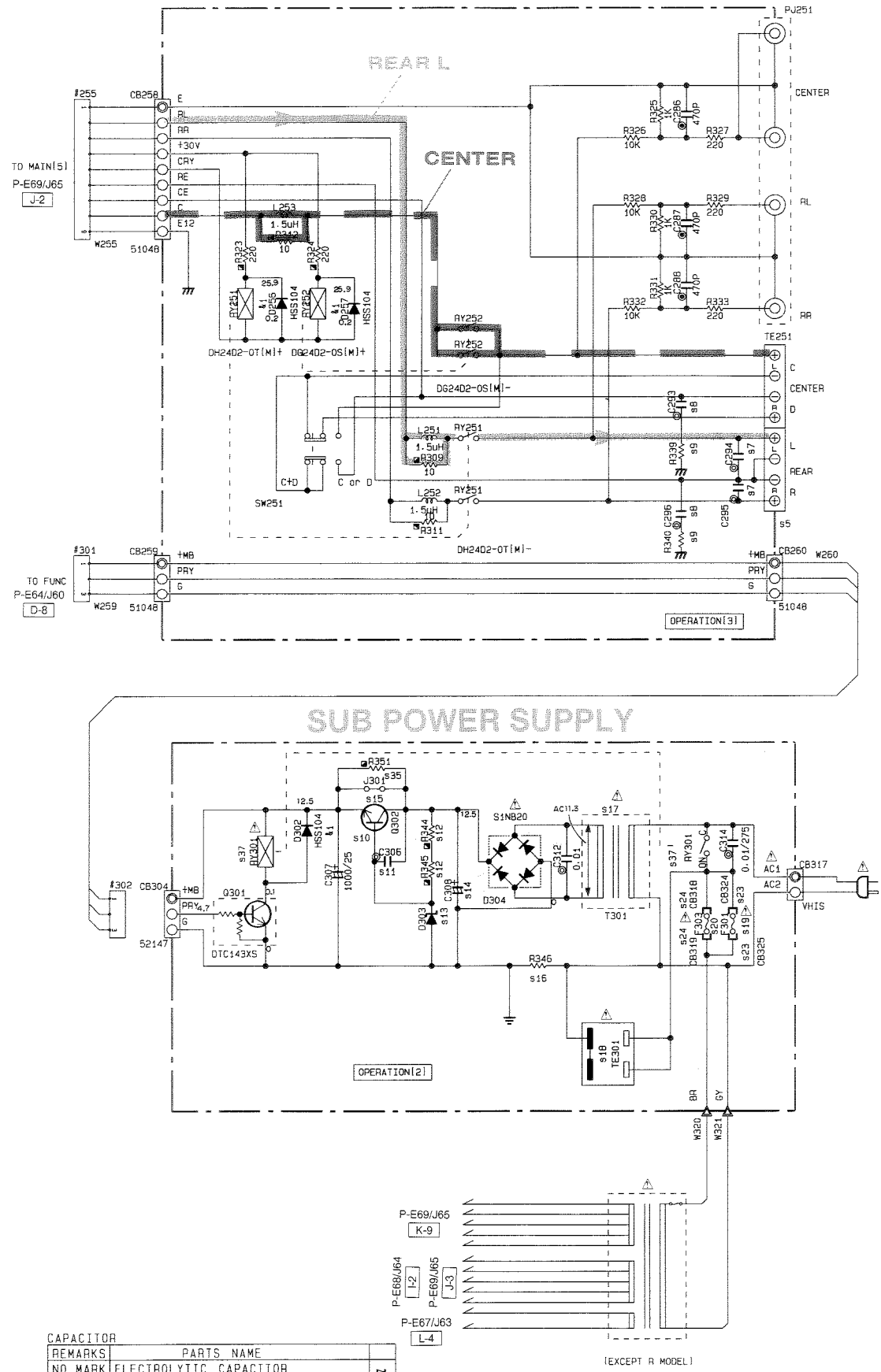
Point ⑦ (Pin16 of IC4)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe



* All voltages 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.

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● △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は標準回路図です。改良のため予告なく変更することがございます。

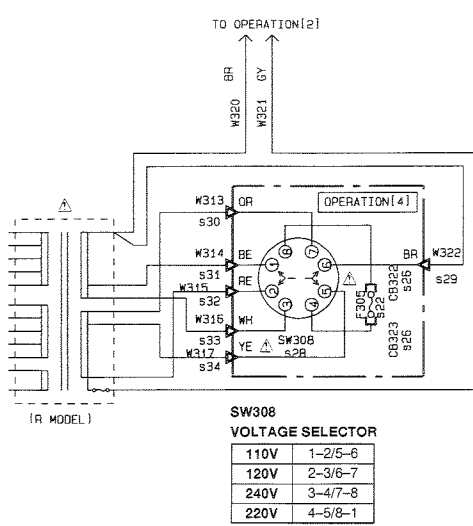
SCHEMATIC DIAGRAM (OPERATION) / 総回路図



REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
⊖	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
Ⓜ	MICA CAPACITOR
Ⓢ	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
△	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
⊠	CEMENT MOLDED RESISTOR
⊠	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

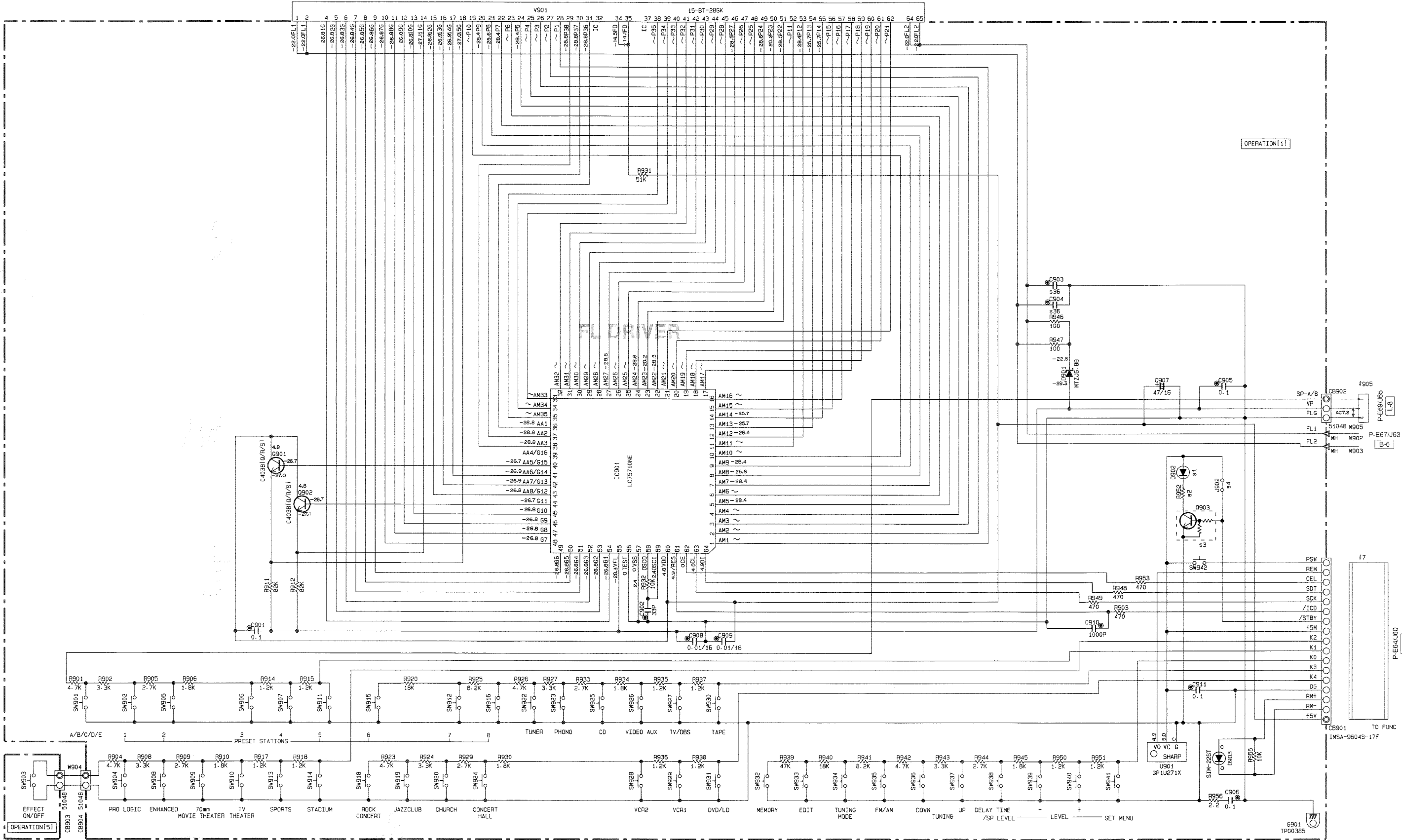
NOTICE (model)
(J)..... JAPANESE
(U)..... U.S.A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE



Mark	Reference Parts Number	Parts Name
K1	D256-257-302	HSS104 155133 155176

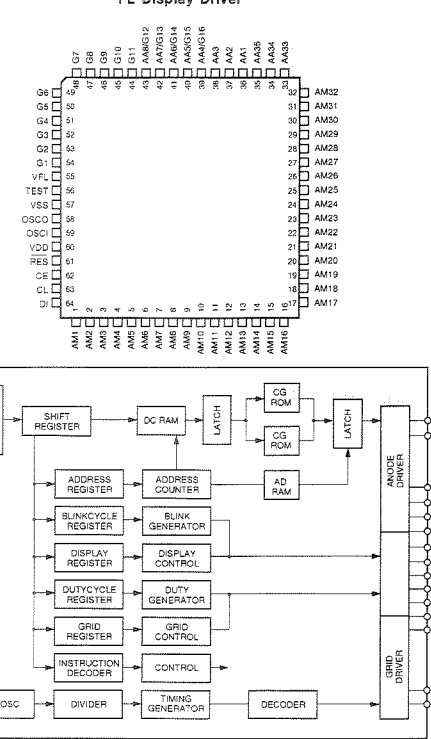
Circuit No.	J	U	C	R	A	L
1 D902	×	×	×	SLR-325VC VS13230	SLR-325VC VS13230	
2 R952	×	×	×	HF45522 HF45522	HF45522 HF45522	
3 R903	×	×	×	DTC114ES UN4211	DTC114ES UN4211	
4 J902	○	○	○	×	×	×
5 TE251	VV00310 VC31370	VV00310 VC31370	VV00310 VC31370	VV00310 VC31370	VV00310 VC31370	VV00310 VC31370
6						
7 C294-295	×	×	×	×	0.22 UA95422	
8 C293-296	×	×	×	×	0.01 UA95410	
9 R339-340	×	×	×	×	2.2 HF49322	
10 Q302	×	×	×	×	Q23961U/K1 VR51080	×
11 C306	×	×	×	×	1000P UA95310	×
12 R344-345	×	×	×	×	5.6K HV75656	×
13 Q303	×	×	×	×	K21J13A V644040	×
14 C308	×	×	×	×	27K3 W87747	×
15 J301	○	○	○	×	×	×
16 R346	×	×	×	×	1/250-2W HC3052	×
17 T301	X542 X557	X0083 X0485	X0083 X0485	X0083 X0485	X0084 X0486	X0084 X0486
18 TE301	VU54310	VU54310	VU54310	VU54310	VU54310	VU54310
19 F301	×	×	×	×	TSAL250V K800078	TSAL250V K800078
20 F303	12A250V K800154	10A250V K800139	12A250V K800154	12A250V K800154	12A250V K800154	12A250V K800154

× : NOT USED
○ : USED



PWB	X1231	X1231	X1231	X1231	X1231	X1231
PCB	Y775470	V234410	Y775480	Y775490	Y775500	Y775610

IC901 : LC75710NE
FL Display Driver



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SCHEMATIC DIAGRAM (MAIN) / 総回路図



CIRCUIT CHANGES BY MARKET.

21	C147-150	J	U.C.B.A	L
22	C21-302	I	Z	0.02
23	TE201	V00310	V00310	V00310
24	JA201	V00310	V00310	V00310
25				
26				
27				
28				
29				

X : NOT USED

Interchangeable Parts at Manufacture-Stage

Part	Reference	Part Number	Part Name
1	10001	10001	10001
2	10002	10002	10002
3	10003	10003	10003
4	10004	10004	10004
5	10005	10005	10005
6	10006	10006	10006
7	10007	10007	10007

NOTICE (model)

(J)..... JAPANESE
(U)..... U.S.A.
(C)..... CANADIAN
(R)..... GENERAL
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(T)..... CHINA
(L)..... SINGAPORE

* All voltages 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.

● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
● Δ印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は標準回路図です。改良のため予告なく変更することがございます。

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 part Nos. of the carbon resistors refer to the last page.

- Flame proof carbon resistors and chip resistors are listed on page 83.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

C.A.EL.CHP	: CHIP ALUMI. ELECTROLYTIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE	: CERAMIC CAP	LED.DSPLY	: LED DISPLAY
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.INFRD	: LED, INFRARED
C.CE.CHP	: CHIP CERAMIC CAP	MODUL.RF	: MODULATOR, RF
C.CE.ML	: MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PIN.TEST	: PIN, TEST POINT
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PLST.RIVET	: PLASTIC RIVET
C.EL	: ELECTROLYTIC CAP	R.ARRAY	: RESISTOR ARRAY
C.MICA	: MICA CAP	R.CAR	: CARBON RESISTOR
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR.CHP	: CHIP RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.FLM	: METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL	: TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.WW	: WIRE WOUND RESISTOR
C.TRIM	: TRIMMER CAP	SCR.BND.HD	: BIND HEAD B-TITE SCREW
CN	: CONNECTOR	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.BS.PIN	: CONNECTOR, BASE PIN	SCR.CUP	: CUP TITE SCREW
CN.CANNON	: CONNECTOR, CANNON	SCR.TERM	: SCREW TERMINAL
CN.DIN	: CONNECTOR, DIN	SCR.TR	: SCREW, TRANSISTOR
CN.FLAT	: CONNECTOR, FLAT CABLE	SUPRT.PCB	: SUPPORT, P.C.B.
CN.POST	: CONNECTOR, BASE POST	SURG.PRTCT	: SURGE PROTECTOR
COIL.MX.AM	: COIL, AM MIX	SW.TACT	: TACT SWITCH
COIL.AT.FM	: COIL, FM ANTENNA	SW.LEAF	: LEAF SWITCH
COIL.DT.FM	: COIL, FM DETECT	SW.LEVER	: LEVER SWITCH
COIL.MX.FM	: COIL, FM MIX	SW.MICRO	: MICRO SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.PUSH	: PUSH SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.RT.ENC	: ROTARY ENCODER
DIODE.BRG	: DIODE BRIDGE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.CHP	: CHIP DIODE	SW.RT	: ROTARY SWITCH
DIODE.VAR	: VARACTOR DIODE	SW.SLIDE	: SLIDE SWITCH
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.SP	: SPEAKER TERMINAL
DIODE.ZENR	: ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DSCR.CE	: CERAMIC DISCRIMINATOR	THRMST.CHP	: CHIP THERMISTOR
FER.BEAD	: FERRITE BEADS	TR.CHP	: CHIP TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT	: DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS	: TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PULS	: PULSE TRANSFORMER
FLTR.COMB	: COMB FILTER MODULE	TRANS.PWR	: POWER TRANSFORMER ASS'y
FLTR.LC.RF	: LC FILTER, EMI	TUNER.AM	: TUNER PACK, AM
GND.MTL	: GROUND PLATE	TUNER.FM	: TUNER PACK, FM
GND.TERM	: GROUND TERMINAL	TUNER.PK	: FRONT-END TUNER PACK
HOLDER.FUS	: FUSE HOLDER	VR	: ROTARY POTENTIOMETER
IC.PRTCT	: IC PROTECTOR	VR.MTR	: POTENTIOMETER WITH MOTOR
JUMPER.CN	: JUMPER CONNECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.TST	: JUMPER, TEST POINT	VR.SLIDE	: SLIDE POTENTIOMETER
L.DTCT	: LIGHT DETECTING MODULE	VR.TRIM	: TRIMMER POTENTIOMETER

Note) Those parts marked with "#" are not included in the P.C.B. ass'y.

P.C.B. TUNER & FUNCTION

Schm Ref.	PART NO.	Description
	VV610200	P. C. B.
	VV610300	P. C. B.
	VV610400	P. C. B.
CB4	VQ961800	CN. BS. PIN
C1	VG287800	C. EL
C2	UB044100	C. CE. M. CHP
C3	UB050800	C. CE. M. CHP
C4	VG291200	C. EL
C5	UB044100	C. CE. M. CHP
C6	VG288900	C. EL
C7	VJ839100	C. EL
C8	UB044100	C. CE. M. CHP
C9	UB044100	C. CE. M. CHP
C10	UB044100	C. CE. M. CHP
C11	UB013100	C. CE. M. CHP
C12	VJ836900	C. EL
C13	VJ836900	C. EL
C14	UB052100	C. CE. M. CHP
C15	UB013100	C. CE. M. CHP
C16	UB051470	C. CE. M. CHP
C17	VG291200	C. EL
C18	UB044470	C. CE. M. CHP
C19	VA761200	C. CE
C20	VG291200	C. EL
C21	UB044470	C. CE. M. CHP
C22	UM216330	C. EL
C23	UB044100	C. CE. M. CHP
C24	UM416470	C. EL
C25	UM216330	C. EL
C26	VJ836900	C. EL
C27	UB044100	C. CE. M. CHP
C28	VA761200	C. CE
C29	VJ839100	C. EL
C30	VJ839100	C. EL
C31	VG291200	C. EL
C32	VJ839000	C. EL
C33	VJ839100	C. EL
C34	UA654470	C. MYLAR
C35	UM216330	C. EL
C36	UA652470	C. MYLAR
C36	UA653100	C. MYLAR
C37	UA652470	C. MYLAR
C37	UA653100	C. MYLAR
C38	UB012470	C. CE. M. CHP
C39	VJ836900	C. EL
C40	UM216330	C. EL
C41	UA653390	C. MYLAR
C42	UM407220	C. EL
C43	UA653390	C. MYLAR
C44	UM216330	C. EL
C45	VG291200	C. EL
C46	VG291200	C. EL
C49	UA652120	C. MYLAR

* New Parts

Schm Ref.	PART NO.	Description
C50	UB044470	C. CE. M. CHP
D1	VT332900	DIODE
D2	VT332900	DIODE
D3	VU993100	DIODE. ZENR
Fi1	GG000560	FLTR. CE
Fi2	GG000560	FLTR. CE
Fi3	VC219000	FLTR. CE
IC1	XB760A00	IC
IC2	XQ944A00	IC
IC3	iG158100	IC
L1	VU889500	COIL
L2	VU889500	COIL
L3	VU889500	COIL
PK1	VQ987600	TUNER. PK
PK1	VR242200	TUNER. PK
PK2	VU333700	COIL. RF. AM
Q1	iC053540	TR
Q2	iC053540	TR
Q3	VD678500	TR. DGT
Q4	VC218900	TR
Q5	VG722000	TR. DGT
Q6	iC1815C0	TR
Q7	VD678500	TR. DGT
SW1	VS602600	SW. SLIDE
T1	VC218600	COIL. DT. FM
T2	VR895700	COIL. IF
T3	VT486800	COIL
T4	VQ138200	FLTR. LC
T5	VQ138200	FLTR. LC
TE1	VU477800	TERM. ANT
TP1	VT969000	PIN. TEST
TP2	VT969000	PIN. TEST
VR1	VJ694000	VR. TRIM
VR2	VJ694000	VR. TRIM
XL1	QU003800	RSNR. CRYST
XL2	GG000750	RSNR. CE
	BB071360	SCR. TERM
	VR282500	PLATE
		ANT.
	VY755300	P. C. B.
	VY755400	P. C. B.
	VY755500	P. C. B.
		FUNCTION (UC)
		FUNCTION (R)
		FUNCTION (AL)
CB1	VK026300	CN. BS. PIN
CB2	VU281400	CN
CB3	VN394900	CN. BS. PIN
CB4	VK024700	CN. BS. PIN
CB5	VU281100	CN. BS. PIN
CB7	VU281700	CN
CB71	VU282700	CN
CB111	VU281600	CN
CB112	VU281000	CN

* New Parts

P.C.B. FUNCTION

Schm Ref.	PART NO.	Description		
* CB113	Vi878400	CN.BS. PIN	6P	
* CB115	VU271900	CN	19P	
CB201	VT620100	L. DTCT	1P	TORX178A
CB202	VQ963600	CN.BS. PIN	15P	
* CB203	VV073000	CN.BS. PIN	12P	
* CB204	VV074800	SOCKET	12P	
CB205	VB858200	CN.BS. PIN	3P	
CB206	VQ047500	CN.BS. PIN	20P	
* CB207	VU272700	CN	27P	
CB208	VU271100	CN.BS. PIN	11P	
* CB209	VU281000	CN	10P	
* CB211	VU270500	CN	5P	
C1	UB012470	C. CE. M. CHP	470pF	50V
C2	VF637900	C. EL	1000uF	10V
C3	VF637900	C. EL	1000uF	10V
C4	UB245100	C. CE. M. CHP	0.1uF	25V
C5	VT740700	C. EL	4700uF	5.5V
C6	UM417100	C. EL	10uF	50V
C7	UB245100	C. CE. M. CHP	0.1uF	25V
C8	UB245100	C. CE. M. CHP	0.1uF	25V
C9	VJ839000	C. EL	0.47uF	50V
C10	UB245100	C. CE. M. CHP	0.1uF	25V
C11	UB245100	C. CE. M. CHP	0.1uF	25V
C12	UB245100	C. CE. M. CHP	0.1uF	25V
C13	VJ837200	C. EL	47uF	16V
C19	UB245100	C. CE. M. CHP	0.1uF	25V
C22	VJ839200	C. EL	2.2uF	50V
C26	VJ839200	C. EL	2.2uF	50V
C27	UB245100	C. CE. M. CHP	0.1uF	25V
C28	UB245100	C. CE. M. CHP	0.1uF	25V
C29	UB245100	C. CE. M. CHP	0.1uF	25V
C30	UB245100	C. CE. M. CHP	0.1uF	25V
C71	VQ645600	C. MYLAR	100pF	50V
C72	VQ645600	C. MYLAR	100pF	50V
C73	UA652100	C. MYLAR	100pF	50V
C74	UA652100	C. MYLAR	100pF	50V
C75	UA652100	C. MYLAR	100pF	50V
C76	UA652100	C. MYLAR	100pF	50V
C77	FG211470	C. CE	47pF	50V
C78	FG211470	C. CE	47pF	50V
C79	UA652100	C. MYLAR	100pF	50V
C80	UA652100	C. MYLAR	100pF	50V
C81	FG211470	C. CE	47pF	50V
C82	FG211470	C. CE	47pF	50V
C83	UA652470	C. MYLAR	470pF	50V
C84	UA652470	C. MYLAR	470pF	50V
C94	UM417100	C. EL	10uF	50V
C95	UM417100	C. EL	10uF	50V
C111	VJ837200	C. EL	47uF	16V
C112	VJ837200	C. EL	47uF	16V
C113	VJ837200	C. EL	47uF	16V
C114	VJ837200	C. EL	47uF	16V
C115	UA654270	C. MYLAR	0.027uF	50V

* New Parts

Schm Ref.	PART NO.	Description		
C116	UA654270	C. MYLAR	0.027uF	50V
C117	VJ837200	C. EL	47uF	16V
C118	VJ837200	C. EL	47uF	16V
C119	UA654270	C. MYLAR	0.027uF	50V
C120	UA654270	C. MYLAR	0.027uF	50V
C122	VJ837200	C. EL	47uF	16V
C123	VJ837200	C. EL	47uF	16V
C124	UA654270	C. MYLAR	0.027uF	50V
C125	UA654270	C. MYLAR	0.027uF	50V
C126	UM407220	C. EL	22uF	16V
C127	VQ645600	C. MYLAR	100pF	50V
C130	VQ645600	C. MYLAR	100pF	50V
C131	UM407220	C. EL	22uF	16V
C132	UA654270	C. MYLAR	0.027uF	50V
C133	UA654270	C. MYLAR	0.027uF	50V
C134	UB052100	C. CE. M. CHP	100pF	50V
C135	UA654390	C. MYLAR	0.039uF	50V
C136	UM417100	C. EL	10uF	50V
C137	UA654330	C. MYLAR	0.033uF	50V
C138	UA654130	C. MYLAR	0.013uF	50V
C139	UM417100	C. EL	10uF	50V
C140	UM416470	C. EL	4.7uF	50V
C141	UM417100	C. EL	10uF	50V
C142	UM417100	C. EL	10uF	50V
C143	UM416470	C. EL	4.7uF	50V
C144	UM417100	C. EL	10uF	50V
C145	UM416470	C. EL	4.7uF	50V
C146	UM417100	C. EL	10uF	50V
C147	UM417100	C. EL	10uF	50V
C148	UM416470	C. EL	4.7uF	50V
C153	UA655100	C. MYLAR	0.1uF	50V
C154	UB052100	C. CE. M. CHP	100pF	50V
C155	UM417100	C. EL	10uF	50V
C156	UB245100	C. CE. M. CHP	0.1uF	25V
C157	UB245100	C. CE. M. CHP	0.1uF	25V
C158	UB245100	C. CE. M. CHP	0.1uF	25V
C159	UB245100	C. CE. M. CHP	0.1uF	25V
C201	UB245100	C. CE. M. CHP	0.1uF	25V
C202	UB245100	C. CE. M. CHP	0.1uF	25V
C203	VJ839200	C. EL	2.2uF	50V
C204	VJ839200	C. EL	2.2uF	50V
C205	UA653910	C. MYLAR	9100pF	50V
C206	UA654330	C. MYLAR	0.033uF	50V
C207	VE117600	C. EL	220uF	10V
C208	VE117600	C. EL	220uF	10V
C209	UA653910	C. MYLAR	9100pF	50V
C210	UA654330	C. MYLAR	0.033uF	50V
C211	UA652100	C. MYLAR	100pF	50V
C212	UA652220	C. MYLAR	220pF	50V
C213	UA652100	C. MYLAR	100pF	50V
C214	UA652220	C. MYLAR	220pF	50V
C215	VJ839200	C. EL	2.2uF	50V
C216	VJ839200	C. EL	2.2uF	50V

* New Parts

P.C.B. FUNCTION

Schm Ref.	PART NO.	Description
C217	VQ645600	C. MYLAR 100pF 50V
C218	VQ645600	C. MYLAR 100pF 50V
C221	UA652100	C. MYLAR 100pF 50V
C222	UA652100	C. MYLAR 100pF 50V
C223	FG211470	C. CE 47pF 50V
C224	FG211470	C. CE 47pF 50V
C225	UB245100	C. CE. M. CHP 0.1uF 25V
C226	UB245100	C. CE. M. CHP 0.1uF 25V
C227	UM407220	C. EL 22uF 16V
C228	UB051220	C. CE. M. CHP 22pF 50V
C229	UB051220	C. CE. M. CHP 22pF 50V
C230	UM407220	C. EL 22uF 16V
C231	VF760000	C. EL 100uF 10V
C232	UB245100	C. CE. M. CHP 0.1uF 25V
C233	UB245100	C. CE. M. CHP 0.1uF 25V
C234	VF964800	C. EL 100uF 16V
C235	UA653100	C. MYLAR 1000pF 50V
C236	UA653100	C. MYLAR 1000pF 50V
C237	VF964800	C. EL 100uF 16V
C238	VJ837200	C. EL 47uF 16V
C239	VJ837200	C. EL 47uF 16V
C240	UM417100	C. EL 10uF 50V
C241	UB012220	C. CE. M. CHP 220pF 50V
C242	UM417100	C. EL 10uF 50V
C243	UB013100	C. CE. M. CHP 1000pF 50V
C244	UB245100	C. CE. M. CHP 0.1uF 25V
C245	UB245100	C. CE. M. CHP 0.1uF 25V
C246	UB052100	C. CE. M. CHP 100pF 50V
C247	UM417100	C. EL 10uF 50V
C248	UM417100	C. EL 10uF 50V
C249	UB052100	C. CE. M. CHP 100pF 50V
C250	UA654270	C. MYLAR 0.027uF 50V
C251	UA654270	C. MYLAR 0.027uF 50V
C252	UM417100	C. EL 10uF 50V
C253	UM417100	C. EL 10uF 50V
C254	UM417100	C. EL 10uF 50V
C255	UM417100	C. EL 10uF 50V
C256	UM417100	C. EL 10uF 50V
C257	UM417100	C. EL 10uF 50V
C258	UM417100	C. EL 10uF 50V
C259	VJ839100	C. EL 1uF 50V
C260	UA652100	C. MYLAR 100pF 50V
C261	UM407220	C. EL 22uF 16V
C262	UA652100	C. MYLAR 100pF 50V
C263	UA652100	C. MYLAR 100pF 50V
C264	UA652100	C. MYLAR 100pF 50V
C265	UM407220	C. EL 22uF 16V
C266	VJ839100	C. EL 1uF 50V
C270	UA652100	C. MYLAR 100pF 50V
C271	UA652100	C. MYLAR 100pF 50V
C273	UM417100	C. EL 10uF 50V
C274	UM417100	C. EL 10uF 50V
C275	UA653330	C. MYLAR 3300pF 50V

* New Parts

Schm Ref.	PART NO.	Description
C276	UA653270	C. MYLAR 2700pF 50V
C277	UA653120	C. MYLAR 1200pF 50V
C278	UA653100	C. MYLAR 1000pF 50V
C279	FG212150	C. CE 150pF 50V
C280	FG212150	C. CE 150pF 50V
C281	FG212150	C. CE 150pF 50V
C282	FG212150	C. CE 150pF 50V
C283	UA653120	C. MYLAR 1200pF 50V
C284	UA653100	C. MYLAR 1000pF 50V
C285	UA653330	C. MYLAR 3300pF 50V
C286	UA653270	C. MYLAR 2700pF 50V
C288	VJ837200	C. EL 47uF 16V
C290	UM407220	C. EL 22uF 16V
C291	UM407220	C. EL 22uF 16V
C292	VJ837200	C. EL 47uF 16V
C293	VJ837200	C. EL 47uF 16V
C295	UB051100	C. CE. M. CHP 10pF 50V
C296	VJ837200	C. EL 47uF 16V
C297	VJ837200	C. EL 47uF 16V
C299	VJ837200	C. EL 47uF 16V
C300	UB245100	C. CE. M. CHP 0.1uF 25V
C301	UA652100	C. MYLAR 100pF 50V
C302	UA652100	C. MYLAR 100pF 50V
C303	UA652100	C. MYLAR 100pF 50V
C304	UA652100	C. MYLAR 100pF 50V
C305	UB245100	C. CE. M. CHP 0.1uF 25V
C306	UB245100	C. CE. M. CHP 0.1uF 25V
C307	UB245100	C. CE. M. CHP 0.1uF 25V
C308	UB051470	C. CE. M. CHP 47pF 50V
C309	UB051470	C. CE. M. CHP 47pF 50V
C310	VD930900	C. CE. SMI 0.1uF 25V
D1	VD631600	DIODE 1SS133, 176, HSS104
D2	VD631600	DIODE 1SS133, 176, HSS104
D3	VD631600	DIODE 1SS133, 176, HSS104
D4	VD631600	DIODE 1SS133, 176, HSS104
D5	VD631600	DIODE 1SS133, 176, HSS104
D6	VD631600	DIODE 1SS133, 176, HSS104
D7	VG437300	DIODE. ZENR MTZJ5.1A 5.1V
D8	VD631600	DIODE 1SS133, 176, HSS104
D9	VD631600	DIODE 1SS133, 176, HSS104
D10	VG438900	DIODE. ZENR MTZJ8.2B 8.2V
D11	VD631600	DIODE 1SS133, 176, HSS104
D12	VG437400	DIODE. ZENR MTZJ5.1B 5.1V
D13	VG437300	DIODE. ZENR MTZJ5.1A 5.1V
D201	VG439200	DIODE. ZENR MTZJ9.1B 9.1V
D202	VG439200	DIODE. ZENR MTZJ9.1B 9.1V
D203	VD631600	DIODE 1SS133, 176, HSS104
D204	VD631600	DIODE 1SS133, 176, HSS104
IC1	XS670C00	IC HD6433614P-XXX CPU
IC2	XR289A00	IC HD74HC4051P
IC3	XJ757A00	IC NJM78L05A-T3
IC4	XF494A00	IC LB1641
IC111	XP896A00	IC LC78213

* New Parts

P.C.B. FUNCTION & MAIN

Schm Ref.	PART NO.	Description
IC112	XR040A00	IC TC9299P
IC113	XR040A00	IC TC9299P
IC114	XR040A00	IC TC9299P
IC116	XM356A00	IC NJM2068LD
IC117	XB247301	IC uPC4570HA
IC118	XB247301	IC uPC4570HA
IC119	XB247301	IC uPC4570HA
IC120	XB247301	IC uPC4570HA
IC121	XB247301	IC uPC4570HA
IC123	XB247301	IC uPC4570HA
IC201	XM356A00	IC NJM2068LD
IC202	XP581A00	IC TC9273N-009
IC204	XP581A00	IC TC9273N-009
* IC205	iG156200	IC HD14066BP AnalogSW
IC206	XB247301	IC uPC4570HA
IC207	XB247301	IC uPC4570HA
IC208	XB247301	IC uPC4570HA
IC209	XB247301	IC uPC4570HA
IC210	XB247301	IC uPC4570HA
IC211	XB247301	IC uPC4570HA
IC212	XB247301	IC uPC4570HA
IC213	XB247301	IC uPC4570HA
IC214	XB247301	IC uPC4570HA
IC215	XP894A00	IC LC78211
IC216	XP896A00	IC LC78213
IC217	iG142200	IC TC74HCU04AP
* IC218	XT208A00	IC HD74HC153P Multplx
L201	GE901970	COIL 68uH
PJ71	VV306900	JACK. PIN 4P
PJ72	VV306900	JACK. PIN 4P
* PJ73	VV325400	JACK. PIN 6P
PJ201	VQ260900	JACK. PIN 4P
PJ202	VV306900	JACK. PIN 4P
* PJ203	VY667900	JACK. PIN 2P
Q1	iA093320	TR 2SA933S Q, R
Q2	VG722000	TR. DGT DTC144ES
Q3	iA093320	TR 2SA933S Q, R
Q4	iA093320	TR 2SA933S Q, R
Q5	iA093320	TR 2SA933S Q, R
Q6	iA093320	TR 2SA933S Q, R
Q7	VD678700	TR. DGT DTC114ES
Q71	iC287820	TR 2SC2878 A, B
Q72	iC287820	TR 2SC2878 A, B
XL1	VE222400	RSNR. CE 8MHz
	VJ828000	PIN IMSA-6024-03E
	BB071360	SCR. TERM 8.3x13
*	VY756300	P. C. B. MAIN (UCRA)
*	VY756400	P. C. B. MAIN (L)
CB101	Vi878600	CN. BS. PIN 8P
CB102	LA002110	TERM. WRAP 2P

* New Parts

Schm Ref.	PART NO.	Description
CB103	LA002110	TERM. WRAP 2P
CB104	LA002110	TERM. WRAP 2P
CB105	Vi878700	CN. BS. PIN 9P
CB106	Vi878300	CN. BS. PIN 5P
CB107	Vi878500	CN. BS. PIN 7P
CB108	VR428900	CN. BS. PIN 4P
CB109	Vi878500	CN. BS. PIN 7P
CB251	Vi878400	CN. BS. PIN 6P
CB252	VK025300	CN. BS. PIN 9P
CB253	VD004500	CN. BS. PIN 2P
CB254	VK024700	CN. BS. PIN 3P
CB255	VD004500	CN. BS. PIN 2P
CB256	Vi878100	CN. BS. PIN 3P
CB257	VK025300	CN. BS. PIN 9P
CB261	VK024900	CN. BS. PIN 5P
CB301	VR428900	CN. BS. PIN 4P
CB302	Vi878500	CN. BS. PIN 7P
CB303	VK024700	CN. BS. PIN 3P
* CB331	VU281900	CN 19P
CB332	VF728300	CN 6P
CB333	VK025100	CN. BS. PIN 7P
CB334	VK025200	CN. BS. PIN 8P
C101	VJ839100	C. EL 1uF 50V
C102	UM417100	C. EL 10uF 50V
C103	UA652100	C. MYLAR 100pF 50V
C104	UM417100	C. EL 10uF 50V
C105	UA652100	C. MYLAR 100pF 50V
C106	UM417100	C. EL 10uF 50V
C107	UA652100	C. MYLAR 100pF 50V
C108	FG251330	C. CE 33pF 50V
C109	VJ837200	C. EL 47uF 16V
C110	FG251330	C. CE 33pF 50V
C111	VJ837200	C. EL 47uF 16V
C112	FG251330	C. CE 33pF 50V
C113	VJ837200	C. EL 47uF 16V
C114	UJ667470	C. EL 47uF 50V
C115	VQ245400	C. PP 33pF 200V
C116	UA653100	C. MYLAR 1000pF 50V
C117	VK699400	C. EL 330uF 63V
C118	UJ667470	C. EL 47uF 50V
C119	VQ245400	C. PP 33pF 200V
C120	UA653100	C. MYLAR 1000pF 50V
C121	UJ667470	C. EL 47uF 50V
C122	VQ245400	C. PP 33pF 200V
C123	UA653100	C. MYLAR 1000pF 50V
C124	VR325000	C. MYLAR 100pF 100V
C125	UJ667470	C. EL 47uF 50V
C126	VR325000	C. MYLAR 100pF 100V
C127	VR325000	C. MYLAR 100pF 100V
C128	UJ667470	C. EL 47uF 50V
C129	VR325000	C. MYLAR 100pF 100V
C130	VR325000	C. MYLAR 100pF 100V
C131	UJ667470	C. EL 47uF 50V

* New Parts

P.C.B. MAIN

Schm Ref.	PART NO.	Description
C132	VR325000	C. MYLAR 100pF 100V
C133	UA654680	C. MYLAR 0.068uF 50V
C134	UA654680	C. MYLAR 0.068uF 50V
C135	UM216330	C. EL 3.3uF 50V
C136	UA654680	C. MYLAR 0.068uF 50V
C137	UA655390	C. MYLAR 0.39uF 50V
C138	UA655390	C. MYLAR 0.39uF 50V
* C139	VY830900	C. EL 15000uF 63V
* C140	VY830900	C. EL 15000uF 63V
C141	UJ658470	C. EL 470uF 35V
C142	UM417100	C. EL 10uF 50V
C143	VF466900	C. CE. TUBLR 470pF 50V
C144	VF466900	C. CE. TUBLR 470pF 50V
C145	UM417100	C. EL 10uF 50V
C146	UJ668220	C. EL 220uF 50V
C147	UA654220	C. MYLAR 0.022uF 50V(L)
C148	UA654220	C. MYLAR 0.022uF 50V(L)
C149	UA654220	C. MYLAR 0.022uF 50V(L)
C150	UA654220	C. MYLAR 0.022uF 50V(L)
C151	UA654100	C. MYLAR 0.01uF 50V
C152	UA654100	C. MYLAR 0.01uF 50V
C153	VS745400	C. POL. MTL 0.1uF 100V
C154	VS745400	C. POL. MTL 0.1uF 100V
C155	UA655100	C. MYLAR 0.1uF 50V
C156	UA655100	C. MYLAR 0.1uF 50V
C157	UJ768470	C. EL 470uF 50V
C158	VF466900	C. CE. TUBLR 470pF 50V
C159	VF760000	C. EL 100uF 10V
C160	UM417100	C. EL 10uF 50V
C161	UA655100	C. MYLAR 0.1uF 50V
C251	FG251330	C. CE 33pF 50V
C252	UM417100	C. EL 10uF 50V
C253	FG212100	C. CE 100pF 50V
C254	UA654100	C. MYLAR 0.01uF 50V
C255	FG212100	C. CE 100pF 50V
C256	UM417100	C. EL 10uF 50V
C257	FG251330	C. CE 33pF 50V
C258	FU451330	C. MICA 33pF 500V
C259	VJ837200	C. EL 47uF 16V
C260	UA653100	C. MYLAR 1000pF 50V
C261	UA653100	C. MYLAR 1000pF 50V
C262	VJ837200	C. EL 47uF 16V
C263	FU451330	C. MICA 33pF 500V
C264	UM417100	C. EL 10uF 50V
C265	VR325000	C. MYLAR 100pF 100V
C266	UJ667470	C. EL 47uF 50V
C267	VG291200	C. EL 47uF 50V
C268	VR325000	C. MYLAR 100pF 100V
C269	Ui377470	C. EL 47uF 63V
C270	VR325000	C. MYLAR 100pF 100V
C271	VG291200	C. EL 47uF 50V
C272	UJ667470	C. EL 47uF 50V
C273	VR325000	C. MYLAR 100pF 100V

* New Parts

Schm Ref.	PART NO.	Description
C274	UA654220	C. MYLAR 0.022uF 50V
C275	UA654220	C. MYLAR 0.022uF 50V
C276	UM416470	C. EL 4.7uF 50V
C277	UJ749470	C. EL 4700uF 25V
C278	UJ749470	C. EL 4700uF 25V
C279	VJ839000	C. EL 0.47uF 50V
C280	VJ837200	C. EL 47uF 16V
C281	UA654100	C. MYLAR 0.01uF 50V
C282	UJ667470	C. EL 47uF 50V
C283	UA655100	C. MYLAR 0.1uF 50V
C284	UA655100	C. MYLAR 0.1uF 50V
C285	UJ648100	C. EL 100uF 25V
C289	VR325300	C. MYLAR 0.047uF 100V
C290	VR325300	C. MYLAR 0.047uF 100V
C291	VJ839000	C. EL 0.47uF 50V
C301	UA654100	C. MYLAR 0.01uF 50V(L)
C302	UA654100	C. MYLAR 0.01uF 50V(L)
C303	UA654100	C. MYLAR 0.01uF 50V
C304	VH053100	C. CE. TUBLR 0.1uF 50V
D101	VN008700	DIODE 1SS270A
D102	VN008700	DIODE 1SS270A
D103	VN008700	DIODE 1SS270A
D104	VD631600	DIODE 1SS133, 176, HSS104
D105	VD631600	DIODE 1SS133, 176, HSS104
D106	VD631600	DIODE 1SS133, 176, HSS104
Δ D107	VN011400	DIODE. BRG D5SB20 5A 200V
D108	VM976500	DIODE. ZENR HZS302TD 30V
D109	VM976500	DIODE. ZENR HZS302TD 30V
Δ D110	VU264100	DIODE 1SR139-400
Δ D111	VU264100	DIODE 1SR139-400
D112	VD631600	DIODE 1SS133, 176, HSS104
D113	VD631600	DIODE 1SS133, 176, HSS104
D114	VD631600	DIODE 1SS133, 176, HSS104
D115	VM975700	DIODE. ZENR HZS12C2TD 12V
D251	VM975800	DIODE. ZENR HZS152TD 15V
D252	VN008700	DIODE 1SS270A
D253	VN008700	DIODE 1SS270A
D254	VM975600	DIODE. ZENR HZS12B2TD 12V
Δ D255	VR253700	DIODE. BRG SINB20 1.0A 200V
D258	VD631600	DIODE 1SS133, 176, HSS104
Δ IC251	XD343A00	IC NJM79M12FA
* JK301	VV346800	JACK. PHONE JY-6311-01-060
* JK301	VV853400	JACK. PHONE JY-6311-060GD
L101	VR906600	COIL 0.95uH
L102	VR906600	COIL 0.95uH
* PJ101	VV853000	JACK. PIN 4P
Q101	iC287820	TR 2SC2878 A, B
Q102	iC287820	TR 2SC2878 A, B
Q103	VK432900	TR 2SD1915F S, T
Q104	VK432900	TR 2SD1915F S, T
Q105	VK432900	TR 2SD1915F S, T
Q106	VP883000	TR 2SA893A D, E
Q107	VP883000	TR 2SA893A D, E

* New Parts

P.C.B. MAIN

Schm Ref.	PART NO.	Description
Q108	VP883000	TR 2SA893A D, E
Q109	VP883000	TR 2SA893A D, E
Q110	VP883000	TR 2SA893A D, E
Q111	VP883000	TR 2SA893A D, E
Q112	iC174020	TR 2SC1740S R, S
Q113	VR325600	TR 2SC2229 O, Y
Q114	iC174020	TR 2SC1740S R, S
Q115	VR325600	TR 2SC2229 O, Y
Q116	iC174020	TR 2SC1740S R, S
Q117	VR325600	TR 2SC2229 O, Y
△ Q118A	iX603580	TR 2SA1358
△ Q118C	iX603590	TR 2SC3421
△ Q120A	iX603580	TR 2SA1358
△ Q120C	iX603590	TR 2SC3421
△ Q122A	iX603580	TR 2SA1358
△ Q122C	iX603590	TR 2SC3421
Q124	iA097000	TR 2SA970 GR, BL
△ # Q125A	iX636490	TR 2SA1962 R, O
△ # Q125C	iX636500	TR 2SC5242 R, O
Q126	VP883100	TR 2SC1890A D, E
△ # Q128A	iX636490	TR 2SA1962 R, O
△ # Q128C	iX636500	TR 2SC5242 R, O
Q129	VP883100	TR 2SC1890A D, E
△ # Q131A	iX636490	TR 2SA1962 R, O
△ # Q131C	iX636500	TR 2SC5242 R, O
Q132	VP883100	TR 2SC1890A D, E
Q134	VD488500	TR. DGT DTC143XS
Q135	VD488500	TR. DGT DTC143XS
Q136	iC174020	TR 2SC1740S R, S
△ Q137	VN996900	TR 2SC4495
Q138	VK432900	TR 2SD1915F S, T
△ Q139	iA101521	TR 2SA1015 Y
Q140	iC174020	TR 2SC1740S R, S
Q141	iC174020	TR 2SC1740S R, S
Q251	VK432900	TR 2SD1915F S, T
Q252	VK432900	TR 2SD1915F S, T
Q253	VP883000	TR 2SA893A D, E
Q254	VP883000	TR 2SA893A D, E
Q255	VP883000	TR 2SA893A D, E
Q256	VP883000	TR 2SA893A D, E
Q257	iC224030	TR 2SC2240 GR, BL
Q258	VR325600	TR 2SC2229 O, Y
Q259	VR325600	TR 2SC2229 O, Y
Q260	iC224030	TR 2SC2240 GR, BL
△ Q261A	iX603580	TR 2SA1358
△ Q261C	iX603590	TR 2SC3421
△ Q262A	iX606460	TR 2SA1492 O, P, Y
△ Q262C	iX606470	TR 2SC3856 O, P, Y
△ Q263A	iX606460	TR 2SA1492 O, P, Y
△ Q263C	iX606470	TR 2SC3856 O, P, Y
△ Q265A	iX603580	TR 2SA1358
Q265C	iX603590	TR 2SC3421
Q269	VP883100	TR 2SC1890A D, E

* New Parts

Schm Ref.	PART NO.	Description
Q270	VP883100	TR 2SC1890A D, E
Q271	VR402300	TR 2SB647 C, D
Q272	iC174020	TR 2SC1740S R, S
△ Q273	VN996900	TR 2SC4495
Q274	iC174020	TR 2SC1740S R, S
R136	HL316560	R. MTL. OXD 5.6KΩ 1W
R137	HL316560	R. MTL. OXD 5.6KΩ 1W
R141	VK189000	R. FUS 1KΩ 1/4W
R145	HL316560	R. MTL. OXD 5.6KΩ 1W
R146	HL316560	R. MTL. OXD 5.6KΩ 1W
R150	VK189000	R. FUS 1KΩ 1/4W
R154	HL316560	R. MTL. OXD 5.6KΩ 1W
R155	HL316560	R. MTL. OXD 5.6KΩ 1W
R159	VK189000	R. FUS 1KΩ 1/4W
△ R164	VK188400	R. FUS 330Ω 1/4W
△ R167	HL314100	R. MTL. OXD 10Ω 1W
△ R169	VK188400	R. FUS 330Ω 1/4W
△ R173	VK188400	R. FUS 330Ω 1/4W
△ R180	VY689500	R. WW 0.22Ω 3W
△ R184	VY689500	R. WW 0.22Ω 3W
△ R188	HZ003780	R. MTL. PLAT 0.22Ω+0.22 5W
△ R192	HL314100	R. MTL. OXD 10Ω 1W
△ R194	HL314100	R. MTL. OXD 10Ω 1W
△ R197	HL314100	R. MTL. OXD 10Ω 1W
△ R236	VY689500	R. WW 0.22Ω 3W
△ R237	VY689500	R. WW 0.22Ω 3W
R274	HL316560	R. MTL. OXD 5.6KΩ 1W
R275	HL316560	R. MTL. OXD 5.6KΩ 1W
R279	VK189000	R. FUS 1KΩ 1/4W
R283	VK189000	R. FUS 1KΩ 1/4W
R287	HL316560	R. MTL. OXD 5.6KΩ 1W
R288	HL316560	R. MTL. OXD 5.6KΩ 1W
△ R291	VK188400	R. FUS 330Ω 1/4W
△ R292	HZ003780	R. MTL. PLAT 0.22Ω+0.22 5W
△ R295	HZ003780	R. MTL. PLAT 0.22Ω+0.22 5W
△ R296	VK188400	R. FUS 330Ω 1/4W
R313	HL324560	R. MTL. OXD 56Ω 2W
R314	HL324560	R. MTL. OXD 56Ω 2W
R334	VP944500	R. MTL. OXD 390Ω 1W
R335	VP944500	R. MTL. OXD 390Ω 1W
RY101	VK438300	RELAY DH24D2-OT/M2
RY102	VK438300	RELAY DH24D2-OT/M2
RY103	VK438300	RELAY DH24D2-OT/M2
* SW101	VY811700	SW. SLIDE SS029-P2022BJ6-PA6
△ SW301	VV523800	SW. SLIDE SL13B-022-BMC1
SW303	VV490000	SW. PUSH PBS-YM-002 2/2/2
TE101	VV003100	TERM. SP 8P(UCRA)
	VJ828000	PIN IMSA-6024-03E
	BB071360	SCR. TERM 8.3x13
	VS606000	HEAT. SINK DPS35-45
	EP600140	SCR. BND. HD 3x10 MFZN2-BL

* New Parts

P.C.B. DSP

Schm Ref.	PART NO.	Description
* CB1	VY755600	P. C. B.
CB2	VQ044100	CN. BS. PIN
CB3	VF982200	CN. BS. PIN
C1	VQ045000	CN. BS. PIN
C2	UB245100	C. CE. M. CHP
C3	UB052100	C. CE. M. CHP
C5	UB245100	C. CE. M. CHP
C6	UB051330	C. CE. M. CHP
C7	UB245100	C. CE. M. CHP
C8	UB013100	C. CE. M. CHP
C9	UB245100	C. CE. M. CHP
C10	VF760000	C. EL
C11	UB245100	C. CE. M. CHP
C12	UB051330	C. CE. M. CHP
C13	UB245100	C. CE. M. CHP
C14	UA653470	C. MYLAR
C15	UB052100	C. CE. M. CHP
C16	UB052100	C. CE. M. CHP
C17	UB052100	C. CE. M. CHP
C18	UB245100	C. CE. M. CHP
C19	UB245100	C. CE. M. CHP
C20	VF760000	C. EL
C21	VJ900900	C. CE. M. CHP
C22	VJ900700	C. CE. M. CHP
C23	UB052100	C. CE. M. CHP
C24	UB052100	C. CE. M. CHP
C25	UB245100	C. CE. M. CHP
C26	VJ900500	C. CE. M. CHP
C27	VJ900500	C. CE. M. CHP
C28	UB044100	C. CE. M. CHP
C29	VJ836300	C. EL
C30	UB245100	C. CE. M. CHP
C31	UB245100	C. CE. M. CHP
C32	UB052100	C. CE. M. CHP
C33	UB052100	C. CE. M. CHP
C34	UB052100	C. CE. M. CHP
C35	UB052100	C. CE. M. CHP
C36	UB245100	C. CE. M. CHP
C37	VJ836300	C. EL
C38	UB245100	C. CE. M. CHP
C39	UB245100	C. CE. M. CHP
C40	VJ837200	C. EL
C41	VJ837200	C. EL
C42	VJ836300	C. EL
C43	UB245100	C. CE. M. CHP
C44	UB013330	C. CE. M. CHP
C45	UB245100	C. CE. M. CHP
C46	UM417100	C. EL
C47	UB245100	C. CE. M. CHP
C48	UM417100	C. EL
C49	UM417100	C. EL
C50	UJ638330	C. EL

* New Parts

Schm Ref.	PART NO.	Description
C51	UB245100	C. CE. M. CHP
C52	UB013330	C. CE. M. CHP
C53	UB044100	C. CE. M. CHP
C54	UB044100	C. CE. M. CHP
C55	UB245100	C. CE. M. CHP
C56	UB044100	C. CE. M. CHP
C57	UM407220	C. EL
C58	UA652330	C. MYLAR
C59	UA652330	C. MYLAR
C60	UM407220	C. EL
C61	UM407220	C. EL
C62	UA652330	C. MYLAR
C63	VJ900700	C. CE. M. CHP
C64	UB051100	C. CE. M. CHP
C65	UB051100	C. CE. M. CHP
C66	VJ900700	C. CE. M. CHP
C67	VJ900700	C. CE. M. CHP
C68	UB051100	C. CE. M. CHP
C69	UB051100	C. CE. M. CHP
C70	VJ900700	C. CE. M. CHP
C71	UB245100	C. CE. M. CHP
C72	UB245100	C. CE. M. CHP
C73	UM417100	C. EL
C74	VJ837200	C. EL
C75	VJ836300	C. EL
C76	UB245100	C. CE. M. CHP
C77	UB245100	C. CE. M. CHP
C78	UM417100	C. EL
C79	UB245100	C. CE. M. CHP
C80	UB245100	C. CE. M. CHP
C81	UM417100	C. EL
C82	VJ837200	C. EL
C83	VJ836300	C. EL
C84	UB245100	C. CE. M. CHP
C85	UB245100	C. CE. M. CHP
C86	UB245100	C. CE. M. CHP
C87	UM417100	C. EL
C88	UM417100	C. EL
C89	UM417100	C. EL
C90	VJ837200	C. EL
C91	VJ836300	C. EL
C92	UB245100	C. CE. M. CHP
C93	UB245100	C. CE. M. CHP
C94	UM407220	C. EL
C95	UM407220	C. EL
C96	UM407220	C. EL
C97	UA653560	C. MYLAR
C98	UA653470	C. MYLAR
C99	UA652330	C. MYLAR
C100	UA653470	C. MYLAR
C101	UA652330	C. MYLAR
C102	UA653560	C. MYLAR
C103	UA653560	C. MYLAR

* New Parts

P.C.B. DSP & VIDEO

RX-V992

Schm Ref.	PART NO.	Description
C104	UA653470	C. MYLAR 4700pF 50V
C105	UA652330	C. MYLAR 330pF 50V
C106	UA653470	C. MYLAR 4700pF 50V
C107	UA652330	C. MYLAR 330pF 50V
C108	UA653560	C. MYLAR 5600pF 50V
C109	UM417100	C. EL 10uF 50V
C110	UM417100	C. EL 10uF 50V
C111	UM417100	C. EL 10uF 50V
C112	UM417100	C. EL 10uF 50V
C113	VJ837200	C. EL 47uF 16V
C114	VJ837200	C. EL 47uF 16V
C115	VJ837200	C. EL 47uF 16V
C116	VJ837200	C. EL 47uF 16V
C117	UM417100	C. EL 10uF 50V
C118	UM407220	C. EL 22uF 16V
C119	UM407220	C. EL 22uF 16V
C120	FU451100	C. MICA 10pF 500V
C121	FU451100	C. MICA 10pF 500V
C122	FU451100	C. MICA 10pF 500V
C123	UB052100	C. CE. M. CHP 100pF 50V
C124	UB052100	C. CE. M. CHP 100pF 50V
C125	UB052100	C. CE. M. CHP 100pF 50V
C126	UB052100	C. CE. M. CHP 100pF 50V
C127	UB052100	C. CE. M. CHP 100pF 50V
C128	UB052100	C. CE. M. CHP 100pF 50V
C129	UB052100	C. CE. M. CHP 100pF 50V
C130	UB052100	C. CE. M. CHP 100pF 50V
C131	UB052100	C. CE. M. CHP 100pF 50V
C132	UB052100	C. CE. M. CHP 100pF 50V
C133	UB052100	C. CE. M. CHP 100pF 50V
C134	UB052100	C. CE. M. CHP 100pF 50V
C135	UB052100	C. CE. M. CHP 100pF 50V
C136	UB052100	C. CE. M. CHP 100pF 50V
C137	UB052100	C. CE. M. CHP 100pF 50V
C138	UB052100	C. CE. M. CHP 100pF 50V
C139	UB052100	C. CE. M. CHP 100pF 50V
C140	UB052100	C. CE. M. CHP 100pF 50V
C141	UB052100	C. CE. M. CHP 100pF 50V
C142	UB052100	C. CE. M. CHP 100pF 50V
C143	UB052100	C. CE. M. CHP 100pF 50V
C144	VJ836300	C. EL 330uF 6.3V
C145	UB245100	C. CE. M. CHP 0.1uF 25V
C146	VJ837200	C. EL 47uF 16V
C147	UB245100	C. CE. M. CHP 0.1uF 25V
C148	VJ837200	C. EL 47uF 16V
C149	UB245100	C. CE. M. CHP 0.1uF 25V
C150	UM417100	C. EL 10uF 50V
C151	UM417100	C. EL 10uF 50V
C152	UM417100	C. EL 10uF 50V
C201	VJ836300	C. EL 330uF 6.3V
C202	UB245100	C. CE. M. CHP 0.1uF 25V
C203	UB245100	C. CE. M. CHP 0.1uF 25V
C204	UB245100	C. CE. M. CHP 0.1uF 25V

* New Parts

Schm Ref.	PART NO.	Description
D1	VT332900	DIODE 1SS355
D2	VT332900	DIODE 1SS355
D3	VT332900	DIODE 1SS355
D4	VT332900	DIODE 1SS355
D5	VT332900	DIODE 1SS355
D6	VT332900	DIODE 1SS355
D7	VT332900	DIODE 1SS355
D201	VH801600	DIODE 1SR139-100
G1	VR463400	TERM. GND D3.5 TP00385
G2	VR463400	TERM. GND D3.5 TP00385
G3	VR463400	TERM. GND D3.5 TP00385
IC1	XD600A00	IC TC74HC02AF-TP1
IC2	XR038A00	IC NJM2904M OP Amp
IC3	XG948E00	IC YM3436DK
IC4	XS462B00	IC YSS243B-F/AC3F
* IC5	XS282A00	IC UM61256FS-15Q SRAM
* IC6	XH603A00	IC TC74HC157AF-TP1
* IC7	XS463A00	IC YSS245-F/HLDSP3
IC8	XQ545A00	IC LH5P832N-10 PS-RAM
IC9	XF291A00	IC uPC4570G2
IC10	XR361A00	IC AK4320-VM-E1
IC11	XR361A00	IC AK4320-VM-E1
IC12	XR361A00	IC AK4320-VM-E1
IC13	XF291A00	IC uPC4570G2
IC14	XF291A00	IC uPC4570G2
IC15	XF291A00	IC uPC4570G2
IC16	iG103520	IC NJM4558MT-1
IC17	iG103520	IC NJM4558MT-1
IC18	XF291A00	IC uPC4570G2
IC19	XF291A00	IC uPC4570G2
Q1	VC124000	TR. DGT DTA144EK
Q2	VC124000	TR. DGT DTA144EK
Q3	VD303700	TR 2SC3326 A, B
Q4	VD303700	TR 2SC3326 A, B
Q5	VD303700	TR 2SC3326 A, B
Q201	iC224030	TR 2SC2240 GR, BL
XL1	Vi551900	RSNR. CRY5 11.2896MHz
XL2	VM651900	RSNR. CRY5 10.0MHz
* * *	VY755900	P. C. B. VIDEO(UC)
* * *	VY756000	P. C. B. VIDEO(R)
* * *	VY756100	P. C. B. VIDEO(AL)
CB1	VM688900	CN. BS. PIN 10P
CB351	VM688900	CN. BS. PIN 10P
CB352	VM859700	CN. BS. PIN 16P
CB353	VD004500	CN. BS. PIN 2P
CB354	LB918020	CN. BS. PIN 2P
CB501	VB858100	CN. BS. PIN 2P
* CB502	VU281600	CN 16P
CB601	VB858200	CN. BS. PIN 3P
* CB603	VU281600	CN 16P

* New Parts

P.C.B. VIDEO

Schm Ref.	PART NO.	Description
CB604	VN394900	CN. BS. PIN 14P
CB751	Vi878200	CN. BS. PIN 4P
CB801	Vi878200	CN. BS. PIN 4P
CB802	VF728300	CN 6P
CB851	Vi878200	CN. BS. PIN 4P
C1	UM417100	C. EL 10uF 50V
C2	UM417100	C. EL 10uF 50V
C3	UM417100	C. EL 10uF 50V
C4	VQ645600	C. MYLAR 100pF 50V
C5	VQ645600	C. MYLAR 100pF 50V
C6	UM417100	C. EL 10uF 50V
C7	VJ839100	C. EL 1uF 50V
C8	UM215100	C. EL 0.1uF 50V
C9	UM215100	C. EL 0.1uF 50V
C10	VJ837200	C. EL 47uF 16V
C11	UA655120	C. MYLAR 0.12uF 50V
C12	VQ645600	C. MYLAR 100pF 50V
C13	VJ839200	C. EL 2.2uF 50V
C14	VQ645600	C. MYLAR 100pF 50V
C15	VJ839200	C. EL 2.2uF 50V
C16	UA655120	C. MYLAR 0.12uF 50V
C17	VJ837200	C. EL 47uF 16V
C18	UM215100	C. EL 0.1uF 50V
C19	UM215100	C. EL 0.1uF 50V
C20	VJ839100	C. EL 1uF 50V
C21	UM417100	C. EL 10uF 50V
C22	UM417100	C. EL 10uF 50V
C23	UA654330	C. MYLAR 0.033uF 50V
C24	UA654330	C. MYLAR 0.033uF 50V
C201	UB245100	C. CE. M. CHP 0.1uF 25V
C202	VF466800	C. CE. TUBLR 100pF 50V
C203	VF466800	C. CE. TUBLR 100pF 50V
C204	UB245100	C. CE. M. CHP 0.1uF 25V
C351	VJ839200	C. EL 2.2uF 50V
C352	UA652100	C. MYLAR 100pF 50V
C353	UA652100	C. MYLAR 100pF 50V
C354	VJ839200	C. EL 2.2uF 50V
C355	VJ839200	C. EL 2.2uF 50V
C356	VF760000	C. EL 100uF 10V
C357	VF760000	C. EL 100uF 10V
C358	VJ839200	C. EL 2.2uF 50V
C359	VJ839200	C. EL 2.2uF 50V
C360	VF760000	C. EL 100uF 10V
C361	VF760000	C. EL 100uF 10V
C362	VJ839200	C. EL 2.2uF 50V
C364	VJ837200	C. EL 47uF 16V
C369	VJ837200	C. EL 47uF 16V
C373	UM417100	C. EL 10uF 50V
C374	UA652100	C. MYLAR 100pF 50V
C375	UA652100	C. MYLAR 100pF 50V
C376	UM417100	C. EL 10uF 50V
C377	UM417100	C. EL 10uF 50V
C378	UA652100	C. MYLAR 100pF 50V

* New Parts

Schm Ref.	PART NO.	Description
C379	UA652100	C. MYLAR 100pF 50V
C380	UM417100	C. EL 10uF 50V
C385	UB245100	C. CE. M. CHP 0.1uF 25V
C386	UM416470	C. EL 4.7uF 50V
C387	UM416470	C. EL 4.7uF 50V
C501	VF637900	C. EL 1000uF 10V
C502	UM417100	C. EL 10uF 50V
C503	UB052100	C. CE. M. CHP 100pF 50V
C504	UB245100	C. CE. M. CHP 0.1uF 25V
C505	UM417100	C. EL 10uF 50V
C506	UB245100	C. CE. M. CHP 0.1uF 25V
C507	VF637900	C. EL 1000uF 10V
C508	UB052100	C. CE. M. CHP 100pF 50V
C509	VF637900	C. EL 1000uF 10V
C510	UB052100	C. CE. M. CHP 100pF 50V
C511	UB052100	C. CE. M. CHP 100pF 50V
C512	VJ900300	C. CE. M. CHP 22pF 50V
C513	UM417100	C. EL 10uF 50V
C514	VF637900	C. EL 1000uF 10V
C515	UB245100	C. CE. M. CHP 0.1uF 25V
C516	UB245100	C. CE. M. CHP 0.1uF 25V
C517	VJ837200	C. EL 47uF 16V
C518	VJ837200	C. EL 47uF 16V
C519	VJ837200	C. EL 47uF 16V
C520	VJ837200	C. EL 47uF 16V
C521	VJ837200	C. EL 47uF 16V
C601	UB052100	C. CE. M. CHP 100pF 50V
C602	UB052100	C. CE. M. CHP 100pF 50V
C603	UB052100	C. CE. M. CHP 100pF 50V
C604	UB052100	C. CE. M. CHP 100pF 50V
C605	UB052100	C. CE. M. CHP 100pF 50V
C606	UB052100	C. CE. M. CHP 100pF 50V
C607	UM417100	C. EL 10uF 50V
C608	UM417100	C. EL 10uF 50V
C609	UM417100	C. EL 10uF 50V
C610	UM417100	C. EL 10uF 50V
C611	UM417100	C. EL 10uF 50V
C612	UM417100	C. EL 10uF 50V
C613	VF637900	C. EL 1000uF 10V
C614	VF637900	C. EL 1000uF 10V
C615	UM417100	C. EL 10uF 50V
C616	VF637900	C. EL 1000uF 10V
C617	UB013330	C. CE. M. CHP 3300pF 50V
C618	VJ837200	C. EL 47uF 16V
C619	VJ837200	C. EL 47uF 16V
C620	UB012820	C. CE. M. CHP 820pF 50V
C621	VF760000	C. EL 100uF 10V
C622	VJ837200	C. EL 47uF 16V
C623	UB052120	C. CE. M. CHP 120pF 50V
C624	UB044100	C. CE. M. CHP 0.01uF 50V
C625	VJ837200	C. EL 47uF 16V
C626	UM417100	C. EL 10uF 50V
C627	UB013120	C. CE. M. CHP 1200pF 50V

* New Parts

P.C.B. VIDEO

RX-V992

Schm Ref.	PART NO.	Description
C628	UB012470	C. CE. M. CHP 470pF 50V
C629	VJ839100	C. EL 1uF 50V
C630	VJ839100	C. EL 1uF 50V
C631	UB245100	C. CE. M. CHP 0.1uF 25V
C632	VJ837200	C. EL 47uF 16V
C633	UB245100	C. CE. M. CHP 0.1uF 25V
C634	VJ837200	C. EL 47uF 16V
C635	VJ899300	C. CE. M. CHP 8pF 50V
C636	VJ899200	C. CE. M. CHP 7pF 50V
* C637	UB051240	C. CE. M. CHP 24pF 50V
* C638	UB051240	C. CE. M. CHP 24pF 50V
C639	UB012220	C. CE. M. CHP 220pF 50V
C640	UM417100	C. EL 10uF 50V
C641	UM416470	C. EL 4.7uF 50V
C642	VJ837200	C. EL 47uF 16V
C643	VJ837200	C. EL 47uF 16V
C644	VJ900700	C. CE. M. CHP 33pF 50V
C645	VJ900300	C. CE. M. CHP 22pF 50V
C751	UA655100	C. MYLAR 0.1uF 50V
C752	UA655100	C. MYLAR 0.1uF 50V
C753	VH507200	C. EL 6800uF 16V
C754	VH507200	C. EL 6800uF 16V
C755	VH507200	C. EL 6800uF 16V(R)
C756	VH520900	C. EL 4700uF 16V
C805	UM417100	C. EL 10uF 50V
C806	VJ837200	C. EL 47uF 16V
C807	UM417100	C. EL 10uF 50V
C808	VJ837200	C. EL 47uF 16V
C809	UM417100	C. EL 10uF 50V
C810	VJ837200	C. EL 47uF 16V
D301	VR711500	LED(or) SLR-325DC
D601	VD631600	DIODE 1SS133, 176, HSS104
D602	VD631600	DIODE 1SS133, 176, HSS104
D603	VD631600	DIODE 1SS133, 176, HSS104
D604	VD631600	DIODE 1SS133, 176, HSS104
D605	VD631600	DIODE 1SS133, 176, HSS104
D606	VD631600	DIODE 1SS133, 176, HSS104
D607	VD631600	DIODE 1SS133, 176, HSS104
D608	VD631600	DIODE 1SS133, 176, HSS104
D609	VD631600	DIODE 1SS133, 176, HSS104
D610	VD631600	DIODE 1SS133, 176, HSS104
D611	VD631600	DIODE 1SS133, 176, HSS104
D612	VD631600	DIODE 1SS133, 176, HSS104
Δ D751	VN011300	DIODE. BRG D3SBA20 4A 200V
D801	VD631600	DIODE 1SS133, 176, HSS104
D802	VD631600	DIODE 1SS133, 176, HSS104
D851	VD631600	DIODE 1SS133, 176, HSS104
G801	VR463400	TERM. GND D3.5 TP00385
IC1	XM356A00	IC NJM2068LD
IC2	XB247301	IC uPC4570HA
IC351	XF971A00	IC uPC4574C
IC501	XL493A00	IC TC74HC4051AP
IC502	XL493A00	IC TC74HC4051AP

* New Parts

Schm Ref.	PART NO.	Description
* IC503	iG156200	IC HD14066BP AnalogSW
IC504	Xi109D00	IC MC14576CP
IC601	XL493A00	IC TC74HC4051AP
IC602	XL493A00	IC TC74HC4051AP
IC603	XL493A00	IC TC74HC4051AP
IC604	XL493A00	IC TC74HC4051AP
* IC605	iG156200	IC HD14066BP AnalogSW
IC606	iG054600	IC HD14053BP MPX
IC607	iG142200	IC TC74HCU04AP
IC608	Xi109D00	IC MC14576CP
IC609	Xi109D00	IC MC14576CP
IC610	Xi109D00	IC MC14576CP
IC611	XS502A00	IC LC74781-9626
IC801	XJ604A00	IC NJM78M05FA
IC802	XJ604A00	IC NJM78M05FA
IC803	XE436A00	IC NJM79M05FA
JK201	VP594600	CN. DIN 1P S
JK201	VU245200	CN. DIN 1P
JK601	VU245200	CN. DIN 1P
JK602	VP113600	CN. DIN 2P
JK603	VP113600	CN. DIN 2P
JK604	VT973000	CN. DIN 2P
JK851	VJ726800	JACK. MNI
JK852	VJ726800	JACK. MNI
L601	VG668700	COIL 33uH
* PJ201	VV325100	JACK. PIN 3P
PJ201	VV852700	JACK. PIN 3P
PJ501	VV325000	JACK. PIN 2P
PJ502	VV325000	JACK. PIN 2P
PJ503	VV325000	JACK. PIN 2P
PJ504	VV325000	JACK. PIN 2P
Q501	iC174020	TR 2SC1740S R, S
Q502	iA101521	TR 2SA1015 Y
Q503	iC053540	TR 2SC535 A, B, C
Q601	iC174020	TR 2SC1740S R, S
Q602	VH964100	TR. DGT DTA143ES
Q603	iC287820	TR 2SC2878 A, B
Q604	VG721700	TR. DGT DTA144ES
Q605	VG721700	TR. DGT DTA144ES
Q606	VD678700	TR. DGT DTC114ES
Q607	iC174020	TR 2SC1740S R, S
Q608	iC174020	TR 2SC1740S R, S
Q609	iA101521	TR 2SA1015 Y
Q610	iC053540	TR 2SC535 A, B, C
Q611	iC224030	TR 2SC2240 GR, BL
SW1	VV885000	SW. PUSH SPUN22 2
* SW101	VV350500	SW. RT SR-2512-0110-20F2A
* SW851	VY811700	SW. SLIDE SS029-P2022BJ6 (R)
VR1	VP741800	VR B20KΩ
VR2	VP741900	VR G25KΩ
VR3	VP742000	VR MN100KΩ
* VR351	VV613500	VR A100KΩ
XL601	VV949800	RSNR. CRYST 14.31818MHz (UCR)

* New Parts

P.C.B. VIDEO & OPERATION

Schm Ref.	PART NO.	Description
XL601	VV949900	RSNR. CRYSTAL
	VJ828000	PIN
	BB071360	SCR. TERM
	VL391100	RADIATOR
	ED330066	SCR. BND. HD
		17.734475MHz (AL)
		IMS-6024-03E
		8.3x13
		OSH-2440-SPL
		3x6 FCRM3-BL
	VY754800	P.C.B.
	VY754900	P.C.B.
	VY755000	P.C.B.
	VY755100	P.C.B.
	VZ344100	P.C.B.
		OPERATION(C)
		OPERATION(R)
		OPERATION(A)
		OPERATION(L)
		OPERATION(U)
CB258	Vi878700	CN. BS. PIN
CB259	Vi878100	CN. BS. PIN
CB260	Vi878100	CN. BS. PIN
CB304	VK024700	CN. BS. PIN
CB317	VG879900	CN. BS. PIN
CB318	VP206500	HOLDER. FUS
CB319	VP206500	HOLDER. FUS
CB322	VP206500	HOLDER. FUS
CB323	VP206500	HOLDER. FUS
CB324	VP206500	HOLDER. FUS
CB325	VP206500	HOLDER. FUS
CB901	VU281700	CN
CB902	Vi878100	CN. BS. PIN
CB903	Vi878000	CN. BS. PIN
CB904	Vi878000	CN. BS. PIN
C286	VF466900	C. CE. TUBLR
C287	VF466900	C. CE. TUBLR
C288	VF466900	C. CE. TUBLR
C293	UA654100	C. MYLAR
C294	UA654220	C. MYLAR
C295	UA654220	C. MYLAR
C296	UA654100	C. MYLAR
C306	UA653100	C. MYLAR
C307	VF606700	C. EL
C308	Ui377470	C. EL
C312	UA654100	C. MYLAR
C314	VS741700	C. CE. SAFTY
C901	VH053100	C. CE. TUBLR
C902	VG277000	C. CE. TUBLR
C903	VH053100	C. CE. TUBLR
C904	VH053100	C. CE. TUBLR
C905	VH053100	C. CE. TUBLR
C906	VH053100	C. CE. TUBLR
C907	VJ837200	C. EL
C908	VF467300	C. CE. TUBLR
C909	VF467300	C. CE. TUBLR
C910	VF467000	C. CE. TUBLR
C911	VH053100	C. CE. TUBLR
D256	VD631600	DIODE
D257	VD631600	DIODE

* New Parts

Schm Ref.	PART NO.	Description
D302	VD631600	DIODE
D303	VG440400	DIODE. ZENR
D304	VR253700	DIODE. BRG
D901	VG438300	DIODE. ZENR
D902	VS132300	LED(re)
D903	VV625100	LED(re)
F301	KB000780	FUSE
F303	KB001390	FUSE
F303	KB001540	FUSE
F305	KB000780	FUSE
G901	VR463400	TERM. GND
IC901	XR188A00	IC
L251	VU038100	COIL
L252	VU038100	COIL
L253	VU038100	COIL
PJ251	VV853100	JACK. PIN
Q301	VD488500	TR. DGT
Q302	VR510800	TR
Q901	VR948600	TR
Q902	VR948600	TR
Q903	VD678700	TR. DGT
RY251	VK438300	RELAY
RY252	VU566700	RELAY
RY301	VV884000	RELAY
RY301	VV884000	RELAY
RY301	VY735300	RELAY
SW251	VV489000	SW. PUSH
SW308	VA961800	VOLT. SELECT
SW901	VG392900	SW. TACT
SW902	VG392900	SW. TACT
SW903	VG392900	SW. TACT
SW904	VG392900	SW. TACT
SW905	VG392900	SW. TACT
SW906	VG392900	SW. TACT
SW907	VG392900	SW. TACT
SW908	VG392900	SW. TACT
SW909	VG392900	SW. TACT
SW910	VG392900	SW. TACT
SW911	VG392900	SW. TACT
SW912	VG392900	SW. TACT
SW913	VG392900	SW. TACT
SW914	VG392900	SW. TACT
SW915	VG392900	SW. TACT
SW916	VG392900	SW. TACT
SW918	VG392900	SW. TACT
SW919	VG392900	SW. TACT
SW920	VG392900	SW. TACT
SW922	VG392900	SW. TACT
SW923	VG392900	SW. TACT
SW924	VG392900	SW. TACT
SW925	VG392900	SW. TACT
SW926	VG392900	SW. TACT
SW927	VG392900	SW. TACT

* New Parts

P.C.B. OPERATION

Schm Ref.	PART NO.	Description
SW928	VG392900	SW. TACT SKHVAA
SW929	VG392900	SW. TACT SKHVAA
SW930	VG392900	SW. TACT SKHVAA
SW931	VG392900	SW. TACT SKHVAA
SW932	VG392900	SW. TACT SKHVAA
SW933	VG392900	SW. TACT SKHVAA
SW934	VG392900	SW. TACT SKHVAA
SW935	VG392900	SW. TACT SKHVAA
SW936	VG392900	SW. TACT SKHVAA
SW937	VG392900	SW. TACT SKHVAA
SW938	VG392900	SW. TACT SKHVAA
SW939	VG392900	SW. TACT SKHVAA
SW940	VG392900	SW. TACT SKHVAA
SW941	VG392900	SW. TACT SKHVAA
SW942	VG392900	SW. TACT SKHVAA
△ T301	XC083A00	TRANS. PWR (UC)
△ T301	XC084A00	TRANS. PWR (AL)
△ T301	XT331A00	TRANS. PWR (R)
TE251	VK506200	TERM. SP 8P (L)
TE251	VV003100	TERM. SP 8P (UCRA)
△ TE301	VT915000	OUTLET. AC 2P (A)
△ TE301	VU543100	OUTLET. AC 2P (UCR)
△ TE301	VU543400	OUTLET. AC 2P (L)
U901	VU591000	L. DTCT GP1U271X
* V901	VV261900	FL. DSPLY 15-BT-28GK
	BB071360	SCR. TERM 8. 3x13
	VS588900	SHEET
	VV499900	SPACER FL-T7.5
	VY760000	SPACER
	VS605900	HEAT. SINK DPS15-45 (R)
	EP600140	SCR. BND. HD 3x10 MFZN2-BL (R)

* New Parts

■ Flame Proof Carbon Resistor & Chip Resistor

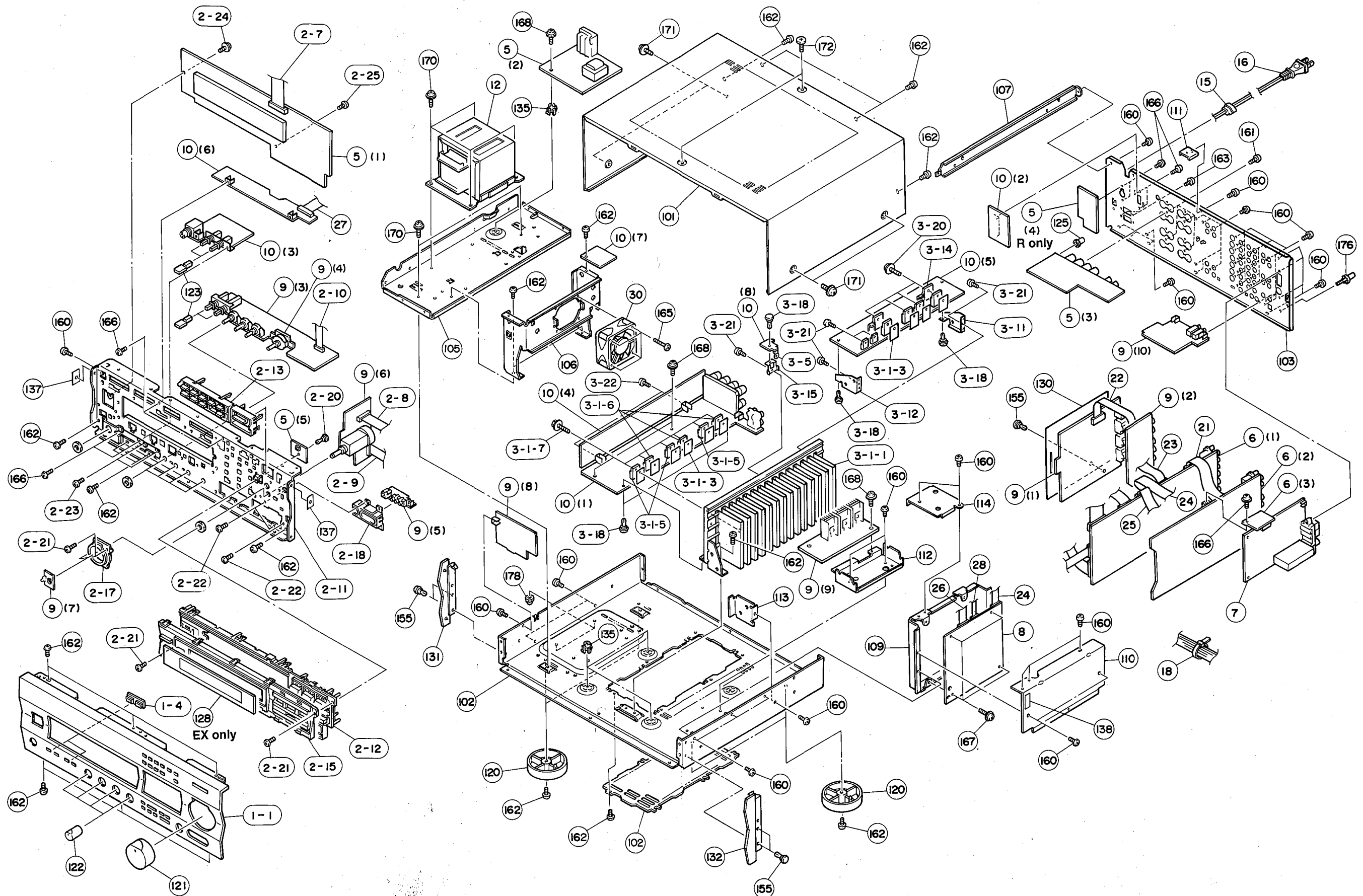
Schm Ref.	PART NO.	Description
△ HV453100	R. CAR. FP	1Ω 1/4W
△ HV453220	R. CAR. FP	2.2Ω 1/4W
△ HV453470	R. CAR. FP	4.7Ω 1/4W
△ HV453680	R. CAR. FP	6.8Ω 1/4W
△ HV454100	R. CAR. FP	10Ω 1/4W
△ HV454120	R. CAR. FP	12Ω 1/4W
△ HV454220	R. CAR. FP	22Ω 1/4W
△ HV454330	R. CAR. FP	33Ω 1/4W
△ HV454470	R. CAR. FP	47Ω 1/4W
△ HV455100	R. CAR. FP	100Ω 1/4W
△ HV455120	R. CAR. FP	120Ω 1/4W
△ HV455220	R. CAR. FP	220Ω 1/4W
△ HV455270	R. CAR. FP	270Ω 1/4W
△ HV455820	R. CAR. FP	820Ω 1/4W
△ HV456100	R. CAR. FP	1KΩ 1/4W
△ HV456270	R. CAR. FP	2.7KΩ 1/4W
△ HV456330	R. CAR. FP	3.3KΩ 1/4W
△ HV456560	R. CAR. FP	5.6KΩ 1/4W

* New Parts

Schm Ref.	PART NO.	Description
RD250000	R. CAR. CHP	0Ω 1/10W
RD254220	R. CAR. CHP	22Ω 1/10W
RD254750	R. CAR. CHP	75Ω 1/10W
RD254820	R. CAR. CHP	82Ω 1/10W
RD255100	R. CAR. CHP	100Ω 1/10W
RD255150	R. CAR. CHP	150Ω 1/10W
RD255200	R. CAR. CHP	200Ω 1/10W
RD255220	R. CAR. CHP	220Ω 1/10W
RD255330	R. CAR. CHP	330Ω 1/10W
RD255430	R. CAR. CHP	430Ω 1/10W
RD255470	R. CAR. CHP	470Ω 1/10W
* RD255620	R. CAR. CHP	620Ω 1/10W
RD255680	R. CAR. CHP	680Ω 1/10W
RD255820	R. CAR. CHP	820Ω 1/10W
RD256100	R. CAR. CHP	1KΩ 1/10W
RD256120	R. CAR. CHP	1.2KΩ 1/10W
RD256130	R. CAR. CHP	1.3KΩ 1/10W
RD256150	R. CAR. CHP	1.5KΩ 1/10W
RD256180	R. CAR. CHP	1.8KΩ 1/10W
RD256220	R. CAR. CHP	2.2KΩ 1/10W
RD256240	R. CAR. CHP	2.4KΩ 1/10W
RD256270	R. CAR. CHP	2.7KΩ 1/10W
RD256330	R. CAR. CHP	3.3KΩ 1/10W
RD256360	R. CAR. CHP	3.6KΩ 1/10W
RD256390	R. CAR. CHP	3.9KΩ 1/10W
RD256470	R. CAR. CHP	4.7KΩ 1/10W
RD256560	R. CAR. CHP	5.6KΩ 1/10W
RD256680	R. CAR. CHP	6.8KΩ 1/10W
RD256820	R. CAR. CHP	8.2KΩ 1/10W
RD256910	R. CAR. CHP	9.1KΩ 1/10W
RD257100	R. CAR. CHP	10KΩ 1/10W
RD257120	R. CAR. CHP	12KΩ 1/10W
RD257130	R. CAR. CHP	13KΩ 1/10W
RD257150	R. CAR. CHP	15KΩ 1/10W
RD257180	R. CAR. CHP	18KΩ 1/10W
RD257220	R. CAR. CHP	22KΩ 1/10W
RD257240	R. CAR. CHP	24KΩ 1/10W
RD257270	R. CAR. CHP	27KΩ 1/10W
RD257330	R. CAR. CHP	33KΩ 1/10W
RD257390	R. CAR. CHP	39KΩ 1/10W
RD257470	R. CAR. CHP	47KΩ 1/10W
RD257560	R. CAR. CHP	56KΩ 1/10W
RD257680	R. CAR. CHP	68KΩ 1/10W
RD257750	R. CAR. CHP	75KΩ 1/10W
RD257910	R. CAR. CHP	91KΩ 1/10W
RD258100	R. CAR. CHP	100KΩ 1/10W
RD258150	R. CAR. CHP	150KΩ 1/10W
RD258220	R. CAR. CHP	220KΩ 1/10W
RD258330	R. CAR. CHP	330KΩ 1/10W
RD258470	R. CAR. CHP	470KΩ 1/10W
RD258680	R. CAR. CHP	680KΩ 1/10W
RD259100	R. CAR. CHP	1MΩ 1/10W
RD259470	R. CAR. CHP	4.7MΩ 1/10W

* New Parts

■ EXPLODED VIEW



■ MECHANICAL PARTS

Ref. No.	PART NO.	Description	Remarks	Markets
* 1- 1	VV264000	FRONT PANEL	BL	
* 1- 1	VV526200	FRONT PANEL	TI	
1- 4	VV123700	ESCUTCHEON, 3/8	BL	
1- 4	VV123800	ESCUTCHEON, 3/8	TI	
* 2- 7	MF117250	FLEXIBLE FLAT CABLE	17P 250mm	
* 2- 8	MF116100	FLEXIBLE FLAT CABLE	16P 100mm	
* 2- 9	MF110160	FLEXIBLE FLAT CABLE	10P 160mm	
* 2-10	MF110120	FLEXIBLE FLAT CABLE	10P 120mm	
* 2-11	VV305800	SUB CHASSIS		
2-12	VV136300	BUTTON, CASE	BL	
2-12	VV136400	BUTTON, CASE	TI	
2-13	VV137500	BUTTON, DSP	BL	
2-13	VV137600	BUTTON, DSP	TI	
* 2-15	VV138300	SUB PANEL CASE	BL	
* 2-15	VV138400	SUB PANEL CASE	TI	
2-17	VV149500	ESCUTCHEON, VOL	BL	
2-17	VV149600	ESCUTCHEON, VOL	TI	
2-18	VV149800	ESCUTCHEON, PJ	BL	
2-18	VV149900	ESCUTCHEON, PJ	TI	
2-20	VQ368500	PUSH RIVET	P3545-B	
2-21	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
2-22	VN413300	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2-BL	
2-23	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
2-24	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
2-25	EP630220	BIND HEAD P-TITE SCREW	3x8 ZMC2-BL	
* 3-1-1	VV308800	HEAT SINK ASS'Y		
* 3-1-3	VV849300	RADIATION SHEET	19x24	
# 3-1-5	iX636490	TRANSISTOR	2SA1962 R,0	Q125A, 128A, 131A
# 3-1-6	iX636500	TRANSISTOR	2SC5242 R,0	Q125C, 128C, 131C
3-1-7	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
3-5	VL965100	THERMISTOR	PTH9M04BE222TS2	
* 3-11	VV517000	SUPPORT	RA-L	
* 3-12	VV517100	SUPPORT	RA-R	
3-14	VR724200	SUPPORT, TR		
3-15	VY934600	SUPPORT, P		
3-18	VQ368500	PUSH RIVET	P3545-B	
3-20	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
3-21	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
3-22	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
* 5	VY754800	P.C.B. ASS'Y	OPERATION	(C)
* 5	VY754900	P.C.B. ASS'Y	OPERATION	(R)
* 5	VY755000	P.C.B. ASS'Y	OPERATION	(A)
* 5	VY755100	P.C.B. ASS'Y	OPERATION	(L)
5	VZ344100	P.C.B. ASS'Y	OPERATION	(U)
* 6	VY755300	P.C.B. ASS'Y	FUNCTION	(UC)
* 6	VY755400	P.C.B. ASS'Y	FUNCTION	(R)
* 6	VY755500	P.C.B. ASS'Y	FUNCTION	(AL)
7	VV610200	P.C.B. ASS'Y	TUNER	(UC)
7	VV610300	P.C.B. ASS'Y	TUNER	(R)
7	VV610400	P.C.B. ASS'Y	TUNER	(AL)
* 8	VY755600	P.C.B. ASS'Y	DSP	
* 9	VY755900	P.C.B. ASS'Y	VIDEO	(UC)
* 9	VY756000	P.C.B. ASS'Y	VIDEO	(R)

* New Parts

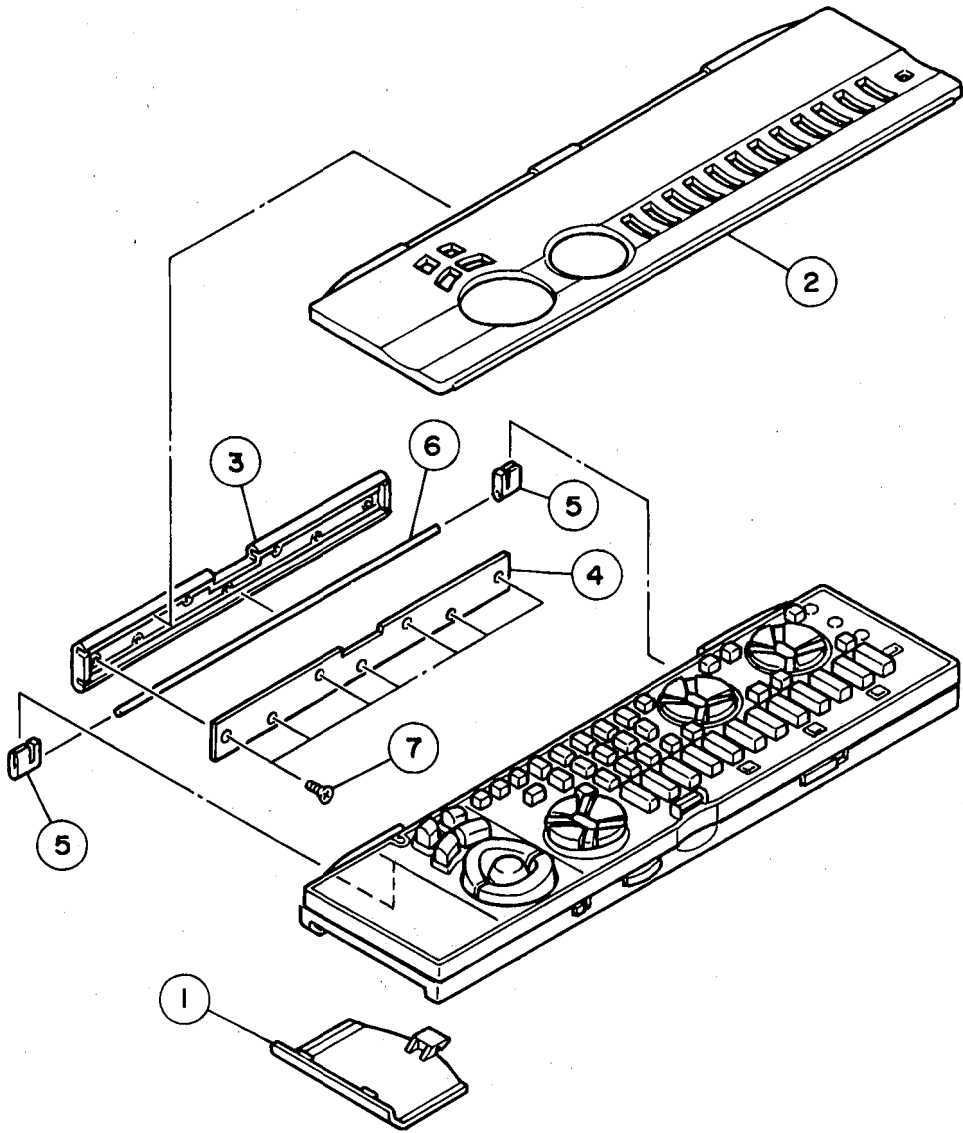
Ref. No.	PART NO.	Description	Remarks	Markets
* 9	VY756100	P.C.B. ASS'Y	VIDEO	(AL)
* 10	VY756300	P.C.B. ASS'Y	MAIN	(UCRA)
* 10	VY756400	P.C.B. ASS'Y	MAIN	(L)
* 12	XT266A00	POWER TRANSFORMER		(U)
* 12	XT267A00	POWER TRANSFORMER		(C)
* 12	XT268A00	POWER TRANSFORMER		(R)
* 12	XT269A00	POWER TRANSFORMER		(A)
* 12	XT270A00	POWER TRANSFORMER		(L)
15	VN158600	CORD STOPPER	No.2104	
16	VL238100	POWER CORD ASS'Y		(R)
16	VN363700	POWER CORD ASS'Y		(L)
16	VQ508600	POWER CORD ASS'Y		(A)
16	VU122900	POWER CORD ASS'Y		(UC)
18	VU590000	BINDING TIE	CBTD001B	
* 21	MF127120	FLEXIBLE FLAT CABLE	27P 120mm	
* 22	MF116070	FLEXIBLE FLAT CABLE	16P 70mm	
23	MF114100	FLEXIBLE FLAT CABLE	14P 100mm	
* 24	MF114120	FLEXIBLE FLAT CABLE	14P 120mm	
* 25	MF111160	FLEXIBLE FLAT CABLE	11P 160mm	
* 26	MF120120	FLEXIBLE FLAT CABLE	20P 120mm	
27	MF119140	FLEXIBLE FLAT CABLE	19P 140mm	
28	MF105180	FLEXIBLE FLAT CABLE	5P 180mm	
30	VV272500	DC FAN MOTOR	2410ML-05W-B20-L00	
101	VV263800	TOP COVER		BL
101	VV263900	TOP COVER		TI
* 102	VV305600	CHASSIS		
* 103	VV304600	REAR PANEL		(U)
* 103	VV304700	REAR PANEL		(C)
* 103	VV304800	REAR PANEL		(R)
* 103	VV304900	REAR PANEL		(A)
* 103	VV305000	REAR PANEL		(L)
* 105	VV305900	FRAME, TRANSFORMER		
* 106	VV306000	FRAME, FAN		
* 107	VV306100	FRAME		
* 109	VV306300	SHIELD CASE		
* 110	VV306400	SHIELD CASE, COVER		
111	VV306200	SSUPPORT, TOP		
* 112	VV516800	SUPPORT, PCB	PCB	
* 113	VV516900	SUPPORT	TUNER	
* 114	VV530800	SUPPORT	FUNCTION	
120	VS025000	LEG	D60xH21	
121	VV150100	KNOB, LED	D40	BL
* 121	VV150200	KNOB, LED	D40	TI
122	VV123300	KNOB	D14	BL
122	VV123400	KNOB	D14	TI
123	VV123500	BUTTON, 3/8		BL
123	VV123600	BUTTON, 3/8		TI
125	VS048300	BUTTON	D7	BL
128	VV259400	SHEET, WINDOW		(UC)
128	VV259600	SHEET, WINDOW		(RAL)
* 130	VY761600	SHEET, M		
131	VV263400	PLATE SIDE L	L	BL
131	VV263500	PLATE SIDE L	L	TI

* New Parts

Ref. No.	PART NO.	Description	Remarks	Markets
132	VV263600	PLATE SIDE R	R	BL
132	VV263700	PLATE SIDE R	R	TI
135	VR264400	SPACER	H8	
137	VY989400	DAMPER	SIDE	
138	VS933900	DAMPER, TOP		
155	VQ368500	PUSH RIVET	P3545-B	
160	VN413300	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2-BL	
161	VY731200	BONDING HEAD TAPPING SCREW	3x10 MFNI33	
162	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
163	Ei030086	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y	
165	VV220300	BIND HEAD B-TITE SCREW	3x30 MFZN2-BL	
166	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
167	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
168	VT669400	PW HEAD B-TITE SCREW	3x15-8 MFC2	
170	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
171	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
171	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
172	EX601850	SPECIAL SCREW S-TITE	4x8-10 FCRM3-BL	BL
172	EX601860	SPECIAL SCREW S-TITE	4x8-10 FNM3-BL	TI
176	AA627310	GROUND TERMINAL		
178	VK002600	HEXAGONAL CAP NUT	4mm	
*	ACCESSORIES			
	VV627100	REMOTE CONTROL TRANSMITTER	RRC4000-5401R	
	VQ147100	ANTENNA, FM	1P 1.4m	
	VR248500	ANTENNA, AM LOOP	1P 1.0m	
	VT948000	ANTENNA ADAPTER		
	VY731700	LABEL, REMOTE CONTROL BATTERY, MANGANESE	SUM-3, AA, R06	(UC)

* New Parts

EXPLODED VIEW



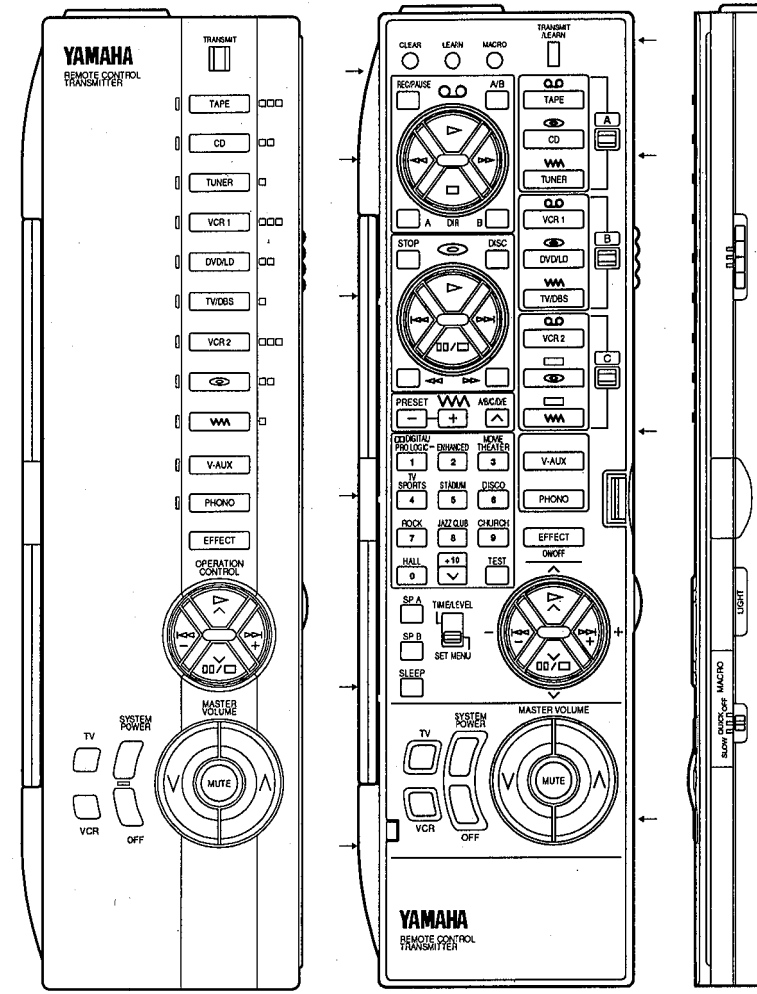
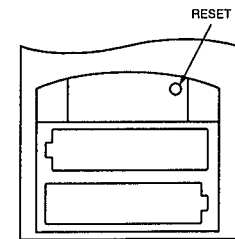
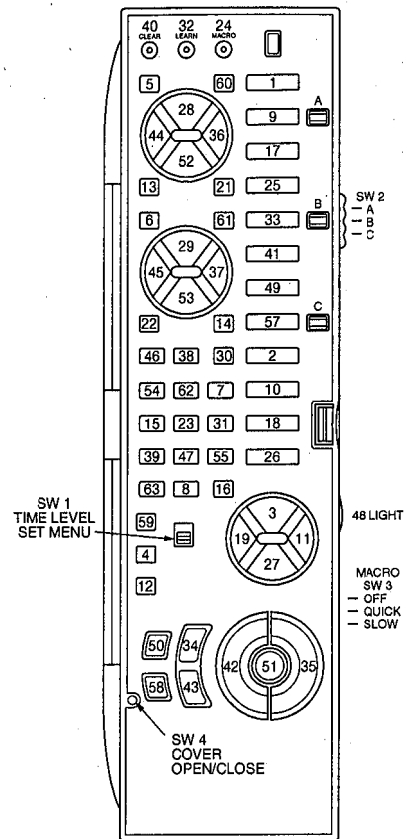
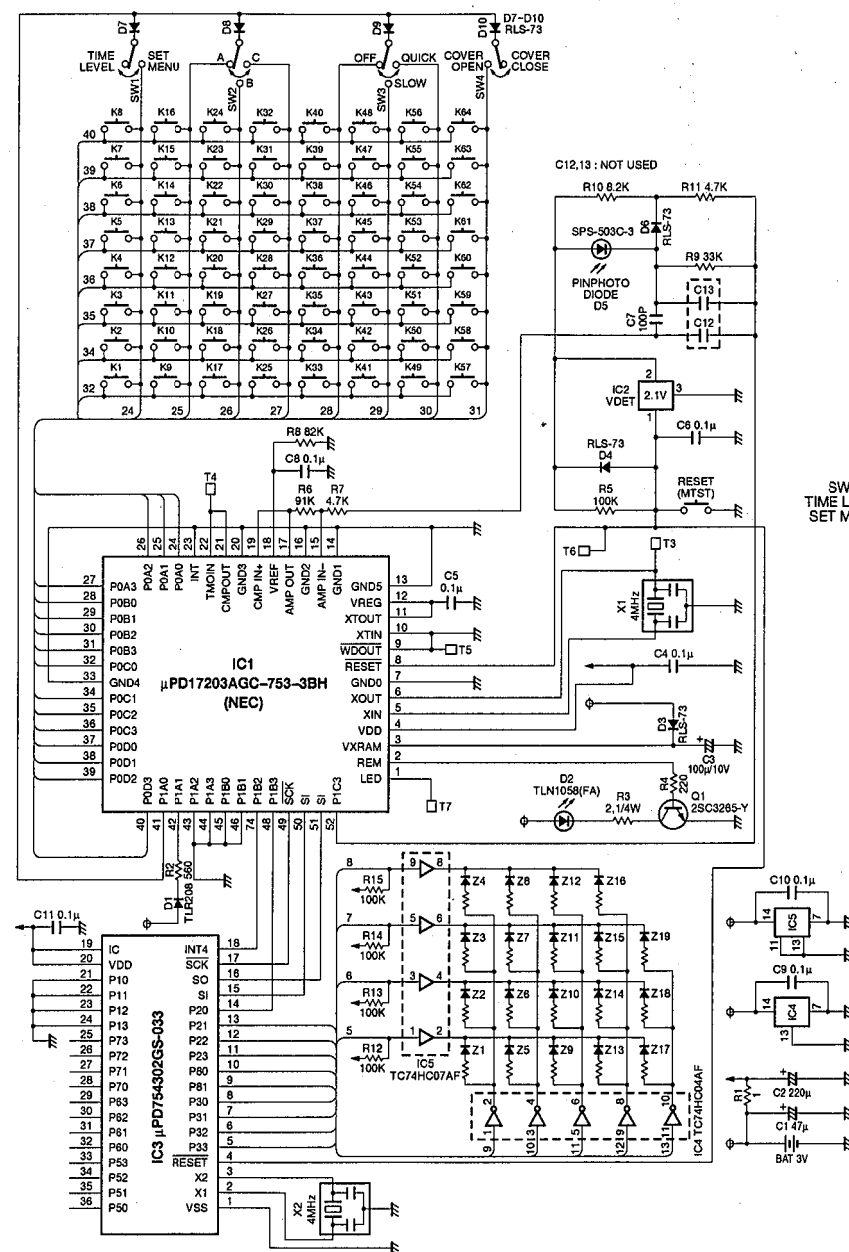
Ref. No.	PART NO.	Description	Remarks	Markets
*	VV627100	REMOTE CONTROL TRANSMITTER	RRC4000-5401R	RRC40005401R
* 1	CX680040	COVER, BATTERY		103RRC11101R
* 2	CX680050	LID		103RRC11201R
* 3	CX680060	BRACKET	A	503RRC00401R
* 4	CX680070	BRACKET	B	503RRC00501R
* 5	CX680080	GUIDE PIN		522RRC00101R
* 6	CX680090	PIN		524RRC00101R
* 7	EX603910	SCREW	M1.7x13.5	ABB1703321001

* New Parts

REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM

Key arrangement



MACRO transmission

Transmission code of initial setting shows under the below. (key No.)
Each transmission code is the fixed or learning code.

Key No.	COVER		CLOSE					
	SW 1		Don't care.					
	SW 2		Don't care.					
	SW 3		QUICK or SLOW					
	MACRO order		1	2	3	4	5	6
1	TAPE	K34	K1	K28-A	-	-	-	-
2	WMA	K34	K2	-	-	-	-	-
9	CD	K34	K9	K29-A	-	-	-	-
10	V-AUX	K34	K10	-	-	-	-	-
17	TUNER	K34	K17	-	-	-	-	-
18	PHONO	K34	K18	-	-	-	-	-
25	VCR	K34	K25	K28-B	-	-	-	-
33	DVD/LD	K34	K33	K29-B	-	-	-	-
34	SYSTEM POWER	K34	K50	K58	-	-	-	-
41	TV/DBS	K34	K41	-	-	-	-	-
43	SYSTEM POWER OFF	K43	-	-	-	-	-	-
49	VCR 2	K34	K49	K28-A	-	-	-	-
57		K34	K57	K29-B	-	-	-	-

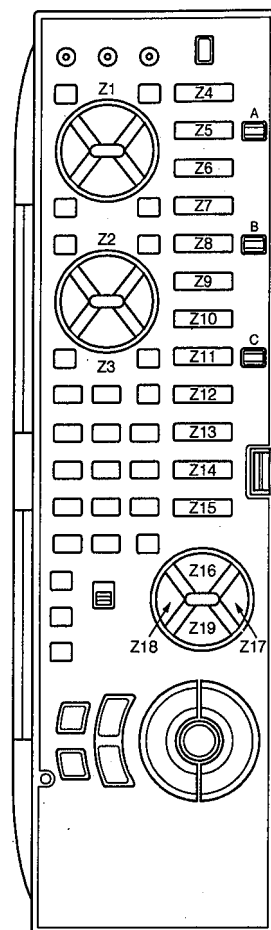
Detail : K x x -
Key No. The position of SW2

List of the fixed code

Key No.	SW 1		SET MENU			TIME/LEVEL		
	SW 2		A	B	C	A	B	C
1	TAPE		7A-85-18	7A-85-18	7A-85-18	7A-85-18	7A-85-18	7A-85-18
2	WMA							
3	CD		7A-85-9D	7A-85-9D	7A-85-9D	7A-85-98	7A-85-98	7A-85-98
4	SP B		7A-85-9B	7A-85-9B	7A-85-9B	7A-85-9B	7A-85-9B	7A-85-9B
5	REC/PAUSE		7A-85-04			7A-85-04		
6	STOP				7C-83-5B			7C-83-5B
7	3		7A-85-8A	7A-85-8A	7A-85-8A	7A-85-8A	7A-85-8A	7A-85-8A
8	+10							
9	CD		7A-85-15	7A-85-15	7A-85-15	7A-85-15	7A-85-15	7A-85-15
10	V-AUX		7A-85-55	7A-85-55	7A-85-55	7A-85-55	7A-85-55	7A-85-55
11	+>>>+		7A-85-9E	7A-85-9E	7A-85-9E	7A-85-52	7A-85-52	7A-85-52
12	SLEEP		7A-85-57	7A-85-57	7A-85-57	7A-85-57	7A-85-57	7A-85-57
13	DIR A		7A-85-07			7A-85-07		
14	>>		7A-85-0C		7C-83-07	7A-85-0C		7C-83-07
15	4		7A-85-8B	7A-85-8B	7A-85-8B	7A-85-8B	7A-85-8B	7A-85-8B
16	TEST		7A-85-85	7A-85-85	7A-85-85	7A-85-85	7A-85-85	7A-85-85
17	TUNER		7A-85-16	7A-85-16	7A-85-16	7A-85-16	7A-85-16	7A-85-16
18	PHONO		7A-85-14	7A-85-14	7A-85-14	7A-85-14	7A-85-14	7A-85-14
19	-<<<-		7A-85-9F	7A-85-9F	7A-85-9F	7A-85-53	7A-85-53	7A-85-53
20	NOT USED		7A-85-87	7A-85-87	7A-85-87	7A-85-87	7A-85-87	7A-85-87
21	DIR B		7A-85-40			7A-85-40		
22	<<		7A-85-0D		7C-83-06	7A-85-0D		7C-83-06
23	5		7A-85-8E	7A-85-8E	7A-85-8E	7A-85-8E	7A-85-8E	7A-85-8E
25	VCR		7A-85-0F	7A-85-0F	7A-85-0F	7A-85-0F	7A-85-0F	7A-85-0F
26	EFFECT		7A-85-56	7A-85-56	7A-85-56	7A-85-56	7A-85-56	7A-85-56
27	VOLUME		7A-85-9C	7A-85-9C	7A-85-9C	7A-85-99	7A-85-99	7A-85-99
28	>	(TAPE)	7A-85-00			7A-85-00		
29	>	(CD)	7A-85-08		7C-83-05	7A-85-08		7C-83-05
30	A/B/C/D/E		7A-85-12			7A-85-12		
31	6		7A-85-8F	7A-85-8F	7A-85-8F	7A-85-8F	7A-85-8F	7A-85-8F

Key No.	SW 1		SET MENU			TIME/LEVEL		
	SW 2		A	B	C	A	B	C
33	DVD/LD		7A-85-17	7A-85-17	7A-85-17	7A-85-17	7A-85-17	7A-85-17
34	SYSTEM POWER		7A-85-1D	7A-85-1D	7A-85-1D	7A-85-1D	7A-85-1D	7A-85-1D
35	MASTER VOL +		7A-85-1A	7A-85-1A	7A-85-1A	7A-85-1A	7A-85-1A	7A-85-1A
36	>>		7A-85-02			7A-85-02		
37	>>>		7A-85-0A		7C-83-03	7A-85-0A		7C-83-03
38	PRESET +		7A-85-10			7A-85-10		
39	7		7A-85-8C	7A-85-8C	7A-85-8C	7A-85-8C	7A-85-8C	7A-85-8C
41	TV/DBS		7A-85-54	7A-85-54	7A-85-54	7A-85-54	7A-85-54	7A-85-54
42	MASTER VOL -		7A-85-1B	7A-85-1B	7A-85-1B	7A-85-1B	7A-85-1B	7A-85-1B
43	SYSTEM POWER OFF		7A-85-1E	7A-85-1E	7A-85-1E	7A-85-1E	7A-85-1E	7A-85-1E
44	<<		7A-85-01			7A-85-01		
45	<<<		7A-85-0B		7C-83-02	7A-85-0B		7C-83-02
46	PRESET -		7A-85-11			7A-85-11		
47	8		7A-85-8D	7A-85-8D	7A-85-8D	7A-85-8D	7A-85-8D	7A-85-8D
49	VTR2		7A-85-13	7A-85-13	7A-85-13	7A-85-13	7A-85-13	7A-85-13
50	SYSTEM POWER TV							
51	MUTE		7A-85-1C	7A-85-1C	7A-85-1C	7A-85-1C	7A-85-1C	7A-85-1C
52	□		7A-85-03			7A-85-03		
53	□□		7A-85-09		7C-83-04	7A-85-09		7C-83-04
54	1		7A-85-88	7A-85-88	7A-85-88	7A-85-88	7A-85-88	7A-85-88
55	9		7A-85-90	7A-85-90	7A-85-90	7A-85-90	7A-85-90	7A-85-90
57	□□□							
58	SYSTEM POWER VCR							
59	SP A		7A-85-9A	7A-85-9A	7A-85-9A	7A-85-9A	7A-85-9A	7A-85-9A
60	A/B		7A-85-06			7A-85-06		
61	DISC		7A-85-4F			7A-85-4F		
62	2		7A-85-89	7A-85-89	7A-85-89	7A-85-89	7A-85-89	7A-85-89
63	0		7A-85-91	7A-85-91	7A-85-91	7A-85-91	7A-85-91	7A-85-91

Lighting point



Key No.	COVER		OPEN		
	SW 1	SW 3	Don't care.		
	SW 2		A	B	C
1	TAPE		Z1, Z4	Z4	Z4
2	WWW		Z12	Z12	Z3, Z12
5	REC/PAUSE		Z1, Z4	Z1, Z7	Z1, Z10
6	STOP		Z2, Z5	Z2, Z8	Z2, Z11
9	CD		Z2, Z5	Z5	Z5
10	V-AUX		Z13	Z13	Z13
13	DIR A		Z1, Z4	Z1, Z7	Z1, Z10
14	>> (CD)		Z2, Z5	Z2, Z8	Z2, Z11
17	TUNER		Z3, Z6	Z6	Z6
18	PHONO		Z14	Z14	Z14
21	DIR B		Z1, Z4	Z1, Z7	Z1, Z10
22	<< (CD)		Z2, Z5	Z2, Z8	Z2, Z11
25	VCR		Z7	Z1, Z7	Z7
28	EFFECT		Z15	Z15	Z15
28	> (TAPE)		Z1, Z4	Z1, Z7	Z1, Z10
29	> (CD)		Z2, Z5	Z2, Z8	Z2, Z11
30	A/B/C/D/E		Z3, Z6	Z3, Z9	Z3, Z12
33	DVD/LD		Z8	Z2, Z8	Z8
36	>> (TAPE)		Z1, Z4	Z1, Z7	Z1, Z10
37	>> (CD)		Z2, Z5	Z2, Z8	Z2, Z11
38	PRESET +		Z3, Z6	Z3, Z9	Z3, Z12
41	TV/DBS		Z9	Z3, Z9	Z9
44	<< (TAPE)		Z1, Z4	Z1, Z7	Z1, Z10
45	<< (CD)		Z2, Z5	Z2, Z8	Z2, Z11
48	PRESET -		Z3, Z6	Z3, Z9	Z3, Z12
49	VCR 2		Z10	Z10	Z1, Z10
52	□		Z1, Z4	Z1, Z7	Z1, Z10
53	□		Z2, Z5	Z2, Z8	Z2, Z11
57	○		Z11	Z11	Z2, Z11
60	A/B		Z1, Z4	Z1, Z7	Z1, Z10
61	DISC		Z2, Z5	Z2, Z8	Z2, Z11

Key No.	COVER		CLOSE		
	SW 1	SW 3	Don't care.		
	SW 2		Don't care.		
1	TAPE		Z4 : ○, Z16 : ○, Z17 : ○, Z18 : ○, Z19 : ○		
2	WWW		Z12 : ○, Z16 : K22-C, Z17 : K30-C, Z18 : K33-C, Z19 : K3-C		
9	CD		Z5 : ○, Z16 : ○, Z17 : ○, Z18 : ○, Z19 : ○		
10	V-AUX		Z13 : ○		
17	TUNER		Z6 : ○, Z16 : ○, Z17 : ○, Z18 : ○		
18	PHONO		Z14 : ○		
25	VCR		Z7 : ○, Z16 : K28-B, Z17 : K36-B, Z18 : K44-B, Z19 : K52-B		
28	EFFECT		Z15 : ○		
33	DVD/LD		Z8 : ○, Z16 : K29-B, Z17 : K37-B, Z18 : K45-B, Z19 : K53-B		
41	TV/DBS		Z9 : ○, Z16 : K22-B, Z17 : K30-B, Z18 : K38-B, Z19 : K8-B		
49	VCR 2		Z10 : ○, Z16 : K28-C, Z17 : K36-C, Z18 : K44-C, Z19 : K52-C		
57	○		Z11 : ○, Z16 : ○, Z17 : ○, Z18 : ○, Z19 : ○		
3	△ ▷ △		Same as the case of pushing the mode key of current mode.		
11	+ ▷ +		(In case of having set the mode TAPE, the lighting is same as the case of pushing TAPE key.)		
19	- ◁ -		Same as the case of pushing TAPE key.		
27	▽ ◻ ▽				

Detail : ○----- Lighting On.
 × X-Y----- Lighting on if the key, that is key No. × and SW2-Y, has been learned.

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	10 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	*	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	*	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	*
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	*
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			

