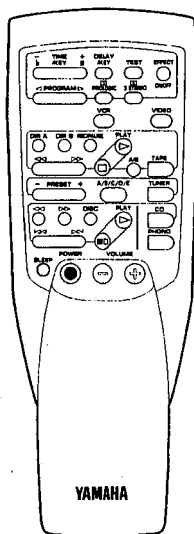
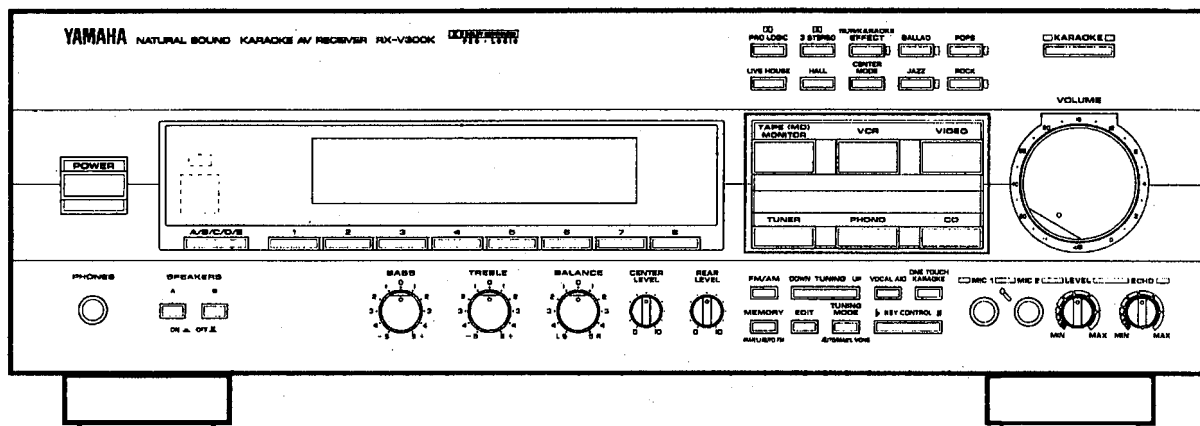


# AV RECEIVER RX-V300K/R-V302K

## SERVICE MANUAL



### 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 of 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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100607

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**YAMAHA**  
YAMAHA CORPORATION  
P.O.Box1, Hamamatsu, Japan  
1.05K-4521 ♪ Printed in Japan '97.10

## ■ TO SERVICE PERSONNEL

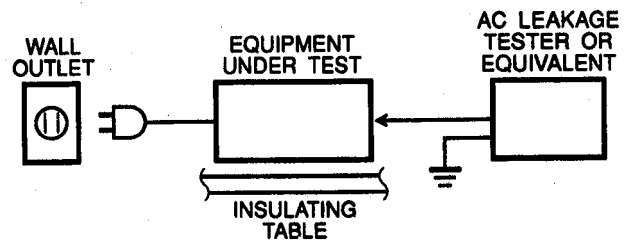
### 1. Critical Components information.

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

### 2. Leakage Current Measurement (For 120V Model only).

When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohm shunted by 0.15  $\mu$ F.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.



### "CAUTION"



"F101 : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 5.0A, 125V FUSE (U,R models), 1.6A 125V FUSE (L model)"

"F102 : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 2.5A, 250V FUSE (L model)"

"F103 : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 1.6A, 250V FUSE (R model)"

## 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.

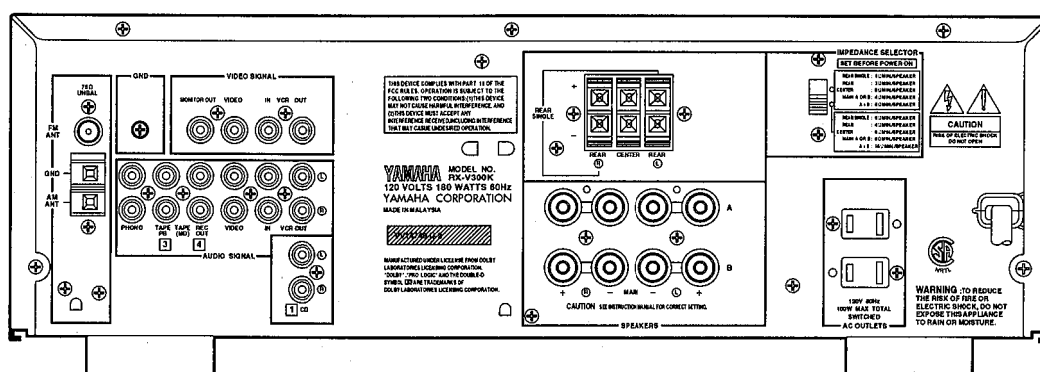
**DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!**

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

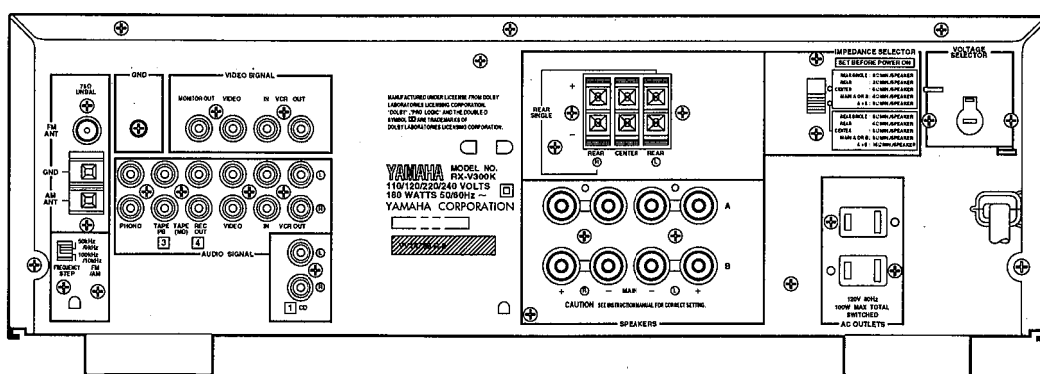
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

## REAR PANELS

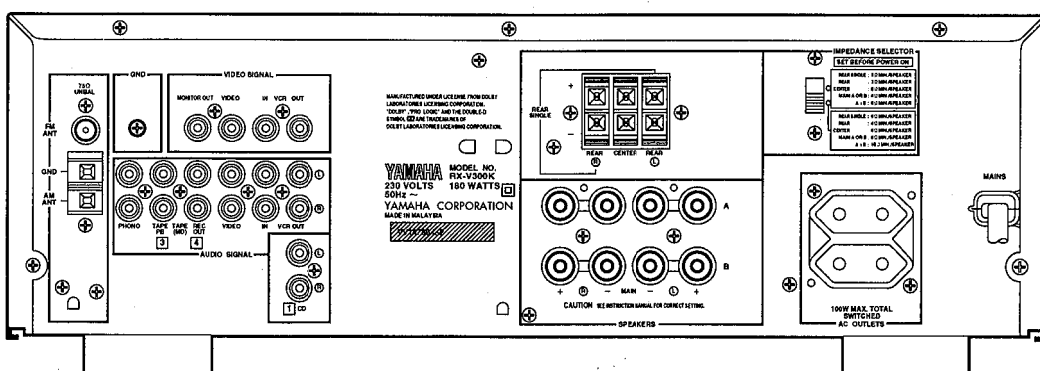
### ▼RX-V300K U model



### ▼RX-V300K/R-V302K R, T models



### ▼RX-V300K L model



## SPECIFICATIONS

### AUDIO SECTION

#### Minimum RMS output Power per Channel

Main L, R

8 Ohms, 20 Hz to 20 kHz, 0.04% THD

U model

60W + 60W

R,L,T models

55W + 55W

Center

8 ohms, 1 kHz, 0.1% THD

U model

60W

R,L,T models

55W

Rear

8 ohms, 1kHz, 0.7% THD

20W

#### Dynamic Power Per Channel (IHF)

8/6/4/2Ω

80/100/120/140W

#### Power Band Width

0.1% THD, 30W,8Ω

10Hz to 50kHz

#### Damping Factor (SP A)

20Hz to 20kHz, 8Ω

80 or more

#### Maximum Power (EIAJ)

R,T models

MAIN 2, R, 1kHz, 10% THD, 8Ω

85W+85W

CENTER, 1kHz, 10% THD, 8Ω

85W

REAR, 1kHz,10% THD, 8Ω

35W

#### Input Sensitivity/Impedance

PHONO MM

2.5mV/47kΩ

CD/TAPE(MD)/VIDEO/VCR

150mV/47kΩ

MIC 1, 2

45μV/32kΩ

#### Maximum Input Signal Level (1kHz)

PHONO MM, 0.04% THD

90mV

MIC1, 2,0.1% THD

30mV

#### Headphones Jack Rated Output/Impedance

0.04% THD, 8Ω

0.49V/330Ω

#### Frequency Response (20Hz to 20kHz)

CD/TAPE(MD)/VIDEO/VCR

0±0.5dB

#### RIAA Equalization Deviation

PHONO MM

0±0.5dB

#### Total Harmonic Distortion (20Hz to 20kHz)

PHONO MM to REC OUT (1V)

0.02%

CD/TAPE(MD)/VIDEO/VCR to SP OUT(30W/8Ω)

0.02%

#### Signal-to-Noise Ratio (IHF-A-Network)

PHONO MM,(5mV Input Shorted),REC OUT

82dB

CD/TAPE(MD)/VIDEO/VCR(Shorted), SP OUT

93dB

#### Residual Noise (IHF-A-Network)

MAIN L/R

140μV

#### Channel Separation (Vol.-30dB, EFFECT OFF)

PHONO MM(Input Shorted), 1kHz

60dB

CD/TAPE(MD)/VIDEO/VCR(Input 5.1kΩ terminated), 1kHz

60dB

#### Tone Control Characteristics

BASS :Boost/Cut

±10dB (50Hz)

:Turnover Frequency

350Hz

TREBLE :Boost/Cut

±10dB (20kHz)

:Turnover Frequency

3.5kHz

#### Key Control Pitch

±3 notes, 13 steps

#### Gain Tracking Error (0~-60dB)

3dB

### Delay Time

MIC ECHO

150 msec.

BALLAD, POPS, JAZZ, ROCK

1 to 50 msec.

LIVE HOUSE, HALL

1 to 100 msec.

PRO LOGIC

15 to 30 msec.

### Tuner Output Level/Impedance (Fixed)

U,R,T models

FM (100% mod, 1kHz)

500mV/2.2kΩ

AM (30% mod, 1kHz)

150mV/2.2kΩ

L model (FM 40kHz Dev)

FM (100% mod, 1kHz)

400mV/2.2kΩ

AM (30% mod, 1kHz)

150mV/2.2kΩ

### FM SECTION

#### Tuning Range

U model

87.50 to 107.9MHz

R,L,T models

87.50 to 108.00MHz

#### 50dB Quieting Sensitivity (IHF,75Ω)

U,R,T models

Mono

1.55μV (15.1dBf)

Stereo

21μV (37.7dBf)

#### Usable Sensitivity (75Ω)

U,R,T models

30dB S/N Quieting, 1kHz, 100% mod. 0.8μV (9.3dBf)

L model

DIN, Mono (S/N 26dB)

0.9μV

DIN, Stereo (S/N 46dB)

24μV

#### Image Response Ratio

U,R,T models

45dB

L model

80dB

#### IF Response Ratio

80dB

#### Spurious Response Ratio

70dB

#### AM Suppression Ratio

55dB

#### Capture Ratio

1.5dB

#### Alternate Channel Selectivity

U,R,T models

85dB

Selectivity (two signals, 40kHz Dev. ±300kHz)

L model

70dB

#### Signal-to-Noise Ratio

Mono/Stereo(IHF)

U,R,T models

80/75dB

Mono/Stereo(DIN-weighted, 40kHz Dev.)

L models

74/69dB

#### Harmonic Distortion

Mono/Stereo (1kHz)

0.1/0.2%

#### Stereo Separation (1kHz)

50dB

#### Frequency Response

30Hz to 15kHz

0±0.5dB

### AM SECTION

#### Tuning Range

U,R,T models

530 to 1710kHz

L model

531 to 1611kHz

#### Usable Sensitivity

100μV/m

## ● DIMENSIONS

Selectivity	32dB
Signal-to-Noise Ratio	50dB
Image Response Ratio	40dB
Spurious Response Ratio	50dB
Harmonic Distortion (1kHz)	0.3%

## ■ VIDEO SECTION


<b>Video Signal Type</b>	
U model	NTSC
R,T models	NTSC/PAL
L model	PAL
<b>Video Signal Level</b>	1Vp-p/75Ω
<b>Maximum Input Level</b>	1.5Vp-p or more
<b>Signal-to-Noise Ratio</b>	50dB or more
<b>Monitor Out Frequency Response (-3dB)</b>	5Hz-10MHz

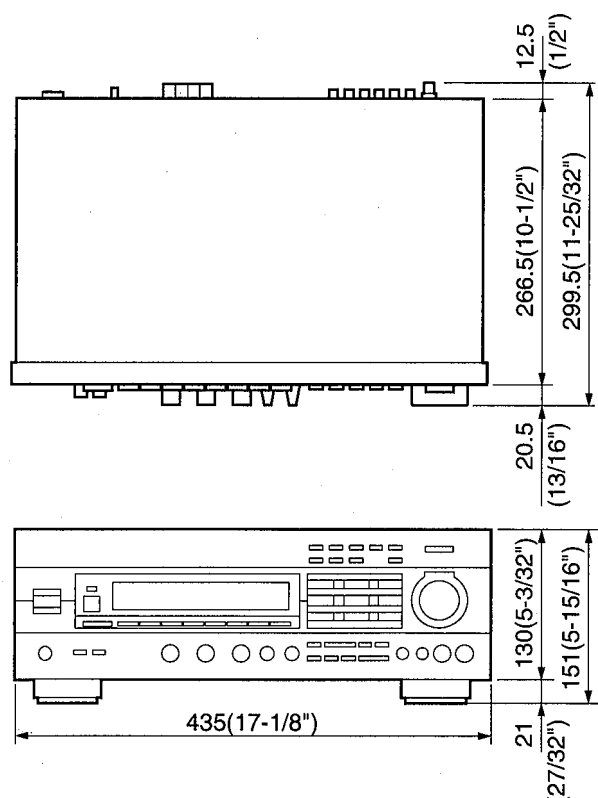
## ■ GENERAL

<b>Power Supply</b>	
U model	AC120V, 60Hz
R,T models	AC110/120/220/240V, 50/60Hz
L model	AC230V, 50Hz
<b>Power Consumption</b>	180W
<b>Maximum Power Consumption</b>	
R,T models	
5CH Simultaneous output, 8Ω, 1kHz, 10%THD	500W
<b>AC Outlet</b>	
Switched x 2	100W max (Total)
<b>Dimensions (W x H x D)</b>	435 x 151 x 266.5mm (17-1/8" x 5-15/16" x 10-1/2")
<b>Weight</b>	7.8kg (17lbs. 3oz)
<b>Accessories</b>	
	AM loop antenna x 1
	Indoor FM antenna x 1
	Remote Control Transmitter x 1
	Battery (size "AA", "R06")
	Antenna adapter (U model only)

\*Specifications subject to change without notice.

**U** U.S.A model  
**R** General model  
**L** Singapore model  
**T** China model

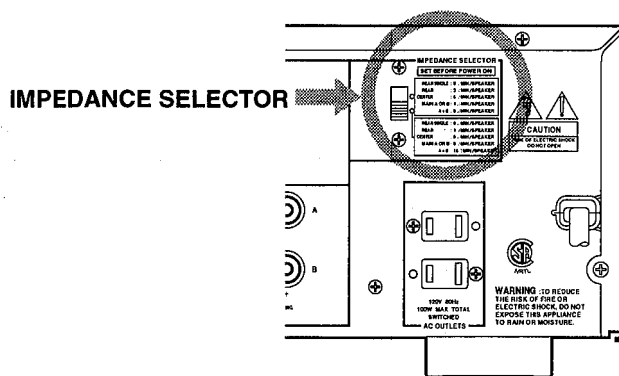
Manufactured under license from Dolby Laboratories Licensing Corporation.  
 "DOLBY", "PRO LOGIC" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.



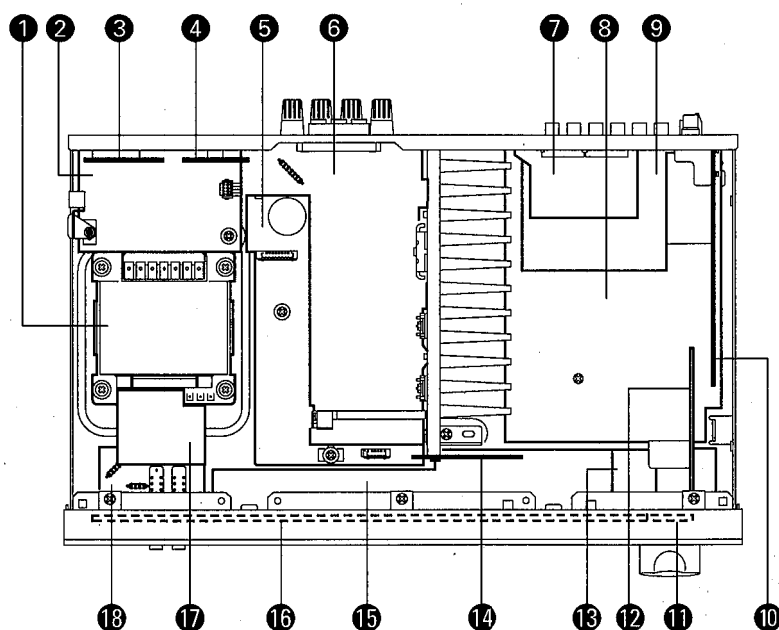
Units:mm (inch)

**WARNING**

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



## INTERNAL VIEW



- ① POWER TRANSFORMER
- ② MAIN P.C.B. ASS'Y (2)
- ③ MAIN P.C.B. ASS'Y (4) (R,T models)
- ④ MAIN P.C.B. ASS'Y (5)
- ⑤ MAIN P.C.B. ASS'Y (1)
- ⑥ INPUT P.C.B. ASS'Y (4)
- ⑦ OPERATION P.C.B. ASS'Y (3)
- ⑧ INPUT P.C.B. ASS'Y (1)
- ⑨ INPUT P.C.B. ASS'Y (2)
- ⑩ TUNER P.C.B. ASS'Y
- ⑪ OPERATION P.C.B. ASS'Y (5)
- ⑫ OPERATION P.C.B. ASS'Y (4)
- ⑬ OPERATION P.C.B. ASS'Y (3)
- ⑭ OPERATION P.C.B. ASS'Y (6)
- ⑮ OPERATION P.C.B. ASS'Y (2)
- ⑯ OPERATION P.C.B. ASS'Y (1)
- ⑰ INPUT P.C.B. ASS'Y (5)
- ⑱ MAIN P.C.B. ASS'Y (3)

## DISASSEMBLY PROCEDURES (Remove parts in the order as numbered.)

### 1. Removal of Top Cover

Remove 4 screws (①) and 4 screws (②) in Fig. 1.

### 2. Removal of Front Panel

- a. Remove 8 knobs.
- b. Remove 6 screws (③) in Fig. 1.

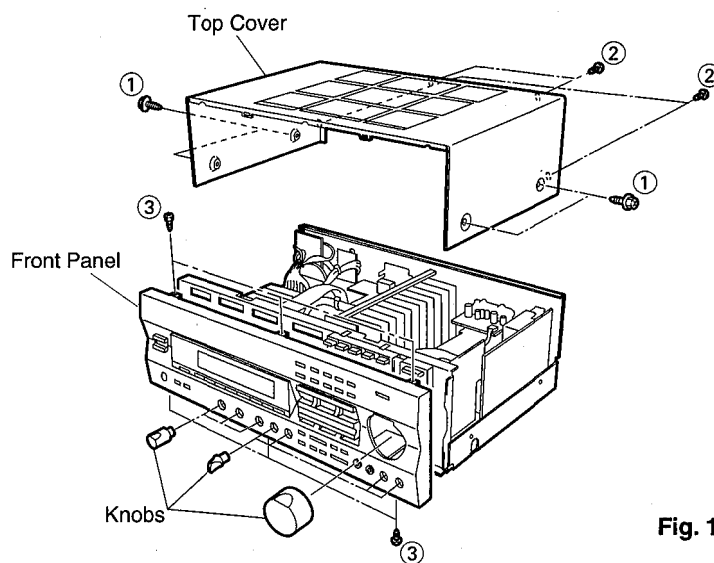


Fig. 1

### 3. Removal of Rear Panel

Remove 23 (U, L models), 25 (R,T models) screws (④) in Fig. 2.

- \* The MAIN, INPUT, TUNER P. C. B. can be removed in this state.

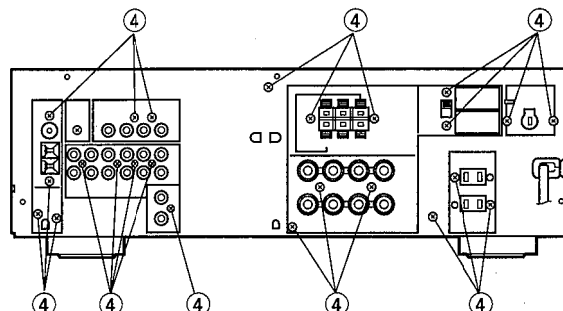


Fig. 2

#### 4. Checking and Parts Replacement of Main Unit

- Disconnect the power cord from the AC outlet.
- Remove 2 screws (⑤) and 1 screw (⑥) in Fig. 3.
- Detach 1 connector terminal (CB103) in Fig.3
- Operating checks can be taken by shorting between following test points in Fig.3.

Short Point
TP101 and TP102
TP103 and TP104
TP105 and TP106

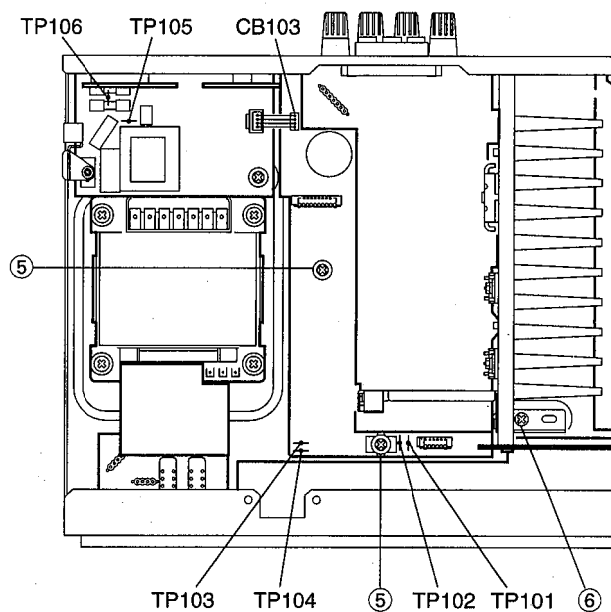


Fig. 3

- Remove 3 screws (⑦) and 2 screws (⑧) in Fig. 4.
- Place the Main Unit on its side as shown in Fig. 5.
- Connect the power cord and turn ON the POWER switch.

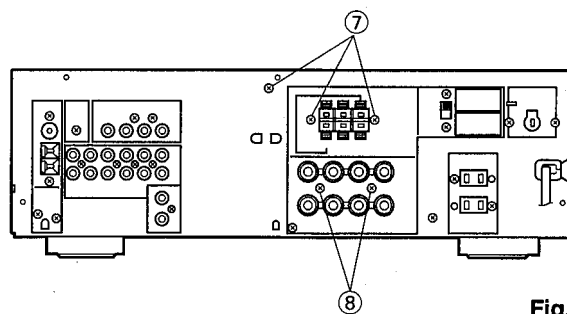


Fig. 4

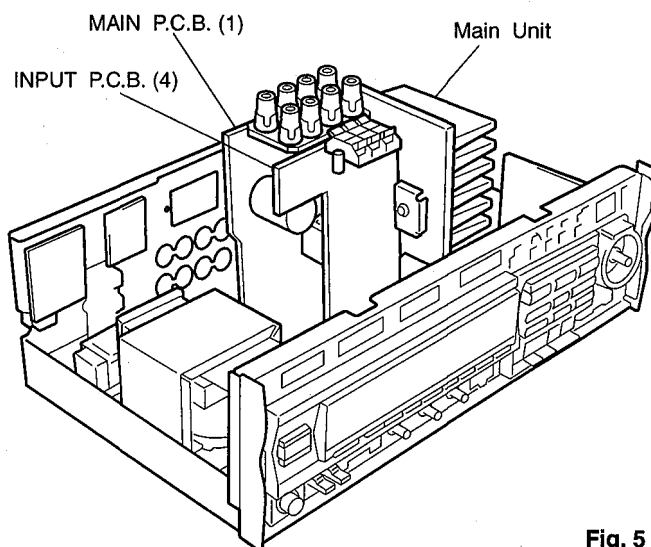


Fig. 5

## ■ SELF CHECK MODE

### 1. STARTING

Turn ON the POWER switch while pressing LIVE HOUSE key & CENTER MODE key simultaneously, and then the unit enters DIAG1 MODE.

### 2. INDEX OF DIAG MODE

DIAG1	AUDIO SECTION MODE	
	DIAG1-1	ALL CHANNEL OUTPUT MODE All channels have output.
	DIAG1-2	EFFECT OFF MODE ONLY L & R channels have output.
DIAG2	PRO LOGIC MODE	
DIAG3	KARAOKE TEST MODE	
	DIAG3-1	KARAOKE EFFECT OFF MODE L, R & S channels have output through YSS-205B.
	DIAG3-2	VOCAL CUT MODE Vocal eliminated when MIC INPUT is added.
	DIAG3-3	MPX Lch MODE The Rch INPUT is eliminated and the Lch INPUT is sent to both Lch and Rch output when MIC INPUT is added.
	DIAG3-4	MPX Rch MODE The Lch INPUT is eliminated and the Rch INPUT is sent to both Lch and Rch output when MIC INPUT is added.
	DIAG3-5	KEY CONTROL +6 MODE
	DIAG3-6	KEY CONTROL -6 MODE
DIAG4	MIC INPUT TEST MODE	
	DIAG4-1	MIC DIRECT MODE MIC INPUT is sent to L,R output directly.
	DIAG4-2	MIC ECHO MODE MIC INPUT is sent to L,R output through YSS-205B. Under this condition, ECHO LEVEL VOLUME is effective.
DIAG5	TEST TONE MODE	
DIAG6	FL TEST MODE	
	DIAG6-1	ALL SEGMENT ON MODE All segments of FL are lighted up.
	DIAG6-2	ALL SEGMENT OFF MODE All segments of FL are extinguished.
DIAG7	MAKER PRESET MODE	
DIAG8	INDICATION OF DESTINATION MODE	

### 3. CHANGE OF DIAG MODE

Press P1-P8 key.

DIAG1	P1
DIAG2	P2
DIAG3	P3
DIAG4	P4
DIAG5	P5
DIAG6	P6
DIAG7	P7
DIAG8	P8

#### ● Protection circuit (description of messages)

When the DIAG mode is entered, two types of the final message will appear.

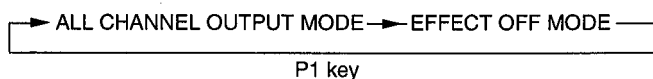
1. I..... Overcurrent
2. DC

#### To initialize the message:

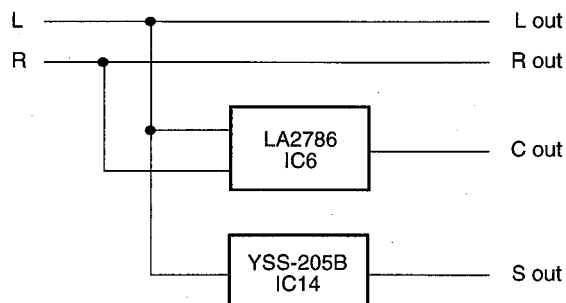
- (1) Note the frequencies preset to the tuner which have been set by user in advance.
- (2) Discharge backup capacitor C311.



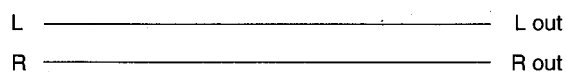
# **DIAG1 AUDIO SECTION MODE**



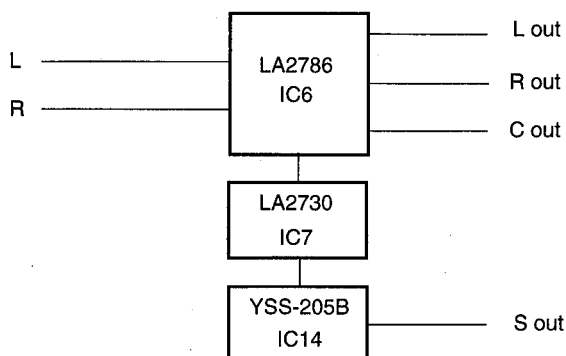
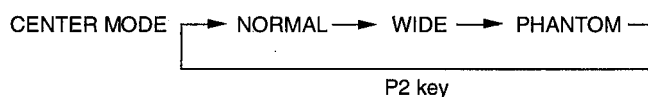
## **• DIAG1-1 ALL CHANNEL OUTPUT MODE**



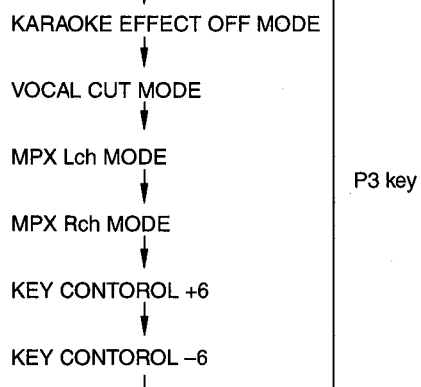
## **• DIAG1-2 EFFECT OFF MODE**



# **DIAG2 PRO LOGIC MODE**

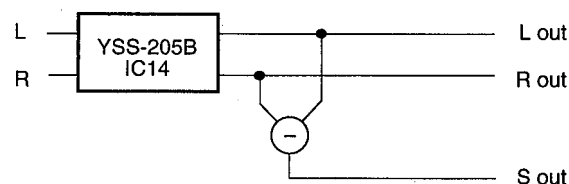


# **DIAG3 KARAOKE TEST MODE**



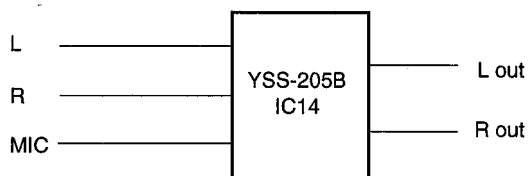
## **• DIAG3-1**

### **KARAOKE EFFECT OFF MODE**



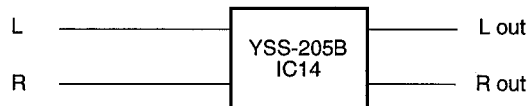
## **• DIAG3-2, 3-3, 3-4**

### **VOCAL CUT MODE, MPX Lch MODE, MPX Rch MODE**



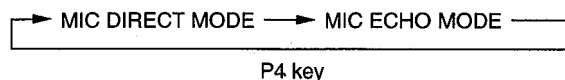
## **• DIAG3-5, 3-6**

### **KEY CONTROL +6 MODE, KEY CONTROL -6 MODE**

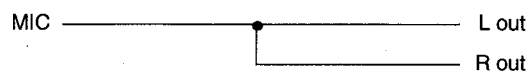


# **DIAG4**

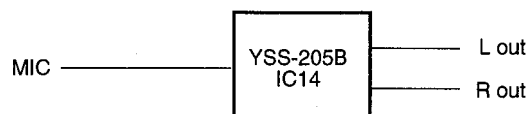
## **MIC TEST MODE**



## **• DIAG4-1 MIC DIRECT MODE**

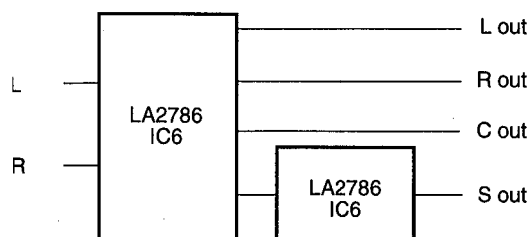
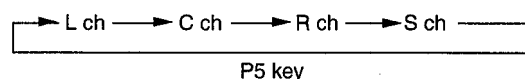


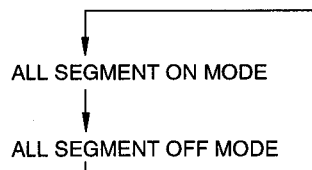
## **• DIAG4-2 MIC ECHO MODE**



# **DIAG5**

## **TEST TONE MODE**



**DIAG6****FL TEST MODE****DIAG7****FACTORY PRESET MODE**

If POWER is switched off under DIAG7, Factory preset is set.  
(User programming is erased.)

**DIAG8****INDICATION OF DESTINATION**

Destination is indicated. If P8 key is pushed, DIAG MODE is finished and goes to normal operation mode.

## ● Factory Preset

### 1) TUNER section

Preset group	P1	P2	P3	P4	P5	P6	P7	P8
A,C,E	87.5MHz	90.1MHz	95.1MHz	98.1MHz	U,R,T :107.9MHz R,L :108.0MHz	88.1MHz	106.1MHz	U,R,T :107.9MHz R,L,T :108.0MHz
B,D	630kHz	1080kHz	1440kHz	U,R,T :530kHz L,R,T :531kHz	U,R :1710kHz L,R,T :1611kHz	900kHz	1350kHz	U,R,T :1400kHz L,R,T :1404kHz

All tuning modes are AUTO TUNING and AUTO STEREO.

### 2) SURROUND section

**DELAY TIME** : ☐ PRO LOGIC ..... 20ms  
(Factory-set surround mode)  
LIVE HOUSE ..... 20ms  
HALL ..... 20ms  
BALLAD ..... 20ms  
POPS ..... 20ms  
JAZZ ..... 20ms  
ROCK ..... 20ms

**CENTER MODE** : NORMAL

### 3) SELECTOR section

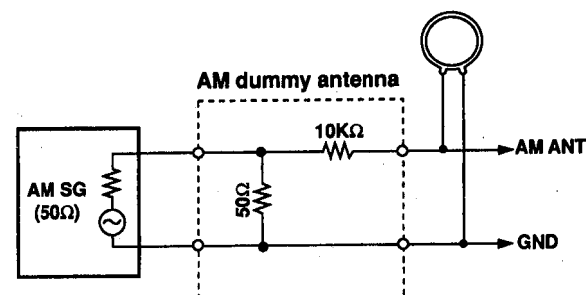
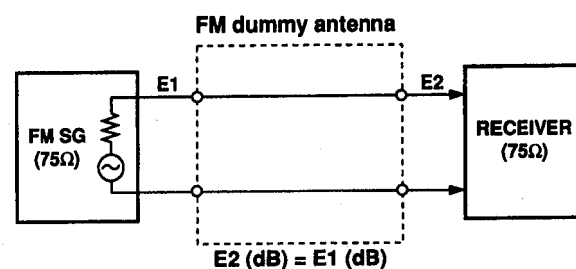
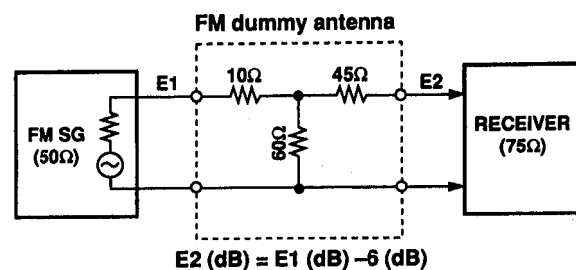
**INPUT** : CD  
**MONITOR OUT** : LD

## ADJUSTMENTS

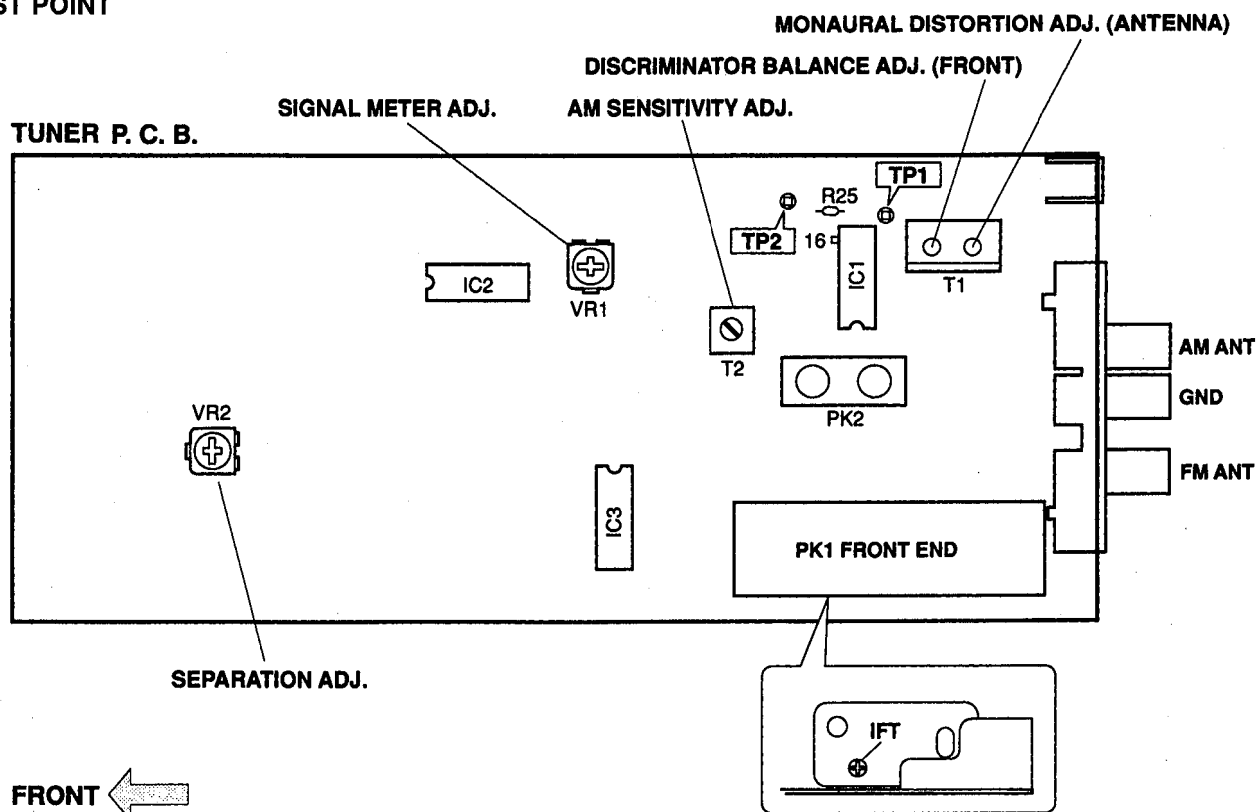
### Measuring Instruments

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,  $1\mu V = 0dB\mu$  applies

**Example :**  $60dB\mu = 1mV$

2) 100% modulation means that the frequency deviation is 75kHz.

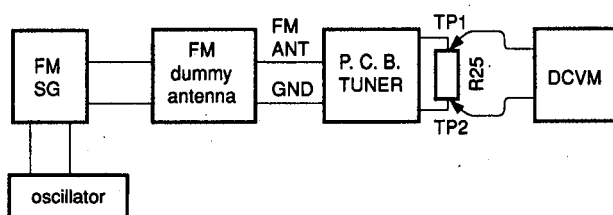
3) Install the Matching Transformer and connect FM SG.

4) Set each switch to the following position unless otherwise specified.

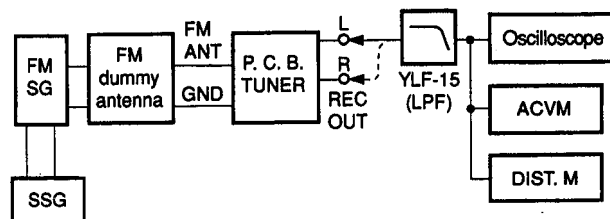
INPUT SELECTOR ..... TUNER  
TUNING MODE ..... AUTO

### ● Connection diagram (Measuring instruments)

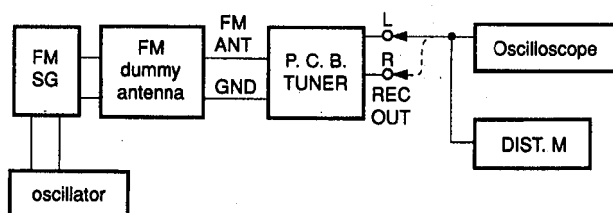
#### 1) Discriminator balance adjustment



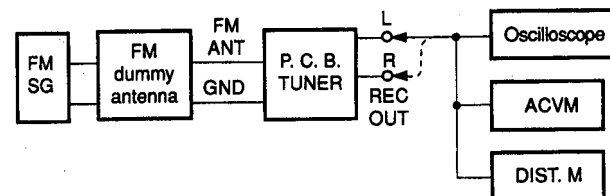
#### 3) Stereo distortion verification/separation adjustment



#### 2) Monaural distortion adjustment



#### 4) Sensitivity Verification



See page 10 for TP locations & adjustment points.

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 100Hz 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 MAKER PRESET (Refer to SELF CHECK MODE on pages 7,8 and 9.) will facilitate setting reception frequency for adjustment.

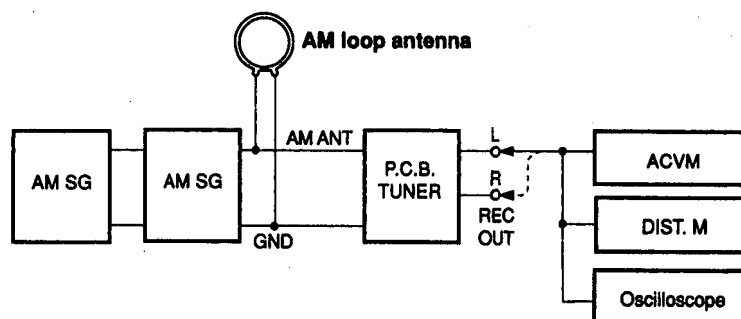
Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment point	Test point	Rating
6	Adjustment of front end IFT	FM ANT (75Ω) 98.1MHz 30dBμ MONO 1kHz, 100% modulation	98.1MHz *(A-4)	Front end IFT	Pin 16 of IC1	Adjust so that the DC voltage is maximum. <b>CAUTION:</b> Over-adjustment of the IFT 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	88.1MHz *(A-6) 98.1MHz *(A-4) 106.1MHz *(A-7)		ANT (75Ω)	1) Set the tuning mode to MAN'L MONO. 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.
10	Adjustment of Separation	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz *(A-4)	VR 2	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)	VR 1		Adjust so that all signal meters 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 *(A-4)			• 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 MAKER PRESET (Refer to SELF CHECK MODE on pages 7,8 and 9.) 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 8 for TP locations & adjustment points.

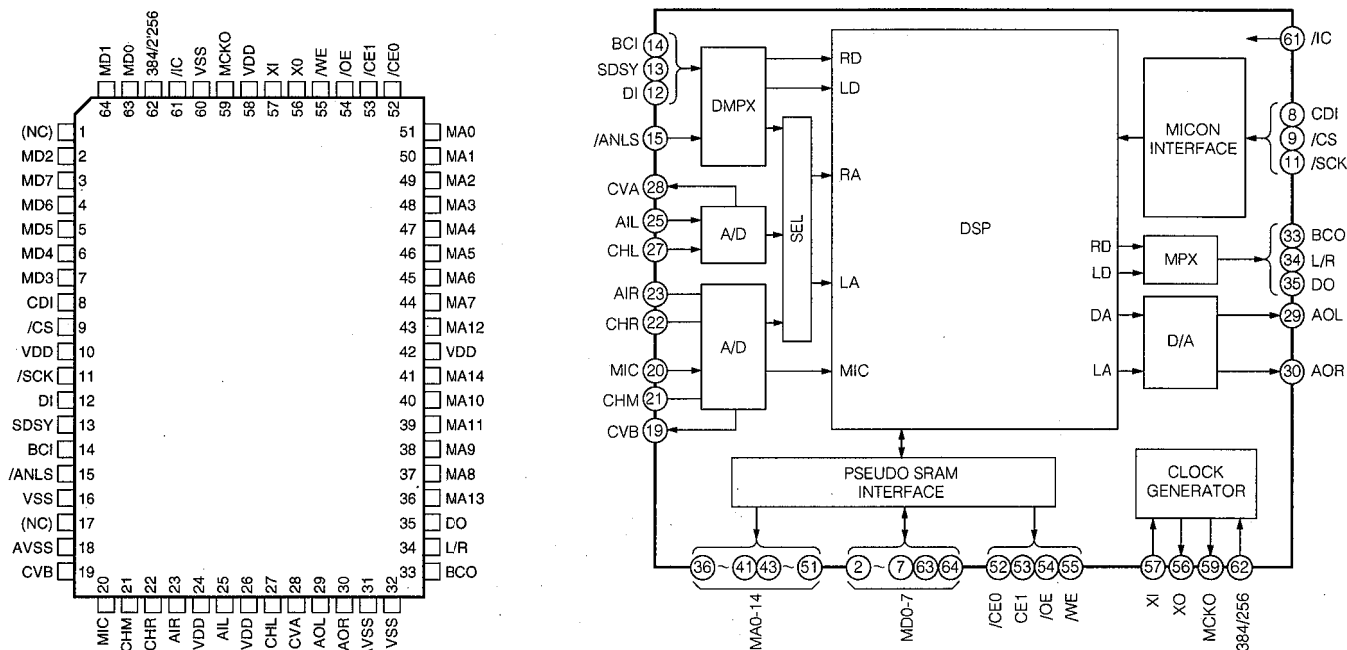
Step	Adjustment item	Signal(ANT IN)	Reception frequency	Adjustment point	Test point	Rating
1	Adjustment of sensitivity (1440kHz)	AM ANT 1440kHz 50dBμ 1kHz, 30% modulation	1440kHz *(B-3)	T2	REC OUT	Audio output should be maximized.
2	Adjustment of sensitivity (630kHz)	AM ANT 630kHz 50dBμ 1kHz, 30% modulation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

\*: Execution of MAKER PRESET (Refer to SELF CHECK MODE on pages 7,8 and 9.) will facilitate setting reception frequency for adjustment.

# IC DATA

## IC14 : YSS205B-F

### Digital Dolby Pro Logic Decoder with Auto Input Balance



No.	Name	I/O	Function
1	(NC)		(Not to be connected externally)
2	MD2	I/O	External pseudo SRAM interface data terminal
3	MD7	I/O	External pseudo SRAM interface data terminal
4	MD6	I/O	External pseudo SRAM interface data terminal
5	MD5	I/O	External pseudo SRAM interface data terminal
6	MD4	I/O	External pseudo SRAM interface data terminal
7	MD3	I/O	External pseudo SRAM interface data terminal
8	CDI	I	Microprocessor interface serial data
9	/CS	I	Microprocessor interface chip select
10	VDD	-	+5V power supply (for digital system)
11	/SCK	I	Microprocessor interface serial clock
12	DI	I+	Digital audio input serial data
13	SDSY	I+	Digital audio input L/R clock
14	BCI	I+	Digital audio input bit clock
15	/ANLS	I+	YM7110 interface serial data
16	VSS	-	Ground (for digital system)
17	(NC)		(Not to be connected externally)
18	AVSS	A-	Ground (for A/D and D/A systems, to be connected to VSS externally)
19	CYB	A-	R channel, MIC channel ADC center voltage
20	MIC	AI	Analog audio MIC channel ADC input
21	CHM	A-	For the connection of a MIC input sample/hold capacitor
22	CHR	A-	For the connection of an AIR input sample/hold capacitor
23	AIR	AI	Analog audio R channel ADC input
24	AVDD	A-	+5V power supply (for A/D and D/A systems, to be connected to VDD externally)
25	AIL	AI	Analog audio L channel ADC input

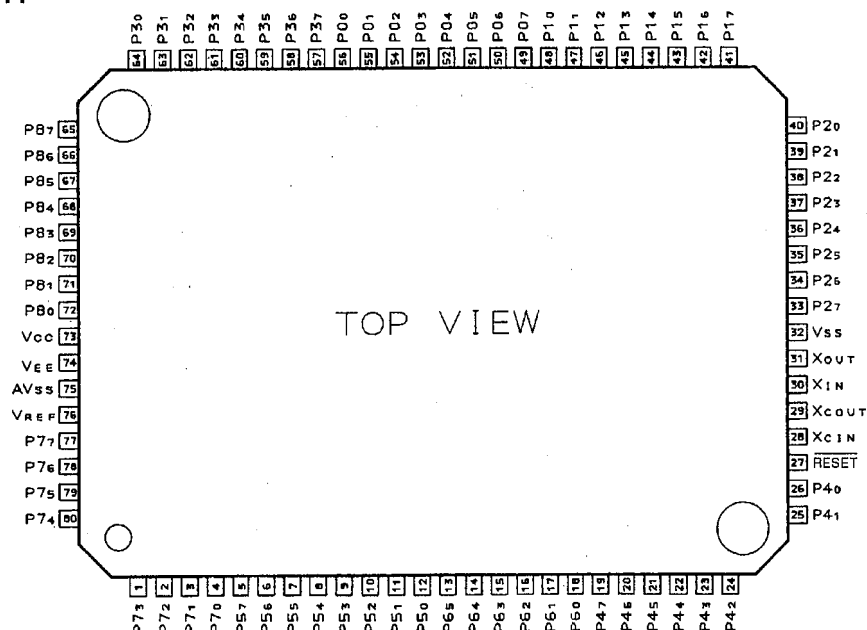
No.	Name	I/O	Function
26	AVDD	A-	+5V power supply (for A/D and D/A systems, to be connected to VDD externally)
27	CHL	A-	For the connection of an AIL input sample/hold capacitor
28	CVA	A-	L channel ADC center voltage
29	AOL	AO	Analog audio L channel DAC output
30	AOR	AO	Analog audio R channel DAC output
31	AVSS	A-	Ground (for A/D and D/A systems, to be connected to VSS externally)
32	VSS	-	Ground (for digital system)
33	BCO	O	Digital audio output bit clock
34	L/R	O	Digital audio output L/R clock
35	DO	O	Digital audio output serial data
36	MA13	O	External pseudo SRAM interface address terminal
37	MA8	O	External pseudo SRAM interface address terminal
38	MA9	O	External pseudo SRAM interface address terminal
39	MA11	O	External pseudo SRAM interface address terminal
40	MA10	O	External pseudo SRAM interface address terminal
41	MA14	O	External pseudo SRAM interface address terminal
42	VDD	-	Ground (for digital system)
43	MA12	O	External pseudo SRAM interface address terminal
44	MA7	O	External pseudo SRAM interface address terminal
45	MA6	O	External pseudo SRAM interface address terminal
46	MA5	O	External pseudo SRAM interface address terminal
47	MA4	O	External pseudo SRAM interface address terminal
48	MA3	O	External pseudo SRAM interface address terminal
49	MA2	O	External pseudo SRAM interface address terminal
50	MA1	O	External pseudo SRAM interface address terminal
51	MA0	O	External pseudo SRAM interface address terminal

No.	Name	I/O	Function
52	/CEO	O	External pseudo SRAM interface chip select #0
53	/CE1	O	External pseudo SRAM interface chip select #1 (effective when two SRAMs are connected)
54	/OE	O	External pseudo SRAM interface OE terminal
55	/WE	O	External pseudo SRAM interface We terminal
56	XO	O	For the connection of a crystal oscillator
57	XI	I	For the connection of a crystal oscillator, or external clock input

No.	Name	I/O	Function
58	VDD	-	+5V power supply (for digital system)
59	VCKO	O	Master clock (XI clock) output
60	VSS	-	Ground (for digital system)
61	/IC	I	Initial clear terminal
62	384/256	I+	Master clock rate switching ("H" : 384 fs, "L" : 256 fs)
63	MDO	I/O	External pseudo SRAM interface data terminal
64	MDI	I/O	External pseudo SRAM interface data terminal

Note ) + : Pull-up terminal, A: Analog terminal

IC302 : M38179M6-381FP  
8 bit  $\mu$ -COM

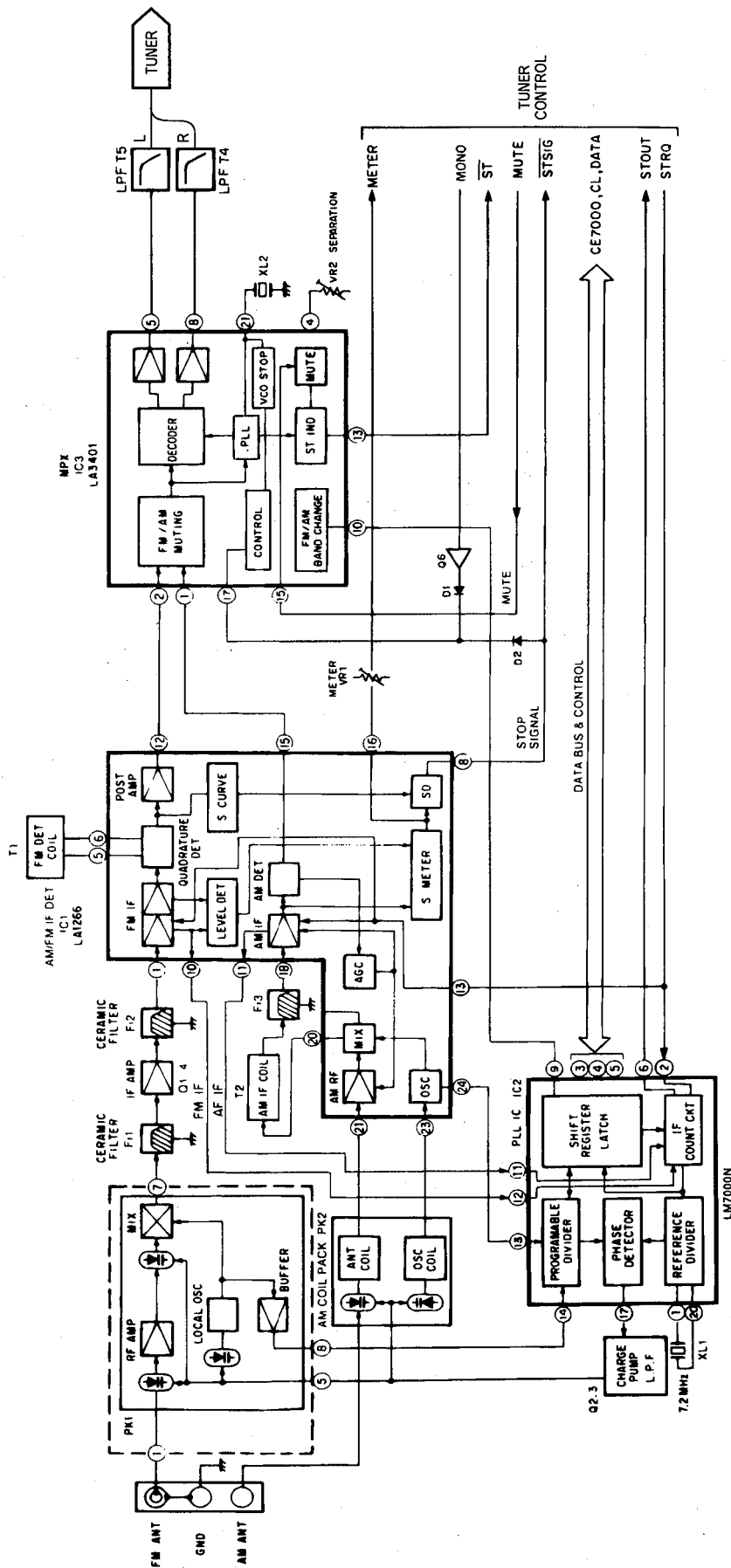




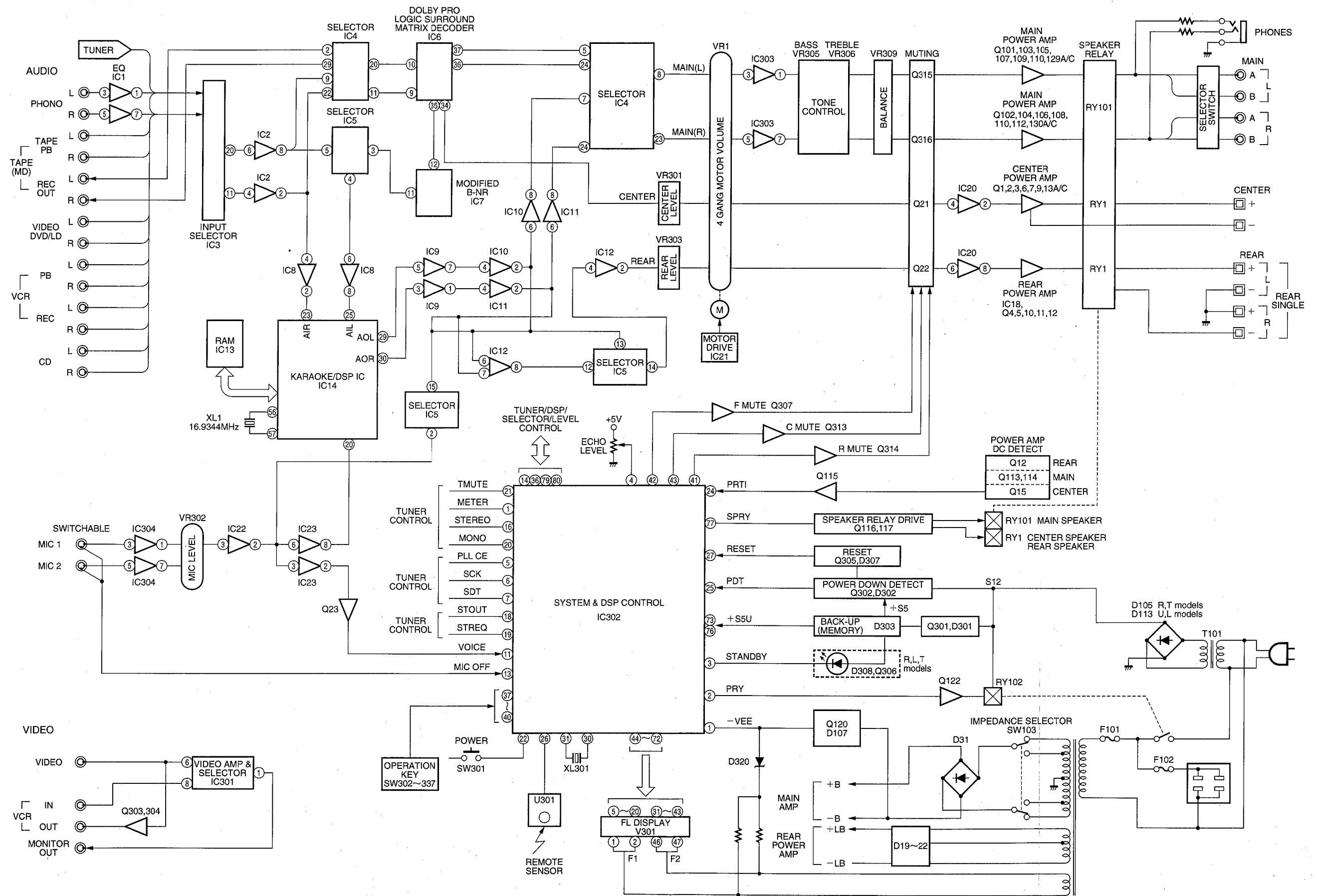
No.	Port	Name	I/O	Function
1	P73	METER	I	Tuner meter
2	P72	PON	O	Power relay
3	P71	STBY	O	LED for Stand by
4	P70	ECHO	I	Echo level
5	P57	PLLCE	O	LM7000 CE
6	P56	CLOCK	O	Serial clock
7	P55	DATA	O	Serial data
8	P54	KPCE	O	YSS-205 CE
9	P53	CE2785	O	LA2786 CE
10	P52		O	
11	P51	VOICE	I	Mic
12	P50	KPRES	O	YSS-205 Reset
13	P65	MICOFF	I	Connect/ Disconnect
14	P64	VSEL2	O	Video select 2
15	P63	CESEL	O	LC78211, 78212 CE
16	P62	ST	I	Stereo for Tuner
17	P61	STSIG	I	STOP SIGNAL
18	P60	STOUT	I	STOP OUT
19	P47	STREQ	O	STOP REQUEST
20	P46	MONO	O	AUTO/MONO
21	P45	TMUTE	O	Tuner mute
22	P44	PSW	I	Power switch key input
23	P43	PRTDC	I	AMP DC detect
24	P42	PRTI	I	Over current detect
25	P41	PDN	I	Power down detect
26	P40	REM	I	Remote control Signal
27	RES	RESET	I	Reset
28	XCIN			GND
29	XCOUT			N.C
30	XIN		I	6.3 MHz
31	XOUT		O	6.3 MHz
32	Vss			GND
33	P27	4052A, V1	I/O	μPD4053A V2
34	P26	4052B, V2	I/O	μPD4053B V1
35	P25	4052C	O	μPD4053C
36	P24	VSEL1	O	Video select 1
37	P23	KEY3	I	Key input 3
38	P22	KEY2	I	Key input 2
39	P21	KEY1	I	Key input 1
40	P20	KEY0	I	Key input 0

No.	Port	Name	I/O	Function
80	P74	VOL UP	O	Volume up
79	P75	VOL DN	O	Volume down
78	P76		I/O	
77	P77	SPRY	O	Speaker relay
76	VREF			+5V
75	AVss			GND
74	VEE	VP		-24V
73	VCC			+5V
72	P80	P15	O	FL ANODE P15
71	P81	P14	O	FL ANODE P14
70	P82	P13	O	FL ANODE P13
69	P83	P12	O	FL ANODE P12
68	P84	P11	O	FL ANODE P11
67	P85	P10	O	FL ANODE P10
66	P86	P9	O	FL ANODE P9
65	P87	P8	O	FL ANODE P8
64	P30	P7	O	FL ANODE P7
63	P31	P6	O	FL ANODE P6
62	P32	P5	O	FL ANODE P5
61	P33	P4	O	FL ANODE P4
60	P34	P3	O	FL ANODE P3
59	P35	P2	O	FL ANODE P2
58	P36	P1	O	FL ANODE P1
57	P37	P0	O	FL ANODE P0
56	P00	0G	O	FL GRID 0
55	P01	1G	O	FL GRID 1
54	P02	2G	O	FL GRID 2
53	P03	3G	O	FL GRID 3
52	P04	4G, D0	O	FL GRID 4
51	P05	5G, D1	O	FL GRID 5
50	P06	6G, D2	O	FL GRID 6
49	P07	7G, D3	O	FL GRID 7
48	P10	8G, D4	O	FL GRID 8
47	P11	9G, D5	O	FL GRID 9
46	P12	10G, D6	O	FL GRID 10
45	P13	11G, D7	O	FL GRID 11
44	P14	12G, D8	O	FL GRID 12
43	P15	CMUTE	O	Center mute
42	P16	MMUTE	O	Main mute
41	P17	RMUTE	O	Rear mute

# BLOCK DIAGRAM (TUNER)



# BLOCK DIAGRAM (MAIN, INPUT, OPERATION)



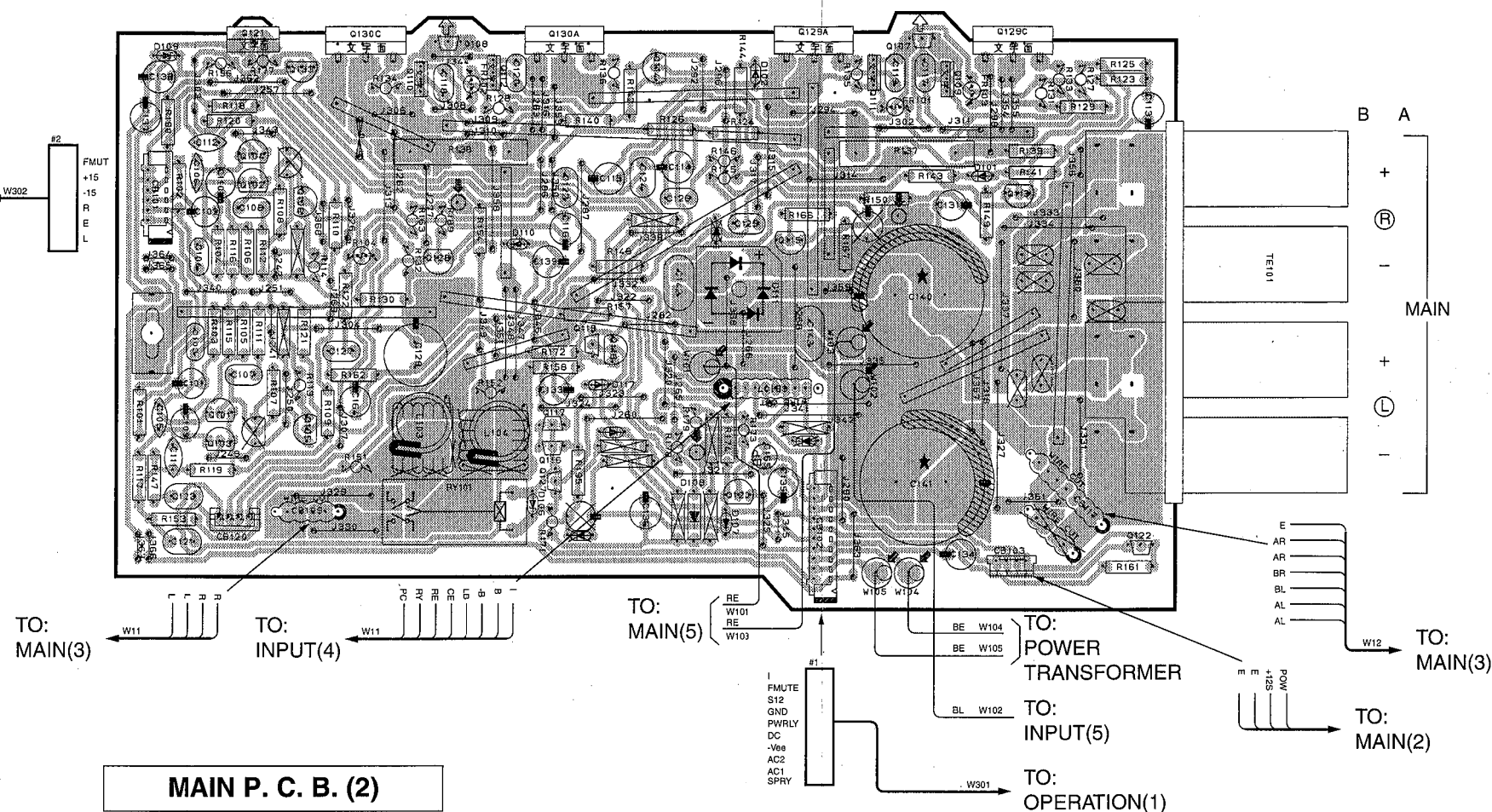
PRINTED CIRCUIT BOARD (Foil side)

MAIN P. C. B. (1)

Semiconductor Location

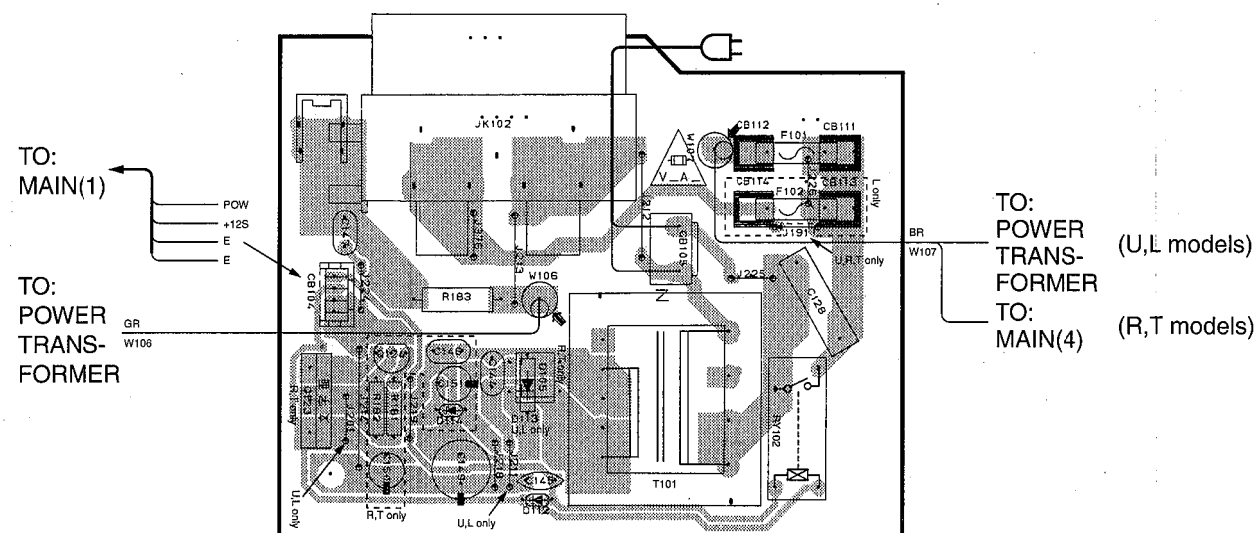
Ref No.	Location
Q101	C3
Q102	C2
Q103	C3
Q104	C2
Q105	C3
Q106	C2
Q107	E2
Q108	C2
Q109	E2
Q110	C2
Q111	E2
Q112	C2
Q113	E2
Q114	D2
Q115	D2
Q116	D3
Q117	D3
Q118	D2
Q119	D2
Q120	D3
Q121	C2
Q122	E3
Q123	B5
Q124	B5
Q127	D3
Q128	C2
Q129A	D2
Q129C	E2
Q130A	D2
Q130C	C2

TO:  
OPERATION(2)

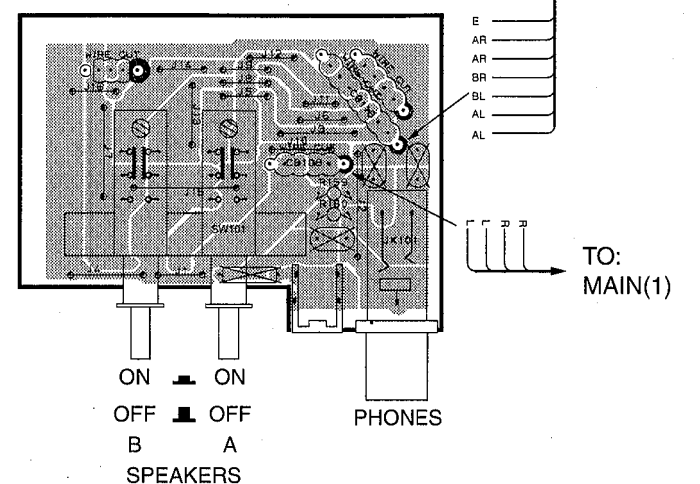


MAIN P. C. B. (2)

SWITCHED  
100W MAX. TOTAL  
AC OUTLETS

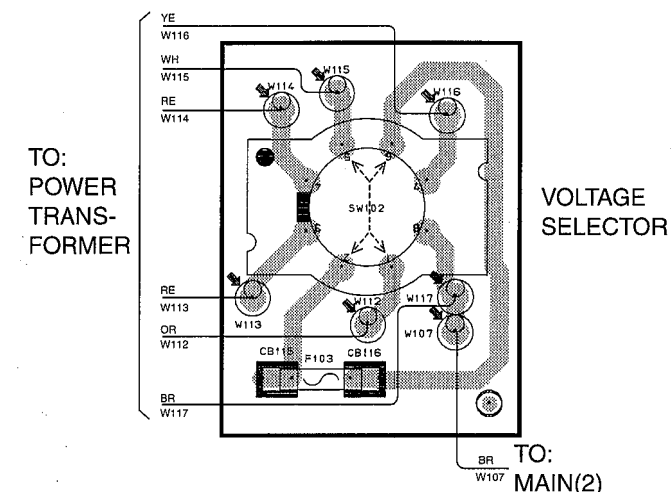


MAIN P. C. B. (3)

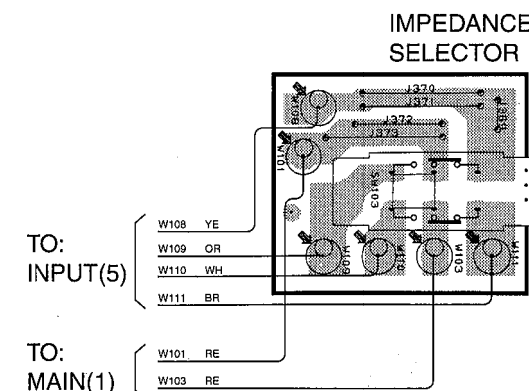


R,T models only

MAIN P. C. B. (4)

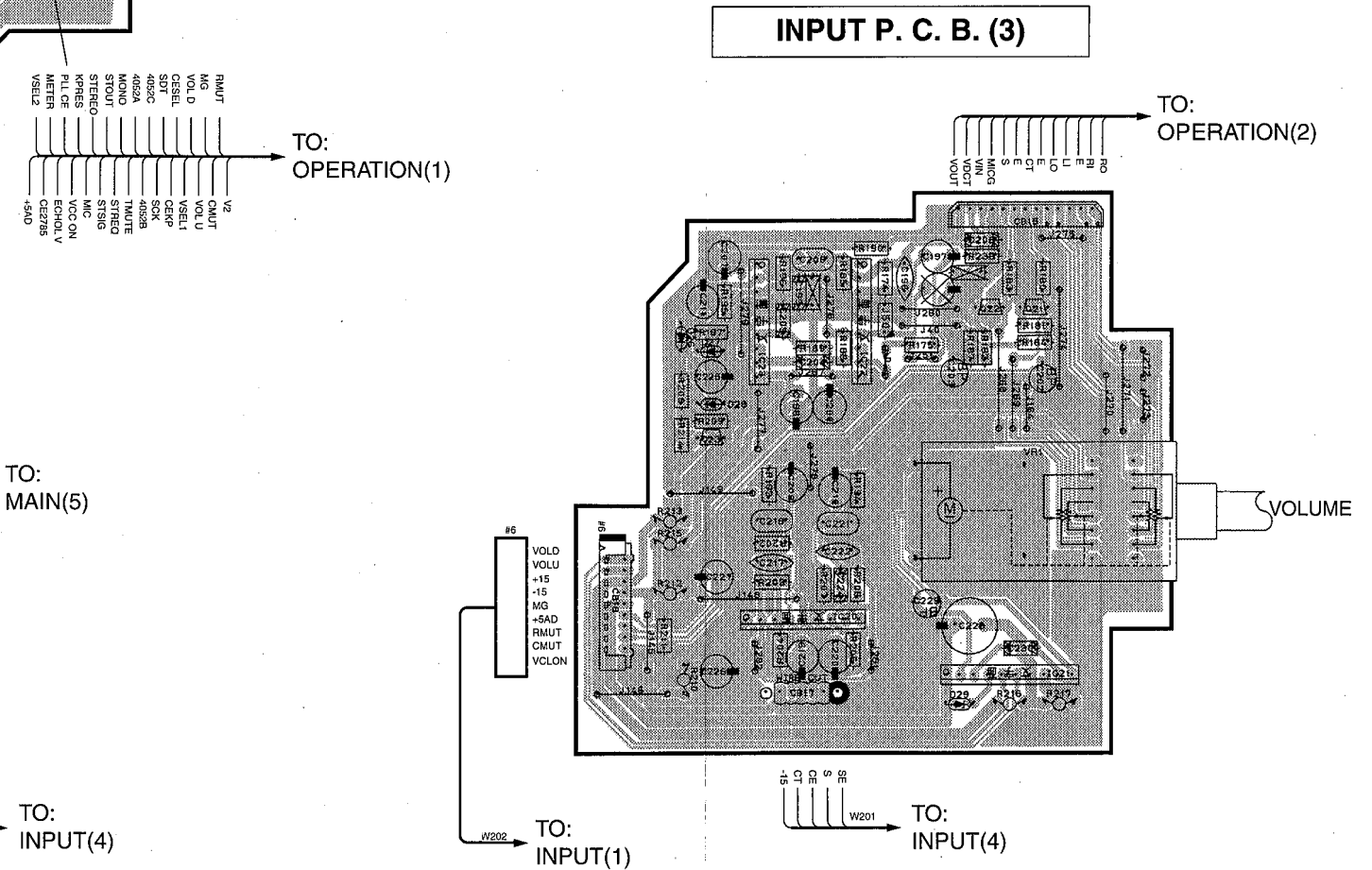
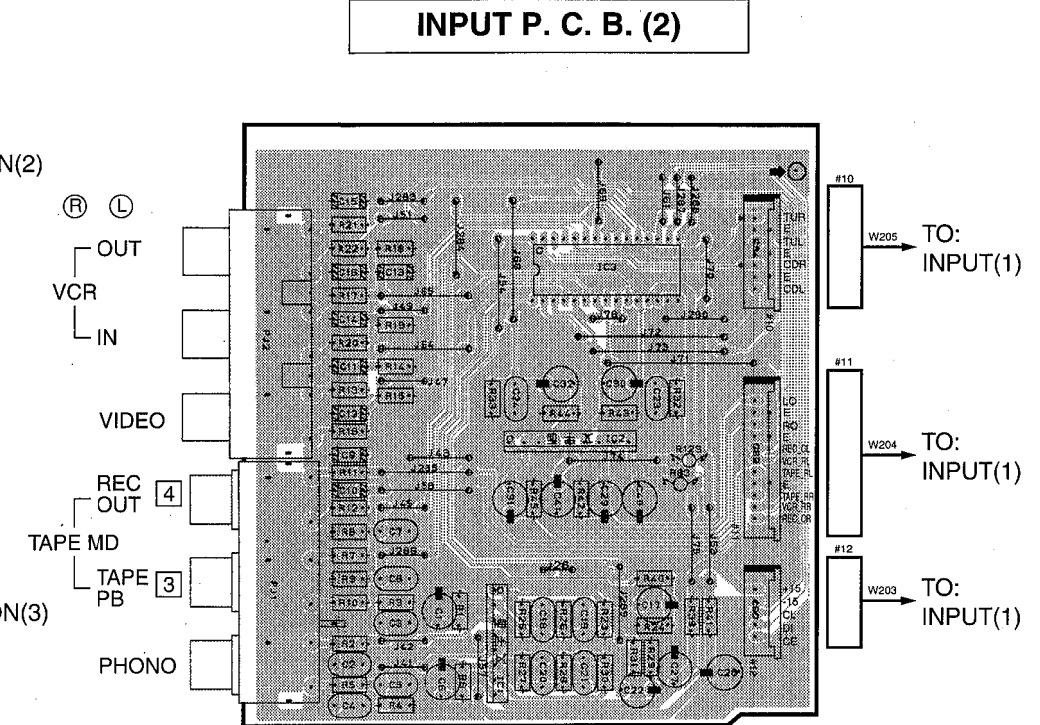
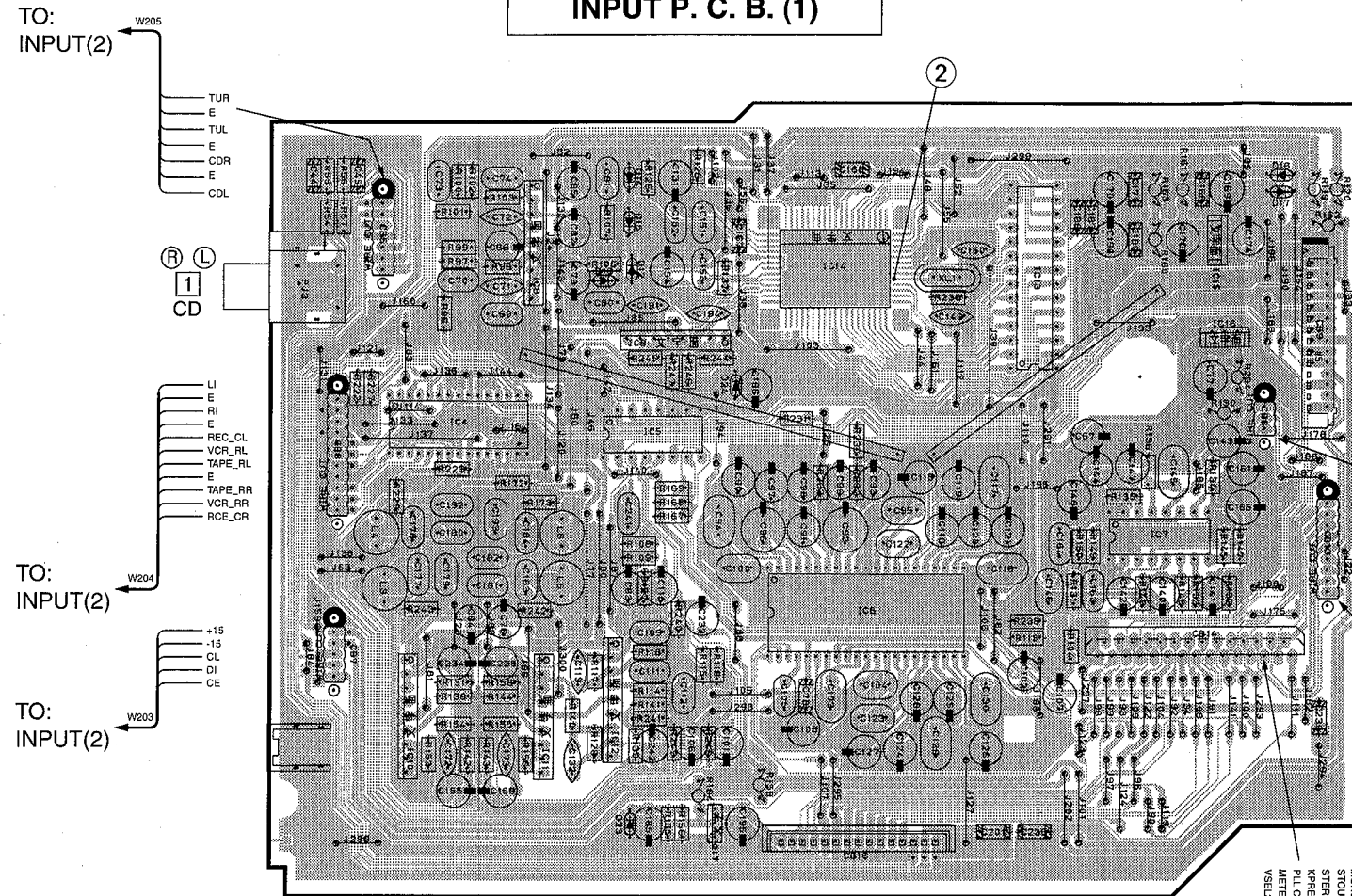


MAIN P. C. B. (5)



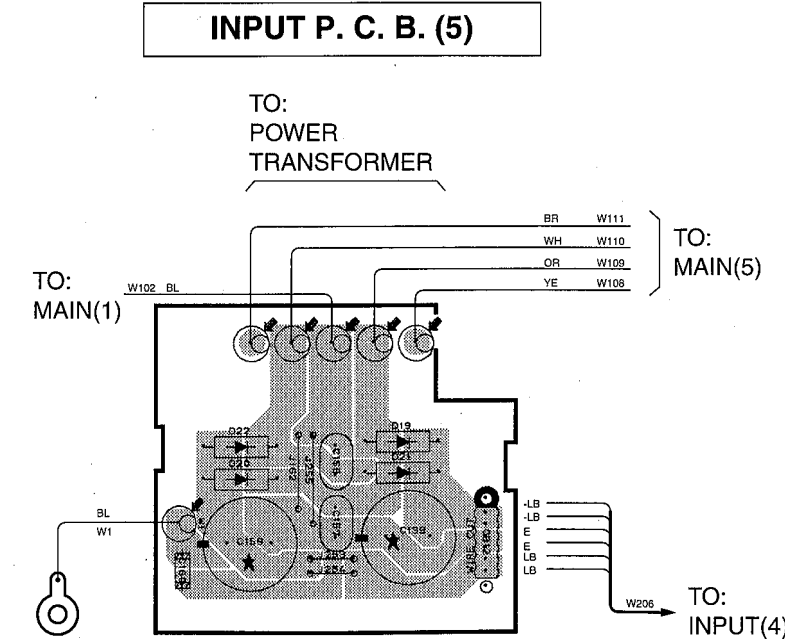
PRINTED CIRCUIT BOARD (Foil side)

② : TEST POINT WAVEFORM (See page 29)



● Semiconductor Location

Ref No.	Location	Ref No.	Location
Q17	C3	IC1	G3
Q21	G4	IC2	G2
Q22	G4	IC3	G2
Q23	F5	IC4	B2
		IC5	C2
		IC6	C3
		IC7	D3
		IC8	B2
		IC9	C2
		IC10	B3
		IC11	B3
		IC12	D2
		IC13	D2
		IC14	C2
		IC15	D2
		IC16	D2
		IC20	G5
		IC21	G5
		IC22	G4
		IC23	F4





## PRINTED CIRCUIT BOARD (Foil side)

① : TEST POINT WAVEFORM (See page 29)

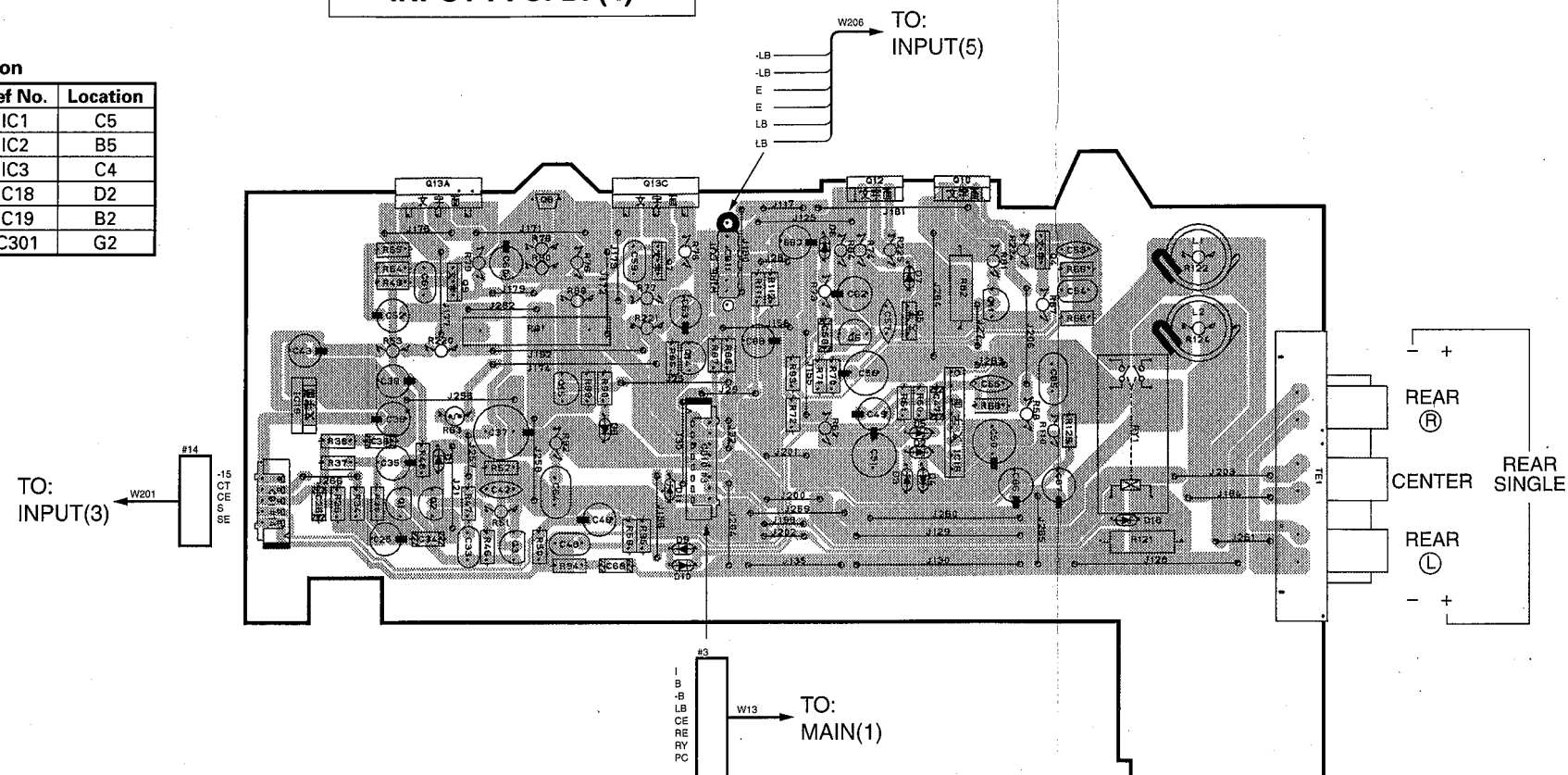
## Semiconductor Location

Ref No.	Location	Ref No.	Location
Q1(*)	C3	IC1	C5
Q1(*)	D5	IC2	B5
Q2(*)	C3	IC3	C4
Q2(*)	C5	IC18	D2
Q3(*)	C3	IC19	B2
Q3(*)	C5	IC301	G2
Q4(*)	D2		
Q4(*)	D5		
Q5(*)	D2		
Q5(*)	C5		
Q6(*)	D2		
Q6(*)	D4		
Q7(*)	C2		
Q7(*)	B5		
Q8	C2		
Q9	C2		
Q10	D2		
Q11	D2		
Q12	D2		
Q13A	C2		
Q13C	C2		
Q14	C2		
Q15	C2		
Q303	G2		
Q304	G2		

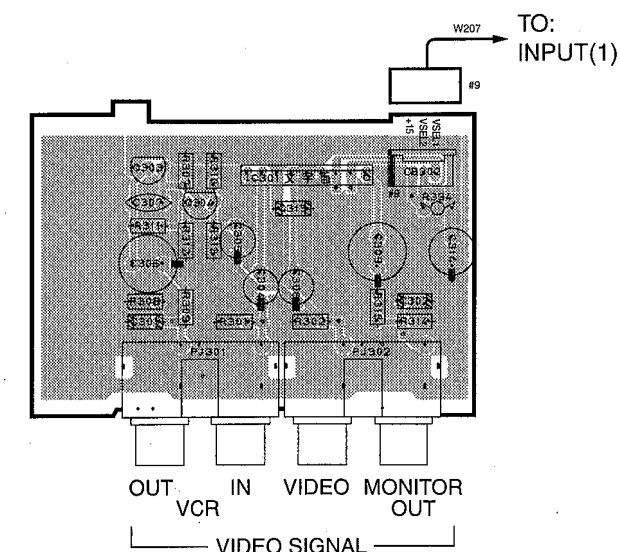
(\*) : INPUT P.C.B. (4)

(\*) : TUNER P.C.B.

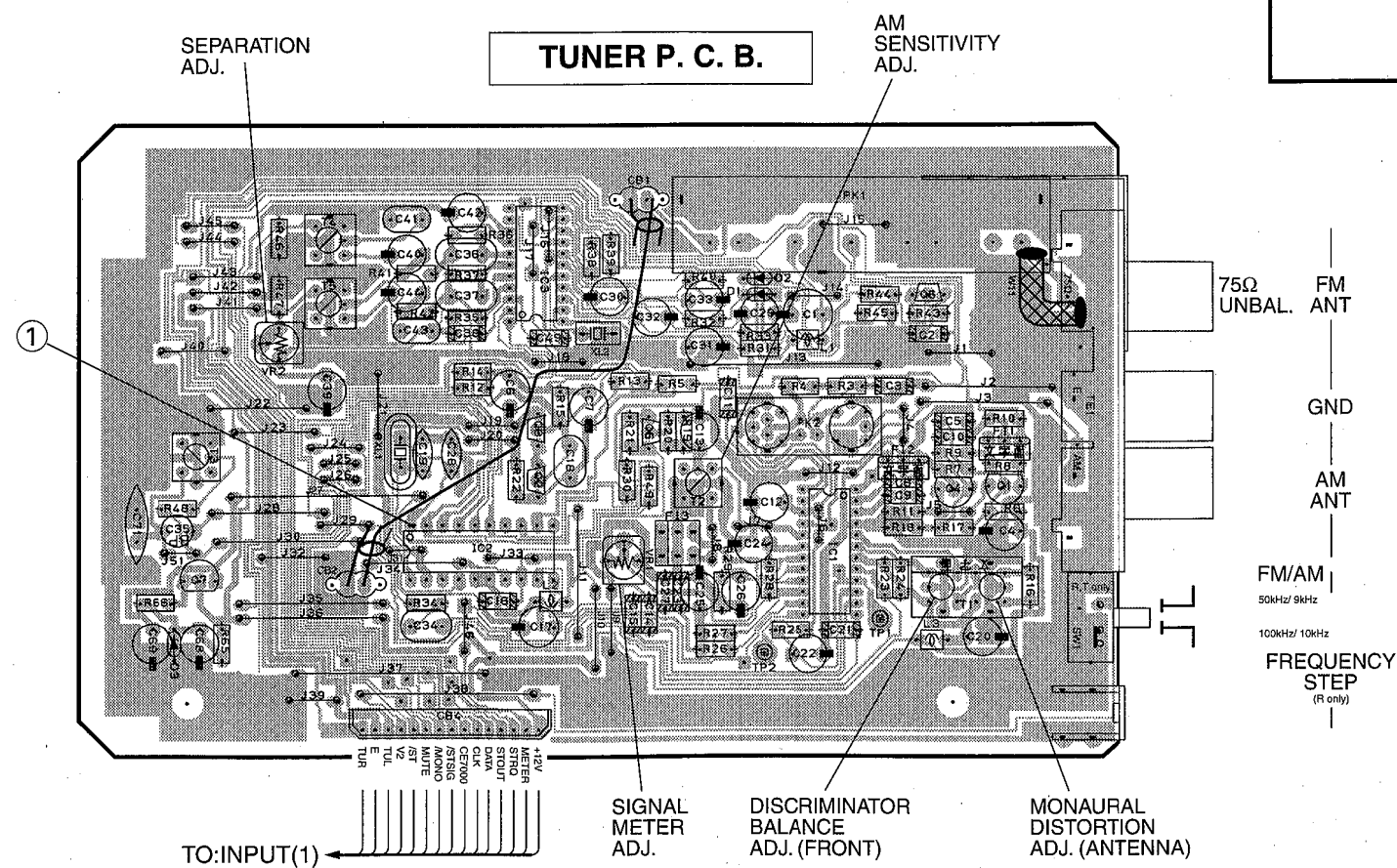
## INPUT P. C. B. (4)



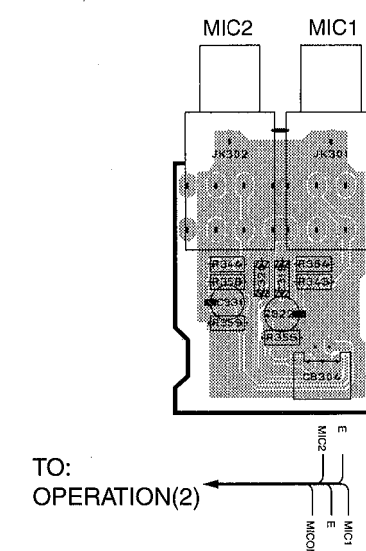
## OPERATION P. C. B. (3)



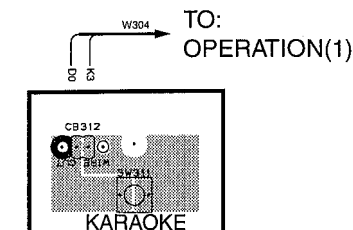
## TUNER P. C. B.



## OPERATION P. C. B. (4)



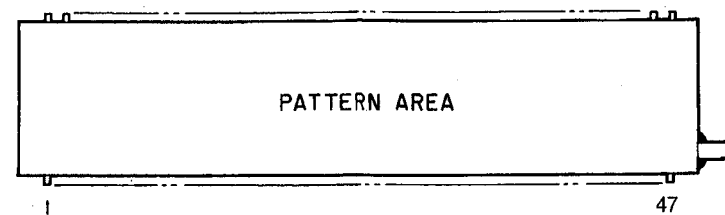
## OPERATION P. C. B. (5)



**③ and ④ : TEST POINT WAVEFORMS (See page 29)**

## ■ DISPLAY DATA (VV485300)

## ● V301 : 13-BT-148GK



## PIN CONNECTION

Pin No.	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
CONNECTION	F2	F2	NP	NP	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NC	NC

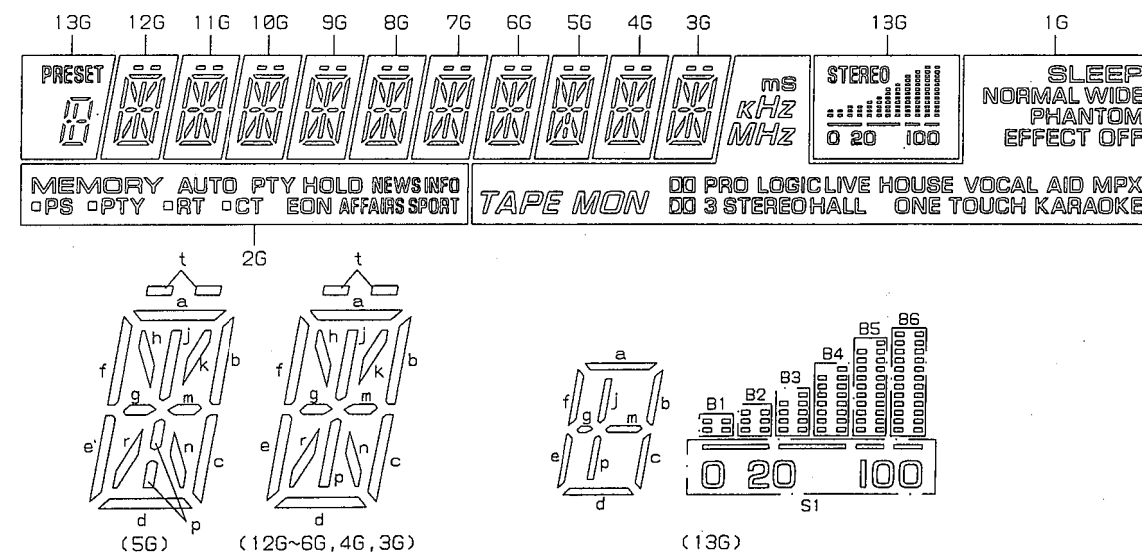
Pin No.	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
CONNECTION	NC	NC	NC	NC	NC	NC	NC	NC	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11

Pin No.	9	8	7	6	5	4	3	2	1
CONNECTION	P12	P13	P14	P15	P16	NP	NP	F1	F1

Note 1) F1, F2 ..... Filament  
 2) NP ..... No pin  
 3) NC ..... No connection

4) P1-P16 ..... Datum Line  
 5) 1G-13G ..... Grid

## GRID ASSIGNMENT

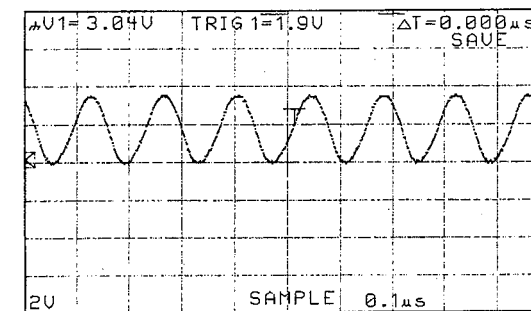


## ANODE CONNECTION

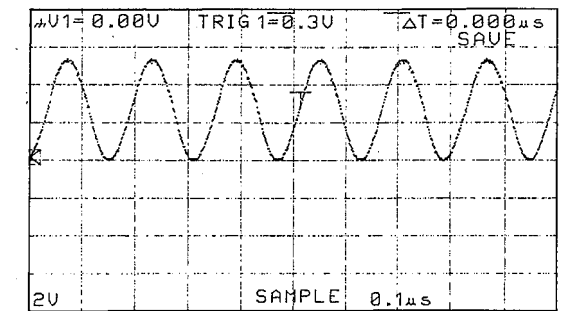
	13G	12G~13G	2G	1G		13G	12G~13G	2G	1G
P1	a	a	MEMORY	SLEEP	P9	STEREO	j	CT	LIVE HOUSE
P2	b, c	b	AUTO	NORMAL	P10	B1	k	□ (CT)	HALL
P3	d	c	PTY HOLD	WIDE	P11	B2	m	RT	□ PRO LOGIC
P4	e, f	d	SPORT	PHANTOM	P12	B3	n	□ (RT)	□ 3 STEREO
P5	g	e	AFFAIRS	EFFECT OFF	P13	B4	p	PTY	ms
P6	j, p	f	INFO	ONE TOUCH KARAOKE	P14	B5	r	□ (RTY)	kHz
P7	m	g	NEWS	MPX	P15	B6	t	PS	MHz
P8	PRESET	h	EON	VOCAL AID	P16	S1	—	□ (PS)	TAPE MON

## ■ TEST POINT WAVEFORMS

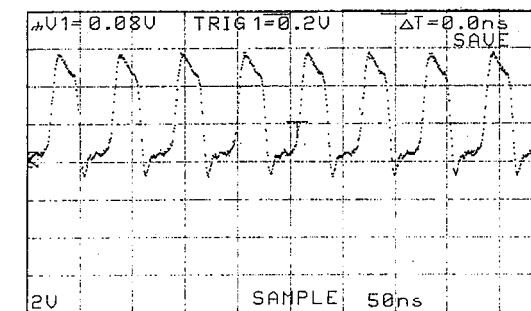
Point ① (Pin 20 of IC2)  
 V : 2V/div H : 0.1μsec/div  
 DC range 1 : 1 probe



Point ③ (Pin 31 of IC302)  
 V : 2V/div H : 0.1μsec/div  
 DC range 1 : 1 probe



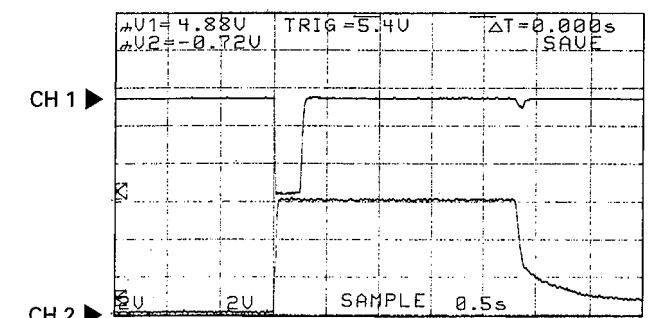
Point ② (Pin 56 of IC14)  
 V : 2V/div H : 50nsec/div  
 DC range 1 : 1 probe



Point ④ (Pin 20 of IC2)

CH 1 : Collector of Q305  
 CH 2 : Emitter of Q301

V : 2V/div  
 H : 0.5sec/div  
 DC range 1 : 1 probe



With the POWER switch turned ON, connect the power cord to the AC outlet. Disconnect the power cord from the AC outlet.

\* This waveform is not available by pushing the power switch ON and OFF.



SCHEMATIC DIAGRAM (TUNER)

Each voltage given here represents that in the FM (98.1MHz, STEREO) reception mode but the one in the parentheses ( ) is that in the AM (1080kHz, MAN'L) reception mode.  
① : TEST POINT WAVEFORM (See page 29)

CAPACITOR	REMARKS	PARTS NAME
⊗	NO MARK	ELECTROLYTIC CAPACITOR
⊙	NO MARK	TANTALUM 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

RESISTOR	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

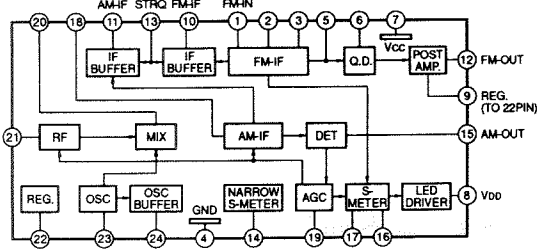
NOTICE (model)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

S	U. C	R. T	A. B	G
1				
2	PK1	VR24220	VR24220	V09B750
3				
4				
5				
6				
7	C21	100P	100P	X
8	R34	10K	10K	27K
9	J51	○	○	X
10	R48	X	X	4.7K
11	T3	X	X	V036570
12	R35	22K	22K	X
13	C36-37	680P	680P	390P
14	R36-37	100K	100K	120K
15	SW1	X	VF54120	X
16	J61	X	X	○
17	C71	X	X	120PCH

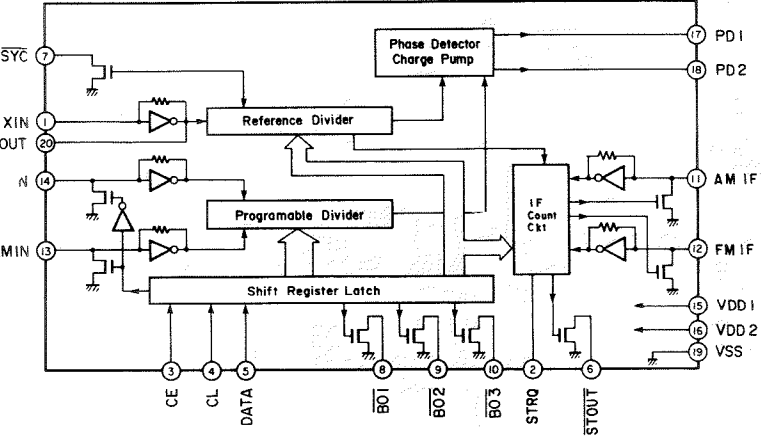
X = NOT USED  
○ = USED

Mark	Reference Parts Number	Parts Name
h1	D1-2	HSS104 1SS133 1SS176

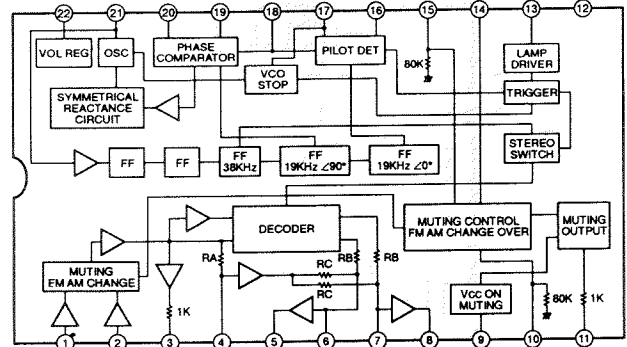
IC1 : LA1266  
AM/FM IF



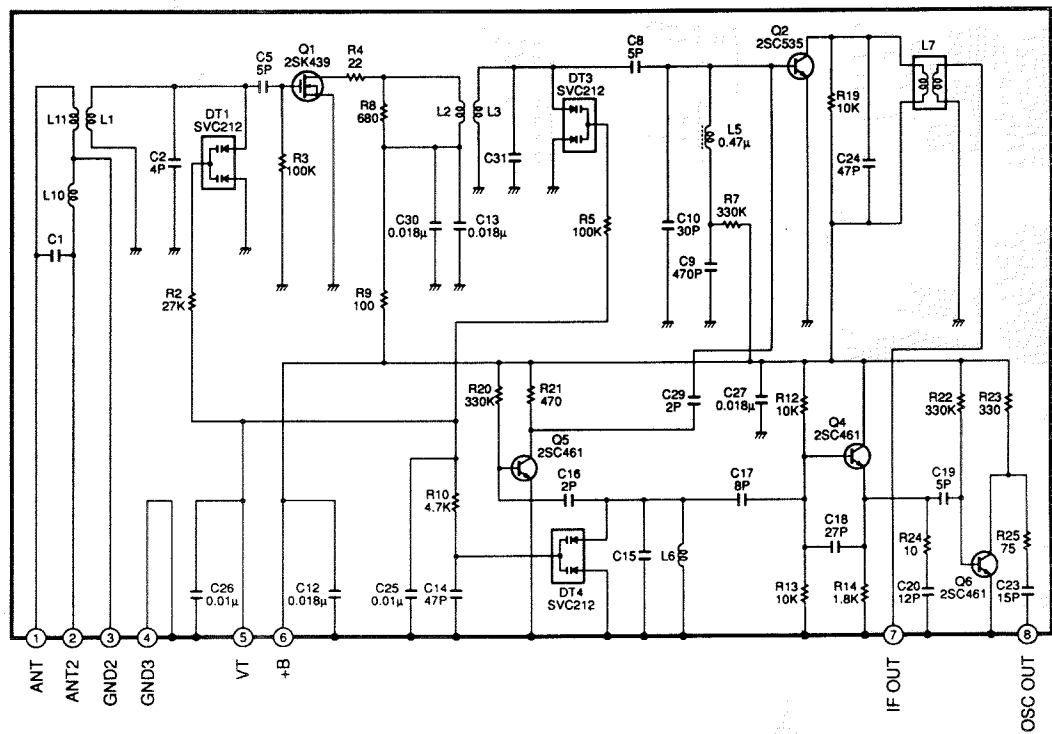
IC2 : LM7000N  
PLL Controller



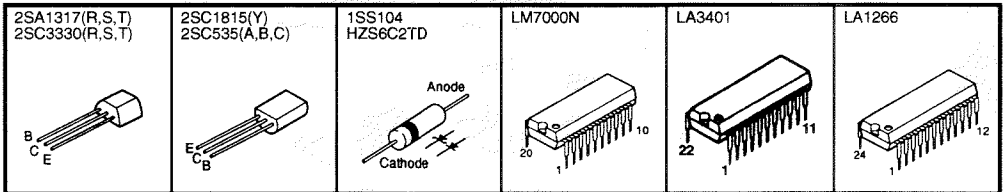
IC3 : LA3401  
MPX



PK1 : EXV-17296G1 (VR242200)  
MPX



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

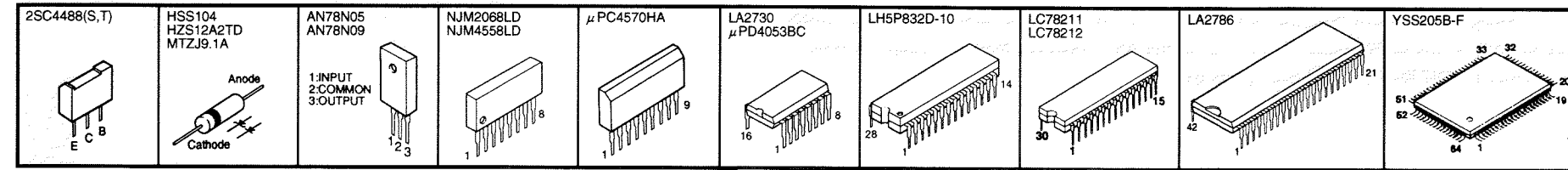


\* All voltage are measured with a 10MΩ/DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.

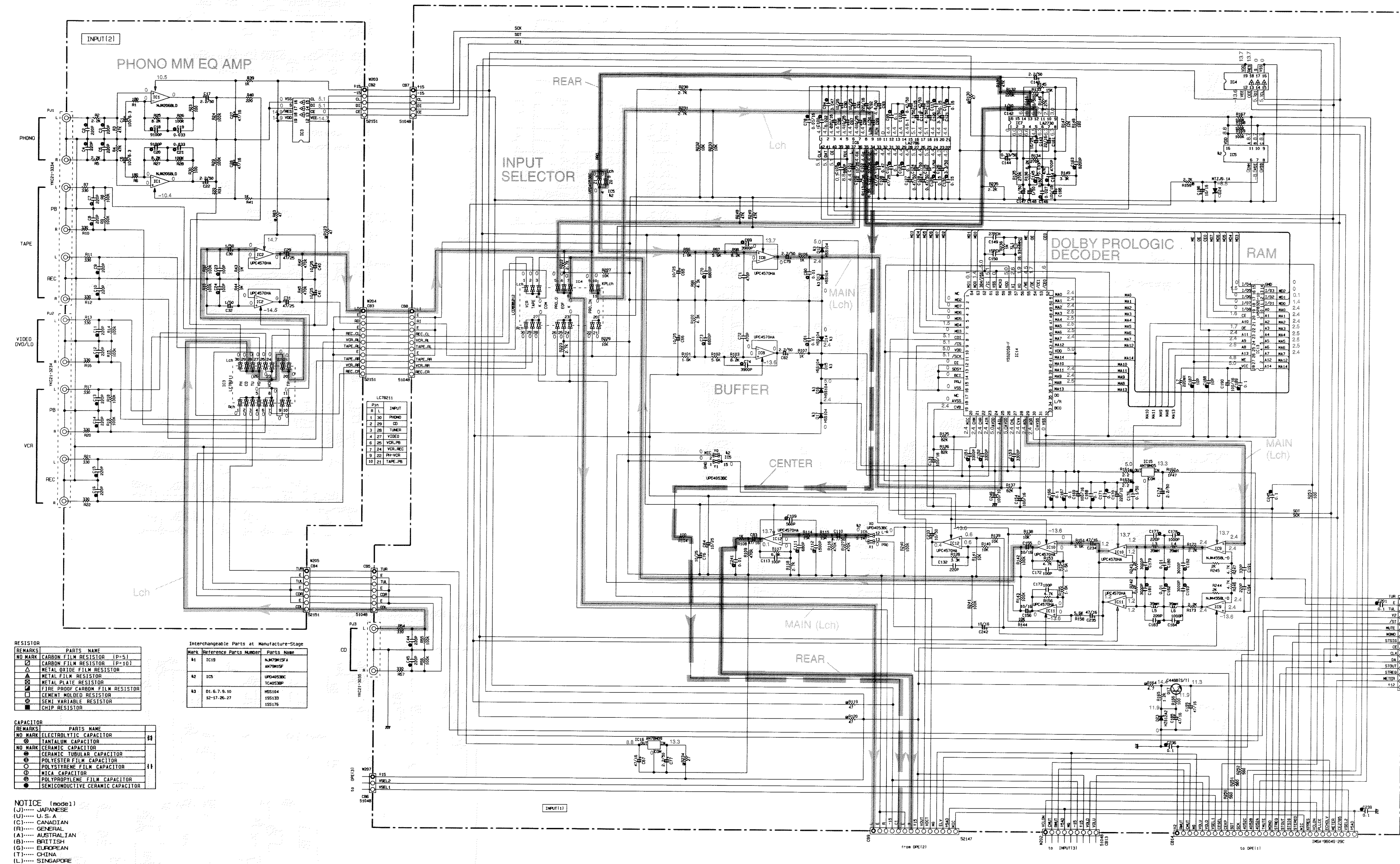
## SCHEMATIC DIAGRAM (INPUT)

② : TEST POINT WAVEFORM (See page 29)

## PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



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



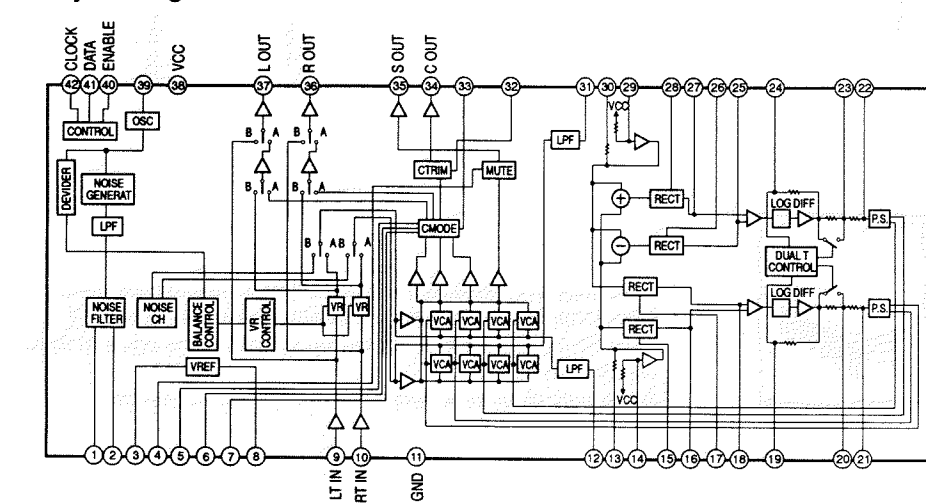
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P-5)
□	CARBON FILM RESISTOR (P-10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
□	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
□	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

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

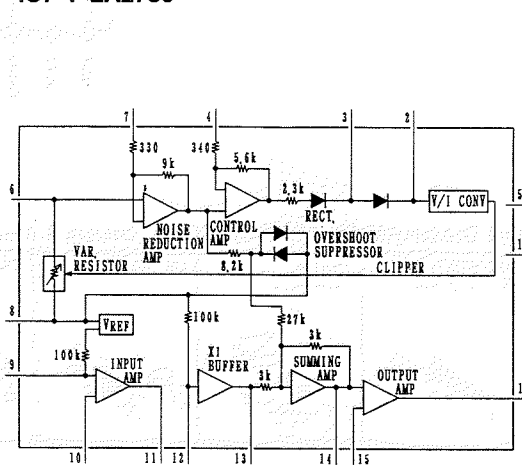
NOTICE (model)  
(J)..... JAPANESE  
(U)..... U.S.A.  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(E)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

IC6 : LA2786

Dolby Pro Logic Surround Matrix Decoder

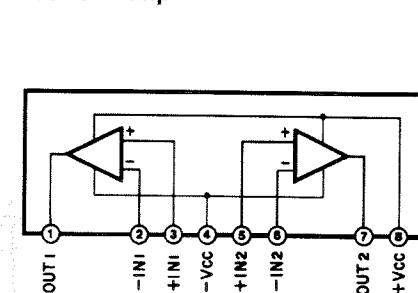


IC7 : LA2730



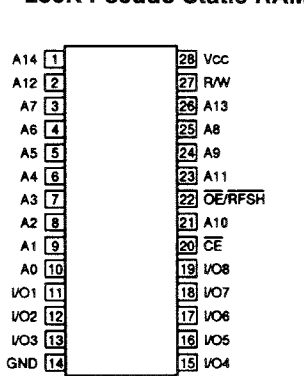
IC9 : NJM4558LD

Dual OP-AMP



IC13 : LH5P832D-10

256K Pseudo Static RAM



Other IC

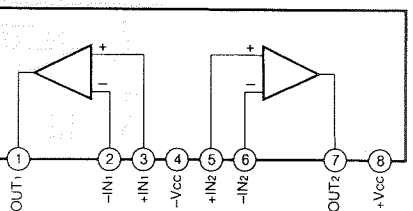
IC14 : YSS205B

→ See page 14



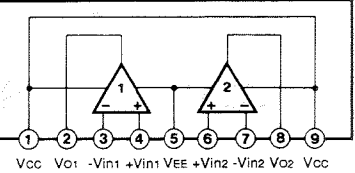
IC1 : NJM2068LD

Dual OP-AMP



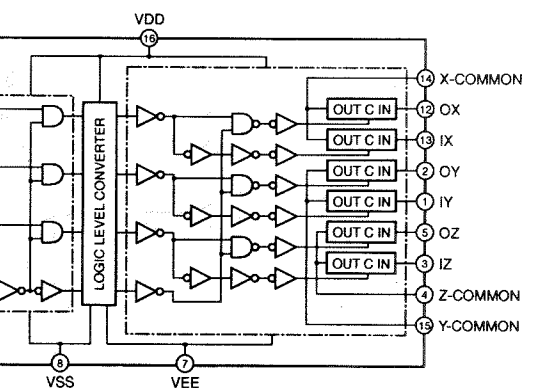
IC2,8,10-12 : μPC4570HA

Dual OP-AMP



IC5 : μPD4053BC

Triple 2-Channel Multiplexer/Demultiplexer



INHIBIT (Pin 6)	CONTROL INPUTS (Pin 9)	A (Pin 10)	B (Pin 11)	ON CHANNEL (Pin 12)	OFF CHANNEL (Pin 13)
L	L	L	L	0X, 0Y, 0Z	1X, 1Y, 1Z
L	L	L	H	0X, 0Y, 0Z	1X, 1Y, 0Z
L	L	H	L	0X, 0Y, 0Z	1X, 0Y, 1Z
L	L	H	H	0X, 0Y, 1Z	1X, 0Y, 1Z
L	H	L	L	0X, 0Y, 1Z	1X, 1Y, 0Z
L	H	L	H	0X, 0Y, 1Z	1X, 1Y, 1Z
L	H	H	L	0X, 0Y, 1Z	1X, 1Y, 1Z
L	H	H	H	0X, 0Y, 1Z	1X, 1Y, 1Z
H	H	H	H	NOTE	NOTE

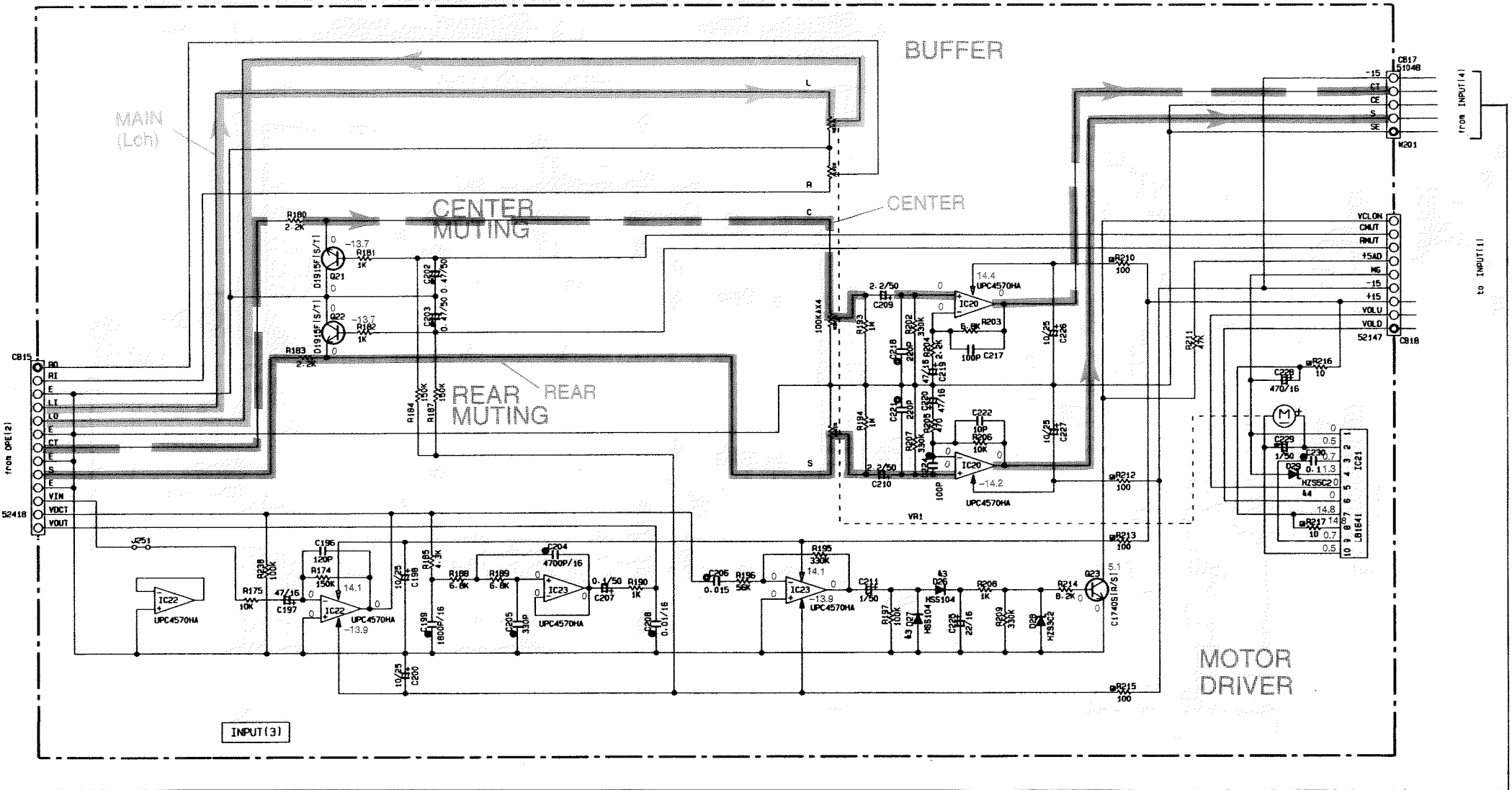
SCHEMATIC DIAGRAM (INPUT)

Each voltage given here represents that in CD, PRO LOGIC, PHANTOM and the top side of IMPEDANCE SELECTOR, but the one in the parentheses ( ) is that in the bottom side.

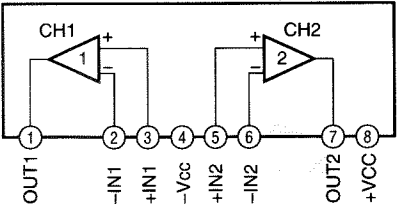
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
▢	METAL PLATE RESISTOR
■	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
◇	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊕	TANTALUM CAPACITOR
⊙	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
⊙	POLYESTER FILM CAPACITOR
⊙	POLYSTYRENE FILM CAPACITOR
⊙	WICA CAPACITOR
⊙	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

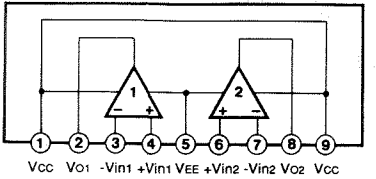
NOTICE (model)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE



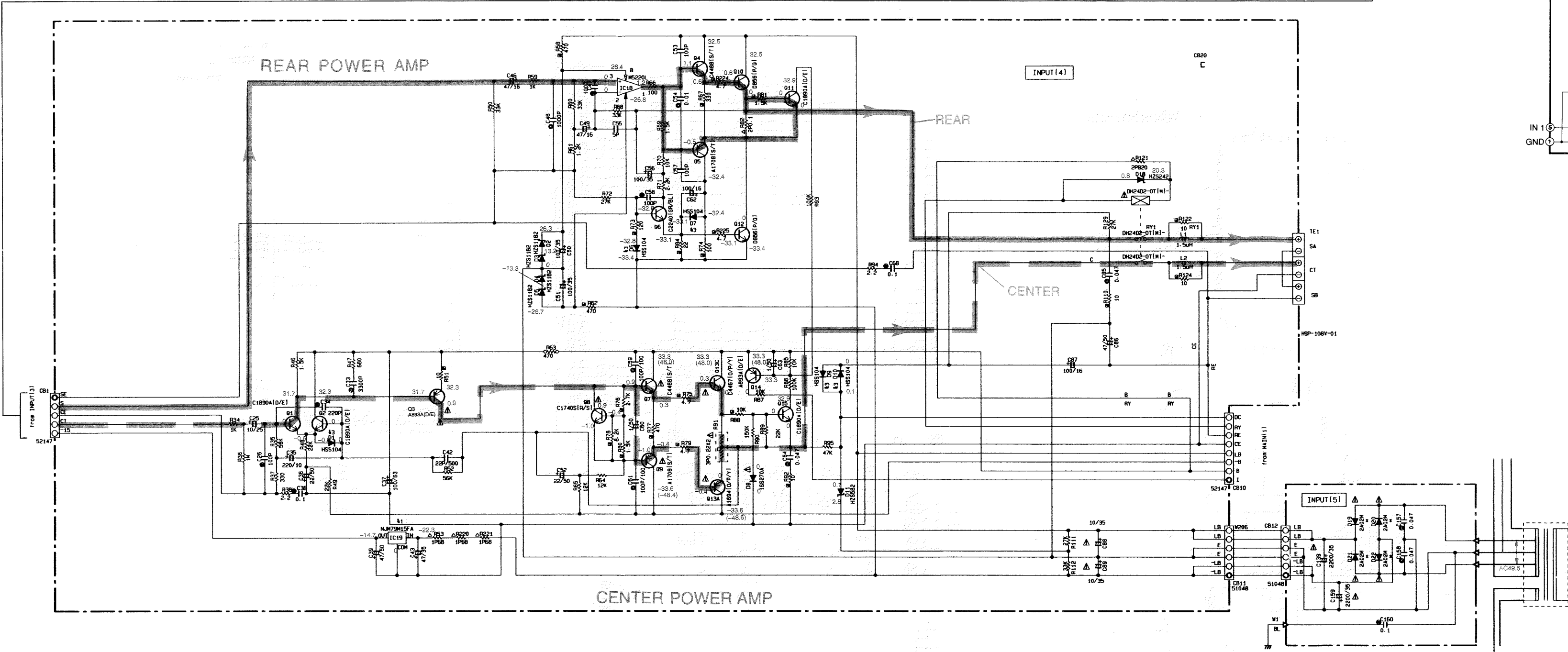
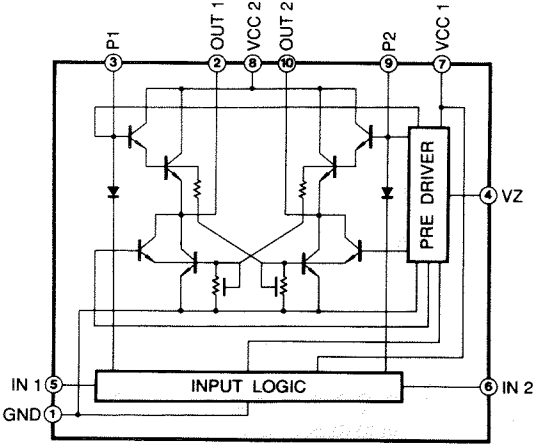
IC18 : M5220L  
Dual OP-Amp



IC20,22,23 : μPC4570HA  
Dual OP-Amp



IC21 : LB1641  
Motor Drive



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

2SC1740S(R,S) 2SD1915F(S,T)	2SA893A(D,E) 2SC1890A(D,E) 2SC2240(GR,BL)	2SA1708(S,T) 2SC4488(S,T)	2SD856(Q,P)	2SA1694(O,P,Y)	1SS270A 2A02M HSS104 HZS11B2TD	HZS242TD HZS5C2TD HZS5B2TD HZS5C2TD	NJM79M15FA	M5220L	μPC4570HA	LB1641

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



SCHEMATIC DIAGRAM (OPERATION)

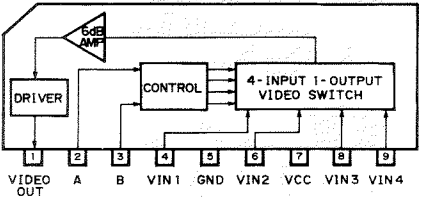
③ and ④ :TEST POINT WAVEFORMS (See page 29)

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

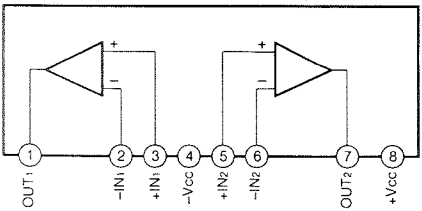
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
○	MICA CAPACITOR
⊙	POLYPROPYLENE FILM CAPACITOR
⊙	SEMICONDUCTIVE CERAMIC CAPACITOR

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

IC301 : LA7956  
Video Switch



IC303, 304 : NJM2068LD  
Dual OP-Amp



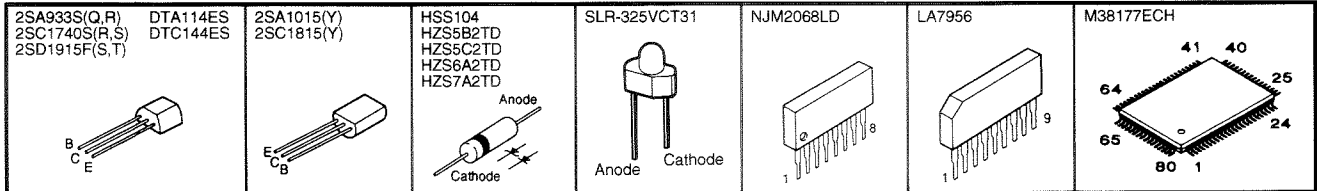
Other IC  
IC302 : M38179M6-381FP  
→ See page 15

	U	R1	L
51	R335	X	33K
52	R341	33K	33K
53	R342	X	3.3K
54	R330, R337	X	10K
55	Q306	X	2SC1740S(R/S) 2SC2643(E/F) 2SC3311(I/G/R/S) 2SC2603(E/F) 2SC3311(I/G/R/S)
56	R325	X	680
57	D308	X	SLR-325VC
58			
59			
60			
61			

X = NOT USED  
○ = USED

Mark	Reference	Parts Number	Parts Name
51	Q303-307	311-319	HSS104 H2S58TD H2S58CTD H2S582TD H2S7A2TD
52	Q302		2SA933S(I/R/S) 2SA1151(E/F) 2SA1309(I/G/R/S)
53	Q301-305		2SC1740S(R/S) 2SC2643(E/F) 2SC3311(I/G/R/S)

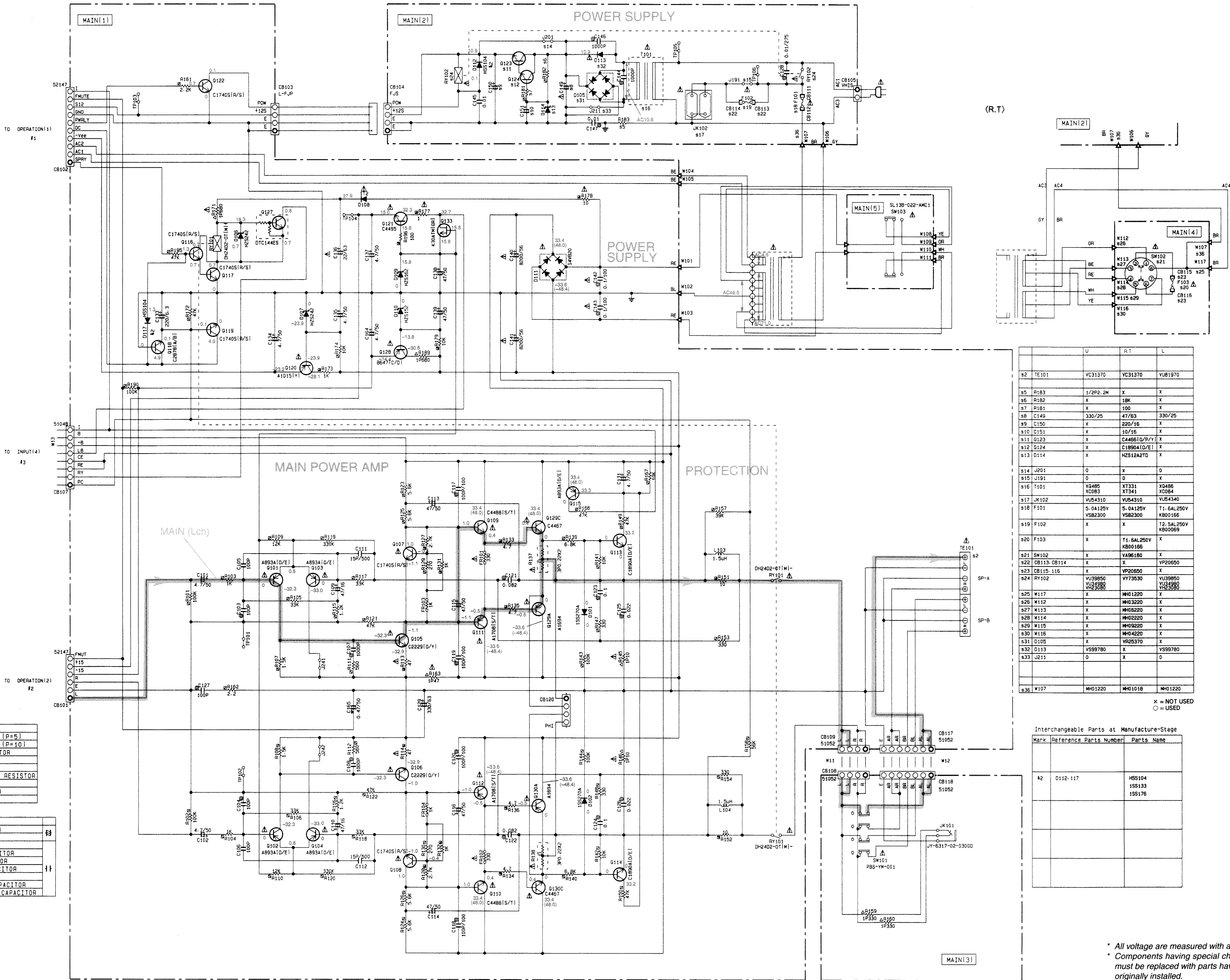
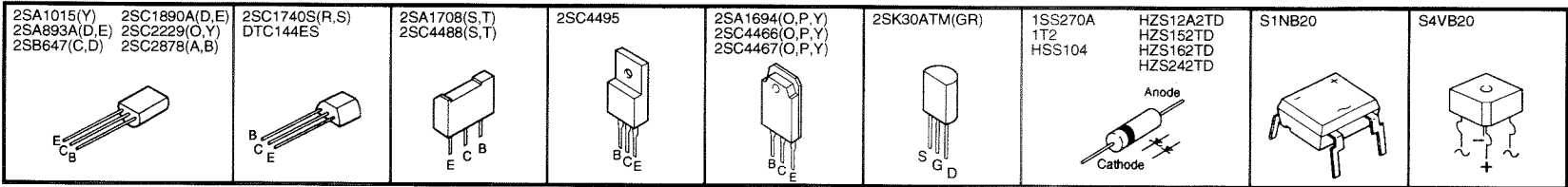
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



SCHEMATIC DIAGRAM (MAIN)

Each voltage given here represents that in CD, PRO LOGIC, PHANTOM and the top side of IMPEDANCE SELECTOR, but the one in the parentheses ( ) is that in the bottom side.

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.



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
NO MARK	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

	U	RT	L
s2 TE101	VC31370	VC31370	VU81970
s5 R183	1/2P2.2M	X	X
s6 R182	X	18K	X
s7 R181	X	100	X
s8 C149	330/25	47/63	330/25
s9 C150	X	220/16	X
s10 C151	X	10/16	X
s11 Q123	X	C4466(D/P/Y)	X
s12 Q124	X	C1890A(D/E)	X
s13 D114	X	HZS12A2TD	X
s14 J201	0	X	0
s15 J191	0	0	X
s16 T101	X0485 X0093	XT331 XT341	X0486 X0384
s17 JK102	VU54310	VU54310	VU54340
s18 F101	5.0A125V VS82300	T1-6AL250V VS82300	XB00166 XB00166
s19 F102	X	X	T2-5AL250V XB00069
s20 F103	X	T1-6AL250V XB00166	X
s21 SW102	X	YA56180	X
s22 CB113, CB114	X	X	VP20650
s23 CB115, 116	X	VP20650	X
s24 RY102	VU39950 VU39950	VY73530	VU39850 VU39850
s25 W117	X	WH01220	X
s26 W112	X	WH03220	X
s27 W113	X	WH06220	X
s28 W114	X	WH02220	X
s29 W115	X	WH02220	X
s30 W116	X	WH04220	X
s31 D105	X	VR25370	X
s32 D113	VS99780	X	VS99780
s33 J211	0	X	0
s36 W107	WH01220	WH01018	WH01220

x = NOT USED  
○ = USED

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
s2	D112-117	HSS104 1SS13 1SS176

\* All voltage are measured with a 10MΩ/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.

# PARTS LIST

RX-V300K/R-V302K

## ELECTRICAL PARTS

### WARNING

Components having special characteristics are marked  $\Delta$  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.

### ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

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

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

## INPUT P.C.B.

Schm Ref.	PART NO.	Description	
*	VY885500	P.C.B.	INPUT
CB1	VK024900	CN.BS.PIN	5P
CB2	VK026400	CN.BS.PIN	5P
CB3	VK027000	CN.BS.PIN	11P
CB4	VK026600	CN.BS.PIN	7P
CB5	Vi878500	CN.BS.PIN	7P
CB6	Vi878100	CN.BS.PIN	3P
CB7	Vi878300	CN.BS.PIN	5P
CB8	Vi878900	CN.BS.PIN	11P
CB9	VK025800	CN.BS.PIN	14P
CB10	VK025200	CN.BS.PIN	8P
CB11	Vi878400	CN.BS.PIN	6P
CB12	Vi878400	CN.BS.PIN	6P
CB13	Vi878700	CN.BS.PIN	9P
CB14	VU272900	CN	29P
CB15	VQ961600	CN	13P
CB16	VQ963600	CN.BS.PIN	15P
CB17	Vi878300	CN.BS.PIN	5P
CB18	VK025300	CN.BS.PIN	9P
CB20	VP206500	HOLDER.FUS	EYF-52BC
C1	VF760000	C.EL	100uF 10V
C2	UA652220	C.MYLAR	220pF 50V
C3	UA652220	C.MYLAR	220pF 50V
C4	UA652220	C.MYLAR	220pF 50V
C5	UA652220	C.MYLAR	220pF 50V
C6	VF760000	C.EL	100uF 10V
C7	UA652220	C.MYLAR	220pF 50V
C8	UA652220	C.MYLAR	220pF 50V
C9	VG278400	C.CE.TUBLR	220pF 50V
C10	VG278400	C.CE.TUBLR	220pF 50V
C11	VG278400	C.CE.TUBLR	220pF 50V
C12	VG278400	C.CE.TUBLR	220pF 50V
C13	VG278400	C.CE.TUBLR	220pF 50V
C14	VG278400	C.CE.TUBLR	220pF 50V
C15	VG278400	C.CE.TUBLR	220pF 50V
C16	VG278400	C.CE.TUBLR	220pF 50V
C17	VJ839200	C.EL	2.2uF 50V
C18	UA653910	C.MYLAR	9100pF 50V
C19	UA654330	C.MYLAR	0.033uF 50V
C20	UA653910	C.MYLAR	9100pF 50V
C21	UA654330	C.MYLAR	0.033uF 50V
C22	VJ839200	C.EL	2.2uF 50V
C23	UA652100	C.MYLAR	100pF 50V
C24	UA652100	C.MYLAR	100pF 50V
C25	UM417100	C.EL	10uF 50V
C26	VF466800	C.CE.TUBLR	100pF 50V
C27	VJ837200	C.EL	47uF 16V
C28	VJ837200	C.EL	47uF 16V
C29	UJ667470	C.EL	47uF 50V
C30	VJ839100	C.EL	1uF 50V
C31	UJ667470	C.EL	47uF 50V
C32	VJ839100	C.EL	1uF 50V
C33	UA653330	C.MYLAR	3300pF 50V

\* New Parts

Schm Ref.	PART NO.	Description	
C34	VG278400	C.CE.TUBLR	220pF 50V
C35	VE117600	C.EL	220uF 10V
C36	Ui367220	C.EL	22uF 50V
C37	UH178100	C.EL	100uF 63V
C38	VH053100	C.CE.TUBLR	0.1uF 50V
C39	UJ667470	C.EL	47uF 50V
C40	UM417100	C.EL	10uF 50V
C41	UM417100	C.EL	10uF 50V
C42	FH611220	C.CE	22pF 500V
C43	VZ410500	C.EL	47uF 35V
C44	VG278400	C.CE.TUBLR	220pF 50V
C45	VG278400	C.CE.TUBLR	220pF 50V
C46	VJ837200	C.EL	47uF 16V
C47	VF466800	C.CE.TUBLR	100pF 50V
C48	UA653100	C.MYLAR	1000pF 50V
C49	VJ837200	C.EL	47uF 16V
C50	UJ668100	C.EL	100uF 50V
C51	UJ668100	C.EL	100uF 50V
C52	Ui367220	C.EL	22uF 50V
C53	FG212100	C.CE	100pF 50V
C54	UA654100	C.MYLAR	0.01uF 50V
C55	FG210500	C.CE	5pF 50V
C56	UJ668100	C.EL	100uF 50V
C57	FG212100	C.CE	100pF 50V
C58	VF466800	C.CE.TUBLR	100pF 50V
C59	VR325000	C.MYLAR	100pF 100V
C60	VJ839100	C.EL	1uF 50V
C61	VR325000	C.MYLAR	100pF 100V
C62	VF964800	C.EL	100uF 16V
C63	VJ839100	C.EL	1uF 50V
C64	UA654470	C.MYLAR	0.047uF 50V
C65	UM417100	C.EL	10uF 50V
C66	UM417100	C.EL	10uF 50V
C67	VJ837200	C.EL	47uF 16V
C68	VH053100	C.CE.TUBLR	0.1uF 50V
C69	UA653390	C.MYLAR	3900pF 50V
C70	UA653680	C.MYLAR	6800pF 50V
C71	FG212470	C.CE	470pF 50V
C72	FG212470	C.CE	470pF 50V
C73	UA653680	C.MYLAR	6800pF 50V
C74	UA653390	C.MYLAR	3900pF 50V
C76	UM417100	C.EL	10uF 50V
C77	VJ839200	C.EL	2.2uF 50V
C78	VF467300	C.CE.TUBLR	0.01uF 16V
C79	VJ839200	C.EL	2.2uF 50V
C80	UA654100	C.MYLAR	0.01uF 50V
C81	UA654100	C.MYLAR	0.01uF 50V
C82	VJ839200	C.EL	2.2uF 50V
C83	VJ837200	C.EL	47uF 16V
C84	UM417100	C.EL	10uF 50V
C85	UA654470	C.MYLAR	0.047uF 50V
C86	UJ667470	C.EL	47uF 50V
C87	VF964800	C.EL	100uF 16V

\* New Parts

## INPUT P.C.B.

Schm Ref.	PART NO.	Description		
C88	UM417100	C.EL	10uF	50V
C89	UM417100	C.EL	10uF	50V
C90	UM417100	C.EL	10uF	50V
C91	UM417100	C.EL	10uF	50V
C92	UJ648220	C.EL	220uF	25V
C93	VJ839100	C.EL	1uF	50V
C94	UA654470	C.MYLAR	0.047uF	50V
C95	UA655100	C.MYLAR	0.1uF	50V
C96	UJ648220	C.EL	220uF	25V
C97	UM417100	C.EL	10uF	50V
C98	UM417100	C.EL	10uF	50V
C99	VJ839100	C.EL	1uF	50V
C100	UA654220	C.MYLAR	0.022uF	50V
C101	UM417100	C.EL	10uF	50V
C102	UM407220	C.EL	22uF	25V
C103	UA655470	C.MYLAR	0.47uF	50V
C104	UA655100	C.MYLAR	0.1uF	50V
C105	UA652680	C.MYLAR	680pF	50V
C106	UM417100	C.EL	10uF	50V
C107	UJ667470	C.EL	47uF	50V
C108	UJ667470	C.EL	47uF	50V
C109	UA652560	C.MYLAR	560pF	50V
C110	UM416470	C.EL	4.7uF	50V
C111	UA652680	C.MYLAR	680pF	50V
C112	UA653150	C.MYLAR	1500pF	50V
C113	FG212100	C.CE	100pF	50V
C115	VJ839000	C.EL	0.47uF	50V
C116	VJ839000	C.EL	0.47uF	50V
C117	UA655150	C.MYLAR	0.15uF	50V
C118	UA655150	C.MYLAR	0.15uF	50V
C119	UM416470	C.EL	4.7uF	50V
C120	UM416470	C.EL	4.7uF	50V
C121	UM216330	C.EL	3.3uF	50V
C122	UA655100	C.MYLAR	0.1uF	50V
C123	UA655100	C.MYLAR	0.1uF	50V
C124	UM416470	C.EL	4.7uF	50V
C125	UM416470	C.EL	4.7uF	50V
C126	UM216330	C.EL	3.3uF	50V
C127	VJ839000	C.EL	0.47uF	50V
C128	VJ839000	C.EL	0.47uF	50V
C129	UA655150	C.MYLAR	0.15uF	50V
C130	UA655150	C.MYLAR	0.15uF	50V
C131	VF964800	C.EL	100uF	16V
C132	FG212220	C.CE	220pF	50V
C139	VG289900	C.EL	2200uF	35V
C140	VJ839200	C.EL	2.2uF	50V
C141	UM417100	C.EL	10uF	50V
C142	VJ839100	C.EL	1uF	50V
C143	UM417100	C.EL	10uF	50V
C144	VJ402700	C.EL	0.33uF	50V
C145	UA654330	C.MYLAR	0.033uF	50V
C146	UA654270	C.MYLAR	0.027uF	50V
C147	UM215100	C.EL	0.1uF	50V

\* New Parts

Schm Ref.	PART NO.	Description		
C148	VJ839100	C.EL	1uF	50V
C149	VA761100	C.CE	27pF	50V
C150	VA760800	C.CE	15pF	50V
C151	UA653330	C.MYLAR	3300pF	50V
C152	UA653330	C.MYLAR	3300pF	50V
C153	UA653330	C.MYLAR	3300pF	50V
C154	VF964800	C.EL	100uF	16V
C155	VJ836900	C.EL	10uF	16V
C156	VJ836900	C.EL	10uF	16V
C157	UA654470	C.MYLAR	0.047uF	50V
C158	UA654470	C.MYLAR	0.047uF	50V
C159	VG289900	C.EL	2200uF	35V
C160	VH053100	C.CE.TUBLR	0.1uF	50V
C161	UM407220	C.EL	22uF	25V
C163	UA653820	C.MYLAR	8200pF	50V
C164	UA653470	C.MYLAR	4700pF	50V
C165	VF964800	C.EL	100uF	16V
C166	VH053100	C.CE.TUBLR	0.1uF	50V
C167	VH053100	C.CE.TUBLR	0.1uF	50V
C168	VH053100	C.CE.TUBLR	0.1uF	50V
C169	VF964800	C.EL	100uF	16V
C170	VE117600	C.EL	220uF	10V
C171	VH053100	C.CE.TUBLR	0.1uF	50V
C172	FG212100	C.CE	100pF	50V
C173	FG212100	C.CE	100pF	50V
C174	VJ839200	C.EL	2.2uF	50V
C176	VH053100	C.CE.TUBLR	0.1uF	50V
C177	UA652220	C.MYLAR	220pF	50V
C178	UA653100	C.MYLAR	1000pF	50V
C179	UA653300	C.MYLAR	3000pF	50V
C180	UA654100	C.MYLAR	0.01uF	50V
C181	UA653300	C.MYLAR	3000pF	50V
C182	UA654100	C.MYLAR	0.01uF	50V
C183	UA652220	C.MYLAR	220pF	50V
C184	UA653100	C.MYLAR	1000pF	50V
C185	VJ837200	C.EL	47uF	16V
C186	VJ836900	C.EL	10uF	16V
C187	VF466600	C.CE.TUBLR	10pF	50V
C188	VF466600	C.CE.TUBLR	10pF	50V
C189	VH053100	C.CE.TUBLR	0.1uF	50V
C190	VF964800	C.EL	100uF	16V
C191	FG212330	C.CE	330pF	50V
C192	UA653300	C.MYLAR	3000pF	50V
C193	UA653300	C.MYLAR	3000pF	50V
C194	FG212220	C.CE	220pF	50V
C195	VJ837200	C.EL	47uF	16V
C196	FG212120	C.CE	120pF	50V
C197	VJ837200	C.EL	47uF	16V
C198	UM417100	C.EL	10uF	50V
C199	VG279300	C.CE.TUBLR	1800pF	16V
C200	UM417100	C.EL	10uF	50V
C201	VH053100	C.CE.TUBLR	0.1uF	50V
C202	UK665470	C.EL	0.47uF	50V

\* New Parts



## INPUT P.C.B.

Schm Ref.	PART NO.	Description
C203	UK665470	C.EL 0.47uF 50V
C204	VF467100	C.CE.TUBLR 4700pF 16V
C205	VG278600	C.CE.TUBLR 330pF 50V
C206	UA654150	C.MYLAR 0.015uF 50V
C207	UM215100	C.EL 0.1uF 50V
C208	VF467300	C.CE.TUBLR 0.01uF 6V
C209	VJ839200	C.EL 2.2uF 50V
C210	VJ839200	C.EL 2.2uF 50V
C211	VJ839100	C.EL 1uF 50V
C217	FG212100	C.CE 100pF 50V
C218	UA652220	C.MYLAR 220pF 50V
C219	VJ837200	C.EL 47uF 16V
C220	VJ837200	C.EL 47uF 16V
C221	UA652220	C.MYLAR 220pF 50V
C222	FG211100	C.CE 10pF 50V
C224	VF466800	C.CE.TUBLR 100pF 50V
C225	UM407220	C.EL 22uF 25V
C226	UM417100	C.EL 10uF 50V
C227	UM417100	C.EL 10uF 50V
C228	UJ638470	C.EL 470uF 16V
C229	VG722100	C.EL 1uF 50V
C230	VH053100	C.CE.TUBLR 0.1uF 50V
C233	UM417100	C.EL 10uF 50V
C234	VJ837200	C.EL 47uF 16V
C235	VJ837200	C.EL 47uF 16V
C236	VH053100	C.CE.TUBLR 0.1uF 50V
C239	VH053100	C.CE.TUBLR 0.1uF 50V
C241	UA654100	C.MYLAR 0.01uF 50V
C242	VJ836900	C.EL 10uF 16V
C245	VH053100	C.CE.TUBLR 0.1uF 50V
C246	VF760000	C.EL 100uF 10V
D1	VD631600	DIODE 1SS133,176,HSS104
D2	VM975300	DIODE.ZENR HZS11B2TD 11V
D3	VM975300	DIODE.ZENR HZS11B2TD 11V
D4	VM975300	DIODE.ZENR HZS11B2TD 11V
D5	VM975300	DIODE.ZENR HZS11B2TD 11V
D6	VD631600	DIODE 1SS133,176,HSS104
D7	VD631600	DIODE 1SS133,176,HSS104
D8	VN008700	DIODE 1SS270A
D9	VD631600	DIODE 1SS133,176,HSS104
D10	VD631600	DIODE 1SS133,176,HSS104
D11	VM974100	DIODE.ZENR HZS5B2TD 5.0V
D12	VD631600	DIODE 1SS133,176,HSS104
D13	VD631600	DIODE 1SS133,176,HSS104
D14	VD631600	DIODE 1SS133,176,HSS104
D15	VD631600	DIODE 1SS133,176,HSS104
D16	VD631600	DIODE 1SS133,176,HSS104
D17	VD631600	DIODE 1SS133,176,HSS104
D18	VM976300	DIODE.ZENR HZS242TD24V
D19	VV731400	DIODE 2A02M
D20	VV731400	DIODE 2A02M
D21	VV731400	DIODE 2A02M
D22	VV731400	DIODE 2A02M

\* New Parts

Schm Ref.	PART NO.	Description
D23	VM975500	DIODE.ZENR HZS12A2TD 12V
D24	VG439100	DIODE.ZENR MTZJ9.1A 9.1V
D26	VD631600	DIODE 1SS133,176,HSS104
D27	VD631600	DIODE 1SS133,176,HSS104
D28	VS277600	DIODE.ZENR HZS3C2TD 3.0V
D29	VM974200	DIODE.ZENR HZS5C2TD 5.0V
IC1	XM356A00	IC NJM2068LD
IC2	XB247301	IC uPC4570HA
IC3	XP894A00	IC LC78211
* IC4	XP895A00	IC LC78212
IC5	iG105900	IC uPD4053BC
IC6	XS023A00	IC LA2786 DOLBY
IC7	XD386001	IC LA2730
IC8	XB247301	IC uPC4570HA
IC9	XQ212A00	IC NJM4558LD
IC10	XB247301	IC uPC4570HA
IC11	XB247301	IC uPC4570HA
IC12	XB247301	IC uPC4570HA
IC13	XS881A00	IC LH5P832D-10 PSRAM
* IC14	XH853B00	IC YSS205B-F/KP
IC15	XA507A00	IC AN78N05
IC16	XQ084A00	IC AN78N09
IC18	iG092000	IC M5220L
IC19	XG505A00	IC NJM79M15FA
IC20	XB247301	IC uPC4570HA
IC21	XF494A00	IC LB1641
IC22	XB247301	IC uPC4570HA
IC23	XB247301	IC uPC4570HA
L1	VP575600	COIL 1.5uH
L2	VP575600	COIL 1.5uH
L3	GE901850	COIL 39mH
L4	GE901850	COIL 39mH
L5	GE901850	COIL 39mH
L6	GE901850	COIL 39mH
L7	VB109600	COIL 220uH
PJ1	VN308700	JACK.PIN 6P
PJ2	VU857800	JACK.PIN 6P
PJ3	VR765100	JACK.PIN 2P
Q1	VP883100	TR 2SC1890A D,E
Q2	VP883100	TR 2SC1890A D,E
Q3	VP883000	TR 2SA893A D,E
Q4	VP872700	TR 2SC4488 S,T
Q5	VP872600	TR 2SA1708 S,T
Q6	iC224030	TR 2SC2240 GR,BL
Q7	VP872700	TR 2SC4488 S,T
Q8	iC174020	TR 2SC1740S R,S
Q9	VP872600	TR 2SA1708 S,T
Q10	VV855300	TR 2SD856 Q,P
Q11	VP883100	TR 2SC1890A D,E
Q12	VV855300	TR 2SD856 Q,P
Q13A	iX615750	TR 2SA1694 O,P,Y
Q13C	iX615760	TR 2SC4467 O,P,Y
Q14	VP883000	TR 2SA893A D,E

\* New Parts

INPUT P.C.B. & MAIN P.C.B.
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Schm Ref.	PART NO.	Description	
Q15	VP883100	TR	2SC1890A D,E
Q17	VP872700	TR	2SC4488 S,T
Q21	VK432900	TR	2SD1915F S,T
Q22	VK432900	TR	2SD1915F S,T
Q23	iC174020	TR	2SC1740S R,S
R51	HV454100	R.CAR.FP	10Ω 1/4W
R53	HL314680	R.MTL.OXD	68Ω 1/4W
R58	HV455470	R.CAR.FP	470Ω 1/4W
R62	HV455470	R.CAR.FP	470Ω 1/4W
R63	VK188600	R.FUS	470Ω 1/4W
R67	HV455330	R.CAR.FP	330Ω 1/4W
R73	HV455120	R.CAR.FP	120Ω 1/4W
R74	HV455100	R.CAR.FP	100Ω 1/4W
R75	HV453470	R.CAR.FP	4.7Ω 1/4W
R76	HV456270	R.CAR.FP	2.7KΩ 1/4W
R77	HV455470	R.CAR.FP	470Ω 1/4W
R78	HV456820	R.CAR.FP	8.2KΩ 1/4W
R79	HV453470	R.CAR.FP	4.7Ω 1/4W
R80	HV456150	R.CAR.FP	1.5KΩ 1/4W
R81	HV456150	R.CAR.FP	1.5KΩ 1/4W
R82	VE869300	R.MTL.OXD	0.1Ω 2W
R83	HV454470	R.CAR.FP	47Ω 1/4W
R84	HV454220	R.CAR.FP	22Ω 1/4W
R88	HV457100	R.CAR.FP	10KΩ 1/4W
R91	VU981700	R.MTL.PLAT	0.22Ω+0.22 3W
R92	HV454100	R.CAR.FP	10Ω 1/4W
R110	HV454100	R.CAR.FP	10Ω 1/4W
R119	HV454470	R.CAR.FP	47Ω 1/4W
R120	HV454470	R.CAR.FP	47Ω 1/4W
R121	HL425820	R.MTL.OXD	820Ω 2W
R122	HV454100	R.CAR.FP	10Ω 1/4W
R123	HV454470	R.CAR.FP	47Ω 1/4W
R124	HV454100	R.CAR.FP	10Ω 1/4W
R130	HV454470	R.CAR.FP	47Ω 1/4W
R159	HV456270	R.CAR.FP	2.7KΩ 1/4W
R161	HV453220	R.CAR.FP	2.2Ω 1/4W
R162	HL314470	R.MTL.OXD	47Ω 1W
R163	HV453220	R.CAR.FP	2.2Ω 1/4W
R164	HV453470	R.CAR.FP	4.7Ω 1/4W
R210	HV455100	R.CAR.FP	100Ω 1/4W
R212	HV455100	R.CAR.FP	100Ω 1/4W
R213	HV455100	R.CAR.FP	100Ω 1/4W
R215	HV455100	R.CAR.FP	100Ω 1/4W
R216	HV454100	R.CAR.FP	10Ω 1/4W
R217	HV454100	R.CAR.FP	10Ω 1/4W
R220	HL314680	R.MTL.OXD	68Ω 1W
R221	HL314680	R.MTL.OXD	68Ω 1W
R224	HV453470	R.CAR.FP	4.7Ω 1/4W
R225	HV453470	R.CAR.FP	4.7Ω 1/4W
R234	HV454270	R.CAR.FP	27Ω 1/4W
RY1	VK438300	RELAY	DH24D2-OT/M2
TE1	VS349400	TERM.SP	6P
* VR1	VZ260700	VR.MTR	RK16814MG 100KAx4

\* New Parts

Schm Ref.	PART NO.	Description	
XL1	VJ719800	RSNR.CRYS	16.9344MHz
	VJ828000	PIN	IMSA-6024-03E
	BB071360	SCR.TERM	8.3x13
* * *	VY885200	P.C.B.	MAIN(U)
	VY885300	P.C.B.	MAIN(RT)
	VY885400	P.C.B.	MAIN(L)
CB101	VF728300	CN	6P
CB102	VF728200	CN.BS.PIN	10P
CB103	VS839400	CN.BS.PIN	4P
CB104	VS839500	CN	4P
CB105	VG879900	CN.BS.PIN	2P
CB107	Vi878600	CN.BS.PIN	8P
CB108	VR428900	CN.BS.PIN	4P
CB109	VR428900	CN.BS.PIN	4P
CB111	VP206500	HOLDER.FUS	EYF-52BC
CB112	VP206500	HOLDER.FUS	EYF-52BC
CB113	VP206500	HOLDER.FUS	EYF-52BC(L)
CB114	VP206500	HOLDER.FUS	EYF-52BC(L)
CB115	VP206500	HOLDER.FUS	EYF-52BC(RT)
CB116	VP206500	HOLDER.FUS	EYF-52BC(RT)
CB117	VQ584900	CN.BS.PIN	7P
CB118	VQ584900	CN.BS.PIN	7P
CB120	VD004700	CN.BS.PIN	4P
C101	UM416470	C.EL	4.7uF 50V
C102	UM416470	C.EL	4.7uF 50V
C103	UA652100	C.MYLAR	100pF 50V
C104	UA652100	C.MYLAR	100pF 50V
C105	FG212100	C.CE	100pF 50V
C106	FG212100	C.CE	100pF 50V
C107	UA653100	C.MYLAR	1000pF 50V
C108	UA653100	C.MYLAR	1000pF 50V
C109	VJ837200	C.EL	47uF 16V
C110	VJ837200	C.EL	47uF 16V
C111	VR516400	C.CE	15p 500V
C112	VR516400	C.CE	15p 500V
C113	UJ667470	C.EL	47uF 50V
C114	UJ667470	C.EL	47uF 50V
C115	VG291200	C.EL	47uF 50V
C116	VG291200	C.EL	47uF 50V
C117	VR325000	C.MYLAR	100pF 100V
C118	VR325000	C.MYLAR	100pF 100V
C119	VR325000	C.MYLAR	100pF 100V
C120	VR325000	C.MYLAR	100pF 100V
C121	UA654820	C.MYLAR	0.082uF 50V
C122	UA654820	C.MYLAR	0.082uF 50V
C123	UA655100	C.MYLAR	0.1uF 50V
C124	UA655100	C.MYLAR	0.1uF 50V
C125	UA654220	C.MYLAR	0.022uF 50V
C126	UA654220	C.MYLAR	0.022uF 50V
C127	UA652100	C.MYLAR	100pF 50V

\* New Parts

## MAIN P.C.B.

Schm Ref.	PART NO.	Description		Schm Ref.	PART NO.	Description
C128	VS741700	C.CE.SAFTY	0.01uF 275V	Q104	VP883000	TR 2SA893A D,E
C129	VK182500	C.EL	330uF 63V	Q105	VR325600	TR 2SC2229 O,Y
C131	UM416470	C.EL	4.7uF 50V	Q106	VR325600	TR 2SC2229 O,Y
C133	VC815000	C.EL	220uF 6.3V	Q107	iC174020	TR 2SC1740S R,S
C134	UM416470	C.EL	4.7uF 50V	Q108	iC174020	TR 2SC1740S R,S
C135	UM416470	C.EL	4.7uF 50V	Q109	VP872700	TR 2SC4488 S,T
C136	Vi846000	C.EL	22uF 63V	Q110	VP872700	TR 2SC4488 S,T
C137	UM416470	C.EL	4.7uF 50V	Q111	VP872600	TR 2SA1708 S,T
C138	UJ667470	C.EL	47uF 50V	Q112	VP872600	TR 2SA1708 S,T
C139	UJ667470	C.EL	47uF 50V	Q113	VP883100	TR 2SC1890A D,E
C140	VV951800	C.EL	6800uF 56V	Q114	VP883100	TR 2SC1890A D,E
C141	VV951800	C.EL	6800uF 56V	Q115	VP883000	TR 2SA893A D,E
C142	VR325400	C.MYLAR	0.1uF 100V	Q116	iC174020	TR 2SC1740S R,S
C143	VR325400	C.MYLAR	0.1uF 100V	Q117	iC174020	TR 2SC1740S R,S
C144	UA653100	C.MYLAR	1000pF 50V	Q118	iC287820	TR 2SC2878 A,B
C145	FG214100	C.CE	0.01uF 50V	Q119	iC174020	TR 2SC1740S R,S
C146	UA653100	C.MYLAR	1000pF 50V	Q120	iA101521	TR 2SA1015 Y
C147	UA654100	C.MYLAR	0.01uF 50V	Q121	VN996900	TR 2SC4495
C149	Ui377470	C.EL	47uF 63V(RT)	Q122	iC174020	TR 2SC1740S R,S
C149	VK457600	C.EL	330uF 25V(UL)	Q123	VP768300	TR 2SC4466 O,P,Y(RT)
C150	UJ648220	C.EL	220uF 25V(RT)	Q124	VP883100	TR 2SC1890A D,E(RT)
C151	VJ836900	C.EL	10uF 16V(RT)	Q127	VG722000	TR.DGT DTC144ES
C164	UM416470	C.EL	4.7uF 50V	Q128	VR402300	TR 2SB647 C,D
C165	UK665470	C.EL	0.47uF 50V	Q129A	IX615750	TR 2SA1694 O,P,Y
D101	VN008700	DIODE	1SS270A	Q129C	IX615760	TR 2SC4467 O,P,Y
D102	VN008700	DIODE	1SS270A	Q130A	IX615750	TR 2SA1694 O,P,Y
D105	VR253700	DIODE.BRG	S1NB20 1.0A 200V(RT)	Q130C	IX615760	TR 2SC4467 O,P,Y
D106	VM976300	DIODE.ZENR	HZS242TD 24V	Q133	IE000020	FET 2SK30ATM GR
D107	VM976300	DIODE.ZENR	HZS242TD 24V	R113	HV454470	R.CAR.FP 47Ω 1/4W
D108	VS997800	DIODE	1T2	R114	HV454470	R.CAR.FP 47Ω 1/4W
D109	VM975900	DIODE.ZENR	HZS162TD 16V	R127	HV456270	R.CAR.FP 2.7KΩ 1/4W
D110	VM975800	DIODE.ZENR	HZS152TD 15V	R128	HV456270	R.CAR.FP 2.7KΩ 1/4W
D111	iH001090	DIODE.BRG	S4VB20 2.6A 200V	R131	HV456100	R.CAR.FP 1KΩ 1/4W
D112	VD631600	DIODE	1SS133,176,HSS104	R132	HV456100	R.CAR.FP 1KΩ 1/4W
D113	VS997800	DIODE	1T2(UL)	R133	HV453470	R.CAR.FP 4.7Ω 1/4W
D114	VM975500	DIODE.ZENR	HZS12A2TD 12V(RT)	R134	HV453470	R.CAR.FP 4.7Ω 1/4W
D117	VD631600	DIODE	1SS133,176,HSS104	R135	HV453470	R.CAR.FP 4.7Ω 1/4W
F101	KB001660	FUSE	T1.60A 250V(L)	R136	HV453470	R.CAR.FP 4.7Ω 1/4W
F101	VS823000	FUSE	T5.0A 125V(URT)	R137	VU981700	R.MTL.PLAT 0.22Ω+0.22 3W
F102	KB000690	FUSE	T2.5A 250V(L)	R138	VU981700	R.MTL.PLAT 0.22Ω+0.22 3W
F103	KB001660	FUSE	T1.60A 250V(RT)	R145	HL314100	R.MTL.OXD 10Ω 1W
FR101	VK188400	R.FUS	330Ω 1/4W	R146	HL314100	R.MTL.OXD 10Ω 1W
FR102	VK188400	R.FUS	330Ω 1/4W	R151	HV454100	R.CAR.FP 10Ω 1/4W
FR103	VK189000	R.FUS	1KΩ 1/4W	R152	HV454100	R.CAR.FP 10Ω 1/4W
FR104	VK189000	R.FUS	1KΩ 1/4W	R159	HL315330	R.MTL.OXD 330Ω 1W
JK101	VZ458100	JACK.PHONE	JY-6317-02-030GD	R160	HL315330	R.MTL.OXD 330Ω 1W
JK102	VU543100	OUTLET.AC	2P(URT)	R163	HL314470	R.MTL.OXD 47Ω 1W
JK102	VU543400	OUTLET.AC	2P(L)	R171	HL315680	R.MTL.OXD 680Ω 1W
L103	VP575600	COIL	1.5uH	R173	HV456100	R.CAR.FP 1KΩ 1/4W
L104	VP575600	COIL	1.5uH	R177	HV453100	R.CAR.FP 1Ω 1/4W
Q101	VP883000	TR	2SA893A D,E	R178	HV454100	R.CAR.FP 10Ω 1/4W
Q102	VP883000	TR	2SA893A D,E	R179	HV457100	R.CAR.FP 10KΩ 1/4W
Q103	VP883000	TR	2SA893A D,E	R189	HL315680	R.MTL.OXD 680Ω 1W

\* New Parts

\* New Parts

MAIN P.C.B. & OPERATION P.C.B.
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Schm Ref.	PART NO.	Description
⚠	R196	HV455100 R.CAR.FP 100Ω 1/4W
⚠	RY101	VK438300 RELAY DH24D2-OT/M2
⚠	RY102	VU398500 RELAY DC LK1AF-12V(UL)
⚠	RY102	VY735300 RELAY DC G5P-1(RT)
⚠	SW101	VV523900 SW.PUSH PBS-YM-001
⚠	SW102	VA961800 VOLT.SELCT ESE-37247-F(RT)
⚠	SW103	VZ361100 SW.SLIDE SL13B-022-AMC1
⚠	T101	XQ485B00 TRANS.PWR (U)
⚠	T101	XQ486B00 TRANS.PWR (L)
⚠	T101	XT331A00 TRANS.PWR (RT)
⚠	TE101	VC313700 TERM.SP 8P(URT)
⚠	TE101	VU819700 TERM.SP 8P(L)
	VJ828000	PIN IMSA-6024-03E
	BB071360	SCR.TERM 8.3x13
	VR264300	PLATE.GND
	VP753100	HEAT.SINK IC-1625-MML
	Ei330166	SCR.BND.HD 3x16 FCRM3-BL
	VY834500	SUPRT (RTL)
*	VY884900	P.C.B. OPERATION(U)
*	VY885000	P.C.B. OPERATION(RT)
*	VY885100	P.C.B. OPERATION(L)
*	CB301	Vi878800 CN.BS.PIN 10P
	CB302	VK026200 CN.BS.PIN 3P
	CB303	VU282900 CN 29P
	CB304	VQ044100 CN.BS.PIN 5P
	CB305	VQ046900 CN.BS.PIN 5P
	CB306	VQ963400 CN.BS.PIN 13P
	CB308	Vi879200 CN.BS.PIN 14P
	CB309	Vi878400 CN.BS.PIN 6P
	CB311	Vi878000 CN.BS.PIN 2P
	CB312	Vi878000 CN.BS.PIN 2P
	C301	VF466800 C.CE.TUBLR 100pF 50V
	C302	VF466800 C.CE.TUBLR 100pF 50V
	C303	VJ839100 C.EL 1uF 50V
	C304	VJ836900 C.EL 10uF 16V
	C305	VJ837200 C.EL 47uF 16V
	C306	VF637900 C.EL 1000uF 10V
	C307	FG251220 C.CE 22pF 50V
	C308	VJ836900 C.EL 10uF 16V
	C309	VF637900 C.EL 1000uF 10V
	C310	VJ836900 C.EL 10uF 16V
	C311	VU545000 C.EL 47000uF 5.5V
	C312	VH053100 C.CE.TUBLR 0.1uF 50V
	C313	VJ839100 C.EL 1uF 50V
	C314	UJ638330 C.EL 330uF 16V
	C315	VH053100 C.CE.TUBLR 0.1uF 50V
	C316	VH053100 C.CE.TUBLR 0.1uF 50V
	C317	UJ638470 C.EL 470uF 16V
	C318	VF467000 C.CE.TUBLR 1000pF 50V
	C319	VF467300 C.CE.TUBLR 0.01uF 16V

\* New Parts

Schm Ref.	PART NO.	Description
C320	VF467300	C.CE.TUBLR 0.01uF 16V
C321	VH053100	C.CE.TUBLR 0.1uF 50V
C322	UM417100	C.EL 10uF 50V
C323	VG278400	C.CE.TUBLR 220pF 50V
C324	VG279400	C.CE.TUBLR 2200pF 16V
C325	VG278100	C.CE.TUBLR 120pF 50V
C326	UM416470	C.EL 4.7uF 50V
C327	UM416470	C.EL 4.7uF 50V
C328	VG278100	C.CE.TUBLR 120pF 50V
C329	VG279400	C.CE.TUBLR 2200pF 16V
C330	VG278400	C.CE.TUBLR 220pF 50V
C331	UM417100	C.EL 10uF 50V
C332	UM417100	C.EL 10uF 50V
C333	UM417100	C.EL 10uF 50V
C334	UM417100	C.EL 10uF 50V
C335	UM417100	C.EL 10uF 50V
C336	UA652220	C.MYLAR 220pF 50V
C337	UA652220	C.MYLAR 220pF 50V
C338	UA652100	C.MYLAR 100pF 50V
C339	VJ839000	C.EL 0.47uF 50V
C340	UM417100	C.EL 10uF 50V
C341	UA652100	C.MYLAR 100pF 50V
C342	UM416470	C.EL 4.7uF 50V
C343	UM416470	C.EL 4.7uF 50V
C344	UM417100	C.EL 10uF 50V
C345	UA652100	C.MYLAR 100pF 50V
C346	UA652100	C.MYLAR 100pF 50V
C347	VJ839000	C.EL 0.47uF 50V
C348	UM407220	C.EL 22uF 25V
C349	UA655120	C.MYLAR 0.12uF 50V
C350	UA654330	C.MYLAR 0.033uF 50V
C351	UA654330	C.MYLAR 0.033uF 50V
C352	UA655120	C.MYLAR 0.12uF 50V
C353	UM407220	C.EL 22uF 25V
C355	VH053100	C.CE.TUBLR 0.1uF 50V
C356	VH053100	C.CE.TUBLR 0.1uF 50V
C357	VH053100	C.CE.TUBLR 0.1uF 50V
D301	VM974600	DIODE.ZENR HZS7A2TD 7.0V
D302	VM974200	DIODE.ZENR HZS5C2TD 5.0V
D303	VD631600	DIODE 1SS133,176,HSS104
D304	VD631600	DIODE 1SS133,176,HSS104
D305	VD631600	DIODE 1SS133,176,HSS104
D306	VD631600	DIODE 1SS133,176,HSS104
D307	VD631600	DIODE 1SS133,176,HSS104
D308	VS132300	LED(re) SLR-325VCT31(RTL)
D310	VM974100	DIODE.ZENR HZS5B2TD 5.0V
D311	VD631600	DIODE 1SS133,176,HSS104
D312	VD631600	DIODE 1SS133,176,HSS104
D313	VD631600	DIODE 1SS133,176,HSS104
D314	VD631600	DIODE 1SS133,176,HSS104
D315	VD631600	DIODE 1SS133,176,HSS104
D316	VD631600	DIODE 1SS133,176,HSS104
D317	VD631600	DIODE 1SS133,176,HSS104

\* New Parts

OPERATION P.C.B. & TUNER P.C.B.
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Schm Ref.	PART NO.	Description	
D318	VD631600	DIODE	1SS133,176,HSS104
D319	VD631600	DIODE	1SS133,176,HSS104
D320	VM974300	DIODE.ZENR	HZS6A2TD 6.0V
G301	VR463400	TERM.GND	D3.5 TP00385
IC301	XH436A00	IC	LA7956
* IC302	XT648A00	IC	M38179M6-381FP
IC303	XM356A00	IC	NJM2068LD
IC304	XM356A00	IC	NJM2068LD
* JK301	VZ087600	JACK.PHONE	LGR6517-1703
* JK302	VZ087600	JACK.PHONE	LGR6517-1703
PJ301	VR110100	JACK.PIN	2P
PJ302	VR110100	JACK.PIN	2P
Q301	iC174020	TR	2SC1740S R,S
Q302	iA093320	TR	2SA933S Q,R
Q303	iA101521	TR	2SA1015 Y
Q304	iC1815C0	TR	2SC1815 Y
Q305	iC174020	TR	2SC1740S R,S
Q306	iC174020	TR	2SC1740S R,S(RTL)
Q307	VD678500	TR.DGT	DTA114ES
Q308	VG722000	TR.DGT	DTC144ES
Q309	VG722000	TR.DGT	DTC144ES
Q310	VG722000	TR.DGT	DTC144ES
Q313	VD678500	TR.DGT	DTA114ES
Q314	VD678500	TR.DGT	DTA114ES
Q315	VK432900	TR	2SD1915F S,T
Q316	VK432900	TR	2SD1915F S,T
R334	HV454470	R.CAR.FP	47Ω 1/4W
R369	HV455100	R.CAR.FP	100Ω 1/4W
R370	HV455100	R.CAR.FP	100Ω 1/4W
R379	HV455100	R.CAR.FP	100Ω 1/4W
R386	HV455100	R.CAR.FP	100Ω 1/4W
SW301	VG392900	SW.TACT	SKHVAA
SW302	VG392900	SW.TACT	SKHVAA
SW303	VG392900	SW.TACT	SKHVAA
SW304	VG392900	SW.TACT	SKHVAA
SW305	VG392900	SW.TACT	SKHVAA
SW306	VG392900	SW.TACT	SKHVAA
SW307	VG392900	SW.TACT	SKHVAA
SW308	VG392900	SW.TACT	SKHVAA
SW309	VG392900	SW.TACT	SKHVAA
SW310	VG392900	SW.TACT	SKHVAA
SW311	VG392900	SW.TACT	SKHVAA
SW312	VG392900	SW.TACT	SKHVAA
SW313	VG392900	SW.TACT	SKHVAA
SW314	VG392900	SW.TACT	SKHVAA
SW315	VG392900	SW.TACT	SKHVAA
SW316	VG392900	SW.TACT	SKHVAA
SW317	VG392900	SW.TACT	SKHVAA
SW318	VG392900	SW.TACT	SKHVAA
SW319	VG392900	SW.TACT	SKHVAA
SW320	VG392900	SW.TACT	SKHVAA
SW321	VG392900	SW.TACT	SKHVAA
SW322	VG392900	SW.TACT	SKHVAA

\* New Parts

Schm Ref.	PART NO.	Description	
SW323	VG392900	SW.TACT	SKHVAA
SW324	VG392900	SW.TACT	SKHVAA
SW325	VG392900	SW.TACT	SKHVAA
SW326	VG392900	SW.TACT	SKHVAA
SW327	VG392900	SW.TACT	SKHVAA
SW328	VG392900	SW.TACT	SKHVAA
SW329	VG392900	SW.TACT	SKHVAA
SW330	VG392900	SW.TACT	SKHVAA
SW331	VG392900	SW.TACT	SKHVAA
SW332	VG392900	SW.TACT	SKHVAA
SW333	VG392900	SW.TACT	SKHVAA
SW334	VG392900	SW.TACT	SKHVAA
SW335	VG392900	SW.TACT	SKHVAA
SW336	VG392900	SW.TACT	SKHVAA
SW337	VG392900	SW.TACT	SKHVAA
U301	VU591000	L.DTCT	GP1U271X
* V301	VV485300	FL.DSPLY	13-BT-148GK
* VR301	VV887200	VR	A10KΩ
VR302	VZ517100	VR	B50KΩ
* VR303	VV887200	VR	A10KΩ
VR304	VZ517100	VR	B50K Ω
VR305	VP741800	VR	B20KΩ
VR306	VP741900	VR	G25KΩ
VR309	VP742000	VR	MN100KΩ
XL301	VR891500	RSNR.CE	6.30MHz
	VJ828000	PIN	IMSA-6024-03E
	VQ859800	SHEET.FL	
	VV499900	SPACER	FL-T7.5
	VZ180600	PLATE	
	VR341800	P.C.B.	TUNER(U)
	VR341900	P.C.B.	TUNER(RT)
	VR342000	P.C.B.	TUNER(L)
CB1	VR428700	CN.BS.PIN	2P
CB2	VR428700	CN.BS.PIN	2P
CB4	VQ961800	CN.BS.PIN	15P
C1	UJ638330	C.EL	330uF 16V
C2	VG280100	C.CE.TUBLR	0.022uF 25V
C3	VJ599000	C.CE.TUBLR	0.047uF 16V
C4	VJ836900	C.EL	10uF 16V
C5	VF467300	C.CE.TUBLR	0.01uF 16V
C6	VF964800	C.EL	100uF 16V
C7	VJ839100	C.EL	1uF 50V
C8	VF467300	C.CE.TUBLR	0.01uF 16V
C9	VF467300	C.CE.TUBLR	0.01uF 16V
C10	VF467300	C.CE.TUBLR	0.01uF 16V
C11	VF467000	C.CE.TUBLR	1000pF 50V
C12	VJ836900	C.EL	10uF 16V
C13	VJ836900	C.EL	10uF 16V
C14	VF467000	C.CE.TUBLR	1000pF 50V
C15	VF467000	C.CE.TUBLR	1000pF 50V

\* New Parts

TUNER P.C.B
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Schm Ref.	PART NO.	Description
C16	VF466700	C.CE.TUBLR 47pF 50V
C17	VF964800	C.EL 100uF 16V
C18	UA655100	C.MYLAR 0.1uF 50V
C19	VA761200	C.CE 33pF 50V
C20	VJ836900	C.EL 10uF 16V
C21	VF466800	C.CE.TUBLR 100pF 50V
C22	VJ839200	C.EL 2.2uF 50V
C23	VF467300	C.CE.TUBLR 0.01uF 16V
C24	UM416470	C.EL 4.7uF 50V
C25	UM216330	C.EL 3.3uF 50V
C26	VJ836900	C.EL 10uF 16V
C27	VF467300	C.CE.TUBLR 0.01uF 16V
C28	VA761200	C.CE 33pF 50V
C29	VJ839100	C.EL 1uF 50V
C30	VJ839100	C.EL 1uF 50V
C31	VJ836900	C.EL 10uF 16V
C32	VJ839000	C.EL 0.47uF 50V
C33	VJ839100	C.EL 1uF 50V
C34	UA654470	C.MYLAR 0.047uF 50V
C35	VD916400	C.EL 2.2uF 50V
C36	UA652470	C.MYLAR 470pF 50V(L)
C36	UA652680	C.MYLAR 680pF 50V(URT)
C37	UA652470	C.MYLAR 470pF 50V(L)
C37	UA652680	C.MYLAR 680pF 50V(URT)
C38	VF466900	C.CE.TUBLR 470pF 50V
C39	VJ836900	C.EL 10uF 16V
C40	UM216330	C.EL 3.3uF 50V
C41	UA653390	C.MYLAR 3900pF 50V
C42	VJ836900	C.EL 10uF 16V
C43	UA653390	C.MYLAR 3900pF 50V
C44	UM216330	C.EL 3.3uF 50V
C49	VJ599000	C.CE.TUBLR 0.047uF 16V
C68	VJ836900	C.EL 10uF 16V
C69	VJ836900	C.EL 10uF 16V
D1	VD631600	DIODE 1SS133,176,HSS104
D2	VD631600	DIODE 1SS133,176,HSS104
D3	VM974500	DIODE.ZENR HZS6C2TD 6.0V
Fi1	GG000560	FLTR.CE SFE10.7MS3GHY-A
Fi2	GG000560	FLTR.CE SFE10.7MS3GHY-A
Fi3	VC219000	FLTR.CE SFZ450JL3
IC1	XB760A00	IC LA1266
IC2	XB818A00	IC LM7000N
IC3	iG158100	IC LA3401
L1	Vi546100	COIL 220uH
L2	Vi546100	COIL 220uH
L3	Vi546100	COIL 220uH
PK1	VR242200	TUNER.PK EXV-17296G1
PK2	Vi027300	COILPAK.AM
Q1	iC053540	TR 2SC535 A,B,C
Q2	VC218900	TR 2SC3330 R,S,T
Q3	VC218900	TR 2SC3330 R,S,T
Q4	iC053540	TR 2SC535 A,B,C
Q5	VC218700	TR 2SA1317 R,S,T

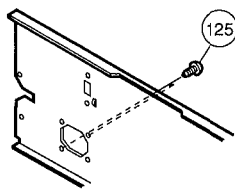
\* New Parts

Schm Ref.	PART NO.	Description
Q6	VC218900	TR 2SC3330 R,S,T
Q7	iC1815C0	TR 2SC1815 Y
SW1	VF541200	SW.SLIDE SSSF11(RT)
T1	VC218600	COIL.DT.FM 10.7MHz
T2	GE100470	COIL.IF.AM 450KHz
T4	VQ138200	FLTR.LC 19KHz
T5	VQ138200	FLTR.LC 19KHz
TE1	LA005800	TERM.ANT YKD31-0215
TP1	VT969000	PIN.TEST IRS-2049
TP2	VT969000	PIN.TEST IRS-2049
VR1	VJ694000	VR.TRIM B47KΩ
VR2	VJ694000	VR.TRIM B47KΩ
XL1	QU003800	RSNR.CRYST 7.2MHz
XL2	GG000750	RSNR.CE 18.95KHz
	BB071360	SCR.TERM 8.3x13
	VR282500	PLATE ANT.

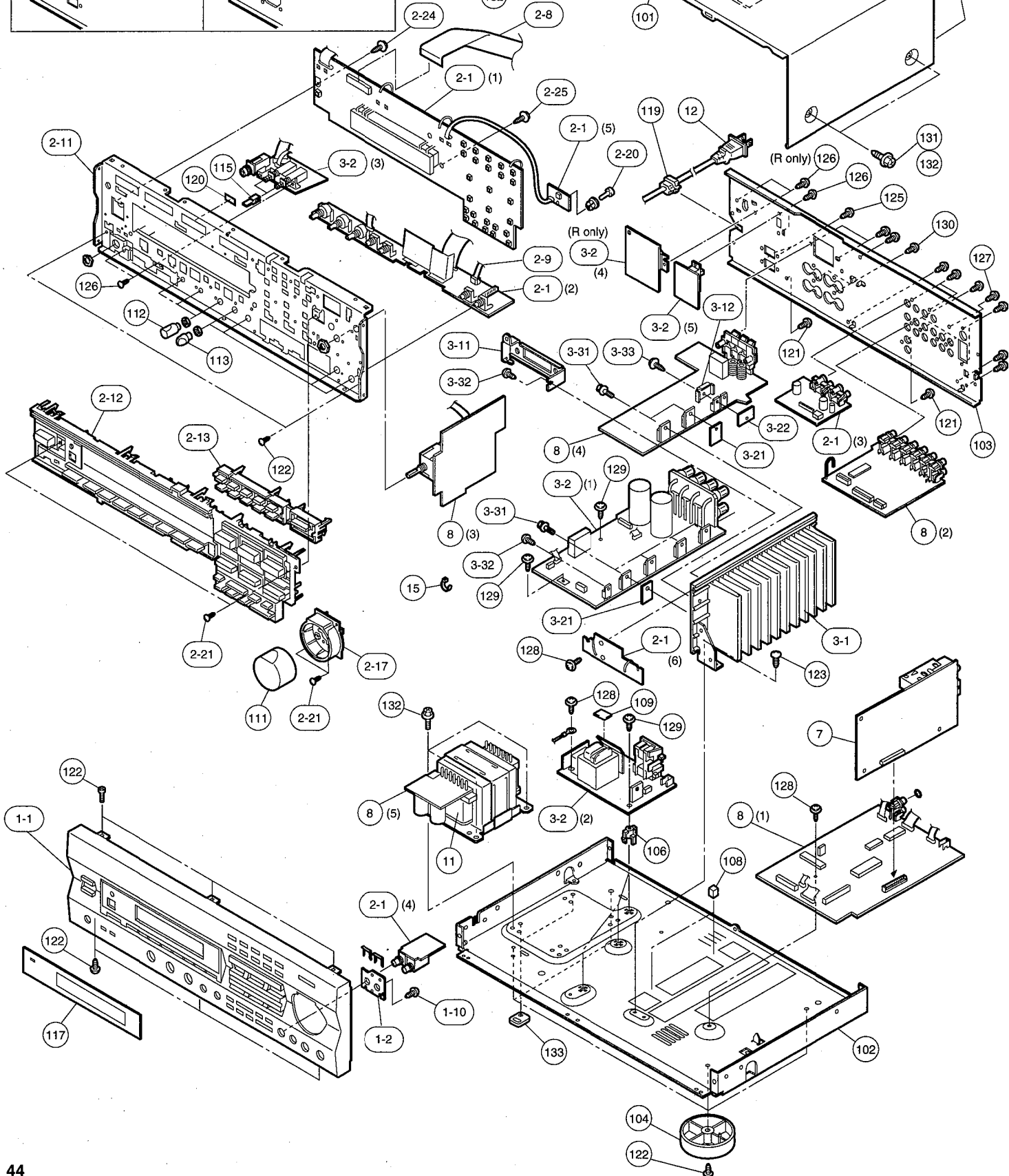
\* New Parts

## 1

L model



2



3

4

5

# MECHANICAL PARTS

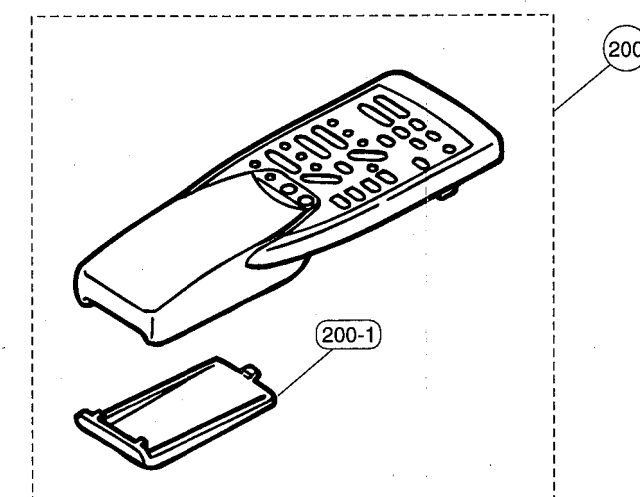
Ref. No.	PART NO.	Description	Remarks	Markets
* 1-1	VV139100	FRONT PANEL	RX-V300K BL	
* 1-1	VV139200	FRONT PANEL	R-V302K GL	
* 1-1	VY649600	FRONT PANEL	R-V302K BL	
* 1-2	VV141100	BRACKET, VR		
1-10	EP600290	BIND HEAD P-TITE SCREW	3x6 ZMC2-Y	
* 2-1	VY884900	P.C.B. ASS'Y	OPERATION	(U)
* 2-1	VY885000	P.C.B. ASS'Y	OPERATION	(RT)
* 2-1	VY885100	P.C.B. ASS'Y	OPERATION	(L)
* 2-8	MF129450	FLEXIBLE FLAT CABLE	29P 450mm	
* 2-9	MF205120	S FLEXIBLE FLAT CABLE C&C	5P 120mm	
* 2-11	VV140900	SUB CHASSIS	130	
2-12	VV136700	BUTTON CASE		BL
* 2-12	VV317300	BUTTON CASE		GL
2-13	VV137500	BUTTON, DSP		BL
* 2-13	VV311700	BUTTON, DSP		GL
2-17	VV149500	ESCUTCHEON, VOL		BL
2-17	VZ031500	ESCUTCHEON, VOL		GL
2-20	VQ368500	PUSH RIVET	P3545-B	
2-21	E i 330086	BIND HEAD B-TITE SCREW	3x8 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	VV899700	HEAT SINK ASS'Y		
* 3-2	VY885200	P.C.B. ASS'Y	MAIN	(U)
* 3-2	VY885300	P.C.B. ASS'Y	MAIN	(RT)
* 3-2	VY885400	P.C.B. ASS'Y	MAIN	(L)
3-11	VV491300	SUPPORT, PCB		
3-12	VV901900	SUPPORT, TR		
3-21	VK195900	RADIATION SHEET	19x24	
3-22	VV901800	RADIATION SHEET		
3-31	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
3-32	E i 330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
3-33	VT669400	PW HEAD B-TITE SCREW	3x15-8 MFC2	
7	VR341800	P.C.B. ASS'Y	TUNER	(U)
7	VR341900	P.C.B. ASS'Y	TUNER	(RT)
7	VR342000	P.C.B. ASS'Y	TUNER	(L)
* 8	VY885500	P.C.B. ASS'Y	INPUT	
* 11	XT696A00	POWER TRANSFORMER		(U)
* 11	XT697A00	POWER TRANSFORMER		(RT)
* 11	XT698A00	POWER TRANSFORMER		(L)
* 12	VL238100	POWER CORD ASS'Y		(R)
* 12	VN363700	POWER CORD ASS'Y		(L)
* 12	VV437200	POWER CORD ASS'Y		(U)
* 12	VZ542500	POWER CORD ASS'Y		(T)
15	VU590000	BINDING TIE	CBTD001B	
101	VV140400	TOP COVER		BL
* 101	VV140600	TOP COVER		GL
102	VQ794000	CHASSIS		
* 103	VV147400	REAR PANEL	RX-V300K	(U)
* 103	VV147600	REAR PANEL	RX-V300K	(RT)
* 103	VV147800	REAR PANEL	RX-V300K	(L)
* 103	VY662100	REAR PANEL	R-V302K	(RT)
104	VS025000	LEG	D60xH21	
104	VV544600	LEG	D60xH21	

\* New Parts

Ref. No.	PART NO.	Description	Remarks	Markets
106	VR264400	SPACER	H8	
108	VQ366100	DAMPER, PCB		
109	VZ319700	STOPPER	SCREW	
111	VV148800	KNOB	D40	BL
* 111	VV149000	KNOB	D40	GL
* 112	VV310900	KNOB	D14	GL
112	VV311000	KNOB	D14	BL
113	VR308400	KNOB, VR	D10	BL
* 113	VV795300	KNOB, VR		GL
115	VV123500	BUTTON, 3/8		BL
* 115	VV311600	BUTTON, 3/8		GL
117	VV139900	SHEET, WINDOW		
117	VV140000	SHEET, WINDOW		
119	VN158600	CORD STOPPER	No.2104	
120	VV259300	SPACER		
121	EN301010	BIND HEAD BONDING TAP SCREW	3x8 FCRM3-BL	
122	E i 330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
123	E i 030046	BIND HEAD TAPPING SCREW	3x4 ZMC2-Y	
125	E i 030086	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y	
126	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
127	VS997700	BIND HEAD S-TITE SCREW	3x10 MFNI33	
128	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
129	VT669400	PW HEAD B-TITE SCREW	3x15-8 MFC2	
130	VY731200	BONDING HEAD TAPPING SCREW	3x10 MFNI33	
131	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	
132	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	
133	VY731400	DAMPER	HOLE	
		ACCESSORIES		
* 200	VV486500	REMOTE CONTROL TRANSMITTER		
200-1	CX679050	LID	74x34BLALPS	
	VQ147100	ANTENNA, FM	1P 1.4m	
	VR248500	ANTENNA, AM LOOP	1P 1.0m	
	VT948000	ANTENNA ADAPTER		
		BATTERY, MANGANESE	SUM-3,AA,R06	(U)

\* New Parts

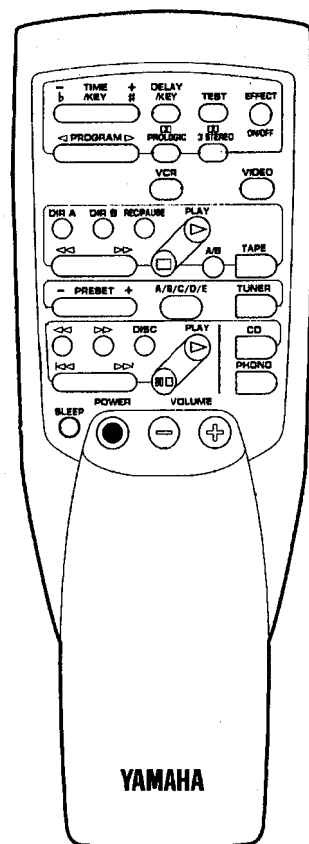
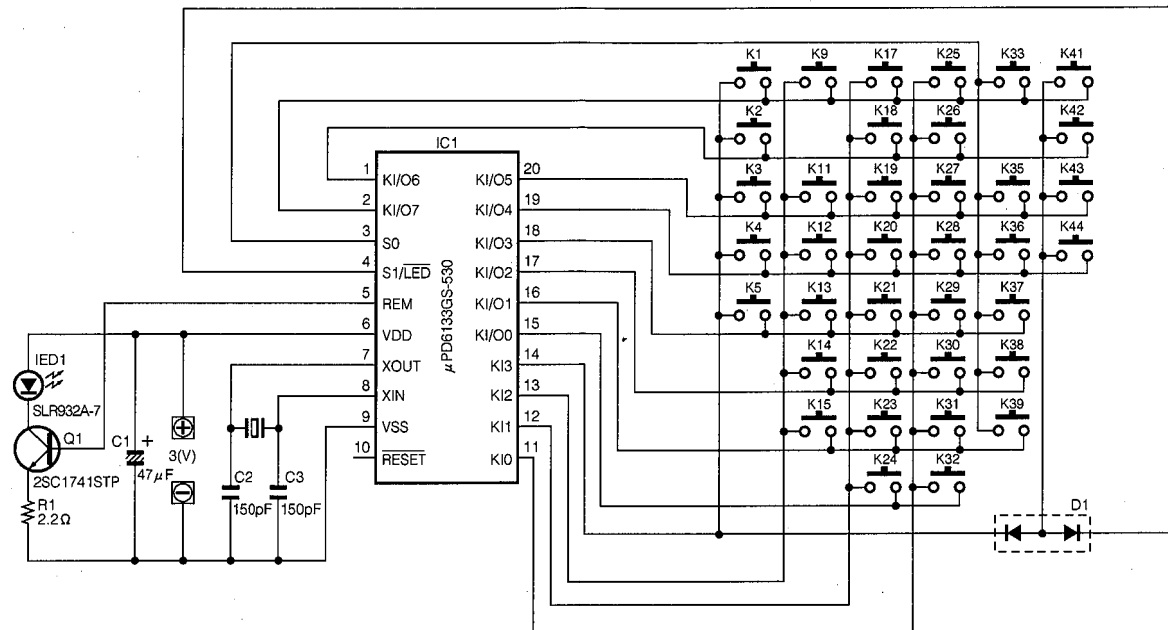
## EXPLODED VIEW (Remote Control Transmitter)





## ■ REMOTE CONTROL TRANSMITTER

## SCHEMATIC DIAGRAM

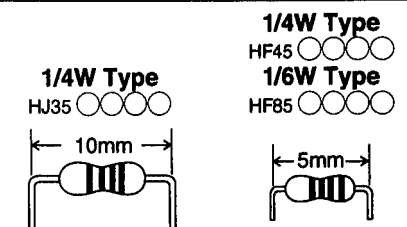


Key No.	FUNCTION	CUSTOM (BIN)	DATA (HEX)
1	EFFECT ON/OFF	7A	56
2	PROGRAM <	7A	59
3	PROGRAM >	7A	58
4	DIPROLOGIC	7A	88
5	3 STEREO	7A	89
		7A	8A
		7A	55
		7A	13
9	VCR	7A	0F
		7A	54
11	VIDEO	7A	17
12	DIR A	7A	07
13	DIR B	7A	40
14	REC/PAUSE	7A	04
15	PLAY (TAPE)	7A	00
		7A	19
17	<< (TAPE)	7A	01
18	>> (TAPE)	7A	02
19	□ (TAPE)	7A	03
20	(DECK) A/B	7A	06
21	TAPE	7A	18
22	PRESET -	7A	11
23	PRESET +	7A	10
24	A/B/C/D/E	7A	12
25	TUNER	7A	16
26	<<< (CD)	7A	0D
27	>>> (CD)	7A	0C
28	DISC	7A	4F
29	PLAY (CD)	7A	08
30	CD	7A	15
31	<<< (CD)	7A	0B
32	>>> (CD)	7A	0A
33	III/□ (CD)	7A	09
		7A	0E
35	PHONO	7A	14
36	SLEEP	7A	57
37	POWER	7A	1F
38	(MASTER) VOLUME -	7A	1B
39	(MASTER) VOLUME +	7A	1A
		7A	1C
41	TIME/KEY ↓	7A	53
42	TIME/KEY #	7A	52
43	DELAY/KEY	7A	86
44	TEST	7A	85

## 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 4390	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			

\*: Not available



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