

# AV RECEIVER

# RX-V2095

# RX-V2095RDS

## 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 or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

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

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

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

## ■ CONTENTS

|                               |       |                                  |         |
|-------------------------------|-------|----------------------------------|---------|
| TO SERVICE PERSONNEL .....    | 1     | DISPLAY DATA .....               | 39~40   |
| FRONT PANEL/REAR PANEL .....  | 2~3   | BLOCK DIAGRAM .....              | 41~45   |
| SPECIFICATIONS .....          | 4~7   | PRINTED CIRCUIT BOARD .....      | 46~75   |
| INTERNAL VIEW .....           | 8     | PIN CONNECTION DIAGRAM .....     | 76~77   |
| DISASSEMBLY PROCEDURES .....  | 8     | SCHEMATIC DIAGRAM .....          | 78~87   |
| SELF DIAGNOSIS FUNCTION ..... | 9~21  | PARTS LIST .....                 | 88~112  |
| AMP CHECK .....               | 22    | REMOTE CONTROL TRANSMITTER ..... | 113~116 |
| TUNER ADJUSTMENTS .....       | 23~26 | ZONE 2 REMOTE CONTROLLER .....   | 117     |
| IC DATA .....                 | 27~38 |                                  |         |

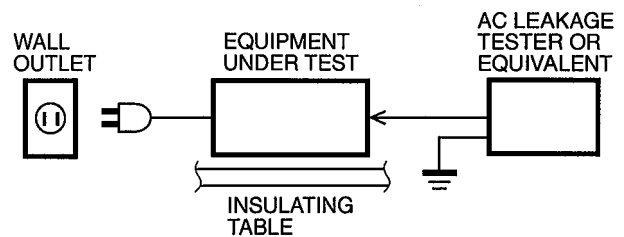


このサービスマニュアルは、エコマーク認定の再生紙を使用しています。  
This Service Manual uses recycled paper.



## ■ TO SERVICE PERSONNEL

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



## 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.

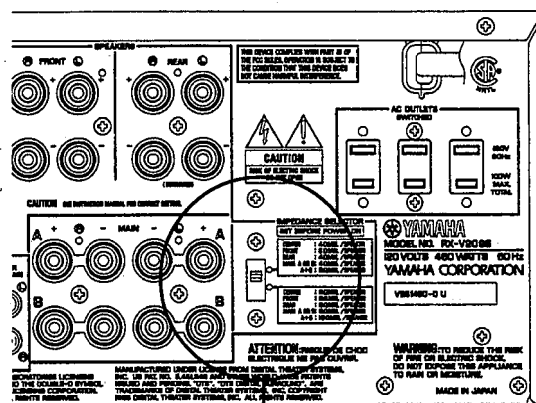
DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

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.

### WARNING

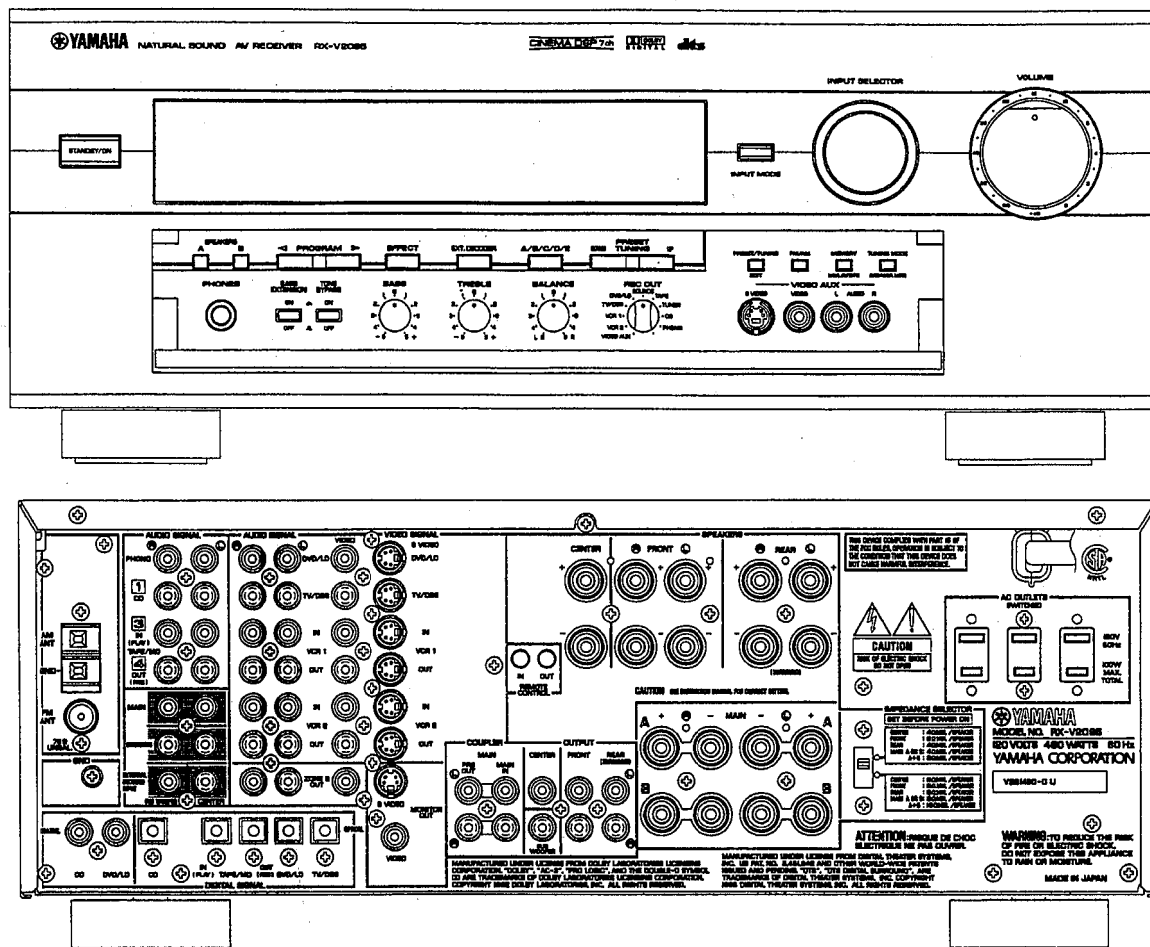
Do not change the IMPEDANCE SELECTOR switch setting while the power to this unit is on, otherwise this unit may be damaged.



IMPEDANCE SELECTOR

# FRONT PANEL/REAR PANEL

## ▼ RX-V2095



### AC Outlets

U, R, T, L models

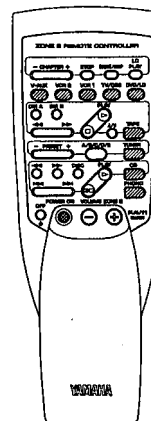
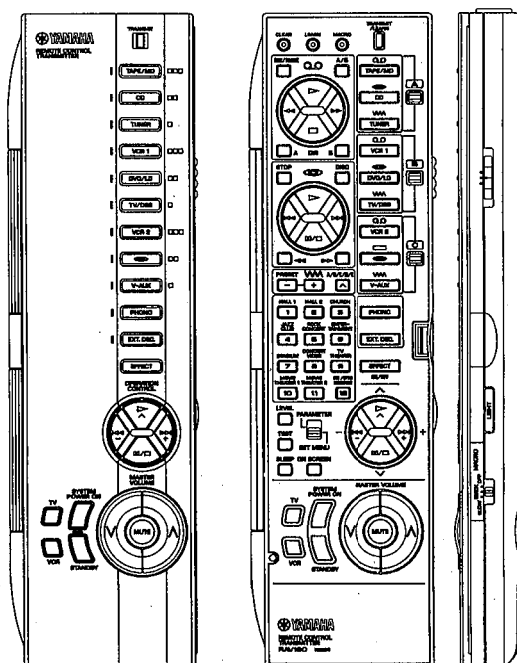
Switched x 3 ..... 100W max (Total)

C model

Switched x 3 .... 100W/1.0A max (Total)

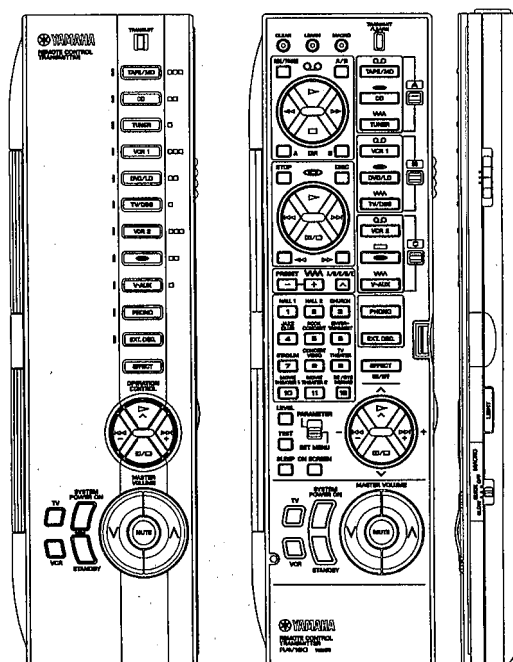
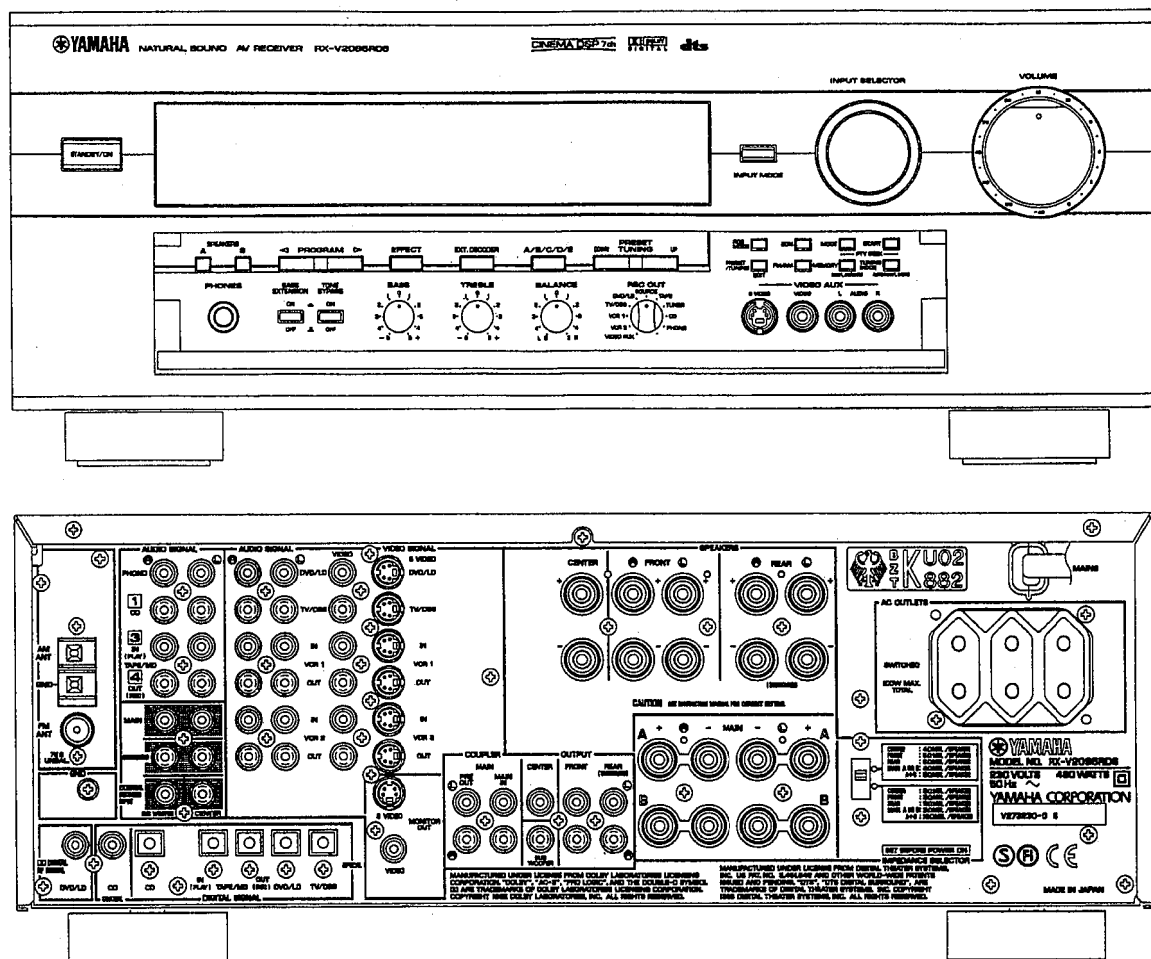
A model

Switched x 1 ..... 100W max



# RX-V2095/RX-V2095RDS

## ▼ RX-V2095RDS





## SPECIFICATIONS

### AUDIO SECTION

#### Minimum RMS Output Power per Channel

|                                      |             |
|--------------------------------------|-------------|
| MAIN, 20Hz to 20kHz, 0.02% THD, 8Ω   | 100W + 100W |
| CENTER, 20Hz to 20kHz, 0.02% THD, 8Ω | 100W        |
| REAR, 20Hz to 20kHz, 0.02% THD, 8Ω   | 100W + 100W |
| FRONT, 1kHz, 0.05% THD, 8Ω           | 25W + 25W   |

#### Maximum Power per Channel (R, T models only)

|                                 |             |
|---------------------------------|-------------|
| MAIN, 1kHz, EIAJ, 10% THD, 8Ω   | 135W + 135W |
| CENTER, 1kHz, EIAJ, 10% THD, 8Ω | 135W        |
| REAR, 1kHz, EIAJ, 10% THD, 8Ω   | 135W + 135W |
| FRONT, 1kHz, EIAJ, 10% THD, 8Ω  | 35W + 35W   |

#### Dynamic Power per Channel (U, C, R, T models only)

|                      |                  |
|----------------------|------------------|
| MAIN, 8/6/4/2Ω (IHF) | 140/170/220/320W |
|----------------------|------------------|

#### Dynamic Headroom (U, C, R, T models only)

|    |        |
|----|--------|
| 8Ω | 1.46dB |
|----|--------|

#### DIN Standard Output Power per Channel (L, G models only)

|                          |      |
|--------------------------|------|
| MAIN, 1kHz, 0.7% THD, 4Ω | 160W |
|--------------------------|------|

#### IEC Power (L, G models only)

|                            |      |
|----------------------------|------|
| MAIN, 1kHz, 0.015% THD, 8Ω | 115W |
|----------------------------|------|

#### Power Band Width

|                         |               |
|-------------------------|---------------|
| MAIN, 0.08% THD, 50W/8Ω | 10Hz to 50kHz |
|-------------------------|---------------|

#### Damping Factor

|                         |             |
|-------------------------|-------------|
| MAIN, 20Hz to 20kHz, 8Ω | 200 or more |
|-------------------------|-------------|

#### Input Sensitivity/Impedance

|          |            |
|----------|------------|
| PHONO MM | 2.5mV/47kΩ |
| CD, etc  | 150mV/47kΩ |
| MAIN IN  | 1V/47kΩ    |

#### Maximum Input Signal Level

|                                      |       |
|--------------------------------------|-------|
| PHONO MM, 1kHz, 0.05% THD            | 110mV |
| CD, etc, 1kHz, 0.05% THD (Effect on) | 2.3V  |

#### Output Level/Impedance

|                                          |             |
|------------------------------------------|-------------|
| REC OUT                                  | 150mV/1.0kΩ |
| PRE OUT (MAIN, CENTER, REAR, FRONT)      | 1V/1.5kΩ    |
| SUB WOOFER (Effect off, MAIN SP : SMALL) | 4.0V/1.5kΩ  |
| ZONE 2 OUT (U, C, R, T, A, L only)       | 1V/1.5kΩ    |

#### Maximum Voltage Output

|                                       |    |
|---------------------------------------|----|
| 20Hz to 20kHz, 1% THD, PRE OUT (MAIN) | 3V |
|---------------------------------------|----|

#### Headphone Jack Rated Output/Impedance

|                 |           |
|-----------------|-----------|
| 1kHz, 150mV, 8Ω | 0.5V/440Ω |
|-----------------|-----------|

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

|               |         |
|---------------|---------|
| CD, etc, MAIN | 0±0.5dB |
|---------------|---------|

#### RIAA Equalization Deviation (20Hz to 20kHz)

|          |         |
|----------|---------|
| PHONO MM | 0±0.5dB |
|----------|---------|

#### Tone Control Characteristics

|                    |               |
|--------------------|---------------|
| BASS : Boost/cut   | ±10dB (50Hz)  |
| Turnover Frequency | 350Hz         |
| TREBLE : Boost/cut | ±10dB (20kHz) |
| Turnover Frequency | 3.5kHz        |

#### Bass Extension

|      |             |
|------|-------------|
| MAIN | +6dB (50Hz) |
|------|-------------|

#### Filter Characteristics

|                                    |                      |
|------------------------------------|----------------------|
| MAIN/CENTER/REAR SP SMALL : H.P.F. | fc = 90Hz, 12dB/oct. |
| SUB WOOFER OUT : L.P.F.            | fc = 90Hz, 18dB/oct. |

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

|                                 |        |
|---------------------------------|--------|
| PHONO MM to REC OUT (3V)        | 0.01%  |
| CD, etc to PRE OUT MAIN (1V)    | 0.005% |
| CD, etc to MAIN SP OUT (50W/8Ω) | 0.015% |
| MAIN IN to MAIN SP OUT (50W/8Ω) | 0.008% |

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

|                                            |      |
|--------------------------------------------|------|
| PHONO MM, Input Shorted (5mV) (Effect off) |      |
| U, C, R, T, A, L models                    | 86dB |
| G model                                    | 82dB |
| CD, etc, Input Shorted (Effect off)        | 96dB |

#### Residual Noise (IHF-A-Netwörk)

|             |       |
|-------------|-------|
| MAIN SP OUT | 170μV |
|-------------|-------|

#### Channel Separation (Vol. -30dB, Effect off)

|                                          |           |
|------------------------------------------|-----------|
| PHONO MM, Input Shorted, 1kHz/10kHz      | 60dB/55dB |
| CD, etc, Input 5.1kΩ Shorted, 1kHz/10kHz | 60dB/45dB |

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

|        |    |
|--------|----|
| Muting | -∞ |
|--------|----|

### FM SECTION

#### Tuning Range

|                |                                  |
|----------------|----------------------------------|
| U, C models    | 87.5 to 107.9MHz                 |
| A, L, G models | 87.50 to 108.00MHz               |
| R, T models    | 87.5 to 108.0/87.50 to 108.00MHz |

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

|                        |                 |
|------------------------|-----------------|
| U, C, R, T models only |                 |
| Mono                   | 1.6μV (15.3dBf) |
| Stereo                 | 23μV (38.5dBf)  |

#### Usable Sensitivity (DIN, 75 Ω)

|                     |       |
|---------------------|-------|
| A, L, G models only |       |
| Mono (S/N 26dB)     | 0.9μV |
| Stereo (S/N 46dB)   | 28μV  |

#### Alternate Channel Selectivity

|                   |      |
|-------------------|------|
| U, C, R, T models | 75dB |
|-------------------|------|

#### Selectivity (two signals, 40kHz Dev.)

|                |      |
|----------------|------|
| A, L, G models | 55dB |
|----------------|------|

#### Signal-to-Noise Ratio

|                                        |         |
|----------------------------------------|---------|
| U, C, R, T models                      |         |
| Mono/Stereo (IHF)                      | 81/75dB |
| A, L, G models                         |         |
| Mono/Stereo (DIN-weighted, 40kHz Dev.) | 75/69dB |

#### Harmonic Distortion

|                    |          |
|--------------------|----------|
| Mono/Stereo (1kHz) | 0.1/0.2% |
|--------------------|----------|

#### Stereo Separation

|      |      |
|------|------|
| 1kHz | 48dB |
|------|------|

#### Frequency Response

|               |         |
|---------------|---------|
| 20Hz to 15kHz | 0±1.0dB |
|---------------|---------|

#### Output Level

|                    |       |
|--------------------|-------|
| U, C, R, T models  |       |
| FM 100% mod. 1kHz  | 550mV |
| A, L, G models     |       |
| FM 40kHz Dev. 1kHz | 550mV |

#### Antenna Input

|  |                 |
|--|-----------------|
|  | 75 Ω unbalanced |
|--|-----------------|

### AM SECTION

#### Tuning Range

|                |                              |
|----------------|------------------------------|
| U, C models    | 530 to 1,710kHz              |
| A, L, G models | 531 to 1,611kHz              |
| R, T models    | 530 to 1,710/531 to 1,611kHz |

#### Usable Sensitivity

|  |         |
|--|---------|
|  | 300μV/m |
|--|---------|

#### Output Level

|                  |       |
|------------------|-------|
| AM 30% mod. 1kHz | 150mV |
|------------------|-------|

#### Signal-to-Noise Ratio

|  |      |
|--|------|
|  | 52dB |
|--|------|

#### Antenna

|  |              |
|--|--------------|
|  | Loop antenna |
|--|--------------|

# RX-V2095/RX-V2095RDS

## VIDEO SECTION

### Video Signal Type

|                |          |
|----------------|----------|
| U, C models    | NTSC     |
| A, L, G models | PAL      |
| R, T models    | NTSC/PAL |

Video Signal Level 1Vp-p/75Ω

### S-Video Signal Level

|   |               |
|---|---------------|
| Y | 1Vp-p/75Ω     |
| C | 0.286Vp-p/75Ω |

Maximum Input Level 1.5Vp-p

Signal-to-Noise Ratio 50dB

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

## GENERAL

### Power Supply

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

### Power Consumption

|                         |            |
|-------------------------|------------|
| U, R, T, A, L, G models | 480W       |
| C model                 | 480W/630VA |

Maximum Power Consumption (R, T models only) 770W

### AC Outlets

|                      |                       |
|----------------------|-----------------------|
| U, R, T, L, G models |                       |
| Switched x 3         | 100W max (Total)      |
| C model              |                       |
| Switched x 3         | 100W/1.0A max (Total) |
| A model              |                       |
| Switched x 1         | 100W max              |

### Dimensions (W x H x D)

|             |                                                     |
|-------------|-----------------------------------------------------|
| Black model | 435 x 171 x 470mm<br>(17-1/8" x 6-3/4" x 18-1/2")   |
| Gold model  | 473 x 171.5 x 470mm<br>(18-5/8" x 6-3/4" x 18-1/2") |

### Weight

|             |                      |
|-------------|----------------------|
| Black model | 20.0 kg (44 lbs 1oz) |
| Gold model  | 21.5 kg (47 lbs 6oz) |

### Accessories

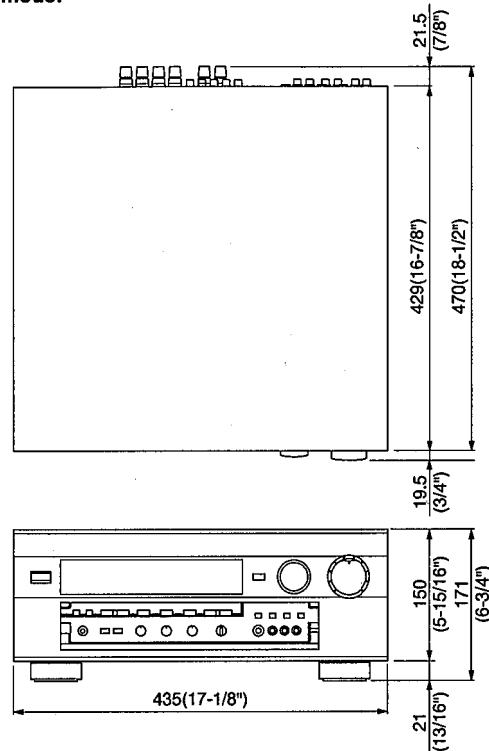
|                                                   |     |
|---------------------------------------------------|-----|
| AM loop antenna                                   | x 1 |
| Indoor FM antenna                                 | x 1 |
| Antenna Adapter (U, C only)                       | x 1 |
| Remote Control Transmitter                        | x 1 |
| Zone 2 Remote Control Transmitter (RX-V2095 only) | x 1 |
| Battery (size "AA", "R06")                        | x 4 |

\* Specifications subject to change without notice.

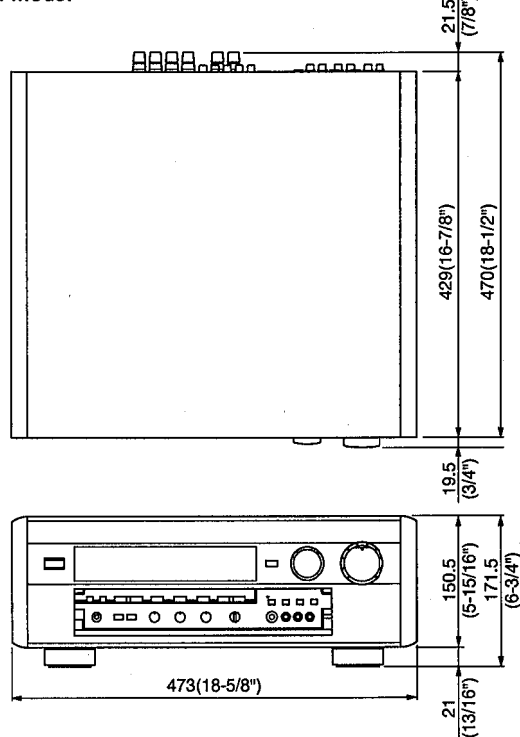
|   |                        |
|---|------------------------|
| U | ..... USA model        |
| C | ..... Canadian model   |
| R | ..... General model    |
| T | ..... China model      |
| A | ..... Australian model |
| L | ..... Singapore model  |
| G | ..... European model   |

## DIMENSIONS

### Black model



### Gold model



Units : mm (inch)

## ● PARAMETER TABLE

| PARAMETER               | P. INIT. DLY | P. ROOM SIZE | P. LIVENESS | S. DLY    |      |      | S. INT. DLY |      |      | S. ROOM SIZE |      |     | S. LIVENESS |      |     | REV. TIME | REV. LVL |
|-------------------------|--------------|--------------|-------------|-----------|------|------|-------------|------|------|--------------|------|-----|-------------|------|-----|-----------|----------|
| INPUT SIGNAL            |              |              |             | PRO LOGIC | 2CH  | AC-3 | DTS         | AC-3 | DTS  | 2CH          | AC-3 | DTS | 2CH         | AC-3 | DTS |           |          |
| MIN                     | 1ms          | 0.1          | 0           | 15ms      | 15ms | 0ms  | 0ms         | 1ms  | 1ms  | 0.1          | 0.1  | 0.1 | 0           | 0    | 0   | 1.0s      | 0%       |
| MAX                     | 99ms         | 2.0          | 10          | 30ms      | 49ms | 15ms | 15ms        | 49ms | 49ms | 2.0          | 2.0  | 2.0 | 10          | 10   | 10  | 5.0s      | 100%     |
| STEP                    | 1ms          | 0.1          | 1           | 1ms       | 1ms  | 1ms  | 1ms         | 1ms  | 1ms  | 0.1          | 0.1  | 0.1 | 1           | 1    | 1   | 0.1s      | 1%       |
| DSP PROGRAM             |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| CONCERT HALL 1          |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Europe Hall A           | 29ms         | 1.0          | 5           |           |      | 10ms | 10ms        |      |      |              |      |     |             |      |     |           |          |
| Europe Hall B           | 29ms         | 1.0          | 5           |           |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |
| CONCERT HALL 2          |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Europe Hall C           | 29ms         | 1.0          | 5           |           |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |
| Live Concert            | 44ms         | 1.0          | 5           |           |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |
| CHURCH                  |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Freiburg                | 95ms         |              |             |           |      | 15ms | 15ms        |      |      |              |      |     |             |      |     | 4.0s      | 55%      |
| Royalumont              | 69ms         |              |             |           |      | 15ms | 15ms        |      |      |              |      |     |             |      |     | 4.0s      | 52%      |
| JAZZ CLUB               |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| The Bottom Line         | 22ms         | 1.0          | 5           |           |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |
| Village Gate            | 20ms         | 1.0          | 3           |           |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |
| ROCK CONCERT            |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| The Roxy Theatre        | 15ms         | 1.0          | 5           |           |      | 7ms  | 7ms         |      |      |              |      |     |             |      |     |           |          |
| Arena                   | 15ms         | 1.0          | 7           |           |      | 8ms  | 8ms         |      |      |              |      |     |             |      |     |           |          |
| ENTERTAINMENT           |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Disco                   | 26ms         | 1.0          | 5           |           |      | 12ms | 12ms        |      |      |              |      |     |             |      |     |           |          |
| Party                   | 15ms         | 1.0          | 5           |           |      | 12ms | 12ms        |      |      |              |      |     |             |      |     |           |          |
| STADIAM                 |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Anaheim                 | 15ms         | 1.0          | 7           |           |      | 8ms  | 8ms         |      |      |              |      |     |             |      |     |           |          |
| Bowl                    | 15ms         | 1.0          | 7           |           |      | 8ms  | 8ms         |      |      |              |      |     |             |      |     |           |          |
| CONCERT VIDEO           |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Classical/Opera         | 28ms         | 1.0          |             |           |      | 5ms  | 5ms         | 31ms | 31ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| Pop/Rock                | 21ms         | 1.0          |             |           |      | 5ms  | 5ms         | 31ms | 31ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| TV THEATER              |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Mono Movie              | 49ms         | 1.0          | 2           |           |      | 8ms  | 8ms         |      |      |              |      |     |             |      |     |           |          |
| Variety/Sports          | 10ms         | 1.0          |             |           |      | 8ms  | 8ms         | 12ms | 12ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| MOVIE THEATER1          |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| 70mm/DGTL/DTS Sci-Fi    | 16ms         | 1.0          |             | 20ms      |      | 15ms | 15ms        | 1ms  | 1ms  | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| 70mm/DGTL/DTS Spectacle | 15ms         | 1.0          |             | 23ms      |      | 15ms | 15ms        | 32ms | 32ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| MOVIE THEATER2          |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| 70mm/DGTL/DTS Adventure | 15ms         | 1.0          |             | 20ms      |      | 15ms | 15ms        | 11ms | 11ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| 70mm/DGTL/DTS General   | 15ms         | 1.0          |             | 20ms      |      | 15ms | 15ms        | 23ms | 23ms | 1.0          | 1.0  | 1.0 |             |      |     |           |          |
| DOLBY/DTS SUR.          |              |              |             |           |      |      |             |      |      |              |      |     |             |      |     |           |          |
| Normal                  |              |              |             | 20ms      |      | 5ms  | 5ms         | 19ms | 19ms | 1.0          | 1.0  | 1.0 | 4           | 4    | 4   |           |          |
| Enhanced                |              |              |             | 20ms      |      | 5ms  | 5ms         |      |      |              |      |     |             |      |     |           |          |

Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", "AC-3", "Pro Logic", and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation. Copyright 1992 Dolby Laboratories, inc. All rights reserved.

Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending "DTS Digital Surround", are trademarks of Digital Theater Systems, Inc. copyright 1996 Digital Theater Systems, inc. All rights reserved.

## RX-V2095/RX-V2095RDS

## ● SET MENU TABLE

| No. | SET MENU             | PRESET VALUE | SETTING RANGES      |
|-----|----------------------|--------------|---------------------|
| 1.  | SPEAKER SET          |              |                     |
| 1A  | CENTER SPEAKER       | LARGE        | LARGE/SMALL/NONE    |
| 1B  | REAR SPEAKER         | LARGE        | LARGE/SMALL         |
| 1C  | MAIN SPEAKER         | LARGE        | LARGE/SMALL         |
| 1D  | LFE/BASS OUT         | SUBWOOFER    | SUBWOOFER/MAIN/BOTH |
| 1E  | SYSTEM SETUP         | 7ch          | 7ch/5ch             |
| 1F  | MAIN LEVEL           | NORMAL       | NORMAL/-10dB        |
| 2.  | DOLBY DIGITAL SET    |              |                     |
| 2A  | LFE LEVEL            | 0dB          | -20dB — 0dB         |
| 2B  | DYNAMIC RANGE        | MAX          | MAX/STD/MIN         |
| 3.  | DTS SET              |              |                     |
| 3A  | LFE LEVEL            | 0dB          | -10dB — +10dB       |
| 4.  | CENTER DELAY         | 0ms          | 0ms — 5ms           |
| 5.  | PARAMETER INITIALIZE | OFF          | PROGRAM 1 — 12      |
| 6.  | MEMORY GUARD         | OFF          | ON/OFF              |
| 7.  | TV/DBS INPUT         | AUTO         | AUTO/LAST           |
| 8.  | DIMMER               | 0            | -4 — 0              |

## ● SUPERIMPOSING

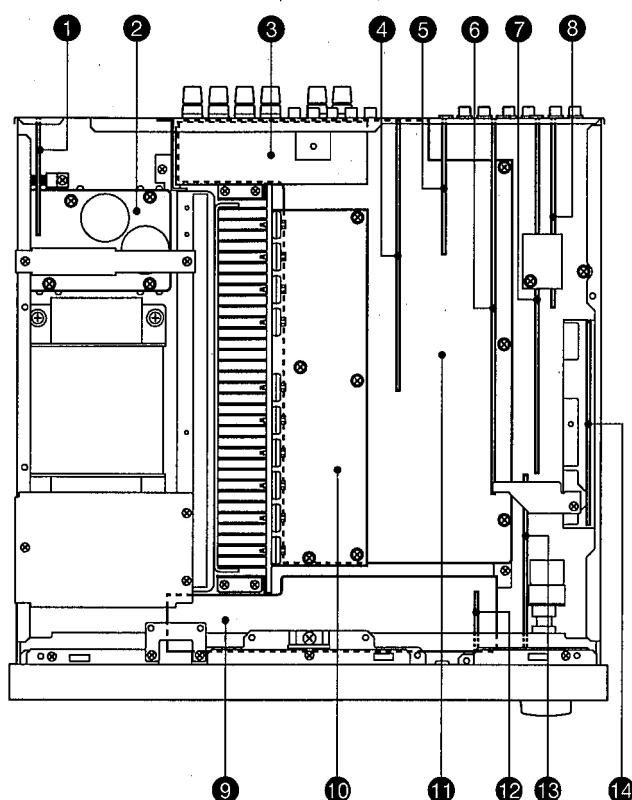
| Input LD, etc. |        | Output             | Superimposing |
|----------------|--------|--------------------|---------------|
| Terminal       | Signal | Monitor connection |               |
| S              | O      | O                  | O (On screen) |
| V              | O      | —                  | X             |
| S              | O      | X                  | X             |
| V              | O      | —                  | O (On screen) |
| S              | O      | O                  | O (On screen) |
| V              | X      | —                  | X             |
| S              | O      | X                  | X             |
| V              | X      | —                  | O (Blue back) |
| S              | X      | —                  | X             |
| V              | O      | —                  | X (On screen) |
| S              | X      | —                  | O (Blue back) |
| V              | X      | —                  | O (Blue back) |

S : S video signal  
 V : Composite video signal  
 O : YES  
 X : NO  
 — : NO CARE

## ● PRESET STATIONS

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

## INTERNAL VIEW



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

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

### 1. Removal of Top Cover

- a. Remove 8 screws ( ① ), 2 screws ( ② ) and 2 screws ( ③ ) in Fig. 1.

### 2. Removal of Bottom Cover

- a. Remove 13 screws ( ④ ) in Fig. 1.

### 3. Removal of Front Panel

- a. Remove 2 knobs.  
b. Remove 4 screws ( ⑤ ) in Fig. 1.

### Black model

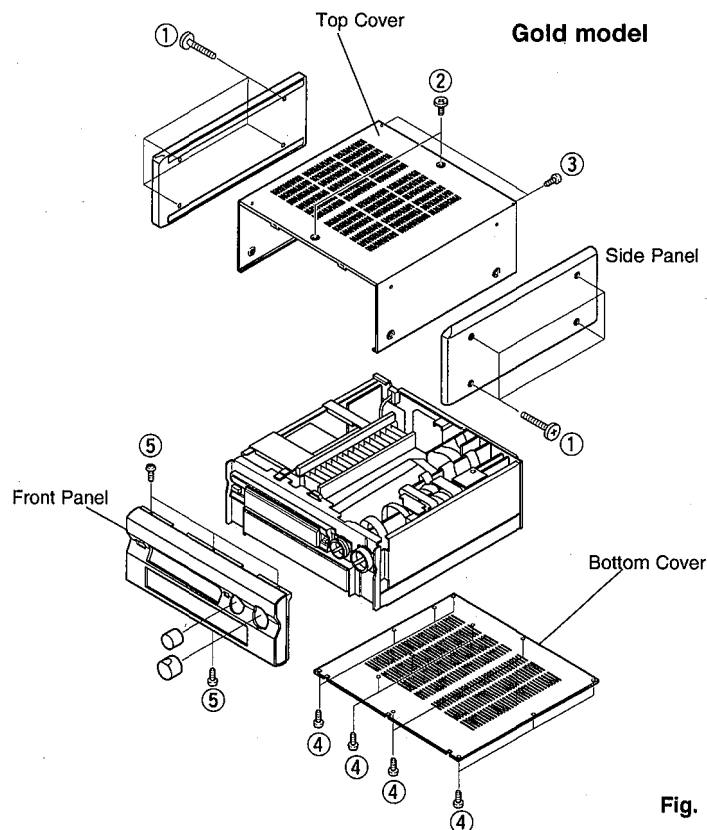
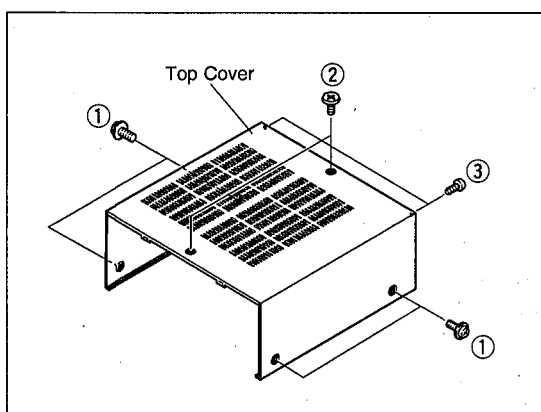


Fig. 1

## ■ SELF DIAGNOSIS FUNCTION

This product has a built-in self diagnosis function (DIAG) to facilitate inspection, measurement and determination of a faulty item.

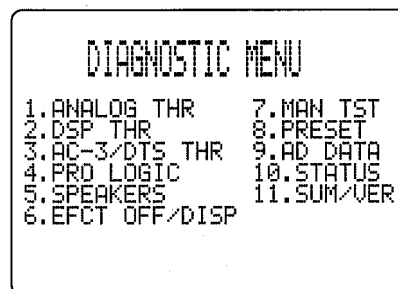
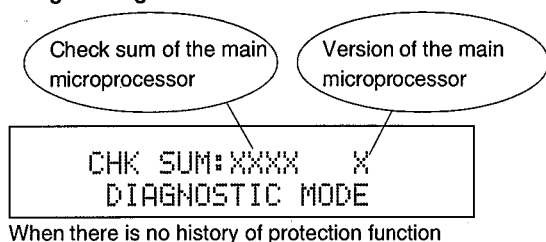
### ● Starting DIAG

Press the "POWER" (STANDBY/ON) key of the main unit while pressing the "PROGRAM ▷" key and the "EFFECT" key located in the sealing panel of the main unit, and DIAG will start to function.

### ● Display at the start of DIAG

The diagnostic menu appears on the monitor display. (It remains on display until it's canceled.) On the FL display of the main unit, an opening message (or the history of the protection) appears for 2 seconds before the diagnostic menu No.1 MAIN BYPASS.

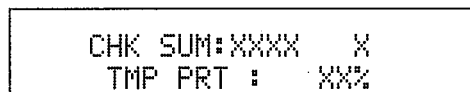
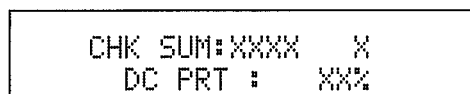
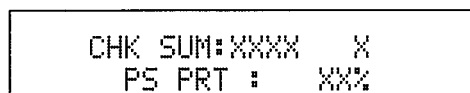
#### Opening message



### If the protection function works after DIAG has been started and the power turns OFF

When the protection function (\*1) works, the history of the protection appears on display and the power turns OFF. Repair the faulty parts according to the displayed history.

\*1) When an excess current or any other faulty condition is found with the power source, amplifier, etc., the power is forced to turn OFF as a protection function.



#### I PROTECTION display

(The power turns OFF instantly, display is provided only to show the history.)

**Cause:** There is an abnormal current flow to the power amplifier.

**Supplementary information:** As the current of the power transistor is checked in each channel, it is possible to determine the abnormal channel by checking the transistor where a current is detected.

\* If a speaker is shorted on purpose while using the DIAG function, I PROTECTION does not appear on display.

The history is stored in memory during the normal use of the unit.

#### PS PRT display

(The power turns OFF after 0.5 seconds. Display may not be provided, if there is an abnormality with the power supply for the display.)

**Cause:** There is an abnormality in the power supply section (voltage).

**Supplementary information:** As the power from following sources is detected, it is possible to determine where an abnormality exists.

Transformer secondary winding  
VI X 2(CB405), OR x 2(CB408)  
Stabilizing power source  
±12, ±5V, +5D, +5M, VP

#### DC PRT display (The power turns OFF after about 2 seconds)

**Cause:** A DC output from the power amplifier is detected in the bad channel.

#### TMP PRT display

**Cause:** The temperature of the heat sink in the power amplifier is excessive. When the temperature rises and an abnormality is detected, the power supply will turn OFF.

Besides the above possible causes, the cause may exist in the connector which has come off or around CPU. PS PRT and DC PRT displays include the abnormal A/D value in %. For this value, refer to the DIAG menu No.9 AD DATA CHK (on page 18).

#### ● Protection history

When the protection function works, its history will be stored in memory with a backup. Even when no abnormality is noted while the unit is being serviced, an abnormality which has occurred previously can be defined as long as the backup data has been stored. (For example, with I PROTECTION on display, it is also possible that an abnormality exists in the user's speaker or setting.) The protection history is cleared when DIAG is canceled by selecting "RESERVED" (to initialize the memory) from the setting items of the DIAG menu No.8 PRESET or when the backup data is erased.

## ● Canceling DIAG

Turn off the power by pressing the "POWER" key of the main unit or the "STANDBY" key of the remote controller.

**CAUTION:** When canceling this function, check the DIAG menu No.8 PRESET (for memory initialization inhibit/reserve). (To keep the user memory, be sure to select "INHIBIT" from the No.8 PRESET menu to inhibit initialization before canceling the diagnosis function.)

## ● Operation procedure of DIAG menu and SUB-MENU

There are No.1 to 11 MENU items and some SUB-MENU items as well.

### DIAG menu selection

Main Unit: PRESET TUNING UP/DOWN (forward/reverse) key

### SUB-MENU selection

Main Unit: PROGRAM ▷/◁ (forward/reverse) key

## ● Functions during DIAG being set

In addition to the DIAG menu, functions as listed below are available.

- Input switching (including ZONE2), external decoder
- ZONE2 volume
- Front / Center / Rear / Sub-woofer level adjustment
- Master volume
- Muting
- Speaker A/B
- Power ON-OFF operation

Settings by the tuner related keys are not accepted.

## ● Initial settings used to start DIAG function

Following initial settings are used when starting the DIAG function.

When the DIAG function is canceled, the settings before starting DIAG will be restored.

- Input : DVD/LD (external decoder OFF)
- ZONE2 input: DVD/LD (external decoder OFF)
- ZONE2 volume: -6dB
- Front level: -10dB
- Center /Rear / Sub woofer level: 0dB
- Audio mute: OFF
- Speaker A/B: ON

| No. DIAG menu    | SUB-MENU                                                                                                                                                                                                                                                                                                                                                      |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. ANALOG THR.   | MAIN BYPASS<br>DSP 0dB                                                                                                                                                                                                                                                                                                                                        |
| 2. DSP THROUGH   | YSS918→SRAM<br>YSS918<br>DSP FULL BIT                                                                                                                                                                                                                                                                                                                         |
| 3. AC3/DTS THR.  | STATUS (Binary)                                                                                                                                                                                                                                                                                                                                               |
| 4. PRO LOGIC     | CENTER LARGE<br>EFFECT OFF                                                                                                                                                                                                                                                                                                                                    |
| 5. SPEAKERS SET  | MAIN:SMALL 0dB<br>MAIN:LARGE 0dB<br>MAIN:LARGE -10<br>B:M & C:N & F:5<br>LFE/BASS:MAIN<br>LFE/BASS:SWFR<br>CENTER:NONE<br>C:SMALL & R:SMALL<br>FRONT MIX:5CH<br>FRONT MIX:7CH                                                                                                                                                                                 |
| 6. DISPLAY CHK   | Initial screen (EFFECT OFF)<br>DISPLAY OFF<br>DISPLAY ALL<br>DISPLAY DIMMER<br>CHECKED PATTERN                                                                                                                                                                                                                                                                |
| 7. MANUAL TEST   | ALL<br>MAIN L<br>CENTER<br>MAIN R<br>REAR R<br>REAR L<br>FRONT L<br>FRONT R<br>LFE                                                                                                                                                                                                                                                                            |
| 8. PRESET        | INHIBIT (Memory initialization inhibited)<br>RESERVED (Memory initialized)                                                                                                                                                                                                                                                                                    |
| 9. AD DATA CHK   | FAN CHECK<br>KEY, REC OUT<br>MTR, THM, PRD, PRV                                                                                                                                                                                                                                                                                                               |
| 10. IF STATUS    | STATUS (0): DSP CPU status information<br>STATUS (1): Channel status information<br>STATUS (2): Version information<br>STATUS (3): Checksum<br>STATUS (4): BSI information 0 (AC3 / DTS)<br>STATUS (5): BSI information 1<br>STATUS (6): BSI information 2<br>STATUS (7): BSI information 3<br>STATUS (8): BSI information 4<br>STATUS (9): BSI information 5 |
| 11. SUM/VER/EXIT | DSP CPU checksum & version<br>Information communicated between CPUs<br>Main CPU port setting information                                                                                                                                                                                                                                                      |

## Details of DIAG menu

In each menu, "SPEAKERS" is always set to "LARGE", D-RANGE to "MAX", LFE LEVEL to 0dB (-10dB at AC-3) and CENTER DELAY to 0ms unless otherwise specified.

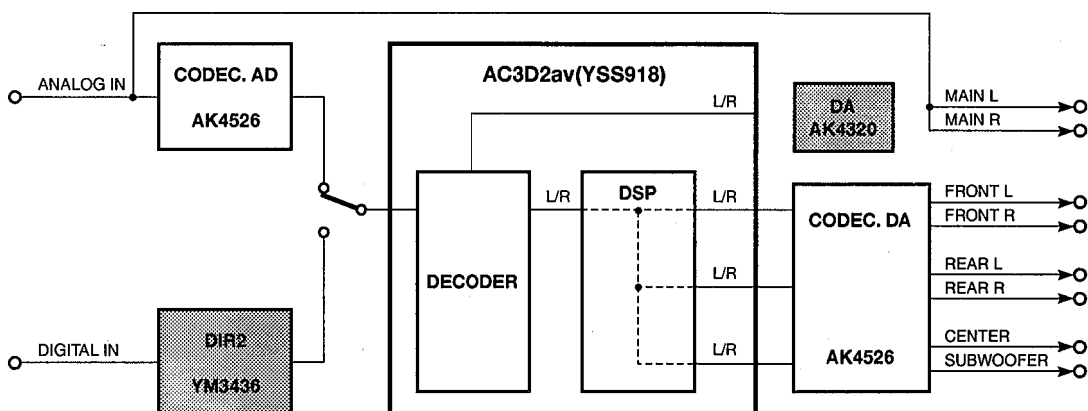
### 1. ANALOG THR. (Analog through)

The input is fixed to use the analog (A/D) system and has 2 sub-menu items.

#### 1. ANALOG THR. MAIN BYPASS

##### MAIN BYPASS

The main L/R signal is output through the analog bypass without passing the DSP section. The main L/R signal passing through the DSP is output through C/LFE, FL/FR and RL/RR.



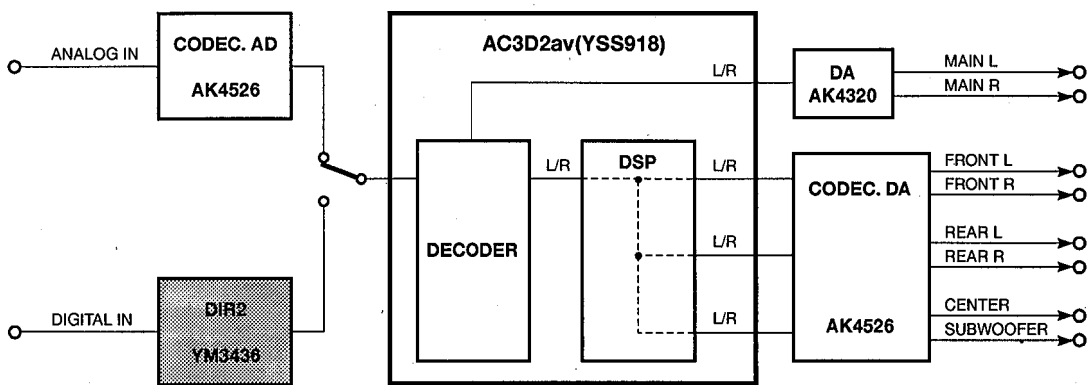
CD ANALOG IN : 1kHz, -20dBV, Both ch  
VOLUME : MAX  
PRE OUT : MAIN L -3.6dBV  
MAIN R -3.7dBV  
CENTER -4.6dBV  
FRONT L -6.3dBV  
FRONT R -6.2dBV  
REAR L -4.0dBV  
REAR R -3.8dBV

The shaded square means that the element included in it does not operate.

#### 1. ANALOG THR. DSP 0dB

##### DSP 0dB

The main L/R, C/LFE, FL/FR, RL/RR signals pass through the DSP section.



CD ANALOG IN : 1kHz, -20dBV, Both ch  
VOLUME : MAX  
PRE OUT : MAIN L -3.8dBV  
MAIN R -3.8dBV  
CENTER -4.6dBV  
FRONT L -6.3dBV  
FRONT R -6.2dBV  
REAR L -4.1dBV  
REAR R -3.9dBV

The shaded square means that the element included in it does not operate.



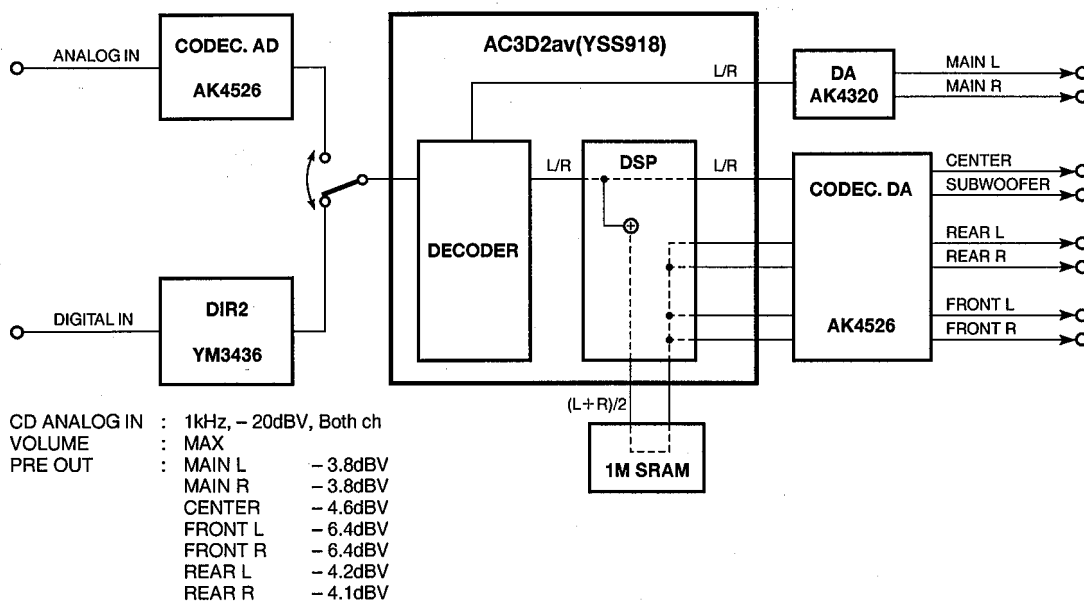
## 2. DSP THROUGH

The input data is automatically identified and switched in the priority order of AC3 → DTS → PCM AUDIO → ANALOG (A/D) according to the signal detection. There are 3 sub-menu items.

### 2. DSP THROUGH YSS918-SRAM

#### YSS918 → SRAM

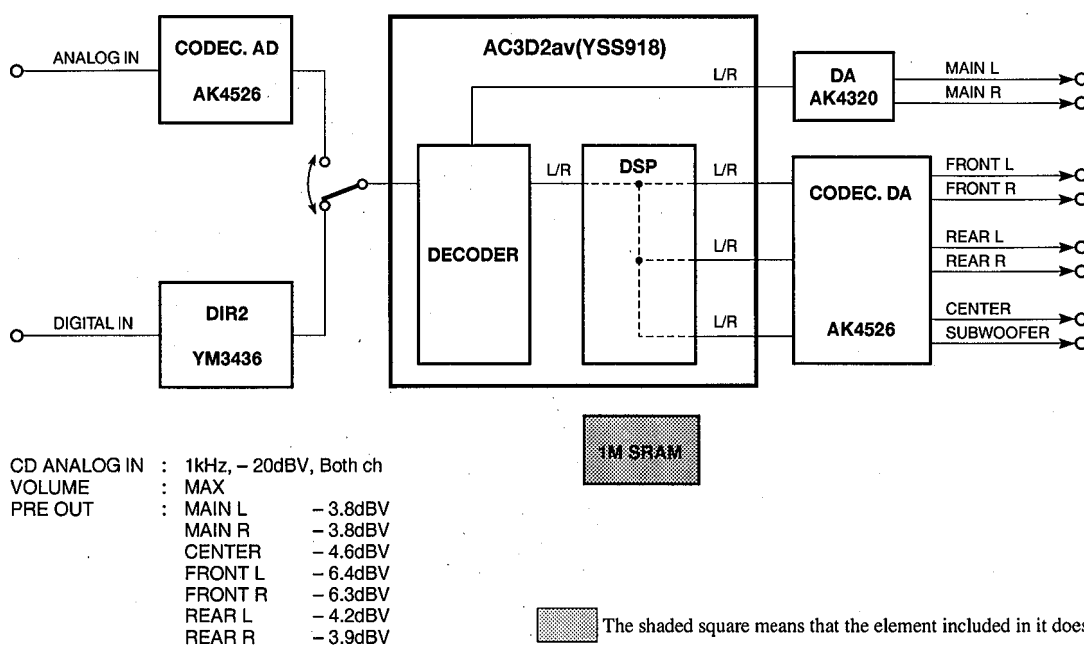
The main L/R signal is input through AC3D2av to DSP, and after passing SRAM and then output through the main L/R and C/LFE. The (L+R)/2 is output at FL/FR and RL/RR.



### 2. DSP THROUGH YSS918

#### YSS918

The main L/R signal is input through AC3D2av to DSP and then output through all channels. SRAM is bypassed.



The shaded square means that the element included in it does not operate.

## 2. DSP THROUGH DSP FULL BIT

### DSP FULL BIT

The main L/R is input through AC3D2av to DSP and then output through all channels. The head margin is eliminated and the digital data is output in digital full bit.

The same applies as "YSS918" except that the digital data is output in full bit at D/A.

CD ANALOG IN : 1kHz, -20dBV, Both ch  
VOLUME : MAX  
PRE OUT : MAIN L -3.8dBV  
MAIN R -3.7dBV  
CENTER -1.7dBV  
FRONT L -2.5dBV  
FRONT R -2.6dBV  
REAR L -4.7dBV  
REAR R -4.9dBV

**Full bit:** The digital data is normally output with a head margin of 6dB for each of C, FL/FR and RL/RR channels. In this menu, the head margin is not used and the digital data is output in full bit so as to obtain the A/D and D/A characteristics fully. Note that this means the analog gain after D/A is +6dB for L/R channels. Also, the LFE channel which is normally controlled by LFE MIX LEVEL of the set menu is also output in full bit.

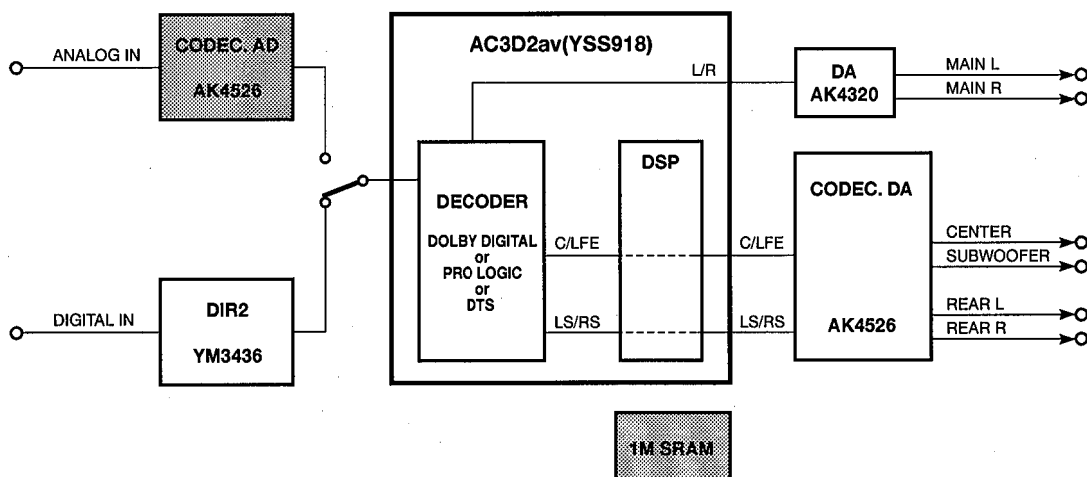
## 3. AC3/DTS THR.

Only the signal of the digital system is input. The AC3 or DTS signal is decoded and reproduced according to the input source.

## 3. AC3/DTS THR. STATUS:00000001

### STATUS:

The AC-3 signal in each channel is decoded and output through AC3D2av → CDSP. The status information of the AC-3 signal is indicated in binary notation on the lower level of the FL display.



The shaded square means that the element included in it does not operate.

### Status information

| bit | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0                                    |
|-----|---|---|---|---|---|---|---|--------------------------------------|
|     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1                                    |
|     |   |   |   |   |   |   |   | IEC958 digital data bit              |
|     |   |   |   |   |   |   |   | IEC958 business equipment bit        |
|     |   |   |   |   |   |   |   | IEC958 Digital format error          |
|     |   |   |   |   |   |   |   | Demodulator MUTO (no RF signal)      |
|     |   |   |   |   |   |   |   | Other than when PCM linear voice : 1 |
|     |   |   |   |   |   |   |   | When FL red DTS ON : 1               |
|     |   |   |   |   |   |   |   | When DTS decode OK: 1                |
|     |   |   |   |   |   |   |   | When AC3 decode OK: 1                |

As signal identification is executed in normal AC-3 reproduction, the source (DAT, CD-ROM, etc.) without digital data bit of IEC958 cannot be reproduced even when it is AC-3 encoded. On the other hand, as this menu does not execute such digital data bit identification, these sources can be AC-3 reproduced. (To measure characteristics during AC-3 reproduction, use the AC-3 decoded sine wave.) However, note that with the sources that have not been AC-3 or DTS encoded, a decode error occurs and muting is applied. In addition, by displaying the status information indicating the operation of the AC-3 signal on the lower level of the FL display in binary notation, malfunction of the decoder can be detected.

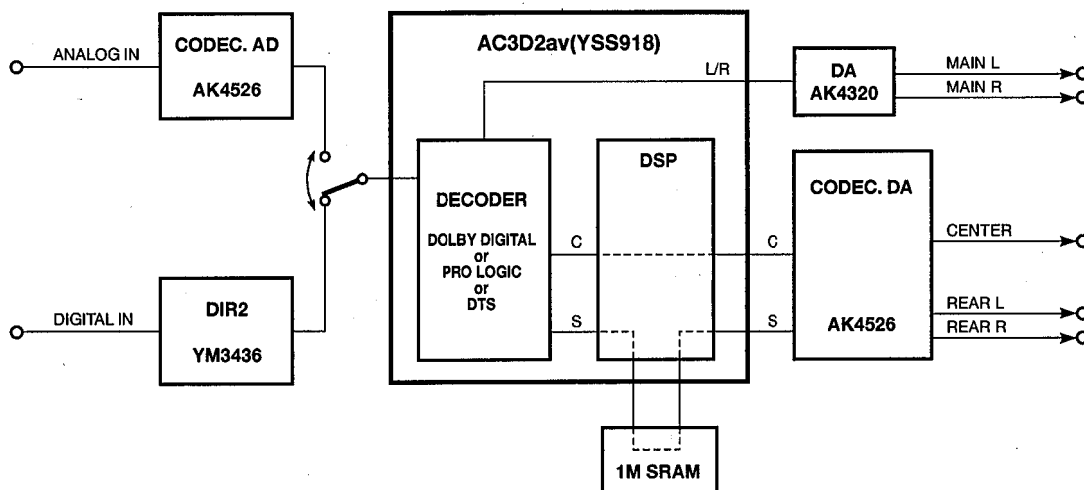
#### 4. PRO LOGIC

The input data is automatically identified in the priority order of AC-3 → PCM → Analog. DTS is inhibited. The sub-menu items include selection of Pro-logic (The auto input balance is OFF) and EFFECT OFF.

##### 4. PRO LOGIC CENTER LARGE

#### CENTER LARGE

When the center mode uses the analog, PCM audio or AC-3 2/0 mode, L, R, C, S signals are pro-logic decoded and output. When the AC-3 mode other than 2/0 is used, the pro logic function does not work and the signals are AC-3 reproduced.



CD ANALOG IN : 1kHz, -20dBV, Both ch  
 VOLUME : MAX  
 PRE OUT : MAIN L -45dBV  
           MAIN R -37dBV  
           CENTER -1.7dBV  
           FRONT L -∞  
           FRONT R -∞  
           REAR L -38.5dBV (noise only)  
           REAR R -38.5dBV (noise only)

CD ANALOG IN : 1kHz, -20dBV, L ch only  
 VOLUME : MAX  
 PRE OUT : MAIN L -4.0dBV  
           MAIN R -52dBV (noise only)  
           CENTER -40dBV (noise only)  
           FRONT L -∞  
           FRONT R -∞  
           REAR L -38.0dBV (noise only)  
           REAR R -38.0dBV (noise only)

##### 4. PRO LOGIC EFFECT OFF

#### EFFECT OFF

The L/R signal is output through ANALOG MAIN BYPASS.

## 5. SPEAKERS SET

The input signal is automatically identified in the priority order of AC-3 → DTS → PCM → Analog. The input L/R signal is output through the specified channels according to the sub-menu.

5. SPEAKERS SET  
MAIN: SMALL 0dB

There are 10 sub-menu items.

The signal output from the DSP section is normally in the EFFECT OFF state in the menus from 1 to 4. In the menus after that, the same signal as in the menu of 2. DSP THROUGH: YSS918. The analog switch settings in each sub-menu are as shown in the following table.

| Sub menu |                       | CENTER | REAR  | MAIN SP | MAIN LVL | LFE/BASS | FRONT MIX | Output       |
|----------|-----------------------|--------|-------|---------|----------|----------|-----------|--------------|
| 1        | MAIN : SMALL 0dB      | LARGE  | LARGE | SMALL   | 0dB      | SWFR     | 7ch       | MAIN L/R     |
| 2        | MAIN : LARGE 0dB      | LARGE  | LARGE | LARGE   | 0dB      | SWFR     | 7ch       | MAIN L/R     |
| 3        | MAIN : LARGE -10      | LARGE  | LARGE | LARGE   | -10dB    | SWFR     | 7ch       | MAIN L/R     |
| 4        | B : M & C : N & F : 5 | NONE   | LARGE | LARGE   | 0dB      | MAIN     | 5ch       | MAIN L/R     |
| 5        | LFE/BASS : MAIN       | LARGE  | LARGE | LARGE   | 0dB      | MAIN     | 7ch       | LFE → L/R    |
| 6        | LFE/BASS : SWFR       | LARGE  | LARGE | LARGE   | 0dB      | SWFR     | 7ch       | LFE → SWFR   |
| 7        | CENTER : NONE         | NONE   | LARGE | LARGE   | 0dB      | SWFR     | 7ch       | CENTER → L/R |
| 8        | C : SMLL & R : SMLL   | SMALL  | SMALL | LARGE   | 0dB      | SWFR     | 7ch       | CENTER/REAR  |
| 9        | FRONT MIX : 5CH       | LARGE  | LARGE | LARGE   | 0dB      | SWFR     | 5ch       | FRONT → L/R  |
| 10       | FRONT MIX : 7CH       | LARGE  | LARGE | LARGE   | 0dB      | SWFR     | 7ch       | FRONT        |

\* In Sub-menu 1, the lower range content of the MAIN L/R is output at SWFR as well.

\* In Sub-menu 8, the lower range content of LFE, CENTER and REAR is output at SWFR as well.

LARGE : Signals are output in all bandwidths.

SMALL : Only signals lower than 90Hz are mixed in the channel specified by LFE/BASS.

NONE : The center contents are distributed to the MAIN L/R channels after -3dB.

M : MAIN

C : CENTER

R : REAR

SWFR : SUBWOOFER

B : BASS

F : FRONT MIX

N : NONE

Output : The signal before MASTER VOLUME is indicated.

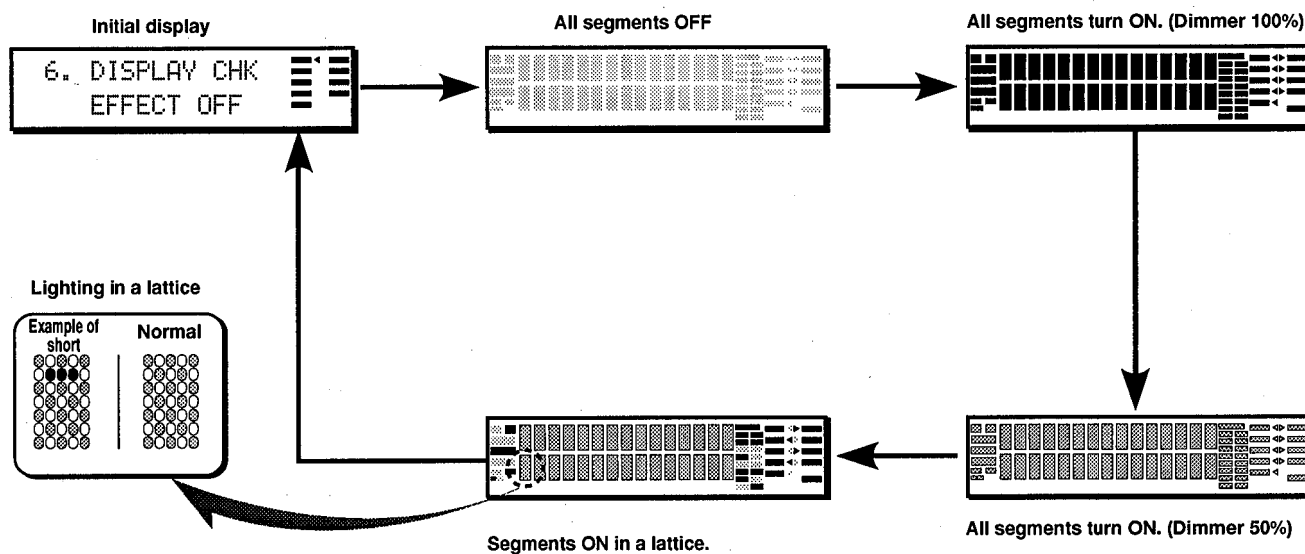
## 6. DISPLAY CHK

This is a program to check lighting of the FL display section.

The FL display changes as shown below according to operation of the sub-menu.

The input data is automatically identified in the priority order of AC-3 → PCM → Analog. The signals are processed in the same way as EFFECT OFF of No.4. (The L/R signal is output through ANALOG MAIN BYPASS.)

As for internal/external synchronization selection of the image signals, forced external synchronization is selected by the microprocessor control.



Segment conditions of the FL driver (IC901, IC902) and the FL tube are checked by turning ON and OFF all segments. Next, the operation of the FL driver is checked by using the dimmer control. Then a short between segments next to each other is checked by turning ON and OFF all segments alternately (in a lattice). (In the above example, the center segment in the second row from the top is shorted.)

**7. MANUAL TEST**

The test noise is output by the noise generator with a built-in DSP through the channels specified by the sub-menu.

|                       |
|-----------------------|
| 7. MANUAL TEST<br>ALL |
|-----------------------|

**ALL**

Noise is output through all channels.

**MAIN L**

Noise is output through the MAIN L channel.

**CENTER**

Noise is output through the CENTER channel.

**MAIN R**

Noise is output through the MAIN R channel.

**REAR R**

Noise is output through the REAR R channel.

**REAR L**

Noise is output through the REAR L channel.

**FRONT L**

Noise is output through the FRONT L channel.

**FRONT R**

Noise is output through the FRONT R channel.

**LFE**

Noise is output through the LFE (sub-woofer) channel.

**8. PRESET**

This menu reserves and inhibits initialization of the back-up RAM (parameter, set menu contents, etc. for the sound field program). The input signals are automatically identified in the priority order of AC-3 → PCM → Analog. The signals are processed in the same way as EFFECT OFF of No.4.

|                      |
|----------------------|
| 8. PRESET<br>INHIBIT |
|----------------------|

**INHIBIT (Initialization inhibited)**

RAM initialization is not executed. Select INHIBIT to protect the values set by the user.

|                       |
|-----------------------|
| 8. PRESET<br>RESERVED |
|-----------------------|

**RESERVED**

Initialization of the back-up RAM is reserved and it is executed when the power is turned ON after canceling DIAG. RESERVED should be selected when shipping out of the factory or resetting RAM.

**CAUTION :** Before setting to the PRESET RESERVED, write down the existing preset memory content of the Tuner in a table as shown below. (This is because setting to the PRESET RESERVED will cause the user memory content to be erased.)

| Preset group | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
|--------------|----|----|----|----|----|----|----|----|
| A            |    |    |    |    |    |    |    |    |
| B            |    |    |    |    |    |    |    |    |
| C            |    |    |    |    |    |    |    |    |
| D            |    |    |    |    |    |    |    |    |
| E            |    |    |    |    |    |    |    |    |

## 9. AD DATA CHK

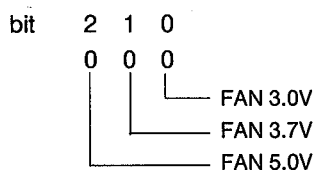
The A/D conversion value of the main CPU (IC3 of the function circuit board) detecting the REC OUT selector, the main unit key, protection, etc. is displayed in % by using the sub-menu. (5V as 100%).

While K0/K1/K2/REC pages are on display, the values of all the keys are detected. This prevents the keys of the main unit from being operated. To cancel this menu, turn the input selector of the main unit, and the next sub-menu will appear. Return to the input data being measured after cancellation. The signal process remains in the state before execution of this menu.

9. AD DATA CHK  
000

### FAN control based on detected temperature

With the voltage value detected from the temperature detection circuit read as a temperature data by the A/D function of the microprocessor, the FAN speed is controlled in 3 levels based on that data.



When there is drive history record : 1

\* Selecting "RESERVED" from the Diag menu No.8 and using factory presetting will clear the history.

K0 K1 K2 REC  
100 100 100 50

### Detection of KEY scanning and REC OUT

K0/K1/K2 : Panel keys of main unit (10% step)

REC : Value at REC OUT position (10% step)

- REC and KEY A/Ds fail to operate properly if they are  $\pm 4\%$  off from the standard value. In this case, check the constant of the partial pressure resistor, soldering condition, etc.

Standard value of KEY (main unit panel key)

| K0            | Standard value |
|---------------|----------------|
| EDIT          | 0              |
| FM/AM         | 10             |
| MEMORY        | 20             |
| TUNING MODE   | 30             |
| START(*)      | 40             |
| MODE(*)       | 50             |
| EON(*)        | 60             |
| RDS(*)        | 70             |
| -             | 80             |
| KEY OFF state | 100            |

| K1            | Standard value |
|---------------|----------------|
| INPUT MODE    | 0              |
| TUNING DOWN   | 10             |
| TUNING UP     | 20             |
| -             | 30             |
| -             | 40             |
| -             | 50             |
| -             | 60             |
| -             | 70             |
| -             | 80             |
| KEY OFF state | 100            |

| K2            | Standard value |
|---------------|----------------|
| A/B/C/D/E     | 0              |
| -             | 10             |
| DIAG          | 20             |
| PROGRAM +     | 30             |
| EFFECT        | 40             |
| EXT. DECODER  | 50             |
| PROGRAM -     | 60             |
| SPEAKERS B    | 70             |
| SPEAKERS A    | 80             |
| KEY OFF state | 100            |

Standard value of REC OUT position

| REC OUT   | Standard value |
|-----------|----------------|
| PHONO     | 90             |
| TUNER     | 80             |
| CD        | 70             |
| TAPE/MD   | 60             |
| SOURCE    | 50             |
| DVD/LD    | 40             |
| TV/DBS    | 30             |
| VCR1      | 20             |
| VCR2      | 10             |
| VIDEO AUX | 0              |

(\*) : RX-V2095RDS only

MTR THM PRD PRV  
0 28 7 10

Numerical values are examples for reference.

### Detection of tuner sensitivity and protection

MTR : Signal sensitivity of tuner

THM : Detection of heat sink temperature (Normal values 6 ~ 40)

PRD : Value of amplifier DC detection (Normal value 1 ~ 13)

PRV : Value of power supply voltage (Normal value 5 ~ 15)

- When THM becomes less than 5%, the protection function works to turn off the power. When it exceeds 40%, it is possible that there is an abnormality in the temperature detection system.
- When the PRD/PRV value becomes abnormal, the protection function works to turn off the power.

**10. IF STATUS 0 ~ 9**

Using this menu, the status data from the sub-microprocessor is displayed in the hexadecimal notation.

During signal processing, the status before execution of this menu is maintained.

As the input mode is fixed to analog in DIAG MENU No.9 before execution, operating the keys on the main unit only will fix this menu to the analog mode.

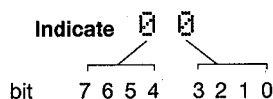
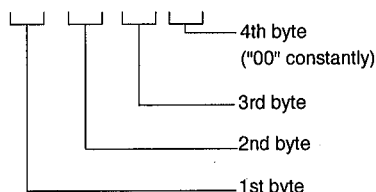
To change the input mode from analog to digital, use the following procedure.

- 1) Select one of DIAG MENU No. from 2 to 5, and enter a digital signal.
- 2) Pressing TAPE PLAY key (7A-00) on the remote controller, select MENU No.10.  
(Then the input mode is fixed to digital.)
- 3) Using PROGRAM >/< keys on the main unit, select the sub-menu.  
(The digital status data can be checked.)

There are 10 SUB-MENU items.

Operating SUB-MENU causes the following status data to be displayed in the hexadecimal notation.

```
10. IF STATUS 0
CPU 22 08 0E 00
```



| Indicate | bit |   |   |   |
|----------|-----|---|---|---|
|          | 3   | 2 | 1 | 0 |
| 0        | 0   | 0 | 0 | 0 |
| 1        | 0   | 0 | 0 | 1 |
| 2        | 0   | 0 | 1 | 0 |
| 3        | 0   | 0 | 1 | 1 |
| 4        | 0   | 1 | 0 | 0 |
| 5        | 0   | 1 | 0 | 1 |
| 6        | 0   | 1 | 1 | 0 |
| 7        | 0   | 1 | 1 | 1 |
| 8        | 1   | 0 | 0 | 0 |
| 9        | 1   | 0 | 0 | 1 |
| A        | 1   | 0 | 1 | 0 |
| B        | 1   | 0 | 1 | 1 |
| C        | 1   | 1 | 0 | 0 |
| D        | 1   | 1 | 0 | 1 |
| E        | 1   | 1 | 1 | 0 |
| F        | 1   | 1 | 1 | 1 |

**STATUS 0** : Indicates the information communicated between microprocessors.

**1st byte**

| bit 7 | MUTE request |                    |                         |
|-------|--------------|--------------------|-------------------------|
| bit 6 | fs           | 000B : Analog      | 001B : 32kHz            |
| bit 5 |              | 010B : 44.1kHz     | 011B : 48kHz            |
| bit 4 |              | Others : Undefined |                         |
| bit 3 | acmod        | 0000B : 1+1        | 0001B : 1/0             |
| bit 2 |              | 0010B : 2/0        | 0011B : 3/0             |
| bit 1 |              | 0100B : 2/1        | 0101B : 3/1             |
| bit 0 |              | 0110B : 2/2        | 0111B : 3/2 1000B : 7.1 |

In the case of acomod 1000B or more, the DSP section is muted at DTS 7.1ch signal.

**2nd byte**

|       |                                                  |
|-------|--------------------------------------------------|
| bit 7 | AC3 DECODE OK                                    |
| bit 6 | DTS DECODE OK                                    |
| bit 5 | History data of FL red DTS (flashing & lighting) |
| bit 4 | "1" other than PCM linear sound                  |
| bit 3 | DEM MUTO (no RF signal)                          |
| bit 2 | IEC958 digital format error                      |
| bit 1 | IEC958 business equipment bit                    |
| bit 0 | IEC958 digital data bit                          |

**3rd byte**

|       |                             |
|-------|-----------------------------|
| bit 7 | AC3 KARAOKE                 |
| bit 6 | DIR2 LOCKN                  |
| bit 5 | DIR2 ERR                    |
| bit 4 | AC3D MUTE                   |
| bit 3 | On-board write mode         |
| bit 2 | Digital input number is 2.  |
| bit 1 | DSP is AC3D2. (DTS present) |
| bit 0 | RF DEM present              |

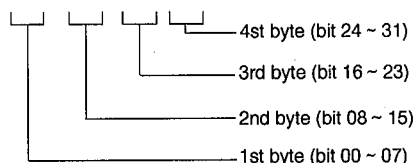


**IEC958** : This standard is used to identify what type of signal the PCM bit stream is.

A digital format error means that the format is digital but the sampling frequency is undefined (not 44.1k, 32k or 48k). As operation of each device at an off-specification frequency cannot be assured, the sub-microprocessor handles it as forced analog (even when detected as "decode OK", it is ignored) and selects the signal from the analog input terminal. Thus, bits 4 to 6 in the upper byte transmits 000B (analog) signal to the main microprocessor as they should and the main microprocessor operates seemingly in the same way as in the digital unlock state.

```
10. IF STATUS 1
CHS 00 01 00 00
```

**STATUS 1** : Indicates the channel status (bit 00~31) of IEC958 obtained from DIR2 by using 1st to 4th bytes.



```
10. IF STATUS 2
VER 5A 30 36 42
```

**STATUS 2** : Version information of sub-CPU (ASCII code 4 bytes)

```
10. IF STATUS 3
SUM 44 39 43 33
```

**STATUS 3** : Checksum in program area of sub-microprocessor (hexadecimal ASCII code 4 bytes)

```
10. IF STATUS 4
BI0 00 00 00 00
```

**STATUS 4** : Indicates the bit stream information included in AC-3/DTS signal in order starting from the 1st byte.

```
10. IF STATUS 5
BI1 00 00 00 00
```

**STATUS 5~9** : Indicates the bit stream information included in AC-3 signal in order starting from the 1st byte.

**11. SUM/VER/EXIT**

There are 3 sub-menu items.

This menu indicates the checksum of the DSP microprocessor, the software version and interchange version of the main / DSP microprocessor and the port setting conditions of the main microprocessor. The signals are processed in the same way as EFFECT OFF of No.4.

When replacing the microprocessor, be sure to check its compatibility. Depending on compatibility of the communication format, the replacing microprocessor may not be suitable. Use of a microprocessor whose communication format is not compatible will result in failure in communication between microprocessors.

```
11. SUM/VER/EXIT
DSP SUM:XXXX X
```

**Checksum and version of DSP microprocessor**

Checksum of DSP microprocessor (4 figures of alphabets and numbers)

Version of DSP microprocessor (1 alphabet)

**Checksum** : The total of the codes in the entire program added by 1M bit at 1 octet intervals and expressed as a 4-figure hexadecimal data (For the range including no code description or codes other than ROM, 0xff is added.)

```
11. SUM/VER/EXIT
M:A00B S:A00B
```

**Software version and compatibility version of main / DSP microprocessors**

M: Indicates the main microprocessor (IC3 of function circuit board)

S: Indicates the DSP microprocessor (IC4 of DSP circuit board)

The alphabet at the end indicates compatibility of the communication format between main/DSP microprocessors. If the alphabet is the same, the communication format of the microprocessor is compatible. If the end alphabets differ, the microprocessor will not operate properly.

A 0 0 B

Software version of microprocessor (3 figures of alphabets and numbers)

Compatibility version of microprocessor (1 alphabet)

```
11. SUM/VER/EXIT
PORT: 00000000
```

**Port settings of main microprocessor**

7 6 5 4 3 2 1 0  
0 0 0 0 0 0 0 0

FREQUENCY STEP switch (Note 1)  
ZONE2 present (1) / absent (0)  
Tuner mode 0 (Note 2)  
Tuner mode 1 (Note 2)  
VIDEO format : PAL (1) / NTSC (0)  
RDS present (1) / absent (0)  
Model type 0 (Note 3)  
Model type 1 (Note 3)

**(Note 1)**

FREQUENCY STEP (R only)

|   |                              |                                 |
|---|------------------------------|---------------------------------|
| 0 | AM : 530-1710kHz(10kHz step) | FM : 87.5-108.0MHz(100kHz step) |
| 1 | AM : 531-1611kHz(9kHz step)  | FM : 87.5-108.0MHz(50kHz step)  |

**(Note 2)**

| Tuner mode 1 | Tuner mode 0 | Reception frequency             |                                 |      |      |
|--------------|--------------|---------------------------------|---------------------------------|------|------|
| 0            | 0            | AM : 531-1611kHz(9kHz step)     | FM : 76.0-90.0MHz(100kHz step)  | J    |      |
| 0            | 1            | AM : 530-1710kHz(10kHz step)    | FM : 87.5-107.9MHz(200kHz step) | U, C |      |
| 1            | 0            | AM : 531-1611kHz(9kHz step)     | FM : 87.5-108.0MHz(50kHz step)  | A, L |      |
| 1            | 1            | As set by FREQUENCY STEP switch |                                 |      | R, T |

**(Note 3)**

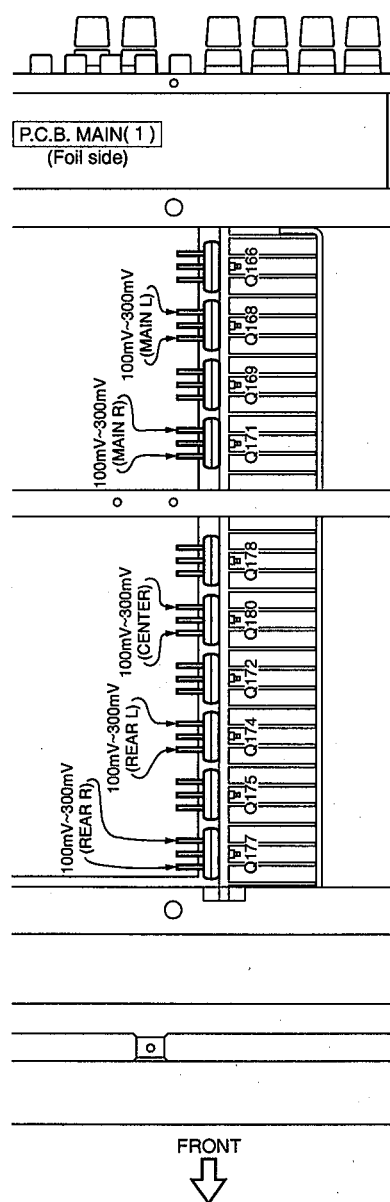
| Model type 1 | Model type 0 | Model name |
|--------------|--------------|------------|
| 0            | 0            | RX-V2095   |
| 0            | 1            | DSP-A2     |
| 1            | 0            | RX-V995    |
| 1            | 1            | RX-V795    |

## ■ AMP CHECK

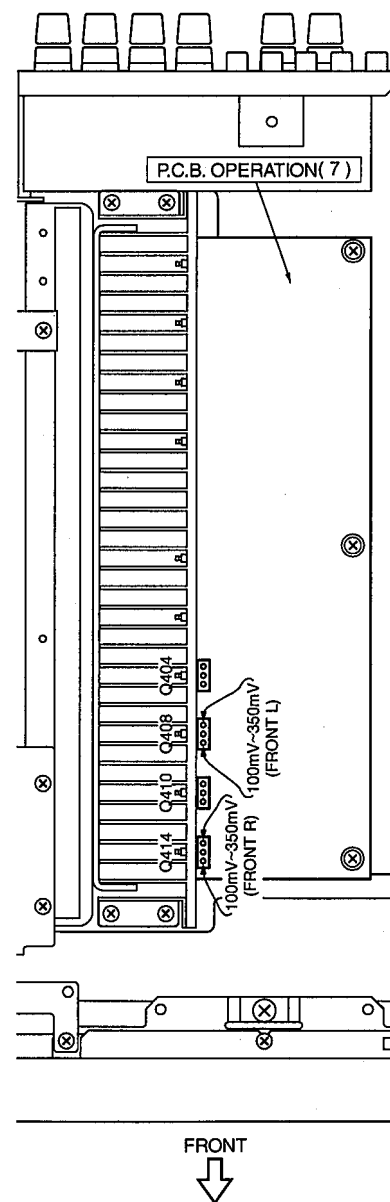
### ● Confirmation of Idling Current

- 1) No signal applied.
- 2) Non-loaded condition.
- 3) Aging is 10 minutes.

| Item    | Test Point                                | Rating (DC) |
|---------|-------------------------------------------|-------------|
| MAIN L  | Q168 Base~Emitter (P.C.B. MAIN [1] )      | 100mV~300mV |
| MAIN R  | Q171 Base~Emitter (P.C.B. MAIN [1] )      |             |
| CENTER  | Q180 Base~Emitter (P.C.B. MAIN [1] )      |             |
| REAR L  | Q174 Base~Emitter (P.C.B. MAIN [1] )      |             |
| REAR R  | Q177 Base~Emitter (P.C.B. MAIN [1] )      |             |
| FRONT L | Q408 Base~Emitter (P.C.B. OPERATION [7] ) | 100mV~350mV |
| FRONT R | Q414 Base~Emitter (P.C.B. OPERATION [7] ) |             |



Viewed from the bottom



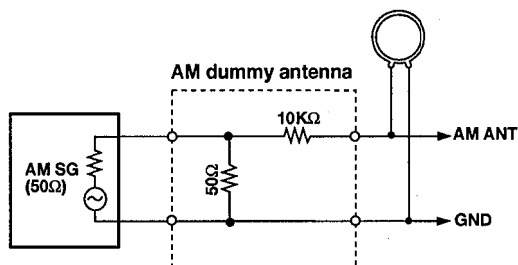
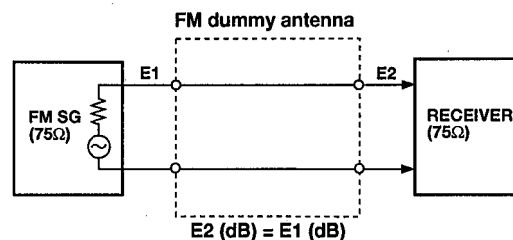
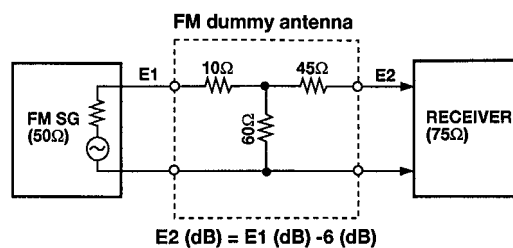
Viewed from the top.

## TUNER ADJUSTMENTS

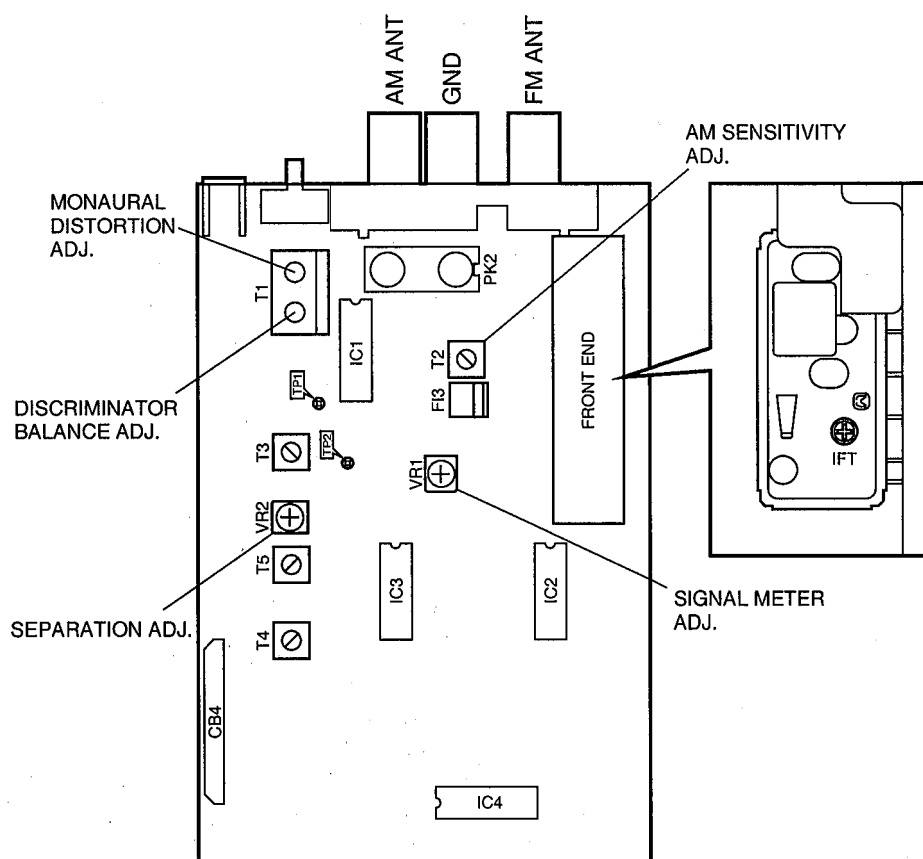
### Measuring Instruments

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

### Dummy antenna



### Test point



## FM Adjustment

### ● Before Adjustment

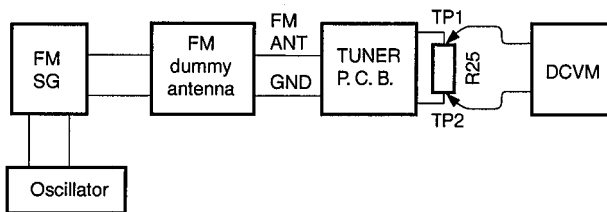
- 1) For dB,  $1\mu V=0dB\mu$   
**Example :**  $60dB\mu=1mV$
- 2) 100% modulation means that the frequency deviation is  $\pm 75kHz$ .

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

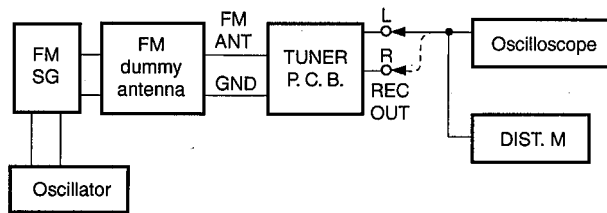
INPUT SELECTOR ..... TUNER  
 TUNING MODE ..... AUTO

### ● Connection diagram (Measuring instruments)

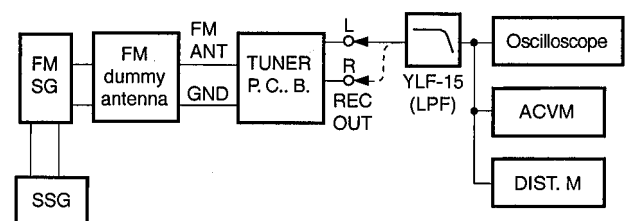
#### 1) Discriminator balance adjustment



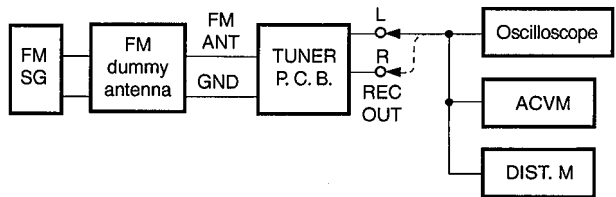
#### 2) Monaural distortion adjustment



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



#### 4) Sensitivity Verification



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

\* : Execution of FACTORY PRESET (Refer to page 17.) will facilitate setting reception frequency for adjustment.

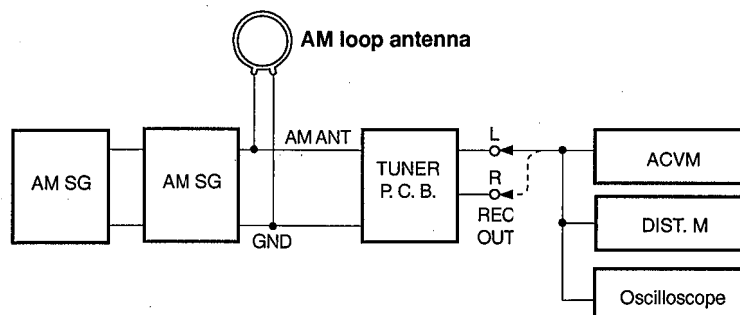
\*\* Must be 98.1MHz  $\pm$  5kHz

## RX-V2095/RX-V2095RDS

See page 23 for TP locations &amp; adjustment points.

| Step | Adjustment item                     | Signal (ANT IN)                                                                | Reception frequency                                             | Adjusted point | Test point    | Rating                                                                                                                                                                                                                                        |
|------|-------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | Adjustment of front end IFT         | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>MONO<br>1kHz,<br>100% modulation           | 98.1MHz<br>* (A-4)                                              | Front end IFT  | Pin 16 of IC1 | Adjust so that the DC voltage is maximum.<br><b>CAUTION</b> : Over-adjustment of the IFT core will reduce the sensitivity.<br>Maximum ±90°                                                                                                    |
| 7    | Verification of monaural distortion | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>MONO 1kHz,<br>100% modulation              | 98.1MHz<br>* (A-4)                                              |                | REC OUT L, R  | 0.4% or less                                                                                                                                                                                                                                  |
| 8    | Verification of stereo distortion   | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>Stereo L or R<br>1kHz,<br>100% modulation  | 98.1MHz<br>* (A-4)<br>* Tuning mode should be AUTO.             |                | REC OUT L, R  | 1% or less<br>• STEREO indicator should light.                                                                                                                                                                                                |
| 9    | Verification of sensitivity         | FM ANT (75Ω)<br>88.1MHz<br>98.1MHz<br>106.1MHz<br>MONO 1kHz<br>100% modulation | 88.1MHz<br>* (A-6)<br>98.1MHz<br>* (A-4)<br>106.1MHz<br>* (A-7) |                | ANT (75Ω)     | 1) Set the tuning mode to MAN'L MONO. (Muting OFF)<br>2) S/N should be 30dB at each frequency of 88.1MHz, 98.1MHz, and 106.1MHz.<br>3) Check to ensure that the voltage at the ANT terminal is 5dBμ or less.<br>(A, G, L only : 7dBμ or less) |
| 10   | Adjustment of Separation            | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>Stereo L or R<br>1kHz,<br>100% modulation  | 98.1MHz<br>* (A-4)                                              | VR2            | REC OUT L, R  | With SSG output at L or R, the signal leakage level at the other channel should be minimized.<br>35dB or more                                                                                                                                 |
| 11   | Adjustment of Signal meter          | FM ANT (75Ω)<br>98.1MHz<br>45dBμ<br>MONO 1kHz<br>30% modulation                | 98.1MHz<br>* (A-4)                                              | VR1            |               | Adjust so that all segments light.                                                                                                                                                                                                            |
|      |                                     | -10dBμ or less                                                                 |                                                                 |                |               | Check to ensure that signal meters turn OFF.                                                                                                                                                                                                  |
| 12   | Verification of auto tuning         | FM ANT (75Ω)<br>98.1MHz<br>26dBμ<br>Stereo L or R<br>1kHz,<br>30% modulation   | 98.1MHz                                                         |                |               | • Automatic reception should be available when the tuning key is moved UP and DOWN.<br>• The stereo indicator should light.<br>• Audio muting should be applied during tuning.                                                                |

\* : Execution of FACTORY PRESET (Refer to page 17.) 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 23 for TP locations &amp; adjustment points.

| Step | Adjustment item                      | Signal (ANT IN)                                           | Reception frequency                                           | Adjustment point | Test point | Rating                                                                                                                             |
|------|--------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------|------------------|------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Adjustment of sensitivity (1440Hz)   | AM ANT<br>1440kHz<br>50dB $\mu$<br>1kHz<br>30% modulation | 1440kHz<br>* (B-3)                                            | T2               | REC OUT    | Audio output should be maximized.                                                                                                  |
| 2    | Verification of sensitivity (630kHz) | AM ANT<br>630kHz<br>50dB $\mu$<br>1kHz<br>30% modulation  | 630kHz<br>* (B-1)                                             | T2               | REC OUT    | Audio output should be maximized.<br>Repeat the Step 1 and 2.                                                                      |
| 3    | Verification of sensitivity          | AM ANT<br>630kHz<br>1080kHz<br>1440kHz<br>30% modulation  | 630kHz<br>* (B-1)<br>1080kHz<br>* (B-2)<br>1440kHz<br>* (B-3) |                  | AM ANT     | Distortion should be 10% or less at each frequency.<br>Check to ensure that the voltage at the ANT terminal is 54dB $\mu$ or less. |
| 4    | Verification of signal meter         | AM ANT<br>1080kHz<br>90dB $\mu$<br>-10dB $\mu$ or less    | 1080kHz<br>* (B-2)                                            |                  |            | Check to ensure that signal meters turn ON<br>Check to ensure that signal meters turn OFF                                          |
| 5    | Verification of auto tuning          | AM ANT<br>60dB $\mu$                                      |                                                               |                  |            | Auto reception should be available when the tuning key is moved UP and DOWN.                                                       |

\* : Execution of FACTORY PRESET (Refer to page 17.) will facilitate setting reception frequency for adjustment.

## RX-V2095/RX-V2095RDS

## ■ IC DATA

IC3 : HD64F3337YF16 (P.C.B. FUNCTION)

8 bit  $\mu$ -COM (Main CPU)

| No. | Pin Name         | Function | I/O | Detailed Function                                 | Power On | Power Off | Backup |
|-----|------------------|----------|-----|---------------------------------------------------|----------|-----------|--------|
| 1   | /RES             | /RES     | --- | CPU Reset                                         | ---      | ---       | ---    |
| 2   | XTAL             | XTAL     | --- | Oscillator : 8MHz                                 | ---      | ---       | ---    |
| 3   | EXTAL            | EXTAL    | --- | Oscillator : 8MHz                                 | ---      | ---       | ---    |
| 4   | MD1              | MD1      | --- | Mode Set 1, Normal : +5M/Flush Write : +12V       | ---      | ---       | ---    |
| 5   | MD0              | MD0      | --- | Mode Set 0, Normal : +5M/Flush Write : +5M        | ---      | ---       | ---    |
| 6   | /NMI             | /NMI     | --- | + 5V                                              | ---      | ---       | ---    |
| 7   | /STBY/FVpp       | /FVpp    | --- | Stand-by or Fvpp, Normal : +5M/Flush Write : +12V | ---      | ---       | ---    |
| 8   | Vcc              | Vcc      | --- | Vcc                                               | ---      | ---       | ---    |
| 9   | P52/SCK0         | SCKN     | O   | SCK for Non Audio                                 | O        | OL        | OL     |
| 10  | P51/RXD0         | RDTR/FSW | I   | RXD for Non Audio (RDS)/Frequency Switch (Note 1) | I        | I         | OL     |
| 11  | P50/TXD0         | SDTN     | O   | SDT for Non Audio                                 | O        | OL        | OL     |
| 12  | Vss              | GND      | --- | GND                                               | ---      | ---       | ---    |
| 13  | P97              | CER      | O   | CE for Non Audio (RDS)                            | O        | OL        | OL     |
| 14  | P96/ $\emptyset$ | /ST      | I   | Tuner Stereo                                      | I        | I         | HiZ    |
| 15  | P95              | CES      | O   | CE for Non Audio (OSD)                            | O        | OL        | OL     |
| 16  | P94              | CEF1     | O   | CE for Non Audio (FL1)                            | O        | OL        | OL     |
| 17  | P93              | CEF0     | O   | CE for Non Audio (FL0)                            | O        | OL        | OL     |
| 18  | P92//IRQ0        | PDT      | I   | Power Detect (Low Level Detect)                   | I        | I         | I      |
| 19  | P91//IRQ1        | REM      | I   | Remote (Low Edge Detect)                          | I        | I         | OL     |
| 20  | P90//IRQ2        | VSX      | I   | Video Vertical Sync (Low Edge Detect)             | I        | I         | OL     |
| 21  | P60              | SCKP     | O   | SCK for Tuner PLL                                 | O        | OL        | OL     |
| 22  | P61              | SDTP     | O   | SDT for Tuner PLL                                 | O        | OL        | OL     |
| 23  | P62              | RDTP     | I   | RDT for Tuner PLL                                 | I        | I         | OL     |
| 24  | P63              | CEP      | O   | CE for Tuner PLL                                  | O        | OL        | OL     |
| 25  | P64              | /TMT     | O   | Tuner Mute                                        | O        | OL        | OL     |
| 26  | P65              | /FLR     | O   | FL Reset                                          | O        | OL        | OL     |
| 27  | P66//IRQ6        | NC       |     | N.C.                                              | OL       | OL        | OL     |
| 28  | P67//IRQ7        | PSW      | I   | Power Switch                                      | I        | I         | OL     |
| 29  | Avcc             | Avcc     | --- | Avcc                                              | ---      | ---       | ---    |
| 30  | P77/AN7          | MTR      | I   | Tuner Meter                                       | I        | I         | HiZ    |
| 31  | P70/AN0          | KEY0     | I   | Key State 0                                       | I        | I         | HiZ    |
| 32  | P71/AN1          | KEY1     | I   | Key State 1                                       | I        | I         | HiZ    |
| 33  | P72/AN2          | KEY2     | I   | Key State 2                                       | I        | I         | HiZ    |
| 34  | P73/AN3          | REC      | I   | Rec out Selector                                  | I        | I         | HiZ    |
| 35  | P74/AN4          | PRV      | I   | V Protection                                      | I        | I         | HiZ    |
| 36  | P75/AN5          | PRD      | I   | DC Protection                                     | I        | I         | HiZ    |
| 37  | P76/AN6          | THM      | I   | Thermal Detect                                    | I        | I         | HiZ    |
| 38  | Avss             | GND      | --- | GND                                               | ---      | ---       | ---    |
| 39  | P40              | VIND     | O   | Volume Indicator                                  | O        | OL        | OL     |
| 40  | P41              | VUP      | O   | Volume Up                                         | O        | OL        | OL     |
| 41  | P42              | VDN      | O   | Volume Down                                       | O        | OL        | OL     |
| 42  | P43              | IPA      | I   | Input Selector A                                  | I        | I         | OL     |
| 43  | P44              | IPB      | I   | Input Selector B                                  | I        | I         | OL     |
| 44  | P45              | PRI      | I   | I Protection                                      | I        | I         | OL     |
| 45  | P46/PW0          | FAN      | O   | Fan Control (PWM)                                 | O        | OL        | OL     |
| 46  | P47/PW1          | /FMT     | O   | Full Mute                                         | O        | OL        | OL     |
| 47  | Vcc              | Vcc      | --- | Vcc                                               | ---      | ---       | ---    |
| 48  | P27              | /MLV     | O   | Main Level Att.                                   | O        | OL        | OL     |
| 49  | P26              | SPA      | O   | Speaker Relay A                                   | O        | OL        | OL     |
| 50  | P25              | SPB      | O   | Speaker Relay B                                   | O        | OL        | OL     |
| 51  | P24              | SPE      | O   | Speaker Relay Ext                                 | O        | OL        | OL     |
| 52  | P23              | CEL      | O   | CE Sanyo for Audio                                | O        | OL        | OL     |
| 53  | P22              | CET      | O   | CE Toshiba for Audio                              | O        | OL        | OL     |



**IC3 : HD64F3337YF16 (P.C.B. FUNCTION)**  
**8 bit  $\mu$ -COM (Main CPU)**

| No. | Pin Name | Function | I/O | Detailed Function                               | Power On | Power Off | Backup |
|-----|----------|----------|-----|-------------------------------------------------|----------|-----------|--------|
| 54  | P21      | SDTA     | O   | SDT for Audio                                   | O        | OL        | OL     |
| 55  | P20      | SCKA     | O   | SCK for Audio                                   | O        | OL        | OL     |
| 56  | Vss      | GND      | --- | GND                                             | ---      | ---       | ---    |
| 57  | P17      | /Z2MT    | O   | Zone 2 Mute                                     | O        | OL        | OL     |
| 58  | P16      | I/E      | O   | Video Internal/External                         | O        | OL        | OL     |
| 59  | P15      | VRC      | O   | Video Rec out Select C                          | O        | OL        | OL     |
| 60  | P14      | VRB      | O   | Video Rec out Select B                          | O        | OL        | OL     |
| 61  | P13      | VRA      | O   | Video Rec out Select A                          | O        | OL        | OL     |
| 62  | P12      | VIC      | O   | Video Input Select C                            | O        | OL        | OL     |
| 63  | P11      | VIB      | O   | Video Input Select B                            | O        | OL        | OL     |
| 64  | P10      | VIA      | O   | Video Input Select A                            | O        | OL        | OL     |
| 65  | P30      | PRY      | O   | Power Relay                                     | O        | OL        | OL     |
| 66  | P31      | Z2DET    | I   | Zone 2 Detect                                   | I        | I         | OL     |
| 67  | P32      | TUN0     | I   | Tuner Mode 0 (Note 2)                           | I        | I         | OL     |
| 68  | P33      | TUN1     | I   | Tuner Mode 1 (Note 2)                           | I        | I         | OL     |
| 69  | P34      | VID      | I   | Video Format (Note 3)                           | I        | I         | OL     |
| 70  | P35      | RDS      | I   | RDS Exist or Not (Note 4)                       | I        | I         | OL     |
| 71  | P36      | TYP0     | I   | Model Type 0 (Note 5)                           | I        | I         | OL     |
| 72  | P37      | TYP1     | I   | Model Type 1 (Note 5)                           | I        | I         | OL     |
| 73  | Vss      | GND      | --- | GND                                             | ---      | ---       | ---    |
| 74  | P80      | NC       | O   | Not used                                        | OL       | OL        | OL     |
| 75  | P81      | /SBR     | O   | Sub CPU Reset                                   | O        | OL        | OL     |
| 76  | P82      | TRQ      | I   | CPU I/F Transfer Request                        | I        | I         | OL     |
| 77  | P83      | RTN      | I   | CPU I/F Word Clock                              | I        | I         | OL     |
| 78  | P84/TXD1 | MTS/TXD1 | O   | Normal : CPU I/F Main to Sub Flush Write : TXD1 | O        | OL        | OL     |
| 79  | P85/RXD1 | STM/RXD1 | I   | Normal : CPU I/F Sub to Main Flush Write : RXD1 | I        | I         | OL     |
| 80  | P86/SCK1 | CKIF     | O   | CPU I/F Clock                                   | O        | OL        | OL     |

**(Note 1) Pin 10 Frequency Switch (R only)**

|   |                              |                                 |
|---|------------------------------|---------------------------------|
| 0 | AM : 530-1710kHz(10kHz step) | FM : 87.5-108.0MHz(100kHz step) |
| 1 | AM : 531-1611kHz(9kHz step)  | FM : 87.5-108.0MHz(50kHz step)  |

**(Note 2) Pin 67, 68 Tuner Mode 0 and 1**

| Tuner Mode 1 | Tuner Mode 0 | Tuner Frequency                                              |      |
|--------------|--------------|--------------------------------------------------------------|------|
| 0            | 0            | AM : 531-1611kHz(9kHz step) FM : 76.0-90.0MHz(100kHz step)   | J    |
| 0            | 1            | AM : 530-1710kHz(10kHz step) FM : 87.5-107.9MHz(200kHz step) | U, C |
| 1            | 0            | AM : 531-1611kHz(9kHz step) FM : 87.5-108.0MHz(50kHz step)   | A, L |
| 1            | 1            | Tuner Frequency is selected by Frequency Switch(Pin 10)      | R, T |

**(Note 3) Pin 69 Video Format**

|   |      |
|---|------|
| 0 | NTSC |
| 1 | PAL  |

**(Note 4) Pin 70 RDS Exist or Not**

|   |           |
|---|-----------|
| 0 | Not Exist |
| 1 | Exist     |

**(Note 5) Pin 71, 72 Model Type 0 and 1**

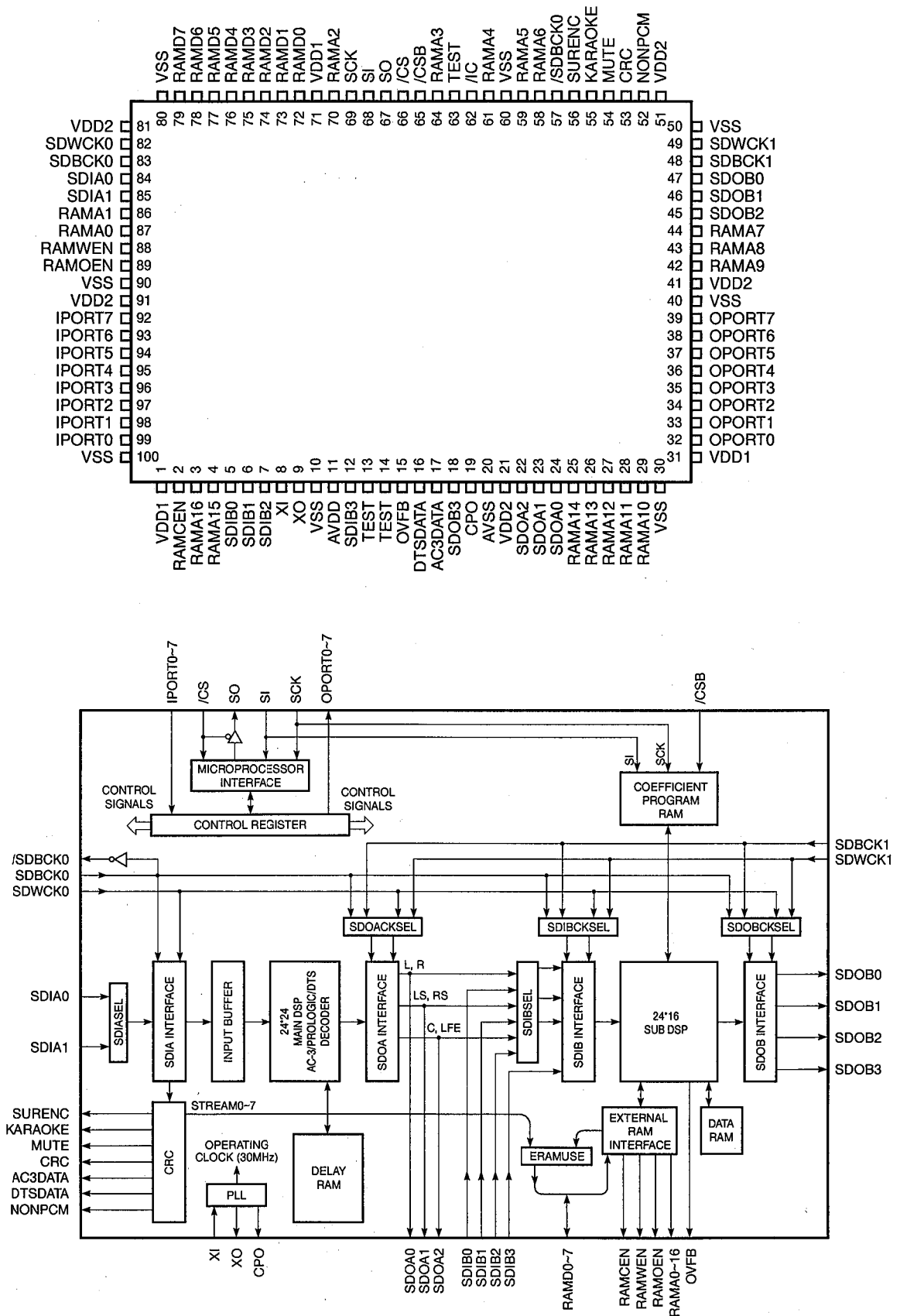
| Model Type 1 | Model Type 0 | Model Name |
|--------------|--------------|------------|
| 0            | 0            | RX-V2095   |
| 0            | 1            | DSP-A2     |
| 1            | 0            | RX-V995    |
| 1            | 1            | RX-V795    |

## RX-V2095/RX-V2095RDS

IC14 : LC87F5164 (P.C.B. DSP)

8 bit  $\mu$ -COM (Sub CPU)

| No. | PORT     | Name   | Function                     | I/O         | No. | PORT     | Name  | Function               | I/O |
|-----|----------|--------|------------------------------|-------------|-----|----------|-------|------------------------|-----|
| 1   | PA3      | CDO    | DIR2 CDO                     | I           | 80  | PA2      | CCK   | DIR2 CCK               | O   |
| 2   | PA4      | /ICDI  | /IC DIR2                     | O           | 79  | PA1      | CLD   | DIR2 CLD               | O   |
| 3   | PA5      | /KM1   | Compulsion (analog) mode     | O           | 78  | PA0      | DMT   | L/R DAC MUTE           | O   |
| 4   | P70/INT0 | LOCKN  | DIR LOCKN                    | IRQ         | 77  | PC0      | DIA   | DIGITAL INP SEL        | O   |
| 5   | P71/INT1 | ERRD   | DIR2 ERR                     | IRQ         | 76  | PC1      | DIB   | DIGITAL INP SEL        | O   |
| 6   | P72/INT2 | ERRA   | AC3D MUTE                    | IRQ         | 75  | PC2      | DIC   | DIGITAL INP SEL        | O   |
| 7   | P73/INT3 | NONPCM | AC3D AC3DATA                 | IRQ         | 74  | PC3      | DRA   | DIGITAL REC SEL        | O   |
| 8   | /RES     | /RES   | CPU RESET                    | -           | 73  | PC4      | DRB   | DIGITAL REC SEL        | O   |
| 9   | XT1      | XT1    | VDD1                         | I           | 72  | PC5      | VER   | OPEN                   | Ipu |
| 10  | XT2      | XT2    | OPEN                         | I           | 71  | PC6      | NC    | -                      | I/O |
| 11  | VSS1     | VSS1   | GND                          | G           | 70  | PC7      | NC    | -                      | I/O |
| 12  | CF1      | CF1    | 10MHz                        | $\emptyset$ | 69  | VDD3     | VDD3  | +5V                    | +5V |
| 13  | CF2      | CF2    | 10MHz                        | $\emptyset$ | 68  | VSS3     | VSS3  | GND                    | G   |
| 14  | VDD1     | VDD1   | +5V                          | +5V         | 67  | PB0      | RF    | H : present/L : absent | Ipu |
| 15  | P80/AN0  | NC     | -                            | O           | 66  | PB1      | CDC/O | CD OPT/COAX            | I   |
| 16  | P81/AN1  | NC     | -                            | O           | 65  | PB2      | LDC/O | LD/DVD OPT/COAX        | I   |
| 17  | P82/AN2  | NC     | -                            | O           | 64  | PB3      | MUTO  | AC3RF MUTE OUT         | Ipu |
| 18  | P83/AN3  | NC     | -                            | O           | 63  | PB4      | DSP   | OPEN                   | Ipu |
| 19  | P84/AN4  | NC     | -                            | O           | 62  | PB5      | NC    | -                      | I/O |
| 20  | P85/AN5  | NC     | -                            | O           | 61  | PB6      | NC    | -                      | I/O |
| 21  | P86/AN6  | NC     | -                            | O           | 60  | PB7      | NC    | -                      | I/O |
| 22  | P87/AN7  | NC     | -                            | O           | 59  | P27      | NC    | -                      | I/O |
| 23  | P30      | /ICAK  | /IC AK4526                   | O           | 58  | P26      | NC    | -                      | I/O |
| 24  | P31      | CEAK   | CE AK4526                    | O           | 57  | P25      | NC    | -                      | I/O |
| 25  | P32      | /ICAC  | /IC AC3D                     | O           | 56  | P24/INT5 | NC    | -                      | I/O |
| 26  | P33      | CEAC2  | CE2 AC3D                     | O           | 55  | P23      | NC    | -                      | I/O |
| 27  | P34      | CEAC1  | CE1 AC3D                     | O           | 54  | P22      | NC    | -                      | I/O |
| 28  | SO0      | TXAC   | TX AC3D/AK4526               | TX          | 53  | P21      | NC    | -                      | I/O |
| 29  | SI0      | RXAC   | RXD AC3D                     | RX          | 52  | P20/INT4 | NC    | -                      | I/O |
| 30  | SCK0     | CLKAC  | CLK AC3D/AK4526              | CLK         | 51  | P07      | NC    | -                      | I/O |
| 31  | P13/SO1  | RSRV   | OPEN : normal/GND : on-board | Ipu         | 50  | P06      | NC    | -                      | I/O |
| 32  | SI1      | TRXOB  | TX/RX for on-board           | I/O         | 49  | P05      | NC    | -                      | I/O |
| 33  | SCK1     | CLKOB  | CLK for on-board             | I           | 48  | P04      | NC    | -                      | I/O |
| 34  | P16/PWM  | NC     | -                            | I           | 47  | P03      | NC    | -                      | I/O |
| 35  | P17/PWM  | NC     | -                            | I/O         | 46  | P02      | NC    | -                      | I/O |
| 36  | SO2      | STM    | TX CPU I/F                   | TX          | 45  | P01      | NC    | -                      | I/O |
| 37  | SI2      | MTS    | RX CPU I/F                   | RX          | 44  | P00      | NC    | -                      | I/O |
| 38  | SCK2     | CLKIF  | RX CLK CPU I/F               | RXCK        | 43  | VSS2     | VSS2  | GND                    | G   |
| 39  | SI2P3    | WCIF   | RETURN CPU I/F               | O           | 42  | VDD2     | VDD2  | +5V                    | +5V |
| 40  | PWM1     | TRQ    | TRANS REQUEST                | O           | 41  | PWM0     | NC    | OPEN                   | OL  |

**IC4 : YSS918 (P.C.B. DSP)**  
**AC3D2av**


## RX-V2095/RX-V2095RDS

IC4 : YSS918 (P.C.B. DSP)  
AC3D2av

| No. | Name    | I/O | Function                                                                                |
|-----|---------|-----|-----------------------------------------------------------------------------------------|
| 1   | VDD     |     | +5V power supply (for terminal section)                                                 |
| 2   | RAMCEN  | O   | External SRAM chip enable terminal                                                      |
| 3   | RAMA16  | O   | External SRAM address terminal 16                                                       |
| 4   | RAMA15  | O   | External SRAM address terminal 15                                                       |
| 5   | SDIB0   | Itp | PCM input terminal 0 to Sub DSP                                                         |
| 6   | SDIB1   | Itp | PCM input terminal 1 to Sub DSP                                                         |
| 7   | SDIB2   | Itp | PCM input terminal 2 to Sub DSP                                                         |
| 8   | XI      | Ic  | Crystal oscillator connecting terminal (12.288MHz)                                      |
| 9   | XO      | O   | Crystal oscillator connecting terminal                                                  |
| 10  | VSS     |     | Ground terminal (for terminal section)                                                  |
| 11  | AVDD    |     | +3.3V power terminal (for PLL circuit)                                                  |
| 12  | SDIB3   | Itp | PCM input terminal 3 to Sub DSP                                                         |
| 13  | TEST    |     | Test terminal (unconnected)                                                             |
| 14  | TEST    |     | Test terminal (unconnected)                                                             |
| 15  | OVFB    | O   | Sub DSP overflow detect terminal                                                        |
| 16  | DTSDATA | O   | DTS data detect terminal                                                                |
| 17  | AC3DATA | O   | AC-3 data detect terminal                                                               |
| 18  | SDOB3   | O   | PCM output terminal from Sub DSP                                                        |
| 19  | CPO     | A   | PLL output terminal (connected to external analog filter circuit)                       |
| 20  | AVSS    |     | Ground terminal (for PLL circuit)                                                       |
| 21  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 22  | SDOA2   | O   | PCM output terminal from Main DSP (C/LFE output at AC-3/DTS, C/S output at Pro Logic)   |
| 23  | SDOA1   | O   | PCM output terminal from Main DSP (LS/RS output at AC-3/DTS, Lt/Rt output at Pro Logic) |
| 24  | SDOA0   | O   | PCM output terminal from Main DSP (L/R output at both AC-3/DTS and Pro Logic)           |
| 25  | RAMA14  | O   | External SRAM address terminal 14                                                       |
| 26  | RAMA13  | O   | External SRAM address terminal 13                                                       |
| 27  | RAMA12  | O   | External SRAM address terminal 12                                                       |
| 28  | RAMA11  | O   | External SRAM address terminal 11                                                       |
| 29  | RAMA10  | O   | External SRAM address terminal 10                                                       |
| 30  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 31  | VDD1    |     | +5V power terminal (for terminal section)                                               |
| 32  | OPORT0  | O   | General purpose output terminal                                                         |
| 33  | OPORT1  | O   | General purpose output terminal                                                         |
| 34  | OPORT2  | O   | General purpose output terminal                                                         |
| 35  | OPORT3  | O   | General purpose output terminal                                                         |
| 36  | OPORT4  | O   | General purpose output terminal                                                         |
| 37  | OPORT5  | O   | General purpose output terminal                                                         |
| 38  | OPORT6  | O   | General purpose output terminal                                                         |
| 39  | OPORT7  | O   | General purpose output terminal                                                         |
| 40  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 41  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 42  | RAMA9   | O   | External SRAM address terminal 9                                                        |
| 43  | RAMA8   | O   | External SRAM address terminal 8                                                        |
| 44  | RAMA7   | O   | External SRAM address terminal 7                                                        |
| 45  | SDOB2   | O   | PCM output terminal from Sub DSP                                                        |
| 46  | SDOB1   | O   | PCM output terminal from Sub DSP                                                        |
| 47  | SDOB0   | O   | PCM output terminal from Sub DSP                                                        |
| 48  | SDBCK1  | Itp | Bit clock input terminal for SDOA, SDIB, SDOB signals                                   |
| 49  | SDWCK1  | Itp | Word clock input terminal for SDOA, SDIB, SDOB signals                                  |
| 50  | VSS     |     | Ground terminal (for terminal section)                                                  |
| 51  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 52  | NONPCM  | O   | Non-PCM data detect terminal                                                            |

**IC4 : YSS918 (P.C.B. DSP)**  
**AC3D2av**

| No. | Name    | I/O   | Function                                                                     |
|-----|---------|-------|------------------------------------------------------------------------------|
| 53  | CRC     | O     | AC-3 CRC error detect terminal                                               |
| 54  | MUTE    | O     | Auto mute detect terminal                                                    |
| 55  | KARAOKE | O     | AC-3 KARAOKE data detect terminal                                            |
| 56  | SURENC  | O     | AC-3 2/0 mode Dolby surround encode input detect terminal                    |
| 57  | /SDBCK0 | O     | SDBCK0 invert clock output terminal                                          |
| 58  | RAMA6   | O     | External SRAM address terminal 6                                             |
| 59  | RAMA5   | O     | External SRAM address terminal 5                                             |
| 60  | VSS     |       | Ground terminal (for internal circuit)                                       |
| 61  | RAMA4   | O     | External SRAM address terminal 4                                             |
| 62  | /IC     | Ics   | Initial clear terminal                                                       |
| 63  | TEST    |       | Test terminal (unconnected)                                                  |
| 64  | RAMA3   | O     | External SRAM address terminal 3                                             |
| 65  | /CSB    | ltsp  | Sub DSP chip select input terminal                                           |
| 66  | /CS     | Its   | Microprocessor interface chip select input terminal                          |
| 67  | SO      | O*    | Microprocessor interface data output terminal                                |
| 68  | SI      | Its   | Microprocessor interface and Sub DSP data input terminal                     |
| 69  | SCK     | Its   | Microprocessor interface and Sub DSP clock input terminal                    |
| 70  | RAMA2   | O     | External SRAM address terminal 2                                             |
| 71  | VDD1    |       | +5V power terminal (for terminal section)                                    |
| 72  | RAMD0   | ltp/O | External SRAM data terminal (STREAM 0 output when external SRAM is not used) |
| 73  | RAMD1   | ltp/O | External SRAM data terminal (STREAM 1 output when external SRAM is not used) |
| 74  | RAMD2   | ltp/O | External SRAM data terminal (STREAM 2 output when external SRAM is not used) |
| 75  | RAMD3   | ltp/O | External SRAM data terminal (STREAM 3 output when external SRAM is not used) |
| 76  | RAMD4   | ltp/O | External SRAM data terminal (STREAM 4 output when external SRAM is not used) |
| 77  | RAMD5   | ltp/O | External SRAM data terminal (STREAM 5 output when external SRAM is not used) |
| 78  | RAMD6   | ltp/O | External SRAM data terminal (STREAM 6 output when external SRAM is not used) |
| 79  | RAMD7   | ltp/O | External SRAM data terminal (STREAM 7 output when external SRAM is not used) |
| 80  | VSS     |       | Ground terminal (for terminal section)                                       |
| 81  | VDD2    |       | +3.3V power terminal (for internal circuit)                                  |
| 82  | SDWCK0  | It    | Word clock input terminal for SDIA, SDOA, SDIB and SDOB signals              |
| 83  | SDBCK0  | It    | Bit clock input terminal for SDIA, SDOA, SDIB and SDOB signals               |
| 84  | SDIA0   | It    | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                 |
| 85  | SDIA1   | It    | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                 |
| 86  | RAMA1   | O     | External SRAM address terminal 1                                             |
| 87  | RAMA0   | O     | External SRAM address terminal 0                                             |
| 88  | RAMWEN  | O     | External SRAM write enable terminal                                          |
| 89  | RAMOEN  | O     | External SRAM output enable terminal                                         |
| 90  | VSS     |       | Ground terminal                                                              |
| 91  | VDD2    |       | +3.3V power terminal (for internal circuit)                                  |
| 92  | IPT7    | ltp   | General purpose input terminal                                               |
| 93  | IPT6    | ltp   | General purpose input terminal                                               |
| 94  | IPT5    | ltp   | General purpose input terminal                                               |
| 95  | IPT4    | ltp   | General purpose input terminal                                               |
| 96  | IPT3    | ltp   | General purpose input terminal                                               |
| 97  | IPT2    | ltp   | General purpose input terminal                                               |
| 98  | IPT1    | ltp   | General purpose input terminal                                               |
| 99  | IPT0    | ltp   | General purpose input terminal                                               |
| 100 | VSS     |       | Ground terminal                                                              |

Note) Listed below are symbols in the I/O column and their meanings.

Ic: CMOS level input terminal

Is: Schmidt trigger input terminal

O: Digital output terminal

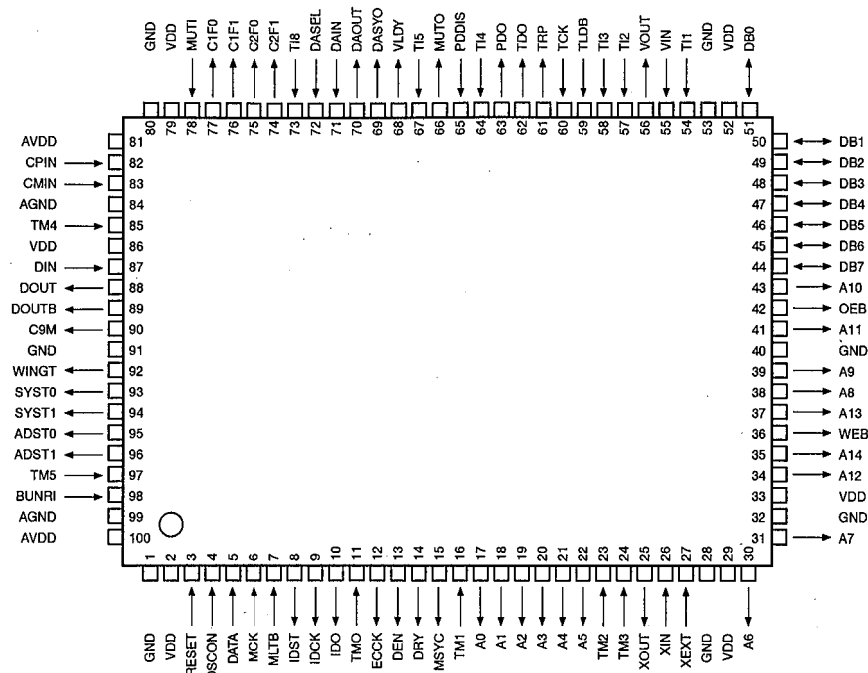
A: Analog input terminal

It: TTL level input terminal

Ip: Input terminal with pull-up resistor

O\*: Tri-state digital output terminal

**IC10 : PM4007A (P.C.B. DIGITAL IN)**  
**AC-3 RF Demodulator**



| No. | Name  | I/O | Function                                                                                                  |
|-----|-------|-----|-----------------------------------------------------------------------------------------------------------|
| 1   | GND   |     | Ground (0V)                                                                                               |
| 2   | VDD   |     | +5V power supply                                                                                          |
| 3   | RESET | I   | System resetting terminal (reset at "L")                                                                  |
| 4   | OSCON | I   | Oscillation control terminal. Oscillation ON at "H", set to "H" normally and to "L" when in standby state |
| 5   | DATA  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 6   | MCK   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 7   | MLTB  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 8   | IDST  | O   | Output terminal for IC test                                                                               |
| 9   | IDCK  | O   | Output terminal for IC test                                                                               |
| 10  | IDO   | O   | Output terminal for IC test                                                                               |
| 11  | TM0   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 12  | ECCK  | O   | Output terminal for IC test                                                                               |
| 13  | DEN   | O   | Output terminal for IC test                                                                               |
| 14  | DRY   | O   | Output terminal for IC test                                                                               |
| 15  | MSYC  | O   | Output terminal for IC test                                                                               |
| 16  | TM1   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 17  | A0    | O   | External RAM address output. Address 0 (LSB)                                                              |
| 18  | A1    | O   | External RAM address output. Address 1                                                                    |
| 19  | A2    | O   | External RAM address output. Address 2                                                                    |
| 20  | A3    | O   | External RAM address output. Address 3                                                                    |
| 21  | A4    | O   | External RAM address output. Address 4                                                                    |
| 22  | A5    | O   | External RAM address output. Address 5                                                                    |
| 23  | TM2   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 24  | TM3   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 25  | XOUT  | O   | Output terminal for IC test                                                                               |
| 26  | XIN   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 27  | XEXT  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 28  | GND   |     | Ground terminal (0V)                                                                                      |
| 29  | VDD   |     | +5V power supply                                                                                          |

**IC10 : PM4007A (P.C.B. DIGITAL IN)**  
**AC-3 RF Demodulator**

| No. | Name  | I/O | Function                                                                                              |
|-----|-------|-----|-------------------------------------------------------------------------------------------------------|
| 30  | A6    | O   | External RAM address output. Address 6                                                                |
| 31  | A7    | O   | External RAM address output. Address 7                                                                |
| 32  | GND   |     | Ground terminal (0V)                                                                                  |
| 33  | VDD   |     | +5V power supply                                                                                      |
| 34  | A12   | O   | External RAM address output. Address 12                                                               |
| 35  | A14   | O   | External RAM address output. Address 14 (MSB)                                                         |
| 36  | WEB   | O   | External RAM write enable signal, active at "L"                                                       |
| 37  | A13   | O   | External RAM address output. Address 13                                                               |
| 38  | A8    | O   | External RAM address output. Address 8                                                                |
| 39  | A9    | O   | External RAM address output. Address 9                                                                |
| 40  | GND   |     | Ground terminal (0V)                                                                                  |
| 41  | A11   | O   | External RAM address output. Address 11                                                               |
| 42  | OEB   | O   | External RAM output enable signal, active at "L"                                                      |
| 43  | A10   | O   | External RAM address output. Address 10                                                               |
| 44  | DB7   | I/O | External RAM data terminal. Data bus 7                                                                |
| 45  | DB6   | I/O | External RAM data terminal. Data bus 6                                                                |
| 46  | DB5   | I/O | External RAM data terminal. Data bus 5                                                                |
| 47  | DB4   | I/O | External RAM data terminal. Data bus 4                                                                |
| 48  | DB3   | I/O | External RAM data terminal. Data bus 3                                                                |
| 49  | DB2   | I/O | External RAM data terminal. Data bus 2                                                                |
| 50  | DB1   | I/O | External RAM data terminal. Data bus 1                                                                |
| 51  | DB0   | I/O | External RAM data terminal. Data bus 0                                                                |
| 52  | VDD   |     | +5V power supply                                                                                      |
| 53  | GND   |     | Ground terminal (0V)                                                                                  |
| 54  | TI1   | I   | IC test terminal, normally connected to VDD                                                           |
| 55  | VIN   | I   | VCXO input                                                                                            |
| 56  | VOUT  | O   | VCXO output                                                                                           |
| 57  | TI2   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 58  | TI3   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 59  | TLDB  | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 60  | TCK   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 61  | TRP   | O   | Output terminal for IC test                                                                           |
| 62  | TDO   | O   | Output terminal for IC test                                                                           |
| 63  | PDO   | O   | Output terminal for phase comparator (tri-state)                                                      |
| 64  | TI4   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 65  | PDDIS | I   | Input terminal to control PDO output. Output ON at "L"                                                |
| 66  | MUTO  | O   | Muting output. Muting available at "H". Setting becomes "H" when "MUTI=H" or AC-3 is asynchronous.    |
| 67  | TI5   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 68  | VLDY  | O   | Output terminal for IC test                                                                           |
| 69  | DASYO | O   | Output terminal for IC test                                                                           |
| 70  | DAOUT | O   | Digital out output (serial data stream output)                                                        |
| 71  | DAIN  | I   | Digital external input, through to DAOUT when DASEL is "H".                                           |
| 72  | DASEL | I   | Digital out select                                                                                    |
| 73  | TI8   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 74  | C2F1  | O   | Terminal used to indicate error condition after C2 correction, whether completely corrected or not.   |
| 75  | C2F0  | O   | Terminal used to indicate error condition after C2 correction, number of errors at C2.                |
| 76  | C1F1  | O   | Terminal used to indicate error condition after C1 correction, whether any error exists at C1 or not. |
| 77  | C1F0  | O   | Terminal used to indicate error condition after C1 correction, number of errors at C1.                |
| 78  | MUTI  | I   | Muting input. Muting available at "H"                                                                 |
| 79  | VDD   |     | +5V power supply                                                                                      |
| 80  | GND   |     | Ground terminal (0V)                                                                                  |

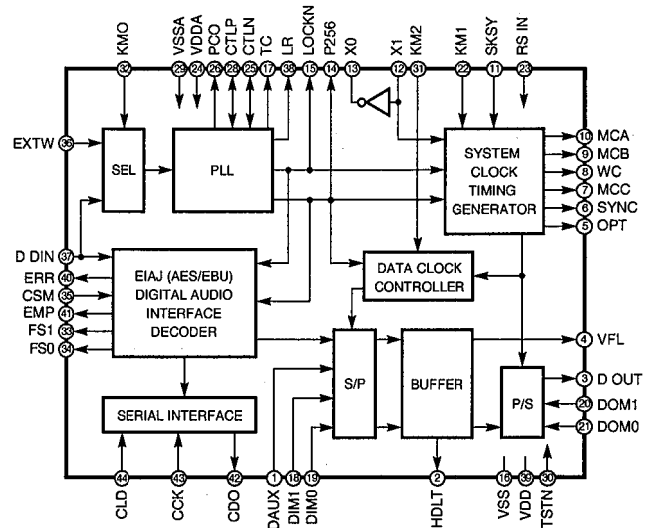
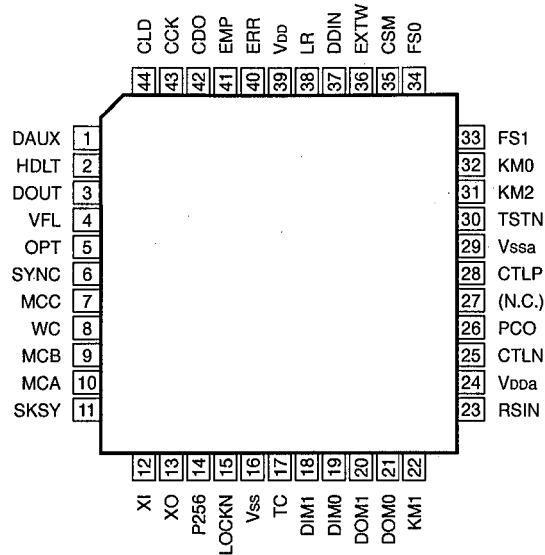
**RX-V2095/RX-V2095RDS****IC10 : PM4007A (P.C.B. DIGITAL IN)****AC-3 RF Demodulator**

| No. | Name  | I/O | Function                                                              |
|-----|-------|-----|-----------------------------------------------------------------------|
| 81  | AVDD  |     | +5V power supply for analog comparator                                |
| 82  | CPIN  | I   | Analog comparator input, positive side (Non-reverse side: QPSK input) |
| 83  | CMIN  | I   | Analog comparator input, negative side (reverse side)                 |
| 84  | AGND  |     | Ground terminal for analog comparator (0V)                            |
| 85  | TM4   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 86  | VDD   |     | +5V power supply                                                      |
| 87  | DIN   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 88  | DOUT  | O   | Analog comparator result output                                       |
| 89  | DOUTB | O   | Analog comparator result reverse output                               |
| 90  | C9M   | O   | 9.216MHz output, output divided into 2 at VIN (No.55 pin)             |
| 91  | GND   |     | Ground terminal (0V)                                                  |
| 92  | WINGT | O   | Output for IC test                                                    |
| 93  | SYST0 | O   | Output for IC test                                                    |
| 94  | SYST1 | O   | Output for IC test                                                    |
| 95  | ADST0 | O   | Output for IC test                                                    |
| 96  | ADST1 | O   | Output for IC test                                                    |
| 97  | TM5   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 98  | BUNRI | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 99  | AGND  |     | Ground terminal (0V) for 46.08MHz oscillator                          |
| 100 | AVDD  |     | +5V power supply for 46.08MHz oscillator                              |



## IC3 : YM3436DK (P.C.B. DSP)

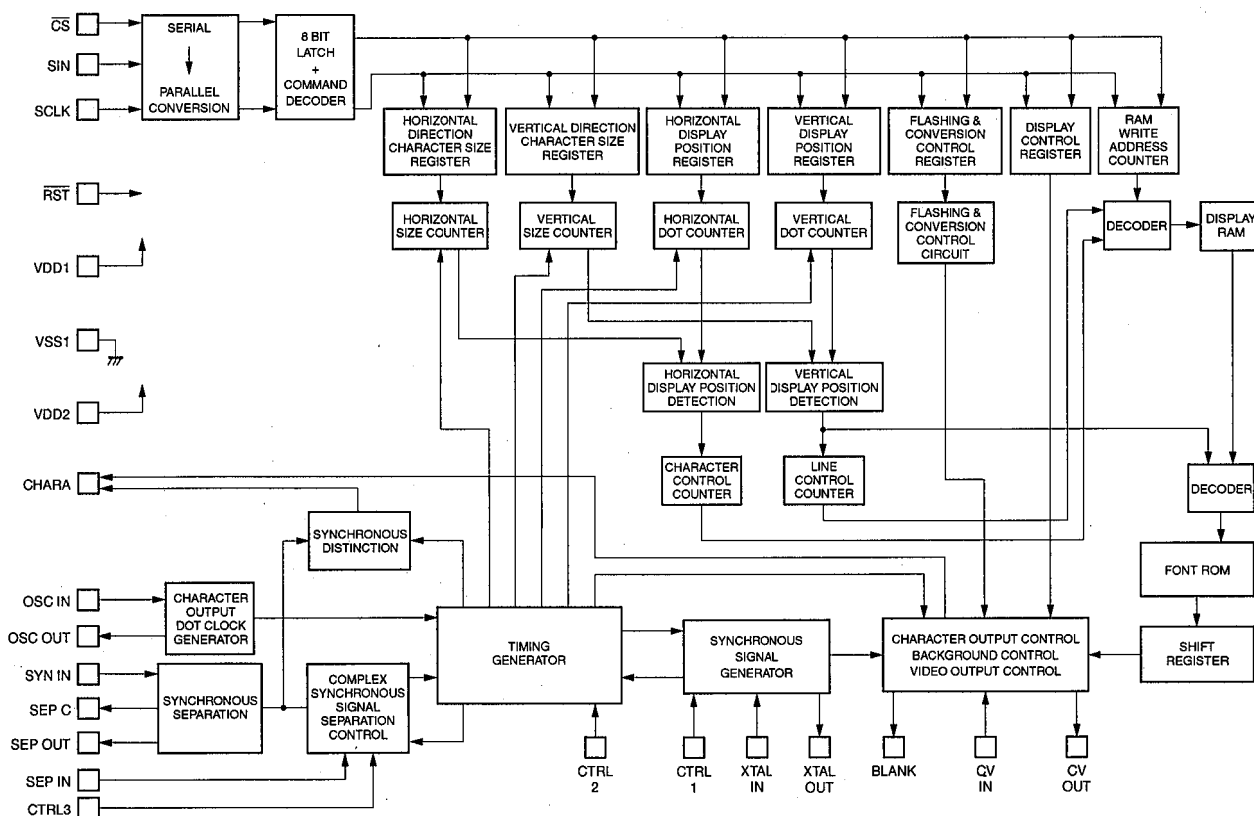
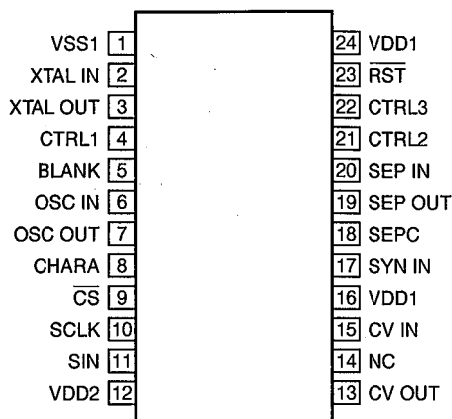
## DIR ( Digital Format Interface Receiver )



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

IC611 : LC74781-9626 (P.C.B. VIDEO)

Superimpose



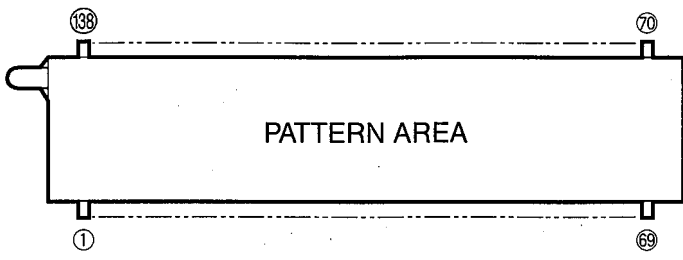
## IC611 : LC74781-9626 (P.C.B. VIDEO)

## Superimpose

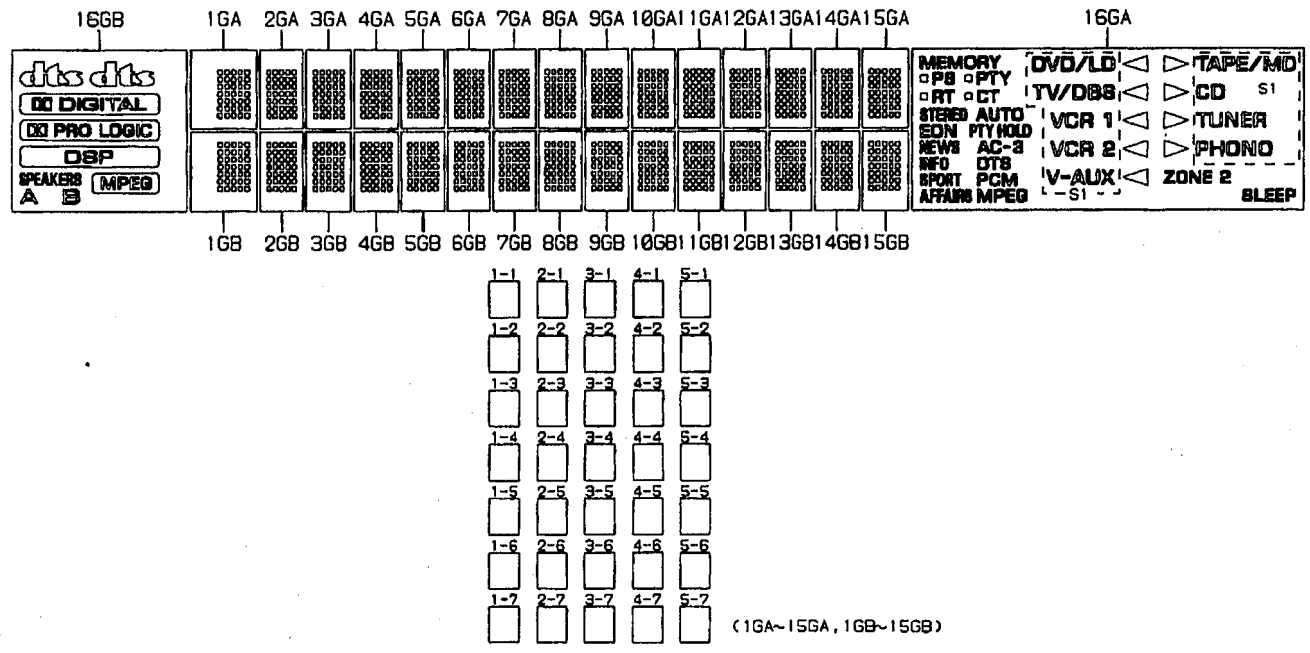
| Pin No. | Symbol   | Terminal name                                        | Function                                                                                                                                                                                                                      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

# ■ DISPLAY DATA (V2763100)

● V901 : 32-BT-05G



## GRID ASSIGNMENT



## PIN CONNECTION

| Pin No. | Connection | Pin No. | Connection | Pin No. | Connection | Pin No. | Connection | Pin No. | Connection | Pin No. | Connection | Pin No. | Connection |
|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|
| 1       | F1         | 21      | P34B       | 41      | P22B       | 61      | P4B        | 81      | P30A       | 101     | 16GA       | 121     | P5A        |
| 2       | F1         | 22      | P35B       | 42      | P21B       | 62      | P3B        | 82      | P29A       | 102     | 15GA       | 122     | P6A        |
| 3       | F1         | 23      | 1GB        | 43      | P20B       | 63      | P2B        | 83      | NP         | 103     | 14GA       | 123     | P7A        |
| 4       | NP         | 24      | 2GB        | 44      | P19B       | 64      | P1B        | 84      | P28A       | 104     | 13GA       | 124     | IC         |
| 5       | NP         | 25      | 3GB        | 45      | P18B       | 65      | NP         | 85      | P27A       | 105     | 12GA       | 125     | NP         |
| 6       | P25B       | 26      | 4GB        | 46      | P17B       | 66      | NP         | 86      | P26A       | 106     | 11GA       | 126     | Fd         |
| 7       | P26B       | 27      | 5GB        | 47      | P16B       | 67      | F2         | 87      | P25A       | 107     | 10GA       | 127     | Fd         |
| 8       | P27B       | 28      | 6GB        | 48      | P15B       | 68      | F2         | 88      | P24A       | 108     | 9GA        | 128     | NP         |
| 9       | P28B       | 29      | 7GB        | 49      | P14B       | 69      | F2         | 89      | P23A       | 109     | 8GA        | 129     | IC         |
| 10      | IC         | 30      | 8GB        | 50      | P13B       | 70      | F2         | 90      | P22A       | 110     | 7GA        | 130     | P8A        |
| 11      | NP         | 31      | 9GB        | 51      | P12B       | 71      | F2         | 91      | P21A       | 111     | 6GA        | 131     | P9A        |
| 12      | Fd         | 32      | 10GB       | 52      | P11B       | 72      | F2         | 92      | P20A       | 112     | 5GA        | 132     | P10A       |
| 13      | Fd         | 33      | 11GB       | 53      | P10B       | 73      | NP         | 93      | P19A       | 113     | 4GA        | 133     | P11A       |
| 14      | NP         | 34      | 12GB       | 54      | P9B        | 74      | NP         | 94      | P18A       | 114     | 3GA        | 134     | NP         |
| 15      | IC         | 35      | 13GB       | 55      | P8B        | 75      | P35A       | 95      | P17A       | 115     | 2GA        | 135     | NP         |
| 16      | P29B       | 36      | 14GB       | 56      | NP         | 76      | P34A       | 96      | P16A       | 116     | 1GA        | 136     | F1         |
| 17      | P30B       | 37      | 15GB       | 57      | P7B        | 77      | P33A       | 97      | P15A       | 117     | P1A        | 137     | F1         |
| 18      | P31B       | 38      | 16GB       | 58      | P6B        | 78      | P32A       | 98      | P14A       | 118     | P2A        | 138     | F1         |
| 19      | P32B       | 39      | P24B       | 59      | NP         | 79      | P31A       | 99      | P13A       | 119     | P3A        |         |            |
| 20      | P33B       | 40      | P23B       | 60      | P5B        | 80      | NP         | 100     | P12A       | 120     | P4A        |         |            |

Note : F1, F2 : Filament NP : No Pin NC : No Connection IC : Internal Connection

P1A~P35A, P1B~P35B : Datum Line 1GA~16GA, 1GB~16GB : Grid

## ANODE CONNECTION

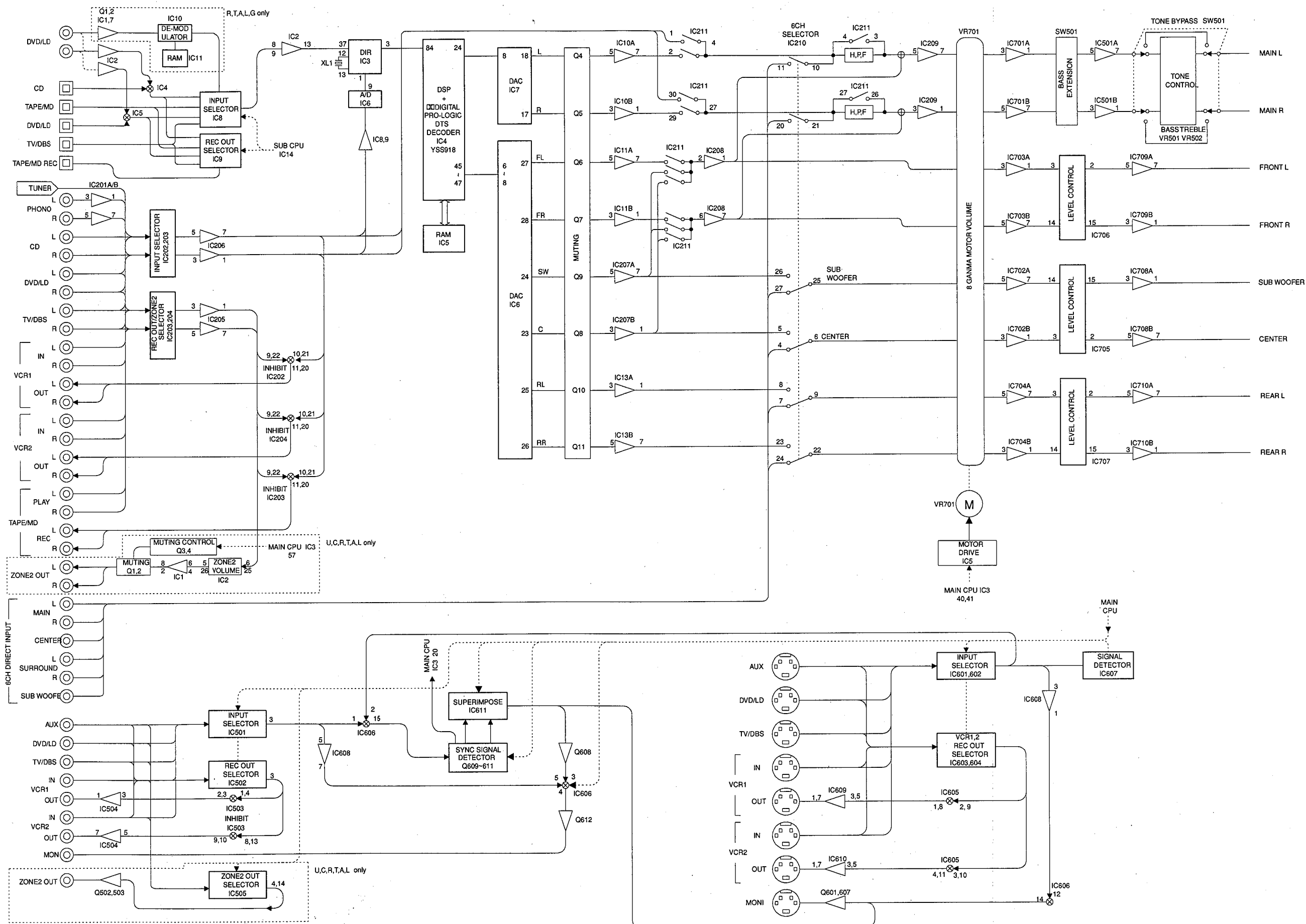
|      | 16GA        | 1GA~15GA |      | 16GA      | 1GA~15GA |      | 16GA     | 1GA~15GA |      | 16GA    | 1GA~15GA |
|------|-------------|----------|------|-----------|----------|------|----------|----------|------|---------|----------|
| P1A  | AC-3        | 1-1      | P11A | ◁ (VCR 1) | 1-3      | P21A | □ (PS)   | 1-5      | P31A | NEWS    | 1-7      |
| P2A  | DTS         | 2-1      | P12A | ◁ (VCR 2) | 2-3      | P22A | PS       | 2-5      | P32A | INFO    | 2-7      |
| P3A  | PCM         | 3-1      | P13A | ◁ (V-AUX) | 3-3      | P23A | □ (PTY)  | 3-5      | P33A | AFFAIRS | 3-7      |
| P4A  | MPEG        | 4-1      | P14A | S1        | 4-3      | P24A | PTY      | 4-5      | P34A | SPORT   | 4-7      |
| P5A  | ▷ (PHONO)   | 5-1      | P15A | ZONE 2    | 5-3      | P25A | □ (RT)   | 5-5      | P35A | AUTO    | 5-7      |
| P6A  | ▷ (TUNER)   | 1-2      | P16A | SLEEP     | 1-4      | P26A | RT       | 1-6      |      |         |          |
| P7A  | ▷ (CD)      | 2-2      | P17A | —         | 2-4      | P27A | □ (CT)   | 2-6      |      |         |          |
| P8A  | ▷ (TAPE/MD) | 3-2      | P18A | —         | 3-4      | P28A | CT       | 3-6      |      |         |          |
| P9A  | ◁ (DVD/LD)  | 4-2      | P19A | STEREO    | 4-4      | P29A | PTY HOLD | 4-6      |      |         |          |
| P10A | ◁ (TV/DBS)  | 5-2      | P20A | MEMORY    | 5-4      | P30A | EON      | 5-6      |      |         |          |

|      | 16GB        | 1GB~15GB |      | 16GB | 1GB~15GB |      | 16GB | 1GB~15GB |      | 16GB | 1GB~15GB |
|------|-------------|----------|------|------|----------|------|------|----------|------|------|----------|
| P1B  | dts (left)  | 1-1      | P11B | —    | 1-3      | P21B | —    | 1-5      | P31B | —    | 1-7      |
| P2B  | dts (right) | 2-1      | P12B | —    | 2-3      | P22B | —    | 2-5      | P32B | —    | 2-7      |
| P3B  | □ DIGITAL   | 3-1      | P13B | —    | 3-3      | P23B | —    | 3-5      | P33B | —    | 3-7      |
| P4B  | □ PRO LOGIC | 4-1      | P14B | —    | 4-3      | P24B | —    | 4-5      | P34B | —    | 4-7      |
| P5B  | DSP         | 5-1      | P15B | —    | 5-3      | P25B | —    | 5-5      | P35B | —    | 5-7      |
| P6B  | MPEG        | 1-2      | P16B | —    | 1-4      | P26B | —    | 1-6      |      |      |          |
| P7B  | SPEAKERS    | 2-2      | P17B | —    | 2-4      | P27B | —    | 2-6      |      |      |          |
| P8B  | A           | 3-2      | P18B | —    | 3-4      | P28B | —    | 3-6      |      |      |          |
| P9B  | B           | 4-2      | P19B | —    | 4-4      | P29B | —    | 4-6      |      |      |          |
| P10B | —           | 5-2      | P20B | —    | 5-4      | P30B | —    | 5-6      |      |      |          |

## ■ BLOCK DIAGRAM



## ■ BLOCK DIAGRAM





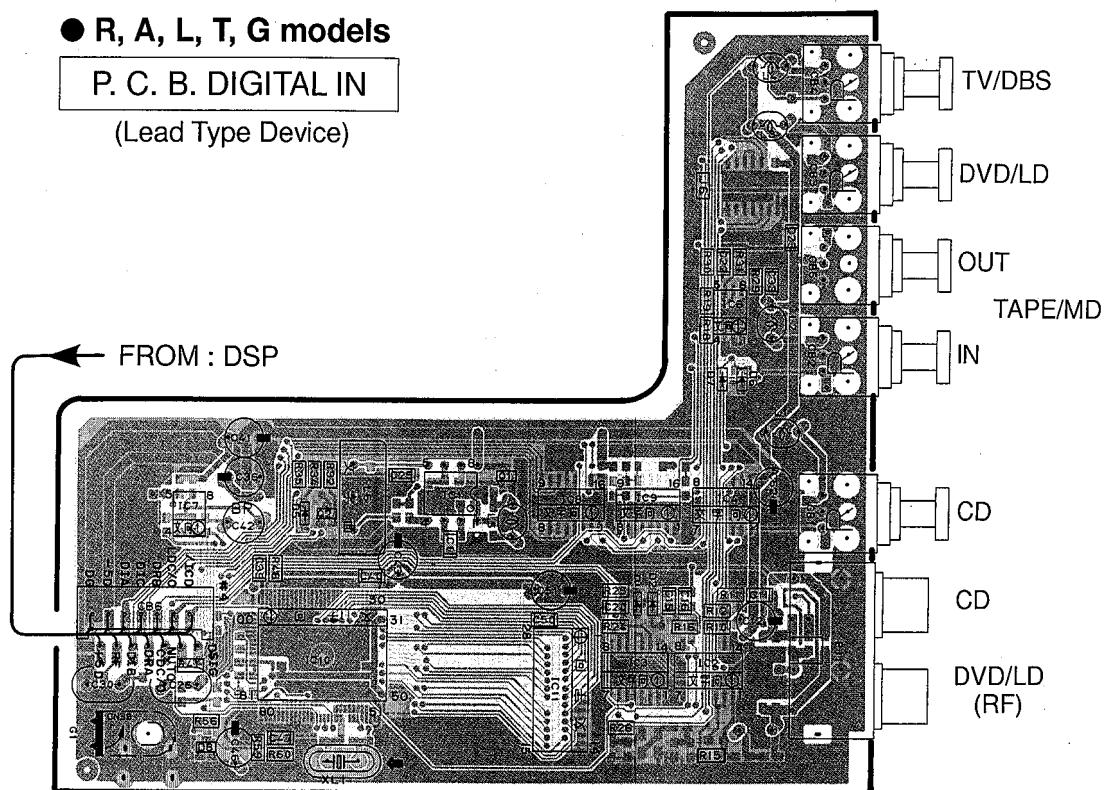


■ PRINTED CIRCUIT BOARD (Foil side)

● R, A, L, T, G models

P. C. B. DIGITAL IN

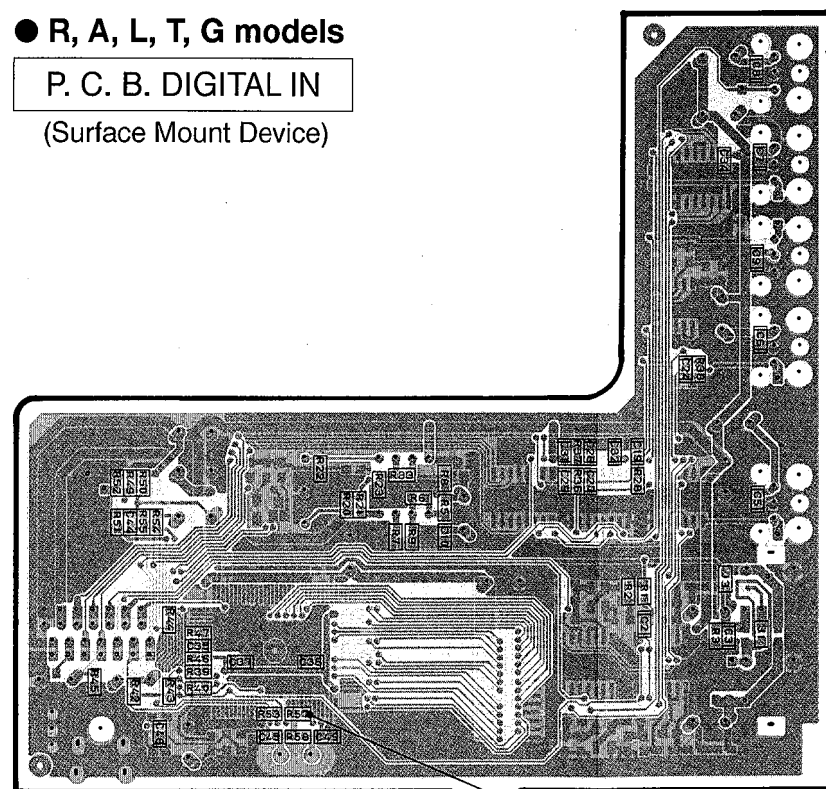
(Lead Type Device)



● R, A, L, T, G models

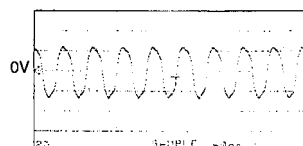
P. C. B. DIGITAL IN

(Surface Mount Device)



④

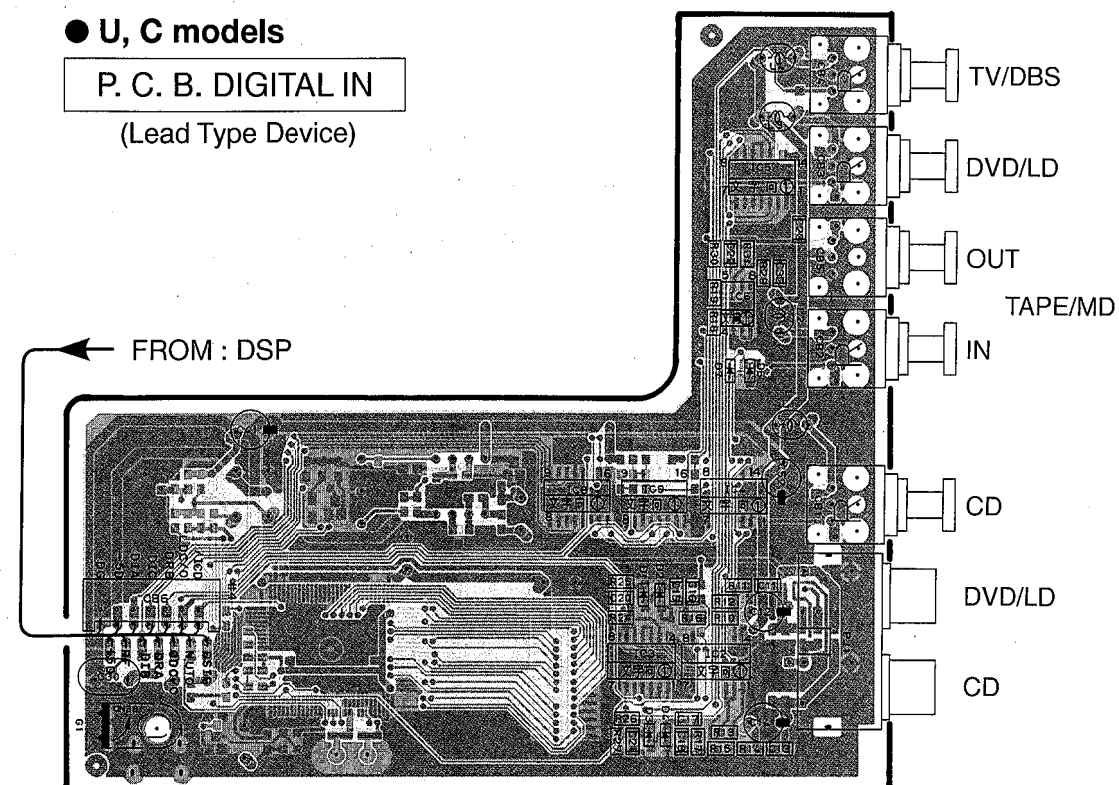
Point ④ (Pin56 of IC10)  
V : 2V/div H : 50 nsec/div  
DC range 1 : 1 probe



● U, C models

P. C. B. DIGITAL IN

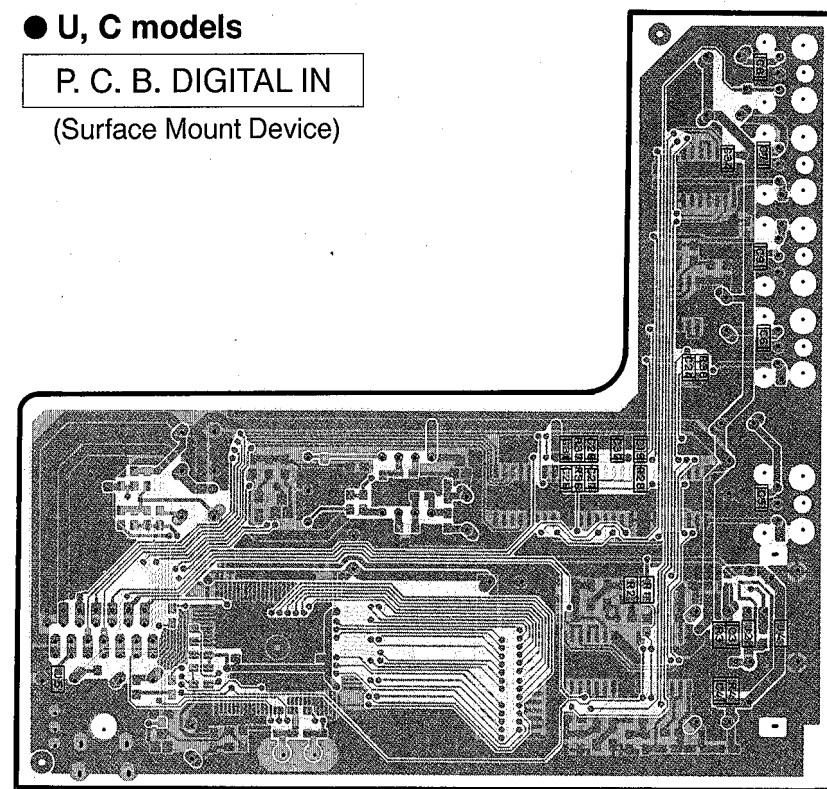
(Lead Type Device)



● U, C models

P. C. B. DIGITAL IN

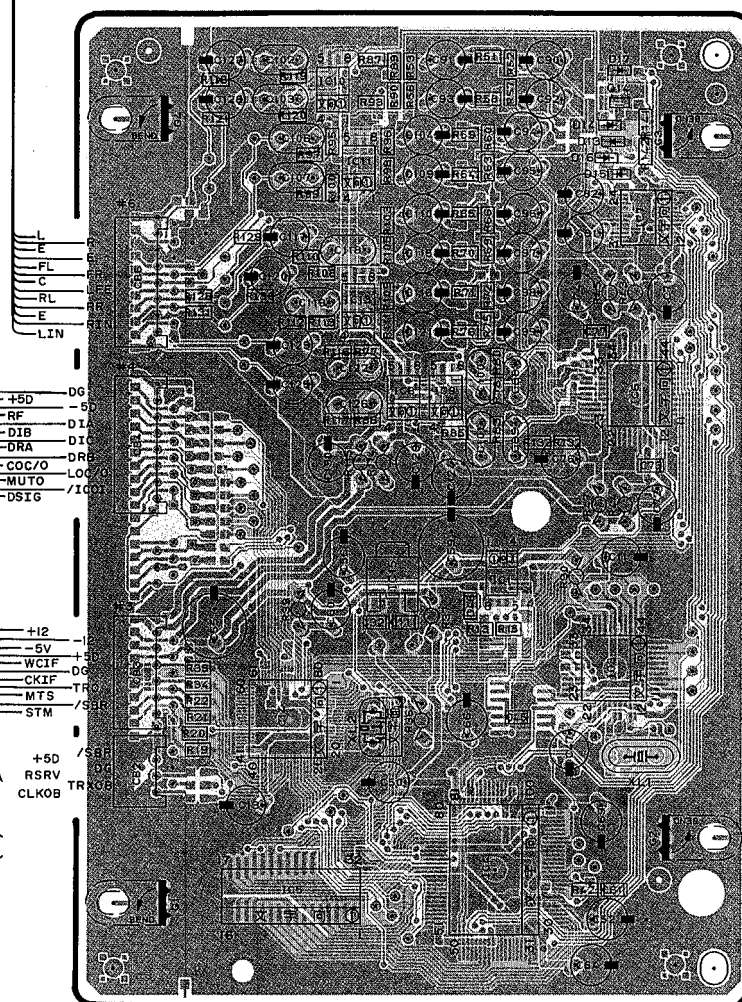
(Surface Mount Device)



# **PRINTED CIRCUIT BOARD (Foil side)**

P. C. B. DSP (Lead Type Device)

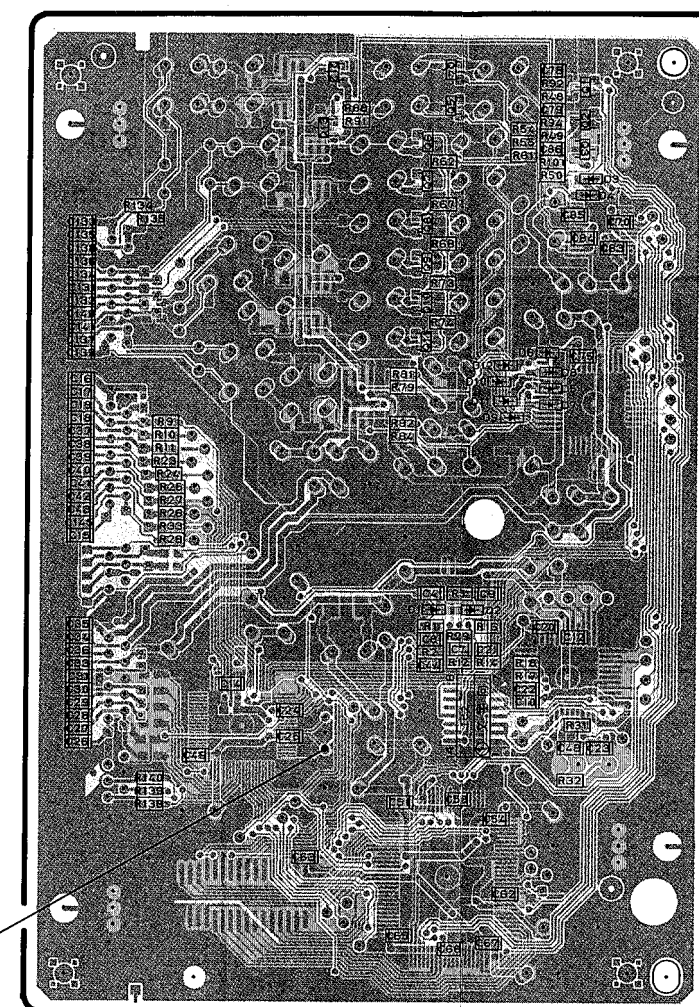
FROM : FUNCTION (2)



FROM : DIGITAL IN

FROM : FUNCTION (1)

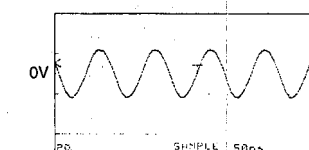
P. C. B. DSP (Surface Mount Device)



Point ③ (Pin13 of IC14)

V : 2V/div H : 50 nsec/div

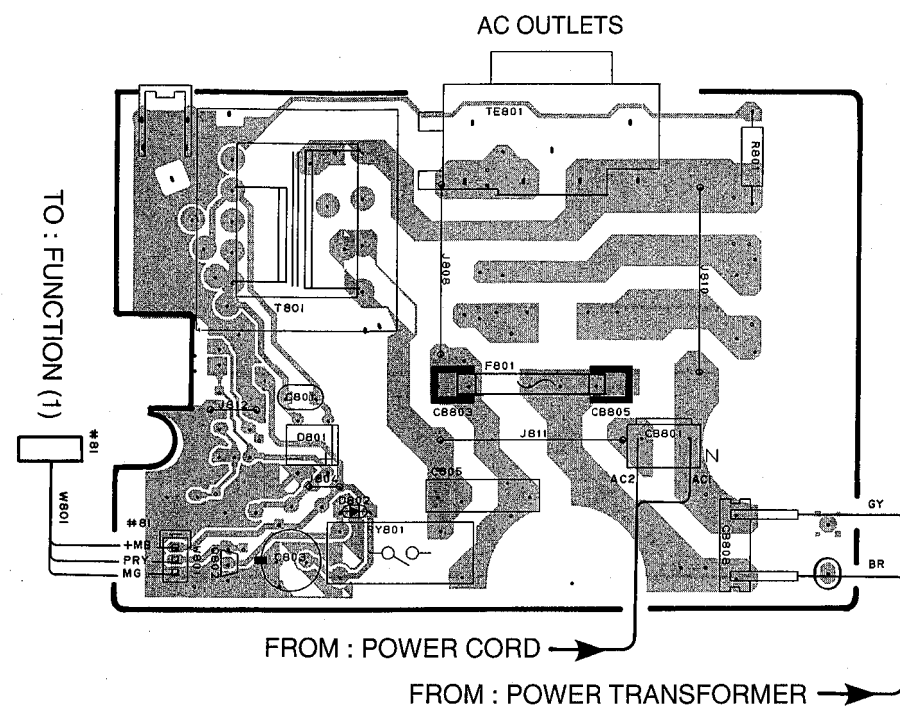
DC range 1 : 1 probe



### ■ PRINTED CIRCUIT BOARD (Foil side)

- U, C models

P. C. B. FUNCTION ( 3 )



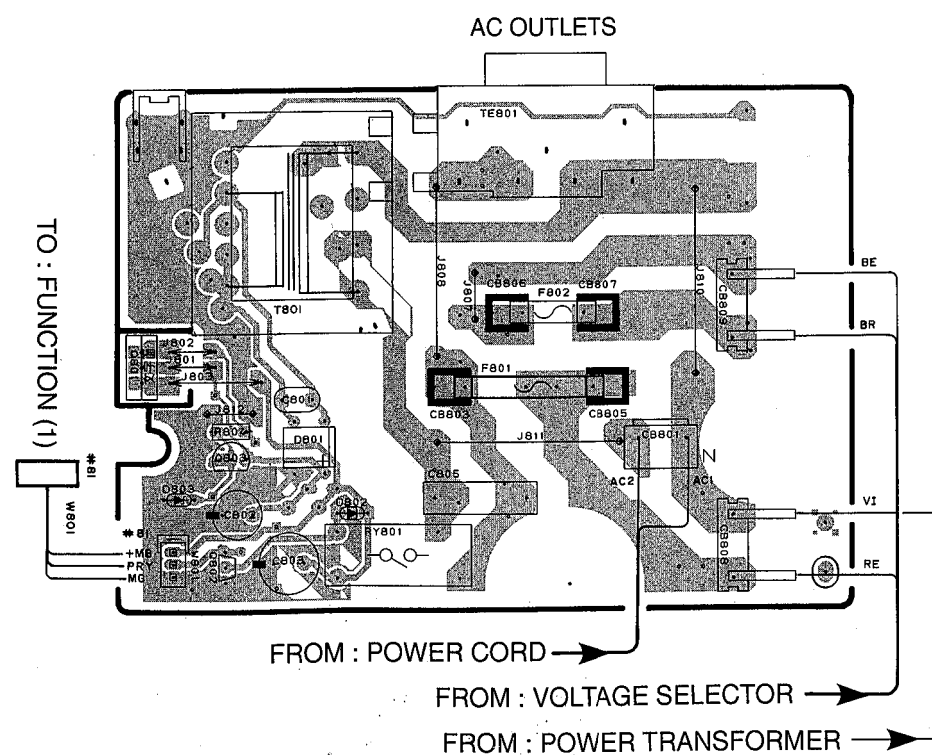
TO:FUNCTION (1)

FROM : POWER CORD

FROM : POWER TRANSFORMER

- R, T models

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



TO: FUNCTION (1)

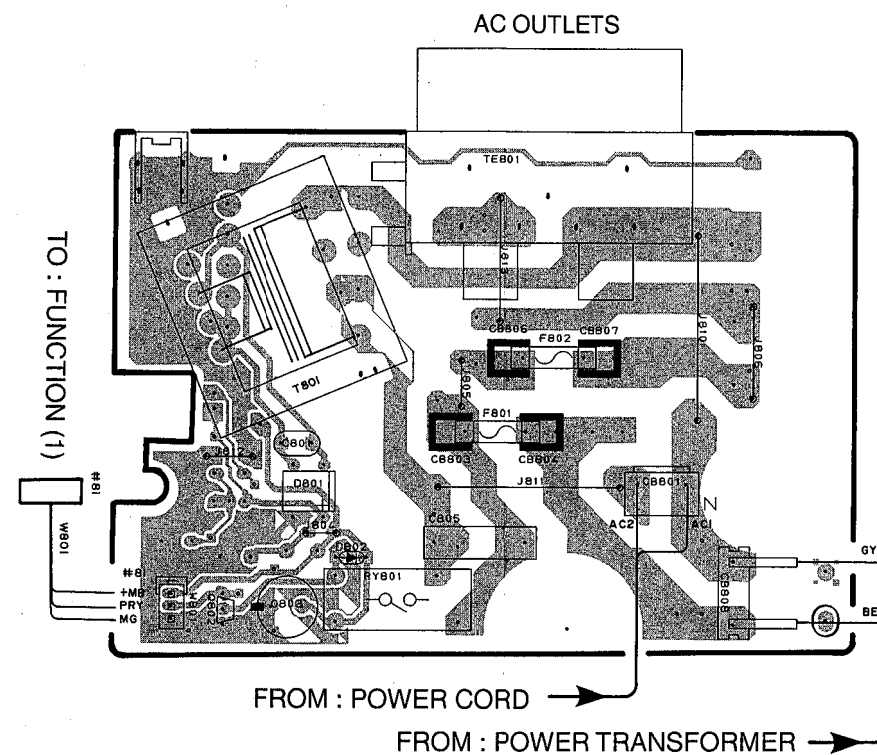
FROM : POWER CORD

FROM : VOLTAGE SELECTOR

FROM : POWER TRANSFORMER

- **L, G models**

P. C. B. FUNCTION ( 3 )



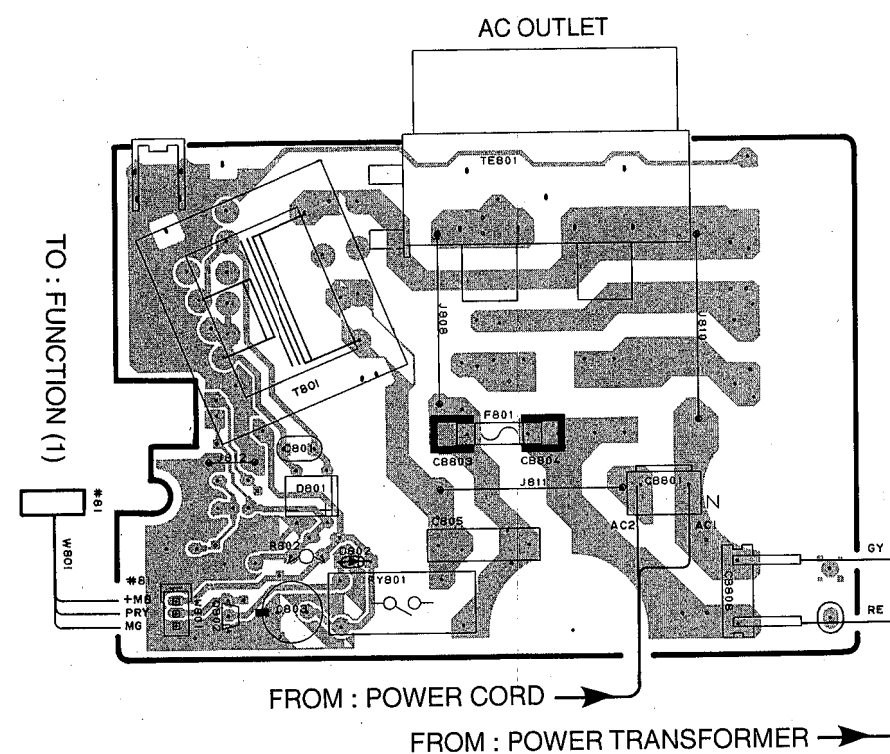
## 10:FUNCTION (f)

FROM : POWER CORD

FROM : POWER TRANSFORMER

- **A model**

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



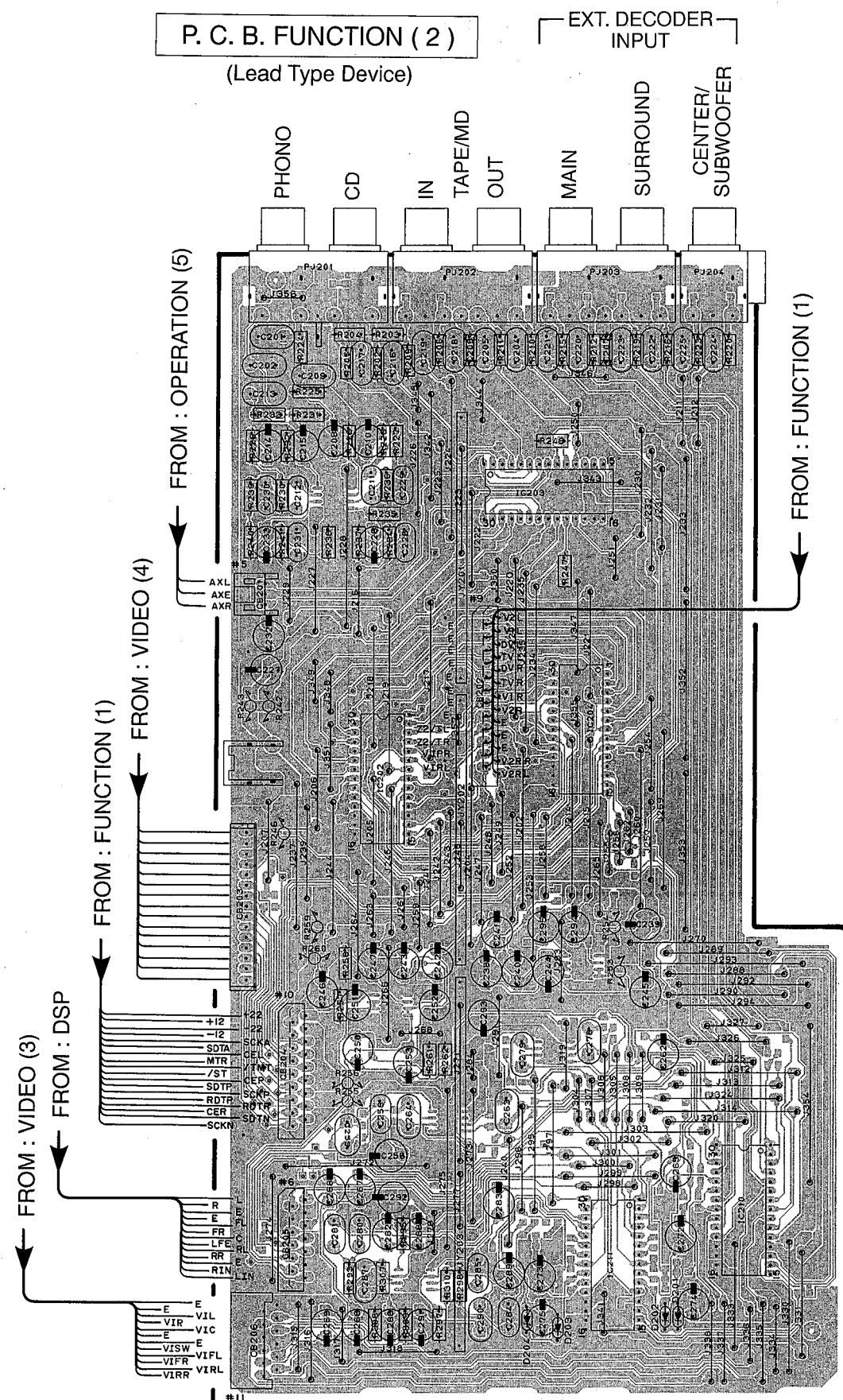
TO:FUNCTION (1)

FROM : POWER CORD

FROM : POWER TRANSFORMER



# **PRINTED CIRCUIT BOARD (Foil side)**

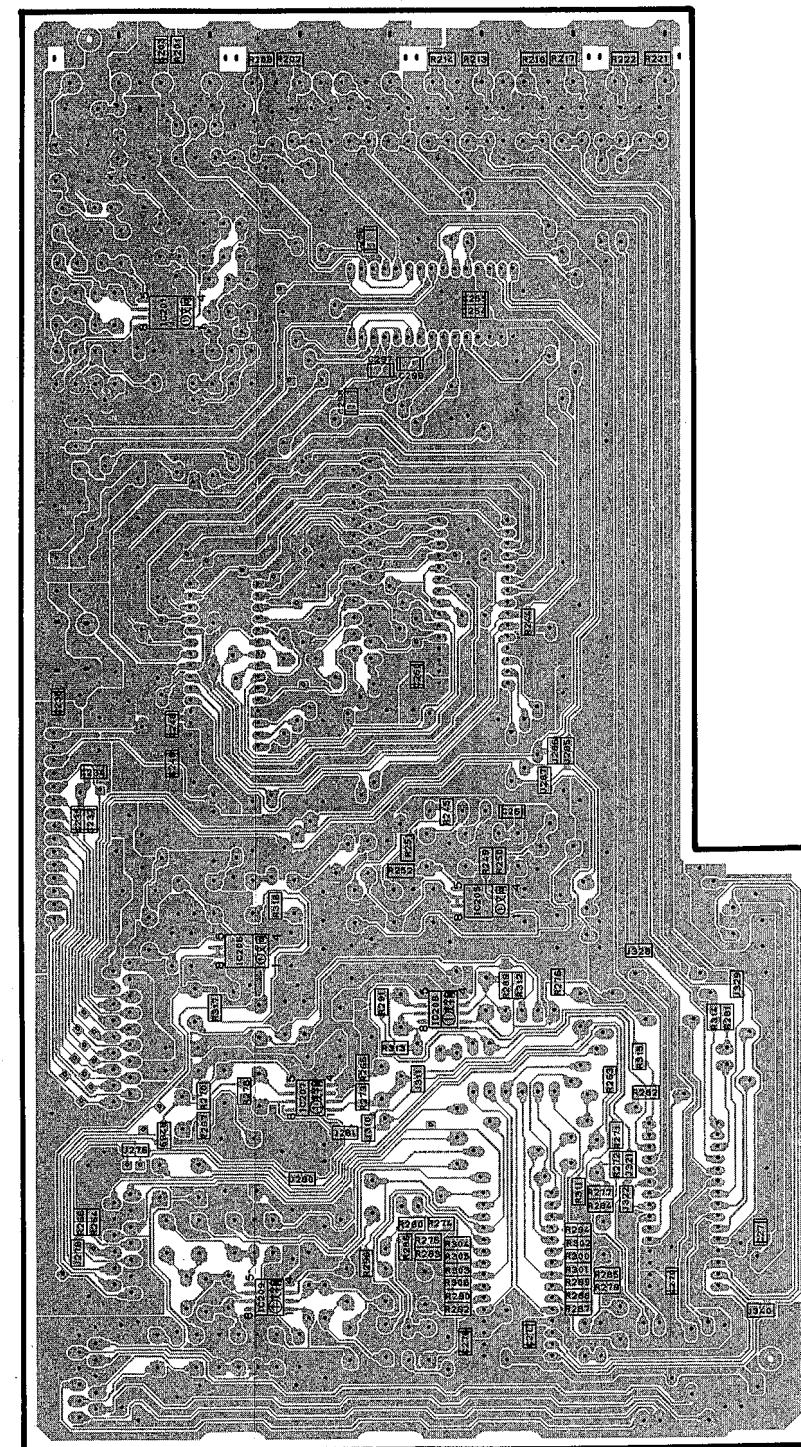


## **CIRCUIT CHANGES BY MARKET.**

|           | U,C | R,T | A | L | G |
|-----------|-----|-----|---|---|---|
| C238, 241 | O   | O   | O | O | X |
| J202, 204 | O   | O   | O | O | X |

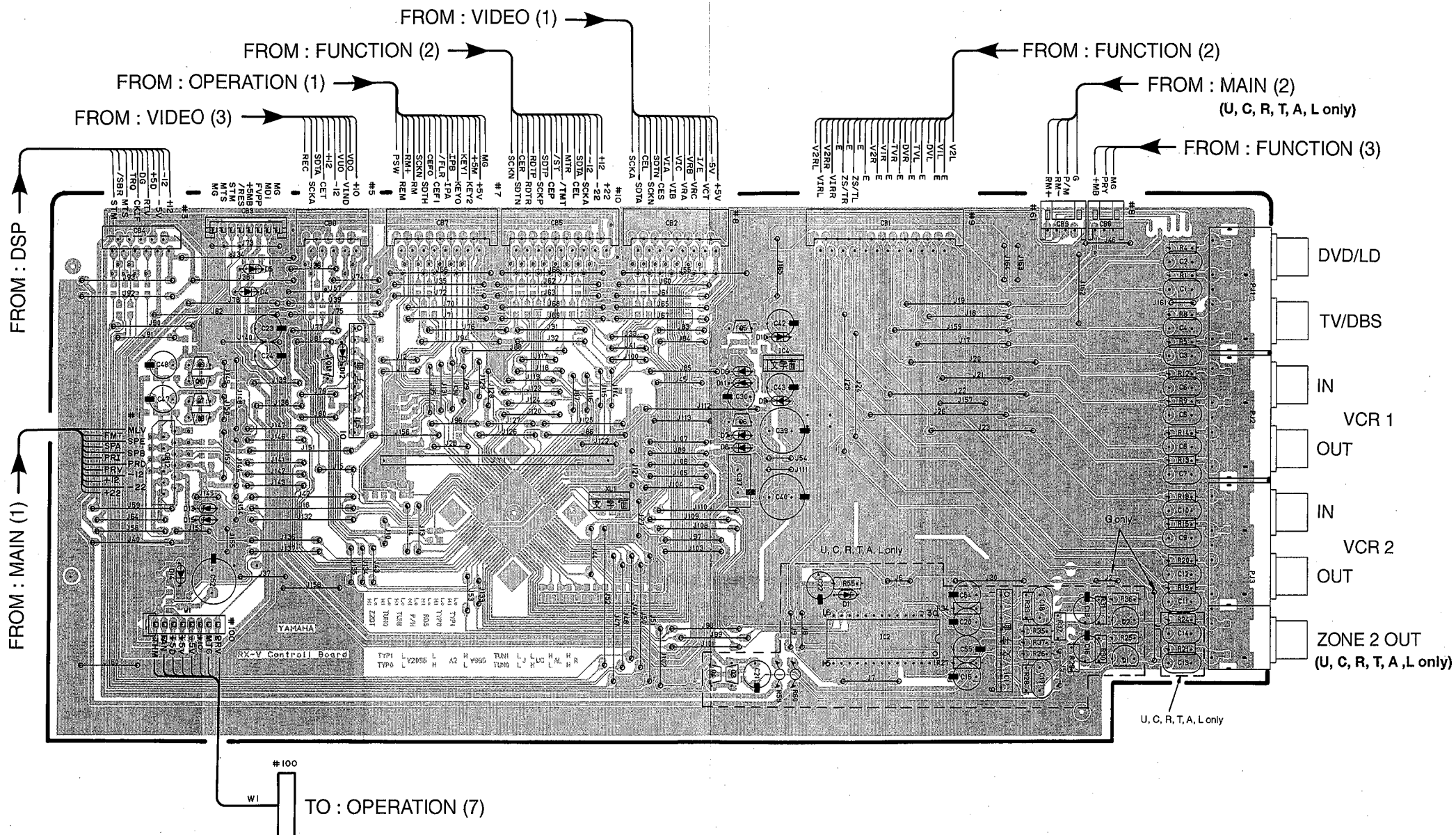
O : USED  
X : NOT USED

## **P. C. B. FUNCTION (2)** (Surface Mount Device)



■ PRINTED CIRCUIT BOARD (Foil side)

P. C. B. FUNCTION ( 1 ) (Lead Type Device)



CIRCUIT CHANGES BY MARKET.

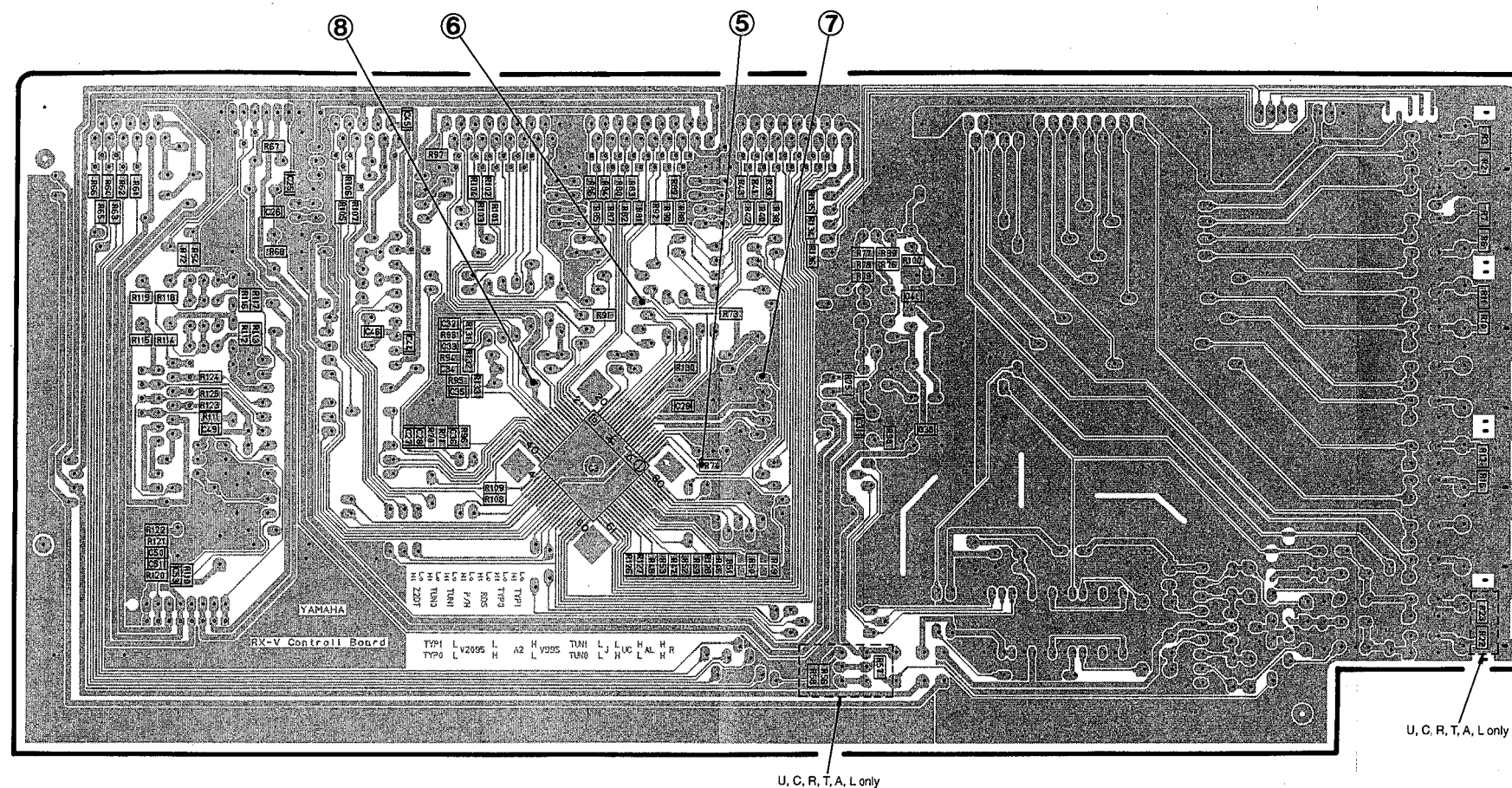
|     | U, C | R, T | A | L | G |
|-----|------|------|---|---|---|
| CB9 | O    | O    | O | O | X |

O : USED  
X : NOT USED



# PRINTED CIRCUIT BOARD (Foil side)

## P. C. B. FUNCTION ( 1 ) (Surface Mount Device)



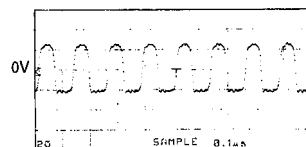
### CIRCUIT CHANGES BY MARKET.

|          | U, C | R, T | A | L | G |
|----------|------|------|---|---|---|
| R51, 126 | O    | O    | O | O | X |
| R46, 127 | X    | X    | X | X | O |
| R52, 128 | O    | X    | X | X | X |
| R47, 69  | X    | O    | O | O | O |
| R53      | X    | X    | O | O | O |
| R48      | O    | O    | X | X | X |

O : USED  
X : NOT USED

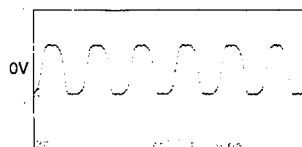
### Point ⑤ (Pin2 of IC3)

V : 2V/div H : 0.1  $\mu$ sec/div  
DC range 1 : 1 probe



### Point ⑥ (Pin13 of IC3)

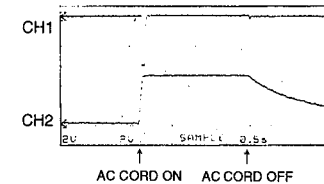
V : 2V/div H : 50 nsec/div  
DC range 1 : 1 probe



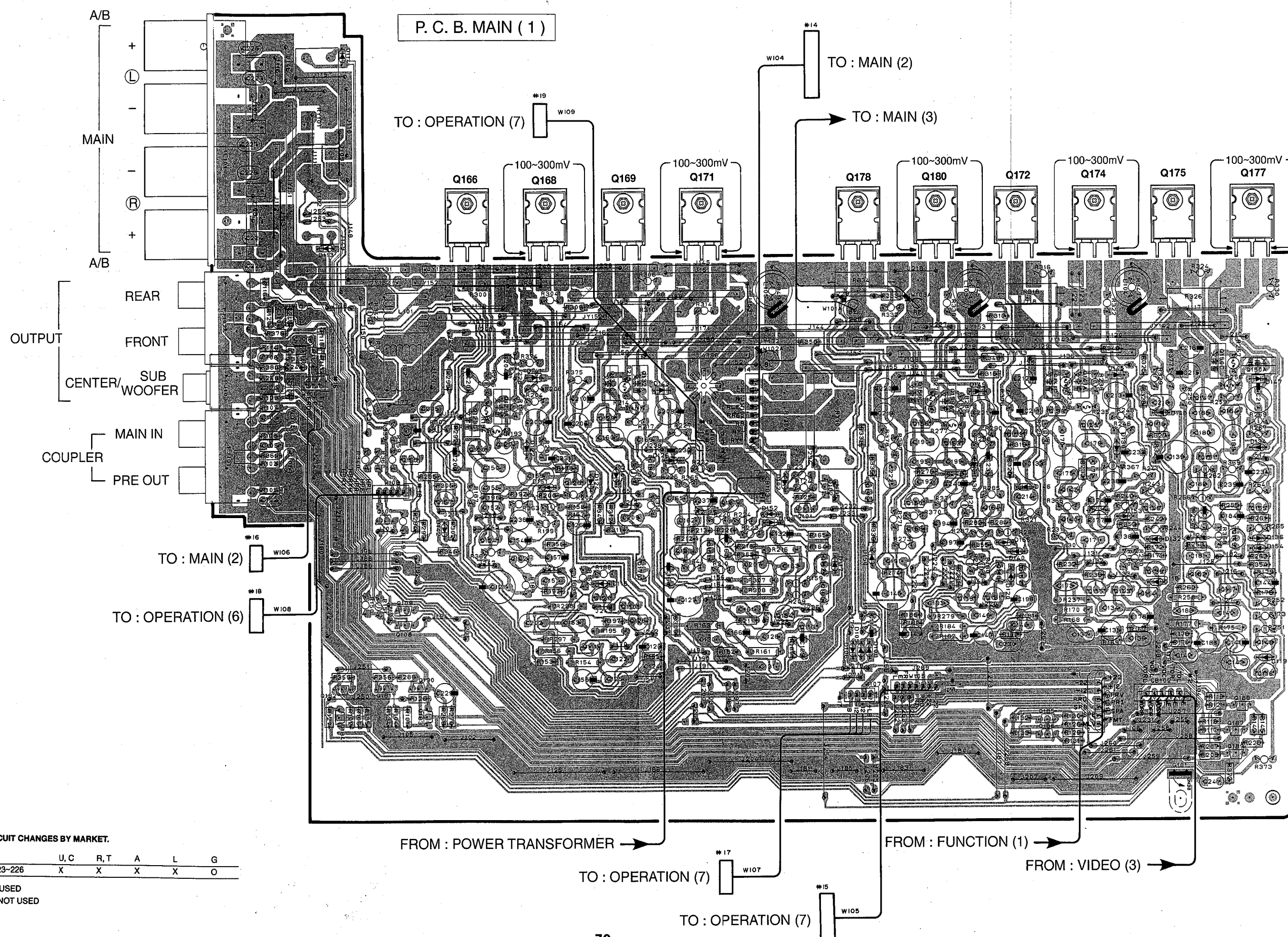
### Point ⑦ (Pin1 of IC3 : CH1)

### Point ⑧ (Pin29 of IC3 : CH2)

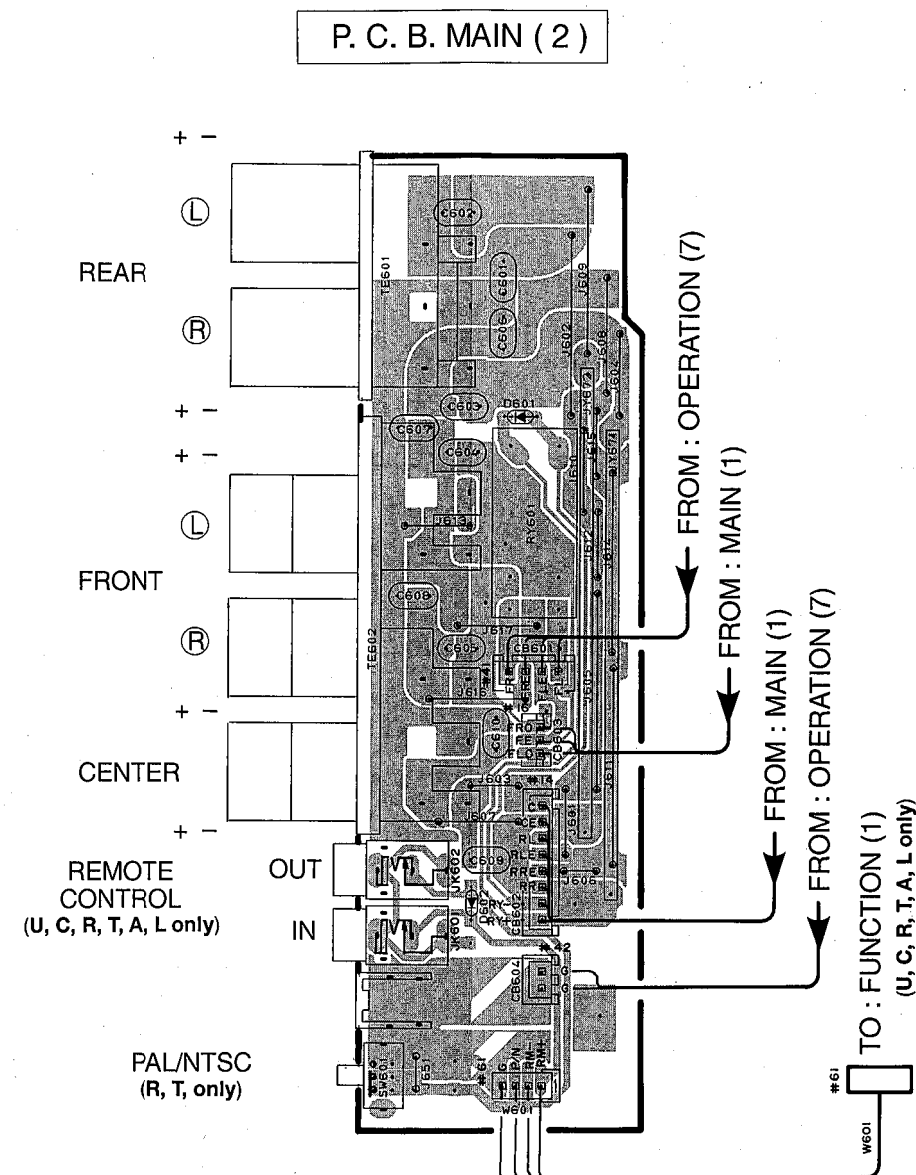
CH1 : 2V/div H : 0.5 sec/div  
CH2 : 2V/div 1 : 1 probe DC range



■ **PRINTED CIRCUIT BOARD (Foil side)**



■ PRINTED CIRCUIT BOARD (Foil side)

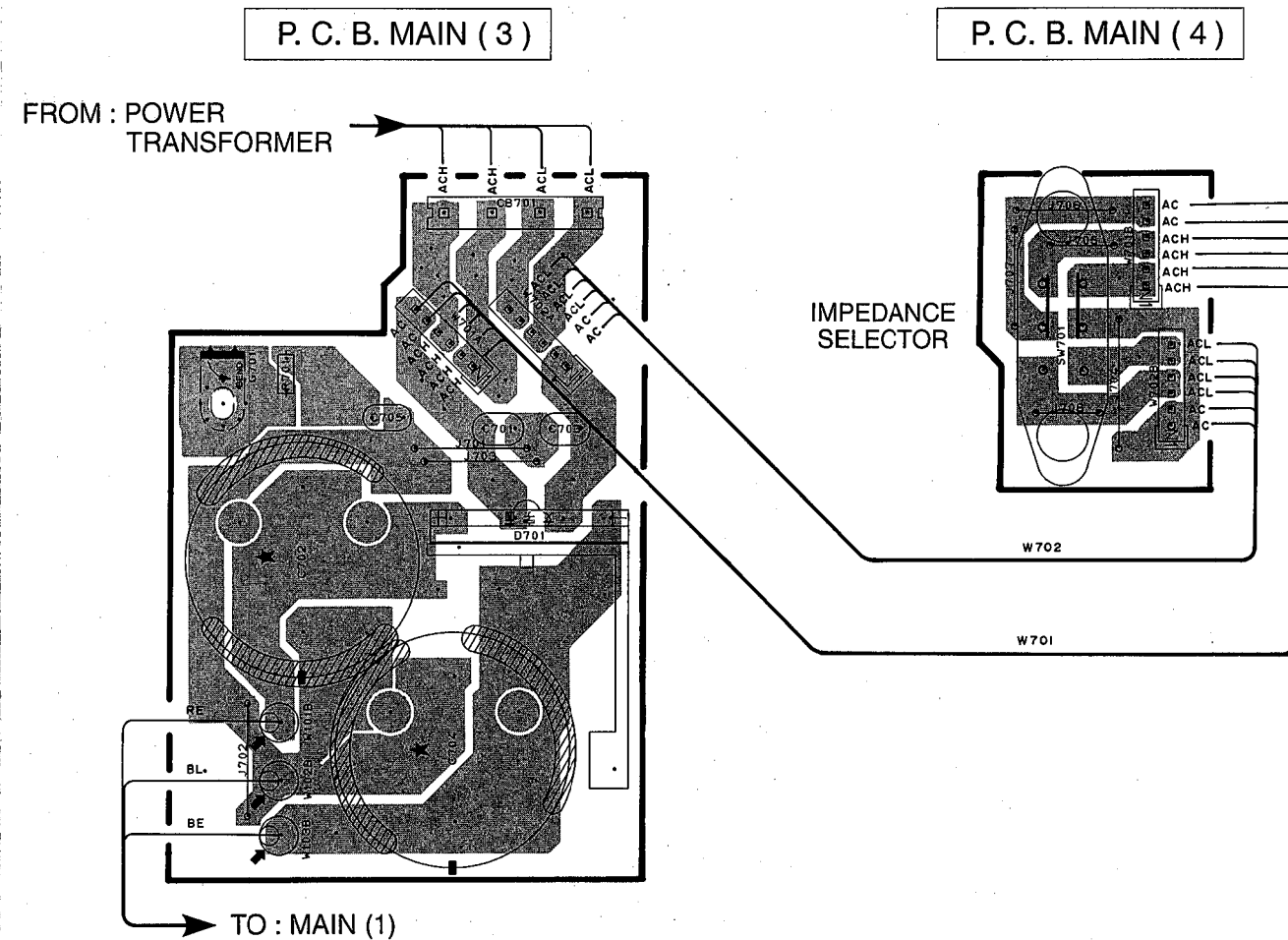


CIRCUIT CHANGES BY MARKET.

|            | U, C | R, T | A | L | G |
|------------|------|------|---|---|---|
| C601~610   | X    | X    | X | X | O |
| SW601      | X    | O    | X | X | X |
| W601       | O    | O    | O | O | X |
| JK601, 602 | O    | O    | O | O | X |
| D602       | O    | O    | O | O | X |
| J651       | O    | X    | X | X | X |

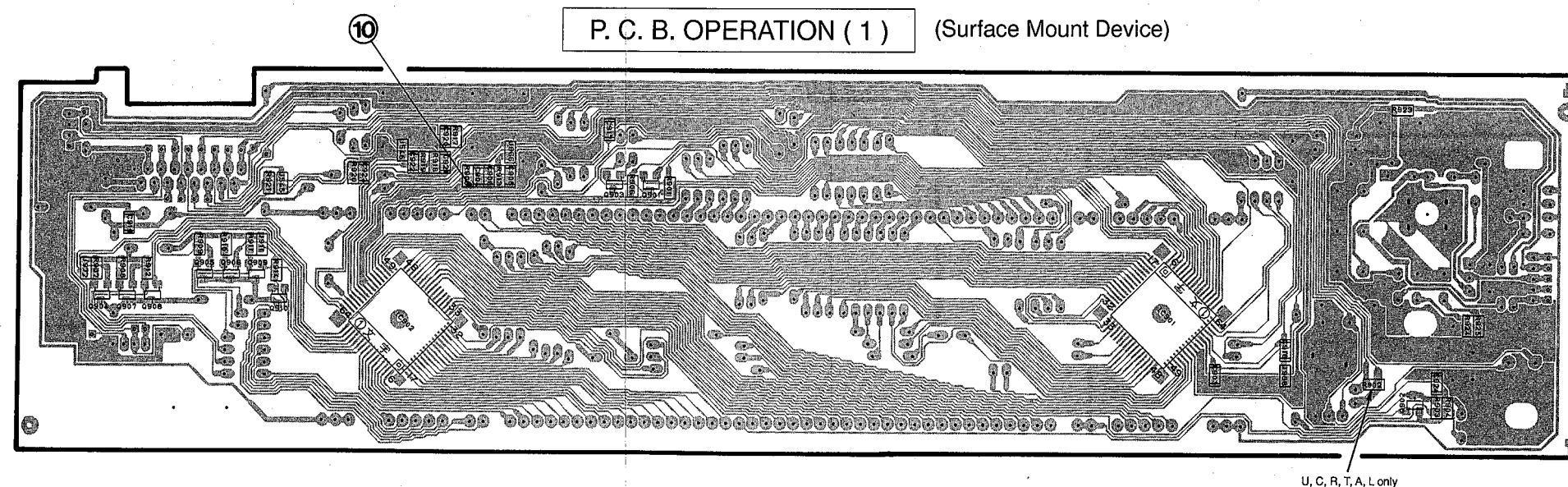
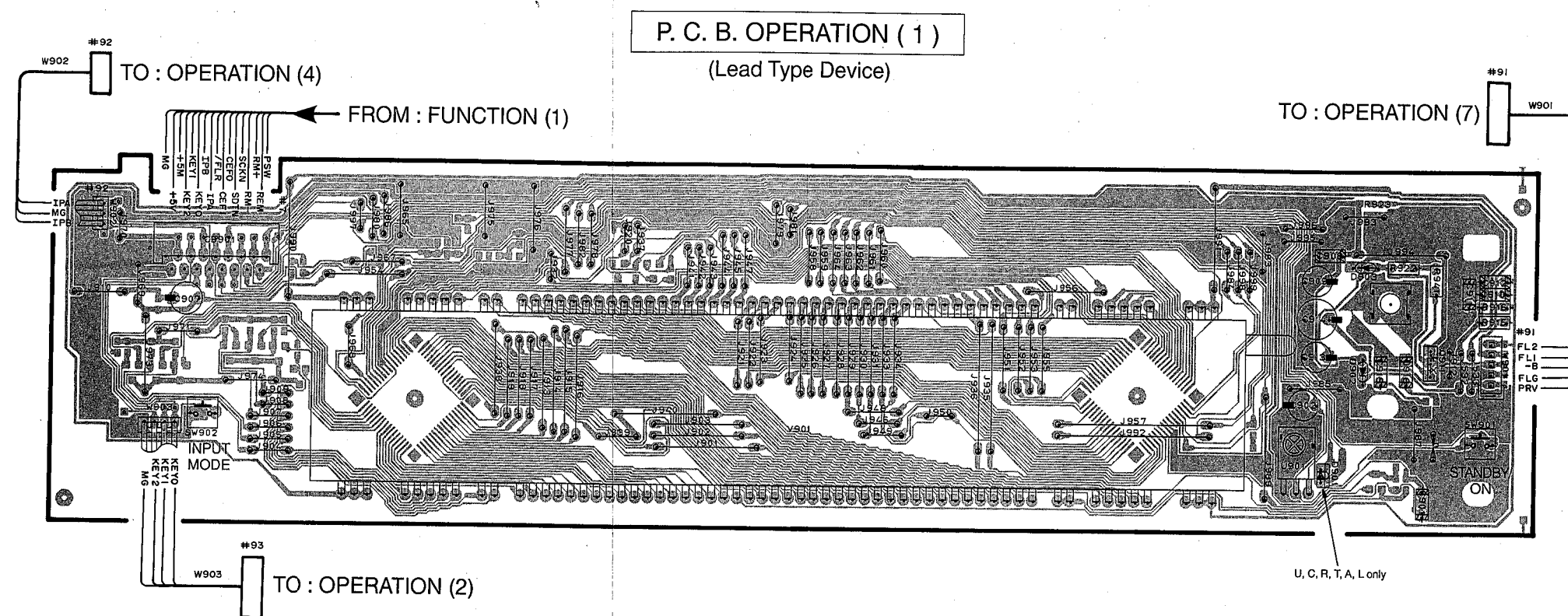
O : USED  
X : NOT USED

● R, T, B, G models

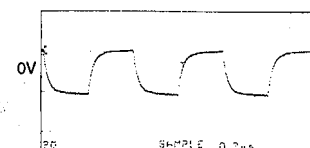




PRINTED CIRCUIT BOARD (Foil side)

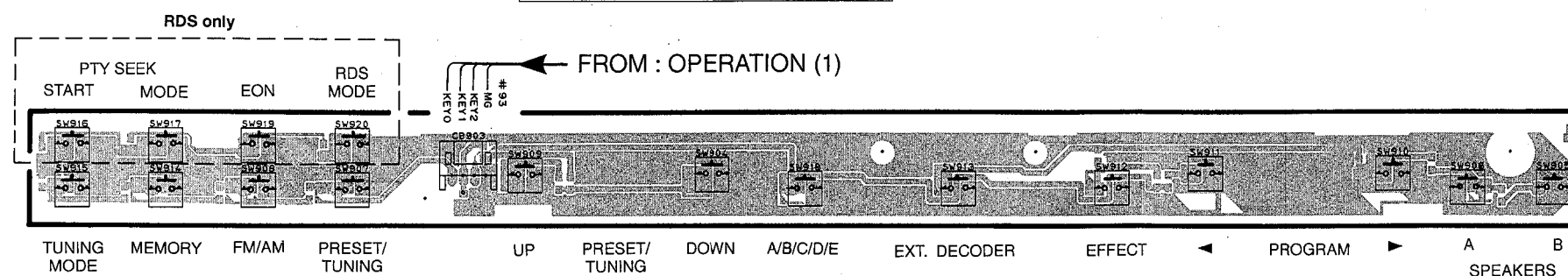


Point ⑩ (Pin58 of IC902)  
V : 2V/div H : 0.2  $\mu$ sec/div  
DC range 1 : 1 probe

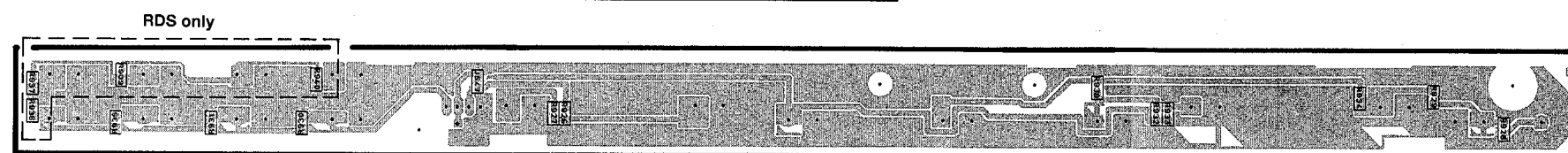


### ■ PRINTED CIRCUIT BOARD (Foil side)

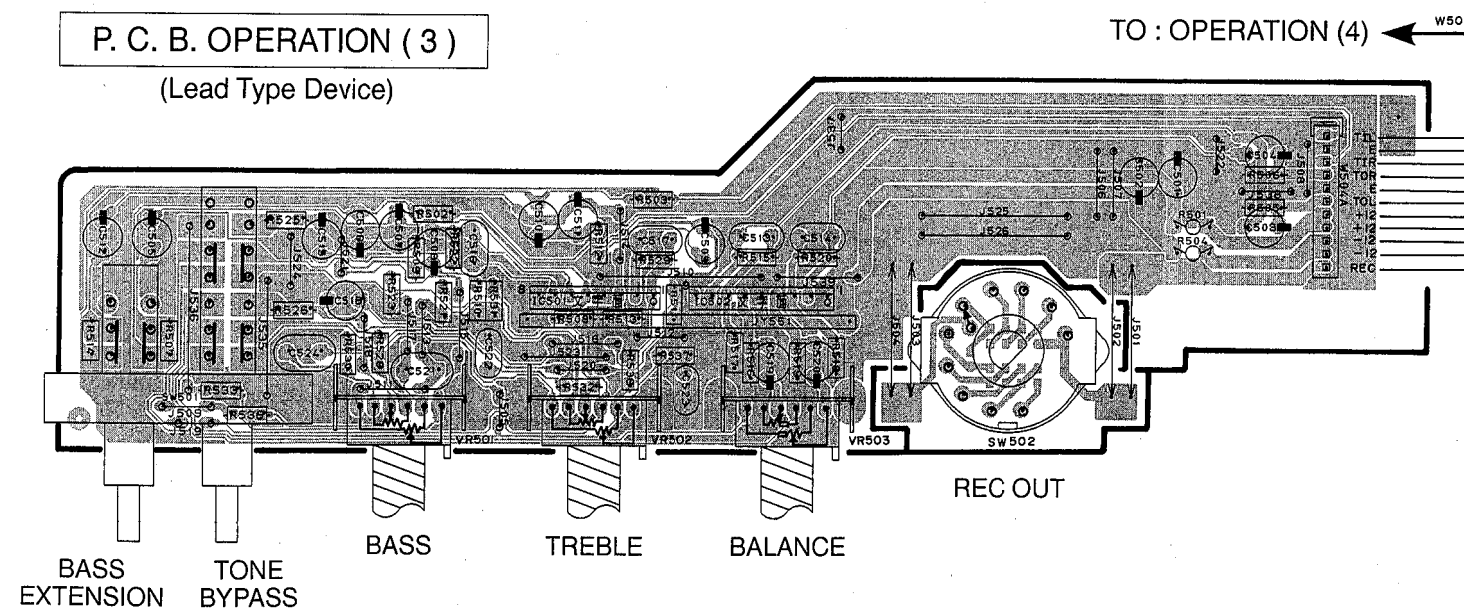
P. C. B. OPERATION ( 2 ) (Lead Type Device)



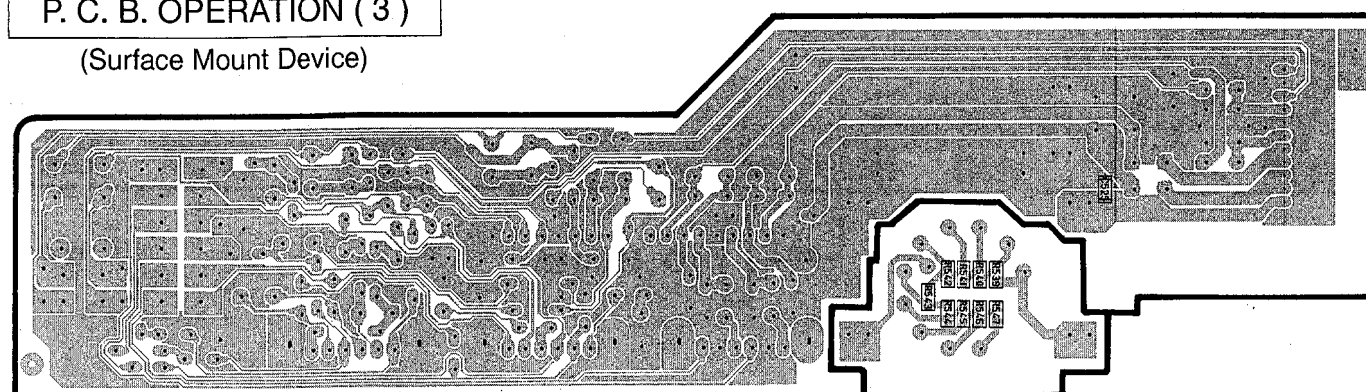
## P. C. B. OPERATION ( 2 ) (Surface Mount Device)



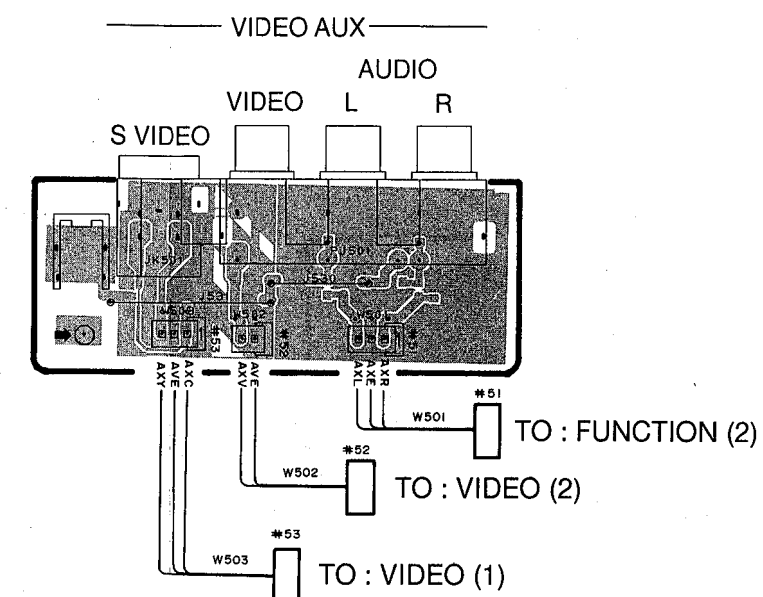
P. C. B. OPERATION ( 3 )  
(Lead Type Device)



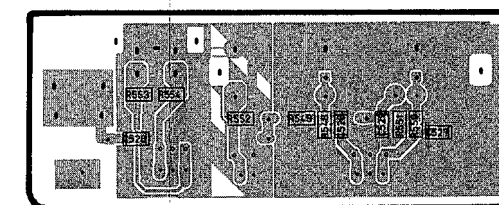
### P. C. B. OPERATION ( 3 )



P. C. B. OPERATION ( 5 )  
(Lead Type Device)

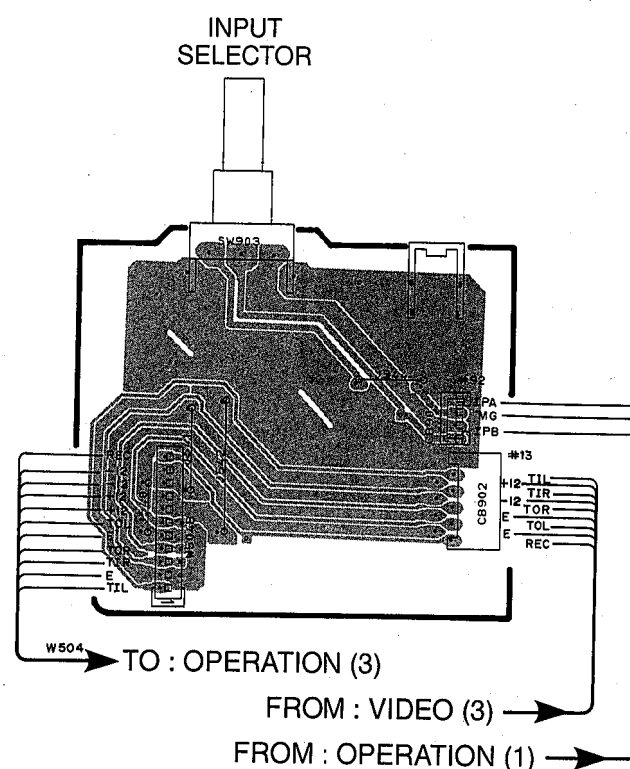


## P. C. B. OPERATION ( 5 )

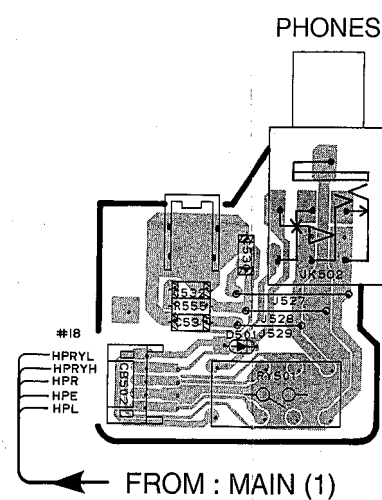


■ PRINTED CIRCUIT BOARD (Foil side)

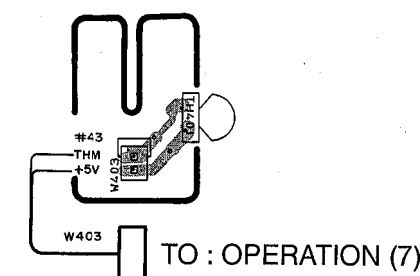
P. C. B. OPERATION (4)



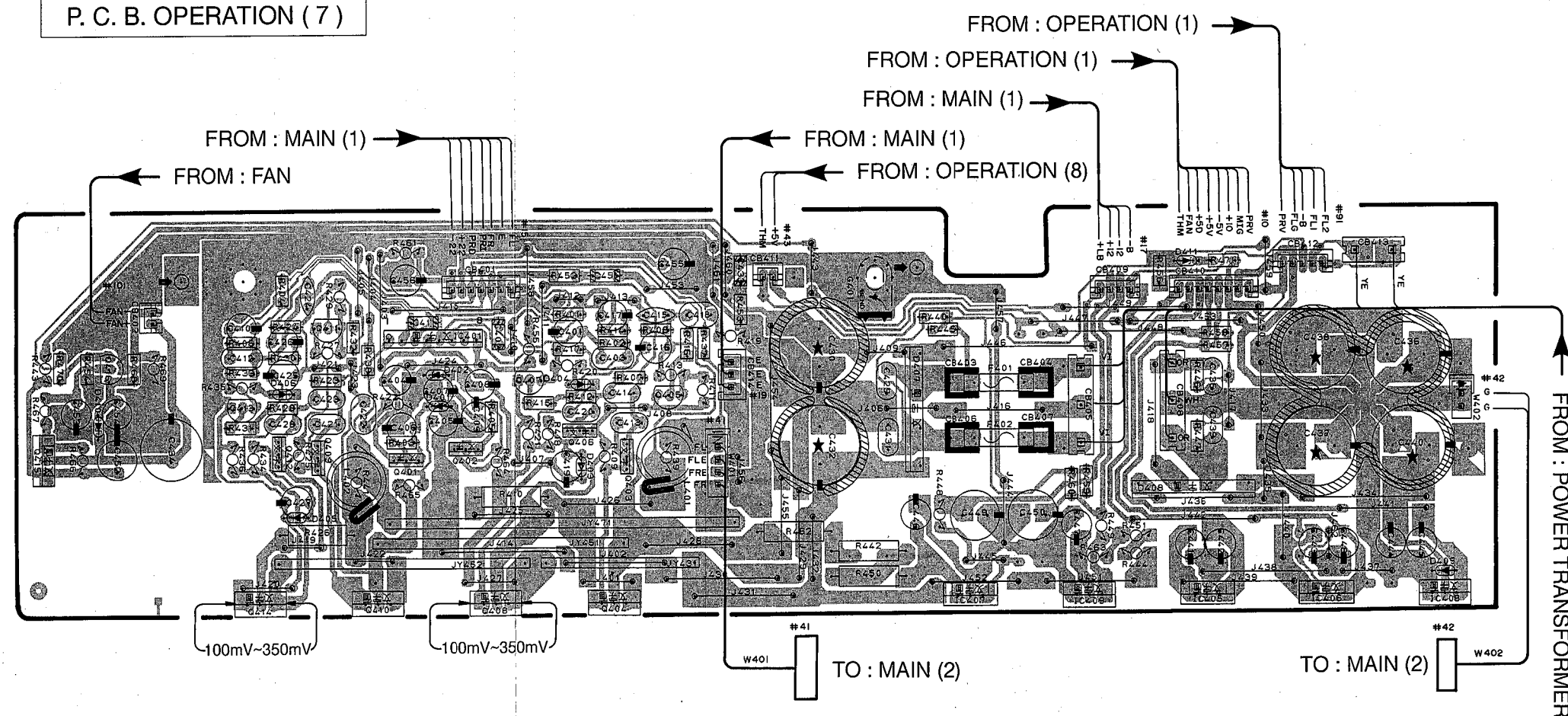
P. C. B. OPERATION (6)



P. C. B. OPERATION (8)



P. C. B. OPERATION (7)





## PRINTED CIRCUIT BOARD (Foil side)

There are two types of P.C.B. Assembly Tuner for this model in terms of construction of components.

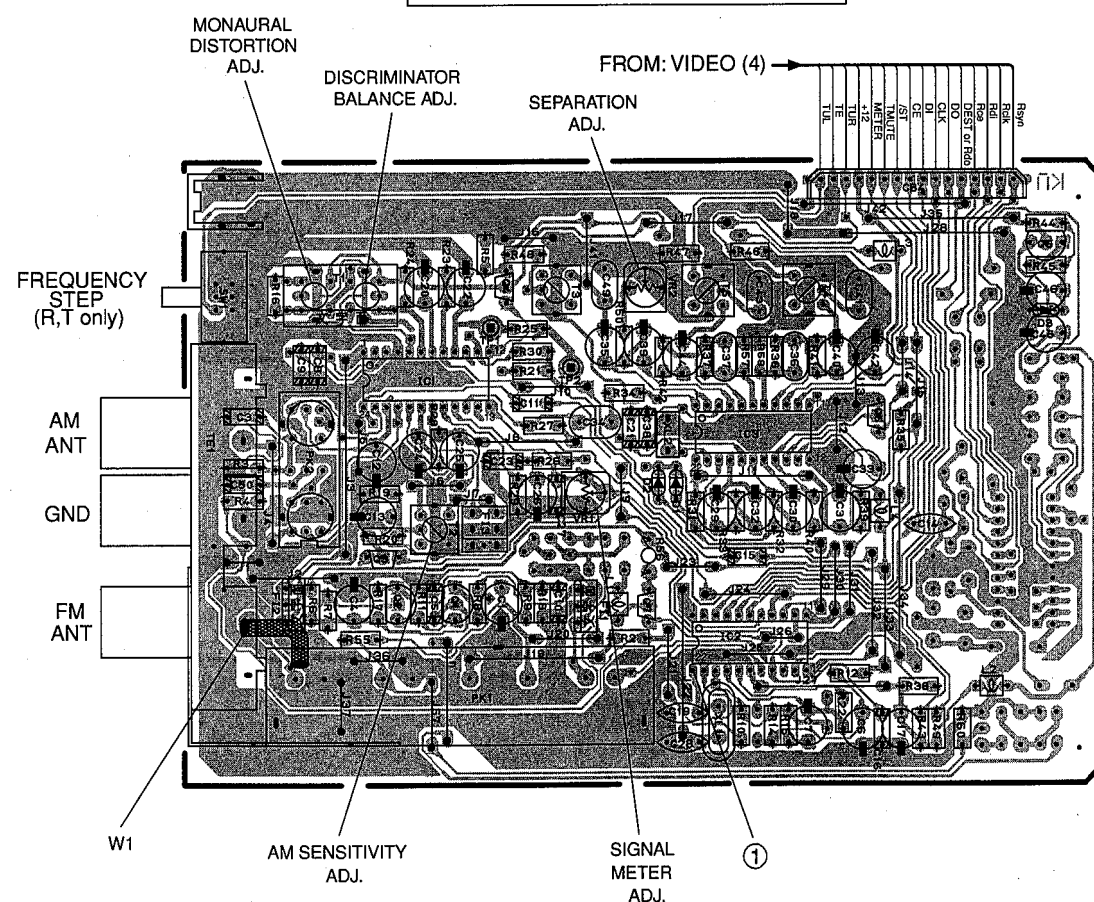
One uses the Lead Type Device only and the other uses the Lead Type device and Surface Mount Device (SMD).

These P.C.B assemblies are interchangeable.

### P.C.B. ASS'Y TUNER LIST

| Model    | Markets | Lead Type | Lead & SMD |
|----------|---------|-----------|------------|
| RX-V2095 | U, C    | V2518600  | V2519300   |
| RX-V2095 | R, T    | V2518700  | V2519400   |
| RX-V2095 | A, L    | V2518800  | V2519500   |

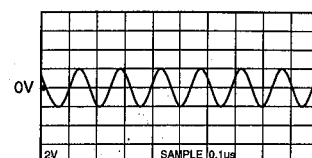
### RX-V2095 P.C.B. TUNER (Lead Type)



Point ① (Pin22 of IC2)

V : 2V/div H : 0.1  $\mu$ sec/div

DC range 1 : 1 probe



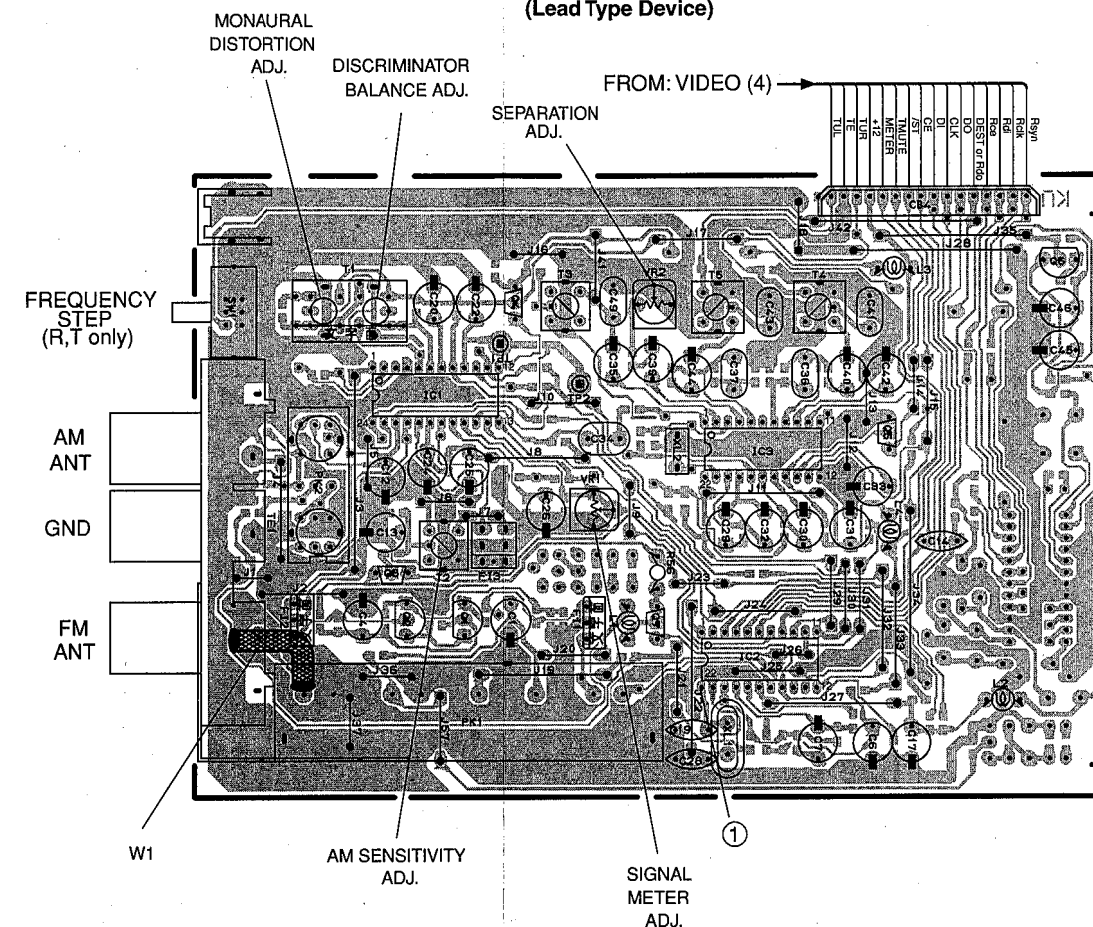
### CIRCUIT CHANGES BY MARKET.

|                     | J | U, C | R, T | A, B, G, L |
|---------------------|---|------|------|------------|
| R48, 55, 57, 58, 60 | X | X    | X    | O          |
| T3                  | X | X    | X    | O          |
| J41                 | O | O    | O    | X          |
| J42                 | X | X    | O    | X          |
| SW1                 | X | X    | O    | X          |

O : USED  
X : NOT USED

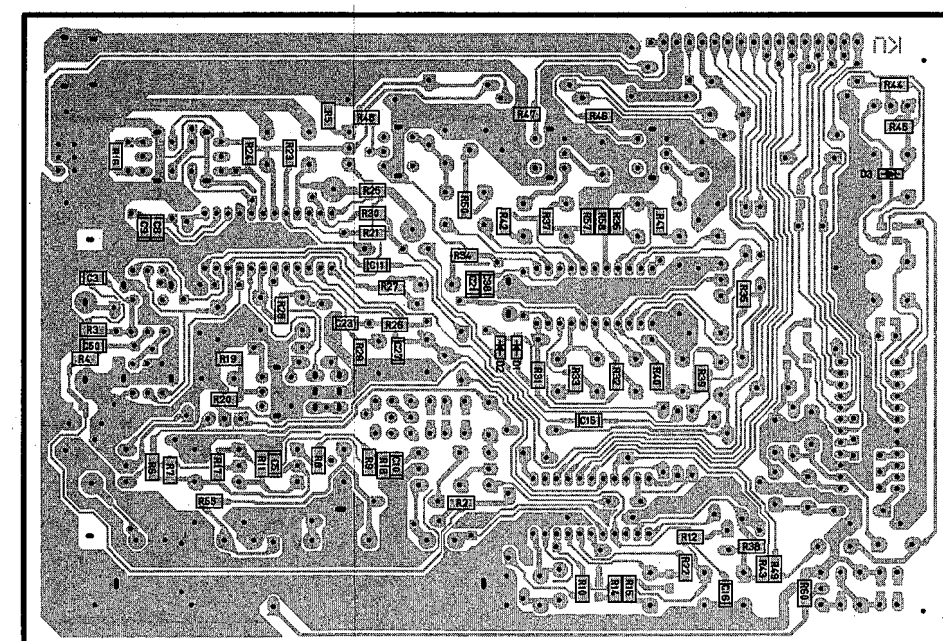
### RX-V2095 P.C.B. TUNER/SMD (Lead Type & SMD)

(Lead Type Device)



### RX-V2095 P.C.B. TUNER/SMD (Lead Type & SMD)

(Surface Mount Device)



PRINTED CIRCUIT BOARD (Foil side)

There are two types of P.C.B. Assembly Tuner for this model in terms of construction of components.

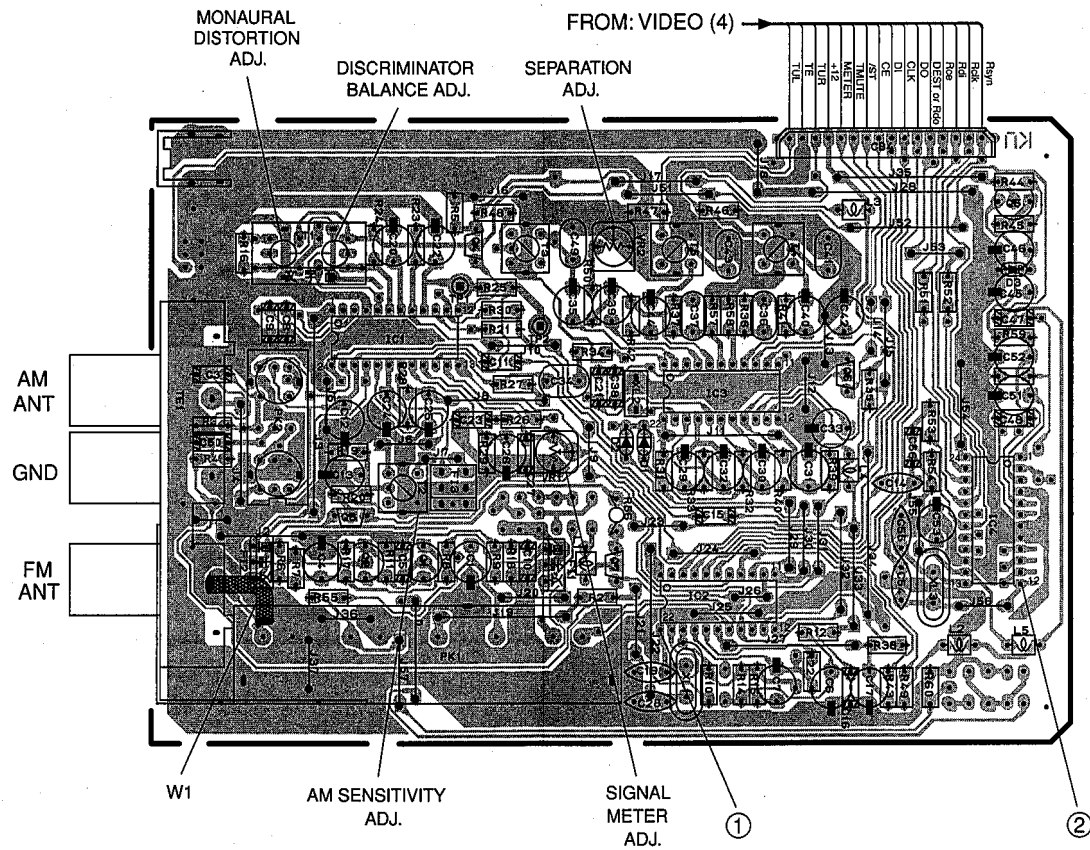
One uses the Lead Type Device only and the other uses the Lead Type device and Surface Mount Device (SMD).

These P.C.B assemblies are interchangeable.

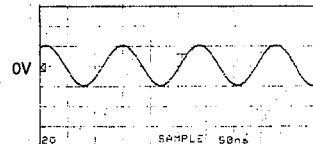
P.C.B. ASS'Y TUNER LIST

| Model       | Markets | Lead Type | Lead & SMD |
|-------------|---------|-----------|------------|
| RX-V2095RDS | G       | V2518900  | V2519600   |

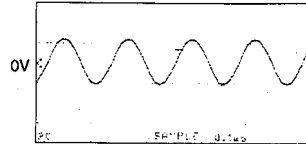
RX-V2095RDS P.C.B. TUNER (Lead Type)



Point ① (Pin22 of IC1)  
V : 2V/div    H : 50 nsec/div  
DC range    1 : 1 probe

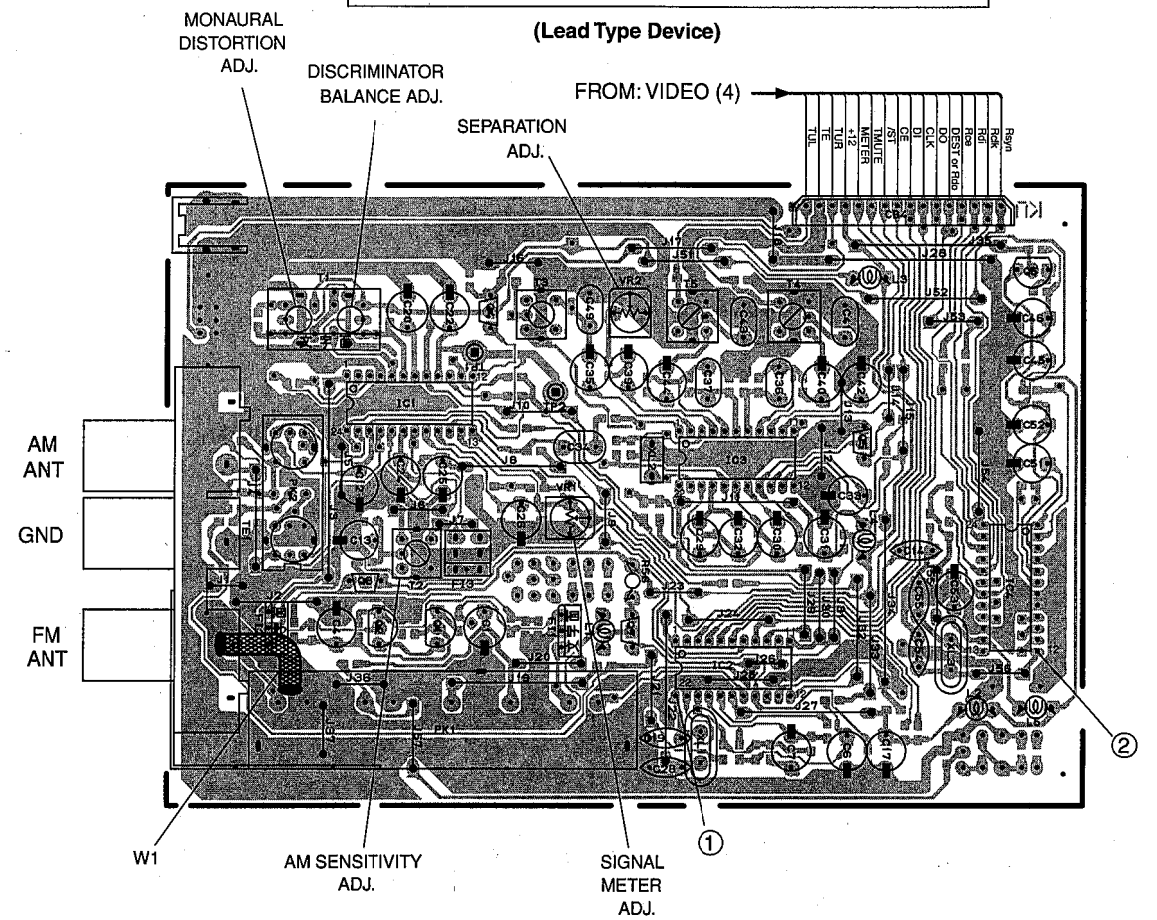


Point ② (Pin12 of IC4)  
V : 2V/div    H : 0.1 μsec/div  
DC range    1 : 1 probe



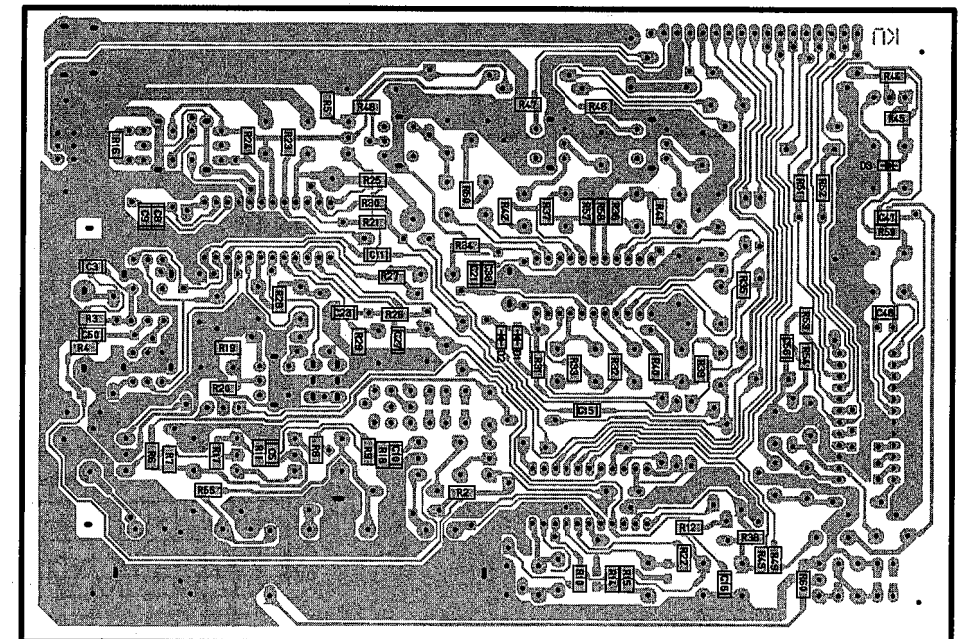
RX-V2095RDS P.C.B. TUNER/SMD (Lead Type & SMD)

(Lead Type Device)



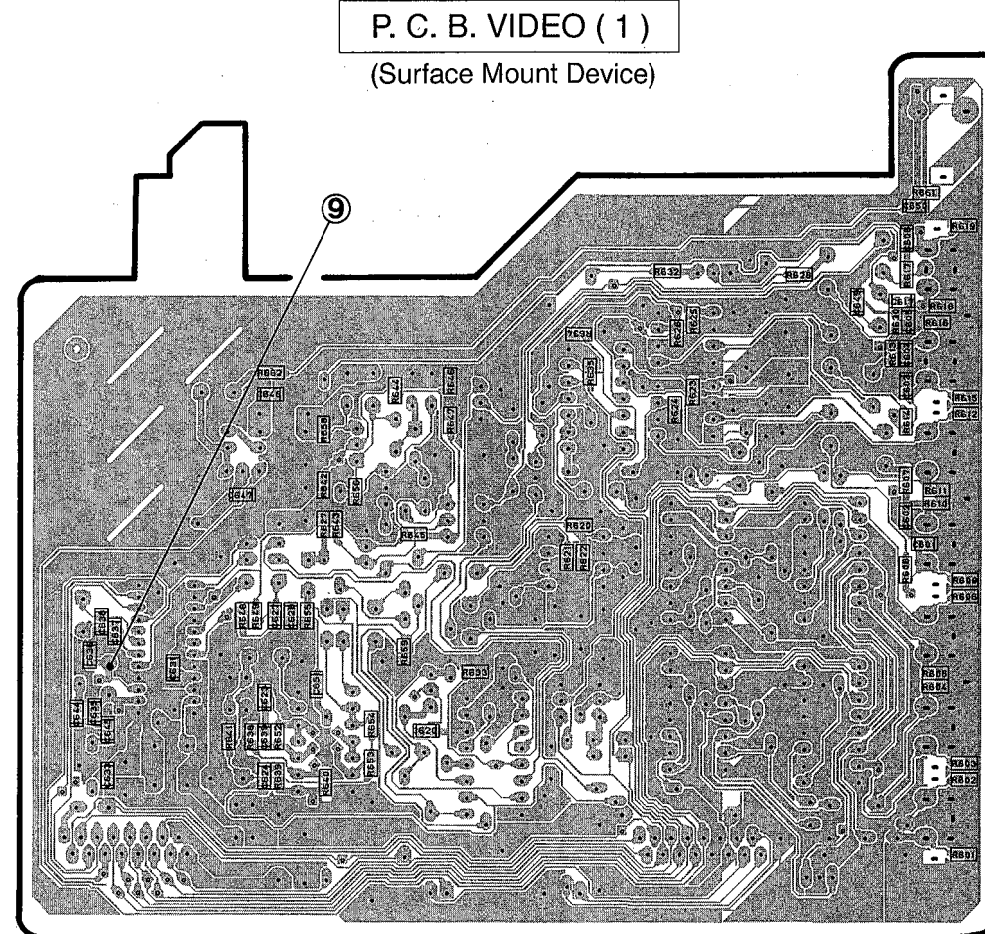
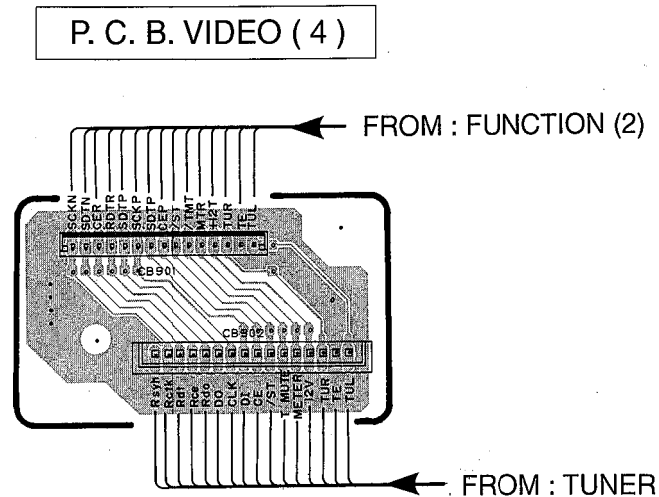
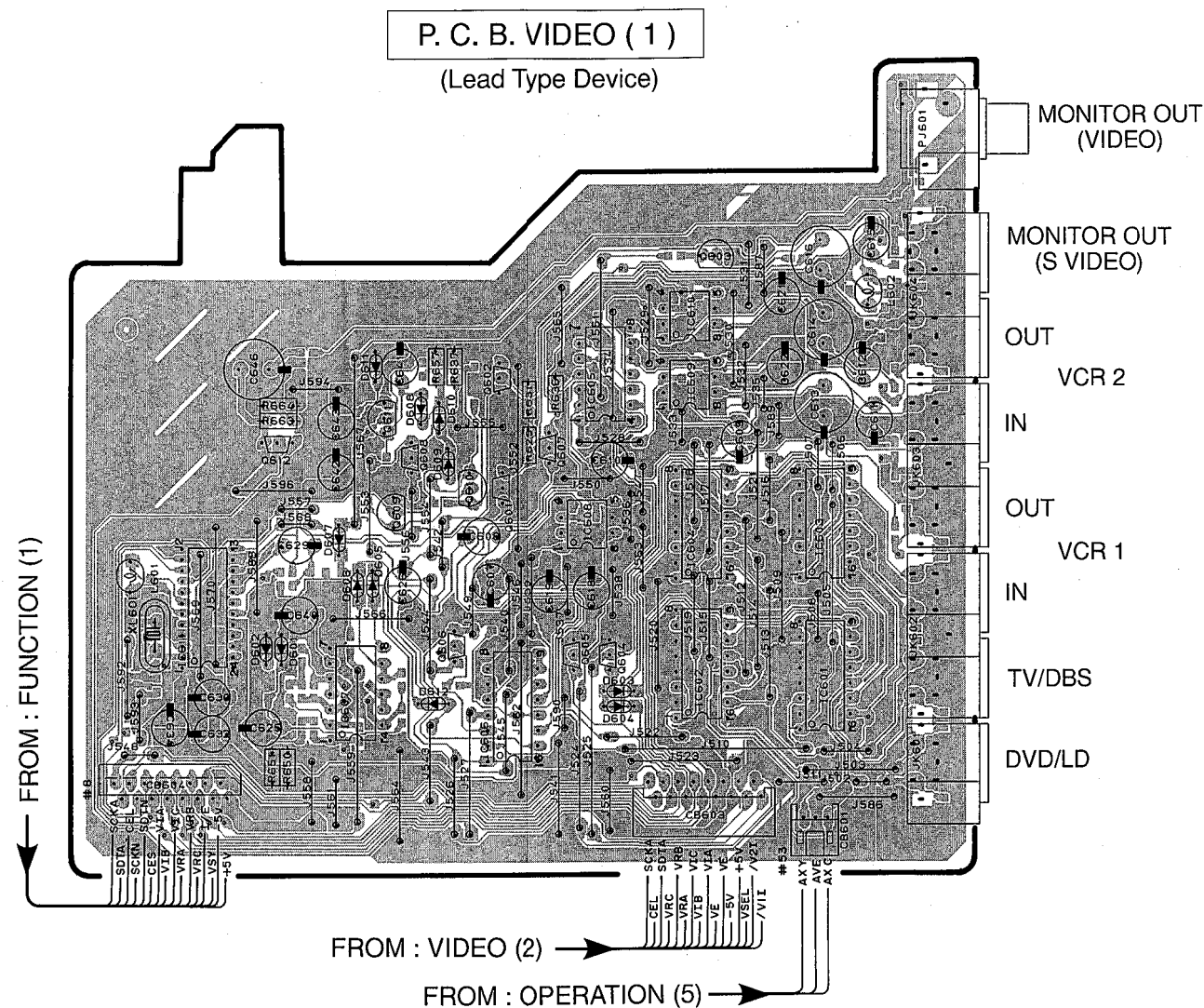
RX-V2095RDS P.C.B. TUNER/SMD (Lead Type & SMD)

(Surface Mount Device)

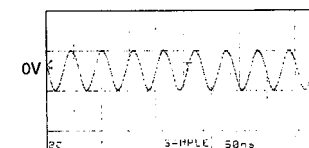




■ PRINTED CIRCUIT BOARD (Foil side)



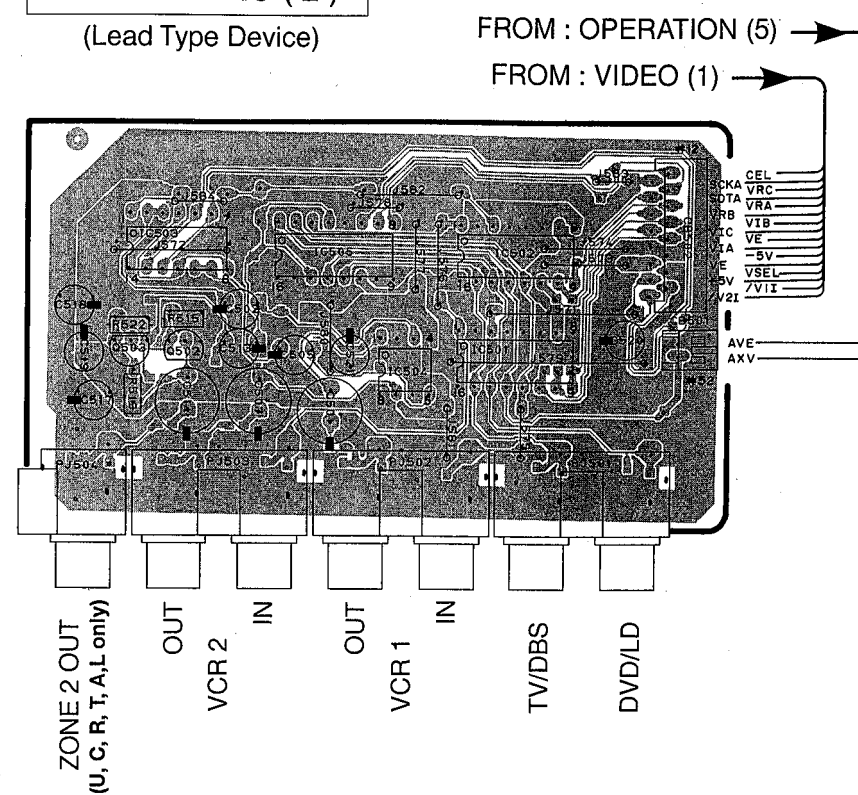
Point ⑨ (Pin3 of IC611)  
V : 2V/div H : 50 nsec/div  
DC range 1 : 1 probe



■ **PRINTED CIRCUIT BOARD (Foil side)**

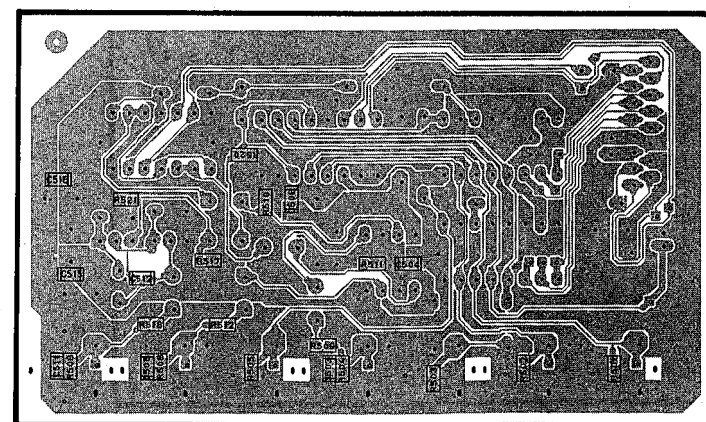
P. C. B. VIDEO ( 2 )

(Lead Type Device)



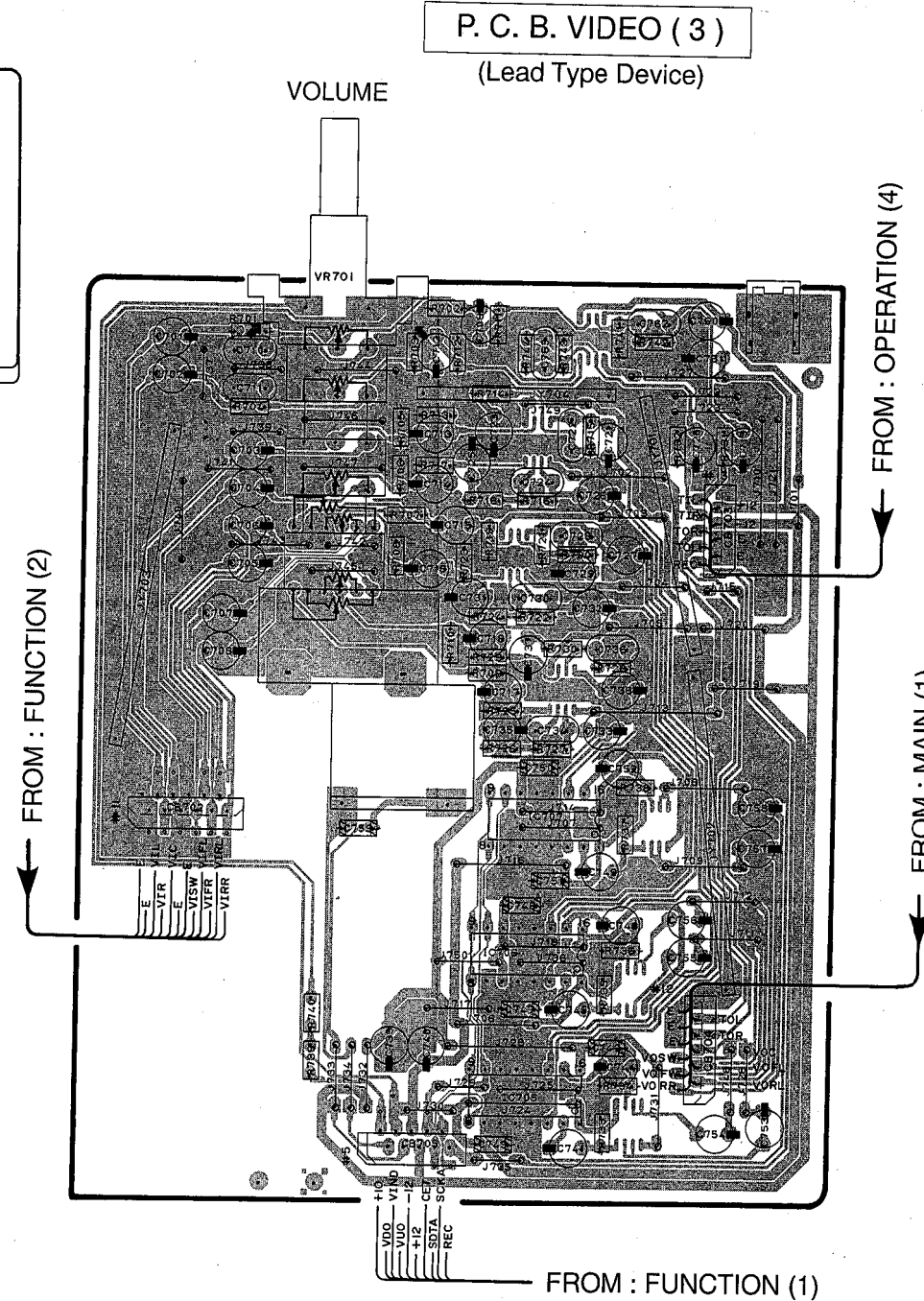
P. C. B. VIDEO ( 2 )

(Surface Mount Device)



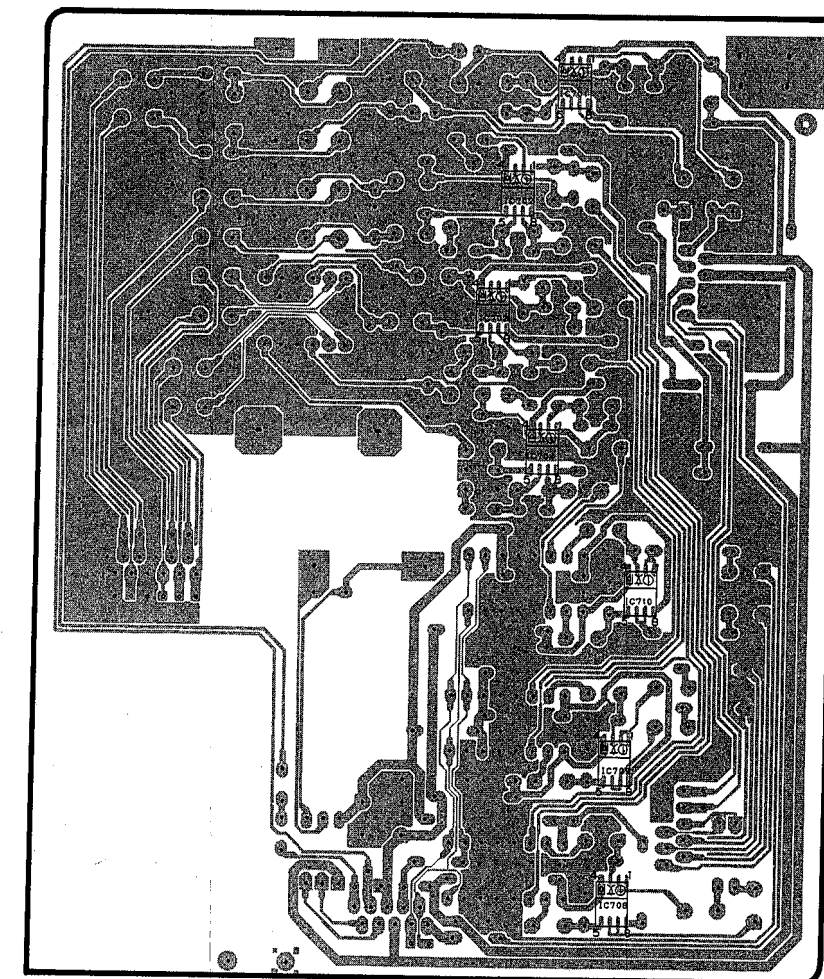
P. C. B. VIDEO ( 3 )

(Lead Type Device)



P. C. B. VIDEO ( 3 )

(Surface Mount Device)



### CIRCUIT CHANGES BY MARKET.

|           | U, C | R, T | A | L | G |
|-----------|------|------|---|---|---|
| C511-519  | O    | O    | O | O | X |
| R508, 515 | O    | O    | O | O | X |
| R517-522  | O    | O    | O | O | X |
| Q502, 503 | O    | O    | O | O | X |
| IC505     | O    | O    | O | O | X |
| PJ504     | O    | O    | O | O | X |

Q : USED

X : NOT USED

PIN CONNECTION DIAGRAM

ICs

|                                         |                                                     |                                                       |                                |                                        |                                              |            |
|-----------------------------------------|-----------------------------------------------------|-------------------------------------------------------|--------------------------------|----------------------------------------|----------------------------------------------|------------|
| AN78N05<br>                             | NJM79M05FA<br>NJM79M12FA<br>                        | NJM7805FA<br>NJM7812FA<br>                            | μPC29M33T-E1<br>               | NJM2068L-D<br>M5220L<br>               | μPC4570HA<br>                                | LB1641<br> |
| MC14578CP<br>MC14577CP<br>NJM2068MD<br> | TC74HCU04AP<br>TC74HC4066AP<br>                     | LC7824<br>TC74HC4051AP<br>TC74HC4053AP<br>TC9299P<br> | LA3401<br>LC72131<br>          | LA1266<br>LC72720N<br>LC74781-9626<br> | LC7536Y<br>LC78211<br>LC78212<br>LC78213<br> |            |
| NJM2904M<br>M5220FP<br>μPC4570G2<br>    | TC74HC00AF<br>TC74HC02AF-TP1<br>TC74HCU04AF-TP1<br> | TC74HC151AF<br>TC74HC153AF<br>                        | AK4320-VM-E1<br>               | UM61256FS-15Q<br>                      |                                              |            |
| M5M51288BKJ-20LTEL<br>                  | AK4526VQ<br>YM3436DK<br>                            | LC75710NE<br>LC75712E<br>                             | HD64F3337YF16<br>LC87F5164<br> | PM4007A<br>YSS918<br>                  |                                              |            |

Transistors

|                                                                                                                                              |                                                                                          |                                                                                                                                                 |                    |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 2SA933S (Q, R)<br>2SC1749S (R, S)<br>2SD1915F (S, T)<br>DTA143ES<br>DTA144ES<br>DTC114ES<br>DTC123JS<br>DTC143XS<br>DTC143ZS<br>DTC144ES<br> | 2SA1037K (Q, R, S)<br>2SC2412K (Q, R, S)<br>2SC3326 (A, B)<br>DTA144EKA<br>DTC144EKA<br> | 2SA970 (GR, BL)<br>2SA1015 (Y)<br>2SC535 (A, B, C)<br>2SC1145 (O, Y)<br>2SC1815 (Y)<br>2SC2240 (GR, BL)<br>2SC2705 (O, Y)<br>2SC2878 (A, B)<br> | 2SK246 (Y)<br>     |
| 2SA1708 (S, T)<br>2SC4498 (S, T)<br>                                                                                                         | 2SA1837<br>2SB941 (P, Q)<br>2SC4793<br>2SD2396 (J, K)<br>                                | 2SC4512 (O, P, Y)<br>                                                                                                                           | 2SC5200 (O, R)<br> |

Diodes

|                                                           |                                                                                                                                              |            |               |            |                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|------------|------------------------|
| 1SR139-400<br>1SS133<br>MA185<br>MTZJ5.1A<br>MTZJ5.1B<br> | MTZJ5.6B<br>MTZJ6.8A<br>MTZJ6.8B<br>MTZJ11.0B<br>MTZJ12.0A<br>MTZJ15.0B<br>MTZJ15.0A<br>MTZJ24.0A<br>MTZJ24.0C<br>MTZJ27.0A<br>MTZJ30.0D<br> | 1SS355<br> | KV1851-TL<br> | S1NB20<br> | D3SBA20<br>RBV-602<br> |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|------------|------------------------|



■ SCHEMATIC DIAGRAM (RX-V2095 TUNER)

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

| CAPACITOR |                                  |
|-----------|----------------------------------|
| 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 |

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

NOTICE (model1)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

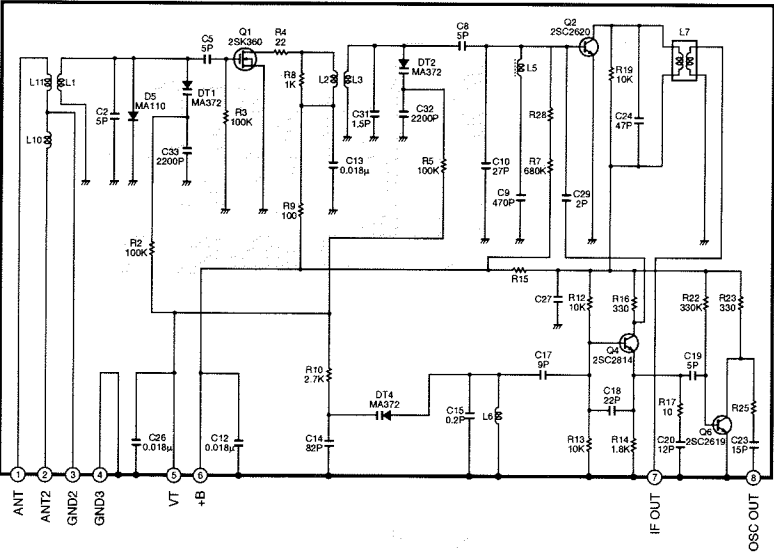
| Mark | Reference Parts Number | Parts Name                 |
|------|------------------------|----------------------------|
| K1   | D1.2                   | HSS104<br>1SS133<br>1SS176 |

CIRCUIT CHANGES BY MARKET.

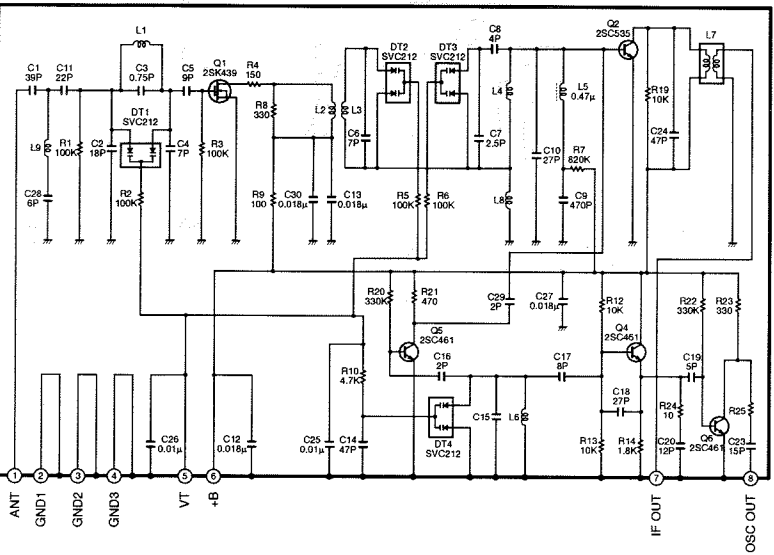
| S  | J<br>V251850 | U.C<br>V251860   | R.T<br>V251870   | A.B.G.L<br>V251880 |
|----|--------------|------------------|------------------|--------------------|
| 1  | PK1          | V290900          | V290910          | V271670            |
| 2  | R48          |                  |                  | 4.7K               |
| 3  | T3           |                  |                  | XYA2<br>VT48680    |
| 4  | J41          | ○                | ○                |                    |
| 5  | C49          | 2200P<br>UA95322 | 2200P<br>UA95322 | 120P<br>UA95212    |
| 6  | R50          | 22K              | 22K              | 1K                 |
| 7  | C36-37       | 680P<br>UA95268  | 1000P<br>UA95310 | 1000P<br>UA95310   |
| 8  | R36-37       | 75K              | 75K              | 180K               |
| 9  | SW1          |                  |                  | V560260            |
| 10 | J42          |                  |                  |                    |
| 11 |              |                  |                  |                    |
| 12 | R55-57-58    |                  |                  | 270K               |
| 13 | R60          |                  |                  | 180K               |
| 14 | R34          | 10K              | 10K              | 27K                |

○ : USED  
□ : NOT USED

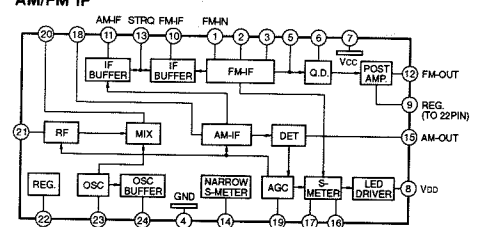
● PK1 : ENV-172C8G1R (V2909100) U, C, R, T models



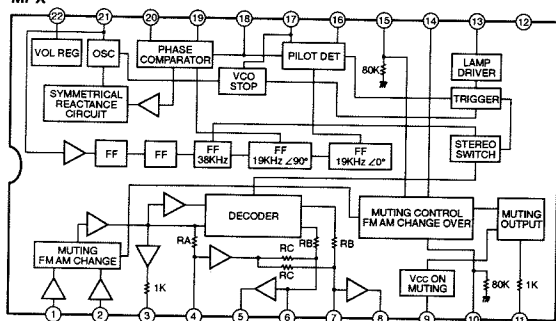
● PK1 : ENV-172A4G1 (V2716700) A, B, G, L models



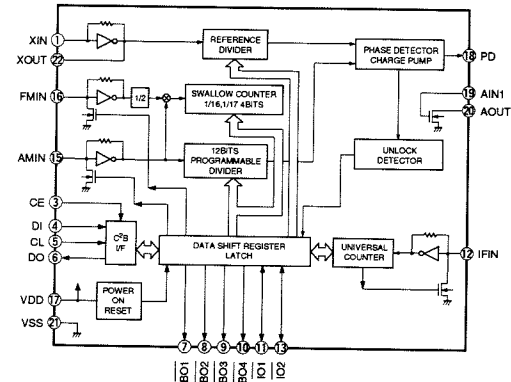
IC1 : LA1266



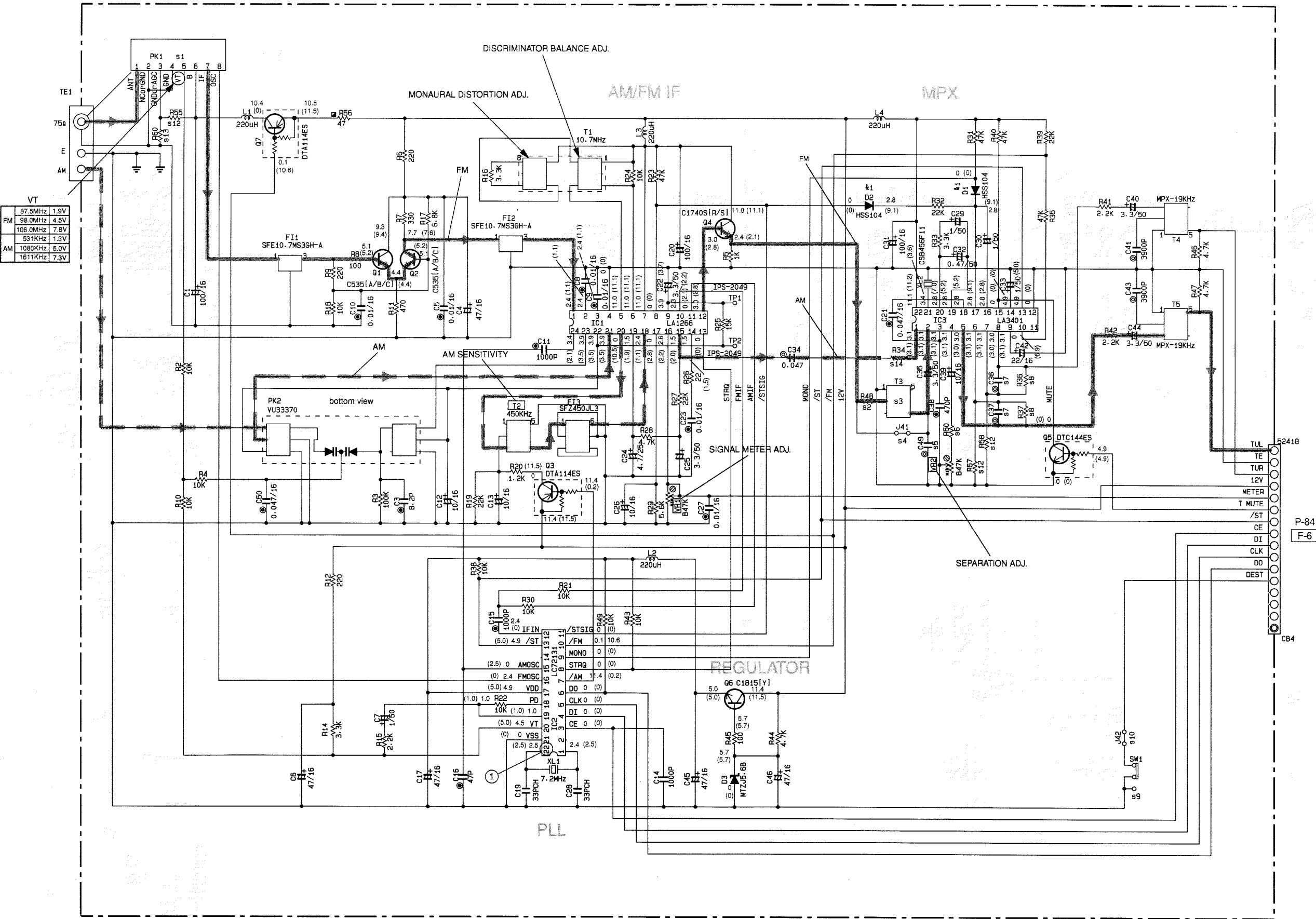
IC3 : LA3401



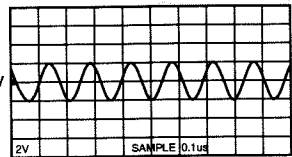
IC2 : LC72131  
PLL Controller



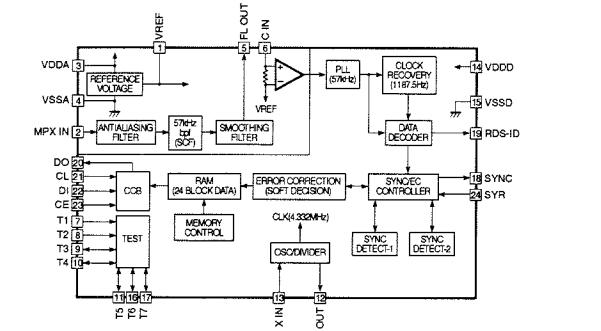
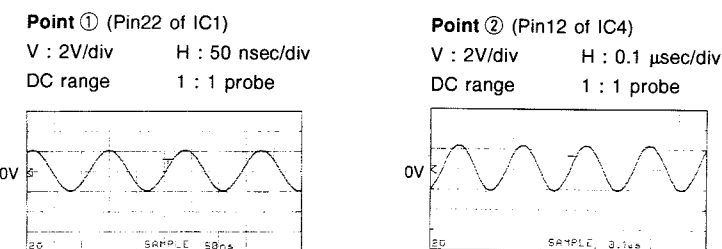
\* All voltages are measured with a 10MΩ/DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



Point ① (Pin22 of IC2)  
V : 2V/div H : 0.1 μsec/div  
DC range 1 : 1 probe

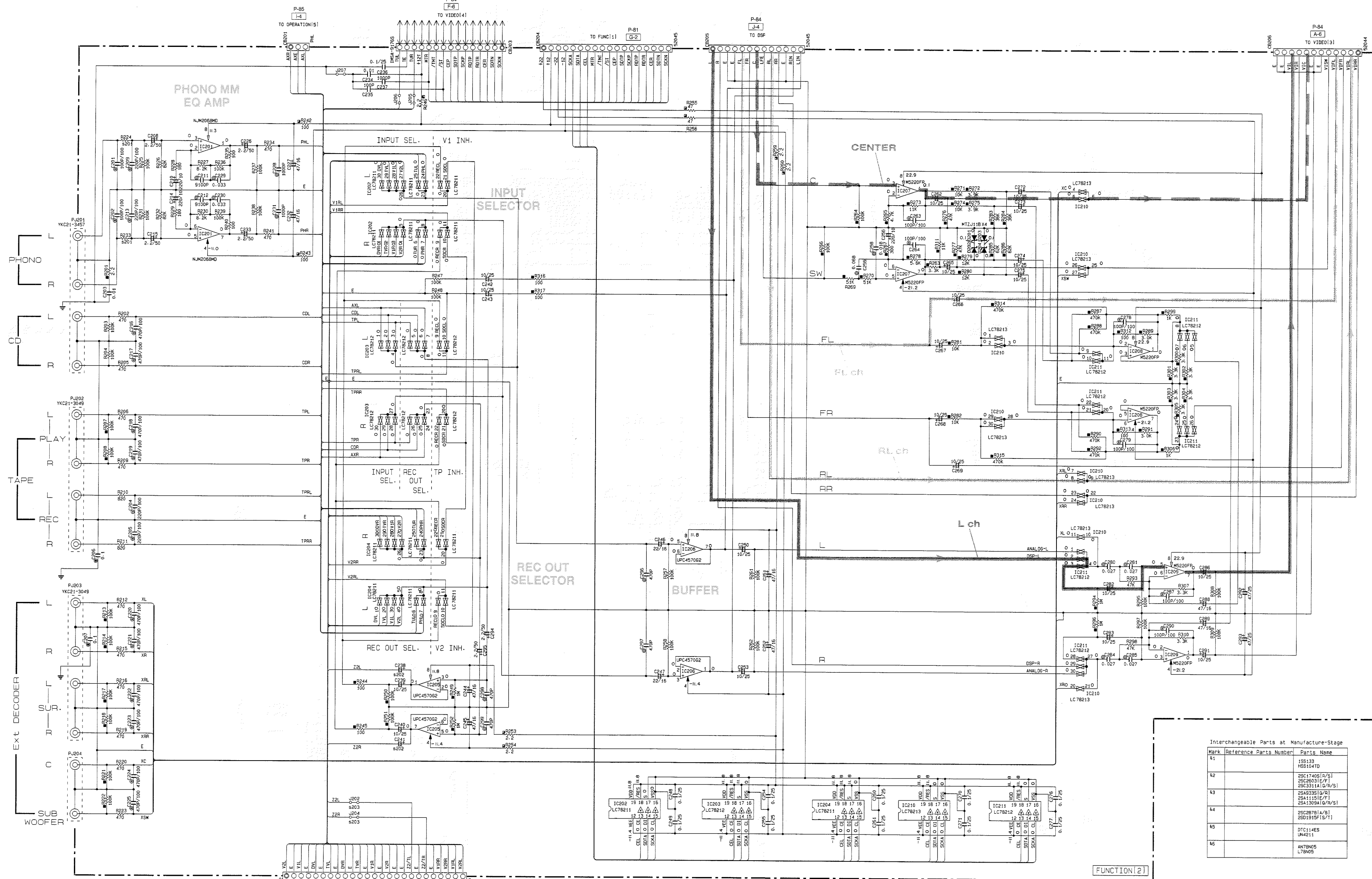


| Mark | Reference Parts Number | Parts Name |
|------|------------------------|------------|
| 41   | D1.2                   | HSS104     |
|      |                        | 1SS133     |
|      |                        | 1SS176     |



79

# ■ SCHEMATIC DIAGRAM (FUNCTION [2])



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

| 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 WOUND RESISTOR           |
| ⊕       | SEMI VARIABLE RESISTOR          |
| ■       | CHIP RESISTOR                   |

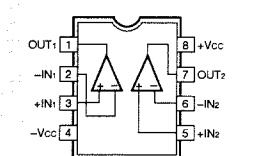
| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| ⊙       | TANTALUM CAPACITOR                   |
| NO MARK | CERAMIC CAPACITOR                    |
| ⊙       | CERAMIC TUBULAR CAPACITOR            |
| ⊙       | POLYESTER FILM CAPACITOR             |
| ⊙       | POLYSTYRENE FILM CAPACITOR           |
| ⊙       | MICA CAPACITOR                       |
| ⊙       | POLYPROPYLENE FILM CAPACITOR         |
| ⊙       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| ⊙       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

| Ref No. | U.C      | R.T     | A       | L       | S (2095RDS) |
|---------|----------|---------|---------|---------|-------------|
| 201     | R224-223 | 47      | 47      | 47      | 1-BK        |
| 202     | C238-241 | 10/25   | 10/25   | 10/25   | ×           |
| 203     | J202-204 | ○       | ○       | ○       | ×           |
| 204     |          |         |         |         |             |
| 205     |          |         |         |         |             |
| 206     |          |         |         |         |             |
| 207     |          |         |         |         |             |
| PWB     | XY369    | XY370   | XY371   | XY371   | XY371       |
| PCB     | V301090  | V301070 | V301090 | V301100 | V301110     |

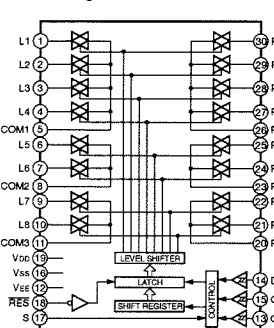
X: NOT USED  
O: USED

| Mark | Reference Parts Number | Parts Name       |
|------|------------------------|------------------|
| 41   | 1S5133                 | MS510410         |
| 42   | 2SC1740S (S/S)         | 2SC28031E (P)    |
| 43   | 2SC3311A (S/R/S)       | 2SA4335 (P/R)    |
| 44   | 2SA1115 (P/T)          | 2SA1309A (S/R/S) |
| 45   | 2SC2878 (A/S)          | 2SD1591 (S/T)    |
| 46   | DT114ES                | 4N6511           |
|      | ANTENNA                | L78N05           |

IC201 : NJM2068MD-T1  
IC205, 206 : μPC4570G2  
IC207-209 : M5220FP  
Dual OP-Amp

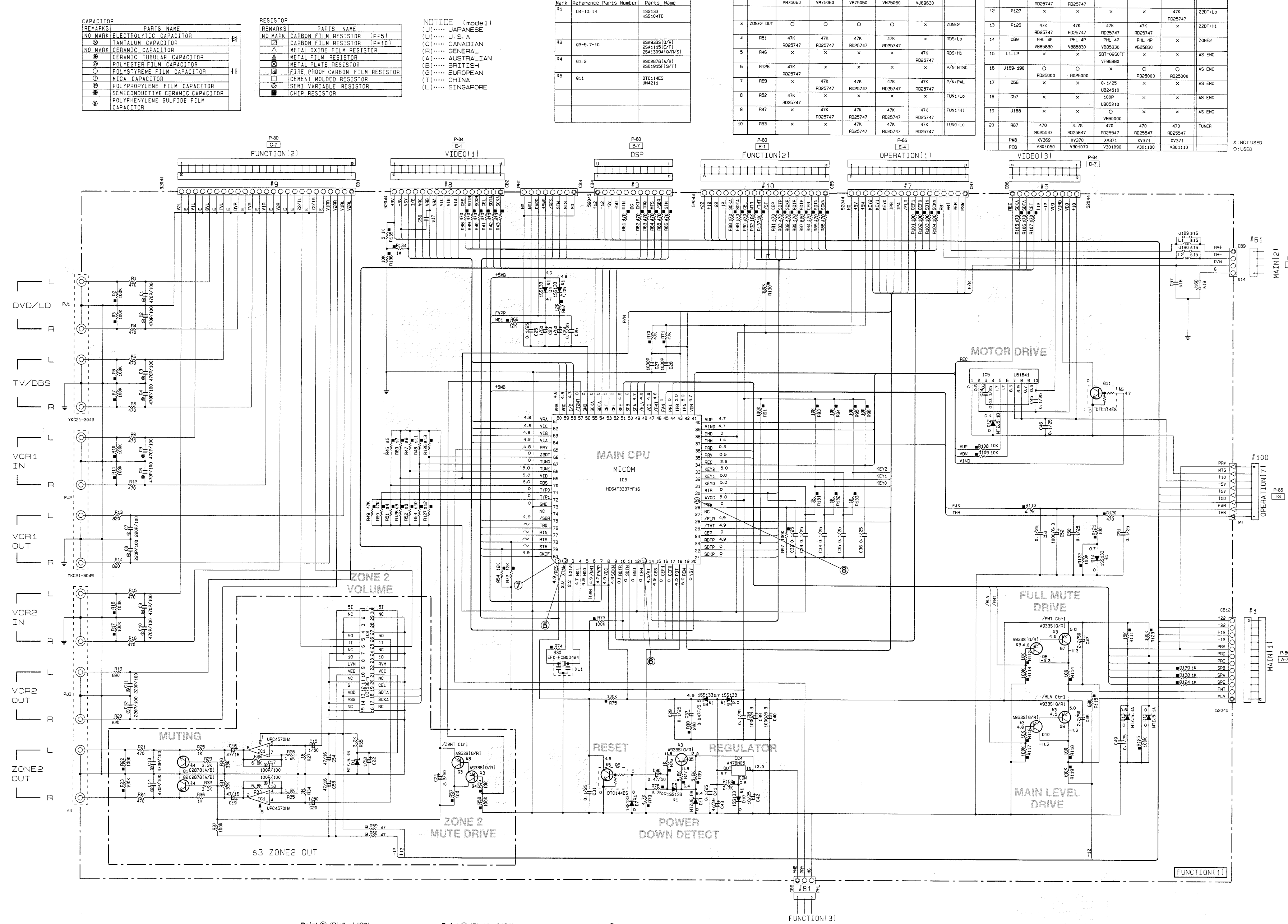


IC202, 204 : LC78211  
Analog Function Switch





■ SCHEMATIC DIAGRAM (FUNCTION [1])



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

| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| NO MARK | CARBON FILM RESISTOR (P=10)     |
| NO MARK | METAL OXIDE FILM RESISTOR       |
| NO MARK | METAL FILM RESISTOR             |
| NO MARK | METAL PLATE RESISTOR            |
| NO MARK | FIRE PROOF CARBON FILM RESISTOR |
| NO MARK | CEMENT MOULDED 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

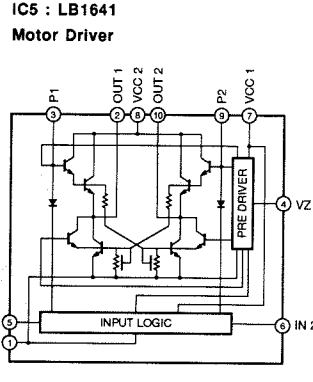
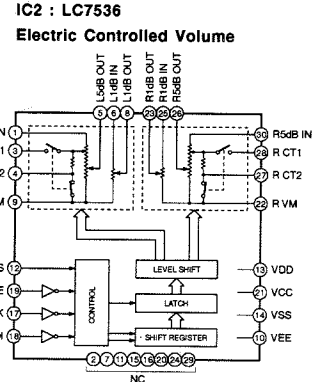
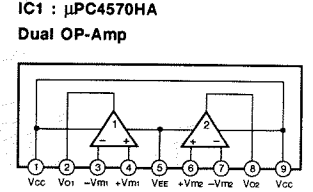
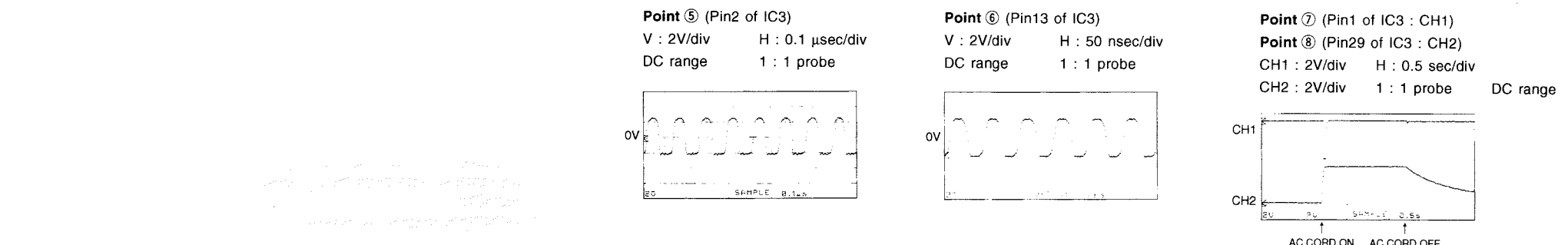
| Mark | Reference | Parts Number | Parts Name   |
|------|-----------|--------------|--------------|
| 41   | D4-10-14  | ISS133       | SS134TD      |
| 43   | 03-5-7-10 | 2S49335(D/R) | 2S41151E(F)  |
| 44   | 01-2      | 2S20761(A/R) | 2S01915(F/S) |
| 45   | 011       | DT1C14ES     | UN4211       |

CIRCUIT CHANGES BY MARKET.

| S  | U-C       | R-T       | A         | L         | G(RDS)    | MEMO     |
|----|-----------|-----------|-----------|-----------|-----------|----------|
| 1  | PJ3       | YK21-3164 | YK21-3164 | YK21-3164 | YK21-3049 | ZONE2    |
| 3  | ZONE2 OUT | O         | O         | O         | O         | ZONE2    |
| 4  | R51       | 47K       | 47K       | 47K       | 47K       | RDS-LO   |
| 5  | R46       | X         | X         | X         | X         | RDS-H1   |
| 6  | R128      | 47K       | 47K       | 47K       | 47K       | P/N-NTSC |
| 7  | R69       | X         | 47K       | 47K       | 47K       | P/N-PAL  |
| 8  | R52       | 47K       | 47K       | 47K       | 47K       | TUN1-LO  |
| 9  | R47       | X         | 47K       | 47K       | 47K       | TUN1-H1  |
| 10 | R53       | X         | 47K       | 47K       | 47K       | TUN1-LO  |

| S  | U-C      | R-T     | A       | L       | G(RDS)  | MEMO    |
|----|----------|---------|---------|---------|---------|---------|
| 11 | R48      | 47K     | 47K     | 47K     | 47K     | TUN0-H1 |
| 12 | R127     | X       | X       | X       | 47K     | Z20T-LO |
| 13 | R126     | 47K     | 47K     | 47K     | 47K     | Z20T-H1 |
| 14 | C89      | PHL 4P  | PHL 4P  | PHL 4P  | PHL 4P  | ZONE2   |
| 15 | L1-L2    | Y885830 | Y885830 | Y885830 | Y885830 | AS EMC  |
| 16 | J189-190 | O       | O       | O       | O       | AS EMC  |
| 17 | C56      | X       | X       | X       | 0.1/25  | AS EMC  |
| 18 | C57      | X       | X       | X       | 0.1/25  | AS EMC  |
| 19 | J158     | X       | X       | O       | Y885830 | AS EMC  |
| 20 | R87      | 470     | 4.7K    | 470     | 470     | TUNER   |

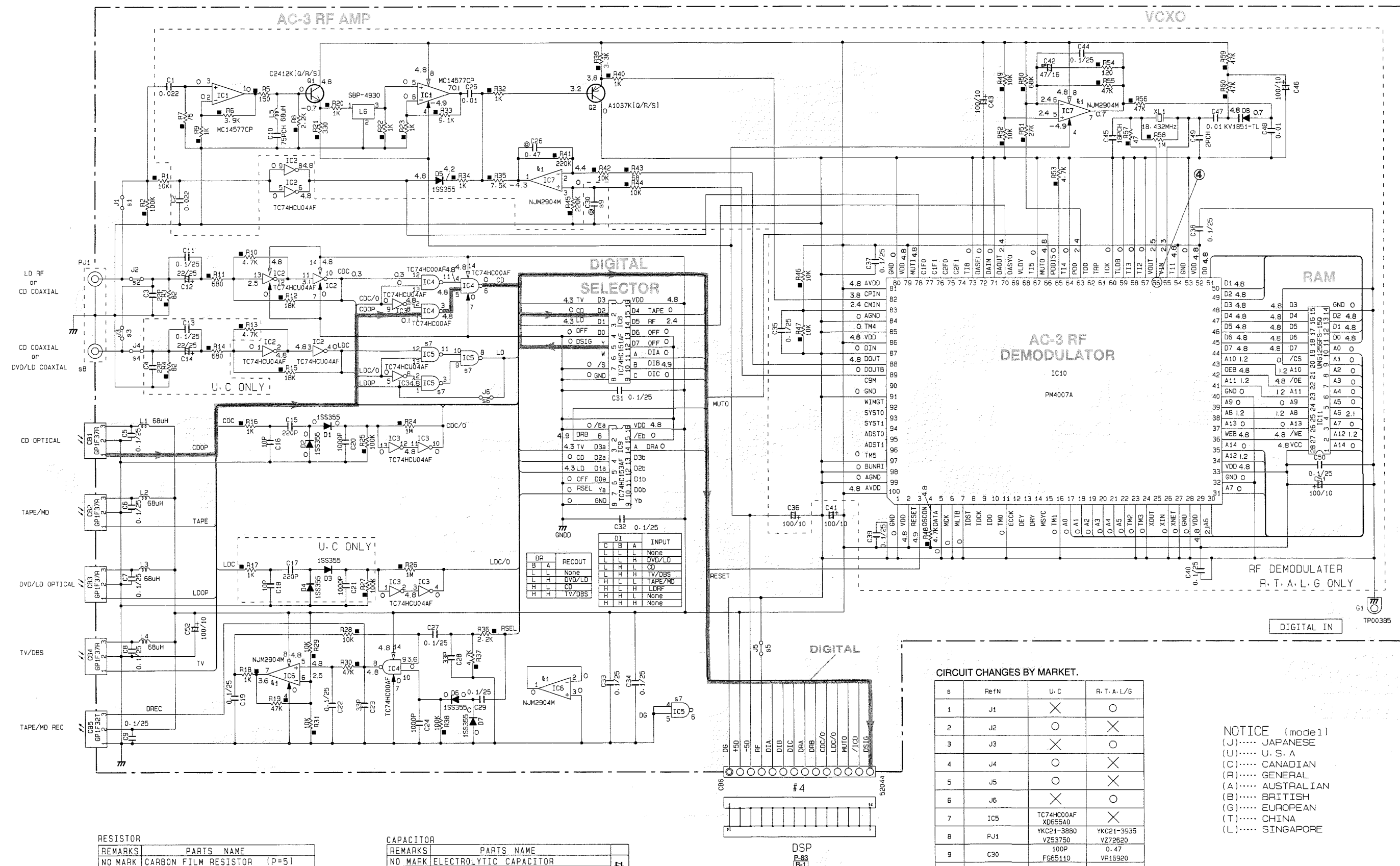
X: NOT USED  
O: USED



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



## ■ SCHEMATIC DIAGRAM (DIGITAL IN)



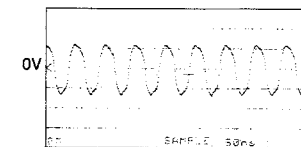
## CIRCUIT CHANGES BY MARKET.

| S | Ref N          | U.C        | R.T.A./L/S |
|---|----------------|------------|------------|
| 1 | J1             | ×          | ○          |
| 2 | J2             | ○          | ×          |
| 3 | J3             | ×          | ○          |
| 4 | J4             | ○          | ×          |
| 5 | J5             | ○          | ×          |
| 6 | J6             | ×          | ○          |
| 7 | IC5            | TC74HC00AF | YK21-3935  |
| 8 | PJ1            | YK21-3880  | V253750    |
| 9 | C30            | F955110    | VR16920    |
|   | RF DEMODULATOR | ×          | ○          |
|   | DVD COAXIAL    | ○          | ×          |
|   | PWB            | XV375      | XV375      |
|   | PCB            | V301270    | V301280    |

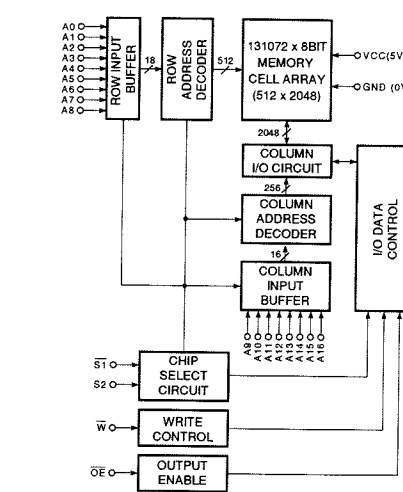
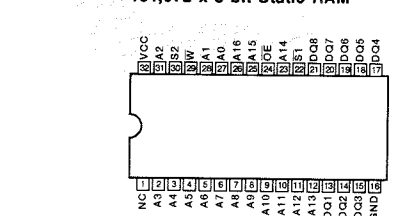
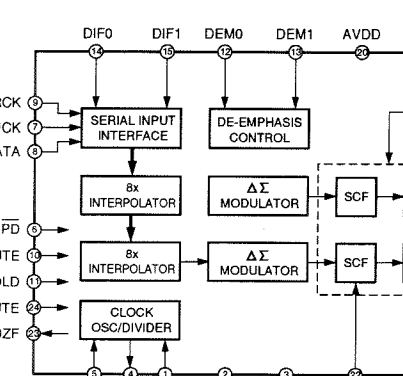
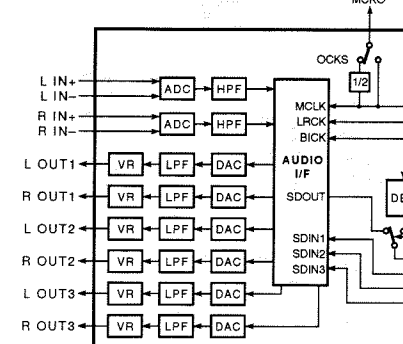
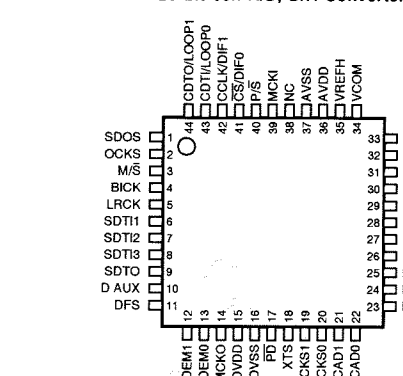
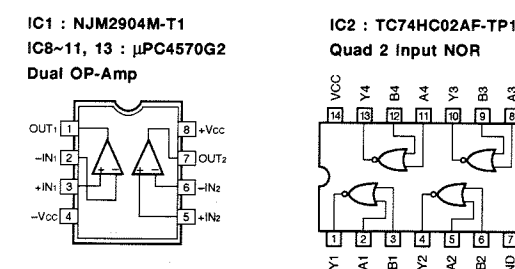
X : NOT USED  
O : USED

NOTICE (model1)  
(J)..... JAPANESE  
(U)..... U.S.A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

Point ④ (Pin56 of IC10)  
V : 2V/div H : 50 nsec/div  
DC range 1 : 1 probe

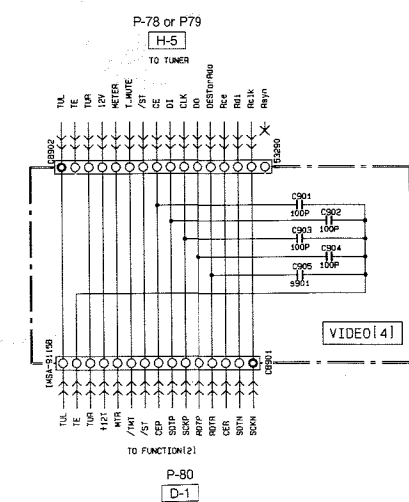
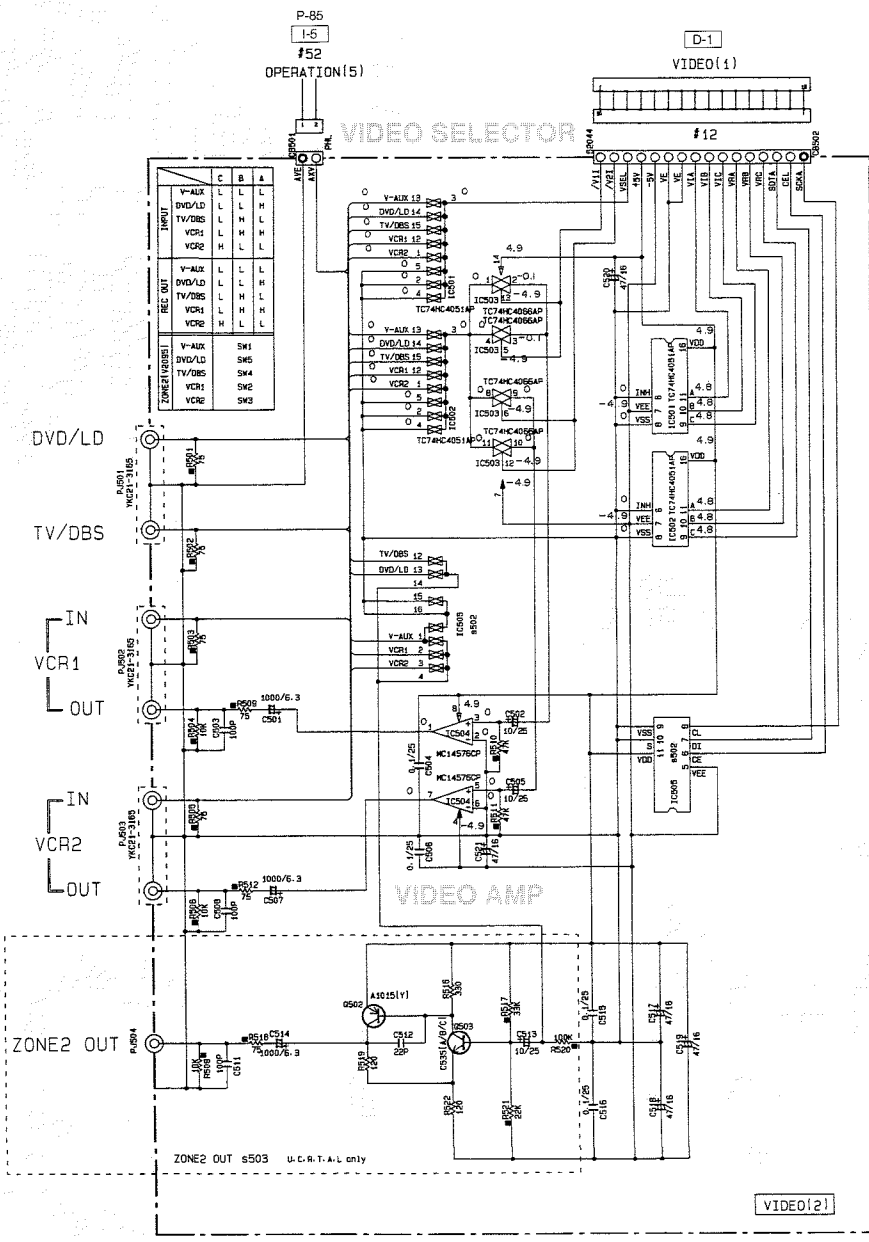
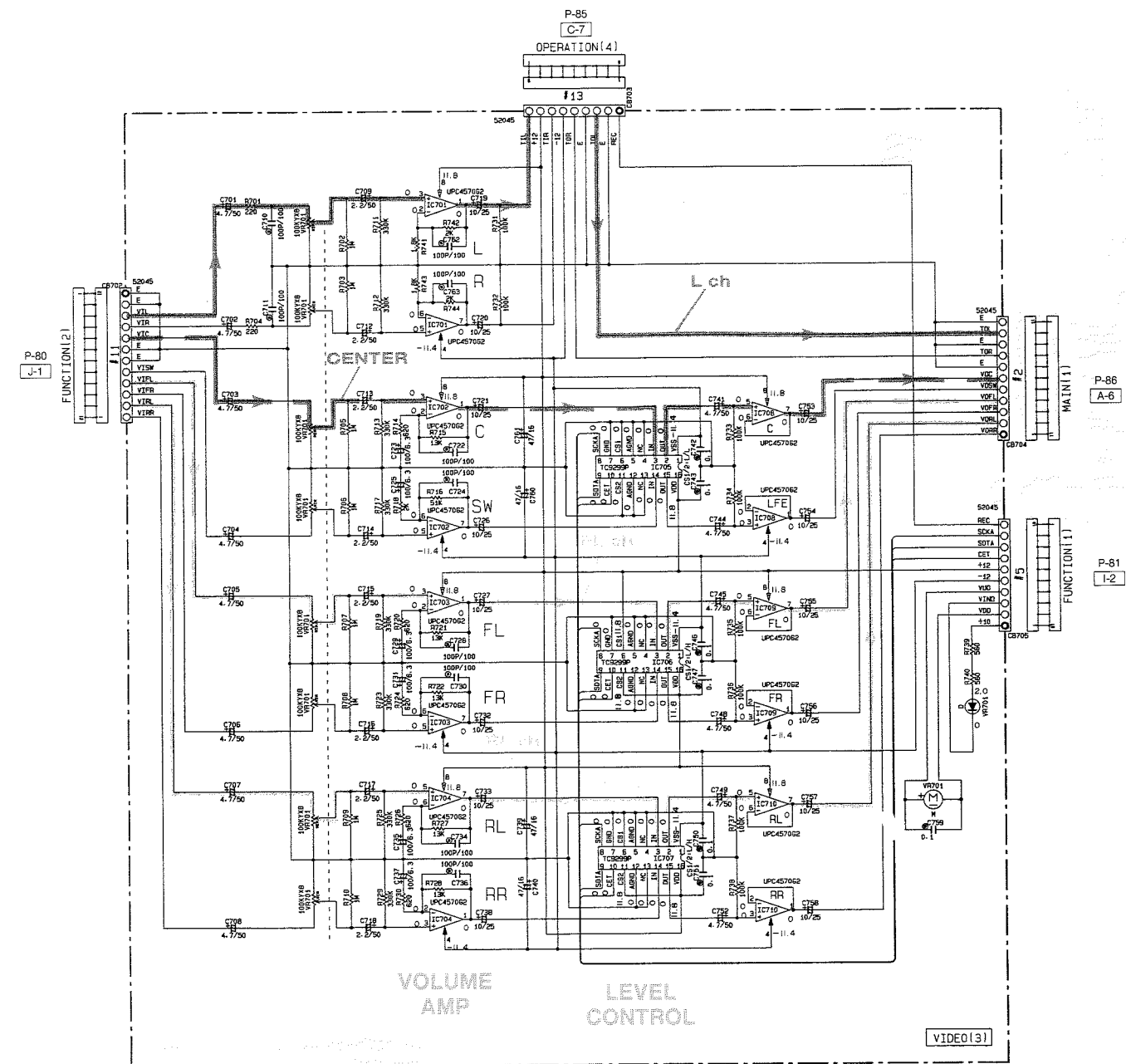
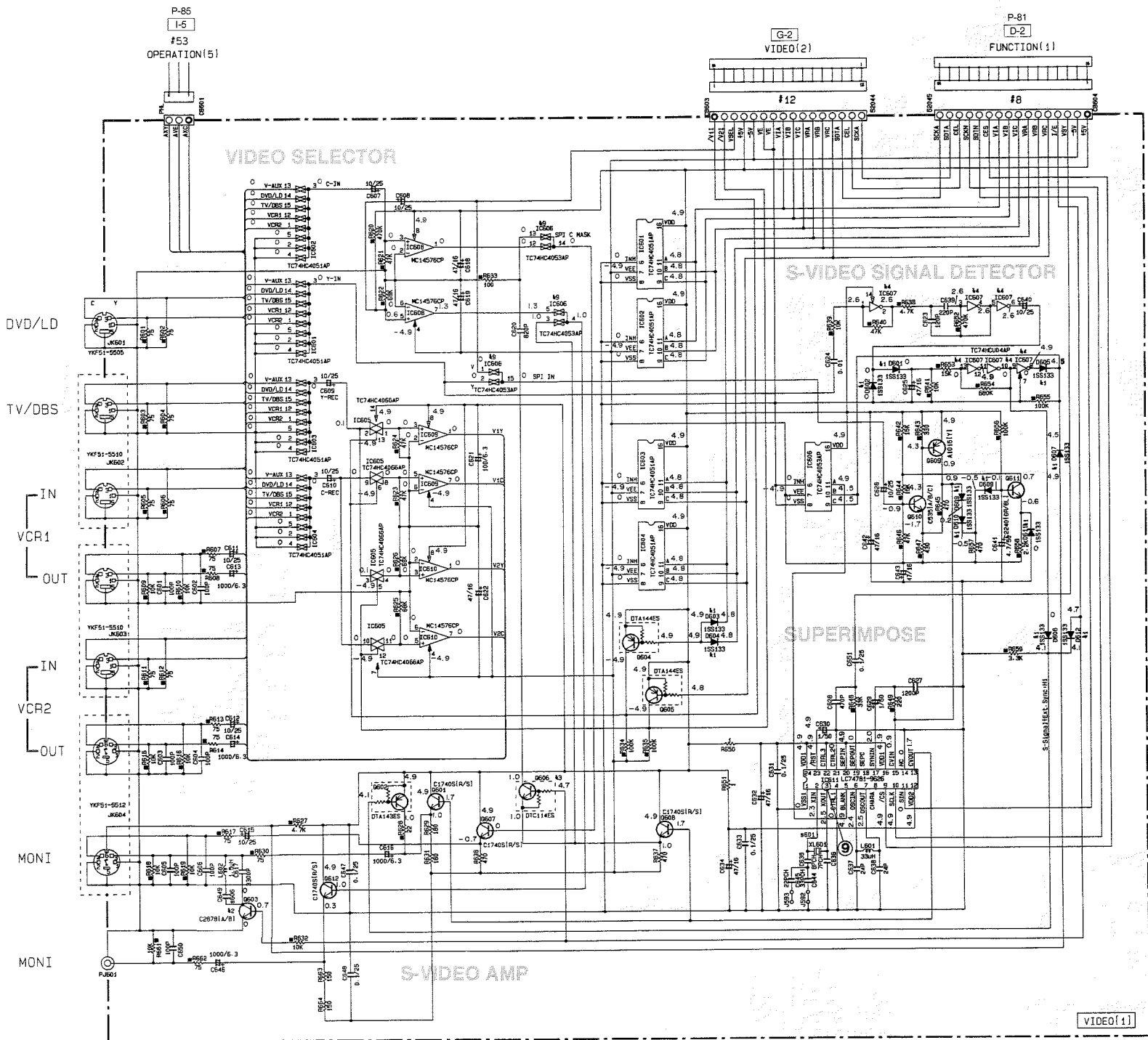


\* All voltages are measured with a 10MΩ/DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



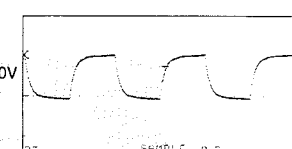
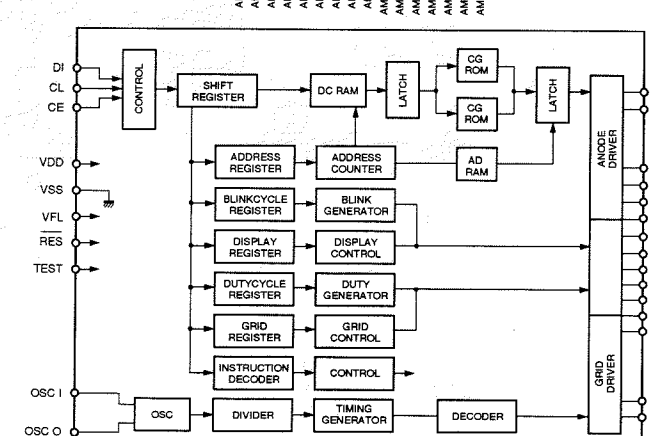
- \* All voltages are measured with a 10M $\Omega$ /DC electric volt meter.
- \* Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.

SCHEMATIC DIAGRAM (VIDEO)



| Interchangeable Parts at Manufacture Stage |                        |               |
|--------------------------------------------|------------------------|---------------|
| Mark                                       | Reference Parts Number | Parts Name    |
| 11                                         | D601-612               | 155132        |
|                                            |                        | H5510470      |
| 12                                         | D603                   | 25C28781A/B1  |
|                                            |                        | 25D1915F15/T1 |
| 13                                         | D606                   | DTC144E5      |
|                                            |                        | UN4211        |
| 14                                         | IC507                  | TC74HC00AP    |
|                                            |                        | SN74HC00AN    |
|                                            |                        | NC74HC00AN    |



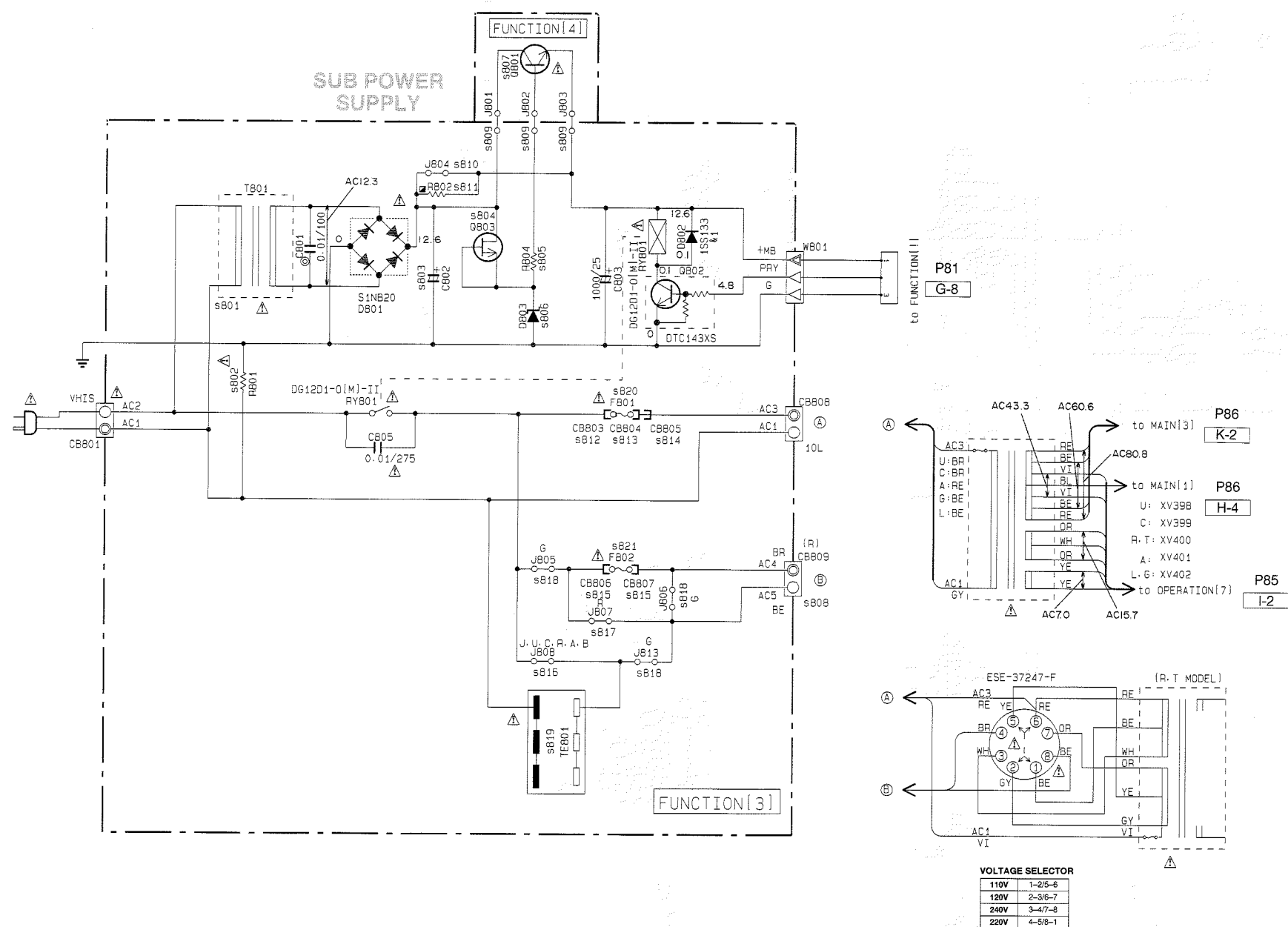


- \* All voltages are measured with a 10M $\Omega$ /DC electric volt meter.
- \* Components having special characteristics are marked  $\triangle$  and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.



| CAPACITOR |                                      |   |
|-----------|--------------------------------------|---|
| REMARKS   | PARTS NAME                           |   |
| NO MARK   | ELECTROLYTIC CAPACITOR               | H |
| ⊗         | TANTALUM CAPACITOR                   |   |
| NO MARK   | CERAMIC CAPACITOR                    | H |
| ●         | CERAMIC TUBULAR CAPACITOR            |   |
| ⊙         | POLYESTER FILM CAPACITOR             |   |
| ○         | POLYSTYRENE FILM CAPACITOR           |   |
| ①         | MICA CAPACITOR                       |   |
| ②         | POLYPROPYLENE FILM CAPACITOR         |   |
| ⊗         | SEMICONDUCTIVE CERAMIC CAPACITOR     |   |
| ⑤         | POLYPHENYLENE SULFIDE FILM CAPACITOR |   |

NOTICE (model1)  
(J).... JAPANESE  
(U).... U. S. A  
(C).... CANADIAN  
(R).... GENERAL  
(A).... AUSTRALIAN  
(B).... BRITISH  
(G).... EUROPEAN  
(T).... CHINA  
(L).... SINGAPORE

[illegible]

| CIRCUIT CHANGES BY MARKET |              |                        |                        |                        |                        |                        | X: NOT USED<br>O: USED |                        |
|---------------------------|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| S                         | RefN         | U-C                    | R-T                    | A                      | L                      | G (RQS)                |                        |                        |
| 801                       | T801         | XG485                  | XC082                  | XG486                  | XG486                  |                        |                        | XG486                  |
| 802                       | R801         | 1/2P 2 2M              | X                      | X                      | X                      | X                      |                        | X                      |
| 803                       | R802         |                        | 47/63                  | X                      | X                      | X                      |                        | X                      |
| 804                       | R803         | X                      | 25K246[V]<br>1F10262   | X                      | X                      | X                      |                        | X                      |
| 805                       | R804         | X                      | 100                    | X                      | X                      | X                      |                        | X                      |
| 806                       | R805         | X                      | W2J11B<br>V541990      | X                      | X                      | X                      |                        | X                      |
| 807                       | R801         | X                      | 2502396[U]<br>VR51080  | X                      | X                      | X                      |                        | X                      |
| 808                       | CB809        | X                      | LA00241                | X                      | X                      | X                      |                        | X                      |
| 809                       | J801-R03     | X                      | O                      | X                      | X                      | X                      |                        | X                      |
| 810                       | J804         | O                      | X                      | X                      | O                      | O                      |                        | O                      |
| 811                       | R802         | X                      | X                      | 8 2                    | X                      | X                      |                        | X                      |
| 812                       | CB803        | V599610                | V599610                | VP20650                | VP20650                | VP20650                |                        | VP20650                |
| 813                       | CB804        | X                      | X                      | VP20650                | VP20650                | VP20650                |                        | VP20650                |
| 814                       | CB805        | V599610                | V599610                | X                      | X                      | X                      |                        | X                      |
| 815                       | CB806-R07    | X                      | VP20650                | X                      | VP20650                | VP20650                |                        | VP20650                |
| 816                       | J808         | O                      | O                      | O                      | X                      | X                      |                        | X                      |
| 817                       | R807         | X                      | O                      | X                      | X                      | X                      |                        | X                      |
| 818                       | J805-R06-R13 | X                      | X                      | X                      | O                      | O                      |                        | X                      |
| 819                       | T801         | S2-7651-212<br>VV11880 | S2-7651-212<br>VV11880 | S2-7737-210<br>VV91500 | S2-7637-212<br>VV11900 | S2-7637-212<br>VV11900 |                        | S2-7637-212<br>VV11900 |
| 820                       | F801         | 10A 250V<br>KB00139    | 10A 250V<br>KB00139    | T5AL 250V<br>KB00078   | T5AL 250V<br>KB00078   | T5AL 250V<br>KB00078   |                        | T5AL 250V<br>KB00078   |
| 821                       | F802         |                        | T5AL 250V<br>KB00078   | X                      | T2 54H 250V<br>VT94250 | T2 54H 250V<br>VT94250 |                        | T2 54H 250V<br>VT94250 |
|                           |              |                        |                        |                        |                        |                        |                        |                        |
|                           |              |                        |                        |                        |                        |                        |                        |                        |
|                           |              |                        |                        |                        |                        |                        |                        |                        |
|                           |              |                        |                        |                        |                        |                        |                        |                        |
|                           | PWB          | XV369                  | XV370                  | XV371                  | XV371                  | XV371                  |                        | XV371                  |
|                           | PCB          | V301050                | V301070                | V301090                | V301100                | V301110                |                        | V301110                |

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



# PARTS LIST

## ■ ELECTRICAL PARTS

### ■ WARNING

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

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the part Nos. of the carbon resistors refer to the last page.

- Chip resistors are listed on page 105.

### ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

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

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

## P.C.B. DSP

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| *         | V3011400 | P. C. B.                 |
|           |          | DSP                      |
| CB2       | VQ044200 | CN. BS. PIN 6P           |
| CB3       | VQ044500 | CN. BS. PIN 11P          |
| CB4       | VF982200 | CN. BS. PIN 14P          |
| CB6       | VQ044600 | CN. BS. PIN 13P          |
| C4        | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C7        | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C8        | VJ900700 | C. CE. M. CHP 33pF 50V   |
| C9        | UB013100 | C. CE. M. CHP 1000pF 50V |
| C10       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C11       | Vi841800 | C. EL 100uF 10V          |
| C12       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C13       | Vi841800 | C. EL 100uF 10V          |
| C14       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C15       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C16       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C17       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C18       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C19       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C20       | VJ900700 | C. CE. M. CHP 33pF 50V   |
| C21       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C22       | UB013470 | C. CE. M. CHP 4700pF 50V |
| C23       | VJ900900 | C. CE. M. CHP 39pF 50V   |
| C24       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C25       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C26       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C27       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C28       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C29       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C30       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C31       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C32       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C33       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C34       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C35       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C36       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C37       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C38       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C39       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C40       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C41       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C42       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C43       | UB052100 | C. CE. M. CHP 100pF 50V  |
| C44       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C45       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C46       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C47       | Vi841800 | C. EL 100uF 10V          |
| C48       | VJ900700 | C. CE. M. CHP 33pF 50V   |
| C49       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C50       | Vi841200 | C. EL 330uF 6.3V         |
| C51       | UB245100 | C. CE. M. CHP 0.1uF 25V  |
| C52       | Vi841200 | C. EL 330uF 6.3V         |
| C53       | UB245100 | C. CE. M. CHP 0.1uF 25V  |

\* New Parts

| Schm Ref. | PART NO. | Description             |
|-----------|----------|-------------------------|
| C54       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C55       | Vi841400 | C. EL 1000uF 6.3V       |
| C56       | Vi841200 | C. EL 330uF 6.3V        |
| C59       | Vi841400 | C. EL 1000uF 6.3V       |
| C60       | Vi841800 | C. EL 100uF 10V         |
| C61       | UB012470 | C. CE. M. CHP 470pF 50V |
| C62       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C63       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C64       | Vi841200 | C. EL 330uF 6.3V        |
| C65       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C66       | Vi841200 | C. EL 330uF 6.3V        |
| C67       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C68       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C69       | Vi841200 | C. EL 330uF 6.3V        |
| C70       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C71       | Vi841800 | C. EL 100uF 10V         |
| C72       | Vi841800 | C. EL 100uF 10V         |
| C73       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C74       | Vi845900 | C. EL 10uF 63V          |
| C75       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C76       | Vi841800 | C. EL 100uF 10V         |
| C77       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C78       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C79       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C81       | Vi841800 | C. EL 100uF 10V         |
| C82       | Vi841800 | C. EL 100uF 10V         |
| C83       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C84       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C85       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C86       | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C88       | UA653150 | C. MYLAR 1500pF 50V     |
| C89       | UA653150 | C. MYLAR 1500pF 50V     |
| C90       | Vi845900 | C. EL 10uF 63V          |
| C91       | Vi845900 | C. EL 10uF 63V          |
| C92       | Vi845900 | C. EL 10uF 63V          |
| C93       | Vi845900 | C. EL 10uF 63V          |
| C94       | Vi845900 | C. EL 10uF 63V          |
| C95       | Vi845900 | C. EL 10uF 63V          |
| C96       | Vi845900 | C. EL 10uF 63V          |
| C97       | Vi845900 | C. EL 10uF 63V          |
| C98       | Vi845900 | C. EL 10uF 63V          |
| C99       | Vi845900 | C. EL 10uF 63V          |
| C100      | UP652100 | C. POL 100pF 100V       |
| C101      | UP652100 | C. POL 100pF 100V       |
| C102      | UP652100 | C. POL 100pF 100V       |
| C103      | UP652100 | C. POL 100pF 100V       |
| C104      | Vi845900 | C. EL 10uF 63V          |
| C106      | UP652100 | C. POL 100pF 100V       |
| C107      | UP652100 | C. POL 100pF 100V       |
| C109      | Vi845900 | C. EL 10uF 63V          |
| C110      | Vi845900 | C. EL 10uF 63V          |
| C111      | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C112      | Vi841300 | C. EL 470uF 6.3V        |

\* New Parts

## P.C.B. DSP

| Schm Ref. | PART NO. | Description             |
|-----------|----------|-------------------------|
| C113      | Vi841900 | C. EL 220uF 10V         |
| C115      | Vi845900 | C. EL 10uF 63V          |
| C116      | Vi845900 | C. EL 10uF 63V          |
| C117      | Vi845900 | C. EL 10uF 63V          |
| C118      | UP652100 | C. POL 100pF 100V       |
| C119      | UP652100 | C. POL 100pF 100V       |
| C120      | Vi845900 | C. EL 10uF 63V          |
| C121      | Vi845900 | C. EL 10uF 63V          |
| C122      | UP652100 | C. POL 100pF 100V       |
| C123      | Vi846000 | C. EL 22uF 63V          |
| C124      | Vi845900 | C. EL 10uF 63V          |
| C125      | Vi846000 | C. EL 22uF 63V          |
| C126      | UP652100 | C. POL 100pF 100V       |
| C127      | Vi845900 | C. EL 10uF 63V          |
| C128      | Vi845900 | C. EL 10uF 63V          |
| C129      | Vi845600 | C. EL 47uF 50V          |
| C130      | Vi845600 | C. EL 47uF 50V          |
| C131      | UB052100 | C. CE. M. CHP 100pF 50V |
| C132      | UB052100 | C. CE. M. CHP 100pF 50V |
| C133      | UB052100 | C. CE. M. CHP 100pF 50V |
| C134      | UB052100 | C. CE. M. CHP 100pF 50V |
| C135      | UB052100 | C. CE. M. CHP 100pF 50V |
| C136      | UB052100 | C. CE. M. CHP 100pF 50V |
| C137      | UB052100 | C. CE. M. CHP 100pF 50V |
| C138      | UB245100 | C. CE. M. CHP 0.1uF 25V |
| C139      | UB052100 | C. CE. M. CHP 100pF 50V |
| C140      | UB052100 | C. CE. M. CHP 100pF 50V |
| C141      | UB052100 | C. CE. M. CHP 100pF 50V |
| C145      | UB052100 | C. CE. M. CHP 100pF 50V |
| D1        | VT332900 | DIODE 1SS355            |
| D2        | VT332900 | DIODE 1SS355            |
| D3        | VT332900 | DIODE 1SS355            |
| D4        | VT332900 | DIODE 1SS355            |
| D5        | VT332900 | DIODE 1SS355            |
| D6        | VT332900 | DIODE 1SS355            |
| D7        | VT332900 | DIODE 1SS355            |
| D8        | VT332900 | DIODE 1SS355            |
| D9        | VT332900 | DIODE 1SS355            |
| D10       | VT332900 | DIODE 1SS355            |
| D11       | VT332900 | DIODE 1SS355            |
| D12       | VT332900 | DIODE 1SS355            |
| D13       | VT332900 | DIODE 1SS355            |
| D14       | VT332900 | DIODE 1SS355            |
| D15       | VT332900 | DIODE 1SS355            |
| D16       | VT332900 | DIODE 1SS355            |
| D17       | VT332900 | DIODE 1SS355            |
| G1        | VR463400 | TERM. GND D3.5 TP00385  |
| G2        | VR463400 | TERM. GND D3.5 TP00385  |
| G3        | VR463400 | TERM. GND D3.5 TP00385  |
| G4        | VR463400 | TERM. GND D3.5 TP00385  |
| IC1       | XR038A00 | IC NJM2904M OP AMP      |
| IC2       | XD600A00 | IC TC74HC02AF-TP1 NOR   |
| IC3       | XC948E00 | IC YM3436DK             |

\* New Parts

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
| * IC4     | XV304A00 | IC YSS918-F           |
| IC5       | XV457A00 | IC M5M51288BKJ-20LTEL |
| * IC6     | XU722A00 | IC AK4526             |
| IC7       | XR361A00 | IC AK4320-VM-E1       |
| IC8       | XF291A00 | IC uPC4570G2          |
| IC9       | XF291A00 | IC uPC4570G2          |
| IC10      | XF291A00 | IC uPC4570G2          |
| IC11      | XF291A00 | IC uPC4570G2          |
| IC13      | XF291A00 | IC uPC4570G2          |
| IC14      | XU929D00 | IC LC87F5164A CPU     |
| * IC15    | XU965A00 | IC uPC29M33T-E1 3.3V  |
| Q1        | VV655300 | TR. DGT DTA144EKA     |
| Q2        | VV655300 | TR. DGT DTA144EKA     |
| Q3        | VV655300 | TR. DGT DTA144EKA     |
| Q4        | VD303700 | TR 2SC3326 A, B       |
| Q5        | VD303700 | TR 2SC3326 A, B       |
| Q6        | VD303700 | TR 2SC3326 A, B       |
| Q7        | VD303700 | TR 2SC3326 A, B       |
| Q8        | VD303700 | TR 2SC3326 A, B       |
| Q9        | VD303700 | TR 2SC3326 A, B       |
| Q10       | VD303700 | TR 2SC3326 A, B       |
| Q11       | VD303700 | TR 2SC3326 A, B       |
| Q12       | VD303700 | TR 2SC3326 A, B       |
| Q13       | VD303700 | TR 2SC3326 A, B       |
| Q14       | VV655700 | TR. DGT DTC144EKA     |
| R30       | HV453220 | R. CAR. FP 2.2Ω 1/4W  |
| R36       | HV453220 | R. CAR. FP 2.2Ω 1/4W  |
| R37       | HV453220 | R. CAR. FP 2.2Ω 1/4W  |
| R39       | HV453100 | R. CAR. FP 1Ω 1/4W    |
| R43       | HV454100 | R. CAR. FP 10Ω 1/4W   |
| R44       | HV454100 | R. CAR. FP 10Ω 1/4W   |
| R45       | HV453100 | R. CAR. FP 1Ω 1/4W    |
| R47       | HV453100 | R. CAR. FP 1Ω 1/4W    |
| R114      | HV453220 | R. CAR. FP 2.2Ω 1/4W  |
| R115      | HV453220 | R. CAR. FP 2.2Ω 1/4W  |
| XL1       | Vi552000 | RSNR. CRY5 12.288MHz  |
| XL2       | VQ791000 | RSNR. CE 10MHz        |

\* New Parts



## P.C.B. DIGITAL-IN

| Schm Ref. | PART NO. | Description                      |
|-----------|----------|----------------------------------|
|           | V3012700 | P.C.B. DIGITAL-IN(UC)            |
|           | V3012800 | P.C.B. DIGITAL-IN(RAGLT)         |
| * CB1     | V2508700 | CN. PHOT. SN 1P GP1F37R          |
| * CB2     | V2508700 | CN. PHOT. SN 1P GP1F37R          |
| * CB3     | V2508700 | CN. PHOT. SN 1P GP1F37R          |
| * CB4     | V2508700 | CN. PHOT. SN 1P GP1F37R          |
| * CB5     | V2508600 | CN. PHOT. DT GP1F32T             |
| CB6       | VF982200 | CN. BS. PIN 14P                  |
| C1        | UB044220 | C. CE. M. CHP 0.022uF 50V(RAGLT) |
| C2        | UB044220 | C. CE. M. CHP 0.022uF 50V(RAGLT) |
| C3        | UB051220 | C. CE. M. CHP 22pF 50V           |
| C4        | UB051220 | C. CE. M. CHP 22pF 50V(UC)       |
| C5        | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C6        | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C7        | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C8        | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C9        | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C10       | VJ901600 | C. CE. M. CHP 75pF 50V(RAGLT)    |
| C11       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C12       | Vi846000 | C. EL 22uF 63V                   |
| C13       | UB245100 | C. CE. M. CHP 0.1uF 25V(UC)      |
| C14       | Vi846000 | C. EL 22uF 63V(UC)               |
| C15       | UB012220 | C. CE. M. CHP 220pF 50V          |
| C16       | UB051100 | C. CE. M. CHP 10pF 50V           |
| C17       | UB012220 | C. CE. M. CHP 220pF 50V(UC)      |
| C18       | UB051100 | C. CE. M. CHP 10pF 50V(UC)       |
| C19       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C20       | UB013100 | C. CE. M. CHP 1000pF 50V         |
| C21       | UB013100 | C. CE. M. CHP 1000pF 50V(UC)     |
| C22       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C23       | UB051330 | C. CE. M. CHP 33pF 50V           |
| C24       | UB013100 | C. CE. M. CHP 1000pF 50V         |
| C25       | UB044100 | C. CE. M. CHP 0.01uF 50V(RAGLT)  |
| C26       | VR169200 | C. MYLAR. ML ECQ-V1H474(RAGLT)   |
| C27       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C28       | UB051330 | C. CE. M. CHP 33pF 50V           |
| C29       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C30       | FG211100 | C. CE 10pF 50V(UC)               |
| C30       | VR169200 | C. MYLAR. ML ECQ-V1H474(RAGLT)   |
| C31       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C32       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C33       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C34       | UB245100 | C. CE. M. CHP 0.1uF 25V          |
| C35       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |
| C36       | Vi841800 | C. EL 100uF 10V(RAGLT)           |
| C37       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |
| C38       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |
| C39       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |
| C40       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |
| C41       | Vi841800 | C. EL 100uF 10V                  |
| C42       | UN837470 | C. EL 47uF 16V(RAGLT)            |
| C43       | Vi841800 | C. EL 100uF 10V(RAGLT)           |
| C44       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)   |

\* New Parts

| Schm Ref. | PART NO. | Description                     |
|-----------|----------|---------------------------------|
| C45       | VJ900100 | C. CE. M. CHP 18pF 50V(RAGLT)   |
| C46       | Vi841800 | C. EL 100uF 10V(RAGLT)          |
| C47       | UB044100 | C. CE. M. CHP 0.01uF 50V(RAGLT) |
| C48       | UB044100 | C. CE. M. CHP 0.01uF 50V(RAGLT) |
| C49       | VJ898700 | C. CE. M. CHP 2pF 50V(RAGLT)    |
| C50       | UB245100 | C. CE. M. CHP 0.1uF 25V(RAGLT)  |
| C51       | Vi841800 | C. EL 100uF 10V(RAGLT)          |
| C52       | Vi841800 | C. EL 100uF 10V                 |
| D1        | VT332900 | DIODE 1SS355                    |
| D2        | VT332900 | DIODE 1SS355                    |
| D3        | VT332900 | DIODE 1SS355(UC)                |
| D4        | VT332900 | DIODE 1SS355(UC)                |
| D5        | VT332900 | DIODE 1SS355(RAGLT)             |
| D6        | VT332900 | DIODE 1SS355                    |
| D7        | VT332900 | DIODE 1SS355                    |
| D8        | VT707700 | C. TRIM KV1851-TL(RAGLT)        |
| G1        | VR463400 | TERM. GND D3.5 TP00385(UC)      |
| IC1       | Xi110D00 | IC MC14577CP(RAGLT)             |
| IC2       | XD660A00 | IC TC74HCU04AF-TP1              |
| IC3       | XD660A00 | IC TC74HCU04AF-TP1              |
| IC4       | XD655A00 | IC TC74HC00AF NAND              |
| IC5       | XD655A00 | IC TC74HC00AF(UC)               |
| IC6       | XR038A00 | IC NJM2904M OP AMP              |
| IC7       | XR038A00 | IC NJM2904M OP(RAGLT)           |
| IC8       | XR041A00 | IC TC74HC151AF                  |
| IC9       | XR042A00 | IC TC74HC153AF                  |
| IC10      | XT958A00 | IC PM4007A(RAGLT)               |
| IC11      | XS282A00 | IC UM61256FS(RAGLT)             |
| * L1      | V2726500 | COIL 68uH                       |
| * L2      | V2726500 | COIL 68uH                       |
| * L3      | V2726500 | COIL 68uH                       |
| * L4      | V2726500 | COIL 68uH                       |
| * L5      | V2726500 | COIL 68uH(RAGLT)                |
| L6        | VT623200 | FLTR. LC SBP-4930(RAGLT)        |
| PJ1       | VZ537500 | JACK. PIN 2P(UC)                |
| PJ1       | VZ726200 | JACK. PIN 2P(RAGLT)             |
| Q1        | iC241200 | TR. CHP 2SC2412K QRS(RAGLT)     |
| Q2        | iA103700 | TR. CHP 2SA1037 QRS(RAGLT)      |
| XL1       | VT928600 | RSNR. CRY 18.432MHz(RAGLT)      |

\* New Parts



## P.C.B. MAIN

| Schm Ref.  | PART NO. | Description                |
|------------|----------|----------------------------|
| * V3012000 | P. C. B. | MAIN(UC)                   |
| * V3012100 | P. C. B. | MAIN(RT)                   |
| * V3012200 | P. C. B. | MAIN(A)                    |
| * V3012300 | P. C. B. | MAIN(L)                    |
| * V3012400 | P. C. B. | MAIN(G)                    |
| CB101      | VQ047300 | CN. BS. PIN 12P            |
| CB102      | VM859500 | CN. BS. PIN 11P            |
| CB103      | LA002110 | TERM. WRAP 2P              |
| CB601      | VL844800 | CN. BS. PIN 4P             |
| CB602      | VL845200 | CN. BS. PIN 8P             |
| CB603      | VD004600 | CN. BS. PIN 3P             |
| CB604      | LB918020 | CN. BS. PIN 2P             |
| CB701      | LA002330 | TERM. WRAP 4P              |
| C101       | UA652470 | C. MYLAR 470pF 50V         |
| C102       | UA652470 | C. MYLAR 470pF 50V         |
| C103       | UA652470 | C. MYLAR 470pF 50V         |
| C104       | UA652470 | C. MYLAR 470pF 50V         |
| C105       | UA654100 | C. MYLAR 0.01uF 50V(UCRTL) |
| C106       | VF466900 | C. CE. TUBLR 470pF 50V     |
| C107       | UA652470 | C. MYLAR 470pF 50V         |
| C108       | UA652470 | C. MYLAR 470pF 50V         |
| C109       | UA652470 | C. MYLAR 470pF 50V         |
| C110       | UA652470 | C. MYLAR 470pF 50V         |
| C114       | Vi841800 | C. EL 100uF 10V            |
| C120       | UA652470 | C. MYLAR 470pF 50V         |
| C121       | VK182800 | C. EL 47uF 100V            |
| C122       | UP652100 | C. POL 100pF 100V          |
| C123       | Vi845900 | C. EL 10uF 63V             |
| C124       | UP652100 | C. POL 100pF 100V          |
| C125       | UP652100 | C. POL 100pF 100V          |
| C126       | Vi845900 | C. EL 10uF 63V             |
| C127       | VK182800 | C. EL 47uF 100V            |
| C128       | UP652100 | C. POL 100pF 100V          |
| C129       | Vi845900 | C. EL 10uF 63V             |
| C130       | UP652100 | C. POL 100pF 100V          |
| C131       | UP652100 | C. POL 100pF 100V          |
| C132       | Vi845900 | C. EL 10uF 63V             |
| C133       | VK182800 | C. EL 47uF 100V            |
| C134       | UP652100 | C. POL 100pF 100V          |
| C135       | Vi845900 | C. EL 10uF 63V             |
| C136       | UP652100 | C. POL 100pF 100V          |
| C137       | UP652100 | C. POL 100pF 100V          |
| C138       | Vi845900 | C. EL 10uF 63V             |
| C139       | VK182800 | C. EL 47uF 100V            |
| C140       | UP652100 | C. POL 100pF 100V          |
| C141       | Vi845900 | C. EL 10uF 63V             |
| C142       | UP652100 | C. POL 100pF 100V          |
| C143       | UP652100 | C. POL 100pF 100V          |
| C144       | Vi845900 | C. EL 10uF 63V             |
| C145       | VK182800 | C. EL 47uF 100V            |
| C146       | UP652100 | C. POL 100pF 100V          |
| C147       | Vi845900 | C. EL 10uF 63V             |
| C148       | UP652100 | C. POL 100pF 100V          |

\* New Parts

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| C149      | Vi845900 | C. EL 10uF 63V             |
| C150      | VK533900 | C. PP 100pF 200V           |
| C151      | UP653120 | C. POL 1200pF 100V         |
| C152      | UA653330 | C. MYLAR 3300pF 50V        |
| C153      | VM645500 | C. PP 15uF 200V            |
| C154      | Vi845200 | C. EL 4.7uF 50V            |
| C155      | UA654100 | C. MYLAR 0.01uF 50V        |
| C156      | Vi842600 | C. EL 100uF 16V            |
| C157      | Vi844100 | C. EL 33uF 35V             |
| C159      | VK533900 | C. PP 100pF 200V           |
| C160      | VK533900 | C. PP 100pF 200V           |
| C161      | UP653120 | C. POL 1200pF 100V         |
| C162      | UA653330 | C. MYLAR 3300pF 50V        |
| C163      | VM645500 | C. PP 15uF 200V            |
| C164      | Vi845200 | C. EL 4.7uF 50V            |
| C165      | UA654100 | C. MYLAR 0.01uF 50V        |
| C166      | Vi842600 | C. EL 100uF 16V            |
| C167      | Vi844100 | C. EL 33uF 35V             |
| C169      | VK533900 | C. PP 100pF 200V           |
| C170      | VK533900 | C. PP 100pF 200V           |
| C171      | UP653120 | C. POL 1200pF 100V         |
| C172      | UA653330 | C. MYLAR 3300pF 50V        |
| C173      | VR516400 | C. CE 15pF 500V            |
| C174      | Vi845200 | C. EL 4.7uF 50V            |
| C175      | UA654100 | C. MYLAR 0.01uF 50V        |
| C176      | Vi842600 | C. EL 100uF 16V            |
| C177      | Vi844100 | C. EL 33uF 35V             |
| C179      | VK533900 | C. PP 100pF 200V           |
| C180      | VK533900 | C. PP 100pF 200V           |
| C181      | UP653120 | C. POL 1200pF 100V         |
| C182      | UA653330 | C. MYLAR 3300pF 50V        |
| C183      | VR516400 | C. CE 15pF 500V            |
| C184      | Vi845200 | C. EL 4.7uF 50V            |
| C185      | UA654100 | C. MYLAR 0.01uF 50V        |
| C186      | Vi842600 | C. EL 100uF 16V            |
| C187      | Vi844100 | C. EL 33uF 35V             |
| C189      | VK533900 | C. PP 100pF 200V           |
| C190      | VK533900 | C. PP 100pF 200V           |
| C191      | UP653120 | C. POL 1200pF 100V         |
| C192      | UA653330 | C. MYLAR 3300pF 50V        |
| C193      | VR516400 | C. CE 15pF 500V            |
| C194      | Vi845200 | C. EL 4.7uF 50V            |
| C195      | UA654100 | C. MYLAR 0.01uF 50V        |
| C196      | Vi842600 | C. EL 100uF 16V            |
| C197      | Vi844100 | C. EL 33uF 35V             |
| C199      | VK533900 | C. PP 100pF 200V           |
| C200      | Vi845100 | C. EL 3.3uF 50V            |
| C201      | Vi846900 | C. EL 10uF 100V            |
| C202      | VR169000 | C. MYLAR. ML ECQ-VIH334JL3 |
| C203      | Vi842800 | C. EL 330uF 16V            |
| C204      | Vi846900 | C. EL 10uF 100V            |
| C205      | UA654470 | C. MYLAR 0.047uF 50V       |
| C206      | Vi846900 | C. EL 10uF 100V            |

\* New Parts

## P.C.B. MAIN

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| C207      | VR169000 | C. MYLAR. ML ECQ-VIH334JL3 |
| C208      | Vi842800 | C. EL 330uF 16V            |
| C209      | UA654470 | C. MYLAR 0.047uF 50V       |
| C210      | Vi846900 | C. EL 10uF 100V            |
| C211      | Vi846900 | C. EL 10uF 100V            |
| C212      | Vi846900 | C. EL 10uF 100V            |
| C213      | Vi842800 | C. EL 330uF 16V            |
| C214      | UA654470 | C. MYLAR 0.047uF 50V       |
| C215      | Vi846900 | C. EL 10uF 100V            |
| C216      | Vi846900 | C. EL 10uF 100V            |
| C217      | Vi842800 | C. EL 330uF 16V            |
| C218      | UA654470 | C. MYLAR 0.047uF 50V       |
| C219      | Vi846900 | C. EL 10uF 100V            |
| C220      | Vi846900 | C. EL 10uF 100V            |
| C221      | Vi842800 | C. EL 330uF 16V            |
| C222      | UA654470 | C. MYLAR 0.047uF 50V       |
| C223      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C224      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C225      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C226      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C227      | UA654100 | C. MYLAR 0.01uF 50V        |
| C228      | UA654100 | C. MYLAR 0.01uF 50V        |
| C229      | Vi844600 | C. EL 0.22uF 50V           |
| C230      | UP652100 | C. POL 100pF 100V          |
| C231      | Vi843500 | C. EL 100uF 25V            |
| C232      | Vi843500 | C. EL 100uF 25V            |
| C233      | Vi843500 | C. EL 100uF 25V            |
| C234      | Vi843500 | C. EL 100uF 25V            |
| C235      | Vi843500 | C. EL 100uF 25V            |
| C236      | Vi844500 | C. EL 0.1uF 50V            |
| C237      | Vi844500 | C. EL 0.1uF 50V            |
| C238      | Vi844500 | C. EL 0.1uF 50V            |
| C239      | Vi844500 | C. EL 0.1uF 50V            |
| C240      | Vi844500 | C. EL 0.1uF 50V            |
| C241      | UA654100 | C. MYLAR 0.01uF 50V        |
| C243      | VF467300 | C. CE. TUBLR 0.01uF 16V    |
| C244      | VF467300 | C. CE. TUBLR 0.01uF 16V    |
| C245      | VH053100 | C. CE. TUBLR 0.1uF 50V(G)  |
| C246      | VF467300 | C. CE. TUBLR 0.01uF 16V(G) |
| C601      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C602      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C603      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C604      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C605      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C606      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C607      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C608      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C609      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C610      | UA654100 | C. MYLAR 0.01uF 50V(G)     |
| C701      | UT454470 | C. PP 0.047uF 100V         |
| C702      | VY818300 | C. EL 22000uF 71V          |
| C703      | UT454470 | C. PP 0.047uF 100V         |
| C704      | VY818300 | C. EL 22000uF 71V          |

\* New Parts

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| C705      | VR168300 | C. MYLAR. ML ECQ-VIH104JL3 |
| D102      | iF004600 | DIODE 1SS133               |
| D105      | iF004600 | DIODE 1SS133               |
| D106      | iF004600 | DIODE 1SS133               |
| D108      | iF004600 | DIODE 1SS133               |
| D113      | iF004600 | DIODE 1SS133               |
| D114      | iF004600 | DIODE 1SS133               |
| D116      | iF004600 | DIODE 1SS133               |
| D117      | iF004600 | DIODE 1SS133               |
| D118      | iF004600 | DIODE 1SS133               |
| D119      | iF004600 | DIODE 1SS133               |
| D120      | iF004600 | DIODE 1SS133               |
| D122      | VC398400 | DIODE MA185                |
| D124      | VC398400 | DIODE MA185                |
| D126      | VC398400 | DIODE MA185                |
| D128      | VC398400 | DIODE MA185                |
| D130      | VC398400 | DIODE MA185                |
| D132      | VC398400 | DIODE MA185                |
| D134      | VC398400 | DIODE MA185                |
| D136      | VC398400 | DIODE MA185                |
| D138      | VC398400 | DIODE MA185                |
| D140      | VC398400 | DIODE MA185                |
| D141      | VU264100 | DIODE 1SR139-400           |
| D142      | VC398400 | DIODE MA185                |
| D143      | VU264100 | DIODE 1SR139-400           |
| D144      | VC398400 | DIODE MA185                |
| D145      | VU264100 | DIODE 1SR139-400           |
| D146      | VC398400 | DIODE MA185                |
| D147      | VU264100 | DIODE 1SR139-400           |
| D148      | VC398400 | DIODE MA185                |
| D149      | VU264100 | DIODE 1SR139-400           |
| D150      | VC398400 | DIODE MA185                |
| D151      | VG440100 | DIODE. ZENR MTZJ12A 12V    |
| D152      | VG440100 | DIODE. ZENR MTZJ12A 12V    |
| D153      | VG440100 | DIODE. ZENR MTZJ12A 12V    |
| D154      | VG440100 | DIODE. ZENR MTZJ12A 12V    |
| D155      | VG440100 | DIODE. ZENR MTZJ12A 12V    |
| D601      | iF004600 | DIODE 1SS133               |
| D602      | iF004600 | DIODE 1SS133 (UCRTAL)      |
| D701      | Vi711600 | DIODE. BRG RBV-602 LF-A    |
| G101      | VR463400 | TERM. GND D3.5 TP00385     |
| G701      | VR463400 | TERM. GND D3.5 TP00385     |
| JK601     | VJ726800 | JACK. MNI (UCRTAL)         |
| JK602     | VJ726800 | JACK. MNI (UCRTAL)         |
| L101      | VC664100 | COIL 0.95uH                |
| L102      | VC664100 | COIL 0.95uH                |
| L103      | GD900470 | COIL 1.5uH                 |
| L104      | GD900470 | COIL 1.5uH                 |
| L105      | GD900470 | COIL 1.5uH                 |
| PJ101     | VJ696300 | JACK. PIN 4P               |
| PJ102     | VJ696300 | JACK. PIN 4P               |
| PJ103     | VP768000 | JACK. PIN 2P               |
| Q101      | iC174020 | TR 2SC1740S R, S           |

\* New Parts

## P.C.B. MAIN

| Schm Ref. | PART NO. | Description         |
|-----------|----------|---------------------|
| Q102      | VK165500 | TR. DGT DTC123JS TP |
| Q107      | VT254500 | TR. DGT DTC143ZS    |
| Q108      | VT254500 | TR. DGT DTC143ZS    |
| Q109      | VT254500 | TR. DGT DTC143ZS    |
| △ Q110    | iA101521 | TR 2SA1015 Y        |
| △ Q111    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q112    | iA101521 | TR 2SA1015 Y        |
| △ Q113    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q114    | iA101521 | TR 2SA1015 Y        |
| △ Q115    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q116    | iA101521 | TR 2SA1015 Y        |
| △ Q117    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q118    | iA101521 | TR 2SA1015 Y        |
| △ Q119    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q120    | VE198800 | TR 2SC2705 O, Y     |
| △ Q121    | iA101521 | TR 2SA1015 Y        |
| △ Q122    | VE198700 | TR 2SA1145 O, Y     |
| △ Q123A   | iX632610 | TR 2SA1837 O, Y     |
| △ Q123C   | iX632620 | TR 2SC4793 O, Y     |
| △ Q124    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q125    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q127    | VE198700 | TR 2SA1145 O, Y     |
| △ Q128    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q129    | VE198800 | TR 2SC2705 O, Y     |
| △ Q130    | iA101521 | TR 2SA1015 Y        |
| △ Q131    | VE198700 | TR 2SA1145 O, Y     |
| △ Q132A   | iX632610 | TR 2SA1837 O, Y     |
| △ Q132C   | iX632620 | TR 2SC4793 O, Y     |
| △ Q133    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q134    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q136    | VE198700 | TR 2SA1145 O, Y     |
| △ Q137    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q138    | VE198800 | TR 2SC2705 O, Y     |
| △ Q139    | iA101521 | TR 2SA1015 Y        |
| △ Q140    | VE198700 | TR 2SA1145 O, Y     |
| △ Q141A   | iX632610 | TR 2SA1837 O, Y     |
| △ Q141C   | iX632620 | TR 2SC4793 O, Y     |
| △ Q142    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q143    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q145    | VE198700 | TR 2SA1145 O, Y     |
| △ Q146    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q147    | VE198800 | TR 2SC2705 O, Y     |
| △ Q148    | iA101521 | TR 2SA1015 Y        |
| △ Q149    | VE198700 | TR 2SA1145 O, Y     |
| △ Q150A   | iX632610 | TR 2SA1837 O, Y     |
| △ Q150C   | iX632620 | TR 2SC4793 O, Y     |
| △ Q151    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q152    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q154    | VE198700 | TR 2SA1145 O, Y     |
| △ Q155    | iC224030 | TR 2SC2240 GR, BL   |
| △ Q156    | VE198800 | TR 2SC2705 O, Y     |
| △ Q157    | iA101521 | TR 2SA1015 Y        |
| △ Q158    | VE198700 | TR 2SA1145 O, Y     |

\* New Parts

| Schm Ref. | PART NO. | Description            |
|-----------|----------|------------------------|
| △ Q159A   | iX632610 | TR 2SA1837 O, Y        |
| △ Q159C   | iX632620 | TR 2SC4793 O, Y        |
| △ Q160    | iC224030 | TR 2SC2240 GR, BL      |
| △ Q161    | iC224030 | TR 2SC2240 GR, BL      |
| △ Q163    | VE198700 | TR 2SA1145 O, Y        |
| △ Q164    | iC224030 | TR 2SC2240 GR, BL      |
| △ Q165    | iA097000 | TR 2SA970 GR, BL       |
| △ # Q166  | VY705000 | TR 2SC5200 R, O        |
| △ # Q167  | iC224030 | TR 2SC2240 GR, BL      |
| △ # Q168  | VY705000 | TR 2SC5200 R, O        |
| △ # Q169  | VY705000 | TR 2SC5200 R, O        |
| △ Q170    | iC224030 | TR 2SC2240 GR, BL      |
| △ # Q171  | VY705000 | TR 2SC5200 R, O        |
| △ # Q172  | VY705000 | TR 2SC5200 R, O        |
| △ Q173    | iC224030 | TR 2SC2240 GR, BL      |
| △ # Q174  | VY705000 | TR 2SC5200 R, O        |
| △ # Q175  | VY705000 | TR 2SC5200 R, O        |
| △ Q176    | iC224030 | TR 2SC2240 GR, BL      |
| △ # Q177  | VY705000 | TR 2SC5200 R, O        |
| △ # Q178  | VY705000 | TR 2SC5200 R, O        |
| △ Q179    | iC224030 | TR 2SC2240 GR, BL      |
| △ # Q180  | VY705000 | TR 2SC5200 R, O        |
| Q181      | VK432900 | TR 2SD1915F S, T       |
| Q182      | VK432900 | TR 2SD1915F S, T       |
| Q183      | VK432900 | TR 2SD1915F S, T       |
| Q184      | VK432900 | TR 2SD1915F S, T       |
| Q185      | VK432900 | TR 2SD1915F S, T       |
| Q186      | VK432900 | TR 2SD1915F S, T       |
| Q187      | VK432900 | TR 2SD1915F S, T       |
| Q188      | VK432900 | TR 2SD1915F S, T       |
| Q189      | VK432900 | TR 2SD1915F S, T       |
| Q190      | VK432900 | TR 2SD1915F S, T       |
| △ R123    | HL315150 | R. MTL. OXD 150 Ω 1W   |
| △ R124    | HL315150 | R. MTL. OXD 150 Ω 1W   |
| △ R149    | HL316100 | R. MTL. OXD 1K Ω 1W    |
| △ R150    | HV455220 | R. CAR. FP 220 Ω 1/4W  |
| △ R151    | HV455220 | R. CAR. FP 220 Ω 1/4W  |
| △ R152    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R159    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R166    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R173    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R180    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R187    | HV454470 | R. CAR. FP 47 Ω 1/4W   |
| △ R188    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R189    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R193    | VK189100 | R. FUS 1.2K Ω 1/4W     |
| △ R194    | VK188000 | R. FUS 150 Ω 1/4W      |
| △ R196    | HV455150 | R. CAR. FP 150 Ω 1/4W  |
| △ R199    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R201    | HV455470 | R. CAR. FP 470 Ω 1/4W  |
| △ R202    | HV455120 | R. CAR. FP 120 Ω 1/4W  |
| △ R203    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R204    | HV455100 | R. CAR. FP 100 Ω 1/4W  |

\* New Parts

## P.C.B. MAIN

| Schm Ref. | PART NO. | Description            |
|-----------|----------|------------------------|
| △ R206    | HV455560 | R. CAR. FP 560 Ω 1/4W  |
| △ R208    | HV454470 | R. CAR. FP 47 Ω 1/4W   |
| △ R209    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R210    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R214    | VK189100 | R. FUS 1.2K Ω 1/4W     |
| △ R215    | VK188000 | R. FUS 150 Ω 1/4W      |
| △ R217    | HV455150 | R. CAR. FP 150 Ω 1/4W  |
| △ R220    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R222    | HV455470 | R. CAR. FP 470 Ω 1/4W  |
| △ R223    | HV455120 | R. CAR. FP 120 Ω 1/4W  |
| △ R224    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R225    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R227    | HV455560 | R. CAR. FP 560 Ω 1/4W  |
| △ R229    | HV454470 | R. CAR. FP 47 Ω 1/4W   |
| △ R230    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R231    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R235    | VK189100 | R. FUS 1.2K Ω 1/4W     |
| △ R236    | VK188000 | R. FUS 150 Ω 1/4W      |
| △ R238    | HV455150 | R. CAR. FP 150 Ω 1/4W  |
| △ R241    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R243    | HV455470 | R. CAR. FP 470 Ω 1/4W  |
| △ R244    | HV455120 | R. CAR. FP 120 Ω 1/4W  |
| △ R245    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R246    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R248    | HV455560 | R. CAR. FP 560 Ω 1/4W  |
| △ R250    | HV454470 | R. CAR. FP 47 Ω 1/4W   |
| △ R251    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R252    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R256    | VK189100 | R. FUS 1.2K Ω 1/4W     |
| △ R257    | VK188000 | R. FUS 150 Ω 1/4W      |
| △ R259    | HV455150 | R. CAR. FP 150 Ω 1/4W  |
| △ R262    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R264    | HV455470 | R. CAR. FP 470 Ω 1/4W  |
| △ R265    | HV455120 | R. CAR. FP 120 Ω 1/4W  |
| △ R266    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R267    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R269    | HV455560 | R. CAR. FP 560 Ω 1/4W  |
| △ R271    | HV454470 | R. CAR. FP 47 Ω 1/4W   |
| △ R272    | HV455680 | R. CAR. FP 680 Ω 1/4W  |
| △ R273    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R277    | VK189100 | R. FUS 1.2K Ω 1/4W     |
| △ R278    | VK188000 | R. FUS 150 Ω 1/4W      |
| △ R280    | HV455150 | R. CAR. FP 150 Ω 1/4W  |
| △ R283    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R285    | HV455470 | R. CAR. FP 470 Ω 1/4W  |
| △ R286    | HV455120 | R. CAR. FP 120 Ω 1/4W  |
| △ R287    | HV456680 | R. CAR. FP 6.8K Ω 1/4W |
| △ R288    | HV455100 | R. CAR. FP 100 Ω 1/4W  |
| △ R290    | HV455560 | R. CAR. FP 560 Ω 1/4W  |
| △ R296    | HV453470 | R. CAR. FP 4.7 Ω 1/4W  |
| △ R300    | VR412900 | R. MTL. OXD 0.1 Ω 3W   |
| △ R303    | HV453470 | R. CAR. FP 4.7 Ω 1/4W  |
| △ R304    | HV453470 | R. CAR. FP 4.7 Ω 1/4W  |

\* New Parts

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
| △ R306    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R310    | VR412900 | R. MTL. OXD 0.1 Ω 3W  |
| △ R313    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R314    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R316    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R318    | VR412900 | R. MTL. OXD 0.1 Ω 3W  |
| △ R321    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R322    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R324    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R326    | VR412900 | R. MTL. OXD 0.1 Ω 3W  |
| △ R329    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R330    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R332    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R334    | VR412900 | R. MTL. OXD 0.1 Ω 3W  |
| △ R337    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R338    | HV453470 | R. CAR. FP 4.7 Ω 1/4W |
| △ R339    | HL315220 | R. MTL. OXD 220 Ω 1W  |
| △ R340    | HL315220 | R. MTL. OXD 220 Ω 1W  |
| △ R342    | HV454100 | R. CAR. FP 10 Ω 1/4W  |
| △ R344    | HV454100 | R. CAR. FP 10 Ω 1/4W  |
| △ R345    | HV454100 | R. CAR. FP 10 Ω 1/4W  |
| △ R347    | HV454100 | R. CAR. FP 10 Ω 1/4W  |
| △ R349    | HV454100 | R. CAR. FP 10 Ω 1/4W  |
| △ R359    | HL315220 | R. MTL. OXD 220 Ω 1W  |
| △ R360    | HL315220 | R. MTL. OXD 220 Ω 1W  |
| △ R362    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R363    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R364    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R365    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R366    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R367    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R368    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R369    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R370    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R371    | HV455470 | R. CAR. FP 470 Ω 1/4W |
| △ R373    | HL315100 | R. MTL. OXD 100 Ω 1W  |
| △ R374    | HV453100 | R. CAR. FP 1 Ω 1/4W   |
| △ R375    | HV453100 | R. CAR. FP 1 Ω 1/4W   |
| △ R376    | HV453100 | R. CAR. FP 1 Ω 1/4W   |
| △ R377    | HV453100 | R. CAR. FP 1 Ω 1/4W   |
| △ R378    | HV453100 | R. CAR. FP 1 Ω 1/4W   |
| RY101     | KC002020 | RELAY DH24D2-OT/M     |
| RY102     | KC002020 | RELAY DH24D2-OT/M     |
| RY104     | VK438300 | RELAY DH24D2-OT/M2    |
| RY105     | VK438300 | RELAY DH24D2-OT/M2    |
| RY601     | VK438300 | RELAY DH24D2-OT/M2    |
| SW601     | VT903900 | SW. SLIDE SSAA22 (RT) |
| SW701     | VZ075500 | SW. SLIDE SL14-22AM5F |
| TE101     | VC313700 | TERM. SP 8P (UCRTA)   |
| TE101     | VK506200 | TERM. SP 8P (LG)      |
| * TE601   | V2504700 | TERM. SP 4P (LG)      |
| TE601     | VF018400 | TERM. SP 4P (UCRTA)   |
| * TE602   | V2504800 | TERM. SP 6P (UCRTA)   |

\* New Parts

## P.C.B. MAIN &amp; FUNCTION

| Schm Ref. | PART NO. | Description                 |
|-----------|----------|-----------------------------|
| * TE602   | V2504900 | TERM. SP 6P(LG)             |
|           | VJ828000 | PIN IMSA-6024-03E           |
|           | BB071360 | SCR. TERM 8.3x13            |
|           | BB070700 | GND. MIL                    |
|           | VY843300 | HEAT. SINK                  |
|           | VK697600 | SCR. BND. HD 3x10 SP ZMC2-Y |
| * *       | V3010500 | P. C. B. FUNCTION(UC)       |
| * *       | V3010700 | P. C. B. FUNCTION(RT)       |
| * *       | V3010900 | P. C. B. FUNCTION(A)        |
| * *       | V3011000 | P. C. B. FUNCTION(L)        |
| * *       | V3011100 | P. C. B. FUNCTION(G)        |
| CB1       | VQ045400 | CN. BS. PIN 25P             |
| CB2       | VQ044700 | CN. BS. PIN 16P             |
| CB3       | VD005100 | CN. BS. PIN 8P              |
| CB4       | VM859500 | CN. BS. PIN 11P             |
| CB5       | VQ044800 | CN. BS. PIN 18P             |
| CB6       | VB858200 | CN. BS. PIN 3P              |
| CB7       | VF982300 | CN. BS. PIN 17P             |
| CB8       | VP113500 | CN. BS. PIN 10P             |
| CB9       | VB858300 | CN. BS. PIN 4P(UCRTAL)      |
| CB12      | VQ047300 | CN. BS. PIN 12P             |
| CB201     | VB858200 | CN. BS. PIN 3P              |
| CB202     | VP082900 | CN. BS. PIN 25P             |
| * CB203   | VV075100 | SOCKET 15P                  |
| CB204     | VP573800 | CN. BS. PIN 18P             |
| CB205     | VM923600 | CN. BS. PIN 13P             |
| CB206     | VN066500 | CN. BS. PIN 12P             |
| △ CB801   | VG879900 | CN. BS. PIN 2P              |
| CB803     | VP206500 | HOLDER. FUS EYF-52BC(ALG)   |
| CB803     | VS996100 | HOLDER. FUS EYF64BC(UCRT)   |
| CB804     | VP206500 | HOLDER. FUS EYF-52BC(ALG)   |
| CB805     | VS996100 | HOLDER. FUS EYF64BC(UCRT)   |
| CB806     | VP206500 | HOLDER. FUS EYF-52BC(RTLG)  |
| CB807     | VP206500 | HOLDER. FUS EYF-52BC(RTLG)  |
| CB808     | LA002410 | TERM. WRAP 2P               |
| CB809     | LA002410 | TERM. WRAP 2P(RT)           |
| C1        | UP652470 | C. POL 470pF 100V           |
| C2        | UP652470 | C. POL 470pF 100V           |
| C3        | UP652470 | C. POL 470pF 100V           |
| C4        | UP652470 | C. POL 470pF 100V           |
| C5        | UP652470 | C. POL 470pF 100V           |
| C6        | UP652470 | C. POL 470pF 100V           |
| C7        | UP652220 | C. POL 220pF 100V           |
| C8        | UP652220 | C. POL 220pF 100V           |
| C9        | UP652470 | C. POL 470pF 100V           |
| C10       | UP652470 | C. POL 470pF 100V           |
| C11       | UP652220 | C. POL 220pF 100V           |
| C12       | UP652220 | C. POL 220pF 100V           |
| C13       | UP652470 | C. POL 470pF 100V(UCRTAL)   |
| C14       | UP652470 | C. POL 470pF 100V(UCRTAL)   |

\* New Parts

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| C15       | Vi844900 | C. EL 1uF 50V(UCRTAL)      |
| C16       | Vi845600 | C. EL 47uF 50V(UCRTAL)     |
| C17       | UP652100 | C. POL 100pF 100V(UCRTAL)  |
| C18       | UP652100 | C. POL 100pF 100V(UCRTAL)  |
| C19       | Vi845600 | C. EL 47uF 50V(UCRTAL)     |
| C20       | Vi844900 | C. EL 1uF 50V(UCRTAL)      |
| C21       | Vi845000 | C. EL 2.2uF 50V(UCRTAL)    |
| C22       | Vi844900 | C. EL 1uF 50V(UCRTAL)      |
| C23       | Vi844900 | C. EL 1uF 50V              |
| C24       | Vi844900 | C. EL 1uF 50V              |
| C25       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C26       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C27       | UB013100 | C. CE. M. CHP 1000pF 50V   |
| C28       | UB013100 | C. CE. M. CHP 1000pF 50V   |
| C29       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C30       | Vi844800 | C. EL 0.47uF 50V           |
| C31       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C32       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C33       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C34       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C35       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C36       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C37       | VT740700 | C. EL 4700uF 5.5V          |
| C38       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C39       | Vi841400 | C. EL 1000uF 6.3V          |
| C40       | Vi841400 | C. EL 1000uF 6.3V          |
| C41       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C42       | Vi845900 | C. EL 10uF 63V             |
| C43       | Vi845600 | C. EL 47uF 50V             |
| C44       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C45       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C46       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C47       | Vi845000 | C. EL 2.2uF 50V            |
| C48       | Vi845000 | C. EL 2.2uF 50V            |
| C49       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C50       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C51       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C52       | Vi841400 | C. EL 1000uF 6.3V          |
| C53       | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C54       | Vi845600 | C. EL 47uF 50V(UCRTAL)     |
| C55       | Vi845600 | C. EL 47uF 50V(UCRTAL)     |
| C56       | UB245100 | C. CE. M. CHP 0.1uF 25V(A) |
| C57       | UB052100 | C. CE. M. CHP 100pF 50V(A) |
| C201      | UP652100 | C. POL 100pF 100V          |
| C202      | UP652100 | C. POL 100pF 100V          |
| C203      | UB044100 | C. CE. M. CHP 0.01uF 50V   |
| C204      | UP652220 | C. POL 220pF 100V          |
| C205      | UP652220 | C. POL 220pF 100V          |
| C206      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C207      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C208      | Vi845000 | C. EL 2.2uF 50V            |
| C209      | UP652220 | C. POL 220pF 100V          |
| C210      | Vi841900 | C. EL 220uF 10V            |

\* New Parts

## P.C.B. FUNCTION

| Schm Ref. | PART NO. | Description             |
|-----------|----------|-------------------------|
| C211      | UA653910 | C. MYLAR 9100pF 50V     |
| C212      | UA653910 | C. MYLAR 9100pF 50V     |
| C213      | UP652220 | C. POL 220pF 100V       |
| C214      | Vi841900 | C. EL 220uF 10V         |
| C215      | Vi845000 | C. EL 2.2uF 50V         |
| C216      | UP652470 | C. POL 470pF 100V       |
| C217      | UP652470 | C. POL 470pF 100V       |
| C218      | UP652470 | C. POL 470pF 100V       |
| C219      | UP652470 | C. POL 470pF 100V       |
| C220      | UP652470 | C. POL 470pF 100V       |
| C221      | UP652470 | C. POL 470pF 100V       |
| C222      | UP652470 | C. POL 470pF 100V       |
| C223      | UP652470 | C. POL 470pF 100V       |
| C224      | UP652470 | C. POL 470pF 100V       |
| C225      | UP652470 | C. POL 470pF 100V       |
| C226      | Vi845000 | C. EL 2.2uF 50V         |
| C227      | Vi845600 | C. EL 47uF 50V          |
| C228      | UA653100 | C. MYLAR 1000pF 50V     |
| C229      | UA654330 | C. MYLAR 0.033uF 50V    |
| C230      | UA654330 | C. MYLAR 0.033uF 50V    |
| C231      | UA653100 | C. MYLAR 1000pF 50V     |
| C232      | Vi845600 | C. EL 47uF 50V          |
| C233      | Vi845000 | C. EL 2.2uF 50V         |
| C234      | UB044100 | C. CE.M. CHP 0.01uF 50V |
| C235      | UB052100 | C. CE.M. CHP 100pF 50V  |
| C237      | UB013100 | C. CE.M. CHP 1000pF 50V |
| C238      | Vi845900 | C. EL 10uF 63V(UCRTAL)  |
| C239      | Vi845900 | C. EL 10uF 63V          |
| C240      | Vi845900 | C. EL 10uF 63V          |
| C241      | Vi845900 | C. EL 10uF 63V(UCRTAL)  |
| C242      | Vi845900 | C. EL 10uF 63V          |
| C243      | Vi845900 | C. EL 10uF 63V          |
| C244      | Vi845600 | C. EL 47uF 50V          |
| C245      | Vi845600 | C. EL 47uF 50V          |
| C246      | Vi846000 | C. EL 22uF 63V          |
| C247      | Vi846000 | C. EL 22uF 63V          |
| C248      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C249      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C250      | Vi845900 | C. EL 10uF 63V          |
| C251      | Vi845600 | C. EL 47uF 50V          |
| C252      | Vi845600 | C. EL 47uF 50V          |
| C253      | Vi845900 | C. EL 10uF 63V          |
| C254      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C255      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C256      | Vi841900 | C. EL 220uF 10V         |
| C258      | UA654180 | C. MYLAR 0.018uF 50V    |
| C259      | UA654680 | C. MYLAR 0.068uF 50V    |
| C260      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C261      | UB245100 | C. CE.M. CHP 0.1uF 25V  |
| C262      | Vi845900 | C. EL 10uF 63V          |
| C263      | UP652100 | C. POL 100pF 100V       |
| C264      | UP652100 | C. POL 100pF 100V       |
| C265      | Vi845900 | C. EL 10uF 63V          |

\* New Parts

| Schm Ref. | PART NO. | Description                   |
|-----------|----------|-------------------------------|
| C266      | Vi845900 | C. EL 10uF 63V                |
| C267      | Vi845900 | C. EL 10uF 63V                |
| C268      | Vi845900 | C. EL 10uF 63V                |
| C269      | Vi845900 | C. EL 10uF 63V                |
| C270      | UB245100 | C. CE.M. CHP 0.1uF 25V        |
| C271      | UB245100 | C. CE.M. CHP 0.1uF 25V        |
| C272      | Vi845900 | C. EL 10uF 63V                |
| C273      | Vi845900 | C. EL 10uF 63V                |
| C274      | Vi845900 | C. EL 10uF 63V                |
| C275      | Vi845900 | C. EL 10uF 63V                |
| C276      | UB245100 | C. CE.M. CHP 0.1uF 25V        |
| C277      | UB245100 | C. CE.M. CHP 0.1uF 25V        |
| C278      | UP652100 | C. POL 100pF 100V             |
| C279      | UP652100 | C. POL 100pF 100V             |
| C280      | UA654270 | C. MYLAR 0.027uF 50V          |
| C281      | UA654270 | C. MYLAR 0.027uF 50V          |
| C282      | Vi845900 | C. EL 10uF 63V                |
| C283      | Vi845900 | C. EL 10uF 63V                |
| C284      | UA654270 | C. MYLAR 0.027uF 50V          |
| C285      | UA654270 | C. MYLAR 0.027uF 50V          |
| C286      | Vi845900 | C. EL 10uF 63V                |
| C287      | UP652100 | C. POL 100pF 100V             |
| C288      | Vi845600 | C. EL 47uF 50V                |
| C289      | Vi845600 | C. EL 47uF 50V                |
| C290      | UP652100 | C. POL 100pF 100V             |
| C291      | Vi845900 | C. EL 10uF 63V                |
| C292      | Vi845600 | C. EL 47uF 50V                |
| C293      | Vi845600 | C. EL 47uF 50V                |
| C294      | Vi845000 | C. EL 2.2uF 50V               |
| C295      | Vi845000 | C. EL 2.2uF 50V               |
| C296      | VS029500 | C. MYLA. CHP 0.00047uF 50V    |
| C297      | VS029500 | C. MYLA. CHP 0.00047uF 50V    |
| C298      | VS029500 | C. MYLA. CHP 0.00047uF 50V    |
| C299      | VS029500 | C. MYLA. CHP 0.00047uF 50V    |
| C801      | VR324600 | C. MYLAR 0.01uF 100V          |
| C802      | Vi846200 | C. EL 47uF 63V(RT)            |
| C803      | VF606700 | C. EL 1000uF 25V              |
| C805      | VV975400 | C. CE 0.01uF 275V             |
| D1        | VG437400 | DIODE. ZENR MTZJ5.1B (UCRTAL) |
| D4        | iF004600 | DIODE 1SS133                  |
| D5        | iF004600 | DIODE 1SS133                  |
| D6        | iF004600 | DIODE 1SS133                  |
| D7        | iF004600 | DIODE 1SS133                  |
| D8        | iF004600 | DIODE 1SS133                  |
| D9        | iF004600 | DIODE 1SS133                  |
| D10       | iF004600 | DIODE 1SS133                  |
| D11       | VG438200 | DIODE. ZENR MTZJ6.8A 6.8V     |
| D12       | VG437400 | DIODE. ZENR MTZJ5.1B 5.1V     |
| D13       | VG437300 | DIODE. ZENR MTZJ5.1A 5.1V     |
| D14       | iF004600 | DIODE 1SS133                  |
| D15       | VG437300 | DIODE. ZENR MTZJ5.1A 5.1V     |
| D201      | VG439900 | DIODE. ZENR MTZJ11B 11V       |
| D202      | VG439900 | DIODE. ZENR MTZJ11B 11V       |

\* New Parts

## P.C.B. FUNCTION

| Schm<br>Ref. | PART NO. | Description                 |
|--------------|----------|-----------------------------|
| D203         | VG439900 | DIODE. ZENR MTZJ11B 11V     |
| D204         | VG439900 | DIODE. ZENR MTZJ11B 11V     |
| △ D801       | VR253700 | DIODE. BRG S1NB20 1.0A 200V |
| D802         | iF004600 | DIODE 1SS133                |
| D803         | VG439900 | DIODE. ZENR MTZJ11B 11V(RT) |
| △ F801       | KB000780 | FUSE T5.0A 250V(ALG)        |
| △ F801       | KB001390 | FUSE 10A 250V(UCRT)         |
| △ F802       | KB000780 | FUSE T5.0A 250V(RT)         |
| △ F802       | VT942900 | FUSE TH2.5A 250V(LG)        |
| IC1          | XB247301 | IC uPC4570HA(UCRTAL)        |
| IC2          | XS884A00 | IC LC7536Y(UCRTAL)          |
| * IC3        | XV284G00 | IC HD6433397F-XXX CPU       |
| IC4          | XA507A00 | IC AN78N05                  |
| IC5          | XF494A00 | IC LB1641                   |
| IC201        | XJ553A00 | IC NJM2068MD                |
| IC202        | XP894A00 | IC LC78211                  |
| IC203        | XP895A00 | IC LC78212                  |
| IC204        | XP894A00 | IC LC78211                  |
| IC205        | XF291A00 | IC uPC4570G2                |
| IC206        | XF291A00 | IC uPC4570G2                |
| * IC207      | XV039A00 | IC M5220FP OP AMP           |
| * IC208      | XV039A00 | IC M5220FP OP AMP           |
| * IC209      | XV039A00 | IC M5220FP OP AMP           |
| IC210        | XP896A00 | IC LC78213                  |
| IC211        | XP895A00 | IC LC78212                  |
| L1           | VD473700 | COIL 60uH(A)                |
| L2           | VD473700 | COIL 60uH(A)                |
| PJ1          | VJ696300 | JACK. PIN 4P                |
| PJ2          | VJ696300 | JACK. PIN 4P                |
| PJ3          | VJ696300 | JACK. PIN 4P(G)             |
| PJ3          | VM750600 | JACK. PIN 6P(UCRTAL)        |
| PJ201        | VQ260900 | JACK. PIN 4P                |
| PJ202        | VJ696300 | JACK. PIN 4P                |
| PJ203        | VJ696300 | JACK. PIN 4P                |
| PJ204        | VT666100 | JACK. PIN 2P                |
| Q1           | iC287820 | TR 2SC2878 AB(UCRTAL)       |
| Q2           | iC287820 | TR 2SC2878 AB(UCRTAL)       |
| Q3           | iA093320 | TR 2SA933S QR(UCRTAL)       |
| Q4           | iA093320 | TR 2SA933S QR(UCRTAL)       |
| Q5           | iA093320 | TR 2SA933S Q, R             |
| Q6           | VG722000 | TR. DGT DTC144ES            |
| Q7           | iA093320 | TR 2SA933S Q, R             |
| Q8           | iA093320 | TR 2SA933S Q, R             |
| Q9           | iA093320 | TR 2SA933S Q, R             |
| Q10          | iA093320 | TR 2SA933S Q, R             |
| Q11          | VD678700 | TR. DGT DTC114ES            |
| △ Q801       | VR510800 | TR 2SD2396 J, K(RT)         |
| Q802         | VD488500 | TR. DGT DTC143XS            |
| Q803         | iE102620 | FET 2SK246 Y(RT)            |
| R59          | HV454470 | R. CAR. FP 47Ω 1/4W(UCRTAL) |
| R60          | HV454470 | R. CAR. FP 47Ω 1/4W(UCRTAL) |
| R242         | HV455100 | R. CAR. FP 100Ω 1/4W        |
| R243         | HV455100 | R. CAR. FP 100Ω 1/4W        |

\* New Parts

| Schm<br>Ref. | PART NO. | Description             |
|--------------|----------|-------------------------|
| R246         | HV453220 | R. CAR. FP 2.2Ω 1/4W    |
| R253         | HV453220 | R. CAR. FP 2.2Ω 1/4W    |
| R254         | HV453220 | R. CAR. FP 2.2Ω 1/4W    |
| R255         | HV454470 | R. CAR. FP 47Ω 1/4W     |
| R256         | HV454470 | R. CAR. FP 47Ω 1/4W     |
| R259         | HV453220 | R. CAR. FP 2.2Ω 1/4W    |
| R260         | HV453220 | R. CAR. FP 2.2Ω 1/4W    |
| R271         | Vi197400 | R. MTL. CHP 10KΩ 1/10W  |
| R272         | Vi196400 | R. MTL. CHP 3.9KΩ 1/10W |
| R274         | Vi197400 | R. MTL. CHP 10KΩ 1/10W  |
| R275         | Vi196400 | R. MTL. CHP 3.9KΩ 1/10W |
| R279         | Vi197600 | R. MTL. CHP 12KΩ 1/10W  |
| R280         | Vi197600 | R. MTL. CHP 12KΩ 1/10W  |
| R281         | Vi197400 | R. MTL. CHP 10KΩ 1/10W  |
| R282         | Vi197400 | R. MTL. CHP 10KΩ 1/10W  |
| R289         | Vi196000 | R. MTL. CHP 3KΩ 1/10W   |
| R291         | Vi196000 | R. MTL. CHP 3KΩ 1/10W   |
| R299         | Vi194900 | R. MTL. CHP 1KΩ 1/10W   |
| R300         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R301         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R302         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R303         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R304         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R305         | Vi196100 | R. MTL. CHP 3.3KΩ 1/10W |
| R306         | Vi194900 | R. MTL. CHP 1KΩ 1/10W   |
| R802         | HV753820 | R. CAR. FP 8.2Ω 1/4W(A) |
| △ * RY801    | V2695300 | RELAY DC DG12D1-O/M-II  |
| △ T801       | XC082A00 | TRANS. PWR (RT)         |
| △ T801       | XQ485A00 | TRANS. PWR (UC)         |
| △ T801       | XQ486A00 | TRANS. PWR (ALG)        |
| △ TE801      | VT915000 | OUTLET. AC 2P(A)        |
| △ TE801      | VV118800 | OUTLET. AC 3P(UCRT)     |
| △ TE801      | VV119000 | OUTLET. AC 3P(LG)       |
| XL1          | VE222400 | RSNR. CE 8MHz           |
|              | BB071360 | SCR. TERM 8.3x13        |

\* New Parts



## P.C.B. OPERATION

| Schm<br>Ref. | PART NO. | Description                |
|--------------|----------|----------------------------|
|              | V3010000 | P.C.B.                     |
|              | V3010200 | P.C.B.                     |
|              | V3010400 | P.C.B.                     |
|              |          | OPERATION(UC)              |
|              |          | OPERATION(RALT)            |
|              |          | OPERATION(G)               |
| CB401        | VD005000 | CN. BS. PIN 7P             |
| CB402        | VD004500 | CN. BS. PIN 2P             |
| CB403        | VP206500 | HOLDER. FUS EYF-52BC       |
| CB404        | VP206500 | HOLDER. FUS EYF-52BC       |
| CB405        | LA002320 | TERM. WRAP 3P              |
| CB406        | VP206500 | HOLDER. FUS EYF-52BC       |
| CB407        | VP206500 | HOLDER. FUS EYF-52BC       |
| CB408        | LA002320 | TERM. WRAP 3P              |
| CB409        | VD004700 | CN. BS. PIN 4P             |
| CB410        | VD005100 | CN. BS. PIN 8P             |
| CB411        | VD004500 | CN. BS. PIN 2P             |
| CB412        | VD004800 | CN. BS. PIN 5P             |
| CB413        | LA002000 | TERM. WRAP 2P              |
| CB414        | VL844700 | CN. BS. PIN 3P             |
| CB502        | VB858400 | CN. BS. PIN 5P             |
| CB901        | VF982300 | CN. BS. PIN 17P            |
| CB902        | VQ044400 | CN. BS. PIN 9P             |
| CB903        | VB858300 | CN. BS. PIN 4P             |
| CB904        | VD004600 | CN. BS. PIN 3P             |
| C401         | Vi845600 | C. EL 47uF 50V             |
| C402         | VF466800 | C. CE. TUBLR 100pF 50V     |
| C403         | UP652100 | C. POL 100pF 100V          |
| C404         | Vi845900 | C. EL 10uF 63V             |
| C405         | Vi845900 | C. EL 10uF 63V             |
| C406         | Vi844100 | C. EL 33uF 35V             |
| C407         | Vi844100 | C. EL 33uF 35V             |
| C408         | Vi845900 | C. EL 10uF 63V             |
| C409         | Vi845900 | C. EL 10uF 63V             |
| C410         | Vi845600 | C. EL 47uF 50V             |
| C411         | VF466800 | C. CE. TUBLR 100pF 50V     |
| C412         | UP652100 | C. POL 100pF 100V          |
| C413         | VR325000 | C. MYLAR 100pF 100V        |
| C414         | UA654100 | C. MYLAR 0.01uF 50V        |
| C415         | VS696700 | C. CE 33pF 500V            |
| C416         | Vi843500 | C. EL 100uF 25V            |
| C417         | Vi845600 | C. EL 47uF 50V             |
| C418         | UA654470 | C. MYLAR 0.047uF 50V       |
| C419         | Vi842600 | C. EL 100uF 16V            |
| C420         | VR325000 | C. MYLAR 100pF 100V        |
| C421         | VR325000 | C. MYLAR 100pF 100V        |
| C422         | UA654470 | C. MYLAR 0.047uF 50V       |
| C423         | UA654100 | C. MYLAR 0.01uF 50V        |
| C424         | VS696700 | C. CE 33pF 500V            |
| C425         | Vi843500 | C. EL 100uF 25V            |
| C426         | Vi845600 | C. EL 47uF 50V             |
| C427         | Vi842600 | C. EL 100uF 16V            |
| C428         | VR325000 | C. MYLAR 100pF 100V        |
| C429         | VR168300 | C. MYLAR. ML ECQ-VIH104JL3 |
| C430         | V2864800 | C. EL 3300uF 35V           |
| C431         | VR168300 | C. MYLAR. ML ECQ-VIH104JL3 |

\* New Parts

| Schm<br>Ref. | PART NO. | Description                |
|--------------|----------|----------------------------|
| C432         | V2864800 | C. EL 3300uF 35V           |
| C433         | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C434         | VH520500 | C. EL 1000uF 35V           |
| C435         | VR168300 | C. MYLAR. ML ECQ-VIH104JL3 |
| C436         | UR739680 | C. EL 6800uF 16V           |
| C437         | UR739680 | C. EL 6800uF 16V(UC)       |
| C437         | UR73A100 | C. EL 10000uF 16V(RALTG)   |
| C438         | UR739680 | C. EL 6800uF 16V(UC)       |
| C438         | UR73A100 | C. EL 10000uF 16V(RALTG)   |
| C439         | VR168300 | C. MYLAR. ML ECQ-VIH104JL3 |
| C440         | UR739680 | C. EL 6800uF 16V           |
| C441         | Vi845900 | C. EL 10uF 63V             |
| C442         | Vi845600 | C. EL 47uF 50V             |
| C443         | Vi845900 | C. EL 10uF 63V             |
| C444         | Vi845900 | C. EL 10uF 63V             |
| C445         | Vi845600 | C. EL 47uF 50V             |
| C446         | Vi844900 | C. EL 1uF 50V              |
| C447         | Vi844900 | C. EL 1uF 50V              |
| C448         | Vi845600 | C. EL 47uF 50V             |
| C449         | VK180400 | C. EL 1000uF 16V           |
| C450         | VK180400 | C. EL 1000uF 16V           |
| C451         | VF467000 | C. CE. TUBLR 1000pF 50V    |
| C452         | Vi845700 | C. EL 100uF 50V            |
| C453         | Vi845900 | C. EL 10uF 63V             |
| C454         | Vi845900 | C. EL 10uF 63V             |
| C455         | Vi843500 | C. EL 100uF 25V            |
| C456         | Vi843500 | C. EL 100uF 25V            |
| C501         | Vi846000 | C. EL 22uF 63V             |
| C502         | Vi846000 | C. EL 22uF 63V             |
| C503         | Vi845900 | C. EL 10uF 63V             |
| C504         | Vi845900 | C. EL 10uF 63V             |
| C505         | Vi844900 | C. EL 1uF 50V              |
| C506         | Vi844500 | C. EL 0.1uF 50V            |
| C507         | Vi844500 | C. EL 0.1uF 50V            |
| C508         | Vi845000 | C. EL 2.2uF 50V            |
| C509         | Vi845000 | C. EL 2.2uF 50V            |
| C510         | Vi844500 | C. EL 0.1uF 50V            |
| C511         | Vi844500 | C. EL 0.1uF 50V            |
| C512         | Vi844900 | C. EL 1uF 50V              |
| C513         | UP652100 | C. POL 100pF 100V          |
| C514         | UP652100 | C. POL 100pF 100V          |
| C515         | Vi845600 | C. EL 47uF 50V             |
| C516         | UP652100 | C. POL 100pF 100V          |
| C517         | UP652100 | C. POL 100pF 100V          |
| C518         | Vi845600 | C. EL 47uF 50V             |
| C519         | Vi845900 | C. EL 10uF 63V             |
| C520         | Vi845900 | C. EL 10uF 63V             |
| C521         | VR168400 | C. MYLAR. ML ECQ-VIH124JL3 |
| C522         | UA654330 | C. MYLAR 0.033uF 50V       |
| C523         | UA654330 | C. MYLAR 0.033uF 50V       |
| C524         | VR168400 | C. MYLAR. ML ECQ-VIH124JL3 |
| C525         | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C526         | UB052100 | C. CE. M. CHP 100pF 50V    |

\* New Parts

## P.C.B. OPERATION

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| C527      | UB052100 | C. CE. M. CHP 100pF 50V    |
| C528      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C529      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C530      | VF467000 | C. CE. TUBLR 1000pF 50V    |
| C531      | VF467000 | C. CE. TUBLR 1000pF 50V    |
| C532      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C901      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C902      | Vi845900 | C. EL 10uF 63V             |
| C903      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C904      | VJ900700 | C. CE. M. CHP 33pF 50V     |
| C905      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C906      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C907      | Vi841200 | C. EL 330uF 6.3V           |
| C908      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C909      | Vi845900 | C. EL 10uF 63V             |
| C910      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C911      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C912      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C913      | Vi845900 | C. EL 10uF 63V             |
| C914      | Vi846200 | C. EL 47uF 63V             |
| C915      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C916      | VH053100 | C. CE. TUBLR 0.1uF 50V     |
| C917      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C918      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C919      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| C920      | UB051330 | C. CE. M. CHP 33pF 50V     |
| C921      | UB051330 | C. CE. M. CHP 33pF 50V     |
| C922      | UB051330 | C. CE. M. CHP 33pF 50V     |
| C923      | UB051330 | C. CE. M. CHP 33pF 50V     |
| C924      | UB245100 | C. CE. M. CHP 0.1uF 25V    |
| D401      | VG442800 | DIODE. ZENR MTZJ27A 27V    |
| D402      | VG442400 | DIODE. ZENR MTZJ24A 24V    |
| D403      | iF004600 | DIODE 1SS133               |
| D404      | iF004600 | DIODE 1SS133               |
| D405      | iF004600 | DIODE 1SS133               |
| D406      | iF004600 | DIODE 1SS133               |
| △ D407    | VT359600 | DIODE. BRG D3SBA20 4A 200V |
| △ D408    | VT359600 | DIODE. BRG D3SBA20 4A 200V |
| D409      | iF004600 | DIODE 1SS133               |
| D410      | VG442600 | DIODE. ZENR MTZJ24C 24V    |
| D411      | VG440800 | DIODE. ZENR MTZJ15B 15V    |
| D501      | iF004600 | DIODE 1SS133               |
| D901      | VV625100 | LED(re) SIM-22ST(UCRALT)   |
| D902      | VG438300 | DIODE. ZENR MTZJ6.8B 6.8V  |
| D903      | VG443500 | DIODE. ZENR MTZJ30D 30V    |
| △ F401    | KB003240 | FUSE T5.0A 250V(RALTG)     |
| △ F401    | KB003640 | FUSE T6.0A 125V(UC)        |
| △ F402    | KB003240 | FUSE T5.0A 250V(RALTG)     |
| △ F402    | KB003640 | FUSE T6.0A 125V(UC)        |
| G401      | VR463400 | TERM. GND D3.5 TP00385     |
| IC401     | iG092000 | IC M5220L                  |
| △ IC405   | XJ607A00 | IC NJM7805FA 5V            |
| △ IC406   | XJ607A00 | IC NJM7805FA 5V            |

\* New Parts

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| △ IC407   | XJ608A00 | IC NJM7812FA             |
| △ IC408   | XE436A00 | IC NJM79M05FA            |
| △ IC409   | XD343A00 | IC NJM79M12FA            |
| IC501     | XM356A00 | IC NJM2068LD             |
| IC502     | XB247301 | IC uPC4570HA             |
| IC901     | XR188A00 | IC LC75710NE (UCRALT)    |
| * IC901   | XV160A00 | IC LC75712E FLD(G)       |
| * IC902   | XR188A00 | IC LC75710NE (UCRALT)    |
| * IC902   | XV160A00 | IC LC75712E FLD(G)       |
| * JK501   | V2589500 | CN 1P                    |
| JK502     | VT749200 | JACK. PHONE HLJ5307      |
| L401      | GD900470 | COIL 1.5uH               |
| L402      | GD900470 | COIL 1.5uH               |
| PJ501     | VS868400 | JACK. PIN 3P             |
| △ Q401    | VP872700 | TR 2SC4488 S, T          |
| △ Q402    | VP872600 | TR 2SA1708 S, T          |
| △ Q403    | VP872700 | TR 2SC4488 S, T          |
| △ Q404    | VK174800 | TR 2SC4512 O, P, Y       |
| Q405      | iC224030 | TR 2SC2240 GR, BL        |
| △ Q406    | VP872600 | TR 2SA1708 S, T          |
| Q407      | iC224030 | TR 2SC2240 GR, BL        |
| △ Q408    | VK174800 | TR 2SC4512 O, P, Y       |
| △ Q409    | VP872700 | TR 2SC4488 S, T          |
| △ Q410    | VK174800 | TR 2SC4512 O, P, Y       |
| Q411      | iC224030 | TR 2SC2240 GR, BL        |
| △ Q412    | VP872600 | TR 2SA1708 S, T          |
| Q413      | iC224030 | TR 2SC2240 GR, BL        |
| △ Q414    | VK174800 | TR 2SC4512 O, P, Y       |
| △ Q415    | VC141900 | TR 2SB941 P, Q           |
| Q416      | iC1815C0 | TR 2SC1815 Y             |
| Q901      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q902      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q903      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q904      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q905      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q906      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q907      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q908      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q909      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q910      | iC241200 | TR. CHP 2SC2412K Q, R, S |
| Q911      | VP872600 | TR 2SA1708 S, T          |
| △ R409    | HV455330 | R. CAR. FP 330 Ω 1/4W    |
| △ R410    | VE869300 | R. MIL. OXD 0.1 Ω 2W     |
| △ R411    | HV456220 | R. CAR. FP 2.2K Ω 1/4W   |
| △ R413    | HV456150 | R. CAR. FP 1.5K Ω 1/4W   |
| △ R418    | HV455100 | R. CAR. FP 100 Ω 1/4W    |
| R419      | HV453470 | R. CAR. FP 4.7 Ω 1/4W    |
| R420      | HV455220 | R. CAR. FP 220 Ω 1/4W    |
| △ R421    | HV455100 | R. CAR. FP 100 Ω 1/4W    |
| R422      | HV453470 | R. CAR. FP 4.7 Ω 1/4W    |
| △ R425    | HV455330 | R. CAR. FP 330 Ω 1/4W    |
| △ R426    | VE869300 | R. MIL. OXD 0.1 Ω 2W     |
| △ R427    | HV456220 | R. CAR. FP 2.2K Ω 1/4W   |

\* New Parts

## P.C.B. OPERATION &amp; VIDEO

| Schm<br>Ref. | PART NO. | Description              |
|--------------|----------|--------------------------|
| △ R429       | HV456150 | R. CAR. FP 1.5KΩ 1/4W    |
| △ R434       | HV455100 | R. CAR. FP 100Ω 1/4W     |
| △ R435       | HV455220 | R. CAR. FP 220Ω 1/4W     |
| △ R436       | HV455100 | R. CAR. FP 100Ω 1/4W     |
| △ R439       | HV454100 | R. CAR. FP 10Ω 1/4W      |
| △ R441       | HV454100 | R. CAR. FP 10Ω 1/4W      |
| △ R442       | HL324100 | R. MTL. OXD 10Ω 2W       |
| △ R443       | HV453470 | R. CAR. FP 4.7Ω 1/4W     |
| △ R444       | VP939900 | R. MTL. OXD 15Ω 1W       |
| △ R448       | VP939500 | R. MTL. FLN 1Ω 1W        |
| △ R449       | VP939500 | R. MTL. FLN 1Ω 1W        |
| △ R450       | HL324100 | R. MTL. OXD 10Ω 2W       |
| △ R451       | VP939900 | R. MTL. OXD 15Ω 1W       |
| △ R455       | HV454470 | R. CAR. FP 47Ω 1/4W      |
| △ R461       | HV454470 | R. CAR. FP 47Ω 1/4W      |
| △ R462       | HL324100 | R. MTL. OXD 10Ω 2W       |
| △ R463       | VP939900 | R. MTL. OXD 15Ω 1W       |
| △ R464       | HV453470 | R. CAR. FP 4.7Ω 1/4W     |
| △ R465       | HV453470 | R. CAR. FP 4.7Ω 1/4W     |
| △ R466       | HV456330 | R. CAR. FP 3.3KΩ 1/4W    |
| △ R467       | HV456470 | R. CAR. FP 4.7KΩ 1/4W    |
| △ R469       | HL314100 | R. MTL. OXD 10Ω 1W       |
| R501         | HV454470 | R. CAR. FP 47Ω 1/4W      |
| R504         | HV454470 | R. CAR. FP 47Ω 1/4W      |
| RY501        | VM640200 | RELAY RY12W-OH-K-DC12V   |
| * SW501      | V2643900 | SW. PUSH SPUN22 2        |
| * SW502      | V2790200 | SW. RT SRRM1A            |
| SW901        | VG392900 | SW. TACT SKHVAA          |
| SW902        | VG392900 | SW. TACT SKHVAA          |
| SW903        | VZ630900 | SW. RT. ENC EC16B12202   |
| SW904        | VG392900 | SW. TACT SKHVAA          |
| SW905        | VG392900 | SW. TACT SKHVAA          |
| SW906        | VG392900 | SW. TACT SKHVAA          |
| SW907        | VG392900 | SW. TACT SKHVAA          |
| SW908        | VG392900 | SW. TACT SKHVAA          |
| SW909        | VG392900 | SW. TACT SKHVAA          |
| SW910        | VG392900 | SW. TACT SKHVAA          |
| SW911        | VG392900 | SW. TACT SKHVAA          |
| SW912        | VG392900 | SW. TACT SKHVAA          |
| SW913        | VG392900 | SW. TACT SKHVAA          |
| SW914        | VG392900 | SW. TACT SKHVAA          |
| SW915        | VG392900 | SW. TACT SKHVAA          |
| SW916        | VG392900 | SW. TACT SKHVAA(G)       |
| SW917        | VG392900 | SW. TACT SKHVAA(G)       |
| SW918        | VG392900 | SW. TACT SKHVAA          |
| SW919        | VG392900 | SW. TACT SKHVAA(G)       |
| SW920        | VG392900 | SW. TACT SKHVAA(G)       |
| TH401        | VM842300 | POSISTOR PTH9M04 BF/80°C |
| U901         | VZ411100 | L. DTCT GP1U281X         |
| * V901       | V2763100 | FL. DSPLY 32-BT-05G      |
| * VR501      | V2859800 | VR B20KΩ                 |
| * VR502      | V2859900 | VR G25KΩ                 |
| * VR503      | V2860000 | VR MN100KΩ               |

\* New Parts

| Schm<br>Ref. | PART NO. | Description                     |
|--------------|----------|---------------------------------|
|              | VJ828000 | PIN IMSA-6024-03E               |
|              | BB071360 | SCR. TERM 8.3x13                |
|              | VP750600 | SCR. TERM MEP1700               |
| *            | V2732400 | SPACER LDS-40B(UCRALT)          |
|              | VZ628400 | SUPRT                           |
|              | VZ628500 | SHEET                           |
| *            | V3011500 | P.C.B. VIDEO(UCRT)              |
| *            | V3011600 | P.C.B. VIDEO(AL)                |
| *            | V3011700 | P.C.B. VIDEO(G)                 |
| CB501        | VB858100 | CN. BS. PIN 2P                  |
| CB502        | VQ044700 | CN. BS. PIN 16P                 |
| CB601        | VB858200 | CN. BS. PIN 3P                  |
| CB603        | VQ044700 | CN. BS. PIN 16P                 |
| CB604        | VM859700 | CN. BS. PIN 16P                 |
| CB702        | VQ047300 | CN. BS. PIN 12P                 |
| CB703        | VQ047200 | CN. BS. PIN 9P                  |
| CB704        | VM859500 | CN. BS. PIN 11P                 |
| CB705        | VM688900 | CN. BS. PIN 10P                 |
| * CB901      | VV073300 | CN. BS. PIN 15P                 |
| CB902        | VQ963700 | CN. BS. PIN 16P                 |
| C501         | Vi841400 | C. EL 1000uF 6.3V               |
| C502         | Vi845900 | C. EL 10uF 63V                  |
| C503         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C504         | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C505         | Vi845900 | C. EL 10uF 63V                  |
| C506         | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C507         | Vi841400 | C. EL 1000uF 6.3V               |
| C508         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C511         | UB052100 | C. CE. M. CHP 100pF 50V(UCRTAL) |
| C512         | UB051220 | C. CE. M. CHP 22pF 50V(UCRTAL)  |
| C513         | Vi845900 | C. EL 10uF 63V(UCRTAL)          |
| C514         | Vi841400 | C. EL 1000uF 6.3V(UCRTAL)       |
| C515         | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C516         | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C517         | Vi845600 | C. EL 47uF 50V                  |
| C518         | Vi845600 | C. EL 47uF 50V                  |
| C519         | Vi845600 | C. EL 47uF 50V                  |
| C520         | Vi845600 | C. EL 47uF 50V                  |
| C521         | Vi845600 | C. EL 47uF 50V                  |
| C601         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C602         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C603         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C604         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C605         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C606         | UB052100 | C. CE. M. CHP 100pF 50V         |
| C607         | Vi845900 | C. EL 10uF 63V                  |
| C608         | Vi845900 | C. EL 10uF 63V                  |
| C609         | Vi845900 | C. EL 10uF 63V                  |
| C610         | Vi845900 | C. EL 10uF 63V                  |
| C611         | Vi845900 | C. EL 10uF 63V                  |

\* New Parts

## P.C.B. VIDEO

| Schm Ref. | PART NO. | Description                     |
|-----------|----------|---------------------------------|
| C612      | Vi845900 | C. EL 10uF 63V                  |
| C613      | Vi841400 | C. EL 1000uF 6.3V               |
| C614      | Vi841400 | C. EL 1000uF 6.3V               |
| C615      | Vi845900 | C. EL 10uF 63V                  |
| C616      | Vi841400 | C. EL 1000uF 6.3V               |
| C617      | UB013330 | C. CE. M. CHP 3300pF 50V        |
| C618      | Vi845600 | C. EL 47uF 50V                  |
| C619      | Vi845600 | C. EL 47uF 50V                  |
| C620      | UB012820 | C. CE. M. CHP 820pF 50V         |
| C621      | Vi841800 | C. EL 100uF 10V                 |
| C622      | Vi845600 | C. EL 47uF 50V                  |
| C623      | UB052120 | C. CE. M. CHP 120pF 50V         |
| C624      | UB044100 | C. CE. M. CHP 0.01uF 50V        |
| C625      | Vi845600 | C. EL 47uF 50V                  |
| C626      | Vi845900 | C. EL 10uF 63V                  |
| C627      | UB013120 | C. CE. M. CHP 1200pF 50V        |
| C628      | UB012470 | C. CE. M. CHP 470pF 50V         |
| C629      | Vi844900 | C. EL 1uF 50V                   |
| C630      | Vi844900 | C. EL 1uF 50V                   |
| C631      | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C632      | Vi845600 | C. EL 47uF 50V                  |
| C633      | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C634      | Vi845600 | C. EL 47uF 50V                  |
| C635      | VJ899300 | C. CE. M. CHP 8pF 50V           |
| C636      | VJ899200 | C. CE. M. CHP 7pF 50V           |
| C637      | UB051240 | C. CE. M. CHP 24pF 50V          |
| C638      | UB051240 | C. CE. M. CHP 24pF 50V          |
| C639      | UB012220 | C. CE. M. CHP 220pF 50V         |
| C640      | Vi845900 | C. EL 10uF 63V                  |
| C641      | Vi845200 | C. EL 4.7uF 50V                 |
| C642      | Vi845600 | C. EL 47uF 50V                  |
| C643      | Vi845600 | C. EL 47uF 50V                  |
| C644      | VJ900700 | C. CE. M. CHP 33pF 50V          |
| C645      | VJ900300 | C. CE. M. CHP 22pF 50V          |
| C646      | Vi841400 | C. EL 1000uF 6.3V               |
| C647      | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C648      | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C649      | UB012820 | C. CE. M. CHP 820pF 50V (ALG)   |
| C649      | UB013150 | C. CE. M. CHP 1500pF 50V (UCRT) |
| C650      | UB052100 | C. CE. M. CHP 100pF 50V         |
| C651      | UB245100 | C. CE. M. CHP 0.1uF 25V         |
| C701      | Vi845200 | C. EL 4.7uF 50V                 |
| C702      | Vi845200 | C. EL 4.7uF 50V                 |
| C703      | Vi845200 | C. EL 4.7uF 50V                 |
| C704      | Vi845200 | C. EL 4.7uF 50V                 |
| C705      | Vi845200 | C. EL 4.7uF 50V                 |
| C706      | Vi845200 | C. EL 4.7uF 50V                 |
| C707      | Vi845200 | C. EL 4.7uF 50V                 |
| C708      | Vi845200 | C. EL 4.7uF 50V                 |
| C709      | Vi845000 | C. EL 2.2uF 50V                 |
| C710      | UP652100 | C. POL 100pF 100V               |
| C711      | UP652100 | C. POL 100pF 100V               |
| C712      | Vi845000 | C. EL 2.2uF 50V                 |

\* New Parts

| Schm Ref. | PART NO. | Description             |
|-----------|----------|-------------------------|
| C713      | Vi845000 | C. EL 2.2uF 50V         |
| C714      | Vi845000 | C. EL 2.2uF 50V         |
| C715      | Vi845000 | C. EL 2.2uF 50V         |
| C716      | Vi845000 | C. EL 2.2uF 50V         |
| C717      | Vi845000 | C. EL 2.2uF 50V         |
| C718      | Vi845000 | C. EL 2.2uF 50V         |
| C719      | Vi845900 | C. EL 10uF 63V          |
| C720      | Vi845900 | C. EL 10uF 63V          |
| C721      | Vi845900 | C. EL 10uF 63V          |
| C722      | UP652100 | C. POL 100pF 100V       |
| C723      | Vi841800 | C. EL 100uF 10V         |
| C724      | UP652100 | C. POL 100pF 100V       |
| C725      | Vi841800 | C. EL 100uF 10V         |
| C726      | Vi845900 | C. EL 10uF 63V          |
| C727      | Vi845900 | C. EL 10uF 63V          |
| C728      | UP652100 | C. POL 100pF 100V       |
| C729      | Vi841800 | C. EL 100uF 10V         |
| C730      | UP652100 | C. POL 100pF 100V       |
| C731      | Vi841800 | C. EL 100uF 10V         |
| C732      | Vi845900 | C. EL 10uF 63V          |
| C733      | Vi845900 | C. EL 10uF 63V          |
| C734      | UP652100 | C. POL 100pF 100V       |
| C735      | Vi841800 | C. EL 100uF 10V         |
| C736      | UP652100 | C. POL 100pF 100V       |
| C737      | Vi841800 | C. EL 100uF 10V         |
| C738      | Vi845900 | C. EL 10uF 63V          |
| C739      | Vi845600 | C. EL 47uF 50V          |
| C740      | Vi845600 | C. EL 47uF 50V          |
| C741      | Vi845200 | C. EL 4.7uF 50V         |
| C742      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C743      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C744      | Vi845200 | C. EL 4.7uF 50V         |
| C745      | Vi845200 | C. EL 4.7uF 50V         |
| C746      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C747      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C748      | Vi845200 | C. EL 4.7uF 50V         |
| C749      | Vi845200 | C. EL 4.7uF 50V         |
| C750      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C751      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C752      | Vi845200 | C. EL 4.7uF 50V         |
| C753      | Vi845900 | C. EL 10uF 63V          |
| C754      | Vi845900 | C. EL 10uF 63V          |
| C755      | Vi845900 | C. EL 10uF 63V          |
| C756      | Vi845900 | C. EL 10uF 63V          |
| C757      | Vi845900 | C. EL 10uF 63V          |
| C758      | Vi845900 | C. EL 10uF 63V          |
| C759      | VH053100 | C. CE. TUBLR 0.1uF 50V  |
| C760      | Vi845600 | C. EL 47uF 50V          |
| C761      | Vi845600 | C. EL 47uF 50V          |
| C762      | UP652100 | C. POL 100pF 100V       |
| C763      | UP652100 | C. POL 100pF 100V       |
| C901      | UB052100 | C. CE. M. CHP 100pF 50V |
| C902      | UB052100 | C. CE. M. CHP 100pF 50V |

\* New Parts

## P.C.B. VIDEO

| Schm<br>Ref. | PART NO. | Description                   |
|--------------|----------|-------------------------------|
| C903         | UB052100 | C. CE. M. CHP 100pF 50V       |
| C904         | UB052100 | C. CE. M. CHP 100pF 50V       |
| C905         | UB052100 | C. CE. M. CHP 100pF 50V(UCRT) |
| D601         | iF004600 | DIODE 1SS133                  |
| D602         | iF004600 | DIODE 1SS133                  |
| D603         | iF004600 | DIODE 1SS133                  |
| D604         | iF004600 | DIODE 1SS133                  |
| D605         | iF004600 | DIODE 1SS133                  |
| D606         | iF004600 | DIODE 1SS133                  |
| D607         | iF004600 | DIODE 1SS133                  |
| D608         | iF004600 | DIODE 1SS133                  |
| D609         | iF004600 | DIODE 1SS133                  |
| D610         | iF004600 | DIODE 1SS133                  |
| D611         | iF004600 | DIODE 1SS133                  |
| D612         | iF004600 | DIODE 1SS133                  |
| IC501        | XL493A00 | IC TC74HC4051AP               |
| IC502        | XL493A00 | IC TC74HC4051AP               |
| IC503        | iR406600 | IC TC74HC4066AP AN-SW         |
| IC504        | Xi109D00 | IC MC14576CP                  |
| IC505        | XK313A00 | IC LC7824 (UCRTAL)            |
| IC601        | XL493A00 | IC TC74HC4051AP               |
| IC602        | XL493A00 | IC TC74HC4051AP               |
| IC603        | XL493A00 | IC TC74HC4051AP               |
| IC604        | XL493A00 | IC TC74HC4051AP               |
| IC605        | iR406600 | IC TC74HC4066AP AN-SW         |
| IC606        | iR405300 | IC TC74HC4053AP               |
| IC607        | iG142200 | IC TC74HCU04AP                |
| IC608        | Xi109D00 | IC MC14576CP                  |
| IC609        | Xi109D00 | IC MC14576CP                  |
| IC610        | Xi109D00 | IC MC14576CP                  |
| IC611        | XS502A00 | IC LC74781-9626               |
| IC701        | XF291A00 | IC uPC4570G2                  |
| IC702        | XF291A00 | IC uPC4570G2                  |
| IC703        | XF291A00 | IC uPC4570G2                  |
| IC704        | XF291A00 | IC uPC4570G2                  |
| IC705        | XR040A00 | IC TC9299P                    |
| IC706        | XR040A00 | IC TC9299P                    |
| IC707        | XR040A00 | IC TC9299P                    |
| IC708        | XF291A00 | IC uPC4570G2                  |
| IC709        | XF291A00 | IC uPC4570G2                  |
| IC710        | XF291A00 | IC uPC4570G2                  |
| JK601        | VU245200 | CN. DIN 1P                    |
| JK602        | VP113600 | CN. DIN 2P                    |
| JK603        | VP113600 | CN. DIN 2P                    |
| JK604        | VT973000 | CN. DIN 2P                    |
| * L601       | V2726100 | COIL 33uH                     |
| L602         | V3233700 | COIL 1.5uH                    |
| PJ501        | VR110100 | JACK. PIN 2P                  |
| PJ502        | VR110100 | JACK. PIN 2P                  |
| PJ503        | VR110100 | JACK. PIN 2P                  |
| PJ504        | VN134600 | JACK. PIN 1P                  |
| PJ504        | VN134600 | JACK. PIN 1P(UCRTAL)          |
| PJ601        | VN134600 | JACK. PIN 1P                  |

\* New Parts

| Schm<br>Ref. | PART NO. | Description                 |
|--------------|----------|-----------------------------|
| Q502         | iA101521 | TR 2SA1015 Y(UCRTAL)        |
| Q503         | iC053540 | TR 2SC535 ABC(UCRTAL)       |
| Q601         | iC174020 | TR 2SC1740S R, S            |
| Q602         | VH964100 | TR. DGT DTA143ES            |
| Q603         | iC287820 | TR 2SC2878 A, B             |
| Q604         | VG721700 | TR. DGT DTA144ES            |
| Q605         | VG721700 | TR. DGT DTA144ES            |
| Q606         | VD678700 | TR. DGT DTC114ES            |
| Q607         | iC174020 | TR 2SC1740S R, S            |
| Q608         | iC174020 | TR 2SC1740S R, S            |
| Q609         | iA101521 | TR 2SA1015 Y                |
| Q610         | iC053540 | TR 2SC535 A, B, C           |
| Q611         | iC224030 | TR 2SC2240 GR, BL           |
| Q612         | iC174020 | TR 2SC1740S R, S            |
| VR701        | VY689400 | VR. MTR Y100KΩ              |
| XL601        | VV949800 | RSNR. CRY 14.31818MHz(UCRT) |
| XL601        | VV949900 | RSNR. CRY 17.734475MHz(ALG) |
|              | BB071360 | SCR. TERM 8.3x13            |

\* New Parts

## P.C.B. TUNER

| Schm Ref.  | PART NO. | Description            |
|------------|----------|------------------------|
| * V2518600 | P.C.B.   | TUNER/TU-01(UC)        |
| * V2518700 | P.C.B.   | TUNER/TU-01(RF)        |
| * V2518800 | P.C.B.   | TUNER/TU-01(AL)        |
| * V2518900 | P.C.B.   | TUNER/TU-01RDS(BG)     |
| CB4        | VQ961900 | CN 16P                 |
| C1         | VG288900 | C.EL 100uF 25V         |
| C3         | VG275800 | C.CE.TUBLR 8.2pF 50V   |
| C4         | VJ837200 | C.EL 47uF 16V          |
| C5         | VF467300 | C.CE.TUBLR 0.01uF 16V  |
| C6         | VJ837200 | C.EL 47uF 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        | FG212100 | C.CE 100pF 50V         |
| C15        | VF467000 | C.CE.TUBLR 1000pF 50V  |
| C16        | VF466700 | C.CE.TUBLR 47pF 50V    |
| C17        | VJ837200 | C.EL 47uF 16V          |
| C19        | VA761200 | C.CE 33pF 50V          |
| C20        | VG288900 | C.EL 100uF 25V         |
| C21        | VJ599000 | C.CE.TUBLR 0.047uF 16V |
| C22        | VG290700 | C.EL 3.3uF 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        | VG288900 | C.EL 100uF 25V         |
| C32        | VJ839000 | C.EL 0.47uF 50V        |
| C33        | VJ839100 | C.EL 1uF 50V           |
| C34        | UA654470 | C.MYLAR 0.047uF 50V    |
| C35        | VG290700 | C.EL 3.3uF 50V         |
| C36        | V3451700 | C.PP 270pF 100V        |
| C37        | V3451700 | C.PP 270pF 100V        |
| C38        | VF466900 | C.CE.TUBLR 470pF 50V   |
| C39        | VQ082700 | C.EL 10uF 16V          |
| C40        | VE020000 | C.EL 3.3uF 50V         |
| C41        | UT453390 | C.PP 3900pF 100V       |
| C42        | UM407220 | C.EL 22uF 25V          |
| C43        | UT453390 | C.PP 3900pF 100V       |
| C44        | VE020000 | C.EL 3.3uF 50V         |
| C45        | VJ837200 | C.EL 47uF 16V          |
| C46        | VJ837200 | C.EL 47uF 16V          |
| C47        | VG278600 | C.CE.TUBLR 330pF 50V   |
| C48        | VG278800 | C.CE.TUBLR 560pF 50V   |
| C49        | V3451600 | C.PP 120pF 100V        |
| C50        | VJ599000 | C.CE.TUBLR 0.047uF 16V |

\* New Parts

| Schm Ref. | PART NO. | Description               |
|-----------|----------|---------------------------|
| C51       | VJ837200 | C.EL 47uF 16V             |
| C52       | VJ837200 | C.EL 47uF 16V             |
| C53       | VJ837200 | C.EL 47uF 16V             |
| C54       | VA761100 | C.CE 27pF 50V             |
| C55       | VA761100 | C.CE 27pF 50V             |
| C56       | VJ599000 | C.CE.TUBLR 0.047uF 16V    |
| D1        | VD631600 | DIODE 1SS133, 176, HSS104 |
| D2        | VD631600 | DIODE 1SS133, 176, HSS104 |
| D3        | VG437700 | DIODE.ZENR MIZJ5.6B 5.6V  |
| Fi1       | GG000560 | FLTR.CE SFE10.7MS3GHY-A   |
| Fi2       | GG000560 | FLTR.CE SFE10.7MS3GHY-A   |
| Fi3       | VC219000 | FLTR.CE SFZ450JL3         |
| IC1       | XB760A00 | IC LA1266                 |
| IC2       | XQ944A00 | IC LC72131                |
| IC3       | iG158100 | IC LA3401                 |
| * IC4     | XU664A00 | IC LC72720N               |
| L1        | Vi546100 | COIL 220uH                |
| L2        | Vi546100 | COIL 220uH                |
| L3        | Vi546100 | COIL 220uH                |
| L4        | Vi546100 | COIL 220uH                |
| L5        | Vi546100 | COIL 220uH                |
| * PK1     | V2716700 | TUNER.PK ENV-172A4G1      |
| PK2       | VU333700 | COIL.RF.AM 940536051A     |
| Q1        | iC053540 | TR 2SC535 A,B,C           |
| Q2        | iC053540 | TR 2SC535 A,B,C           |
| Q3        | VD678500 | TR.DGT DTA114ES           |
| Q4        | iC174020 | TR 2SC1740S R,S           |
| Q5        | VG722000 | TR.DGT DTC144ES           |
| Q6        | iC1815C0 | TR 2SC1815 Y              |
| Q7        | VD678500 | TR.DGT DTA114ES           |
| R56       | HV454470 | R.CAR.FP 47Ω 1/4W         |
| T1        | VC218600 | COIL.DT.FM 10.7MHz        |
| T2        | VR895700 | COIL.IF 450KHz            |
| T3        | VT486800 | COIL XYA2                 |
| T4        | VQ138200 | FLTR.LC 19KHz             |
| T5        | VQ138200 | FLTR.LC 19KHz             |
| TE1       | VU477800 | TERM.ANT AJ-2038-040      |
| 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.CRYS 7.2MHz          |
| XL2       | GG000750 | RSNR.CE 18.95KHz          |
| XL3       | VY704900 | RSNR.CRYS 4.332MHz        |
|           | BB071360 | SCR.TERM 8.3x13           |
|           | VR282500 | PLATE ANT.                |

\* New Parts

## CHIP RESISTOR

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
|           | RD250000 | R.CAR.CHP 0Ω 1/10W    |
|           | RD253220 | R.CAR.CHP 2.2Ω 1/10W  |
|           | RD254220 | R.CAR.CHP 22Ω 1/10W   |
|           | RD254470 | R.CAR.CHP 47Ω 1/10W   |
|           | RD254680 | R.CAR.CHP 68Ω 1/10W   |
|           | RD254750 | R.CAR.CHP 75Ω 1/10W   |
|           | RD254820 | R.CAR.CHP 82Ω 1/10W   |
|           | RD255100 | R.CAR.CHP 100Ω 1/10W  |
|           | RD255120 | R.CAR.CHP 120Ω 1/10W  |
|           | RD255150 | R.CAR.CHP 150Ω 1/10W  |
|           | RD255220 | R.CAR.CHP 220Ω 1/10W  |
|           | RD255300 | R.CAR.CHP 300Ω 1/10W  |
|           | RD255330 | R.CAR.CHP 330Ω 1/10W  |
|           | RD255430 | R.CAR.CHP 430Ω 1/10W  |
|           | RD255470 | R.CAR.CHP 470Ω 1/10W  |
|           | RD255680 | R.CAR.CHP 680Ω 1/10W  |
|           | RD256100 | R.CAR.CHP 1KΩ 1/10W   |
|           | RD256120 | R.CAR.CHP 1.2KΩ 1/10W |
|           | RD256150 | R.CAR.CHP 1.5KΩ 1/10W |
|           | RD256180 | R.CAR.CHP 1.8KΩ 1/10W |
|           | RD256220 | R.CAR.CHP 2.2KΩ 1/10W |
|           | RD256270 | R.CAR.CHP 2.7KΩ 1/10W |
|           | RD256330 | R.CAR.CHP 3.3KΩ 1/10W |
|           | RD256390 | R.CAR.CHP 3.9KΩ 1/10W |
|           | RD256430 | R.CAR.CHP 4.3KΩ 1/10W |
|           | RD256470 | R.CAR.CHP 4.7KΩ 1/10W |
|           | RD256510 | R.CAR.CHP 5.1KΩ 1/10W |
|           | RD256560 | R.CAR.CHP 5.6KΩ 1/10W |
|           | RD256680 | R.CAR.CHP 6.8KΩ 1/10W |
|           | RD256750 | R.CAR.CHP 7.5KΩ 1/10W |
|           | RD256820 | R.CAR.CHP 8.2KΩ 1/10W |
|           | RD256910 | R.CAR.CHP 9.1KΩ 1/10W |
|           | RD257100 | R.CAR.CHP 10KΩ 1/10W  |
|           | RD257110 | R.CAR.CHP 11KΩ 1/10W  |
|           | RD257120 | R.CAR.CHP 12KΩ 1/10W  |
|           | RD257150 | R.CAR.CHP 15KΩ 1/10W  |
|           | RD257180 | R.CAR.CHP 18KΩ 1/10W  |
|           | RD257220 | R.CAR.CHP 22KΩ 1/10W  |
|           | RD257270 | R.CAR.CHP 27KΩ 1/10W  |
|           | RD257330 | R.CAR.CHP 33KΩ 1/10W  |
|           | RD257360 | R.CAR.CHP 36KΩ 1/10W  |
|           | RD257470 | R.CAR.CHP 47KΩ 1/10W  |
|           | RD257510 | R.CAR.CHP 51KΩ 1/10W  |
|           | RD257560 | R.CAR.CHP 56KΩ 1/10W  |
|           | RD257620 | R.CAR.CHP 62KΩ 1/10W  |
|           | RD257680 | R.CAR.CHP 68KΩ 1/10W  |
|           | RD257820 | R.CAR.CHP 82KΩ 1/10W  |
|           | RD258100 | R.CAR.CHP 100KΩ 1/10W |
|           | RD258220 | R.CAR.CHP 220KΩ 1/10W |
|           | RD258470 | R.CAR.CHP 470KΩ 1/10W |
|           | RD258680 | R.CAR.CHP 680KΩ 1/10W |
|           | RD259100 | R.CAR.CHP 1MΩ 1/10W   |

\* New Parts

| Schm Ref. | PART NO. | Description |
|-----------|----------|-------------|
|-----------|----------|-------------|

\* New Parts

A

B

C

D

E

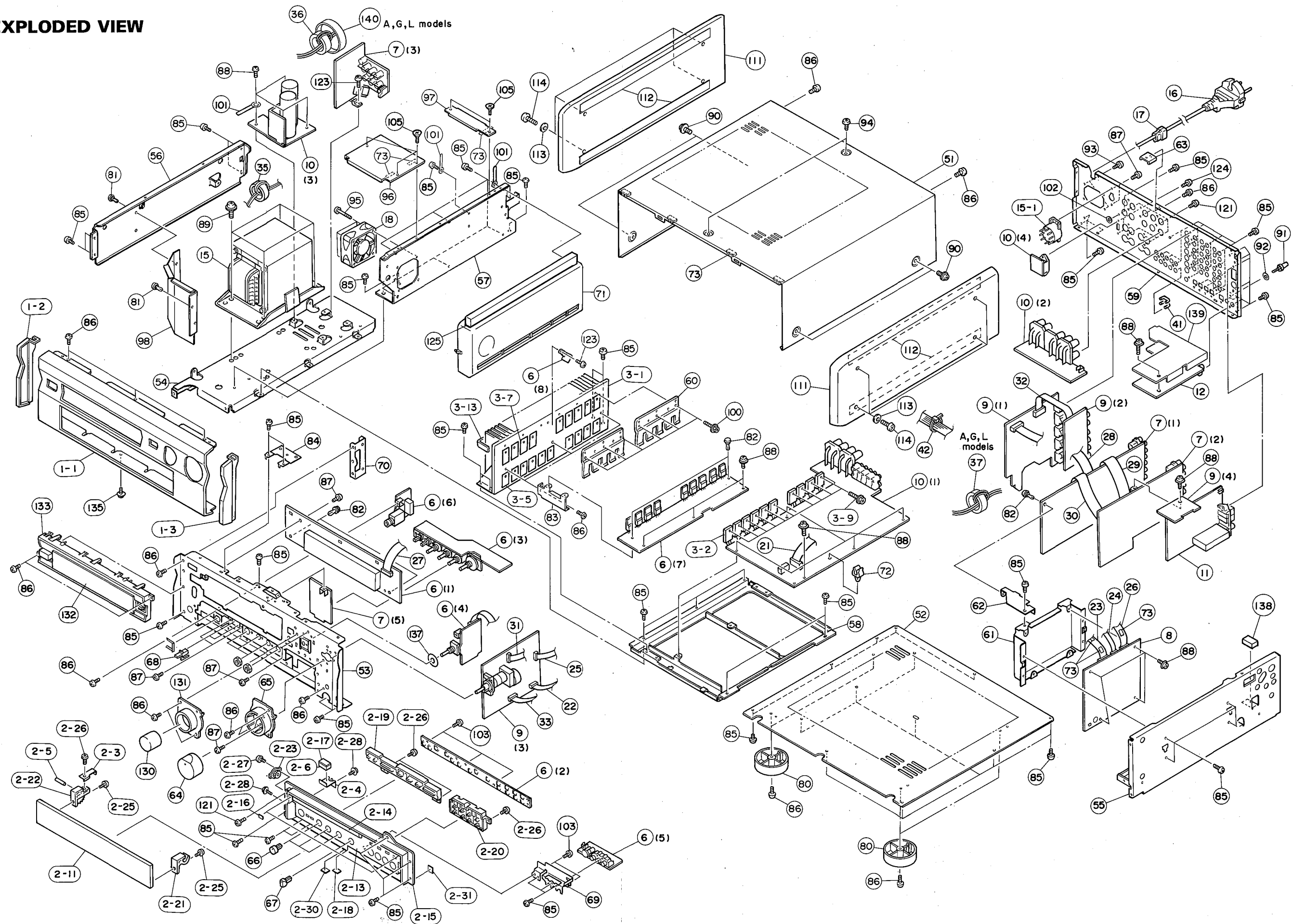
F

G

H

RX-V2095/RX-V2095RDS

## ■ EXPLODED VIEW





## ■ MECHANICAL PARTS

| Ref.<br>No. | PART NO. | Description            | Remarks        | Markets            |
|-------------|----------|------------------------|----------------|--------------------|
| * 1- 1      | V2615700 | FRONT PANEL            | RX-V2095 BL    | (UCRALT)           |
| * 1- 1      | V2615900 | FRONT PANEL            | RX-V2095 GD    |                    |
| * 1- 1      | V2616000 | FRONT PANEL            | RX-V2095RDS BL | (G)                |
| * 1- 2      | V2619600 | PLATE, SIDE L          | BL             |                    |
| * 1- 2      | V2619800 | PLATE, SIDE L          | GD             |                    |
| * 1- 3      | V2619900 | PLATE, SIDE R          | BL             |                    |
| * 1- 3      | V2620100 | PLATE, SIDE R          | GD             |                    |
| 2- 3        | VZ619800 | SUPPORT                | HINGE          |                    |
| 2- 4        | VZ830500 | SUPPORT                | MG             |                    |
| 2- 5        | VZ621800 | SHAFT                  | AA             |                    |
| 2- 6        | VZ621900 | MAGNET                 |                |                    |
| * 2-11      | V2616500 | PANEL, LID             | BL             |                    |
| * 2-11      | V2616700 | PANEL, LID             | GD             |                    |
| * 2-13      | V2616800 | PLATE, L               | RX-V2095 BL    | (UCRALT)           |
| * 2-13      | V2617000 | PLATE, L               | RX-V2095 GD    |                    |
| * 2-13      | V2617100 | PLATE, L               | RX-V2095RDS BL | (G)                |
| * 2-14      | V2617700 | PLATE, SP              | BL             |                    |
| * 2-14      | V2617900 | PLATE, SP              | GD             |                    |
| * 2-15      | V2618900 | CASE, SUB PANEL        | BL             |                    |
| * 2-15      | V2619100 | CASE, SUB PANEL        | GD             |                    |
| 2-16        | V2048500 | CUSHION, LID           | GD             |                    |
| 2-16        | VT062900 | CUSHION                | BL             |                    |
| 2-17        | VZ875000 | SPACER                 | MG             |                    |
| 2-18        | VH625500 | DAMPER                 |                |                    |
| * 2-19      | V2637300 | BUTTON                 | PG             | BL                 |
| * 2-19      | V2637500 | BUTTON                 | PG             | GD                 |
| * 2-20      | V2637600 | BUTTON                 | TU             | BL                 |
| * 2-20      | V2637800 | BUTTON                 | TU             | GD                 |
| 2-21        | V0050300 | STOPPER                | HINGE          | GD                 |
| 2-21        | VJ888100 | STOPPER                | HINGE          | BL                 |
| 2-22        | V0047400 | HINDGE                 |                | GD                 |
| 2-22        | VZ629400 | HINDGE                 |                | BL                 |
| 2-23        | VZ830300 | DAMPER, GEAR           | 15G            |                    |
| 2-25        | ED330066 | BIND HEAD SCREW        | 3x6 FCRM3-BL   |                    |
| 2-26        | EP600190 | BIND HEAD B-TITE SCREW | 3x8 ZMC2-BL    |                    |
| 2-27        | VG893800 | BIND HEAD P-TITE SCREW | 2x6 ZMC2-BL    |                    |
| 2-28        | VE529700 | PW HEAD B-TITE SCREW   | 3x6-8 FCRM3-BL |                    |
| 2-30        | V3217600 | PLATE, GROUND          |                |                    |
| 2-31        | V3281300 | PLATE, GROUND          |                |                    |
| 3- 1        | VV693500 | HEAT SINK              | 40BS300-L110   |                    |
| △# 3- 2     | VY705000 | TRANSISTOR             | 2SC5200 R,0    | Q166, 168, 169,    |
| △# 3- 2     | VY705000 | TRANSISTOR             | 2SC5200 R,0    | 171, 172, 174, 175 |
| △# 3- 2     | VY705000 | TRANSISTOR             | 2SC5200 R,0    | , 177, 178, 180    |
| 3- 5        | VK196000 | SHEET                  | 22x29          |                    |
| 3- 7        | VK195900 | SHEET                  | 19x24          |                    |
| 3- 9        | VK173200 | SCREW, TRANSISTOR      | 3x15 SP FCM3   |                    |
| 3-13        | VU195800 | DAMPER, FIN            |                |                    |
| * 6         | V3010000 | P.C.B. ASS'Y           | OPERATION      | (UC)               |
| * 6         | V3010200 | P.C.B. ASS'Y           | OPERATION      | (RALT)             |
| * 6         | V3010400 | P.C.B. ASS'Y           | OPERATION      | (G)                |
| * 7         | V3010500 | P.C.B. ASS'Y           | FUNCTION       | (UC)               |
| * 7         | V3010700 | P.C.B. ASS'Y           | FUNCTION       | (RT)               |
| * 7         | V3010900 | P.C.B. ASS'Y           | FUNCTION       | (A)                |

\* New Parts

## RX-V2095/RX-V2095RDS

| Ref.<br>No. | PART NO. | Description           | Remarks            | Markets |
|-------------|----------|-----------------------|--------------------|---------|
| * 7         | V3011000 | P. C. B. ASS'Y        | FUNCTION           | (L)     |
| * 7         | V3011100 | P. C. B. ASS'Y        | FUNCTION           | (G)     |
| * 8         | V3011400 | P. C. B. ASS'Y        | DSP                |         |
| * 9         | V3011500 | P. C. B. ASS'Y        | VIDEO              | (UCRT)  |
| * 9         | V3011600 | P. C. B. ASS'Y        | VIDEO              | (AL)    |
| * 9         | V3011700 | P. C. B. ASS'Y        | VIDEO              | (G)     |
| * 10        | V3012000 | P. C. B. ASS'Y        | MAIN               | (UC)    |
| * 10        | V3012100 | P. C. B. ASS'Y        | MAIN               | (RT)    |
| * 10        | V3012200 | P. C. B. ASS'Y        | MAIN               | (A)     |
| * 10        | V3012300 | P. C. B. ASS'Y        | MAIN               | (L)     |
| * 10        | V3012400 | P. C. B. ASS'Y        | MAIN               | (G)     |
| * 11        | V2518600 | P. C. B. ASS'Y        | TUNER/TU-01        | (UC)    |
| * 11        | V2518700 | P. C. B. ASS'Y        | TUNER/TU-01        | (RT)    |
| * 11        | V2518800 | P. C. B. ASS'Y        | TUNER/TU-01        | (AL)    |
| * 11        | V2518900 | P. C. B. ASS'Y        | TUNER/TU-01RDS     | (G)     |
| * 12        | V3012700 | P. C. B. ASS'Y        | DIGITAL-IN         | (UC)    |
| * 12        | V3012800 | P. C. B. ASS'Y        | DIGITAL-IN         | (RAGLT) |
| △ * 15      | XV398A00 | POWER TRANSFORMER     |                    | (U)     |
| △ * 15      | XV399A00 | POWER TRANSFORMER     |                    | (C)     |
| △ * 15      | XV400A00 | POWER TRANSFORMER     |                    | (R)     |
| △ * 15      | XV401A00 | POWER TRANSFORMER     |                    | (A)     |
| △ * 15      | XV402A00 | POWER TRANSFORMER     |                    | (GL)    |
| △ 15-1      | Vi449800 | VOLTAGE SELECTOR      | ESE-37284-F        | (R)     |
| △ * 16      | V2643800 | POWER CORD ASS'Y      |                    | (UC)    |
| △ 16        | VP418300 | POWER CORD ASS'Y      |                    | (A)     |
| △ 16        | VS759300 | POWER CORD ASS'Y      |                    | (GL)    |
| △ 16        | VZ542500 | POWER CORD ASS'Y      |                    | (RT)    |
| * 17        | V2438700 | CORD STOPPER          | #10P1              |         |
| 18          | V2063800 | DC FAN MOTOR          | DC MMS-06D24DU-R0E |         |
| 21          | VQ120600 | CONNECTOR, FLAT CABLE | 12P 70mm           |         |
| * 22        | V2853800 | CONNECTOR, FLAT CABLE | 11P 250mm          |         |
| 23          | VZ869000 | CONNECTOR, FLAT CABLE | 11P 100mm          |         |
| * 24        | V2854200 | CONNECTOR, FLAT CABLE | 14P 300mm          |         |
| * 25        | V2853700 | CONNECTOR, FLAT CABLE | 10P 160mm          |         |
| * 26        | V2854000 | CONNECTOR, FLAT CABLE | 13P 80mm           |         |
| * 27        | V2854400 | CONNECTOR, FLAT CABLE | 17P 300mm          |         |
| * 28        | V2854300 | CONNECTOR, FLAT CABLE | 16P 80mm           |         |
| * 29        | V2854600 | CONNECTOR, FLAT CABLE | 25P 100mm          |         |
| * 30        | V2854500 | CONNECTOR, FLAT CABLE | 18P 60mm           |         |
| * 31        | V2853900 | CONNECTOR, FLAT CABLE | 12P 160mm          |         |
| 32          | VQ157200 | CONNECTOR, FLAT CABLE | 16P 60mm           |         |
| 33          | V3122700 | CONNECTOR, FLAT CABLE | 9P 180mm           |         |
| 35          | V3260000 | FERRITE CORE          | FSOB190RT02B       | (UC)    |
| 36          | VB933800 | FERRITE CORE          | BP53RB310190NOA    | (AGL)   |
| 37          | V3311500 | FERRITE CORE          | FSOB140RN          | (AGL)   |
| 41          | VQ194100 | SHORT PLUG            | CNT31-0            |         |
| 42          | CB069250 | BINDING TIE           | BK-1               |         |
| 51          | V0051300 | TOP COVER             |                    | GD      |
| 51          | VV690300 | TOP COVER             |                    | BL      |
| 52          | VJ893400 | BOTTOM COVER          |                    |         |
| * 53        | V2614200 | SUB CHASSIS           |                    |         |
| * 54        | V2614300 | FRAME                 | L                  |         |
| * 55        | V2614400 | FRAME                 | R                  |         |

\* New Parts

| Ref.<br>No. | PART NO. | Description                  | Remarks            | Markets |
|-------------|----------|------------------------------|--------------------|---------|
| * 56        | V2614500 | FRAME                        | SL                 |         |
| 57          | VV691100 | FRAME                        | SF                 |         |
| 58          | VV691200 | FRAME                        | C                  |         |
| * 59        | V2614600 | REAR PANEL                   |                    | (U)     |
| * 59        | V2614700 | REAR PANEL                   |                    | (C)     |
| * 59        | V2614800 | REAR PANEL                   |                    | (RT)    |
| * 59        | V2614900 | REAR PANEL                   |                    | (A)     |
| * 59        | V2615000 | REAR PANEL                   |                    | (L)     |
| 59          | V2732300 | REAR PANEL                   |                    | (G)     |
| 60          | VV826100 | SUPPORT                      | TR                 |         |
| * 61        | V2615600 | SHIELD CASE                  |                    |         |
| * 62        | V2825300 | SUPPORT                      | D/PCB              |         |
| 63          | VV306200 | SUPPORT, TOP                 |                    |         |
| 64          | V2048600 | KNOB, LED                    | D40                | GD      |
| 64          | VV268600 | KNOB, LED                    | D40                | BL      |
| * 65        | V2467900 | ESCUTCHEON, VOL              |                    | BL      |
| * 65        | V2468100 | ESCUTCHEON, VOL              |                    | GD      |
| 66          | VS757200 | KNOB                         | D12P               | BL      |
| 66          | VZ891300 | KNOB                         | D12P               | GD      |
| 67          | VT275100 | KNOB                         | D12R               | BL      |
| 67          | VZ891400 | KNOB                         | D12R               | GD      |
| * 68        | V2467300 | BUTTON, 3/8                  |                    | BL      |
| * 68        | V2467500 | BUTTON, 3/8                  |                    | GD      |
| * 69        | V2642700 | SUPPORT                      | PJ                 |         |
| 70          | VJ895500 | FRAME                        | A                  |         |
| 71          | VV713600 | BRACKET                      | F                  |         |
| 72          | VY707200 | HOLDER, PCB                  | A-1 3R48           |         |
| 73          | VE222600 | CUSHION                      |                    |         |
| 80          | V0042500 | LEG                          | D60xH21            | GD      |
| 80          | VS025000 | LEG                          | D60xH21            | BL      |
| 81          | CB068880 | PLASTIC RIVET                | No. 1027           |         |
| 82          | CB605620 | PLASTIC RIVET                | No. 1781           |         |
| 83          | VV692400 | SUPPORT                      | H/PCB              |         |
| * 84        | V2643000 | SUPPORT                      | SF                 |         |
| 85          | VN413300 | BIND HEAD BONDING B-T. SCREW | 3x8 MFZN2-BL       |         |
| 86          | EP600190 | BIND HEAD B-TITE SCREW       | 3x8 ZMC2-BL        |         |
| 87          | ED330066 | BIND HEAD SCREW              | 3x6 FCRM3-BL       |         |
| 88          | EK930010 | PW HEAD B-TITE SCREW         | 3x8-8 FCRM3-BL     |         |
| 89          | VK625000 | CUP S-TITE SCREW             | 5x10-12 ZMC2-Y     |         |
| 90          | EK365090 | PW HEAD S-TITE SCREW         | 4x8-10 FCRM3-BL    |         |
| 91          | AA627310 | GROUND TERMINAL              |                    |         |
| 92          | EV265560 | PLAIN WASHER                 | 3.6x10x0.8 FNM3-3G |         |
| 93          | EP600220 | BIND HEAD B-TITE SCREW       | 3x10 ZMC2-Y        |         |
| 94          | EX601850 | SPECIAL SCREW S-TITE         | 4x8-10 FCRM3-BL    | BL      |
| 94          | VZ893000 | DECORATED SCREW S-TIGHT      | 4x8-10 MFNI-33     | GD      |
| 95          | VV220300 | BIND HEAD B-TITE SCREW       | 3x30 MFZN2-BL      |         |
| 96          | VY979800 | SUPPORT, FAN COVER           |                    |         |
| 97          | VY980000 | SUPPORT                      | R                  |         |
| 98          | VY980100 | PLATE, FAN COVER             |                    |         |
| 100         | VK173200 | SCREW, TRANSISTOR            | 3x15 SP FCM3       |         |
| 101         | CB502030 | BINDING TIE                  | S-75B              |         |
| 102         | VZ180200 | SPACER                       |                    |         |
| 103         | EP630220 | BIND HEAD P-TITE SCREW       | 3x8 ZMC2-BL        |         |

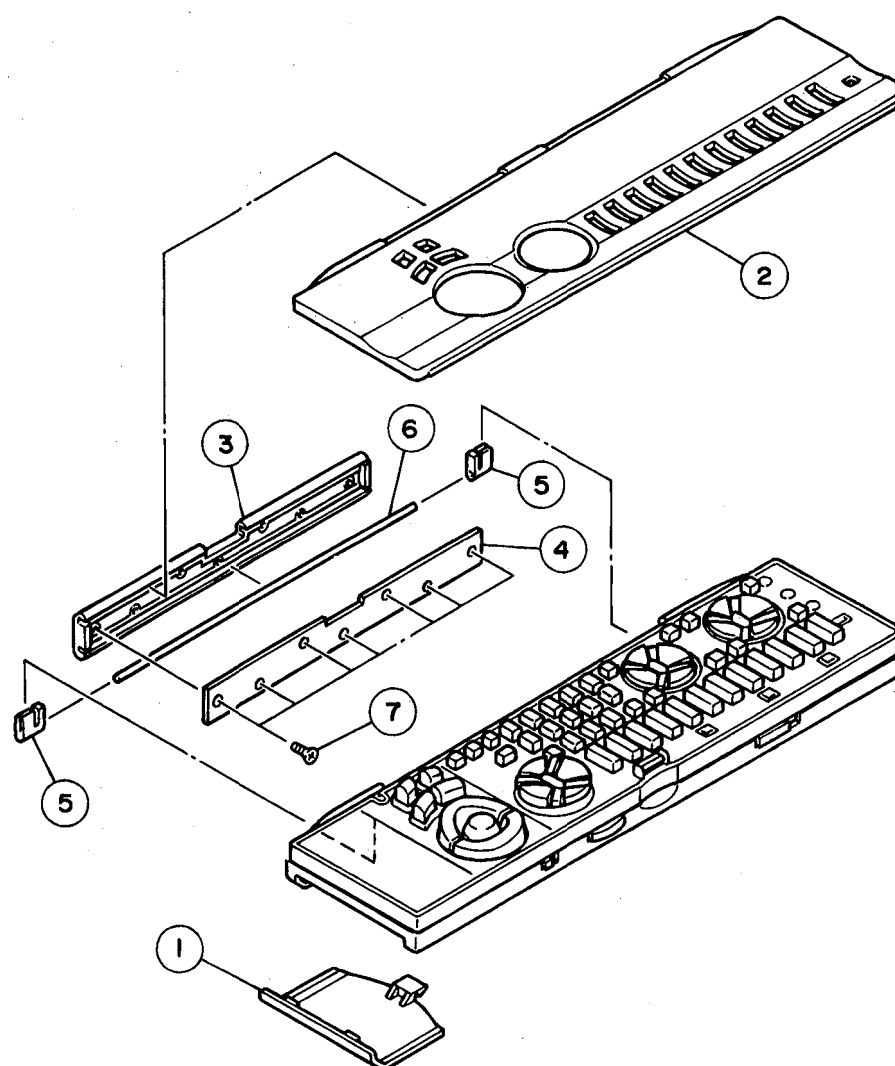
\* New Parts

## RX-V2095/RX-V2095RDS

| Ref.<br>No. | PART NO. | Description                         | Remarks        | Markets      |
|-------------|----------|-------------------------------------|----------------|--------------|
|             | 105      | EP600790 FLAT HEAD B-TITE SCREW     | 3x8 MFZN2-BL   |              |
| *           | 111      | V2620300 SIDE PANEL                 |                |              |
|             | 112      | VK492400 SPACER                     |                |              |
|             | 113      | V2961800 RING                       | /WOOD          |              |
|             | 114      | VC077200 FLAT FILLISTER HEAD SCREW  | 4x27 FCRM3-BR  |              |
|             | 121      | VY731200 BONDING HEAD TAPPING SCREW | 3x10 MFNI33    |              |
|             | 123      | VK697600 BIND HEAD B-TITE SCREW     | 3x10 SP ZMC2-Y |              |
|             | 124      | EP600530 BIND HEAD S-TITE SCREW     | 3x8 ZMC2-BL    |              |
|             | 125      | VZ012900 CUSHION, FAN               |                |              |
| *           | 130      | V2618300 KNOB                       | D30            | BL           |
| *           | 130      | V2618500 KNOB                       | D30            | GD           |
| *           | 131      | V2619200 ESCUTCHEON, SEL            |                | BL           |
| *           | 131      | V2619400 ESCUTCHEON, SEL            |                | GD           |
| *           | 132      | V2620200 WINDOW PANEL, LID          |                |              |
| *           | 133      | V2618600 BUTTON CASE, UPPER         |                | BL           |
| *           | 133      | V2618800 BUTTON CASE, UPPER         |                | GD           |
|             | 135      | V3317100 PW HEAD P-TITE SCREW       | 3x6-8 MFZN2-BL |              |
|             | 137      | V3188700 SPACER                     | T=0.2          |              |
|             | 138      | V3246000 SHEET, GROUND              | UC-300285      |              |
|             | 139      | V3259600 SHIELD PLATE               | RF             |              |
|             | 140      | VQ625400 DAMPER                     | H. SINK        | (AGL)        |
|             |          | ACCESSORIES                         |                |              |
| *           | 200      | V2686700 REMOTE CONTROL TRANSMITTER | RAV180         | See page 112 |
| *           | 201      | V2690000 REMOTE CONTROL TRANSMITTER | RAV11          | (UCRALT)     |
|             | 201-1    | CX679050 LID                        |                |              |
|             |          | VE366200 LOOP ANTENNA               | AM             |              |
|             |          | VG850700 ANTENNA, FM                | 1.4m           |              |
|             |          | VT948000 ANTENNA ADAPTER            |                | (UC)         |
|             |          | VY814500 LABEL, REMOTE CONTROL      |                |              |
|             |          | BATTERY, MANGAN-ALKALINE            | 1.5V LR6       |              |
|             |          | BATTERY, MANGANESE                  | SUM-3, AA, R06 | (UCRALT)     |

\* New Parts

# **EXPLODED VIEW**

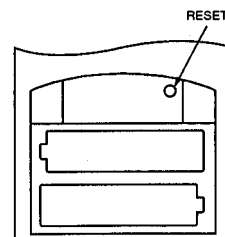


| Ref. No. | PART NO. | Description                | Remarks       | Markets      |
|----------|----------|----------------------------|---------------|--------------|
| *        | V2686700 | REMOTE CONTROL TRANSMITTER | RRC4000-5453R |              |
| 1        | CX680040 | COVER, BATTERY             | 103RRC11101R  |              |
| *        | 2        | XX710680                   | LID           | 103RRC11204R |
| 3        | CX680060 | BRACKET                    | 503RRC00401R  |              |
| 4        | CX680070 | BRACKET                    | 503RRC00501R  |              |
| 5        | CX680080 | GUIDE PIN                  | 522RRC00101R  |              |
| 6        | CX680090 | PIN                        | 524RRC00101R  |              |
| 7        | EX603910 | SCREW                      | ABB1703321001 |              |

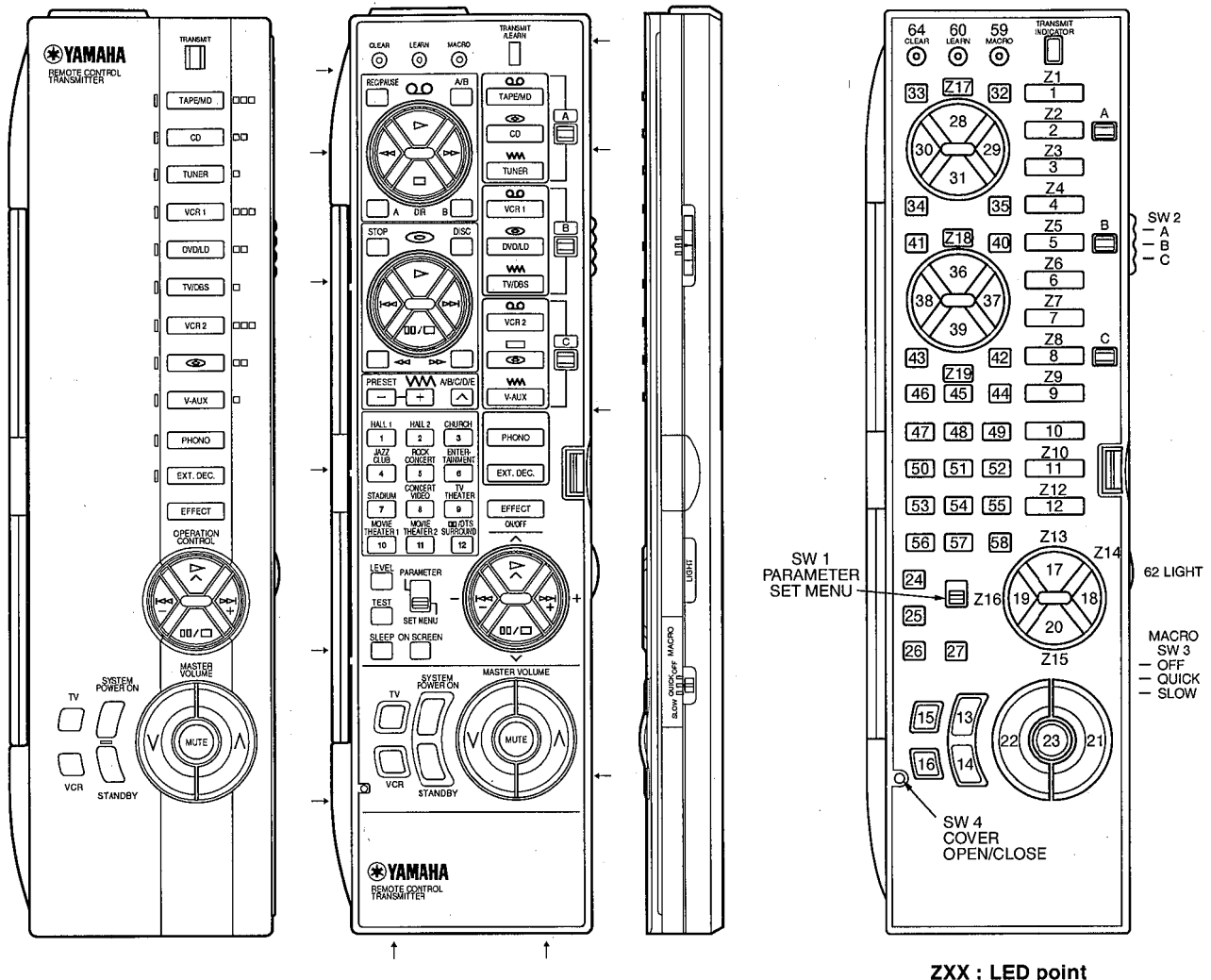
\* New Parts

# REMOTE CONTROL TRANSMITTER

## ■ SCHEMATIC DIAGRAM



## Key arrangement



ZXX : LED point

## List of the fixed code

| Key No. | SW 1           | SW 2 | SET MENU |          |          | PARAMETER |          |          |
|---------|----------------|------|----------|----------|----------|-----------|----------|----------|
|         |                |      | A        | B        | C        | A         | B        | C        |
| 1       | TAPE/MD        |      | 7A-85-18 | 7A-85-18 | 7A-85-18 | 7A-85-18  | 7A-85-18 | 7A-85-18 |
| 2       | CD             |      | 7A-85-15 | 7A-85-15 | 7A-85-15 | 7A-85-15  | 7A-85-15 | 7A-85-15 |
| 3       | TUNER          |      | 7A-85-16 | 7A-85-16 | 7A-85-16 | 7A-85-16  | 7A-85-16 | 7A-85-16 |
| 4       | VCR 1          |      | 7A-85-0F | 7A-85-0F | 7A-85-0F | 7A-85-0F  | 7A-85-0F | 7A-85-0F |
| 5       | DVD/LD         |      | 7A-85-17 | 7A-85-17 | 7A-85-17 | 7A-85-17  | 7A-85-17 | 7A-85-17 |
| 6       | TV/DBS         |      | 7A-85-54 | 7A-85-54 | 7A-85-54 | 7A-85-54  | 7A-85-54 | 7A-85-54 |
| 7       | VCR 2          |      | 7A-85-13 | 7A-85-13 | 7A-85-13 | 7A-85-13  | 7A-85-13 | 7A-85-13 |
| 8       |                |      |          |          |          |           |          |          |
| 9       | V-AUX          |      | 7A-85-55 | 7A-85-55 | 7A-85-55 | 7A-85-55  | 7A-85-55 | 7A-85-55 |
| 10      | PHONO          |      | 7A-85-14 | 7A-85-14 | 7A-85-14 | 7A-85-14  | 7A-85-14 | 7A-85-14 |
| 11      | EXT. DECODER   |      | 7A-85-87 | 7A-85-87 | 7A-85-87 | 7A-85-87  | 7A-85-87 | 7A-85-87 |
| 12      | EFFECT         |      | 7A-85-56 | 7A-85-56 | 7A-85-56 | 7A-85-56  | 7A-85-56 | 7A-85-56 |
| 13      | SYSTEM POWER   |      | 7A-85-1D | 7A-85-1D | 7A-85-1D | 7A-85-1D  | 7A-85-1D | 7A-85-1D |
| 14      | POWER STANDBY  |      | 7A-85-1E | 7A-85-1E | 7A-85-1E | 7A-85-1E  | 7A-85-1E | 7A-85-1E |
| 15      | TV POWER       |      |          |          |          |           |          |          |
| 16      | VCR POWER      |      |          |          |          |           |          |          |
| 17      | ^ PLAY ^       |      | 7A-85-9D | 7A-85-9D | 7A-85-9D | 7A-85-C5  | 7A-85-C5 | 7A-85-C5 |
| 18      | + >>> +        |      | 7A-85-9E | 7A-85-9E | 7A-85-9E | 7A-85-C6  | 7A-85-C6 | 7A-85-C6 |
| 19      | - <<< -        |      | 7A-85-9F | 7A-85-9F | 7A-85-9F | 7A-85-C7  | 7A-85-C7 | 7A-85-C7 |
| 20      | ∨ PAUSE/STOP ∨ |      | 7A-85-9C | 7A-85-9C | 7A-85-9C | 7A-85-C4  | 7A-85-C4 | 7A-85-C4 |
| 21      | VOLUME +       |      | 7A-85-1A | 7A-85-1A | 7A-85-1A | 7A-85-1A  | 7A-85-1A | 7A-85-1A |
| 22      | VOLUME -       |      | 7A-85-1B | 7A-85-1B | 7A-85-1B | 7A-85-1B  | 7A-85-1B | 7A-85-1B |
| 23      | MUTE           |      | 7A-85-1C | 7A-85-1C | 7A-85-1C | 7A-85-1C  | 7A-85-1C | 7A-85-1C |
| 24      | LEVEL          |      | 7A-85-86 | 7A-85-86 | 7A-85-86 | 7A-85-86  | 7A-85-86 | 7A-85-86 |
| 25      | TEST           |      | 7A-85-85 | 7A-85-85 | 7A-85-85 | 7A-85-85  | 7A-85-85 | 7A-85-85 |
| 26      | SLEEP          |      | 7A-85-57 | 7A-85-57 | 7A-85-57 | 7A-85-57  | 7A-85-57 | 7A-85-57 |
| 27      | ON SCREEN      |      | 7A-85-C2 | 7A-85-C2 | 7A-85-C2 | 7A-85-C2  | 7A-85-C2 | 7A-85-C2 |
| 28      | PLAY           |      | 7A-85-00 |          | 7A-85-00 |           | 7A-85-00 |          |
| 29      | >>>            |      | 7A-85-02 |          | 7A-85-02 |           | 7A-85-02 |          |
| 30      | <<<            |      | 7A-85-01 |          | 7A-85-01 |           | 7A-85-01 |          |

| Key No. | SW 1       | SW 2 | SET MENU |          |          | PARAMETER |          |          |
|---------|------------|------|----------|----------|----------|-----------|----------|----------|
|         |            |      | A        | B        | C        | A         | B        | C        |
| 31      | STOP       |      | 7A-85-03 |          | 7A-85-03 | 7A-85-03  |          | 7A-85-03 |
| 32      | A/B        |      | 7A-85-06 |          | 7A-85-06 | 7A-85-06  |          | 7A-85-06 |
| 33      | REC/PAUSE  |      | 7A-85-04 |          | 7A-85-04 | 7A-85-04  |          | 7A-85-04 |
| 34      | DIR A      |      | 7A-85-07 |          | 7A-85-07 | 7A-85-07  |          | 7A-85-07 |
| 35      | DIR B      |      | 7A-85-40 |          | 7A-85-40 | 7A-85-40  |          | 7A-85-40 |
| 36      | PLAY       |      | 7A-85-08 | 7C-83-82 | 7C-83-05 | 7A-85-08  | 7C-83-82 | 7C-83-05 |
| 37      | >>>        |      | 7A-85-0A | 7C-83-BA | 7C-83-03 | 7A-85-0A  | 7C-83-BA | 7C-83-03 |
| 38      | <<<        |      | 7A-85-0B | 7C-83-B9 | 7C-83-02 | 7A-85-0B  | 7C-83-B9 | 7C-83-02 |
| 39      | PAUSE/STOP |      | 7A-85-09 | 7C-83-84 | 7C-83-04 | 7A-85-09  | 7C-83-84 | 7C-83-04 |
| 40      | DISC       |      | 7A-85-4F | 7C-83-8B |          | 7A-85-4F  | 7C-83-8B |          |
| 41      | STOP       |      |          | 7C-83-85 | 7C-83-5B |           | 7C-83-85 | 7C-83-5B |
| 42      | >>>        |      | 7A-85-0C | 7C-83-87 | 7C-83-07 | 7A-85-0C  | 7C-83-87 | 7C-83-07 |
| 43      | <<<        |      | 7A-85-0D | 7C-83-86 | 7C-83-06 | 7A-85-0D  | 7C-83-86 | 7C-83-06 |
| 44      | A/B/C/D/E  |      | 7A-85-12 |          | 7A-85-12 |           |          |          |
| 45      | PRESET +   |      | 7A-85-10 |          | 7A-85-10 |           |          |          |
| 46      | PRESET -   |      | 7A-85-11 |          | 7A-85-11 |           |          |          |
| 47      | 1          |      | 7A-85-88 | 7A-85-88 | 7A-85-88 | 7A-85-88  | 7A-85-88 | 7A-85-88 |
| 48      | 2          |      | 7A-85-89 | 7A-85-89 | 7A-85-89 | 7A-85-89  | 7A-85-89 | 7A-85-89 |
| 49      | 3          |      | 7A-85-8A | 7A-85-8A | 7A-85-8A | 7A-85-8A  | 7A-85-8A | 7A-85-8A |
| 50      | 4          |      | 7A-85-8B | 7A-85-8B | 7A-85-8B | 7A-85-8B  | 7A-85-8B | 7A-85-8B |
| 51      | 5          |      | 7A-85-8C | 7A-85-8C | 7A-85-8C | 7A-85-8C  | 7A-85-8C | 7A-85-8C |
| 52      | 6          |      | 7A-85-8D | 7A-85-8D | 7A-85-8D | 7A-85-8D  | 7A-85-8D | 7A-85-8D |
| 53      | 7          |      | 7A-85-8E | 7A-85-8E | 7A-85-8E | 7A-85-8E  | 7A-85-8E | 7A-85-8E |
| 54      | 8          |      | 7A-85-8F | 7A-85-8F | 7A-85-8F | 7A-85-8F  | 7A-85-8F | 7A-85-8F |
| 55      | 9          |      | 7A-85-90 | 7A-85-90 | 7A-85-90 | 7A-85-90  | 7A-85-90 | 7A-85-90 |
| 56      | 10         |      | 7A-85-91 | 7A-85-91 | 7A-85-91 | 7A-85-91  | 7A-85-91 | 7A-85-91 |
| 57      | 11         |      | 7A-85-92 | 7A-85-92 | 7A-85-92 | 7A-85-92  | 7A-85-92 | 7A-85-92 |
| 58      | 12         |      | 7A-85-93 | 7A-85-93 | 7A-85-93 | 7A-85-93  | 7A-85-93 | 7A-85-93 |



## RX-V2095/RX-V2095RDS

## Learning and macro key

| Key No. | NAME           | LEARN | MACRO | Key No. | NAME       | LEARN | MACRO |
|---------|----------------|-------|-------|---------|------------|-------|-------|
| 1       | TAPE/MD        | X     | O     | 31      | STOP       | ●     | X     |
| 2       | CD             | X     | O     | 32      | A/B        | ●     | X     |
| 3       | TUNER          | X     | O     | 33      | REC/PAUSE  | ●     | X     |
| 4       | VCR 1          | X     | O     | 34      | DIR A      | ●     | X     |
| 5       | DVD/LD         | X     | O     | 35      | DIR B      | ●     | X     |
| 6       | TV/DBS         | X     | O     | 36      | PLAY       | ●     | X     |
| 7       | VCR 2          | X     | O     | 37      | ⏮          | ●     | X     |
| 8       | ⏮              | O     | O     | 38      | ⏪          | ●     | X     |
| 9       | V-AUX          | X     | O     | 39      | PAUSE/STOP | ●     | X     |
| 10      | PHONO          | X     | O     | 40      | DISC       | ●     | X     |
| 11      | EXT. DECODER   | X     | O     | 41      | STOP       | ●     | X     |
| 12      | EFFECT         | X     | X     | 42      | ⏭          | ●     | X     |
| 13      | SYSTEM POWER   | X     | O     | 43      | ⏩          | ●     | X     |
| 14      | POWER STANDBY  | X     | O     | 44      | A/B/C/D/E  | ●     | X     |
| 15      | TV POWER       | O     | X     | 45      | PRESET +   | ●     | X     |
| 16      | VCR POWER      | O     | X     | 46      | PRESET -   | ●     | X     |
| 17      | ⏮ PLAY ⏭       | X     | X     | 47      | 1          | ●     | X     |
| 18      | + ⏮ +          | X     | X     | 48      | 2          | ●     | X     |
| 19      | - ⏭ -          | X     | X     | 49      | 3          | ●     | X     |
| 20      | ⏮ PAUSE/STOP ⏭ | X     | X     | 50      | 4          | ●     | X     |
| 21      | VOLUME +       | X     | X     | 51      | 5          | ●     | X     |
| 22      | VOLUME -       | X     | X     | 52      | 6          | ●     | X     |
| 23      | MUTE           | X     | X     | 53      | 7          | ●     | X     |
| 24      | LEVEL          | X     | X     | 54      | 8          | ●     | X     |
| 25      | TEST           | X     | X     | 55      | 9          | ●     | X     |
| 26      | SLEEP          | X     | X     | 56      | 10         | ●     | X     |
| 27      | ON SCREEN      | X     | X     | 57      | 11         | ●     | X     |
| 28      | PLAY           | ●     | X     | 58      | 12         | ●     | X     |
| 29      | ⏭              | ●     | X     |         |            |       |       |
| 30      | ⏪              | ●     | X     |         |            |       |       |

## LEARN

O : Learning key A (The key of learning 1 position (Don't care every SW).)

● : Learning key B (The key of learning 2 position of SW3-B and SW3-C. in case of SW3-A, non-learning key, without regard to the positions of other SW.)

X : Non-learning key (The key of non-learning without regard to positions of every SW.)

## MACRO

O : The key of macro setting

X : The key of macro non-setting

## The list of action when each key is pushed.

| Key No. |                | Cover OPEN |      |      | Cover CLOSE |       |      |
|---------|----------------|------------|------|------|-------------|-------|------|
|         |                | Don't care |      |      | Don't care  |       |      |
|         |                | SW 1       | SW 2 | SW 3 | SW 1        | SW 2  | SW 3 |
|         |                | A          | B    | C    | OFF         | QUICK | SLOW |
| 1       | TAPE/MD        | AS         | AS   | AS   | AS          | MS    | MS   |
| 2       | CD             | AS         | AS   | AS   | AS          | MS    | MS   |
| 3       | TUNER          | AS         | AS   | AS   | AS          | MS    | MS   |
| 4       | VCR 1          | AS         | AS   | AS   | AS          | MS    | MS   |
| 5       | DVD/LD         | AS         | AS   | AS   | AS          | MS    | MS   |
| 6       | TV/DBS         | AS         | AS   | AS   | AS          | MS    | MS   |
| 7       | VCR 2          | AS         | AS   | AS   | AS          | MS    | MS   |
| 8       | ⏮              | GS         | GS   | GS   | GS          | MS    | MS   |
| 9       | V-AUX          | AS         | AS   | AS   | AS          | MS    | MS   |
| 10      | PHONO          | AS         | AS   | AS   | AS          | MS    | MS   |
| 11      | EXT. DECODER   | AS         | AS   | AS   | AS          | MS    | MS   |
| 12      | EFFECT         | AS         | AS   | AS   | AS          | AS    | AS   |
| 13      | SYSTEM POWER   | A          | A    | A    | A           | M     | M    |
| 14      | POWER STANDBY  | A          | A    | A    | A           | M     | M    |
| 15      | TV POWER       | G          | G    | G    | G           | G     | G    |
| 16      | VCR POWER      | G          | G    | G    | G           | G     | G    |
| 17      | ⏮ PLAY ⏭       | A          | A    | A    | CS          | CS    | CS   |
| 18      | + ⏮ +          | A          | A    | A    | CS          | CS    | CS   |
| 19      | - ⏭ -          | A          | A    | A    | CS          | CS    | CS   |
| 20      | ⏮ PAUSE/STOP ⏭ | A          | A    | A    | CS          | CS    | CS   |
| 21      | VOLUME +       | A          | A    | A    | A           | A     | A    |
| 22      | VOLUME -       | A          | A    | A    | A           | A     | A    |
| 23      | MUTE           | A          | A    | A    | A           | A     | A    |
| 24      | LEVEL          | A          | A    | A    | —           | —     | —    |
| 25      | TEST           | A          | A    | A    | —           | —     | —    |
| 26      | SLEEP          | A          | A    | A    | —           | —     | —    |
| 27      | ON SCREEN      | A          | A    | A    | —           | —     | —    |
| 28      | PLAY           | AS         | GS   | BS   | —           | —     | —    |
| 29      | ⏭              | AS         | GS   | BS   | —           | —     | —    |
| 30      | ⏪              | AS         | GS   | BS   | —           | —     | —    |

| Key No. |            | Cover OPEN |      |      | Cover CLOSE |       |      |
|---------|------------|------------|------|------|-------------|-------|------|
|         |            | Don't care |      |      | Don't care  |       |      |
|         |            | SW 1       | SW 2 | SW 3 | SW 1        | SW 2  | SW 3 |
|         |            | A          | B    | C    | OFF         | QUICK | SLOW |
| 31      | STOP       | AS         | GS   | BS   | —           | —     | —    |
| 32      | A/B        | AS         | GS   | GS   | —           | —     | —    |
| 33      | REC/PAUSE  | AS         | GS   | BS   | —           | —     | —    |
| 34      | DIR A      | AS         | GS   | GS   | —           | —     | —    |
| 35      | DIR B      | AS         | GS   | GS   | —           | —     | —    |
| 36      | PLAY       | AS         | BS   | BS   | —           | —     | —    |
| 37      | ⏮          | AS         | BS   | BS   | —           | —     | —    |
| 38      | ⏪          | AS         | BS   | BS   | —           | —     | —    |
| 39      | PAUSE/STOP | AS         | BS   | BS   | —           | —     | —    |
| 40      | DISC       | AS         | BS   | BS   | —           | —     | —    |
| 41      | STOP       | NS         | BS   | BS   | —           | —     | —    |
| 42      | ⏭          | AS         | BS   | BS   | —           | —     | —    |
| 43      | ⏩          | AS         | BS   | BS   | —           | —     | —    |
| 44      | A/B/C/D/E  | AS         | GS   | GS   | —           | —     | —    |
| 45      | PRESET +   | AS         | GS   | GS   | —           | —     | —    |
| 46      | PRESET -   | AS         | GS   | GS   | —           | —     | —    |
| 47      | 1          | A          | B    | B    | —           | —     | —    |
| 48      | 2          | A          | B    | B    | —           | —     | —    |
| 49      | 3          | A          | B    | B    | —           | —     | —    |
| 50      | 4          | A          | B    | B    | —           | —     | —    |
| 51      | 5          | A          | B    | B    | —           | —     | —    |
| 52      | 6          | A          | B    | B    | —           | —     | —    |
| 53      | 7          | A          | B    | B    | —           | —     | —    |
| 54      | 8          | A          | B    | B    | —           | —     | —    |
| 55      | 9          | A          | B    | B    | —           | —     | —    |
| 56      | 10         | A          | B    | B    | —           | —     | —    |
| 57      | 11         | A          | B    | B    | —           | —     | —    |
| 58      | 12         | A          | B    | B    | —           | —     | —    |

A : Transmit the fixed code (non-learning key)

B : Transmit the fixed code or learn code

AS : Transmit the fixed code (non-learning key) + lighting

BS : Transmit the fixed code or learn code + lighting

CS : Transmit the code of control mode + lighting

G : Transmit the learn code (in case of the non-learning, transmits no code)

GS : Transmit the learn code (in case of the non-learning, transmits no code) + lighting

M : MACRO transmission

MS : MACRO transmission + lighting

NS : Lighting only

## Lighting point

| Key No. | COVER      | OPEN        |         |         |
|---------|------------|-------------|---------|---------|
|         | SW 1       | Don't care. |         |         |
|         | SW 3       | Don't care. |         |         |
|         | SW 2       | A           | B       | C       |
| 1       | TAPE/MD    | Z1, Z17     | Z1      | Z1      |
| 2       | CD         | Z2, Z18     | Z2      | Z2      |
| 3       | TUNER      | Z3, Z19     | Z3      | Z3      |
| 4       | VCR 1      | Z4          | Z4, Z17 | Z4      |
| 5       | DVD/LD     | Z5          | Z5, Z18 | Z5      |
| 6       | TV/DBS     | Z6          | Z6, Z19 | Z6      |
| 7       | VCR 2      | Z7          | Z7      | Z7, Z17 |
| 8       |            | Z8          | Z8      | Z8, Z18 |
| 9       | V-AUX      | Z9          | Z9      | Z9, Z19 |
| 10      | PHONO      | Z10         | Z10     | Z10     |
| 11      | EXT. DEC.  | Z11         | Z11     | Z11     |
| 12      | EFFECT     | Z12         | Z12     | Z12     |
| 28      | PLAY       | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 29      | ⏮          | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 30      | ⏪          | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 31      | STOP       | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 32      | A/B        | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 33      | REC/PAUSE  | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 34      | DIR A      | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 35      | DIR B      | Z1, Z17     | Z4, Z17 | Z7, Z17 |
| 36      | PLAY       | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 37      | ⏮          | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 38      | ⏪          | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 39      | PAUSE/STOP | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 40      | DISC       | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 41      | STOP       | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 42      | ⏮          | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 43      | ⏪          | Z2, Z18     | Z5, Z18 | Z8, Z18 |
| 44      | A/B/C/D/E  | Z3, Z19     | Z6, Z19 | Z9, Z19 |
| 45      | PRESET +   | Z3, Z19     | Z6, Z19 | Z9, Z19 |
| 46      | PRESET -   | Z3, Z19     | Z6, Z19 | Z9, Z19 |

| Key No. | COVER          | CLOSE                                                                                        |
|---------|----------------|----------------------------------------------------------------------------------------------|
|         | SW 1           | Don't care.                                                                                  |
|         | SW 3           | Don't care.                                                                                  |
|         | SW 2           | Don't care.                                                                                  |
| 1       | TAPE/MD        | Z1 : ○, Z13 : ○, Z14 : ○, Z16 : ○, Z15 : ○                                                   |
| 2       | CD             | Z1 : ○, Z13 : ○, Z14 : ○, Z16 : ○, Z15 : ○                                                   |
| 3       | TUNER          | Z3 : ○, Z13 : ○, Z14 : ○, Z16 : ○                                                            |
| 4       | VCR 1          | Z4 : ○, Z13 : K28-B, Z14 : K29-B, Z16 : K30-B, Z15 : K31-B                                   |
| 5       | DVD/LD         | Z5 : ○, Z13 : ○, Z14 : ○, Z16 : ○, Z15 : ○                                                   |
| 6       | TV/DBS         | Z6 : ○, Z13 : K44-B, Z14 : K45-B, Z16 : K46-B                                                |
| 7       | VCR 2          | Z7 : ○, Z13 : ○, Z14 : ○, Z16 : ○, Z15 : ○                                                   |
| 8       |                | Z8 : ○, Z13 : ○, Z14 : ○, Z16 : ○, Z15 : ○                                                   |
| 9       | V-AUX          | Z9 : ○, Z13 : K44-C, Z14 : K45-C, Z16 : K46-C                                                |
| 10      | PHONO          | Z10 : ○                                                                                      |
| 11      | EXT. DEC.      | Z11 : ○                                                                                      |
| 12      | EFFECT         | Z12 : ○                                                                                      |
| 17      | △ PLAY △       | Same as the case of pushing the mode key of current mode.                                    |
| 18      | + ⏮ +          | (In case of having set the mode TAPE, the lighting is same as the case of pushing TAPE key.) |
| 19      | - ⏮ -          |                                                                                              |
| 20      | ∇ PAUSE/STOP ∇ |                                                                                              |

Detail : ○----- Lighting on.

K × X - Y----- Lighting on if the key, that is key No. X × X and SW2 - Y, has been learned.

## Control transmission

The unit transmits the code of the mode set by pushing one of 4 keys (OPERATION CONTROL keys) shown below.

The codes of every mode are the code setting key No. shown below.

(The code is fixed code or learned signal in case of finishing learning. If the key has no code and no learning, the unit transmits no code.)

| Key No. | NAME           | TAPE  | CD    | TUNER | VCR 1 | DVD/LD | TV/DBS | VCR 2 |       | V-AUX |
|---------|----------------|-------|-------|-------|-------|--------|--------|-------|-------|-------|
| 17      | △ PLAY △       | K28-A | K36-A | K44-A | K28-B | K36-B  | K44-B  | K28-C | K36-C | K44-C |
| 18      | + ⏮ +          | K29-A | K37-A | K45-A | K29-B | K37-B  | K45-B  | K29-C | K37-C | K45-C |
| 19      | - ⏮ -          | K30-A | K38-A | K46-A | K30-B | K38-B  | K46-B  | K30-C | K38-C | K46-C |
| 20      | ∇ PAUSE/STOP ∇ | K31-A | K39-A | —     | K31-B | K39-B  | —      | K31-C | K39-C | —     |

Detail : K × X - Y

Key No. The position of SW2

## All key lighting

If the LIGHT key (Key No. 62) is pushed, the LED lights as shown below.

If the LIGHT key (Key No. 62) is pushed again during lighting of the LED, the LED turns off.

| COVER        | OPEN     | CLOSE    |
|--------------|----------|----------|
| Lighting LED | Z1 ~ Z19 | Z1 ~ Z16 |

## MACRO transmission

Transmission code of initial setting is shown below. (key No.)

Each transmission code is the fixed or learning code.

| Key No. | COVER         | CLOSE         |     |       |   |   |   |   |
|---------|---------------|---------------|-----|-------|---|---|---|---|
|         | SW 1          | Don't care.   |     |       |   |   |   |   |
|         | SW 2          | Don't care.   |     |       |   |   |   |   |
|         | SW 3          | QUICK or SLOW |     |       |   |   |   |   |
|         | MACRO order   | 1             | 2   | 3     | 4 | 5 | 6 | 7 |
| 1       | TAPE/MD       | K13           | K1  | K28-A | — | — | — | — |
| 2       | CD            | K13           | K2  | K36-A | — | — | — | — |
| 3       | TUNER         | K13           | K3  | —     | — | — | — | — |
| 4       | VCR 1         | K13           | K4  | K28-B | — | — | — | — |
| 5       | DVD/LD        | K13           | K5  | K36-B | — | — | — | — |
| 6       | TV/DBS        | K13           | K6  | —     | — | — | — | — |
| 7       | VCR 2         | K13           | K7  | K28-C | — | — | — | — |
| 8       |               | K13           | K8  | K36-C | — | — | — | — |
| 9       | V-AUX         | K13           | K9  | —     | — | — | — | — |
| 10      | PHONO         | K13           | K10 | —     | — | — | — | — |
| 11      | EXT. DECODER  | K13           | K11 | —     | — | — | — | — |
| 13      | SYSTEM POWER  | K13           | K15 | K16   | — | — | — | — |
| 14      | POWER STANDBY | K14           | —   | —     | — | — | — | — |

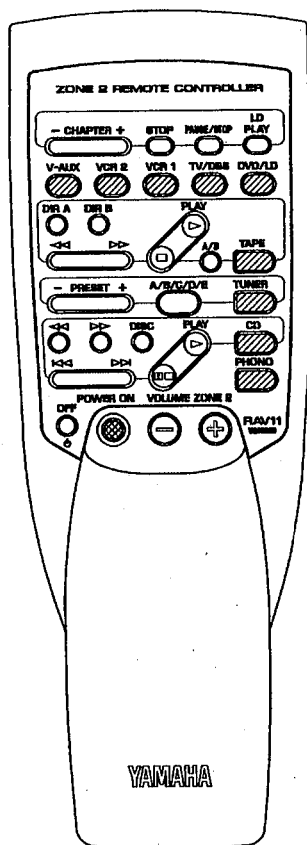
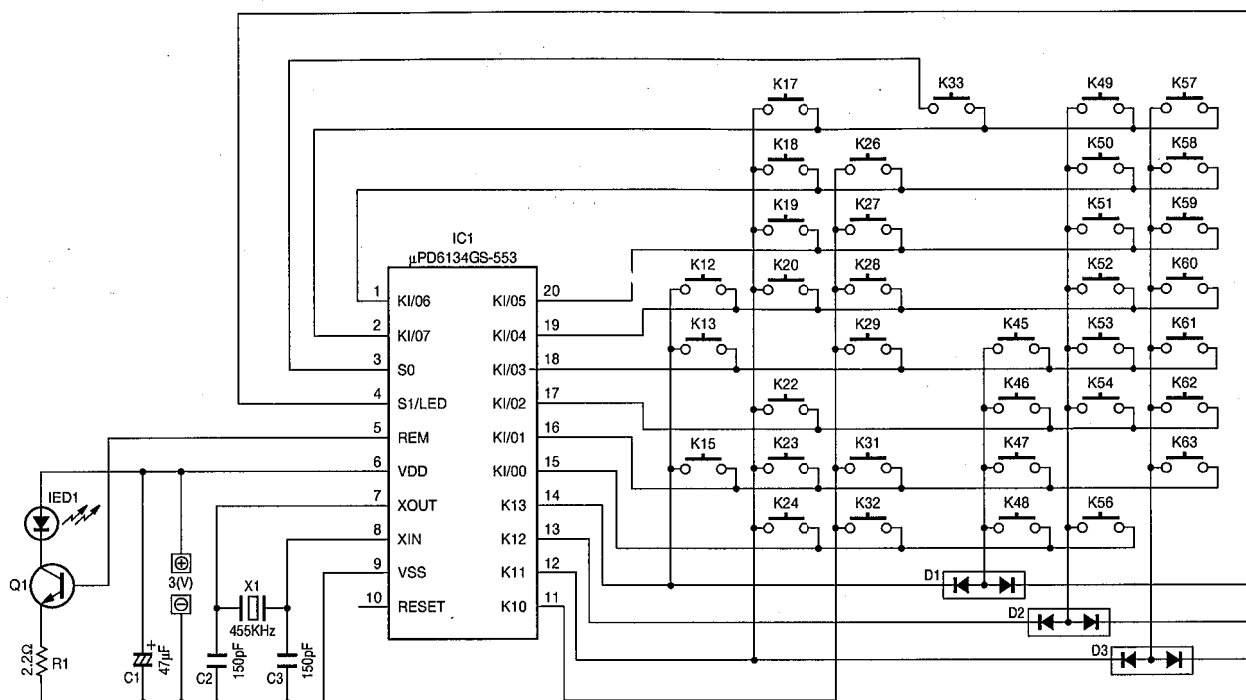
Detail : K × X - Y

Key No. The position of SW2

RX-V2095/RX-V2095RDS

# ZONE 2 REMOTE CONTROLLER

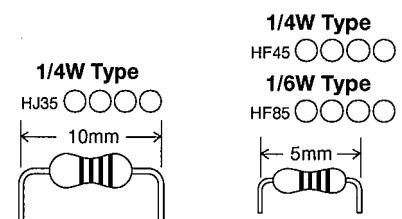
## ■ SCHEMATIC DIAGRAM



| Key No. | Function        | HEX    |      |
|---------|-----------------|--------|------|
|         |                 | CUSTOM | DATA |
| 12      | DIR A           | 7A     | 07   |
| 13      | DIR B           | 7A     | 40   |
| 14      |                 |        |      |
| 15      | PLAY ▷ (TAPE)   | 7A     | 00   |
| 17      | ◀◀ (TAPE)       | 7A     | 01   |
| 18      | ▶▶ (TAPE)       | 7A     | 02   |
| 19      | □ (TAPE)        | 7A     | 03   |
| 20      | A/B             | 7A     | 06   |
| 22      | PRESET -        | 7A     | 11   |
| 23      | PRESET +        | 7A     | 10   |
| 24      | A/B/C/D/E       | 7A     | 12   |
| 26      | ◀◀ (CD)         | 7A     | 0D   |
| 27      | ▶▶ (CD)         | 7A     | 0C   |
| 28      | DISC            | 7A     | 4F   |
| 29      | PLAY ▷ (CD)     | 7A     | 08   |
| 31      | ◀◀              | 7A     | 0B   |
| 32      | ▶▶              | 7A     | 0A   |
| 33      | 01/□            | 7A     | 09   |
| 34      |                 |        |      |
| 45      | CHAPTER -       | 7C     | 02   |
| 46      | CHAPTER +       | 7C     | 03   |
| 47      | STOP            | 7C     | 5B   |
| 48      | PAUSE/STOP      | 7C     | 04   |
| 49      | LD PLAY         | 7C     | 05   |
| 50      | V-AUX           | 7A     | D8   |
| 51      | VCR 2           | 7A     | D7   |
| 52      | VCR 1           | 7A     | D6   |
| 53      | TV/DBS          | 7A     | D9   |
| 54      | DVD/LD          | 7A     | D5   |
| 55      |                 |        |      |
| 56      | TAPE            | 7A     | D3   |
| 57      | TUNER           | 7A     | D2   |
| 58      | CD              | 7A     | D1   |
| 59      | PHONO           | 7A     | D0   |
| 60      | POWER OFF       | 7A     | 1E   |
| 61      | POWER ON        | 7A     | 1D   |
| 62      | VOLUME ZONE 2 - | 7A     | DB   |
| 63      | VOLUME ZONE 2 + | 7A     | DA   |
| 64      |                 |        |      |

# 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 $\Omega$   | HJ35 3100          | HF85 3100          | 10 k $\Omega$  | HF45 7100          | HF45 7100          |
| 1.8 $\Omega$   | HJ35 3180          | *                  | 11 k $\Omega$  | HF45 7110          | HF45 7110          |
| 2.2 $\Omega$   | HJ35 3220          | HF85 3220          | 12 k $\Omega$  | HJ35 7120          | HF85 7120          |
| 3.3 $\Omega$   | HJ35 3330          | HF85 3330          | 13 k $\Omega$  | HF45 7130          | HF45 7130          |
| 4.7 $\Omega$   | HJ35 3470          | HF85 3470          | 15 k $\Omega$  | HF45 7150          | HF45 7150          |
| 5.6 $\Omega$   | HJ35 3560          | HF85 3560          | 18 k $\Omega$  | HF45 7180          | HF45 7180          |
| 10 $\Omega$    | HF45 4100          | HF45 4100          | 22 k $\Omega$  | HF45 7220          | HF45 7220          |
| 15 $\Omega$    | HJ35 4150          | HF85 4150          | 24 k $\Omega$  | HF45 7240          | HF45 7240          |
| 22 $\Omega$    | HF45 4220          | HF45 4220          | 27 k $\Omega$  | HJ35 7270          | HF85 7270          |
| 27 $\Omega$    | HJ35 4270          | HF85 4270          | 30 k $\Omega$  | HF45 7300          | HF45 7300          |
| 33 $\Omega$    | HF45 4330          | HF45 4330          | 33 k $\Omega$  | HF45 7330          | HF45 7330          |
| 39 $\Omega$    | HJ35 4470          | HF85 4390          | 36 k $\Omega$  | HF45 7360          | HF45 7360          |
| 47 $\Omega$    | HF45 4470          | HF45 4470          | 39 k $\Omega$  | HF45 7390          | HF45 7390          |
| 56 $\Omega$    | HF45 4560          | HF45 4560          | 47 k $\Omega$  | HF45 7470          | HF45 7470          |
| 68 $\Omega$    | HF45 4680          | HF45 4680          | 51 k $\Omega$  | HF45 7510          | HF45 7510          |
| 75 $\Omega$    | HF45 4750          | HF45 4750          | 56 k $\Omega$  | HF45 7560          | HF45 7560          |
| 82 $\Omega$    | HF45 4820          | HF45 4820          | 62 k $\Omega$  | HF45 7620          | HF45 7620          |
| 91 $\Omega$    | HF45 4910          | HF45 4910          | 68 k $\Omega$  | HF45 7680          | HF45 7680          |
| 100 $\Omega$   | HF45 5100          | HF45 5100          | 82 k $\Omega$  | HF45 7820          | HF45 7820          |
| 110 $\Omega$   | HJ35 5110          | HF85 5110          | 91 k $\Omega$  | HF45 7910          | HF45 7910          |
| 120 $\Omega$   | HF45 5120          | HF45 5120          | 100 k $\Omega$ | HF45 8100          | HF45 8100          |
| 150 $\Omega$   | HF45 5150          | HF45 5150          | 110 k $\Omega$ | HF45 8110          | HF45 8110          |
| 160 $\Omega$   | HJ35 5160          | *                  | 120 k $\Omega$ | HF45 8120          | HF45 8120          |
| 180 $\Omega$   | HF45 5180          | HF45 5180          | 150 k $\Omega$ | HF45 8150          | HF45 8150          |
| 200 $\Omega$   | HF45 5200          | HF45 5200          | 180 k $\Omega$ | HF45 8180          | HF45 8180          |
| 220 $\Omega$   | HF45 5220          | HF45 5220          | 220 k $\Omega$ | HJ35 8220          | HF85 8220          |
| 270 $\Omega$   | HF45 5270          | HF45 5270          | 270 k $\Omega$ | HF45 8270          | HF45 8270          |
| 330 $\Omega$   | HF45 5330          | HF45 5330          | 300 k $\Omega$ | HF45 8300          | HF45 8300          |
| 390 $\Omega$   | HF45 5390          | HF45 5390          | 330 k $\Omega$ | HF45 8330          | HF45 8330          |
| 430 $\Omega$   | HF45 5430          | HF45 5430          | 390 k $\Omega$ | HJ35 8390          | HF85 8390          |
| 470 $\Omega$   | HF45 5470          | HF45 5470          | 470 k $\Omega$ | HF45 8470          | HF45 8470          |
| 510 $\Omega$   | HF45 5510          | HF45 5510          | 560 k $\Omega$ | HJ35 8560          | HF85 8560          |
| 560 $\Omega$   | HF45 5560          | HF45 5560          | 680 k $\Omega$ | HJ35 8680          | HF85 8680          |
| 680 $\Omega$   | HF45 5680          | HF45 5680          | 820 k $\Omega$ | HJ35 8820          | HF85 8820          |
| 820 $\Omega$   | HF45 5820          | HF45 5820          | 1.0 M $\Omega$ | HF45 9100          | HF45 9100          |
| 910 $\Omega$   | HF45 5910          | HF45 5910          | 1.2 M $\Omega$ | HJ35 9120          | *                  |
| 1.0 k $\Omega$ | HF45 6100          | HF45 6100          | 1.5 M $\Omega$ | HJ35 9150          | HF85 9150          |
| 1.2 k $\Omega$ | HF45 6120          | HF45 6120          | 1.8 M $\Omega$ | HJ35 9180          | HF85 9180          |
| 1.5 k $\Omega$ | HF45 6150          | HF45 6150          | 2.2 M $\Omega$ | HJ35 9220          | HF85 9220          |
| 1.8 k $\Omega$ | HF45 6180          | HF45 6180          | 3.3 M $\Omega$ | HJ35 9330          | HF85 9330          |
| 2.0 k $\Omega$ | HJ35 6200          | HF85 6200          | 3.9 M $\Omega$ | HJ35 9390          | *                  |
| 2.2 k $\Omega$ | HF45 6220          | HF45 6220          | 4.7 M $\Omega$ | HJ35 9470          | HF85 9470          |
| 2.4 k $\Omega$ | HJ35 6240          | HF85 6240          |                |                    |                    |
| 2.7 k $\Omega$ | HF45 6270          | HF45 6270          |                |                    |                    |
| 3.0 k $\Omega$ | HF45 6300          | HF45 6300          |                |                    |                    |
| 3.3 k $\Omega$ | HF45 6330          | HF45 6330          |                |                    |                    |
| 3.6 k $\Omega$ | HJ35 6360          | HF85 6360          |                |                    |                    |
| 3.9 k $\Omega$ | HF45 6390          | HF45 6390          |                |                    |                    |
| 4.7 k $\Omega$ | HF45 6470          | HF45 6470          |                |                    |                    |
| 5.1 k $\Omega$ | HF45 6510          | HF45 6510          |                |                    |                    |
| 5.6 k $\Omega$ | HF45 6560          | HF45 6560          |                |                    |                    |
| 6.8 k $\Omega$ | HF45 6680          | HF45 6680          |                |                    |                    |
| 8.2 k $\Omega$ | HF45 6820          | HF45 6820          |                |                    |                    |
| 9.1 k $\Omega$ | HF45 6910          | HF45 6910          |                |                    |                    |



**RX-V2095/RX-V2095RDS**

---

**YAMAHA**

---