

# AV RECEIVER

# RX-V467/HTR-4063

## 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.

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This Service Manual uses recycled paper.

## ■ TO SERVICE PERSONNEL

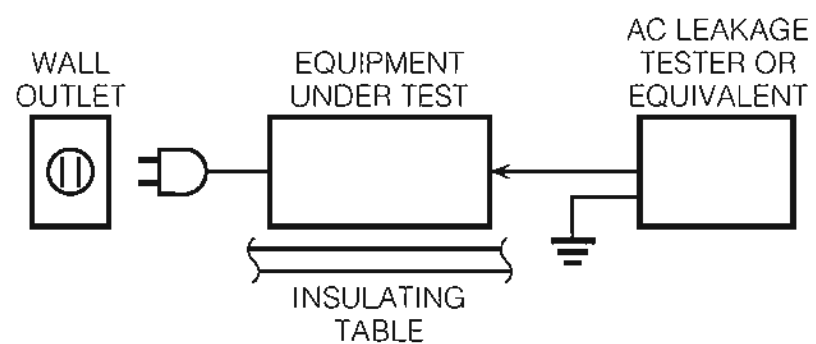
### 1. Critical Components Information

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 ohms 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.



#### For U model

##### “CAUTION”

“F3701: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 6A, 125V FUSE.”

#### For C model

##### CAUTION

F3701: REPLACE WITH SAME TYPE 6A, 125V FUSE.

##### ATTENTION

F3701: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 6A, 125V.

## WARNING: CHEMICAL CONTENT NOTICE!

This product contains chemicals known to the State of California to cause cancer, 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.

## About lead free solder / 無鉛ハンダについて

All of the P.C.B.s installed in this unit and solder joints are soldered using the lead free solder.

Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

#### Caution:

As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.

本機に搭載されているすべての基板およびハンダ付けによる接合部は無鉛ハンダでハンダ付けされています。

無鉛ハンダにはいくつかの種類がありますが、修理時には下記のような無鉛ハンダの使用を推奨します。

- Sn+Ag+Cu (錫 + 銀 + 銅)
- Sn+Cu (錫 + 銅)
- Sn+Zn+Bi (錫 + 亜鉛 + ビスマス)

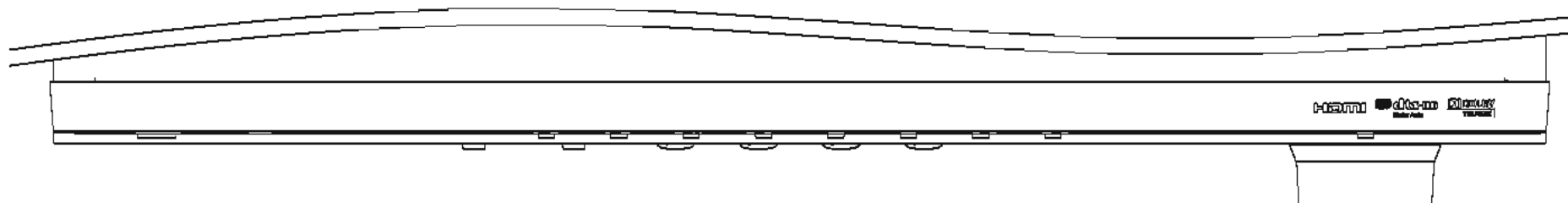
#### 注意：

無鉛ハンダの融点温度は通常の鉛入りハンダに比べ 30 ～ 40℃程度高くなっていますので、それぞれのハンダに合ったハンダごてをご使用ください。

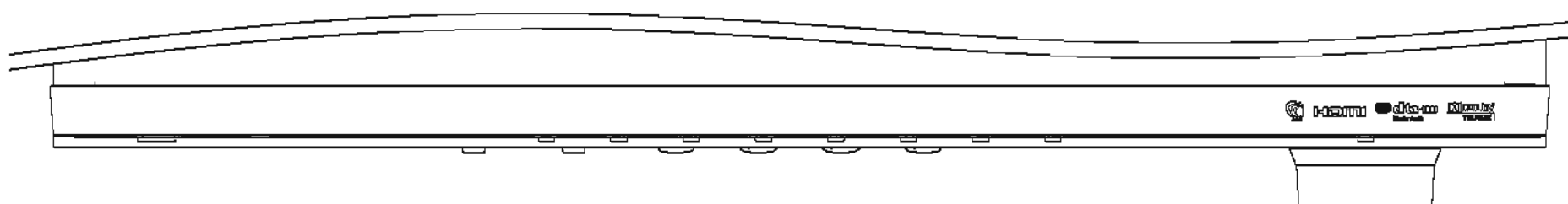
## FRONT PANELS

### Top view

U, C, R, T, K, A, B, G, F, L, models

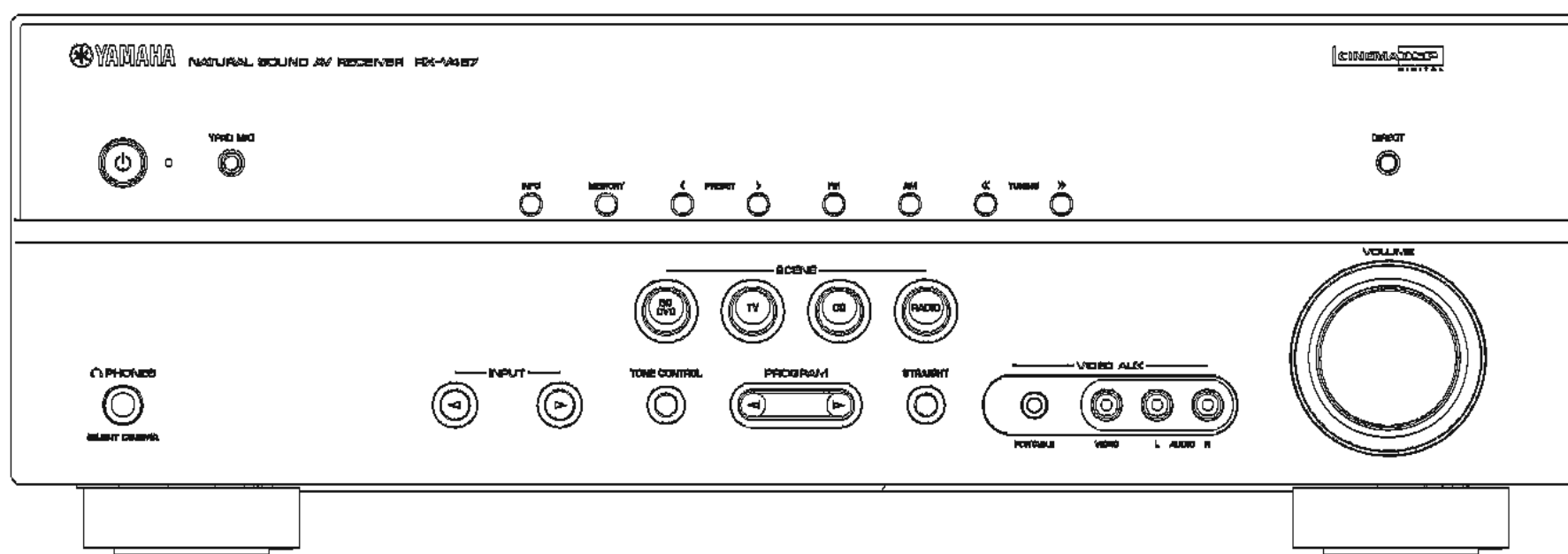


### J model

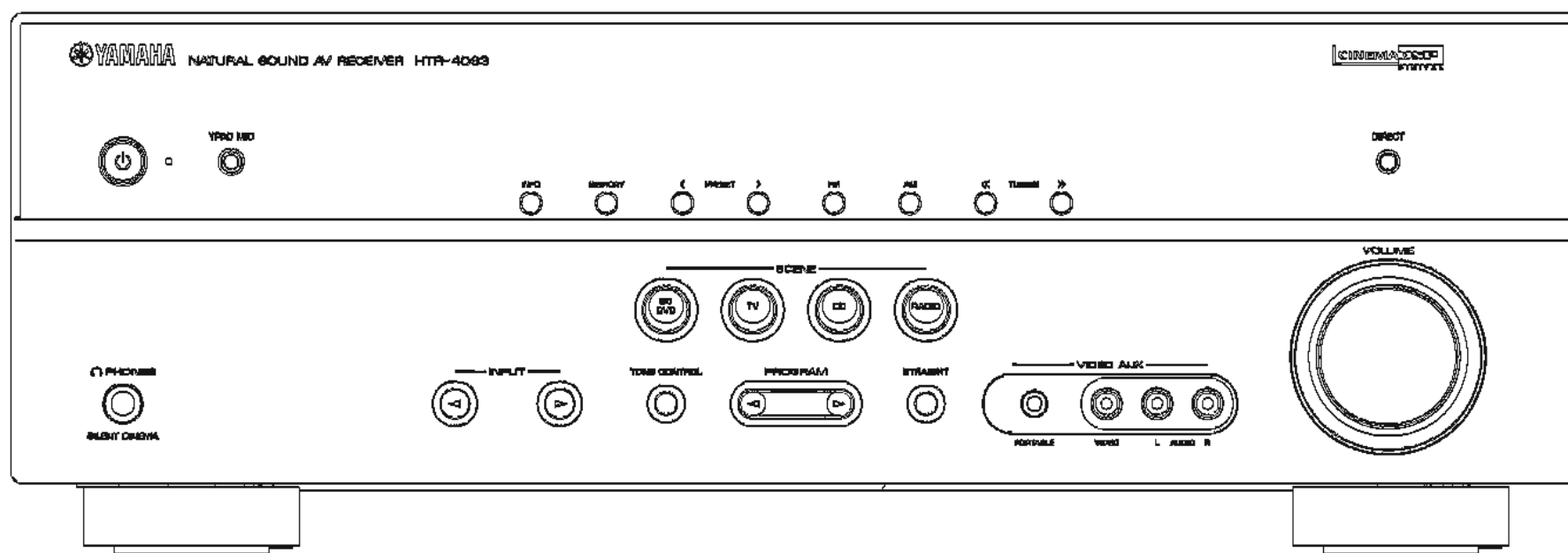


### Front view

RX-V467

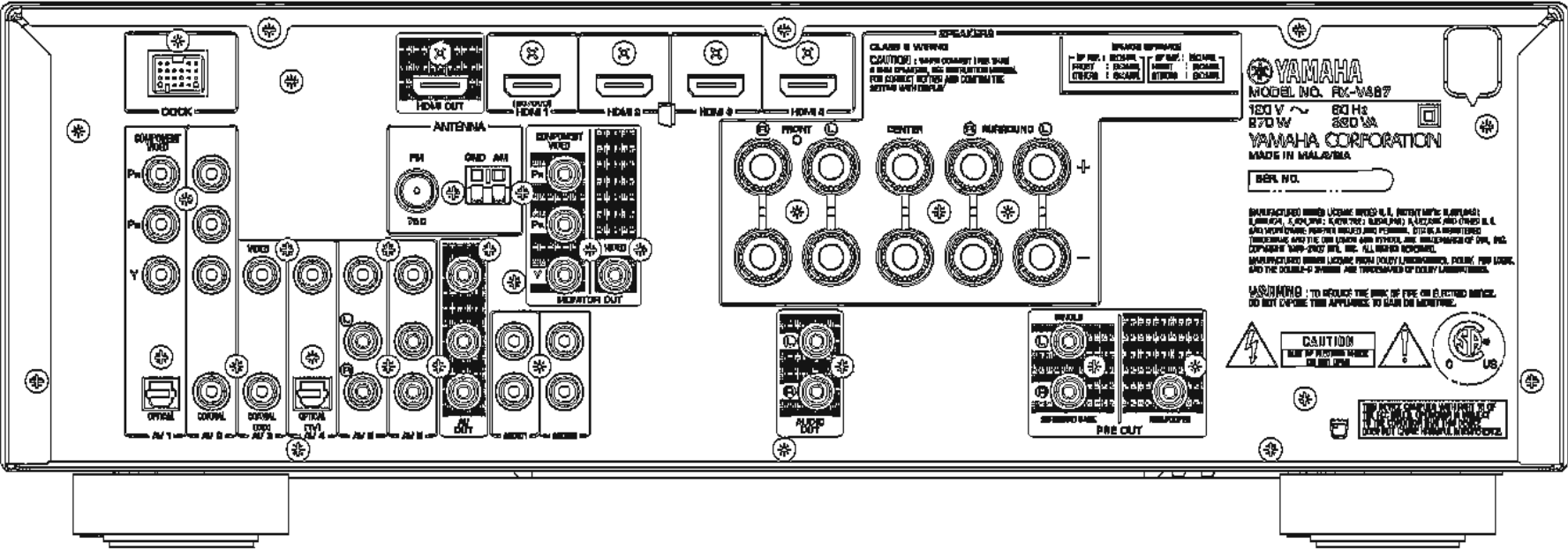


HTR-4063

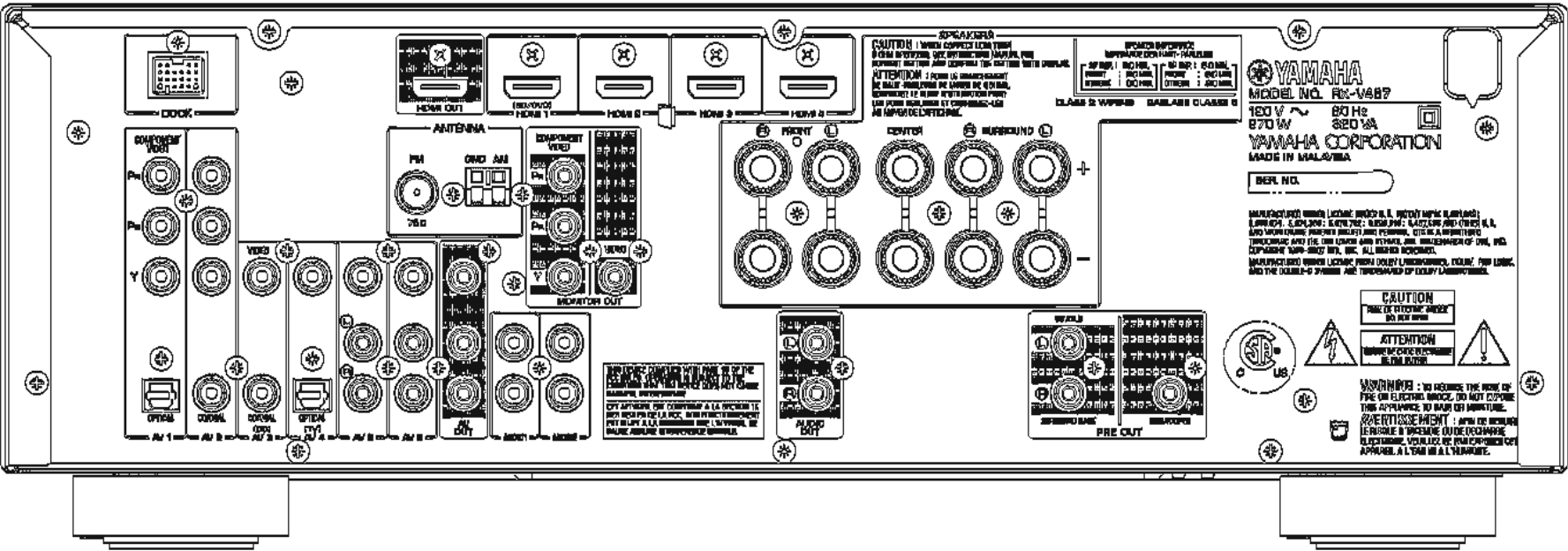


REAR PANELS

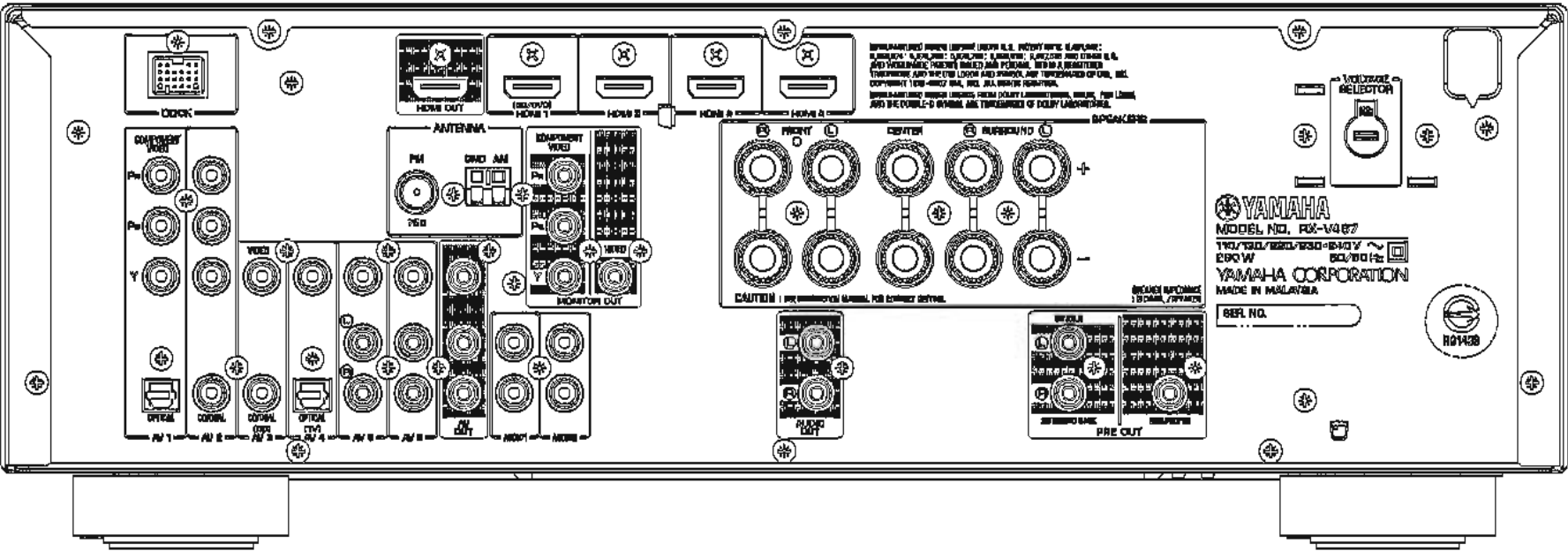
RX-V467 (U model)



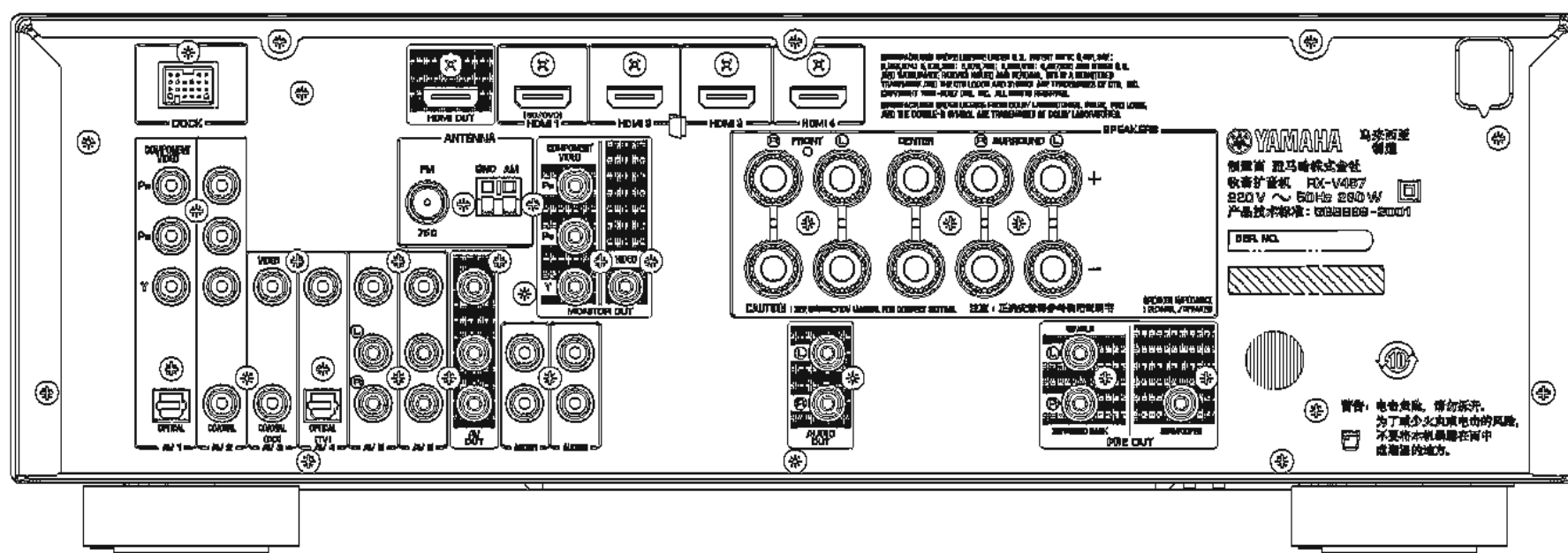
RX-V467 (C model)



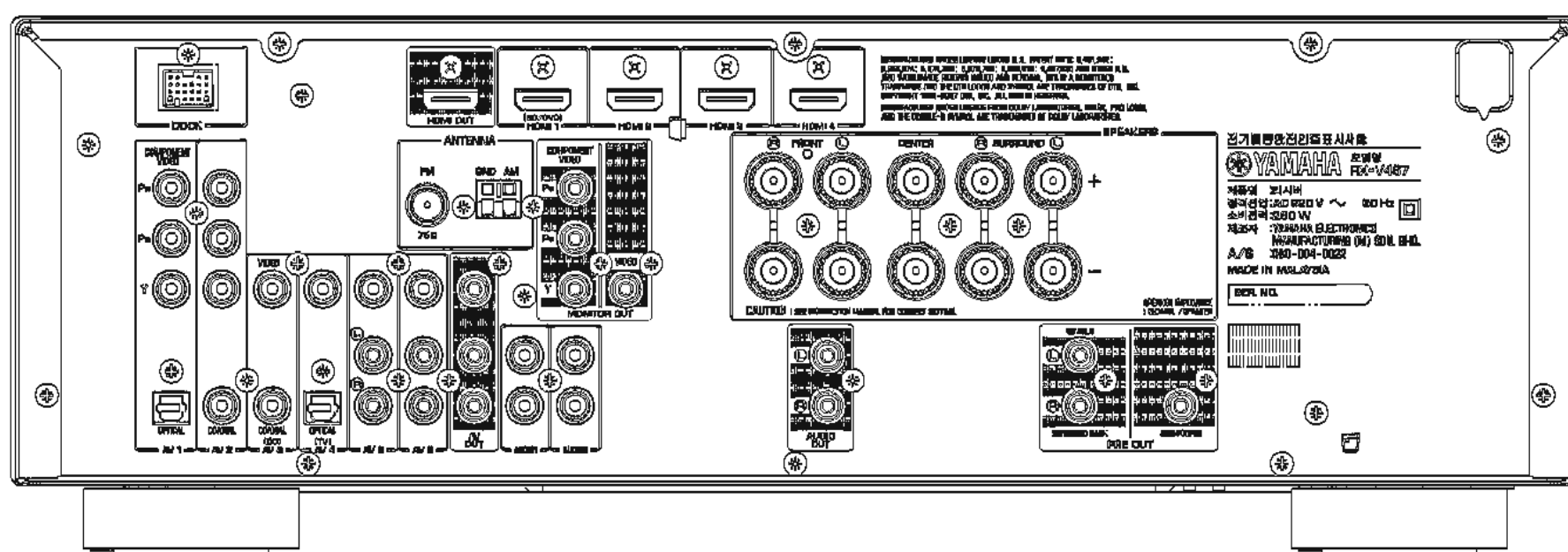
RX-V467 (R model)



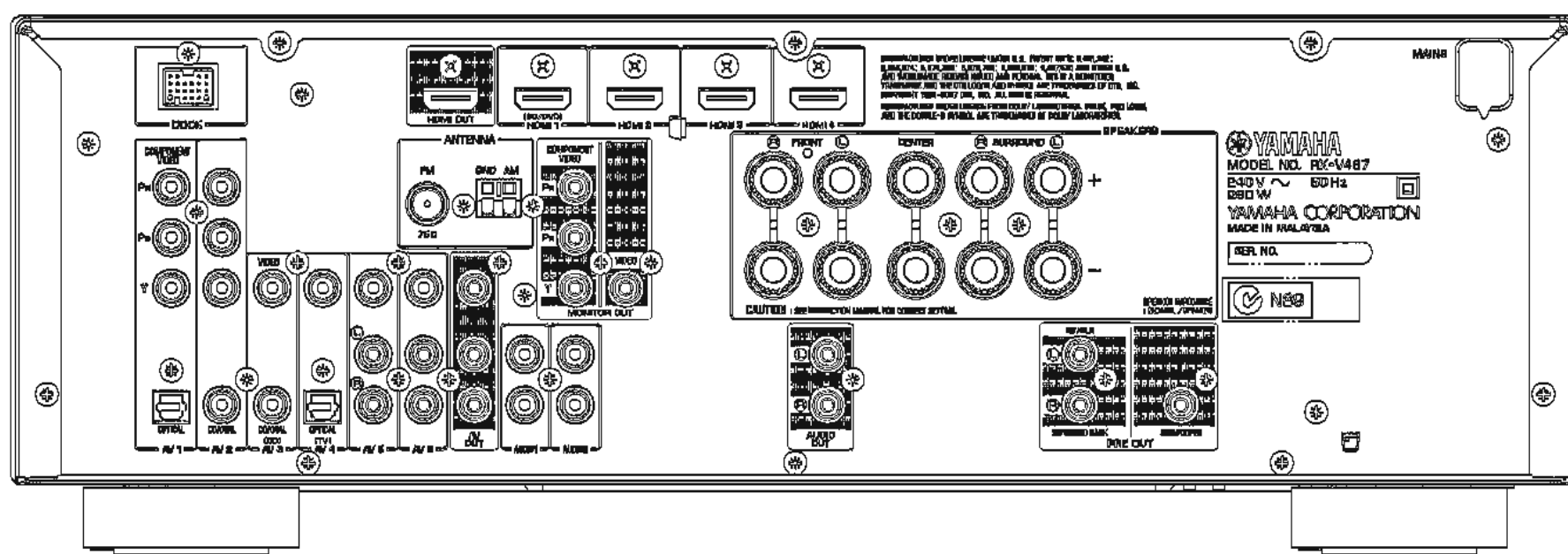
RX-V467 (T model)

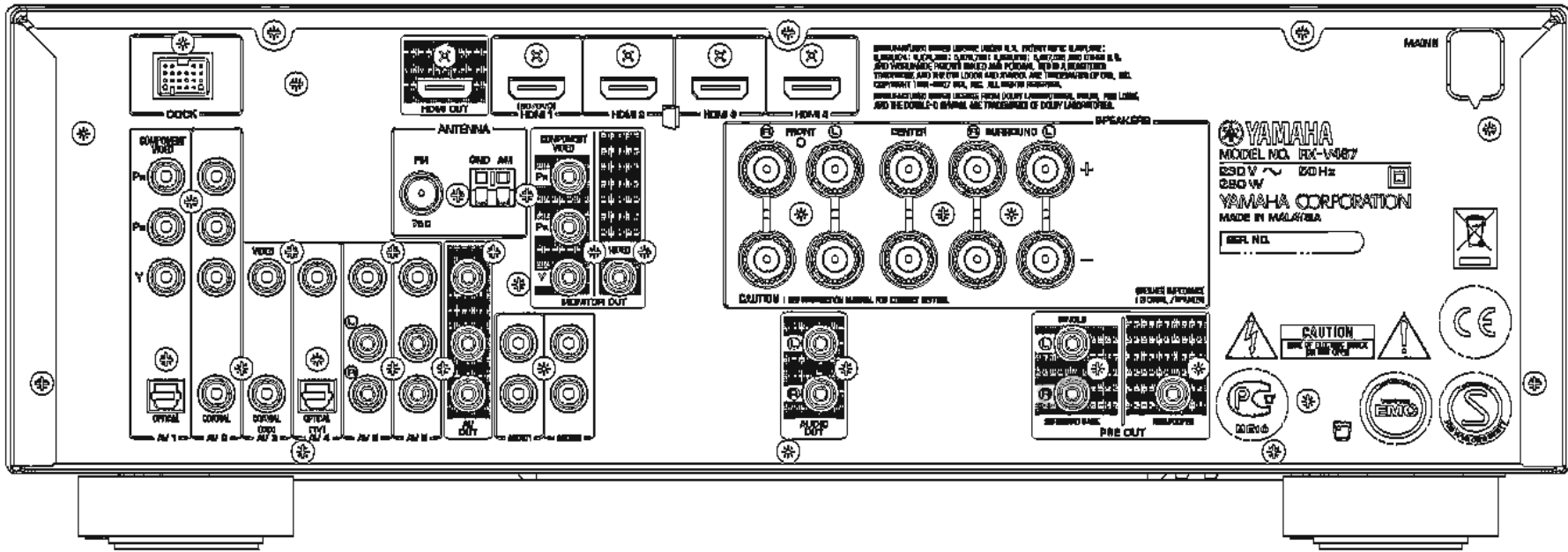


RX-V467 (K model)

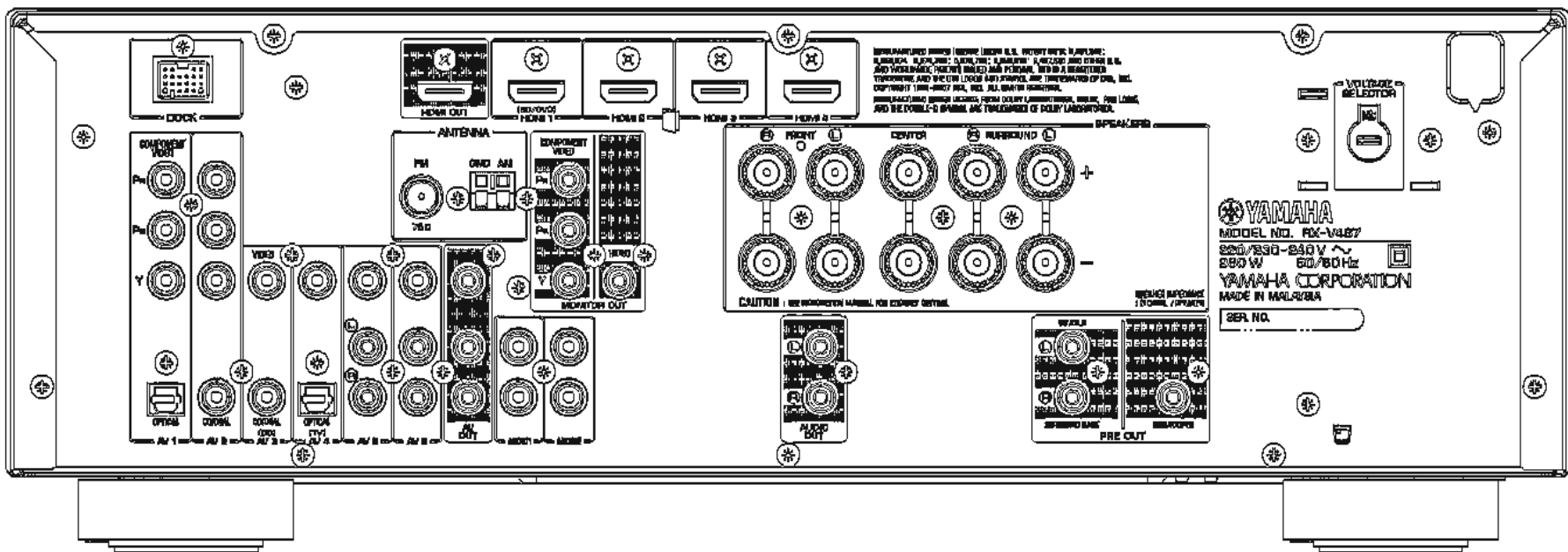


RX-V467 (A model)

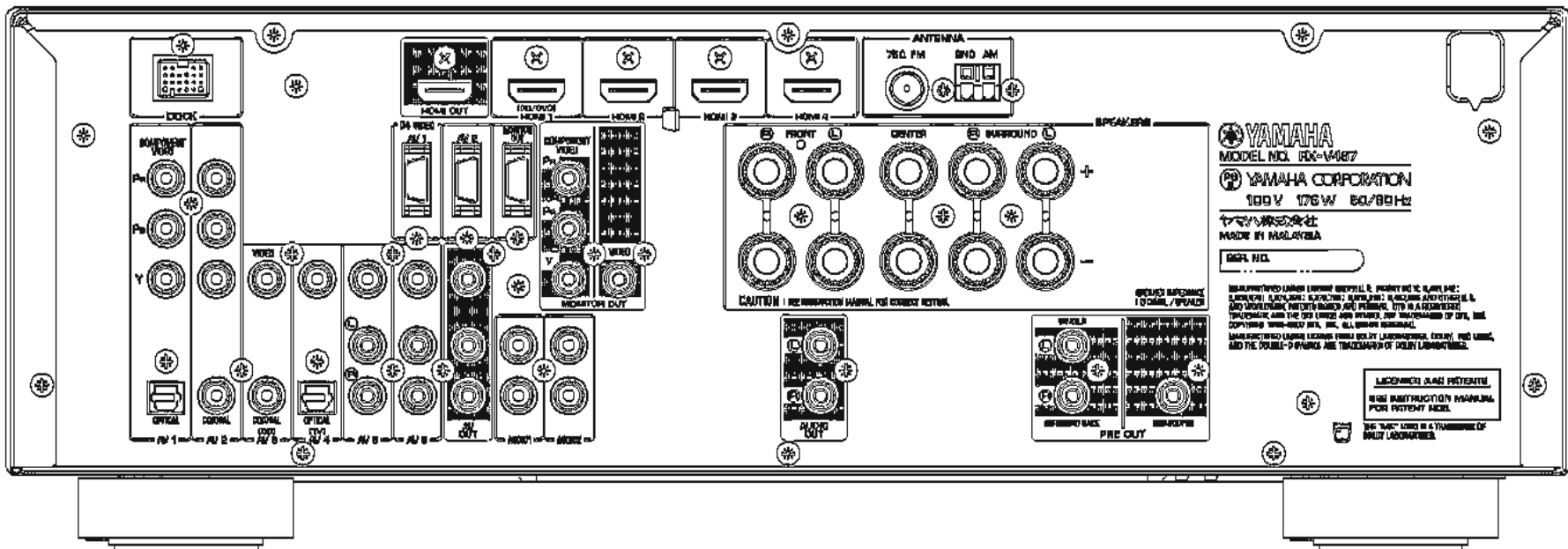


**RX-V467 (B, G, F models)**

## RX-V467 (L model)

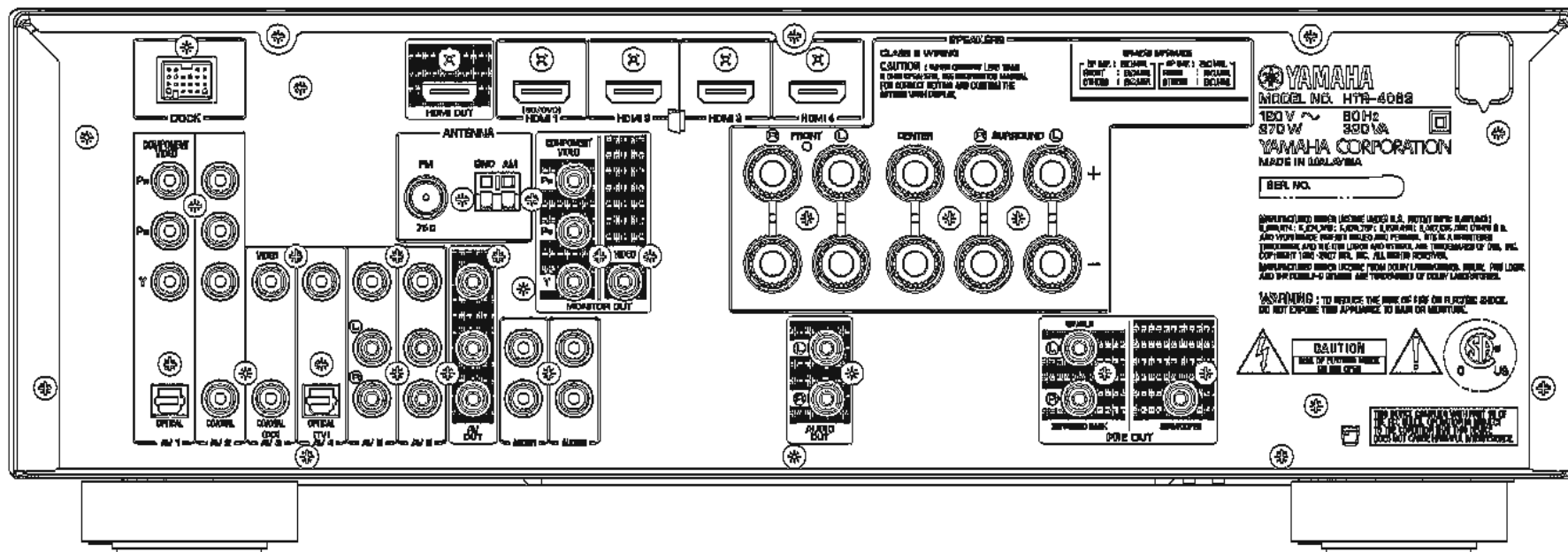


## RX-V467 (J model)

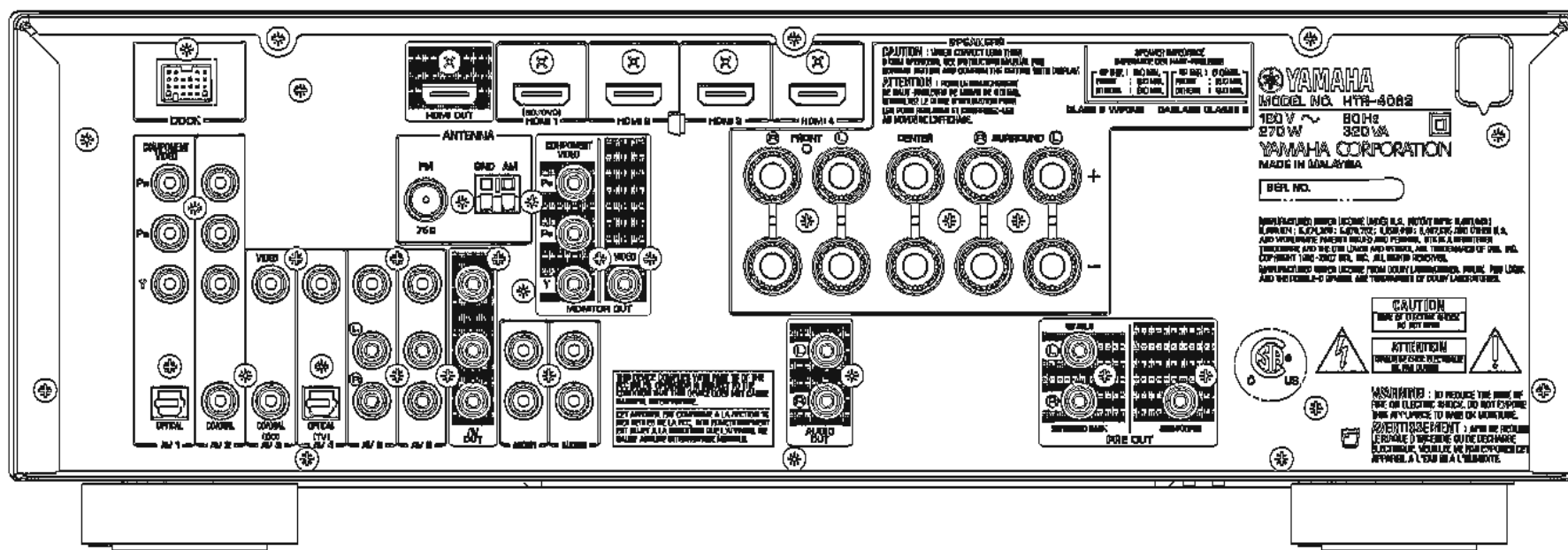




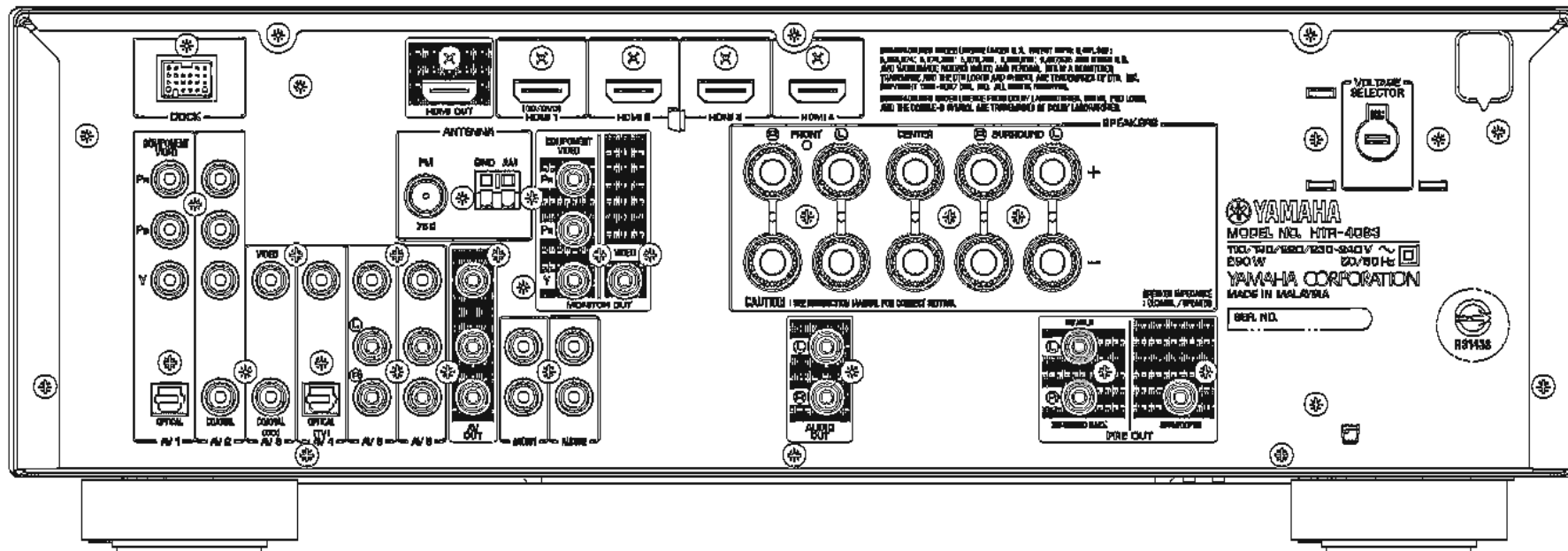
HTR-4063 (U model)



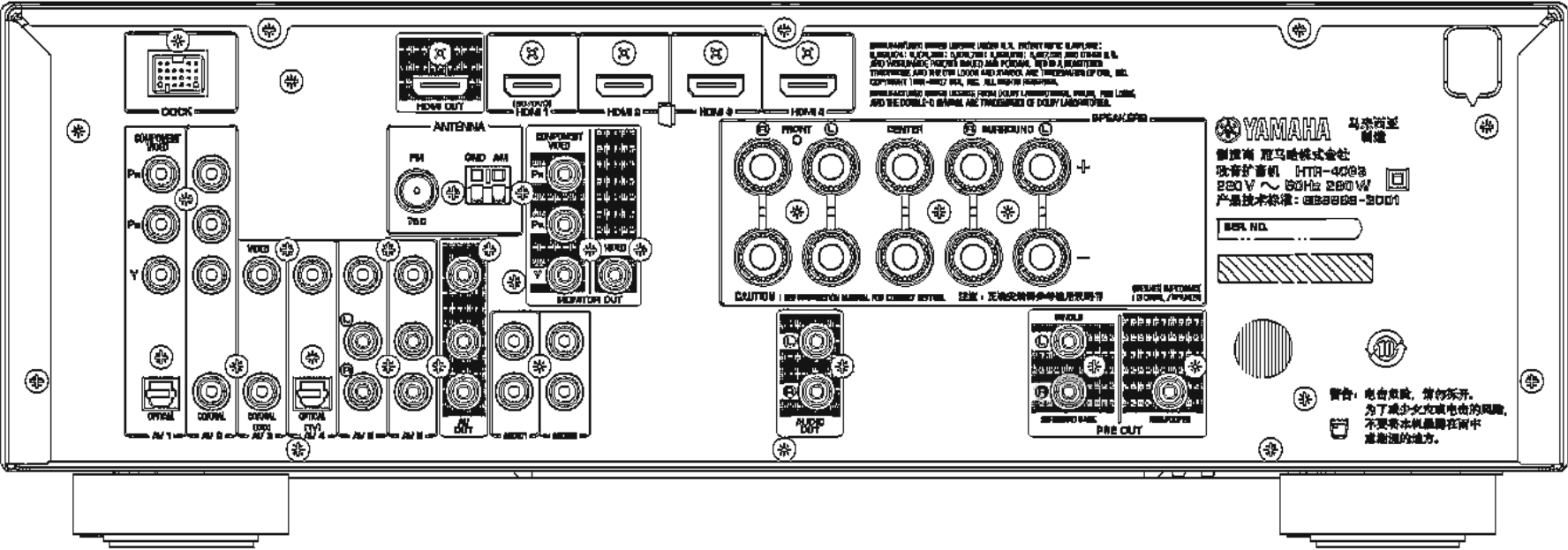
HTR-4063 (C model)



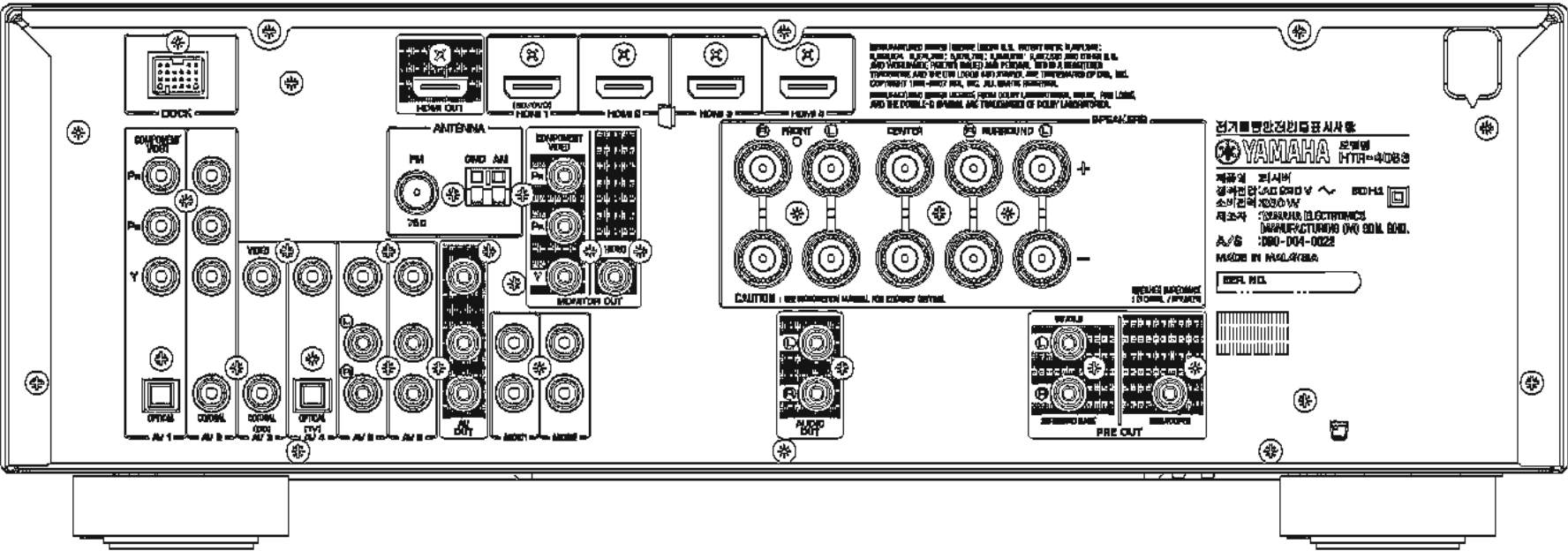
HTR-4063 (R model)



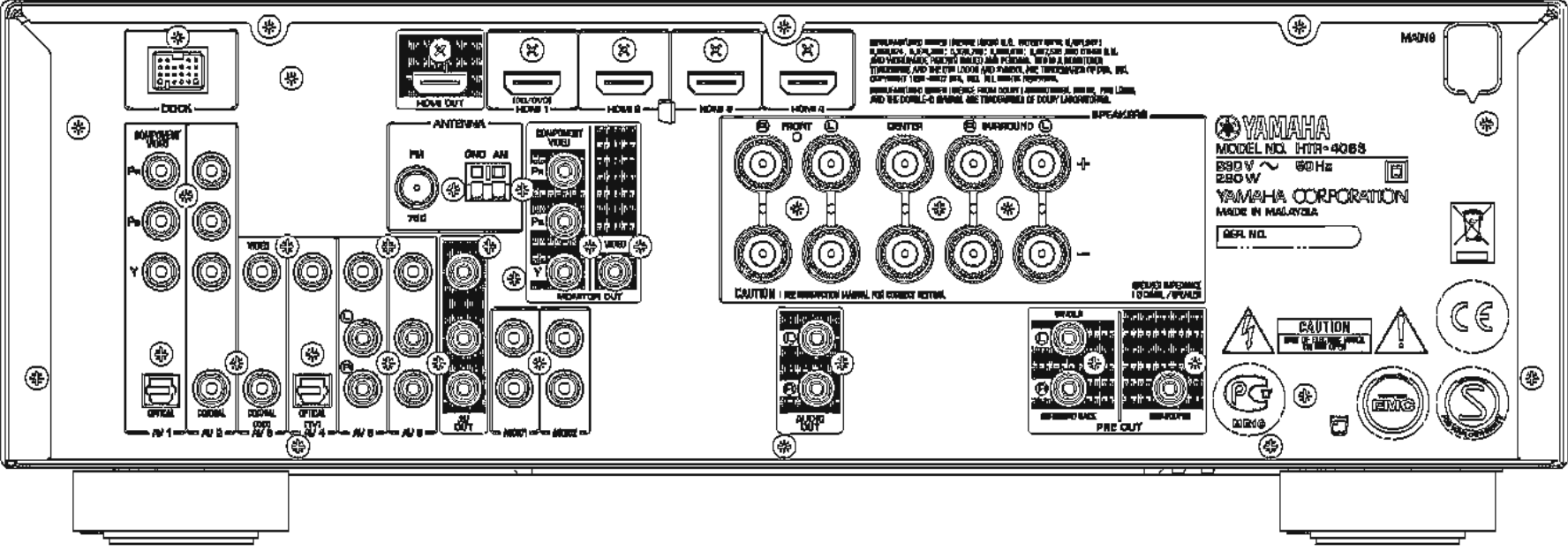
HTR-4063 (T model)



HTR-4063 (K model)

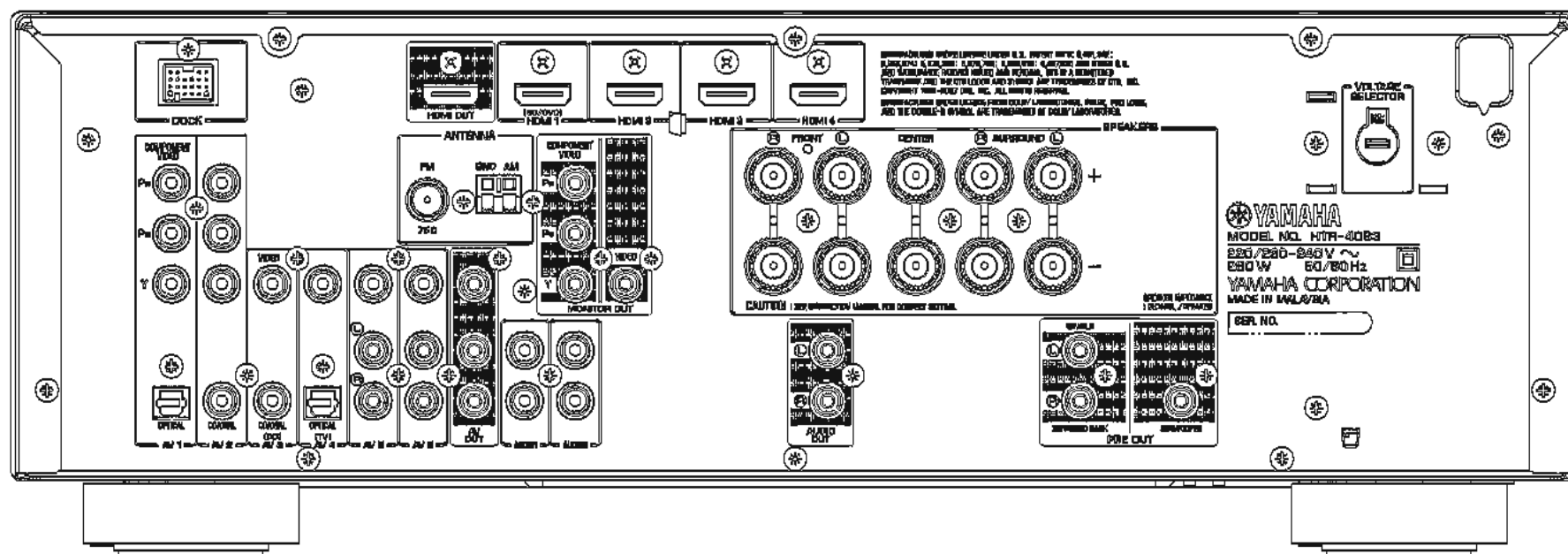


HTR-4063 (G, F models)



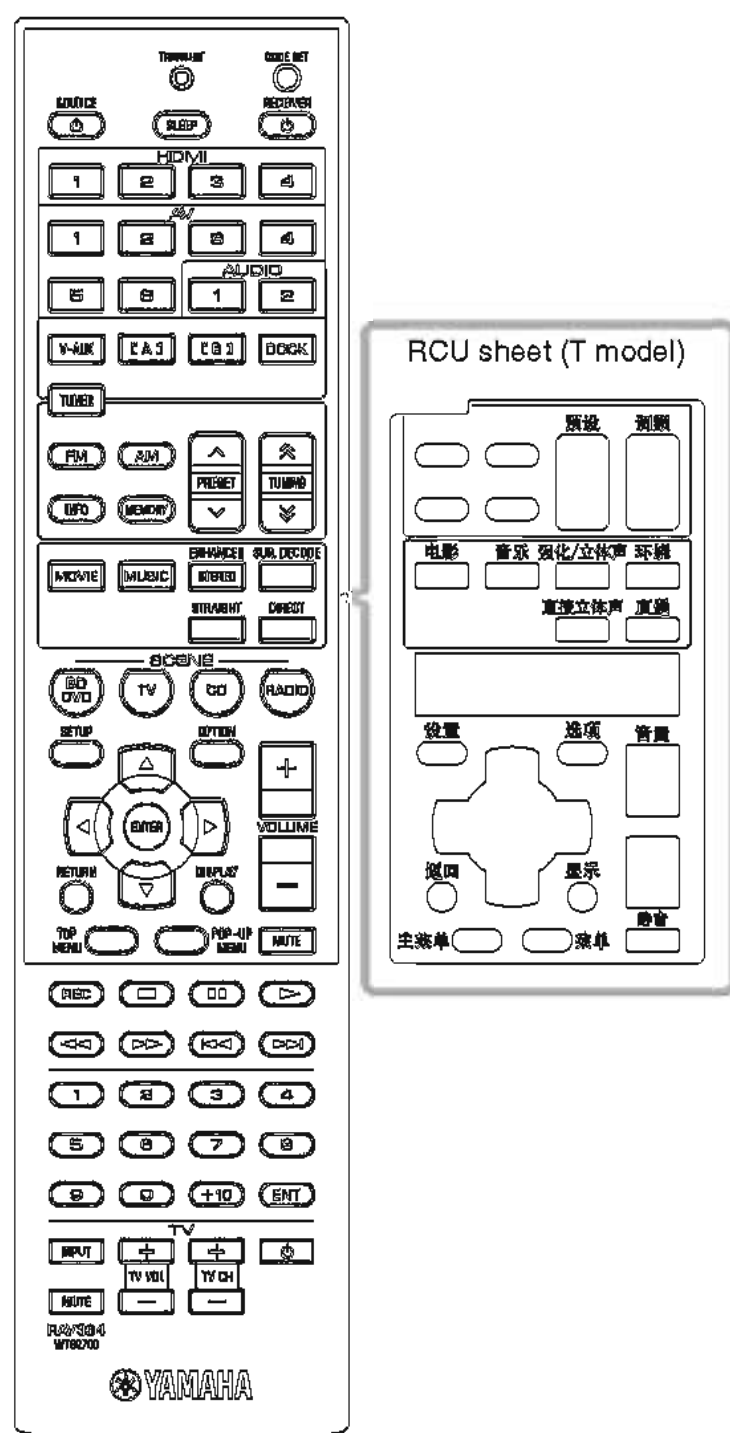


HTR-4063 (L model)



## ■ REMOTE CONTROL PANEL

RAV334



SPECIFICATIONS / 参考仕様

Audio Section / オーディオ部

|                                                                                             |                                         |
|---------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Minimum RMS Output Power (Power Amp. Section) / 定格出力 (パワーアンプ部)</b><br>(1 kHz, 0.9 % THD) |                                         |
| U, C models (8 ohms)                                                                        |                                         |
| FRONT L/R .....                                                                             | 105 W/ch                                |
| CENTER .....                                                                                | 105 W                                   |
| SURROUND L/R .....                                                                          | 105 W/ch                                |
| R, T, K, A, B, G, F, L, J models (6 ohms)                                                   |                                         |
| FRONT L/R .....                                                                             | 105 W/ch                                |
| CENTER .....                                                                                | 105 W                                   |
| SURROUND L/R .....                                                                          | 105 W/ch                                |
| <b>Maximum Power / 実用最大出力 (JEITA) (1 kHz, 10 % THD, 6 ohms)</b><br>[R, T, K, L, J models]   |                                         |
| FRONT L/R .....                                                                             | 140 W/ch                                |
| CENTER .....                                                                                | 140 W                                   |
| SURROUND L/R .....                                                                          | 140 W/ch                                |
| <b>MAX. Power Per Channel (1 kHz, 0.7 % THD, 4 ohms)</b><br>[B, G, F, L models]             |                                         |
| FRONT L/R .....                                                                             | 120 W/ch                                |
| CENTER .....                                                                                | 120 W                                   |
| SURROUND L/R .....                                                                          | 120 W/ch                                |
| <b>IEC Power (1 kHz, 0.9 % THD, 8 ohms) [B, G, F, L models]</b>                             |                                         |
| FRONT L/R .....                                                                             | 105 W/ch                                |
| <b>Dynamic Power Per Channel / ダイナミックパワー (IHF)</b><br>FRONT L/R drive                       |                                         |
| U, C models                                                                                 |                                         |
| (8 / 6 / 4 / 2 ohms) .....                                                                  | 110 / 130 / 160 / 180 W                 |
| R, T, K, A, B, G, F, L, J models                                                            |                                         |
| (6 / 4 / 2 ohms) .....                                                                      | 110 / 130 / 150 W                       |
| <b>Dynamic Headroom [U, C models]</b>                                                       |                                         |
| 8 ohms .....                                                                                | 0.2 dB                                  |
| <b>Input Sensitivity/Input Impedance / 入力感度／入力インピーダンス</b><br>(1 kHz, 100 W/6 ohms)          |                                         |
| AV5 etc. ....                                                                               | 200 mV / 47 k-ohms                      |
| <b>Maximum Input Signal / 最大許容入力 (1 kHz, 0.5 % THD)</b>                                     |                                         |
| AV5 etc. ....                                                                               | 2.3 V or more                           |
| <b>Output Level/Output Impedance / 出力電圧／出力インピーダンス</b>                                       |                                         |
| REC OUT .....                                                                               | 200 mV / 1.2 k-ohms                     |
| PRE OUT .....                                                                               | 1 V / 1.2 k-ohms                        |
| SUBWOOFER (2 ch stereo and FRONT SP: small)                                                 |                                         |
| .....                                                                                       | 1 V / 1.2 k-ohms                        |
| <b>Headphone Jack Rated Output/Output Impedance / ヘッドホン出力／出力インピーダンス</b>                     |                                         |
| AV5 etc. input (1 kHz, 50 mV, 8 ohms) .....                                                 | 100 mV / 470 ohms                       |
| <b>Frequency Response / 再生周波数帯域</b>                                                         |                                         |
| AV5 etc., FRONT (10 Hz to 100 kHz) .....                                                    | 0 / -3 dB                               |
| <b>Total Harmonic Distortion / 全高調波歪率</b>                                                   |                                         |
| AV5 etc. (DIRECT) to FRONT SP OUT (1 kHz, 50 W)                                             |                                         |
| U, C models (8 ohms) .....                                                                  | 0.06 % or less                          |
| R, T, K, A, B, G, F, L, J models (6 ohms) .....                                             | 0.06 % or less                          |
| <b>Signal to Noise Ratio / 信号対雑音比 (IHF-A network)</b>                                       |                                         |
| AV5, etc. (DIRECT) to SP OUT (Input shorted 250 mV)                                         |                                         |
| .....                                                                                       | 100 dB or more                          |
| <b>Residual Noise / 残留ノイズ (IHF-A Network)</b>                                               |                                         |
| FRONT L/R to SP OUT .....                                                                   | 150 µV or less                          |
| <b>Channel Separation / チャンネルセパレーション</b>                                                    |                                         |
| AV5, etc. (Input 5.1 k-ohms shorted)                                                        |                                         |
| 1 kHz / 10 kHz .....                                                                        | 60 dB or more / 45 dB or more           |
| <b>Volume Control / 可変範囲／ステップ</b>                                                           |                                         |
| .....                                                                                       | MUTE / -80 dB to +16.5 dB / 0.5 dB step |

|                                                   |                            |
|---------------------------------------------------|----------------------------|
| <b>Tone Control Characteristics / トーンコントロール特性</b> |                            |
| FRONT L/R                                         |                            |
| Bass                                              |                            |
| Boost/Cut .....                                   | ±10 dB / 2 dB, step 50 Hz  |
| Turnover frequency .....                          | 350 Hz                     |
| Treble                                            |                            |
| Boost/Cut .....                                   | ±10 dB / 2 dB, step 20 kHz |
| Turnover frequency .....                          | 3.5 kHz                    |

|                                                       |                                                   |
|-------------------------------------------------------|---------------------------------------------------|
| <b>Filter Characteristics / フィルタ特性</b>                |                                                   |
| FRONT, CENTER, SURROUND, SURROUND BACK small (H.P.F.) |                                                   |
| .....                                                 | fc=40/60/80/90/100/110/120/160/200 Hz, 12 dB/oct. |
| SUBWOOFER small (L.P.F.)                              |                                                   |
| .....                                                 | fc=40/60/80/90/100/110/120/160/200 Hz, 24 dB/oct. |

Video Section / ビデオ部

|                                                                |                       |
|----------------------------------------------------------------|-----------------------|
| <b>Video Signal Type / ビデオ信号方式</b>                             |                       |
| U, C, R, K, J models .....                                     | NTSC                  |
| T, A, B, G, F, L models .....                                  | PAL                   |
| Video conversion / ビデオコンバージョン                                  |                       |
| .....                                                          | NTSC/PAL              |
| <b>Composite Video Signal Level / コンポジットビデオ信号</b>              |                       |
| .....                                                          | 1 Vp-p / 75 ohms      |
| <b>Component Video Signal Level / コンポーネントビデオ信号</b>             |                       |
| Y .....                                                        | 1 Vp-p / 75 ohms      |
| Cb/Cr .....                                                    | 0.7 Vp-p / 75 ohms    |
| <b>D4 Video Signal / D4 ビデオ信号 [J model]</b>                    |                       |
| Y .....                                                        | 1 Vp-p / 75 ohms      |
| Cb/Cr .....                                                    | 0.7 Vp-p / 75 ohms    |
| <b>Video Maximum Input Level / ビデオ最大許容入力 (VIDEO COMV. OFF)</b> |                       |
| .....                                                          | 1.5 Vp-p or more      |
| <b>Video Signal to Noise Ratio / ビデオ信号対雑音比</b>                 |                       |
| .....                                                          | 50 dB or more         |
| <b>Monitor Out Frequency Response / モニター出力周波数帯域</b>            |                       |
| Component video signal level .....                             | 5 Hz to 60 MHz, -3 dB |
| D4 video signal / D4 ビデオ信号 (J model) ....                      | 5 Hz to 60 MHz, -3 dB |

|                                                                              |                                         |
|------------------------------------------------------------------------------|-----------------------------------------|
| <b>FM Section / FM 部</b>                                                     |                                         |
| <b>Tuning Range / 受信周波数範囲</b>                                                |                                         |
| U, C models .....                                                            | 87.5 to 107.9 MHz                       |
| R, L models .....                                                            | 87.5 to 108.0 MHz / 87.50 to 108.00 MHz |
| T, K, A, B, G, F models .....                                                | 87.50 to 108.00 MHz                     |
| J model .....                                                                | 76.0 to 90.0 MHz                        |
| <b>50 dB Quieting Sensitivity / 50 dB SN 感度 (IHF)</b><br>(1 kHz, 100 % MOD.) |                                         |
| MONO/STEREO .....                                                            | 3 µV (20.8 dBf)                         |
| <b>Signal to Noise Ratio / S/N 比 (IHF)</b>                                   |                                         |
| Mono .....                                                                   | 74 dB                                   |
| Stereo .....                                                                 | 69 dB                                   |
| <b>Harmonic Distortion / 歪率 (1 kHz)</b>                                      |                                         |
| Mono .....                                                                   | 0.3 %                                   |
| Stereo .....                                                                 | 0.3 %                                   |
| <b>Antenna Input / アンテナ入力</b>                                                |                                         |
| .....                                                                        | 75 ohms unbalanced                      |

## ■ AM Section / AM 部

### Tuning Range

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

**Antenna / アンテナ** ..... Loop antenna

## ■ General / 総合

### Power Supply / 電源電圧

|                |                                    |
|----------------|------------------------------------|
| U, C models    | AC 120 V, 60 Hz                    |
| R model        | AC 110/120/220/230-240 V, 50/60 Hz |
| T model        | AC 220 V, 50 Hz                    |
| K model        | AC 220 V, 60 Hz                    |
| A model        | AC 240 V, 50 Hz                    |
| B, G, F models | AC 230 V, 50 Hz                    |
| L model        | AC 220/230-240 V, 50/60 Hz         |
| J model        | AC 100 V, 50/60 Hz                 |

### Power Consumption / 消費電力

|                               |                |
|-------------------------------|----------------|
| U, C models                   | 270 W / 320 VA |
| R, T, K, A, B, G, F, L models | 280 W          |
| J model                       | 175 W          |

### Standby Power Consumption (reference data)

|                                                 |               |
|-------------------------------------------------|---------------|
| HDMI control: OFF / Standby through: OFF        | 0.2 W or less |
| HDMI control: ON / Standby through: ON / Repeat | 3.0 W or less |
| HDMI control: ON / Standby through: ON          | 1.2 W or less |

### Maximum Power Consumption

|  |       |
|--|-------|
|  | 440 W |
|--|-------|

### Dimensions (W x H x D) / 寸法 (幅 × 高さ × 奥行き)

|  |                                             |
|--|---------------------------------------------|
|  | 435 x 151 x 364 mm (17-1/8" x 6" x 14-3/8") |
|--|---------------------------------------------|

### Weight / 質量

|  |                    |
|--|--------------------|
|  | 8.4 kg (18.5 lbs.) |
|--|--------------------|

### Finish / 仕上げ

|                                        |                |
|----------------------------------------|----------------|
| [RX-V467]                              |                |
| R, T models                            | Gold color     |
| U, C, R, T, K, A, B, G, F, L, J models | Black color    |
| G, F, L models                         | Titanium color |
| R, K, G, F, L models                   | Silver color   |
| [HTR-4063]                             |                |
| T model                                | Gold color     |
| U, C, R, T, K, G, F, L models          | Black color    |
| R, K, G models                         | Silver color   |

### Accessories / 付属品

|                           |     |
|---------------------------|-----|
| Remote control            | x 1 |
| Battery (R03, AAA, UM-4)  | x 2 |
| Indoor FM antenna (1.4 m) | x 1 |
| AM loop antenna (1.0 m)   | x 1 |
| YPAO microphone (6.0 m)   | x 1 |
| Video AUX input cover     | x 1 |
| RCU sheet (T model)       | x 1 |

\* Specifications are subject to change without notice.

※ 参考仕様および外観は、製品の改良のため予告なく変更することがあります。

|   |                       |   |                      |
|---|-----------------------|---|----------------------|
| U | .....U.S.A model      | B | .....British model   |
| C | .....Canadian model   | G | .....European model  |
| R | .....General model    | F | .....Russian model   |
| T | .....Chinese model    | L | .....Singapore model |
| K | .....Korean model     | J | .....Japanese model  |
| A | .....Australian model |   |                      |



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iPhone は、Apple Inc. の商標または登録商標です。

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### HDMI

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### SILENT CINEMA

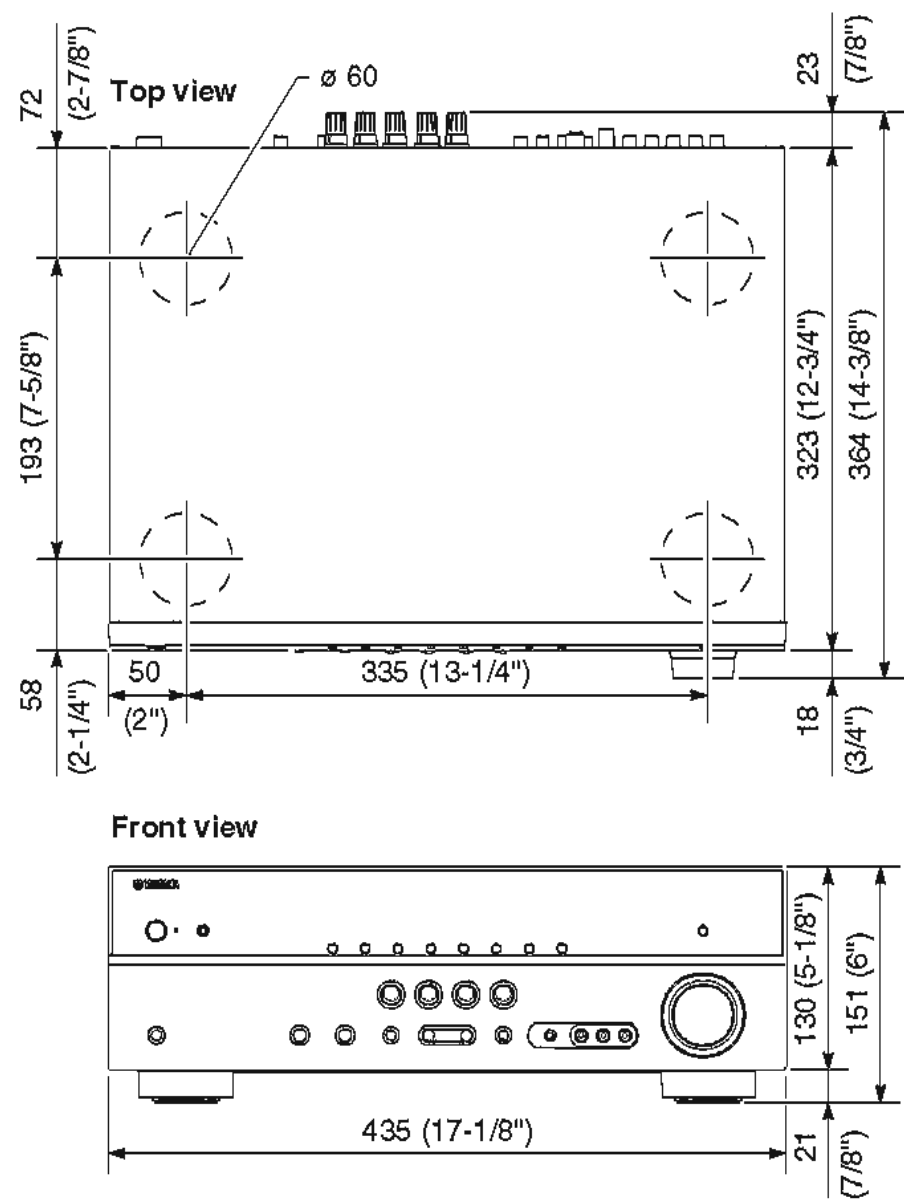
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◆ DIMENSIONS



Unit: mm (inch)  
単位:mm (インチ)

# • SELECT MENU

Sound field parameters

|                |                   | Parameter   |                         |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      |            |
|----------------|-------------------|-------------|-------------------------|-------------------------|-----------------------------|-----------------------------|--------------------------------|------------------|------------------------|------------------|----------------------|----------------------------|----------------------|------------|
| Category       | Program           | Decode Type | DSP Level: -6dB to +3dB | Center Level: 0 to 100% | Surround L Level: 0 to 100% | Surround R Level: 0 to 100% | Surround Back Level: 0 to 100% | Direct: Auto/Off | Effect Level: High/Low | Panorama: On/Off | Center Width: 0 to 7 | Dimension: -3 to STD to +3 | C. Image: 0.0 to 1.0 | Initialize |
| MOVIE          | Standard          |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Spectacle         |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Sci-Fi            |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Adventure         |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Drama             |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Mono Movie        |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Sports            |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Action Game       |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Roleplaying Game  |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
| MUSIC          | Hall in Munich    |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Hall in Vienna    |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Chamber           |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Cellar Club       |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | The Roxy Theatre  |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | The Bottom Line   |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | Music Video       |             | ●                       |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      | ●          |
|                | STEREO            | 2ch Stereo  |                         |                         |                             |                             |                                |                  | ●                      |                  |                      |                            |                      |            |
| 7ch Stereo     |                   |             |                         | ●                       | ●                           | ●                           | ●                              |                  |                        |                  |                      |                            |                      | ●          |
| MUSIC ENHANCER | Straight Enhancer |             |                         |                         |                             |                             |                                |                  | ●                      |                  |                      |                            |                      | ●          |
|                | 7ch Enhancer      |             |                         |                         |                             |                             |                                |                  | ●                      |                  |                      |                            |                      | ●          |
| SUR. DECODE    | Surround Decoder  | ●<br>*1     |                         |                         |                             |                             |                                |                  |                        | △                | △                    | △                          | ■                    | ●          |
| STRAIGHT       |                   |             |                         |                         |                             |                             |                                |                  |                        |                  |                      |                            |                      |            |

△ : Setting is possible only when Pro Logic II x Music (Pro Logic II Music) is selected using decode type.

Decode Type で Pro Logic II x Music (Pro Logic II Music) を選択時のみ設定可

■ : Setting is possible only when Neo:6 Music is selected using decode type.

Decode Type で Neo:6 Music を選択時のみ設定可

## \*1 Decode Type

|             |                             |                                                                    |
|-------------|-----------------------------|--------------------------------------------------------------------|
| Decode Type | Pro Logic                   |                                                                    |
|             | PL II x Movie / PL II Movie | PL II when Surround Back is None / Surround Back が None の場合は PL II |
|             | PL II x Music / PL II Music | PL II when Surround Back is None / Surround Back が None の場合は PL II |
|             | PL II x Game / PL II Game   | PL II when Surround Back is None / Surround Back が None の場合は PL II |
|             | Neo:6 Cinema                |                                                                    |
|             | Neo:6 Music                 |                                                                    |

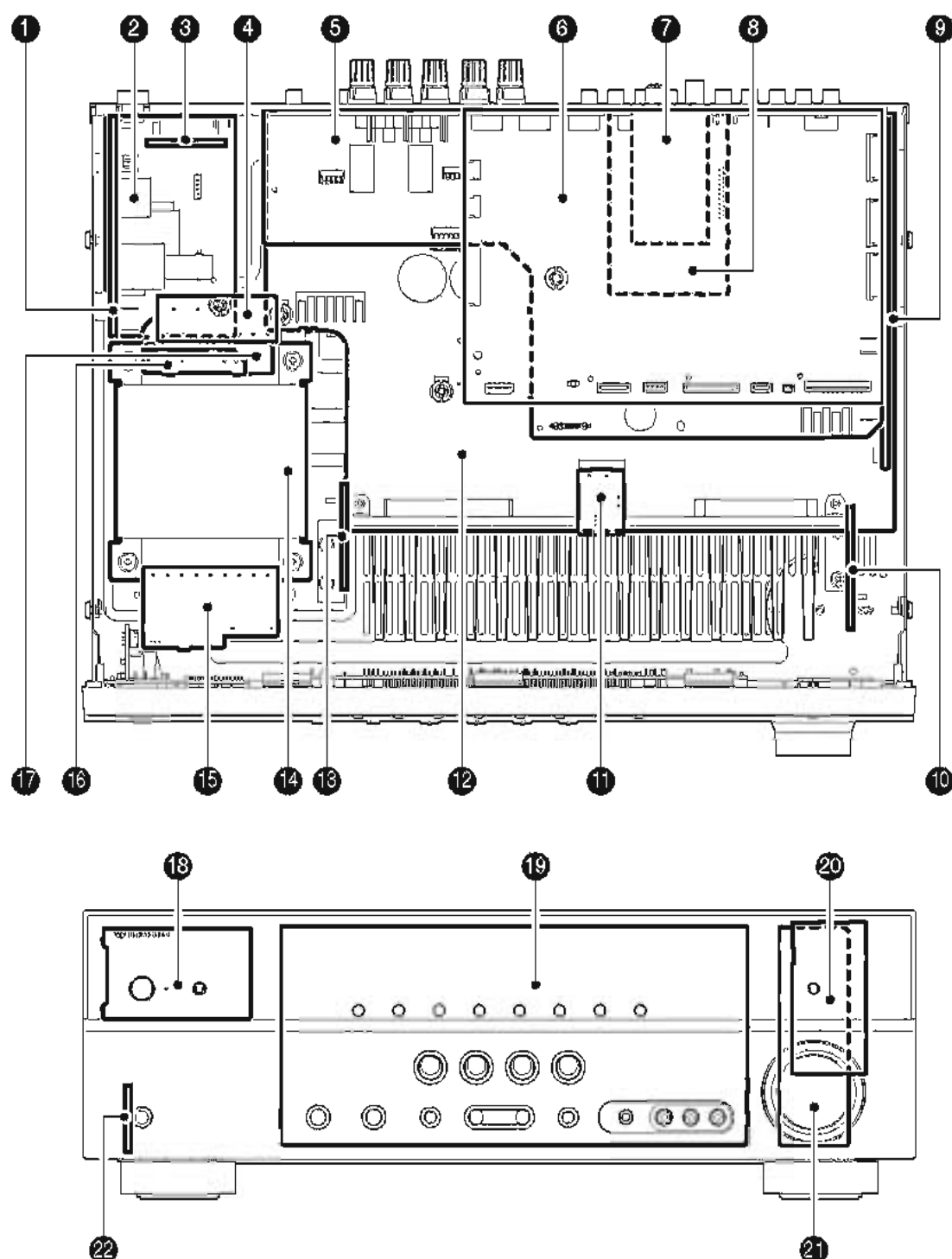
## ♦ SET MENU TABLE

| MAIN MENU         | SUB-MENU                            | PARAMETER                     |                                                                                                                                                          | VALUE [INITIAL VALUE]                                                                                   |
|-------------------|-------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1 • Speaker Setup |                                     |                               |                                                                                                                                                          |                                                                                                         |
|                   | 1 Config                            | Subwoofer                     |                                                                                                                                                          | [Yes] / None                                                                                            |
|                   |                                     | Front speaker                 |                                                                                                                                                          | Small / [Large]                                                                                         |
|                   |                                     | Center speaker                |                                                                                                                                                          | None / [Small] / Large                                                                                  |
|                   |                                     | Surround speaker L/R          |                                                                                                                                                          |                                                                                                         |
|                   |                                     | Surround back L/R speaker     |                                                                                                                                                          | [None] / SMLx1 / SMLx2 / LRGx1 / LRGx2                                                                  |
|                   |                                     | Crossover                     |                                                                                                                                                          | 40 / 60 / [80] / 90 / 100 / 110 / 120 / 160 / 200 Hz                                                    |
|                   |                                     | Subwoofer Phase               |                                                                                                                                                          | [NRM] / REV                                                                                             |
|                   |                                     | Extra Bass                    |                                                                                                                                                          | On / [Off]                                                                                              |
|                   | 2 Level                             | FL (Front speaker L)          |                                                                                                                                                          | -10.0 to +10.0 dB, [0 dB], 0.5 dB step                                                                  |
|                   |                                     | FR (Front speaker R)          |                                                                                                                                                          |                                                                                                         |
|                   |                                     | C (Center speaker)            |                                                                                                                                                          | -10.0 to +10.0 dB, [-1.0 dB], 0.5 dB step                                                               |
|                   |                                     | SL (Surround speaker L)       |                                                                                                                                                          |                                                                                                         |
|                   |                                     | SR (Surround speaker R)       |                                                                                                                                                          |                                                                                                         |
|                   |                                     | SBL (Surround back speaker L) |                                                                                                                                                          |                                                                                                         |
|                   |                                     | SBR (Surround back speaker R) |                                                                                                                                                          | -10.0 to +10.0 dB, [0 dB], 0.5 dB step                                                                  |
|                   |                                     | SWFR (Subwoofer)              |                                                                                                                                                          |                                                                                                         |
|                   | 3 Distance                          | Unit                          |                                                                                                                                                          | meters (m) / [feet (ft)]                                                                                |
|                   |                                     | Front L                       |                                                                                                                                                          | 0.30 to 24.00 m, [3.00 m], 0.1 m step                                                                   |
|                   |                                     | Front R                       |                                                                                                                                                          | 1.0 to 80.0 ft, [10.0 ft], 0.5 ft step                                                                  |
|                   |                                     | Center                        |                                                                                                                                                          | 0.30 to 24.00 m, [2.60 m], 0.1 m step                                                                   |
|                   |                                     |                               |                                                                                                                                                          | 1.0 to 80.0 ft, [8.5 ft], 0.5 ft step                                                                   |
|                   |                                     | Sur. L                        |                                                                                                                                                          | 0.30 to 24.00 m, [2.40 m], 0.1 m step                                                                   |
|                   |                                     | Sur. R                        |                                                                                                                                                          |                                                                                                         |
|                   |                                     | Sur. B L                      |                                                                                                                                                          | 1.0 to 80.0 ft, [8.0 ft], 0.5 ft step                                                                   |
|                   |                                     | Sur. B R                      |                                                                                                                                                          | 0.30 to 24.00 m, [3.00 m], 0.1 m step                                                                   |
|                   |                                     | SWFR                          |                                                                                                                                                          |                                                                                                         |
|                   | 4 Equalizer                         | EQ Type Select                |                                                                                                                                                          | [GEQ] / Off                                                                                             |
|                   |                                     | GEQ                           |                                                                                                                                                          | * "GEQ" is available only when "EQ Type Select" is set to "GEQ".<br>"EQ Type Select" にて "GEQ" 選択時のみ設定可能 |
|                   |                                     | Front L                       | 63 Hz .....  ..... 0 dB                                                                                                                                  | -6.0 to +6.0 dB, [0 dB], 0.5 dB step                                                                    |
|                   |                                     | Front R                       | 160 Hz .....  ..... 0 dB                                                                                                                                 |                                                                                                         |
|                   |                                     | Center                        | 400 Hz .....  ..... 0 dB                                                                                                                                 |                                                                                                         |
|                   |                                     | Sur. L                        | 1 kHz .....  ..... 0 dB                                                                                                                                  |                                                                                                         |
|                   |                                     | Sur. R                        | 2.5 kHz .....  ..... 0 dB                                                                                                                                |                                                                                                         |
|                   |                                     | SBL                           | 6.3 kHz .....  ..... 0 dB                                                                                                                                |                                                                                                         |
|                   |                                     | SBR                           | 16 kHz .....  ..... 0 dB                                                                                                                                 |                                                                                                         |
|                   |                                     |                               |                                                                                                                                                          |                                                                                                         |
| 5 Test Tone       |                                     |                               |                                                                                                                                                          | [Off] / On                                                                                              |
| 2 • Sound Setup   |                                     |                               |                                                                                                                                                          |                                                                                                         |
|                   | 1 Lipsync                           | HDMI Auto                     |                                                                                                                                                          | [Off] / On                                                                                              |
|                   |                                     | Auto                          |                                                                                                                                                          | 0 to 240 ms, 1 ms step                                                                                  |
|                   |                                     | Manual                        |                                                                                                                                                          | 0 to 240 ms, [0 ms], 1 ms step                                                                          |
|                   | 2 Adaptive DRC                      |                               | Auto / [Off]                                                                                                                                             |                                                                                                         |
|                   | 3 D.Range                           |                               | Min/Auto / STD / [Max]                                                                                                                                   |                                                                                                         |
|                   | 4 Max Volume                        |                               | -30.0 to +15.0 dB / +16.5 dB (Maximum volume), [+16.5 dB], 5.0 dB step                                                                                   |                                                                                                         |
|                   | 5 Init. Volume                      |                               | Off, Mute, -80 dB to +16.5 dB [Off], 0.5 dB step                                                                                                         |                                                                                                         |
| 3 • HDMI Setup    |                                     |                               |                                                                                                                                                          |                                                                                                         |
|                   | 1 Control (HDMI Control)            |                               | [Off] / On                                                                                                                                               |                                                                                                         |
|                   | 2 TV Audio                          |                               | AV1 / AV2 / AV3 / [AV4] / AV5 / AV6 /<br>AUDIO1 / AUDIO2<br>* "TV Audio" is available only when "Control" is set to "On".<br>"Control" にて "On" 選択時のみ設定可能 |                                                                                                         |
|                   | 3 ReturnChan (Audio Return Channel) |                               | [Off] / On<br>* "ReturnChan" is available only when "Control" is set to "On".<br>"Control" にて "On" 選択時のみ設定可能                                             |                                                                                                         |
|                   | 4 Standby (Standby Through)         |                               | [Off] / On<br>* "Standby" is available only when "Control" is set to "Off".<br>"Control" にて "Off" 選択時のみ設定可能                                              |                                                                                                         |
|                   | 5 Audio                             |                               | [Amp] / TV / Amp+TV<br>* "Audio" is available only when "Control" is set to "Off".<br>"Control" にて "Off" 選択時のみ設定可能                                       |                                                                                                         |



| MAIN MENU          |                   | SUB-MENU                         | PARAMETER                                                                                                                                                        | VALUE [INITIAL VALUE]                       |                |                                                                                                                                 |
|--------------------|-------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|
| 4 + Function Setup |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| 1 Input Rename     |                   |                                  | Input is possible to 9 characters<br>Input possible Character type<br>Capital : A to Z<br>Small : a to z<br>Figure : 0 to 9<br>Symbols : # * + , - etc.<br>Space |                                             |                |                                                                                                                                 |
| 2 Auto Power Down  |                   |                                  | [Off] / 4 hours / 8 hours / 12 hours                                                                                                                             |                                             |                |                                                                                                                                 |
| 3 Dimmer           |                   |                                  | -4 to 0, [0]                                                                                                                                                     |                                             |                |                                                                                                                                 |
| 5 DSP Parameter    |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| MOVIE              | Standard          | [2], [13]                        |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Spectacle         |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Sci-Fi            |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Adventure         |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Drama             |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Mono Movie        |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Sports            |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Action Game       |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | Roleplaying Game  |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | MUSIC             |                                  |                                                                                                                                                                  |                                             | Hall in Munich | [2], [13]                                                                                                                       |
| Hall in Vienna     |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| Chamber            |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| Cellar Club        |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| The Roxy Theatre   |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| The Bottom Line    |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| Music Video        |                   |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| STEREO             | 2ch Stereo        | [7], [13]                        |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | 7ch Stereo        | [3], [4], [5], [6], [13]         |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| MUSIC ENHANCER     | Straight Enhancer | [8], [13]                        |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | 7ch Enhancer      | [8], [13]                        |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
| SUR. DECODE        | Sur. Decoder      | [1], [9], [10], [11], [12], [13] |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    | STRAIGHT          |                                  |                                                                                                                                                                  |                                             |                |                                                                                                                                 |
|                    |                   | [1]                              |                                                                                                                                                                  |                                             | Decode Type    | Pro Logic, PL II x Movie / PL II Movie,<br>PL II x Music / PL II Music, PL II x Game / PL II Game,<br>Neo:6 Cinema, Neo:6 Music |
|                    |                   | [2]                              |                                                                                                                                                                  |                                             | DSP Level      | -6 to +3 dB, [0 dB]                                                                                                             |
|                    |                   | [3]                              | Center Level                                                                                                                                                     |                                             |                |                                                                                                                                 |
|                    |                   | [4]                              | Surround L Level                                                                                                                                                 | 0 to 100 %, [100 %]                         |                |                                                                                                                                 |
|                    |                   | [5]                              | Surround R Level                                                                                                                                                 |                                             |                |                                                                                                                                 |
|                    |                   | [6]                              | Surround Back Level                                                                                                                                              | 0 to 100 %, [35 % (7.1 ch) / 50 % (6.1 ch)] |                |                                                                                                                                 |
|                    |                   | [7]                              | Direct                                                                                                                                                           | [Auto] / Off                                |                |                                                                                                                                 |
|                    |                   | [8]                              | Effect Level                                                                                                                                                     | [High] / Low                                |                |                                                                                                                                 |
|                    |                   | [9]                              | Panorama                                                                                                                                                         | [Off] / On                                  |                |                                                                                                                                 |
|                    |                   | [10]                             | Center Width                                                                                                                                                     | 0 to 7, [3]                                 |                |                                                                                                                                 |
|                    |                   | [11]                             | Dimension                                                                                                                                                        | -3 to STD to +3, [STD (Standard)]           |                |                                                                                                                                 |
|                    |                   | [12]                             | C. Image                                                                                                                                                         | 0.0 to 1.0, [0.3]                           |                |                                                                                                                                 |
|                    |                   | [13]                             | Initialize                                                                                                                                                       |                                             |                |                                                                                                                                 |
| 6 Memory Guard     |                   |                                  |                                                                                                                                                                  | [Off] / On                                  |                |                                                                                                                                 |

## INTERNAL VIEW



- ① VIDEO (2) P.C.B.
- ② VIDEO (3) P.C.B.
- ③ MAIN (3) P.C.B. (R, L models)
- ④ MAIN (2) P.C.B.
- ⑤ VIDEO (1) P.C.B.
- ⑥ DIGITAL P.C.B.
- ⑦ TUNER
- ⑧ VIDEO (8) P.C.B. (J model)
- ⑨ OPERATION (2) P.C.B.
- ⑩ OPERATION (6) P.C.B.
- ⑪ MAIN (5) P.C.B.
- ⑫ MAIN (1) P.C.B.
- ⑬ MAIN (6) P.C.B.
- ⑭ POWER TRANSFORMER
- ⑮ VIDEO (6) P.C.B.
- ⑯ VIDEO (7) P.C.B.
- ⑰ MAIN (4) P.C.B. (R, L models)
- ⑱ OPERATION (4) P.C.B.
- ⑲ OPERATION (1) P.C.B.
- ⑳ OPERATION (8) P.C.B.
- ㉑ OPERATION (5) P.C.B.
- ㉒ OPERATION (3) P.C.B.

## SERVICE PRECAUTIONS / サービス時の注意事項

### Safety measures

- Some internal parts in this product contain high voltages and are dangerous.  
Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that positions indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there.  
Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10W) between terminals at following positions.  
The time required for discharging is about 30 seconds.  
C3703 on VIDEO (2) P.C.B.  
Refer to "PRINTED CIRCUIT BOARDS: VIDEO (2) P.C.B."

### 安全対策

- この製品の内部には高電圧部分があり危険です。修理の際は、絶縁性の手袋を使用などの安全対策を行ってください。
- 下記箇所には電源を OFF にした後も電荷が残り、高電圧が維持されており危険です。  
修理作業前に放電用抵抗 (5 k $\Omega$  / 10 W) を下記箇所の端子間に接続して放電してください。  
放電所用時間は約 30 秒間です。  
VIDEO (2) P.C.B. の C3703  
"PRINTED CIRCUIT BOARDS : VIDEO (2) P.C.B." を参照してください。



## ■ DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)  
Disconnect the power cable from the AC outlet.

(番号順に部品を取り外してください。)  
AC 電源コンセントから、電源コードを抜いてください。

### 1. Removal of Top Cover

- Remove 4 screws (①) and 5 screws (②). (Fig. 1)
- Slide the top cover rearward to remove it. (Fig. 1)

### 1. トップカバーの外し方

- ① のネジ 4 本、② のネジ 5 本を外します。(Fig. 1)
- トップカバーを後方へスライドさせ、取り外します。(Fig. 1)

### 2. Removal of Front Panel Unit

- Remove 7 screws (③), and remove W4401. (Fig. 1)
- Remove CB20, CB461 and CB472. (Fig. 1)
- Unlock and remove CB333. (Fig. 1)
- Release 2 hooks on both ends and remove the front panel unit. (Fig. 1)

### 2. フロントパネルユニットの外し方

- ③ のネジ 7 本を外し、W4401 を取り外します。(Fig. 1)
- CB20、CB461、CB472 を外します。(Fig. 1)
- ロックを外し、CB333 を外します。(Fig. 1)
- フック 2 箇所を外し、フロントパネルユニットを取り外します。(Fig. 1)

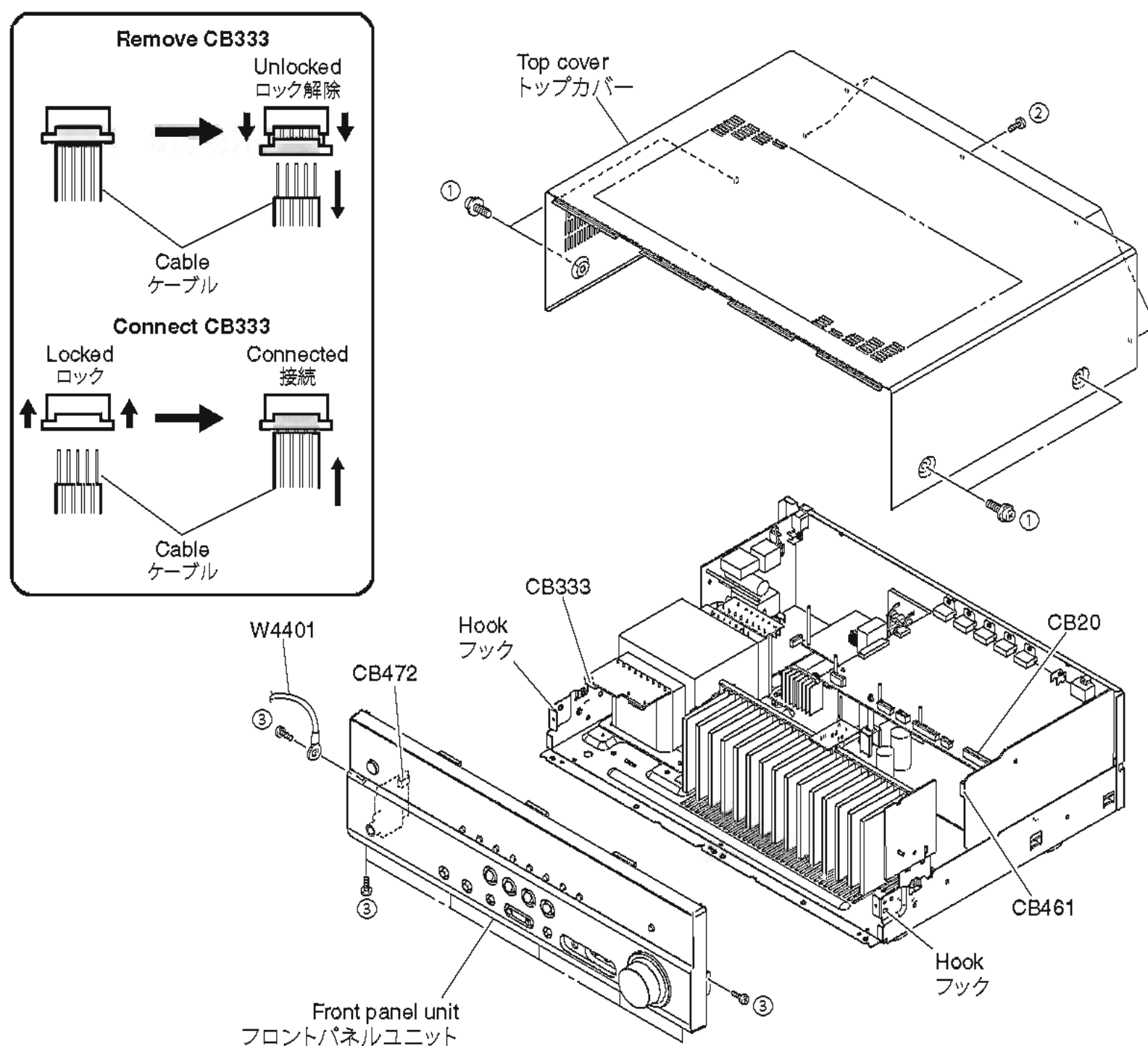


Fig. 1

### 3. Removal of DIGITAL P.C.B.

- Remove 2 screws (④) and 5 screws (⑤). (Fig. 3)
- Remove screw (⑥). (Fig. 2)
- Remove CB7 and CB25, CB72 and CB73 (B, G, F models). (Fig. 2)
- Unlock and remove CB22-24. (Fig. 2)
- Release hook. (Fig. 2)
- Remove the DIGITAL P.C.B. which is connected directly to the OPERATION (2) P.C.B. with board-to-board connectors. (Fig. 2)

### 4. Removal of AMP Unit

- Remove 3 screws (⑦) and 4 screws (⑧). (Fig. 2)
- Remove 3 screws (⑨). (Fig. 3)
- Remove the amp unit. (Fig. 2)

### 3. DIGITAL P.C.B. の外し方

- ④ のネジ 2 本、⑤ のネジ 5 本を外します。 (Fig. 3)
- ⑥ のネジ 1 本を外します。 (Fig. 2)
- CB7、CB25、CB72 を外します。 (Fig. 2)
- ロックを外し、CB22～24 を外します。 (Fig. 2)
- フック 1 箇所を外します。 (Fig. 2)
- DIGITAL P.C.B. を取り外します。ただし、DIGITAL P.C.B. は OPERATION (2) P.C.B. に基板対基板コネクタで直接接続されています。 (Fig. 2)

### 4. アンプユニットの外し方

- ⑦ のネジ 3 本、⑧ のネジ 4 本を外します。 (Fig. 2)
- ⑨ のネジ 3 本を外します。 (Fig. 3)
- アンプユニットを取り外します。 (Fig. 2)

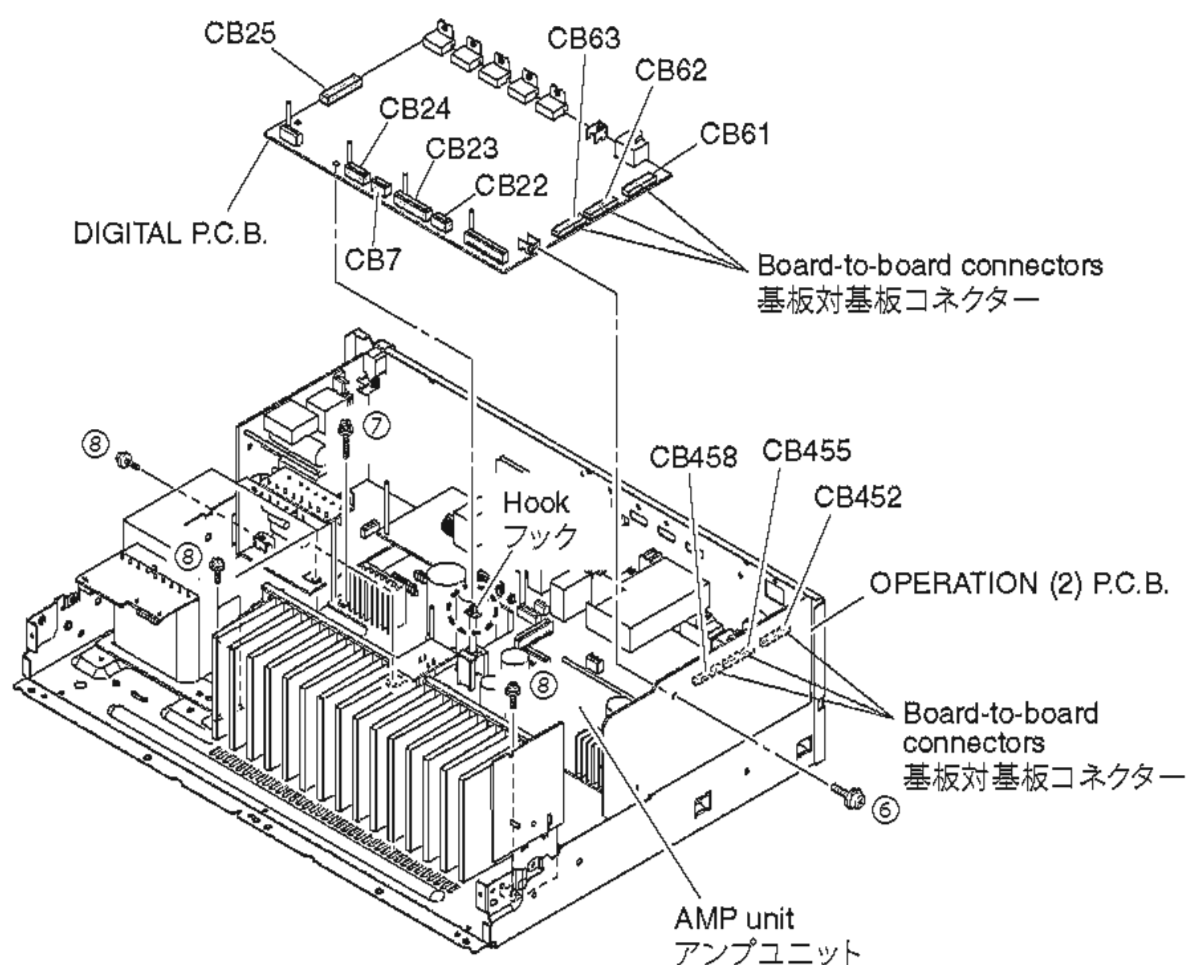
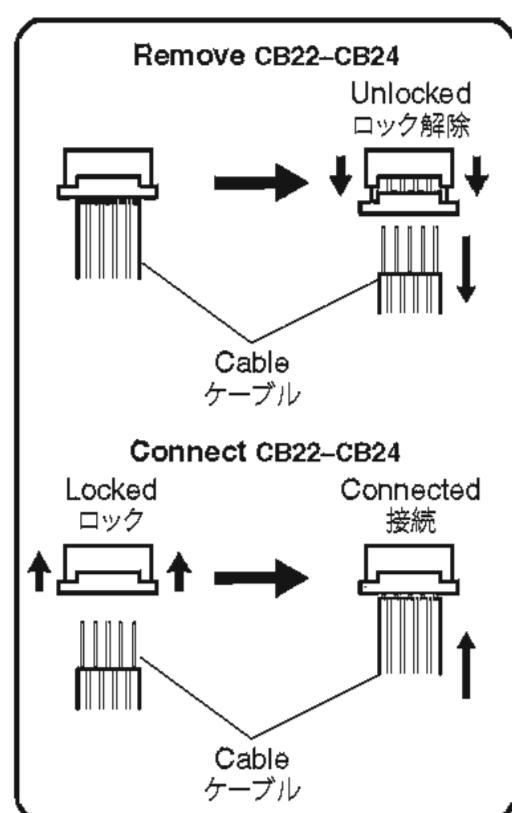


Fig. 2

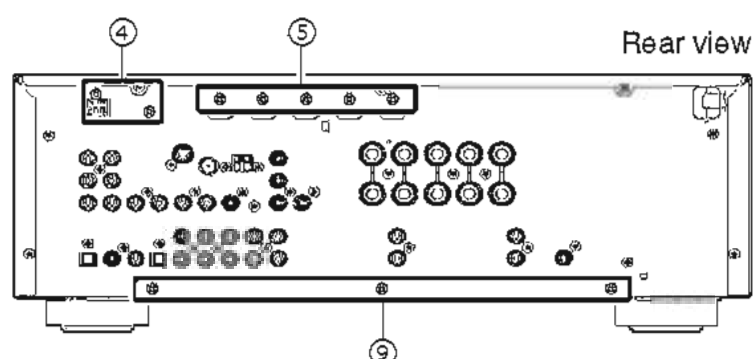


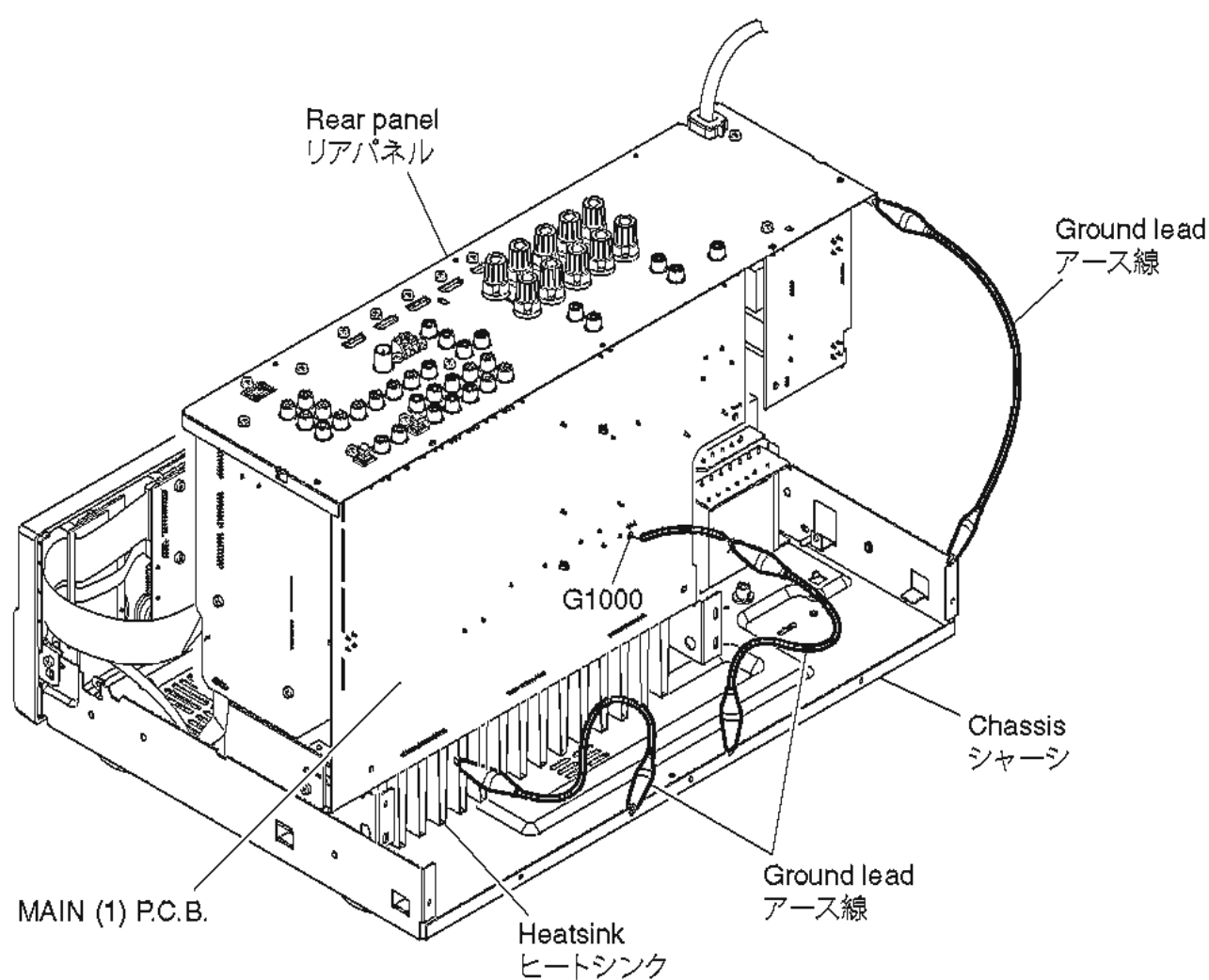
Fig. 3

**When checking the P.C.B.s:**

- Place the P.C.B.s (with rear panel) upright. (Fig. 4)
- Connect the ground points of the heatsink, rear panel and MAIN (1) P.C.B. (G1000) to the chassis with a ground lead or the like. (Fig. 4)
- When connecting the flexible flat cable, be careful with polarity.
- Reconnect all cables (connectors) that have been disconnected.

**P.C.B. をチェックする場合には：**

- リアパネルと一緒に P.C.B. を立ち上げて置きます。(Fig. 4)
- ヒートシンク、リアパネル、MAIN (1) P.C.B. の G1000 のアースをリード線等でシャーシに接続してください。(Fig. 4)
- フラットケーブルを接続する際、極性に注意してください。
- 外したケーブル（コネクタ）をすべて接続します。

**Fig. 4**

## ■ UPDATING FIRMWARE / ファームウェアの書き込み

When the following parts are replaced, the firmware must be updated to the latest version by using the corresponding update method.

下記の部品を交換した場合、それに対応する方法でファームウェアを最新バージョンにアップデートする必要があります。

| Replaced parts                               | Writing method using the CD /<br>CD を使用して書き込む方法 | Writing method using PC (RS-232C) /<br>PC (RS-232C) を使用して書き込む方法 |
|----------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|
| DIGITAL P.C.B.                               | yes                                             | yes                                                             |
| IC20 (Main microprocessor) of DIGITAL P.C.B. | no                                              | yes                                                             |
| IC49 (TI (DSP) flash ROM) of DIGITAL P.C.B.  | yes                                             | yes                                                             |

### ● Confirmation of firmware version and checksum

Before and after updating the firmware, check the firmware version and checksum by using the self-diagnostic function menu.

Start up the self-diagnostic function and select "25. ROM VER/SUM/PORT" menu.

Using the sub-menu, have the firmware version and checksum displayed, and note them down.  
(See "SELF-DIAGNOSTIC FUNCTION")

- \* When the firmware version is different from written one after updating, perform the updating procedure again from the beginning.

### ● ファームウェアのバージョンとチェックサムの確認

ファームウェアのアップデートの前後に、ファームウェアのバージョンとチェックサムをダイアグで確認します。

ダイアグを起動し、"25. ROM VER/SUM/PORT" を選択します。

サブメニューでファームウェアのバージョンとチェックサムを表示し、それらを書きとめます。  
(「ダイアグ」参照)

- ※ アップデート後、ファームウェアのバージョンが書き込まれたものと異なる場合、アップデートの操作を最初からやり直してください。

### ● Initializing the back-up IC (EEPROM: IC22 of the DIGITAL P.C.B.)

After updating the firmware, the back-up IC MUST be initialized by the following procedure to have proper memorization of the set up information (soundfield parameters, system memory and tuner presetting, etc.).

Start up the self-diagnostic function and select "24. FACTORY PRESET" menu. (See "SELF-DIAGNOSTIC FUNCTION")

Select "24. PRESET RSRV", press the "⏻" (Power) key of this unit to turn off the power once and turn on the power again. Then the back-up IC is initialized.

### ● バックアップICの初期化 (EEPROM : DIGITAL P.C.B. の IC22)

ファームウェアのアップデート後、設定情報（音場プログラムのパラメーターやシステムメモリー、チューナープリセット等）を正常に記憶するために、下記の方法でバックアップICを初期化する必要があります。

本機のダイアグを起動し、"24. FACTORY PRESET" を選択します。（「ダイアグ」参照）

"24. PRESET RSRV" を選択し、"⏻"（パワー）キーを押して電源を一度切ってから、もう一度電源を入れるとバックアップICが初期化されます。

**Writing method using the CD**● **Required Tools**

- DVD or CD player (with DIGITAL OUTPUT (OPTICAL or COAXIAL) jack)
- Optical cable (when OPTICAL jack is used)
- Digital audio pin cable (when COAXIAL jack is used)
- Firmware CD
  - \* Download the latest firmware from the specified download source and create the firmware CD.

**CD を使用して書き込む方法**● **必要なツール**

- DVD または CD プレーヤー (DIGITAL OUTPUT (OPTICAL) 端子付き)
- 光ファイバーケーブル (OPTICAL 端子使用時)
- デジタル音声ピンケーブル (COAXIAL 端子使用時)
- ファームウェア CD
  - ※ 指定のダウンロード先から、最新のファームウェアをダウンロードしてファームウェア CD を製作してください。

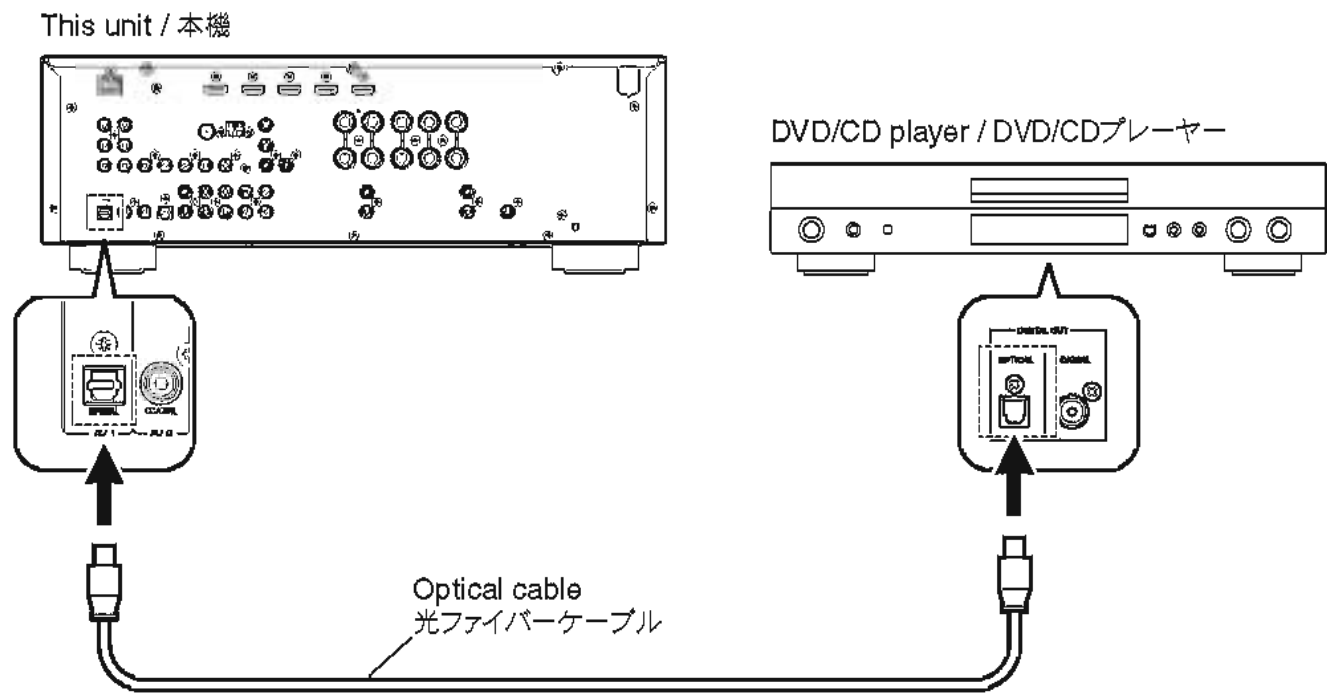
● Connection

Connect this unit and DVD/CD player as shown below. (Fig. 1)

● 接続

本機と DVD/CD プレーヤーを下記のように接続します。(Fig. 1)

Example of OPTICAL Jack / OPTICAL 端子使用例



Example of COAXIAL Jack / COAXIAL 端子使用例

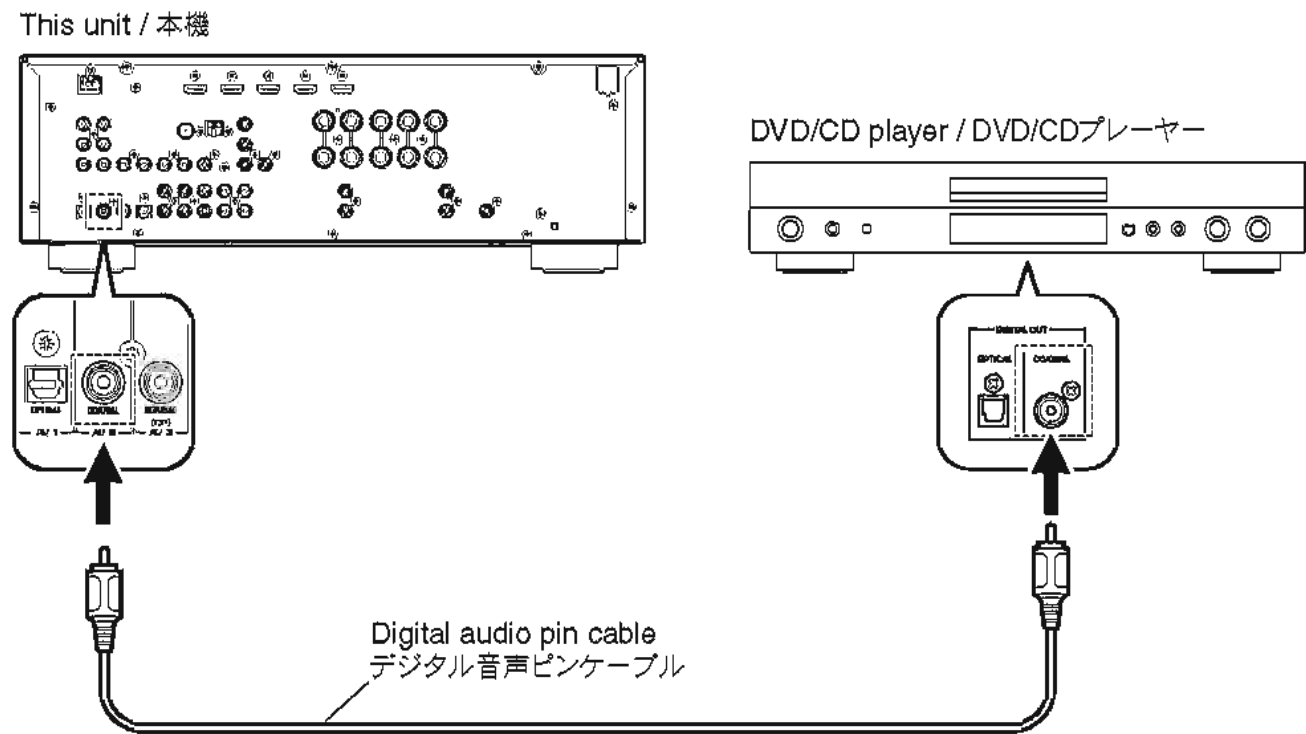


Fig. 1



## ● Operation Procedures

1. While pressing the "INFO" key of this unit, connect the power cable of this unit to the AC outlet. (Fig. 2)  
The FIRMWARE UPDATE mode is activated and "CDDA Upgrader" is displayed. (Fig. 2)

## ● 操作手順

1. 本機の "INFO" キーを押しながら、本機の電源コードを AC コンセントに接続します。(Fig. 2)  
ファームウェアアップデートモードが起動し、"CDDA Upgrader" が表示されます。(Fig. 2)

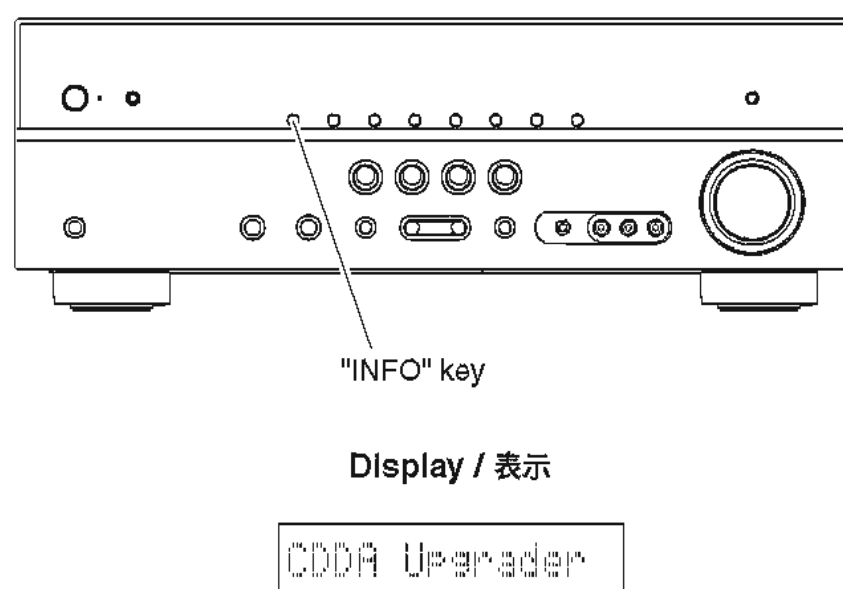
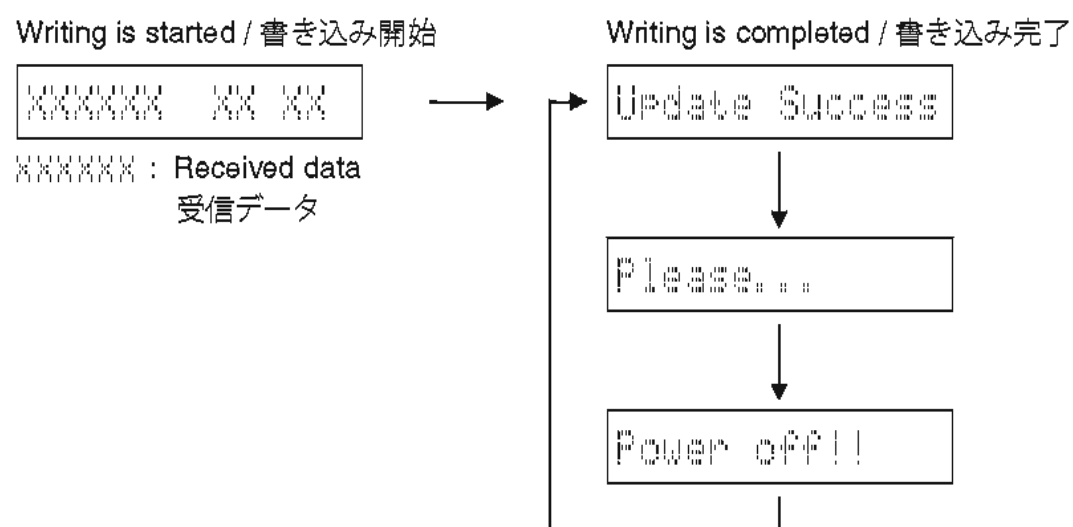


Fig. 2

2. Play the firmware CD on the DVD/CD player.  
Writing of the firmware starts automatically. (Fig. 3)
3. When writing of the firmware is completed, "Update Success", "Please..." and "Power off!!" are displayed repeatedly. (Fig. 3)



- \* When the version of the firmware to be written is the same as the one existing in this unit, "Same Version", "Please..." and "Power off!!" are displayed repeatedly. (Updating is not necessary.)

If the display remains unchanged for more than 10 seconds after starting the firmware CD play procedure, perform the firmware CD play procedure again from the beginning.

If "FILE CORRUPTED" is displayed after "Address:XXXXXX", make sure that the written data is not corrupted and perform Steps 1 to 3 of "Operation Procedures" again.

If "Upgrade Failed" is displayed, perform "operation procedures" again from the beginning.

4. Press the "⏻" (Power) key of this unit to turn off the power.
5. Eject the firmware CD from the DVD/CD player.
6. Start up the self-diagnostic function and check that the firmware version and checksum are the same as written ones. (See "Confirmation of firmware version and checksum")

- ※ 本機に既存のファームウェアと、書き込もうとしているファームウェアのバージョンが同じ場合、"Same Version"、"Please..."、"Power off!!" の表示が繰り返されます。(アップデートの必要はありません。)

ファームウェア CD の再生開始後、10 秒以上経過してもディスプレイ表示が変わらない場合、ファームウェア CD の再生を最初からやり直してください。

"Address:XXXXXX" の後に、"FILE CORRUPTED" が表示された場合、書き込みデータが破損していないかを確認し、"操作手順" の 1 から 3 までもう一度やり直してください。

"Upgrade Failed" が表示された場合、"操作手順" を最初からやり直してください。

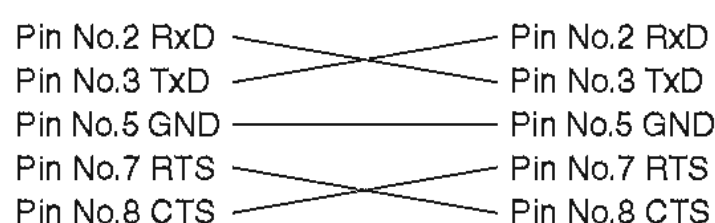
4. 本機の "⏻" (パワー) キーを押して電源を切ります。
5. DVD/CD プレーヤーからファームウェア CD を取り出します。
6. ダイアグを起動し、ファームウェアのバージョンとチェックサムが、書き込まれたものと同じであることを確認します。("ファームウェアのバージョンとチェックサムの確認" 参照)



### Writing method using PC (RS-232C)

#### ● Required Tools

- Firmware downloader program  
.....Flash Development Toolkit 4.04 Basic.exe
- \* Download the "fdtv404r00.exe" from the specified source to the PC and execute it. Perform operation according to the direction on the display. The installation of the firmware downloader program will be completed.
- Firmware .....V567\_xxxx.mot  
V567\_xxxx.id
- \* The firmware for RX-V467 is the same as one for RX-V567.
- RS-232C cross cable "D-sub 9 pin female"  
(Specifications)



- RS-232C conversion adaptor (Part No.: WR492800)

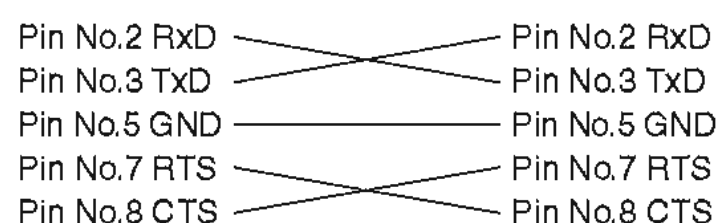
#### ● Preparation and precautions

- Download the latest firmware from the specified source to the older of the PC.
  - Prepare the above specified RS-232C cross cable.
  - While writing the firmware, keep the other application software on the PC closed.
- It is also recommended to keep the software on the task tray closed as well.

### PC (RS-232C) を使用して書き込む方法

#### ● 必要なツール

- ファームウェア書き込み用プログラム  
.....Flash Development Toolkit 4.04 Basic.exe
- ※ 指定のダウンロード先から "fdtv404r00.exe" を PC にダウンロードし、それを実行します。表示される指示通りに操作するとファームウェア書き込み用プログラムのインストールが完了します。
- ファームウェア .....V567\_xxxx.mot  
V567\_xxxx.id
- ※ RX-V467 用ファームウェアは、RX-V567 用のものと同じです。
- RS-232C クロスケーブル "D-sub 9 pin メス"  
(仕様)



- RS-232C 変換アダプター (部品番号: WR492800)

#### ● 準備と注意

- 指定のダウンロード先から、最新のファームウェアを、PC のフォルダにダウンロードしてください。
  - RS-232C クロスケーブルは必ず上記仕様のものを用意してください。
  - 書き込み時は、PC 上の他のアプリケーションソフトは閉じてください。
- さらに、タスクトレイ上にあるソフトも閉じておくことを推奨します。

## ● Connection

- \* Disconnect the power cable of this unit from the AC outlet.
- 1. Remove the top cover.  
(See "DISASSEMBLY PROCEDURES")
- 2. Connect the writing port (CB27 of the DIGITAL P.C.B.) of this unit to the serial port (RS-232C) of the PC with RS-232C cross cable, RS-232C conversion adaptor and flexible flat cable as shown below.  
(Fig. 1)
- 3. Set the switch (SW7) of RS-232C conversion adaptor as shown below. (Fig. 1)

## ● 接続

- ※ 本機の電源コードを AC コンセントから抜いてください。
- 1. トップカバーを外します。 ("分解手順" 参照)
- 2. 本機の書き込み用ポート (DIGITAL P.C.B. の CB27) と PC のシリアルポート (RS-232C) を下記のように接続します。 (Fig. 1)
- 3. RS-232C 変換アダプターのスイッチ (SW7) を下記のように設定します。 (Fig. 1)

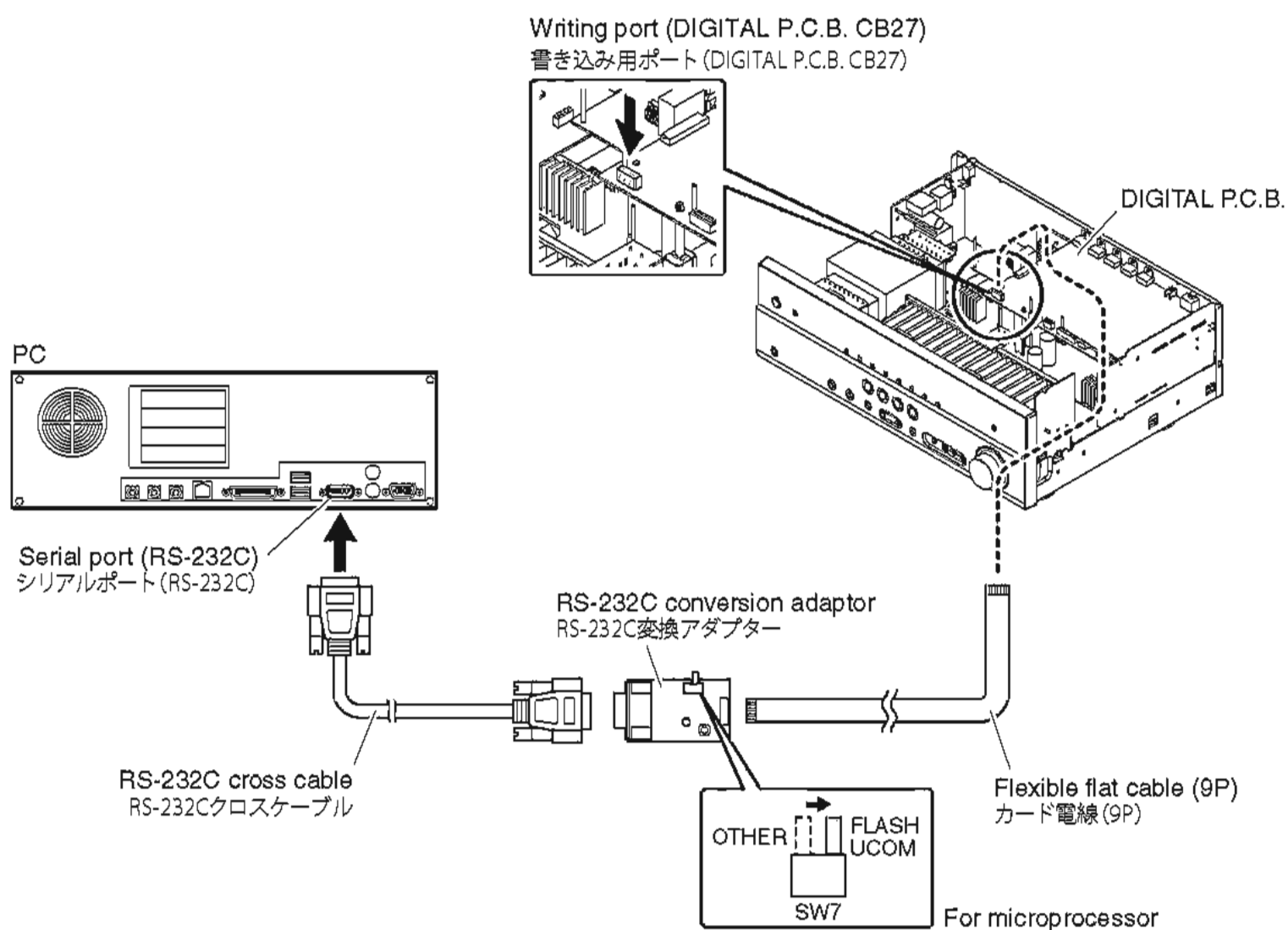


Fig. 1

## ● Operation procedure

1. Connect the power cable of this unit to the AC outlet.  
The power to this unit is supplied and the microprocessor is in the writing mode.

2. Follow the procedure below to start up Flash Development Toolkit 4.04 Basic.exe.

Click [start] → [All Programs] → [Renesas] → [Flash Development Toolkit 4.04] → [Flash Development Toolkit 4.04 Basic].

The screen appears as shown below. (Fig. 2)

- \* When Flash Development Toolkit 4.04 Basic.exe is started with the PC for the first time, the "Choose Device And Kernel" screen appears. (Fig. 4)

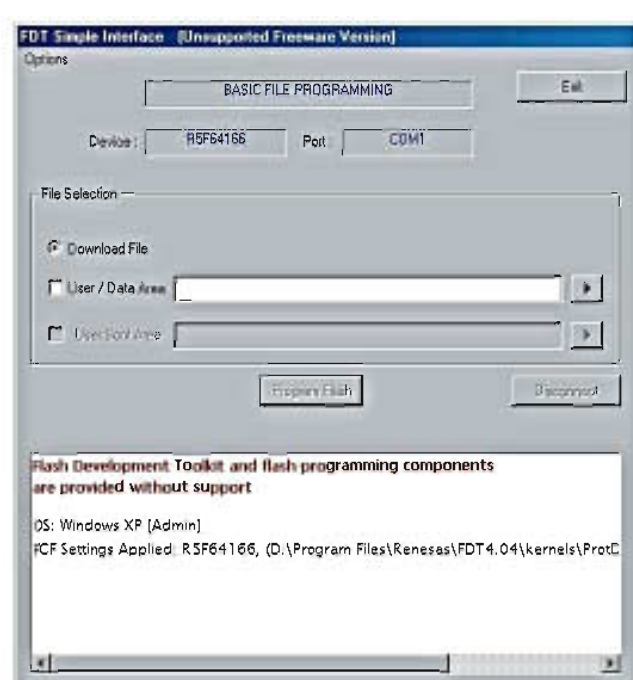


Fig. 2

## ● 操作方法

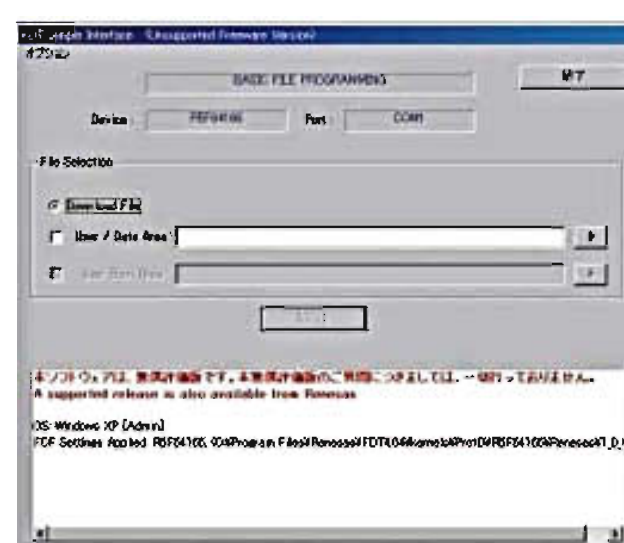
1. 本機の電源コードを AC コンセントに接続します。  
本機に電源が入り、マイコンが書き込みモードになります。

2. 下記の手順で Flash Development Toolkit 4.04 Basic.exe を起動します。

[スタート] → [すべてのプログラム] → [Renesas] → [Flash Development Toolkit 4.04] → [Flash Development Toolkit 4.04 Basic] をクリックします。

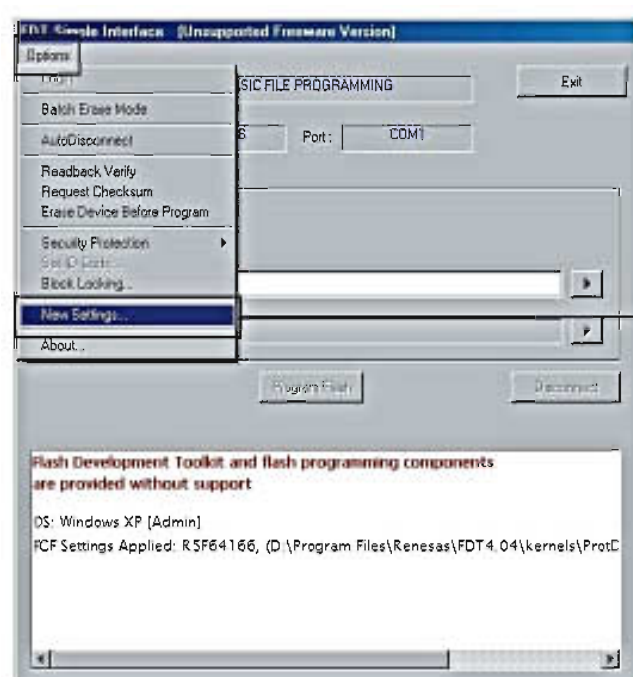
下記の画面が表示されます。(Fig. 2)

- ※ Flash Development Toolkit 4.04 Basic.exe をパソコンで初めて起動した場合、“デバイスとカーネルの選択” 画面が表示されます。(Fig. 4)



3. Click [Options] → [New Settings], and select the Device and Port. (Fig. 3)

The "Choose Device And Kernel" screen appears. (Fig. 4)



3. [オプション] → [新規設定] をクリックし、Device、Port を選択します。(Fig. 3)

“デバイスとカーネルの選択” 画面が表示されます。(Fig. 4)

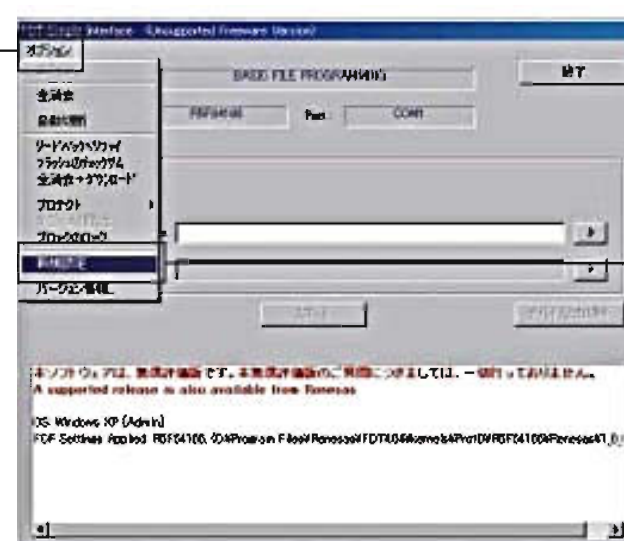
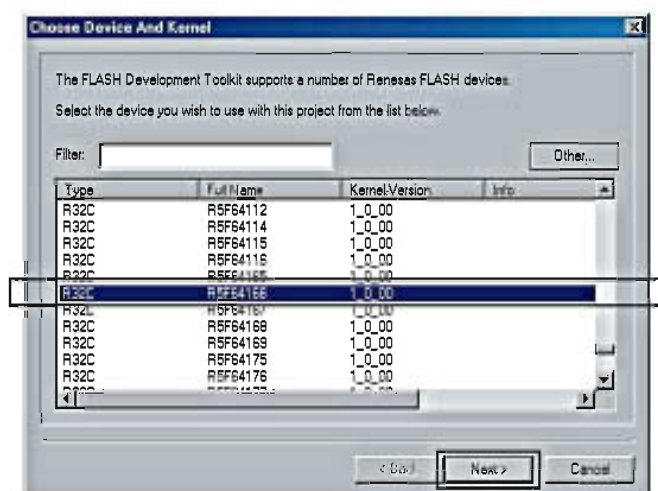


Fig. 3

4. Select the device. (Fig. 4)

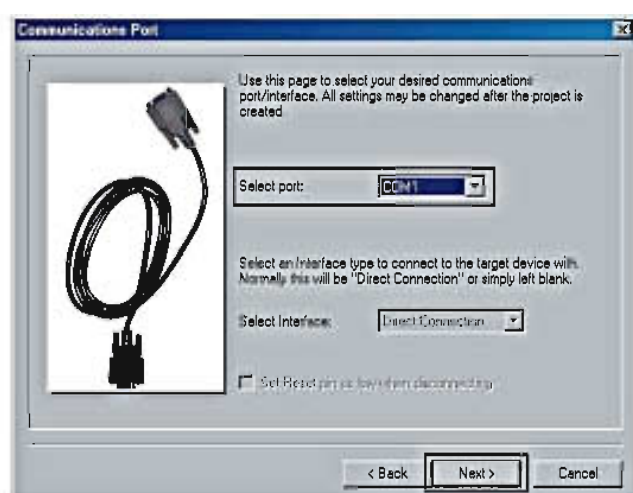
RX-V467/HTR-4063: R32C R5F64166 1\_0\_00



Click [Next]

Fig. 4

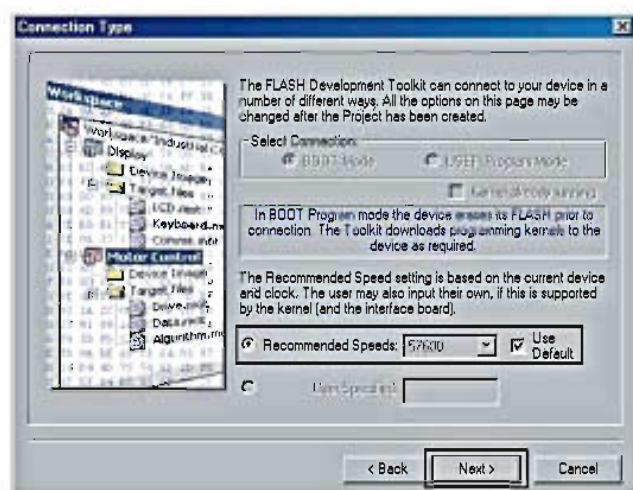
5. Select the communications port of RS-232C. (Fig. 5)



Click [Next]

Fig. 5

6. Select the Recommended Speeds "Use Default". (Fig. 6)

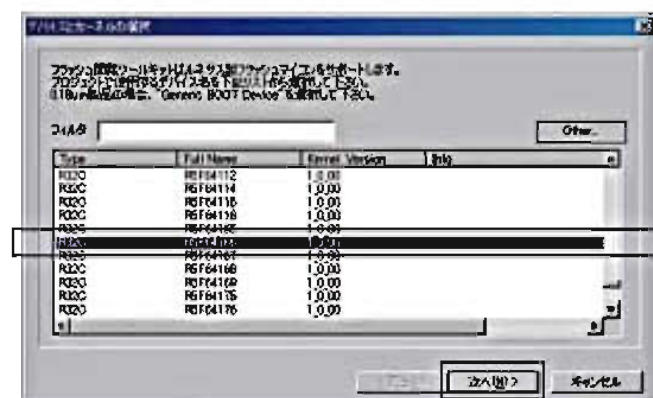


Click [Next]

Fig. 6

4. デバイスを選択します。(Fig. 4)

RX-V467/HTR-4063 : R32C R5F64166 1\_0\_00



[次へ] をクリック

5. 接続している RS-232C の通信ポートを選択します。(Fig. 5)



[次へ] をクリック

6. ボーレート "Use Default" を選択します。(Fig. 6)

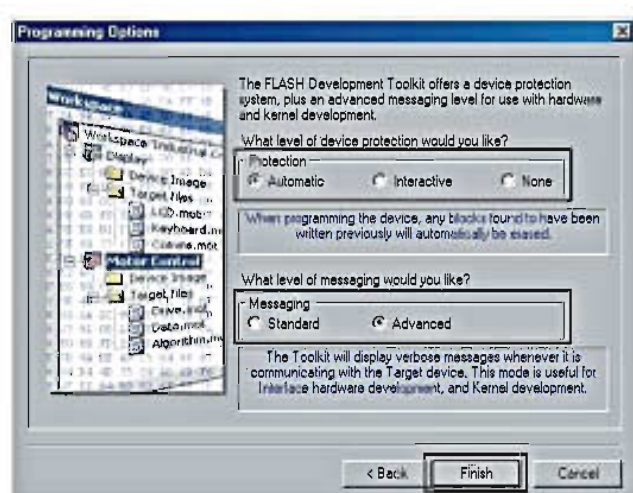


[次へ] をクリック



## 7. Select the Protection and Messaging. (Fig. 7)

Protection: Automatic  
Messaging: Advanced



Click [Finish]

## 7. Protection、Messaging を選択します。(Fig. 7)

Protection : Automatic  
Messaging : Advanced



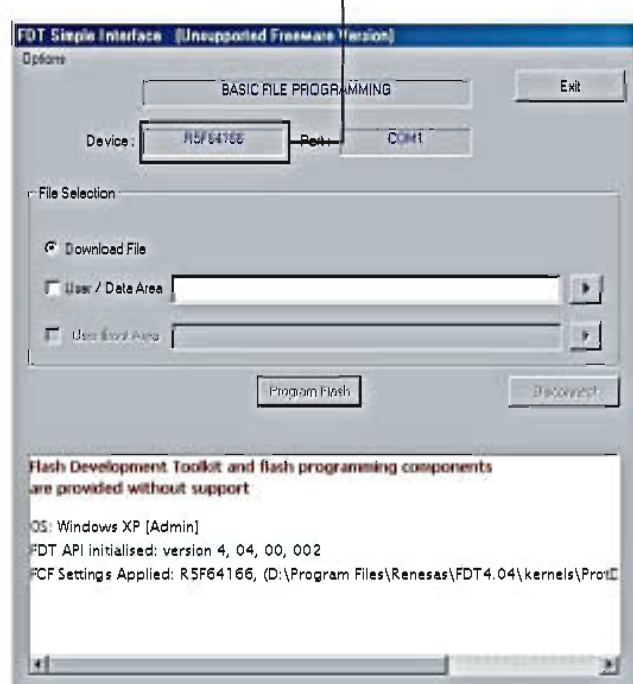
[完了] をクリック

Fig. 7

## 8. Check the Device.

When the Device is different from selected one, perform the steps from 3 to 7 of the "Operation procedure" again.

RX-V467/HTR-4063: **R5F64166**

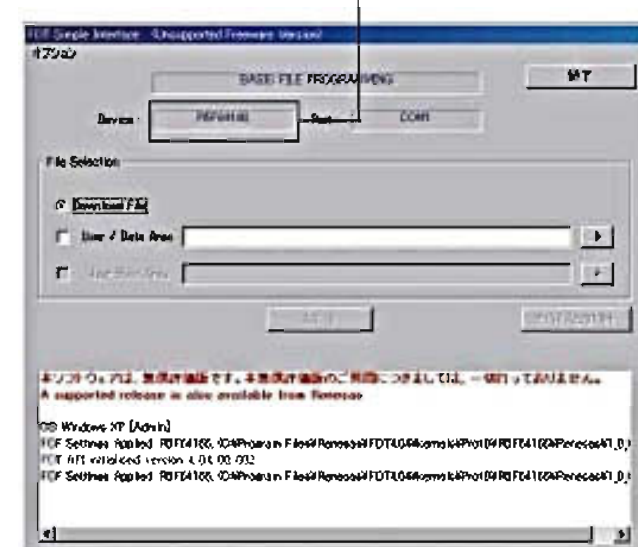


Click [Finish]

## 8. Device を確認します。

Device が選択されたものと異なっているときには、「操作方法」の3から7までをもう一度やり直してください。

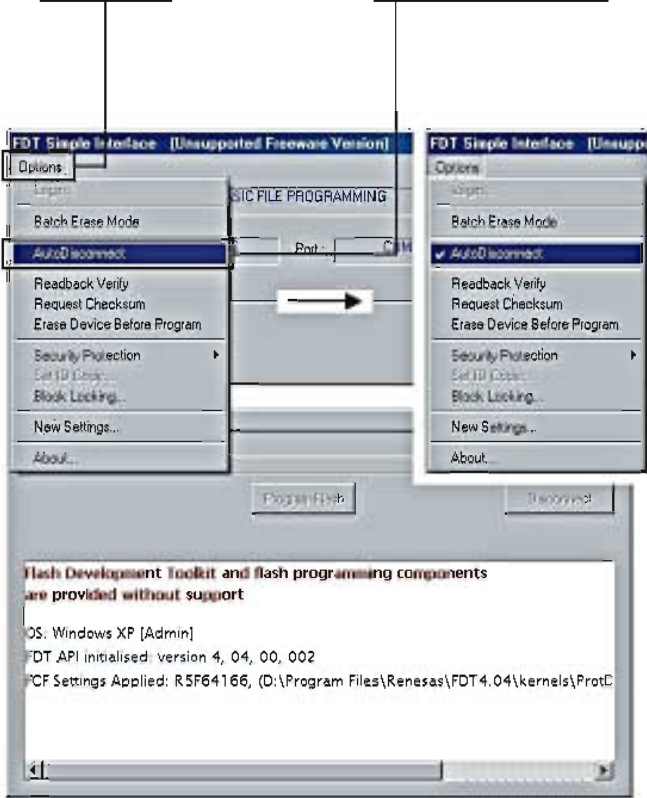
RX-V467/HTR-4063 : **R5F64166**



[完了] をクリック

Fig. 8

9. Click [Options] to select the AutoDisconnect. (Fig. 9)



9. [オプション] をクリックして自動切断を選択します。(Fig. 9)

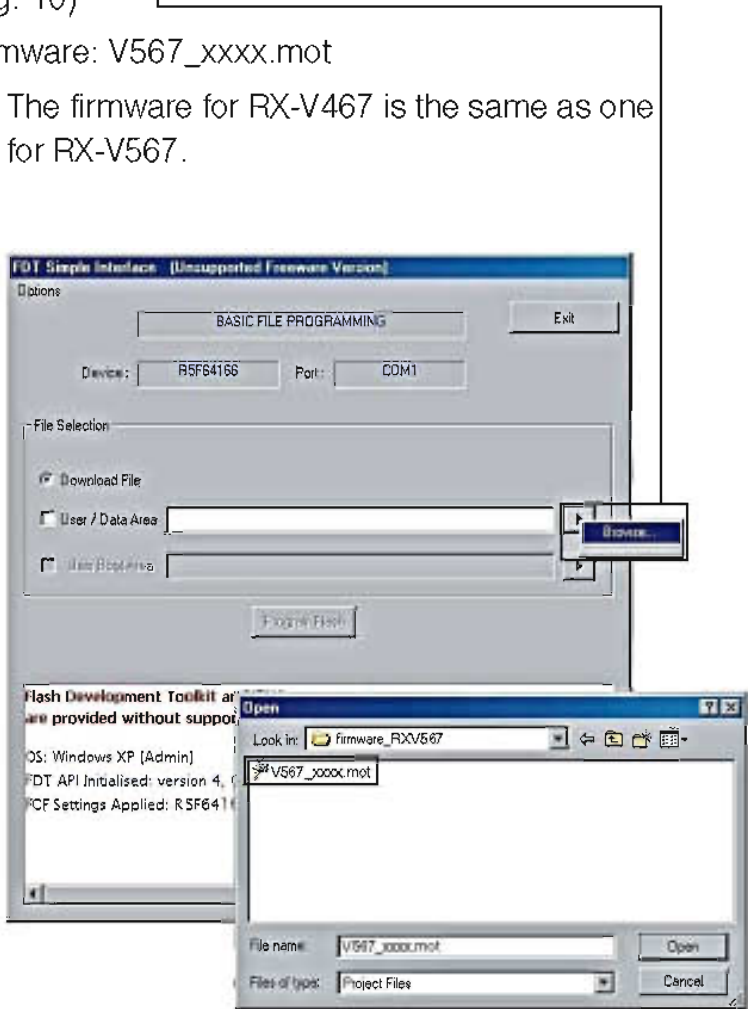


Fig. 9

10. Click [▶] → [Browse], and select the firmware name. (Fig. 10)

Firmware: V567\_xxxx.mot

\* The firmware for RX-V467 is the same as one for RX-V567.



10. [▶] → [参照] をクリックし、書き込むファームウェアを選択します。(Fig. 10)

ファームウェア：V567\_xxxx.mot

※ RX-V467 用ファームウェアは、RX-V567 用のものと同じです。

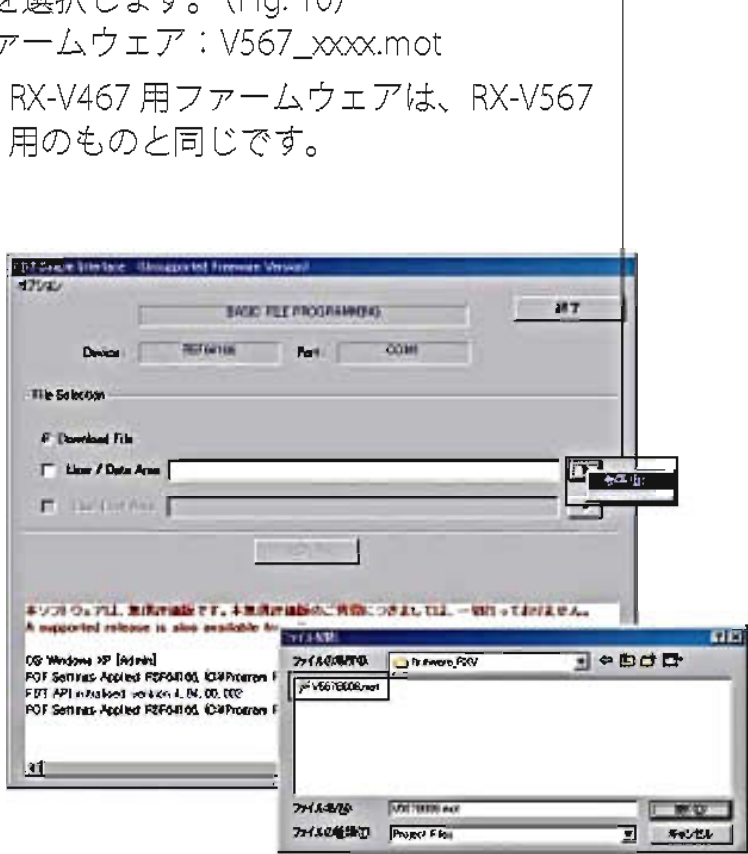
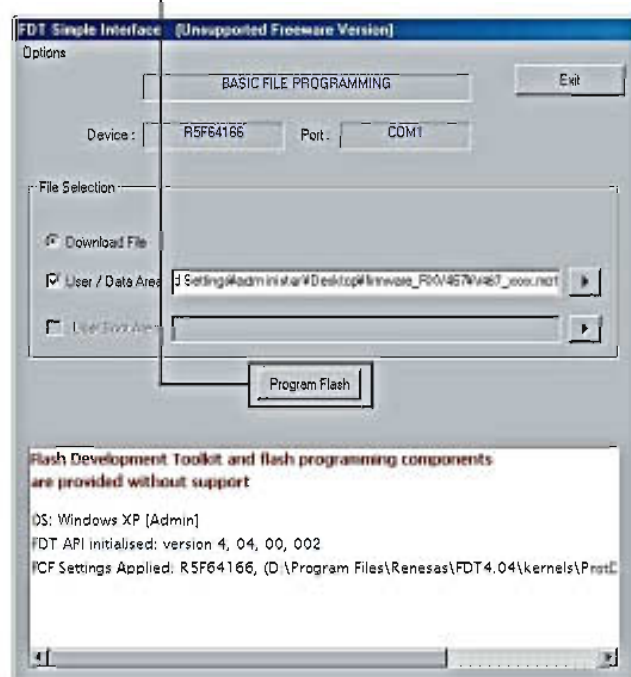
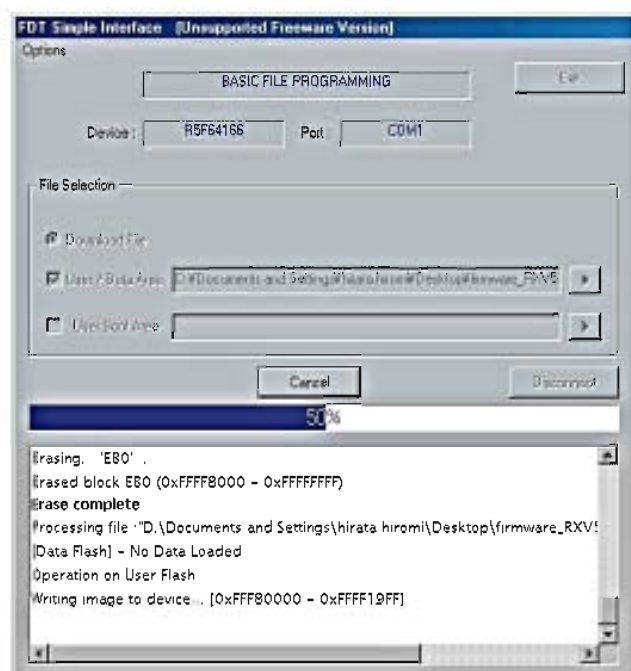


Fig. 10

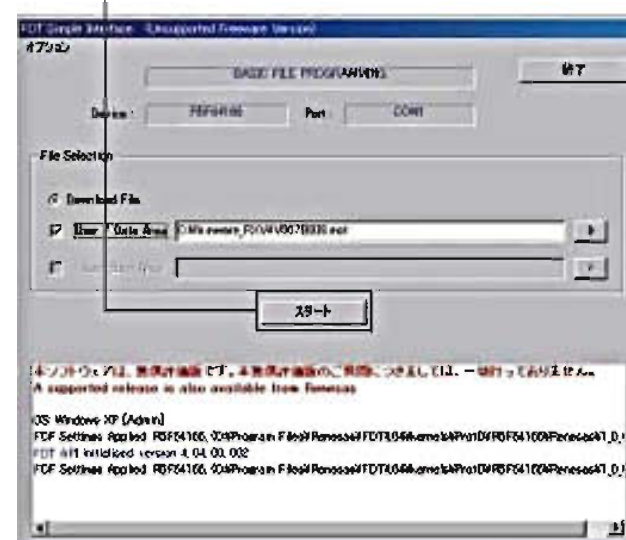
11. Click [Program Flash] to start writing. (Fig. 11)



Writing being executed



11. [スタート] をクリックして書き込みを開始します。  
(Fig. 11)



書き込み中

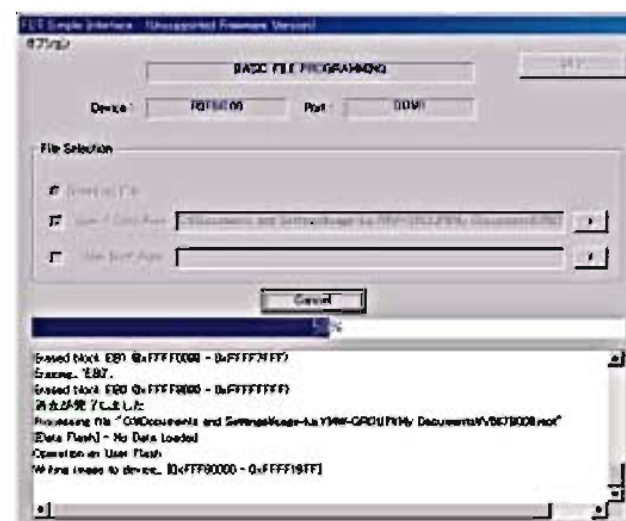
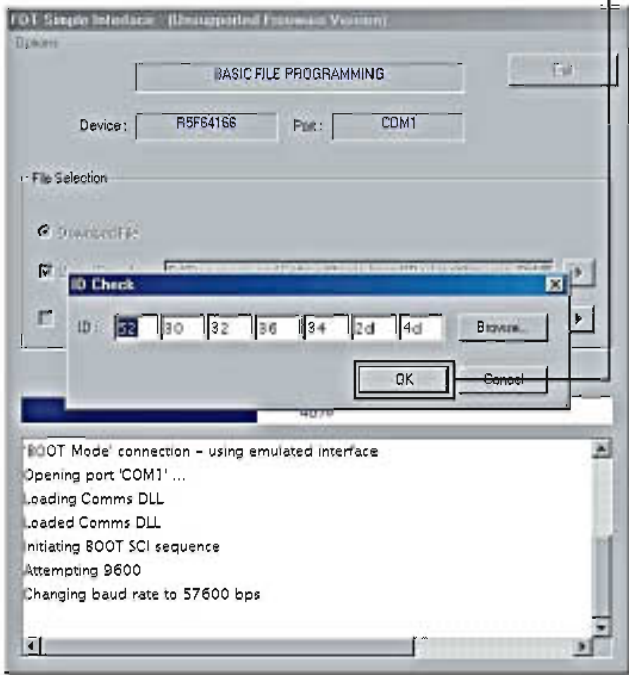


Fig. 11



\* If the "ID Code" screen appears, click [OK].  
(Fig. 12)



※ もし "ID コード" が表示された場合、[OK] をクリックします。(Fig.12)

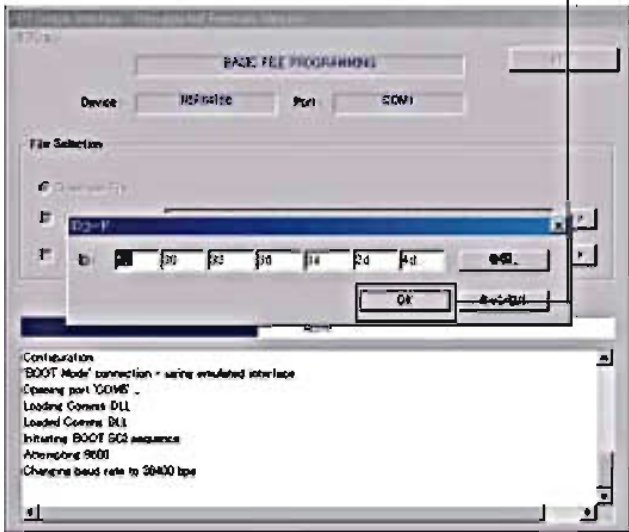
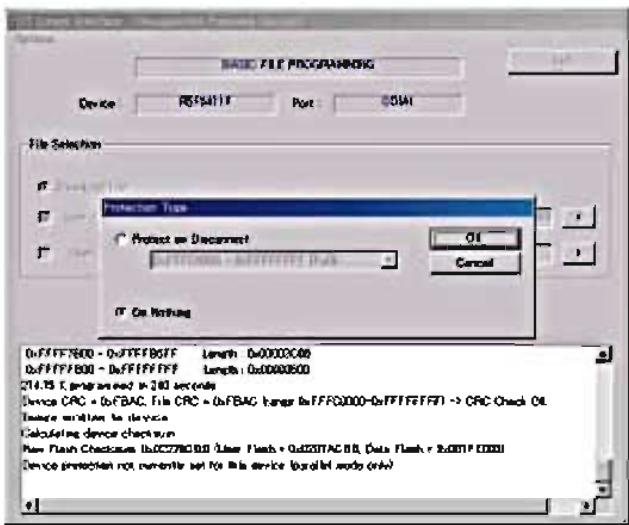


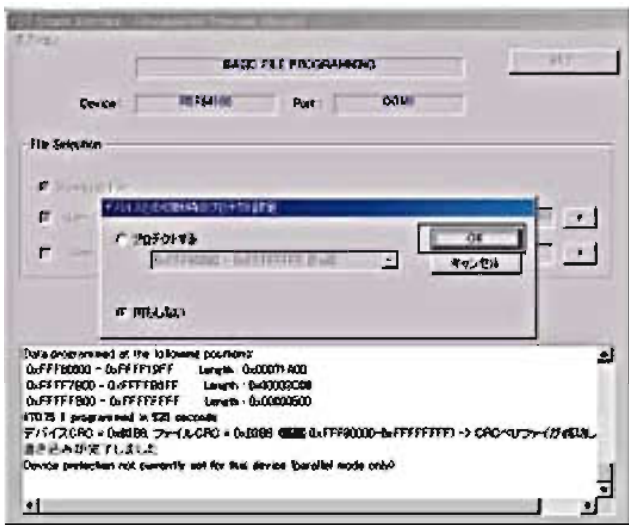
Fig. 12

12. When writing of the firmware is completed, the screen appears as shown below. (Fig. 13)



Click [OK]

12. ファームウェアの書き込みが完了すると、以下の画面が表示されます。(Fig. 13)

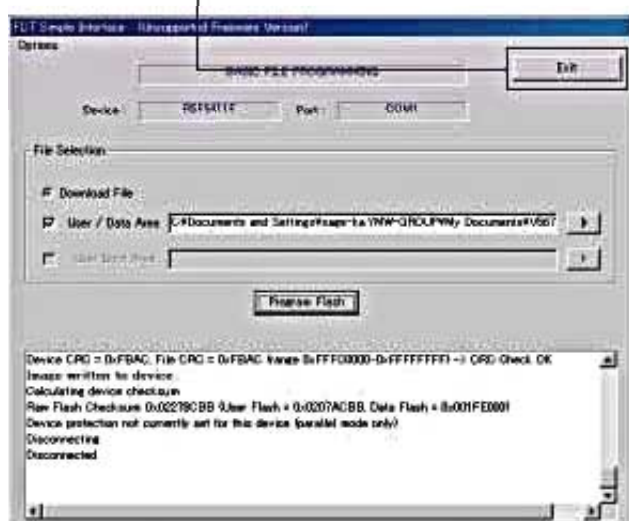


[OK] をクリック

Fig. 13



13. Click [Exit] to end Flash Development Toolkit 4.04 Basic. (Fig. 14)



13. [終了]をクリックしてFlash Development Toolkit 4.04 Basicを終了します。(Fig. 14)

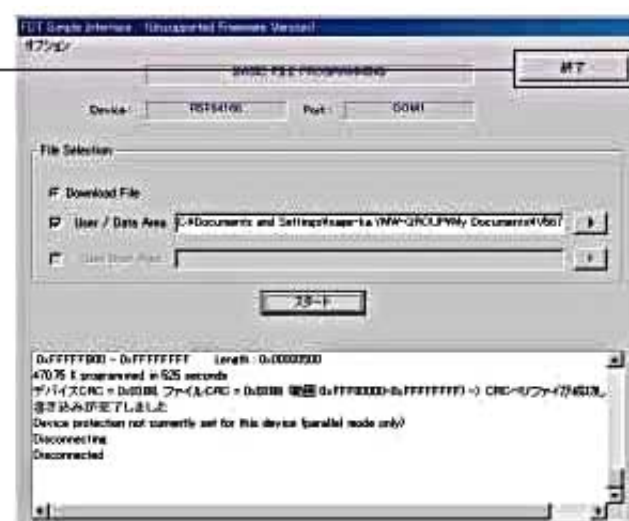


Fig. 14

14. Disconnect the power cable of this unit from the AC outlet.
15. Remove the RS-232C conversion adaptor and flexible flat cable from the writing port (CB27 of the DIGITAL P.C.B.) of this unit.
16. Connect the power cable of this unit to the AC outlet, start up the self-diagnostic function and check that the firmware version and checksum are the same as written ones. (See "Confirmation of firmware version and checksum")

14. 本機の電源コードを AC コンセントから抜きます。
15. 本機の書き込み用ポート (DIGITAL P.C.B. の CB27) から RS-232C 変換アダプターとカード電線を取り外します。
16. 本機の電源コードを AC コンセントに接続してダイアグを起動し、ファームウェアのバージョンとチェックサムが、書き込まれたものと同じであることを確認します。(「ファームウェアのバージョンとチェックサムの確認」参照)

## ■ SELF-DIAGNOSTIC FUNCTION / ダイアグ（自己診断機能）

This unit has self-diagnostic functions that are intended for inspection, measurement and location of faulty point.

There are 25 main menu items, each of which has sub-menu items.

Listed in the table below are main menu items and sub-menu items.

Note that not all menu items listed will apply to the models covered in this service manual.

本機には、検査、測定、不良個所の発見を目的にしたダイアグ（自己診断機能）があります。

ダイアグメニューは25個あり、そのそれぞれにサブメニューがあります。

下表はダイアグメニュー一覧です。

下表の全ダイアグメニュー項目が、このサービスマニュアル記載のモデルに適用されるとは限りません。

| No. | Main menu                                      | Sub-menu |                                                    |
|-----|------------------------------------------------|----------|----------------------------------------------------|
| 1   | BYPASS                                         | 1        | ANALOG BYPASS                                      |
|     |                                                | 2        | DSP BYPASS                                         |
| 2   | RAM THROUGH                                    | 1        | RAM MARGIN                                         |
|     |                                                | 2        | RAM FULL ALL                                       |
|     |                                                | 3        | RAM FULL CENTER                                    |
|     |                                                | 4        | RAM FULL SURROUND                                  |
|     |                                                | 5        | RAM FULL SURROUND BACK                             |
| 3   | HDMI AUDIO                                     | 1        | SPDIF                                              |
|     |                                                | 2        | Multi                                              |
|     |                                                | 3        | DSD                                                |
|     |                                                | 4        | ARC                                                |
| 4   | SPEAKERS SET                                   | 1        | FRONT: SML 0dB                                     |
|     |                                                | 2        | CENTER: NONE                                       |
|     |                                                | 3        | LFE/BASS: FRNT                                     |
|     |                                                | 4        | ZONE2 AMP ON                                       |
|     |                                                | 5        | BI-AMP                                             |
|     |                                                | 6        | TONE: MAX                                          |
|     |                                                | 7        | TONE: MIN                                          |
|     |                                                | 8        | SPEAKER 6 ohms                                     |
| 5   | X-CH INPUT<br>(Not for service / サービスでは使用しません) | 1        | 8ch INPUT 6 ohms                                   |
|     |                                                | 2        | 8ch INPUT 8 ohms                                   |
|     |                                                | 3        | LIM/PLDET/THM                                      |
| 6   | MIC CHECK                                      | 1        | MIC CHECK                                          |
| 7   | FL/MONITOR CHECK                               | 1        | INITIAL DISPLAY                                    |
|     |                                                | 2        | ALL SEGMENT OFF/MONITOR (VIDEO) MUTE               |
|     |                                                | 3        | ALL SEGMENT ON/MONITOR (COMPONENT) MUTE            |
|     |                                                | 4        | DIMMER 50%                                         |
|     |                                                | 5        | CHECK PATTERN                                      |
| 8   | MANUAL TEST                                    | 1        | TEST ALL                                           |
| 9   | AD DATA CHECK                                  | 1        | PS1/PS2                                            |
|     |                                                | 2        | DC/TH                                              |
|     |                                                | 3        | IMP/PL                                             |
|     |                                                | 4        | DST/DK                                             |
|     |                                                | 5        | K1/K2                                              |
| 10  | VIDEO                                          | 1        | I2C                                                |
|     |                                                | 2        | DIGITAL COMPONENT (Not for service / サービスでは使用しません) |
|     |                                                | 3        | DIGITAL CVBS (Not for service / サービスでは使用しません)      |
|     |                                                | 4        | DIGITAL Y/C (Not for service / サービスでは使用しません)       |
|     |                                                | 5        | ANALOG BYPASS (Not for service / サービスでは使用しません)     |
|     |                                                | 6        | TEST PATTERN (Not for service / サービスでは使用しません)      |
|     |                                                | 7        | VIDEO IN (Not for service / サービスでは使用しません)          |
| 11  | XM STATUS<br>(Not for service / サービスでは使用しません)  | 1        | 1k-1dB /44kHz                                      |
|     |                                                | 2        | 1k-61dB /44kHz                                     |
|     |                                                | 3        | MUTE /44kHz                                        |
|     |                                                | 4        | XM TONE /44kHz                                     |

| No. | Main menu                                     | Sub-menu |                                              |
|-----|-----------------------------------------------|----------|----------------------------------------------|
| 11  |                                               | 5        | ISO TONE /44kHz                              |
|     |                                               | 6        | 1k-1dB /32kHz                                |
|     |                                               | 7        | 1k-61dB /32kHz                               |
|     |                                               | 8        | MUTE /32kHz                                  |
|     |                                               | 9        | XM TONE /32kHz                               |
|     |                                               | 10       | ISO TONE /32kHz                              |
|     |                                               | 11       | BUS POWER                                    |
| 12  | SIRIUS<br>(Not for service / サービスでは使用しません)    | 1        | SIRIUS                                       |
|     |                                               | 2        | SR                                           |
|     |                                               | 3        | SSP                                          |
|     |                                               | 4        | MAC                                          |
|     |                                               | 5        | ADP                                          |
|     |                                               | 6        | PRDID                                        |
|     |                                               | 7        | SEQID                                        |
| 13  | HD RADIO<br>(Not for service / サービスでは使用しません)  | 1        | HD CPU VERSION                               |
|     |                                               | 2        | HD DSP VERSION                               |
| 14  | DOCK                                          | 1        | DOCK                                         |
|     |                                               | 2        | BT VERSION                                   |
| 15  | HDMI INFO                                     | 1        | MODEL NAME                                   |
|     |                                               | 2        | PRODUCT ID                                   |
|     |                                               | 3        | VENDOR NAME                                  |
| 16  | HDMI SELECT                                   | 1        | HDMI NONE                                    |
|     |                                               | 2        | HDMI IN 1                                    |
|     |                                               | 3        | HDMI IN 2                                    |
|     |                                               | 4        | HDMI IN 3                                    |
|     |                                               | 5        | HDMI IN 4                                    |
|     |                                               | 6        | HDMI UPCONV (Not for service / サービスでは使用しません) |
|     |                                               | 7        | HDMI UPTHR (Not for service / サービスでは使用しません)  |
| 17  | USB<br>(Not for service / サービスでは使用しません)       | 1        | USB FILE1                                    |
|     |                                               | 2        | USB FILE2                                    |
| 18  | IF STATUS<br>(Not for service / サービスでは使用しません) | 1        | DSP STATUS                                   |
| 19  | BUS CHECK                                     | 1        | TI BUS:                                      |
|     |                                               | 2        | BF LOOP (Not for service / サービスでは使用しません)     |
| 20  | NO MENU                                       |          | Invalidity                                   |
| 21  | PROTECTION HIST.                              | 1        | HISTORY 1                                    |
|     |                                               | 2        | HISTORY 2                                    |
|     |                                               | 3        | HISTORY 3                                    |
|     |                                               | 4        | HISTORY 4                                    |
| 22  | NO MENU                                       |          | Invalidity                                   |
| 23  | UPDATE<br>(Not for service / サービスでは使用しません)    | 1        | TI FLASH BOOT                                |
| 24  | FACTORY PRESET                                | 1        | PRESET INHIBIT                               |
|     |                                               | 2        | PRESET RESERVED                              |
| 25  | ROM VER/SUM/PORT                              | 1        | FIRMWARE VERSION                             |
|     |                                               | 2        | ALL CHECKSUM                                 |
|     |                                               | 3        | TI (DSP) FLASH ROM VERSION                   |
|     |                                               | 4        | TI (DSP) FLASH ROM CHECKSUM                  |
|     |                                               | 5        | XM VERSION (Not for service / サービスでは使用しません)  |
|     |                                               | 6        | SSR VERSION (Not for service / サービスでは使用しません) |
|     |                                               | 7        | MODEL/DESTINATION                            |
|     |                                               | 8        | Verify (Not for service / サービスでは使用しません)      |

## ● Starting Self-Diagnostic Function

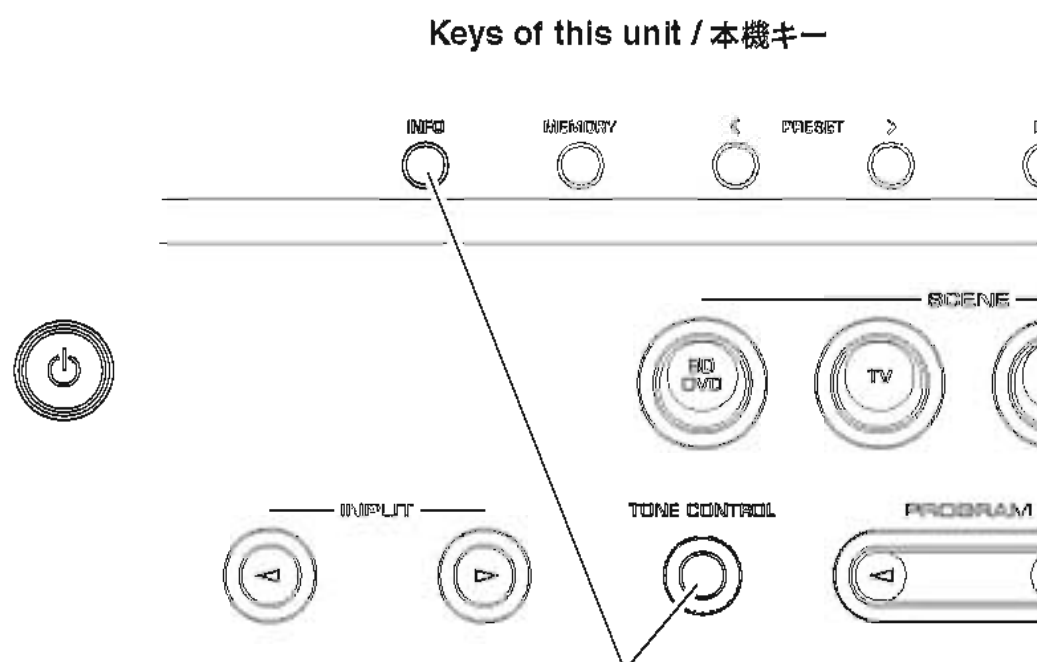
While pressing the "TONE CONTROL" and "INFO" keys of this unit as shown in the figure below, press the "⏻" (Power) key of this unit to turn on the power.

The self-diagnostic function mode is activated.

## ● ダイアグの起動

本機の下図に示す "TONE CONTROL" と "INFO" キーを押しながら "⏻" (パワー) キーを押して電源を入れます。

ダイアグが起動します。



While pressing these keys, turn on the power. / これらのキーを押しながら、電源を入れます。

## ● Starting Self-Diagnostic Function in the protection cancel mode

If the protection function works and causes hindrance to trouble shoot, cancel the protection function as described below, and it will be possible to enter the self-diagnostic function mode.

(The protection functions other than the excess current detect function will be disabled.)

While pressing the "TONE CONTROL" and "STRAIGHT" keys as shown in the figure above, press the "⏻" (Power) key to turn on the power and keep pressing those 2 keys and the "⏻" (Power) key for 3 seconds or longer.

The self-diagnostic function mode is activated with the protection functions disabled.

In this mode, the "SLEEP" segment of the FL display of this unit flashes to indicate that the mode is self-diagnostic function mode with the protection functions disabled.

## ● プロテクション解除モードでの起動

プロテクションが動作することにより、故障箇所の診断に支障をきたすような場合は、次の方法によりプロテクションを解除した状態でダイアグモードに入ることができます。

(過電流検出以外のプロテクション動作を解除する)

上図に示す "TONE CONTROL" と "STRAIGHT" キーを押しながら "⏻" (パワー) キーを押して電源を入れ、2つのキーと "⏻" (パワー) キーを3秒以上押し続けます。

プロテクション解除モードでダイアグが起動します。

このモードでは本機FLの "SLEEP" セグメントが点滅し、プロテクションを解除した状態でのダイアグモードであることを知らせます。

### CAUTION!

Using this product with the protection function disabled may cause further damage to this unit. Use special care for this point when using this mode.

### 注意!

プロテクションを解除した状態でのダイアグモードは、危険な状態でもプロテクションが作動しないため、動作させると、機器を破壊することがあります。このモードを使用する場合は十分注意してください。

## ● Canceling Self-Diagnostic Function

1. Before canceling self-diagnostic function, execute setting for FACTORY PRESET of main menu No.24. (Memory Initialization inhibited or Memory Initialized).
  - \* In order to keep the user memory preserved, be sure to select PRESET INHIBIT (Memory Initialization inhibited).
2. Press the "⏻" (Power) key of this unit to turn off the power.

## ● Display provided when Self-Diagnostic Function started

The display is as described below depending on the situation the last time the power to this unit is turned off.

### 1. When the power is turned off normally:

The FL display of this unit displays "NO PROTECT" then the main menu (sub-menu "1. ANALOG BYPAS" of main menu No. 1 BYPASS) a few seconds later.

## ● ダイアグの解除

1. ダイアグを解除する前に、メインメニュー No. 24. FACTORY PRESET (メモリーの初期化禁止/またはメモリーの初期化) の設定をします。
  - ※ ユーザーメモリーを保持したい場合は、必ず PRESET INHIBIT (メモリー初期化禁止) を選択してください。
2. 本機の "⏻" (パワー) キーを押して電源を切ります。

## ● ダイアグ起動時の表示

最後に本機の電源が切れたときの状況により、下記のように表示されます。

### 1. 通常の操作で電源を切った場合:

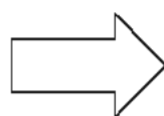
本機の FL ディスプレイに "NO PROTECT" が表示されます。数秒後、メインメニュー 1 BYPASS のサブメニュー "1. ANALOG BYPAS" が表示されます。

Opening message / オープニング表示

Main menu display / メインメニュー表示

After a few seconds / 数秒後

NO PROTECT



1. ANALOG BYPAS

## 2. When the protection function worked to turn off the power:

The FL display of this unit displays the data of protection function which worked at that time then the main menu (sub-menu "1. ANALOG BYPAS" of main menu 1 BYPASS) a few seconds later.

Note: When you reactivate the self-diagnostic function after turning off the power once by pressing the "⏻" (Power) key, "NO PROTECT" will be displayed because that situation is equal to "1. When the power is turned off by usual operation:" described above.

However the protection function history is stored in a back-up IC with a backup. For details, refer to main menu 21 PROTECTION HISTORY.

### 2-1. When there is a history of protection function due to excess current

PS PRT:xxxL

AD value when the protection function is working  
電圧の A/D 変換値

**Cause:** An excessive current flowed through the power amplifier.

**Supplementary Information:** As current of the power amplifier is detected, the abnormal channel can be identified by checking the current detect transistor.

Turning on the power without correcting the abnormality will cause the protection function to work immediately and the power supply will instantly be shut off.

## 2. プロテクションが働いて電源が切れた場合:

本機の FL ディスプレイにそのときに働いたプロテクションの情報が表示されます。数秒後、メインメニュー 1 BYPASS のサブメニュー "1. ANALOG BYPAS" が表示されます。

注) このときに "⏻" (パワー) キーを押していったん電源を切った後にダイアグを再起動すると、上述の「1. 通常の操作で電源を切った場合」に相当するので、"NO PROTECT" が表示されます。ただし、プロテクションの履歴はメモリーにバックアップして記憶されます。詳細は、メインメニュー 21 PROTECTION HISTORY を参照してください。

### 2-1. 過電流によるプロテクション履歴がある場合

**原因:** パワーアンプに過電流が流れた。

**補足:** パワートランジスタの電流を検出していますので、電流検出トランジスタをチェックすれば異常チャンネルが特定できます。

異常状態のまま電源を入れると、瞬時にプロテクションが働き、すぐに電源が切れます。

#### Notes)

- Applying the power to this unit without correcting the abnormality can be dangerous and cause additional circuit damage. To avoid this, if "PS" and "DC" protection function works 3 times consecutively, the power will not turn on even when the "⏻" (Power) key is pressed. In order to turn on the power again, disconnect the power cable of this unit from the AC outlet once and then reconnect it again. In order to turn on the power again, disconnect the power cable of this unit from the AC outlet once and then reconnect it again.
- The output transistors in each amplifier channel should be checked for damage before applying power to this unit.
- Amplifier current should be monitored by measuring DC voltage across the emitter resistors for each channel.

#### 注意!

- 異常状態のまま本機の電源を入れると、危険な状態になり、さらに回路が損傷を受ける原因になります。それを避けるために、プロテクションが連続して3回目働いた場合、それ以降 "⏻" (パワー) キーを押しても電源が入らなくなります。再度電源を入れる場合、一度本機の電源コードを AC 電源コンセントから抜いて接続し直してください。
- 本機の電源をいれる前に、各パワーアンプの出力トランジスタに損傷がないかチェックしてください。
- パワーアンプの電流は、各チャンネルのエミッターの抵抗器間 DC 電圧を測定することによりモニターしてください。



## 2-2. When the protection function worked due to a short between speaker terminals.

## 2-2. スピーカー端子間のショートによりプロテクションが働いた場合

I PROTECT

**Cause:** The line between speaker terminals is shorted.

**Supplementary Information:** As the excess current is detected after operation of the speaker relay, the shorted speaker terminal and the connected speaker can be identified.

Turning on the power without correcting the abnormality will cause the protection function to work immediately and the power supply will instantly be shut off.

**原因：**スピーカー端子間がショートしている。

**補足：**スピーカーリレー動作後に過電流を検出している  
ので、スピーカー端子および接続しているスピー  
カーのショートが特定できます。

異常状態のまま電源を入れると、瞬時にプロテクション  
が働き、すぐに電源が切れます。

## 2-3. When the protection function worked due to abnormal DC output.

## 2-3. DC 出力異常によりプロテクションが働いた場合

DC PRT:xxxH

AD value when the protection function is working  
電圧の A/D 変換値

**Cause:** DC output of the power amplifier is abnormal.

**Supplementary Information:** The protection function worked due to a DC voltage appearing at the speaker terminal. A cause could be a defect in the amplifier.

Turning on the power without correcting the abnormality will cause the protection function to work in 3 seconds and the power supply will be shut off.

**原因：**パワーアンプの DC 出力が異常。

**補足：**アンプの故障でスピーカー端子に直流電圧が DC  
掛かるなどが原因で、プロテクションが働いたこ  
とを示します。

異常状態のまま電源を入れると、3 秒後にプロテクション  
が働き、電源が切れます。



2-4. When the protection function worked due to abnormal voltage in the power supply section.

2-4. 電源部の電圧異常によりプロテクションが働いた場合

PRV PRT:xxxL

AD value when the protection function is working  
電圧の A/D 変換値

**Cause:** The voltage in the power supply section is abnormal.  
**Supplementary Information:** The protection function worked due to a defect or overload in the power supply.  
Turning on the power without correcting the abnormality will cause the protection function to work in 1 seconds and the power supply will be shut off.

**原因：**電源部の電圧が異常。  
**補足：**電源電圧による原因で、プロテクションが働いたことを示します。  
異常状態のまま電源を入れると、1 秒後にプロテクションが働き、電源が切れます。

2-5. When the protection function worked due to excessive heatsink temperature.

2-5. ヒートシンクの異常温度によりプロテクションが働いた場合

TMP PRT:xxxL

AD value when the protection function is working  
電圧の A/D 変換値

**Cause:** The temperature of the heatsink is excessive.  
**Supplementary Information:** The protection function worked due to the temperature limit being exceeded. Causes could be poor ventilation or a defect related to the thermal sensor.  
Turning on the power without correcting the abnormality will cause the protection function to work in 1 seconds and the power supply will be shut off.  
\* For detection of each protection function, refer to main menu described later.

**原因：**ヒートシンクの温度が異常。  
**補足：**温度制限を越えた原因で、プロテクションが働いたことを示します。  
異常状態のまま電源を入れると、1 秒後にプロテクションが働き、電源が切れます。  
プロテクション履歴の詳細は、メインメニュー 21 PROTECTION HISTORY を参照してください。  
※ 各プロテクションの検出に関しては、後述のメインメニューを参照してください。

● History of protection function

When the protection function has worked, its history is stored in memory with a backup.

Even if no abnormality is noted while servicing the unit, an abnormality which has occurred previously can be defined as long as the backup data has been stored.

The history of the protection function will be initialized when self-diagnostic function is cancelled by selecting No. 24-2. PRESET RESERVED (Memory initialized) sub-menu.

● プロテクションの履歴

プロテクションが働いた場合、履歴をバックアップして記憶しています。

修理のときに異常が認められなくても、バックアップが残っていれば、お客様のところで起きた異常を区別できます。

サブメニュー No. 24-2 PRESET RESERVED（メモリーの初期化）を選んでダイアグを解除した場合にプロテクションの履歴はクリアされます。



## ● Operation procedure of Main menu and Sub-menu

There are 25 main menu items, each of having sub-menu items.

### Main menu selection

Select the menu using "SCENE TV" (forward) and "SCENE BD/DVD" (reverse) keys.

### Sub-menu selection

Select the sub-menu using "SCENE RADIO" (forward) and "SCENE CD" (reverse) keys.

## ● メインメニューとサブメニューの操作

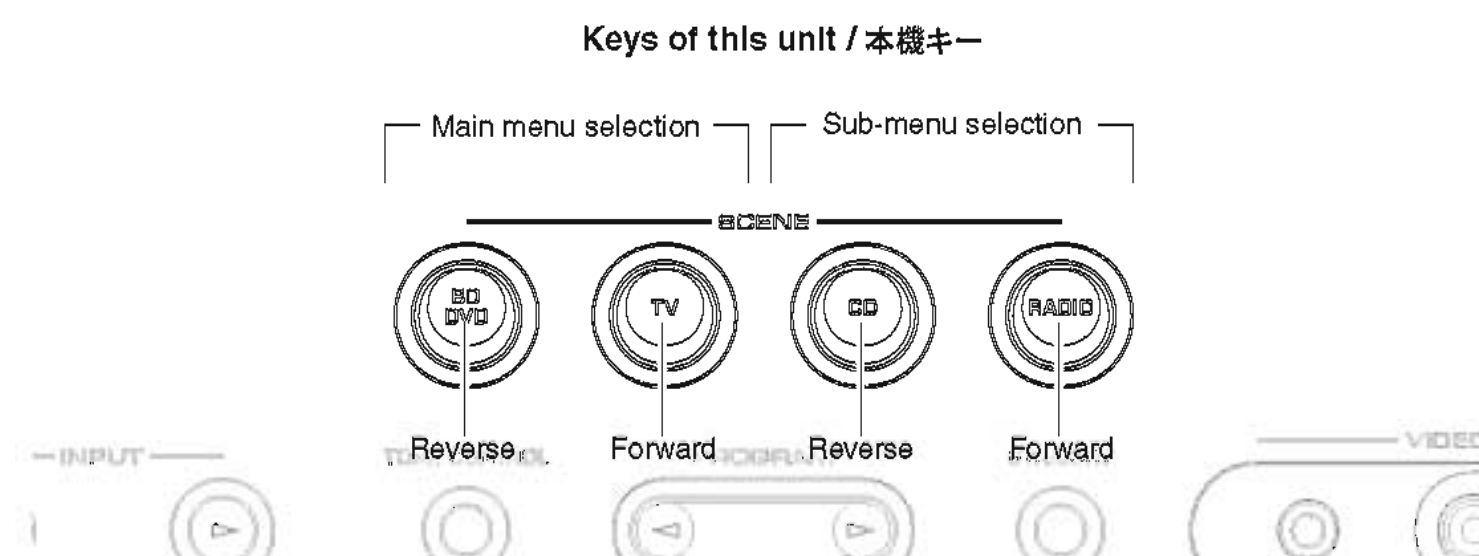
ダイアグには No. 1 ～ 25 のメインメニューがあり、そのそれぞれにサブメニューがあります。

### メインメニューの選択

"SCENE TV" (順送り)、"SCENE BD/DVD" (逆送り) キーで選択します。

### サブメニューの選択

"SCENE RADIO" (順送り)、"SCENE CD" (逆送り) キーで選択します。



## ● Functions in Self-Diagnostic Function mode

In addition to the self-diagnostic function menu items, functions as listed below are available.

- Power ON/OFF
- Master volume
- Muting
- Input selection
- \* Functions related to the tuner and the set menu are not available.

## ● ダイアグ中の機能

ダイアグメニューの他に、以下の機能が動作します。

- 電源 オン/オフ
- マスターボリューム
- ミューティング
- インプットセレクト

※ チューナー関連、セットメニュー関連は機能しません。

## ● Initial settings used to start Self-Diagnostic Function

The following initial settings are used when starting self-diagnostic function.

When self-diagnostic function is canceled, these settings are restored to those before starting self-diagnostic function.

- Master volume: -20 dB
- Input: AV5
- Main menu: 1. ANALOG BYPASS
- Speaker setting: LARGE, Bass out to SWFR (All channels)

## ● ダイアグ開始時の初期設定

ダイアグ開始時に以下のような設定になります。

ダイアグ解除時にはダイアグ開始前の状態に戻ります。

- マスターボリューム: -20 dB
- インプット: AV5
- メインメニュー: 1. ANALOG BYPASS
- スピーカー設定: LARGE、Bass out to SWFR (すべてのチャンネル)

● Details of Self-Diagnostic Function menu

1. BYPASS

Using the sub-menu, it is possible to select ANALOG BYPASS or DSP BYPASS output.

1-1. ANALOG BYPASS

The analog input audio signal is output to FRONT L/R in DIRECT mode.

● ダイアグメニュー詳細

1. BYPASS

サブメニュー操作により、ANALOG BYPASS/DSP BYPASS が選択可能です。

1-1. ANALOG BYPASS

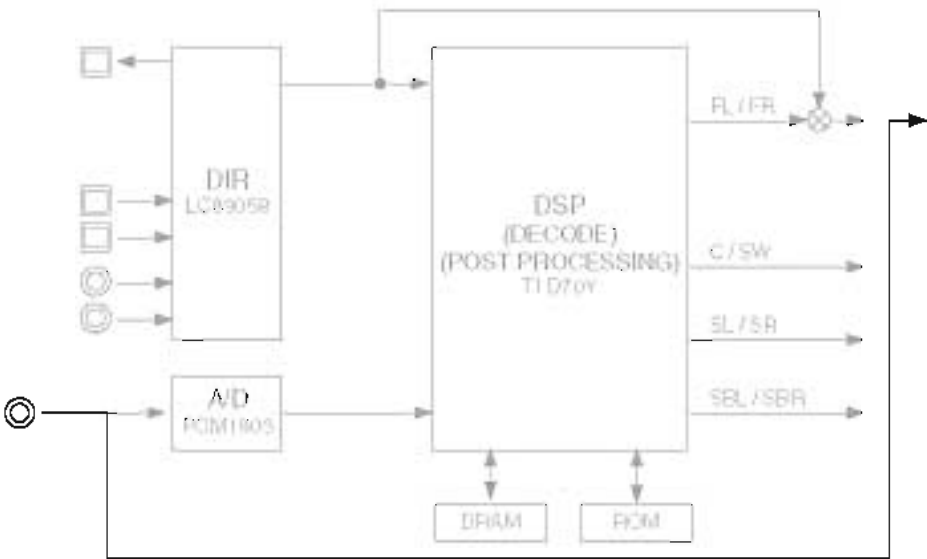
アナログ入力の音声信号がダイレクトモードで FRONT L/R へ出力されます。

1. ANALOG BYPASS

INPUT: AV5 ANALOG  
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |        |          | SURROUND BACK | SUBWOOFER OUTPUT |
|------------------|---------|----------------|--------|----------|---------------|------------------|
|                  |         | FRONT          | CENTER | SURROUND |               |                  |
| Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | -∞     | -∞       | -∞            | -∞               |

ANALOG BYPASS



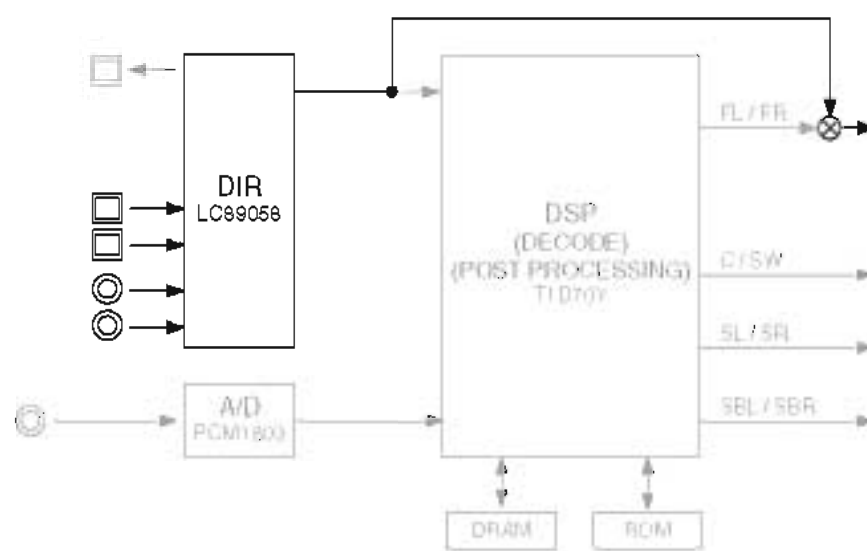
(Shaded items not used in this example)

**1-2. DSP BYPASS**

The digital input audio signal is output to FRONT L/R in DIRECT mode.

**1-2. DSP BYPASS**

デジタル入力の音声信号がダイレクトモードで FRONT L/R へ出力されます。

**1. DSP BYPASS****DSP BYPASS**

(Shaded items not used in this example)

2. RAM THROUGH

Using the sub-menu, it is possible to select MARGIN output or FULL BIT output.

2-1. RAM MARGIN

The audio signal is output including the head margin.

2. RAM MARGIN

INPUT: AV5 ANALOG  
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |           |           |               | SUBWOOFER OUTPUT |
|------------------|---------|----------------|-----------|-----------|---------------|------------------|
|                  |         | FRONT          | CENTER    | SURROUND  | SURROUND BACK |                  |
| Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +11.5 dBm | -16.5 dBm     | -7.5 dBm         |

2-2. RAM FULL ALL

The audio signal is output to all channels in digital full bit without including the head margin.  
The SUBWOOFER signal is output but not in digital full bit.

2. RAM FULL ALL

INPUT: AV5 ANALOG  
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |           |           |               | SUBWOOFER OUTPUT |
|------------------|---------|----------------|-----------|-----------|---------------|------------------|
|                  |         | FRONT          | CENTER    | SURROUND  | SURROUND BACK |                  |
| Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +11.5 dBm | -16.5 dBm     | -7.5 dBm         |

2-3. RAM FULL CENTER

The audio signal is output to only CENTER channel in digital full bit without including the head margin.

2. RAM FULL C

INPUT: AV5 ANALOG  
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |           |          |               | SUBWOOFER OUTPUT |
|------------------|---------|----------------|-----------|----------|---------------|------------------|
|                  |         | FRONT          | CENTER    | SURROUND | SURROUND BACK |                  |
| Both ch, -20 dBm | +6.5 dB | -∞             | +11.5 dBm | -∞       | -∞            | -∞               |

2. RAM THROUGH

サブメニュー操作により、MARGIN/FULL BIT が選択可能です。

2-1. RAM MARGIN

音声信号がヘッドマージンを含んで出力されます。

2-2. RAM FULL ALL

音声信号がヘッドマージンを含まず、デジタルフルビットで全チャンネルへ出力されます。  
SUBWOOFER は出力されますが、デジタルフルビットではありません。

2-3. RAM FULL CENTER

音声信号がヘッドマージンを含まず、デジタルフルビットで CENTER チャンネルのみへ出力されます。

**2-4. RAM FULL SURROUND**

The audio signal is output to only SURROUND L/R channels in digital full bit without including the head margin.

2. RAM FULL SUR

INPUT: AV5 ANALOG

SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |        |           |               | SUBWOOFER OUTPUT |
|------------------|---------|----------------|--------|-----------|---------------|------------------|
|                  |         | FRONT          | CENTER | SURROUND  | SURROUND BACK |                  |
| Both ch, -20 dBm | +6.5 dB | -∞             | -∞     | +11.5 dBm | -∞            | -∞               |

**2-5. RAM FULL SURROUND BACK**

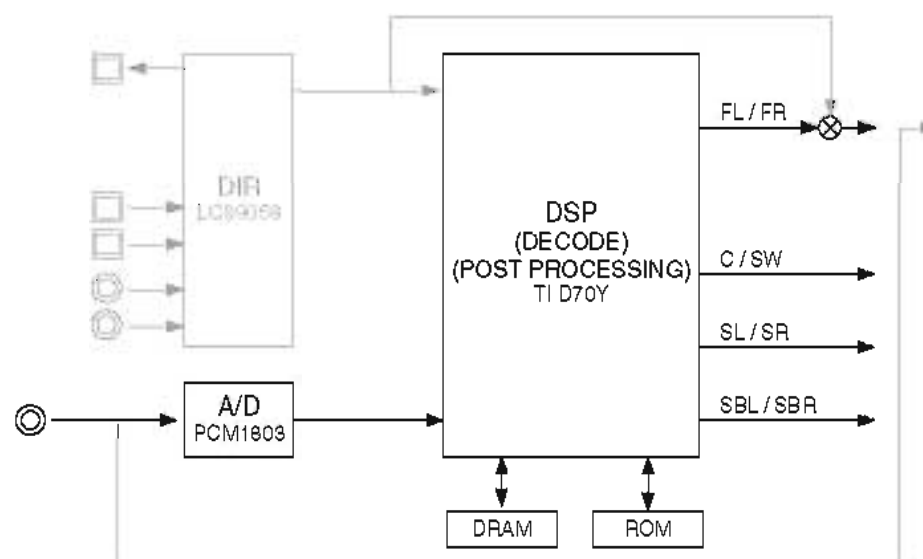
The audio signal is output to only SURROUND BACK L/R channels in digital full bit without including the head margin.

2. RAM FULL SB

INPUT: AV5 ANALOG

SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Input level      | Volume  | SPEAKER OUTPUT |        |          |               | SUBWOOFER OUTPUT |
|------------------|---------|----------------|--------|----------|---------------|------------------|
|                  |         | FRONT          | CENTER | SURROUND | SURROUND BACK |                  |
| Both ch, -20 dBm | +6.5 dB | -∞             | -∞     | -∞       | -16.5 dBm     | -∞               |

**RAM THROUGH**

(Shaded items not used in this example)

3. HDMI AUDIO

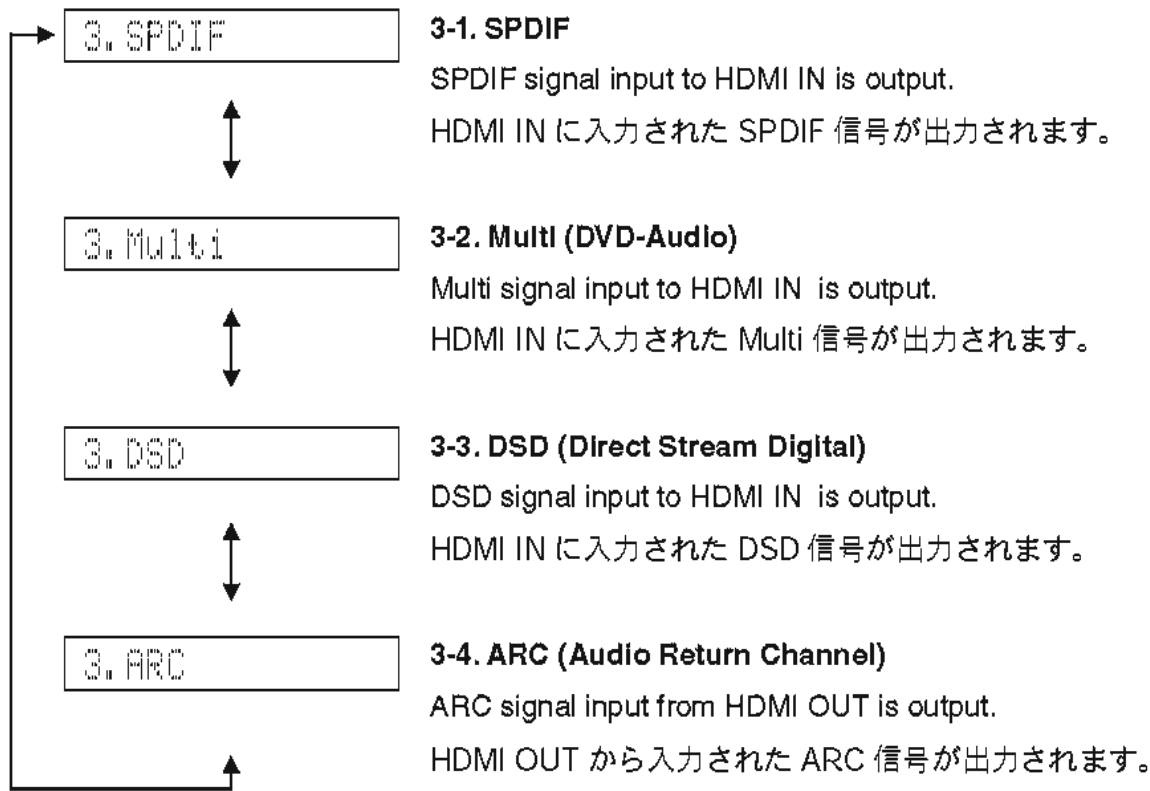
Using the sub-menu, the audio signals input to HDMI IN/OUT are selected and output.

- \* When selecting “DSD”, be sure to connect an HDMI unit equipped with DSD output function to this unit.
- \* When selecting “ARC”, be sure to connect an HDMI unit equipped with ARC output function to this unit.

3. HDMI AUDIO

サブメニュー操作により、HDMI IN/OUT に入力された音声信号が選択し、出力されます。

- ※ “DSD” を選択する場合、必ず DSD 出力が可能な HDMI 機器を接続してください。
- ※ “ARC” を選択する場合、必ず ARC 出力が可能な HDMI 機器を接続してください。





#### 4. SPEAKER SET

This menu is used to check the speaker output.

The analog switch settings for each sub-menu are as shown in the table below.

|                |  | FRONT | CENTER | SURROUND | SURROUND BACK | SUBWOOFER |
|----------------|--|-------|--------|----------|---------------|-----------|
| FRNT : SML 0dB |  | SMALL | LARGE  | LARGE    | LARGE         | SWFR      |
| CENTER : NONE  |  | LARGE | NONE   | LARGE    | LARGE         | SWFR      |
| LFE/B : FRNT   |  | LARGE | SMALL  | SMALL    | SMALL         | FRONT     |
| Zone2 Amp ON   |  | LARGE | LARGE  | LARGE    | NONE          | SWFR      |
| Bi-AMP         |  | LARGE | LARGE  | LARGE    | NONE (*)      | SWFR      |
| TONE : MAX     |  | LARGE | LARGE  | LARGE    | LARGE         | SWFR      |
| TONE : MIN     |  | LARGE | LARGE  | LARGE    | LARGE         | SWFR      |
| SPEAKER 6 ohms |  | LARGE | LARGE  | LARGE    | LARGE         | SWFR      |

(\*) Bi-AMP: LARGE

**LARGE:** This mode is used for a speaker with high bass reproduction performance (a large unit).  
Full bandwidth signals are output.

**SMALL:** This mode is used for a speaker with low bass reproduction performance (a small unit).  
The signals of 90 Hz or less are mixed into the channel specified by LFE/BASS.

**NONE:** This mode is used for no center speaker.  
The center content is reduced by 3 dB and distributed to FRONT L/R.

**SWFR:** LFE of 5.1 channel signal or LFE/BASS lower than 90 Hz is output through SUBWOOFER OUT.

**FRONT:** LFE of 5.1 channel signal or LFE/BASS lower than 90 Hz is distributed to FRONT L/R.

#### 4. SPEAKERS SET

スピーカー出力をチェックします。

各サブメニューにおけるアナログスイッチの設定は以下の通りです。

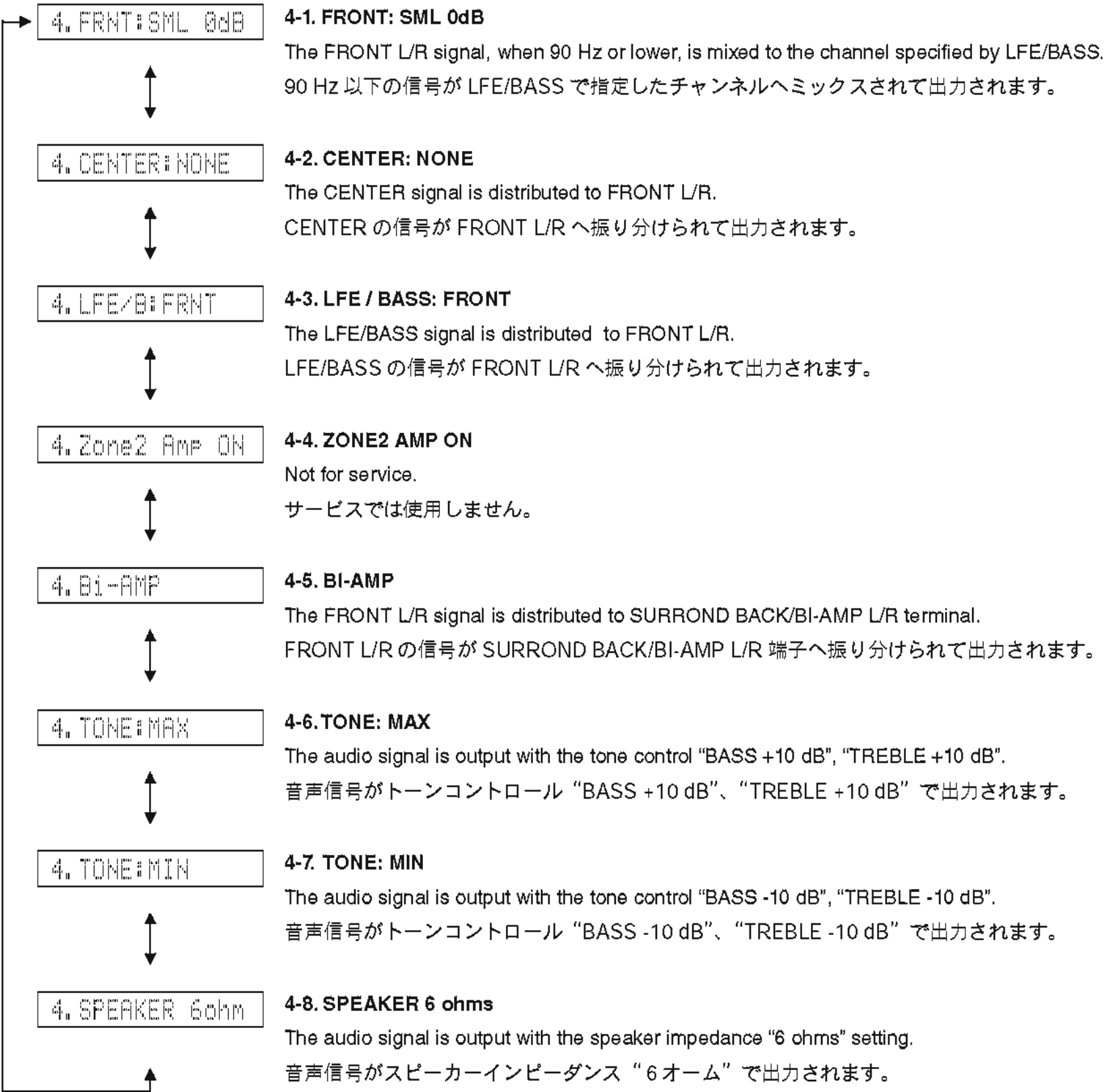
**LARGE :** 低音再生能力の高い（ユニットの大きい）スピーカーを使用するモードです。  
全帯域が出力されます。

**SMALL :** 低音再生能力の低い（ユニットの小さい）スピーカーを使用するモードです。90 Hz 以下が LFE/BASS で指定したチャンネルにミックスされます。

**NONE :** センタースピーカーを使用しないモードです。  
センター成分は -3 dB されて、FRONT L/R に振り分けられます。

**SWFR :** 5.1 チャンネル 信号の LFE または 90 Hz 以下の LFE/BASS が SUBWOOFER OUT に出力されます。

**FRONT :** 5.1 チャンネル信号の LFE または 90 Hz 以下の LFE/BASS を FRONT L/R に振り分けます。



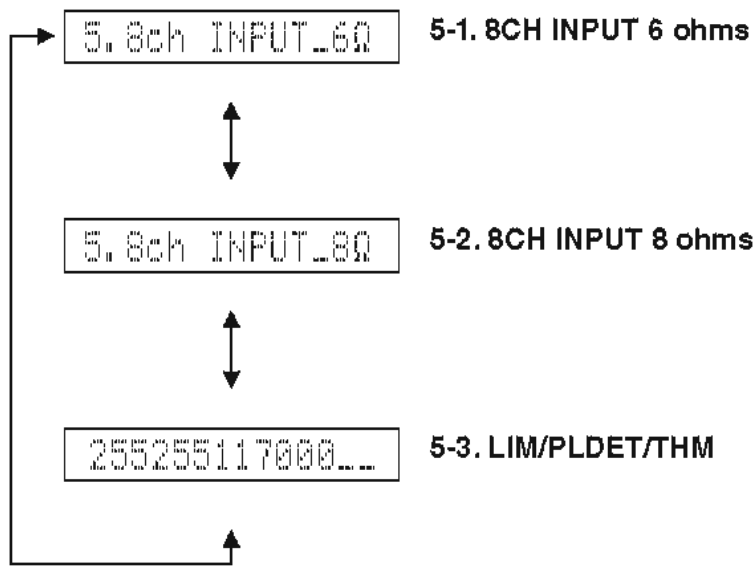
INPUT: AV5 ANALOG  
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

| Sub-menu             | Input level      | Volume  | SPEAKER OUTPUT |           |              |                   | SUBWOOFER OUTPUT |
|----------------------|------------------|---------|----------------|-----------|--------------|-------------------|------------------|
|                      |                  |         | FRONT L/R      | CENTER    | SURROUND L/R | SURROUND BACK L/R |                  |
| FRNT : SML 0dB       | Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -3.5 dBm         |
| CENTER : NONE        | Both ch, -20 dBm | +6.5 dB | +16.0 dBm      | -∞        | +11.5 dBm    | -16.5 dBm         | -7.5 dBm         |
| LFE/B : FRNT (50 Hz) | Both ch, -20 dBm | +6.5 dB | -∞             | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -∞               |
| Zone2 Amp ON         | Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -7.5 dBm         |
| Bi-AMP               | Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +17.5 dBm    | -∞                | -7.5 dBm         |
| TONE : MAX           | Both ch, -20 dBm | +6.5 dB | +13.0 dBm      | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -7.5 dBm         |
| TONE : MIN           | Both ch, -20 dBm | +6.5 dB | +10.5 dBm      | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -7.5 dBm         |
| SPEAKER 6 ohms       | Both ch, -20 dBm | +6.5 dB | +11.5 dBm      | +11.5 dBm | +11.5 dBm    | -16.5 dBm         | -7.5 dBm         |



5. X-CH INPUT

Not for service.



5. X-CH INPUT

サービスでは使用しません。

6. MIC CHECK

The signals input through the microphone are output to only FRONT L channel via A/D-D/A.

6. MIC CHECK

マイク入力された信号が A/D – D/A 経由で FRONT L チャンネルのみへ出力されます。

6. MIC CHK    ON

7. FL/MONITOR CHECK

This menu is used to check the FL display and video monitor output.

When checking the video monitor output, connect a TV monitor to this unit with a component video cable and video pin cable. Prepare a video source which can also output component video and video (composite).

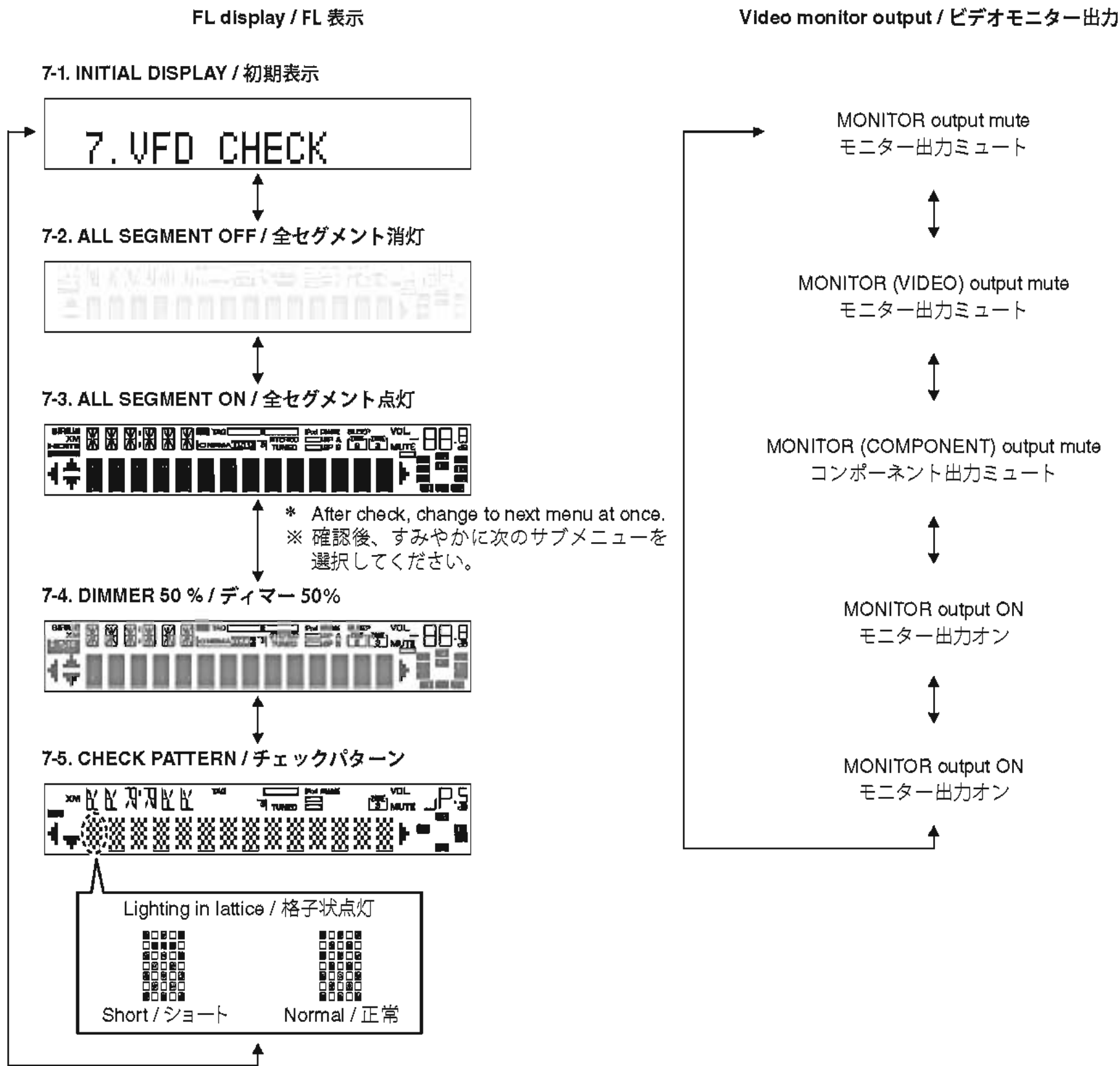
Using the sub-menu, the FL display and video monitor output change together as shown below.

7. FL/MONITOR CHECK

FL 表示とビデオモニター出力をチェックします。

ビデオモニター出力をチェックする場合には、TV モニターと本機をコンポーネントビデオケーブル・D 端子ケーブルとビデオ用ピンケーブルで接続します。また、コンポーネント・D ビデオ出力とビデオ（コンポジット）出力ができるビデオ機器を用意してください。

サブメニュー操作により、FL 表示とビデオモニター出力が連動して以下のように変わります。



Segment conditions of the FL driver 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 lattice).

(In the above example, the segments in the second row from the top are shorted.)

全セグメント消灯・全セグメント点灯により FL ドライバー、FL 管のセグメントの不良を確認します。

次に、ディマーコントロールによって FL ドライバーの動作チェックを行います。

さらに全セグメントを交互（格子状）に点灯／消灯することで、隣り合うセグメントのショートをチェックします。

（上記の例は、上から 2 列目のセグメントがショートしています。）

## 8. MANUAL TEST

The built-in noise generator of DSP outputs the test noise through the channels specified by using the sub-menu.

The noise frequency for LFE is 30 to 80 Hz. Other than that, the noise frequency is 500 to 2 kHz.

### 8-1. TEST ALL

Noise is output from all channels.

## 8. MANUAL TEST

DSP 内蔵のノイズ発生回路によって、サブメニューで指定したチャンネルへテストノイズが出力されます。

LFE 用のノイズ周波数は 30 ～ 80Hz、それ以外はノイズ周波数 500 ～ 2kHz となります。

### 8-1. TEST ALL

全チャンネルからノイズが出力されます。

8. TEST ALL

9. A/D DATA CHECK

This menu is used to display the A/D conversion value of the microprocessor which detects panel keys of this unit and protection functions in using the sub-menu.

When "9-5. K1/K2" sub-menu is selected, keys become non-operable due to detection of the values of all keys.

However, it is possible to advance to the next main menu by turning the "VOLUME" knob of this unit.

\* Numeric values in the figure are given as reference only.

9-1. PS1/PS2

Power supply voltage protection detection

**PS1:**

The voltage at 135 pin (PS1\_PRT) of the microprocessor is displayed.

Voltage detects: ACBL, AC\_12 and ±12

Normal value: 38 to 141  
(Reference voltage: 3.3 V=255)

**PS2:**

The voltage at 136 pin (PS2\_PRT) of the microprocessor is displayed.

Voltage detects: +5I and -5V

Normal value: 34 to 138  
(Reference voltage: 3.3 V=255)

\* If PS1 or PS2 becomes out of the normal value range, the protection function works to turn off the power.

PS:090 2:078

9-2. DC/TH

**DC:** Power amplifier DC (DC voltage) output is detection

The voltage at 126 pin (DC\_PRT) of the microprocessor is displayed.

Normal value: 27 to 89  
(Reference voltage: 3.3 V=255)

**TH:** Temperature of the heatslnk is detection

The voltage at 124 pin (THM) of the microprocessor is displayed.

Normal value: 124 to 255  
(Reference voltage: 3.3 V=255)

\* If DC or TH becomes out of the normal value range, the protection function works to turn off the power.

DC:046 TH:117

9. A/D DATA CHECK

本機パネルキー、プロテクションなどを検出しているマイコンの A/D 変換値を、サブメニューで表示します。

サブメニュー "9-5. K.1/K2" にすると、全キーの値を検出するためキー操作はできなくなりますが、本機の "VOLUME" ツマミを回すことにより、次のメインメニューに進めることができます。

※ 図中の数値は参考例です。

9-1. PS1/PS2

電源電圧プロテクションの検出

**PS1 :**

マイコンの 135 ピン (PS1\_PRT) の電圧が表示されます。

検出電圧: ACBL、AC\_12、± 12

正常値: 38 ~ 141  
(基準電圧: 3.3 V = 255)

**PS2 :**

マイコンの 136 ピン (PS2\_PRT) の電圧が表示されます。

検出電圧: +5I、-5V

正常値: 34 ~ 138  
(基準電圧: 3.3 V = 255)

※ PS1 または PS2 が正常値を外れるとプロテクションが働き、電源が切れます。

9-2. DC/TH

**DC :** パワーアンプ DC (直流電圧) 出力の検出

マイコンの 126 ピン (DC\_PRT) の電圧が表示されます。

正常値: 27 ~ 89  
(基準電圧: 3.3 V = 255)

**TH :** ヒートシンク温度の検出

マイコンの 124 ピン (THM) の電圧が表示されます。

正常値: 124 ~ 255  
(基準電圧: 3.3 V = 255)

※ DC または TH が正常値を外れるとプロテクションが働き、電源が切れます。

## 9-3. IMP/PL

**IMP:** 8 or 6 ohms impedance setup detection

IMP8: 8 ohms setting

IMP6: 6 ohms setting

**PL:** PLDET (Power amplifier output voltage detection)

The power amplifier output voltage is detected and the power amplifier input voltage is controlled according to the detected output voltage.

The voltage at 125 pin (AMP\_OLV) of the microprocessor is displayed.

(Reference voltage: 3.3 V=255)

IMP8: PL:255

## 9-3. IMP/PL

**IMP:** インピーダンス設定の検出  
サービスでは使用しません。

**PL:** PLDET (パワーアンプ出力電圧の検出)  
パワーアンプ出力電圧を検出して、パワーアンプ入力電圧を制御します。  
マイコンの 125 ピン (AMP\_OLV) の電圧が表示されます。

(基準電圧: 3.3 V = 255)

## 9-4. AMP/DK

**DST:** Destination detection

The voltage at 139 pin (DEST) of the microprocessor is displayed.

(Reference voltage: 3.3 V=255)

**DK:** DOCK type detection

The voltage at 141 pin (DOCK\_TYPE) of the microprocessor is displayed.

(Reference voltage: 3.3 V=255)

DST:027 DK:255

## 9-4. AMP/DK

**DST:** 仕向け先の検出  
マイコンの 139 ピン (DEST) の電圧が表示されます。

(基準電圧: 3.3 V = 255)

**DK:** DOCK タイプの検出  
マイコンの 141 ピン (DOCK\_TYPE) の電圧が表示されます。

(基準電圧: 3.3 V = 255)

Destination detection for AD port

Pull-up resistance 10 k-ohms

| Ohm                   | 0        | 1.2 k       | 4.7 k       | 6.8 k       | 10.0 k      | 15.0 k      | 47.0 k      | 100.0 k     |
|-----------------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| V                     | 0 – 0.16 | 0.17 – 0.68 | 0.69 – 1.19 | 1.20 – 1.49 | 1.50 – 1.81 | 1.82 – 2.35 | 2.36 – 2.86 | 2.87 – 3.15 |
| A/D value (3.3 V=255) | 0 – 12   | 13 – 53     | 54 – 92     | 93 – 115    | 116 – 140   | 141 – 182   | 183 – 221   | 222 – 244   |
| Destination           | J        | U, C        | R           | T           | K           | A           | B, G, F     | L           |

DOCK detection for AD port

Pull-up resistance 10 k-ohms

| DOCK type<br>(DKID 141 pin) | Bluetooth<br>(YBA-10) | Wireless iPod<br>(YID-W10) | iPod              |             | No connected |
|-----------------------------|-----------------------|----------------------------|-------------------|-------------|--------------|
|                             |                       |                            | (YDS-10/11/12(B)) | (YDS-12(A)) |              |
| A/D value (3.3 V=255)       | 5 – 25                | 85 – 100                   | 120 – 140         | 150 – 170   | 255          |

9-5. K0/K1

Panel key of this unit is detected.  
When the A/D conversion value of the panel key becomes out of the specified range, normal operation will not be available.  
In that case, check the constant of voltage dividing resistor, solder condition, etc. Refer to table.  
(Reference voltage: 3.3 V=255)  
It is possible to advance to the next main menu by turning the "VOLUME" knob of this unit.

9-5. K0/K1

本機パネルキーの検出  
パネルキーの A/D 値が規定範囲から外れると、正常な動きをしません。  
下表をご覧になり、各キーの分圧抵抗の定数、ハンダ不良等の確認をしてください。  
(基準電圧：3.3 V=255)  
本機の "VOLUME" ツマミを回すことにより、次のメインメニューに進めることができます。

K0:255 K1:255

| Display / 表示 | K0                 |
|--------------|--------------------|
| 0 - 11       | RADIO<br>(SCENE4)  |
| 12 - 32      | CD<br>(SCENE3)     |
| 33 - 54      | TV<br>(SCENE2)     |
| 55 - 75      | BD/DVD<br>(SCENE1) |
| 76 - 96      | -                  |
| 97 - 119     | -                  |
| 120 - 142    | INPUT<br>>         |
| 143 - 163    | INPUT<br><         |
| 182 - 197    | ⏻ (Power)          |
| 198 - 209    | TONE<br>CONTROL    |
| 255          | Key off            |

| Display / 表示 | K1           |
|--------------|--------------|
| 0 - 11       | -            |
| 12 - 32      | TUNING<br>>> |
| 33 - 54      | TUNING<br><< |
| 55 - 77      | AM           |
| 78 - 99      | FM           |
| 100 - 121    | PRESET<br>>  |
| 122 - 144    | PRESET<br><  |
| 145 - 166    | MEMORY       |
| 167 - 186    | INFO         |
| 187 - 205    | PROGRAM<br>> |
| 206 - 226    | PROGRAM<br>< |
| 227 - 246    | STRAIGHT     |
| 255          | Key off      |

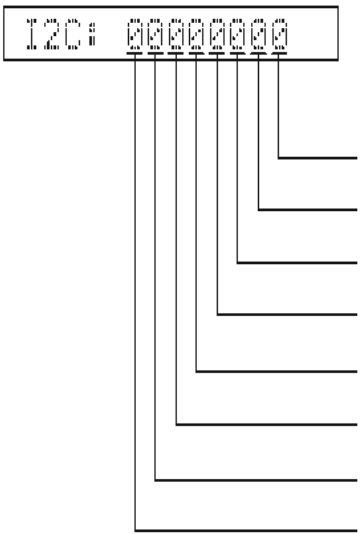


10. VIDEO CHECK

This menu is used to check the video control section.

10-1. I2C check

The I2C (Inter integrated circuit) bus line connection is checked.



10. VIDEO CHECK

ビデオ制御部をチェックします。

10-1. I2C Check

I2C (Inter integrated circuit) バスラインの接続をチェックします。

- 0 : No error detected / 不良検出なし
- 1 : An error is detected / 不良検出あり
- 0 bit : -
- 1 bit : -
- 2 bit : -
- 3 bit : HDMI TRANSMITTER (IC7, DIGITAL P.C.B.)
- 4 bit : HDMI RECEIVER (IC4, DIGITAL P.C.B.)
- 5 bit : HDMI CEC (Including IC4, DIGITAL P.C.B.)
- 6 bit : -
- 7 bit : -

10-2. Digital component

Not for service.

10-2. Digital component

サービスでは使用しません。

DIGITAL COMP

10-3. Digital CVBS (Video)

Not for service.

10-3. Digital CVBS (Video)

サービスでは使用しません。

DIGITAL CVBS

10-4. Digital Y/C (S-Video)

Not for service.

10-4. Digital Y/C

サービスでは使用しません。

DIGITAL Y/C

10-5. Analog bypass

Not for service.

10-5. Analog bypass

サービスでは使用しません。

ANALOG BYPASS

10-6. Test pattern

Not for service.

TEST PATTERN

10-6. Test pattern

サービスでは使用しません。

10-7. Video Information

Not for service.

VIDEO IN ---

10-7. Video information

サービスでは使用しません。

11. XM STATUS (U model)

Not for service.

1k - 1dB/44 ↔ Bus Power:OFF

12. SIRIUS (U model)

Not for service.

SIRIUS: ↔ SEQID:

13. HD RADIO (U model)

Not for service.

HD CPU V: ↔ D:



## 14. DOCK

### 14-1. DOCK

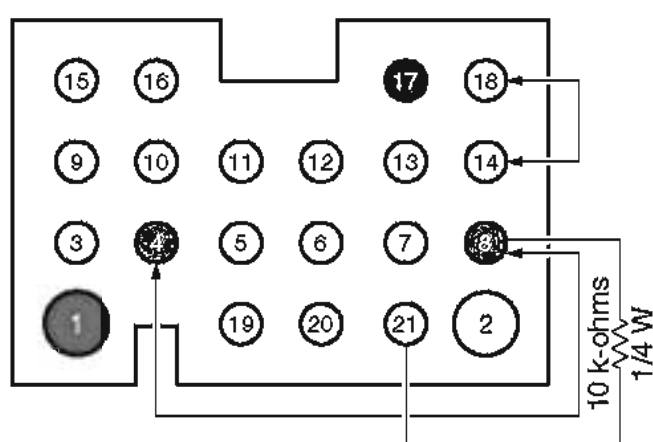
This menu is used to check the DOCK connector without the iPod itself.

With the power to this unit turned off, short between pins No. 14 (TX) and No. 18 (RX), between pins No. 4 (IPDET) and No. 8 (DGND). Also, connect a 10 k-ohms, 1/4 W resistor between pins NO. 21 (DKID) and No. 8 (DGND). (Make sure that the power is turned off when shorting pins.)

Start up the self-diagnostic function and select this menu.

The check result is displayed according to the following display specifications

**Note) Be sure to return the shorted pins to their original condition after executing this test.**



DOCK CONNECTOR

## 14. DOCK

### 14-1. DOCK

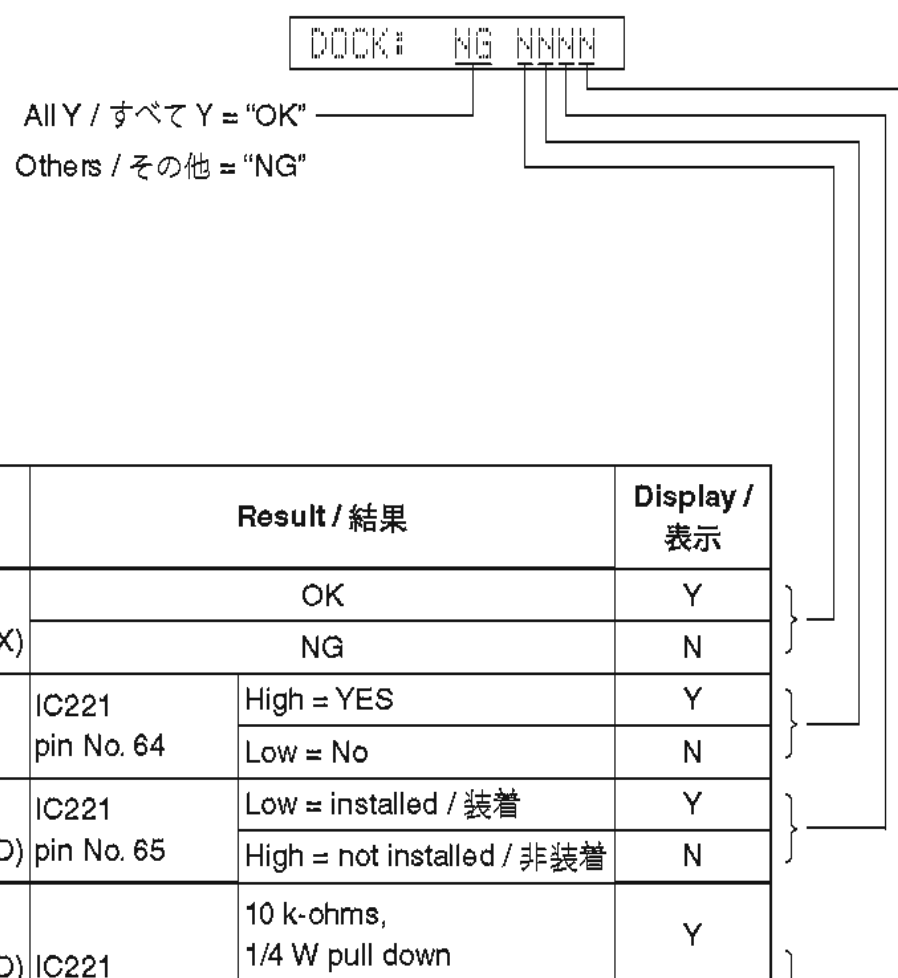
iPod 本体無しで、DOCK コネクタの検査を行うメニューです。

本機の電源を切った状態で、DOCK コネクタの 14 ピン (TX) と 18 ピン (RX)、4 ピン (IPDET) と 8 ピン (DGND) をショートさせます。また、21 ピン (DKID) と 8 ピン (DGND) の間に 10 k Ω、1/4 W 抵抗を接続します。(ショートさせる時は、必ず電源を切ってください。)

ダイアグを起動して本メニューを選択します。

下記表示仕様に従って、チェック結果が表示されます。

**注意) 検査後、ショートしたピンを必ず元の状態に戻してください。**



| Check Item / チェック項目                                                                 | Short pins / ショートピン                                                   | Result / 結果         |                               | Display / 表示 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------|-------------------------------|--------------|
| UART loop back test<br>UART ループバックテスト                                               | Pins No.14 (TX)<br>- No.18 (RX)                                       | OK                  |                               | Y            |
|                                                                                     |                                                                       | NG                  |                               | N            |
| iPAP (iPod accessory power) detection<br>IPAP (iPod accessory power) 検出             |                                                                       | IC221<br>pin No. 64 | High = YES                    | Y            |
|                                                                                     |                                                                       |                     | Low = No                      | N            |
| iPDET (iPod installation to DOCK) detection<br>IPDET (iPod Installation to DOCK) 検出 | Pins No.4 (iPDET)<br>- No.8 (DGND)                                    | IC221<br>pin No. 65 | Low = installed / 装着          | Y            |
|                                                                                     |                                                                       |                     | High = not installed / 非装着    | N            |
| DKID (DOCK ID) detection<br>DKID (DOCK ID) 検出                                       | Pins No.21 (DKID)<br>- No.8 (DGND)<br>* 10 k-ohms, 1/4 W<br>pull down | IC221<br>pin No. 95 | 10 k-ohms,<br>1/4 W pull down | Y            |
|                                                                                     |                                                                       |                     | Other                         | N            |

### 14-2. BT (Bluetooth version)

The DOCK (Bluetooth module: YBA-10) version is displayed.

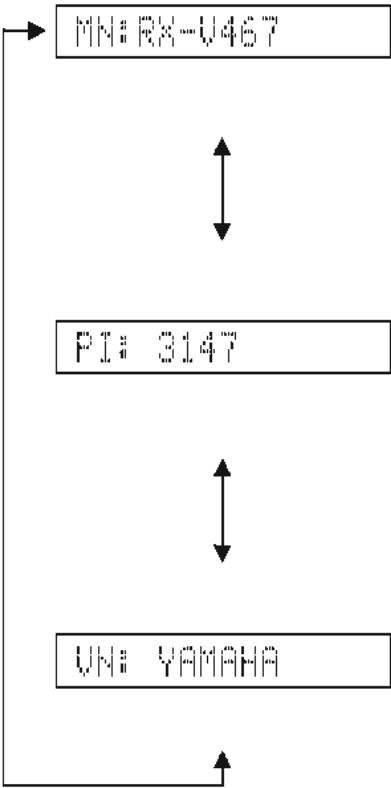
### 14-2. BT (Bluetooth version)

DOCK (Bluetooth module : YBA-10) のバージョンが表示されます。

ET V1

15. HDMI INFORMATION

The HDMI informations are displayed.



- 15-1. HDMI model name**

The model name of this unit written in HDMI module is displayed.

HDMI モジュールに書き込まれている本機のモデル名が表示されます。

RX-V467/HTR-4063
- 15-2. HDMI product ID**

The product ID of this unit written in HDMI module is displayed.

HDMI モジュールに書き込まれている本機のプロダクト ID が表示されます。

RX-V467: 3147

HTR-4063: 3148
- 15-3. HDMI vendor name**

The vendor name “YAMAHA” of this unit written in HDMI module is displayed.

HDMI モジュールに書き込まれている本機のベンダー名 “YAMAHA” が表示されます。

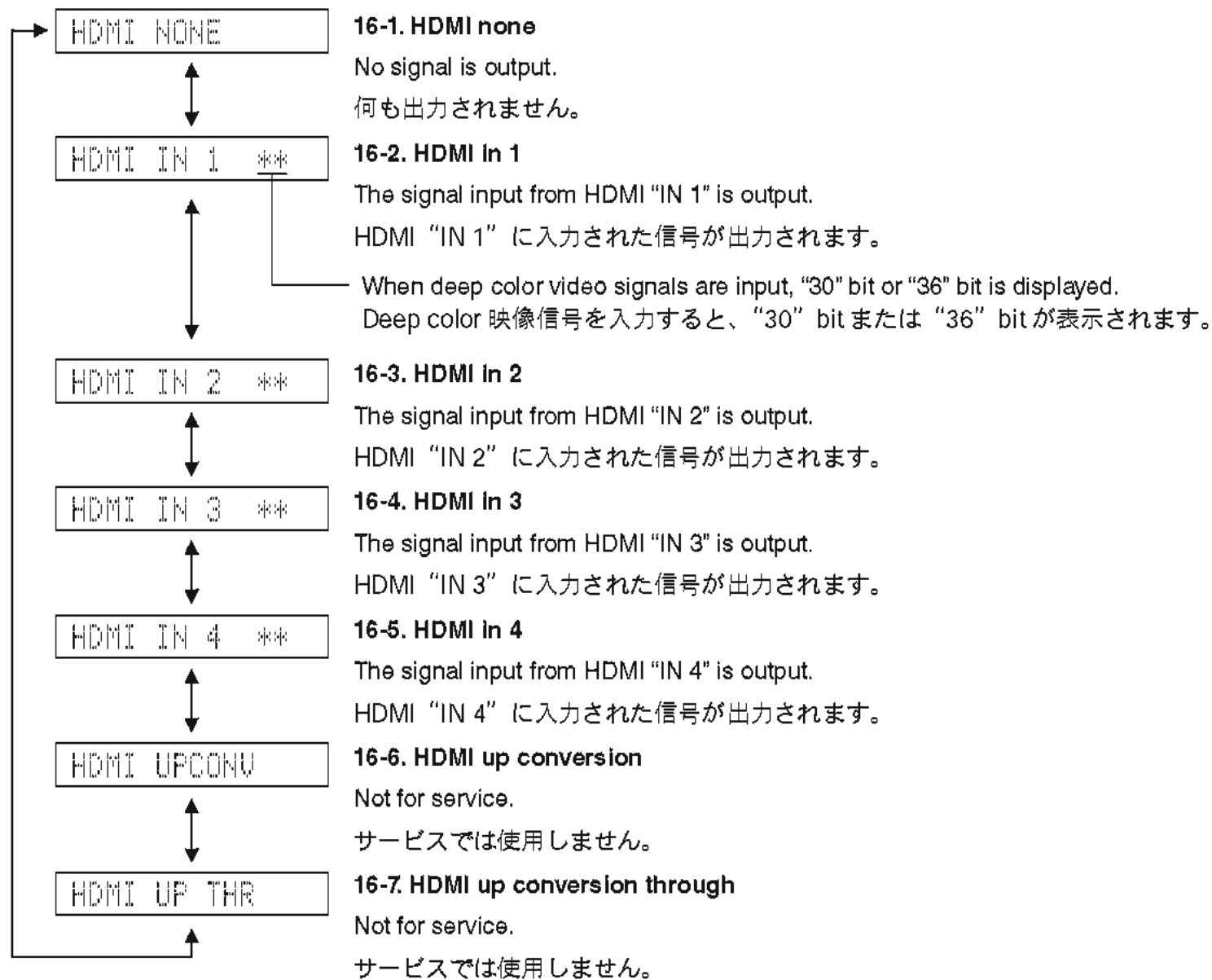
15. HDMI INFORMATION

HDMI の情報を表示します。

## 16. HDMI SELECT

Using the sub-menu, the selected input signal is output to HDMI OUT.

- \* The output destination of HDMI input audio signals is set to "TV".



## 16. HDMI SELECT

サブメニューにより、選択された入力信号が HDMI OUT へ出力されます。

- ※ HDMI 音声の出力先は "TV" に設定されます。

## 17. USB

Not for service.

## 17. USB

サービスでは使用しません。



## 18. IF STATUS (Input function status)

Not for service.

## 18. IF STATUS (Input function status)

サービスでは使用しません。

DST:710E0F2390

19. BUS CHECK

Communication and bus line connection between devices on the DIGITAL P.C.B. are checked.

19-1. TI (DSP) BUS check

Communication and bus line connection between microprocessor (IC20) and TI (DSP, IC44) are checked.

TI BUS:NoEr

- NoEr:** No error detected.
- Boot:** When “Boot” is displayed for a few seconds or “Boot” and “NoEr” are displayed alternately, there is a possibility that an error had occurred.

19-2. BF LOOP check

Not for service.

BF LOOP:

20. NO MENU

20. Invalidity

19. BUS CHECK

DIGITAL P.C.B. の各デバイス間の通信・バスラインの接続をチェックします。

19-1. TI (DSP) BUS check

マイコン (IC20) とTI (DSP、IC44) の通信・バスラインの接続をチェックします。

- NoEr :** 不良検出なし
- Boot :** “Boot” が数秒間表示されるまたは “Boot” と “NoEr” が交互に表示される場合、異常が発生している可能性があります。

19-2. BF LOOP check

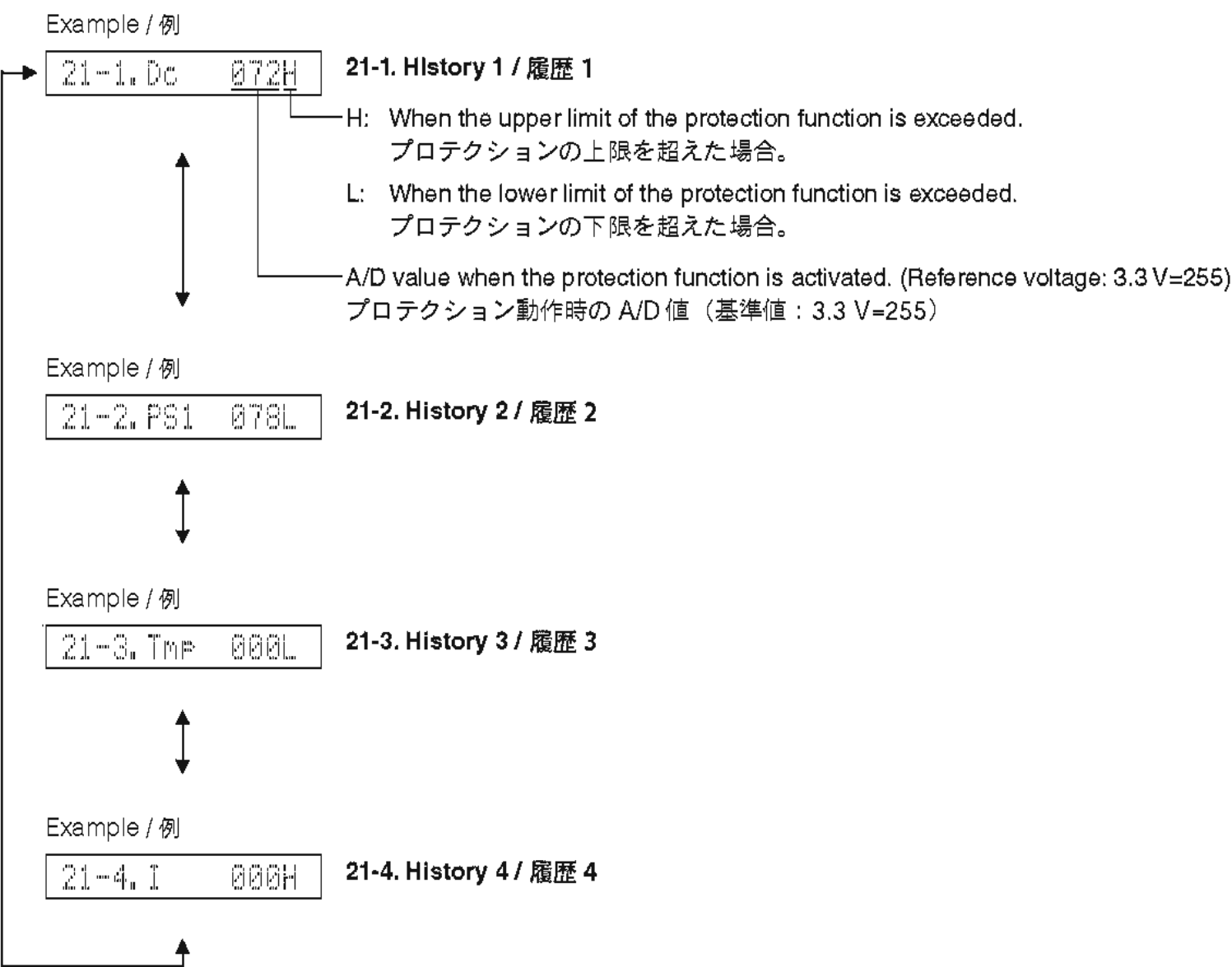
サービスでは使用しません。

20. NO MENU

21. PROTECTION HISTORY

This menu is used to display the history of protection function.

All history of protection function will be erased by pressing the "STRAIGHT" key after selecting each sub-menu.



21. PROTECTION HISTORY

プロテクション履歴が表示されます。

各サブメニューを選んだ後、“STRAIGHT” キーを押すとプロテクション履歴は消去されます。

22. NO MENU

22. NO MENU

Invalidity

23. UPDATE TI

Not for service.

23. UPDATE TI

サービスでは使用しません。

23. UPDATE TI

24. FACTORY PRESET

This menu is used to reserve/inhibit initialization of the back-up IC (EEPROM: IC222 of the DIGITAL P.C.B.).

24. PRESET INHI



24. PRESET RSRV

**CAUTION:** Before setting to the PRESET RESERVED, write down the existing preset memory content of the tuner. (This is because setting to the PRESET RESERVED will cause the user memory content to be erased.)

24. FACTORY PRESET

バックアップ IC（EEPROM：DIGITAL P.C.B. の IC222）の初期化を予約／禁止します。

- 24-1. PRESET INHIBIT** (Initialization inhibited) / **PRESET INHIBIT**（初期化禁止）

Initialization of the back-up IC is not executed. Select this sub-menu to protect the values set by the user.

バックアップ用 IC の初期化は行われません。ユーザーの設定値を保護するときは、こちらを選択してください。
- 24-2. PRESET RESERVED** (Initialization reserved) / **PRESET RESERVED**（初期化予約）

Initialization of the back-up IC is reserved. (Actual initialization is executed the next time the power is turned on.) Press the “”(Power) key of this unit to turn off the power after this sub-menu is selected, reset the original factory settings or to reset the backup IC. Any protection history will be initialized.

ユーザーメモリの初期化が予約されます。（実際に初期化されるのは、次回の電源投入時です。）工場出荷時やユーザーメモリをリセットしたいときは、こちらを選択してから “”（パワー）キーを押して電源を切ってください。このとき、プロテクション履歴も初期化されます。

**注意：** PRESET RESERVED を選んで初期化をする前に、チューナーのユーザーメモリーの内容を書き写してください。（初期化をすると、チューナーのユーザーメモリーの内容は消えてしまいます。）



## 25. ROM VER/SUM/PORT

The firmware version, checksum values, model name and destination are displayed.

The checksum is obtained by adding the data at every 8 bits for each program area and expressing the result as a 4-figure hexadecimal notation.

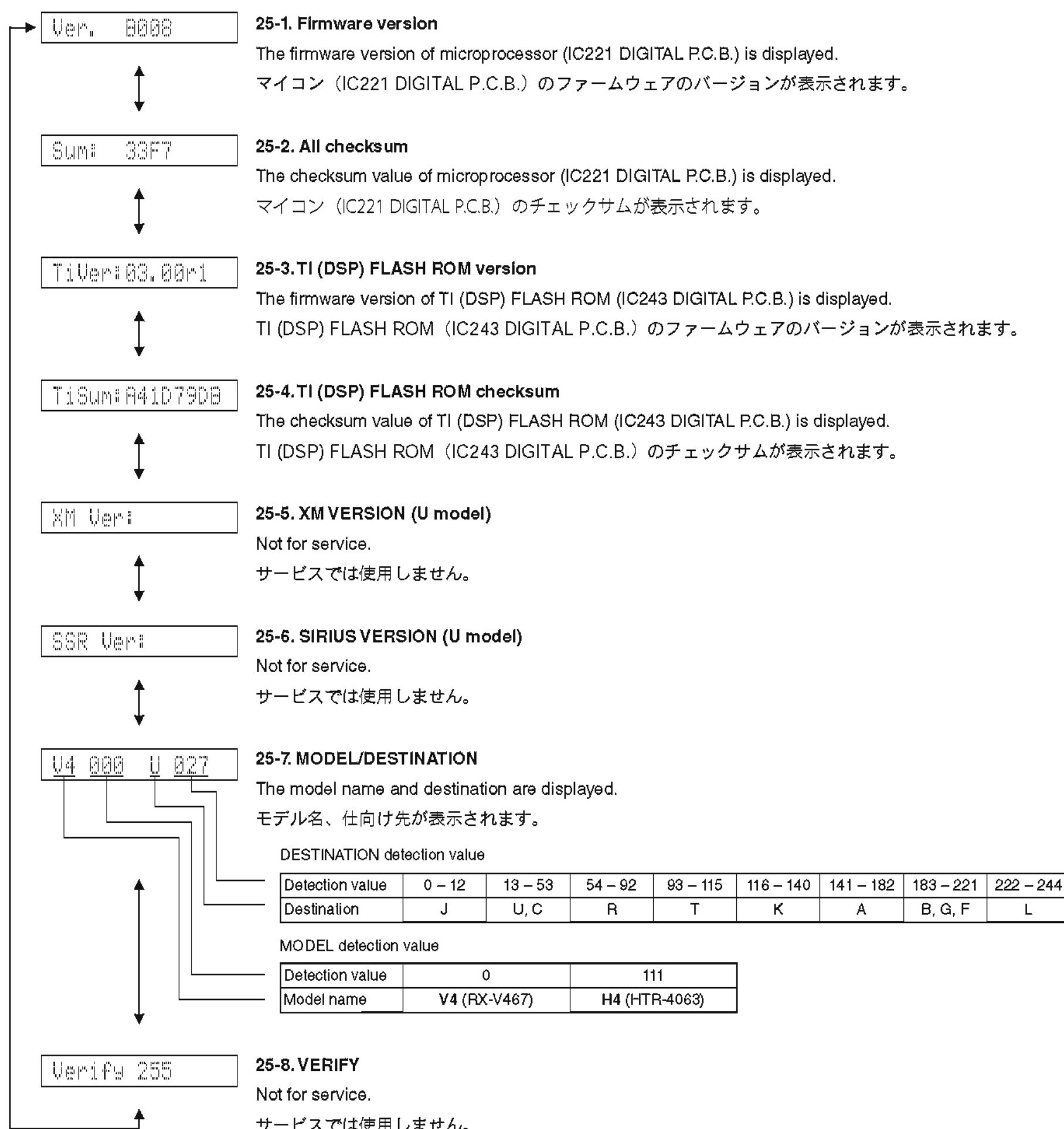
\* Numeric values in the figure are given as reference only.

## 25. ROM VER/SUM/PORT

ファームウェアのバージョン、チェックサム、モデル名、仕向け先が表示されます。

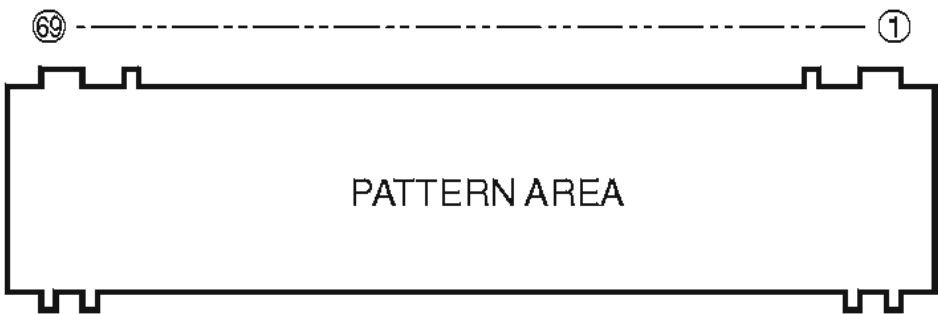
チェックサムは、プログラムエリア別にデータを8ビットごとに加算していき、4桁の16進数で表記したものです。

※ 図中の数値は参考例です。



■ DISPLAY DATA

● V1001 : 18-MT-09GNK (OPERATION P.C.B.)



● PIN CONNECTION

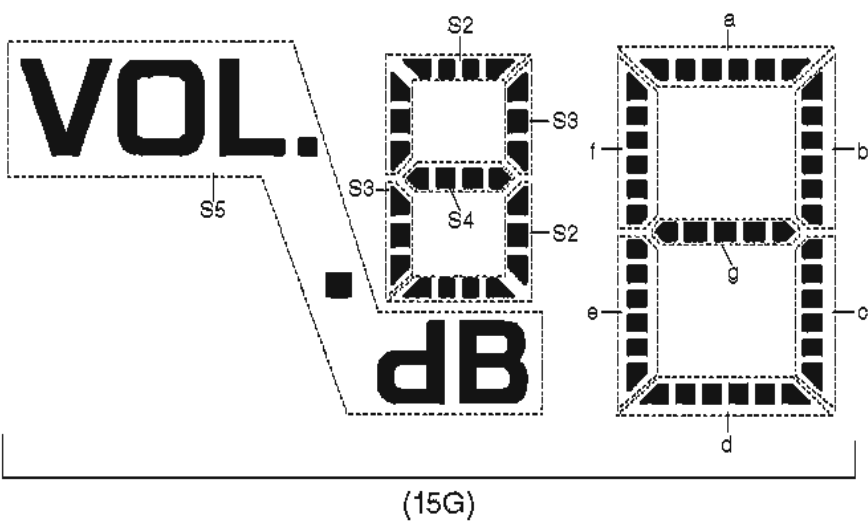
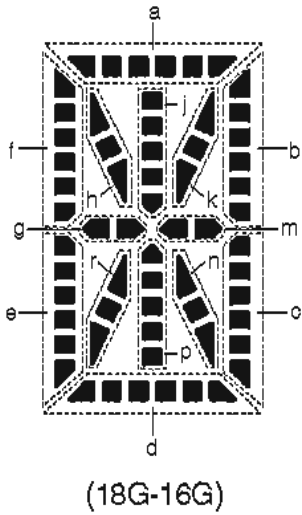
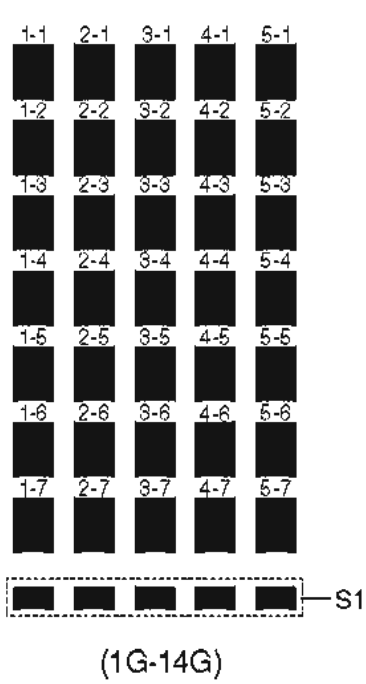
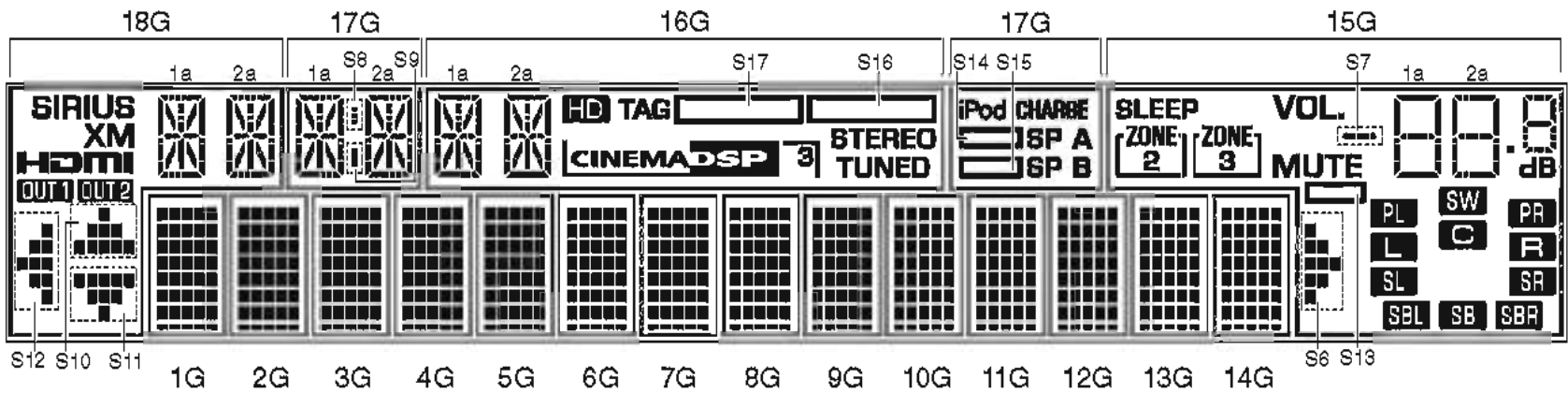
|            |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pin No.    | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56  | 55  | 54  | 53  | 52  | 51  | 50  | 49  | 48  | 47  | 46  | 45  | 44  | 43  | 42  | 41  | 40  | 39  | 38  | 37  | 36  | 35  |
| Connection | F2 | NX | NP | NP | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 | P11 | P12 | P13 | P14 | P15 | P16 | P17 | P18 | P19 | P20 | P21 | P22 | P23 | P24 | P25 | P26 | P27 | P28 | P29 | P30 | P31 |

|            |     |     |     |     |     |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
|------------|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Pin No.    | 34  | 33  | 32  | 31  | 30  | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22  | 21  | 20  | 19  | 18  | 17  | 16  | 15  | 14  | 13 | 12 | 11 | 10 | 9  | 8  | 7  | 6  | 5  | 4  | 3  | 2  | 1  |
| Connection | P32 | P33 | P34 | P35 | P36 | NX | NX | NX | NX | NX | NX | NX | 18G | 17G | 16G | 15G | 14G | 13G | 12G | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | NP | NP | NX | F1 |

Note : 1) F1, F2 ..... Filament pin    2) NP ..... No pin    3) NX ..... No extend pin    4) 1G-18G ..... Grid pin

● GRID ASSIGNMENT





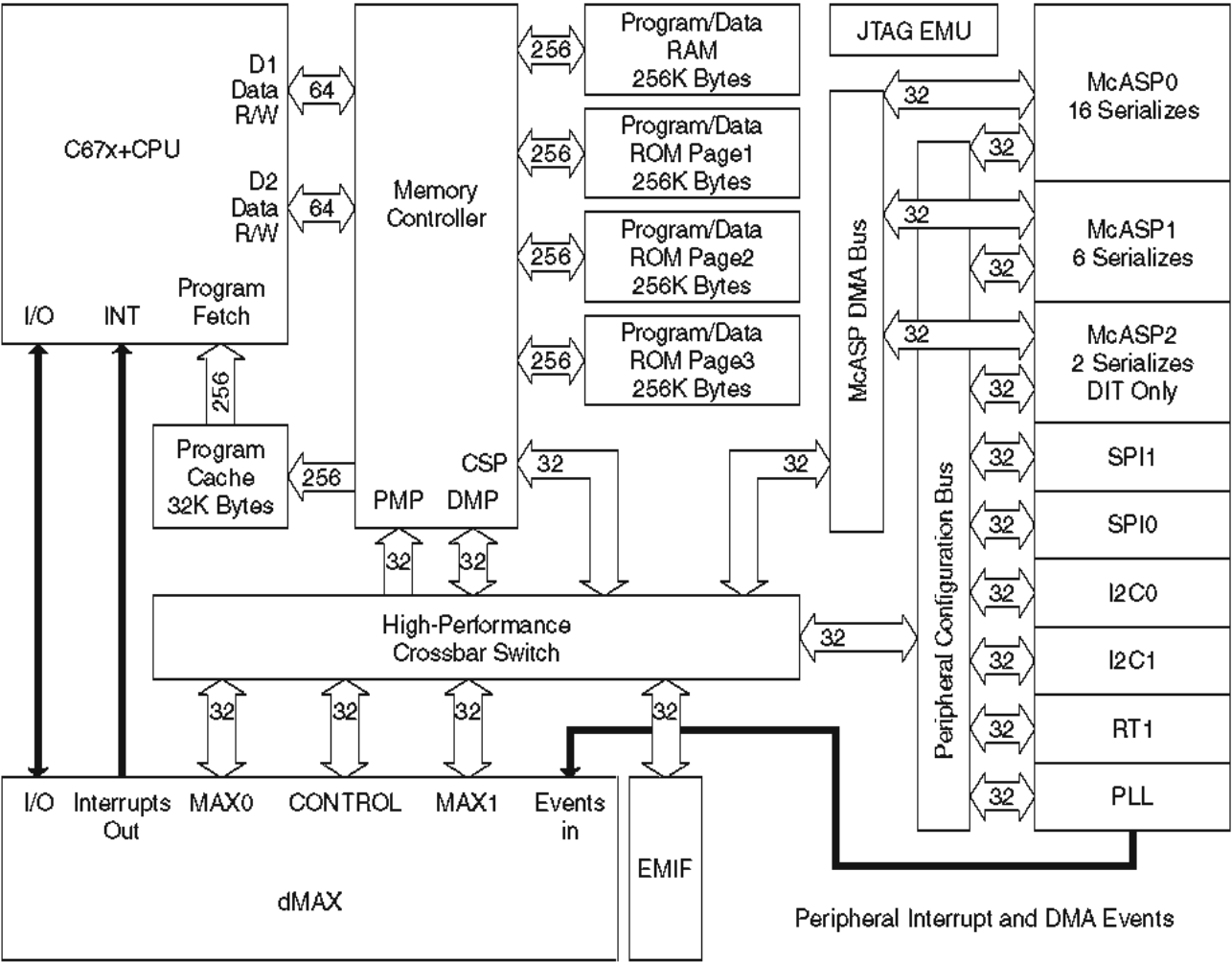
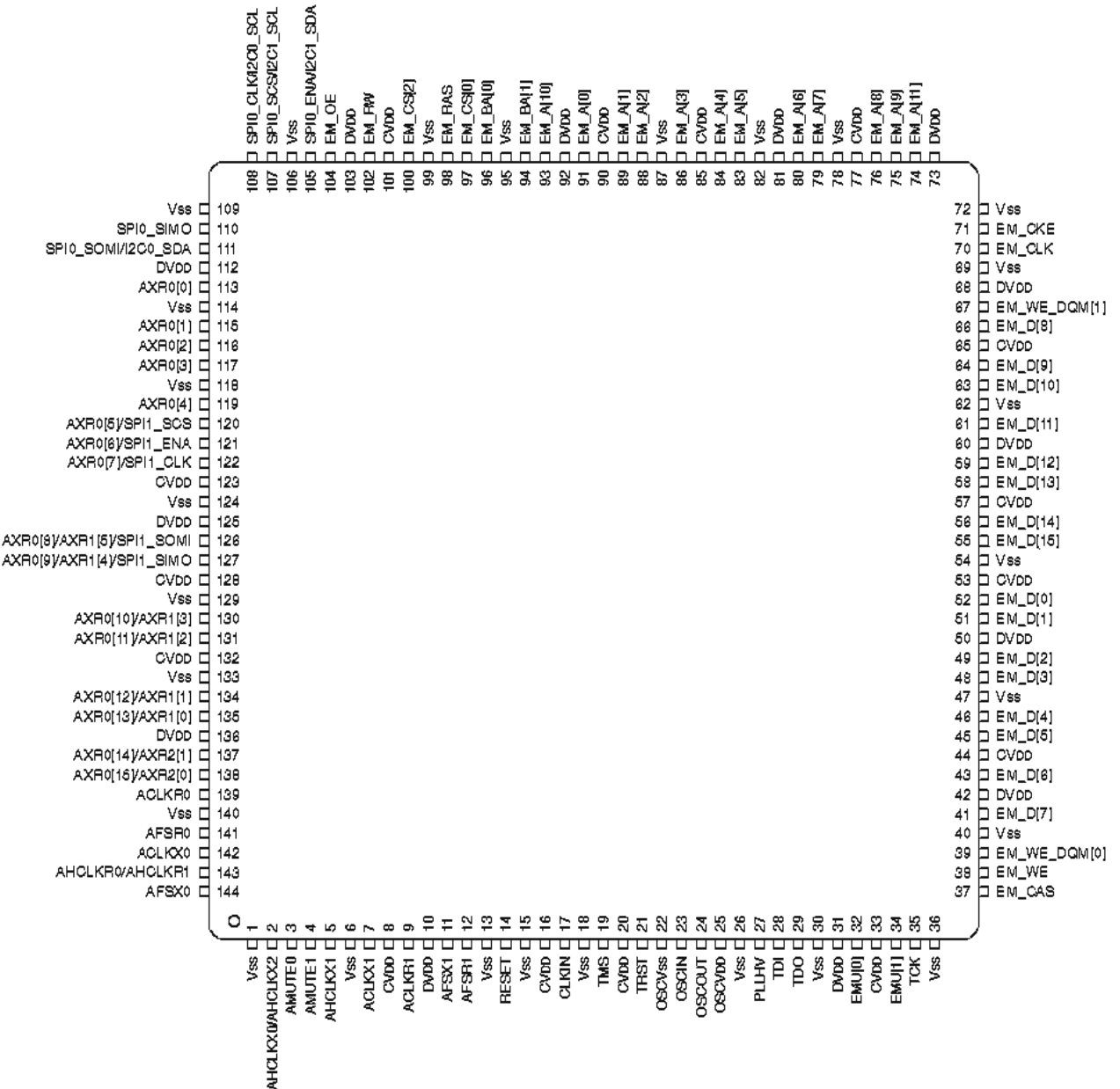
## ● ANODE CONNECTION

|     | 18G           | 17G                | 16G               | 15G           | 1G-14G |
|-----|---------------|--------------------|-------------------|---------------|--------|
| P1  | 1a            | 1a                 | 1a                | S5            | 1-1    |
| P2  | 1h            | 1h                 | 1h                | S7            | 2-1    |
| P3  | 1j            | 1j                 | 1j                | 1d            | 3-1    |
| P4  | 1k            | 1k                 | 1k                | 2d            | 4-1    |
| P5  | 1b            | 1b                 | 1b                | S2            | 5-1    |
| P6  | 1f            | 1f                 | 1f                | 1e            | 1-2    |
| P7  | 1m            | 1m                 | 1m                | 2e            | 2-2    |
| P8  | 1g            | 1g                 | 1g                | S3            | 3-2    |
| P9  | 1c            | 1c                 | 1c                | 1c            | 4-2    |
| P10 | 1e            | 1e                 | 1e                | 2c            | 5-2    |
| P11 | 1r            | 1r                 | 1r                | S4            | 1-3    |
| P12 | 1p            | 1p                 | 1p                | 1g            | 2-3    |
| P13 | 1n            | 1n                 | 1n                | 2g            | 3-3    |
| P14 | 1d            | 1d                 | 1d                | 1f            | 4-3    |
| P15 | 2a            | 2a                 | 2a                | 2f            | 5-3    |
| P16 | 2h            | 2h                 | 2h                | 1b            | 1-4    |
| P17 | 2j            | 2j                 | 2j                | 2b            | 2-4    |
| P18 | 2k            | 2k                 | 2k                | 1a            | 3-4    |
| P19 | 2b            | 2b                 | 2b                | 2a            | 4-4    |
| P20 | 2f            | 2f                 | 2f                | <b>PL</b>     | 5-4    |
| P21 | 2m            | 2m                 | 2m                | <b>SW</b>     | 1-5    |
| P22 | 2g            | 2g                 | 2g                | <b>PR</b>     | 2-5    |
| P23 | 2c            | 2c                 | 2c                | <b>L</b>      | 3-5    |
| P24 | 2e            | 2e                 | 2e                | <b>C</b>      | 4-5    |
| P25 | 2r            | 2r                 | 2r                | <b>R</b>      | 5-5    |
| P26 | 2p            | 2p                 | 2p                | <b>SL</b>     | 1-6    |
| P27 | 2n            | 2n                 | 2n                | <b>SR</b>     | 2-6    |
| P28 | 2d            | 2d                 | 2d                | <b>SBL</b>    | 3-6    |
| P29 | <b>SIRIUS</b> | S8                 | <b>HD</b>         | <b>SB</b>     | 4-6    |
| P30 | <b>XM</b>     | S9                 | <b>TAG</b>        | <b>SBR</b>    | 5-6    |
| P31 | <b>HDMI</b>   | <b>iPod CHARGE</b> | <b>CINEMA DSP</b> | S6            | 1-7    |
| P32 | <b>OUT1</b>   | <b>SP B</b>        | <b>S</b>          | S13           | 2-7    |
| P33 | <b>OUT2</b>   | S15                | <b>STEREO</b>     | <b>MUTE</b>   | 3-7    |
| P34 | S12           | <b>SP A</b>        | <b>TUNED</b>      | <b>ZONE 2</b> | 4-7    |
| P35 | S10           | S14                | S17               | <b>ZONE 3</b> | 5-7    |
| P36 | S11           | —                  | S16               | <b>SLEEP</b>  | S1     |

IC DATA

IC44: D70YE101BRFP266 (DIGITAL P.C.B.)  
Decoder/Post processor

\* No replacement part available. / サービス部品供給なし

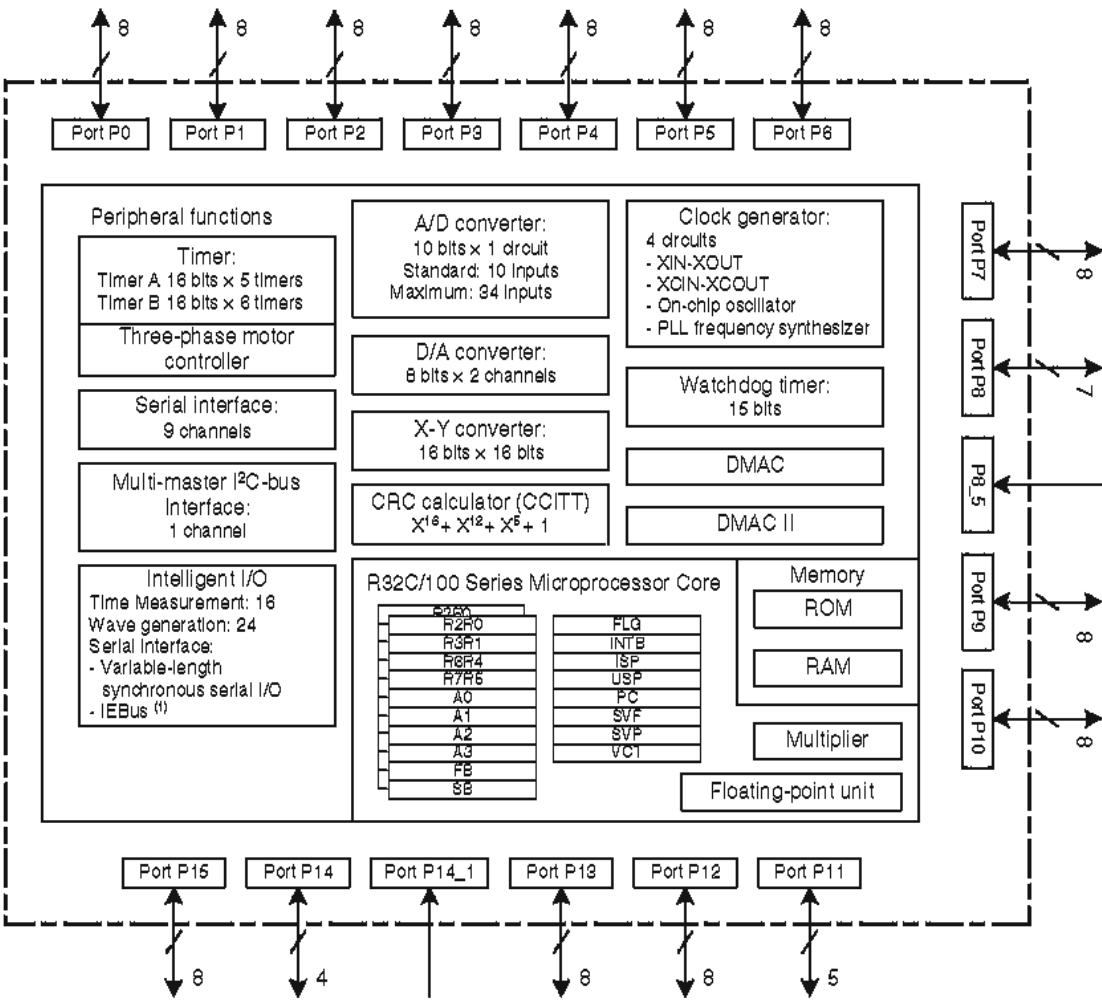


| No. | Function Name<br>(P.C.B.) | TYPE <sup>(1)</sup> | PULL <sup>(2)</sup> | GPIO <sup>(3)</sup> | Detail of Function                                |
|-----|---------------------------|---------------------|---------------------|---------------------|---------------------------------------------------|
| 1   | VSS                       |                     |                     |                     |                                                   |
| 2   | AHCLKX0/AHCLKX2           | IO                  | –                   | Y                   | McASP0 and McASP2 transmit master clock           |
| 3   | AMUTE0                    | IO                  | –                   | Y                   | McASP0 mute output                                |
| 4   | AMUTE1                    | IO                  | –                   | Y                   | McASP1 mute output                                |
| 5   | AHCLKX1                   | IO                  | –                   | Y                   | McASP1 transmit master clock                      |
| 6   | VSS                       |                     |                     |                     |                                                   |
| 7   | ACLKX1                    | IO                  | –                   | Y                   | McASP1 transmit bit clock                         |
| 8   | CVDD                      |                     |                     |                     |                                                   |
| 9   | ACLKR1                    | IO                  | –                   | Y                   | McASP1 receive bit clock                          |
| 10  | DVDD                      |                     |                     |                     |                                                   |
| 11  | AFSX1                     | IO                  | –                   | Y                   | McASP1 transmit frame Sync (L/R clock)            |
| 12  | AFSR1                     | IO                  | –                   | Y                   | McASP1 receive frame Sync (L/R clock)             |
| 13  | VSS                       |                     |                     |                     |                                                   |
| 14  | RESET                     | IO                  | –                   | N                   | Device reset pin                                  |
| 15  | VSS                       |                     |                     |                     |                                                   |
| 16  | CVDD                      |                     |                     |                     |                                                   |
| 17  | CLKIN                     | IO                  | –                   | N                   | Alternate clock input (3.3-V LVCMOS input)        |
| 18  | VSS                       |                     |                     |                     |                                                   |
| 19  | TMS                       | IO                  | IPU                 | N                   | Test mode select                                  |
| 20  | CVDD                      |                     |                     |                     |                                                   |
| 21  | TRST                      | IO                  | IPU                 | N                   | Test reset                                        |
| 22  | OSCVSS                    | PWR                 | –                   | N                   | Oscillator Vss tap point (for filter only)        |
| 23  | OSCIN                     | IO                  | –                   | N                   | 1.2-V oscillator input                            |
| 24  | NC                        | O                   | –                   | N                   |                                                   |
| 25  | OSCVDD                    | PWR                 | –                   | N                   | Oscillator 1.2-V Vpp tap point (for filter only)  |
| 26  | VSS                       |                     |                     |                     |                                                   |
| 27  | PLLHV                     | PWR                 | –                   | N                   | PLL 3.3-V supply input (requires external filter) |
| 28  | TDI                       | IO                  | IPU                 | N                   | Test data in                                      |
| 29  | TDO                       | OZ                  | IPU                 | N                   | Test data out                                     |
| 30  | VSS                       |                     |                     |                     |                                                   |
| 31  | DVDD                      |                     |                     |                     |                                                   |
| 32  | EMU[0]                    | IO                  | IPU                 | N                   | Emulation pin 0                                   |
| 33  | CVDD                      |                     |                     |                     |                                                   |
| 34  | EMU[1]                    | IO                  | IPU                 | N                   | Emulation pin 1                                   |
| 35  | TCK                       | IO                  | IPU                 | N                   | Test clock                                        |
| 36  | Ground(Vss)               |                     |                     |                     |                                                   |
| 37  | EM_CAS                    | O                   | –                   | N                   | SDRAM column address strobe                       |
| 38  | EM_WE                     | O                   | –                   | N                   | SDRAM write enable                                |
| 39  | EM_WE_DQM[0]              | O                   | –                   | N                   | Write enable or byte enable for EM_D [7:0]        |
| 40  | VSS                       |                     |                     |                     |                                                   |
| 41  | EM_D[7]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 42  | DVDD                      |                     |                     |                     |                                                   |
| 43  | EM_D[6]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 44  | CVDD                      |                     |                     |                     |                                                   |
| 45  | EM_D[5]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 46  | EM_D[4]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 47  | VSS                       |                     |                     |                     |                                                   |
| 48  | EM_D[3]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 49  | EM_D[2]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                     |
| 50  | DVDD                      |                     |                     |                     |                                                   |

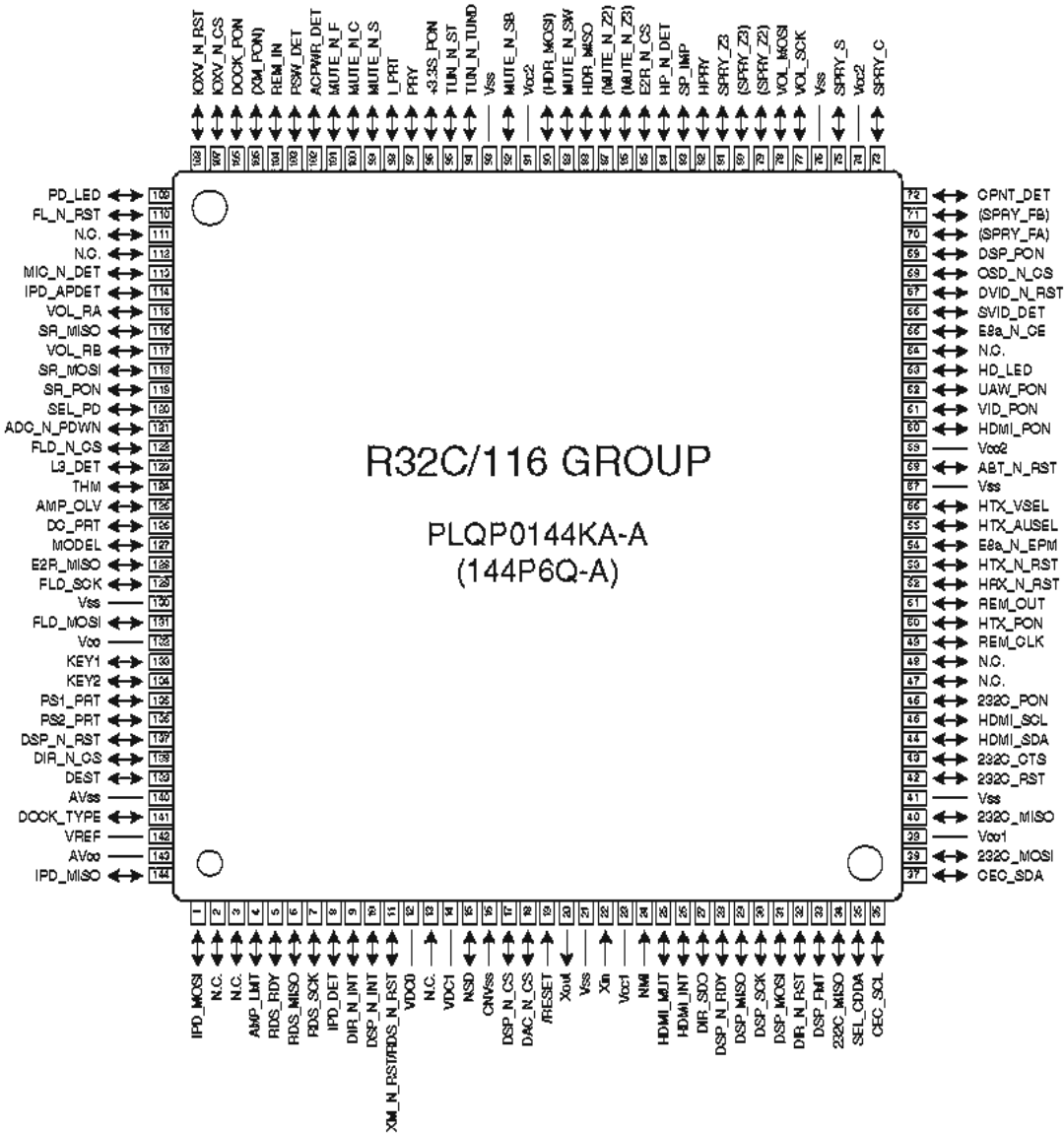
| No. | Function Name<br>(P.C.B.) | TYPE <sup>(1)</sup> | PULL <sup>(2)</sup> | GPIO <sup>(3)</sup> | Detail of Function                                           |
|-----|---------------------------|---------------------|---------------------|---------------------|--------------------------------------------------------------|
| 51  | EM_D[1]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                                |
| 52  | EM_D[0]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                                |
| 53  | CVDD                      |                     |                     |                     |                                                              |
| 54  | VSS                       |                     |                     |                     |                                                              |
| 55  | EM_D[15]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                                |
| 56  | EM_D[14]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 57  | CVDD                      |                     |                     |                     |                                                              |
| 58  | EM_D[13]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 59  | EM_D[12]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 60  | DVDD                      |                     |                     |                     |                                                              |
| 61  | EM_D[11]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 62  | VSS                       |                     |                     |                     |                                                              |
| 63  | EM_D[10]                  | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 64  | EM_D[9]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-Bits]                                |
| 65  | CVDD                      |                     |                     |                     |                                                              |
| 66  | EM_D[8]                   | IO                  | –                   | N                   | EMIF data bus [lower 16-bits]                                |
| 67  | EM_WE_DQM[1]              | O                   | –                   | N                   | Write enable or byte enable for EM_D [15:8]                  |
| 68  | DVDD                      |                     |                     |                     |                                                              |
| 69  | VSS                       |                     |                     |                     |                                                              |
| 70  | EM_CLK                    | O                   | –                   | N                   | SDRAM clock                                                  |
| 71  | EM_CKE                    | O                   | –                   | N                   | SDRAM clock enable                                           |
| 72  | VSS                       |                     |                     |                     |                                                              |
| 73  | DVDD                      |                     |                     |                     |                                                              |
| 74  | EM_A[11]                  | O                   | –                   | N                   | EMIF address bus                                             |
| 75  | EM_A[9]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 76  | EM_A[8]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 77  | CVDD                      |                     |                     |                     |                                                              |
| 78  | VSS                       |                     |                     |                     |                                                              |
| 79  | EM_A[7]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 80  | EM_A[6]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 81  | DVDD                      |                     |                     |                     |                                                              |
| 82  | VSS                       |                     |                     |                     |                                                              |
| 83  | EM_A[5]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 84  | EM_A[4]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 85  | CVDD                      |                     |                     |                     |                                                              |
| 86  | EM_A[3]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 87  | VSS                       |                     |                     |                     |                                                              |
| 88  | EM_A[2]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 89  | EM_A[1]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 90  | CVDD                      |                     |                     |                     |                                                              |
| 91  | EM_A[0]                   | O                   | –                   | N                   | EMIF address bus                                             |
| 92  | DVDD                      |                     |                     |                     |                                                              |
| 93  | EM_A[10]                  | O                   | –                   | N                   | EMIF address bus                                             |
| 94  | EM_BA[1]                  | O                   | –                   | N                   | SDRAM bank address and asynchronous memory Low-Order address |
| 95  | VSS                       |                     |                     |                     |                                                              |
| 96  | EM_BA[0]                  | O                   | –                   | N                   | SDRAM bank address and asynchronous memory Low-Order address |
| 97  | EM_CS[0]                  | O                   | –                   | N                   | SDRAM chip select                                            |
| 98  | EM_RAS                    | O                   | –                   | N                   | SDRAM row address strobe                                     |
| 99  | VSS                       |                     |                     |                     |                                                              |
| 100 | EM_CS[2]                  | O                   | –                   | N                   | Asynchronous memory chip select                              |

| No. | Function Name<br>(P.C.B.) | TYPE <sup>(1)</sup> | PULL <sup>(2)</sup> | GPIO <sup>(3)</sup> | Detail of Function                                                                |
|-----|---------------------------|---------------------|---------------------|---------------------|-----------------------------------------------------------------------------------|
| 101 | CVDD                      |                     |                     |                     |                                                                                   |
| 102 | NC                        | O                   | –                   | N                   | Asynchronous memory read/not write                                                |
| 103 | DVDD                      |                     |                     |                     |                                                                                   |
| 104 | EM_OE                     | O                   | –                   | N                   | SDRAM output enable                                                               |
| 105 | SPI0_ENA/I2C1_SDA         | IO                  | –                   | Y                   | SPI0 enable (ready) or I2c1 serial data                                           |
| 106 | VSS                       |                     |                     |                     |                                                                                   |
| 107 | SPI0_ENA/I2C1_SCL         | IO                  | –                   | Y                   | SPI0 enable (ready) or I2c1 serial clock                                          |
| 108 | SPI0_CLK/I2C0_SCL         | IO                  | –                   | Y                   | SPI0 serial clock or I2c0 serial clock                                            |
| 109 | VSS                       |                     |                     |                     |                                                                                   |
| 110 | SPIO_SIMO                 | IO                  | –                   | Y                   | SPI0 data pin slave in master out                                                 |
| 111 | SPIO_SOMI/I2C0_SDA        | IO                  | –                   | Y                   | SPI0 data pin slave out master in or I2C0 serial data                             |
| 112 | DVDD                      |                     |                     |                     |                                                                                   |
| 113 | AXR0[0]                   | IO                  | –                   | Y                   | McASP0 serial data 0                                                              |
| 114 | VSS                       |                     |                     |                     |                                                                                   |
| 115 | AXR0[1]                   | IO                  | –                   | Y                   | McASP0 serial data 1                                                              |
| 116 | AXR0[2]                   | IO                  | –                   | Y                   | McASP0 serial data 2                                                              |
| 117 | AXR0[3]                   | IO                  | –                   | Y                   | McASP0 serial data 3                                                              |
| 118 | VSS                       |                     |                     |                     |                                                                                   |
| 119 | AXR0[4]                   | IO                  | –                   | Y                   | McASP0 serial data 4                                                              |
| 120 | SPI1_SCS                  | IO                  | –                   | Y                   | McASP0 serial data 5 or SPI1 slave chip select                                    |
| 121 | SPI1_ENA                  | IO                  | –                   | Y                   | McASP0 serial data 6 or SPI1 enable (ready)                                       |
| 122 | SPI1_CLK                  | IO                  | –                   | Y                   | McASP0 serial data 7 or SPI1 serial clock                                         |
| 123 | CVDD                      |                     |                     |                     |                                                                                   |
| 124 | VSS                       |                     |                     |                     |                                                                                   |
| 125 | DVDD                      |                     |                     |                     |                                                                                   |
| 126 | /SPI1_SOMI                | IO                  | –                   | Y                   | McASP0 serial data 8 or McASP1 serial data 5 or SPI1 data pin slave out master in |
| 127 | /SPI1_SIMO                | IO                  | –                   | Y                   | McASP0 serial data 9 or McASP1 serial data 4 or SPI1 data pin slave in master out |
| 128 | CVDD                      |                     |                     |                     |                                                                                   |
| 129 | VSS                       |                     |                     |                     |                                                                                   |
| 130 | AXR0[10]                  | IO                  | –                   | Y                   | McASP0 serial data 10 or McASP1 serial data 3                                     |
| 131 | AXR0[11]                  | IO                  | –                   | Y                   | McASP0 serial data 11 or McASP1 serial data 2                                     |
| 132 | CVDD                      |                     |                     |                     |                                                                                   |
| 133 | VSS                       |                     |                     |                     |                                                                                   |
| 134 | AXR0[12]                  | IO                  | –                   | Y                   | McASP0 serial data 12 or McASP1 serial data 1                                     |
| 135 | AXR0[13]                  | IO                  | –                   | Y                   | McASP0 serial data 13 or McASP1 serial data 0                                     |
| 136 | DVDD                      |                     |                     |                     |                                                                                   |
| 137 | AXR0[14]                  | IO                  | –                   | Y                   | McASP0 serial data 14 or McASP2 serial data 1                                     |
| 138 | AXR0[15]                  | IO                  | –                   | Y                   | McASP0 serial data 15 or McASP2 serial data 0                                     |
| 139 | ACLKR0                    | IO                  | –                   | Y                   | McASP0 receive bit clock                                                          |
| 140 | VSS                       |                     |                     |                     |                                                                                   |
| 141 | AFSR0                     | IO                  | –                   | Y                   | McASP0 receive frame Sync (L/R clock)                                             |
| 142 | ACLKX0                    | IO                  | –                   | Y                   | McASP0 transmit bit clock                                                         |
| 143 | AHCLKR0/AHCLKR1           | IO                  | –                   | Y                   | McASP0 and McASP1 receive master clock                                            |
| 144 | AFSX0                     | IO                  | –                   | Y                   | McASP0 transmit frame Sync (L/R clock)                                            |

IC20: R5F64166DFD (DIGITAL P.C.B.)  
Microprocessor



Note: IEBus is a trademark of NEC Electronics Corporation.



Note: The position of pin number 1 varies by product. Refer to the index mark in attached "Package Dimensions".



| Pin No. | Port Name | Function Name (P.C.B.) | I/O     |          |         |           |                  |          | Detail of Function                                                                                                                                                                 |
|---------|-----------|------------------------|---------|----------|---------|-----------|------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |           |                        | PowerOn | StbyThrh | Standby | StbySleep | MCUSleep [Sleep] | E8a, ICP |                                                                                                                                                                                    |
| 1       | TXD4      | IPD_MOSI               | SO      | O        | O       | O         | O                |          | iPod asynchronous data output                                                                                                                                                      |
| 2       | P9_5      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                    |
| 3       | P9_4      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                    |
| 4       | DA0       | AMP_LMT                | DA      | I        | I       | I         | I                |          | Limiter control output                                                                                                                                                             |
| 5       | P9_2      |                        | O       | O        | O       | O         | O                |          | (U, C, R, T, K, A, B, F, L, J models)                                                                                                                                              |
|         | TB2in     | RDS_RDY                | TMR     | O        | O       | O         | [O]              |          | RDS RRADY input (G model)                                                                                                                                                          |
| 6       | RXD3      |                        | O       | O        | O       | O         | O                |          | (U, C, R, T, K, A, B, F, L, J models)                                                                                                                                              |
|         | RXD3      | RDS_MISO               | SI      | O        | O       | O         | O                |          | RDS synchronous data input (G model)                                                                                                                                               |
|         | P90       |                        | O       | O        | O       | O         | O                |          | (U, C, R, T, K, A, B, F, L, J models)                                                                                                                                              |
| 7       | CLK3      | RDS_SCK                | SO      | O        | O       | O         | O                |          | Synchronous clock output for RDS IC<br>Low level standby setting required (G model)                                                                                                |
| 8       | INT8      | IPD_DET                | IRQ     | IRQ      | IRQ     | IRQ       | O                |          | iPod detection / H -> L with iPod inserted into Dock<br>Restriction of port: INT for High Edge or Low Edge only                                                                    |
| 9       | INT7      | DIR_N_INT              | IRQ     | O        | O       | O         | O                |          | DIR interrupt<br>Restriction of port: INT for High Edge or Low Edge only                                                                                                           |
| 10      | INT6      | DSP_N_INT              | IRQ     | O        | O       | O         | O                |          | DA70Y interrupt<br>Restriction of port: INT for High Edge or Low Edge only                                                                                                         |
| 11      | P143      |                        | O       | O        | O       | O         | O                |          | (U, C, R, T, K, A, B, F, L, J models)                                                                                                                                              |
|         | P143      | RDS_N_RST              | O       | O        | O       | O         | [O]              |          | RDS reset (G model)                                                                                                                                                                |
| 12      | VDC0      | VDC0                   | MCU     | MCU      | MCU     | MCU       | MCU              |          |                                                                                                                                                                                    |
| 13      | P14_1     | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                    |
| 14      | VDC1      | VDC1                   | MCU     | MCU      | MCU     | MCU       | MCU              |          |                                                                                                                                                                                    |
| 15      | NSD       | NSD                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | 4.7k PU / Debugger                                                                                                                                                                 |
| 16      | CNVss     | CNVss                  | MCU     | MCU      | MCU     | MCU       | MCU              |          | Processor mode select Low: single chip mode<br>High: FLASH included boot mode<br>P50=H, P55=L when hardware resetting is cancelled<br>Standard serial input/output mode at CNVss=H |
| 17      | P8_7      | DSP_N_CS               | CS      | O        | O       | O         | O                |          | DA70Y chip select                                                                                                                                                                  |
| 18      | P8_6      | DAC_N_CS               | CS      | O        | O       | O         | O                |          | DAC chip select                                                                                                                                                                    |
| 19      | /RESET    | /RESET                 | MCU     | MCU      | MCU     | MCU       | MCU              |          | Reset                                                                                                                                                                              |
| 20      | Xout      | Xout                   | MCU     | MCU      | MCU     | MCU       | MCU              |          | 8MHz ceramic oscillator                                                                                                                                                            |
| 21      | Vss       | Vss                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | GND                                                                                                                                                                                |
| 22      | Xin       | Xin                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | 8MHz ceramic oscillator                                                                                                                                                            |
| 23      | Vcc       | Vcc                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | Microprocessor power supply                                                                                                                                                        |
| 24      | /NMI      | /NMI                   | MCU     | MCU      | MCU     | MCU       | MCU              |          | Unused, pulled up to Vcc                                                                                                                                                           |
| 25      | INT2      | HDMI_MUT               | IRQ     | IRQ      | O       | O         | O                |          | HDMI MUTE input<br>H: Mute                                                                                                                                                         |
| 26      | INT1      | HDMI_INT               | IRQ     | IRQ      | O       | O         | O                |          | Interrupt from HDMI RX                                                                                                                                                             |
| 27      | P8_2      | DIR_SDO                | I       | O        | O       | O         | O                |          | DIR DATA input when in CDDA writing mode                                                                                                                                           |
| 28      | P8_1      | DSP_N_RDY              | I       | O        | O       | O         | O                |          | DA70Y RDY                                                                                                                                                                          |
|         | P8_1      | DIR_WCK                | I       | O        | O       | O         | [O]              |          | DIR_WCK input for CDDA writing                                                                                                                                                     |
| 29      | RXD5      | DSP_MISO               | SI      | O        | O       | O         | O                |          | DIR, DA70Y, DAC synchronous data input                                                                                                                                             |
| 30      | CLK5      | DSP_SCK                | SO      | O        | O       | O         | O                |          | DIR, DA70Y, DAC synchronous clock output                                                                                                                                           |
| 31      | TXD5      | DSP_MOSI               | SO      | O        | O       | O         | O                |          | DIR, DA70Y, DAC synchronous data output                                                                                                                                            |
| 32      | P7_5      | DIR_N_RST              | O       | O        | O       | O         | O                |          | DIR reset                                                                                                                                                                          |
| 33      | P7_4      | DSP_FMT                | O       | O        | O       | O         | O                |          | DA70Y FULL MUTE output<br>H: Mute                                                                                                                                                  |
| 34      | P7_3      | 232C_MISO              | I       | I        | I       | I         | I                |          | Always set to input so as to use RXD1 at E8a                                                                                                                                       |
| 35      | P7_2      | SEL_CDDA               | O       | O        | O       | O         | O                |          | CDDA writing path select<br>H: CDDA writing mode L: Normal operation mode                                                                                                          |
| 36      | SCL2      | CEC_SCL                | SO      | SO       | O       | O         | O                |          | CEC microprocessor, Tuner, HDMI_EQ (SiI9185 A) I2C<br>SCL output (100kHz device)<br>Pulled up to +3.3S by 3.3k in u-com block                                                      |
| 37      | SDA2      | CEC_SDA                | SIO     | SIO      | O       | O         | O                |          | CEC microprocessor, Tuner, HDMI EQ (SiI9185 A) I2C<br>SCA input/output (100kHz device)<br>Pulled up to +3.3S by 3.3k in u-com block                                                |

| Pin No. | Port Name | Function Name (P.C.B.) | I/O     |          |         |           |                  |         | Detail of Function                                                                                                         |
|---------|-----------|------------------------|---------|----------|---------|-----------|------------------|---------|----------------------------------------------------------------------------------------------------------------------------|
|         |           |                        | PowerOn | StbyThrh | Standby | StbySleep | MCUSleep [Sleep] | E8a,ICP |                                                                                                                            |
| 38      | TxD1      | 232C_MOSI              | SO      | SO       | SO      | O         | O                |         | RS232C data output / Pulled up by 100kΩ                                                                                    |
|         | TxD1      | TXD                    |         |          |         |           |                  | SO      | E8a, ICP (In-circuit Programmer) data output                                                                               |
| 39      | Vcc       | Vcc                    | MCU     | MCU      | MCU     | MCU       | MCU              |         | Microprocessor power supply                                                                                                |
| 40      | RxD1      | 232C_MISO              | SI      | SI       | SI      | I         | I                |         | RS232C data input / Pulled up by 100k Ω                                                                                    |
|         | RxD1      | RXD                    |         |          |         |           |                  | SI      | E8A, ICP (In-circuit Programmer) data input                                                                                |
| 41      | Vss       | Vss                    | MCU     | MCU      | MCU     | MCU       | MCU              |         | Microprocessor GND                                                                                                         |
| 42      | P6_5      | 232C_RTS               | SO      | SO       | SO      | O         | O                |         | RS232C RTS output                                                                                                          |
|         | CLK1      | E8a_SCLK               |         |          |         |           |                  | SI      | E8A, ICP (In-circuit Programmer) clock input<br>Pulled up by 100k Ω                                                        |
| 43      | CTS1      | 232C_CTS               | SI      | SI       | SI      | I         | I                |         | RS232C CTS input / Pulled up by 100k Ω                                                                                     |
|         | RTS1      | E8a_BUSY               |         |          |         |           |                  | SO      | E8A, ICP (In-circuit Programmer) BUSY output                                                                               |
| 44      | SDA0      | HDMI_SDA               | SIO     | SIO      | O       | O         | O                |         | HDMI RX/TX, Video Enc<br>Dec I2C SCL output<br>(400kHz device)<br>Pulled up in HDMI block<br>HDMI RX/TX: 5V tolerant       |
| 45      | SCL0      | HDMI_SCL               | SIO     | SIO      | O       | O         | O                |         | HDMI RX/TX, Video Enc<br>Dec I2C SDA input/output<br>(400kHz device)<br>Pulled up in HDMI block<br>HDMI RX/TX: 5V tolerant |
| 46      | P6_1      | 232C_PON               | O       | O        | O       | O         | O                |         |                                                                                                                            |
| 47      | P6_0      | NC                     | O       | O        | O       | O         | O                |         |                                                                                                                            |
| 48      | P13_7     | NC                     | O       | O        | O       | O         | O                |         |                                                                                                                            |
| 49      | ISCLK2    | REM_CLK                | SO      | O        | O       | O         | O                |         | Clock output for remote control cord generation<br>No place to be connected to                                             |
| 50      | P13_5     | HTX_PON                | O       | O        | O       | O         | O                |         | Unused (Commonly used with HDMI_PON)                                                                                       |
| 51      | ISTXD2    | REM_OUT                | SO      | O        | O       | O         | O                |         | Scene select DVD control remote control cord output                                                                        |
| 52      | P5_7      | HRX_N_RST              | O       | O        | O       | O         | O                |         | HDMI RX reset output<br>L: Reset<br>Pulled down in HDMI block                                                              |
| 53      | P5_6      | HTX_N_RST              | O       | O        | O       | O         | O                |         | HDMI TX reset output<br>L: Reset<br>Pulled down in HDMI block                                                              |
| 54      | P5_5      | E8a_N_EPM              | I       | I        | I       | I         | I                |         | E8a writing mode enable input / Pulled down by 10k Ω                                                                       |
| 55      | P5_4      | HTX_AUSEL              | O       | O        | O       | O         | O                |         | Unused (HDMI Rx GPIO used)                                                                                                 |
| 56      | P13_3     | HTX_VSEL               | O       | O        | O       | O         | O                |         | Unused (HDMI Rx GPIO used)                                                                                                 |
| 57      | Vss       | Vss                    | MCU     | MCU      | MCU     | MCU       | MCU              |         | Microprocessor GND                                                                                                         |
| 58      | P13_2     | ABT_N_RST              | O       | O        | O       | O         | O                |         | Video 1/P&Scaler IC reset<br>L: Reset<br>Low fixed when <-VID_PON=L                                                        |
| 59      | Vcc       | Vcc                    | MCU     | MCU      | MCU     | MCU       | MCU              |         | Microprocessor power supply                                                                                                |
| 60      | P13_1     | HDMI_PON               | O       | O        | O       | O         | O                |         | HDMI power ON/OFF control / H: ON, L: OFF                                                                                  |
| 61      | P13_0     | VID_PON                | O       | O        | O       | O         | O                |         | Video power ON/OFF control / H: ON, L: OFF<br>Setting according to Pure Direct specification                               |
| 62      | P5_3      | UAW_PON                | O       | O        | O       | O         | O                |         | Video power ON/OFF control / H: ON, L: OFF                                                                                 |
| 63      | P5_2      | HD_LED                 | O       | O        | O       | O         | O                |         | HD_LED                                                                                                                     |
| 64      | P5_1      | NC                     | O       | O        | O       | O         | O                |         | SubCPU Output for reception control (request to send)                                                                      |
| 65      | P5_0      | E8a_N_CE               | I       | I        | I       | I         | I                |         | E8a chip enable input / Pulled up by 10k Ω                                                                                 |
| 66      | P12_7     | SVID_DET               | I       | O        | O       | O         | O                |         | S Video detection / Low fixed when VID_PON=L                                                                               |
| 67      | P12_6     | DVID_N_RST             | O       | O        | O       | O         | O                |         | Video Enc / Dec reset / Low fixed when VID_PON=L                                                                           |
| 68      | P12_5     | OSD_N_CS               | CS      | O        | O       | O         | O                |         | OSD chip select / Low fixed when VID_PON=L                                                                                 |
| 69      | P4_7      | DSP_PON                | O       | O        | O       | O         | O                |         | DSP power ON/OFF control / H: ON, L: OFF                                                                                   |
| 70      | P4_6      | SPRY_FA                | O       | O        | O       | O         | O                |         | Front A Speaker relay control / H: ON, L: OFF                                                                              |
| 71      | P4_5      | SPRY_FB                | O       | O        | O       | O         | O                |         | Front B Speaker relay control / H: ON, L: OFF                                                                              |
| 72      | P4_4      | CPNT_DET               | O       | O        | O       | O         | O                |         | Unused                                                                                                                     |
| 73      | P4_3      | SPRY_C                 | O       | O        | O       | O         | O                |         | Center Speaker relay control                                                                                               |
| 74      | Vcc       | Vcc                    | MCU     | MCU      | MCU     | MCU       | MCU              |         | Microprocessor power supply                                                                                                |



| Pin No. | Port Name | Function Name (P.C.B.) | I/O     |          |         |           |                  |          | Detail of Function                                                                                                                                                                                                                                                    |
|---------|-----------|------------------------|---------|----------|---------|-----------|------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |           |                        | PowerOn | StbyThrh | Standby | StbySleep | MCUSleep [Sleep] | E8a, ICP |                                                                                                                                                                                                                                                                       |
| 75      | P4_2      | SPRY_S                 | O       | O        | O       | O         | O                |          | Surround Speaker relay control                                                                                                                                                                                                                                        |
| 76      | Vss       | Vss                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | Microprocessor GND                                                                                                                                                                                                                                                    |
| 77      | P4_1      | VOL_SCK                | O       | O        | O       | O         | O                |          | Electronic volume Flip-flop synchronous clock output                                                                                                                                                                                                                  |
| 78      | P4_0      | VOL_MOSI               | O       | O        | O       | O         | O                |          | Electronic volume Flip-flop synchronous data output                                                                                                                                                                                                                   |
| 79      | P3_7      | SPRY_SB                | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 80      | P3_6      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 81      | P3_5      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 82      | P3_4      | HPRY                   | O       | O        | O       | O         | O                |          | Headphone relay control                                                                                                                                                                                                                                               |
| 83      | P3_3      | SP_IMP                 | O       | O        | O       | O         | O                |          | Speaker impedance relay control<br>When set to 8ohm: Low (relay OFF, B voltage High)<br>When set to 6ohm and temperature rising: High (relay ON, B voltage Low)                                                                                                       |
| 84      | P3_2      | HP_N_DET               | I       | O        | O       | O         | O                |          | Headphone detection<br>L: Headphone available<br>+3.3S pull-up                                                                                                                                                                                                        |
| 85      | P3_1      | E2R_N_CS               | CS      | CS       | CS      | I         | I                |          | EEPROM chip select<br>Pulled up to EEPROM power source by 10k $\Omega$                                                                                                                                                                                                |
| 86      | P12_4     | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 87      | P12_3     | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 88      | P12_2     | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 89      | P12_1     | MUTE_N_SW              | O       | O        | O       | O         | O                |          | Subwoofer mute control / L: Mute                                                                                                                                                                                                                                      |
| 90      | TXD6      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 91      | Vcc       | Vcc                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | Microprocessor power supply                                                                                                                                                                                                                                           |
| 92      | P3_0      | MUTE_N_SB              | O       | O        | O       | O         | O                |          | Surround Back / BiAMP / Zone2 mute control / L: Mute                                                                                                                                                                                                                  |
| 93      | Vss       | Vss                    | MCU     | MCU      | MCU     | MCU       | MCU              |          | Microprocessor GND                                                                                                                                                                                                                                                    |
| 94      | P2_7      | TUN_N_TUND             | I       | O        | O       | O         | O                |          | FM/AM Tuner TUNED input / Pulled up to +3.3S by 47k                                                                                                                                                                                                                   |
| 95      | P2_6      | TUN_N_ST               | I       | O        | O       | O         | O                |          | FM/AM Tuner STEREO detection input<br>Pulled up to +3.3S by 47h                                                                                                                                                                                                       |
| 96      | P2_5      | +3.3S_PON              | O       | O        | O       | O         | I                |          | +3.3S power ON/OFF control<br>H: ON, L: OFF<br>Set to L in Standby Sleep mode (to reduce wasteful power consumption (Mute, Pull up, etc.)<br>Using Input (HiZ), turn on +3.3S power supply mechanically (to make Mute function effective when power down is detected) |
| 97      | P2_4      | PRY                    | O       | O        | O       | O         | O                |          | Power relay ON/OFF control H: ON, L: OFF                                                                                                                                                                                                                              |
| 98      | P2_3      | I_PRT                  | I       | I        | O       | O         | O                |          | Excess current protection detection                                                                                                                                                                                                                                   |
| 99      | P2_2      | MUTE_N_S               | O       | O        | O       | O         | O                |          | Surround mute control / L: Mute                                                                                                                                                                                                                                       |
| 100     | P2_1      | MUTE_N_C               | O       | O        | O       | O         | O                |          | Center mute control / L: Mute                                                                                                                                                                                                                                         |
| 101     | P2_0      | MUTE_N_F               | O       | O        | O       | O         | O                |          | Front (including headphone) mute control / L: Mute                                                                                                                                                                                                                    |
| 102     | INT5      | ACPWR_DET              | IRQ     | IRQ      | IRQ     | IRQ       | O                |          | AC power detection / L: Power down                                                                                                                                                                                                                                    |
| 103     | INT4      | PSW_DET                | IRQ     | IRQ      | IRQ     | IRQ       | O                |          | Main / Zone / Input key interrupt / KEY1 port discriminates which key is pressed.                                                                                                                                                                                     |
| 104     | INT3      | REM_IN                 | IRQ     | IRQ      | IRQ     | IRQ       | O                |          | Remote control pulse input                                                                                                                                                                                                                                            |
| 105     | P1_4      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 106     | P1_3      | DOCK_PON               | O       | O        | O       | O         | O                |          | Dock power ON/OFF control / H: ON, L: OFF                                                                                                                                                                                                                             |
| 107     | P1_2      | IOXV_N_CS              | CS      | O        | O       | O         | O                |          | IO expanded IC (for Video) chip select                                                                                                                                                                                                                                |
| 108     | P1_1      | IOXV_N_RST             | O       | O        | O       | O         | O                |          | IO expanded IC (for Video) reset                                                                                                                                                                                                                                      |
| 109     | P1_0      | PD_LED                 | O       | O        | O       | O         | O                |          | Pure Direct LED ON/OFF control / H: ON, L: OFF                                                                                                                                                                                                                        |
| 110     | P0_7      | FLD_N_RST              | O       | O        | O       | O         | O                |          | FL driver reset                                                                                                                                                                                                                                                       |
| 111     | P0_6      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 112     | P0_5      | NC                     | O       | O        | O       | O         | O                |          |                                                                                                                                                                                                                                                                       |
| 113     | P0_4      | MIC_N_DET              | I       | O        | O       | O         | O                |          | MIC detection / L: MIC available                                                                                                                                                                                                                                      |
| 114     | P11_4     | IPD_APDET              | I       | I        | I       | I         | I                |          | iPod accessory power detection / Low while iPod booting (about 2 sec.) / Execute identification at approximate time of completion of booting / Change to constant input to prevent mutual pulling between iPod High output and microprocessor output Low Fix.         |

| Pin No. | Port Name | Function Name (P.C.B.) | I/O     |           |         |           |                  | Detail of Function                                                                                                                                                                                                                   |
|---------|-----------|------------------------|---------|-----------|---------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |           |                        | PowerOn | Stby Thrh | Standby | StbySleep | MCUSleep [Sleep] |                                                                                                                                                                                                                                      |
| 115     | P11_3     | VOL_RA                 | I       | O         | O       | O         | O                | Volume rotary encoder A                                                                                                                                                                                                              |
| 116     | P112      | NC                     | O       | O         | O       | O         | O                |                                                                                                                                                                                                                                      |
| 117     | P11_1     | VOL_RB                 | I       | O         | O       | O         | O                | Volume rotary encoder B                                                                                                                                                                                                              |
| 118     | P110      | NC                     | O       | O         | O       | O         | O                |                                                                                                                                                                                                                                      |
| 119     | P0_3      | NC                     | O       | O         | O       | O         | O                |                                                                                                                                                                                                                                      |
| 120     | P0_2      | SEL_PD                 | O       | O         | O       | O         | O                | DSP Pure Direct path select<br>H: Pure Direct ON                                                                                                                                                                                     |
| 121     | P0_1      | ADC_N_PDWN             | O       | O         | O       | O         | O                | ADC: Power down<br>L: Power down                                                                                                                                                                                                     |
| 122     | P0_0      | FLD_N_CS               | CS      | O         | O       | O         | O                | FL driver chip select                                                                                                                                                                                                                |
| 123     | P157      |                        | O       | O         | O       | O         | O                | (U, C, R, T, K, A, B, G, F, L models)                                                                                                                                                                                                |
|         | P15_7     | L3_DET                 | AD      | O         | O       | O         | O                | D terminal aspect detection (J model)                                                                                                                                                                                                |
| 124     | AN15_6    | THM                    | AD      | AD        | O       | O         | O                | Temperature detection                                                                                                                                                                                                                |
| 125     | AN15_5    | AMP_OLV                | AD      | AD        | O       | O         | O                | Power amplifier output level detection                                                                                                                                                                                               |
| 126     | AN15_4    | DC_PRT                 | AD      | AD        | O       | O         | O                | Power amplifier DC detection                                                                                                                                                                                                         |
| 127     | AN15_3    | MODEL                  | AD      | AD        | AD      | O         | O                | Destination discriminating AD value<br>Data taken in when reset is cancelled                                                                                                                                                         |
| 128     | IIO0_2    | E2R_MISO               | SI      | SI        | SI      | O         | O                | EEPROM synchronous data input                                                                                                                                                                                                        |
| 129     | IIO0_1    | FLD_SCK                | SO      | SO        | SO      | O         | O                | FL driver OSDIO expanded IC (Video), EEPROM<br>synchronous clock output<br>Do not let power OFF device be sucked                                                                                                                     |
| 130     | Vss       | Vss                    | MCU     | MCU       | MCU     | MCU       | MCU              | Microprocessor GND                                                                                                                                                                                                                   |
| 131     | IIO0_0    | FLD_MOSI               | SO      | SO        | SO      | O         | O                | FL driver OSDIO expanded IC (Video), EEPROM<br>synchronous clock output<br>Do not let power OFF device be sucked                                                                                                                     |
| 132     | Vcc       | Vcc                    | MCU     | MCU       | MCU     | MCU       | MCU              | Microprocessor power supply                                                                                                                                                                                                          |
| 133     | AN_7      | KEY1                   | AD      | AD        | AD      | I         | O                | KEY AD value taken in 1<br>Discriminates key pressed after changing to AD during<br>PSW_DET interrupt                                                                                                                                |
| 134     | AN_6      | KEY2                   | AD      | AD        | AD      | I         | O                | KEY AD value taken in 2<br>Discriminates key pressed after changing to AD during<br>PSW_DET interrupt                                                                                                                                |
| 135     | AN_5      | PS1_PRT                | AD      | AD        | O       | O         | O                | PS protection detection 1                                                                                                                                                                                                            |
| 136     | AN_4      | PS2_PRT                | AD      | AD        | O       | O         | O                | PS protection detection 2                                                                                                                                                                                                            |
| 137     | P10_3     | DSP_N_RST              | O       | O         | O       | O         | O                | DA70Y reset                                                                                                                                                                                                                          |
| 138     | P10_2     | DIR_N_CS               | CS      | O         | O       | O         | O                | DIR chip select                                                                                                                                                                                                                      |
| 139     | AN_1      | DEST                   | AD      | AD        | AD      | O         | O                | Destination discriminating AD value<br>Data takes in when reset is cancelled                                                                                                                                                         |
| 140     | AVss      | AVss                   | MCU     | MCU       | MCU     | MCU       | MCU              | Microprocessor GND                                                                                                                                                                                                                   |
| 141     | AN_0      | DOCK_TYPE              | AD      | AD        | AD      | I         | O                | DOCK discriminate<br>Discriminates type of connected dock and changes<br>operation<br>Discriminates by A/D value 10ms after changing to AD<br>during IPD_DET interrupt<br>Discriminates by A/D value 10ms after Low edge of IPD_ DET |
| 142     | Vref      | VREF                   | MCU     | MCU       | MCU     | MCU       | MCU              | Microprocessor power supply                                                                                                                                                                                                          |
| 143     | Avcc      | AVcc                   | MCU     | MCU       | MCU     | MCU       | MCU              | Microprocessor power supply                                                                                                                                                                                                          |
| 144     | RXD4      | IPD_MISO               | SI      | I         | I       | I         | O                | iPod asynchronous data input<br>Input setting to prevent mutual pulling between iPod High<br>output and microprocessor output Low Fix                                                                                                |

## Key detection for A/D port

Key input (A/D) pull-up resistance 10 k-ohms

|                          |                   |                |                |                    |             |             |             |             |                                                                                             |                   |
|--------------------------|-------------------|----------------|----------------|--------------------|-------------|-------------|-------------|-------------|---------------------------------------------------------------------------------------------|-------------------|
| Ohm                      | 0                 | + 1.0 k        | + 1.0 k        | + 1.5 k            | + 1.5 k     | + 2.2 k     | + 3.3 k     | + 4.7 k     | 22.0 k                                                                                      | 33.0 k            |
| V                        | 0 – 0.15          | 0.15 – 0.42    | 0.43 – 0.70    | 0.71 – 0.97        | 0.98 – 1.24 | 1.25 – 1.53 | 1.54 – 1.84 | 1.85 – 2.22 | 2.23 – 2.62                                                                                 | 2.63 – 3.04       |
| A/D value<br>(3.3 V=255) | 0 – 11            | 12 – 32        | 33 – 54        | 55 – 75            | 76 – 96     | 97 – 119    | 120 – 142   | 143 – 163   | 162 – 197                                                                                   | 198 – 209         |
| KEY1<br>(133 pin)        | RADIO<br>(SCENE4) | CD<br>(SCENE3) | TV<br>(SCENE2) | BD/DVD<br>(SCENE1) | –           | –           | INPUT<br>>  | INPUT<br><  |  (Power) | TONE CON-<br>TROL |

|                          |          |              |              |             |             |             |             |             |             |             |              |              |
|--------------------------|----------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Ohm                      | 0        | + 1.0 k      | + 1.0 k      | + 1.5 k     | + 1.8 k     | + 2.2 k     | + 3.3 k     | + 4.7 k     | + 6.8 k     | + 10.0 k    | + 22.0 k     | + 68.0 k     |
| V                        | 0 – 0.15 | 0.16 – 0.42  | 0.43–0.70    | 0.71 – 0.99 | 1.00 – 1.27 | 1.28 – 1.56 | 1.57 – 1.86 | 1.87 – 2.14 | 2.15 – 2.39 | 2.40 – 2.65 | 2.66 – 2.91  | 2.92 – 3.17  |
| A/D value<br>(3.3 V=255) | 0 – 11   | 12 – 32      | 33 – 54      | 55 – 77     | 78 – 99     | 100 – 121   | 122 – 144   | 145 – 166   | 167 – 186   | 187 – 205   | 206 – 226    | 227 – 246    |
| KEY2<br>(134 pin)        | –        | TUNING<br>>> | TUNING<br><< | AM          | FM          | PRESET<br>> | PRESET<br>< | MEMORY      | INFO        | STRAIGHT    | PROGRAM<br>> | PROGRAM<br>< |

## Destination detection for AD port

Pull-up resistance 10 k-ohms

|                          |          |             |             |             |             |             |             |             |
|--------------------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Ohm                      | 0        | 1.2 k       | 4.7 k       | 6.8 k       | 10.0 k      | 15.0 k      | 47.0 k      | 100.0 k     |
| V                        | 0 – 0.16 | 0.17 – 0.68 | 0.69 – 1.19 | 1.20 – 1.49 | 1.50 – 1.81 | 1.82 – 2.35 | 2.36 – 2.86 | 2.87 – 3.15 |
| A/D value<br>(3.3 V=255) | 0 – 12   | 13 – 53     | 54 – 92     | 93 – 115    | 116 – 140   | 141 – 182   | 183 – 221   | 222 – 244   |
| Destination              | J        | U, C        | R           | T           | K           | A           | B, G, F     | L           |

## Model detection for A/D port

Model input (A/D) pull-up resistance 10 k-ohms

|                          |          |             |
|--------------------------|----------|-------------|
| R200                     | 10.0 k   | 10.0 k      |
| R201                     | 0        | 1.0 k       |
| V                        | 0 – 0.13 | 0.14 – 0.43 |
| A/D value<br>(3.3 V=255) | 0 – 10   | 11 – 33     |
| Model name               | RX-V467  | HTR-4063    |

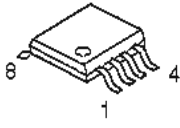
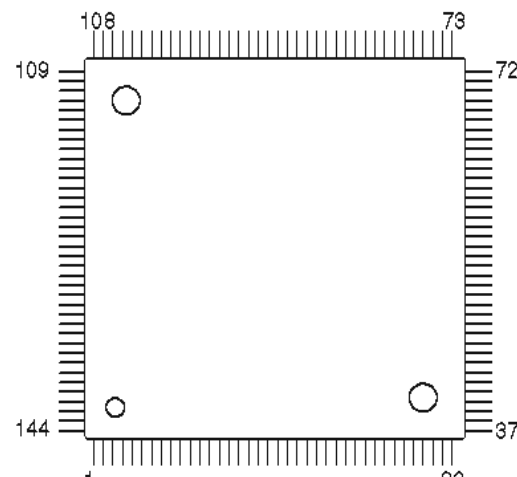
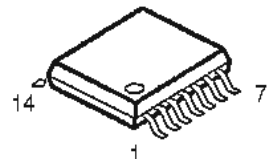
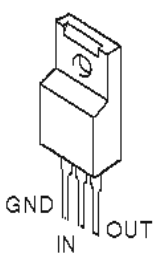
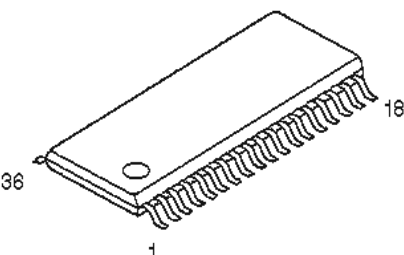
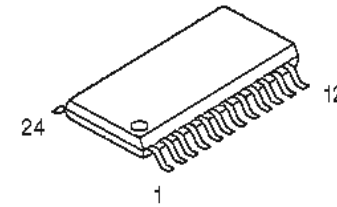
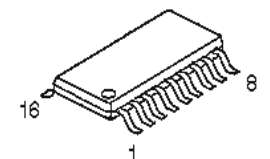
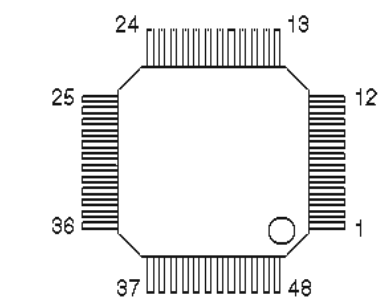
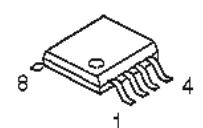
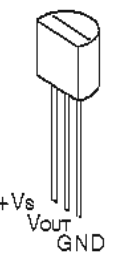
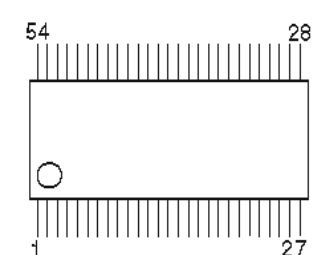
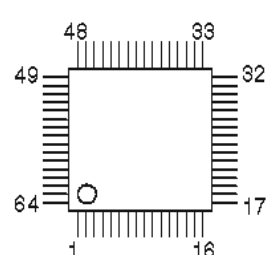
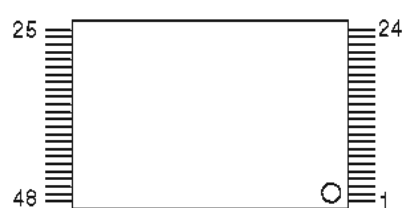
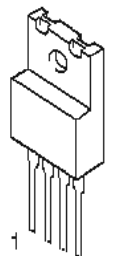
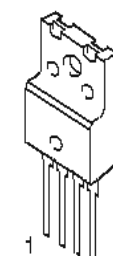
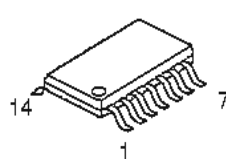
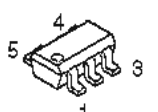
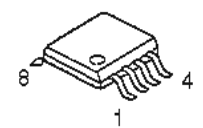
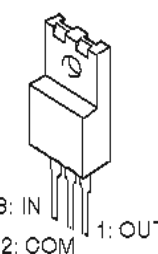
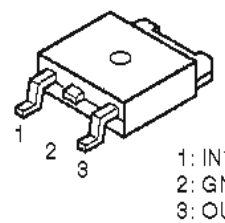
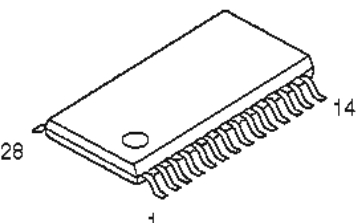
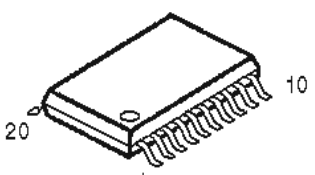
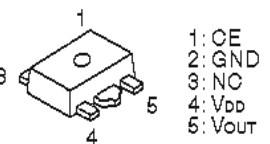
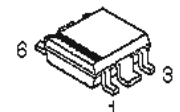
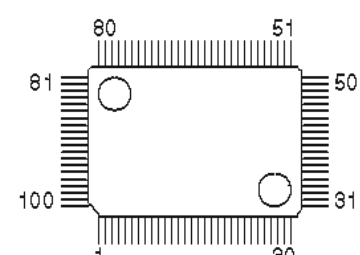
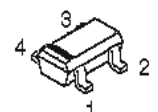
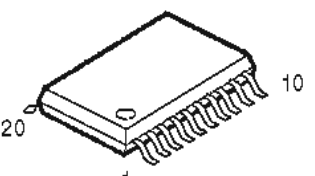
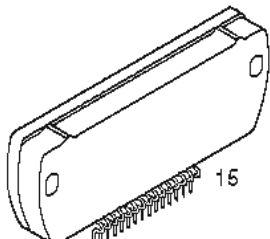
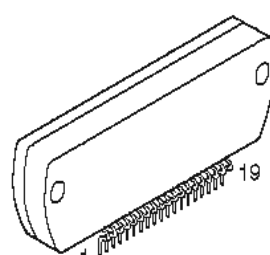
## DOCK detection for AD port

Pull-up resistance 10 k-ohms

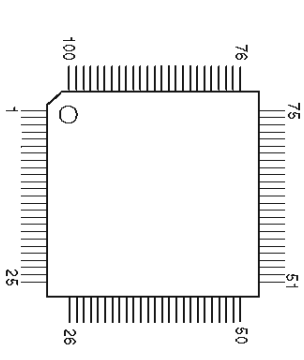
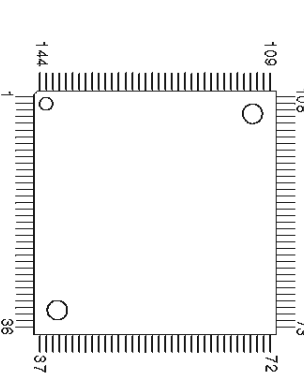
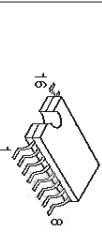
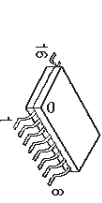
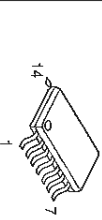
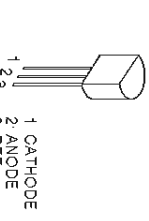
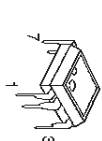
| DOCK type<br>(DKID 141 pin) | Bluetooth<br>(YBA-10) | Wireless iPod<br>(YID-W10) | iPod              |             | No connected |
|-----------------------------|-----------------------|----------------------------|-------------------|-------------|--------------|
|                             |                       |                            | (YDS-10/11/12(B)) | (YDS-12(A)) |              |
| A/D value<br>(3.3 V=255)    | 5 – 25                | 85 – 100                   | 120 – 140         | 150 – 170   | 255          |

PIN CONNECTION DIAGRAMS

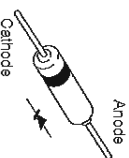
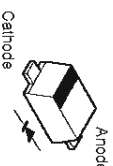
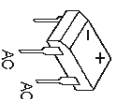
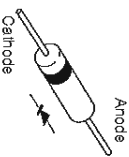
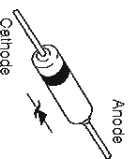
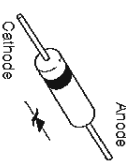
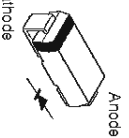
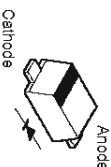
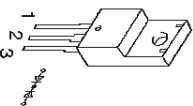
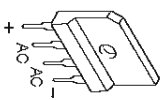
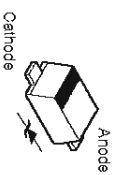
ICs

|                                                                                                        |                                                                                                                     |                                                                                                                             |                                                                                                           |                                                                                                             |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| BD9323EFJ-E2<br>      | D70YE101BRFP266<br>R5F64166DFD<br> | FHP3350IM14X<br>                          | KIA7912PI<br>          | LA73050-TLM-E<br>        |
| LC709004A-TLM-E<br> | LC72725KM-UY-TLM-E<br>           | LC89058WD-E<br>                         | LE25LA322M-TLM-E<br> | LM19CIZ/LF<br>         |
| M12L64164A-5TG<br>  | M66003-0131FP-R<br>              | MX29LV160DBTI-70G<br>                   | NJM2388F05<br>       | NJM2396F05<br>         |
| NJM2581M<br>        | NJM2867F3-05 (TE1)<br>           | NJM4565M (TE1)<br>                      | NJM7812FA<br>        | NJM78M05DL1A (TE1)<br> |
| PCM1680DBQR<br>     | PCM1803DBR<br>                  | R1172H331D-T1-F<br>R1172H501D-T1-F<br> | R1172S121D-E2-F<br>  |                                                                                                             |
| R2A15220FP<br>      | RP130Q501D-TR-F<br>              | SN74LVC245APWR<br>                      | STK433-130Y-E<br>    | STK433-330Y-E<br>      |

• ICS

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| SI19134CTU                                                                          |                                                                                     | SI19233ACTU                                                                         |                                                                                     | TC74HC4051AEEL<br>TC74HC4052AF                                                       |                                                                                       | TC74HC4053AF                                                                          |  |
|  |                                                                                     |  |                                                                                     |  |                                                                                       |  |  |
| TC74VHC157FT                                                                        | TC74VHC108AFT<br>TC74VHCU04FT                                                       | TC7SH08FU                                                                           | TC7WHU04FU                                                                          | TL431ACLPR                                                                           | TOP254PN                                                                              |                                                                                       |  |
|  |  |  |  |  |  |                                                                                       |  |

• Diodes

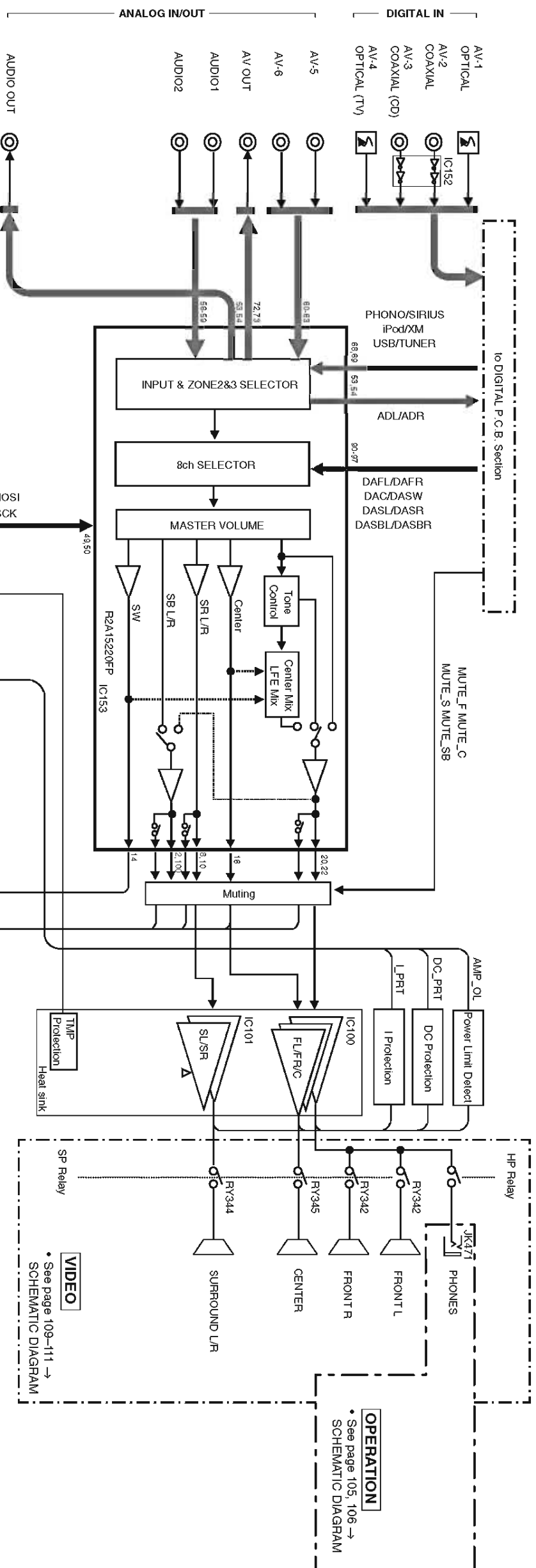
|                                                                                    |                                                                                   |                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1N4003S<br>1SS133<br>1SS176<br>1SS270A                                             | 1SS355                                                                            | DB105                                                                              | HT18G                                                                                |
|  |  |   |  |
| HZU4.3B3 TRF-E                                                                     | MTZJ3.3B<br>MTZJ10B<br>MTZJ22C<br>MTZJ39D<br>MTZJ5.1B<br>MTZJ6.8C                 | P6KE200ARL                                                                         | RB051L-40                                                                            |
|   |  |  |   |
| RB501V-40                                                                          | RS203M-B-C-J80                                                                    | SG10SC4M                                                                           | TS6FP03G 6.0A 200V                                                                   |
|   |  |   |    |
|                                                                                    |                                                                                   |                                                                                    | UDZ5.1B 5.1V<br>UDZS3.3B 3.3V<br>UDZS12B 12V                                         |
|                                                                                    |                                                                                   |                                                                                    |   |

• Transistors

|                              |              |                                                  |                            |                |          |              |          |
|------------------------------|--------------|--------------------------------------------------|----------------------------|----------------|----------|--------------|----------|
| 2N5401C-A/T/P<br>2N5551C-A/T | 2SA1015-Y    | 2SA1576A                                         | 2SA1708                    | 2SB1274        | 2SC1740S | 2SC1815 Y    | 2SC2412K |
|                              |              |                                                  |                            |                |          |              |          |
| 2SC5938A                     | 2SC4081 TT06 | DTA114EKA<br>DTA144EKA<br>DTC114EKA<br>DTC144EKA | KRA104S-RTK<br>KRC102S-RTK | KTAT1046-Y-U/P | KTC3875S | MCH6336-TL-E |          |
|                              |              |                                                  |                            |                |          |              |          |

## ■ BLOCK DIAGRAMS

## ANALOG AUDIO Section Block Diagram



**MAIN**

- See page 107, 108 → SCHEMATIC DIAGRAM

• See page 101–104 →  
SCHEMATIC DIAGRAM

**VIDEO**

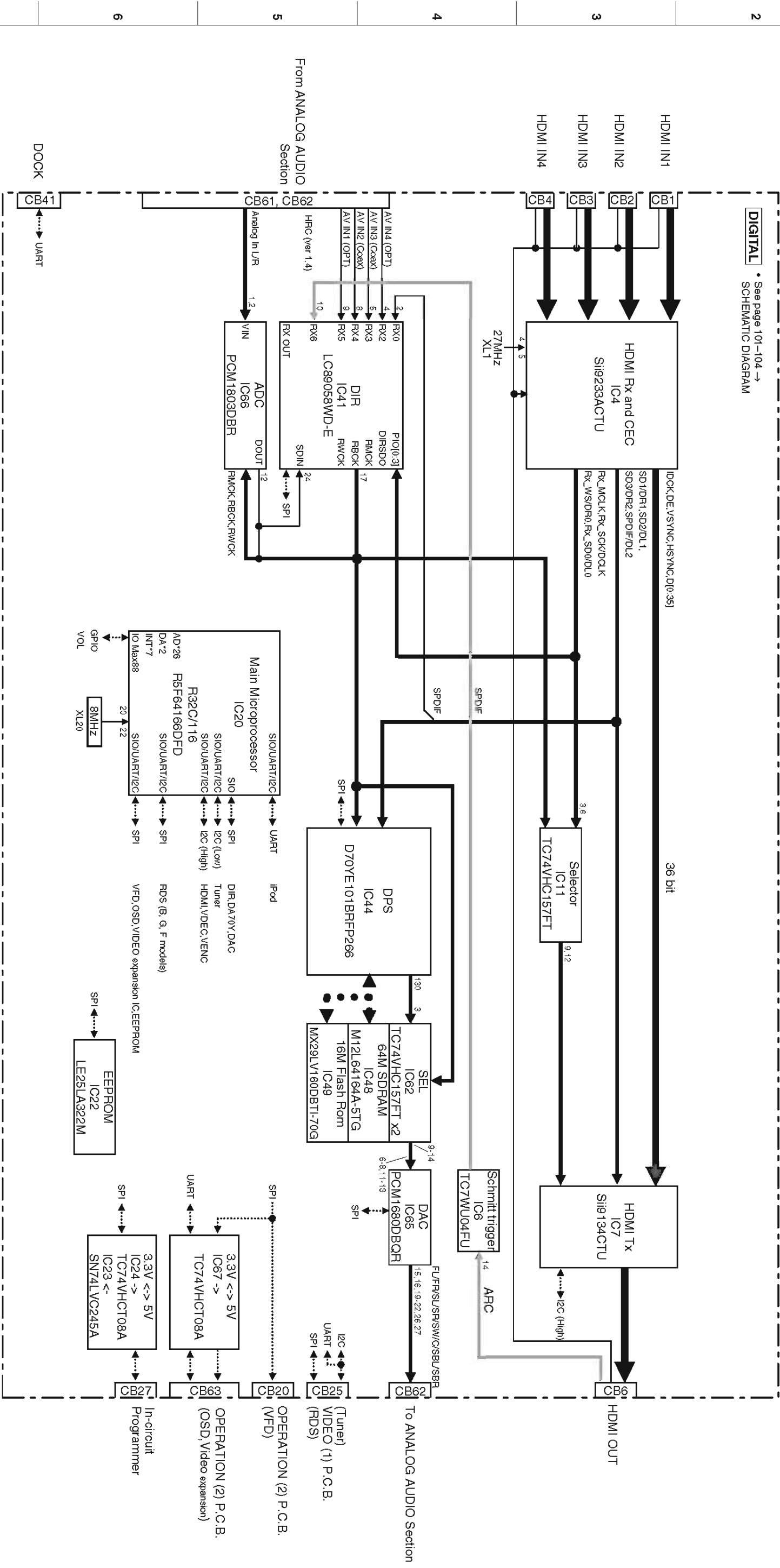
- See page 109–111 → SCHEMATIC DIAGRAM

**OPERATION**

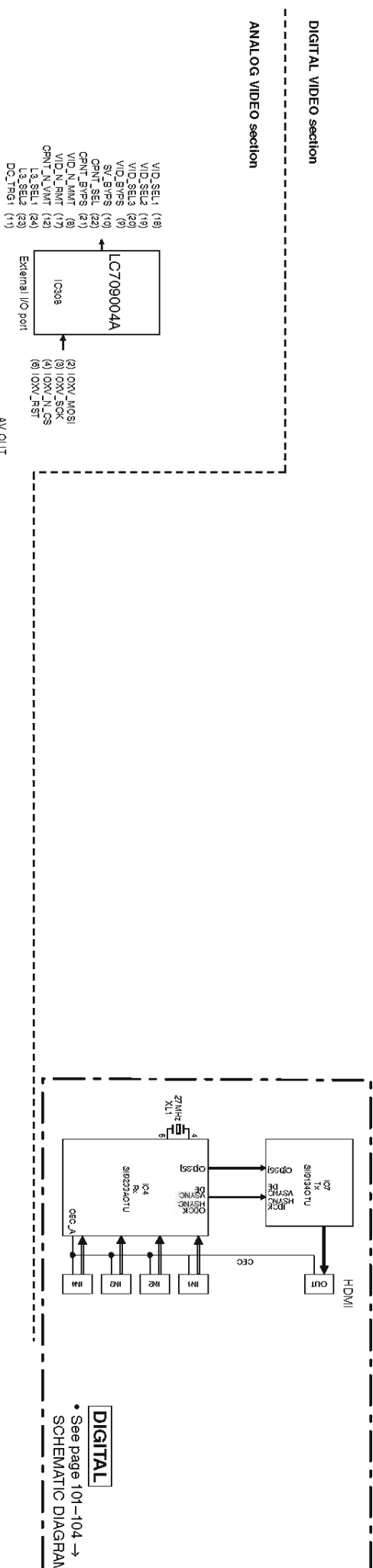
- See page 105, 106 → SCHEMATIC DIAGRAM



DIGITAL P.C.B. Section Block Diagram



## VIDEO Section Block Diagram



**DIGITAL**

- See page 101–104 → SCHEMATIC DIAGRAM

## OPERATION

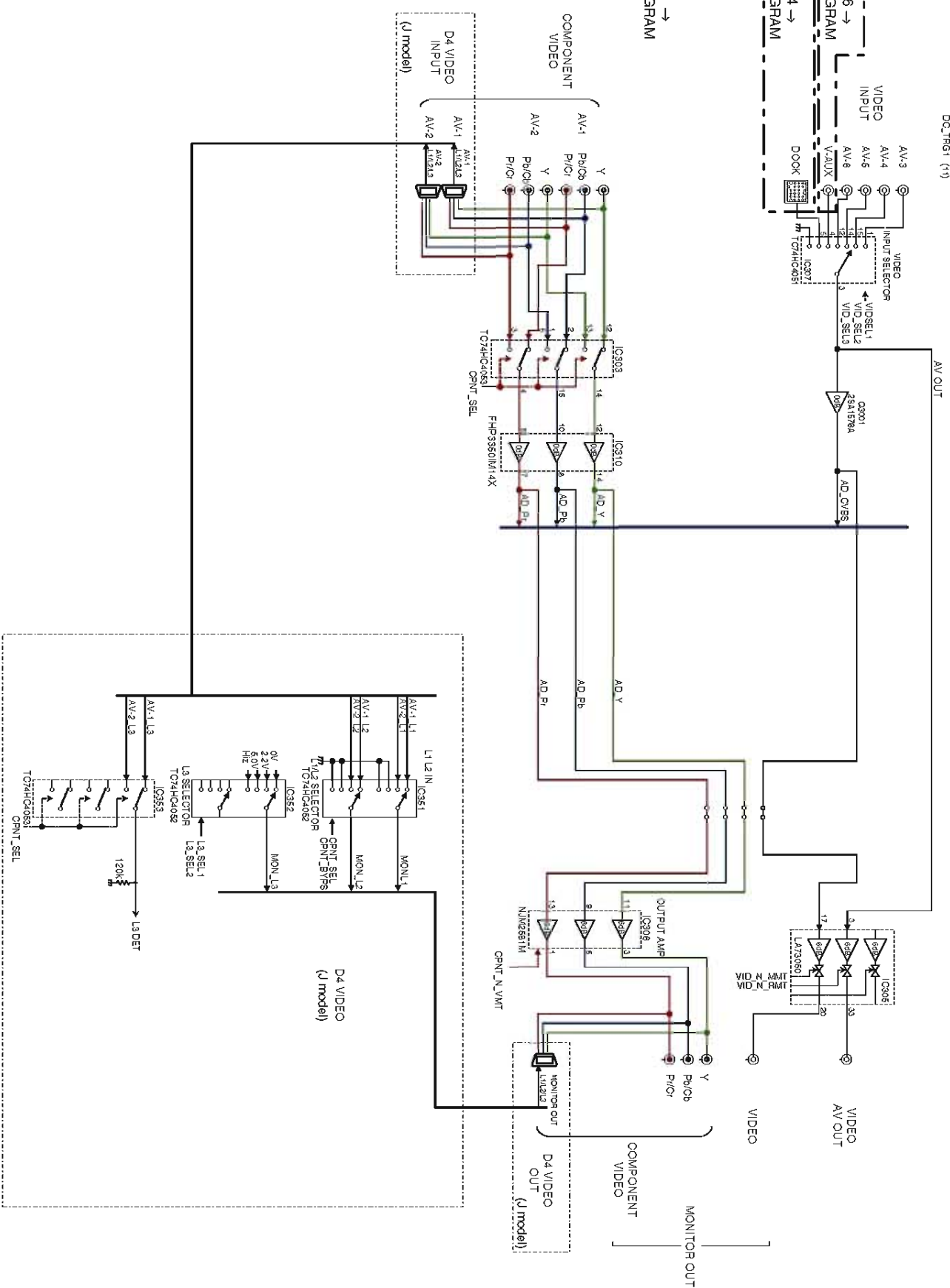
- See page 105, 106 → SCHEMATIC DIAGRAM

**DIGITAL**

• See page 101–104 →  
SCHEMATIC DIAGRAM

## VIDEO

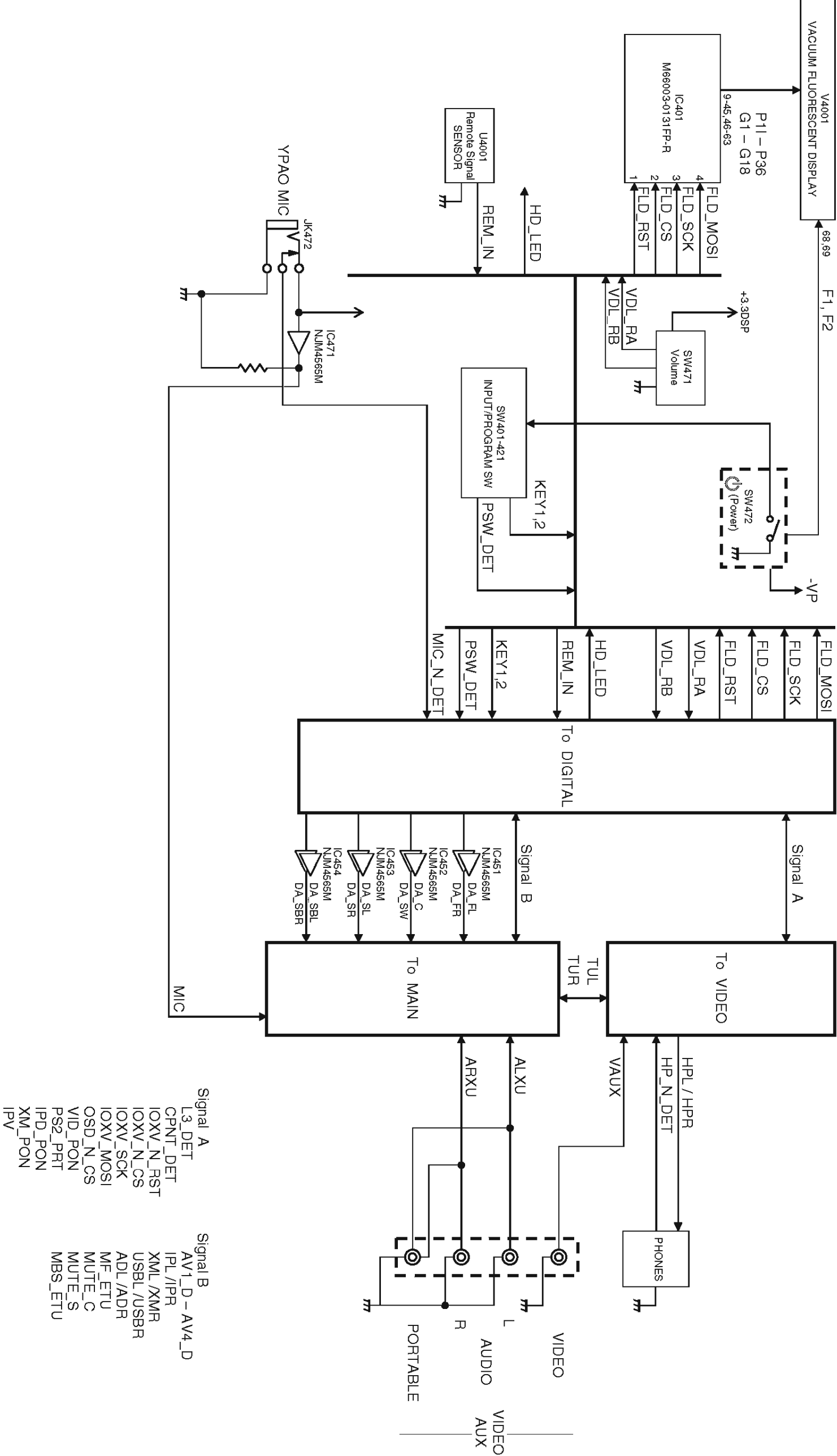
• See page 109-111 →  
SCHEMATIC DIAGRAM



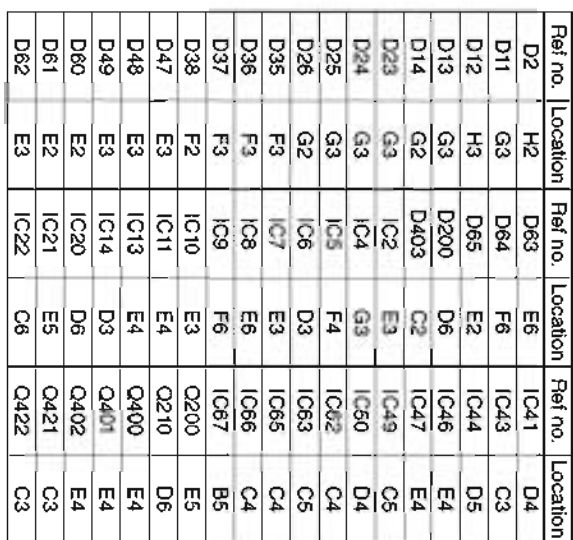


OPERATION P.C.B. Section Block Diagram

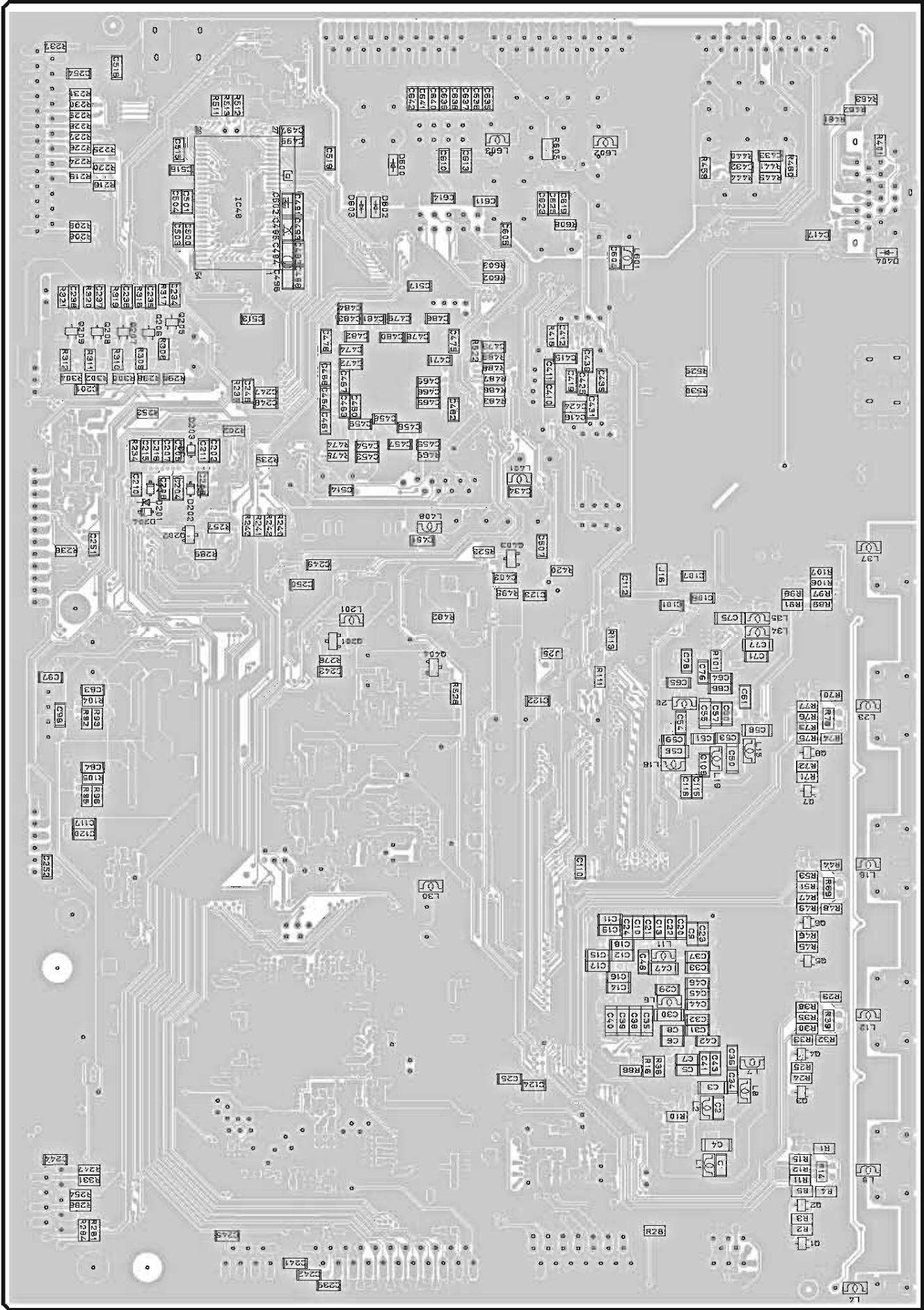
OPERATION • See page 105-106 → SCHEMATIC DIAGRAM



**DIGITAL P.C.B.**  
(Side A)



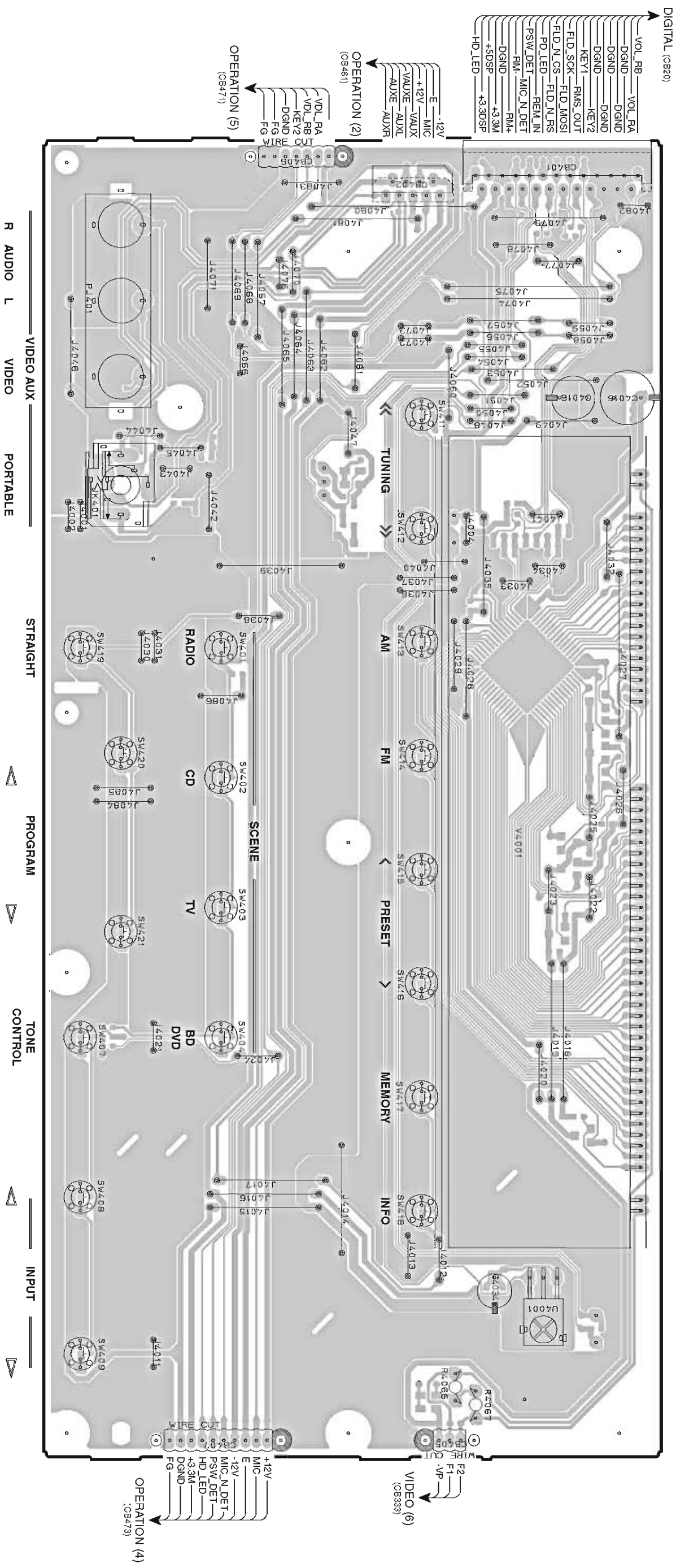
DIGITAL P.C.B. (Side B)



• Semiconductor Location

| Ref no. | Location |
|---------|----------|
| D201    | E6       |
| D202    | E6       |
| D203    | D6       |
| D204    | E6       |
| D404    | C2       |
| D600    | C5       |
| D602    | C5       |
| D603    | C5       |
| IC48    | C5       |
| Q1      | H3       |
| Q2      | H3       |
| Q3      | G3       |
| Q4      | G3       |
| Q5      | G3       |
| Q6      | G3       |
| Q7      | F3       |
| Q8      | F3       |
| Q201    | E5       |
| Q202    | E6       |
| Q205    | D6       |
| Q206    | D6       |
| Q207    | D6       |
| Q208    | D6       |
| Q209    | D6       |
| Q403    | E4       |
| Q404    | E5       |

## OPERATION (1) P.C.B. (Side A)



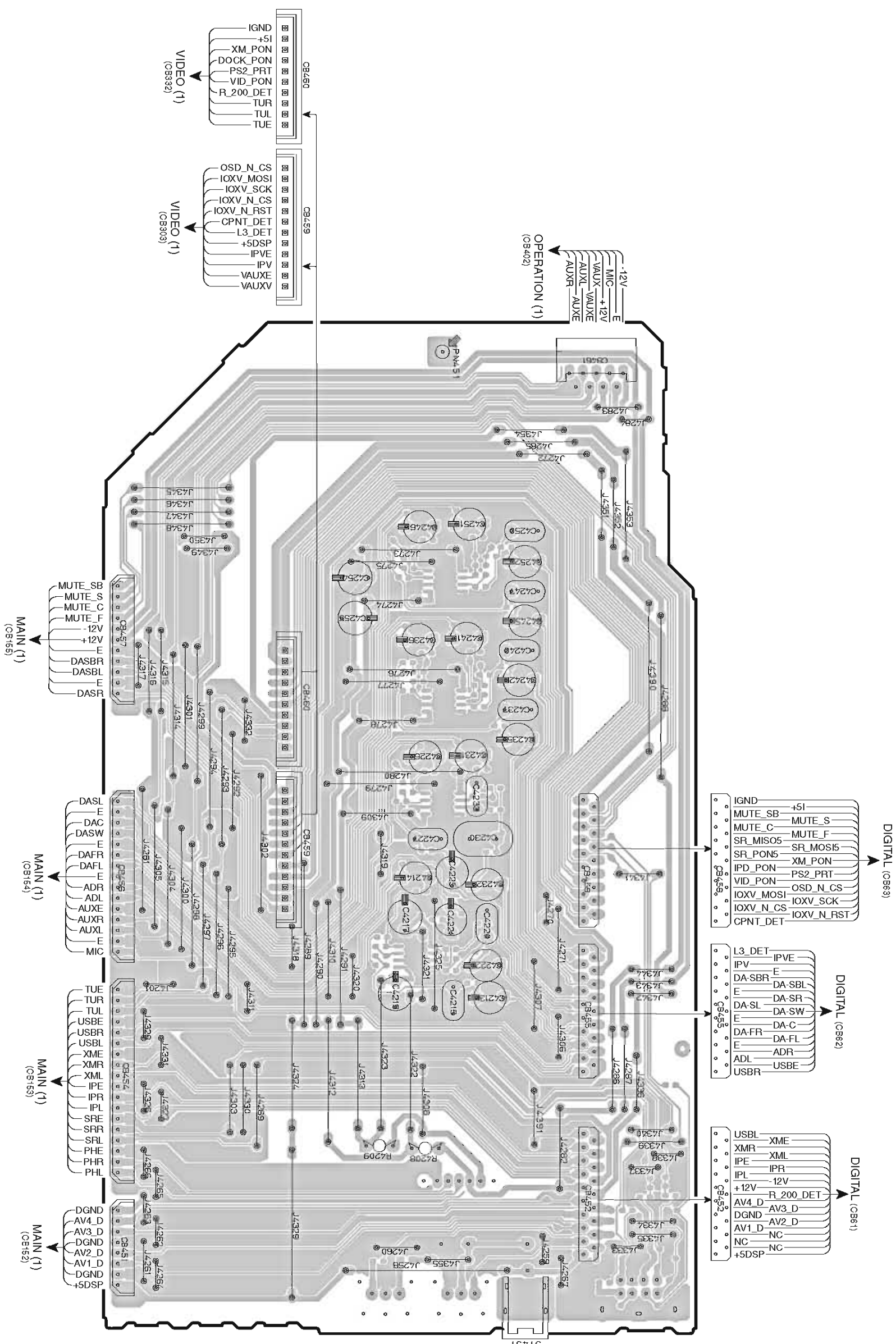


7

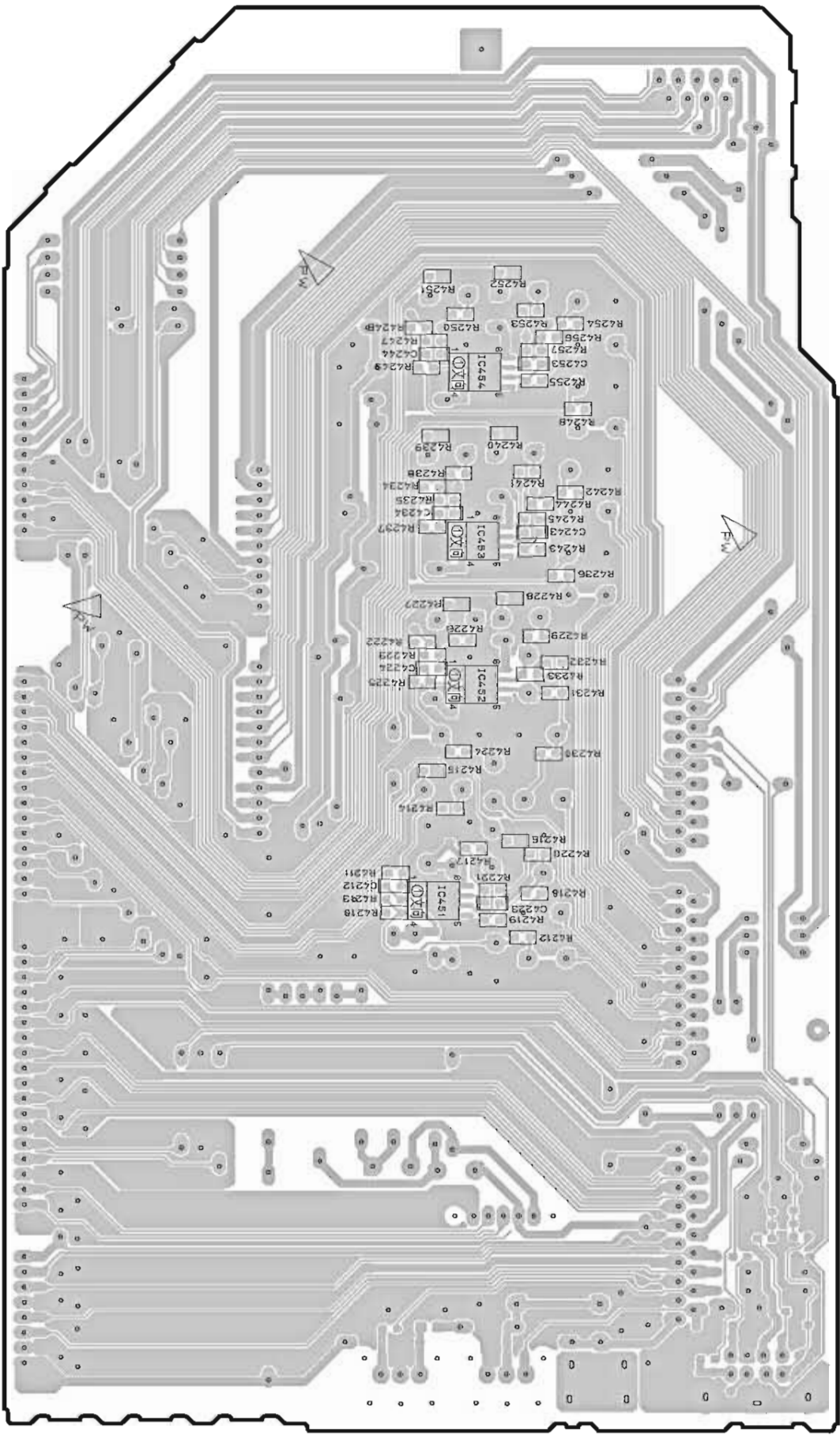


| Ref.no. | Location | Ref.no. | Location |
|---------|----------|---------|----------|
| D4006   | I3       | Q4001   | E2       |
| D4007   | I3       | Q4002   | E2       |
| D4010   | D4       | Q4003   | E2       |
| D4012   | D4       | Q4006   | F3       |
| D4091   | C6       | Q4007   | H2       |
| D4092   | C6       | Q4008   | F3       |
| D4093   | B6       | Q4009   | F3       |
| D4094   | B6       | Q4012   | E2       |
| IC401   | E3       |         |          |

**OPERATION (2) P.C.B.** (Side A)



OPERATION (2) P.C.B. (Side B)

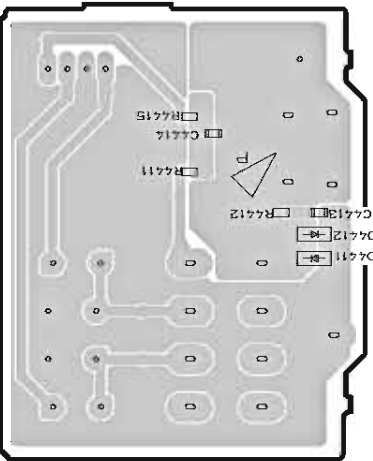
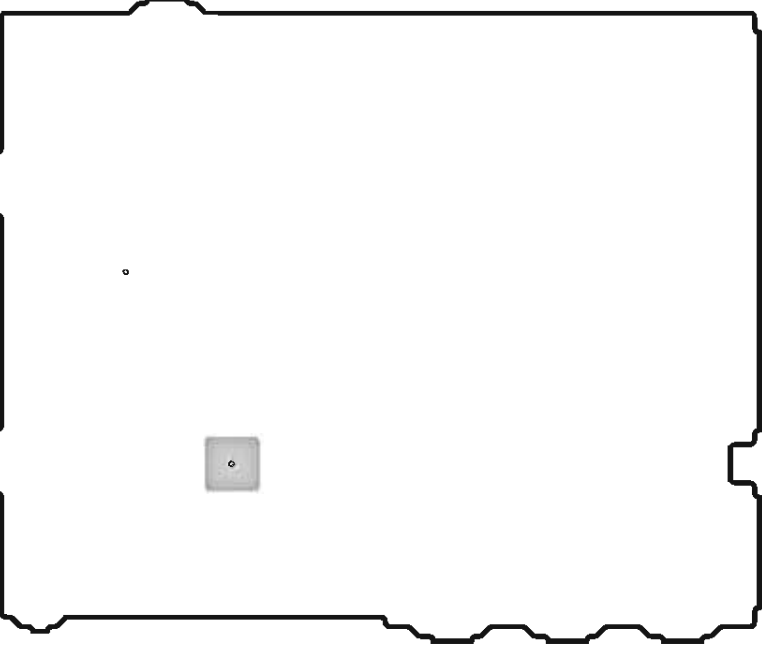
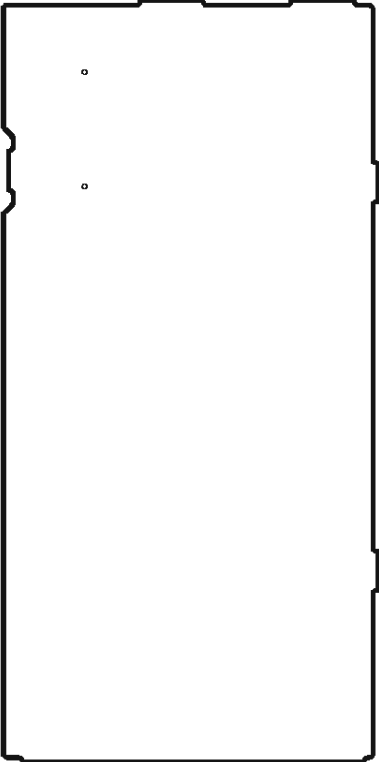


• Semiconductor Location

| Ref no. | Location |
|---------|----------|
| IC451   | F4       |
| IC452   | E4       |
| IC453   | E4       |
| IC454   | D4       |





|   | A                                                                                                                                                                     | B | C                             | D | E                             | F | G | H | I | J |  |  |  |  |  |  |  |  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------|---|-------------------------------|---|---|---|---|---|--|--|--|--|--|--|--|--|
| 1 |                                                                                                                                                                       |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
|   | OPERATION (3) P.C.B. (Side B)                                                                                                                                         |   | OPERATION (4) P.C.B. (Side B) |   | OPERATION (5) P.C.B. (Side B) |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 2 |                                                                                                                                                                       |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 3 |                                                                                    |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 4 | OPERATION (6) P.C.B. (Side B)                                                                                                                                         |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 5 |                                                                                                                                                                       |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 6 |                                                                                                                                                                       |   | OPERATION (8) P.C.B. (Side B) |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |
| 7 |   |   |                               |   |                               |   |   |   |   |   |  |  |  |  |  |  |  |  |

• Semiconductor Location

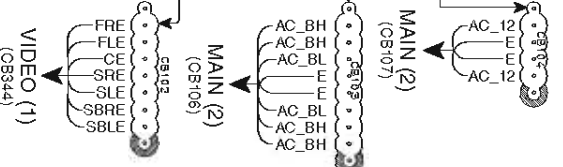
| Ref no. | Location |
|---------|----------|
| D4411   | B2       |
| D4412   | B2       |
| D4421   | D3       |
| D4422   | D3       |
| D4423   | E2       |
| IC471   | D2       |
| Q4402   | E3       |

(Side A)

AV — AUDIO1 — AUDIO2 —  
OUT

— AUDIO OUT —

**SURROUND BACK** **SUBWOOFER**



- Semiconductor Location

| Ref. no. | Location | Ref. no. | Location |
|----------|----------|----------|----------|
| D1000    | G5       | IC101    | G7       |
| D1001    | G5       | IC103    | F4       |
| D1004    | G5       | IC104    | F4       |
| D1005    | F6       | IC100    | H5       |
| D1009    | B6       | Q1001    | H5       |
| D1010    | E6       | Q1002    | G5       |
| D1011    | C5       | Q1003    | H5       |
| D1012    | F5       | Q1004    | G5       |
| D1013    | C6       | Q1005    | G5       |
| D1014    | G5       | Q1006    | C6       |
| D1017    | H4       | Q1007    | G6       |
| D1018    | H3       | Q1008    | F6       |
| D1019    | I4       | Q1011    | B6       |
| D1503    | E4       | Q1012    | D6       |
| D1504    | E3       | Q1013    | H6       |
| IC100    | C7       | Q1014    | E5       |

A

B

C

D

E

F

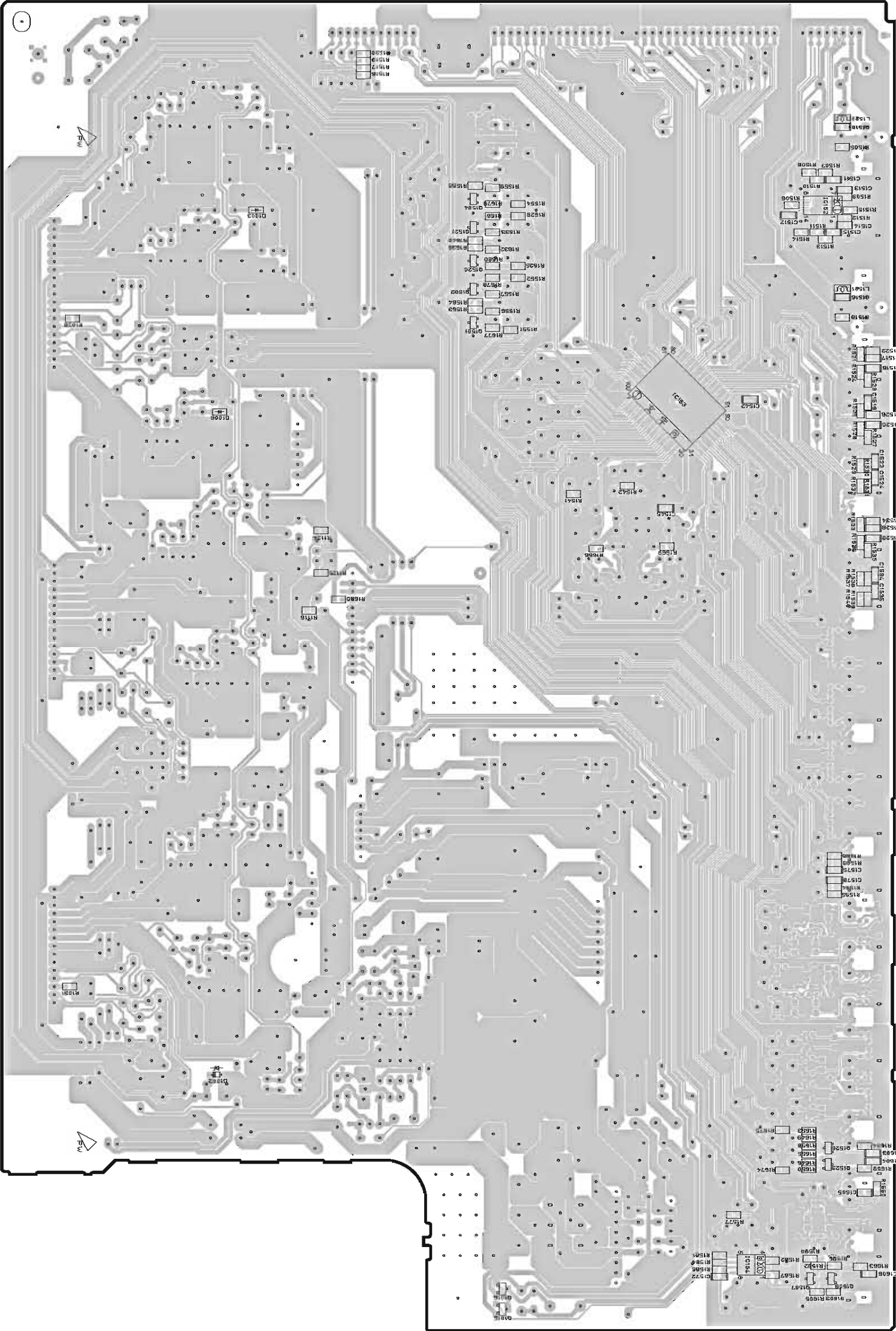
G

H

I

J

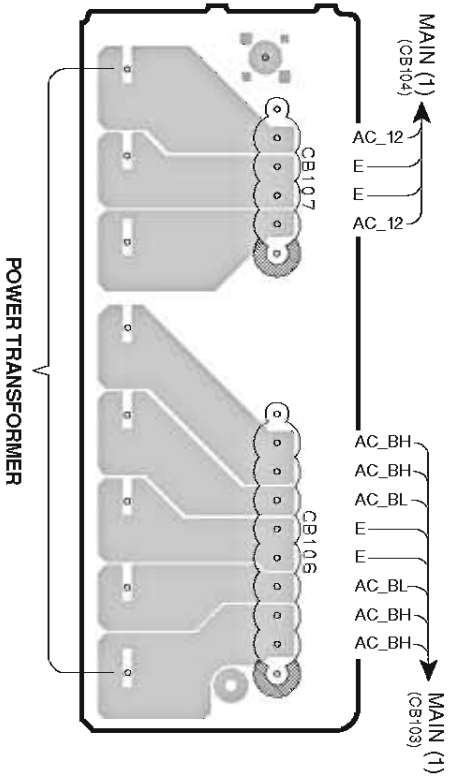
MAIN (1) P.C.B. (side B)



• Semiconductor Location

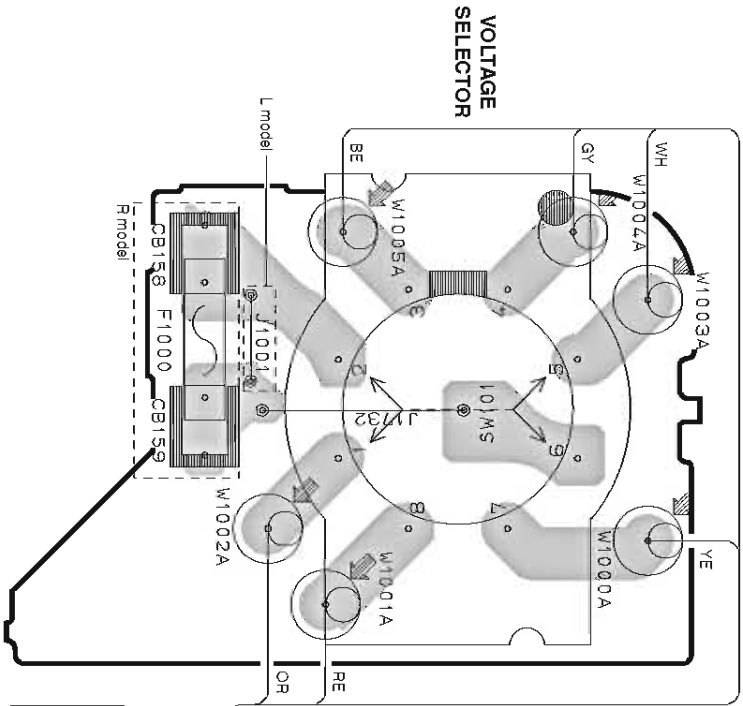
| Ref no. | Location |
|---------|----------|
| D1002   | H6       |
| D1003   | C6       |
| D1008   | D6       |
| IC152   | C2       |
| IC153   | D3       |
| IC154   | I3       |
| Q1015   | I4       |
| Q1016   | I4       |
| Q1501   | C4       |
| Q1502   | C4       |
| Q1504   | C4       |
| Q1507   | I3       |
| Q1509   | I2       |
| Q1520   | C4       |
| Q1521   | C4       |
| Q1523   | H2       |
| Q1526   | H2       |

MAIN (2) P.C.B. (Side A)



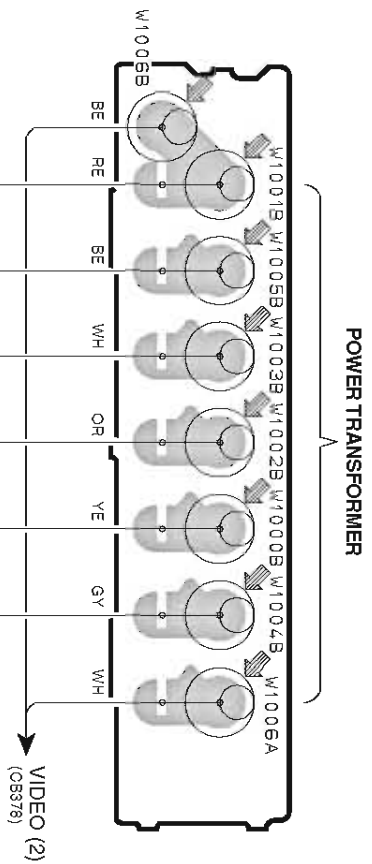
MAIN (3) P.C.B. (Side A)

R, L models

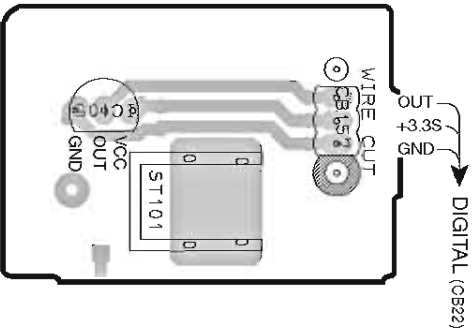


MAIN (4) P.C.B. (Side A)

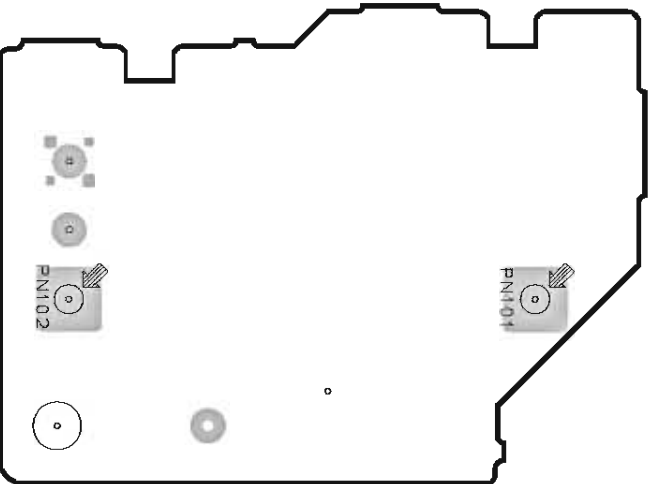
R, L models



MAIN (5) P.C.B. (Side A)

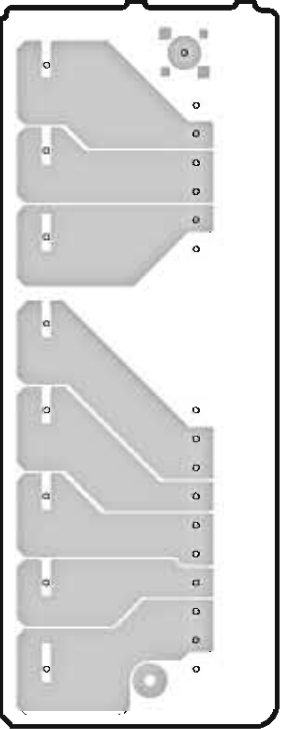
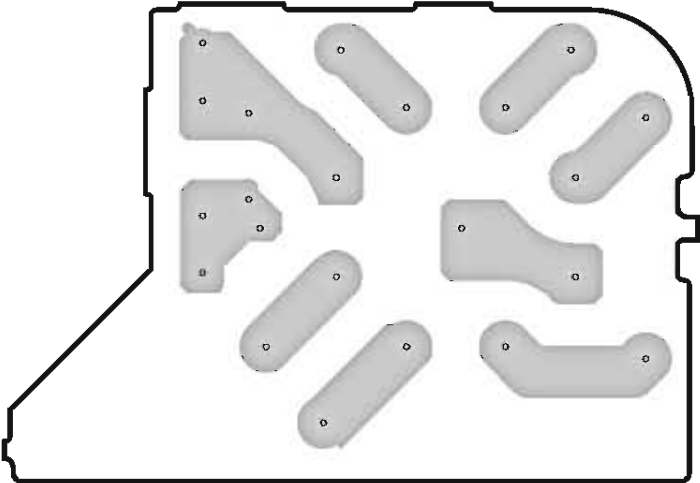
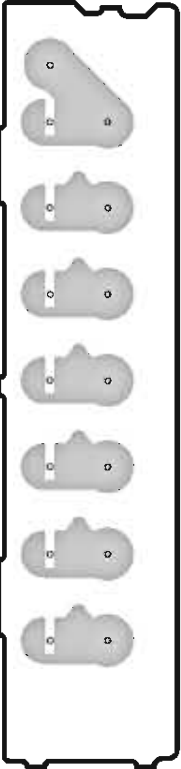
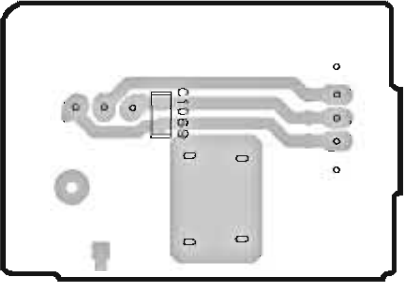
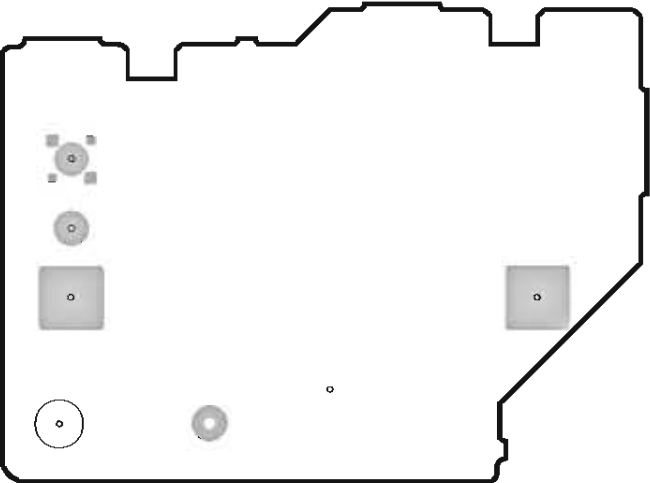


MAIN (6) P.C.B. (Side A)



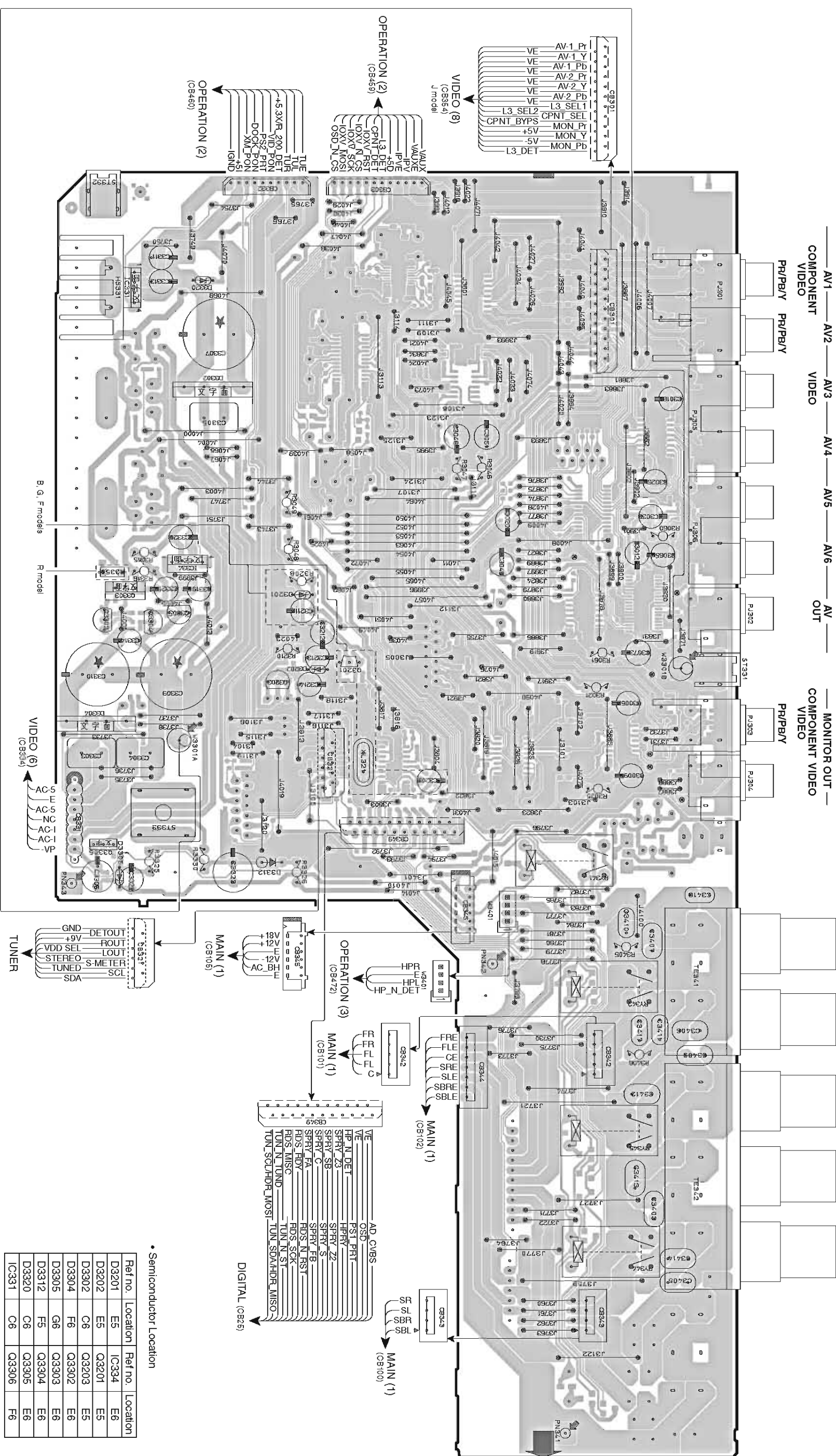
• Semiconductor Location

| Ref no. | Location |
|---------|----------|
| IC105   | B6       |

|   | A                                                                                     | B | C | D | E | F | G | H | I | J |
|---|---------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|
| 1 |                                                                                       |   |   |   |   |   |   |   |   |   |
|   | <div>MAIN (2) P.C.B. (Side B)</div>                                                   |   |   |   |   |   |   |   |   |   |
| 2 |   |   |   |   |   |   |   |   |   |   |
| 3 |                                                                                       |   |   |   |   |   |   |   |   |   |
| 4 | <div>MAIN (3) P.C.B. (Side B)<br/>R, L models</div>                                   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |
|   |                                                                                       |   |   |   |   |   |   |   |   |   |
|   | <div>MAIN (4) P.C.B. (Side B)<br/>R, L models</div>                                   |   |   |   |   |   |   |   |   |   |
|   |  |   |   |   |   |   |   |   |   |   |
|   |                                                                                       |   |   |   |   |   |   |   |   |   |
|   | <div>MAIN (5) P.C.B. (Side B)</div>                                                   |   |   |   |   |   |   |   |   |   |
| 5 |      |   |   |   |   |   |   |   |   |   |
| 6 |                                                                                       |   |   |   |   |   |   |   |   |   |
|   | <div>MAIN (6) P.C.B. (Side B)</div>                                                   |   |   |   |   |   |   |   |   |   |
|   |    |   |   |   |   |   |   |   |   |   |
| 7 |                                                                                       |   |   |   |   |   |   |   |   |   |



VIDEO (1) P.C.B. (Side A)



• Semiconductor Location

A

B

C

D

E

F

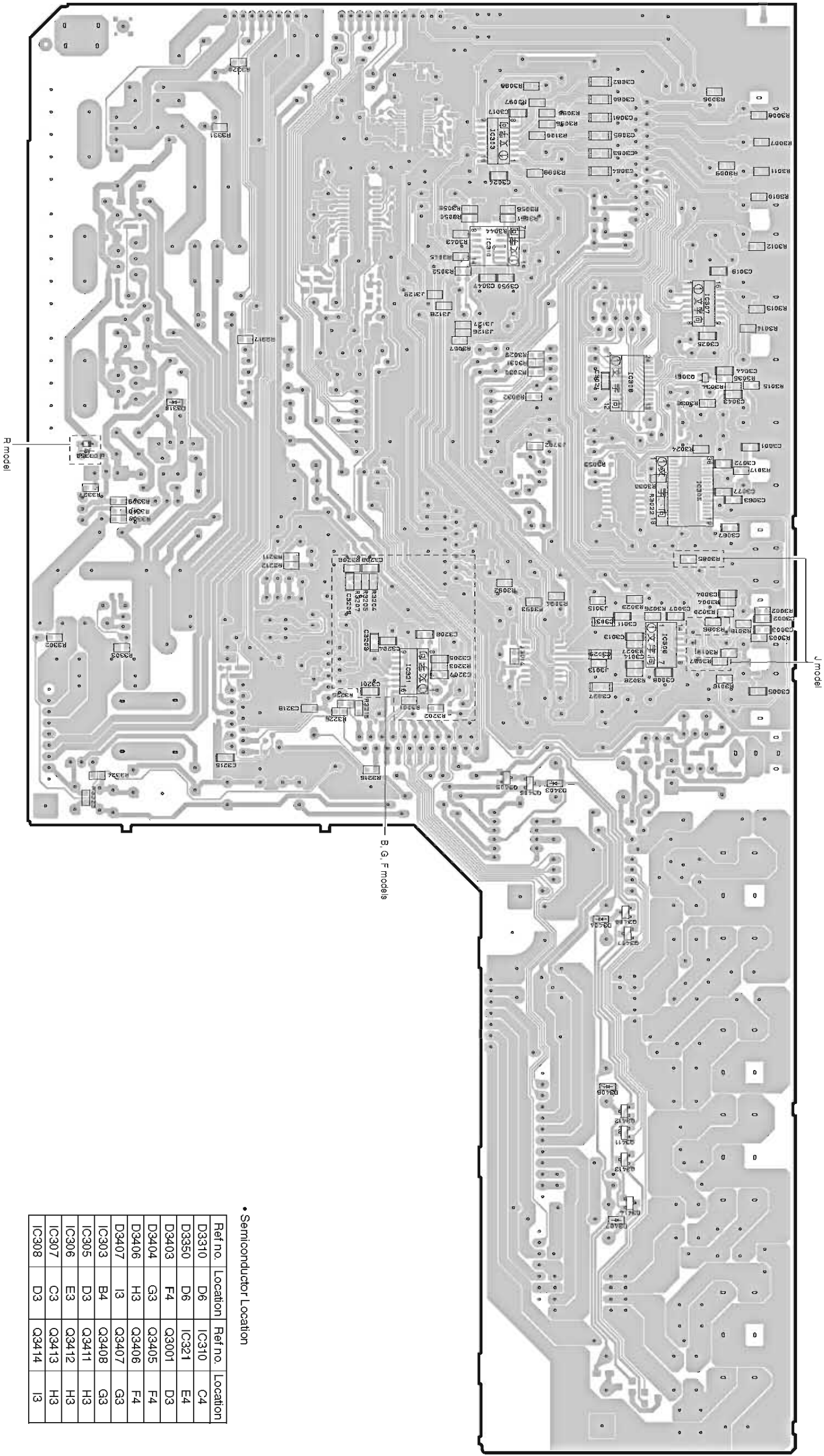
G

H

I

J

VIDEO (1) P.C.B. (Side B)



7

6

5

4

3

2

1

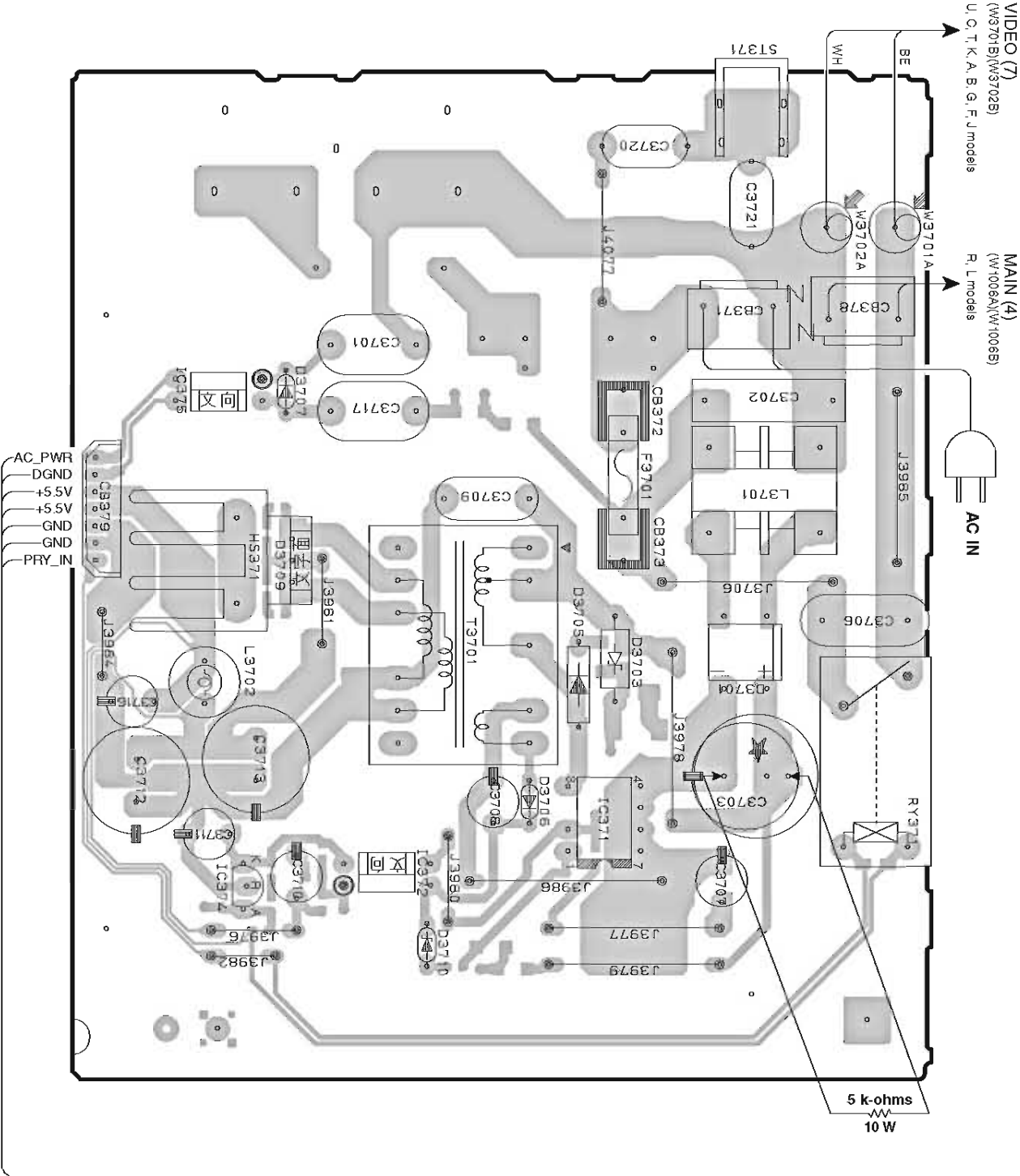
**Notes)**

**Safety measures**

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that positions indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10W) between terminals at following positions. The time required for discharging is about 30 seconds.

C3703 on VIDEO (2) P.C.B.

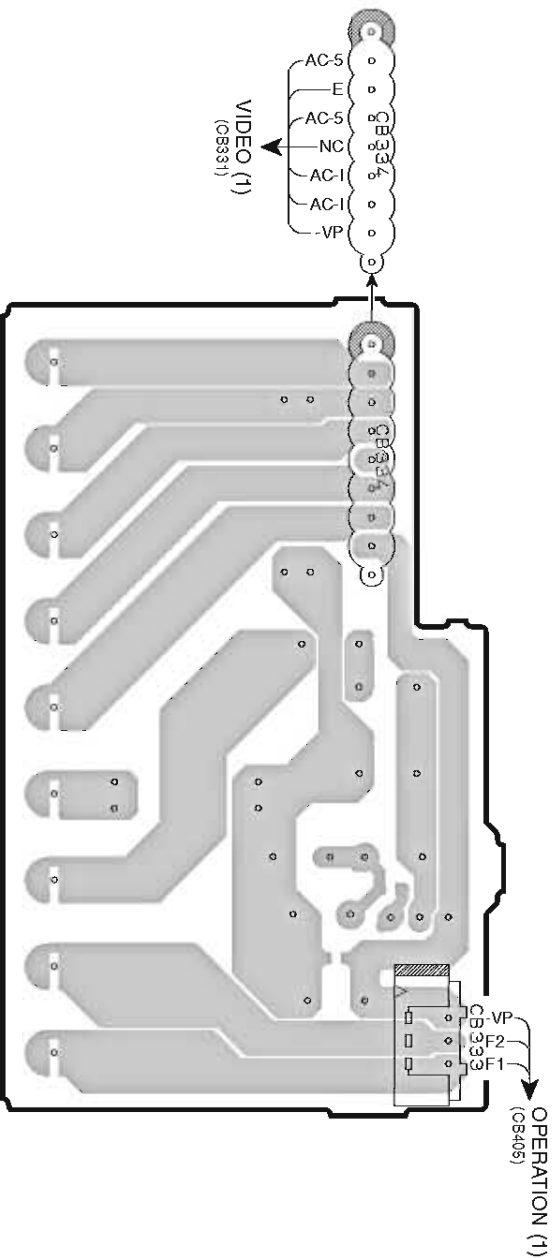
VIDEO (2) P.C.B. (Side A)



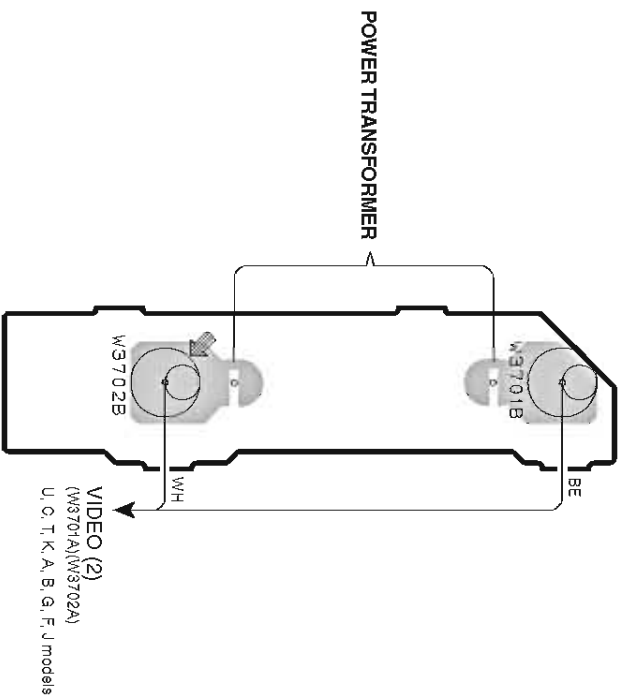




VIDEO (6) P.C.B. (Side A)

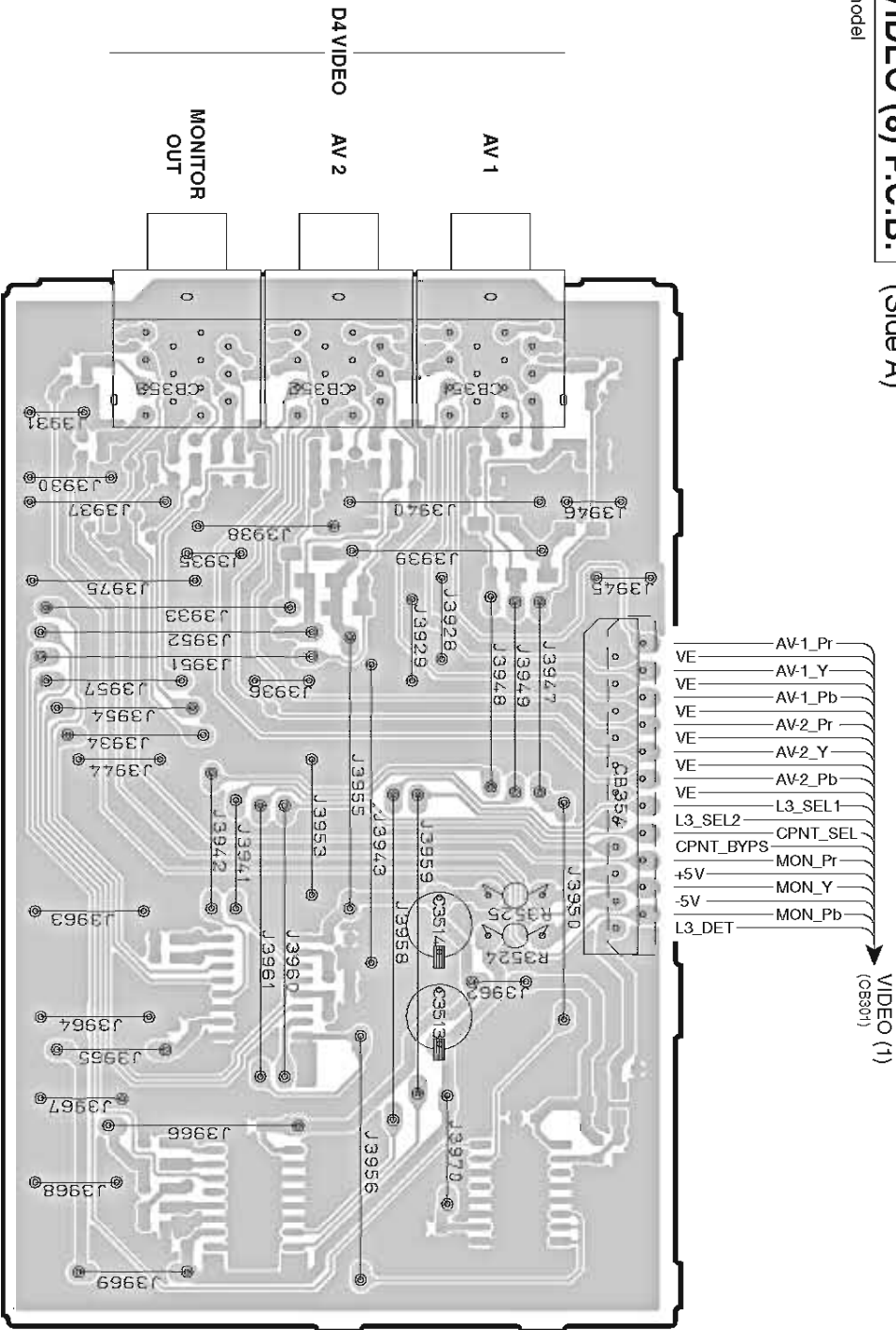


VIDEO (7) P.C.B. (Side A)



VIDEO (8) P.C.B. (Side A)

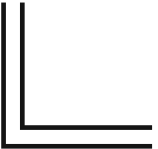
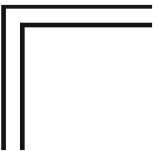
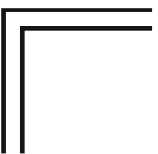
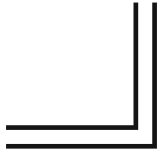
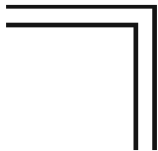
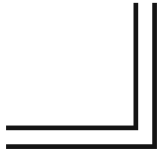
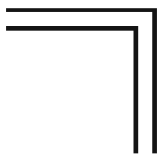
J model



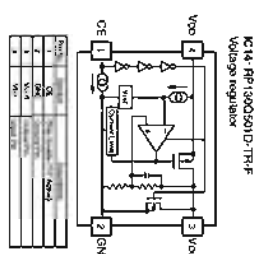
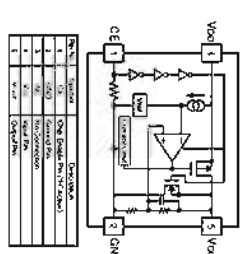
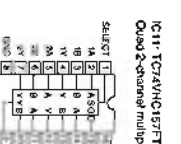
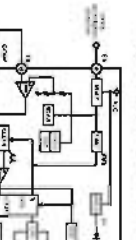
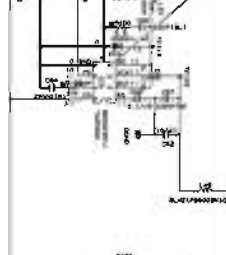
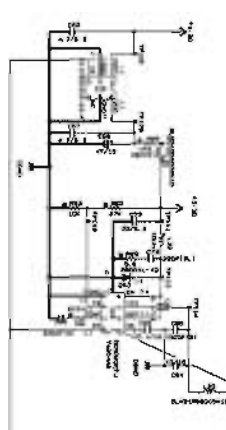
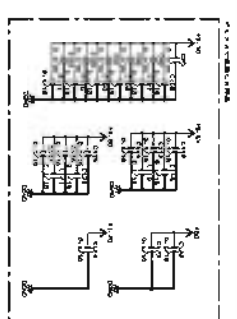
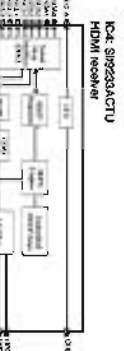
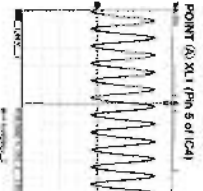
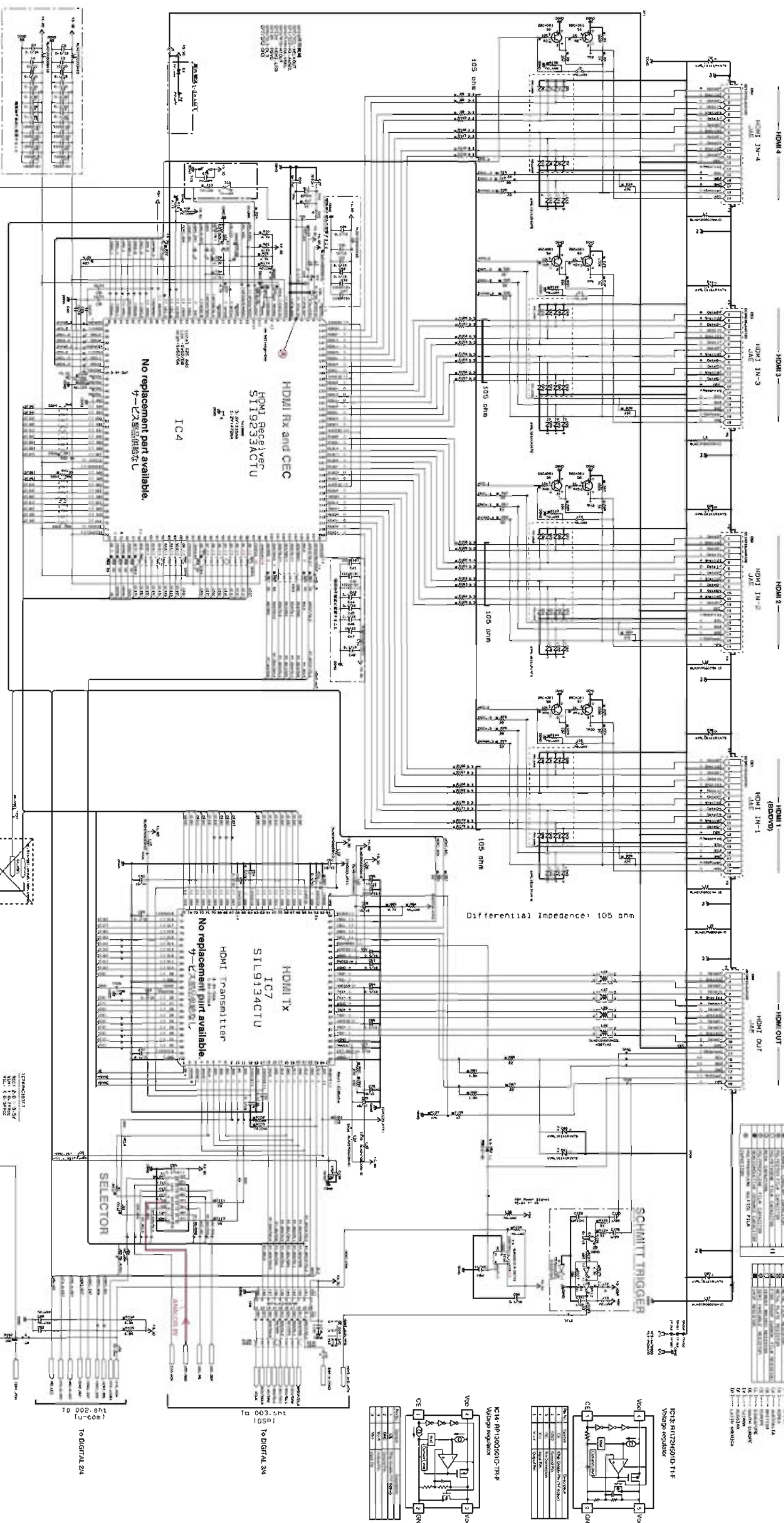


MEMO

MEMO



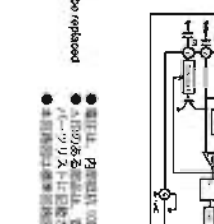
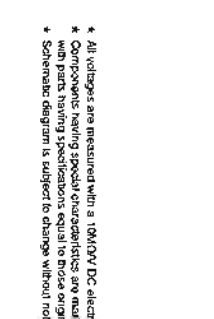
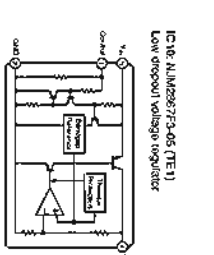
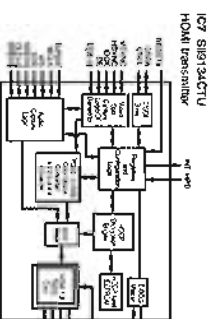
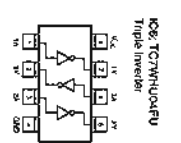
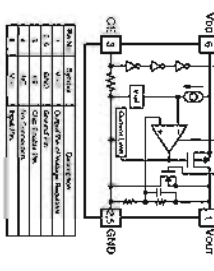
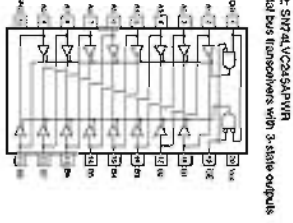
# ■ SCHEMATIC DIAGRAMS DIGITAL 1/4



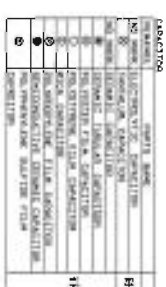
NOTICE (Rev.01)

| Item | Content                                        |
|------|------------------------------------------------|
| 1    | Check the component values and specifications. |
| 2    | Check the component values and specifications. |
| 3    | Check the component values and specifications. |
| 4    | Check the component values and specifications. |
| 5    | Check the component values and specifications. |
| 6    | Check the component values and specifications. |
| 7    | Check the component values and specifications. |
| 8    | Check the component values and specifications. |
| 9    | Check the component values and specifications. |
| 10   | Check the component values and specifications. |

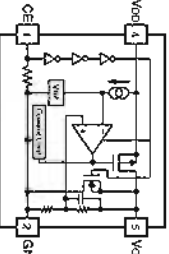
| Item | Content                                        |
|------|------------------------------------------------|
| 1    | Check the component values and specifications. |
| 2    | Check the component values and specifications. |
| 3    | Check the component values and specifications. |
| 4    | Check the component values and specifications. |
| 5    | Check the component values and specifications. |
| 6    | Check the component values and specifications. |
| 7    | Check the component values and specifications. |
| 8    | Check the component values and specifications. |
| 9    | Check the component values and specifications. |
| 10   | Check the component values and specifications. |







NOTICE: Involuntarily  
(J) ... JAPAN  
(U) ... U.S.A.  
(U) ... CANADA  
(U) ... FRANCE  
(U) ... GERMANY  
(U) ... ITALY  
(U) ... JAPAN  
(U) ... KOREA  
(U) ... L.A.  
(U) ... MEXICO  
(U) ... N.Y.  
(U) ... PARIS  
(U) ... ROME  
(U) ... SPAIN  
(U) ... SWITZERLAND  
(U) ... TAIPEI  
(U) ... TOKYO  
(U) ... WASHINGTON  
(U) ... YOKOHAMA

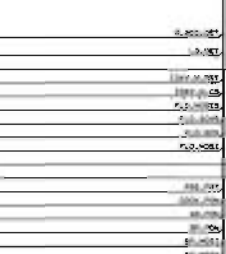


- \* All wirings are measured with a (KOH/DV DC electronic voltmeter.
- \* Components having special characteristics are marked  $\Delta$ , and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.

●電圧は、内部電源（IGN）の電圧に等しいものとす。

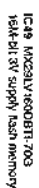
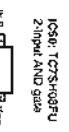
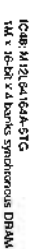
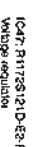
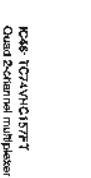
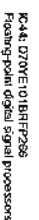
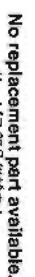
● $\Delta$ 印のある部品は、正常な動作を要する点と異なり、従来の交換が必要ないものとして、必ずしも同等品でなくても構いません。

●本図面は修正図版です。改訂のため予告なく変更する場合があります。





## DIGITAL 3/4

[illegible]

**NOTICE (model)**

{J} JAPAN  
{U} UNITED STATES OF AMERICA  
{C} CANADA  
{A} AFRICA  
{T} TAIWAN  
{K} KOREA  
{S} SOUTH AFRICA  
{B} BAHAMA ISLANDS  
{G} GERMANY  
{L} LUXEMBOURG  
{E} EUROPE  
{Y} YUGOSLAVIA  
{R} RUSSIAN REPUBLIC  
{P} LATIN AMERICA



Page 108 **E3**  
10 OPERATION (2)\_CB452Page 106 | G3 |  
10 OPERATION (2)\_CB455Page 106 13  
10 OPERATION (2)\_CBASE

**NOTICE: [open]**

(J) [open] [open]

(G) [open] U.S. A

(G) [open] CANADA

(G) [open] GERMANY

(T) [open] GERMANY

(G) [open] KOREA

(A) [open] AUSTRALIA

(G) [open] BRITAIN

(G) [open] GERMANY

(G) [open] SOUTH AFRICA

(T) [open] TAIWAN

(G) [open] RUSSIA

(G) [open] LATIN AMERICA

```
s1 ~ 19:002, str (u-com)
s20 ~ 54:003, str (DSP)
s35 ~ 69:004, str (AD-DA)
```

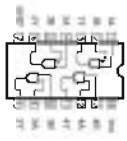
MC62 TC74VHC157T  
Quad 2-channel multiplexer

IC68J, NJM78M05DLTA (TE1)  
Voltage regulator

ICES: PCM1630DBQR  
Audio digital-to-analog converter

Model: PCM1803DBIA  
Stereo A/D converter

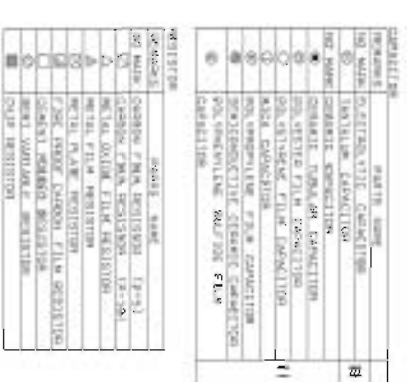
IC67: TC74VHC108AFT  
Quad 2-input AND gate



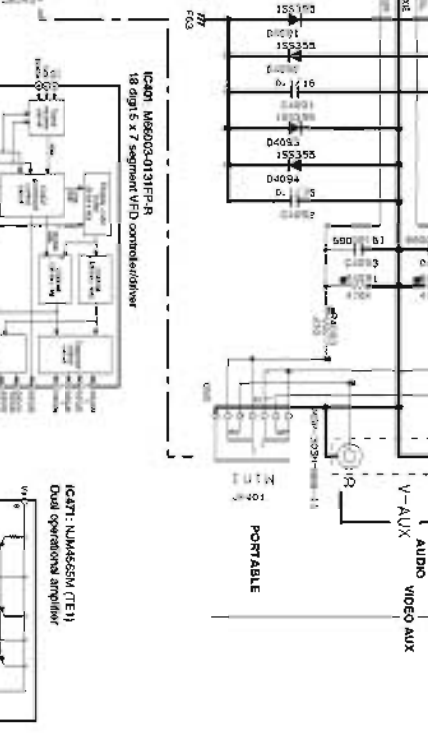
- \* All voltages are measured with a 10 M $\Omega$  V DC electronic voltmeter.
- \* Components having special characteristics are marked  $\Delta$ , and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.

- 電話は、お電話先1台のみの電話で済ましていただくのです。
- 商品の注文は、必ずお電話にてさせていただきます。商品の受取は、お集金票を、お集金票に添付していただくようお願いいたします。
- お集金票は、お集金票に添付していただくようお願いいたします。



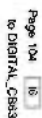
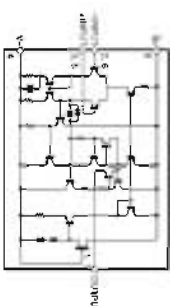


(P)..... LATIN AMERICA

Page 108 M6  
to OPERATION (2)\_CBA61

- \* All voltages are measured with a 10kΩ DC electronic voltmeter
- \* Components having a value of less than 100Ω are marked "r" and must be replaced with parts having spec. equal to those originally installed
- \* Schematic diagram is subject to change without notice.



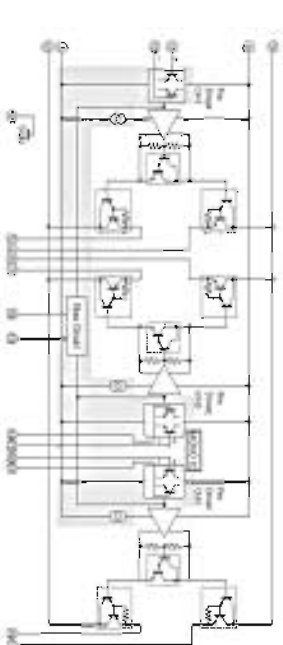
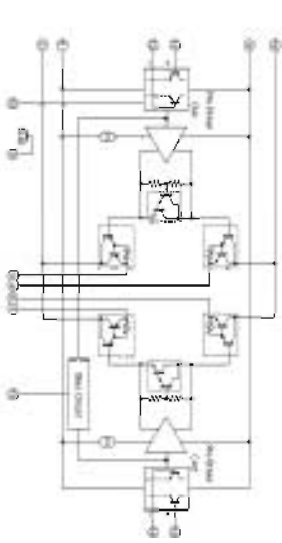
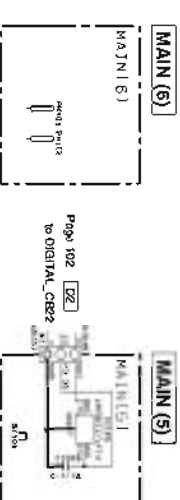
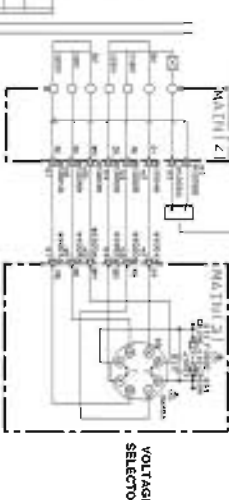
[illegible]Page 105 39  
10 OPERATION (1)\_CBA02

HC451-454 NUMA565M ITE1  
Dust operational amplifier

- 電話は、1600番以内の電話計で済ましたものです。
- 商品の売上高は、販売促進活動によって、商品の売上げが数倍に増え、パケット上の記載されている数量を超過して行く。
- 本誌の発行は、読者のためでなく、読者することになります。

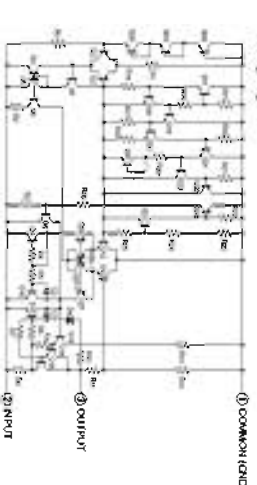
| Option Data (see Page 114) |        |          |          |            |             |          |        |          |          |
|----------------------------|--------|----------|----------|------------|-------------|----------|--------|----------|----------|
| Model                      | Option | Part No. | Quantity | Unit Price | Total Price | Remarks  | Option | Part No. | Quantity |
| 1                          | 1      | 1000000  | 1        | 1000000    | 1000000     | 1000000  | 1      | 1000000  | 1        |
| 2                          | 2      | 2000000  | 1        | 2000000    | 2000000     | 2000000  | 2      | 2000000  | 1        |
| 3                          | 3      | 3000000  | 1        | 3000000    | 3000000     | 3000000  | 3      | 3000000  | 1        |
| 4                          | 4      | 4000000  | 1        | 4000000    | 4000000     | 4000000  | 4      | 4000000  | 1        |
| 5                          | 5      | 5000000  | 1        | 5000000    | 5000000     | 5000000  | 5      | 5000000  | 1        |
| 6                          | 6      | 6000000  | 1        | 6000000    | 6000000     | 6000000  | 6      | 6000000  | 1        |
| 7                          | 7      | 7000000  | 1        | 7000000    | 7000000     | 7000000  | 7      | 7000000  | 1        |
| 8                          | 8      | 8000000  | 1        | 8000000    | 8000000     | 8000000  | 8      | 8000000  | 1        |
| 9                          | 9      | 9000000  | 1        | 9000000    | 9000000     | 9000000  | 9      | 9000000  | 1        |
| 10                         | 10     | 10000000 | 1        | 10000000   | 10000000    | 10000000 | 10     | 10000000 | 1        |

| NOTICE (Page 11) |    |          |   |          |          |          |    |          |   |
|------------------|----|----------|---|----------|----------|----------|----|----------|---|
| 1                | 1  | 1000000  | 1 | 1000000  | 1000000  | 1000000  | 1  | 1000000  | 1 |
| 2                | 2  | 2000000  | 1 | 2000000  | 2000000  | 2000000  | 2  | 2000000  | 1 |
| 3                | 3  | 3000000  | 1 | 3000000  | 3000000  | 3000000  | 3  | 3000000  | 1 |
| 4                | 4  | 4000000  | 1 | 4000000  | 4000000  | 4000000  | 4  | 4000000  | 1 |
| 5                | 5  | 5000000  | 1 | 5000000  | 5000000  | 5000000  | 5  | 5000000  | 1 |
| 6                | 6  | 6000000  | 1 | 6000000  | 6000000  | 6000000  | 6  | 6000000  | 1 |
| 7                | 7  | 7000000  | 1 | 7000000  | 7000000  | 7000000  | 7  | 7000000  | 1 |
| 8                | 8  | 8000000  | 1 | 8000000  | 8000000  | 8000000  | 8  | 8000000  | 1 |
| 9                | 9  | 9000000  | 1 | 9000000  | 9000000  | 9000000  | 9  | 9000000  | 1 |
| 10               | 10 | 10000000 | 1 | 10000000 | 10000000 | 10000000 | 10 | 10000000 | 1 |

IC100 STK402-200-E  
5-channel AF power amplifier, standby by circuit built-inIC101 STK402-130V-E  
2-channel AF power amplifier, standby by circuit built-inPage 111 [B7]  
to VIDEO (2), CR83/8MAIN (4) R.L. models  
MAIN (3) R.L. models

| VOLTAGE SELECTOR |         |         |         |
|------------------|---------|---------|---------|
| 230-240V         | 1-2-3-4 | 1-2-3-4 | 1-2-3-4 |
| 200V             | 5-6-7   | 5-6-7   | 5-6-7   |
| 110V             | 8-9-10  | 8-9-10  | 8-9-10  |
| 100V             | 11-12   | 11-12   | 11-12   |

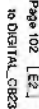
POWER TRANSFORMER



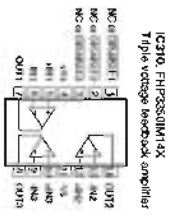
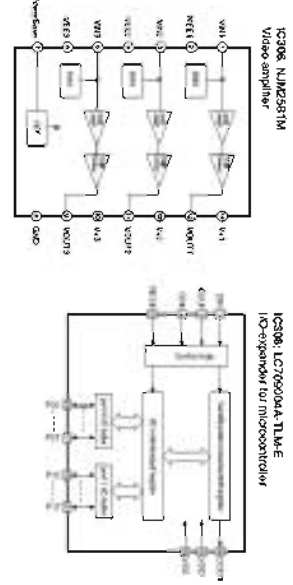
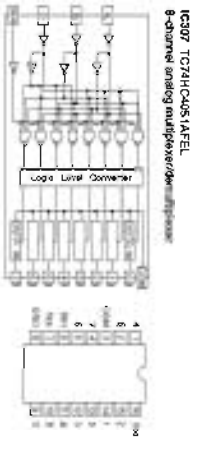
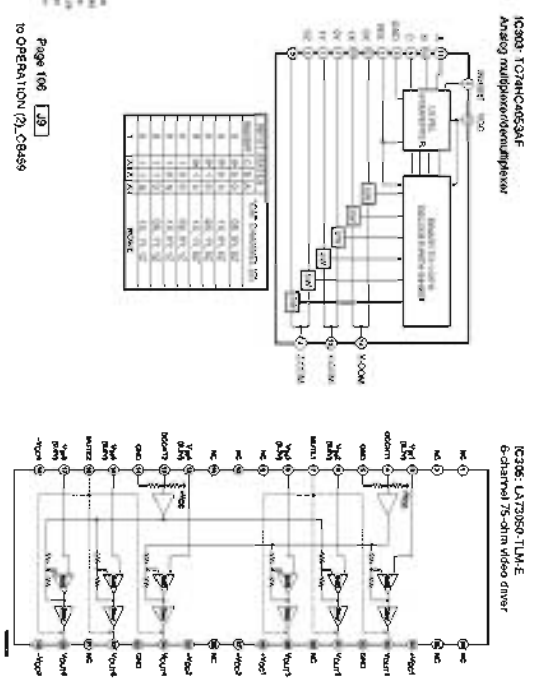
● All voltage are measured with a 1000V DC electronic voltmeter.  
● Components having values in parentheses are optional and must be replaced with parts having specifications equal to those originally installed.  
● Schematic diagram is subject to change without notice.

● 電圧は、1000V DC電子電圧計で測定した値を示す。  
● 括弧内に示した数値は、選別品を示す。必ず同等の仕様品で交換すること。  
● 本図は、仕様変更のため、無断で複製してはならない。





- 製品は、7000時間稼働の耐用年数で設計したものです。
- 4000時間稼働以上、動作性能が劣化を来していません。製品の交換が必要ない、パワーアップが容易なだけでなく修理も便利にしてください。
- 本製品は、標準価格です。お客様の求める内容なく変更することはありません。











## ■ REPLACEMENT PARTS LIST

### • ELECTRICAL COMPONENT PARTS

#### WARNING

- Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.
- $\Delta$ 印のある部分は、安全確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 部品価格ランクは、予告なく変更することがあります。

#### ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

|                |                                  |            |                               |
|----------------|----------------------------------|------------|-------------------------------|
| C.A.EL.CHP     | : CHIP ALUMI.ELECTROLYTIC CAP    | JUMPER.TST | : JUMPER,TEST POINT           |
| C.CE           | : CERAMIC CAP                    | L.DTCT     | : LIGHT DETECTING MODULE      |
| C.CE.ARRAY     | : CERAMIC CAP ARRAY              | LED.CHP    | : CHIP LED                    |
| C.CE.CHP       | : CHIP CERAMIC CAP               | LED.DSPLY  | : LED DISPLAY                 |
| C.CE.M.CHP     | : CHIP MULTILAYER CERAMIC CAP    | LED.INFRD  | : LED,INFRARED                |
| C.CE.SAFTY     | : RECOGNIZED CERAMIC CAP         | PHOT.CPL   | : PHOTO COUPLER               |
| C.CE.TUBLR     | : CERAMIC TUBULAR CAP            | PHOT.INTR  | : PHOTO INTERRUPTER           |
| C.CE.SMI       | : SEMI CONDUCTIVE CERAMIC CAP    | PHOT.RFLCT | : PHOTO REFLECTOR             |
| C.EL           | : ELECTROLYTIC CAP               | PHOT.TR    | : PHOTO TRANSISTOR            |
| C.EL.BP        | : BIPOLAR ELECTROLYTIC CAP       | PIN.TEST   | : PIN,TEST POINT              |
| C.EL.CHP       | : CHIP 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 POLYESTER FILM CAP  | R.CAR.FP   | : FLAME PROOF CARBON RESISTOR |
| C.MYLAR        | : MYLAR FILM CAP                 | R.CEMENT   | : CEMENT RESISTOR             |
| C.MYLAR.ML     | : MULTILAYER MYLAR FILM CAP      | R.FUS      | : FUSABLE RESISTOR            |
| C.NIOB.OXD     | : NIOBIUM OXIDE 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.PP           | : POLYPROPYLENE FILM CAP         | RSNR.CE    | : CERAMIC RESONATOR           |
| C.PP.CHP       | : CHIP PP FILM CAP               | RSNR.CRY   | : CRYSTAL RESONATOR           |
| C.TNTL         | : TANTALUM CAP                   | SCR.BND.HD | : BIND HEAD B-TIGHT SCREW     |
| C.TNTL.CHP     | : CHIP TANTALUM CAP              | SCR.TERM   | : SCREW TERMINAL              |
| C.TRIM         | : TRIMMER CAP                    | SCR.TR     | : SCREW,TRANSISTOR            |
| CN             | : CONNECTOR                      | SURG.PRTCT | : SURGE PROTECTOR             |
| CN.BS.PIN      | : CONNECTOR,BASE PIN             | SUPRT.PCB  | : P.C.B. SUPPORT              |
| CN.CANNON      | : CONNECTOR,CANNON               | SW.LEVER   | : LEVER SWITCH                |
| CN.DIN         | : CONNECTOR,DIN                  | SW.MICRO   | : MICRO SWITCH                |
| CN.FLAT        | : CONNECTOR,FLAT CABLE           | SW.LEAF    | : LEAF SWITCH                 |
| CN.FFC         | : CONNECTOR,FLEXIBLE FLAT CABLE  | SW.PUSH    | : PUSH SWITCH                 |
| CN.HDMI        | : HDMI CONNECTOR                 | SW.RT      | : ROTARY SWITCH               |
| CN.PHOTO.R     | : PHOTO FIBER SENSOR,RECEIVED    | SW.RT.ENC  | : ROTARY ENCODER              |
| CN.PHOTO.T     | : PHOTO FIBER SENSOR,TRANSMITTED | SW.RT.MTR  | : ROTARY SWITCH WITH MOTOR    |
| DIODE.ARRAY    | : DIODE ARRAY                    | SW.SLIDE   | : SLIDE SWITCH                |
| DIODE.BRG      | : DIODE BRIDGE                   | SW.TACT    | : TACT SWITCH                 |
| DIODE.CHP      | : CHIP DIODE                     | TERM.SP    | : SPEAKER TERMINAL            |
| DIODE.VAR      | : VARACTOR DIODE                 | TERM.WRAP  | : WRAPPING TERMINAL           |
| DIODE.ZENR     | : ZENER DIODE                    | THRMST.CHP | : CHIP THERMISTOR             |
| DIODE.Z.CHP    | : CHIP ZENER DIODE               | TR         | : TRANSISTOR                  |
| DIODE.SCHOTTKY | : SCHOTTKY BARRIER DIODE         | TR.CHP     | : CHIP TRANSISTOR             |
| DIODE.PHOT     | : PHOTO DIODE                    | TR.DGT     | : DIGITAL TRANSISTOR          |
| FER.BEAD       | : FERRITE BEADS                  | TR.DGT.CHP | : CHIP DIGITAL TRANSISTOR     |
| FER.CORE       | : FERRITE CORE                   | TR.PAIR    | : PAIR TRANSISTOR             |
| FET.CHP        | : CHIP FET                       | TRANS      | : TRANSFORMER                 |
| FL.DSPLY       | : FLUORESCENT DISPLAY            | TRANS.PULS | : PULSE TRANSFORMER           |
| FLTR.CE        | : CERAMIC FILTER                 | TRANS.PWR  | : POWER TRANSFORMER           |
| FLTR.COMB      | : COMB FILTER MODULE             | VOLT.SELCT | : VOLTAGE SELECTOR            |
| FLTR.LC.RF     | : LC FILTER,EMI                  | VR         | : ROTARY POTENTIOMETER        |
| FUSE.CHP       | : CHIP FUSE                      | VR.MTR     | : POTENTIOMETER WITH MOTOR    |
| GND.MTL        | : GROUND PLATE                   | VR.SLIDE   | : SLIDE POTENTIOMETER         |
| GND.TERM       | : GROUND TERMINAL                | VR.SW      | : POTENTIOMETER WITH SWITCH   |
| JUMPER.CN      | : JUMPER CONNECTOR               | VR.TRIM    | : TRIMMER POTENTIOMETER       |



## P.C.B. DIGITAL

| Ref No.    | Part No. | Description | Remarks      | Markets    | 部 品 名               | ランク |
|------------|----------|-------------|--------------|------------|---------------------|-----|
| * WU357000 | P. C. B. | DIGITAL     | V467         | JUCLKABGFL | P C B D I G I T A L |     |
| * WU357300 | P. C. B. | DIGITAL     | 4063         | UCTKGFL    | P C B D I G I T A L |     |
| * WU357100 | P. C. B. | DIGITAL     | V467         | R          | P C B D I G I T A L |     |
| * WU357400 | P. C. B. | DIGITAL     | 4063         | R          | P C B D I G I T A L |     |
| * CB1-4    | WU167400 | CN. HDMI    | HDMI 19P SE  |            | HDMIコネクター           |     |
| * CB6      | WU167400 | CN. HDMI    | HDMI 19P SE  |            | HDMIコネクター           |     |
| CB7        | LB918040 | CN. BS. PIN | 4P           |            | ベース付ポスト             | 01  |
| CB20       | VP082900 | CN. BS. PIN | 25P          |            | FFCコネクター            | 02  |
| CB22       | VK024700 | CN. BS. PIN | 3P           |            | ワイヤートラップ            | 01  |
| CB23       | VK025600 | CN. BS. PIN | 12P          |            | ワイヤートラップ            | 01  |
| CB24       | VF728300 | CN          | 6P           |            | コネクター               | 01  |
| CB25       | VQ045200 | CN. BS. PIN | 22P          |            | FFCコネクター            | 01  |
| CB27       | VQ047200 | CN. BS. PIN | 9P           |            | FFCコネクター            | 01  |
| CB61-63    | V9356900 | CN. JE      | 19P SE       |            | JEコネクタープラグ          |     |
| C1-2       | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C3-4       | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C5-14      | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C15-24     | US063100 | C. CE. CHP  | 1000pF 50V B |            | チップセラコン             | 01  |
| C25        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C27        | US060700 | C. CE. CHP  | 7pF 50V B    |            | チップセラコン             | 01  |
| C28        | US060500 | C. CE. CHP  | 5pF 50V B    |            | チップセラコン             | 01  |
| C29        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C30        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C31-32     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C33        | US063100 | C. CE. CHP  | 1000pF 50V B |            | チップセラコン             | 01  |
| C34        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C35        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C36        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C37        | US063100 | C. CE. CHP  | 1000pF 50V B |            | チップセラコン             | 01  |
| C38-40     | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C41-43     | US063100 | C. CE. CHP  | 1000pF 50V B |            | チップセラコン             | 01  |
| C44-46     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C47        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C48        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C50        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C51        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C53-54     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C55-56     | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C57        | US063100 | C. CE. CHP  | 1000pF 50V B |            | チップセラコン             | 01  |
| C58        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C59-61     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C62        | WG251600 | C. CE. CHP  | 4. 7uF 6. 3V |            | チップセラコン             | 01  |
| C64-66     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C67        | WG251600 | C. CE. CHP  | 4. 7uF 6. 3V |            | チップセラコン             | 01  |
| C69        | UF027470 | C. EL. CHP  | 47uF 10V     |            | チップケミコン             | 01  |
| C71-72     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C73-74     | WJ344400 | C. CE. CHP  | 22uF 6. 3V   |            | チップセラコン             | 01  |
| C75        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C76        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C77        | WD758300 | C. CE. CHP  | 10uF 10V     |            | チップセラコン             | 01  |
| C78        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C79-80     | US062220 | C. CE. CHP  | 220pF 50V B  |            | チップセラコン             | 01  |
| C81-82     | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |
| C83        | US063330 | C. CE. CHP  | 3300pF 50V B |            | チップセラコン             | 01  |
| C84        | US063470 | C. CE. CHP  | 4700pF 50V B |            | チップセラコン             | 01  |
| C85        | US063120 | C. CE. CHP  | 1200pF 50V B |            | チップセラコン             | 01  |
| C86        | US135100 | C. CE. CHP  | 0. 1uF 16V   |            | チップセラコン             | 01  |

\* New Parts \* 新規部品

## P.C.B. DIGITAL

| Ref No.  | Part No. | Description   | Remarks       | Markets | 部 品 名     | ランク |
|----------|----------|---------------|---------------|---------|-----------|-----|
| C87      | US063120 | C. CE. CHP    | 1200pF 50V B  |         | チップセラコン   | 01  |
| C88-90   | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C91-92   | WD758300 | C. CE. CHP    | 10uF 10V      |         | チップセラコン   | 01  |
| C93      | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C94      | WD758300 | C. CE. CHP    | 10uF 10V      |         | チップセラコン   | 01  |
| C95      | WG888300 | C. CE. M. CHP | 10uF 6.3V     |         | チップ積層セラコン | 01  |
| C96      | WD758300 | C. CE. CHP    | 10uF 10V      |         | チップセラコン   | 01  |
| C97-101  | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C102     | UR267470 | C. EL         | 47uF 50V      |         | ケミコン      | 01  |
| C103     | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C104     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C105     | WH772100 | C. EL         | 1000uF 10V    |         | ケミコン      | 04  |
| C106-124 | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C125     | US046100 | C. CE. CHP    | 1uF 25V       |         | チップセラコン   | 01  |
| C126     | US061220 | C. CE. CHP    | 22pF 50V B    |         | チップセラコン   | 01  |
| C136     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C137-138 | US062470 | C. CE. CHP    | 470pF 50V B   |         | チップセラコン   | 01  |
| C139     | US046100 | C. CE. CHP    | 1uF 25V       |         | チップセラコン   | 01  |
| C140     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C141     | US046100 | C. CE. CHP    | 1uF 25V       |         | チップセラコン   | 01  |
| C200     | UR837330 | C. EL         | 33uF 16V      |         | ケミコン      | 01  |
| C201     | US062100 | C. CE. CHP    | 100pF 50V B   |         | チップセラコン   | 01  |
| C202     | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C203     | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C204-205 | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C207-211 | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C212     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C214     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C215-216 | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C217     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C218-219 | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C220-225 | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C226     | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C228-229 | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C231     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C234-238 | US046100 | C. CE. CHP    | 1uF 25V       |         | チップセラコン   | 01  |
| C239-242 | US062100 | C. CE. CHP    | 100pF 50V B   |         | チップセラコン   | 01  |
| C243     | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C244-254 | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C402-403 | US064100 | C. CE. CHP    | 0.01uF 50V B  |         | チップセラコン   | 01  |
| C410     | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C411     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C412     | US035100 | C. CE. CHP    | 0.1uF 16V B   |         | チップセラコン   | 01  |
| C413-414 | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C415     | US044220 | C. CE. CHP    | 0.022uF 25V B |         | チップセラコン   | 01  |
| C416     | US062100 | C. CE. CHP    | 100pF 50V B   |         | チップセラコン   | 01  |
| C417     | US063100 | C. CE. CHP    | 1000pF 50V B  |         | チップセラコン   | 01  |
| C418     | US062220 | C. CE. CHP    | 220pF 50V B   |         | チップセラコン   | 01  |
| C419     | WG251600 | C. CE. CHP    | 4.7uF 6.3V    |         | チップセラコン   | 01  |
| C420     | US062220 | C. CE. CHP    | 220pF 50V B   |         | チップセラコン   | 01  |
| C421     | US046100 | C. CE. CHP    | 1uF 25V       |         | チップセラコン   | 01  |
| C422     | US062220 | C. CE. CHP    | 220pF 50V B   |         | チップセラコン   | 01  |
| C424-425 | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C426     | US062220 | C. CE. CHP    | 220pF 50V B   |         | チップセラコン   | 01  |
| C427     | US135100 | C. CE. CHP    | 0.1uF 16V     |         | チップセラコン   | 01  |
| C430     | UR067470 | C. EL         | 47uF 50V      |         | ケミコン      | 01  |
| C431     | US062100 | C. CE. CHP    | 100pF 50V B   |         | チップセラコン   | 01  |

\* New Parts \* 新規部品

## P.C.B. DIGITAL

| Ref No.  | Part No. | Description     | Remarks         | Markets | 部 品 名       | ランク |
|----------|----------|-----------------|-----------------|---------|-------------|-----|
| C432-433 | US062220 | C. CE. CHP      | 220pF 50V B     |         | チップセラコン     | 01  |
| C434-436 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C437-438 | US062100 | C. CE. CHP      | 100pF 50V B     |         | チップセラコン     | 01  |
| C439     | US061100 | C. CE. CHP      | 10pF 50V B      |         | チップセラコン     | 01  |
| C440     | US060800 | C. CE. CHP      | 8pF 50V B       |         | チップセラコン     | 01  |
| C441-442 | US062390 | C. CE. CHP      | 390pF 50V B     |         | チップセラコン     | 01  |
| C445-446 | UR837100 | C. EL           | 10uF 16V        |         | ケミコン        | 01  |
| C447-448 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C449-450 | UR237470 | C. EL           | 47uF 16V        |         | ケミコン        | 01  |
| C451     | US062100 | C. CE. CHP      | 100pF 50V B     |         | チップセラコン     | 01  |
| C452     | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C453     | US126100 | C. CE. CHP      | 1uF 10V         |         | チップセラコン     | 01  |
| C454-472 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C473     | US062680 | C. CE. CHP      | 680pF 50V B     |         | チップセラコン     | 01  |
| C474-476 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C477     | WG251600 | C. CE. CHP      | 4. 7uF 6. 3V    |         | チップセラコン     | 01  |
| C478-484 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C485     | WG251600 | C. CE. CHP      | 4. 7uF 6. 3V    |         | チップセラコン     | 01  |
| C486     | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C488-489 | UR267220 | C. EL           | 22uF 50V        |         | ケミコン        | 01  |
| C491-493 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C494-496 | US063100 | C. CE. CHP      | 1000pF 50V B    |         | チップセラコン     | 01  |
| C497-498 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C499-502 | US063100 | C. CE. CHP      | 1000pF 50V B    |         | チップセラコン     | 01  |
| C503-519 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C600     | UR237100 | C. EL           | 10uF 16V        |         | ケミコン        |     |
| C601-603 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C604-605 | US064100 | C. CE. CHP      | 0. 01uF 50V B   |         | チップセラコン     | 01  |
| C606     | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C608-609 | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C610     | US126100 | C. CE. CHP      | 1uF 10V         |         | チップセラコン     | 01  |
| C611     | US062100 | C. CE. CHP      | 100pF 50V B     |         | チップセラコン     | 01  |
| C612     | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C613-614 | US126100 | C. CE. CHP      | 1uF 10V         |         | チップセラコン     | 01  |
| C619     | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C620     | UR067470 | C. EL           | 47uF 50V        |         | ケミコン        | 01  |
| C622     | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C623     | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C624     | UR237330 | C. EL           | 33uF 16V        |         | ケミコン        |     |
| C625     | US135100 | C. CE. CHP      | 0. 1uF 16V      |         | チップセラコン     | 01  |
| C626     | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C627-628 | WJ603600 | C. MYLAR        | 820pF 50V J     |         | マイラーコン      | 01  |
| C633-634 | UR067100 | C. EL           | 10uF 50V        |         | ケミコン        | 01  |
| C635-642 | US062100 | C. CE. CHP      | 100pF 50V B     |         | チップセラコン     | 01  |
| D2       | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D11-14   | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D23-26   | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D35-38   | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D47-49   | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D60-61   | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D62      | VV220700 | DIODE. SCHOTTKY | RB501V-40       |         | ショットキーダイオード | 01  |
| D63-64   | V6267600 | DIODE           | RB051L-40       |         | ダイオード       | 01  |
| D65      | WE674800 | DIODE           | AVRL161A1R1NTB  |         | チップバリスタ     | 01  |
| D200-204 | VU171400 | DIODE. ZENR     | UDZS3. 3B 3. 3V |         | ツェナーダイオード   |     |
| D403-404 | VT332900 | DIODE           | 1SS355          |         | ダイオード       | 01  |
| D600     | VT332900 | DIODE           | 1SS355          |         | ダイオード       | 01  |
| D602-603 | VT332900 | DIODE           | 1SS355          |         | ダイオード       | 01  |

\* New Parts \* 新規部品

## P.C.B. DIGITAL and P.C.B. OPERATION

| Ref No.  | Part No. | Description | Remarks              | Markets   | 部 品 名         | ランク |
|----------|----------|-------------|----------------------|-----------|---------------|-----|
| IC2      | XZ287A00 | IC          | SN74LVC245APWR       |           | ロジック I C      | 02  |
| IC5      | X7195A00 | IC          | R1172S121D-E2-F      |           | 電源 I C        | 04  |
| IC6      | X4063A00 | IC          | TC7WHU04FU           |           | ロジック I C      |     |
| IC10     | X7741A00 | IC          | NJM2867F3-05 (TE1)   |           | 電源 I C        | 02  |
| IC11     | X0199B00 | IC          | TC74VHC157FT (EL, K) |           | ロジック I C      | 01  |
| IC13     | YA255A00 | IC          | R1172H501D-T1-F      |           | 電源 I C        | 03  |
| * IC14   | YC289A00 | IC          | RP130Q501D-TR        |           | 電源 I C        |     |
| * IC20   | YC590A00 | IC. CPU     | R5F64166DFD CPU      | boot only | CPU/周辺 I C    |     |
| IC21     | X8194A00 | IC          | R1172H331D-T1-F      |           | 電源 I C        | 03  |
| IC22     | YA398A00 | IC. MEMORY  | LE25LA322M-TLM-E     |           | メモリ I C       | 03  |
| IC41     | YA399A00 | IC          | LC89058WD-E          |           | I C           | 07  |
| IC43     | X7378A00 | IC          | NJM4565M (TE1)       |           | アンプ I C       | 01  |
| IC46     | X0199B00 | IC          | TC74VHC157FT (EL, K) |           | ロジック I C      | 01  |
| IC47     | X7195A00 | IC          | R1172S121D-E2-F      |           | 電源 I C        | 04  |
| IC48     | X9625A00 | IC          | M12L64164A-5TG       |           | メモリ I C 64M   | 07  |
| * IC49   | YC538A00 | IC. MEMORY  | MX29LV160DBT1-70G    | written   | メモリ I C       |     |
| IC50     | XR680A00 | IC          | TC7SH08FU (TE85L, JF |           | ロジック I C      | 01  |
| IC62     | X0199B00 | IC          | TC74VHC157FT (EL, K) |           | ロジック I C      | 01  |
| IC63     | XS534A00 | IC          | NJM78M05DL1A         |           | 電源 I C        | 02  |
| IC65     | X7355A00 | IC          | PCM1680DBQR          |           | I C           | 07  |
| IC66     | X7357A00 | IC          | PCM1803DBR           |           | I C           | 04  |
| IC67     | X3586B00 | IC          | TC74VHCT08AFT EL, K  |           | ロジック I C      | 01  |
| Q1-8     | VQ986700 | TR          | 2SC4081 T106         |           | トランジスタ        | 01  |
| Q200     | WQ381000 | FET         | MCH6336-TL-E         |           | MOS FET       | 01  |
| Q201-202 | VV655300 | TR. DGT     | DTA144EKA            |           | デジタルトランジスタ    | 01  |
| Q205-209 | VR936300 | TR          | 2SA1576A T106        |           | トランジスタ        | 01  |
| Q210     | VR936300 | TR          | 2SA1576A T106        |           | トランジスタ        | 01  |
| Q400     | WQ381000 | FET         | MCH6336-TL-E         |           | MOS FET       | 01  |
| Q401     | VV655300 | TR. DGT     | DTA144EKA            |           | デジタルトランジスタ    | 01  |
| Q402     | WQ381000 | FET         | MCH6336-TL-E         |           | MOS FET       | 01  |
| Q403     | VV655000 | TR. DGT     | DTA114EKA            |           | デジタルトランジスタ    | 01  |
| Q404     | VV655300 | TR. DGT     | DTA144EKA            |           | デジタルトランジスタ    | 01  |
| Q421     | VV655300 | TR. DGT     | DTA144EKA            |           | デジタルトランジスタ    | 01  |
| Q422     | VV655700 | TR. DGT     | DTC144EKA            |           | デジタルトランジスタ    | 01  |
| R88      | V8070100 | R. MTL. FLM | 2.2Ω 1W              |           | 金属被膜抵抗        | 01  |
| R201     | RD350000 | R. CHP      | 0Ω 1/16W             | V467      | チップ抵抗         | 01  |
| R201     | RD356100 | R. CHP      | 1KΩ 1/16W            | 4063      | チップ抵抗         | 01  |
| R466-467 | HV753220 | R. CAR. FP  | 2.2Ω 1/4W            |           | 不燃化カーボン抵抗     | 01  |
| R601     | V8070100 | R. MTL. FLM | 2.2Ω 1W              |           | 金属被膜抵抗        | 01  |
| R607     | HV753220 | R. CAR. FP  | 2.2Ω 1/4W            |           | 不燃化カーボン抵抗     | 01  |
| ST1-2    | V4040500 | SCR. TERM   | M3                   |           | スクリュー/ターミナル   | 01  |
| XL1      | WR725300 | RSNR. CRYST | 27MHz SMD-49         |           | 水晶振動子         | 03  |
| XL20     | WA782500 | RSNR. CE    | 8.000MHz             |           | セラミック振動子      | 01  |
| XL42     | V3625700 | RSNR. CRYST | 24.576MHz            |           | 水晶振動子         | 03  |
| *        | WU346900 | P. C. B.    | OPERATION            |           | PCB OPERATION |     |
| CB401    | VQ045400 | CN. BS. PIN | 25P                  |           | FFCコネクタ       | 03  |
| CB402    | VQ047200 | CN. BS. PIN | 9P                   |           | FFCコネクタ       | 01  |
| CB451    | VQ961100 | CN. BS. PIN | 8P                   |           | ハウジング         | 01  |
| CB452    | V9357000 | CN          | 19P TE               |           | JEコネクタ        |     |
| CB454    | VQ962100 | CN. BS. PIN | 18P                  |           | ハウジング         | 03  |
| CB455    | V9357000 | CN          | 19P TE               |           | JEコネクタ        |     |
| CB456    | VQ961800 | CN. BS. PIN | 15P                  |           | ハウジング         | 01  |
| CB457    | VQ961400 | CN. BS. PIN | 11P                  |           | ハウジング         | 03  |
| CB458    | V9357000 | CN          | 19P TE               |           | JEコネクタ        |     |

\* New Parts \* 新規部品

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| Ref No.    | Part No. | Description | Remarks        | Markets | 部 品 名      | ランク |
|------------|----------|-------------|----------------|---------|------------|-----|
| CB459      | VQ963300 | CN. BS. PIN | 12P            |         | ウエハー       | 01  |
| CB460      | VQ963100 | CN. BS. PIN | 10P            |         | ウエハー       | 01  |
| CB461      | VQ044400 | CN. BS. PIN | 9P             |         | F F Cコネクター | 01  |
| CB472      | VB858300 | CN. BS. PIN | 4P             |         | コネクタベースポスト | 01  |
| CB473      | VK026900 | CN          | 10P            |         | ワイヤートラップ   | 01  |
| C4002      | US065100 | C. CE. CHP  | 0. 1uF 50V B   |         | チップセラコン    | 01  |
| C4012-4013 | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4015      | UR268220 | C. EL       | 220uF 50V      |         | ケミコン       | 01  |
| C4016      | UM388330 | C. EL       | 330uF 6. 3V    |         | ケミコン       | 01  |
| C4017      | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4018      | US061680 | C. CE. CHP  | 68pF 50V B     |         | チップセラコン    | 01  |
| C4019      | US065100 | C. CE. CHP  | 0. 1uF 50V B   |         | チップセラコン    | 01  |
| C4020-4021 | US163100 | C. CE. CHP  | 1000pF 50V     |         | チップセラコン    | 01  |
| C4022      | US064100 | C. CE. CHP  | 0. 01uF 50V B  |         | チップセラコン    | 01  |
| C4023-4024 | US063100 | C. CE. CHP  | 1000pF 50V B   |         | チップセラコン    | 01  |
| C4025-4026 | US065100 | C. CE. CHP  | 0. 1uF 50V B   |         | チップセラコン    | 01  |
| C4027      | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4028      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4030      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4031      | US062470 | C. CE. CHP  | 470pF 50V B    |         | チップセラコン    | 01  |
| C4032-4033 | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4034      | UM417100 | C. EL       | 10uF 50V       |         | ケミコン       | 01  |
| C4035      | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4037      | US064100 | C. CE. CHP  | 0. 01uF 50V B  |         | チップセラコン    | 01  |
| C4039      | US062220 | C. CE. CHP  | 220pF 50V B    |         | チップセラコン    | 01  |
| C4091-4092 | US135100 | C. CE. CHP  | 0. 1uF 16V     |         | チップセラコン    | 01  |
| C4093-4094 | US063680 | C. CE. CHP  | 6800pF 50V B   |         | チップセラコン    | 01  |
| C4212      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4213      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4214      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4215      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4217      | UR067470 | C. EL       | 47uF 50V       |         | ケミコン       | 01  |
| C4219      | UR067470 | C. EL       | 47uF 50V       |         | ケミコン       | 01  |
| C4220      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4221      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4222      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4223-4224 | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4225      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4226      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4227      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4230      | WJ605800 | C. MYLAR    | 0. 047uF 50V J |         | マイラーコン     | 01  |
| C4231-4232 | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| * C4233    | WJ604700 | C. MYLAR    | 6800pF 50V     |         | マイラーコン     |     |
| C4234      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4235      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4236      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4237      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4240      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4241      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4242      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4243-4244 | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C4245      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |
| C4246      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4247      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4250      | WJ603500 | C. MYLAR    | 680pF 50V      |         | マイラーコン     | 01  |
| C4251      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C4252      | UR267100 | C. EL       | 10uF 50V       |         | ケミコン       |     |

\* New Parts \* 新規部品

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| Ref No.      | Part No. | Description | Remarks            | Markets | 部 品 名       | ランク |
|--------------|----------|-------------|--------------------|---------|-------------|-----|
| C4253        | US062100 | C. CE. CHP  | 100pF 50V B        |         | チップセラコン     | 01  |
| C4254-4255   | UR267470 | C. EL       | 47uF 50V           |         | ケミコン        | 01  |
| C4401-4402   | US063100 | C. CE. CHP  | 1000pF 50V B       |         | チップセラコン     | 01  |
| * C4411-4412 | WJ604300 | C. MYLAR    | 3300pF 50V         |         | マイラーコン      |     |
| C4413        | US064100 | C. CE. CHP  | 0.01uF 50V B       |         | チップセラコン     | 01  |
| C4414        | US063100 | C. CE. CHP  | 1000pF 50V B       |         | チップセラコン     | 01  |
| C4421        | US063100 | C. CE. CHP  | 1000pF 50V B       |         | チップセラコン     | 01  |
| C4422        | UM397100 | C. EL       | 10uF 16V           |         | ケミコン        | 01  |
| C4423        | UM397220 | C. EL       | 22uF 25V           |         | ケミコン        | 01  |
| C4424        | US064100 | C. CE. CHP  | 0.01uF 50V B       |         | チップセラコン     | 01  |
| C4425        | US062100 | C. CE. CHP  | 100pF 50V B        |         | チップセラコン     | 01  |
| C4426        | UM397470 | C. EL       | 47uF 16V           |         | ケミコン        | 01  |
| C4427        | US061330 | C. CE. CHP  | 33pF 50V B         |         | チップセラコン     | 01  |
| C4428        | UM397100 | C. EL       | 10uF 16V           |         | ケミコン        | 01  |
| C4430        | UM397220 | C. EL       | 22uF 25V           |         | ケミコン        | 01  |
| C4432        | UM397220 | C. EL       | 22uF 25V           |         | ケミコン        | 01  |
| D4006-4007   | WS693300 | DIODE. ZENR | HZU4. 3B3 TRF-E    |         | ツェナーダイオード   | 01  |
| D4010        | VT332900 | DIODE       | 1SS355             |         | ダイオード       | 01  |
| D4012        | VT332900 | DIODE       | 1SS355             |         | ダイオード       | 01  |
| D4091-4094   | VT332900 | DIODE       | 1SS355             |         | ダイオード       | 01  |
| D4411-4412   | VT332900 | DIODE       | 1SS355             |         | ダイオード       | 01  |
| D4421-4422   | VT332900 | DIODE       | 1SS355             |         | ダイオード       | 01  |
| D4423        | VU171900 | DIODE. ZENR | UDZS5. 1B 5.1V     |         | ツェナーダイオード   | 01  |
| D4424        | WR095700 | LED         | 8224-10SDRD/S530A3 |         | LED         | 01  |
| IC401        | X6386A00 | IC          | M66003-0131FP      |         | IC          | 07  |
| IC451-454    | X7378A00 | IC          | NJM4565M(TE1)      |         | アンプ IC      | 01  |
| IC471        | X7378A00 | IC          | NJM4565M(TE1)      |         | アンプ IC      | 01  |
| JK401        | WJ117400 | JACK. MNI   | OPTIMIZER MIC      |         | ミニジャック      | 02  |
| JK471        | V9408200 | JACK. PHONE | MSJ-064-05B GR     |         | ホーンジャック     | 03  |
| JK472        | WJ117300 | JACK. PHONE | PHONES             |         | ヘッドホンジャック   | 02  |
| PJ401        | WJ117500 | JACK. PIN   | 3P                 |         | ピンジャック      | 03  |
| Q4001-4003   | WC529400 | TR          | KTC3875S Y GR RTK  |         | トランジスタ      | 01  |
| Q4006-4009   | WC529400 | TR          | KTC3875S Y GR RTK  |         | トランジスタ      | 01  |
| Q4012        | WC529400 | TR          | KTC3875S Y GR RTK  |         | トランジスタ      | 01  |
| Q4402        | WC529400 | TR          | KTC3875S Y GR RTK  |         | トランジスタ      | 01  |
| R4066-4067   | HV755120 | R. CAR. FP  | 120Ω 1/4W          |         | 不燃化カーボン抵抗   | 01  |
| R4208-4209   | HV753220 | R. CAR. FP  | 2.2Ω 1/4W          |         | 不燃化カーボン抵抗   | 01  |
| R4413-4414   | V8071300 | R. MTL. FLM | 470Ω 1W            |         | 金属被膜抵抗      |     |
| ST451        | V4040500 | SCR. TERM   | M3                 |         | スクリューノターミナル | 01  |
| ST471        | WA246200 | SCR. TERM   | 3.5                |         | スクリューターミナル  |     |
| SW401-404    | WD483100 | SW. TACT    | SKRGAAD010         |         | タクト SW      | 01  |
| SW407-409    | WD483100 | SW. TACT    | SKRGAAD010         |         | タクト SW      | 01  |
| SW411-421    | WD483100 | SW. TACT    | SKRGAAD010         |         | タクト SW      | 01  |
| SW471        | V9597100 | SW. RT. ENC | EC12E2460802       |         | ロータリーエンコーダ  | 04  |
| SW472-473    | WD483100 | SW. TACT    | SKRGAAD010         |         | タクト SW      | 01  |
| U4001        | WQ600700 | L. DTCT     | SM3385VMH6         |         | リモコン受光ユニット  | 03  |
| V4001        | WQ842100 | FL. DSPLY   | 18-MT-09GNK        |         | 蛍光表示管       | 08  |
|              | V6007100 | SPACER. FL  | 4.6/10/32          |         | スペーサ FL     |     |
| * * * *      | WU343800 | P. C. B.    | MAIN               | JBGF    | PCB MAIN    |     |
|              | WU343900 | P. C. B.    | MAIN               | UCTKA   | PCB MAIN    |     |
|              | WU344000 | P. C. B.    | MAIN               | R       | PCB MAIN    |     |
|              | WU344100 | P. C. B.    | MAIN               | L       | PCB MAIN    |     |
| CB152        | VQ962900 | CN. BS. PIN | 8P                 |         | ウエハー        | 01  |
| CB153        | VQ963900 | CN. BS. PIN | 18P                |         | ウエハー        | 03  |

\* New Parts \* 新規部品



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| Ref No.      | Part No. | Description | Remarks            | Markets | 部 品 名    | ランク |
|--------------|----------|-------------|--------------------|---------|----------|-----|
| CB154        | VQ963600 | CN. BS. PIN | 15P                |         | ウエハー     | 01  |
| CB155        | VQ963200 | CN. BS. PIN | 11P                |         | ウエハー     | 03  |
| CB158-159    | WN077700 | CLIP. FUSE  | CLIP PFC5000-0202F | R       | ヒューズクリップ |     |
| C1001-1003   | UR267100 | C. EL       | 10uF 50V           |         | ケミコン     |     |
| C1005-1006   | UR267100 | C. EL       | 10uF 50V           |         | ケミコン     |     |
| C1007        | WN165300 | C. PP       | 0.01uF 100V        |         | PPコン     | 01  |
| C1008        | WJ603300 | C. MYLAR    | 470pF 50V J        |         | マイラーコン   | 01  |
| C1009        | UR277100 | C. EL       | 10uF 63V           |         | ケミコン     | 01  |
| C1011        | UR297100 | C. EL       | 10uF 100V          |         | ケミコン     |     |
| C1012        | WJ603300 | C. MYLAR    | 470pF 50V J        |         | マイラーコン   | 01  |
| C1014        | UR297100 | C. EL       | 10uF 100V          |         | ケミコン     |     |
| C1016        | UR277100 | C. EL       | 10uF 63V           |         | ケミコン     | 01  |
| C1017-1018   | UR297100 | C. EL       | 10uF 100V          |         | ケミコン     |     |
| C1020-1022   | WJ603300 | C. MYLAR    | 470pF 50V J        |         | マイラーコン   | 01  |
| C1023        | WJ602900 | C. MYLAR    | 100pF 50V K        |         | マイラーコン   | 01  |
| C1024        | UR067330 | C. EL       | 33uF 50V           |         | ケミコン     | 01  |
| C1025        | WJ602900 | C. MYLAR    | 100pF 50V K        |         | マイラーコン   | 01  |
| C1026        | UR067330 | C. EL       | 33uF 50V           |         | ケミコン     | 01  |
| C1028        | UR067330 | C. EL       | 33uF 50V           |         | ケミコン     | 01  |
| C1030        | WJ602900 | C. MYLAR    | 100pF 50V K        |         | マイラーコン   | 01  |
| C1031        | UR067330 | C. EL       | 33uF 50V           |         | ケミコン     | 01  |
| C1032        | WJ602900 | C. MYLAR    | 100pF 50V K        |         | マイラーコン   | 01  |
| C1035        | UR297100 | C. EL       | 10uF 100V          |         | ケミコン     |     |
| C1036        | FG650500 | C. CE       | 5pF 50V            |         | セラコン     | 01  |
| C1037        | WJ602900 | C. MYLAR    | 100pF 50V K        |         | マイラーコン   | 01  |
| C1038        | UR067330 | C. EL       | 33uF 50V           |         | ケミコン     | 01  |
| C1039        | UR866100 | C. EL       | 1uF 50V            |         | ケミコン     | 01  |
| C1040        | FG650500 | C. CE       | 5pF 50V            |         | セラコン     | 01  |
| C1042        | FG650500 | C. CE       | 5pF 50V            |         | セラコン     | 01  |
| C1044-1045   | FG650500 | C. CE       | 5pF 50V            |         | セラコン     | 01  |
| * C1046-1048 | WP421000 | C. PP       | 0.047uF 100V       |         | PPコン     |     |
| * C1051-1052 | WP421000 | C. PP       | 0.047uF 100V       |         | PPコン     |     |
| C1053        | UR866470 | C. EL       | 4.7uF 50V          |         | ケミコン     | 01  |
| C1054        | UR838100 | C. EL       | 100uF 16V          |         | ケミコン     | 01  |
| △ C1055      | WN331300 | C. EL       | 6800uF 71V         | JBGF    | ケミコン     | 07  |
| △ C1055      | WE514200 | C. EL       | 6800uF 63V         | UCRTKAL | ケミコン     |     |
| △ C1056      | WN331300 | C. EL       | 6800uF 71V         | JBGF    | ケミコン     | 07  |
| △ C1056      | WE514200 | C. EL       | 6800uF 63V         | UCRTKAL | ケミコン     |     |
| C1057-1058   | WK041800 | C. EL       | 10uF 16V           |         | ケミコン     | 01  |
| C1059-1060   | UR266100 | C. EL       | 1uF 50V            |         | ケミコン     | 01  |
| C1062        | UR048470 | C. EL       | 470uF 25V          |         | ケミコン     |     |
| C1063-1064   | WJ611400 | C. MYLAR    | 0.1uF 100V J       |         | マイラーコン   | 01  |
| C1065        | UR049330 | C. EL       | 3300uF 25V         |         | ケミコン     | 03  |
| C1066        | UR049100 | C. EL       | 1000uF 25V         |         | ケミコン     | 01  |
| C1067-1068   | WN165500 | C. PP       | 0.022uF 100V       |         | PPコン     | 01  |
| C1069        | US135100 | C. CE. CHP  | 0.1uF 16V          |         | チップセラコン  | 01  |
| C1509        | UR267470 | C. EL       | 47uF 50V           |         | ケミコン     | 01  |
| C1510-1512   | US135100 | C. CE. CHP  | 0.1uF 16V          |         | チップセラコン  | 01  |
| C1513-1514   | US061220 | C. CE. CHP  | 22pF 50V B         |         | チップセラコン  | 01  |
| C1515-1516   | US135100 | C. CE. CHP  | 0.1uF 16V          |         | チップセラコン  | 01  |
| C1517-1520   | US062220 | C. CE. CHP  | 220pF 50V B        |         | チップセラコン  | 01  |
| C1521        | UR837100 | C. EL       | 10uF 16V           |         | ケミコン     | 01  |
| C1522        | US061470 | C. CE. CHP  | 47pF 50V B         |         | チップセラコン  | 01  |
| C1523        | UR838100 | C. EL       | 100uF 16V          |         | ケミコン     | 01  |
| C1524        | US061470 | C. CE. CHP  | 47pF 50V B         |         | チップセラコン  | 01  |
| C1525        | UR837100 | C. EL       | 10uF 16V           |         | ケミコン     | 01  |
| C1526-1527   | UR838100 | C. EL       | 100uF 16V          |         | ケミコン     | 01  |

\* New Parts \* 新規部品

## P.C.B. MAIN

| Ref No.    | Part No. | Description | Remarks            | Markets | 部 品 名     | ランク |
|------------|----------|-------------|--------------------|---------|-----------|-----|
| C1528-1529 | US062220 | C. CE. CHP  | 220pF 50V B        |         | チップセラコン   | 01  |
| C1530      | UR838100 | C. EL       | 100uF 16V          |         | ケミコン      | 01  |
| C1531      | UR837330 | C. EL       | 33uF 16V           |         | ケミコン      | 01  |
| C1532-1533 | UR238100 | C. EL       | 100uF 16V          |         | ケミコン      |     |
| C1534-1535 | US062220 | C. CE. CHP  | 220pF 50V B        |         | チップセラコン   | 01  |
| C1536      | UR238100 | C. EL       | 100uF 16V          |         | ケミコン      |     |
| * C1537    | WJ605600 | C. MYLAR    | 0.033uF 50V        |         | マイラーコン    |     |
| C1538      | VR169000 | C. MYLAR    | 0.33uF 50V         |         | マイラーコン    | 01  |
| C1539      | WJ604800 | C. MYLAR    | 8200pF 50V         |         | マイラーコン    | 01  |
| * C1540    | WJ605600 | C. MYLAR    | 0.033uF 50V        |         | マイラーコン    |     |
| C1541      | VR169000 | C. MYLAR    | 0.33uF 50V         |         | マイラーコン    | 01  |
| C1542      | US135100 | C. CE. CHP  | 0.1uF 16V          |         | チップセラコン   | 01  |
| C1543      | WJ604800 | C. MYLAR    | 8200pF 50V         |         | マイラーコン    | 01  |
| C1545      | US135100 | C. CE. CHP  | 0.1uF 16V          |         | チップセラコン   | 01  |
| C1553-1554 | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1556      | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1558-1559 | UR267470 | C. EL       | 47uF 50V           |         | ケミコン      | 01  |
| C1568      | VR169200 | C. MYLAR    | 0.47uF 50V         |         | マイラーコン    | 01  |
| C1572      | US062100 | C. CE. CHP  | 100pF 50V B        |         | チップセラコン   | 01  |
| C1574      | UR837100 | C. EL       | 10uF 16V           |         | ケミコン      | 01  |
| C1575      | US061470 | C. CE. CHP  | 47pF 50V B         |         | チップセラコン   | 01  |
| C1576      | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1578      | US061470 | C. CE. CHP  | 47pF 50V B         |         | チップセラコン   | 01  |
| C1579      | UR837100 | C. EL       | 10uF 16V           |         | ケミコン      | 01  |
| C1583-1584 | UR267470 | C. EL       | 47uF 50V           |         | ケミコン      | 01  |
| C1589-1590 | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1599      | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1602      | UR267100 | C. EL       | 10uF 50V           |         | ケミコン      |     |
| C1603-1604 | US062470 | C. CE. CHP  | 470pF 50V B        |         | チップセラコン   | 01  |
| C1605      | US064100 | C. CE. CHP  | 0.01uF 50V B       |         | チップセラコン   | 01  |
| C1608      | US064100 | C. CE. CHP  | 0.01uF 50V B       |         | チップセラコン   | 01  |
| C1609      | UR049220 | C. EL       | 2200uF 25V         |         | ケミコン      | 01  |
| D1000-1001 | VD631600 | DIODE       | 1SS133, 176        |         | ダイオード     | 01  |
| D1002      | VU171900 | DIODE. ZENR | UDZS5.1B 5.1V      |         | ツェナーダイオード | 01  |
| D1003      | VT332900 | DIODE       | 1SS355             |         | ダイオード     | 01  |
| D1004-1005 | VN008700 | DIODE       | 1SS270A            |         | ダイオード     | 01  |
| D1008      | VT332900 | DIODE       | 1SS355             |         | ダイオード     | 01  |
| D1009-1014 | VN008700 | DIODE       | 1SS270A            |         | ダイオード     | 01  |
| △ D1017    | WA653200 | DIODE. BRG  | TS6P03G 6A 200V    |         | ダイオードブリッジ | 04  |
| △ D1018    | WH487300 | DIODE. BRG  | RS203M 2.0A 200V   |         | ダイオードブリッジ | 02  |
| D1019      | VD631600 | DIODE       | 1SS133, 176        |         | ダイオード     | 01  |
| D1503-1504 | VG438400 | DIODE. ZENR | MTZJ6.8C 6.8V      |         | ツェナーダイオード | 01  |
| △ F1000    | VV071700 | FUSE        | 3.15A 250V         | R       | ヒューズ      | 01  |
| △ IC100    | X8190B00 | IC          | STK433-330Y-E      |         | アンプ I C   |     |
| △ IC101    | X7427B00 | IC          | STK433-130Y-E      |         | アンプ I C   | 09  |
| IC103      | XJ608A00 | IC          | NJM7812FA          |         | I C       | 02  |
| IC104      | X4154A00 | IC          | KIA7912PI          |         | 電源 I C    | 03  |
| IC105      | YA381A00 | IC          | LM19CIZ/LF THERMAL |         | 電源 I C    | 04  |
| IC152      | XZ509A00 | IC          | TC74VHC04FT INVER  |         | ロジック I C  | 01  |
| IC153      | YA361A00 | IC          | R2A15220FP         |         | I C       | 07  |
| IC154      | X7378A00 | IC          | NJM4565M (TE1)     |         | アンプ I C   | 01  |
| PJ150      | V9420700 | JACK. PIN   | 2P MSP-252V1-30NI  |         | ピンジャック    |     |
| PJ151      | V7046800 | JACK. PIN   | 6P MSP-246V1-01NI  |         | ピンジャック    | 04  |
| PJ152      | V7046700 | JACK. PIN   | 4P MSP-244V1-01NI  |         | ピンジャック    | 03  |
| PJ159      | V7189700 | JACK. PIN   | 1P                 |         | ピンジャック    | 01  |
| PJ160      | WC612700 | JACK. PIN   | 2P                 |         | ピンジャック    | 01  |
| PJ161      | WQ364800 | JACK. PIN   | 2P                 |         | ピンジャック    | 02  |

\* New Parts \* 新規部品

## P.C.B. MAIN and P.C.B. VIDEO

|   | Ref No.    | Part No. | Description  | Remarks           | Markets | 部 品 名           | ランク |
|---|------------|----------|--------------|-------------------|---------|-----------------|-----|
| △ | Q1000      | WC398400 | TR           | 2N5551C-AT        |         | トランジスタ          | 01  |
| △ | Q1001-1002 | VC614000 | TR           | 2SB1274 Q, R, S   |         | トランジスタ          | 02  |
| △ | Q1003      | WC398400 | TR           | 2N5551C-AT        |         | トランジスタ          | 01  |
|   | Q1004-1005 | WC397700 | TR           | 2N5401C-AT        |         | トランジスタ          | 01  |
| △ | Q1006-1008 | WC398400 | TR           | 2N5551C-AT        |         | トランジスタ          | 01  |
| △ | Q1011-1012 | WC398400 | TR           | 2N5551C-AT        |         | トランジスタ          | 01  |
| △ | Q1013      | WC397700 | TR           | 2N5401C-AT        |         | トランジスタ          | 01  |
| △ | Q1014      | iC181510 | TR           | 2SC1815 Y         |         | トランジスタ          | 01  |
| △ | Q1015      | WC435000 | TR. DGT      | KRC102S-RTK       |         | デジタルトランジスタ      | 01  |
|   | Q1016      | WC434900 | TR. DGT      | KRA104S-RTK       |         | デジタルトランジスタ      | 01  |
|   | Q1501-1502 | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1504      | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1507      | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1509      | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1520-1521 | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1523      | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
|   | Q1526      | WC756200 | TR           | 2SC5938A A, B     |         | トランジスタ          | 01  |
| △ | R1012-1013 | HV753220 | R. CAR. FP   | 2. 2Ω 1/4W        |         | 不燃化カーボン抵抗       | 01  |
| △ | R1017      | HV755560 | R. CAR. FP   | 560Ω 1/4W         |         | 不燃化カーボン抵抗       | 01  |
| △ | R1029      | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
| △ | R1032      | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
| △ | R1046      | WP839400 | R. CEMENT    | 0. 22+0. 22 3W    |         | セメント抵抗          | 01  |
| △ | R1048      | WP839400 | R. CEMENT    | 0. 22+0. 22 3W    |         | セメント抵抗          | 01  |
| △ | R1056      | WP839400 | R. CEMENT    | 0. 22+0. 22 3W    |         | セメント抵抗          | 01  |
| △ | R1067-1068 | WP839400 | R. CEMENT    | 0. 22+0. 22 3W    |         | セメント抵抗          | 01  |
|   | R1086      | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
|   | R1089-1090 | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
|   | R1098      | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
|   | R1101      | HV754100 | R. CAR. FP   | 10Ω 1/4W          |         | 不燃化カーボン抵抗       | 01  |
| △ | R1103      | V8070200 | R. MTL. FLM  | 4. 7Ω 1W          |         | 金属被膜抵抗          |     |
| △ | R1107-1108 | V8070200 | R. MTL. FLM  | 4. 7Ω 1W          |         | 金属被膜抵抗          |     |
| △ | R1113-1114 | V8070200 | R. MTL. FLM  | 4. 7Ω 1W          |         | 金属被膜抵抗          |     |
|   | R1504      | HV753100 | R. CAR. FP   | 1Ω 1/4W           |         | 不燃化カーボン抵抗       | 01  |
|   | R1664-1665 | HV755100 | R. CAR. FP   | 100Ω 1/4W         |         | 不燃化カーボン抵抗       | 01  |
|   | R1666-1667 | WA621400 | R. MTL. OXD  | 82Ω 1W J          |         | 酸化金属被膜抵抗        | 01  |
|   | RY100      | WE648700 | RELAY        | DC DH24D2-0-Q     |         | リレー 24V         | 06  |
|   | ST100      | V4040500 | SCR. TERM    | M3                |         | スクリューノターミナル     | 01  |
|   | ST101      | WA246200 | SCR. TERM    | 3. 5              |         | スクリューターミナル      |     |
| △ | SW101      | WB493700 | VOLT. SELCT  | R8140246 110-240V | R       | 電圧切替器           |     |
| △ | SW101      | WD073700 | VOLT. SELCT  | R8140254 220-240V | L       | 電圧切替器           |     |
|   | U1500-1501 | WH169900 | CN. PHOTO. R | 1P GP1FAV51RK0F   |         | 光ファイバー受信器       | 04  |
|   |            | WE774200 | SCR. BND. HD | 3x10 MFZN2W3      |         | バインドBタイトネジ      | 01  |
| * |            | WU345000 | P. C. B.     | VIDEO             | J       | P C B V I D E O |     |
| * |            | WU345100 | P. C. B.     | VIDEO             | UC      | P C B V I D E O |     |
| * |            | WU345200 | P. C. B.     | VIDEO             | R       | P C B V I D E O |     |
| * |            | WU345300 | P. C. B.     | VIDEO             | T       | P C B V I D E O |     |
| * |            | WU345400 | P. C. B.     | VIDEO             | K       | P C B V I D E O |     |
| * |            | WU345500 | P. C. B.     | VIDEO             | A       | P C B V I D E O |     |
| * |            | WU345600 | P. C. B.     | VIDEO             | BGF     | P C B V I D E O |     |
| * |            | WU345700 | P. C. B.     | VIDEO             | L       | P C B V I D E O |     |
|   | CB301      | VQ047700 | CN. BS. PIN  | 22P               | J       | F F Cコネクター      | 01  |
|   | CB303      | VQ961500 | CN. BS. PIN  | 12P               |         | ハウジング           | 01  |
|   | CB321      | VM859500 | CN. BS. PIN  | 11P               |         | F F Cコネクター      | 01  |
|   | CB332      | VQ961300 | CN. BS. PIN  | 10P               |         | ハウジング           | 01  |

\* New Parts \* 新規部品

## P.C.B. VIDEO

| Ref No.    | Part No. | Description | Remarks        | Markets | 部 品 名      | ランク |
|------------|----------|-------------|----------------|---------|------------|-----|
| CB333      | VK024700 | CN. BS. PIN | 3P             |         | ワイヤートラップ   | 01  |
| CB342      | VQ585500 | CN. JUMPER  | 5P             |         | ジャンパーコネクター | 02  |
| CB343      | VZ130900 | CN. JUMPER  | 4P             |         | ジャンパーコネクター | 01  |
| CB344      | VQ585700 | CN. JUMPER  | 7P             |         | ジャンパーコネクター | 03  |
| CB345      | VF728300 | CN          | 6P             |         | コネクター      | 01  |
| CB349      | VQ047700 | CN. BS. PIN | 22P            |         | F F Cコネクター | 01  |
| CB351-353  | WD398400 | CN. DIN     | 14P YKF45-3011 | J       | D I Nコネクタ  | 05  |
| CB354      | VQ047700 | CN. BS. PIN | 22P            | J       | F F Cコネクター | 01  |
| CB371      | VG879900 | CN. BS. PIN | 2P             |         | ベースピン      | 01  |
| CB372-373  | WN103000 | CLIP. FUSE  | TP00351-31     |         | ヒューズクリップ   | 01  |
| CB378      | VG879900 | CN. BS. PIN | 2P             | RL      | ベースピン      | 01  |
| CB379      | VQ961000 | CN. BS. PIN | 7P             |         | ハウジング      | 02  |
| CB381      | VQ962800 | CN. BS. PIN | 7P             |         | ウエハー       | 02  |
| C3001      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C3002-3004 | US060800 | C. CE. CHP  | 8pF 50V B      |         | チップセラコン    | 01  |
| C3005      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C3006      | UR237470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3007-3008 | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3009      | UR237470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3011      | US060300 | C. CE. CHP  | 3pF 50V B      |         | チップセラコン    | 01  |
| C3012      | UR837470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3013-3014 | US060300 | C. CE. CHP  | 3pF 50V B      |         | チップセラコン    | 01  |
| C3017      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3018      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C3019      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3020      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C3021      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3024-3025 | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3026      | UR237100 | C. EL       | 10uF 16V       |         | ケミコン       |     |
| C3027      | WD758300 | C. CE. CHP  | 10uF 10V       |         | チップセラコン    | 01  |
| C3029      | WD758300 | C. CE. CHP  | 10uF 10V       |         | チップセラコン    | 01  |
| C3031      | WD758300 | C. CE. CHP  | 10uF 10V       |         | チップセラコン    | 01  |
| C3033      | UR837470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3043-3044 | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3045      | UR837470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3047      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3048      | UR238220 | C. EL       | 220uF 16V      |         | ケミコン       | 01  |
| C3050      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3051      | UR238220 | C. EL       | 220uF 16V      |         | ケミコン       | 01  |
| C3063      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3065      | UR237470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3067      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3072      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3073      | UR238220 | C. EL       | 220uF 16V      |         | ケミコン       | 01  |
| C3077      | US135100 | C. CE. CHP  | 0.1uF 16V      |         | チップセラコン    | 01  |
| C3080-3085 | WD758300 | C. CE. CHP  | 10uF 10V       |         | チップセラコン    | 01  |
| C3201      | US061270 | C. CE. CHP  | 27pF 50V B     | BGF     | チップセラコン    | 01  |
| C3202      | UR837100 | C. EL       | 10uF 16V       | BGF     | ケミコン       | 01  |
| C3203      | US061270 | C. CE. CHP  | 27pF 50V B     | BGF     | チップセラコン    | 01  |
| C3204-3205 | US135100 | C. CE. CHP  | 0.1uF 16V      | BGF     | チップセラコン    | 01  |
| C3206      | US062560 | C. CE. CHP  | 560pF 50V B    | BGF     | チップセラコン    | 01  |
| C3207-3208 | US062330 | C. CE. CHP  | 330pF 50V B    | BGF     | チップセラコン    | 01  |
| C3209      | US135100 | C. CE. CHP  | 0.1uF 16V      | BGF     | チップセラコン    | 01  |
| C3211      | UR237470 | C. EL       | 47uF 16V       | BGF     | ケミコン       | 01  |
| C3212-3214 | UR237470 | C. EL       | 47uF 16V       |         | ケミコン       | 01  |
| C3215      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |
| C3218      | US062100 | C. CE. CHP  | 100pF 50V B    |         | チップセラコン    | 01  |

\* New Parts \* 新規部品

## P.C.B. VIDEO

| Ref No.      | Part No. | Description  | Remarks             | Markets | 部 品 名      | ランク |
|--------------|----------|--------------|---------------------|---------|------------|-----|
| C3303-3305   | WJ611400 | C. MYLAR     | 0. 1uF 100V J       |         | マイラーコン     | 01  |
| C3306        | UR268100 | C. EL        | 100uF 50V           |         | ケミコン       |     |
| C3307        | UR03A100 | C. EL        | 10000uF 16V         |         | ケミコン       |     |
| C3309        | UR03A100 | C. EL        | 10000uF 16V         |         | ケミコン       |     |
| C3310        | UR039470 | C. EL        | 4700uF 16V          |         | ケミコン       | 03  |
| C3311        | UR266100 | C. EL        | 1uF 50V             |         | ケミコン       | 01  |
| C3312        | UR237220 | C. EL        | 22uF 16V            |         | ケミコン       |     |
| C3314        | UR266100 | C. EL        | 1uF 50V             |         | ケミコン       | 01  |
| C3319        | UR266100 | C. EL        | 1uF 50V             |         | ケミコン       | 01  |
| C3320-3321   | UR237330 | C. EL        | 33uF 16V            |         | ケミコン       |     |
| C3322        | UR267100 | C. EL        | 10uF 50V            |         | ケミコン       |     |
| C3323        | UR278100 | C. EL        | 100uF 63V           |         | ケミコン       | 01  |
| C3403        | WJ605000 | C. MYLAR     | 0. 01uF 50V J       |         | マイラーコン     | 01  |
| C3405-3407   | WJ605000 | C. MYLAR     | 0. 01uF 50V J       |         | マイラーコン     | 01  |
| C3409        | WJ605000 | C. MYLAR     | 0. 01uF 50V J       |         | マイラーコン     | 01  |
| * C3410-3411 | WJ604500 | C. MYLAR     | 4700pF 50V          |         | マイラーコン     |     |
| * C3412-3414 | WJ605200 | C. MYLAR     | 0. 015uF 50V        |         | マイラーコン     |     |
| * C3417-3418 | WJ604500 | C. MYLAR     | 4700pF 50V          |         | マイラーコン     |     |
| C3501-3509   | US064100 | C. CE. CHP   | 0. 01uF 50V B       | J       | チップセラコン    | 01  |
| C3510-3512   | US060800 | C. CE. CHP   | 8pF 50V B           | J       | チップセラコン    | 01  |
| C3513-3514   | UR237100 | C. EL        | 10uF 16V            | J       | ケミコン       |     |
| C3515-3520   | US135100 | C. CE. CHP   | 0. 1uF 16V          | J       | チップセラコン    | 01  |
| C3701        | WQ852400 | C. POL. MTL  | 0. 022uF 630V       |         | メタライズドポリコン | 01  |
| △ C3702      | WK005000 | C. CE. SAFTY | 0. 047uF 275V       |         | 規格認定コンデンサ  | 01  |
| C3703        | WR082000 | C. EL        | 100uF 220V          | JUC     | ケミコン       | 04  |
| * C3703      | WR082100 | C. EL        | 100uF 400V          | R       | ケミコン       |     |
| * C3703      | WQ852500 | C. EL        | 68uF 400V           | TKABGFL | ケミコン       |     |
| C3704        | WR182800 | C. CE. CHP   | 2200pF 250V         |         | チップセラコン    | 01  |
| C3705        | US065100 | C. CE. CHP   | 0. 1uF 50V B        |         | チップセラコン    | 01  |
| △ C3706      | WQ939400 | C. CE. SAFTY | 0. 01uF 250V        |         | 規格認定コンデンサ  | 01  |
| C3707        | UR837470 | C. EL        | 47uF 16V            |         | ケミコン       | 01  |
| C3708        | UR867100 | C. EL        | 10uF 50V            |         | ケミコン       | 01  |
| △ C3709      | WQ902200 | C. CE. SAFTY | 2200pF 250V         |         | 規格認定コン     | 01  |
| C3710-3711   | UR866100 | C. EL        | 1uF 50V             |         | ケミコン       | 01  |
| C3712-3713   | WH777900 | C. EL        | 1000uF 35V          |         | ケミコン       | 03  |
| C3714        | US046100 | C. CE. CHP   | 1uF 25V             |         | チップセラコン    | 01  |
| C3715        | US135100 | C. CE. CHP   | 0. 1uF 16V          |         | チップセラコン    | 01  |
| C3716        | WH771300 | C. EL        | 100uF 10V           |         | ケミコン       | 01  |
| C3717        | WQ852400 | C. POL. MTL  | 0. 022uF 630V       |         | メタライズドポリコン | 01  |
| △ C3720-3721 | WQ902300 | C. CE. SAFTY | 1000pF 250V         |         | 規格認定コンデンサ  | 01  |
| C3801        | US064100 | C. CE. CHP   | 0. 01uF 50V B       |         | チップセラコン    | 01  |
| C3802        | V7887800 | C. EL        | 1uF 50V             |         | ケミコン       |     |
| C3803        | WJ335500 | C. EL        | 2. 2uF 50V          |         | ケミコン       | 01  |
| C3804        | WJ603700 | C. MYLAR     | 1000pF 50V          |         | マイラーコン     | 01  |
| C3805        | US064100 | C. CE. CHP   | 0. 01uF 50V B       |         | チップセラコン    | 01  |
| D3201        | VG436100 | DIODE. ZENR  | MTZJ3. 3B 3. 3V     | BGF     | ツェナーダイオード  | 01  |
| D3202        | VG439500 | DIODE. ZENR  | MTZJ10B 10V         |         | ツェナーダイオード  | 01  |
| △ D3302      | WH487300 | DIODE. BRG   | RS203M 2. 0A 200V   |         | ダイオードブリッジ  | 02  |
| △ D3304      | WH487300 | DIODE. BRG   | RS203M 2. 0A 200V   |         | ダイオードブリッジ  | 02  |
| D3305        | VG444700 | DIODE. ZENR  | MTZ J 39D 39. 0V TP |         | ツェナーダイオード  | 01  |
| D3310        | VT332900 | DIODE        | 1SS355              |         | ダイオード      | 01  |
| * D3312      | WU201600 | DIODE        | 1N4003S TP          |         | ダイオード      |     |
| D3320        | VG437400 | DIODE. ZENR  | MTZJ5. 1B 5. 1V     |         | ツェナーダイオード  | 01  |
| D3350        | VU172800 | DIODE. ZENR  | UDZS12B 12V         | R       | ツェナーダイオード  | 01  |
| D3403-3404   | VT332900 | DIODE        | 1SS355              |         | ダイオード      | 01  |
| D3406-3407   | VT332900 | DIODE        | 1SS355              |         | ダイオード      | 01  |
| D3501-3506   | VT332900 | DIODE        | 1SS355              | J       | ダイオード      | 01  |

\* New Parts \* 新規部品

## P.C.B. VIDEO

|   | Ref No.    | Part No. | Description     | Remarks            | Markets | 部 品 名       | ランク |
|---|------------|----------|-----------------|--------------------|---------|-------------|-----|
| △ | D3701      | WH471700 | DIODE. BRG      | DB105 1A 600V      |         | ダイオードブリッジ   | 02  |
|   | D3703      | WN672400 | DIODE. ZENR     | P6KE200A 200V      |         | ツェナーダイオード   | 03  |
|   | D3705      | WQ647500 | DIODE           | HT18G              |         | ダイオード       | 01  |
|   | D3706-3707 | VD631600 | DIODE           | 1SS133, 176        |         | ダイオード       | 01  |
|   | D3708      | VT332900 | DIODE           | 1SS355             |         | ダイオード       | 01  |
|   | D3709      | WR007000 | DIODE. SCHOTTKY | 10A 40V SG10SC4M   |         | ショットキーダイオード | 03  |
|   | D3710      | VG442200 | DIODE. ZENR     | MTZJ22C 22V        |         | ツェナーダイオード   | 01  |
|   | D3801-3805 | VT332900 | DIODE           | 1SS355             |         | ダイオード       | 01  |
| △ | F3701      | WB221200 | FUSE            | T6A 125V           | JUC     | ヒューズ        | 01  |
| △ | F3701      | WB760600 | FUSE            | T6. 3A 250V        | R       | ヒューズ        | 01  |
| △ | F3701      | VV071700 | FUSE            | 3. 15A 250V        | TKABGFL | ヒューズ        | 01  |
|   | IC303      | XY879A00 | IC              | TC74HC4053AF (EL)  |         | ロジック I C    | 03  |
|   | IC305      | X6742A00 | IC              | LA73050-TLM-E      |         | アンプ I C     | 04  |
|   | IC306      | X2904A00 | IC              | NJM2581M VIDEO AMP |         | アンプ I C     | 06  |
|   | IC307      | XY549A00 | IC              | TC74HC4051AFEL     |         | ロジック I C    | 02  |
|   | IC308      | X7779A00 | IC              | LC709004A-TLM-E    |         | ロジック I C    | 04  |
|   | IC310      | X8875A00 | IC              | FHP33501M14X       |         | アンプ I C     | 04  |
|   | IC321      | X8235A00 | IC              | LC72725KM          | BGF     | I C         |     |
|   | IC331      | X8276A00 | IC              | NJM2396F05         |         | 電源 I C      | 04  |
|   | IC334      | X6143A00 | IC              | NJM2388F05 5. 0V   |         | 電源 I C      | 04  |
|   | IC351-352  | XS790A00 | IC              | TC74HC4052AF MPX   | J       | ロジック I C    | 02  |
|   | IC353      | XY879A00 | IC              | TC74HC4053AF (EL)  | J       | ロジック I C    | 03  |
|   | IC371      | YA565A00 | IC              | TOP254PN SW        |         | 電源 I C      | 07  |
| △ | IC372      | WQ867100 | PHOT. CPL       | EL816 (M) (C)      |         | フォトカプラ      | 01  |
|   | IC374      | YA276A00 | IC              | TL431AC 2. 5-36V   |         | 電源 I C      | 02  |
| △ | IC375      | WQ867100 | PHOT. CPL       | EL816 (M) (C)      |         | フォトカプラ      | 01  |
|   | PJ301      | WG505100 | JACK. PIN       | 6P                 |         | ピンジャック      | 04  |
|   | PJ302      | V7189800 | JACK. PIN       | 1P                 |         | ピンジャック      | 01  |
|   | PJ303      | WH381400 | JACK. PIN       | 3P JACK G, B, R    |         | ピンジャック      | 03  |
|   | PJ304      | V7189800 | JACK. PIN       | 1P                 |         | ピンジャック      | 01  |
|   | PJ305-306  | V7190000 | JACK. PIN       | 2P                 |         | ピンジャック      |     |
|   | Q3001      | VR936300 | TR              | 2SA1576A T106      |         | トランジスタ      | 01  |
|   | Q3201      | iC174020 | TR              | 2SC1740S QRS       | BGF     | トランジスタ      | 01  |
|   | Q3203      | iC181510 | TR              | 2SC1815 Y          |         | トランジスタ      | 01  |
|   | Q3302      | iA101510 | TR              | 2SA1015 Y          |         | トランジスタ      | 01  |
|   | Q3303      | WG538600 | TR              | KTA1046-Y-U/P      |         | トランジスタ      | 02  |
|   | Q3304      | iA101510 | TR              | 2SA1015 Y          |         | トランジスタ      | 01  |
|   | Q3305      | iC181510 | TR              | 2SC1815 Y          |         | トランジスタ      | 01  |
| △ | Q3306      | VP872600 | TR              | 2SA1708 S, T       |         | トランジスタ      | 01  |
|   | Q3405      | VV655400 | TR. DGT         | DTC114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3406      | VV655000 | TR. DGT         | DTA114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3407      | VV655400 | TR. DGT         | DTC114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3408      | VV655000 | TR. DGT         | DTA114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3411      | VV655400 | TR. DGT         | DTC114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3412      | VV655000 | TR. DGT         | DTA114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3413      | VV655400 | TR. DGT         | DTC114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3414      | VV655000 | TR. DGT         | DTA114EKA          |         | デジタルトランジスタ  | 01  |
|   | Q3501      | VV556400 | TR              | 2SC2412K Q, R, S   | J       | トランジスタ      | 01  |
|   | Q3801-3802 | iC181510 | TR              | 2SC1815 Y          |         | トランジスタ      | 01  |
|   | Q3803      | VV655700 | TR. DGT         | DTC114EKA          |         | デジタルトランジスタ  | 01  |
|   | R3021      | HV753100 | R. CAR. FP      | 1Ω 1/4W            |         | 不燃化カーボン抵抗   | 01  |
|   | R3025      | HV753100 | R. CAR. FP      | 1Ω 1/4W            |         | 不燃化カーボン抵抗   | 01  |
|   | R3046-3049 | HV753100 | R. CAR. FP      | 1Ω 1/4W            |         | 不燃化カーボン抵抗   | 01  |
|   | R3060-3061 | HV753100 | R. CAR. FP      | 1Ω 1/4W            |         | 不燃化カーボン抵抗   | 01  |
|   | R3208      | HV755680 | R. CAR. FP      | 680Ω 1/4W          | BGF     | 不燃化カーボン抵抗   | 01  |
|   | R3210      | HV754180 | R. CAR. FP      | 18Ω 1/4W           |         | 不燃化カーボン抵抗   | 01  |
|   | R3315-3316 | HV756470 | R. CAR. FP      | 4. 7KΩ 1/4W        |         | 不燃化カーボン抵抗   | 01  |

\* New Parts \* 新規部品



## P.C.B. VIDEO

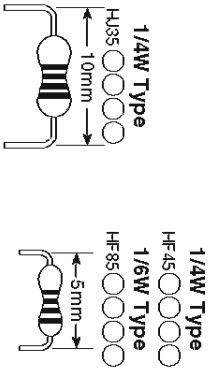
| Ref No.    | Part No. | Description  | Remarks               | Markets | 部 品 名       | ランク |
|------------|----------|--------------|-----------------------|---------|-------------|-----|
| △ R3325    | HV756330 | R. CAR. FP   | 3. 3KΩ 1/4W           |         | 不燃化カーボン抵抗   | 01  |
| △ R3326    | HV753220 | R. CAR. FP   | 2. 2Ω 1/4W            |         | 不燃化カーボン抵抗   | 01  |
| R3330      | HV754100 | R. CAR. FP   | 10Ω 1/4W              |         | 不燃化カーボン抵抗   | 01  |
| R3405-3406 | HV757100 | R. CAR. FP   | 10KΩ 1/4W             |         | 不燃化カーボン抵抗   | 01  |
| R3524-3525 | HV753100 | R. CAR. FP   | 1Ω 1/4W               | J       | 不燃化カーボン抵抗   | 01  |
| RY341-342  | WJ122400 | RELAY        | 981-2A-24DS-SP7       |         | リレー 24V     | 04  |
| RY344-345  | WJ122400 | RELAY        | 981-2A-24DS-SP7       |         | リレー 24V     | 04  |
| △ RY371    | WQ804100 | RELAY        | DC DLS5D1-0 (M) 0. 25 |         | リレー         | 04  |
| ST331-332  | V4040500 | SCR. TERM    | M3                    |         | スクリューノターミナル | 01  |
| ST371      | V4040500 | SCR. TERM    | M3                    |         | スクリューノターミナル | 01  |
| ST381-383  | V4040500 | SCR. TERM    | M3                    |         | スクリューノターミナル | 01  |
| △ T3701    | YA507B00 | TRANS. PWR   |                       |         | 電源トランス      | 07  |
| TE341      | WK560800 | TERM. SP     | 4P MST-204V1-01 NC    | JUCRTA  | スピーカーターミナル  | 04  |
| TE341      | WK560900 | TERM. SP     | 4P MST-204V1-01 WC    | KBGFL   | スピーカーターミナル  |     |
| TE342      | WK561000 | TERM. SP     | 6P MST-207V1-01 NC    | JUCRTA  | スピーカーターミナル  | 05  |
| TE342      | WK561100 | TERM. SP     | 6P MST-207V1-01 WC    | KBGFL   | スピーカーターミナル  |     |
| XL321      | V2731100 | RSNR. CRYST  | 4. 332M HC-49/U       | BGF     | 水晶振動子       |     |
|            | WE774200 | SCR. BND. HD | 3x10 MFZN2W3          |         | バインドBタイトネジ  | 01  |
|            | WE774200 | SCR. BND. HD | 3x10 MFZN2W3          |         | バインドBタイトネジ  | 01  |

\* New Parts \* 新規部品

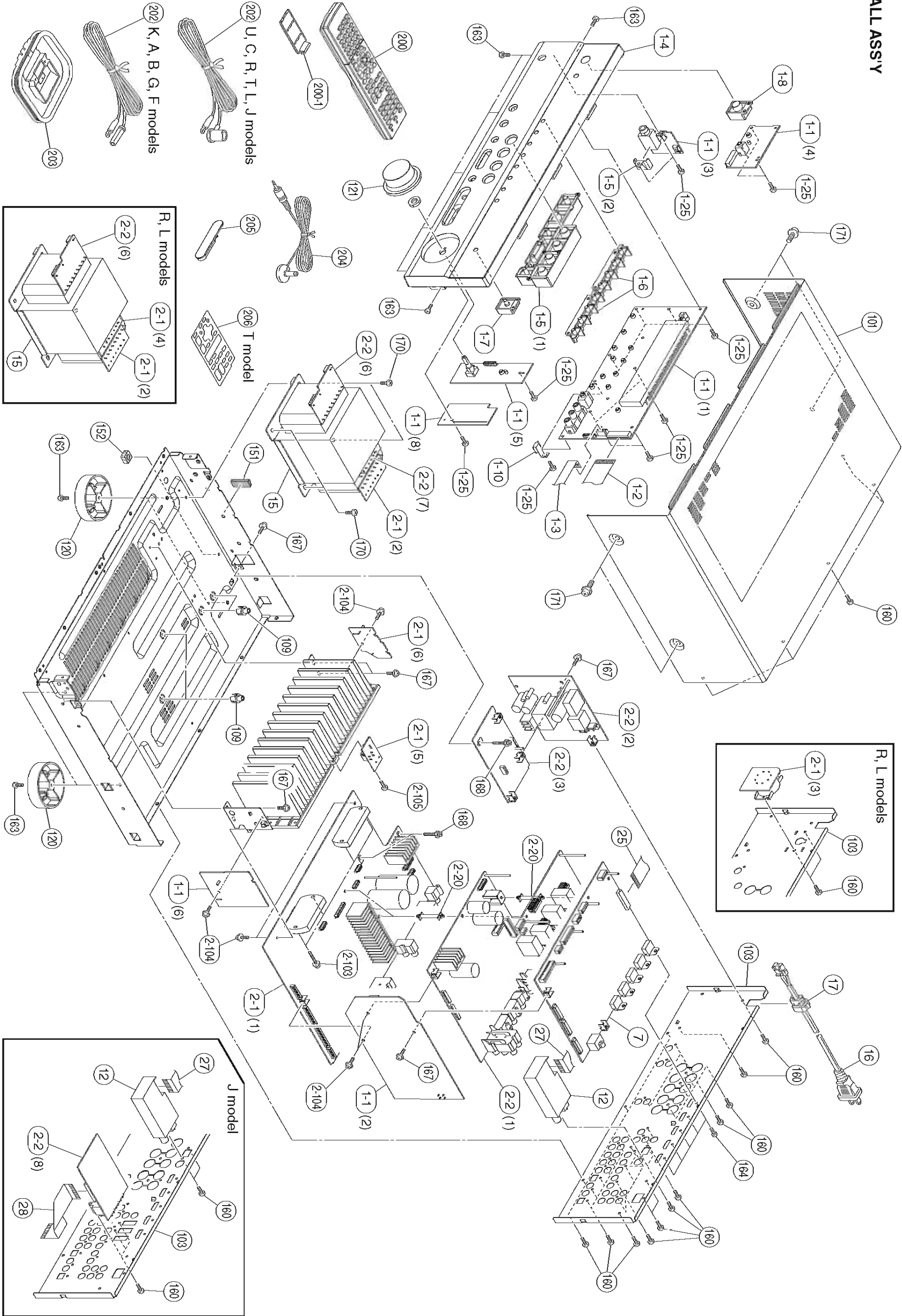
Carbon Resistors

| Value  | 1/4W Type Part No. | 1/6W Type Part No. | Value  | 1/4W Type Part No. | 1/6W Type Part No. |
|--------|--------------------|--------------------|--------|--------------------|--------------------|
| 1.0 Ω  | HJ35 3100          | HF85 3100          | 11 kΩ  | HF45 7110          | HF45 7110          |
| 1.8 Ω  | HJ35 3180          | *                  | 12 kΩ  | HJ35 7120          | HF85 7120          |
| 2.2 Ω  | HJ35 3220          | HF85 3220          | 13 kΩ  | HF45 7130          | HF45 7130          |
| 3.3 Ω  | HJ35 3330          | HF85 3330          | 15 kΩ  | HF45 7150          | HF45 7150          |
| 4.7 Ω  | HJ35 3470          | HF85 3470          | 18 kΩ  | HF45 7180          | HF45 7180          |
| 5.6 Ω  | HJ35 3560          | HF85 3560          | 22 kΩ  | HF45 7220          | HF45 7220          |
| 10 Ω   | HF45 4100          | HF45 4100          | 24 kΩ  | HF45 7240          | HF45 7240          |
| 15 Ω   | HJ35 4150          | HF85 4150          | 27 kΩ  | HJ35 7270          | HF85 7270          |
| 22 Ω   | HF45 4220          | HF45 4220          | 30 kΩ  | HF45 7300          | HF45 7300          |
| 27 Ω   | HJ35 4270          | HF85 4270          | 33 kΩ  | HF45 7330          | HF45 7330          |
| 33 Ω   | HF45 4330          | HF45 4330          | 36 kΩ  | HF45 7360          | HF45 7360          |
| 39 Ω   | HJ35 4470          | HF85 4390          | 39 kΩ  | HF45 7390          | HF45 7390          |
| 47 Ω   | HF45 4470          | HF45 4470          | 47 kΩ  | HF45 7470          | HF45 7470          |
| 56 Ω   | HF45 4560          | HF45 4560          | 51 kΩ  | HF45 7510          | HF45 7510          |
| 68 Ω   | HF45 4680          | HF45 4680          | 56 kΩ  | HF45 7560          | HF45 7560          |
| 75 Ω   | HF45 4750          | HF45 4750          | 62 kΩ  | HF45 7620          | HF45 7620          |
| 82 Ω   | HF45 4820          | HF45 4820          | 68 kΩ  | HF45 7680          | HF45 7680          |
| 91 Ω   | HF45 4910          | HF45 4910          | 82 kΩ  | HF45 7820          | HF45 7820          |
| 100 Ω  | HF45 5100          | HF45 5100          | 91 kΩ  | HF45 7910          | HF45 7910          |
| 110 Ω  | HJ35 5110          | HF85 5110          | 100 kΩ | HF45 8100          | HF45 8100          |
| 120 Ω  | HF45 5120          | HF45 5120          | 110 kΩ | HF45 8110          | HF45 8110          |
| 150 Ω  | HF45 5150          | HF45 5150          | 120 kΩ | HF45 8120          | HF45 8120          |
| 160 Ω  | HJ35 5160          | *                  | 130 kΩ | HF45 8130          | *                  |
| 180 Ω  | HF45 5180          | HF45 5180          | 150 kΩ | HF45 8150          | HF45 8150          |
| 200 Ω  | HF45 5200          | HF45 5200          | 180 kΩ | HF45 8180          | HF45 8180          |
| 220 Ω  | HF45 5220          | HF45 5220          | 220 kΩ | HJ35 8220          | HF85 8220          |
| 270 Ω  | HF45 5270          | HF45 5270          | 270 kΩ | HF45 8270          | HF45 8270          |
| 330 Ω  | HF45 5330          | HF45 5330          | 300 kΩ | HF45 8300          | HF45 8300          |
| 390 Ω  | HF45 5390          | HF45 5390          | 330 kΩ | HF45 8330          | HF45 8330          |
| 430 Ω  | HF45 5430          | HF45 5430          | 390 kΩ | HJ35 8390          | HF85 8390          |
| 470 Ω  | HF45 5470          | HF45 5470          | 470 kΩ | HF45 8470          | HF45 8470          |
| 510 Ω  | HF45 5510          | HF45 5510          | 560 kΩ | HJ35 8560          | HF85 8560          |
| 560 Ω  | HF45 5560          | HF45 5560          | 680 kΩ | HJ35 8680          | HF85 8680          |
| 680 Ω  | HF45 5680          | HF45 5680          | 820 kΩ | HJ35 8820          | HF85 8820          |
| 820 Ω  | HF45 5820          | HF45 5820          | 1.0 MΩ | HF45 9100          | HF45 9100          |
| 910 Ω  | HF45 5910          | HF45 5910          | 1.2 MΩ | HJ35 9120          | *                  |
| 1.0 kΩ | HF45 6100          | HF45 6100          | 1.5 MΩ | HJ35 9150          | HF85 9150          |
| 1.2 kΩ | HF45 6120          | HF45 6120          | 1.8 MΩ | HJ35 9180          | HF85 9180          |
| 1.5 kΩ | HF45 6150          | HF45 6150          | 2.2 MΩ | HJ35 9220          | HF85 9220          |
| 1.8 kΩ | HF45 6180          | HF45 6180          | 3.3 MΩ | HJ35 9330          | HF85 9330          |
| 2.0 kΩ | HJ35 6200          | HF85 6200          | 3.9 MΩ | HJ35 9390          | *                  |
| 2.2 kΩ | HF45 6220          | HF45 6220          | 4.7 MΩ | HJ35 9470          | HF85 9470          |
| 2.4 kΩ | HJ35 6240          | HF85 6240          |        |                    |                    |
| 2.7 kΩ | HF45 6270          | HF45 6270          |        |                    |                    |
| 3.0 kΩ | HF45 6300          | HF45 6300          |        |                    |                    |
| 3.3 kΩ | HF45 6330          | HF45 6330          |        |                    |                    |
| 3.6 kΩ | HJ35 6360          | HF85 6360          |        |                    |                    |
| 3.9 kΩ | HF45 6390          | HF45 6390          |        |                    |                    |
| 4.7 kΩ | HF45 6470          | HF45 6470          |        |                    |                    |
| 5.1 kΩ | HF45 6510          | HF45 6510          |        |                    |                    |
| 5.6 kΩ | HF45 6560          | HF45 6560          |        |                    |                    |
| 6.8 kΩ | HF45 6680          | HF45 6680          |        |                    |                    |
| 8.2 kΩ | HF45 6820          | HF45 6820          |        |                    |                    |
| 9.1 kΩ | HF45 6910          | HF45 6910          |        |                    |                    |
| 10 kΩ  | HF45 7100          | HF45 7100          |        |                    |                    |

\* : Not available



• OVERALL ASS'Y



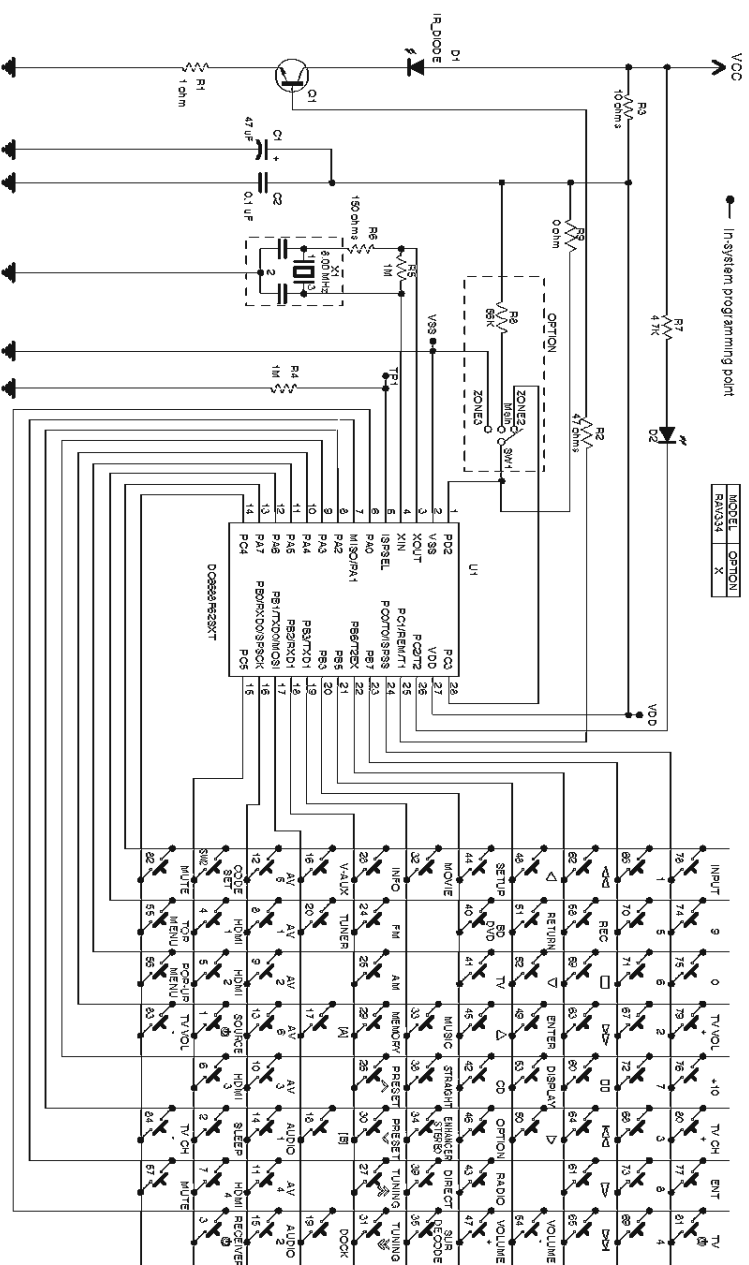
| Ref No. | Part No.  | Description             | Remarks          | Markets    | 部 品 名            | ラック |
|---------|-----------|-------------------------|------------------|------------|------------------|-----|
| * 1-1   | WU346900  | P.C.B. ASS'Y            |                  |            | PCB OPERATION    |     |
| 1-2     | MF125250  | FLEXIBLE FLAT CABLE     |                  |            | カード電線            | 04  |
| 1-3     | MF108250  | FLEXIBLE FLAT CABLE     |                  |            | カード電線            | 03  |
| * 1-4   | WU824700  | FRONT PANEL SUB ASS'Y   | V467BD           | U          | フロントパネルサブアサシ     |     |
| * 1-4   | WU824200  | FRONT PANEL SUB ASS'Y   | V467BL           | UORTKABGFL | フロントパネルサブアサシ     |     |
| * 1-4   | WU824500  | FRONT PANEL SUB ASS'Y   | V467BL           |            | フロントパネルサブアサシ     |     |
| * 1-4   | WU824600  | FRONT PANEL SUB ASS'Y   | V467SI           |            | フロントパネルサブアサシ     |     |
| * 1-4   | WU825000  | FRONT PANEL SUB ASS'Y   | V467SI           |            | フロントパネルサブアサシ     |     |
| * 1-4   | WU824900  | FRONT PANEL SUB ASS'Y   | 4063BD           |            | フロントパネルサブアサシ     |     |
| * 1-4   | WU825200  | FRONT PANEL SUB ASS'Y   | 4063BL           |            | フロントパネルサブアサシ     |     |
| * 1-4   | WU825100  | FRONT PANEL SUB ASS'Y   | 4063SI           | RK         | フロントパネルサブアサシ     |     |
| * 1-5   | WT822500  | BUTTON CASE             | GD               | G          | ボタンケース           |     |
| * 1-5   | WT822300  | BUTTON CASE             | BL               |            | ボタンケース           |     |
| * 1-5   | WT822400  | BUTTON CASE             | TI               |            | ボタンケース           |     |
| * 1-5   | WT822600  | BUTTON CASE             | SI               |            | ボタンケース           |     |
| * 1-6   | WT823800  | BUTTON TUNER            |                  |            | ボタン チューナー        |     |
| * 1-7   | WT843700  | BUTTON DIRECT           |                  |            | ボタン DIRECT POWER |     |
| * 1-8   | WT843800  | BUTTON POWER            |                  |            | ボタン プレート         |     |
| * 1-10  | WT846200  | EARTH PLATE             |                  |            | バックシールドプレート      |     |
| 1-25    | WE774800  | BIND HEAD B-TIGHT SCREW | 3x8              |            | MAIN             | 01  |
| * 2-1   | WU343800  | P.C.B. ASS'Y            | MAIN             | JBGF       | PCB MAIN         |     |
| * 2-1   | WU343900  | P.C.B. ASS'Y            | MAIN             | UOTKA      | PCB MAIN         |     |
| * 2-1   | WU344000  | P.C.B. ASS'Y            | MAIN             | R          | PCB MAIN         |     |
| * 2-1   | WU344100  | P.C.B. ASS'Y            | MAIN             | L          | PCB MAIN         |     |
| * 2-2   | WU345000  | P.C.B. ASS'Y            | VIDEO            | U          | PCB VIDEO        |     |
| * 2-2   | WU345100  | P.C.B. ASS'Y            | VIDEO            | UG         | PCB VIDEO        |     |
| * 2-2   | WU345200  | P.C.B. ASS'Y            | VIDEO            | R          | PCB VIDEO        |     |
| * 2-2   | WU345300  | P.C.B. ASS'Y            | VIDEO            | T          | PCB VIDEO        |     |
| * 2-2   | WU345400  | P.C.B. ASS'Y            | VIDEO            | K          | PCB VIDEO        |     |
| * 2-2   | WU345500  | P.C.B. ASS'Y            | VIDEO            | A          | PCB VIDEO        |     |
| * 2-2   | WU345600  | P.C.B. ASS'Y            | VIDEO            | BGF        | PCB VIDEO        |     |
| * 2-2   | WU345700  | P.C.B. ASS'Y            | VIDEO            | L          | PCB VIDEO        |     |
| * 2-20  | WU345700  | P.C.B. ASS'Y            | VIDEO            |            | スルー IC           | 01  |
| 2-103   | WE774600  | SCREW 1G                | 3x18             |            | MAIN             | 01  |
| 2-104   | WE774300  | BIND HEAD B-TIGHT SCREW | 3x8              |            | MAIN             | 01  |
| 2-105   | WE774300  | BIND HEAD B-TIGHT SCREW | 3x8              |            | MAIN             | 01  |
| * 7     | WU357000  | P.C.B. ASS'Y            | DIGITAL          | UJCTKABGFL | PCB DIGITAL      |     |
| * 7     | WU357300  | P.C.B. ASS'Y            | DIGITAL          | UOTKABFL   | PCB DIGITAL      |     |
| * 7     | WU357100  | P.C.B. ASS'Y            | DIGITAL          | R          | PCB DIGITAL      |     |
| * 7     | WU357400  | P.C.B. ASS'Y            | DIGITAL          | R          | PCB DIGITAL      |     |
| * 12    | WU756500  | AM/FM TUNER             | FAH06-J          | U          | AM/FMチューナー       | 11  |
| 12      | WU756600  | AM/FM TUNER             | FAH06-A          | UORTL      | AM/FMチューナー       |     |
| 12      | WU756700  | AM/FM TUNER             | FAH06-E          | KABGF      | AM/FMチューナー       |     |
| * 15    | YA527A00  | POWER TRANSFORMER       |                  | U          | 電源トランス           | 19  |
| * 15    | YA528A00  | POWER TRANSFORMER       |                  | UG         | 電源トランス           |     |
| * 15    | YA529A00  | POWER TRANSFORMER       |                  | RL         | 電源トランス           |     |
| * 15    | YA531A00  | POWER TRANSFORMER       |                  | TK         | 電源トランス           |     |
| * 15    | YA530A00  | POWER TRANSFORMER       |                  | A          | 電源トランス           |     |
| * 15    | WU633A00  | POWER TRANSFORMER       |                  | BGF        | 電源トランス           |     |
| 16      | WU636300  | POWER CABLE             | 1.8m             |            | 電源コード            | 07  |
| 16      | WU6392700 | POWER CABLE             | 2m               | UG         | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | R          | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | T          | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | K          | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | A          | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | B          | 電源コード            |     |
| 16      | WU6392700 | POWER CABLE             | 2m               | GFL        | 電源コード            |     |
| 17      | V2438700  | CORD STOPPER            | 10P1             |            | コードストッパー         | 02  |
| 25      | MF122140  | FLEXIBLE FLAT CABLE     | 22P 140mm P=1.25 |            | カード電線            | 03  |
| 27      | MF111200  | FLEXIBLE FLAT CABLE     | 11P 200mm P=1.25 | U          | カード電線            | 03  |
| 27      | MF111100  | FLEXIBLE FLAT CABLE     | 11P 100mm P=1.25 | UORTKABGFL | カード電線            | 02  |
| 28      | MF122100  | FLEXIBLE FLAT CABLE     | 22P 100mm P=1.25 | U          | カード電線            | 03  |
| * 101   | WT980000  | TOP COVER               | GD               |            | トップカバー           |     |
| * 101   | WT979800  | TOP COVER               | BL               |            | トップカバー           |     |

\* New Parts \* 新規部品

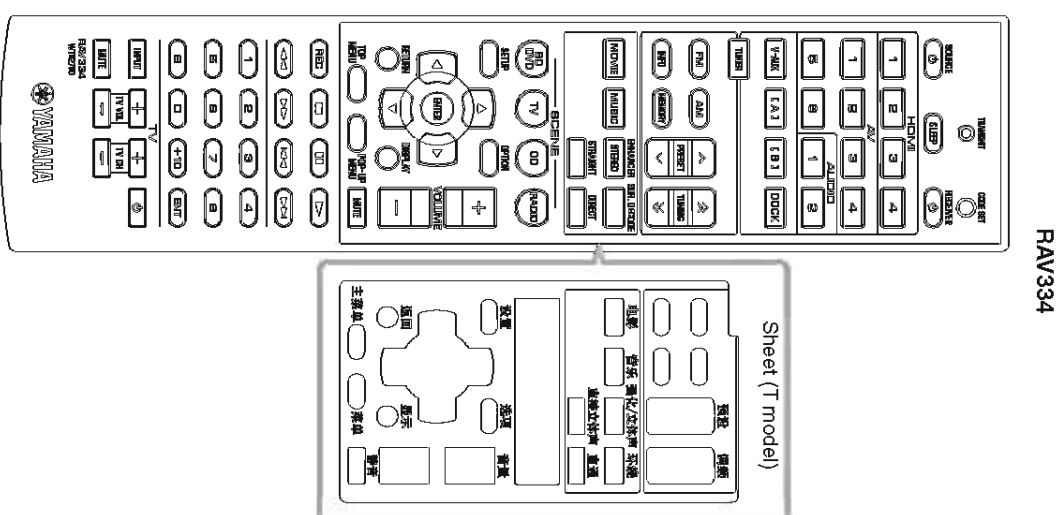
| Ref No. | Part No. | Description                  | Remarks             | Markets       | 部 品 名          | ラック |
|---------|----------|------------------------------|---------------------|---------------|----------------|-----|
| * 101   | WT979900 | TOP COVER                    |                     | TI            | トップカバー         |     |
| * 101   | WT980100 | TOP COVER                    | SI                  |               | トップカバー         |     |
| * 103   | WU009900 | REAR PANEL                   | V467                | U             | リアパネル          |     |
| * 103   | WU009100 | REAR PANEL                   | V467                | U             | リアパネル          |     |
| * 103   | WU010000 | REAR PANEL                   | 4063                | U             | リアパネル          |     |
| * 103   | WU009200 | REAR PANEL                   | V467                | C             | リアパネル          |     |
| * 103   | WU010100 | REAR PANEL                   | 4063                | C             | リアパネル          |     |
| * 103   | WU009300 | REAR PANEL                   | V467                | R             | リアパネル          |     |
| * 103   | WU010200 | REAR PANEL                   | 4063                | R             | リアパネル          |     |
| * 103   | WU009400 | REAR PANEL                   | V467                | T             | リアパネル          |     |
| * 103   | WU010300 | REAR PANEL                   | 4063                | T             | リアパネル          |     |
| * 103   | WU009500 | REAR PANEL                   | V467                | K             | リアパネル          |     |
| * 103   | WU010400 | REAR PANEL                   | 4063                | K             | リアパネル          |     |
| * 103   | WU009600 | REAR PANEL                   | V467                | A             | リアパネル          |     |
| * 103   | WU009700 | REAR PANEL                   | V467                | BGF           | リアパネル          |     |
| * 103   | WU010500 | REAR PANEL                   | 4063                | GFL           | リアパネル          |     |
| * 103   | WU009800 | REAR PANEL                   | V467                | L             | リアパネル          |     |
| * 103   | WU010600 | REAR PANEL                   | 4063                | L             | リアパネル          |     |
| 109     | WU664500 | SUPPORT H8                   |                     |               | サポートH8         | 01  |
| 120     | V0042500 | LEG                          | GD                  |               | レッグ            | 03  |
| 120     | V0042500 | LEG                          | D60xH21 GD          |               | レッグ            | 02  |
| * 121   | WT824300 | KNOB                         | D52                 | BL, TI, SI    | ノブ             |     |
| * 121   | WT824100 | KNOB                         | D52                 | BL            | ノブ             |     |
| * 121   | WT824200 | KNOB                         | D52                 | TI            | ノブ             |     |
| * 121   | WT824400 | KNOB                         | D52                 | SI            | ノブ             |     |
| 151     | WU870100 | DAMPER                       | 30x10x4             |               | ダンパー           |     |
| 152     | WU879000 | DAMPER                       | SCREW MASK          |               | ダンパー           |     |
| 160     | WE774100 | BIND HEAD BONDING B-T. SCREW | 3x8                 |               | ボンドヘッドボルトネジ    | 01  |
| 163     | WE774300 | BIND HEAD B-TIGHT SCREW      | 3x8                 |               | バインドヘッドボルトネジ   | 01  |
| 164     | WE877900 | BIND HEAD S-TIGHT SCREW      | 3x6                 |               | バインドヘッドボルトネジ   | 01  |
| 167     | WE002600 | PW HEAD B-TIGHT SCREW        | 3x8                 |               | PWヘッドボルトネジ     | 01  |
| 168     | WE774600 | SCREW 1G                     | 3x18                |               | スクリュー 1G       | 01  |
| 170     | WE774700 | BIND HEAD S-TIGHT SCREW      | 4x10                |               | バインドヘッドボルトネジ   | 01  |
| 171     | VD069600 | PW HEAD S-TIGHT SCREW        | 4x8-10              | GD, TI, SI    | PWヘッドボルトネジ     | 01  |
| 171     | VH313200 | PW HEAD S-TIGHT SCREW        | 4x8-10              | BL            | PWヘッドボルトネジ     | 01  |
| * 200   | WT927000 | ACCESSORIES                  |                     |               | 付属品            |     |
| 200-1   | AAK82380 | REMOTE CONTROL               | RAY334              | 000-213200190 | リモコン           | 03  |
| 202     | V6267000 | BATTERY COVER                | 1.4m 1pc            | 09-2209       | 電池蓋            | 03  |
| 202     | V0147100 | INDOOR FM ANTENNA            | 1.0m 1pc            |               | F/M簡易アンテナ      | 02  |
| 202     | V0147100 | INDOOR FM ANTENNA            | 1.0m 1pc            |               | F/M簡易アンテナ      | 03  |
| 203     | VY248500 | AM LOOP ANTENNA              | 6.0m 1pc            | UORTL         | AMループアンテナ      |     |
| 204     | WU649600 | YPAD MICROPHONE              | 1pc                 | KABGF         | YPAOマイク        |     |
| * 205   | WU187800 | VVIDEO AUX INPUT COVER       | 1pc                 | GD            | 前面入力端子保護用キャップ  | 08  |
| * 205   | WU187600 | VVIDEO AUX INPUT COVER       | 1pc                 | BL            | 前面入力端子保護用キャップ  |     |
| * 205   | WU187700 | VVIDEO AUX INPUT COVER       | 1pc                 | TI            | 前面入力端子保護用キャップ  |     |
| * 205   | WU187900 | VVIDEO AUX INPUT COVER       | 1pc                 | SI            | 前面入力端子保護用キャップ  |     |
| * 206   | WU183200 | RCU SHEET                    | 1pc                 |               | リモコンシート        |     |
|         |          | BATTERY                      | R03, AAA, UM-4 2pcs | T             | 単4乾電池          |     |
|         |          | SERVICE TOOL                 |                     |               | サービス用部品        |     |
|         | WT492800 | RS-232C CONVERSION ADAPTOR   | 3.3Vtype withFFC9P  |               | RS-232C変換アダプター |     |

\* New Parts \* 新規部品

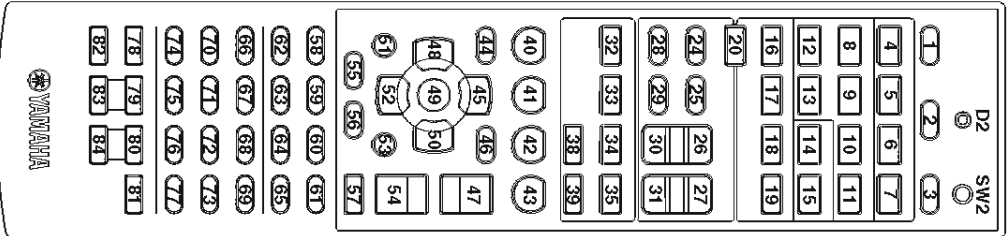
## ■ REMOTE CONTROL SCHEMATIC DIAGRAM



**PANEL**



KEY NO. LAYOUT



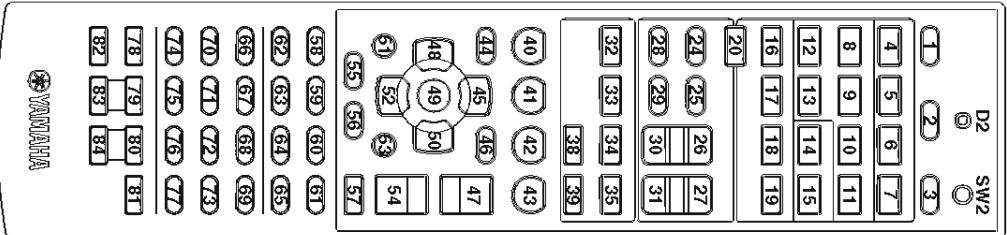
KEY CODE

AMP MODE

| GROUP   | PRE SET | COM | Key/ No | FUNCTION                             |          |           | MAIN      | ID1       |                           |           | ID2       |         |         |
|---------|---------|-----|---------|--------------------------------------|----------|-----------|-----------|-----------|---------------------------|-----------|-----------|---------|---------|
|         |         |     |         | (U, C, R, K, A, B, G, F, L, J modes) | (T mode) |           |           | (ZONE2)   | (ZONE3)                   | MAIN      | (ZONE2)   | (ZONE3) | (ZONE3) |
| POWER   | -       | -   | SW1     | MAIN/ZONE2/ZONES                     |          | [MAIN]    | [MAIN]    | [ZONE2]   | [ZONE3]                   | [MAIN]    | [ZONE2]   | [ZONE3] |         |
|         | -       | -   | LED1    | TRANSMIT                             |          | -         | -         | -         | -                         | -         | -         | -       |         |
|         | -       | -   | SW2     | CODE SET                             |          | -         | -         | -         | -                         | -         | -         | -       |         |
|         | -       | O   | K2      | SLEEP                                |          | 7A-30     | 7A-31     | 7A-32     | 7A-30CE                   | 7A-31OF   | 7A-32CC   | 7A-32CC |         |
|         | -       | O   | K3      | RECEIVER                             |          | 7E-2A     | 7A-453A   | 7A-4639   | 7E-2AD4                   | 7A-463B   | 7A-463B   | 7A-463B |         |
| INPUT 1 | O       | O   | K4      | HDMI-1                               |          | 7A-4739   | 7A-4837   | 7A-4936   | 7A-4739                   | 7A-4836   | 7A-4937   |         |         |
|         |         |     |         | Default setting                      |          |           |           |           | * enter into HDMI-1 MODE  |           |           |         |         |
|         | O       | O   | K5      | HDMI-2                               |          | 7A-4A35   | 7A-4B34   | 7A-4C33   | 7A-4A34                   | 7A-4B35   | 7A-4C32   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into HDMI-2 MODE  |           |           |         |         |
|         | O       | O   | K6      | HDMI-3                               |          | 7A-4D32   | 7A-4E31   | 7A-4F30   | 7A-4D33                   | 7A-4E30   | 7A-4F31   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into HDMI-3 MODE  |           |           |         |         |
|         | O       | O   | K7      | HDMI-4                               |          | 7A-502F   | 7A-512E   | 7A-522D   | 7A-502E                   | 7A-512F   | 7A-522C   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into HDMI-4 MODE  |           |           |         |         |
|         | O       | O   | K8      | AV-1                                 |          | 7A-532C   | 7A-542B   | 7A-552A   | 7A-532D                   | 7A-542A   | 7A-552B   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-1 MODE    |           |           |         |         |
|         | O       | O   | K9      | AV-2                                 |          | 7A-5629   | 7A-5728   | 7A-5827   | 7A-5628                   | 7A-5729   | 7A-5826   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-2 MODE    |           |           |         |         |
|         | O       | O   | K10     | AV-3                                 |          | 7A-5926   | 7A-5A25   | 7A-5B24   | 7A-5927                   | 7A-5A24   | 7A-5B25   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-3 MODE    |           |           |         |         |
|         | O       | O   | K11     | AV-4                                 |          | 7A-5C23   | 7A-5D22   | 7A-5E21   | 7A-5C22                   | 7A-5D23   | 7A-5E20   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-4 MODE    |           |           |         |         |
|         | O       | O   | K12     | AV-5                                 |          | 7A-5F20   | 7A-601F   | 7A-611E   | 7A-5F21                   | 7A-601E   | 7A-611F   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-5 MODE    |           |           |         |         |
|         | O       | O   | K13     | AV-6                                 |          | 7A-621D   | 7A-631C   | 7A-641B   | 7A-621C                   | 7A-631D   | 7A-641A   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AV-6 MODE    |           |           |         |         |
|         | O       | O   | K14     | AUDIO-1                              |          | 7A-661A   | 7A-6619   | 7A-6716   | 7A-651B                   | 7A-6618   | 7A-6719   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AUDIO-1 MODE |           |           |         |         |
|         | O       | O   | K15     | AUDIO-2                              |          | 7A-6817   | 7A-6916   | 7A-6A16   | 7A-6816                   | 7A-6917   | 7A-6A14   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into AUDIO-2 MODE |           |           |         |         |
|         | O       | O   | K16     | V-AUX                                |          | 7A-65     | 7A-D8     | 7A-F0     | 7A-55A8                   | 7A-D826   | 7A-F00E   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into V-AUX MODE   |           |           |         |         |
|         | O       | O   | K17     | [A]                                  |          | 7A-14     | 7A-D0     | 7A-F1     | 7A-14EA                   | 7A-D02E   | 7A-F10F   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into PHONO MODE   |           |           |         |         |
| INPUT 2 | O       | O   | K18     | [B]                                  |          | 7F01-3F   | 7F01-40   | 7F01-41   | 7F01-3FC1                 | 7F01-40BE | 7F01-41BF |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into USB MODE     |           |           |         |         |
|         | -       | O   | K19     | DOCK                                 |          | 7F01-4A   | 7F01-4B   | 7F01-4C   | 7F01-4AB4                 | 7F01-4B5B | 7F01-4C52 |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into DOCK MODE    |           |           |         |         |
|         | -       | O   | K20     | TUNER                                |          | 7A-16     | 7A-D2     | 7A-F3     | 7A-16E9                   | 7A-D22C   | 7A-F30D   |         |         |
|         |         |     |         |                                      |          |           |           |           | * enter into TUNER MODE   |           |           |         |         |
| RADIO   | -       | O   | K24     | FM                                   |          | 7F01-5827 | 7F01-5826 | 7F01-5A25 | 7F01-5826                 | 7F01-5827 | 7F01-5A24 |         |         |
|         | -       | O   | K25     | AM                                   |          | 7F01-552A | 7F01-5629 | 7F01-5728 | 7F01-552B                 | 7F01-5626 | 7F01-5729 |         |         |
|         | -       | O   | K26     | PRESET                               |          | 7F01-5B24 | 7F01-5C23 | 7F01-5D22 | 7F01-5B25                 | 7F01-5C22 | 7F01-5D23 |         |         |
|         | -       | O   | K27     | TUNING                               |          | 7F01-611E | 7F01-621D | 7F01-631C | 7F01-611F                 | 7F01-621C | 7F01-631D |         |         |
|         | -       | O   | K28     | INFO                                 |          | 7A-2758   | 7A-2857   | 7A-2956   | 7A-2759                   | 7A-2856   | 7A-2957   |         |         |
|         | -       | O   | K29     | MEMORY                               |          | 7F01-6716 | 7F01-6817 | 7F01-6916 | 7F01-6719                 | 7F01-6816 | 7F01-6917 |         |         |
|         | -       | O   | K30     | PRESET                               |          | 7F01-5E21 | 7F01-5F20 | 7F01-5E20 | 7F01-5F21                 | 7F01-601E | 7F01-601E |         |         |
|         | -       | O   | K31     | TUNING                               |          | 7F01-641B | 7F01-651A | 7F01-6619 | 7F01-641A                 | 7F01-651B | 7F01-6616 |         |         |
|         | -       | O   | K32     | MOVE                                 |          | 7A-88     |           | -         | 7A-8976                   |           | -         |         |         |
|         | -       | O   | K33     | MUSIC                                |          | 音乐        | 7A-89     |           | -                         | 7A-8977   |           | -       |         |
|         | -       | O   | K34     | ENHANCER/STEREO                      |          | 环绕/左声道    | 7A-94     |           | -                         | 7A-946A   |           | -       |         |
|         | -       | O   | K35     | SUR DECODE                           |          | 环绕        | 7A-8D     |           | -                         | 7A-8D73   |           | -       |         |
|         | -       | O   | K38     | STRAIGHT                             |          | 直立式解码     | 7A-56     |           | -                         | 7A-56A6   |           | -       |         |
|         | -       | O   | K39     | DIRECT                               |          | 直通        | 7A-DD     |           | -                         | 7A-DD23   |           | -       |         |

| GROUP                    | PRE SET | COM | Key/ No | FUNCTION                             |          |         | MAIN    | ID1     |                       |         | ID2       |         |         |
|--------------------------|---------|-----|---------|--------------------------------------|----------|---------|---------|---------|-----------------------|---------|-----------|---------|---------|
| SCENE                    | -       | O   | K40     | (U, C, R, K, A, B, G, F, L, J modes) | (T mode) |         |         | (ZONE2) | (ZONE3)               | MAIN    | (ZONE2)   | (ZONE3) | (ZONE3) |
|                          |         |     |         | BD/DVD (SCENE)                       |          | 7A-007F | 7A-017E | 7A-027D | 7A-007E               | 7A-017F | 7A-027C   |         |         |
|                          |         |     |         | TV (SCENE)                           |          | 7A-037C | 7A-047B | 7A-057A | 7A-037D               | 7A-047A | 7A-057B   |         |         |
|                          |         |     |         | DO (SCENE)                           |          | 7A-0679 | 7A-0778 | 7A-0877 | 7A-0678               | 7A-0779 | 7A-0876   |         |         |
|                          |         |     |         | OD (SCENE)                           |          | 7A-0976 | 7A-0A75 | 7A-0B74 | 7A-0977               | 7A-0A74 | 7A-0B75   |         |         |
| MENU                     | -       | O   | K43     | RADIO (SCENE)                        |          |         |         |         |                       |         |           |         |         |
|                          | -       | O   | K44     | SETUP                                |          | 7A-84   |         | -       | -                     | 7A-847A |           | -       |         |
|                          |         |     |         |                                      |          |         |         |         | * enter into AMP MODE |         |           |         |         |
|                          | -       | O   | K46     | OPTION                               |          | 7A-6B14 |         | -       | -                     | 7A-6B16 |           | -       |         |
|                          |         |     |         |                                      |          |         |         |         | * enter into AMP MODE |         |           |         |         |
| CURSOR                   | -       | -   | K45     | Δ (UP)                               |          | 7A-9D   |         | -       | -                     | 7A-9D63 |           | -       |         |
|                          | -       | -   | K46     | ◀ (LEFT)                             |          | 7A-9F   |         | -       | -                     | 7A-9F61 |           | -       |         |
|                          | -       | -   | K49     | ENTER                                |          | 7A-DE   |         | -       | -                     | 7A-DE20 |           | -       |         |
|                          | -       | -   | K50     | ▷ (RIGHT)                            |          | 7A-9E   |         | -       | -                     | 7A-9E60 |           | -       |         |
|                          | -       | -   | K51     | RETURN                               |          | 7A-AA   |         | -       | -                     | 7A-AA64 |           | -       |         |
|                          | -       | -   | K52     | ▽ (DOWN)                             |          | 7A-9C   |         | -       | -                     | 7A-9C62 |           | -       |         |
|                          | -       | -   | K53     | DISPLAY                              |          | 7F01-60 | 7F01-60 | 7F01-A0 | 7F01-609E             | 7A-0A74 | 7F01-A05E |         |         |
| VOLUME                   | -       | O   | K47     | VOLUME (+)                           |          | 7A-1A   | 7A-DA   | 7A-FD   | 7A-1AE4               | 7A-DA24 | 7A-FD03   |         |         |
|                          | -       | O   | K54     | VOLUME (-)                           |          | 7A-1B   | 7A-DB   | 7A-FE   | 7A-1BE5               | 7A-DB26 | 7A-FE00   |         |         |
|                          | -       | O   | K57     | MUTE                                 |          | 7A-1C   | 7A-DC   | 7A-FF   | 7A-1CE2               | 7A-DC22 | 7A-FF01   |         |         |
|                          | -       | -   | K55     | TOP MENU                             |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K56     | POP-UP MENU                          |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K1      | SOURCE                               |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K58     | REC                                  |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K59     | □ (STOP)                             |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K60     | DO (PAUSE)                           |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K61     | ▷ (PLAY)                             |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K62     | ◀◀ (REW)                             |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K63     | ▶▶ (FF)                              |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K64     | ⏮ (SKIP-)                            |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K65     | ⏭ (SKIP+)                            |          |         |         |         |                       |         |           |         |         |
| 10 key                   | -       | -   | K66     | 1                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K67     | 2                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K68     | 3                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K69     | 4                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K70     | 5                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K71     | 6                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K72     | 7                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K73     | 8                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K74     | 9                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K75     | 0                                    |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K76     | +10                                  |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K77     | ENT                                  |          |         |         |         |                       |         |           |         |         |
| TV                       | -       | -   | K78     | TV INPUT                             |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K79     | TV VOL (+)                           |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K80     | TV CH (+)                            |          |         |         |         |                       |         |           |         |         |
|                          | ●       | -   | K81     | TV                                   |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K82     | TV MUTE                              |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K83     | TV VOL (-)                           |          |         |         |         |                       |         |           |         |         |
|                          | -       | -   | K84     | TV CH (-)                            |          |         |         |         |                       |         |           |         |         |
|                          |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
|                          |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
|                          |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
| * TV MODE                |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
| * SOURCE MODE 1/2        |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
| * SOURCE MODE 1/2        |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
| * enter into SOURCE MODE |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |
| (SOURCE MODE 1/2)        |         |     |         |                                      |          |         |         |         |                       |         |           |         |         |





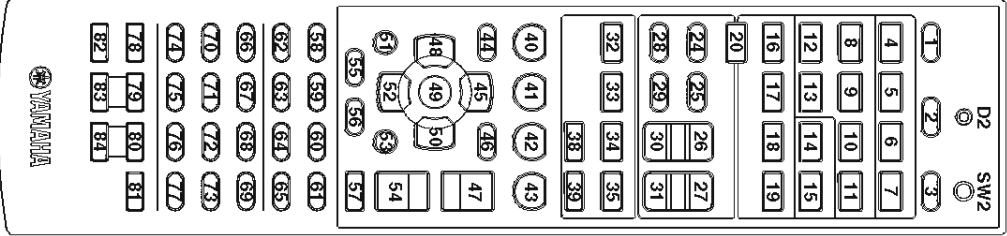
SOURCE MODE 1/2

| SOURCE MODE 1 (INPUT 1) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | SOURCE MODE 2 (INPUT 2) |  |          |  |          |  |          |  |        |  |        |  |        |  |        |  |        |  |        |  |           |  |           |  |         |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | [USB]                   |  | [DOCK]   |  | [TUNER]  |  |          |  |        |  |        |  |        |  |        |  |        |  |        |  |           |  |           |  |         |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | [HDMI-1]                |  | [HDMI-2] |  | [HDMI-3] |  | [HDMI-4] |  | [AV-1] |  | [AV-2] |  | [AV-3] |  | [AV-4] |  | [AV-5] |  | [AV-6] |  | [AUDIO-1] |  | [AUDIO-1] |  | [V-AUX] |  | [PHONO] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ID1                     |  |          |  |          |  |          |  |        |  |        |  |        |  |        |  | ID1    |  | ID2    |  | ID1       |  | ID2       |  | ID1     |  | ID2     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | [MAIN]                  |  |          |  |          |  |          |  |        |  |        |  |        |  |        |  |        |  |        |  |           |  |           |  |         |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



SOURCE MODE 2/2

| GROUP  | Key               | No.             | FUNCTION<br>(U, C, R, K, A, B, G, F, L, J models)<br>(T model) | SOURCE MODE 1 (INPUT1)                                                                                            |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       |         | SOURCE MODE 2 (INPUT 2) |         |           |       |         |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------|-------------------|-----------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------|----|-------|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|---------|-------------------------|---------|-----------|-------|---------|-----------------------|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|-----|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|        |                   |                 |                                                                | K4                                                                                                                | K5    | K6 | K7    | K8 | K9    | K10 | K11   | K12 | K13   | K14 | K15   | K16 | K17   | K18 | K19   | K20     |                         |         |           |       |         |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| VOLUME | K47               | VOLUME (+)      | 音量                                                             | [HDMI-1] [HDMI-2] [HDMI-3] [HDMI-4] [AV-1] [AV-2] [AV-3] [AV-4] [AV-5] [AV-6] [AUDIO-1] [AUDIO-1] [V-AUX] [PHONO] |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       |         | [USB]                   | [DOCK]  | [TUNER]   |       |         |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|        |                   |                 |                                                                | ID1                                                                                                               |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       |         |                         |         |           |       |         |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| SOURCE | K55               | TOP MENU<br>主菜单 | TO-C1                                                          | -                                                                                                                 | -     | -  | -     | -  | -     | -   | -     | -   | -     | -   | -     | -   | -     | -   | -     | 7F01-2D | 7F01-2DD8               | 7F01-0D | 7F01-0DF3 | 7A-AE | 7A-AE50 |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|        |                   |                 |                                                                |                                                                                                                   |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       |         |                         |         |           |       |         | * keep on SOURCE MODE |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| K56    | POP-UP MENU<br>弹出 | TO-CF           | * keep on SOURCE MODE                                          |                                                                                                                   |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       | 7F01-2F | 7F01-2FD1               | 7F01-0F | 7F01-0FF1 | 7A-AB | 7A-AB55 |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|        |                   |                 | * keep on SOURCE MODE                                          |                                                                                                                   |       |    |       |    |       |     |       |     |       |     |       |     |       |     |       |         |                         |         |           |       |         |                       |       |   |       |   |       |   |       |   |       |   |       |   |       |   |       |     |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| K1     | SOURCE            | TO-80           | 7C-80                                                          | -                                                                                                                 | 7C-8B | -  | 7C-85 | -  | 7C-83 | -   | 7C-82 | -   | 7C-86 | -   | 7C-87 | -   | 7C-89 | -   | 7C-8A | -       | 7C-94                   | -       | 7C-95     | -     | 7C-96   | -                     | 7C-97 | - | 7C-98 | - | 7C-99 | - | 7C-9A | 7 | 7C-9B | - | 7C-9C | 9 | 7C-93 | 0 | 7C-9D | +10 | 7C-9E | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



■ ADVANCED SETUP

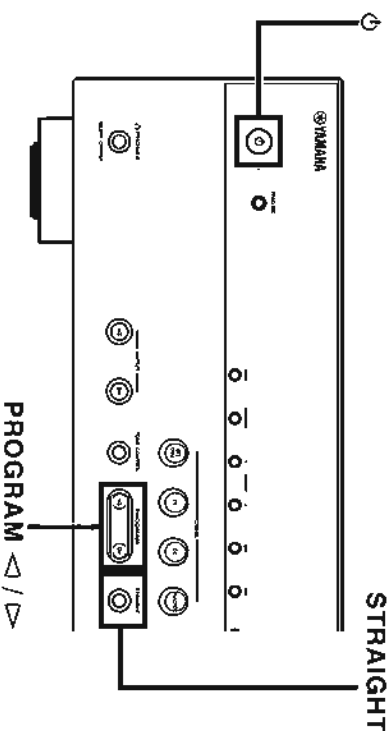
The Advanced Setup menu can be used for unit initialization and other useful extended functions. The Advanced Setup menu can be operated as follows.

Displaying/Setting the *Advanced Setup* menu

1 Switch this unit to the standby mode.

2 Press **⏻** while pressing and holding **STRAIGHT** on the front panel.

Release the keys when “ADVANCED SETUP” is displayed on the front panel display.  
After approximately a few seconds, the top menu items are displayed.



3 Use **PROGRAM** **◀ / ▶** to select the item to be set from the following items.

In the Advanced Setup menu, you can set the following settings.

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| SP IMP. (U, C models) | Sets the impedance of speakers.                     |
| REMOTE ID             | Changes the remote control ID of a receiver.        |
| TU (R, L models)      | Selects one of the following FM/AM frequency steps. |
| INIT                  | Initializes various settings for this unit.         |

4 Press **STRAIGHT** repeatedly to select the value you want to change.

5 Switch this unit to the standby mode, and then switch it on again.

The settings become effective and the unit is powered on. If initialization is selected, it will be performed when the unit is powered on again.

Setting the impedance of speakers (U, C models)

SP IMP. 80MIN

Changes the unit settings depending on the impedance of the speakers connected. **⚙1**

|                 |                                                            |
|-----------------|------------------------------------------------------------|
| 60MIN           | Select the impedance when 60 speakers are connected.       |
| 80MIN (Default) | Select the impedance when speakers above 80 are connected. |

**⚙1** : For detailed procedures of speaker impedance settings, refer to “(U, C models) Changing speaker impedance”.

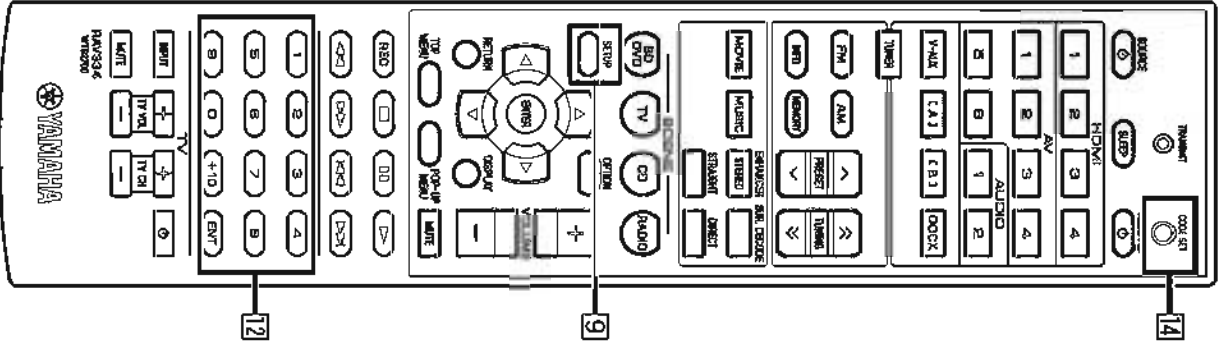
## Avoiding crossing remote control signals when using multiple Yamaha receivers

### REMOTE ID --- ID1

The remote control of the unit can only receive signals from a receiver which has an identical ID (remote control ID). When using multiple Yamaha AV receivers, you can set each remote control with a unique remote control ID for its corresponding receiver. On the contrary, if you are setting the same remote control ID for all receivers, you can use one remote control to operate 2 receivers.

| ID1 (Default) | Receives the remote control signals set in ID1. |
|---------------|-------------------------------------------------|
| ID2           | Receives the remote control signals set in ID2. |

ID1 is set for both remote control and receiver by default. To avoid crossing remote control, change the remote control ID for both remote control and receiver.



- 9 SETUP
- 12 Numeric keys
- 14 CODE SET

### ■ To change the remote control ID

Perform each of the following steps within 1 minute. Settings will be automatically stopped if more than 1 minute passes since the last operation. To reset, repeat from step 1.

**1** Press **14**CODE SET on the remote control using a pointed object such as the tip of a ballpoint pen.

**2** Press **9**SETUP on the remote control.

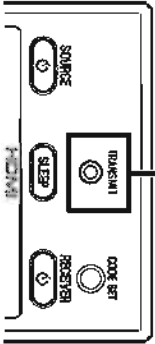
**3** Enter the desired remote control ID code.

To switch to ID1:  
Enter “5019” using **12**Numeric keys.

To switch to ID2:  
Enter “5020” using **12**Numeric keys.

Once the remote control code is registered successfully the remote control will blink twice.

Registration successful: blinks twice  
Registration failed: blinks 6 times



- If setup fails, repeat from step 1.
- Returns to ID1 after the remote control code is initialized.

## Changing FM/AM frequency steps (R, L models)

### FM --- FM9/FM50

You can select one of the following FM/AM frequency steps: **FM1**

| FM10/FM100         | You can adjust the AM frequency by steps of 10kHz and FM by steps of 100kHz. |
|--------------------|------------------------------------------------------------------------------|
| FM9/FM50 (Default) | You can adjust the AM frequency by steps of 9kHz and FM by steps of 50kHz.   |

**FM1** : For details on setting FM/AM frequency steps, refer to “FM/AM tuning”.

## Initializing various settings for this unit

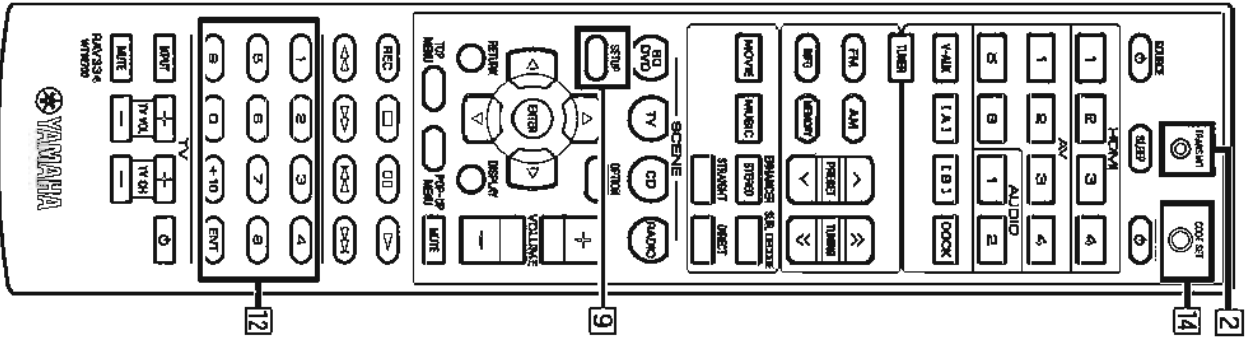
### INIT --- CANCEL

Initializes various settings stored in this unit and sets it back to default.

Select the items to be initialized from the following.

| DSP PARAM        | Initializes all parameters for the sound field programs. |
|------------------|----------------------------------------------------------|
| ALL              | Resets this unit to default factory settings.            |
| CANCEL (Default) | Does not initialize.                                     |

■ 本機の設定を変更する



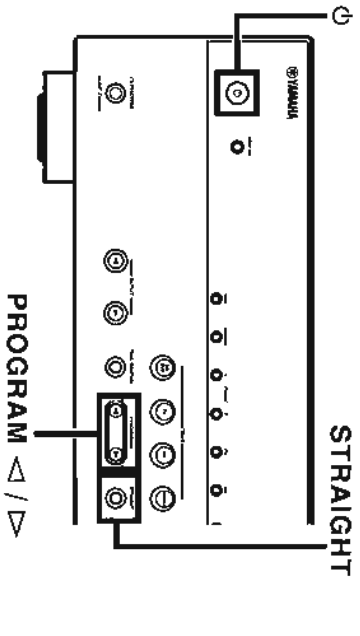
アドバンスドセットアップメニューでは、本体設定の初期化など、必要に応じて使用可能な拡張機能を設定/実行できます。アドバンスドセットアップメニューは次の方法で操作できます。

アドバンスドセットアップメニューを表示/設定する

1 本機の電源をスタンバイにする。

2 フロントパネルのSTRAIGHTを押しながら **φ** を押す。

フロントパネルディスプレイに「ADVANCED SETUP」と表示されたら両方のキーから手を離してください。しばらくすると、先頭のメニュー項目が表示されます。



3 PROGRAM < / > を使って、次の中から設定したい項目を選ぶ。

アドバンスドセットアップメニューでは次の機能を設定できます。

|           |                  |
|-----------|------------------|
| REMOTE ID | 本機のリモコンIDを変更します。 |
| INIT      | 本機の各種設定を初期化します。  |

4 STRAIGHT を何度か押して設定値を選びます。

5 電源をスタンバイにしてから、再度電源をオンにする。

選んだ設定が反映され、本機の電源がオンになります。初期化を選択した場合は、再度電源をオンにすると初期化が実行されます。

リモコンIDを変更する

REMOTE ID - ID1

本機のリモコンは、ID（リモコンID）が一致するレシーバーでのみ受信できます。ヤマハ製 AV レシーバーを複数使用する場合は、それぞれのリモコンで各レシーバーを操作するために、リモコンIDが重ならないようにリモコンIDを設定します。各レシーバーを同じリモコンIDに設定すれば、1つのリモコンで2台のレシーバーを操作することも可能です。

|            |                          |
|------------|--------------------------|
| ID1 (初期設定) | ID1 に設定されたリモコンの操作を受信します。 |
| ID2        | ID2 に設定されたリモコンの操作を受信します。 |

工場出荷時には、リモコン側、レシーバー側ともにID1 に設定されています。リモコンの混信を防ぎたい場合は、レシーバー / リモコン共にリモコンIDを変更してください。

● リモコン側のIDを変更するには

次の手順はそれぞれ1分以内に操作してください。最後に操作してから1分以上経過すると、設定が自動で中止されます。再度設定する場合は、手順1からやり直してください。

1 ボールペンなどの先の細いもので、リモコンの **⑭CODE SET** を押す。

2 リモコンの **⑫SETUP** を押す。

3 希望するリモコンIDに応じてコードを入力する。

リモコンID1に切り替える場合：

**⑫数字キー**を使って「5019」と入力します。

リモコンID2に切り替える場合：

**⑫数字キー**を使って「5020」と入力します。

ID変更が完了すると、**⑫TRANSMIT** が2回点滅します。

- 設定に失敗した場合は、**⑫TRANSMIT** が6回点滅します。ID変更をやり直すには、もう一度手順1から操作してください。
- リモコンコードを初期化すると、ID1に戻ります。

本機の各種設定を初期化する

INIT - CANCEL

本機に記憶されている設定情報を初期化し、工場出荷時に戻します。

初期化する内容は下記から選択できます。

|               |                         |
|---------------|-------------------------|
| DSP PARAM     | 音場プログラムのすべての設定を初期化します。  |
| ALL           | すべての設定を工場出荷時の状態に初期化します。 |
| CANCEL (初期設定) | 初期化しません。                |