

# Service Manual

## Audio Mixer WR-DA7

# RAMSA



The Meter Bridge shown in photo is one of the optional accessories.

## SPECIFICATIONS

### General

Power requirement :	AC 120 V 60 Hz
Power consumption :	105 W (with options)
Frequency response :	20 Hz - 20 kHz, +1 dB - -2 dB
T.H.D. (total harmonic distortion) :	Less than 0.1 % (input = +10 dB/1 kHz, output = +4 dB/RL 600 $\Omega$ )
Equivalent input noise :	-128 dB (Rs = 150 $\Omega$ Input sensitivity = -60 dB typical)
Residual noise :	-93 dB typical
Maximum voltage gain :	84 dB: MIC/LINE(1-16) in to BUS out 84 dB: MIC/LINE(1-16) in to MASTER out 84 dB: MIC/LINE(1-16) in to AUX out
Common Mode Rejection Ratio :	More than 80 dB (1kHz)
Crosstalk :	90 dB typical (1kHz)
Dynamic Range (Fs = 48kHz, DIN audio filter) :	113 dB typical : DA converter (digital in to analog out) 112 dB typical : AD converter (analog in to digital out) 110 dB typical : AD + DA (analog in to analog out)
AD Converter :	24 bit, 64 times oversampling (input 1 to 16) 20 bit, 64 times oversampling (aux returns 3 to 6)
DA Converter :	24 bit, 64 times oversampling (MASTER, MONITOR A) 24 bit, 128 times oversampling (MONITOR B) 20 bit, 128 times oversampling (aux returns 3 to 6)
Internal signal processing :	32 bit (Dynamic range 192 dB)
Sampling Frequency (Fs) :	Internal: 44.1 kHz and 48 kHz External: 44.1 kHz $\pm$ 6 % and 48 kHz $\pm$ 6 %
Signal delay :	Less than 2.5 ms, MIC/LINE input to MASTER out

# Panasonic®




©1998 Matsushita Communication Industrial Co., Ltd.  
All rights reserved. Unauthorized copying and  
distribution is a violation of law.

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

 <p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p>	 <p>This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.</p>
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <p>This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.</p>

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

## Dynamics

### Compressor

Threshold :	-40 dB - 0 dB (1 dB/step)
Ratio :	1.0, 1.1, 1.3, 1.5, 1.7, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 8.0, 10, 20, ∞ (16 points)
Attack time :	0 ms - 250 ms (1 ms/step)
Release time :	5 ms - 2000 ms (5 ms/step)
Gain :	0 dB - +12 dB (0.5 dB/step)

### Gate

Threshold :	-80 dB - -15 dB (1 dB/step)
Attack Time :	0 ms - 250 ms (1 ms/step)
Release time :	5 ms - 2000 ms (5 ms/step)

### Expander

Threshold :	-80dB - -15dB (1dB/step)
Ratio :	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, ∞
Attack time :	0 ms - 250 ms (1 ms/step)
Release time :	5 ms - 2000 ms (5 ms/step)
Range :	0 dB - +40 dB (0.5 dB/step)

## Equalizer

LOW band PEQ (parametric equalizer) type:	Q = 0.5 - 50 (41 steps) F = 20 Hz - 20 kHz (1/12 oct step) G = ± 15 dB (0.5 dB/step)
LOW band SHL (shelving low) type :	F = 20 Hz - 1.6 kHz (1/12 oct step) G = ± 15 dB (0.5dB/step)
LOW band HPF (high-pass) type :	F = 20 Hz - 1.6 kHz (1/12 oct step)
LOW-MID band PEQ type :	Q = 0.5 - 50 (41 steps) F = 20 Hz - 20 kHz (1/12 oct step) G = ± 15dB (0.5dB/step)
HIGH-MID band PEQ type :	Q = 0.5 - 50 (41 steps) F = 50 Hz - 20 kHz (1/12 oct step) G = ± 15 dB (0.5 dB/step)
HIGH band PEQ type :	Q = 0.5 - 50 (41 steps) F = 50 Hz - 20 kHz (1/12 oct step) G = ± 15 dB (0.5 dB/step)
HIGH band SHH (shelving high) type :	F = 1 kHz - 20 kHz (1/12 oct step) G = ± 15 dB (0.5 dB/step)
HIGH band LPF (low-pass) type:	1 kHz - 20 kHz (1/12 oct step)

**Delay :** 0 - 14,400 samples/0 - 300 ms (Fs = 48 kHz), 0 - 326 ms (Fs = 44.1 kHz)  
**Phase :** normal/reverse (switchable)  
**Stereo meter :** Bar graph type LED, Left and Right, 20 points for each  
 VU or PPM (selectable), Peak hold on/off, ∞  
**Fader :** 100 mm motor fader ( x 21), +10 dB - -90 dB -∞ dB  
**Display :** LCD, 320 x 240 dot, with backlight  
**Memory :** SCENE MEMORY (Snapshot) 50 registers  
 CHANNEL library 50 registers  
 EQUALIZER library 50 registers  
 DYNAMICS library 50 registers  
 AUTOMATION 4 mix  
**Ambient operating temperature :** 0 °C - 40 °C (32 °F - 104 °F)  
**Dimensions (mm) :** 698 (W) x 244 (H) x 549.5 (D)  
**Weight (without options) :** 23kg (51lbs)  
**Finish :** ABS resin (Top Panel), Blue black  
**Standard Accessories :** Power Cord, Users' Guide, Warranty Card, Registration Card

Dimensions and weights indicated are approximate.  
 Specifications are subject to change without notice.

### Analog Inputs (0 dB = 0.775 Vrms, 0 dBV = 1 Vrms)

Input Type	Source Impedance	Signal Level (Nominal-before clipping)	Connector Type
CH input 1-8 5 kΩ	mics, 50 Ω - 600 Ω	-60 dB - -46 dB	XLR 3-31 (bal)
	lines, 600 Ω	+10 dB - +24 dB	XLR 3-31 (bal)
CH input 9-16 5 kΩ	mics, 50 Ω - 600 Ω	-60 dB - -46 dB	TRS phone jack (bal)
	lines, 600 Ω	+10 dB - +24 dB	TRS phone jack (bal)
CH Insertion Returns 1-16 10 kΩ	lines, 600 Ω	+4 dB - +18 dB	TRS phone jack (unbal)
	lines, 600 Ω	+4 dB - +18 dB	TRS phone jack (bal)
AUX returns 3-6 10 kΩ	lines, 600 Ω	+4 dB - +18 dB	TRS phone jack (unbal)

### Analog Outputs (0 dB = 0.775 Vrms, 0 dBV = 1 Vrms)

Input Type	Output Impedance	Adapted Load Impedance	Signal Level (Nominal-before clipping)	Connector Type
MASTER L/R 5 kΩ	150 Ω	lines 600 Ω	+4 dB - +18 dB	XLR 3-32 (bal)
AUX sends 3 - 6	75 Ω	lines 10 kΩ	+4 dB - +18 dB	TRS phone jack (unbal)
INSERTION 1 - 16	10 Ω	lines 10 kΩ	+4 dB - +18 dB	TRS phone jack (unbal)
REC OUT L/R (analog)	150 Ω	lines 10 kΩ	+4 dB - +18 dB	TRS phone jack (bal)
MONITOR A out L/R	150 Ω	lines 600 Ω	+4 dB - +18 dB	TRS phone jack (bal)
MONITOR B out L/R	150 Ω	lines 600 Ω	+4 dB - +18 dB	TRS phone jack (bal)
Headphones	8 Ω	phones 40 Ω/8 Ω	400 mW/100mW	Stereo phone jack (unbal)

### Digital In and Out

#### 2TR IN (INPUT 15,16) :

**In/Out :** In  
**Format :** IEC 958 Professional (AES/EBU) or Consumer (S/PDIF) switchable  
**Level :** RS-422 (AES/EBU) or 0.5 V [pp]/75 Ω (S/PDIF)  
**Connector :** XLR 3-31

#### REC OUT :

**In/Out :** Out  
**Format :** IEC 958 Professional (AES/EBU) or Consumer (S/PDIF) switchable  
**Level :** RS-422 (AES/EBU) or 0.5 V [pp]/75 Ω (S/PDIF)  
**Connector :** XLR 3-32

#### AUX RETURN 1/2 :

**In/Out :** In  
**Format :** IEC 958 Consumer (S/PDIF)  
**Level :** 0.5 V [pp]/75 Ω  
**Connector :** RCA pin jack

**AUX SEND 1/2 :**

In/Out : Out  
 Format : IEC 958 Consumer (S/PDIF)  
 Level : 0.5 V [pp]/75 Ω  
 Connector : RCA pin jack

**WORD CLOCK IN :**

In/Out : In  
 Level : TTL/75Ω switchable  
 Connector : BNC

**WORD CLOCK OUT/THROUGH :**

In/Out : Out  
 Level : TTL/75 Ω, Pass-through (75 Ω OFF) or termination (75 Ω ON)  
 Connector : BNC

**MIDI IN :**

In/Out : In  
 Format : MIDI  
 Connector : DIN Connector 5P

**MIDI OUT :**

In/Out : Out  
 Format : MIDI  
 Connector : DIN Connector 5P

**TO PC :**

In/Out : In and Out  
 Connector : Mini-DIN Connector 8P

**RS422/485 :**

In/Out : In and Out  
 Connector : D-sub 9P

**FOOT SWITCH :**

In/Out : In  
 Level : TTL level, Normally Open (Unlatch type)  
 Connector : Phone jack

## Optional Accessories

**Meter Bridge :**

Type : Bargraph LED, 26 channels, 15 points for each  
 Format : RAMSA original Level NET II  
 Power : DC 7 V  
 Connector : D-sub 15P

**WR-ADTA (ADAT Interface card (8 in / 8 out))**

Type : ADAT (DIRECT OUT / BUS / AUX / MASTER, Input 9-32)  
 In/Out : In and Out  
 Connector : Optical

**WR-TDIF (TDIF Card (8 in / 8 out))**

Type : TDIF (DIRECT OUT / BUS / AUX / MASTER, Input 9-32)  
 In/Out : In and Out  
 Format : TDIF-1  
 Connector : D-sub 25P (in and out)

**WR-AESS (AES/EBU Card (8 in / 8 out))**

Type : AES/EBU/SPDIF  
 Signal type : RS422  
 Connector : D-sub 25P (in and out)

### **WR-ADDA (A-D/D-A Card (8 in / 8 out))**

Input 1 - 8 (balanced)	
Indicated impedance :	10k $\Omega$
Nominal source impedance :	50 $\Omega$ ~ 600 $\Omega$
Nominal input level :	+4dB (1.23V)
Maximum input level before clipping :	+18dB (6.15V)
Connector type :	D-sub 25P
Output 1 - 8 (balanced)	
Indicated impedance :	10k $\Omega$
Nominal source impedance :	150 $\Omega$
Nominal input level :	+4dB (1.23V)
Maximum input level before clipping :	+18dB (6.15V)
Connector type :	D-sub 25P

### **WR-SMPT (SMPTE/V SYNC Card)**

SMPTE IN	
In/Out :	In
Format :	SMPTE (LTC)
Signal type :	nominal -10dBV / 10k $\Omega$
Connector :	XLR
V SYNC	
In/Out :	In
Format :	NTSC (B/W or color) / PAL
Signal type :	75 $\Omega$ , termination
Connector :	BNC

### **WR-TNDM (TANDEM Card (for running two DA7 mixers simultaneously))**

Type :	TANDEM connection
In/Out :	In and Out
Format :	RAMSA SSA
Signal type :	RS422
Connector :	D-sub 25P

# PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE

## SAFETY PRECAUTIONS

### GENERAL GUIDELINE

1. When service is required, observe the original lead dress. Components, wires or cables that indicate evidence of overheating or other electrical or mechanical damage should be replaced.
2. After servicing see to that all the protective devices, such as insulation tape, shields must be properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc.  
When the exposed metallic part has a return path to the chassis, the reading should be between  $1M \Omega$  and  $5.2M \Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$  (infinity).  
Any resistance value below this range indicates an abnormality which requires corrective action.
3. Repeat the test with the AC switch in the "OFF" position.

### LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into adaptor socket and plug adaptor into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5k \Omega/10W$  resistor, paralleled by  $0.15 \mu F$  capacitor, between each exposed metallic part on the unit and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with  $1000\Omega/\text{volt}$  or more sensitivity, to measure the potential across the resistor.
4. Check all exposed metallic parts of the cover (BNC connector, Handle bracket, Metallic cabinet, Screwheads, Metallic overlays, etc.), and measure the voltage at each point.
5. Reverse the AC plug in the AC plug adaptor and re-peat each of the above measurements.
6. The potential at any point should not exceed  $0.75 \text{ V RMS}$ . A leakage current tester (SIMPSON MODEL 229 or equivalent) may be used to make the hot checks. Leakage current must not exceed  $0.5$  milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and corrective action must be taken before returning the instrument to the customer.

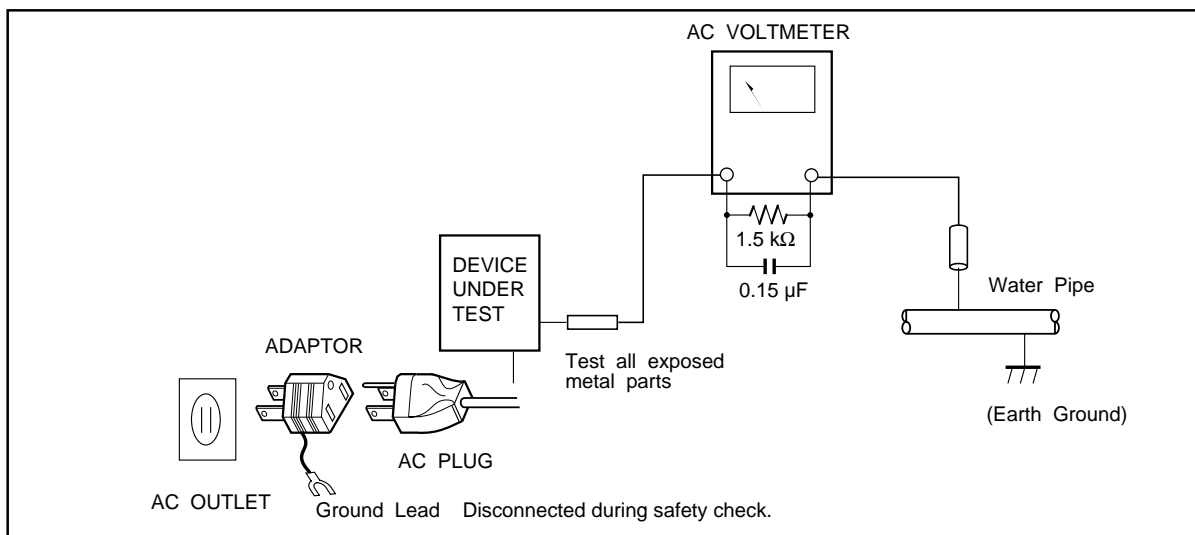


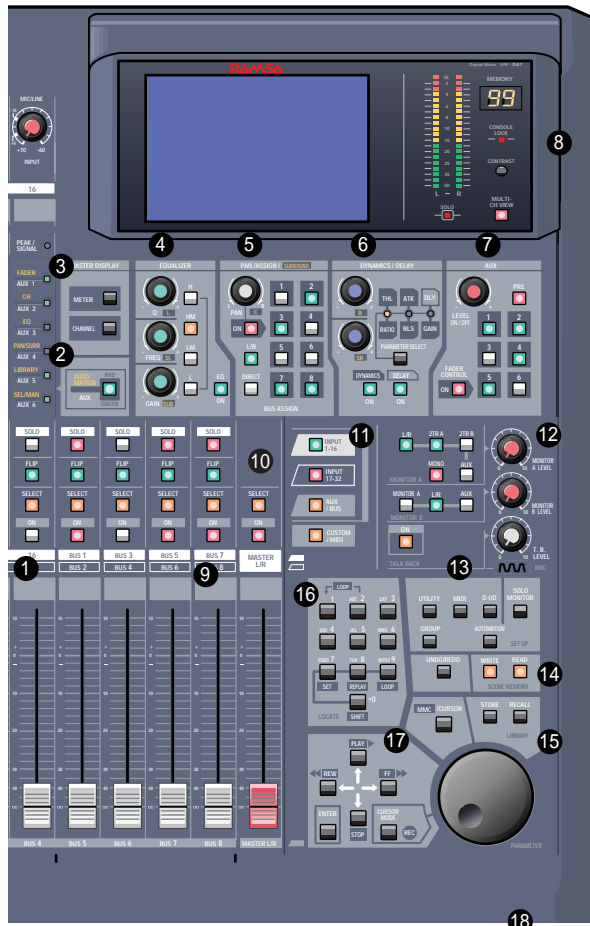
Fig. 1 Leakage Current Hot Check

# CONTENTS

<b>Major Operating Controls and Their Functions</b> .....	1
<b>Self Check Procedure</b> .....	15
<b>Wiring Diagram</b> .....	22
<b>Block Diagram</b>	
Overall Block Diagram .....	23
Main Board (CPU Section) .....	24
Main Board (Panel Control CPU Section) .....	25
Main Board (DSP Section-1) .....	26
Main Board (DSP Section-2) .....	27
Main Board (Audio Interface Section) .....	28
AD/DA Board (1/2) .....	29
AD/DA Board (2/2) .....	30
Fader Drive Board (1/2) .....	31
Input Switch Board/Fader Drive Board (2/2) .....	32
HA Board and INS Board .....	33
Monitor VR/HP/TB Boards .....	34
EFX Board .....	35
Block Diagram .....	36
Level Diagram .....	37
<b>Schematic Diagram</b>	
Monitor VR/HP/TB Boards .....	39
Bus Relay Board .....	40
Power-1/Power-2 Boards .....	42
HA Board and INS Board .....	45
EFX/Meter Board .....	46
Fader Drive Board .....	48
Input Switch Board .....	51
AD/DA Board (2/3) .....	53
AD/DA Board (3/3) .....	54
AD/DA Board (1/3) .....	55
Main Board (1/4) .....	56
Main Board (2/4) .....	57
Main Board (3/4) .....	58
Main Board (4/4) .....	59
WR-MTBR .....	60
WR-TNDM .....	63
WR-TDIF .....	64
WR-SMPT .....	67
WR-AESS .....	68
WR-ADAT .....	71
<b>Conductor View</b>	
Monitor VR/HP/TB Boards .....	38
Bus Relay Board .....	41
Power-1/Power-2 Boards .....	43
HA Board and INS Board .....	44
EFX/Meter Board .....	47
Fader Drive Board .....	49
Input Switch Board .....	50
AD/DA Board .....	52
Main Board .....	58
WR-MTBR .....	61
WR-TNDM .....	62
WR-TDIF .....	65
WR-SMPT .....	66
WR-AESS .....	69
WR-ADAT .....	70
<b>Exploded View</b>	
WR-DA7 .....	72
WR-MTBR .....	73
WR-TNDM .....	74
WR-TDIF .....	75
WR-SMPT .....	76
WR-AESS .....	77
WR-ADAT .....	78
<b>Replacement Parts List</b> .....	79

# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

## Illustrated Guide

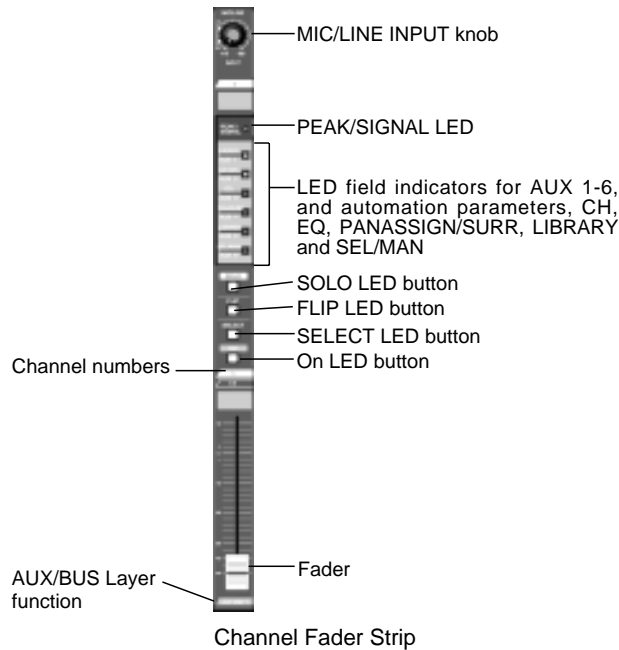


- 1 **Channel Strip** – input gain controls with channel control and status indicators. Also called a Channel Fader Strip.
- 2 **AUTOMATION/AUX LED** button – selects the display mode of the Channel Strip LED field indicators, and arms the AUTOMATION system.
- 3 **MASTER DISPLAY** section – the METER and CHANNEL buttons are direct buttons to the respective LCD screen windows. These should be considered as "home base" for the LCD display.
- 4 **EQUALIZER** section – controls for setting the equalization parameters for a selected channel.
- 5 **PAN/ASSIGN/SURROUND** , **BUS ASSIGN** section – controls for setting the pan and bus assignments for a selected channel.
- 6 **DYNAMICS/DELAY** section – controls for setting the onboard dynamics processing parameters for a selected channel.

- 7 **AUX** section – controls for routing channels to outboard sources and for defining the signal path as either pre-fader or post-fader.
- 8 **Display Bridge** – contains the LCD screen, L/R meter display, and primary mixer display status indicators.
- 9 **BUS Fader Strip** – controls for output BUSES.
- 10 **MASTER L/R Fader Strip** – controls for L/R MASTER output.
- 11 **Fader Layer Controls** section – selects the current fader layer to be displayed.
- 12 **MONITOR** section – volume and selection controls for monitoring.
- 13 **SETUP** section – mixer function, or display control buttons.
- 14 **SCENE MEMORY** section – buttons for writing and reading the 50 mixer scene memories.
- 15 **LIBRARY** section – buttons for storing and recalling Channel, EQ and Dynamics libraries.
- 16 **Keypad** – alphanumeric keys for entering numbers or text.
- 17 **Cursor Control** section – buttons and controls for defining the cursor actions.
- 18 **Headset Control** section – the location of the headset connector and level control of the DA7 is immediately below the right front edge of the Top Panel.



## 1 Channel Fader Strip



There are sixteen Channel Fader Strips on the **DA7**. Depending on the selection of the four **Fader Layer** controls, each strip directly controls (1) **INPUT 1-16**, (2) **INPUT 17-32**, (3) **AUX/BUS** (indicated on the bottom of the strip), and (4) a user CUSTOM/MIDI function.

The **MIC/LINE INPUT** knob varies the channel input gain volume and adjusts for either a mic or line-level input. Due to the high quality design of this circuit, there is no pad switch necessary; the input knob range sets the input level. This knob only affects the analog inputs 1-16.

The **PEAK/SIGNAL LED** indicates when an input signal is present (*green*), and when the input signal level is too high (*red*).

The LED field indicators reflect the auxiliary (**AUX**) routing assignments and automation parameters. The LED color signifies the **AUTOMATION/AUX** button selection; **AUX** (*green*), **AUTOMATION** (*red*).

The **SOLO LED** button toggles on (*red*) or off. When on, the channel output will be routed to the **MONITOR A** speakers (overriding the **MONITOR A** input), and to the headphones.

The **FLIP LED** button flips the control of the **Channel Fader Strip** from one input layer to the other. The LED color indicates the current input selection and matches the **Fader Layer** control LED button colors, **INPUTS 1-16** (*green*) or **INPUTS 17-32** (*red*).

The **SELECT LED** button, when on (*orange*), identifies the channel as the current channel selected. Only one **Fader Strip** can be selected at a time (unless it's in stereo or link mode).

For more detail, see **Chapter 5, Channel, Library, and Meter Windows** in the Users' Guide.

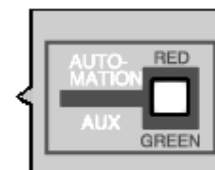
The **ON LED** button toggles on (*red*) and off. When on, the channel output is active.

There are two channel numbers for each strip, indicating the **INPUT** connections on the Rear Panel of the **DA7**.

The **AUX/BUS** label at the bottom of a **Channel Fader Strip** indicates its function when the **AUX/BUS Fader Layer** control is selected.

See **Chapter 6, Fader Layers and Channel Strips** in the Users' Guide for additional information.

## 2 AUTOMATION/AUX LED Button

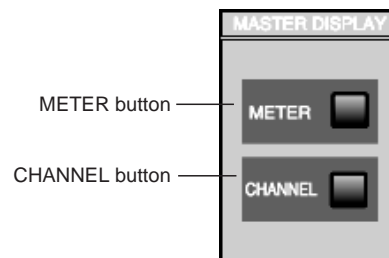


AUTOMATION/AUX LED Button

The **AUTOMATION/AUX LED** button toggles the display of the **Channel Fader Strips** LED field indicators. The LED color indicates the current selection.

See **Chapter 14, Automation** and **Chapter 10, AUX** in the Users' Guide for additional information.

## 3 MASTER DISPLAY Section



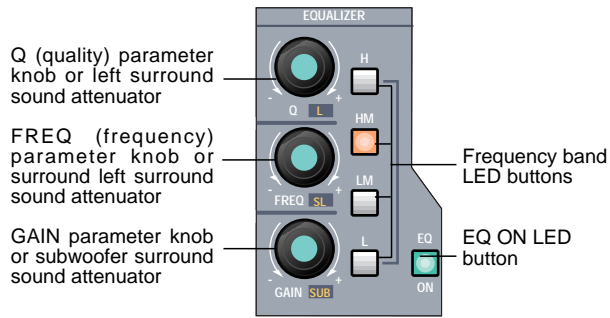
MASTER DISPLAY Section

Pressing the **METER** button will display the **[METER]** window group on the LCD screen in the **Display Bridge**. Pressing the **METER** button again will cycle the three window selections: **[METER INPUTS 1-32]**, **[BUS/AUX]**, **[SLOT]**.

Pressing the **CHANNEL** button will display the **[CHANNEL]** window group on the LCD screen in the **Display Bridge**. The window displayed will show the current mixer strip selected.

See **Chapter 5, Channel, Library, and Meter Windows** in the Users' Guide for additional information.

#### 4 EQUALIZER Section



EQUALIZER Section

There are three parameter knobs and four frequency range LED buttons in the **EQUALIZER** section, which are used to change the EQ settings of the currently selected channel. The **EQ ON** LED button toggles the **EQUALIZER** on (green) and off. When the controls are active, adjustments can be made to the currently selected channel.

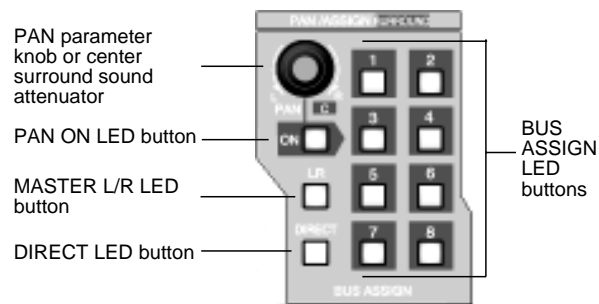
The three knobs are labeled **Q** (quality), **FREQ** (frequency), and **GAIN** (gain). The additional labeling of **L** (left), **SL** (surround left), and **SUB** (surround subwoofer) indicate the surround sound parameters that are controlled by the knobs when the **[SURROUND]** mixing area is activated. Surround sound capabilities are discussed in **Chapter 8**.

The four frequency band LED buttons can be selected one at a time, and turn on (orange) to show which band is operating. They are labeled **H** (high), **HM** (high-mid), **LM** (low-mid), and **L** (low).

Pressing the **GAIN** knob displays the **[EQUALIZER]** window on the LCD screen. Once the **[EQUALIZER]** is displayed in the LCD window, these buttons perform other shortcut functions.

The **EQUALIZER** section is detailed in **Chapter 7** in the Users' Guide.

#### 5 PAN/ASSIGN/SURROUND, BUS ASSIGN Section



PAN/ASSIGN/SURROUND, BUS ASSIGN Section

Pan, bus assignment, and surround sound parameters for the selected channel is set within this area. The pan control is always active for the **L/R** bus, so you do not need to activate the **ON** button to pan across the Master **L/R** out. However, if you wish to pan between odd/even buses, you must push the **ON** button. Assignment to the **DIRECT** output is not affected by the pan control.

The additional labeling of **C** (center) indicates the surround sound parameter that is controlled by the knob when the **[SURROUND]** mixing area is activated.

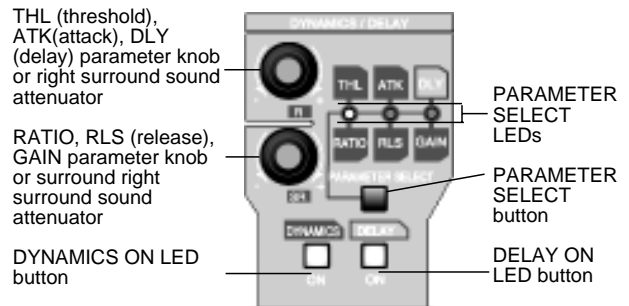
The **L/R**, the **DIRECT**, and the **BUS ASSIGN** LED buttons toggle on (green) and off. In addition to the eight bus selections, labeled 1 - 8, selections for **L/R** (master L/R) output and **DIRECT** output are available. The **DIRECT** output works in conjunction with the option cards installed in the **DA7** Rear Panel, routing signals directly to the cards.

The **DIRECT** output is detailed in **Chapter 12, D-I/O** (Digital Input/Output) in the Users' Guide.

Pressing the **PAN** knob displays the **[SURROUND]** window on the LCD screen.

The **PAN/ASSIGN/SURROUND**, **BUS ASSIGN** section of the Top Panel is detailed in **Chapter 8** in the Users' Guide.

#### 6 DYNAMICS/DELAY Section



DYNAMICS/DELAY Section

**DYNAMICS** and/or **DELAY** processing can be added to each of the **DA7 Channels**. Pressing the **PARAMETER SELECT** button cycles the current parameter selections, which are grouped in pairs. The top knob adjusts the top parameter selection in the pair, and the bottom knob adjusts the bottom parameter selection in the pair. The **DYNAMICS ON** LED button toggles the dynamics processing on (green) and off for the selected channel, and the **DELAY ON** LED button toggles the delay on (green) and off.

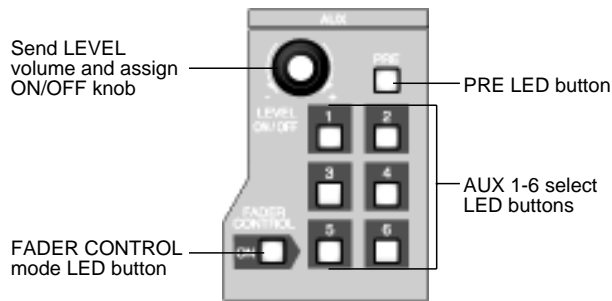
The additional labeling of **R** (right) and **SR** (surround right) indicates the surround sound parameters that are controlled by the knobs when the **[SURROUND SOUND]** mixing area is activated. The surround sound function is activated in the **[SURROUND]** window of the **[SURROUND]** window group.

See **Chapter 8** in the Users' Guide for more information on surround sound.

Pressing the bottom knob displays the **[DYNAMICS]** window group on the LCD screen.

For more information on the **DYNAMICS/DELAY** section of the Top Panel, see **Chapter 9** in the Users' Guide.

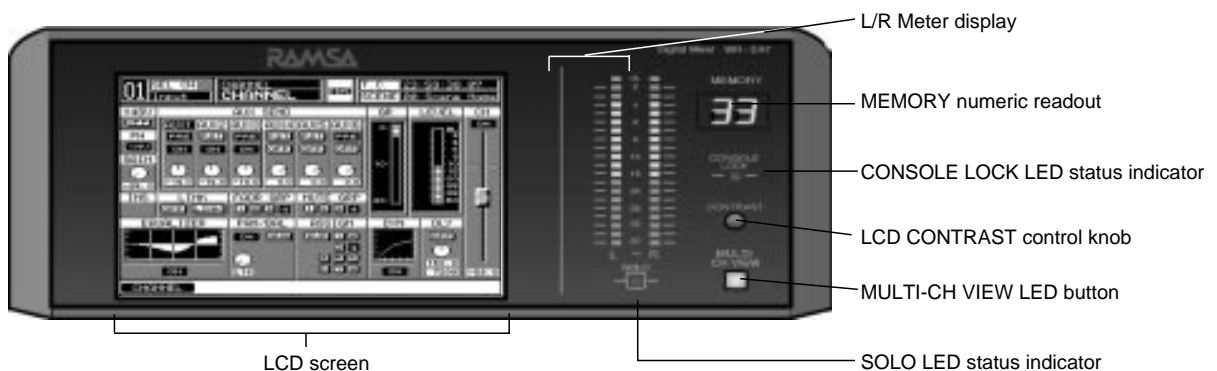
## 7 AUX Section



AUX Section

This section of the Top Panel contains controls for routing selected channels from/to outboard sources. These six aux routes are independent of the channel input connectors on the Rear Panel of the **DA7** and greatly expand the flexibility of the mixer. They can be used as six mono sends, or in stereo pairs (such as 1&2, 3&4, 5&6), and six mono returns or stereo pairs. There are two digital aux routes, **AUX 1/2**, and four analog aux routes, **AUX 3/4** and **AUX 5/6**. These are paired for convenience on the Rear Panel connectors. If you wish to use them as Mono channels, connect a standard audio "Y" cable (available at your dealer) to split the audio channels.

## 8 Display Bridge



Display Bridge Section

The **Display Bridge** contains the information for the current status of the **DA7** and the LCD screen. The various windows for the functions and features of the mixer are displayed on the LCD screen.

With a channel selected, press an **AUX 1-6** LED button (green) to select which aux route you wish to assign for the channel. The **LEVEL** knob performs two functions. By pressing the knob, you will assign the channel to the selected aux route, and by turning the knob, you can adjust the individual channel output to the aux selection. The LED field of the **Channel Fader Strips** will reflect the aux assignments for the channels.

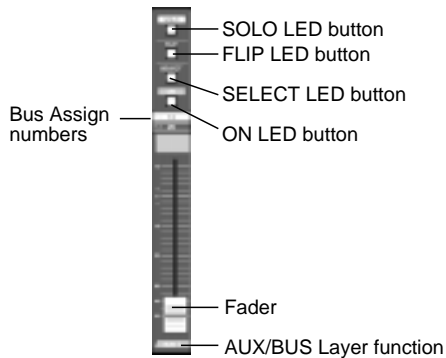
Aux routing is defaulted to a post-fader condition for the selected channel. Press the **PRE** LED button to select it (red) and change the aux routing function to a pre-fader condition.

Press the **FADER CONTROL** LED button to select it (red) and display the **[FADER CONTROL]** window group on the LCD screen. The window displayed will be determined by the current **AUX 1-6** LED button selection. The channel fader status of the 32 input channels for the aux selected will be reflected in the **[FADER CONTROL]** window, and the **Channel Faders** will reset to their respective level positions for the aux selected.

The **AUX/BUS** designations at the bottom of the **Channel Fader Strips** identify the strip functions when the **Fader Layer AUX/BUS** LED button is pressed.

For more information on the **AUX** section of the Top Panel see **Chapter 10** in the Users' Guide.

## 9 BUS Fader Strip



BUS Fader Strip

There are four **BUS Fader Strips** on the **DA7**. In conjunction with the **Fader Layer** controls, each strip directly controls the **BUS** outputs, or the **AUX/BUS** functions which are indicated on the bottom of the strip or a user **CUSTOM/MIDI** function.

The **SOLO** LED button toggles on (*red*) or off. When on, the selected bus output will be routed to the **MONITOR A** speakers and headphones, overriding the previous input.

There are two bus numbers for each strip, indicating the **BUS ASSIGN** selections that can be controlled by the strip.

The **FLIP** LED button flips the **BUS Fader Strip** from controlling one bus to controlling the other bus for the strip. The LED color (*red* or *green*) indicates the current bus selection.

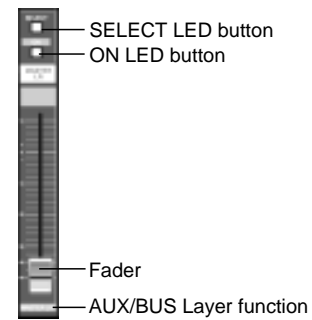
The **SELECT** LED button, when on (*orange*), identifies the bus strip as the current bus strip selected. Only one **BUS Fader Strip** can be selected at a time unless they are paired for **LINK** or **STEREO** operation.

The **ON** LED button toggles on (*red*) and off. When on, the bus output is active.

The **AUX/BUS** indication at the bottom of the **BUS Fader Strip** indicates the strip function when the **AUX/BUS Fader Layer** control is selected.

See **Chapter 6, Fader Layers and Channel Strips** in the Users' Guide for additional information.

## 10 MASTER L/R Fader Strip



MASTER L/R Fader Strip

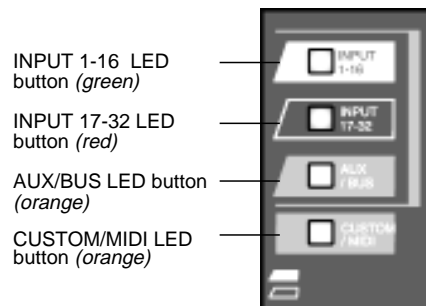
The **MASTER L/R Fader Strip** controls the **DA7** master **L/R** output.

The **SELECT** LED button, when on (*orange*), identifies the strip as the current fader strip selection.

The **ON** LED button toggles on (*red*) and off. When on, the master output is active.

See **Chapter 6, Fader Layers and Channel Strips** in the Users' Guide for additional information.

## 11 Fader Layer Controls Section



Fader Layer Controls Section

The **Fader Layer** controls significantly expand the flexibility of the **DA7** mixer. The LED button selections define the current function for the fader strips.

LED buttons for the Fader Layer controls assist you in determining or checking the current channel and bus fader settings on the mixer.

**INPUT 1-16**, when selected (*green*), resets the fader strips to control channel inputs 1 through 16, and buses 1, 3, 5, and 7. When selected, the faders move to the positions reflecting the current settings for the layer, unless previously flipped. To reset a flipped **Channel Fader Strip**, press the **FLIP** button. To reset all the currently flipped **Channel Fader Strips**, press the **INPUT 1-16 Fader Layer** control button and hold it or two seconds. This will set all faders to the selected layer.

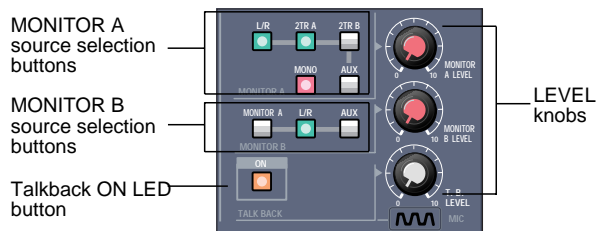
**INPUT 17-32**, when selected (*red*), resets the fader strips to control channel inputs 17 through 32, and buses 2, 4, 6, and 8. When selected, the faders move to the positions reflecting the current settings for the layer, unless previously flipped. To reset a flipped **Channel Fader Strip**, press the **FLIP** button. To reset all the currently flipped **Channel Fader Strips**, press the **INPUT 17-32 Fader Layer** control button and hold it for two seconds. This will set all faders to the selected layer.

**AUX/BUS**, when selected (*orange*), resets the fader strips to control the aux sends, aux returns, and bus outputs, while the faders move to the positions reflecting the current fader settings for the layer.

**CUSTOM/MIDI** is a user-definable **Fader Layer** control, where the functions are selectable.

See **Chapter 11, MIDI** for more information on the **DA7** MIDI feature, and **Chapter 6, Fader Layers and Channel Strips** in the Users' Guide for additional information.

## 12 MONITOR Section



MONITOR Section

The **DA7** provides controls for two monitor outputs and a talkback circuit. There are source selection LED buttons for the **MONITOR A** and **MONITOR B** outputs, and **LEVEL** knobs for both of the monitor outputs and the talkback circuit.

### MONITOR A Controls

The **MONITOR A** selection LED buttons route the input selected (*green*) to the **MONITOR A OUTPUT (CR)** (Control Room) connections on the Rear Panel of the mixer and to the headphones. The selections are:

- **L/R** routes the **MASTER L/R** output to the monitors.
- **2TR A** routes the device that is connected to **2TR A IN** on the Rear Panel to the monitors.
- **2TR B** routes the device that is connected to **2TR B IN** on the Rear Panel to the monitors.

- **AUX** routes the **AUX SEND** outputs to the monitors. Press the **AUX** LED button to monitor the selections, beginning with **AUX SEND 1/2**, followed by **AUX SEND 3/4**, and **AUX SEND 5/6**. The **MEMORY** numeric readout on the **Display Bridge** will momentarily display the **AUX SEND** selections.

The **MONO** button, when on (*red*), sums the selected input and sends a monaural signal to the monitors. This will not affect the **2TR B** output stereo signal.

### MONITOR B Controls

The **MONITOR B** selection LED buttons route the input selected (*green*) to the **MONITOR B OUTPUT (STUDIO)** connections on the Rear Panel of the mixer. The selections are:

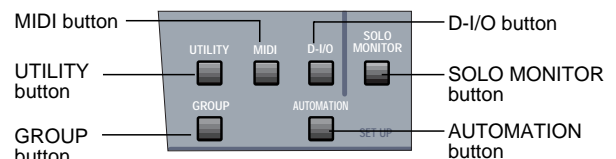
- **MONITOR A** routes the current **MONITOR A** selection to the studio monitors.
- **AUX** routes the **AUX SEND** outputs to the monitors. Press the **AUX** LED button to monitor the selections beginning with **AUX SEND 1/2**, followed by **AUX SEND 3/4**, and **AUX SEND 5/6**. The **MEMORY** numeric readout on the **Display Bridge** will momentarily display the **AUX SEND** selections.

## TALKBACK

The **TALKBACK ON** button controls the talkback microphone installed in the Top Panel of the **DA7**. When on (*orange*), the **MIC** is active and the **MONITOR A** speakers will be dimmed. This can be either a “push-to-talk” momentary interrupt type button, or a “push on/push off” type button. This is selected in the **[UTILITY]** window. Talkback routing is selected in the **[SOLO MONITOR]** window. There is also a phone jack on the Rear Panel that allows for remote Talk back operation.

For additional information on the talkback, see **Chapter 16, Utility and Solo monitor** in the Users' Guide.

## 13 SETUP Section



SETUP Section

These are direct-action buttons that will display the selected windows in the LCD screen of the **Display Bridge**.

## UTILITY Button

Pressing the **UTILITY** button will display the **[UTILITY]** window group on the LCD screen in the **Display Bridge**. The window displayed will be determined by the window selection buttons at the bottom of the window. Pressing the **UTILITY** button again will cycle the window selections: **[OSC\_BATT]**, **[CONFIGuration]**, **[USER CuSToM]**.

See **Chapter 16, Utility and Solo Monitor** in the Users' Guide for additional information.

## MIDI Button

Pressing the **MIDI** button will display the **[MIDI]** window group on the LCD screen in the **Display Bridge**. Pressing the **MIDI** button again will cycle the window selections: **[SETUP]**, **[PRoGram ASSiGN]**, **[ConTRoL ASSiGN]**, **[BULK]**, **[REMOTE]**.

See **Chapter 11, MIDI** in the Users' Guide for additional information.

## D-I/O Button

Pressing the **D-I/O** button will display the **[D-I/O]** (Digital Input/Output) window group on the LCD screen in the **Display Bridge**. Pressing the **D-I/O** button again will cycle the window selections: **[INPUT SET]**, **[TO SLOT]**, **[DITHER]**.

See **Chapter 12, D-I/O** in the Users' Guide for additional information.

## GROUP Button

Pressing the **GROUP** button will display the **[GROUP]** window selections on the LCD screen in the **Display Bridge**. Pressing the **GROUP** button again will cycle the window selections: **[FADER GRouP]**, **[MUTE GRouP]**, **[LINK/STR]**.

See **Chapter 13, Group** in the Users' Guide for additional information.

## AUTOMATION Button

Pressing the **AUTOMATION** button will display the **[AUTOMATION]** window group on the LCD screen in the **Display Bridge**. Pressing the **AUTOMATION** button again will cycle the window selections: **[SETUP]**, **[EXECUTE]**, **[EVENt EDIT]**.

See **Chapter 14, Automation** in the Users' Guide for more information.

## SOLO MONITOR Button

This button displays Solo Monitor mode, Talk back assignment and Surround Monitor.

See **Chapter 16, Utility and Solo Monitor** in the Users' Guide for additional information.

## 14 SCENE MEMORY Section



SCENE MEMORY Section

**SCENE MEMORY** allows you to store and recall complete mixer setups and functions. There are fifty registers, numbered 01 through 50, available for storage of mixer settings. Memory 00 is reserved for Automation.

Press either the **WRITE** LED button or the **READ** LED button (*orange*) to select it and display the **[ReaD/WriTe]** window of the **[SCENE MEMORY]** window group on the LCD screen of the **Display Bridge**.

There are two windows in the group: **[RD/WT]**, **[XFADE]**. The **[RD/WT]** window is always the initial window displayed when either button is selected. To change to the **[XFADE]** window, use the **ARROW** buttons to navigate to the respective window selection button and then press the **ENTER** button, or press either the **WRITE** or **READ** LED buttons a second time.

When the **[RD/WT]** window is displayed, the **JogDial** is enabled to scroll the **[SCENE MEMORY]** list area of the window. This allows you to quickly access a previously stored scene, locate an empty scene memory, or locate a scene memory to be overwritten. By pressing the **ENTER** button after a scene has been located, the mixer will immediately assume the setting for the stored scene.

The **MEMORY** readout display will flash the memory number that is selected until it is recalled. The selected memory will be displayed without flashing once it has been recalled.

While the **[RD/WT]** window is displayed, pressing the **ENTER** button will immediately overwrite the current scene memory with the settings on the mixer at the moment the **ENTER** button is pressed, unless the register is write-protected. See **Chapter 15, Scene Memory** in the Users' Guide for additional information.

## 15 LIBRARY Section



LIBRARY Section

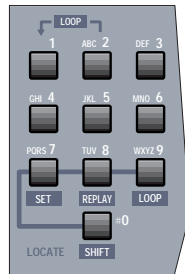
There are three mixer functions with associated libraries: **CHANNEL**, **EQUALIZER**, **DYNAMICS/DELAY**. The library feature allows you to store and recall individual function parameters to a separate library. There are fifty registers for each library, numbered 01 through 50.

The **RECALL** button opens the library window for the selected function. What this means is that if the **[CHANNEL]** window was displayed when you pressed the **RECALL** button, the **CHANNEL** library will be displayed. The same goes for the **EQUALIZER AND DYNAMICS/DELAY** libraries. Once selected, the parameter knob will allow you to scroll through the stored memories. After you have chosen a memory, press the **RECALL** button again and the selected memory will be recalled to the currently selected function. You will also automatically return to the main screen for the selected function.

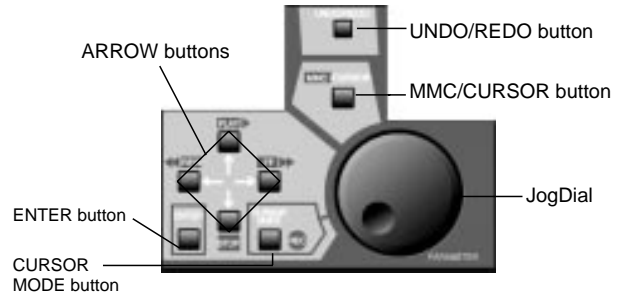
While the library is displayed, pressing the **STORE** button will immediately store the current function settings to the current memory location, unless the memory location is write-protected.

See **Chapter 5, Library** in the Users' Guide for additional information.

### 16 Keypad and 17 Cursor Control Section



Keypad



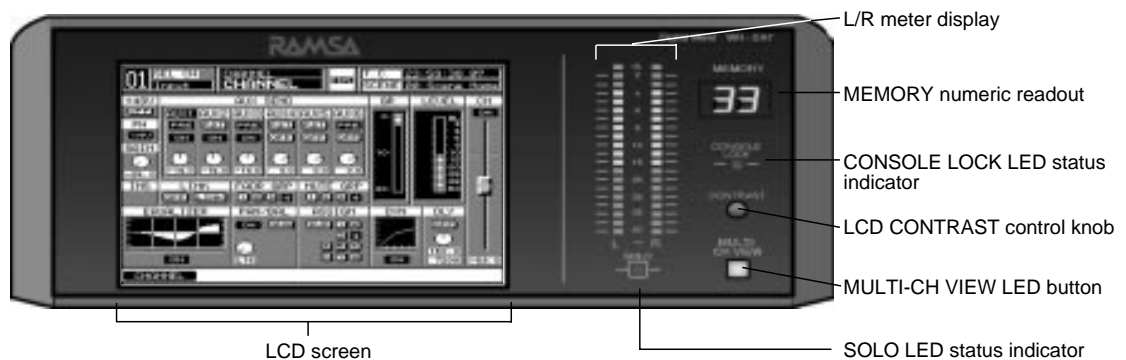
Cursor Control Section

Details on the **Keypad**, **UNDO/REDO** button, **MMC/CURSOR** button, **ARROW** buttons, **ENTER** button, **CURSOR MODE** button, and **JogDial** elements of the **DA7** Top Panel are provided in **Chapter 4** in the Users' Guide.

### 18 Headset Control Section

A stereo headset connector and headset volume control are located under the right front edge of the Top Panel of the **DA7**. The current **MONITOR A** selection is always routed to the headset connector.

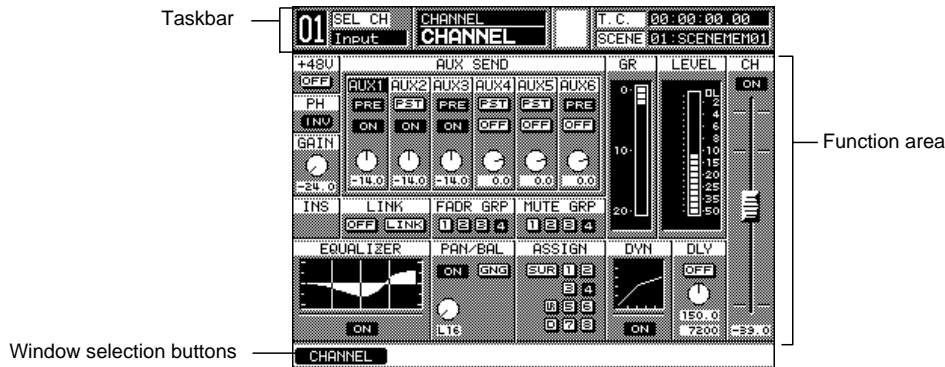
## Display Bridge



Display Bridge Section

The **Display Bridge** for the **DA7** is your “window” to the mixer functions and features. The elements comprising the **Display Bridge** are the LCD screen, the **L/R** meter display, the **MEMORY** numeric readout, the **CONSOLE LOCK** LED status indicator, the **CONTRAST** control knob, the **MULTI-CH VIEW** (multi-channel) LED button, and the **SOLO** LED status indicator.

## LCD Screen

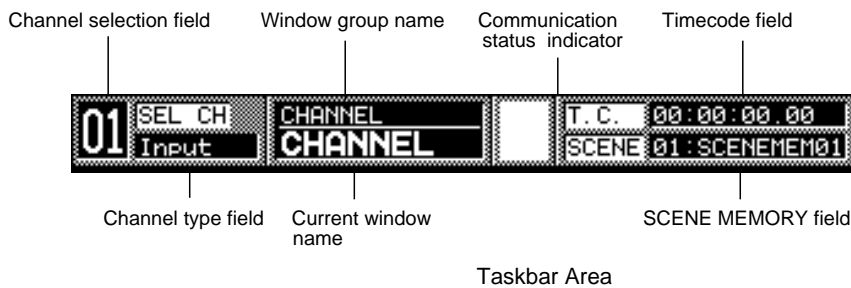


Sample Window Display (CHANNEL window displayed)

The LCD screen is the 320x240 backlit liquid-crystal display (LCD) element of the **Display Bridge**. The screen displays the various windows that show the functions and status of the **DA7**. The windows contain areas and items that can be accessed with the cursor control or **JogDial**.

There are three general areas for the windows displayed on the LCD screen: the **[taskbar]** area, the **[function]** area, the **[windows selection buttons]** area.

### Taskbar Area



The **[taskbar]** area of a window contains information about the current window and the most recent mixer selections. Several of the items in the **[taskbar]** will remain unaffected when you change to another window, depending on the new window selection.

#### Channel Selection Field

This field shows the currently selected **Channel**, **BUS**, or **MASTER L/R** strip selection. When channels or buses are paired, the field will display both numbers. The field will change when you press a different **SELECT** LED button on the Top Panel.

#### Channel Type Field

This field shows the most recently selected channel type. The field will change when you press a **SELECT** LED button on the Top Panel.

#### Window Group Name

The current window group name is displayed in this field.

#### Current Window Name

The name of the current window is displayed in this field.

#### Communication Status Indicator

This area of the **[taskbar]** displays the current communication status as configured in the **[MIDI>SETUP]** window. The selections are either **[TO PC]**, **[S I/O]**, or **[MIDI]**.

#### Timecode Field

This field displays the most recent time code value received by the mixer, as defined by the settings in the **[AUTOMATION>EXECUTE]** window.

#### SCENE Field

This field displays the most recently read **SCENE MEMORY** number and name.



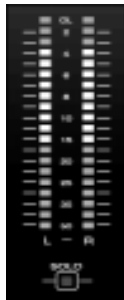
### Function Area

The [function] area of a window contains the various controls, buttons, settings, and values for the current window.

### Window Selection Buttons Area

This area of a window contains the buttons for the windows that comprise the current window group. The button for the current window will be highlighted.

### L/R Meter Display



SOLO LED status indicator

L/R Meter Display

This meter reflects the current **MASTER L/R** (left/right) output of the **DA7**, unless **SOLO** has been activated for a channel. If a **SOLO** LED button is selected on the mixer, the meter reflects the level of the solo'd channel(s) only.

In the [METER>SLOT] window, the [RESPONSE] area lets you select between [VU] (Volume Units) and [PPM] (Pulse Position Modulation). When [VU] is selected, the **L/R Meter Display** will show the mixer output in Volume Units, and when [PPM] is selected, the Meter reflects the mixer output as Pulse Position Modulation.

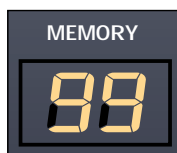
### SOLO LED Status Indicator



SOLO LED Status Indicator

Located below the **L/R** meter display, the **SOLO** LED status indicator will light and flash (*red*) when **SOLO** has been activated for any channel on the mixer.

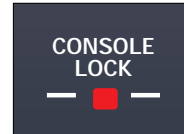
### MEMORY Numeric Readout



MEMORY Numeric Readout

The two-digit numeric readout displays the most recently accessed **SCENE MEMORY**. Whenever an **AUX** monitoring selection button is activated for either **MONITOR A** or **MONITOR B**, the numeric display will momentarily display the **AUX** selections.

### CONSOLE LOCK LED Status Indicator

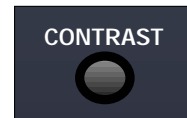


CONSOLE LOCK LED Status Indicator

When illuminated (*red*), the password protection for an area or function of the mixer is engaged, and selected mixer operations cannot be performed.

See **Section 16-3, [UTILITY>CONFIG] Window** for more information.

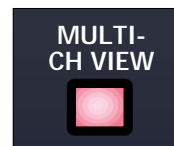
### CONTRAST Control Knob



CONTRAST Control Knob

This knob controls the contrast value of the LCD screen. Rotate the knob to adjust the contrast value of the LCD screen for optimum viewing and to suit the operating environment.

### MULTI-CH VIEW LED Button



MULTI-CH VIEW LED Button

Press this LED button to activate the multi-channel viewing mode for the LCD screen. When on (*red*), the LCD screen will display the currently selected **Channel Fader** and one of other sources that can be used to compare or copy information from the current selection.

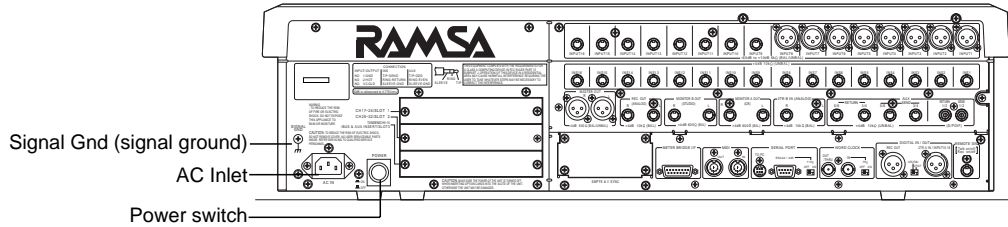
See **Chapter 5, Channel, Library, and Meter Windows** in the Users' Guide for more information.

## Rear Panel

Everything that goes in, out, and through the **DA7** happens on the Rear Panel, with the exception of the headphone connector. The **DA7** provides multiple ways for doing many things, so let your creativity be your guide.

The rear of the **DA7** is configured in four rows. The top row contains analog **INPUTS 1-16** (inputs 1-8 are balanced XLR connectors and inputs 9-16 are balanced TRS (tip-ring-sleeve) phone plug connectors).

Row 2 contains analog **INS 1-16** (inserts) with (TRS) phone plug connectors. Row 3 contains outputs for **MASTER OUT**, **REC OUT** analog, **MONITORS A&B**, and **AUX** returns and sends 1 through 6. The bottom row contains the **METER BRIDGE** connection, **MIDI IN/OUT**, **SERIAL PORT** (for direct connection to a PC or a Macintosh computer), **WORD CLOCK IN/OUT**, **DIGITAL IN/OUT**, and a **REMOTE SW** connector.



DA7 Rear Panel

### Power Switch

Turns the power on and off to the **DA7**.

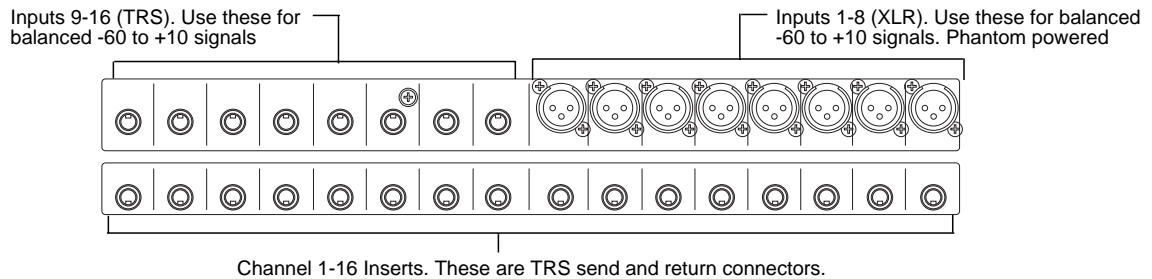
### AC Inlet

Plug the AC power cord here.

### Signal Ground [SIGNAL GND]

Connect to a grounded source to stabilize the voltage levels of the connected devices, and to prevent hum and buzz created by ungrounded sources.

## Rows 1 & 2 Connectors



Cutaway of DA7 Rear Panel (Rows 1 and 2) Input and Insert Connectors

### INPUTS 1-8

These inputs are designed for XLR connectors. The input range is from -60dB to +10dB, 5k  $\Omega$  BAL. Use the **MIC/LINE INPUT** knobs on the **Channel Strips** for adjustment of the incoming level. From the **[CHANNEL]** window, the +48V phantom power can be individually turned on or off for each channel via the screen.

### INPUTS 9-16

Use these inputs with a 1/4" TRS (tip-ring-sleeve) phone plug connector. Use the **MIC/LINE INPUT** knob to adjust the input level. The input range is from -60dB to +10dB, 5k  $\Omega$  BAL. There is no +48V phantom power. Microphones used on these inputs must be externally powered if required.

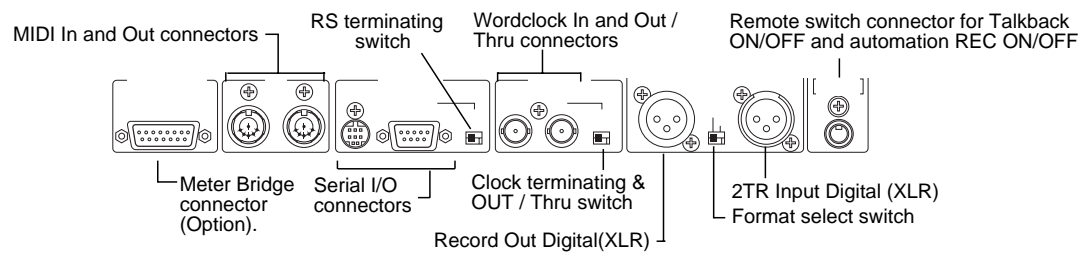
## INSERTS 1-16

These inserts are used for creating an effects loop. A 1/4" TRS phone plug, with a level of +4 dB, 10k Ω UNBAL, provides an output (tip) send to effects, or an input (ring) return from an outboard effects device.

## Monitor B Out

These terminals are 1/4" TRS dual phono plugs at a level of +4dB, 600Ω BAL, and connect the output of the **MONITOR B** source selection to an external amplifier for monitoring in the studio.

## Row 4 Connectors



Cutaway of DA7 Rear Panel Row (4) Digital and Serial Connectors

## Remote SW [Switch]

Connect a momentary or press-to-talk switch with a 1/4" TS phone plug for Talk Back or automation record functions. Parameters are assignable in the **[UTILITY>CONFIG]** window.

## Digital Input [AES/EBU]

An XLR connector inputs an audio signal from a DAT or other digital source. Assignments can be made from the **[D-I/O>INPUT SET]** window.

## [REC OUT] Record Output

Use 1/4" TRS phone plugs, at a level of +4dB, 10kΩ BAL, to output signals for recording.

## Master Output

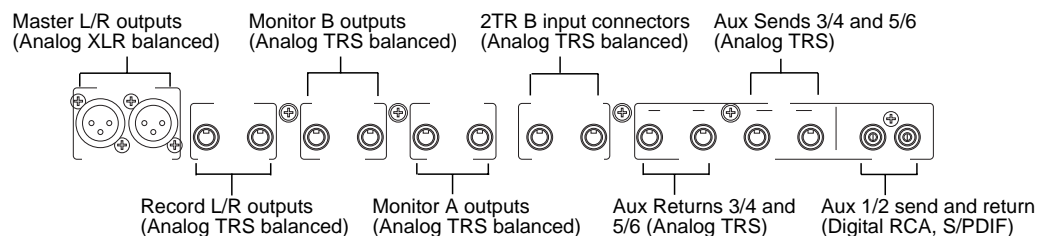
Female XLR connectors send the **MASTER L/R** analog program output to external speakers and/or a recording device of +4 dB, 600Ω BAL.

This incoming source can be monitored by selecting the **2TR A** LED button as the **MONITOR A** source selection, or, on **Channel Faders 15** and **16**, when **2TR A** is assigned in the **[D-I/O>INPUT SET]** window. The signal can also be directly assigned to the **MASTER L/R** program output.

## Digital Record Output [AES/EBU]

XLR connections of the **MASTER L/R** digital output are for use in recording by a digital device with AES/EBU digital input capabilities.

## Row 3 Connectors



Cutaway of DA7 Rear Panel (Row 3) Output Connectors

### AUX SEND 1/2

Use RCA connectors to attach a digital effects device or another S/PDIF device to the **AUX SEND 1/2** and **AUX RETURN 1/2** digital terminals. **AUX/BUS Fader Layer** faders control the **AUX 1/2 SEND** and **RETURN**. These connections are not analog signals.

### AUX SEND 3/4, 5/6

These terminals are 1/4" TRS phone plug connectors, at a level of +4dB, 10k $\Omega$  UNBAL. They can be used for connecting outboard signal processing devices, or for a studio headphone feed, or as part of a multitrack output setup. The possibilities are limited only by your imagination. The **AUX/BUS Fader Layer** is the fader control for these connections.

### AUX RETURN 3/4, 5/6

These terminals are 1/4" TRS phone plug connectors, at a level of +4dB, 10k $\Omega$  UNBAL. The **AUX/BUS Fader Layer** is the fader control for these feeds.

### 2-Track B Input

This is used to connect an analog source strictly for monitoring purposes, as it does not appear as an input to the mixer. Connect a 1/4" TRS phone plug to the output signal from a cassette deck, for example. The input signals are sent to the **2 TR B IN** LED button in the monitor section. The level is +4dB, 10k $\Omega$  BAL.

### Monitor A Out

These terminals are 1/4" TRS dual phone plugs at a level of +4dB, 600 $\Omega$  BAL, and connect the output of the **MONITOR A** to an external amplifier (or powered speaker) for monitoring in the control room (**CR**).

### Format Select Switch

This switch is used to select the signal format of the connected device, either AES/EBU or S/PDIF. The digital input and output are both switched. For S/PDIF usage, an optional adapter is required. You must make certain that the adapter connects pin #1 and #3 together.

### Clock Terminating 75 $\Omega$ ON/OFF & Out / Thru Switch

Next to the **WORD CLOCK IN** BNC connection, this switch should be set to 75  $\Omega$  **OFF** and **Thru** position if the **DA7** is being used to pass the wordclock signal to other devices in the chain.

Set the switch to 75  $\Omega$  **ON** and **OUT** for terminating the wordclock, if the **DA7** is slaved and located at the end of the wordclock chain. The 75  $\Omega$  **ON** and **OUT** position should also be selected when the **DA7** is being used to slave other devices to the **DA7's** wordclock. See **Chapter 12, D-I/O** in the Users' Guide for more information.

### Clock Input

This is used to synchronize the **DA7** to an external word clock source. This allows the **DA7's** internal clock to slave to another reference, such as a digital multi-track deck or other device. Use a BNC connection to attach an external wordclock source.

### Clock Output

This is used to slave an external device, such as a digital multi-track machine, to the **DA7** internal clock. It can also be used to relay an external wordclock that is being used to synchronize the **DA7** to an external device. Using a BNC connector, other devices can synchronize to the **DA7** wordclock.

### Serial Terminating Switch

Set the switch to **ON** if the **DA7** is the termination point of the RS-422/485 serial transmission path. The 110 $\Omega$  switch turns this function **OFF/ON**.

### Serial Port [RS-422/485]

Use this serial port to connect an IBM compatible computer having an RS-422/485 port. Connect to the **DA7** with a D-SUB 9-pin connector. Optional remote control software for your computer can be used to control the **DA7**, thus expanding the features and capabilities of the mixer.

### Serial Port [TO PC]

Use this serial port to connect with a Macintosh computer. If the computer is an IBM compatible, you may need a conversion cable that changes a Mini-DIN 8 pin (for TO PC) to a D-sub 9 pin (for RS-232C), available at nearest dealer. Optional remote control software for your computer can be used to control the **DA7**, thus expanding the features and capabilities of the mixer.

### MIDI IN

This connector is used to receive signals from peripheral MIDI devices.

### MIDI OUT

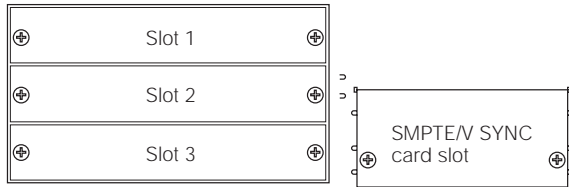
This connector is used to send signals to peripheral MIDI devices. The **DA7** can be used as a MIDI controller. See **Chapter 11, MIDI** for details.

### METER BRIDGE Connector

This is used to connect the optional Meter Bridge for the **DA7**.

See **Chapter 17, Options** in the Users' Guide for more details.

## Option Card Slots



Option Card Slots

There are three slots for the optional audio Input/Output cards, plus one dedicated slot for the **SMPTE/V SYNC** card. The space for the **SMPTE/V SYNC** card is located directly under the **MASTER OUT** XLR connectors. Audio option cards are next to the power switch. The audio option cards can be used in any of the audio slots, but for **TANDEM** operation, the **TANDEM** card **MUST** be used in Slot 3.

### Video Sync Input [V SYNC]

This is used to connect a vertical synchronizing signal from a video device.

See **Chapter 17, Options** in the Users' Guide for more about SMPTE/V SYNC.

### Digital I/O Slot 1 [CH17-24/SLOT 1]

When an option card is inserted into Slot 1, the output of the connected device appears on **Channel Faders 17** through **24**, and is controlled by the **Fader Layer Inputs 17-32**.

### Digital I/O Slot 2 [CH25-32/SLOT 2]

When an option card is inserted into Slot 2, the output of the connected device appears on **Channel Faders 25** through **32**, and is controlled by the **Fader Layer Inputs 17-32**.

### Digital I/O Slot 3 [CH9-16/SLOT 3]

When an option card is inserted into Slot 3, the output of the connected device appears on **Channel Faders 9** through **16**, and is controlled by the **Fader Layer Inputs 1-16**. This connection **REPLACES** the analog inputs 1-16 with whatever is connected to the option card in Slot 3.

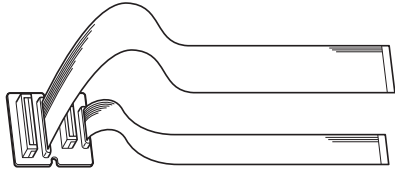
For more information regarding optional slots, see **Chapter 12, D-I/O** and **Chapter 17, Options** in the Users' Guide.

# SELF CHECK FUNCTION

- The Self Check Function is incorporated in the Digital Audio Mixer WR-DA7.

## 1. Test Equipment Required

- The following Test Jigs are required for Self Check and Service of the WR-DA7.
- AD EXT-D-1 (Part Number : YWA0EA1196AN) between the Power-2 Board and AD/DA Board as shown in fig. 1-1.



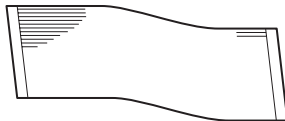
**Fig. 1-1**

- SLOT EXT-D (Part Number : YWA0EA1198AN) for the optional Board as shown in fig. 1-2.



**Fig. 1-2**

- AD EXT-D-2 (Part Number : YWA0EA1199AN) between the Main Board and AD/DA Board as shown in fig. 1-3.



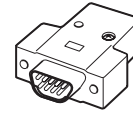
**Fig. 1-3**

- PC RTN (Part Number : YWA0EA1200AN) for the PC Connector as shown in fig. 1-4.



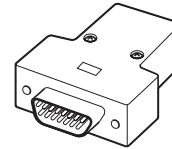
**Fig. 1-4**

- RS232C/485 RTN (Part Number : YWA0EA1202AN) for RS232C/485 Connector as shown in fig. 1-5.



**Fig. 1-5**

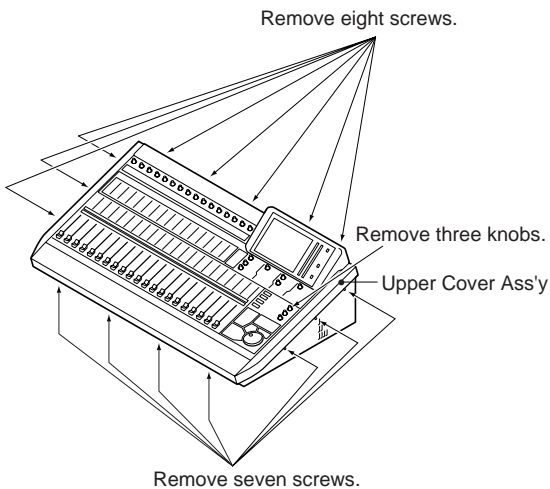
- MTBR RTN (Part Number : YWA0EA1203AN) for the Meter Bridge Connector as shown in fig. 1-6.



**Fig. 1-6**

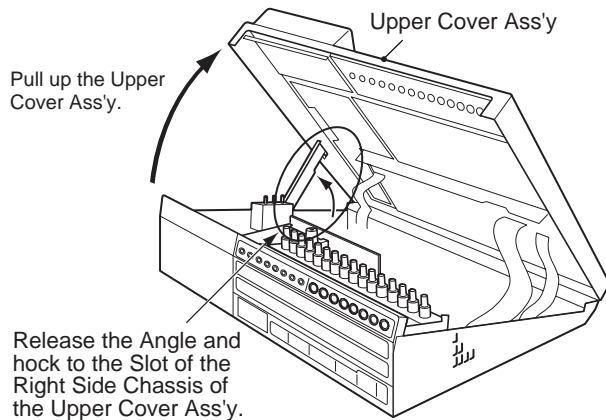
## 2. Disassembling Procedure

- Referring to Fig. 2-1, remove three knobs and fifteen screws that secure the Upper Cover Ass'y.



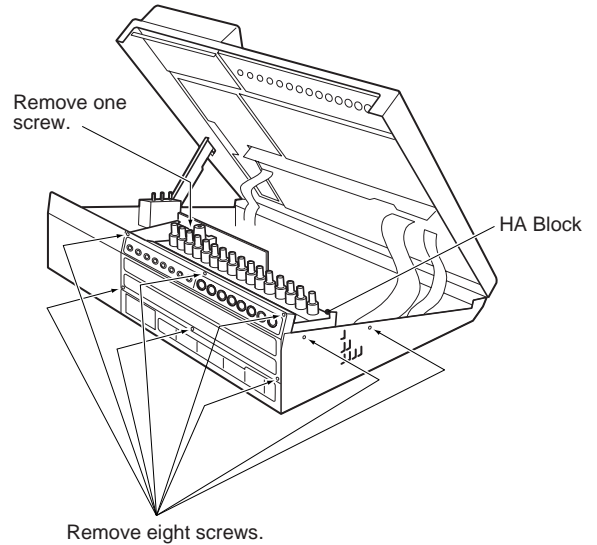
**Fig. 2-1**

- Referring to Fig. 2-2, pull up the Upper Cover Ass'y and hook to the slot of the Right Side Chassis of the Upper Cover Ass'y.



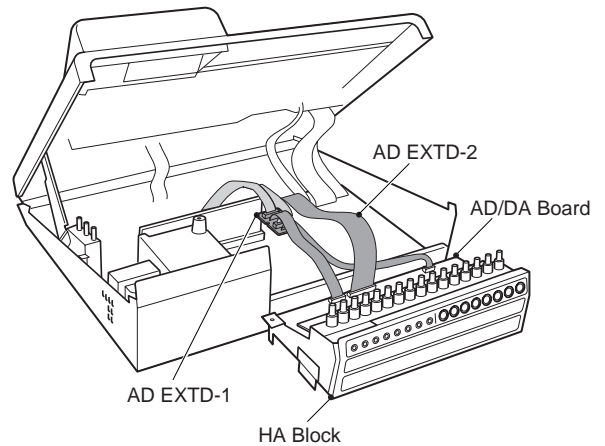
**Fig. 2-2**

- Referring to Fig. 2-3, pull up the Upper Cover Ass'y and remove nine screws that secure the HA Block and remove the HA Block.
- Cut one Wire Binder that secure the Ground Cable and others.
- Remove one screw that secure the Ground Cable (Brown Wire) at the Power-2 Board and tighten this screw.
- Connect this Ground Cable (Brown Cable) to the Chassis.



**Fig. 2-3**

- Referring to Fig. 2-4, disconnect three Cables from the Connectors CN33, CN52 and CN 53 of the AD/DA Board.
- Insert two Cables from the Power-2 Board to the AD EXT-1.
- Insert two Cables of the AD EXT-2 to two Connectors CN52 and CN53 of the AD/DA Board.
- Insert the AD EXT-2 between CN33 of the Main Board and CN33 on the AD/DA Board.



**Fig. 2-4**

### 3. Execution of the Self Check Function

- Turn the Power On while pressing the [SELECT] Key, [ON] Key of the MASTER LR and [3] Key of the TEN KEY simultaneously, the Self Check Function has been executed and the Diagnostic Menu 1 as shown in Fig. 3-1 is displayed on the LCD Display of the WR-DA7.

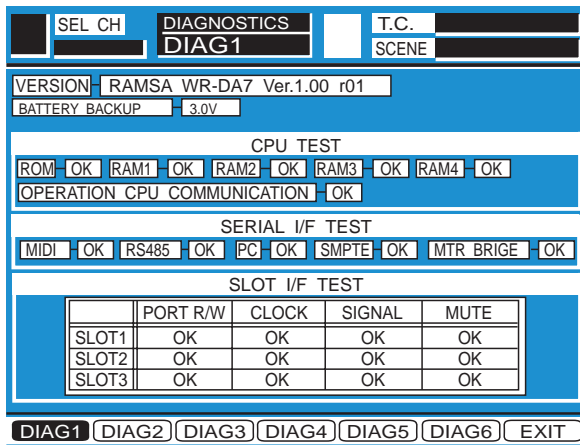


Fig. 3-1

### 4. Fundamental Operation

#### 4.1. Selection and Execution of the Check Item

- Select the Check Item by either UP or DOWN Cursor Key on the Upper Cover Ass'y.
- Execute the Check Item by pressing the Enter Key on the Upper Cover Ass'y.

#### 4.2. Switching of the Diagnostic Menu

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item by either LEFT or RIGHT Cursor Key on the Upper Cover Ass'y.
- Execute the Diagnostic Item by pressing the Enter Key.

### 5. Check Each Item

#### 5.1. Version Indication (VERSION)

- Referring to Fig. 3-1, the Product Description and the Version of the Control Program will be displayed.
- Displayed always without any Item Selection and Execution.

#### 5.2. Battery Backup Indication (BATTERY BACKUP)

- Referring to Fig. 3-1, the remaining voltage value of the Memory Backup Battery will be displayed.
- Displayed always without any Item Selection and Execution.

#### 5.3. CPU Test (CPU TEST)

- Referring to Fig. 3-1, select the CPU TEST Item by either UP or DOWN Cursor Key.
- Execute the CPU TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for ROM (Flash Memory) and four RAMs (RAM1, RAM2, RAM3 and RAM4), and check the Serial Communication in between Main CPU and Sub CPU.
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

#### 5.4. Serial Interface Test (SERIAL I/F TEST)

- Connect the Return Cable and the Return Connectors to the MIDI Connector, RS-422/485 Connector, TO PC Connector.
- Insert the SMPTE Board to the Slot of the SMPTE Board and supply the Time Code from the Time Code Generator.
- Connect the Return Connector to the Meter Bridge I/F Connector.
- Referring to Fig. 3-1, select the SIR I/F TEST Item by either UP or DOWN Cursor Key.
- Execute the SERIAL I/F TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the Interface of MIDI, RS-422/485, TO PC, SMPTE and METER BRIDGE.
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

#### 5.5. Multi IC/Mix IC Test (MLT/MIX TEST)

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item (DIAG2) by either LEFT or RIGHT Cursor Key.
- Press the Enter Key, the Diagnostic Menu 2 as shown in Fig. 5-1 is displayed.



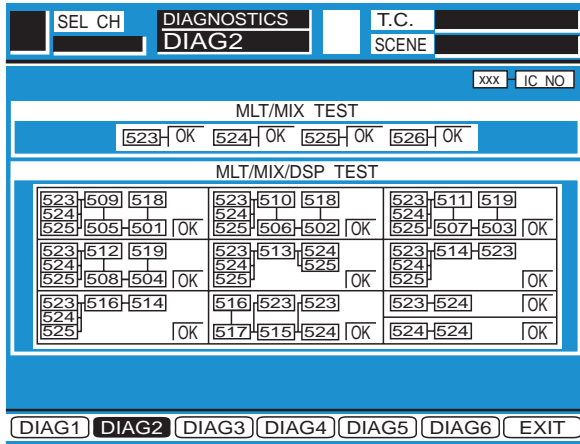


Fig. 5-1

- Referring to Fig. 5-1, select the MLT/MIX TEST Item by either UP or DOWN Cursor.
- Execute the MLT/MIX TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the three MIX ICs (IC523 - IC525) and one Multi IC (IC526).
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

### 5.6. Multi IC/Mix IC/DSP Overall Test (MLT/MIX/DSP TEST)

- Referring to Fig. 5-1, select the MLT/MIX/DSP TEST Item by either UP or DOWN Cursor.
- Execute the MLT/MIX/DSP TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for chains of signal path consist of three MIX ICs (IC523 - IC525) and nineteen DSP ICs (IC501 - IC519).
- Each DSP IC has been controlled through the Multi IC (IC526) so that the Self Check for the Multi IC is made in this section.
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.
- In the case displayed "NG" in defective signal path, passed IC number(s) is (are) displayed reverse indication in a half way.

So that easy to find which signal path is defected as shown in Fig. 5-2.

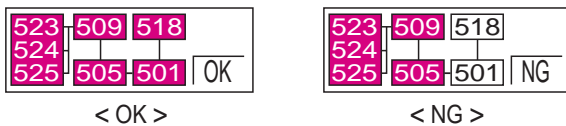


Fig. 5-2

### <For examples>

In case of Fig. 5-2, defective IC501 or defective connection between IC501 and IC518.

### 5.7. DSP Meter Signal Test (METER SIGNAL TEST)

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item (DIAG3) by either LEFT or RIGHT Cursor Key.
- Press the Enter Key, the Diagnostic Menu 3 as shown in Fig. 5-3 is displayed.

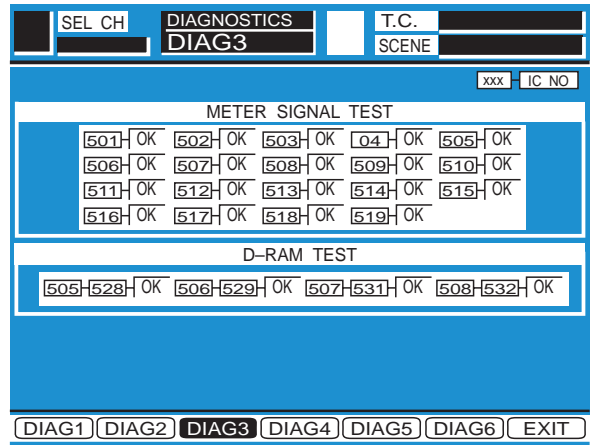


Fig. 5-3

- Select the METER SIGNAL TEST Item by either UP or DOWN Cursor.
- Execute the METER SIGNAL TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the Meter Signal Paths from the nineteen DSP ICs (IC501 - IC519) to Multi IC (IC526).
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

### 5.8. DSP D-RAM Test (D-RAM TEST)

- Referring to Fig. 5-3, select the D-RAM TEST Item by either UP or DOWN Cursor.
- Execute the D-RAM TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the D-RAMs (IC528 - IC532) Signal Paths from four DSP ICs (IC505 - IC508) to Multi IC (IC526).
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

### 5.9. Digital Interface Test (DIGITAL I/F TEST)

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item (DIAG4) by either LEFT or RIGHT Cursor Key.
- Press the Enter Key, the Diagnostic Menu 4 as shown in Fig. 5-4 is displayed.

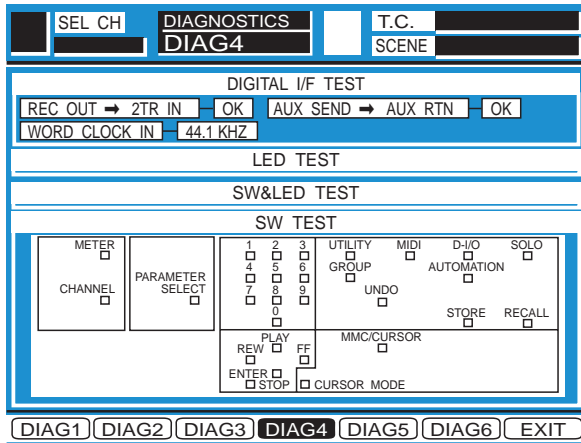


Fig. 5-4

- Connect the Record Output Connector and 2TR A Input Connector, connect the AUX SND1/2 Connector and AUX RTN1/2 Connector.
- Select the DIGITAL I/F TEST Item by either UP or DOWN Cursor.
- Execute the DIGITAL I/F TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the signal paths Record Output Connector to 2TR Input Connector and AUX SND1/2 Connector to AUX RTN1/2 Connector.
- A result after Self Check, displayed "OK" in passed item and displayed "NG" in defective item.

### 5.10. Word Clock Indication (WORD CLOCK)

- Referring to Fig. 5-4, a presence Master Word Clock Frequency and Lock/Unlock Status will be displayed.
- Displayed always without any Item Selection and Execution.

### 5.11. LED Test (LED TEST)

- Referring to Fig. 5-4, select the LED TEST Item by either UP or DOWN Cursor.
- Execute the LED TEST Item by pressing the Enter Key.
- When executing, all LEDs except Switch LEDs lit.
- Press Enter Key to finish the LED Test.

### 5.12. Switch LED Test (SW&LED TEST)

- Referring to Fig. 5-4, select the SW&LED TEST Item by either UP or DOWN Cursor.
- Execute the SW&LED TEST Item by pressing the Enter Key.
- When executing, all Switch LEDs become blinking sequentially.
- When press the Switch which blinking LED, this LED becomes lit and next LED becomes blinking.
- When press the Enter Key instead of the Blinking LED Key, this LED becomes off and next LED becomes blinking (Skip Function).
- The Self Check of the Switch LED Test is finished after checked all of the Switch LEDs.

### 5.13. Switch Test (SW TEST)

- Referring to Fig. 5-4, select the SW TEST Item by either UP or DOWN Cursor.
- Execute the SW TEST Item by pressing the Enter Key.
- When executing, all Switches become reverse indication sequentially.
- When press the reverse indication Switch, next Switch position becomes reverse indication.
- When press the Enter Key instead of the reverse indication Switch, this reverse indication Switch will be released reverse indication and next Switch position becomes reverse indication (Skip Function).
- The Self Check of the Switch Test is finished after checked all of the Switch LEDs.

### 5.14. Knob Test (KNOB TEST)

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item (DIAG5) by either LEFT or RIGHT Cursor Key.
- Press the Enter Key, the Diagnostic Menu 5 as shown in Fig. 5-5 is displayed.

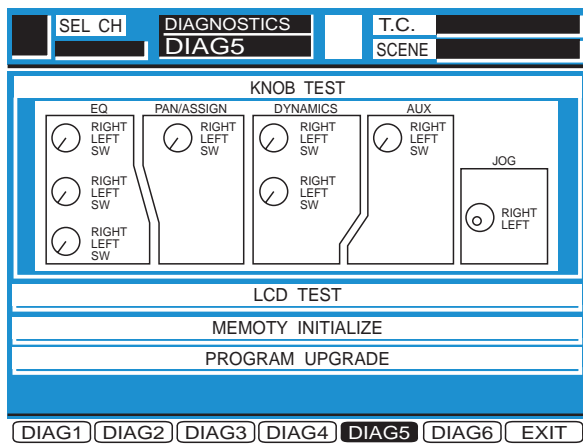


Fig. 5-5

- Select the KNOB TEST Item by either UP or DOWN Cursor.
- Execute the KNOB TEST Item by pressing the Enter Key.
- When executing, the Self Check will start for the Knobs. First select the Q Adjusting Knob of the EQ Section indicate to turn to right (reverse indication of the RIGHT).
- Turn the Q Adjusting Knob to right, indicate to turn to the left (reverse indication of LEFT).
- Turn the Q Adjusting Knob to left, indicate to press this Knob (reverse indication of KNOB). If press the Enter Key instead of the Knob, this Knob will be released reverse indication and next Knob becomes reverse indication (Skip Function).
- Press the Q Adjusting Knob, indicate to next Knob and check the same manner as above.
- The Jog Dial do not have press function.
- The Self Check will be end after check of the Jog Dial.

### 5.15. LCD Test (LCD TEST)

- Referring to Fig. 5-5, select the LCD TEST Item by either UP or DOWN Cursor.
- Execute the LCD TEST Item by pressing the Enter Key.
- When executing, all face of the LCD is turn on (White Indication) and off (Blue Indication) repeatedly by three seconds.
- Press the Enter Key to finish this Self Check Item.

### 5.16. Memory Initialize (MEMORY INITIALIZE)

- Referring to Fig. 5-5, select the MEMORY INITIALIZE Item by either UP or DOWN Cursor.
- Execute the MEMORY INITIALIZE Item by pressing the Enter Key.

- When executing, all contents of the Memories such as the Current, Scene, Library, Automation and. etc. have been cleared and return to the initial contents which set in the factory.

### 3.17. Execution of Upgrade Function (PROGRAM UPGRADE)

- Referring to Fig. 5-5, select the PROGRAM UPGRADE Item by either UP or DOWN Cursor.
- Execute the PROGRAM UPGRADE Item by pressing the Enter Key and all loaded programs in the ROM is deleted.

**Note: All Programs loaded in the ROM IC have been deleted if the Program Upgrade Function is executed. Must be need careful caution for execution this function.**

### 5.18. Fader Calibration Test (FADER CALIBRATION TEST)

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the Diagnostic Item (DIAG6) by either LEFT or RIGHT Cursor Key.
- Press the Enter Key, the Diagnostic Menu 6 as shown in Fig. 5-6 is displayed.

	1	2	3	4	5	6	7	8
AVERAGE	100	100	100	100	100	100	100	100
STATUS	OK	OK	OK	OK	OK	OK	OK	OK
	9	10	11	12	13	14	15	16
AVERAGE	100	100	100	100	100	100	100	100
STATUS	OK	OK	OK	OK	OK	OK	OK	OK
	17	18	19	20	21			
AVERAGE	100	100	100	100	100			
STATUS	OK	OK	OK	OK	OK			

Fig. 5-6

- Select the FADER CALIBRATION Item by either UP or DOWN Cursor.
- Execute the FADER CALIBRATION Item by pressing the Enter Key.
- When executing, all Faders (21 pcs.) have been calibrated and displayed measured value.

## 6. Quit of the Self Check Function

- Move the Cursor to most bottom position by either UP or DOWN Cursor Key.
- Select the EXIT Item by either LEFT or RIGHT Cursor Key as shown Fig. 6-1.

SEL CH	DIAGNOSTICS	T.C.
	EXIT	SCENE

FADER CALIBRATION TEST								
	1	2	3	4	5	6	7	8
AVERAGE	100	100	100	100	100	100	100	100
STATUS	OK	OK	OK	OK	OK	OK	OK	OK
	9	10	11	12	13	14	15	16
AVERAGE	100	100	100	100	100	100	100	100
STATUS	OK	OK	OK	OK	OK	OK	OK	OK
	17	18	19	20	21			
AVERAGE	100	100	100	100	100			
STATUS	OK	OK	OK	OK	OK			

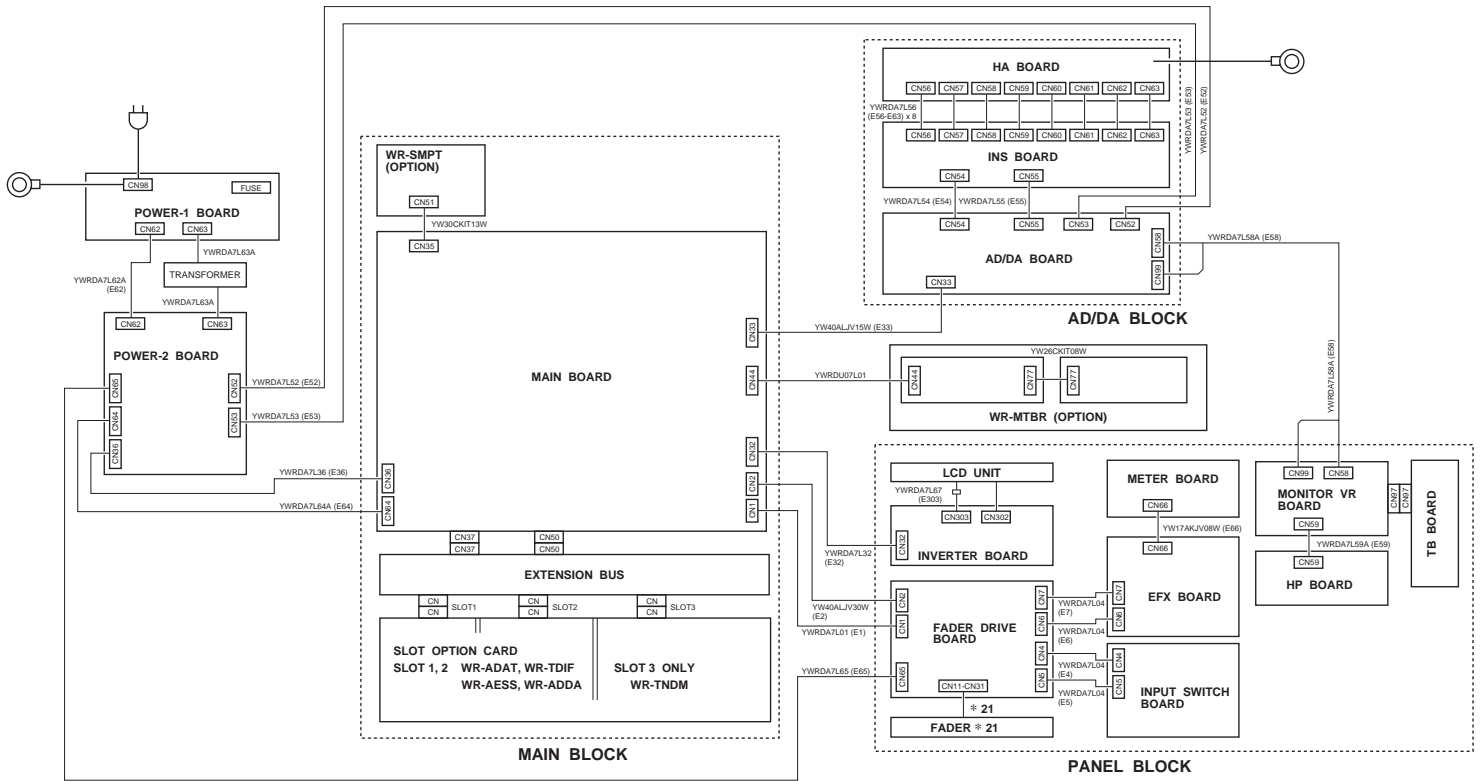
  

DIAG1	DIAG2	DIAG3	DIAG4	DIAG5	DIAG6	EXIT
-------	-------	-------	-------	-------	-------	------

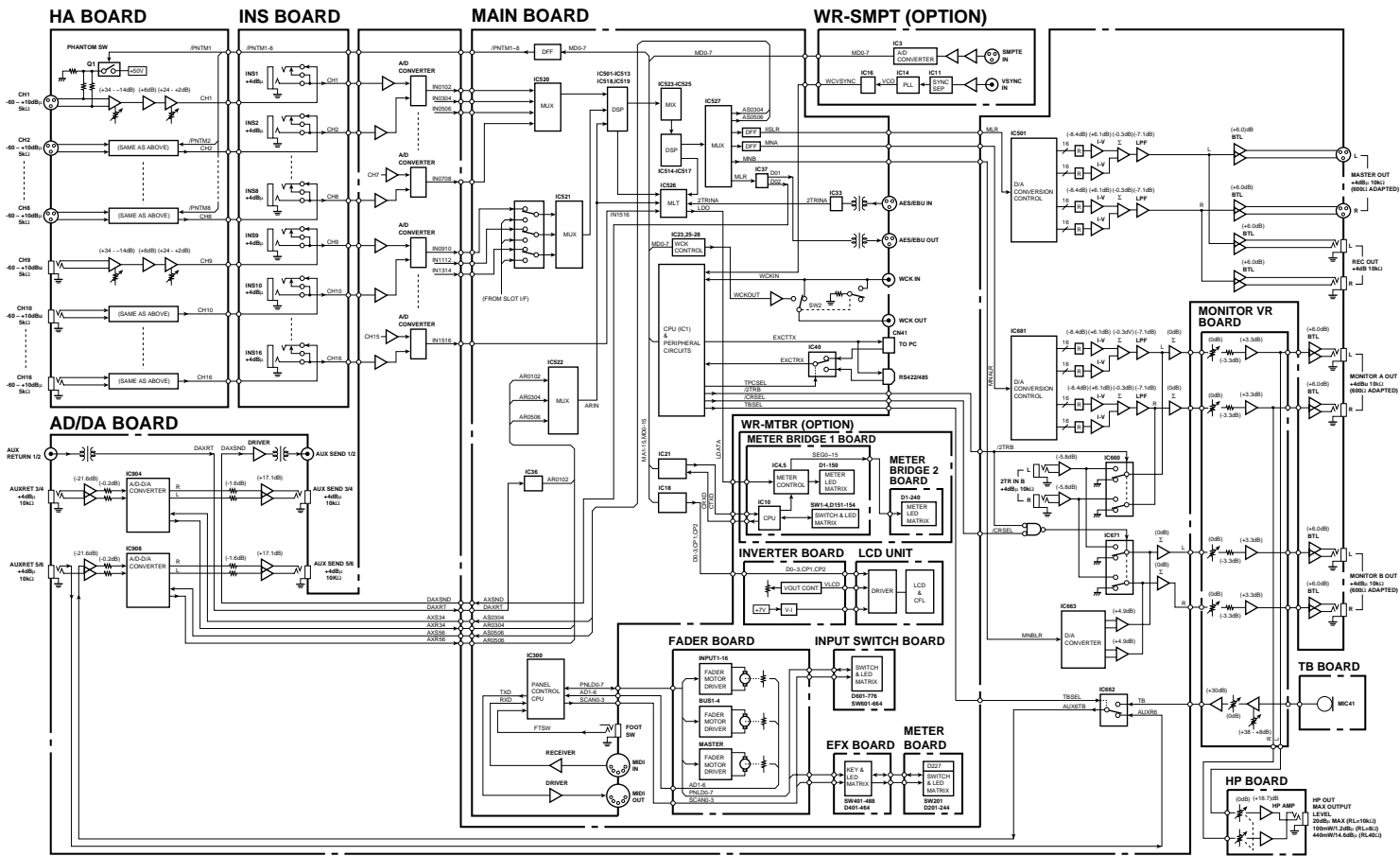
**Fig. 6-1**

- Press the Enter Key to Quit from the Self Check Function and execute to normal operation mode.
- The Fader Calibration Data have been cleared by the Memory Initialize so that the Fader Calibration is required after Quit from the Self Check Function.
- The Fader Calibration has been made by pressing two layer Keys  and  simultaneously.

# WIRING DIAGRAM

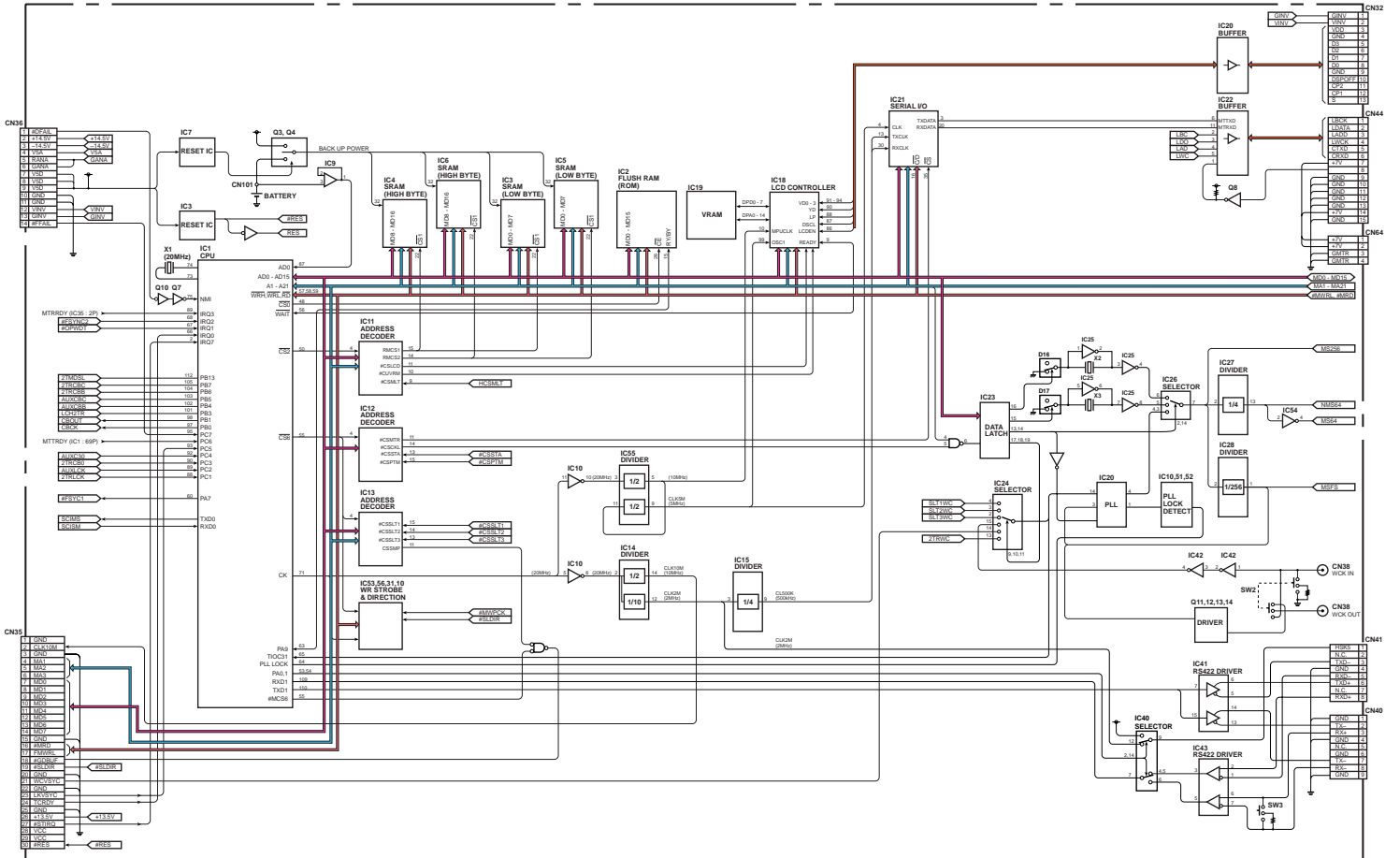


# OVERALL BLOCK DIAGRAM

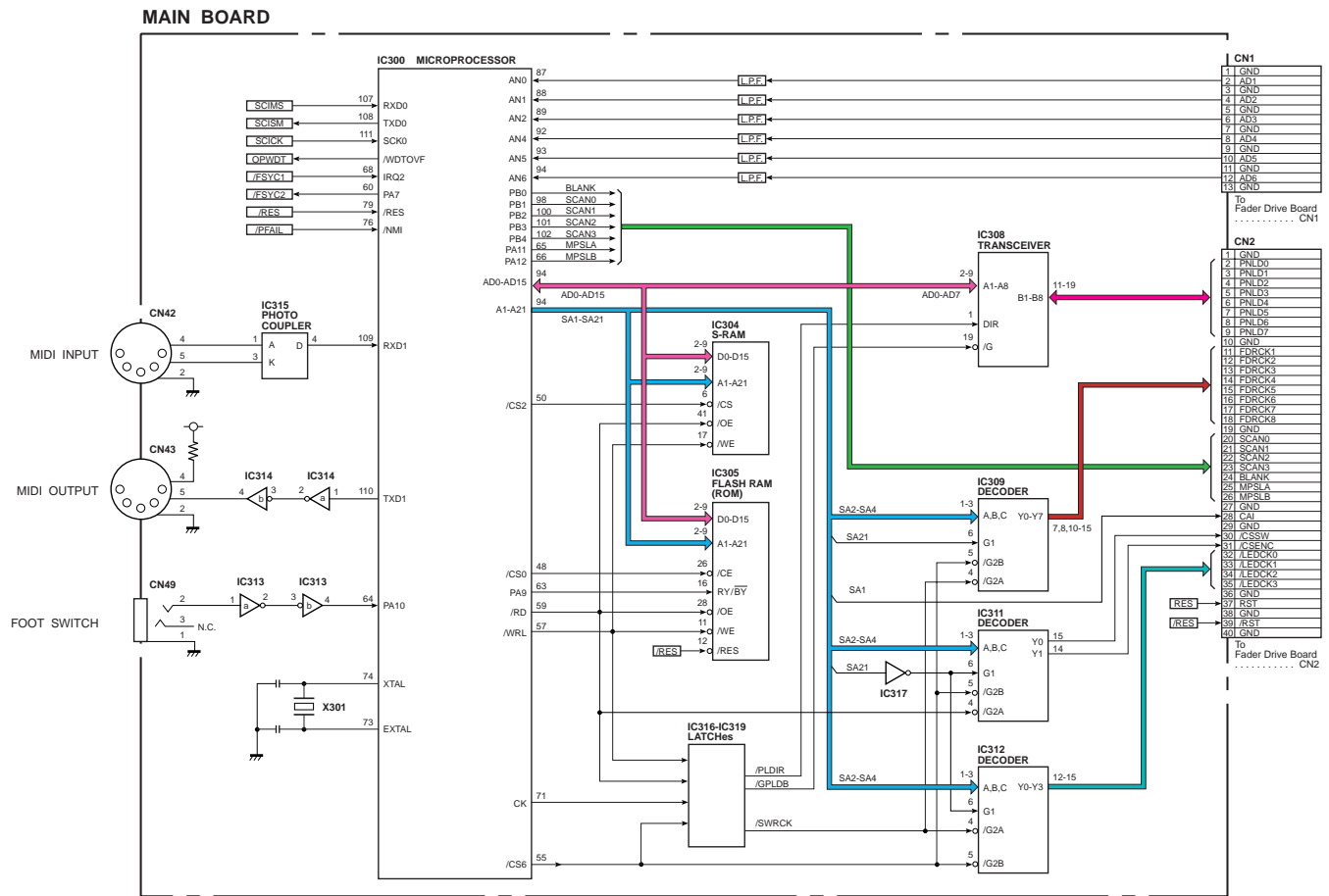


## BLOCK DIAGRAM OF MAIN BOARD (CPU SECTION)

MAIN BOARD



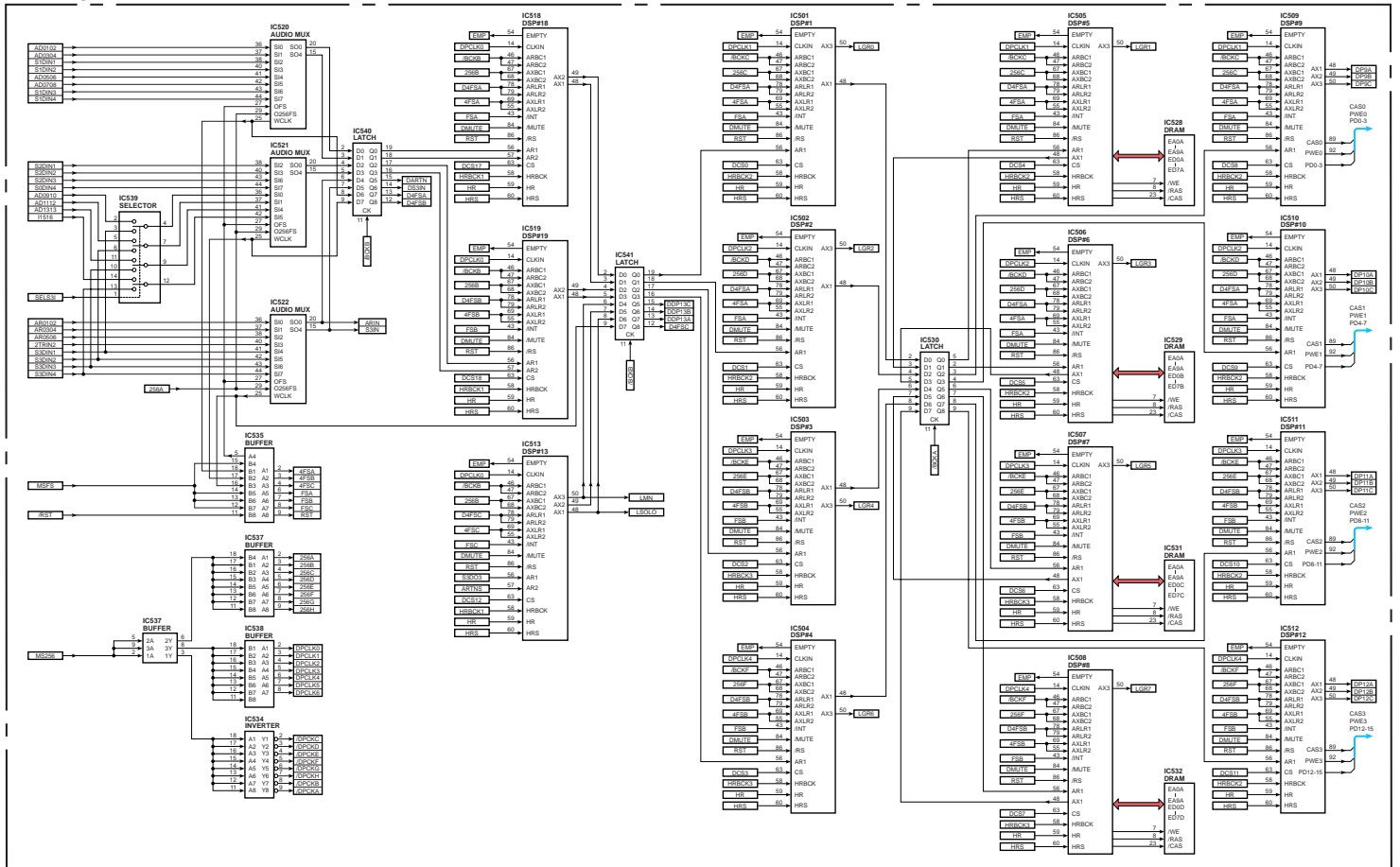
## BLOCK DIAGRAM OF MAIN BOARD (PANEL CONTROL CPU SECTION)





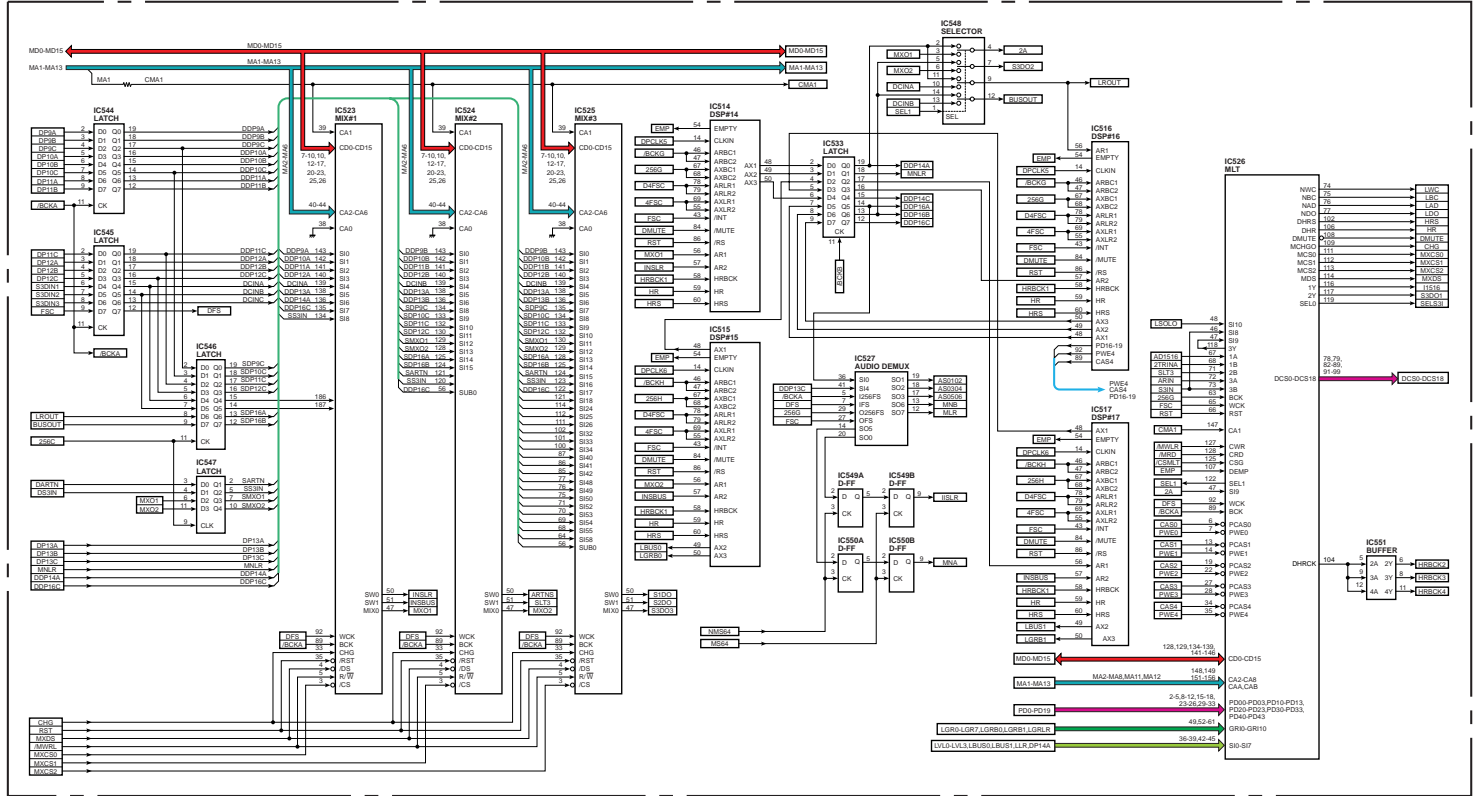
## BLOCK DIAGRAM OF MAIN BOARD (DSP SECTION - 1)

MAIN BOARD



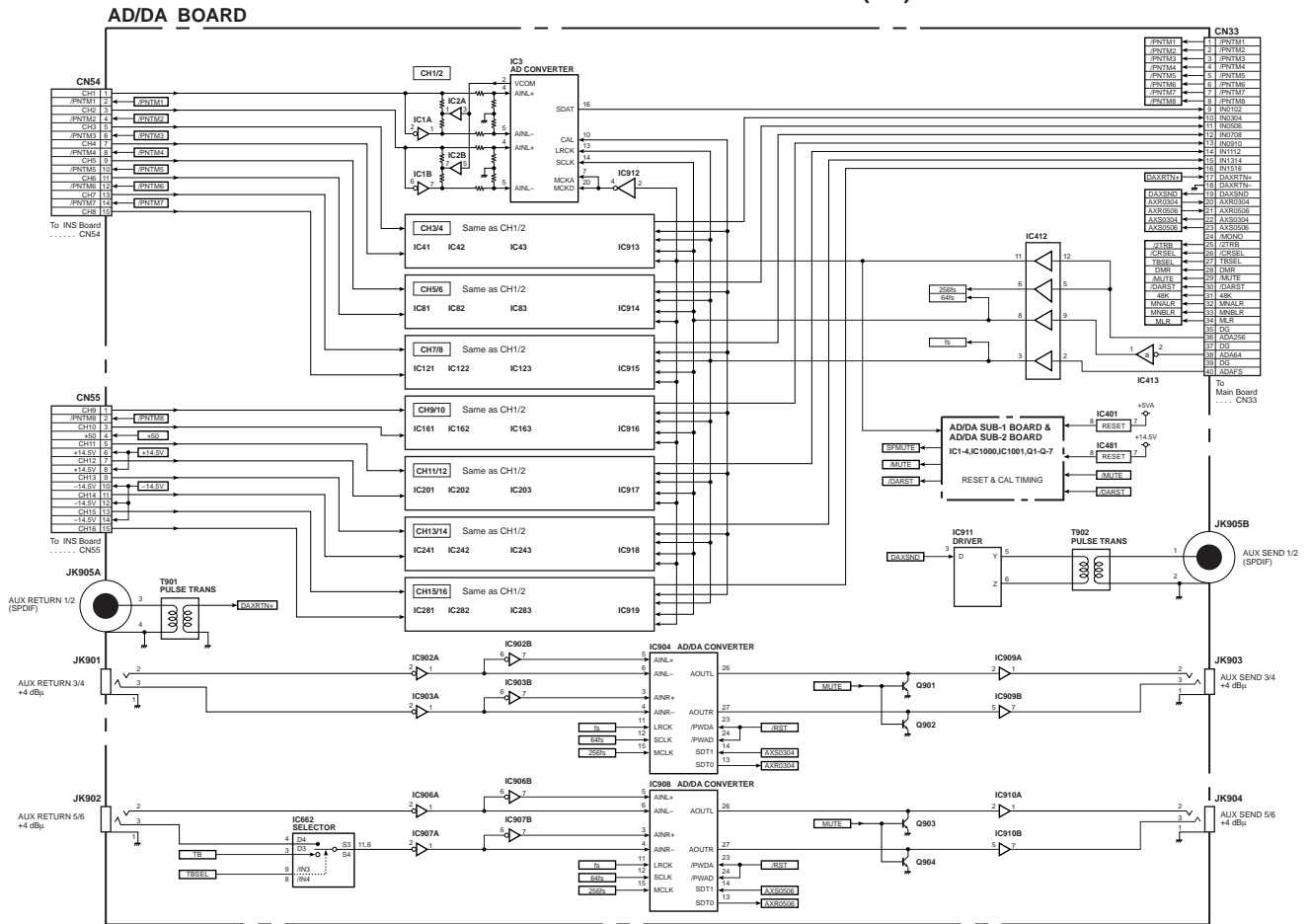
## BLOCK DIAGRAM OF MAIN BOARD (DSP SECTION-2)

### MAIN BOARD

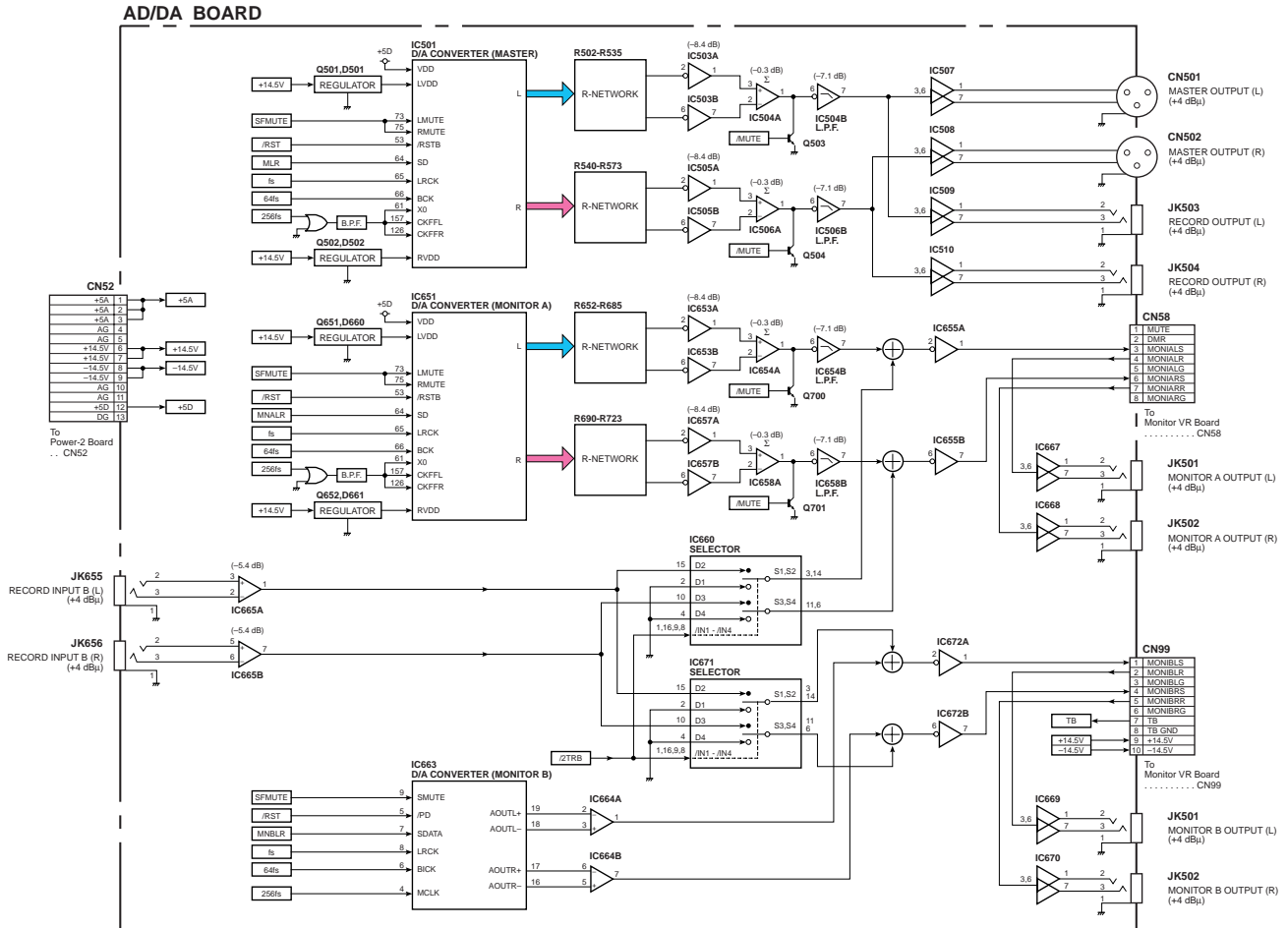




## BLOCK DIAGRAM OF AD/DA BOARD (1/2)

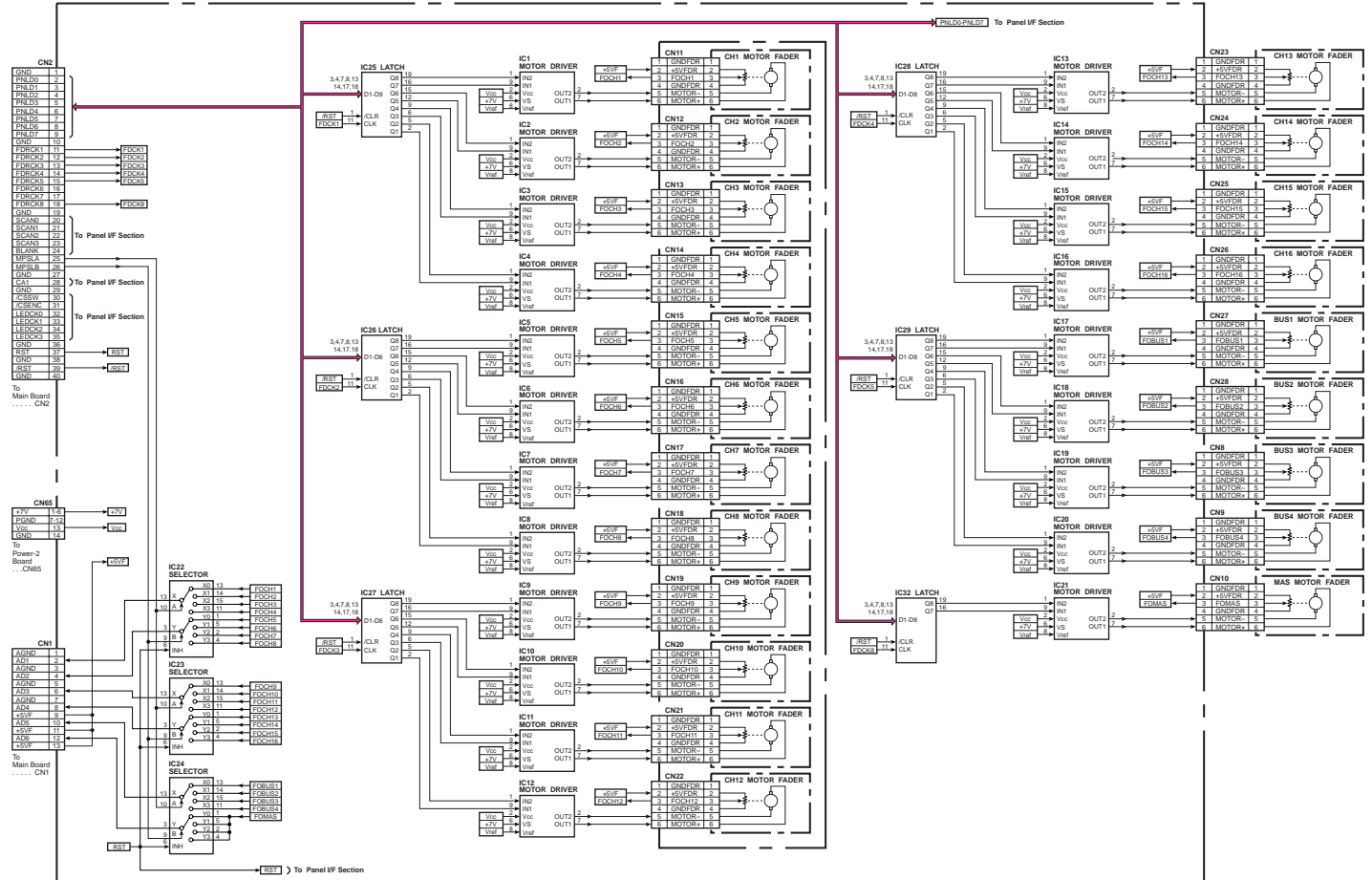


## BLOCK DIAGRAM OF AD/DA BOARD (2/2)

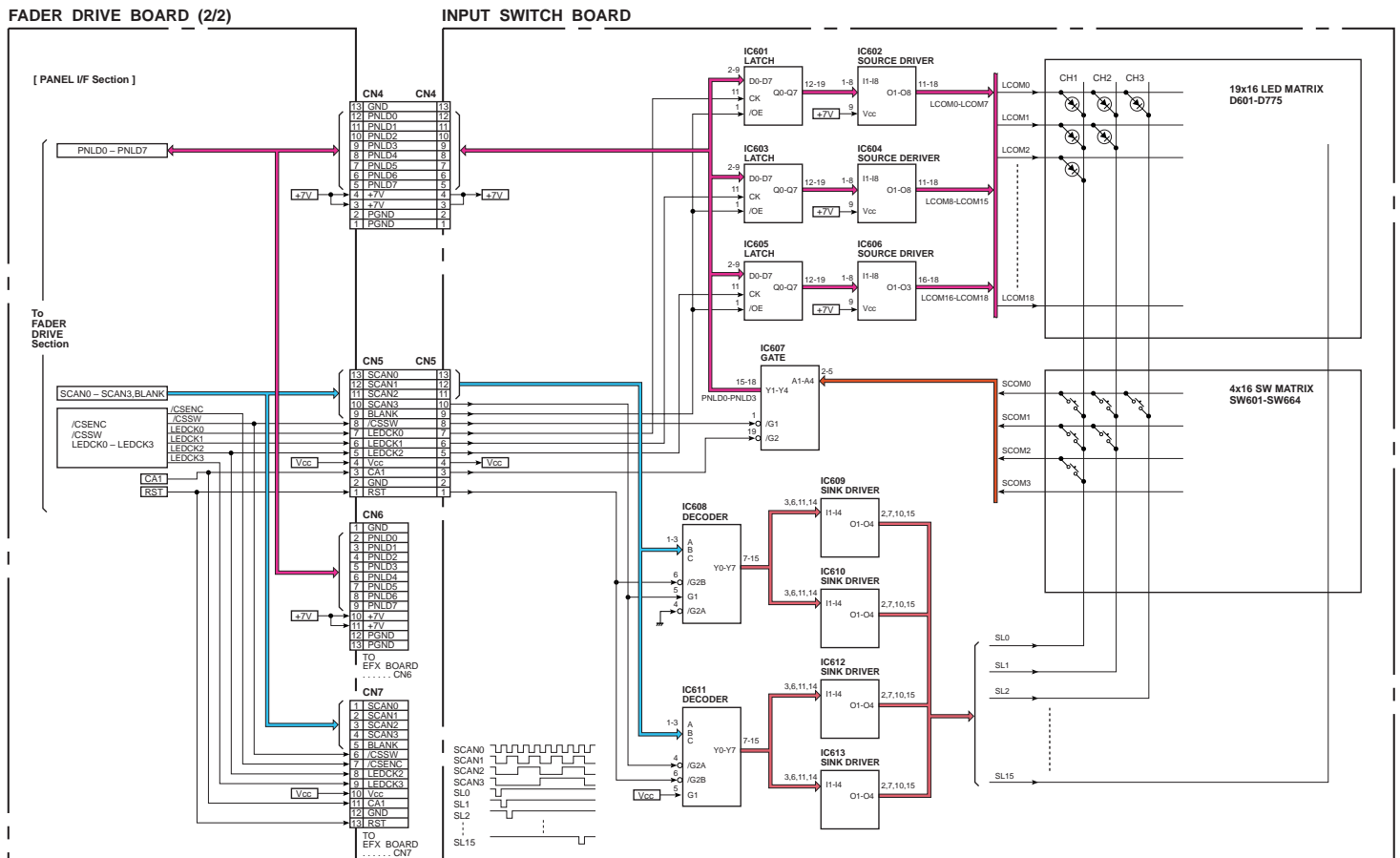


## BLOCK DIAGRAM OF FADER DRIVE BOARD (1/2)

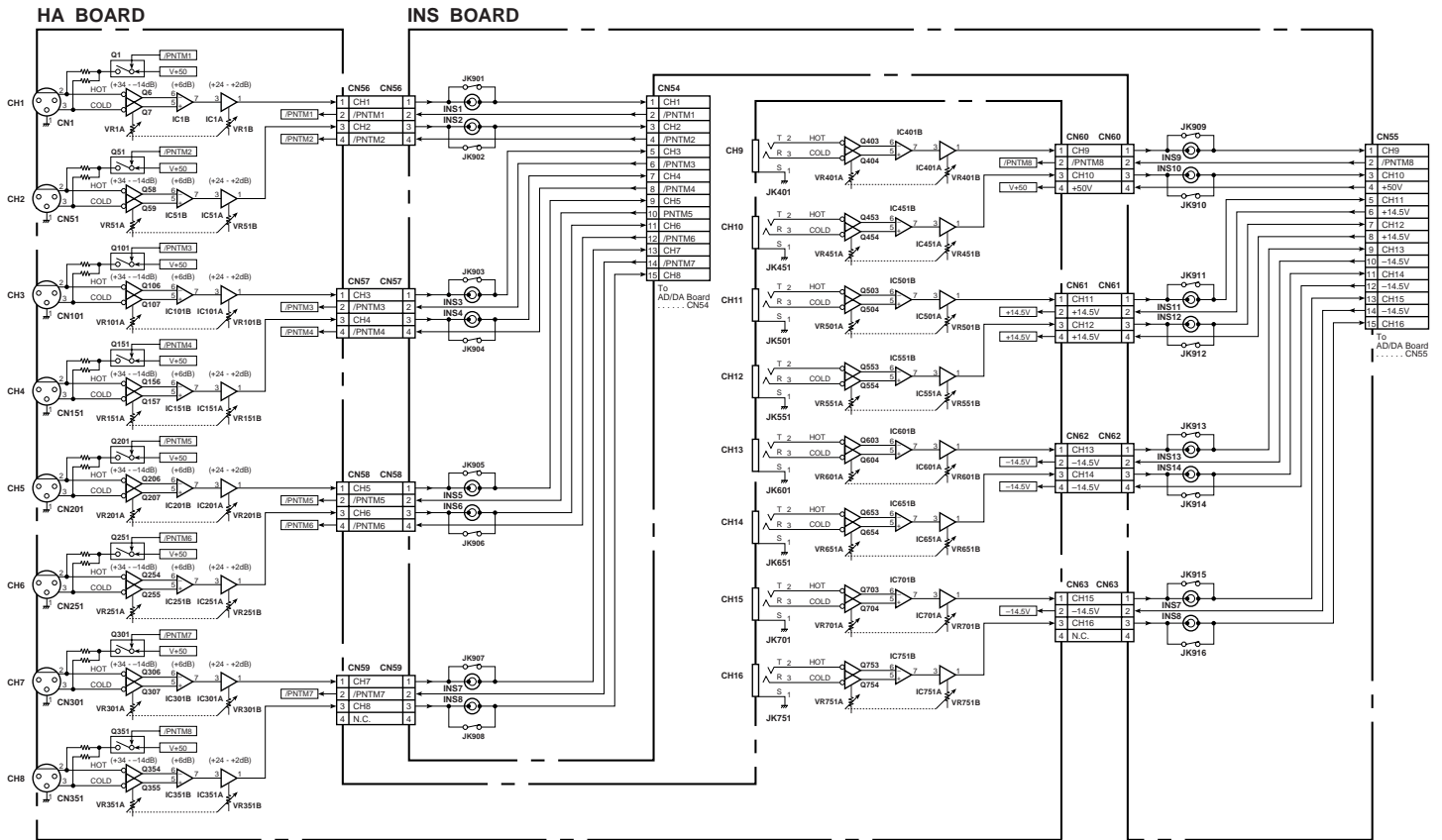
### FADER DRIVE BOARD (1/2)



## BLOCK DIAGRAM OF INPUT SWITCH BOARD / FADER DRIVE (2/2) BOARD

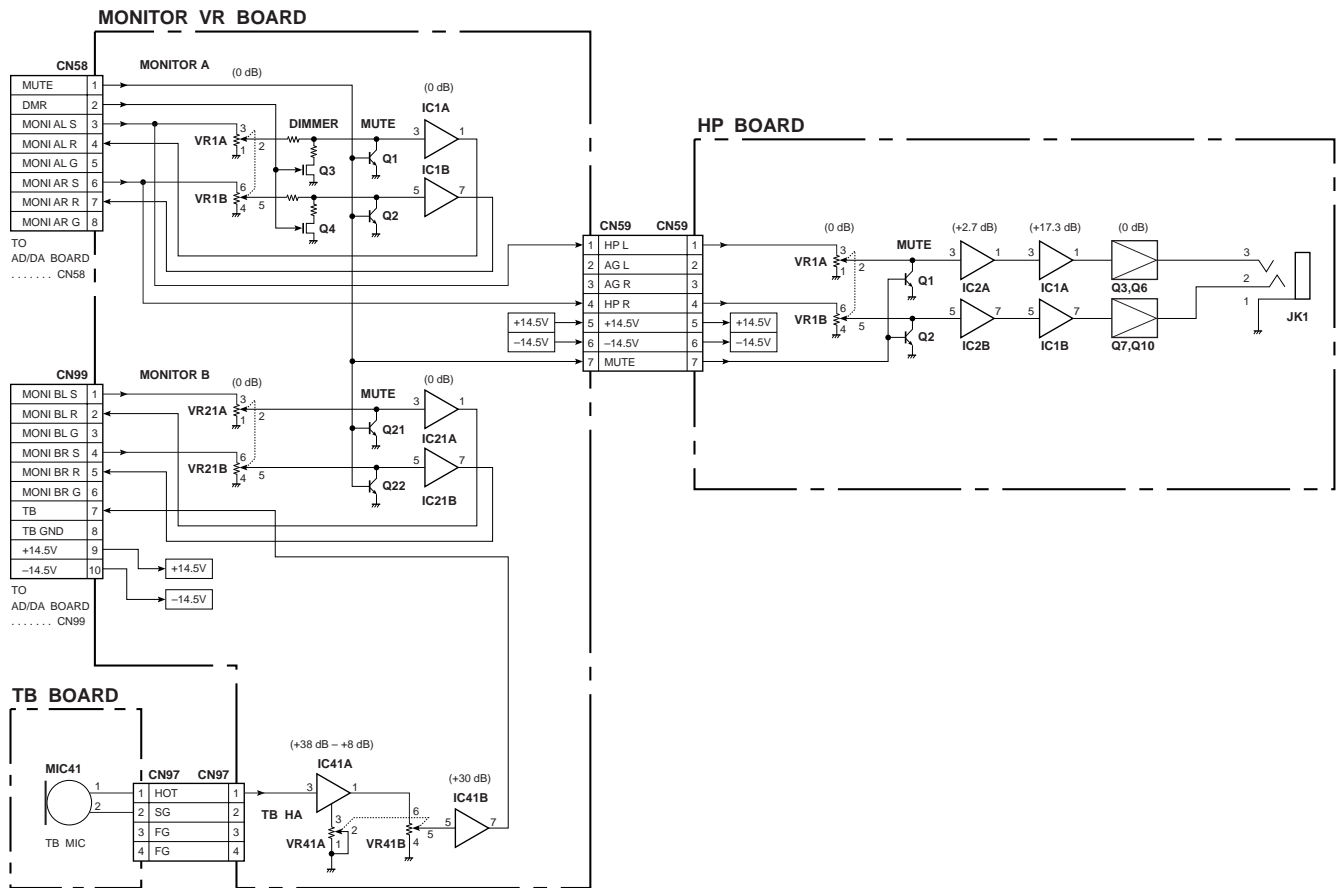


## BLOCK DIAGRAM OF HA BOARD AND INS BOARD

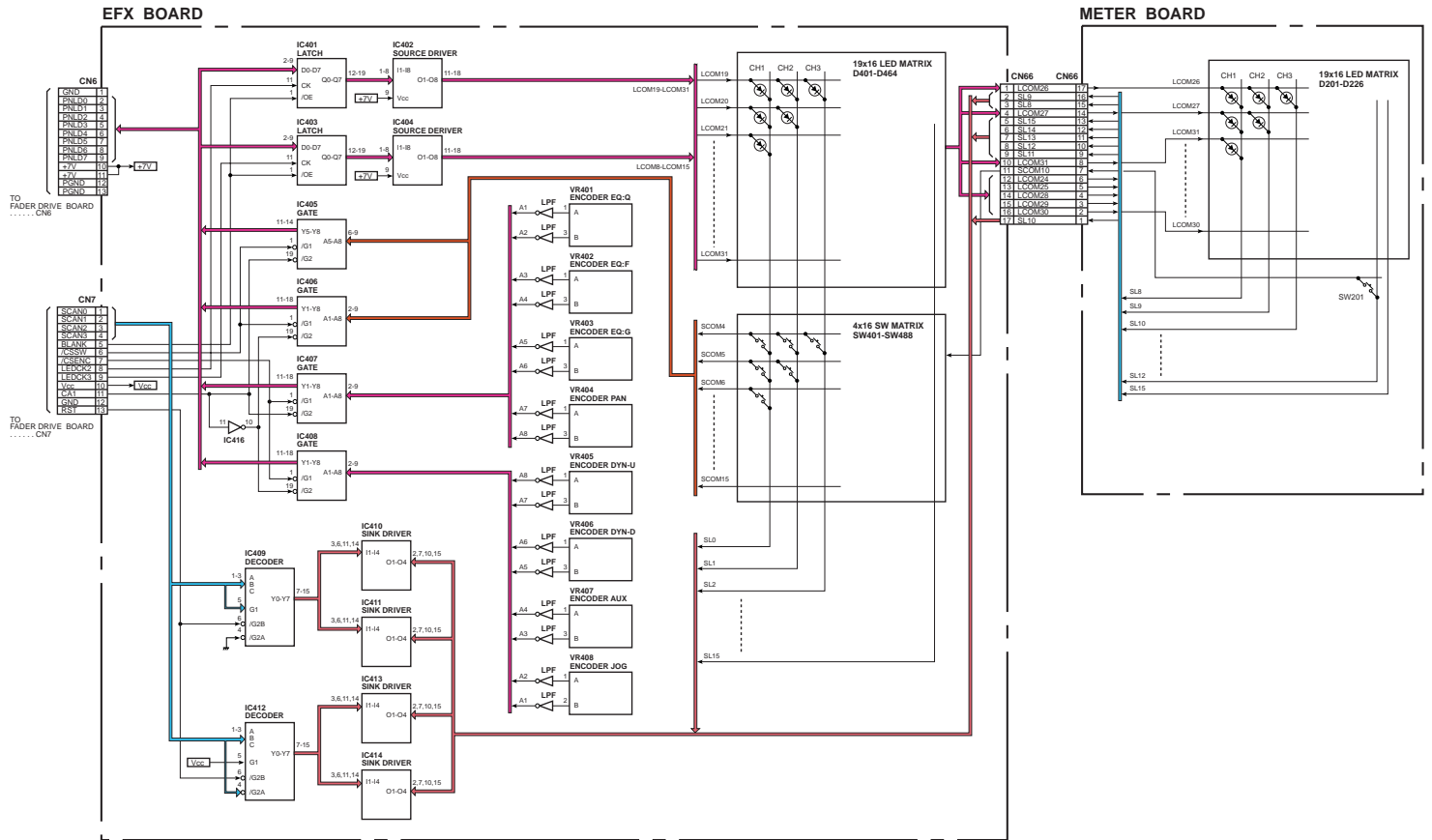




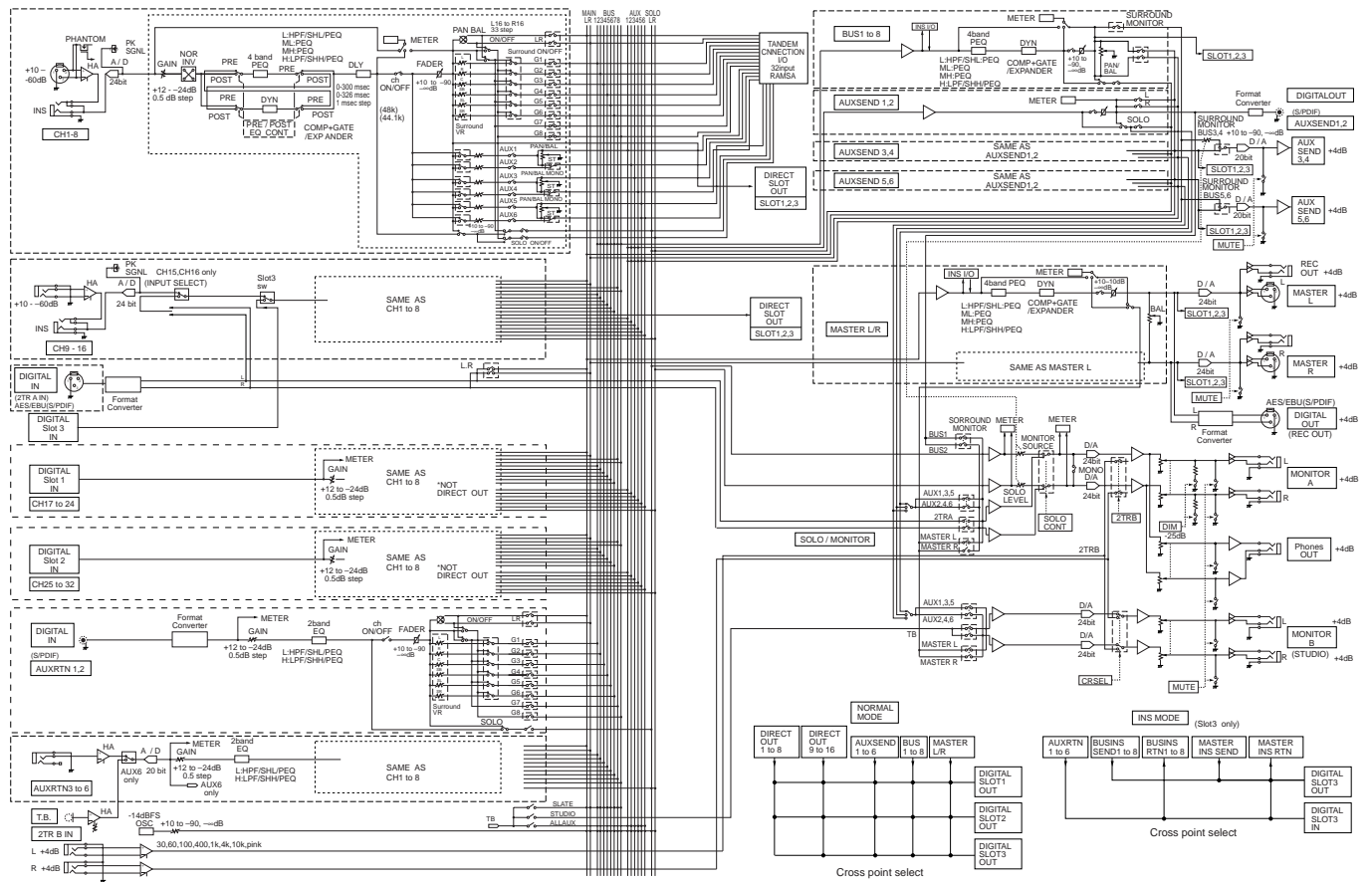
## BLOCK DIAGRAM OF MONITOR VR / HP / TB BOARDS



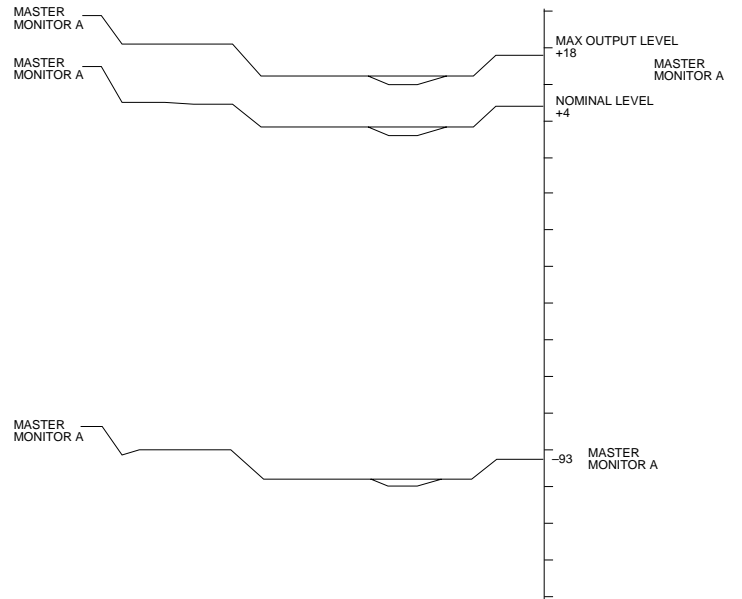
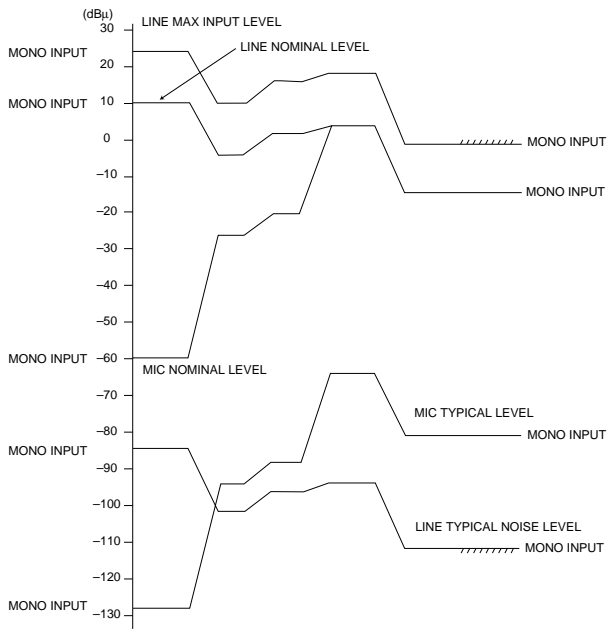
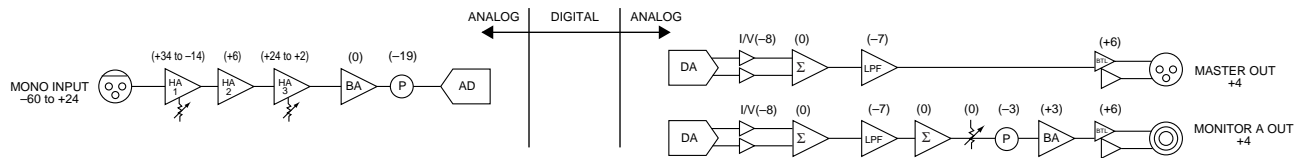
# BLOCK DIAGRAM OF EFX BOARD



# BLOCK DIAGRAM



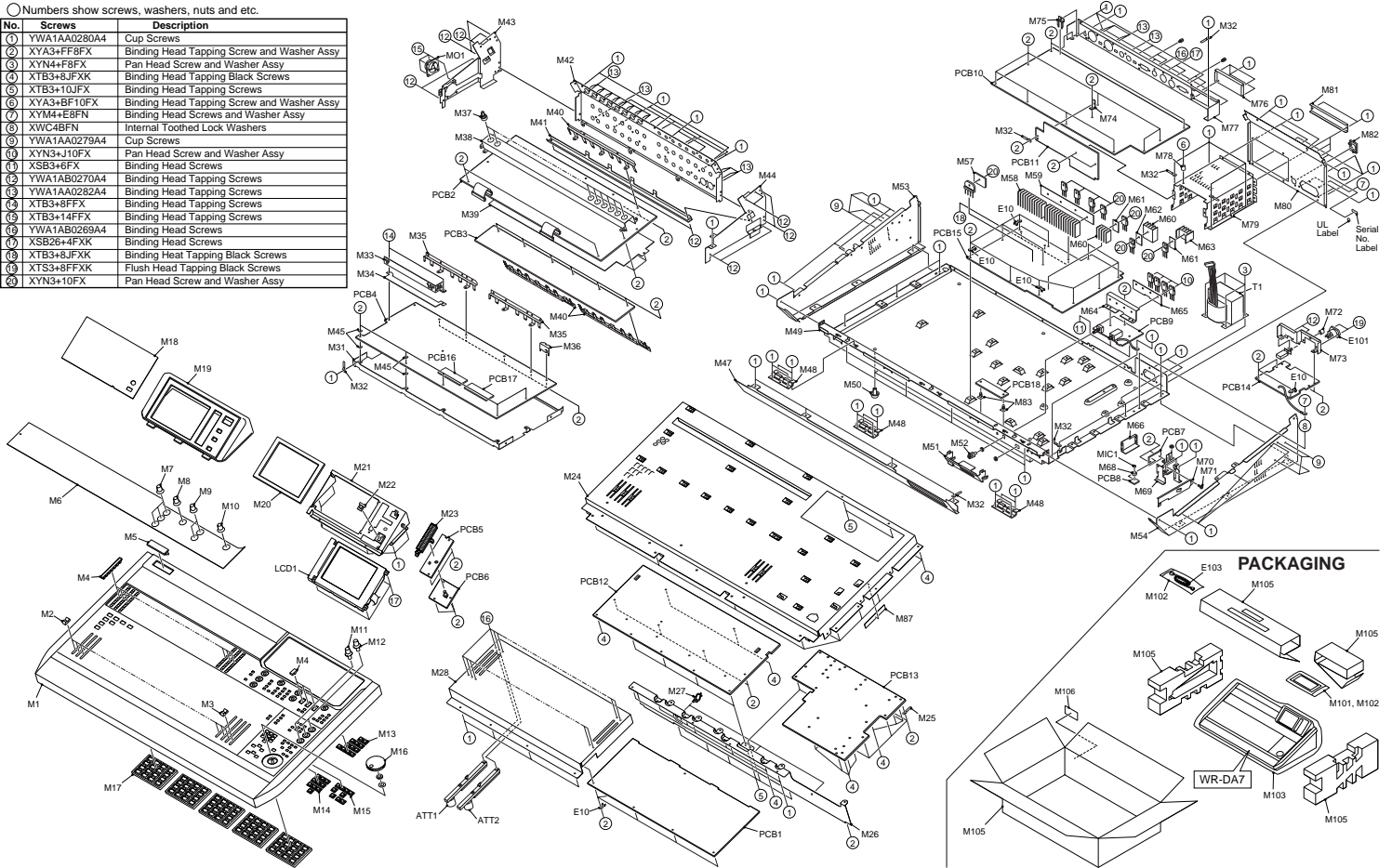
## LEVEL DIAGRAM



## EXPLODED VIEW OF WR-DA7

○ Numbers show screws, washers, nuts and etc.

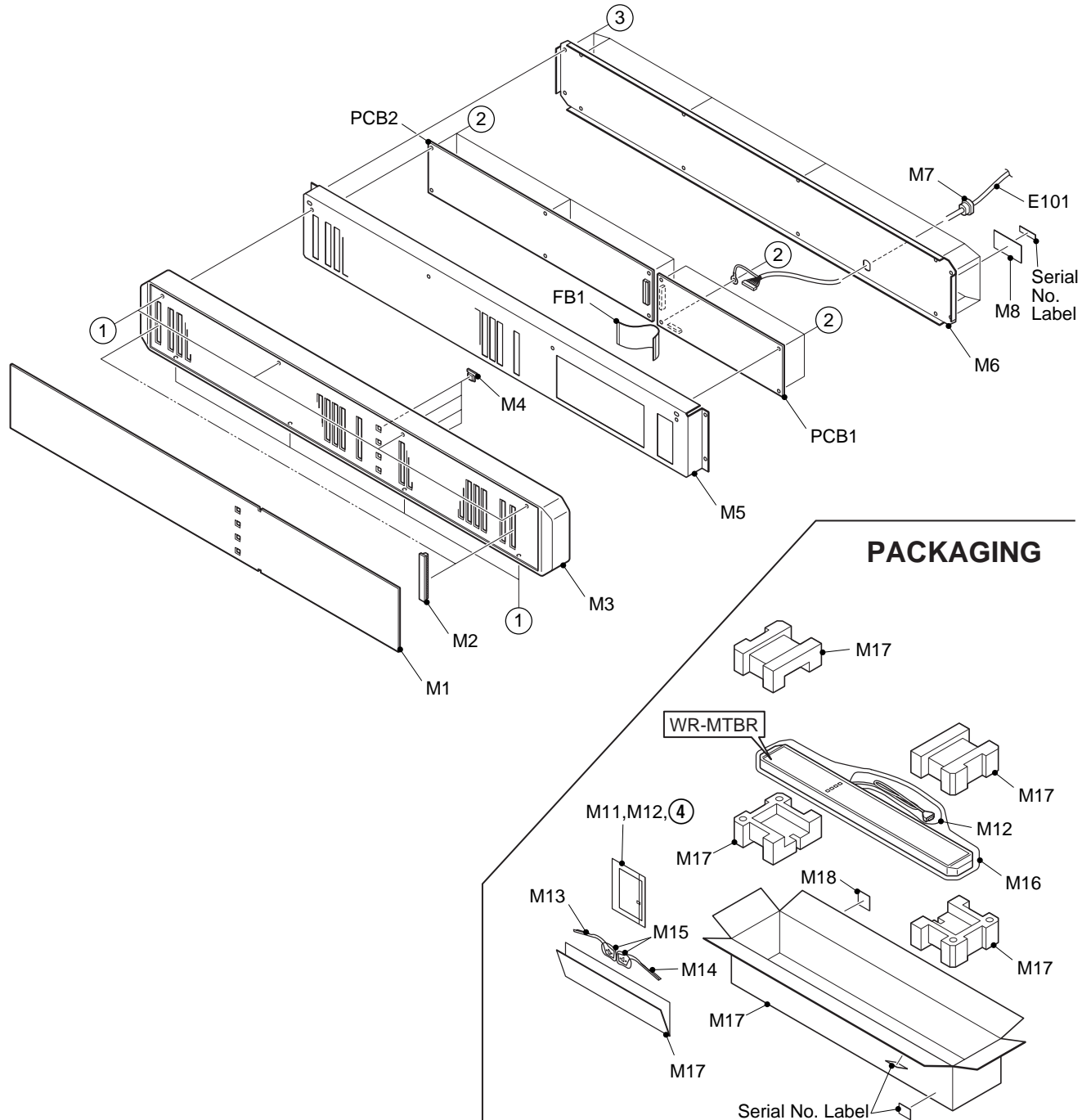
No.	Screws	Description
①	YW1AA0280A4	Cup Screws
②	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy
③	XYN4+8FX	Pan Head Screw and Washer Assy
④	XTB3+8JFXK	Binding Head Tapping Black Screws
⑤	XTB3+10JFX	Binding Head Tapping Screws
⑥	XYA3+BF10FX	Binding Head Tapping Screw and Washer Assy
⑦	XYM4+E8FN	Binding Head Screws and Washer Assy
⑧	XWC4BFN	Internal Toothed Lock Washers
⑨	YW1AA0279A4	Cup Screws
⑩	XYN3+J10FX	Pan Head Screw and Washer Assy
⑪	XSB3+6FX	Binding Head Screws
⑫	YW1AB0270A4	Binding Head Tapping Screws
⑬	YW1AA0282A4	Binding Head Tapping Screws
⑭	XTB3+8JFXK	Binding Head Tapping Screws
⑮	XTB3+14JFXK	Binding Head Tapping Screws
⑯	YW1AB0269A4	Binding Head Screws
⑰	XSB26+4FXK	Binding Head Screws
⑱	XTB3+8JFXK	Binding Head Tapping Black Screws
⑲	XTS3+8JFXK	Flush Head Tapping Black Screws
㉑	XYN3+10FX	Pan Head Screw and Washer Assy



# EXPLODED VIEW OF WR-MTBR

○ Numbers show screws, etc.

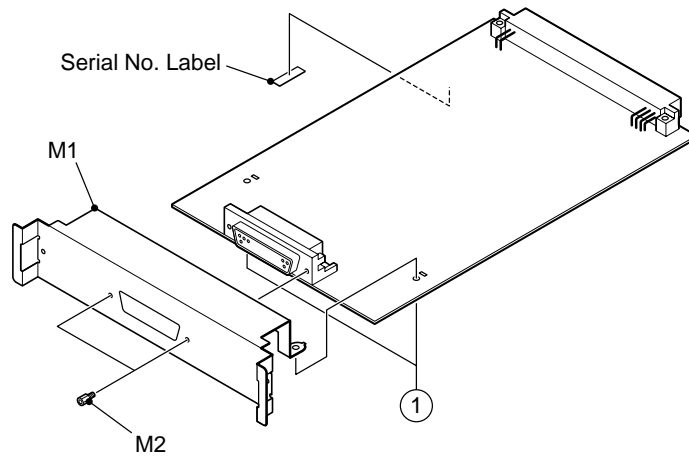
No.	Screws	Description
①	XTB3+6FFZK	Binding Head Tapping Black Screws
②	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy
③	YWA1AA0280A4	Cup Black Screws
④	YWA1AA0279A4	Cup Black Screws



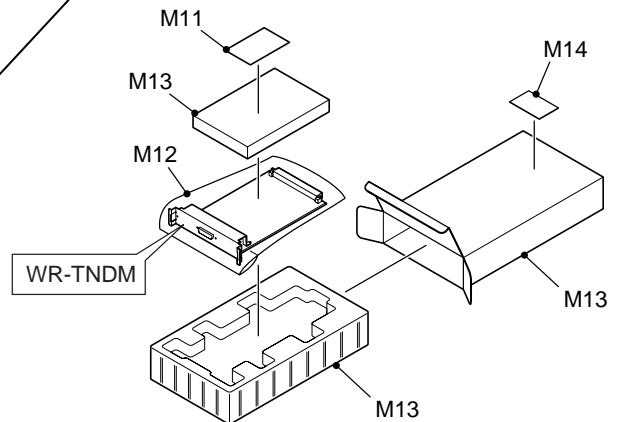
# EXPLODED VIEW OF WR-TNDM

○ Numbers show screws, etc.

No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy



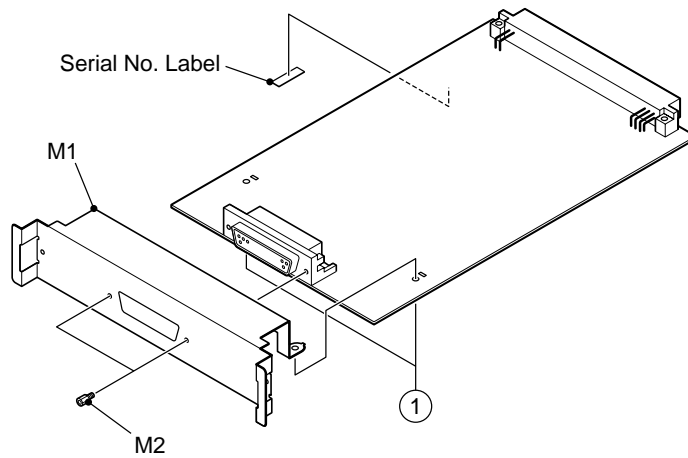
## PACKAGING



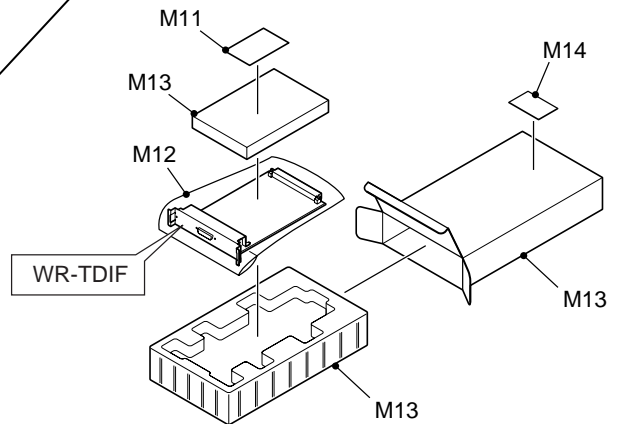
# EXPLODED VIEW OF WR-TDIF

○ Numbers show screws, etc.

No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy



## PACKAGING

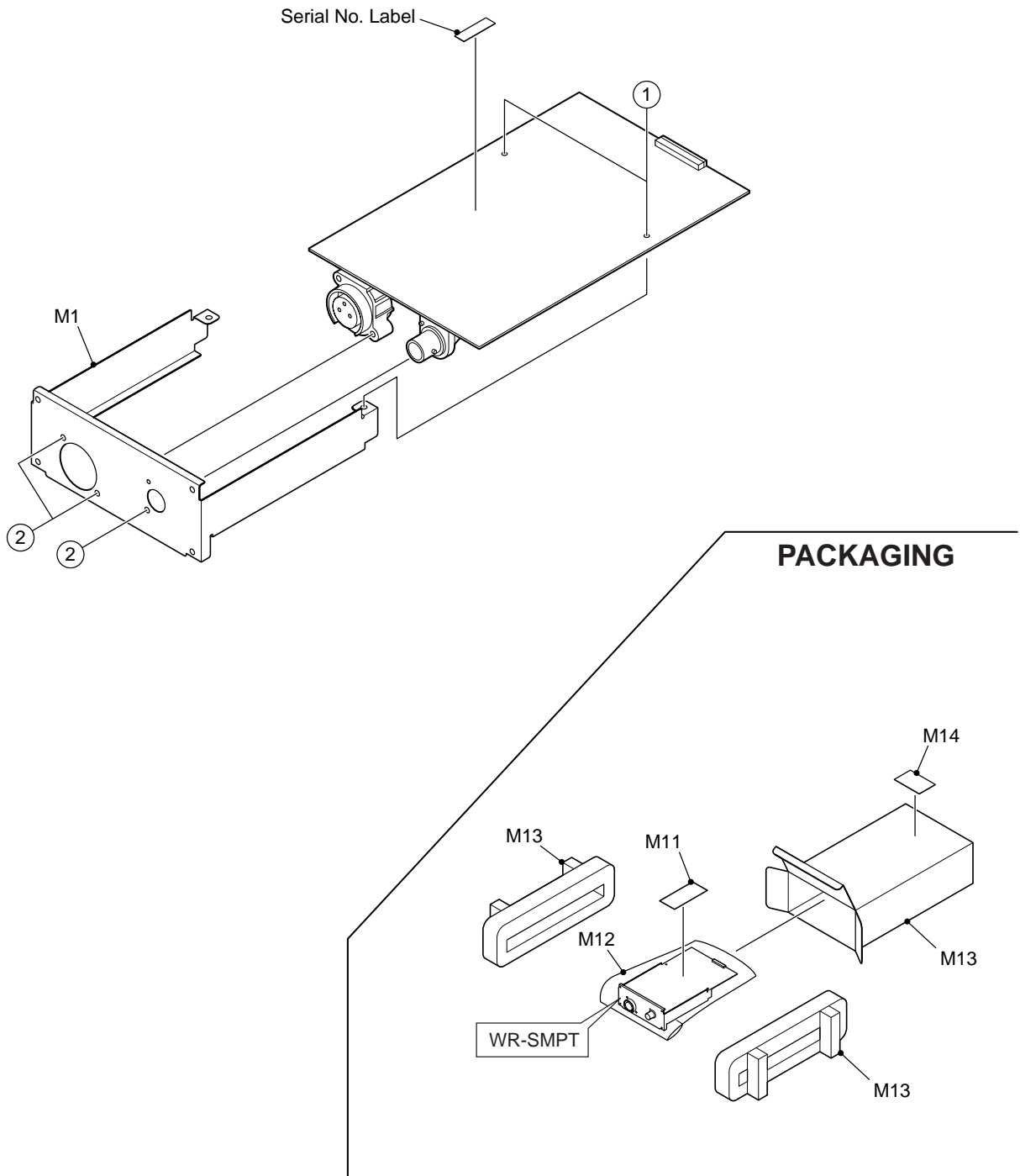




# EXPLODED VIEW OF WR-SMPT

○ Numbers show screws, etc.

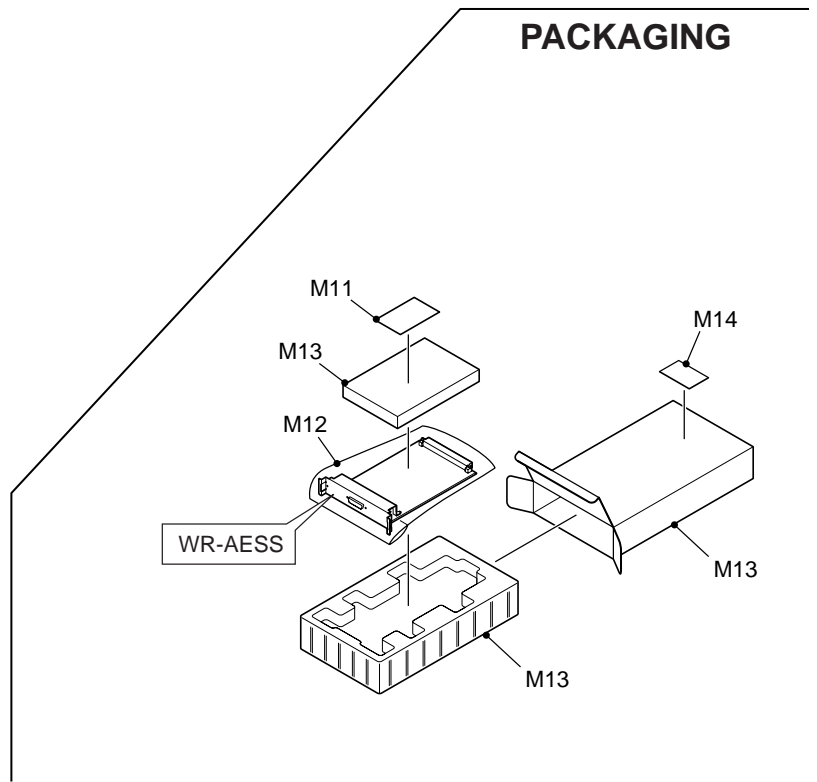
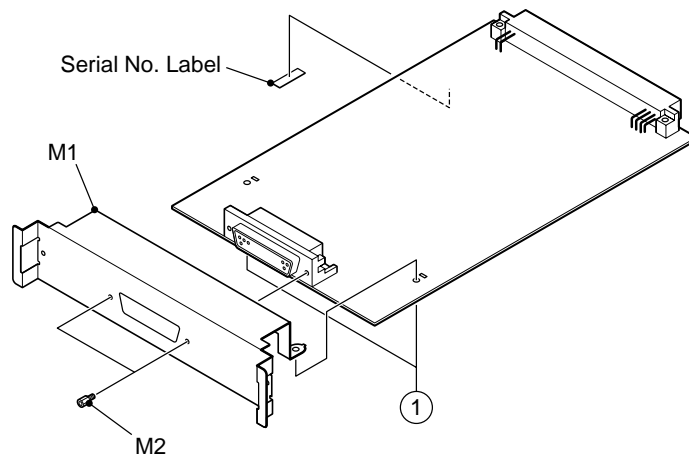
No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy
②	YWA1AA0282A4	Special Screws



# EXPLODED VIEW OF WR-AESS

○ Numbers show screws, etc.

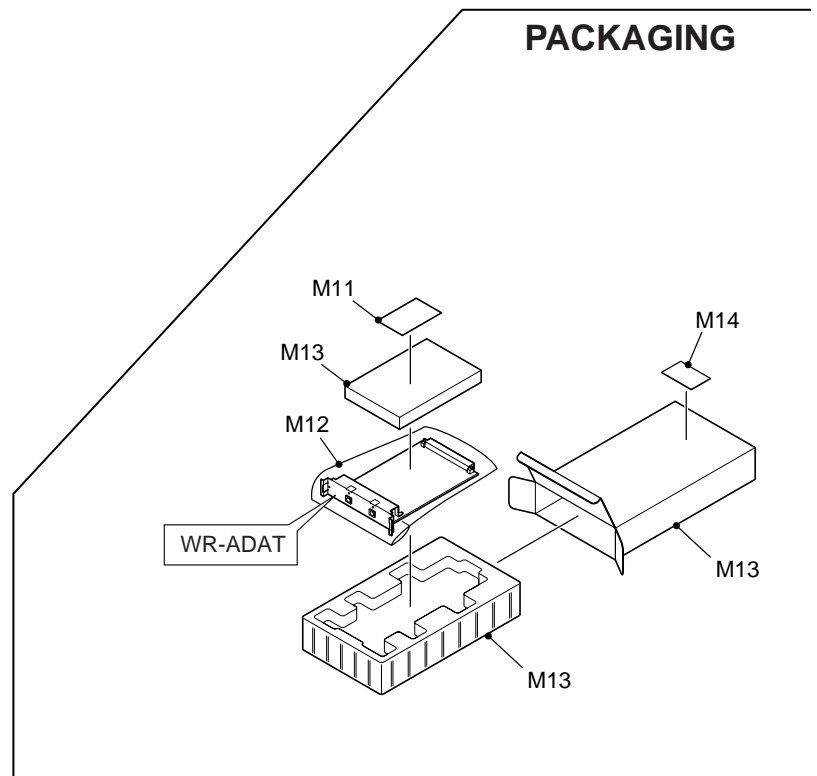
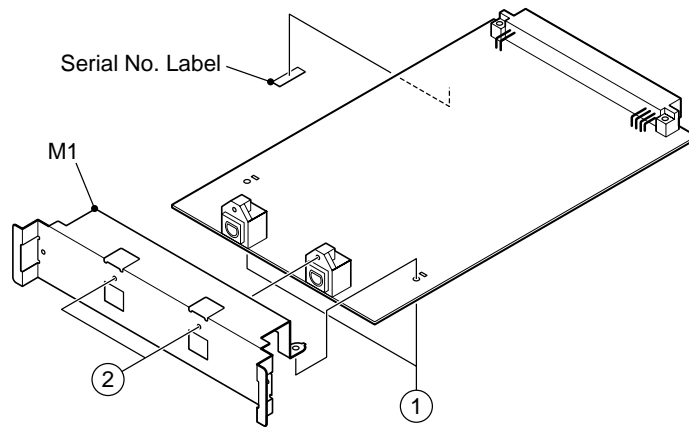
No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy



# EXPLODED VIEW OF WR-ADAT

○ Numbers show screws, etc.

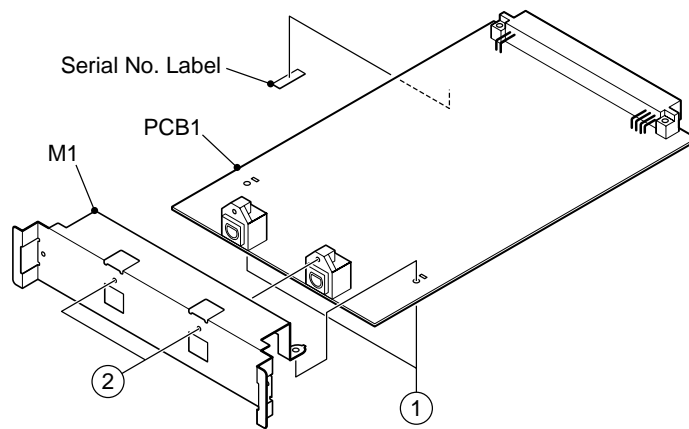
No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy
②	YWA1AA0282A4	Special Screws



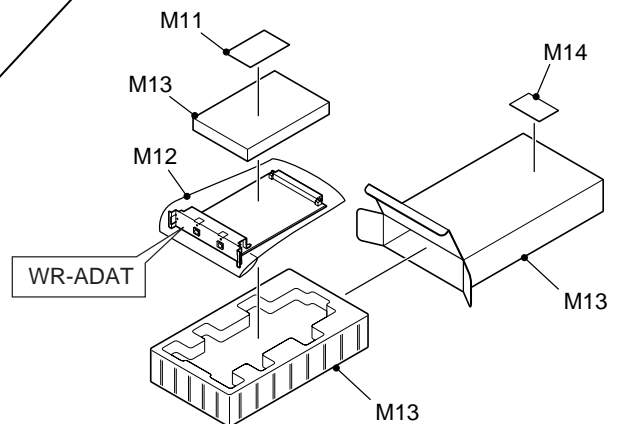
# EXPLODED VIEW OF WR-ADAT

○ Numbers show screws, etc.

No.	Screws	Description
①	XYA3+FF8FX	Binding Head Tapping Screw and Washer Assy
②	YWA1AA0282A4	Special Screws



## PACKAGING



# REPLACEMENT PARTS LIST

## Important Notice

- Components identified by "  $\triangle$  " mark have special characteristics important for safety.  
When replacing any of these components, use only manufacturer's specified parts.
- RTL : Retention Time Limited (No longer available after discontinuing product).
- REF. NO. Exx for Wire Assy, refer to Wiring Diagram on page 22.

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>WR-DA7</b>			M21	YWA2SA4491A1	Mounting Angle
<b>MISCELLANEOUS</b>			M22	YWA6JA1120A3	Button
			M24	YWA2KA1197B1	Chassis
			M25	YWCS7	Cord Clamp
			M26	YWA3BA1043A1	Supporting Angle
ATT1	EVANMAP01B14	Attenuator	M27	YWA2GA0092A4	Cord Clamp (x30)
ATT2	EVANMEP01B14	Attenuator	M28	YWA2SA4488A1	Mounting Angle for Father
MO1	YWAVA612LL5B	DC Motor	M31	YWA2KA1192A2	Chassis
T1	$\triangle$ YWAPTA1030A4	Power Transformer	M32	YWCS1	Cord Clamp
F1	$\triangle$ XBA1C50NU100	Current Fuse 5A 125V	M33	YWA7DA1077A3	Heat Sink
BAT1	YWCR2032	Battery	M34	YWA2PA1148A3	Insulator
E1	YWAEJA0501A4	Insulator	M37	YWA5RA1054A3	Knob
E2	YW40ALJV30W	Wire Assy for Main Board CN2 and Fader Drive Board CN2	M38	YWA3BA1037A2	Supporting Angle
E5	$\triangle$ YW840522	Insulator Fuse Cover	M39	YWA2PA1142A4	Insulator
E32	YWRDA7L32	Wire Assy for Main Board CN32 and Inverter Board CN32	M41	YWA3BA1038A2	Supporting Angle
E33	YW40ALJV15W	Wire Assy for Main Board CN33 and AD/DA Board CN33	M42	YWA5WA2357A1	Rear Panel
E58	YWRDA7L58A	Wire Ass'y for AD/DA Board CN58,CN99 and Monitor Board CN58,CN99	M43	YWA2KA1190A2	Side L Chassis
E62	$\triangle$ YWRDA7L62A	Wire Assy for Power-1 Board CN62 and Power-2 Board CN62	M44	YWA2KA1191A2	Chassis
E66	YW17AKJV08W	Wire Assy for Meter Board CN66 and EFX Board CN66	M45	YWA2PA1155A4	Insulator
LCD1	YWLM32019T	LCD Unit	M47	YWA5EA2283A1	Cover
M1	YWA5WA2356C1	Panel	M48	YWA5QA0510A3	Hinge
M2	YWA5RA1060B3	Knob	M49	YWA2KA1193A1	Chassis
M3	YWA5RB1060B3	Knob	M50	YW1492AR	Rubber Foot
M4	YWA1VA0518A3	Lens	M51	YWA5WA2361A3	Panel
M5	YWA7PA1011A4	Badge	M52	YWA5RA1059A3	Knob
M6	YWA7SA3719B2	Panel Sheet	M53	YWA2KA1194B1	Chassis
M7	YWA5RD1052A3	Knob	M54	YWA2KA1195B1	Chassis
M8	YWA5RA1052A3	Knob	M66	YWA2HA2143B3	Shield Parts
M9	YWA5RB1052A3	Knob	M69	YWA2SA4490A3	Mounting Angle
M10	YWA5RC1052A3	Knob	M70	YWA5QA0511A3	Hinge
M11	YWA5RA1053A3	Knob	M71	YWE5100EM02	Standard Screw
M12	YWA5RC1053A3	Knob	M72	YWBM90HR02B	Knob
M13	YWA6JA1117A3	Button	M74	YWA2SA4489A4	Mounting Angle
M14	YWA6JA1119A3	Button	M76	YWA5WA2360A4	Panel
M15	YWA6JB1117A3	Button	M78	YWA2NA1083A4	Spacer
M16	YWA5RA1061B3	Knob	M79	YWA2KA1196A1	Chassis
M17	YWA6JA1118A2	Button	M80	$\triangle$ YWA5WA2362A2	Panel
M18	YWA7SA3720B3	Label	M81	YWA5WA2359A4	Panel
M19	YWA5WA2363B1	Panel	M82	YWA5DA0020A3	Ornament
M20	YWA2FA1151A4	Cushion	M87	YWA7SA3748A4	Label

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>FADER DRIVE BOARD</b>			D40	MA165	Diode
			D41	YWERA1502AVR	Diode
			D42	MA165	Diode
			R45	ERDS2TJ223	Carbon 22K ohms 1/4W
			R46	ERDS2TJ473	Carbon 47K ohms 1/4W
PCB1 (RTL)	YWR00DA7KZ6A	Printed Circuit Board Assy	C1	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
IC1-21	YWTA7291S	IC	C2	ECA1AHG102	Electrolytic 1000 $\mu$ F 10V
IC22-24	MC74HC4052N	IC	C3	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
IC25-29	MC74HC273AH	IC	C4	ECA1CM102	Electrolytic 1000 $\mu$ F 16V
IC32	MC74HC273AH	IC	C5	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
IC54	NJM78L05A	IC	C7	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D1	YWERA1502AVR	Diode	C9	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D2	MA165	Diode	C11	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D3	YWERA1502AVR	Diode	C20	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D4	MA165	Diode	C21	ECA1CM221B	Electrolytic 220 $\mu$ F 16V
D5	YWERA1502AVR	Diode	C22,23	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D6	MA165	Diode	C25,26	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D7	YWERA1502AVR	Diode	C29	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D8	MA165	Diode	C31	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D9	YWERA1502AVR	Diode	C33	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D10	MA165	Diode	C35	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D11	YWERA1502AVR	Diode	C37-56	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D12	MA165	Diode	C59	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D13	YWERA1502AVR	Diode	C62	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D14	MA165	Diode	C65	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D15	YWERA1502AVR	Diode	C68,69	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D16	MA165	Diode	C72	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D17	YWERA1502AVR	Diode	C75	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D18	MA165	Diode	C78	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D19	YWERA1502AVR	Diode	C81	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D20	MA165	Diode	C84	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D21	YWERA1502AVR	Diode	C87	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D22	MA165	Diode	C90	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D23	YWERA1502AVR	Diode	C93	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D24	MA165	Diode	C96	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D25	YWERA1502AVR	Diode	C97	YWECA1CM102B	Electrolytic 1000 $\mu$ F 16V
D26	MA165	Diode	C98-100	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D27	YWERA1502AVR	Diode	C107,108	ECKF1H103ZF	Ceramic 0.01 $\mu$ F 50V
D28	MA165	Diode	C109,110	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D29	YWERA1502AVR	Diode	C112-132	ECQV1H104JZ	Plastic 0.1 $\mu$ F 50V
D30	MA165	Diode	C137	ECKF1H103ZF	Ceramic 0.01 $\mu$ F 50V
D31	YWERA1502AVR	Diode	L1	YWZBF503S03B	Coil
D32	MA165	Diode	CN1	YW510481300	13-pin Connector
D33	YWERA1502AVR	Diode	CN2	YW520444010	40-pin Connector
D34	MA165	Diode	CN4-7	YW521511310	13-pin Connector
D35	YWERA1502AVR	Diode	CN8-28	YWS6BPHKS	6-pin Connector
D36	MA165	Diode	CN65	YW521471410	14-pin Connector
D37	YWERA1502AVR	Diode	E1	YWRDA7L01	Wire Assy for Main Board CN1
D38	MA165	Diode	E10	YWA2QA0134A4	Electrode
D39	YWERA1502AVR	Diode	E56-63	RDA7L56	Wire Assy

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>HA BOARD</b>					
PCB2 (RTL)	YWR00DA7KB5A	Printed Circuit Board Assy	Q352	2SK374-RS	Transistor
IC1,51	YWUPC4570G	IC	Q353	2SC4102	Transistor
IC101,151	YWUPC4570G	IC	Q354,355	2SC2545-E	Transistor
IC201,251	YWUPC4570G	IC	Q356,357	2SC4081	Transistor
IC301,351	YWUPC4570G	IC	Q401,402	2SC4081	Transistor
IC401,451	YWUPC4570G	IC	Q403,404	2SC2545-E	Transistor
IC501,551	YWUPC4570G	IC	Q451,452	2SC4081	Transistor
IC601,651	YWUPC4570G	IC	Q453,454	2SC2545-E	Transistor
IC701,751	YWUPC4570G	IC	Q501,502	2SC4081	Transistor
Q1	2SC4102	Transistor	Q503,504	2SC2545-E	Transistor
Q2	2SK374-RS	Transistor	Q551,552	2SC4081	Transistor
Q3	2SC4102	Transistor	Q553,554	2SC2545-E	Transistor
Q4,5	2SC4081	Transistor	Q601,602	2SC4081	Transistor
Q6,7	2SC2545-E	Transistor	Q603,604	2SC2545-E	Transistor
Q51	2SC4102	Transistor	Q651,652	2SC4081	Transistor
Q52	2SK374-RS	Transistor	Q653,654	2SC2545-E	Transistor
Q53	2SC4102	Transistor	Q701,702	2SC4081	Transistor
Q56,57	2SC4081	Transistor	Q703,704	2SC2545-E	Transistor
Q58,59	2SC2545-E	Transistor	Q751,752	2SC4081	Transistor
Q101	2SC4102	Transistor	Q753,754	2SC2545-E	Transistor
Q102	2SK374-RS	Transistor	D1	MA142K	Diode
Q103	2SC4102	Transistor	D2	MA143	Diode
Q104,105	2SC4081	Transistor	D51	MA142K	Diode
Q106,107	2SC2545-E	Transistor	D52	MA143	Diode
Q151	2SC4102	Transistor	D101	MA142K	Diode
Q152	2SK374-RS	Transistor	D102	MA143	Diode
Q153	2SC4102	Transistor	D151	MA142K	Diode
Q154,155	2SC4081	Transistor	D152	MA143	Diode
Q156,157	2SC2545-E	Transistor	D201	MA142K	Diode
Q201	2SC4102	Transistor	D202	MA143	Diode
Q202	2SK374-RS	Transistor	D251	MA142K	Diode
Q203	2SC4102	Transistor	D252	MA143	Diode
Q204,205	2SC4081	Transistor	D301	MA142K	Diode
Q206,207	2SC2545-E	Transistor	D302	MA143	Diode
Q251	2SC4102	Transistor	D351	MA142K	Diode
Q252	2SK374-RS	Transistor	D352,401	MA143	Diode
Q253	2SC4102	Transistor	D451,501	MA143	Diode
Q254,255	2SC2545-E	Transistor	D551,601	MA143	Diode
Q256,257	2SC4081	Transistor	D651,701	MA143	Diode
Q301	2SC4102	Transistor	D751	MA143	Diode
Q302	2SK374-RS	Transistor	D752-759	YW1SS355	Diode
Q303	2SC4102	Transistor	R1,2	YWR1220P682D	Metal 6.8K ohms
Q304,305	2SC4081	Transistor	R3	YFR1220P104D	Metal 100K ohms
Q306,307	2SC2545-E	Transistor	R4	ERJ6GEYJ103	Carbon 10K ohms 1/10W
Q351	2SC4102	Transistor	R7,8	YWR1220P100D	Metal 10 ohms
			R9,10	YWR1220P103D	Metal 10K ohms
			R11,12	YWR1220P391D	Metal 390 ohms
			R13	YWR1220P100D	Metal 10 ohms
			R14,15	YWR1220P102D	Metal 1K ohms
			R16	R1220P822D	Metal 8.2K ohms

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R18,19	R1220P1911D	Metal	1.91K ohms	R171	YWR1220P181D	Metal	180 ohms
R20	YWR1220P473D	Metal	47K ohms	R172	YWR1220P272D	Metal	2.7K ohms
R21	YWR1220P181D	Metal	180 ohms	R173-175	YWR1220P473D	Metal	47K ohms
R22	YWR1220P272D	Metal	2.7K ohms	R176	ERJ6GEYJ101	Carbon	100 ohms 1/10W
R23-25	YWR1220P473D	Metal	47K ohms	R177	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R26	ERJ6GEYJ101	Carbon	100 ohms 1/10W	R201,202	YWR1220P682D	Metal	6.8K ohms
R27	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W	R203	YFR1220P104D	Metal	100K ohms
R51,52	YWR1220P682D	Metal	6.8K ohms	R204	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R53	YFR1220P104D	Metal	100K ohms	R207,208	YWR1220P100D	Metal	10 ohms
R54	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R209,210	YWR1220P103D	Metal	10K ohms
R57,58	YWR1220P100D	Metal	10 ohms	R211,212	YWR1220P391D	Metal	390 ohms
R59,60	YWR1220P103D	Metal	10K ohms	R213	YWR1220P100D	Metal	10 ohms
R61,62	YWR1220P391D	Metal	390 ohms	R214,215	YWR1220P102D	Metal	1K ohms
R63	YWR1220P100D	Metal	10 ohms	R216	YWR1220P822D	Metal	8.2K ohms
R64,65	YWR1220P102D	Metal	1K ohms	R218,219	R1220P1911D	Metal	1.91K ohms
R66	R1220P822D	Metal	8.2K ohms	R220	YWR1220P473D	Metal	47K ohms
R68,69	YWR1220P1911D	Metal	1.91K ohms	R221	YWR1220P181D	Metal	180 ohms
R70	YWR1220P473D	Metal	47K ohms	R222	YWR1220P272D	Metal	2.7K ohms
R71	YWR1220P181D	Metal	180 ohms	R223-225	YWR1220P473D	Metal	47K ohms
R72	YWR1220P272D	Metal	2.7K ohms	R226	ERJ6GEYJ101	Carbon	100 ohms 1/10W
R73-75	YWR1220P473D	Metal	47K ohms	R227	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R76	ERJ6GEYJ101	Carbon	100 ohms 1/10W	R251,252	YWR1220P682D	Metal	6.8K ohms
R77	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W	R253	YFR1220P104D	Metal	100K ohms
R101,102	YWR1220P682D	Metal	6.8K ohms	R254	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R103	YFR1220P104D	Metal	100K ohms	R257,258	YWR1220P100D	Metal	10 ohms
R104	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R259,260	YWR1220P103D	Metal	10K ohms
R107,108	YWR1220P100D	Metal	10 ohms	R261,262	YWR1220P391D	Metal	390 ohms
R109,110	YWR1220P103D	Metal	10K ohms	R263	YWR1220P100D	Metal	10 ohms
R111,112	YWR1220P391D	Metal	390 ohms	R264,265	YWR1220P102D	Metal	1K ohms
R113	YWR1220P100D	Metal	10 ohms	R266	R1220P822D	Metal	8.2K ohms
R114,115	YWR1220P102D	Metal	1K ohms	R268,269	R1220P1911D	Metal	1.91K ohms
R116	R1220P822D	Metal	8.2K ohms	R270	YWR1220P473D	Metal	47K ohms
R118,119	R1220P1911D	Metal	1.91K ohms	R271	YWR1220P181D	Metal	180ohms
R120	YWR1220P473D	Metal	47K ohms	R272	YWR1220P272D	Metal	2.7K ohms
R121	YWR1220P181D	Metal	180 ohms	R273-275	YWR1220P473D	Metal	47K ohms
R122	YWR1220P272D	Metal	2.7K ohms	R276	ERJ6GEYJ101	Carbon	100 ohms
R123-125	YWR1220P473D	Metal	47K ohms	R277	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R126	ERJ6GEYJ101	Carbon	100 ohms	R301,302	YWR1220P682D	Metal	6.8K ohms
R127	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W	R303	YFR1220P104D	Metal	100K ohms
R151,152	YWR1220P682D	Metal	6.8K ohms	R304	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R153	YFR1220P104D	Metal	100K ohms	R307,308	YWR1220P100D	Metal	10 ohms
R154	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R309,310	YWR1220P103D	Metal	10K ohms
R157,158	YWR1220P100D	Metal	10 ohms	R311,312	YWR1220P391D	Metal	390 ohms
R159,160	YWR1220P103D	Metal	10K ohms	R313	YWR1220P100D	Metal	10 ohms
R161,162	YWR1220P391D	Metal	390 ohms	R314,315	YWR1220P102D	Metal	1K ohms
R163	YWR1220P100D	Metal	10 ohms	R316	R1220P822D	Metal	8.2K ohms
R164,165	YWR1220P102D	Metal	1K ohms	R318,319	R1220P1911D	Metal	1.91K ohms
R166	R1220P822D	Metal	8.2K ohms	R320	YWR1220P473D	Metal	47K ohms
R168,169	R1220P1911D	Metal	1.91K ohms	R321	YWR1220P181D	Metal	180 ohms
R170	YWR1220P473D	Metal	47K ohms	R322	YWR1220P272D	Metal	2.7K ohms



REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R323-325	YWR1220P473D	Metal	47K ohms	R518	YWR1220P272D	Metal	2.7K ohms
R326	ERJ6GEYJ101	Carbon	100 ohms 1/10W	R519-521	YWR1220P473D	Metal	47K ohms
R327	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W	R553,554	YWR1220P103D	Metal	10K ohms
R351,352	YWR1220P682D	Metal	6.8K ohms	R555,556	YWR1220P100D	Metal	10 ohms
R353	YFR1220P104D	Metal	100K ohms	R557,558	YWR1220P391D	Metal	390 ohms
R354	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R559	YWR1220P100D	Metal	10 ohms
R357,358	YWR1220P100D	Metal	10 ohms	R560,561	YWR1220P102D	Metal	1K ohms
R359,360	YWR1220P103D	Metal	10K ohms	R562	R1220P822D	Metal	8.2K ohms
R361,362	YWR1220P391D	Metal	390 ohms	R564,565	R1220P1911D	Metal	1.91K ohms
R363	YWR1220P100D	Metal	10 ohms	R566	YWR1220P473D	Metal	47K ohms
R364,365	YWR1220P102D	Metal	1K ohms	R567	YWR1220P181	Metal	180 ohms
R366	R1220P822D	Metal	8.2K ohms	R568	YWR1220P272D	Metal	2.7K ohms
R368,369	R1220P1911D	Metal	1.91K ohms	R569-571	YWR1220P473D	Metal	47K ohms
R370	YWR1220P473D	Metal	47K ohms	R603,604	YWR1220P103D	Metal	10K ohms
R371	YWR1220P181D	Metal	180 ohms	R605,606	YWR1220P100D	Metal	10 ohms
R372	YWR1220P272D	Metal	2.7K ohms	R607,608	YWR1220P391D	Metal	390 ohms
R373-375	YWR1220P473D	Metal	47K ohms	R609	YWR1220P100D	Metal	10 ohms
R376	ERJ6GEYJ101	Carbon	100 ohms 1/10W	R610,611	YWR1220P102D	Metal	1K ohms
R377	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W	R612	R1220P822D	Metal	8.2K ohms
R403,404	YWR1220P103D	Metal	10K ohms	R614,615	R1220P1911D	Metal	1.91K ohms
R405,406	YWR1220P100D	Metal	10 ohms	R616	YWR1220P473D	Metal	47K ohms
R407,408	YWR1220P391D	Metal	390 ohms	R617	YWR1220P181	Metal	180 ohms
R409	YWR1220P100D	Metal	10 ohms	R618	YWR1220P272D	Metal	2.7K ohms
R410,411	YWR1220P102D	Metal	1K ohms	R619-621	YWR1220P473D	Metal	47K ohms
R412	R1220P822D	Metal	8.2K ohms	R653,654	YWR1220P103D	Metal	10K ohms
R414,415	R1220P1911D	Metal	1.91K ohms	R655,656	YWR1220P100D	Metal	10 ohms
R416	YWR1220P473D	Metal	47K ohms	R657,658	YWR1220P391D	Metal	390 ohms
R417	YWR1220P181D	Metal	180 ohms	R659	YWR1220P100D	Metal	10 ohms
R418	YWR1220P272D	Metal	2.7K ohms	R660,661	YWR1220P102D	Metal	1K ohms
R419-421	YWR1220P473D	Metal	47K ohms	R662	R1220P822D	Metal	8.2K ohms
R453,454	YWR1220P103D	Metal	10K ohms	R664,665	R1220P1911D	Metal	1.91K ohms
R455,456	YWR1220P100D	Metal	10 ohms	R666	YWR1220P473D	Metal	47K ohms
R457,458	YWR1220P391D	Metal	390 ohms	R667	YWR1220P181	Metal	180 ohms
R459	YWR1220P100D	Metal	10 ohms	R668	YWR1220P272D	Metal	2.7K ohms
R460,461	YWR1220P102D	Metal	1K ohms	R669-671	YWR1220P473D	Metal	47K ohms
R462	R1220P822D	Metal	8.2K ohms	R703,704	YWR1220P103D	Metal	10K ohms
R464,465	R1220P1911D	Metal	1.91K ohms	R705,706	YWR1220P100D	Metal	10 ohms
R466	YWR1220P473D	Metal	47K ohms	R707,708	YWR1220P391D	Metal	390 ohms
R467	YWR1220P181	Metal	180 ohms	R709	YWR1220P100D	Metal	10 ohms
R468	YWR1220P272D	Metal	2.7K ohms	R710,711	YWR1220P102D	Metal	1K ohms
R469-471	YWR1220P473D	Metal	47K ohms	R712	R1220P822D	Metal	8.2K ohms
R503,504	YWR1220P103D	Metal	10K ohms	R714,715	R1220P1911D	Metal	1.91K ohms
R505,506	YWR1220P100D	Metal	10 ohms	R716	YWR1220P473D	Metal	47K ohms
R507,508	YWR1220P391D	Metal	390 ohms	R717	YWR1220P181	Metal	180 ohms
R509	YWR1220P100D	Metal	10 ohms	R718	YWR1220P272D	Metal	2.7K ohms
R510,511	YWR1220P102D	Metal	1K ohms	R719-721	YWR1220P473D	Metal	47K ohms
R512	R1220P822D	Metal	8.2K ohms	R753,754	YWR1220P103D	Metal	10K ohms
R514,515	R1220P1911D	Metal	1.91K ohms	R755,756	YWR1220P100D	Metal	10 ohms
R516	YWR1220P473D	Metal	47K ohms	R757,758	YWR1220P391D	Metal	390 ohms
R517	YWR1220P181	Metal	180 ohms	R759	YWR1220P100D	Metal	10 ohms

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R760,761	YWR1220P102D	Metal	1K ohms	C117,118	YWR2025T101	Electrolytic	100 µF 25V
R762	R1220P822D	Metal	8.2K ohms	C120,121	RA216V330T58	Electrolytic	33 µF 16V
R764,765	R1220P1911D	Metal	1.91K ohms	C151,152	YF400101CHJT	Ceramic	100 pF
R766	YWR1220P473D	Metal	47K ohms	C153,154	YWR2063T470	Electrolytic	47 µF 63V
R767	YWR1220P181	Metal	180 ohms	C155	ECA1JM100	Electrolytic	10 µF 63V
R768	YWR1220P272D	Metal	2.7K ohms	C156,157	YF400101CHJT	Ceramic	100 pF
R769-771	YWR1220P473D	Metal	47K ohms	C158	YWRA26T471	Electrolytic	470 µF 6V
R951-957	ERJ6GEYJ271	Carbon	270 ohms 1/10W	C160,161	YF400221CHJT	Ceramic	220 pF
R978	ERJ6GEYJ271	Carbon	270 ohms 1/10W	C163	YWRA26T471	Electrolytic	470 µF 6V
R981-988	ERJ6GEYJ333	Carbon	33K ohms 1/10W	C164	YF400221CHJT	Ceramic	220 pF
VR1,51	EVJYAQF30730	Variable Resistor	10K ohms	C165,166	ECHU1H104JB9	Plastic	0.1 µF 50V
VR101,151	EVJYAQF30730	Variable Resistor	10K ohms	C167,168	R2O25T101	Electrolytic	100 µF 25V
VR201,251	EVJYAQF30730	Variable Resistor	10K ohms	C170,171	RA216V330T58	Electrolytic	33 µF 16V
VR301,351	EVJYAQF30730	Variable Resistor	10K ohms	C201,202	YF400101CHJT	Ceramic	100 pF
VR401,451	EVJYAQF30730	Variable Resistor	10K ohms	C203,204	YWR2063T470	Electrolytic	47 µF 63V
VR501,551	EVJYAQF30730	Variable Resistor	10K ohms	C205	ECA1JM100	Electrolytic	10 µF 63V
VR601,651	EVJYAQF30730	Variable Resistor	10K ohms	C206,207	YF400101CHJT	Ceramic	100 pF
VR701,751	EVJYAQF30730	Variable Resistor	10K ohms	C208	YWRA26T471	Electrolytic	470 µF 6V
C0	YW400104KX	Ceramic	0.1 µF	C210,211	YF400221CHJT	Ceramic	220 pF
C1,2	YF400101CHJT	Ceramic	100 pF	C213	YWRA26T471	Electrolytic	470 µF 6V
C3,4	YWR2063T470	Electrolytic	47 µF 63V	C214	YF400221CHJT	Ceramic	220 pF
C5	ECA1JM100	Electrolytic	10 µF 63V	C215,216	ECHU1H104JB9	Plastic	0.1 µF 50V
C6,7	YF400101CHJT	Ceramic	100 pF	C217,218	YWR2025T101	Electrolytic	100 µF 25V
C8	YWRA26T471	Electrolytic	470 µF 6V	C220,221	RA216V330T58	Electrolytic	33 µF 16V
C10,11	YF400221CHJT	Ceramic	220 pF	C251,252	YF400101CHJT	Ceramic	100 pF
C13	YWRA26T471	Electrolytic	470 µF 6V	C253,254	YWR2063T470	Electrolytic	47 µF 63V
C14	YF400221CHJT	Ceramic	220 pF	C255	ECA1JM100	Electrolytic	10 µF 6V
C15,16	ECHU1H104JB9	Plastic	0.1 µF 50V	C256,257	YF400101CHJT	Ceramic	100 pF
C17,18	YWR2025T101	Electrolytic	100 µF 25V	C258	YWRA26T471	Electrolytic	470 µF 6V
C20,21	RA216V330T58	Electrolytic	33 µF 16V	C260,261	YF400221CHJT	Ceramic	220 pF
C51,52	YF400101CHJT	Ceramic	100 pF	C263	YWRA26T471	Electrolytic	470 µF 6V
C53,54	YWR2063T470	Electrolytic	47 µF 63V	C264	YF400221CHJT	Ceramic	220 pF
C55	ECA1JM100	Electrolytic	10 µF 63V	C265,266	ECHU1H104JB9	Plastic	0.1 µF 50V
C56,57	YF400101CHJT	Ceramic	100 pF	C267,268	YWR2025T101	Electrolytic	100 µF 25V
C58	YWRA26T471	Electrolytic	470 µF 6V	C270,271	RA216V330T58	Electrolytic	33 µF 16V
C60,61	YF400221CHJT	Ceramic	220 pF	C301,302	YF400101CHJT	Ceramic	100 pF
C63	YWRA26T471	Electrolytic	470 µF 6V	C303,304	YWR2063T470	Electrolytic	47 µF 63V
C64	YF400221CHJT	Ceramic	220 pF	C305	ECA1JM100	Electrolytic	10 µF 63V
C65,66	ECHU1H104JB9	Plastic	0.1 µF 50V	C306,307	YF400101CHJT	Ceramic	100 pF
C67,68	YWR2025T101	Electrolytic	100 µF 25V	C308	YWRA26T471	Electrolytic	470 µF 6V
C70,71	RA216V330T58	Electrolytic	33 µF 16V	C310,311	YF400221CHJT	Ceramic	220 pF
C101,102	YF400101CHJT	Ceramic	100 pF	C313	YWRA26T471	Electrolytic	470 µF 6V
C103,104	YWR2063T470	Electrolytic	47 µF 63V	C314	YF400221CHJT	Ceramic	220 pF
C105	ECA1JM100	Electrolytic	10 µF 63V	C315,316	ECHU1H104JB9	Plastic	0.1 µF 50V
C106,107	YF400101CHJT	Ceramic	100 pF	C317,318	YWR2025T101	Electrolytic	100 µF 25V
C108	YWRA26T471	Electrolytic	470 µF 6V	C320,321	RA216V330T58	Electrolytic	33 µF 16V
C110,111	YF400221CHJT	Ceramic	220 pF	C351,352	YF400101CHJT	Ceramic	100 pF
C113	YWRA26T471	Electrolytic	470 µF 6V	C353,354	YWR2063T470	Electrolytic	47 µF 63V
C114	YF400221CHJT	Ceramic	220 pF	C355	ECA1JM100	Electrolytic	10 µF 6.3V
C115,116	ECHU1H104JB9	Plastic	0.1 µF 50V	C356,357	YF400101CHJT	Ceramic	100 pF

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C358	YWRA26T471	Electrolytic	470 µF 6V	C660	YWRA26T471	Electrolytic	470 µF 6V
C360,361	YF400221CHJT	Ceramic	220 pF	C661	YF400221CHJT	Ceramic	220 pF
C363	YWRA26T471	Electrolytic	470 µF 6V	C662,663	ECHU1H104JB9	Plastic	0.1 µF 50V
C364	YF400221CHJT	Ceramic	220 pF	C664,665	YWR2025T101	Electrolytic	100 µF 25V
C365,366	ECHU1H104JB9	Plastic	0.1 µF 50V	C670,671	RA216V330T58	Electrolytic	33 µF 16V
C367,368	YWR2025T101	Electrolytic	100 µF 25V	C701-704	YF400101CHJT	Ceramic	100 pF
C370,371	RA216V330T58	Electrolytic	33 µF 16V	C705	YWRA26T471	Electrolytic	470 µF 6V
C401-404	YF400101CHJT	Ceramic	100 pF	C707,708	YF400221CHJT	Ceramic	220 pF
C405	YWRA26T471	Electrolytic	470 µF 6V	C710	YWRA26T471	Electrolytic	470 µF 6V
C407,408	YF400221CHJT	Ceramic	220 pF	C711	YF400221CHJT	Ceramic	220 pF
C410	YWRA26T471	Electrolytic	470 µF 6V	C712,713	ECHU1H104JB9	Plastic	0.1 µF 50V
C411	YF400221CHJT	Ceramic	220 pF	C714,715	YWR2025T101	Electrolytic	100 µF 25V
C412,413	ECHU1H104JB9	Plastic	0.1 µF 50V	C720,721	RA216V330T58	Electrolytic	33 µF 16V
C414,415	YWR2025T101	Electrolytic	100 µF 25V	C751-754	YF400101CHJT	Ceramic	100 pF
C420,421	RA216V330T58	Electrolytic	33 µF 16V	C755	YWRA26T471	Electrolytic	470 µF 6V
C451-454	YF400101CHJT	Ceramic	100 pF	C757,758	YF400221CHJT	Ceramic	220 pF
C455	YWRA26T471	Electrolytic	470 µF 6V	C760	YWRA26T471	Electrolytic	470 µF 6V
C457,458	YF400221CHJT	Ceramic	220 pF	C761	YF400221CHJT	Ceramic	220 pF
C460	YWRA26T471	Electrolytic	470 µF 6V	C762,763	ECHU1H104JB9	Plastic	0.1 µF 50V
C461	YF400221CHJT	Ceramic	220 pF	C764,765	YWR2025T101	Electrolytic	100 µF 25V
C462,463	ECHU1H104JB9	Plastic	0.1 µF 50V	C770,771	RA216V330T58	Electrolytic	33 µF 16V
C464,465	YWR2025T101	Electrolytic	100 µF 25V	C951-957	YF400104FZT	Ceramic	0.1 µF
C470,471	RA216V330T58	Electrolytic	33 µF 16V	C976,977	ECA1EM471	Electrolytic	470 µF 25V
C501-504	YF400101CHJT	Ceramic	100 pF	C978	YF400104FZT	Ceramic	0.1 µF
C505	YWRA26T471	Electrolytic	470 µF 6V	C979-982	ECA1EM471	Electrolytic	470 µF 25V
C507,508	YF400221CHJT	Ceramic	220 pF	C983-990	ECA1JM100	Electrolytic	0.1 µF 63V
C510	YWRA26T471	Electrolytic	470 µF 6V	L1,2	YWBLM21A05PT	Coil	
C511	YF400221CHJT	Ceramic	220 pF	L51,52	YWBLM21A05PT	Coil	
C512,513	ECHU1H104JB9	Plastic	0.1 µF 50V	L101,102	YWBLM21A05PT	Coil	
C514,515	YWR2025T101	Electrolytic	100 µF 25V	L151,152	YWBLM21A05PT	Coil	
C520,521	RA216V330T58	Electrolytic	33 µF 16V	L201,202	YWBLM21A05PT	Coil	
C551-554	YF400101CHJT	Ceramic	100 pF	L251,252	YWBLM21A05PT	Coil	
C555	YWRA26T471	Electrolytic	470 µF 6V	L301,302	YWBLM21A05PT	Coil	
C557,558	YF400221CHJT	Ceramic	220 pF	L351,352	YWBLM21A05PT	Coil	
C560	YWRA26T471	Electrolytic	470 µF 6V	L401,402	YWBLM21A05PT	Coil	
C561	YF400221CHJT	Ceramic	220 pF	L451,452	YWBLM21A05PT	Coil	
C562,563	ECHU1H104JB9	Plastic	0.1 µF 50V	L501,502	YWBLM21A05PT	Coil	
C564,565	YWR2025T101	Electrolytic	100 µF 25V	L551,552	YWBLM21A05PT	Coil	
C570,571	RA216V330T58	Electrolytic	33 µF 16V	L601,602	YWBLM21A05PT	Coil	
C601-604	YF400101CHJT	Ceramic	100 pF	L651,652	YWBLM21A05PT	Coil	
C605	YWRA26T471	Electrolytic	470 µF 6V	L701,702	YWBLM21A05PT	Coil	
C607,608	YF400221CHJT	Ceramic	220 pF	L751,752	YWBLM21A05PT	Coil	
C610	YWRA26T471	Electrolytic	470 µF 6V	CN1,51	YWNC3FAH10	Connector	
C611	YF400221CHJT	Ceramic	220 pF	CN56-63	YW510480400	Connector	
C612,613	ECHU1H104JB9	Plastic	0.1 µF 50V	CN101,151	YWNC3FAH10	Connector	
C614,615	YWR2025T101	Electrolytic	100 µF 25V	CN201,251	YWNC3FAH10	Connector	
C620,621	RA216V330T58	Electrolytic	33 µF 16V	CN301,351	YWNC3FAH10	Connector	
C651-654	YF400101CHJT	Ceramic	100 pF	JK401,451	YWYKB215261	Jack	
C655	YWRA26T471	Electrolytic	470 µF 6V	JK501,551	YWYKB215261	Jack	
C657,658	YF400221CHJT	Ceramic	220 pF	JK601,651	YWYKB215261	Jack	

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
JK701,751 M40	YWYKB215261 YWA3BA1041A3	Jack Supporting Angle	IC401 IC412 IC413 IC451 IC501	YWM51957BFP MC74HC125AF YWTC7S04F YWM51957BFP YWMN64734	IC IC IC IC IC
<b>INS BOARD</b>					
PCB3 (RTL) R901-916 C901-932 L901-932 CN54,55	YWR00DA7KC5A YWR1220P100D YF400101CHJT YWBLM21A05PT YW510481500	Printed Circuit Board Assy Metal Ceramic           100 pF Coil Connector	IC502 IC503-506 IC507-510 IC651 IC652	YWTC7S04F YWNJM5532M YWUPC4570G YWMN64734 YWTC7S04F	IC IC IC IC IC
CN56-63 JK901-916 E54 E55 M40	YW510480400 YWYKB215262 YWRDA7L54 YWRDA7L55 YWA3BA1041A3	Connector Jack Wire Assy for AD/DA Board CN54 Wire Assy for AD/DA Board CN55 Supporting Angle	IC653,654 IC655 IC657,658 IC660,662 IC663	NJM2068MD YWUPC4570G NJM2068MD YWNJU201AM YWAK4324VF	IC IC IC IC IC
<b>AD/DA BOARD</b>					
PCB4 (RTL) IC1 IC2 IC3 IC41	YWR00DA7KZ4A YWUPC4570G NJM2068MD YWCS5394KS YWUPC4570G	Printed Circuit Board Assy IC IC IC IC	IC664,665 IC666 IC667-670 IC671 IC672	NJM2068MD YWTC7S32FL YWUPC4570G YWNJU201AM NJM2068MD	IC IC IC IC IC
IC42 IC43 IC81 IC82 IC83	NJM2068MD YWCS5394KS YWUPC4570G NJM2068MD YWCS5394KS	IC IC IC IC IC	IC673 IC902,903 IC904 IC906,907 IC908	YWMC74HC04AF YWNJM2122M YWAK4520AVF YWNJM2122M YWAK4520AVF	IC IC IC IC IC
IC121 IC122 IC123 IC161 IC162	YWUPC4570G NJM2068MD YWCS5394KS YWUPC4570G NJM2068MD	IC IC IC IC IC	IC909,910 IC911 IC912-919 Q407 Q408	YWUPC4570G YWSN75179BPS YWTC7S04F DTC114EU DTA114EU	IC IC IC Transistor Transistor
IC163 IC201 IC202 IC203 IC241	YWCS5394KS YWUPC4570G NJM2068MD YWCS5394KS YWUPC4570G	IC IC IC IC IC	Q416 Q501,502 Q503,504 Q651,652 Q654,655	DTC114EU 2SD1766T00PQ 2SC4695TB 2SD1766T00PQ DTC114EU	Transistor Transistor Transistor Transistor Transistor
IC242 IC243 IC281 IC282 IC283	NJM2068MD YWCS5394KS YWUPC4570G NJM2068MD YWCS5394KS	IC IC IC IC IC	Q657-660 Q700,701 Q901-904 D501,502 D503-510	DTC114EU 2SC4695TB 2SC4695TB YWUDZ5.6B MA111	Transistor Transistor Transistor Diode Diode
			D660,661 R1 R2 R3 R4	YWUDZ5.6B YWR1220P473D YWR1220P512D YWR1220P512D YWR1220P752D	Diode Metal Metal Metal Metal
			R5 R6 R7 R8 R9	YWR1220P752D R1220P681D YFR1220P104D R1220P681D YWR1220P752D	Metal Metal Metal Metal Metal
					47K ohms 5.1K ohms 5.1K ohms 7.5K ohms 7.5K ohms 680 ohms 100K ohms 680 ohms 7.5K ohms

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R10	YWR1220P752D	Metal	7.5K ohms	R97	R1220P681D	Metal	680 ohms
R11	YWR1220P181D	Metal	180 ohms	R98	YFR1220P104D	Metal	100K ohms
R12	YWR1220P473D	Metal	47K ohms	R99	R1220P681D	Metal	680 ohms
R13	YWR1220P512D	Metal	5.1K ohms	R100,101	YWR1220P473D	Metal	47K ohms
R14	YWR1220P512D	Metal	5.1K ohms	R102,103	YWR1220P752D	Metal	7.5K ohms
R15	YWR1220P752D	Metal	7.5K ohms	R105	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W
R16	YWR1220P752D	Metal	7.5K ohms	R106	YWR1220P473D	Metal	47K ohms
R17	R1220P681D	Metal	680 ohms	R107	YWR1220P181D	Metal	180 ohms
R18	YFR1220P104D	Metal	100K ohms	R121	YWR1220P473D	Metal	47K ohms
R19	R1220P681D	Metal	680 ohms	R122,123	YWR1220P512D	Metal	5.1K ohms
R20	YWR1220P473D	Metal	47K ohms	R124,125	YWR1220P752D	Metal	7.5K ohms
R21	YWR1220P473D	Metal	47K ohms	R126	R1220P681D	Metal	680 ohms
R22	YWR1220P752D	Metal	7.5K ohms	R127	YFR1220P104D	Metal	100K ohms
R23	YWR1220P752D	Metal	7.5K ohms	R128	R1220P681D	Metal	680 ohms
R25	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W	R129,130	YWR1220P752D	Metal	7.5K ohms
R26	YWR1220P473D	Metal	47K ohms	R131	YWR1220P181D	Metal	180 ohms
R27	YWR1220P181D	Metal	180 ohms	R132	YWR1220P473D	Metal	47K ohms
R41	YWR1220P473D	Metal	47K ohms	R133,134	YWR1220P512D	Metal	5.1K ohms
R42	YWR1220P512D	Metal	5.1K ohms	R135,136	YWR1220P752D	Metal	7.5K ohms
R43	YWR1220P512D	Metal	5.1K ohms	R137	R1220P681D	Metal	680 ohms
R44	YWR1220P752D	Metal	7.5K ohms	R138	YFR1220P104D	Metal	100K ohms
R45	YWR1220P752D	Metal	7.5K ohms	R139	R1220P681D	Metal	680 ohms
R46	R1220P681D	Metal	680 ohms	R140,141	YWR1220P473D	Metal	47K ohms
R47	YFR1220P104D	Metal	100K ohms	R142,143	YWR1220P752D	Metal	7.5K ohms
R48	R1220P681D	Metal	680 ohms	R145	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W
R49	YWR1220P752D	Metal	7.5K ohms	R146	YWR1220P473D	Metal	47K ohms
R50	YWR1220P752D	Metal	7.5K ohms	R147	YWR1220P181D	Metal	180 ohms 1/10W
R51	YWR1220P181D	Metal	180 ohms	R161	YWR1220P473D	Metal	47K ohms
R52	YWR1220P473D	Metal	47K ohms	R162,163	YWR1220P512D	Metal	5.1K ohms
R53,54	YWR1220P512D	Metal	5.1K ohms	R164,165	YWR1220P752D	Metal	7.5K ohms
R55,56	YWR1220P752D	Metal	7.5K ohms	R166	R1220P681D	Metal	680 ohms
R57	R1220P681D	Metal	680 ohms	R167	YFR1220P104D	Metal	100K ohms
R58	YFR1220P104D	Metal	100K ohms	R168	R1220P681D	Metal	680 ohms
R59	R1220P681D	Metal	680 ohms	R169,170	YWR1220P752D	Metal	7.5K ohms
R60,61	YWR1220P473D	Metal	47K ohms	R171	YWR1220P181D	Metal	180 ohms 1/10W
R62,63	YWR1220P752D	Metal	7.5K ohms	R172	YWR1220P473D	Metal	47K ohms
R65	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W	R173,174	YWR1220P512D	Metal	5.1K ohms
R66	YWR1220P473D	Metal	47K ohms	R175,176	YWR1220P752D	Metal	7.5K ohms
R67	YWR1220P181D	Metal	180 ohms	R177	R1220P681D	Metal	680 ohms
R81	YWR1220P473D	Metal	47K ohms	R178	YFR1220P104D	Metal	100K ohms
R82,83	YWR1220P512D	Metal	5.1K ohms	R179	R1220P681D	Metal	680 ohms
R84,85	YWR1220P752D	Metal	7.5K ohms	R180,181	YWR1220P473D	Metal	47K ohms
R86	R1220P681D	Metal	680 ohms	R182,183	YWR1220P752D	Metal	7.5K ohms
R87	YFR1220P104D	Metal	100K ohms	R185	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W
R88	R1220P681D	Metal	680 ohms	R186	YWR1220P473D	Metal	47K ohms
R89,90	YWR1220P752D	Metal	7.5K ohms	R187	YWR1220P181D	Metal	180 ohms 1/10W
R91	YWR1220P181D	Metal	180 ohms	R201	YWR1220P473D	Metal	47K ohms
R92	YWR1220P473D	Metal	47K ohms	R202,203	YWR1220P512D	Metal	5.1K ohms
R93,94	YWR1220P512D	Metal	5.1K ohms	R204,205	YWR1220P752D	Metal	7.5K ohms
R95,96	YWR1220P752D	Metal	7.5K ohms	R206	R1220P681D	Metal	680 ohms

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R207	YFR1220P104D	Metal	100K ohms	R307	YWR1220P181D	Metal	180 ohms
R208	R1220P681D	Metal	680 ohms	R311	R1220P1912D	Metal	19.1K ohms
R209,210	YWR1220P752D	Metal	7.5K ohms	R314	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R211	YWR1220P181D	Metal	180 ohms	R315-318	YWR1220P103D	Metal	10K ohms
R212	YWR1220P473D	Metal	47K ohms	R319	YFR1220P203D	Metal	20K ohms
R213,214	YWR1220P512D	Metal	5.1K ohms	R320	R1220P2102D	Metal	21K ohms
R215,216	YWR1220P752D	Metal	7.5K ohms	R321	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R217	R1220P681D	Metal	680 ohms	R322	R1220P2102D	Metal	21K ohms
R218	YFR1220P104D	Metal	100K ohms	R323	YWR1220P103D	Metal	10K ohms
R219	R1220P681D	Metal	680 ohms	R324	R1220P5900D	Metal	5.9K ohms
R220,221	YWR1220P473D	Metal	47K ohms	R325	YWR1220P751D	Metal	750 ohms
R222,223	YWR1220P752D	Metal	7.5K ohms	R327	YWR1220P152D	Metal	1.5K ohms
R225	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W	R329	R1220P2102D	Metal	21K ohms
R226	YWR1220P473D	Metal	47K ohms	R331	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R227,228	YWR1220P181D	Metal	180 ohms	R336,337	YWR1220P122D	Metal	1.2K ohms
R241	YWR1220P473D	Metal	47K ohms	R339	YWR1220P100D	Metal	10 ohms
R242,243	YWR1220P512D	Metal	5.1K ohms	R340	YWR1220P680D	Metal	68 ohms
R244,245	YWR1220P752D	Metal	7.5K ohms	R341	YWR1220P100D	Metal	10 ohms
R246	R1220P681D	Metal	680 ohms	R342	YWR1220P680D	Metal	68 ohms
R247	YFR1220P104D	Metal	100K ohms	R343	YWR1220P100D	Metal	10 ohms
R248	R1220P681D	Metal	680 ohms	R345	YWR1220P680D	Metal	68 ohms
R249,250	YWR1220P752D	Metal	7.5K ohms	R346	YWR1220P100D	Metal	10 ohms
R251	YWR1220P181D	Metal	180 ohms	R347	YWR1220P680D	Metal	68 ohms
R252	YWR1220P473D	Metal	47K ohms	R401	ERJ6GEY0R00	Carbon	0 ohm 1/10W
R253,254	YWR1220P512D	Metal	5.1K ohms	R403	YWR1220P912D	Metal	9.2K ohms
R255,256	YWR1220P752D	Metal	7.5K ohms	R404	YWR1220P332D	Metal	3.3K ohms
R257	R1220P681D	Metal	680 ohms	R407	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R258	YFR1220P104D	Metal	100K ohms	R434	ERJ6GEYJ123	Carbon	12K ohms 1/10W
R259	R1220P681D	Metal	680 ohms	R436,437	ERJ6GEYJ473	Carbon	47K ohms 1/10W
R260,261	YWR1220P473D	Metal	47K ohms	R443-446	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R262,263	YWR1220P752D	Metal	7.5K ohms	R452	ERJ6GEYJ473	Carbon	47K ohms 1/10W
R265	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W	R456	YWR1220P153D	Metal	15K ohms
R266,281	YWR1220P473D	Metal	47K ohms	R457	YWR1220P332D	Metal	3.3K ohms
R282,283	YWR1220P512D	Metal	5.1K ohms	R458	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R284,285	YWR1220P752D	Metal	7.5K ohms	R502-535	YWR0816P103B	Metal	10K ohms
R286	R1220P681D	Metal	680 ohms	R537,539	YWR1220P681D	Metal	680 ohms
R287	YFR1220P104D	Metal	100K ohms	R540-573	YWR0816P103B	Metal	10K ohms
R288	R1220P681D	Metal	680 ohms	R580,581	R1220P432D	Metal	4.3K ohms
R289,290	YWR1220P752D	Metal	7.5K ohms	R582,583	YWR1220P562D	Metal	5.6K ohms
R291	YWR1220P181D	Metal	180 ohms	R584,585	YWR1220P272D	Metal	2.7K ohms
R292	YWR1220P473D	Metal	47K ohms	R588	YFR1220P222D	Metal	2.2K ohms
R293,294	YWR1220P512D	Metal	5.1K ohms	R589	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R295,296	YWR1220P752D	Metal	7.5K ohms	R591	YWR1220P112D	Metal	1.1K ohms
R297	R1220P681D	Metal	680 ohms	R592	YWR1220P751D	Metal	750 ohms
R298	YFR1220P104D	Metal	100K ohms	R593	R1220P5900D	Metal	5.9K ohms
R299	R1220P681D	Metal	680 ohms	R596,597	R1220P432D	Metal	4.3K ohms
R300,301	YWR1220P473D	Metal	47K ohms	R598,599	YWR1220P562D	Metal	5.6K ohms
R302,303	YWR1220P752D	Metal	7.5K ohms	R600,601	YWR1220P272D	Metal	2.7K ohms
R305	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W	R604	YFR1220P222D	Metal	2.2K ohms
R306	YWR1220P473D	Metal	47K ohms	R605	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R607	YWR1220P112D	Metal	1.1K ohms	R774,776	ER0S2CKF1202	Metal	12K ohms 1/4W
R608	R1220P1912D	Metal	19.1K ohms	R778,779	YWR1220P223D	Metal	22K ohms
R609,610	YWR1220P103D	Metal	10K ohms	R780,781	YWR1220P473D	Metal	47K ohms
R611	YFR1220P203D	Metal	20K ohms	R783,785	ER0S2CKF1202	Metal	12K ohms 1/4W
R612,613	YWR1220P103D	Metal	10K ohms	R787,788	YWR1220P223D	Metal	22K ohms
R616	ERJ6GEYJ750	Carbon	75 ohms 1/10W	R790	R1220P1912D	Metal	19.1K ohms
R617	R1220P2102D	Metal	21K ohms	R791,792	YWR1220P103D	Metal	10K ohms
R618	ERJ6GEYJ750	Carbon	75 ohms 1/10W	R793	YFR1220P203D	Metal	20K ohms
R619	R1220P2102D	Metal	21K ohms	R794,795	YWR1220P103D	Metal	10K ohms
R620,621	YWR1220P103D	Metal	10K ohms	R796,797	YWR1220P473D	Metal	47K ohms
R622	R1220P1912D	Metal	19.1K ohms	R798	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R623-626	YWR1220P103D	Metal	10K ohms	R799	R1220P2102D	Metal	21K ohms
R627	YFR1220P203D	Metal	20K ohms	R800	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R629	ERJ6GEYJ750	Carbon	75 ohms 1/10W	R801	R1220P2102D	Metal	21K ohms
R630	R1220P2102D	Metal	21K ohms	R802,803	YWR1220P103D	Metal	10K ohms
R631	ERJ6GEYJ750	Carbon	75 ohms 1/10W	R804	R1220P1912D	Metal	19.1K ohms
R632	R1220P2102D	Metal	21K ohms	R805,806	YWR1220P103D	Metal	10K ohms
R633-635	YWR1220P103D	Metal	10K ohms	R807	YFR1220P203D	Metal	20K ohms
R636	R1220P1912D	Metal	19.1K ohms	R808,809	YWR1220P103D	Metal	10K ohms
R640	YWR1220P152D	Metal	1.5K ohms	R812	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R641-643	YWR1220P103D	Metal	10K ohms	R813	R1220P2102D	Metal	21K ohms
R644	YFR1220P203D	Metal	20K ohms	R814	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R645	YWR1220P103D	Metal	10K ohms	R815	R1220P2102D	Metal	21K ohms
R646	YWR1220P473D	Metal	47K ohms	R816,817	YWR1220P103D	Metal	10K ohms
R647	ERJ6GEYJ750	Carbon	75 ohms 1/10W	R818	R1220P1912D	Metal	19.1K ohms
R648	R1220P2102D	Metal	21K ohms	R819,820	YWR1220P103D	Metal	10K ohms
R649,650	YWR1220P103D	Metal	10K ohms	R821	YFR1220P203D	Metal	20K ohms
R652-685	YWR0816P103B	Metal	10K ohms	R822,823	YWR1220P103D	Metal	10K ohms
R687,689	YWR1220P162D	Metal	1.6K ohms	R824,825	YWR1220P473D	Metal	47K ohms
R690-723	YWR0816P103B	Metal	10K ohms	R826	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R724	R1220P5900D	Metal	5.9K ohms	R827	R1220P2102D	Metal	21K ohms
R726	YWR1220P751D	Metal	750 ohms	R828	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R730,731	R1220P432D	Metal	4.3K ohms	R829	R1220P2102D	Metal	21K ohms
R732,733	YWR1220P562D	Metal	5.6K ohms	R830,831	YWR1220P103D	Metal	10K ohms
R734,735	YWR1220P272D	Metal	2.7K ohms	R832	R1220P1912D	Metal	19.1K ohms
R738	YWR1220P122D	Metal	1.2K ohms	R833,834	YWR1220P103D	Metal	10K ohms
R739	YWR1220P152D	Metal	1.5K ohms	R835	YFR1220P203D	Metal	20K ohms
R740	YWR1220P112D	Metal	1.1K ohms	R836,837	YWR1220P103D	Metal	10K ohms
R741-743	YWR1220P472D	Metal	4.7K ohms	R838,839	YWR1220P473D	Metal	47K ohms
R749	YWR1220P751D	Metal	750 ohms	R840	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R750	R1220P5900D	Metal	5.9K ohms	R841	R1220P2102D	Metal	21K ohms
R752,754	R1220P432D	Metal	4.3K ohms	R842	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R755,756	YWR1220P562D	Metal	5.6K ohms	R843	R1220P2102D	Metal	21K ohms
R757,758	YWR1220P272D	Metal	2.7K ohms	R844,845	YWR1220P103D	Metal	10K ohms
R761	YWR1220P122D	Metal	1.2K ohms	R855,856	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R762	YWR1220P152D	Metal	1.5K ohms	R857,858	YWR1220P221D	Metal	220 ohms
R763	YWR1220P112D	Metal	1.1K ohms	R859,860	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R764-766	YWR1220P472D	Metal	4.7K ohms	R861	YWR1220P221D	Metal	220 ohms
R772	ERJ6GEYJ100	Carbon	10 ohms 1/10W	R862,863	YWR1220P103D	Metal	10K ohms
R773	YWR1220P473D	Metal	47K ohms	R864,865	YWR1220P512D	Metal	5.1K ohms

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
R866-868	YWR1220P473D	Metal 47K ohms	R943	YWR1220P473D	Metal 47K ohms
R869,870	YWR1220P103D	Metal 10K ohms	R944	YWR1220P103D	Metal 10K ohms
R871,872	YWR1220P512D	Metal 5.1K ohms	R949	R1220P3242D	Metal 32.4Kohms
R873	YWR1220P473D	Metal 47K ohms	R952	YWR1220P272D	Metal 2.7K ohms
R874,875	ERJ6GEYJ223	Carbon 22K ohms 1/10W	R953,954	YWR1220P562D	Metal 5.6K ohms
R876,877	YWR1220P221D	Metal 220 ohms	R955,956	R1220P331D	Metal 330K ohms
R878-883	YWR1220P472D	Metal 4.7K ohms	R957,959	YWR1220P473D	Metal 47K ohms
R884	YWR1220P221D	Metal 220 ohms	R960	YWR1220P103D	Metal 10K ohms
R886	YFR1220P222D	Metal 2.2K ohms	R963	R1220P3242D	Metal 32.4Kohms
R887	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	R964	YWR1220P272D	Metal 2.7K ohms
R888	YFR1220P222D	Metal 2.2K ohms	R965	R1220P331D	Metal 330K ohms
R889	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	R966,967	YWR1220P562D	Metal 5.6K ohms
R890	YWR1220P680D	Metal 68 ohms	R968	R1220P331D	Metal 330K ohms
R891,892	YWR1220P100D	Metal 10 ohms	R969	YFR1220P222D	Metal 2.2K ohms
R893	YWR1220P680D	Metal 68 ohms	R970	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R894	YWR1220P100D	Metal 10 ohms	R972	YFR1220P113D	Metal 11K ohms
R895	YWR1220P680D	Metal 68 ohms	R973	YWR1220P102D	Metal 1K ohms
R896	YWR1220P100D	Metal 10 ohms	R974	YWR1220P622D	Metal 6.2K ohms
R897	YWR1220P680D	Metal 68 ohms	R975,976	YWR1220P473D	Metal 47K ohms
R899	ERJ6GEYJ151	Carbon 150 ohms 1/10W	R977	YWR1220Q750D	Metal 75 ohms
R901	YWR1220P103D	Metal 10K ohms	R978	YWR1220P473D	Metal 47K ohms
R903	YWR1220P562D	Metal 5.6K ohms	R979	YFR1220P222D	Metal 2.2K ohms
R906	R1220P3242D	Metal 32.4Kohms	R980	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R907	YWR1220P562D	Metal 5.6K ohms	R982	YFR1220P113D	Metal 11K ohms
R909	YWR1220P272D	Metal 2.7K ohms	R983	YWR1220P102D	Metal 1K ohms
R910	R1220P331D	Metal 330K ohms	R984	YWR1220P622D	Metal 6.2K ohms
R911,912	YWR1220P562D	Metal 5.6K ohms	R985	YWR1220Q750D	Metal 75 ohms
R913	R1220P331D	Metal 330K ohms	R986	YWR1220P473D	Metal 47K ohms
R914,916	YWR1220P473D	Metal 47K ohms	R989,990	ERJ8GCSG560	Carbon 56 ohms 1/8W
R917	YWR1220P103D	Metal 10K ohms	R991	ERJ8GCSJ820	Carbon 82 ohms 1/8W
R918	ERJ6GEYJ101	Carbon 100 ohms 1/10W	R992	ERJ8GEYJ330	Carbon 33 ohms 1/8W
R920	R1220P3242D	Metal 32.4Kohms	R993	ERJ8GCSJ470	Carbon 47 ohms 1/8W
R921	YWR1220P272D	Metal 2.7K ohms	R995	R1220P820D	Metal 82ohms
R922	R1220P331D	Metal 330K ohms	R999	YWR1220P473D	Metal 47K ohms
R923,924	YWR1220P562D	Metal 5.6K ohms	R1002,1003	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R925	R1220P331D	Metal 330K ohms	R1004,1005	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R926	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	R1006,1007	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R927	YFR1220P222D	Metal 2.2K ohms	R1008,1009	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R929	YFR1220P113D	Metal 11K ohms	R1010,1011	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R930	YWR1220P102D	Metal 1K ohms	R1012,1013	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R931	YWR1220P622D	Metal 6.2K ohms	R1014,1015	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R932,933	YWR1220P473D	Metal 47K ohms	R1016,1017	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R934	YWR1220Q750D	Metal 75 ohms	R1018,1019	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R935	YWR1220P473D	Metal 47K ohms	R1020,1021	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R936	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	R1022,1023	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R937	YFR1220P222D	Metal 2.2K ohms	R1024,1025	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R939	YFR1220P113D	Metal 11K ohms	R1026,1027	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R940	YWR1220P102D	Metal 1K ohms	R1028,1029	ERJ6GEYJ563	Carbon 56K ohms 1/10W
R941	YWR1220P622D	Metal 6.2K ohms	R1030,1031	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R942	YWR1220Q750D	Metal 75 ohms	R1032,1033	ERJ6GEYJ563	Carbon 56K ohms 1/10W



REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R1038,1039	YWR1220P102D	Metal	1K ohms	C59,60	YWRVW1E101	Electrolytic	100 µF 25V
R1040	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C61	YF400104FZT	Ceramic	0.1 µF
R1041	ERJ6GEYJ102	Carbon	1K ohms 1/10W	C62	YWRVW1C101	Electrolytic	100 µF 16V
R1042	YWR1220P102D	Metal	1K ohms	C63,65	ECHU1C104JB	Plastic	0.1 µF 16V
R1043	YWR1220P102D	Metal	1K ohms	C67	YF400103XKT	Ceramic	0.01 µF
R1044	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C68	YF400104FZT	Ceramic	0.1 µF
R1045	ERJ6GEYJ102	Carbon	1K ohms 1/10W	C69	ECHU1C104JB	Plastic	0.1 µF 16V
R1046-1049	YWR1220P103D	Metal	10K ohms	C70	YWRVW1C101	Electrolytic	100 µF 16V
R1050	ERJ6GEYJ561	Carbon	560 ohms 1/10W	C71	YF400104FZT	Ceramic	0.1 µF
R1110	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C72	YWRVW1C470	Electrolytic	47 µF 16V
R1500	YWERG2SJ181P	Metal	180 ohms 2W	C73	YF400103XKT	Ceramic	0.01 µF
R1508-1511	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C74	YF400102XKT	Ceramic	1000 pF
R1512-1514	ERDAS2CF1002	Carbon	10K ohms 2W	C75	YF400103XKT	Ceramic	0.01 µF
Z401-406	EXBV8V103J	Block Resistor		C81	YWRVS0J101M	Electrolytic	100 µF 6.3V
C1	YF400101CHJT	Ceramic	100 pF	C82	YF400101CHJT	Ceramic	100 pF
C2	YWRVS0J101M	Electrolytic	100 µF 6.3V	C83	YWRVS0J101M	Electrolytic	100 µF 6.3V
C3	YWRVS0J101M	Electrolytic	100 µF 6.3V	C86	YF400101CHJT	Ceramic	100 pF
C6	YF400101CHJT	Ceramic	100 pF	C87	YF400104FZT	Ceramic	0.1 µF
C7	YF400104FZT	Ceramic	0.1 µF	C88	YF400472XKT	Ceramic	4700pF
C8	YF400472XKT	Ceramic	4700 pF	C89	YWRVS0J101M	Electrolytic	100 µF 6.3V
C9	YWRVS0J101M	Electrolytic	100 µF 6.3V	C90	YF400101CHJT	Ceramic	100 pF
C10	YF400101CHJT	Ceramic	100 pF	C91	YWRVS0J101M	Electrolytic	100 µF 6.3V
C11	YWRVS0J101M	Electrolytic	100 µF 6.3V	C94	YF400101CHJT	Ceramic	100 pF
C14	YF400101CHJT	Ceramic	100 pF	C95-98	ECHU1C104JB	Plastic	0.1 µF 16V
C15-18	ECHU1C104JB	Plastic	0.1 µF 16V	C99,100	YWRVW1E101	Electrolytic	100 µF 25V
C19,20	YWRVW1E101	Electrolytic	100 µF 25V	C101	YF400104FZT	Ceramic	0.1 µF
C21	YF400104FZT	Ceramic	0.1 µF	C102	YWRVW1C101	Electrolytic	100 µF 16V
C22	RVW1C101	Electrolytic	100 µF 16V	C103,105	ECHU1C104JB	Plastic	0.1 µF 16V
C23	ECHU1C104JB	Plastic	0.1 µF 16V	C107	YF400103XKT	Ceramic	0.01 µF
C25	ECHU1C104JB	Plastic	0.1 µF 16V	C108	YF400104FZT	Ceramic	0.1 µF
C27	YF400103XKT	Ceramic	0.01 µF	C109	ECHU1C104JB	Plastic	0.1 µF 16V
C28	YF400104FZT	Ceramic	0.1 µF	C110	YWRVW1C101	Electrolytic	100 µF 16V
C29	ECHU1C104JB	Plastic	0.1 µF 16V	C111	YF400104FZT	Ceramic	0.1 µF
C30	YWRVW1C101	Electrolytic	100 µF 16V	C112	YWRVW1C470	Electrolytic	47 µF 16V
C31	YF400104FZT	Ceramic	0.1 µF	C113	YF400103XKT	Ceramic	0.01 µF
C32	YWRVW1C470	Electrolytic	47 µF 16V	C114	YF400102XKT	Ceramic	1000 pF
C33	YF400103XKT	Ceramic	0.01 µF	C115	YF400103XKT	Ceramic	0.01 µF
C34	YF400102XKT	Ceramic	1000 pF	C121	YWRVS0J101M	Electrolytic	100 µF 6.3V
C35	YF400103XKT	Ceramic	0.01 µF	C122	YF400101CHJT	Ceramic	100 pF
C41	YWRVS0J101M	Electrolytic	100 µF 6.3V	C123	YWRVS0J101M	Electrolytic	100 µF 6.3V
C42	YF400101CHJT	Ceramic	100 pF	C126	YF400101CHJT	Ceramic	100 pF
C43	YWRVS0J101M	Electrolytic	100 µF 6.3V	C127	YF400104FZT	Ceramic	0.1 µF
C46	YF400101CHJT	Ceramic	100 pF	C128	YF400472XKT	Ceramic	4700 pF
C47	YF400104FZT	Ceramic	0.1 µF	C129	YWRVS0J101M	Electrolytic	100 µF 6.3V
C48	YF400472XKT	Ceramic	4700pF	C130	YF400101CHJT	Ceramic	100 pF
C49	YWRVS0J101M	Electrolytic	100 µF 6.3V	C131	YWRVS0J101M	Electrolytic	100 µF 6.3V
C50	YF400101CHJT	Ceramic	100 pF	C134	YF400101CHJT	Ceramic	100 pF
C51	YWRVS0J101M	Electrolytic	100 µF 6.3V	C135-138	ECHU1C104JB	Plastic	0.1 µF 16V
C54	YF400101CHJT	Ceramic	100 pF	C139,140	YWRVW1E101	Electrolytic	100 µF 25V
C55-58	ECHU1C104JB	Plastic	0.1 µF 16V	C141	YF400104FZT	Ceramic	0.1 µF

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C142	YWRVW1C101	Electrolytic	100 µF 16V	C227	YF400103XKT	Ceramic	0.01 µF
C143,145	ECHU1C104JB	Plastic	0.1 µF 16V	C228	YF400104FZT	Ceramic	0.1 µF
C147	YF400103XKT	Ceramic	0.01 µF	C229	ECHU1C104JB	Plastic	0.1 µF 16V
C148	YF400104FZT	Ceramic	0.1 µF	C230	YWRVW1C101	Electrolytic	100 µF 16V
C149	ECHU1C104JB	Plastic	0.1 µF 16V	C231	YF400104FZT	Ceramic	0.1 µF
C150	YWRVW1C101	Electrolytic	100 µF 16V	C232	YWRVW1C470	Electrolytic	47 µF 16V
C151	YF400104FZT	Ceramic	0.1 µF	C233	YF400103XKT	Ceramic	0.01 µF
C152	YWRVW1C470	Electrolytic	47 µF 16V	C234	YF400102XKT	Ceramic	1000 pF
C153	YF400103XKT	Ceramic	0.01 µF	C235	YF400103XKT	Ceramic	0.01 µF
C154	YF400102XKT	Ceramic	1000 pF	C241	YWRVS0J101M	Electrolytic	100 µF 6.3V
C155	YF400103XKT	Ceramic	0.01 µF	C242	YF400101CHJT	Ceramic	100 pF
C161	YWRVS0J101M	Electrolytic	100 µF 6.3V	C243	YWRVS0J101M	Electrolytic	100 µF 6.3V
C162	YF400101CHJT	Ceramic	100 pF	C246	YF400101CHJT	Ceramic	100 pF
C163	YWRVS0J101M	Electrolytic	100 µF 6.3V	C247	YF400104FZT	Ceramic	0.1 µF
C166	YF400101CHJT	Ceramic	100 pF	C248	YF400472XKT	Ceramic	4700 pF
C167	YF400104FZT	Ceramic	0.1 µF	C249	YWRVS0J101M	Electrolytic	100 µF 6.3V
C168	YF400472XKT	Ceramic	4700 pF	C250	YF400101CHJT	Ceramic	100 pF
C169	YWRVS0J101M	Electrolytic	100 µF 6.3V	C251	YWRVS0J101M	Electrolytic	100 µF 6.3V
C170	YF400101CHJT	Ceramic	100 pF	C254	YF400101CHJT	Ceramic	100 pF
C171	YWRVS0J101M	Electrolytic	100 µF 6.3V	C255-258	ECHU1C104JB	Plastic	0.1 µF 16V
C174	YF400101CHJT	Ceramic	100 pF	C259,260	YWRVW1E101	Electrolytic	100 µF 25V
C175-178	ECHU1C104JB	Plastic	0.1 µF 16V	C261	YF400104FZT	Ceramic	0.1 µF
C179,180	YWRVW1E101	Electrolytic	100 µF 25V	C262	YWRVW1C101	Electrolytic	100 µF 16V
C181	YF400104FZT	Ceramic	0.1 µF	C263,265	ECHU1C104JB	Plastic	0.1 µF 16V
C182	YWRVW1C101	Electrolytic	100 µF 16V	C267	YF400103XKT	Ceramic	0.01 µF
C183,185	ECHU1C104JB	Plastic	0.1 µF 16V	C268	YF400104FZT	Ceramic	0.1 µF
C187	YF400103XKT	Ceramic	0.01 µF	C269	ECHU1C104JB	Plastic	0.1 µF 16V
C188	YF400104FZT	Ceramic	0.1 µF	C270	YWRVW1C101	Electrolytic	100 µF 16V
C189	ECHU1C104JB	Plastic	0.1 µF 16V	C271	YF400104FZT	Ceramic	0.1 µF
C190	YWRVW1C101	Electrolytic	100 µF 16V	C272	YWRVW1C470	Electrolytic	47 µF 16V
C191	YF400104FZT	Ceramic	0.1 µF	C273	YF400103XKT	Ceramic	0.01 µF
C192	YWRVW1C470	Electrolytic	47 µF 16V	C274	YF400102XKT	Ceramic	1000 pF
C193	YF400103XKT	Ceramic	0.01 µF	C275	YF400103XKT	Ceramic	0.01 µF
C194	YF400102XKT	Ceramic	1000 pF	C281	YWRVS0J101M	Electrolytic	100 µF 6.3V
C195	YF400103XKT	Ceramic	0.01 µF	C282	YF400101CHJT	Ceramic	100 pF
C201	YWRVS0J101M	Electrolytic	100 µF 6.3V	C283	YWRVS0J101M	Electrolytic	100 µF 6.3V
C202	YF400101CHJT	Ceramic	100 pF	C286	YF400101CHJT	Ceramic	100 pF
C203	YWRVS0J101M	Electrolytic	100 µF 6.3V	C287	YF400104FZT	Ceramic	0.1 µF
C206	YF400101CHJT	Ceramic	100 pF	C288	YF400472XKT	Ceramic	4700pF
C207	YF400104FZT	Ceramic	0.1 µF	C289	YWRVS0J101M	Electrolytic	100 µF 6.3V
C208	YF400472XKT	Ceramic	4700 pF	C290	YF400101CHJT	Ceramic	100 pF
C209	YWRVS0J101M	Electrolytic	100 µF 6.3V	C291	YWRVS0J101M	Electrolytic	100 µF 6.3V
C210	YF400101CHJT	Ceramic	100 pF	C294	YF400101CHJT	Ceramic	100 pF
C211	YWRVS0J101M	Electrolytic	100 µF 6.3V	C295-298	ECHU1C104JB	Plastic	0.1 µF 16V
C214	YF400101CHJT	Ceramic	100 pF	C299,300	YWRVW1E101	Electrolytic	100 µF 25V
C215-218	ECHU1C104JB	Plastic	0.1 µF 16V	C301	YF400104FZT	Ceramic	0.1 µF
C219,220	YWRVW1E101	Electrolytic	100 µF 25V	C302	YWRVW1C101	Electrolytic	100 µF 16V
C221	YF400104FZT	Ceramic	0.1 µF	C303,305	ECHU1C104JB	Plastic	0.1 µF 16V
C222	YWRVW1C101	Electrolytic	100 µF 16V	C307	YF400103XKT	Ceramic	0.01 µF
C223,225	ECHU1C104JB	Plastic	0.1 µF 16V	C308	YF400104FZT	Ceramic	0.1 µF

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C309	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C565	YF400221CHJT	Ceramic	220 pF
C310	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C566,567	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C311,312	YF400104FZT	Ceramic	0.1 $\mu$ F	C568	YF400221CHJT	Ceramic	220 pF
C314	YF400104FZT	Ceramic	0.1 $\mu$ F	C569,570	YWRVW1E101	Electrolytic	100 $\mu$ F 25V
C315-322	YF400472XKT	Ceramic	4700 pF	C571	YW400122CHJT	Ceramic	1200 pF
C401	ECEA1HKA2R2	Electrolytic	2.2 $\mu$ F 50V	C572	YW400332CHJT	Ceramic	3300 pF
C418	YF400104FZT	Ceramic	0.1 $\mu$ F	C573	YWRVW1C470	Electrolytic	47 $\mu$ F 16V
C421,424	YF400103XKT	Ceramic	0.01 $\mu$ F	C574	YF400220CHJT	Ceramic	22 pF
C425-428	YF400104FZT	Ceramic	0.1 $\mu$ F	C575,576	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C442	YF400103XKT	Ceramic	0.01 $\mu$ F	C577,578	YWRVW1E221	Electrolytic	220 $\mu$ F 25V
C444	YF400104FZT	Ceramic	0.1 $\mu$ F	C579	YF400220CHJT	Ceramic	22 pF
C449-451	YF400103XKT	Ceramic	0.01 $\mu$ F	C580,581	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C452	YF400104FZT	Ceramic	0.1 $\mu$ F	C582,583	YF400101CHJT	Ceramic	100 pF
C453	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C584	YF400220CHJT	Ceramic	22 pF
C454	YF400103XKT	Ceramic	0.01 $\mu$ F	C585,586	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C455	YF400102XKT	Ceramic	1000 pF	C587,588	YWRVW1E221	Electrolytic	220 $\mu$ F 25V
C456,457	YF400103XKT	Ceramic	0.01 $\mu$ F	C589	YF400220CHJT	Ceramic	22 pF
C501	YF400681CHJT	Ceramic	680 $\mu$ F 50V	C590,591	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C502	ECHU1H153JB	Plastic	0.015 $\mu$ F 50V	C592,593	YF400101CHJT	Ceramic	100 pF
C503	YF400681CHJT	Ceramic	680 $\mu$ F 50V	C594	YF400220CHJT	Ceramic	22 pF
C504	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C595,596	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C505	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C599	YF400101CHJT	Ceramic	100 pF
C506	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C600	YF400220CHJT	Ceramic	22 pF
C507-513	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C602,603	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C514	YF400104FZT	Ceramic	0.1 $\mu$ F	C604	ECHU1H101JB	Plastic	100 $\mu$ F 50V
C515	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C611	YF400220CHJT	Ceramic	22 pF
C518,519	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C612,613	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C520	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C614,615	YWRVW1E221	Electrolytic	220 $\mu$ F 25V
C521	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C616	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C522	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C617	YF400101CHJT	Ceramic	100 pF
C523-527	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C618	YF400220CHJT	Ceramic	22 pF
C528	YF400681CHJT	Ceramic	680 $\mu$ F 50V	C619	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C529	ECHU1H153JB	Plastic	0.015 $\mu$ F 50V	C620	YF400101CHJT	Ceramic	100 pF
C530	YF400681CHJT	Ceramic	680 $\mu$ F 50V	C621,622	YF400104FZT	Ceramic	0.1 $\mu$ F
C532	YF400104FZT	Ceramic	0.1 $\mu$ F	C624	YF400101CHJT	Ceramic	100 pF
C533	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C651	YF400681CHJT	Ceramic	680 $\mu$ F 50V
C534,536	ECHU1H271JB	Plastic	270 pF 50V	C652	ECHU1C153JB	Plastic	0.015 $\mu$ F 16V
C537,539	ECHU1H101JB	Plastic	100 pF 50V	C653	YF400681CHJT	Ceramic	680 $\mu$ F 50V
C541,542	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C654	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C544,545	YF400221CHJT	Ceramic	220 pF	C655	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C546,547	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C656	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C548,549	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C657-663	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C550	YW400122CHJT	Ceramic	1200 pF	C664	YF400104FZT	Ceramic	0.1 $\mu$ F
C551	YW400332CHJT	Ceramic	3300 pF	C665	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C552	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C668,669	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C554	YF400104FZT	Ceramic	0.1 $\mu$ F	C670	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C555	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C671	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C556,558	ECHU1H271JB	Plastic	270 pF 50V	C672	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C559	ECHU1H101JB	Plastic	100 pF 50V	C673-677	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C562,563	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C678	YF400681CHJT	Ceramic	680 $\mu$ F 50V

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C679	ECHU1C153JB	Plastic	0.015 $\mu$ F 16V	C776	YF400220CHJT	Ceramic	22 pF
C680	YF400681CHJT	Ceramic	680 $\mu$ F 50V	C777,778	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C681	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C779,780	YWRVW1E221	Electrolytic	220 $\mu$ F 25V
C682	YF400104FZT	Ceramic	0.1 $\mu$ F	C781	YF400220CHJT	Ceramic	22 pF
C684	ECHU1H271JB	Plastic	270 pF 50V	C782,783	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C685	ECHU1H101JB	Plastic	100 pF 50V	C784,785	YF400101CHJT	Ceramic	100 pF
C688,689	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C786	YF400220CHJT	Ceramic	22 pF
C691	ECHU1H271JB	Plastic	270 pF 50V	C787,788	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C692	ECHU1H101JB	Plastic	100 pF 50V	C789,790	YWRVW1E221	Electrolytic	220 $\mu$ F 25V
C694,695	YF400221CHJT	Ceramic	220 pF	C791	YF400220CHJT	Ceramic	22 pF
C696,697	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C792,793	YWRVW1C221	Electrolytic	220 $\mu$ F 16V
C698,699	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C794	YF400101CHJT	Ceramic	100 pF
C700	YW400332CHJT	Ceramic	3300 pF	C796,797	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C701	YW400122CHJT	Ceramic	1200 pF	C802,803	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C703	YF400101CHJT	Ceramic	100 pF	C804	YF400101CHJT	Ceramic	100 pF
C704,705	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C811,812	YF400104FZT	Ceramic	0.1 $\mu$ F
C706,707	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C813	YF400104FZT	Ceramic	0.1 $\mu$ F
C712	YF400104FZT	Ceramic	0.1 $\mu$ F	C814-817	YF400101CHJT	Ceramic	100 pF
C713	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C818	ECEV1EG101	Electrolytic	100 $\mu$ F 25V
C715	ECHU1H271JB	Plastic	270 pF 50V	C819	YF400104FZT	Ceramic	0.1 $\mu$ F
C716	ECHU1H101JB	Plastic	100 pF 50V	C820	YWRVW1E470	Electrolytic	47 $\mu$ F 25V
C719,720	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C821	YF400104FZT	Ceramic	0.1 $\mu$ F
C721	ECHU1H101JB	Plastic	100 pF 50V	C822	YWRVW1E470	Electrolytic	47 $\mu$ F 25V
C723	ECHU1H271JB	Plastic	270 pF 50V	C823-826	YF400101CHJT	Ceramic	100 pF
C725,726	YF400221CHJT	Ceramic	220 pF	C827	ECEV1EG101	Electrolytic	100 $\mu$ F 25V
C727,728	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C828	YF400104FZT	Ceramic	0.1 $\mu$ F
C729,730	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C829,830	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C731	YW400332CHJT	Ceramic	3300 pF	C831	YF400101CHJT	Ceramic	100 pF
C733	YW400122CHJT	Ceramic	1200 pF	C832,833	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V
C734	YF400101CHJT	Ceramic	100 pF	C834	YF400101CHJT	Ceramic	100 pF
C741	YF400104FZT	Ceramic	0.1 $\mu$ F	C835	YWRVW1C470	Electrolytic	47 $\mu$ F 16V
C742	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C837,838	YF400104FZT	Ceramic	0.1 $\mu$ F
C743	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C840,842	YF400104FZT	Ceramic	0.1 $\mu$ F
C744	YW400821CHJT	Ceramic	820 pF	C843,844	YF400104FZT	Ceramic	0.1 $\mu$ F
C745,746	YF400221CHJT	Ceramic	220 pF	C845	YF400104FZT	Ceramic	0.1 $\mu$ F
C748,749	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C846	YF400104FZT	Ceramic	0.1 $\mu$ F
C750	YW400821CHJT	Ceramic	820 pF	C847	YF400101CHJT	Ceramic	100 pF
C751,752	YF400221CHJT	Ceramic	220 pF	C848	YF400104FZT	Ceramic	0.1 $\mu$ F
C756	YF400220CHJT	Ceramic	22 pF	C849-855	YF400101CHJT	Ceramic	100 pF
C757,758	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C856-859	YF400104FZT	Ceramic	0.1 $\mu$ F
C759,760	YWRVW1E221	Electrolytic	220 $\mu$ F 25V	C860,901	YF400101CHJT	Ceramic	100 pF
C761	YF400220CHJT	Ceramic	22 pF	C907,908	YWRVW1C470	Electrolytic	47 $\mu$ F 16V
C762,763	YWRVW1C221	Electrolytic	220 $\mu$ F 16V	C909	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C764,765	YF400101CHJT	Ceramic	100 pF	C910	YF400181CHJT	Ceramic	180 pF
C766	YF400220CHJT	Ceramic	22 pF	C911	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C767,768	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C912	YF400820CHJT	Ceramic	82 pF
C769,770	YWRVW1E221	Electrolytic	220 $\mu$ F 25V	C913	YW400152CHJT	Ceramic	1500 pF
C771	YF400220CHJT	Ceramic	22 pF	C915	YWRVW1C101	Electrolytic	100 $\mu$ F 16V
C772,773	YWRVW1C221	Electrolytic	220 $\mu$ F 16V	C916	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V
C774,775	YF400101CHJT	Ceramic	100 pF	C918	YF400104FZT	Ceramic	0.1 $\mu$ F

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C919	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1001-1004	YWRVW1C470	Electrolytic	47 $\mu$ F 16V
C920	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C1006	YF400104FZT	Ceramic	0.1 $\mu$ F
C921	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1018	YF400300CHJT	Ceramic	30 pF
C922	YF400101CHJT	Ceramic	100 pF	C1019	YF400270CHJT	Ceramic	27 pF
C924	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1020	YW400160CHJT	Ceramic	16 pF 50V
C925	YF400181CHJT	Ceramic	180 pF	C1021	YF400820CHJT	Ceramic	82 pF
C926	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C1022	YF400200CHJT	Ceramic	20 pF
C927	YF400820CHJT	Ceramic	82 pF	C1023	YF400820CHJT	Ceramic	82 pF
C928	YW400152CHJT	Ceramic	1500 pF	C1024	YF400200CHJT	Ceramic	20 pF
C929	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1025	YF400510CHJT	Ceramic	51 pF
C930	YF400221CHJT	Ceramic	220 pF	C1026	YW400821CHJT	Ceramic	820 pF
C931,932	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	C1027	YF400300CHJT	Ceramic	30 pF
C933,934	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	C1028	YF400270CHJT	Ceramic	27 pF
C935	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1029	YW400160CHJT	Ceramic	16 pF
C936	YF400101CHJT	Ceramic	100 pF	C1030	YF400820CHJT	Ceramic	82 pF
C937	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1031	YF400200CHJT	Ceramic	20 pF
C938	YF400101CHJT	Ceramic	100 pF	C1032	YF400820CHJT	Ceramic	82 pF
C939	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1033	YF400200CHJT	Ceramic	20 pF
C940,941	YF400101CHJT	Ceramic	100 pF	C1034	YF400510CHJT	Ceramic	51 pF
C947	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1035	YW400821CHJT	Ceramic	820 pF
C950	YF400181CHJT	Ceramic	180 pF	C1036-1043	YF400104FZT	Ceramic	0.1 $\mu$ F
C951	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C1044-1046	RVP1C470G10	Electrolytic	47 $\mu$ F 16V
C952	YF400820CHJT	Ceramic	82 pF	C1047	RVP1C470G10	Electrolytic	47 $\mu$ F 16V
C953	YW400152CHJT	Ceramic	1500 pF	C1048	YF400104FZT	Ceramic	0.1 $\mu$ F
C954	YWRVW1C101	Electrolytic	100 $\mu$ F 16V	C1049	EEVHB1H100P	Electrolytic	10 $\mu$ F 50V
C955	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	C1114,1118	ECKF1H102KB	Ceramic	1000pF 5W
C957	YF400104FZT	Ceramic	0.1 $\mu$ F	C1127,1129	ECH1EM471	Electrolytic	470 $\mu$ F 25V
C958	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	C1131-1134	YWRA216V330	Electrolytic	33 $\mu$ F 16V
C960	YF400101CHJT	Ceramic	100 pF	L143	YWBLM21B03PB	Coil	
C962	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L401	YWZBF503S01	Coil	
C963	YF400181CHJT	Ceramic	180 pF	L404,406	YWBLM21B03PB	Coil	
C964	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	L408,410	YWBLM21B03PB	Coil	
C965	YF400820CHJT	Ceramic	82 pF	L412,416	YWBLM21B03PB	Coil	
C966	YW400152CHJT	Ceramic	1500 pF	L418,420	YWBLM21B03PB	Coil	
C967	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L421-428	YWBLM21B03PB	Coil	
C968	YF400221CHJT	Ceramic	220 pF	L501-508	YWBLM21A05PT	Coil	
C969,970	ECHU1H104JB	Plastic	0.1 $\mu$ F 50V	L511-513	YWBLM21B03PB	Coil	
C971,972	YWRVW1E101	Electrolytic	100 $\mu$ F 25V	L653	YWBLM21B03PB	Coil	
C973	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L654-665	YWBLM21A05PT	Coil	
C974	YF400101CHJT	Ceramic	100 pF	L668-674	YWBLM21B03PB	Coil	
C975	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L677,678	YWBLM21B03PB	Coil	
C976	YF400101CHJT	Ceramic	100 pF	L683,800	YWBLM21B03PB	Coil	
C977	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L801	YWBLM21B03PB	Coil	
C978	YF400101CHJT	Ceramic	100 pF	L802,901	YWBLM21A05PT	Coil	
C979,980	YF400470CHJT	Ceramic	47 pF	L902-910	YWBLM21A05PT	Coil	
C982,985	YF400104FZT	Ceramic	0.1 $\mu$ F	L1009	YWNL323R3J	Coil	3.3 $\mu$ H
C986	YF400104FZT	Ceramic	0.1 $\mu$ F	L1010,1012	YWNL321R8J	Coil	1.8 $\mu$ H
C988,989	YF400470CHJT	Ceramic	47 pF	L1014,1015	YWNL323R3J	Coil	3.3 $\mu$ H
C990	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	L1016,1018	YWNL321R8J	Coil	1.8 $\mu$ H
C991,999	YWRVW1C470	Electrolytic	47 $\mu$ F 16V	L1020	YWNL323R3J	Coil	3.3 $\mu$ H

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
T901,902	YWPT1099	High Freq Transformer	<b>INVERTER BOARD</b>		
CN33	YW520454010	40-pin Connector	PCB6 (RTL)	YWR00DA7KYDA	Printed Circuit Board Assy
CN52	YW521471310	13-pin Connector	IC301	YWBP5311	IC
CN53	YW521470710	7-pin Connector	IC302	YWCXAM10LL	IC
CN54,55	YW521471510	15-pin Connector	R301	ERDS2TJ274	Carbon 270K ohms 1/4W
CN58	YWB8BPHSM3TB	8-pin Connector	VR301	EVUF2AE35A55	Variable Resistor 500K ohms
CN99	B10BPHSM3TB	10-pin Connector	C301	ECA1VM470	Electrolytic 47 $\mu$ F 35V
CN501,502	YWNC3MAH1	Connector	C302	ECA1CM101	Electrolytic 100 $\mu$ F 16V
JK503,504	YWYKB215261	Jack	Z301	EXBF9E473J	Block Resistor
JK651-656	YWYKB215261	Jack	CN32	YW521511310	13-pin Connector
JK901-904	YWYKB215261	Jack	CN302	YW559712CPB	Connector
JK905	YWYKC213040	Jack	E303	YWRDA7L67	Wire Assy for LCD unit
M35	YWA3BA1039A4	Supporting Angle	<b>MONITOR VR BOARD</b>		
M36	YWA2SA4485A4	Mounting Angle	PCB7 (RTL)	YWR00DA7KB8A	Printed Circuit Board Assy
<b>METER BOARD</b>			IC1	YWUPC4570G	IC
PCB5 (RTL)	YWR00DA7KYCA	Printed Circuit Board Assy	IC21	YWUPC4570G	IC
D201-208	YWSML210VT86	LED	IC41	NJM4558M	IC
D209-226	YWSML210DT86	LED	Q1,2	2SC4695TB	Transistor
D227	YWGL7H201	LED	Q3,4	2SK374-RS	Transistor
D229-244	YWSML210MT86	LED	Q21,22	2SC4695TB	Transistor
D245	YWSML210VT86	LED	D41	YWMTZJ4.7B	Diode
D228	1SS353TE17	Diode	D101,102	MA723	Diode
SW201	EVQPJS04K	Push Switch	R1	YWR1220P472D	Metal 4.7K ohms
CN66	YW524921720	17-pin Connector	R2	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
M23	YWA5XA0503A3	Reflection Plate	R4,5	YWR1220P103D	Metal 10K ohms
			R6	YWR1220P472D	Metal 4.7K ohms
			R8,9	YWR1220P473D	Metal 47K ohms
			R10	YWR1220P472D	Metal 4.7K ohms
			R11	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
			R13,14	YWR1220P103D	Metal 10K ohms
			R15	YWR1220P472D	Metal 4.7K ohms
			R16	ERJ6GEYJ473	Carbon 47K ohms 1/10W
			R18	R1220P331D	Metal 330K ohms

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
R21	YWR1220P472D	Metal 4.7K ohms	C159-162	YWR2025V470	Electrolytic 47µF 25V
R22	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	CN58	YWB8BEH	8-pin Connector
R24,25	YWR1220P103D	Metal 10K ohms	CN99	YWB10BEH	10-pin Connector
R26	YWR1220P472D	Metal 4.7K ohms	E59	YWRDA7L59A	Wire Assy for HP Board CN59
R28,29	YWR1220P473D	Metal 47K ohms	<b>TB BOARD</b>		
R30	YWR1220P472D	Metal 4.7K ohms	PCB8 (RTL)	YWR00DA7KC8A	Printed Circuit Board Assy
R31	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W	C61	YF400100CHJT	Ceramic 10 pF
R33,34	YWR1220P103D	Metal 10K ohms	C62	YF400511CHJT	Ceramic 510 pF
R35	YWR1220P472D	Metal 4.7K ohms	CN97	JMI8LH04AAT	Connector
R36	ERJ6GEYJ473	Carbon 47K ohms 1/10W	MIC1	YWWW034BX	Mic Unit
R38	R1220P331D	Metal 330K ohms	<b>HP BOARD</b>		
R41	YFR1220P222D	Metal 2.2K ohms	PCB9 (RTL)	YWR00DA7KD8A	Printed Circuit Board Accey
R42	YWR1220P391D	Metal 390 ohms	IC2	YWUPC4570G	IC
R43	YWR1220P333D	Metal 33K ohms	IC1	NJM2068MD	IC
R44	YWR1220P472D	Metal 4.7K ohms	Q1,2	2SC4695TB	Transistor
R45	YWR1220P103D	Metal 10K ohms	Q3	2SD1276A-QR	Transistor
R46	YWR1220P473D	Metal 47K ohms	Q4	2SC1318-RS	Transistor
R47	YWR1220P332D	Metal 3.3K ohms	Q5	2SA720-RS	Transistor
R48	YFR1220P104D	Metal 100K ohms	Q6	2SB950A-QR	Transistor
R49	YFR1220P222D	Metal 2.2K ohms	Q7	2SD1276A-QR	Transistor
R101-104	ERDS2TJ104	Carbon 100K ohms 1/4W	Q8	2SC1318-RS	Transistor
VR1,21	EVJC20F03A24	Variable Resistor 20K ohms	Q9	2SA720-RS	Transistor
VR41	EVJCC0F0346	Variable Resistor	Q10	2SB950A-QR	Transistor
C1	YWRA216T330	Electrolytic 33 µF 16V	D1-4	MA111	Diode
C2	YF400101CHJT	Ceramic 100 pF	R1	YWR1220P472D	Metal 4.7K ohms
C3,4	ECHU1H104JB	Plastic 0.1 µF 50V	R2	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
C5,6	YWR2025T221	Electrolytic 220 µF 25V	R4	YWR1220P472D	Metal 4.7K ohms
C7	YWRA216T330	Electrolytic 33 µF 16V	R5	R1220P132D	Metal 1.3K ohms
C8	YF400101CHJT	Ceramic 100 pF	R6	R1220P822D	Metal 8.2K ohms
C21	YWRA216T330	Electrolytic 33 µF 16V	R7	YWR1220P103D	Metal 10K ohms
C22	YF400101CHJT	Ceramic 100 pF	R8,9	YWR1220P473D	Metal 47K ohms
C23,24	ECHU1H104JB	Plastic 0.1 µF 50V	R10	ERD25FJ4R7	Carbon 4.7 ohms 1/4W
C25,26	YWR2025T221	Electrolytic 220 µF 25V	R11	YWR1220P103D	Metal 10K ohms
C27	YWRA216T330	Electrolytic 33 µF 16V	R12	YWR1220P472D	Metal 4.7K ohms
C28	YF400101CHJT	Ceramic 100 pF	R13	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
C41	YW400224XK	Ceramic 0.22 µF	R15	YWR1220P472D	Metal 4.7K ohms
C42	YW400102CHJT	Ceramic 1000 pF	R16	R1220P132D	Metal 1.3K ohms
C43	ECA1CM100B	Electrolytic 10 µF 16V	R17	R1220P822D	Metal 8.2K ohms
C44	ECA1HM010	Electrolytic 1 µF 50V	R18	ERD25FJ4R7	Carbon 4.7 ohms 1/4W
C45,46	YF400104FZT	Ceramic 0.1 µF	R19	EROS2CKF1002	Metal 10K ohms 1/4W
C47	ECA1CM100B	Electrolytic 10 µF 16V	R20,21	YWR1220P301D	Metal 300 ohms
C48	ECA1HM010	Electrolytic 1 µF 50V			
C49	YF400391CHJT	Ceramic 390 pF			
C50	ECA1HM010	Electrolytic 1 µF 50V			
C101,102	YW400105XKT	Ceramic 1 µF			
C103,104	YW400103XK	Ceramic 0.01 µF			
C105-108	YW400105FZ	Ceramic 1 µF			
C151-154	ECQB1H471	Plastic 470pF 50V			
C155,156	YW400104XK	Ceramic 0.1µF			
C157,158	ECQV1H104	Ceramic 0.1µF 50V			

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION
R22	ER0S2CKF1002	Metal	10K ohms 1/4W	<b>MAIN BOARD</b>		
R23,24	ERD10TJ3R3	Carbon	3.3 ohms 1/4W			
R25	ER0S2CKF1002	Metal	10K ohms 1/4W	PCB10 (RTL)	YWR00DA7KZ1A	Printed Circuit Board Assy
R26,27	YWR1220P301D	Metal	300 ohms	IC1	YWHD77034F20	IC
R28	ER0S2CKF1002	Metal	10K ohms 1/4W	IC2	YWACSA0502CN	CustomIC
R29,30	ERD10TJ3R3	Carbon	3.3 ohms 1/4W	IC3-6	YWM51008F7LL	IC
R31	R1220P133D	Metal	13K ohms	IC7,8	YWM51957BFP	IC
R32	YWR1220P472D	Metal	4.7K ohms	IC9	YWNJM082M	IC
R33	R1220P132D	Metal	1.3K ohms	IC10	YWT74VHC04FL	IC
R34	R1220P822D	Metal	8.2K ohms	IC11-13	YWT74VHC138F	IC
R35	R1220P133D	Metal	13K ohms	IC14	YWMC74HC160F	IC
R36	YWR1220P472D	Metal	4.7K ohms	IC15	YWMC74HC74AF	IC
R37	R1220P132D	Metal	1.3K ohms	IC16,17	MC74HC273AF	IC
R38	R1220P822D	Metal	8.2K ohms	IC18	YWSED1351F0A	LSI
VR1	EVJC20F01A24	Variable Resistor	20K ohms	IC19	YWM51008F7LL	IC
C1	YWRA216T330	Electrolytic	33 $\mu$ F 16V	IC20	MC74HC541AF	IC
C2	YF400220CHJT	Ceramic	22 pF	IC21	YWUPD71051GB	IC
C3,4	ECFR1H104ZF	Ceramic	0.1 $\mu$ F 50V	IC22	MC74HC541AF	IC
C5,6	ECA1EM471	Electrolytic	470 $\mu$ F 25V	IC23	MC74HC574AF	IC
C7,11	RA216T471	Electrolytic	470 $\mu$ F 16V	IC24	YWMC74HC151F	IC
C9	YWRA216T330	Electrolytic	33 $\mu$ F 16V	IC25	TC74HCU04AF	IC
C10	YF400220CHJT	Ceramic	22 pF	IC26	YWMC74HC153F	IC
C13-18	YF400151CHJT	Ceramic	150 pF	IC27,28	MC74HC161AF	IC
C19	YF400221CHJT	Ceramic	220 pF	IC30	MC74HC4046AF	IC
C20	YF400220CHJT	Ceramic	22 pF	IC31	YWT74VHC32FL	IC
C21	YF400221CHJT	Ceramic	220 pF	IC33,36	YWCS8412CS	Custom IC
C22	YF400220CHJT	Ceramic	22 pF	IC34	MC74HC125AF	IC
C100,101	400105FZ	Ceramic	1 $\mu$ F	IC35	YWTC7W04FL	IC
C102,103	ECHU1C104JB	Plastic	0.1 $\mu$ F 16V	IC37	YWTC9271FELP	LSI
C104,105	YWRA216V330	Electrolytic	33 $\mu$ F 16V	IC40	YWMC74HC153F	IC
C106,107	YW400103XK	Ceramic	0.01 $\mu$ F	IC41	M26LS31CNS	IC
L1,2	YWBLM21B03PB	Coil		IC42	YWSN74LS14NS	IC
JK1	YWYKB215261	Jack		IC43	AM26LS32ACNS	IC
CN59	YWB7BEH	7-pin Connector		IC45	YWTC7S04F	IC
M64	YWA7DA1074A4	Heat Sink		IC50	YWTC7W32FL	IC
M65	YWA2PA1132A4	Insulator		IC51	MC74HC161AF	IC
				IC52	YWMC74HC74AF	IC
				IC53	YWT74VHC74FL	IC
				IC54	YWTC7S04F	IC
				IC55	YWMC74HC74AF	IC
				IC56	T74VHC175FL	IC
				IC57	YWT74VHC32FL	IC
				IC300	YWACSA0507AN	Custom IC
				IC304	IDT71016S15Y	LSI
				IC308	MC74HC245AF	IC
				IC309,311	MC74HC138AF	IC
				IC312	MC74HC138AF	IC



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
IC313	MC74HC14AF	IC	R2	YWR1220P332D	Metal 3.3K ohms
IC314	YWMC74LS05F	IC	R5	ERJ6GEYJ102	Carbon 1K ohms 1/10W
IC315	YWPC400T	IC	R6	ERJ6GEYJ103	Carbon 10K ohms 1/10W
IC316	T74VHC175FL	IC	R7	ERJ6GEYJ102	Carbon 1K ohms 1/10W
IC317	YWT74VHC04FL	IC	R8-11	ERJ6GEYJ103	Carbon 10K ohms 1/10W
IC318	YWT74VHC74FL	IC	R12	YW2116105JT	Carbon 1M ohms 1/10W
IC319	YWT74VHC32FL	IC	R15	YF2116471JT	Carbon 470 ohms 1/10W
IC401	YWMC74HC11F	IC	R16,17	ERJ6GEYJ223	Carbon 22K ohms 1/10W
IC402,403	MC74HC541AF	IC	R18	ERJ6GEYJ103	Carbon 10K ohms 1/10W
IC404	MC74HC245AF	IC	R19,20	YW2116105JT	Carbon 1M ohms 1/10W
IC405-409	MC74HC541AF	IC	R21,22	YF2116301JT	Carbon 300 ohms 1/10W
IC410,411	YWMC74LS05F	IC	R23	YFR1220P113D	Metal 11K ohms
IC412,413	MC74HC541AF	IC	R24	R1220P133D	Metal 13K ohms
IC501-519	TMS57070FFT	IC	R25	YWR1220P273D	Metal 27K ohms
IC520-522	YWT6G22U1057	IC	R26	YWR1220P472D	Metal 4.7K ohms
IC523-525	YWT9G16F0020	LSI	R31	ERJ8GEYJ111V	Carbon 110 ohms 1/10W
IC526	YWT9G10F0017	IC	R33,34	ERJ6GEYJ560	Carbon 56 ohms 1/10W
IC527	YWT6G22U1057	IC	R35	ERJ6GEYJ820	Carbon 82 ohms 1/10W
IC528,529	YWHM514800CJ	IC	R36	ERJ6GEYJ470	Carbon 47 ohms 1/10W
IC530	YWT74VHC574FL	IC	R37	ERJ6GEYJ330	Carbon 33 ohms 1/10W
IC531,532	YWHM514800CJ	IC	R39	ERDS2TJ111	Carbon 110 ohms 1/4W
IC533	YWT74VHC574FL	IC	R42,43	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
IC534	YWT74VHC540FL	IC	R46	ERJ12YJ750	Carbon 75 ohms 1/10W
IC535,537	YWT74VHC245F	IC	R47-51	ERJ6GEYJ470	Carbon 47 ohms 1/10W
IC536	MC74HC125AF	IC	R52,53	ERJ8GCSG221	Carbon 220 ohms 1/8W
IC538	YWT74VHC245F	IC	R54	ERJ14YJ111	Carbon 110 ohms 1/10W
IC539	YWT74VHC157FL	IC	R56,57	YF2116100JT	Carbon 10 ohms 1/10W
IC540,541	YWT74VHC574FL	IC	R60	ERJ6GEYJ103	Carbon 10K ohms 1/10W
IC544-546	YWT74VHC574FL	IC	R61	ERJ6GEYJ223	Carbon 22K ohms 1/10W
IC547	YWT74VHC174FL	IC	R62	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
IC548	YWT74VHC157FL	IC	R64,65	ERJ6GEYJ223	Carbon 22K ohms 1/10W
IC549,550	YWMC74HC74AF	IC	R66	ERJ6GEYJ102	Carbon 1K ohms 1/10W
IC551	MC74HC125AF	IC	R70	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
IC552	YW78L05UATE2	IC	R71	ERJ6GEYJ104	Carbon 100K ohms 1/10W
Q1	DTC114TK-T46	Transistor	R72	ERJ6GEYJ561	Carbon 560 ohms 1/10W
Q3	2SB709A-RS	Transistor	R73	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
Q4	2SD601ARS-TX	Transistor	R74,75	ERJ6GEYJ102	Carbon 1K ohms 1/10W
Q8	DTC114EK	Transistor	R76,77	ERJ1WYJ100	Carbon 10 ohms 1/10W
Q9	DTA114EK	Transistor	R325	ERJ6GEYJ103	Carbon 10K ohms 1/10W
Q10	DTC143ZKAT46	Transistor	R326	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
Q11	2SB709A-RS	Transistor	R328	ERJ6GEYJ103	Carbon 10K ohms 1/10W
Q12	2SD601ARS-TX	Transistor	R329	YF2116272JT	Carbon 2.7K ohms 1/10W
Q13	2SD874ARS-TX	Transistor	R330-332	YF2116221JT	Carbon 220 ohms 1/10W
Q14	2SB766A-QR	Transistor	R334	ERJ6GEYJ223	Carbon 22K ohms 1/10W
D1	MA704	Diode	R335	YF2116471JT	Carbon 470 ohms 1/10W
D16,17	MA111	Diode	R336,337	ERJ6GEYJ223	Carbon 22K ohms 1/10W
D18,20	YWUDZ5.1B	Diode	R340,401	ERJ6GEYJ223	Carbon 22K ohms 1/10W
D302-308	YWDA204K	Diode	R408	YF2116473GT	Carbon 47K ohms 1/10W
D310	MA111	Diode	R410	ERJ6GEYJ223	Carbon 22K ohms 1/10W
R1	YWR1220P912D	Metal 9.2K ohms	R501-576	ERJ6GEYJ103	Carbon 10K ohms 1/10W




REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R579	ERJ6GEYJ103	Carbon	10K ohms 1/10W	C170,171	YF400103FZT	Ceramic	0.01 µF
R801	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C172,173	YF400104FZT	Ceramic	0.1 µF
R802-810	ERJ6GEYJ750	Carbon	75 ohms 1/10W	C174	EEVHB1H100P	Electrolytic	10 µF 50V
R901,902	ERJ6GEYJ220	Carbon	22 ohms 1/10W	C301-306	YW400821CHJT	Ceramic	820 pF
R951	ERJ6GEYJ220	Carbon	22 ohms 1/10W	C307	EEVHB1H1R0R	Electrolytic	1 µF 50V
R952,953	ERJ6GEYJ221	Carbon	220 ohms 1/10W	C308	YF400104FZT	Ceramic	0.1 µF
R954	ERJ6GEY0R00	Carbon	0 ohm 1/10W	C310,311	YF400270CHJT	Ceramic	27 pF
R955	ERJ6GEYJ221	Carbon	220 ohms 1/10W	C315,316	YF400104FZT	Ceramic	0.1 µF
R956	ERDS2TJ111	Carbon	110 ohms 1/4W	C320,321	YF400104FZT	Ceramic	0.1 µF
Z2,4	EXBV8V223J	Block Resistor		C323-332	YF400104FZT	Ceramic	0.1 µF
Z5-13	EXBV8V223J	Block Resistor		C333	YF400470CHJT	Ceramic	47 pF
Z16-20	EXBV8V223J	Block Resistor		C334	YF400104FZT	Ceramic	0.1 µF
Z24,25	EXBV8V223J	Block Resistor		C335,336	YF400470CHJT	Ceramic	47 pF
Z304-313	EXBV8V223J	Block Resistor		C337-342	YF400104FZT	Ceramic	0.1 µF
Z401-410	EXBV8V223J	Block Resistor		C345-348	YF400104FZT	Ceramic	0.1 µF
C1-9	YF400104FZT	Ceramic	0.1 µF	C401-404	YF400104FZT	Ceramic	0.1 µF
C10	ECSH1AX106CR	Tantalum	10 µF 10V	C406	EEVHB1H100P	Electrolytic	10 µF 50V
C11	EEVHB1H1R0R	Electrolytic	1 µF 50V	C407-409	YF400104FZT	Ceramic	0.1 µF
C12	YF400104FZT	Ceramic	0.1 µF	C411,412	YF400104FZT	Ceramic	0.1 µF
C13	YF400104FZT	Ceramic	0.1 µF	C415	YF400104FZT	Ceramic	0.1 µF
C14	YF400272XKT	Ceramic	2700pF	C416	EEVHB1C470P	Electrolytic	47 µF 16V
C15,16	YF400103FZT	Ceramic	0.01 µF	C417-420	YF400104FZT	Ceramic	0.1 µF
C17	EEVHA1C221P	Electrolytic	220 µF 16V	C422-424	YF400104FZT	Ceramic	0.1 µF
C18	EEVHB1H100P	Electrolytic	10 µF 50V	C502,506	YF400104FZT	Ceramic	0.1 µF
C19-25	YF400104FZT	Ceramic	0.1 µF	C509-511	YF400104FZT	Ceramic	0.1 µF
C26,27	YF400270CHJT	Ceramic	27 pF	C513,515	YF400104FZT	Ceramic	0.1 µF
C28-46	YF400104FZT	Ceramic	0.1 µF	C516,518	YF400104FZT	Ceramic	0.1 µF
C48,49	YF400104FZT	Ceramic	0.1 µF	C519,521	YF400104FZT	Ceramic	0.1 µF
C64	ECHU1C153JB5	Plastic	0.015 µF 16V	C523,525	YF400104FZT	Ceramic	0.1 µF
C65	ECHU1C823JB5	Plastic	0.082 µF 16V	C528,529	YF400104FZT	Ceramic	0.1 µF
C66,67	YF400270CHJT	Ceramic	27 pF	C531,533	YF400104FZT	Ceramic	0.1 µF
C68,69	YF400240CHJT	Ceramic	24 pF	C535,538	YF400104FZT	Ceramic	0.1 µF
C70	EEVHB1H1R0R	Electrolytic	1 µF 50V	C539,542	YF400104FZT	Ceramic	0.1 µF
C71,72	YF400104FZT	Ceramic	0.1 µF	C544,546	YF400104FZT	Ceramic	0.1 µF
C73	YF400510CHJT	Ceramic	51 pF	C547,549	YF400104FZT	Ceramic	0.1 µF
C74,76	YF400104FZT	Ceramic	0.1 µF	C550,554	YF400104FZT	Ceramic	0.1 µF
C77-81	YF400104FZT	Ceramic	0.1 µF	C556,558	YF400104FZT	Ceramic	0.1 µF
C84-86	YF400104FZT	Ceramic	0.1 µF	C559,562	YF400104FZT	Ceramic	0.1 µF
C95-106	YF400470CHJT	Ceramic	47 pF	C564,566	YF400104FZT	Ceramic	0.1 µF
C111-121	YF400104FZT	Ceramic	0.1 µF	C569,570	YF400104FZT	Ceramic	0.1 µF
C122-129	YF400470CHJT	Ceramic	47 pF	C574,576	YF400104FZT	Ceramic	0.1 µF
C130,131	YW400473XK	Ceramic	0.047 µF	C577,579	YF400104FZT	Ceramic	0.1 µF
C132,134	YF400104FZT	Ceramic	0.1 µF	C580,582	YF400104FZT	Ceramic	0.1 µF
C135	YF400104FZT	Ceramic	0.1 µF	C583,585	YF400104FZT	Ceramic	0.1 µF
C136-138	YF400104FZT	Ceramic	0.1 µF	C587,590	YF400104FZT	Ceramic	0.1 µF
C140-147	YF400104FZT	Ceramic	0.1 µF	C591,595	YF400104FZT	Ceramic	0.1 µF
C150	YF400104FZT	Ceramic	0.1 µF	C597,600	YF400104FZT	Ceramic	0.1 µF
C151-153	YF400560CHJT	Ceramic	56 pF	C601,604	YF400104FZT	Ceramic	0.1 µF
C154,155	YF400103XKT	Ceramic	0.01 µF	C606,608	YF400104FZT	Ceramic	0.1 µF
C156-160	YF400221CHJT	Ceramic	220 pF	C609,611	YF400104FZT	Ceramic	0.1 µF



REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R605	ERDS2TJ680	Carbon	68 ohms 1/4W	R403	ERJ14YJ560H	Carbon	56 ohms 1/4W
R606	ERDS2TJ151	Carbon	150 ohms 1/4W	R404	ERJ14YJ470	Carbon	47 ohms 1/4W
R607	ERDS2TJ680	Carbon	68 ohms 1/4W	R405,406	ERJ14YJ560H	Carbon	56 ohms 1/4W
R608	ERDS2TJ151	Carbon	150 ohms 1/4W	R407,408	ERJ14YJ470	Carbon	47 ohms 1/4W
R609	ERDS2TJ680	Carbon	68 ohms 1/4W	R409-412	ERJ14YJ390H	Carbon	39 ohms 1/4W
R610	ERDS2TJ151	Carbon	150 ohms 1/4W	R413-428	ERJ6GEYJ104	Carbon	100K ohms 1/16W
R611	ERDS2TJ680	Carbon	68 ohms 1/4W	R429	ERJ14YJ560H	Carbon	56 ohms 1/4W
R612	ERDS2TJ151	Carbon	150 ohms 1/4W	R430-433	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R613	ERDS2TJ680	Carbon	68 ohms 1/4W	R434-441	ERJ6GEYJ473	Carbon	47K ohms 1/10W
R614	ERDS2TJ151	Carbon	150 ohms 1/4W	VR401-407	EVQBBDFB220B	Variable Resistor	
R615	ERDS2TJ560	Carbon	56 ohms 1/4W	VR408	EVQVB5F0124B	Variable Resistor	
R616	ERDS2TJ390	Carbon	39 ohms 1/4W	Z403	EXBF9E472J	Block Resistor	4.7K ohms
R617	ERDS2TJ560	Carbon	56 ohms 1/4W	Z404,405	EXBF9E473J	Block Resistor	47K ohms
R618	ERDS2TJ470	Carbon	47 ohms 1/4W	C401-413	YF400104FZT	Ceramic	0.1 μF
R619	ERDS2TJ560	Carbon	56 ohms 1/4W	C414-429	YF400103XKT	Ceramic	0.01 μF
Z601	EXBF9E473J	Block Resistor	47K ohms	C430,431	YF400104FZT	Ceramic	0.1 μF
Z602	EXBF9E472J	Block Resistor	4.7K ohms	C432,433	ECEA1CKS101	Electrolytic	100 μF 16V
C611,612	ECEA1CKS101	Electrolytic	100 μF 16V	C434	YF400103XKT	Ceramic	0.01 μF
L601	YWBL01RN1A62	Coil		L401	YWBLM21B03PB	Coil	
SW601-664	EVQ21305R	Push Switch		SW401-489	EVQ21305R	Push Switch	
CN4,5	YW510481300	13-pin Connector		CN6,7	YW510481300	13-pin Connector	
E4,5	YWRDA7L04	Wire Assy for Fader Drive Board CN4,5		CN66	YW524921720	17-pin Connector	
				E6,7	YWRDA7L04	Wire Ass'y for Fader Drive Board CN6,7	
<b>EFX BOARD</b>				<b>POWER-1 BOARD</b>			
PCB13 (RTL)	YWR00DA7KZ9A	Printed Circuit Board Assy		PCB14 (RTL)	YWR0DA7PKYAA	Printed Circuit Board Assy	
IC402,404	YWTD62783AFL	IC		VS1	ERZC14DK471	ZNR	
IC410,411	YWTD62318AP	IC		C1	ECQU2A224MV	Plastic	0.22 μF
IC413,414	YWTD62318AP	IC		C3-5	ECKDRS332ME	Ceramic	3300 pF
D401-404	YWSLR325VRT	LED		L1	YW1R5A123F28	Coil	
D405-408	YWSPR325MVWT	LED		SW1	YWSDDF3	Push Switch	
D409-413	YWSLR325DUT	LED		CN2,62	YWB2P3VH	2-pin Connector	
D414-418	YWSLR325VRT	LED		CN98	YWPWI1909	Connector	
D419	YWSPR325MVWT	LED		E1,2	S-N5057	Fuse Holder	
D420-424	YWSLR325VRT	LED		E10	YWA2QA0134A4	Electrode	
D425-435	YWSLR325DUT	LED		M73	YWA2SA4486A4	Mounting Angle	
D436-443	YWSLR325MGT	LED					
D445-464	YWSLR325MGT	LED					
D465-560	YW1SS133T77	Diode					
IC401,403	MC74HC574AF	IC					
IC405-408	MC74HC541AF	IC					
IC409,412	MC74HC138AF	IC					
IC415-417	MC74HC14AF	IC					
R401	ERJ14YJ560H	Carbon	56 ohms 1/4W				
R402	ERJ14YJ390H	Carbon	39 ohms 1/4W				

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>POWER-2 BOARD</b>			R14	ERDS2TJ102	Carbon 1K ohms 1/4W
			R15,16	ERDS2TJ471	Carbon 470 ohms 1/4W
			R17	ERDS2TJ241	Carbon 240 ohms 1/4W
			R18	ERDS2TJ181	Carbon 180 ohms 1/4W
			R19	ERDS2TJ273	Carbon 27K ohms 1/4W
			R20	△ ERC12ZGM156	Solid 15M ohms 1/2W
			R21	ERDS2TJ100	Carbon 10 ohms 1/4W
			R22	ERDS2TJ221	Carbon 220 ohms 1/4W
			R23	ERG2SJ470	Metal 47 ohms 2W
			R24	ERDS2TJ470	Carbon 47 ohms 1/4W
			R25	ERDS2TJ182	Carbon 1.8K ohms 1/4W
			R26	ERDS2TJ562	Carbon 5.6K ohms 1/4W
			R27	EROS2CKF6801	Metal 6.8K ohms 1/4W
			R28	ERDS2TJ561	Carbon 560 ohms 1/4W
			R29	EROS2CKF6801	Metal 6.8K ohms 1/4W
			R30	ERDS2TJ471	Carbon 470 ohms 1/4W
			R31	ERDS2TJ331	Carbon 330 ohms 1/4W
			R32	ERDS2TJ222	Carbon 2.2K ohms 1/4W
			R33	EROS2CKF1202	Metal 12K ohms 1/4W
			R34	ERDS2TJ621	Carbon 620 ohms 1/4W
			R35	EROS2CKF6801	Metal 6.8K ohms 1/4W
			R43	ERDS2TJ221	Carbon 220 ohms 1/4W
			R44	ERDS2TJ104	Carbon 100K ohms 1/4W
			R45	ERDS2TJ103	Carbon 10K ohms 1/4W
			R46	ERDS2TJ821	Carbon 820 ohms 1/4W
			R47	ERDS2TJ103	Carbon 10K ohms 1/4W
			R48	ERDS2TJ821	Carbon 820 ohms 1/4W
			R49	ERDS2TJ103	Carbon 10K ohms 1/4W
			R50,51	ERDS2TJ152	Carbon 1.5K ohms 1/4W
			R52,53	ERDS2TJ473	Carbon 47K ohms 1/4W
			R54	△ ERQ12AJ4R7P	Fuse Resistor 4.7 ohms 1/2W
			R55	ERDS2TJ104	Carbon 100K ohms 1/4W
			R56	ERDS2TJ472	Carbon 4.7K ohms 1/4W
			R57	ERDS2TJ103	Carbon 10K ohms 1/4W
			R59,60	ERDS2TJ222	Carbon 2.2K ohms 1/4W
			R61	ERDS2TJ181	Carbon 180 ohms 1/4W
			R62	ERDS2TJ103	Carbon 10K ohms 1/4W
			R63	ERDS2TJ392	Carbon 3.9K ohms 1/4W
			R64	ERDS2TJ112	Carbon 1.1K ohms 1/4W
			R71	ERDS2TJ392	Carbon 3.9K ohms 1/4W
			R72	ERDS2TJ112	Carbon 1.1K ohms 1/4W
			R73	ERDS2TJ180	Carbon 18 ohms 1/4W
			R74	ERDS2TJ103	Carbon 10K ohms 1/4W
			R75	ERDS2TJ222	Carbon 2.2K ohms 1/4W
			R76	ERDS2TJ104	Carbon 100K ohms 1/4W
			C2,6	△ ECQU2A224MV	Plastic 0.22 μF 50V
			C7,8	ECOS2EB681CB	Electrolytic 680 μF 250V
			C9,10	ECKD3F331KB	Ceramic 330 pF
			C11	ECQV1H224JZ	Plastic 0.22 μF 50V
			C12	ECQP1H391JZ	Plastic 390 pF 50V
PCB15 (RTL)	YWR00DA7KZBA	Printed Circuit Board Assy			
IC1	YWFA5304P	IC			
IC2	YWNJM2903D1	IC			
IC22,23	YWTA76431S	IC			
Q1	△ 2SK2675	FET			
Q2,3	△ YWPC123FY2	Photo Coupler			
Q4	2SA1225Y	Transistor			
Q41	2SB943-PQ	Transistor			
Q42	2SC1815-Y	Transistor			
Q43	2SA1015-Y	Transistor			
Q44	2SD1268-PQ	Transistor			
Q45	2SD1276A-QR	Transistor			
Q46	2SB943-PQ	Transistor			
Q47	2SC1815-Y	Transistor			
D1	△ YWD3SB60	Diode			
D2,3	YWERB3710	Diode			
D4	YWERA9102	Diode			
D5	YWMTZJ30AT77	Diode			
D6	YWERB3710	Diode			
D21	△ YWD20LC20U	Diode			
D23	YWMTZJ8R2C	Diode			
D25	△ YWSF10SC6	Diode			
D24	YWMTZJ5.1CT77	Diode			
D26,27	YWERA9102	Diode			
D28,41	MA165	Diode			
D42	MA165	Diode			
D43	YWMTZJ5.1CT77	Diode			
D44	YWD4SBS6	Diode			
D45,46	YWMTZJ15BT77	Diode			
D47,48	MA165	Diode			
D49-52	YWAM01Z	Diode			
D53,54	YWMTZJ24CT77	Diode			
D55	YWD4SBS6	Diode			
D56	YWMTZJ5.1CT77	Diode			
D57	MA165	Diode			
R1	△ ERC12ZGM105	Solid 1M ohms 1/2W			
R2,3	ERF5TK1R5	Wire Wound 1.5 ohms 5W			
R4,5	ERDS2TJ334	Carbon 330K ohms 1/4W			
R6	ERG3SJ221	Metal 220 ohms 3W			
R7	ERX3SJR22	Metal 0.22 ohm 3W			
R8	ERDS2TJ180	Carbon 18 ohms 1/4W			
R9	ERG2SJ104	Metal 100K ohms 2W			
R10	ERDS2TJ471	Carbon 470 ohms 1/4W			
R11	ERDS2TJ105	Carbon 1M ohms 1/4W			
R12,13	ERDS2TJ103	Carbon 10K ohms 1/4W			

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C13	ECQV1H104JZ	Plastic	0.1 μF 50V	M58	YWA7DA1072A3	Heat Sink	
C14	ECQB1H103JZ	Plastic	0.01 μF 50V	M59	YWA2PA1131A4	Insulator	
C15	EEUFC1V390B	Electrolytic	39 μF 35V	M60	YWUG3630M	Heat Sink (x2)	
C16,17	△ ECKDRS332ME	Ceramic	3300 pF	M61	△ YWAC254	Insulator (x2)	
C22,25	EEUFC1A222	Electrolytic	2200 μF 10V	M62	△ YWAC-256	Insulator	
C26-28	ECQV1H104JZ	Plastic	0.1 μF 50V	M63	YWPC303030PB	Heat Sink	
C41	ECQM1104KZ	Plastic	0.1 μF 50V	<b>AD/DA-SUB1 BOARD</b>			
C42	ECQV1H224JZ	Plastic	0.22 μF 50V				
C43	LPW1E682P1	Electrolytic	6800 μF 25V				
C44	ECQV1H104JZ	Plastic	0.1 μF 50V				
C45	LPW1E682P1	Electrolytic	6800 μF 25V				
C46	ECQV1H104JZ	Plastic	0.1 μF 50V				
C47-50	ECA1EHG331	Electrolytic	330 μF 25V				
C51,52	ECQV1H104JZ	Plastic	0.1 μF 50V				
C53	ECQM2104KZ	Plastic	0.1 μF 200V				
C54	EC0S1KA102CA	Electrolytic	1000 μF 10V				
C55	ECQM1103KZ	Plastic	0.01 μF 50V	IC1	YWTC7S04F	IC	
C56,57	ECA1JHG331	Electrolytic	330 μF 63V	IC2,3	HD74HC123AF	IC	
C58	ECQM1103KZ	Plastic	0.01 μF	IC4	YWTC7S00FL	IC	
C59	ECQV1H104JZ	Plastic	0.1 μF 50V	Q1,2	FMA4AT148	Transistor	
C60	ECOS1CA333EB	Electrolytic	33000 μF 16V	Q3,4	DTC114EU	Transistor	
C61	ECQB1H103JZ	Plastic	0.01 μF 50V	Q5	DTA114EKAT46	Transistor	
C62	ECA1CHG101B	Electrolytic	100 μF 16V	Q6	DTC144EKAT46	Transistor	
C63	ECA1CHG331B	Electrolytic	330 μF 16V	Q7	DTC144TU06	Transistor	
C64	ECQB1H103JZ	Plastic	0.01 μF 50V	R1-3	ERJ6GEYJ334	Carbon	330K ohms 1/10W
C65	ECOS1CA333EB	Electrolytic	33000 μF 16V	R4	ERJ12YJ332H	Carbon	3.3K ohms 1/2W
C70	ECA1CHG101B	Electrolytic	100 μF 16V	R7	ERJ6GEYJ472	Carbon	4.7K ohms 1/10W
L3	△ YWOR9A273F28	Coil		C1	YF400104FZT	Ceramic 0.1 μF	
L4	△ YFBL02RN2R62	Coil		C2	ECST1CY475ZR	Tantalum 4.7 μF 16V	
L21	△ YWMSSX12X8A	Coil		C3	ECST1CY105ZR	Tantalum 1 μF 16V	
L22	YFBL02RN2R62	Coil		C4	YF400104FZT	Ceramic 0.1 μF	
L23	△ YWTC1240	Coil		C5	ECST1CY105ZR	Tantalum 1 μF 16V	
L24	△ YFBL02RN2R62	Coil		C6-9	YF400104FZT	Ceramic 0.1 μF	
L25	△ YWTC1240	Coil		C10	EEVHB1C470P	Electrolytic 4.7 μF 16V	
L26,27	YFBL02RN2R62	Coil		C11	YF400104FZT	Ceramic 0.1 μF	
T1	△ YWAPTA1027A4	Power Transformer		<b>AD/DA-SUB2 BOARD</b>			
CN36	YWB14BEH	14-pin Connector					
CN52	YW510481300	13-pin Connector					
CN53	YW510480700	7-pin Connector					
CN62	YWB2P3VH	2-pin Connector					
CN63	YWB7PVH	7-pin Connector					
CN64	YWB4BEH	4-pin Connector					
CN65	YW510481400	14-pin Connector					
CN99	YWB3BXHA	3-pin Connector					
F1-3	△ YWSSFR6R3AF3	Current Fuse	6.3A				
E1	△ YW851040	Fuse Insulator Cap		IC1000	YWMC74HC74AF	IC	
E52	YWRDA7L52	Wire Assy for AD/DA Board CN52		IC1001	YWTC7S00FL	IC	
E53	YWRDA7L53	Wire Assy for AD/DA Board CN53		IC1002	YWTC7S044F	IC	
E65	YWRDA7L65	Wire Assy for Fader Drive Board CN65		Q1,2	FMA4AT148	Transistor	
E10	YWA2QA0134A4	Electrode		R1504	ERJ6GEYJ101	Carbon	100 ohms 1/10W
M57	YWA7DA1075A4	Heat Sink		C1124-1126	YF400104FZT	Ceramic	0.1 μF

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>POWER-2 SUB BOARD</b>			<b>WR-MTBR</b>		
<b>POWER-2 SUB BOARD</b>			<b>MISCELLANEOUS</b>		
PCB18 (RTL)	YWR00DA7KYUA	Printed Circuit Board Assy	E101 	YW26CKIT08W	Power Cord
IC100	YWM51957BL	LSI	FB1	YWRDU07L01	Flexible Cable
Q100	DTC114ES	Transistor	M1	YWA5WA2366B1	Meter Decoration Panel
Q111	2SA1015-Y	Transistor	M2	YWA1VA0519A3	LED Cover
D58	ERA15-04V3	Diode	M3	YWA5WA2364A1	Meter Panel
D111	MA723	Diode	M4	YWA6JA1120A3	Button
R76	ERG2SJ220	Metal 22 ohms 2W	M5	YWA2KA1198A1	Meter Sub Chassis
R100	ER0S2CKF8201	Metal 8.2K ohms	M6	YWA5WA2365A1	Meter Rear Panel
R101	ER0S2CKF3301	Metal 3.3K ohms	M7	YWSR6N4	Cord Bushing
R102	ERDS2TJ222	Carbon 2.2K ohms 1/4W	M8	YWA7QA4848A4	Main Label
R103	ER0S2CKF2202	Metal 22K ohms	<b>METER BRIDGE BOARD-1</b>		
R111	ERDS2TJ510	Carbon 51 ohms 1/4W	PCB1 (RTL)	YWR0DU07KZ1A	Printed Circuit Board Assy
R112	ERDS2TJ242	Carbon 2.4K ohms 1/4W	IC1	YWMC74HC367F	IC
C100	ECA1EHG331	Tantalum 330 µF 25V	IC2	YWTC7S04F	IC
C101	ECQB1H102JF	Plastic 1000 pF 50V	IC3	YWM51957BFP	IC
L100	YWZBF503S01	Coil	IC4,5	YWT7C110F003	IC
RL1	YWATX209	Relay	IC6	YWTD62M8600FL	IC
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			IC7,8	YWTB62705BFL	IC
E103 	YWKP30S31SVB	AC Power Cord	IC10	YWD78052G145	IC
M101 	YWA8QA4842AN	Operating Instructions	IC11	YWTC7S08F	IC
M102	XZB26X40C05	Polyethylene Bag	IC12	YWTC7S04F	IC
M103	YWT80X90X1	Polyethylene Bag	IC13	MC74HC573AF	IC
M105	YWA9CA3703BN	Packaging Assy	IC14	YWTC7S04F	IC
M106	YVW7SA2037A3	Label	Q1-5	FMG9AT148	Transistor
			Q6,7	2SB766A-QR	Transistor
			Q8	2SD874A-RS	Transistor
			Q9	DTC114YKAT46	Transistor
			Q10	DTA114YKAT46	Transistor
			Q11,12	FMG9AT148	Transistor
			D1,2	YWSML210VT86	LED
			D3-8	YWSML210DT86	LED
			D9-15	YWSML210MT86	LED
			D16	YWSML210VT86	LED
			D17	YWSML210VT86	LED
			D18-23	YWSML210DT86	LED
			D24-30	YWSML210MT86	LED

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
D31,32	YWSML210VT86	LED	C3	YF400104FZT	Ceramic 0.1 μF
D33-38	YWSML210DT86	LED	C5	EEVHB1C220R	Electrolytic 22 μF 16V
D39-45	YWSML210MT86	LED	C7	YF400104FZT	Ceramic 0.1 μF
D46,47	YWSML210VT86	LED	C8,9	YF400103FZT	Ceramic 0.01 μF
D48-53	YWSML210DT86	LED	C10-25	YF400104FZT	Ceramic 0.1 μF
D54-60	YWSML210MT86	LED	SW1-4	EVQPJS04K	Push Switch
D61,62	YWSML210VT86	LED	X1	YWCCR5R0MC3	Oscillator
D63-68	YWSML210DT86	LED	CF1-6	ELKE221FA	LC Filter
D69-75	YWSML210MT86	LED	CF7	ELKE103FA	LC Filter
D76,77	YWSML210VT86	LED	L11-14	YWBLM21A601T	LC Filter
D78-83	YWSML210DT86	LED	CN44	YWB13BPHSM3T	15-pin Connector
D84-90	YWSML210MT86	LED	CN77	YW528082690	26-pin Connector
D91,92	YWSML210VT86	LED	<b>METER BRIDGE BOARD-2</b>		
D93-98	YWSML210DT86	LED	PCB2 (RTL)	YWR0DU07KZ2A	Printed Circuit Board Assy
D99-105	YWSML210MT86	LED	IC1,2	YWTD62M8600FL	IC
D106,107	YWSML210VT86	LED	IC3,4	YWTB62705BFL	IC
D108-113	YWSML210DT86	LED	Q1-8	FMG9AT148	Transistor
D114-120	YWSML210MT86	LED	D1,2	YWSML210VT86	LED
D121,122	WSML210VT86	LED	D3-8	YWSML210DT86	LED
D123-128	YWSML210DT86	LED	D9-15	YWSML210MT86	LED
D129-135	YWSML210MT86	LED	D16,17	YWSML210VT86	LED
D136,137	YWSML210VT86	LED	D18-23	YWSML210DT86	LED
D138-142	YWSML210DT86	LED	D24-30	YWSML210MT86	LED
D144-150	YWSML210MT86	LED	D31,32	YWSML210VT86	LED
D151	YWSML210VT86	LED	D33-38	YWSML210DT86	LED
D152	YWSML210DT86	LED	D39-45	YWSML210MT86	LED
D153	YWSML210VT86	LED	D46,47	YWSML210VT86	LED
D154	YWSML210MT86	LED	D48-53	YWSML210DT86	LED
D155-158	YW1SS355	Diode	D54-60	YWSML210MT86	LED
D159-164	YWUDZ5.6B	Diode	D61,62	YWSML210VT86	LED
D165	YWUDZ6.2B	Diode	D63-68	YWSML210DT86	LED
R1	YWR1220P912D	Metal	D69-75	YWSML210MT86	LED
R2	YWR1220P332D	Metal	D76,77	YWSML210VT86	LED
R3	ERJ6GEYJ102	Carbon	D78-83	YWSML210DT86	LED
R4-7	ERJ6GEYJ223	Carbon	D84-90	YWSML210MT86	LED
R8-17	ERJ6GEYJ561	Carbon	D91,92	YWSML210VT86	LED
R18,19	ERJ6GEYJ223	Carbon	D93-98	YWSML210DT86	LED
R20	ERJ6GEYJ471	Carbon	D99-105	YWSML210MT86	LED
R21	ERJ6GEYJ561	Carbon	D106,107	YWSML210VT86	LED
R22	ERJ6GEYJ223	Carbon	D108-113	YWSML210DT86	LED
R23	ERJ14YJ390H	Carbon	D114-120	YWSML210MT86	LED
R24	ERJ14YJ470	Carbon	D121,122	YWSML210VT86	LED
R25	ERJ14YJ560H	Carbon	D123-128	YWSML210DT86	LED
R26	ERJ6GEYJ223	Carbon			
R27	ERJ6GEYJ680	Carbon			
R29,30	ERJ6GEYJ223	Carbon			
R31-45	ERJ14YJ101	Carbon			
Z1-21	EXBV8V223J	Block Resistor			
C1	YF400104FZT	Ceramic			
C2	EEVHB1C470P	Electrolytic			



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
D129-135	YWSML210MT86	LED	<b>WR-TNDM</b>		
D136,137	YWSML210VT86	LED	<b>MISCELLANEOUS</b>		
D138-143	YWSML210DT86	LED	M1	YWA5WA2371A3	Panel
D144-150	YWSML210MT86	LED	M2	YWXM2Z0021	Special Screw
D151,152	YWSML210VT86	LED	<b>MAIN BOARD</b>		
D153-158	YWSML210DT86	LED	IC1	MC74HC541AF	IC
D159-165	YWSML210MT86	LED	IC2	YWT6G22U1057	IC
D166,167	YWSML210VT86	LED	IC3	AM26LS32ACNS	IC
D168-173	YWSML210DT86	LED	IC4	YWT6G22U1057	IC
D174-180	YWSML210MT86	LED	IC5	YWSN75179BPS	IC
D181,182	YWSML210VT86	LED	IC6	YWTC7S04F	IC
D183-188	YWSML210DT86	LED	IC7	YWTC7W74FL	IC
D189-195	YWSML210MT86	LED	IC8	AM26LS31CNS	IC
D196,197	YWSML210VT86	LED	IC9	YWT74VHC541F	IC
D198-203	YWSML210DT86	LED	Q1	YWDTC114EK97	Transistor
D204-210	YWSML210MT86	LED	D21	YWUDZ5.1B	Diode
D211,212	YWSML210VT86	LED	R1	ERJ6GEYJ103	Metal 10K ohms 1/10W
D213-218	YWSML210DT86	LED	R8	ERJ6GEYJ681	Metal 680 ohms 1/10W
D219-225	YWSML210MT86	LED	R9	ERJ14YJ111	Metal 110 ohms 1/14W
D226,227	YWSML210VT86	LED	R10,11	ERJ6GEYJ681	Metal 680 ohms 1/10W
D228-233	YWSML210DT86	LED	R12	ERJ14YJ111	Metal 110 ohms 1/14W
D234-240	YWSML210MT86	LED	R13,14	ERJ6GEYJ681	Metal 680 ohms 1/10W
R1-16	ERJ6GEYJ561	Carbon 560 ohms 1/10W	R15	ERJ14YJ111	Metal 110 ohms 1/14W
R17	ERJ6GEYJ471	Carbon 470 ohms 1/10W	R16,17	ERJ6GEYJ681	Metal 680 ohms 1/10W
R18	ERJ6GEYJ561	Carbon 560 ohms 1/10W	R18	ERJ14YJ111	Metal 110 ohms 1/14W
R19-33	ERJ14YJ101	Carbon 100 ohms 1/10W	R19,20	ERJ6GEYJ681	Metal 680 ohms 1/10W
R100-212	ERJ6GEY0R00	Carbon 0 ohm 1/10W	R21	ERJ14YJ111	Metal 110 ohms 1/14W
R213-230	ERJ8GCS0R00	Carbon 0 ohm 1/10W	R22	ERJ6GEYJ681	Metal 680 ohms 1/10W
R231-329	ERJ6GEY0R00	Carbon 0 ohm 1/10W	R23-32	YF2116100JT	Metal 10 ohms 1/10W
C1,2	YF400104FZT	Ceramic 0.1 µF	R33	ERJ6GEYJ223	Metal 22K ohms 1/10W
CN77	YW522072690	26-pin Connector	R34	ERJ6GEYJ103	Metal 10K ohms 1/10W
E10	YWA2QA0134A4	Electrode (X4)	C1,2	YF400104FZT	Ceramic 0.1 µF
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			C3	EEVHB1C470P	Electrolytic 47 µF 16V
M11	△ YWA8QA4845AN	Operating Instructions	C4-20	YF400104FZT	Ceramic 0.1 µF
M12	XZB26X40C05	Polyethylene Bag	C21-24	YF400470CHJT	Ceramic 47 pF
M13	YWA2SA4492A3	Mounting Angle R	C25	YF400104FZT	Ceramic 0.1 µF
M14	YWA2SA4493A3	Mounting Angle L	C26-29	YF400470CHJT	Ceramic 47 pF
M15	YWT12X15C03	Polyethylene Bag	C30	YF400104FZT	Ceramic 0.1 µF
M16	YWA8EB0109A4	Polyethylene Bag	C31-34	YF400470CHJT	Ceramic 47 pF
M17	YWA9CA3712AN	Packaging Assy	C35	YF400104FZT	Ceramic 0.1 µF
M18	YVW7SA2037A3	Bar Cord Label	C36-39	YF400470CHJT	Ceramic 47 pF
			C40	YF400104FZT	Ceramic 0.1 µF
			C41-44	YF400470CHJT	Ceramic 47 pF
			C45	YF400104FZT	Ceramic 0.1 µF
			C46-49	YF400470CHJT	Ceramic 47 pF

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION			
C50	YF400104FZT	Ceramic 0.1 μF	<b>MAIN BOARD</b>					
C51-54	YF400470CHJT	Ceramic 47 pF						
C55	YF400104FZT	Ceramic 0.1 μF						
C56-59	YF400470CHJT	Ceramic 47 pF						
C60	YF400104FZT	Ceramic 0.1 μF						
C61-64	YF400470CHJT	Ceramic 47 pF						
C65	YF400104FZT	Ceramic 0.1 μF						
C66-69	YF400470CHJT	Ceramic 47 pF						
C70-72	YF400103XKT	Ceramic 0.01 μF						
C73,74	YF400470CHJT	Ceramic 47 pF						
C75	YF400104FZT	Ceramic 0.1 μF						
L1	YWZBF503S01	Coil				IC1	MC74HC240AF	IC
L2-23	YWBLM21B03PB	Coil	IC2	MC74HC540AF	IC			
SW1	YWSSSS92057A	Slide Switch	IC3	MC74HC4046AF	IC			
CN1	YWXC5A64421A	64-pin Connector	IC4	MC74HC14AF	IC			
			IC5	HD74HC123AF	IC			
CN2	XM3B2522502	25-pin Connector	IC6	YWACSA0506BN	Custom IC			
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			IC7,8	YWT6G22U1057	IC			
			R2	ERJ6GEYJ470	Carbon 47 ohms 1/10W			
			R8	ERJ6GEYJ113	Carbon 11K ohms 1/10W			
			R9	ERJ6GEYJ133	Carbon 13K ohms 1/10W			
			R10	ERJ6GEYJ102	Carbon 1K ohms 1/10W			
			R11	ERJ6GEYJ104	Carbon 100K ohms 1/10W			
			R14	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
			R17	ERJ6GEYJ273	Carbon 27K ohms 1/10W			
			R18	ERJ6GEYJ472	Carbon 4.7K ohms 1/10W			
			R19,20	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
			R23,26	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
			Z1	EXBV8V470J	Block Resistor			
Z2	EXBV8V471J	Block Resistor						
Z3,4	EXBV8V472J	Block Resistor						
Z5-8	EXBV8V222J	Block Resistor						
C1-32	YF400470CHJT	Ceramic 47 pF	C10	YWT74VHC541F	IC			
C33-36	YF400104FZT	Ceramic 0.1 μF	IC12	YWT74VHC245F	IC			
C37	YF400510CHJT	Ceramic 51 pF	D1-17	DA204K-T46	Diode			
C38	ECHU1C823JB5	Plastic 0.082 μF 16V	R2	ERJ6GEYJ470	Carbon 47 ohms 1/10W			
C39	YW400222CHJ	Ceramic 2200 pF	R8	ERJ6GEYJ113	Carbon 11K ohms 1/10W			
C40	YF400103XKT	Ceramic 0.01 μF	R9	ERJ6GEYJ133	Carbon 13K ohms 1/10W			
C41-58	YF400104FZT	Ceramic 0.1 μF	R10	ERJ6GEYJ102	Carbon 1K ohms 1/10W			
C59	ECEV1CA101	Electrolytic 100 μF 16V	R11	ERJ6GEYJ104	Carbon 100K ohms 1/10W			
C60-62	YF400104FZT	Ceramic 0.1 μF	R14	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
C63	YF400103FZT	Ceramic 0.01 μF	R17	ERJ6GEYJ273	Carbon 27K ohms 1/10W			
C66	ECHU1H153JB5	Plastic 0.015 μF 50V	R18	ERJ6GEYJ472	Carbon 4.7K ohms 1/10W			
L1-18	YWBLM21B03PB	Coil	R19,20	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
SW2	YWSMS502	Dip Switch	R23,26	ERJ6GEYJ103	Carbon 10K ohms 1/10W			
CN1	YWXC5A64421A	64-pin Connector	Z1	EXBV8V470J	Block Resistor			
CN2	XM3B2522502	25-pin Connector	Z2	EXBV8V471J	Block Resistor			
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			Z3,4	EXBV8V472J	Block Resistor			
			M11	YWA8QA4858AN	Operating Instructions			
			M12	YWA8EA0079A4	Polyethylen Bag			
			M13	YWA9CG3714AN	Packaging Assy			
			M14	YWV7SA2037A3	Label			
			<b>WR-TDIF</b>			C37	YF400510CHJT	Ceramic 51 pF
			<b>MISCELLANEOUS</b>			C38	ECHU1C823JB5	Plastic 0.082 μF 16V
						C39	YW400222CHJ	Ceramic 2200 pF
			M1	YWA5WA2368A3	TDIF Card Panel	C40	YF400103XKT	Ceramic 0.01 μF
			M2	YWXM2Z0021	Special Screw	C41-58	YF400104FZT	Ceramic 0.1 μF
			<b>ACCESSORY PARTS / PACKAGING PARTS</b>			C59	ECEV1CA101	Electrolytic 100 μF 16V
						C60-62	YF400104FZT	Ceramic 0.1 μF
C63	YF400103FZT	Ceramic 0.01 μF						
C66	ECHU1H153JB5	Plastic 0.015 μF 50V						
L1-18	YWBLM21B03PB	Coil						
SW2	YWSMS502	Dip Switch						
CN1	YWXC5A64421A	64-pin Connector						
CN2	XM3B2522502	25-pin Connector						
M11	YWA8QA4858AN	Operating Instructions						
M12	YWA8EA0079A4	Polyethylen Bag						
M13	YWA9CG3714AN	Packaging Assy						
M14	YWV7SA2037A3	Label						

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
<b>WR-SMPT</b>			R21	YWR1220P221D	Metal 220 ohms
<b>MISCELLANEOUS</b>			R22	YWR1220P202D	Metal 2K ohms
M1	YWA5WA2372A3	Panel	R23	ERJ6GEYJ750	Metal 75 ohms 1/10W
<b>MAIN BOARD</b>			R24	YWR1220P472D	Metal 4.7K ohms
IC1	MC74HC245AF	IC	R25	YFR1220P113D	Metal 11K ohms
IC2	MC74HC541AF	IC	R26	R1220P133D	Metal 13K ohms
IC3	YWPD65636055	IC	R27	YWR1220P273D	Metal 27K ohms
IC4	YWTC7W04FL	IC	R28	ERJ6GEYJ273	Metal 27K ohms 1/10W
IC5	YWMC74HC160F	IC	R30	ERJ6GEYJ562	Metal 5.6K ohms 1/10W
IC6	YWTC7W74FL	IC	R31	ERJ6GEYJ472	Metal 4.7K ohms 1/10W
IC7	YFNJM311M	IC	R32	ERJ6GEYJ122	Metal 1.2K ohms 1/10W
IC8	YWNJM082M	IC	R35	ERJ6GEYJ103	Metal 10K ohms 1/10W
IC10	YWHD74HC221F	IC	R36	YWR1220P472D	Metal 4.7K ohms
IC11	YWLM1881M	IC	R37	YWR1220P103D	Metal 10K ohms
IC12	MC74HC4046AF	IC	R38	YFR1220P392D	Metal 3.9K ohms
IC13	NJM2903MT31	IC	R39	YWR1220P273D	Metal 27K ohms
IC14	MC74HC4046AF	IC	R40	ERJ6GEYJ273	Metal 27K ohms 1/10W
IC15	NJM2903MT31	IC	R42	ERJ6GEYJ562	Metal 5.6K ohms 1/10W
IC16	YWACSA0503AN	CustomIC	R43	ERJ6GEYJ472	Metal 4.7K ohms 1/10W
Q1	DTC144EK	Transistor	R44	ERJ6GEYJ122	Metal 1.2K ohms 1/10W
Q3	2SA1532-CD	Transistor	R47	ERJ6GEYJ103	Metal 10K ohms 1/10W
Q4	2SC3930-BC	Transistor	R48,49	ERJ6GEYJ472	Metal 4.7K ohms 1/10W
Q5	DTC144EK	Transistor	R53	ERJ6GEYJ101	Metal 100 ohms 1/10W
Q6	DTC144EK	Transistor	R54	ERJ6GEYJ561	Metal 560 ohms 1/10W
D1	YWDA204K	Diode	R55	ERJ6GEYJ101	Metal 100 ohms 1/10W
R1	ERJ6GEYJ472	Metal	Z1,2	EXBV8V223J	Block Resistor
R2	ERJ6GEYJ223	Metal	Z3-6	EXBV8V472J	Block Resistor
R3	YFR1220P222D	Metal	C1-6	YF400104FZT	Ceramic 0.1 µF
R4	YWR1220P824D	Metal	C7	EEVHA1C221P	Electrolytic 220 µF 16V
R5	YWR1220P103D	Metal	C9-11	YF400104FZT	Ceramic 0.1 µF
R6	YWR1220P184D	Metal	C12	YF400103FZT	Ceramic 0.01 µF
R7	YWR1220P684D	Metal	C13,14	YF400104FZT	Ceramic 0.1 µF
R8	YWR1220P563D	Metal	C15	EEVHB1H4R7R	Electrolytic 4.7 µF 50V
R9	YWR1220P204D	Metal	C16	YF400104FZT	Ceramic 0.1 µF
R11	YWR1220P204D	Metal	C17	YW400010CHC	Ceramic 1 pF
R12	ERJ6GEYJ101	Metal	C18,19	YF400104FZT	Ceramic 0.1 µF
R13	ERJ6GEYJ103	Metal	C21	EEVHB1H100P	Electrolytic 10 µF 50V
R14	ERJ6GEYJ184V	Metal	C22,23	YF400470CHJT	Ceramic 47 pF
R15	ERJ6GEYJ224	Metal	C24,25	YF400221CHJT	Ceramic 220 pF
R16	ERJ6GEYJ684	Metal	C26-28	YF400104FZT	Ceramic 0.1 µF
R17	YWR1220P181D	Metal	C30,31	YF400104FZT	Ceramic 0.1 µF
R18	YWR1220P221D	Metal	C32	ECEV1AA330NP	Electrolytic 33 µF 10V
R19	YWR1220P272D	Metal	C33,34	YF400470CHJT	Ceramic 47 pF
R20	YWR1220P361D	Metal	C35-37	YF400104FZT	Ceramic 0.1 µF
			C39	ECHU1C153JB5	Plastic 0.015 µF
			C40	ECHU1C823JB5	Plastic 0.082 µF
			C41	YF400510CHJT	Ceramic 51 pF
			C42,44	YF400104FZT	Ceramic 0.1 µF
			C45	ECHU1C153JB5	Plastic 0.015 µF 16V
			C46	ECHU1C823JB5	Plastic 0.082 µF 16V

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
C47	YF400510CHJT	Ceramic 51 pF	IC30	ACSA0501AN	CustomIC
C48,49	YF400104FZT	Ceramic 0.1 μF	R1	ERJ6GEYJ223	Carbon 22K ohms 1/10W
C51	YF400104FZT	Ceramic 0.1 μF	R2-5	ERJ14YJ111	Carbon 110 ohms 1/10W
L1-6	YWBLM21B03PB	Coil	R6	ERJ6GEYJ560	Carbon 56 ohms 1/10W
L8	YWBLM21B03PB	Coil	R7	ERJ6GEYJ820	Carbon 82 ohms 1/10W
CN2	YWNC3FAH10	Connector	R8	ERJ6GEYJ470	Carbon 47 ohms 1/10W
CN3	YWP2201A	BNC Connector	R9	ERJ6GEYJ330	Carbon 33 ohms 1/10W
CN51	YW528523090	30-pin Connector	R10,11	ERJ6GEYJ560	Carbon 56 ohms 1/10W
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			R12	ERJ6GEYJ820	Carbon 82 ohms 1/10W
M11	△ YWA8QA4862AN	Operating Instructions	R13	ERJ6GEYJ470	Carbon 47 ohms 1/10W
M12	YWA8EA0079A4	Polyethylene Bag	R14	ERJ6GEYJ330	Carbon 33 ohms 1/10W
M13	YWA9CB3741AN	Packaging Assy	R15,16	ERJ6GEYJ560	Carbon 56 ohms 1/10W
M14	YVW7SA2037A3	Bar Cord Label	R17	ERJ6GEYJ820	Carbon 82 ohms 1/10W
<b>WR-AESS</b>			R18	ERJ6GEYJ470	Carbon 47 ohms 1/10W
<b>MISCELLANEOUS</b>			R19	ERJ6GEYJ330	Carbon 33 ohms 1/10W
M1	YWA5WA2369A3	AES/EBU Card Panel	R20,21	ERJ6GEYJ560	Carbon 56 ohms 1/10W
M2	YWXM2Z0021	Special Screw	R22	ERJ6GEYJ820	Carbon 82 ohms 1/10W
<b>MAIN BOARD</b>			R23	ERJ6GEYJ470	Carbon 47 ohms 1/10W
IC2	YWT74VHC541F	IC	R24	ERJ6GEYJ330	Carbon 33 ohms 1/10W
IC3	YWT74VHC245F	IC	R25	ERJ6GEYJ560	Carbon 56 ohms 1/10W
IC4	YWT74VHC541F	IC	R28-32	ERJ6GEYJ103	Carbon 10K ohms 1/10W
IC6	YWT6G22U1057	IC	Z5,6	EXBV8V223J	Block Resistor
IC7	YWTC74ACT04AF	IC	C1,2	YF400104FZT	Ceramic 0.1 μF
IC8	YWTC7W74FL	IC	C3	EEVHB1H1R0R	Electrolytic 1 μF 50V
IC9,10	MC74HCT244AF	IC	C5-13	YF400104FZT	Ceramic 0.1 μF
IC11	MC74HC125AF	IC	C16,18	YF400104FZT	Ceramic 0.1 μF
IC13	MC74HC273AF	IC	C19,22	YF400104FZT	Ceramic 0.1 μF
IC15,16	YWTC9271FELP	LSI	C23	YF400104FZT	Ceramic 0.1 μF
IC19	YWCS8412CS	CustomIC	C24	YW400473XK	Ceramic 0.047 μF
IC21	MC74HC125AF	IC	C25	YF400104FZT	Ceramic 0.1 μF
IC22-24	YWCS8412CS	CustomIC	C27,28	YF400104FZT	Ceramic 0.1 μF
IC25	AM26LS31CNS	IC	C29-32	YF400470CHJT	Ceramic 47 pF
IC26	MC74HC541AF	IC	C33-35	YF400104FZT	Ceramic 0.1 μF
			C36	YW400473XK	Ceramic 0.047 μF
			C37	YF400104FZT	Ceramic 0.1 μF
			C39,40	YF400104FZT	Ceramic 0.1 μF
			C41-44	YF400470CHJT	Ceramic 47 pF
			C45,46	YF400104FZT	Ceramic 0.1 μF
			C47	YW400473XK	Ceramic 0.047 μF
			C48	YF400104FZT	Ceramic 0.1 μF
			C50,51	YF400104FZT	Ceramic 0.1 μF
			C52-55	YF400470CHJT	Ceramic 47 pF
			C56,57	YF400104FZT	Ceramic 0.1 μF
			C58	YW400473XK	Ceramic 0.047 μF
			C59	YF400104FZT	Ceramic 0.1 μF
			C61,62	YF400104FZT	Ceramic 0.1 μF
			C63-66	YF400470CHJT	Ceramic 47 pF
			C67-70	YF400104FZT	Ceramic 0.1 μF
			C71-74	YF400470CHJT	Ceramic 47 pF
			C75-77	YF400104FZT	Ceramic 0.1 μF

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
C78-81	YF400470CHJT	Ceramic 47 pF	R8	ERJ6GEYJ113V	Carbon 11K ohms 1/10W
C82,83	YF400104FZT	Ceramic 0.1 μF	R9	ERJ6GEYJ133	Carbon 13K ohms 1/10W
C84	YF400104FZT	Ceramic 0.1 μF	R10	ERJ6GEYJ102	Carbon 1K ohms 1/10W
C85-88	YF400470CHJT	Ceramic 47 pF	R11	ERJ6GEYJ104	Carbon 100K ohms 1/10W
C89-91	YF400104FZT	Ceramic 0.1 μF	R14	ERJ6GEYJ103	Carbon 10K ohms 1/10W
C92-95	YF400470CHJT	Ceramic 47 pF	R17	ERJ6GEYJ272	Carbon 2.7K ohms 1/10W
C96	YF400104FZT	Ceramic 0.1 μF	R18	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
C99-103	YF400104FZT	Ceramic 0.1 μF	R19,20	ERJ6GEYJ103	Carbon 10K ohms 1/10W
L1	YWZBF503S01	Coil	R23-25	ERJ6GEYJ103	Carbon 10K ohms 1/10W
L2-21	YWBLM21B03PB	Coil	R26	ERJ6GEYJ105	Carbon 1M ohms 1/10W
T1-8	YWPT1099	High Freq Transformer	Z1,2	EXBV8V222J	Block Resistor
SW1-4	SSSS92A58A	Slide Switch	C35,36	YF400104FZT	Ceramic 0.1 μF
CN1	XC5A64821A	64-pin Connector	C37	YF400510CHJT	Ceramic 51 pF
CN2	XM3B2522502	25-pin Connector	C38	ECHU1C823JB5	Plastic 0.082 μF 16V
<b>ACCESSORY PARTS / PACKAGING PARTS</b>			C39	YW400222CHJ	Ceramic 2200 pF
M11	△ YWA8QA4859AN	Operating Instructions	C40	YF400103XKT	Ceramic 0.01 μF
M12	YWA8EA0079A4	Polyethylene Bag	C41-58	YF400104FZT	Ceramic 0.1 μF
M13	YWA9CJ3714AN	Packaging Assy	C59	ECEV1CA101R	Electrolytic 100 μF 16V
M14	YWV7SA2037A3	Bar Cord Label	C60-64	YF400104FZT	Ceramic 0.1 μF
<b>WR-ADAT</b>			C65	YF400103FZT	Ceramic 0.01 μF
<b>MISCELLANEOUS</b>			C66,67	YF400104FZT	Ceramic 0.1 μF
M1	YWA5WA2367A3	ADAT Card Panel	C68	ECHU1H153JB5	Plastic 0.015 μF 50V
<b>MAIN BOARD</b>			L17-19	YWBLM21B03PB	Coil
IC2	ACSA0504AN	Custom IC	X1	CSTCS122MT	Crystal Oscillator
IC3	MC74HC4046AF	IC	CN1	YWXC5A64421A	64-pin Connector
IC4	MC74HC14AF	IC	JK1	YWGP1F32T	Jack
IC5	HD74HC123AF	IC	JK13	YWGP1F37R	Jack
IC6	ACSA0505AN	Custom IC	E1	YWXM2Z0021	Compsite Assy
IC7,8	YWT6G22U1057	IC	<b>ACCESSORY PARTS / PACKAGING PARTS</b>		
IC9	MC74HC541AF	IC	M11	△ YWA8QA4857AN	Operating Instructions
IC10,11	YWT74VHC541F	IC	M12	YWA8EA0079A4	Polyethylen Bag
IC12	YWT74VHC245F	IC	M13	YWA9CG3714AN	Packaging Assy
IC14	TC74HCU04AF	IC	M14	YWV7SA2037A3	Label

Printed in Japan  
P-761 © 5, 7, 23