TASCAM

TEAC Professional Division

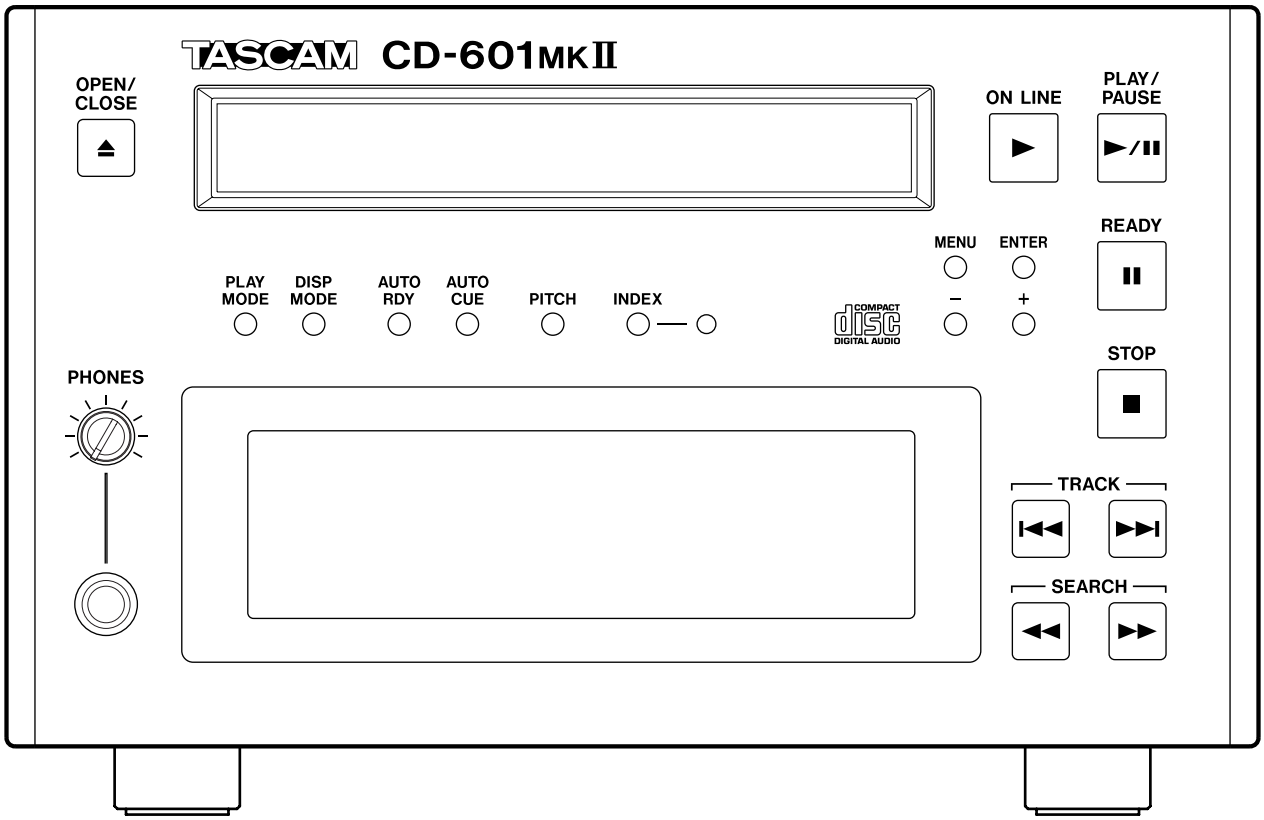
D00811701A

CD-601MKII

CD PLAYER

OWNER'S MANUAL

COMPACT disc DIGITAL AUDIO



Important Safety Precautions

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.

The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’ s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION
Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

For the customers in Europe

WARNING
This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les utilisateurs en Europe

AVERTISSEMENT
Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa

Warnung
Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen versursachen; in diesem Fall kann vom Betrieber verlang werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

CE Marking Information

a) Applicable electromagnetic environment: E4
b) Peak inrush current: 2.5 A

Important Safety Instructions

1 Read these instructions.

2 Keep these instructions.

3 Heed all warnings.

4 Follow all instructions.

5 Do not use this apparatus near water.

6 Clean only with dry cloth.

7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11 Only use attachments/accessories specified by the manufacturer.

12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

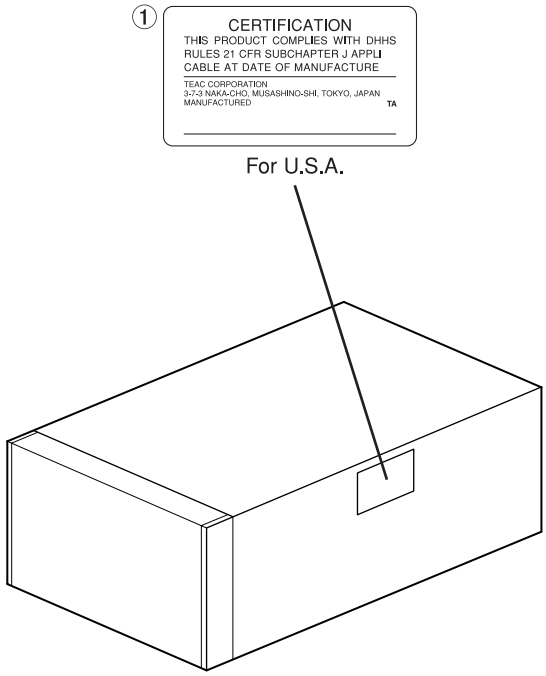
13 Unplug this apparatus during lightning storms or when unused for long periods of time.

14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Do not expose this apparatus to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the apparatus.
- Do not install this apparatus in a confined space such as a book case or similar unit.
- The apparatus draws nominal non-operating power from the AC outlet with its POWER switch in the off position.
- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- Apparatus with Class I construction shall be connected to an AC outlet with a protective grounding connection.

Safety Information

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ① .



For U.S.A.

CAUTION

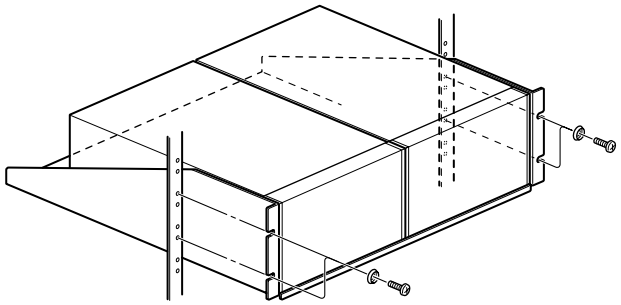
- DO NOT REMOVE THE PROTECTIVE HOUSING USING A SCREWDRIVER.
- USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
- IF THIS PRODUCT DEVELOPS TROUBLE, CONTACT YOUR NEAREST QUALIFIED SERVICE PERSONNEL, AND DO NOT USE THE PRODUCT IN ITS DAMAGED STATE.

Optical pickup:

Type:	KSS-213C
Manufacturer:	SONY Corporation
Laser output:	Less than 0.4 mW on the objective lens
Wavelength:	760 to 800 nm

Rack-mounting the Unit

The CD-601MKII can be mounted in a standard 19-inch rack by using the optional RM-601 rack shelf as shown below.



NOTE

- Leave 1U of space above the unit for ventilation.
- Allow at least 10 cm (4 in) at the rear of the unit for ventilation.

Contents

INTRODUCTION

Before you start using this product, thoroughly read and understand this manual. After you have finished reading this manual, be sure to keep it in a safe place so that it can be retrieved whenever necessary.

Features

The CD-601MKII is a professional-use CD player for use in broadcasting stations, post-production, sound production, and other commercial uses. Its features include:

- Rack-mountable 3U, half-rack size by using the rack mount tray (sold separately)
- Playback of audio discs made using CD-R and CD-RW discs in addition to commercially available audio CDs
- Provided with XLR (balance) and RCA (unbalance) analog output terminals, and XLR (AES/EBU) and RCA (S/PDIF) digital output terminals
- Two playback modes are provided, online playback for final take, and monitor playback for rehearsals. Each of these playback signals can be output from different output terminals.
- Instant start for instantly starting playback
- Standby at audio start point of track enabled by auto cue function.
- Cueing can be performed at singe-frame accuracy.
- Searching of the index is possible.
- In addition to regular playback of all tunes, single playback of a single tune and program playback of various tunes in a desired order are also possible.
- The Auto Ready Function enables the CD player to automatically stand by at the start of the next track after a track has been played.
- The Incremental Play function enables the CD player to automatically stand by at the start of the next track when track playback has been cancelled.
- The Failsafe function prevents inadvertent operation during playback of the final take.
- Synchronization with an external word clock (44.1 kHz, 48 kHz) is possible.
  During synchronization with an external 48 kHz clock, the CD playback signal is digitally output at a sampling frequency of 48 kHz.
- ±12.5% pitch control function
- The Timer Play function automatically starts monitor playback when the power is turned ON.
- CD text can be displayed.
- Provided with parallel terminal for control such as fader start/stop from external equipment.
- Provided with serial (RS-232C) terminal for control from a PC or editing equipment.
- Operability can be improved and functions expanded by connecting the RC-601MKII Remote Control Unit (sold separately).
- Headphone terminal/level knob for a monitor are provided on the front panel.

About Terms Used in This Manual

This manual uses the following terms:
"**Online READY**" is used to indicate an "online playback standby state" and
"**Monitor PAUSE**" is used to indicate a "monitor playback standby state."

Product Configuration

This product comprises the following items:

- CD-601MKII unit x 1
- Power cable x 1
- Owner's Manual (this manual) x 1
- Warranty x 1

When unpacking this product, take care not to damage the product. Store the box and packaging materials so that they can be used for transporting the product at a later date.

If you find that any parts are missing or parts have been damaged during transportation, contact us immediately.

Precautions on Installation Locations

Do not install this product at the following locations. Doing so might cause audio quality to drop or cause the product to malfunction.

- Surfaces included 5° or more
- Locations subject to lots of vibrations or unstable locations
- Next to windows or other locations subject to the direct sunlight
- Next to heating apparatus or other locations subject to extremely high temperatures
- Locations subject to extremely low temperatures
- Locations subject to lots of humidity or poorly ventilated locations
- Next to tuners, TVs or video recorder decks

  Installing this product near such locations may disturb video images or cause noise.

About Backup Memory

The following setup information is stored to backup memory on the CD-601MKII so that the same settings are reproduced when this product is next turned ON.

- Playback mode
- Time display mode
- Auto ready function ON/OFF
- Auto cue function ON/OFF
- Pitch control function ON/OFF
- Pitch control value
- Index search function ON/OFF
- Settings for each of the menu items (*)

(*) : When the “USER” menu is set to “PRE”, the menu item settings return to their defaults each time that the power is turned ON. (→ page 19 “Saving Menu Settings”)

Precautions upon Use

About the power supply

Connect this CD player to the specified power supply. Do not connect to other power supplies.

When connecting or disconnecting the power cable, hold it by its plug.

Daily care of the CD player

Do not wipe the CD player’s body with chemical-impregnated cloth, or a cloth soaked with benzene, paint thinner or other organic solvent. Doing so might damage the surface of the CD player’s body. Wipe off stubborn dirt on the top cover or panels with a soft cloth moistened with a small amount of diluted neutral detergent.

About condensation

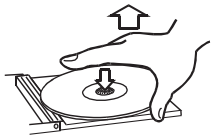
When the CD player (or a compact disc) is moved from a cold to a warm, heated room (e.g. in winter), or immediately after heating apparatus in the room where the CD player is installed is turned ON, water droplets (condensation) may form inside the CD player. This will not only prevent the CD player from operating normally but also may damage discs or precision components inside the CD player. If condensation forms, leave the CD player turned ON for one or two hours to acclimatize and allow water droplets to evaporate so that the CD player can operate normally. Before moving the CD player or when the CD player is not used, remove the disc.

Handling CDs (compact discs)

This CD player can play back CD-DA format CDs.

Both commercially available audio CDs (120 mm/80 mm) and normally recorded CD-R/CD-RW discs can also be used.

- To take a disc out of its storage case, press down on the centre of the case and lift the disc out, holding it carefully by its edges.



Correct way of taking a compact disc out of its storage case

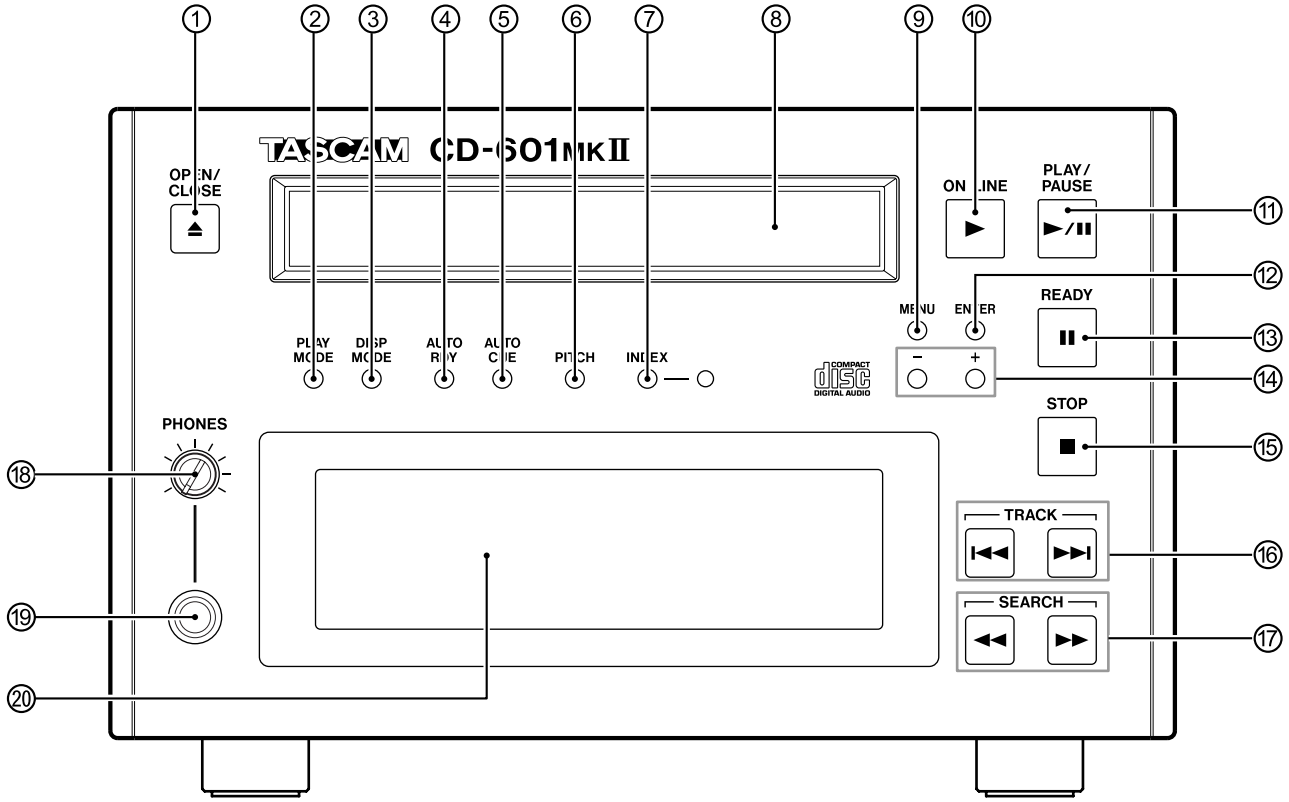
Correct ways of holding a compact disc

- Fingerprints or dust on the recording surface should be carefully wiped off by wiping in a straight motion from the inside to the outside of the disc with a soft cloth. Dirt on discs causes the laser pickup to jump. So, keep discs in a clean state at all times and store them in their storage cases.

- Never use record sprays, antistatic sprays, benzene, paint thinner, or other organic solvents. Chemical products such as these may damage the surface of the disc.
- Do not expose discs to the direct sunlight or high temperature or humidity. Long exposure to high temperatures may cause them to warp or become deformed.
- Do not stick paper or write anything with a ballpoint pen on the label surface.
- Do not use discs from which cellophane tape or rental CD stickers have been peeled off, or discs with adhesive from stickers still sticking to the disc. Leaving discs such as these in the CD player may prevent the disc from being removed or cause a malfunction.

NAMES & FUNCTIONS OF PARTS

Front Panel



① **OPEN/CLOSE key (⏏)**

Opens and closes the tray.

② **PLAY MODE key**

Select the playback mode from regular playback (playback of all tunes), single playback, and program playback.

The current playback mode is displayed in the playback mode display area of the display window.
(→ page 12 “Selecting the Playback Mode”)

③ **DISP MODE key**

Each press of this key switches the time display mode. As the default setting, the time display mode is switched between “track elapsed time” and “track remaining time.” You can select the display modes to be switched between using the menu. (→ page 23 “Switching the Time Display”)

④ **AUTO RDY key**

Switches the auto ready function (for automatically standing by at the start of the next track after a track has been played) ON/OFF. When this function is ON, “**A.READY**” is lit in the display window. (→ page 21 “Auto Ready Function”)

⑤ **AUTO CUE key**

Switches the auto cue function (mainly for searching for the actual track start cue point during a track search) ON/OFF. When this function is ON, “**A.CUE**” is lit in the display window. (→ page 20 “Auto Cue Function”)

⑥ **PITCH key**

Switches the pitch control function ON/OFF. When this function is set to ON, “**PITCH**” and the setting value (%) are lit in the display window. The +/- keys are used to set the pitch in ±12.5% increments.
(→ page 21 “Pitch Control Function”)

⑦ **INDEX key/indicator**

Switches the index search function ON/OFF. The index search is possible using the **TRACK** key while the INDEX indicator is lit. (→ page 16 “Selecting the index”)

⑧ **Disc tray**

This is the tray for placing the disc on.

⑨ **MENU key**

Switches the menu mode ON/OFF. Various settings can be made using the menu. (→ page 17 “Menu Operations”)

⑩ **ON LINE key (▶)**

When this key is pressed in the online READY mode (**READY** key is lit), online playback is performed. During online playback, this key is lit (green). (→ page 15 “Details of Transport Key Operations”)

⑪ **PLAY/PAUSE key (▶/❚❚)**

When this key is pressed while disc operation is stopped, in the online READY mode or during monitor playback, the CD player enters the monitor PAUSE mode. When it is pressed in the monitor PAUSE mode, monitor playback is started.
During monitor playback, this key is lit yellow, and in the monitor PAUSE mode, it blinks. (→ page 15 “Details of Transport Key Operations”)

⑫ **ENTER key**

Press this key to apply selections or settings during menu operations.

⑬ **READY key (❚❚)**

Pressing this key sets the CD player to the online READY mode.
The online READY point differs according to the state of the CD player when this key is pressed. (→ page 15 “Details of Transport Key Operations”)

⑭ **+/- key**

This key is used to select items or setting values during menu operations.

It is also used to set pitch control values.

⑮ **STOP key (■)**

Pressing this key stops disc operations. This key is lit while disc operations are stopped. (→ page 15 “Details of Transport Key Operations”)

⑯ **TRACK (|◀◀ / ▶▶|) key**

This key is used to perform a track search (skip). An index search is performed when the INDEX indicator is lit. The operation after a skip differs according the operation state when this key is pressed, the auto cue settings, and auto cue up setting. (→ page 16 “Selecting the Track”)

⑰ **SEARCH (◀◀/▶▶) key**

Holding down this key during monitor playback or in the monitor PAUSE mode performs a cue search. (→ page 16 “Searching for an Intermediate Point in a Tune”)

⑱ **PHONES level knob**

Adjusts the headphone output level.

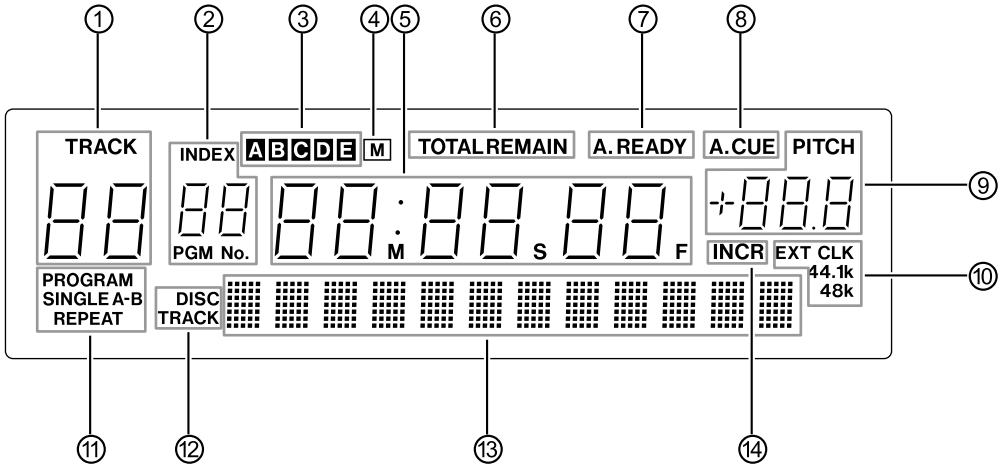
⑲ **PHONES jack**

This is the standard phone jack for connecting stereo headphones. When connecting a mini plug headphone, use a conversion adapter.

⑳ **Display window**

This window displays disc information, CD player operation mode, menus, and various other information.

Display Window



① **Track display area**

Displays the track No. currently being played back or currently selected track.
In the menu mode, displays the menu No.

② **Index/program display area**

Displays the index No. currently being played back or currently selected index. During setting of the program, displays the program step No.

③ **Memory bank display area**

Displays the currently selected memory bank (one of A to E). The memory function is enabled when the Remote Control Unit RC-601MKII (sold separately) is connected.

④ **Memory display area**

"**M**" is lit when information such as the disc cue point is saved to internal memory. The memory function is enabled when the Remote Control Unit RC-601MKII (sold separately) is connected.

⑤ **Time display area**

Displays the time information.
In the menu mode, displays the menu items. In the menu item display, alphabet characters are displayed as follows:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Ab Cd E F G H I J K L M N O P Q r S t U V W X Y Z

⑥ **Time display mode display area**

This area is lit as follows according to the time display mode. (→ page 23 "Switching the Time Display")

In the disc remaining time mode : **TOTAL** and **REMAIN** are lit.
In the disc total time mode : **TOTAL** is lit.
In the track time mode : **TOTAL** blinks.
In the track remaining time mode : **REMAIN** is lit.

⑦ **Auto ready display area**

Lit when the auto ready function is ON. (→ page 21 "Auto Ready Function")

⑧ **Auto cue display area**

Lit when the auto cue function is ON. (→ page 20 "Auto Cue Function")

⑨ **Pitch control display area**

When pitch control is ON, "**PITCH**" is lit and the pitch control value is displayed. (→ page 21 "Pitch Control Function")
Also, in the menu mode, the setting value is displayed.

⑩ **Clock display area**

When the CD player is synchronized with an external clock, "**EXT CLK**" is lit, displaying the sampling frequency. When the operation clock is set to "EXT" and the CD player is not synchronized with an external clock, "**EXT CLK**" blinks. (→ page 23 "Referencing to an External Clock Source")

⑪ **Playback mode/repeat mode display area**

Displays the playback mode and repeat mode.
(→ page 12 "Selecting the Playback Mode")
The repeat function is enabled when the Remote Control Unit RC-601MKII (sold separately) is connected.

⑫ **Disc/track display area**

Displays according to the display details while CD text is displayed on the character display area.

When disc information is displayed : "**DISC**" is lit.

When track information is displayed : "**TRACK**" is lit.

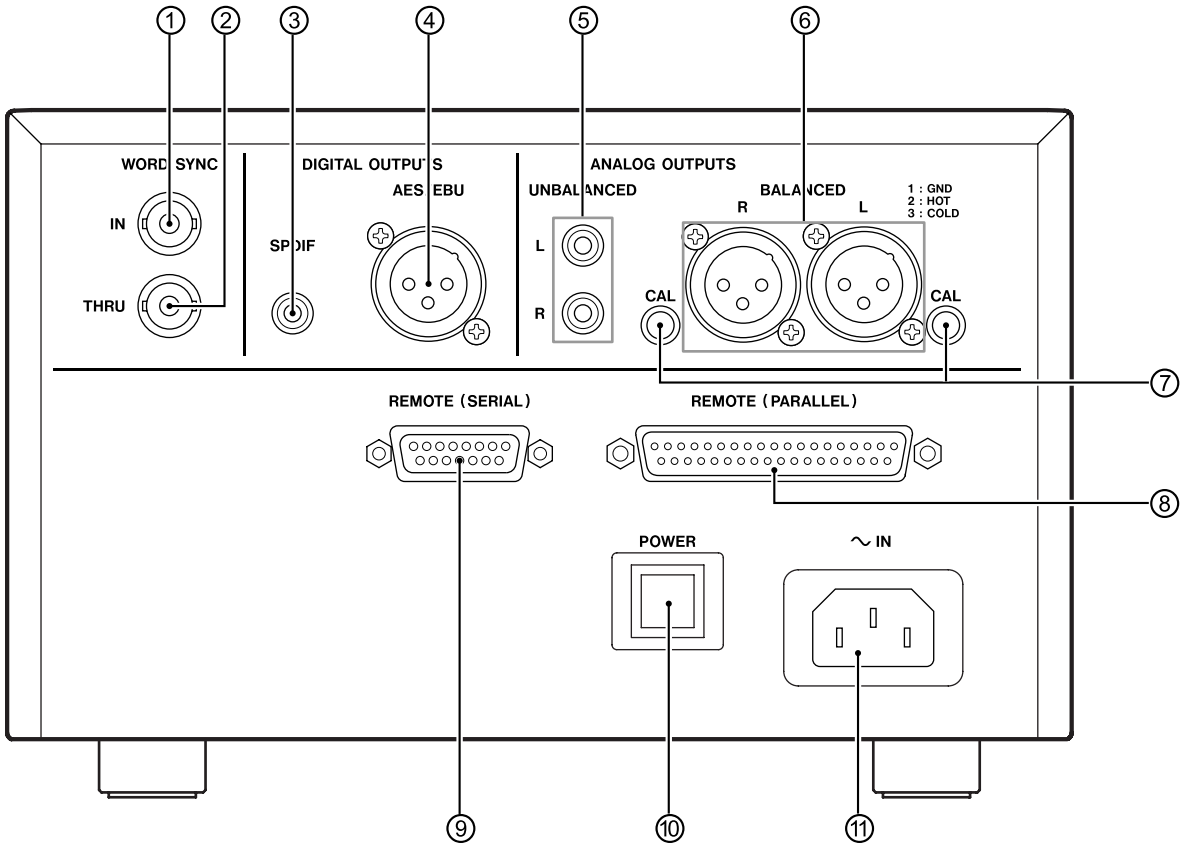
⑬ **Character display area**

Displays CD text or menu item details.

⑭ **Incremental play display area**

Lights when the incremental play function is ON.
(→ page 21 "Incremental Play Function")

Rear Panel



① **WORD SYNC IN terminal**

This terminal is for inputting the word clock signal. When the CD player is operated referenced to an external clock (EXT), the word clock that is input to this terminal becomes the reference clock.

② **WORD SYNC THRU terminal**

This terminal is for outputting the input word clock signal, allowing it to be sent to other digital equipment as it is.

③ **DIGITAL OUTPUTS - SPDIF terminal**

This co-axial digital output terminal is for outputting the disc playback signal in IEC60958-3 (S/PDIF) format. In the default setting, the playback signal is output in either of online playback and monitor playback.

④ **DIGITAL OUTPUTS - AES/EBU terminal**

This digital output terminal is for outputting the disc playback signal in IEC60958-4 (AES/EBU) format. In the default setting, the playback signal is output in either of online playback and monitor playback.

⑤ **ANALOG OUTPUTS - UNBALANCED (L, R) terminals**

This analog unbalance output terminal (RCA pin) is for outputting the disc playback signal. In the default setting, the playback signal is output in either of online playback and monitor playback.

⑥ **ANALOG OUTPUTS - BALANCED (L, R) terminals**

This analog unbalance output terminal is for outputting the disc playback signal.
In the default setting, the playback signal is output in either of online playback and monitor playback.

⑦ **CAL knobs**

These semi-fixed control knobs are for the analog balance output terminals.
These knobs allow you to fine-tune the output levels of the L and R channels individually.

⑧ **REMOTE (PARALLEL) terminal**

This D-Sub 37-pin connector is used for performing fader start and other external controls. (→ page 25 “Parallel Control”)

⑨ **REMOTE (SERIAL) terminal**

This terminal is for connecting the Remote Control Unit RC-601MKII (sold separately).
This terminal is an RS-232C-compliant serial control terminal. So, a PC or other device can be connected to this terminal to control the CD player. (→ page 26 “Control from the RS-232C interface”)

⑩ **POWER switch**

Switches the power ON/OFF.

⑪ **~ IN connector**

The power cable (supplied) is connected to this connector.

Online Playback and Monitor Playback

The CD player has two playback modes, online playback and monitor playback. The output destination in each of these playback modes can be set individually.

For example, in sites such as broadcasts and events, the monitor playback mode can be used to cue tracks or playback points before the final take, and then the CD player can be set to online standby (READY), and online playback can be performed from that point at the time of the final take.

On this CD player, the UNBALANCED analog output terminal and SPDIF digital output terminal are positioned as terminals for monitor output, and the BALANCED analog output terminal and AES/EBU digital output terminal are positioned as terminals for online output.

Note, however, that in the default setting both the monitor playback signal and the online playback signal are output in the same way from all analog/digital output terminals.

By changing the menu setup, you can set the UNBALANCED analog output terminal and SPDIF digital output terminal for monitor exclusive output, or the BALANCED analog output terminal and the AES/EBU digital output terminal for online exclusive output. (→ page 22 “Setting the Terminals for Online Output”) (→ page 22 “Setting the Terminals for Monitor Output”)

[NOTE]

- This manual refers to the online playback standby state as “online READY” and the monitor playback standby state as “monitor PAUSE.”

Preparations

1 Turn the **POWER** switch on the rear panel to ON.

- When the Remote Control Unit RC-601MKII (sold separately) is used, connect the unit with the CD player turned OFF.

2 Press the **OPEN/CLOSE** key to open the disc tray.

3 Load the disc in the tray with the label face up.

4 Press the **OPEN/CLOSE** key to close the disc tray.

The total number of tracks on the disc and total playing time will be displayed on the display window.

[NOTE]

- Instead of pressing the **OPEN/CLOSE** key, you can also close the disc tray by pressing the **PLAY/PAUSE, READY** or **TRACK** keys.

Selecting the Playback Mode

You can select the playback mode by using the **PLAY MODE** key.

Each press of this key switches the playback mode in the following order:

Regular playback (all tunes) → single playback → program playback

The current playback mode is displayed in the playback mode display area of the display window.

Playback Mode	Display Window	Operation
Regular playback	(nothing displayed)	Tunes are played back in disc track order. (regular playback)
Single playback	**SINGLE** lit	Only the selected track is played back.
Program playback	**PROGRAM** lit	Tunes are played back in the preset program order.

- The selected playback mode is backed up on the CD player. So, the same mode is reproduced when the CD player is next turned ON.

Playing a Specific Tune from the Beginning (SINGLE play)

The following describes the procedure for playing the final take (online playback) after selecting and confirming a desired tune (monitor playback). The following description assumes that the procedure is performed with menu items at their default settings.

1 Select the single mode using the **PLAY MODE** key.

Press the **PLAY MODE** key several times until "**SINGLE**" is lit in the playback mode display area of the display window.

2 Press the **PLAY/PAUSE** key to enter the monitor PAUSE mode. The **PLAY/PAUSE** key starts blinking.

3 Select the tune (track) to play back using the **TRACK** key.

The monitor PAUSE mode is enabled at the start of the selected track.

4 To check the playback sound, press the **PLAY/PAUSE** key to perform monitor playback.

- In addition to using an external monitor system, the monitor playback sound can also be checked on headphones connected to the **PHONES** terminal on the CD player.

5 After checking the monitor playback sound, press the **READY** key.

The disc returns to the tune start point, and the CD player enters the online READY mode. (The **READY** key is lit.)

6 Press the **ON LINE** key to start online playback.

When the tune ends, playback automatically stops.

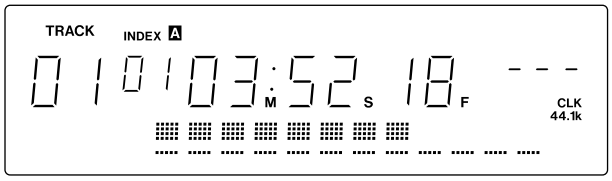
- To cancel playback, press the **STOP** key.

[NOTE]

- In the default setting, the failsafe function is ON, and operation of keys other than **STOP**, **PLAY MODE** and **DISP MODE** is not accepted during online playback. However, the menu system can be used to set the failsafe function OFF. (→ page 23 "Failsafe Function")

Display of playback position

During playback, the approximate playback position in the track is displayed on the character display area of the display window in the form of a 12-dot bar. The number of square dots in this bar increases the further playback progresses. The following example shows that about 2/3 of the track has been played back.



When the time display in the display window is the track remaining mode (**REMAIN**), all of the square dots light at the beginning of the track, and decrease as playback progresses.

Playing from an Intermediate Point in a Tune

To search for any intermediate point in a tune and play back the final take from that point, select the track at step 3 in procedure on the previous page, and perform the following.

4 Press the **PLAY/PAUSE** key to perform monitor playback, and proceed to near the desired point.

5 Press the **PLAY/PAUSE** key near the desired point to set to the monitor PAUSE mode.

6 Search the desired point using the **SEARCH** key.

[NOTE]

- One light touch of the **SEARCH** key in the monitor PAUSE mode moves the point forwards or backwards in single-frame units. Holding down the SEARCH key increases the search speed. (→ page 16 “Searching for an Intermediate Point in a Tune”)

7 When the desired point is found, press the **PLAY/PAUSE** key again to perform monitor playback, and confirm the point.

8 Press the **READY** key.

The disc returns to the point preset in step 6, and the CD player enters the online READY mode. (The **READY** key is lit.)

To adjust the setting point, press the **PLAY/PAUSE** key to enter the monitor PAUSE mode, and return to step 6.

9 Press the **ON LINE** key to start playback.

When the tune ends, playback stops.

- To cancel playback, press the **STOP** key.

Auto-registering Cue Points

In the default setting, the position where monitor playback was last started from the monitor PAUSE mode is automatically registered as the cue point. When the **READY** key is pressed during monitor playback, the CD-601MKII is located to the cue point and enters the online READY mode.

By using menu item No. 20 (“CUE_SET”), you can select either of the following two conditions as the condition for auto-registering the cue point.

NOR (default setting): The position where monitor playback was last started from the monitor PAUSE mode is automatically registered as the cue point.

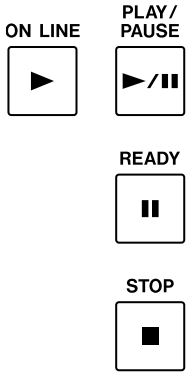
RDY : The position where monitor playback was started from the monitor PAUSE mode, or the position where the READY key was pressed from the monitor PAUSE mode is auto-registered as the cue point.

- For details on menu operations, see “Menu Operations” (page 17).

[NOTE]

- When the Remote Control Unit RC-601MKII (sold separately) is used, the above auto-registered cue points can be registered to CUE1 to CUE10.

Details of Transport Key Operations



READY key (❚❚)

Pressing this key sets the CD player to the online READY (standby) mode.

To perform online playback, the CD player must first be set to the online READY mode.

Audio signals are not output from any of the terminals unless the CD player is in the online READY mode.

Online READY point

The online **READY** point is as follows according to the state of the CD player when the READY key is pressed.

- When the tray is open: Start of track 1 on the disc
- In the monitor PAUSE mode: Point when the **READY** key was pressed
- When disc operation is stopped/in the monitor playback mode: Start of track 1 on the disc (when a cue point is not registered), or the position where monitor playback was last started from the monitor PAUSE mode (cue point)
- During online playback (only when the failsafe setting is OFF): Point when the **READY** key was pressed

[NOTE]

- When the failsafe setting is ON, operation of the **TRACK**, **SEARCH**, **INDEX**, and **MENU** keys is not accepted in the online READY mode. (→ page 23 “Failsafe Function”)

ON LINE key (▶)

When this key is pressed in the online READY mode (**READY** key is lit), online playback is started. During online playback, this key is lit (green).

In a mode other than the online READY mode, online playback is not started even if this key is pressed.

To cancel online playback, press the **STOP** key.

In the default setting, the online playback signal is output from all analog /digital output terminals. Note, however, that the online playback signal can be set in menus not to be output from the UNBALANCED analog output terminal and SPDIF digital output terminal. (→ page 22 “Setting the Terminals for Monitor Output”)

[NOTE]

- When the failsafe function is ON, operation of keys other than **STOP**, **PLAY MODE** and **DISP MODE** is not accepted during online playback. (→ page 23 “Failsafe Function”)

PLAY/PAUSE key (▶/❚❚)

When this key is pressed while disc operation is stopped, in the online READY mode or during monitor playback, the CD player enters the monitor PAUSE mode. When this key is pressed in the monitor PAUSE mode, monitor playback is started.

[NOTE]

- When failsafe is set to OFF, the CD player enters the monitor PAUSE mode also when this key is pressed during online playback.
  (→ page 23 “Failsafe Function”)

In the monitor PAUSE mode, “PAUSE” is displayed in the character display area of the display window.

In the default setting, the monitor playback signal is output from all analog /digital output terminals. Note, however, that the online playback signal can be set in menus not to be output from the BALANCED analog output terminal and AES/EBU digital output terminal. (→ page 22 “Setting the Terminals for Online Output”)

During monitor playback, the **PLAY/PAUSE** key is lit yellow, and in the monitor PAUSE mode, it blinks.

[NOTE]

- When this key is pressed while the disc tray is open, the disc tray closes and the CD player then enters the monitor PAUSE mode at the start of track 1.
- When this key is pressed while disc operations are stopped, the CD player enters the monitor PAUSE mode at the start of track 1.

STOP key (■)

When this key is pressed during online playback, in the online READY mode, during monitor playback, or in the monitor PAUSE mode, the disc will stop. This key is lit while disc operations are stopped.

Note, however, that when the incremental play function is set to ON, and the **STOP** key is pressed during online playback and monitor playback, the CD player stands by at the start of the next tune to be played at either the online READY or monitor PAUSE mode according to the auto cue up setting.

Selecting the playback point

Selecting a track

Tracks can be selected (skipped) using the **TRACK**(I◄◄ / ►►I) key.

I◄◄ key:

Pressing this key when the elapsed time of a track is one second or more, the CD player returns to the start of that track. When the elapsed time is less than one second, the CD player skips to the start of the previous track.

►►I key:

The CD player skips to the start of the next track. Pressing this key again makes the CD player skip to the start of the following track.

- In the program playback mode, the CD player skips to the previous and next tracks according to the program order.
- When the I◄◄ key is pressed at the start of track 1, the CD player skips to the start of the final track, and when the >>I key is pressed at the final track, the CD player skips to the start of the first track.
- When the I◄◄ or ►►I key is pressed while disc operations are stopped, the CD player skips to the start of the first track on the disc.

CD player operation after track selection

Operation of the CD player after a track is selected by the **TRACK** key differs according to the operating state of the CD player when this key is pressed, the ON/OFF state of the auto cue function, and the auto cue up setting. (→ page 20 “Auto Cue Function”)

When the auto cue function is ON:

When the auto cue function is ON, the CD player basically stands by according to the auto cue up setting.

When the auto cue function is OFF:

The CD player enters the same state as that before the **TRACK** key is pressed. Note, however, that the CD player enters the monitor playback mode when a track has been selected while disc operations were stopped or while the tray was open.

Selecting the index

When the **INDEX** key is pressed to set to the index search mode (INDEX indicator is lit), the index can be selected (skipped) by using the **TRACK** key.

The operation mode after index selection conforms to operation after track selection. The auto cue function also is active. (The CD player stands by at the audio start point of the index.)

Searching for an intermediate point in a tune

You can search for cues in a tune by holding down the **SEARCH** (◄◄/►►) key during monitor playback or in the monitor PAUSE mode.

When the failsafe function is OFF, cue searches are also possible in the online READY mode. (→ page 23 “Failsafe Function”)

[NOTE]

- During a cue search, the playback output level automatically drops by about 12 dB.

Holding down the **SEARCH** key during monitor playback performs a cue search at about ten times the regular speed.

Holding down the **SEARCH** key in the monitor PAUSE mode gradually increases the search speed.

MENU OPERATIONS

Various settings on the CD player can be made using the menu system.

Menu Configuration

The menu contains the following items.

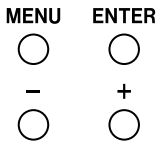
Menu No.	Item Display	Details Display	Description	Reference Item	
01	A_CUE	Auto cue level	Auto cue level setting	“Setting the Auto Cue Level”	(p. 21)
02	ONLINE	Online play output	Setting the terminals for online output	“Setting the Terminals for Online Output”	(p. 22)
03	MONI	Monitor output	Setting the terminals for monitor output	“Setting the Terminals for Monitor Output”	(p. 22)
04	CLOCK	Clock source	Operation clock setting	“Referencing to an External Clock Source”	(p. 23)
05	PROG	Program setting	Program setting	“Program Playback”	(p. 20)
06	INCR_P	Incremental play	Incremental play ON/OFF	“Incremental Play Function”	(p. 21)
07	TIMER	Timer play	Timer play ON/OFF	“Timer Play Function”	(p. 24)
08	OUTPUT	Output stereo mono	Output stereo/monaural setting	“Setting Stereo/Monaural”	(p. 22)
09	OUT_L	Output level	Output level setting	“Setting the Output Level”	(p. 22)
10	F_SAFE	Fail safe	Failsafe function ON/OFF during online playback/READY	“Failsafe Function”	(p. 23)
11	EOM	End of message time	End of track warning display setting	“Displaying the End of Track Warning”	(p. 23)
12(*)	E_CHK	End check time	End check time setting	RC-601MKII Owner’s Manual	
13(*)	BANK	Memory BANK select	Memory back selection	RC-601MKII Owner’s Manual	
14	F_STAR	Fader start polarity	Setting fader start polarity	“Setting fader start/stop”	(p. 25)
15	F_STOP	Fader stop state	Setting the state of the CD player at a fader stop	“Setting fader start/stop”	(p. 25)
16	CUE_UP	Auto CUE up state	Setting the CD player standby mode during an auto cue or an auto ready	“Auto Ready Function”	(p. 21)
17(*)	RMT	Remote control	CD player operation enable/ disable setting when remote control (*) RC-601MKII is used	RC-601MKII Owner’s Manual	
18	FRAME	Frame display	Setting the frame display of the time display area of the display window	“Clearing the Frame Display”	(p. 24)
19	TIME	Time display	Setting the time display switching pattern	“Switching the Time Display”	(p. 23)
20	CUESET	Cue point set	Cue point setting	“Auto-registering Cue Points”	(p. 14)
21	A_CLR	Memory ALL clear	Memory all clear	“Clearing Menu Settings”	(p. 19)
22	USER	User setting	Calling up user banks to save settings to	“Saving Menu Settings”	(p. 19)
23	RS232C	Com PORT baud rate	RS-232C baud rate setting	“Setting the baud rate”	(p. 26)
(none)	xxxxH	Motor addition time display	Motor total drive time display	“Viewing the Total Motor Time”	(p. 24)

* Menu items followed by an asterisk (*) in the above table are valid when the Remote Control Unit RC-601MKII (sold separately) is connected.

For details on these menu items, refer to the RC-601MKII Owner’s Manual.

Menu Operation Basics

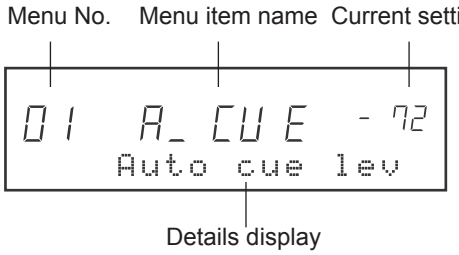
The **MENU**, **ENTER** and **+/-** keys are used for performing menu operations.



1 Press the **MENU** key.

The CD player enters the menu mode, and the menu screen is displayed in the display window.

The following are displayed in each menu screen.



2 Press the **+/-** key to select the desired menu item.

Pressing the **+** key displays the menu item for the next menu No.

Pressing the **-** key displays the menu item for the previous menu No.

- At this state, the menu No. blinks to indicate that the menu item is currently selected.
- The menu details display is scrolled immediately after the screen is switched, and then the leading 12 characters are displayed fixed in the display window. Not only item details but also selections are displayed depending on the menu item (e.g. menu No. 19).

3 Press the **ENTER** key to apply the selected menu item.

The menu No. stops blinking and stays lit.

- The following steps (4 to 6) are not applied to menu No. 05 (“PROG”), menu No. 21 (“A_CLR”) and the total motor time display.

4 Press the **+/-** key to select the desired value.

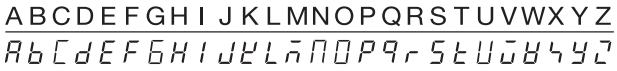
The current setting value blinks when it is changed.

5 Press the **ENTER** key to apply the newly set value.

The value stops blinking and stays lit. When the new settings are fixed, the menu mode automatically ends.

[NOTE]

- The alphabet characters of the menu item names are displayed as follows:



- When the Remote Control Unit RC-601MKII (sold separately) is connected and menu operations are being performed using the RC-601MKII, all CD player operations including menu operations are not accepted.
- Likewise, when menu operations are being performed on the CD player, all RC-601MKII operations including menu operations are not accepted.

Saving Menu Settings

Settings made to each of the menu items can be saved to user banks.

Five user banks (U1 to U5) are provided, and menu settings when the CD player is turned OFF are stored to the currently selected user bank.

You will find it more convenient to save optimum menu settings to individual user banks depending on your specific work requirements.

The user bank can be selected by using menu No. 22 (“USER”).

Selection: U1 (default setting) to U5, PRE

When the CD player is turned ON, the menu settings saved to the currently selected user bank are reproduced. When PRE is selected, all menu settings are returned to their defaults.

When a user bank is changed using the above menu item (“USER”) during operations, the menu settings change to those of the newly selected user bank. (The CD player need not be turned OFF then back ON again.)

Clearing Menu Settings

The menu settings currently saved to a user bank can be cleared to return them to their defaults. User banks can be batch-cleared or cleared individually.

Clearing all user banks

Set menu No. 22 to “PRE” and use menu No. 21 (“A_CLR”) to clear all user banks.

When menu No. 21 (“A_CLR”) is selected, the message “SURE?” will be displayed. Press the **ENTER** key to clear the user banks.

All menu settings currently saved to user banks (U1 to U5) will be cleared and returned to their defaults.

[NOTE]

- When Remote Control Unit RC-601MKII (sold separately) is used, a memory clear also clears the disc information of memory banks (A to E).

Clearing individual user banks

1 Select the user bank to be cleared in menu No. 22.

2 Simultaneously press the **+** and **-** keys.

PLAYBACK-RELATED FUNCTIONS

Program Playback

The program playback function can be used to play back a disc in any desired track order. Up to 30 tracks can be programmed.

Entering the program mode

Select the program mode using the **PLAY MODE** key.

Press the **PLAY MODE** key for the required number of times until "**PROGRAM**" is displayed in the message display area of the display window.

In the program mode, the disc is played backed according to the program made by the method described as follows.

Programming

1 Press the **MENU** key to enter the menu mode.

2 Press the +/- key, select menu No. 05 ("PROG"), and press the **ENTER** key.

The display window changes to the program setup screen.

3 Select the desired track using the **TRACK** key, and press the **ENTER** key.

The selected track is set as the 1st tune (program No. 01) of the program, and the next tune (program No. 02) can be set.

4 Repeat step 3 above for the required number of times to make the desired program.

5 When you have finished making the program, press the **MENU** key to exit the menu mode.

Swapping programmed tracks

You can swap programmed tracks by performing the following procedure while the program setup screen is displayed.

1 Press the **SEARCH** key to select the program No. that you want to swap.

2 Select the desired track using the **TRACK** key, and press the **ENTER** key.

3 When you have finished swapping the track, press the **MENU** key to exit the menu mode.

Adding program tunes

You can add a program tune by performing the following procedure while the program setup screen is displayed.

1 Press the **SEARCH** key, and select the location to add a tune.

For example, to add a new tune between the tunes currently preset to program Nos. 2 and 3, select program No. 3.

2 Press the **+** key.

3 Select the track to add to using the **TRACK** key, and press the **ENTER** key.

4 When you have finished adding tunes, press the **MENU** key to exit the menu mode.

Deleting program tunes

You can delete a program tune by performing the following procedure while the program setup screen is displayed.

1 Press the **SEARCH** key, and select the program number that is preset with the tune to delete.

2 Press the **-** key.

This deletes the tune, and the program numbers of the following tunes are rounded up.

3 When you have finished deleting tunes, press the **MENU** key to exit the menu mode.

Clearing a program

Opening the disc tray clears the program.

[NOTE]

- The program settings are not cleared even if the CD player is turned OFF with a disc loaded.

Auto Cue Function

When the auto cue function is turned ON, the CD player automatically stands by (in the online READY or monitor PAUSE mode) at the audio start point of the track when the track is selected or when the auto ready function is ON. (→ page 16 "Selecting the Track")

Press the **AUTO CUE** key to turn the auto cue function ON/OFF. When the auto cue function is ON, "**A.CUE**" is lit in the display window.

- The auto cue function ON/OFF setting is backed up on the CD player. So, the same setting is reproduced when the CD player is next turned ON.

After searching for the audio start point on the track with the auto cue function ON, whether the CD player enters the online READY mode or the monitor PAUSE mode is determined according to the auto cue up setting described below.

Setting the Auto Cue Level

Select from the following auto cue levels using menu No. 01 (“A_CUE”). The point where signals at the auto cue level or above first appear on the selected track are recognized as the audio start point.

Selection : -72 dB (default setting), -66 dB, -60 dB, -54 dB, -48 dB

Setting Auto Cue Up

Select whether the CD player enters the online READY mode or the monitor PAUSE mode when the auto cue function is activated using menu No. 16 (“CUE_UP”).

Selection: RDY (online READY, default setting), PUS (monitor PAUSE)

[NOTE]

- The CD player also enters the online READY or monitor PAUSE mode according to the auto cue up setting when the auto ready function is activated.

Auto Ready Function

When the auto ready function is ON, CD player stands by at the start of the next track after a track is played backed.

Press the **AUTO RDY** key to turn the auto ready function ON/OFF. When the auto ready function is ON, “**A.READY**” is lit in the display window.

- The auto ready function ON/OFF setting is backed up on the CD player. So, the same setting is reproduced when the CD player is next turned ON.

When the auto ready function is activated, the CD player enters the online READY or monitor PAUSE mode according to the setting of menu No. 16 (“CUE_UP”). (→ above “Setting Auto Cue Up”)

Also, the CD player stands by at the following points according to the playback mode:

Regular playback	: Start of next track
Single playback	: Start of current track
Program playback	: Start of next programmed track

[NOTE]

- When the auto ready function and auto cue function are used together, the CD player stands by at the audio start point of the next track after a track is played.

Pitch Control Function

The pitch control function can be used to control the playback speed within the ±12.5% range.

Press the **PITCH** key to turn the pitch control function ON/OFF. When the pitch control function is ON, “**PITCH**” and the current pitch control value are lit in the display window.

When the pitch control function is ON, the **+/-** keys can be used to set the pitch control values in 0.1% increments.

Pressing both the **+** and **-** keys simultaneously resets the pitch control value to 0.0%.

- The pitch control function ON/OFF setting and pitch control value are backed up on the CD player. So, the same settings are reproduced when the CD player is next turned ON.

[NOTE]

- Even when the pitch control function is activated, a digital signal of sampling frequency 44.1 kHz is output at all times from the digital output terminal on the CD player. Note, however, that when the CD player is synchronized to a 48 kHz external word clock signal, a digital signal of sampling frequency 48 kHz is output.

Incremental Play Function

When the incremental play function is ON, and the **STOP** key is pressed during online playback and monitor playback, the CD player stops at the start of the next track, and stands by at either the online READY or monitor PAUSE mode according to the auto cue up setting.

[NOTE]

- In the program playback mode, playback skips to the start of the next programmed track. In the single playback mode, playback skips to the start of the current track.

Select incremental function ON/OFF using menu No. 06 (“INCR_P”).

Selection: OFF (default setting), ON

[NOTE]

- When the **MONITOR** button on the Remote Control Unit RC-601MKII (sold separately) or the No. 2 pin (MONITOR PLAY IN) of the REMOTE (PARALLEL) terminal is used, playback can skip to the start of the next track and start monitor playback. Also, when the **ONLINE** button on the Remote Control Unit RC-601MKII (sold separately) or the No. 1 pin (ONLINE PLAY IN) of the REMOTE (PARALLEL) terminal is used, playback can skip to the start of the next track during online playback and start online playback as long as the failsafe function is OFF.

OUTPUT-RELATED SETTINGS

Setting the Terminals for Online Output

The BALANCED analog output terminal and AES/EBU digital output terminal are basically provided as terminals for online output. In the default setting, both of the monitor playback signals and online playback signals are output from these terminals. However, by using menu item No. 02 (“ON LINE”) you can set so that only the online playback signal is output from these output terminals.

OFF (default setting):

Audio signals are output from the BALANCED analog output terminal and AES/EBU digital output terminal during both online playback and monitor playback.

ON:

Audio signals are output from the BALANCED analog output terminal and AES/EBU digital output terminal only during online playback.

Setting the Terminals for Monitor Output

The UNBALANCED analog output terminal and SPDIF digital output terminal are basically provided as terminals for monitor output. In the default setting, both of the monitor playback signals and online playback signals are output from these terminals. However, by using menu item No. 03 (“MONI”) you can set so that only the monitor playback signal is output from these output terminals.

OFF (default setting):

Audio signals are output from the UNBALANCED analog output terminal and SPDIF digital output terminal during both online playback and monitor playback.

ON:

Audio signals are output from the UNBALANCED analog output terminal and SPDIF digital output terminal only during monitor playback.

[NOTE]

- The playback signal is output from the **PHONES** terminal during both monitor playback and online playback regardless of the above setting.

Setting Stereo/Monaural

The playback output signal can be set to monaural.

Set monaural using menu No. 8 (“OUTPUT”).

Selection: ST (STEREO, default setting), MON (MONO)

Setting the Output Level

You can select the maximum output level of the BALANCED analog output terminal.

Set the maximum output level using menu No. 09 (“OUT_L”).

Selection: +24 (default setting), +22, +20, +15 (dBu)

OTHER FUNCTIONS & SETTINGS

Referencing to an External Clock Source

The CD player can be operated referenced to an external digital clock.

1 Connect the word clock from an external source to the **WORD SYNC IN** terminal on the rear panel.

2 Set menu No. 04 (“CLOCK”) to “EXT”.
“**EXT CLK**” and the sampling frequency (“44.1k” or “48k”) are lit on the clock display area of the display area.

The default setting is “INT” (referenced to internal clock).

Failsafe Function

The failsafe function is a safety function for preventing playback from discontinuation when an operation key is touched inadvertently during a final take.

In the default setting, the failsafe function is ON, and operation of keys other than **STOP**, **PLAY MODE** and **DISP MODE** is not accepted during online playback. Also, in the online READY mode, operation of search-related keys such as the **TRACK** key and numeric keys and the **MENU** key is not accepted.

When the failsafe function is set to OFF (“OFF”) using menu No. 10 (“F_SAFE”), all keys (excluding the **SEARCH** key during online playback) are functional.

Displaying the End of Track Warning

The end of track warning (EOM = End of Message) can be displayed in the display window in the online playback and monitor playback modes. (In the default setting, the warning is not displayed.)

When the end of track warning is set to be displayed, the countdown to the end of the track is displayed.

Set the end of track warning display using menu No. 11 (“EOM”).

OFF (default setting): The end of track warning is not displayed.

10, 15, 20, 30, 60, 90: The countdown display starts from the end of the track by the preset number of seconds.

Switching the Time Display

Each press of the **DISP MODE** key during playback switches the time information in the display window. As the default setting, the time display mode is switched between “track elapsed time” and “track remaining time.”

The type of time display that is switches using the **DISP MODE** key can be selected in menu No. 19 (“TIME”). Selections are displayed at 1 to 4.

1 (default setting): Track elapsed time ⇔ track remaining time

2 : Track elapsed time ⇔ track remaining time ⇔ disc remaining time

3 : Track elapsed time ⇔ track remaining time ⇔ disc remaining time ⇔ disc total time

4 : Track elapsed time ⇔ track remaining time ⇔ disc remaining time ⇔ disc total time « track time

The current time display mode is displayed as follows at the top of the display window.

Track elapsed time	: (no display)
Track remaining time	: **REMAIN** is lit.
Disc remaining time	: **TOTAL REMAIN** is lit.
Disc total time	: **TOTAL** is lit.
Track time	: **TOTAL** blinks.

- The time display setting is backed up on the CD player. So, the same setting is reproduced when the CD player is next turned ON.

[NOTE]

- While disc operations are stopped, the disc total time is displayed.

Clearing the Frame Display

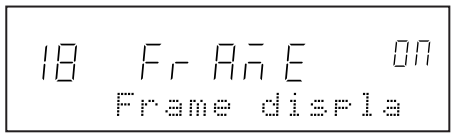
The frame digit in the time display that is displayed in the display window can be cleared.

Select from the following using menu No. 18 (“FRAME”):

ON (default setting): The frame digit is displayed.

OFF: The frame digit is not displayed.

AUTO: The frame digit is not displayed only during online playback.



Timer Play Function

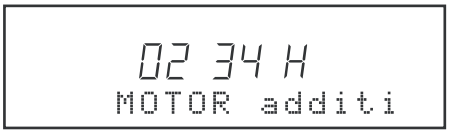
When the timer play function is set to ON, monitor playback is started automatically when the CD player is turned ON.

Select timer play function ON/OFF using menu No. 07 (“TIMER”).

Selection: OFF (default setting), ON

Viewing the Total Motor Time

To view the total time that the CD mechanism motor in the CD player has been used, select the item following menu No. 23 (before menu No. 01) without a menu No.

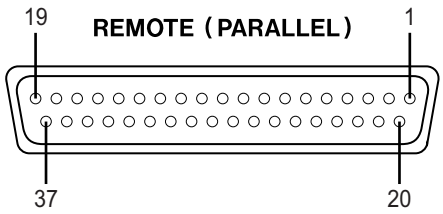


The menu example above shows that the total motor time is 234 hours.

EXTERNAL CONTROL

Parallel Control

The CD player can be controlled on the parallel interface from external equipment using the **REMOTE (PARALLEL)** terminal (37-pin D-Sub connector) on the rear panel.



Pin Arrangement

Pin No.	Signal Name	IN/OUT
1	ON LINE PLAY IN	IN
2	MONITOR PLAY IN	IN
3	PAUSE IN	IN
4	READY IN	IN
5	STOP IN	IN
6	TRACK SEARCH REV IN [|<<]	IN
7	N.C	–
8	TRACK SEARCH FWD IN [>>|]	IN
9	SEARCH REV IN [<<]	IN
10	SEARCH FWD IN [>>]	IN
11	MONITOR PLAY TALLY	OUT
12	READY TALLY	OUT
13	PAUSE TALLY	OUT
14	STOP TALLY	OUT
15	INDEX SERACH REV IN [<-]	IN
16	INDEX SEARCH FWD IN [->]	IN
17	ON LINE PLAY TALLY	OUT
18	FLASH READY IN	IN
19	FLASH MODE IN	IN
20	EOM OUT	OUT
21	FADER START/STOP IN	IN
22	ONLINE PLAY / MONITOR PLAY OUT	OUT
23	TEN KEY 0 IN	IN
24	TEN KEY 1 IN	IN
25	TEN KEY 2 IN	IN
26	TEN KEY 3 IN	IN
27	TEN KEY 4 IN	IN
28	TEN KEY 5 IN	IN
29	TEN KEY 6 IN	IN
30	TEN KEY 7 IN	IN
31	TEN KEY 8 IN	IN
32	TEN KEY 9 IN	IN
33	STOP/READY OUT	OUT
34	FLASH READY TALLY	OUT
35	FLASH MODE TALLY	OUT
36	GND	–
37	+5 V	–

Parallel control I/O specifications

Input : +5 V pull-up, Low Active, 50 ms or more
Output : Open collector, 20 mA max.
+5 V (pin No. 37) max. current: 100 mA

Setting fader start/stop

Fader start/stop is possible by connecting the No. 21 pin (FADER START/STOP IN) and No. 36 pin (GND) of the **REMOTE (PARALLEL)** terminal to the external interface. At a fader start, the CD player enters the online playback mode.

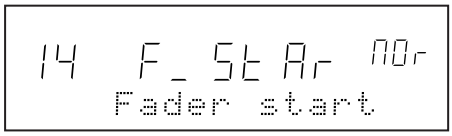
To start/stop the CD player from an external fader, set the following menu items.

Setting fader start

Set the polarity using menu No. 14 (“F_STAR”).

NOR (NORMAL): Low Active. The CD player starts when the input signal is switched from High to Low.

REV (REVERSE): High Active. The CD player starts when the input signal is switched from Low to High.



Setting fader stop

Set the state of the CD player at stop operation using menu No. 15 (“F_STOP”).

STP (STOP): The CD player stops.

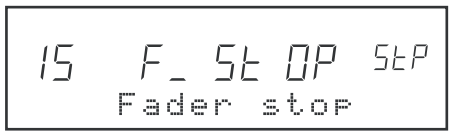
RDY (READY): The CD player enters the online READY mode.

PUS (PAUSE): The CD player enters the monitor PAUSE mode.

CUE: The CD player returns to the cue point (point at fader start), and enters the online READY mode.

INC (INCREMENT): The CD player enters the online READY mode at the start of the next track.

PLY (PLAY): Online playback is continued.



Control from the RC-601MKII

Functions are added to the CD player and the CD player becomes easier to user by using the Remote Control Unit RC-601MKII (sold separately).

Expanded and additional functions by the RC-601MKII

- Time chart/index search using the numeric keys
- Search using the jog/search dial
- End check function that allows you to listen to the end of tracks
- 1 tune repeat, all tunes repeat, program repeat, repeat playback between A and B
- Max. 10 cue points can be set to a single disc.
- Flash start function using 10 cue points
- Cue point settings for 500 discs can be stored to memory.
- Playback between A and B using MEMO points and confirmation playback of points are possible.
- The monitor outputs of up to four CD-601MKII can be connected to RC-601MKII and monitored on headphones.

Setting operation on the CD player

Operation on the CD player can be selected between enabled and disabled when the RC-601MKII is connected.

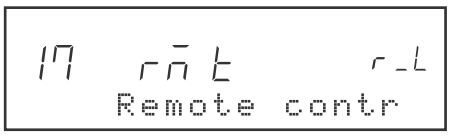
Set enable/disable using menu No. 17 (“RMT”).

R_L (REMOTE + LOCAL, default): Operation of the CD player is possible on both the RC-601MKII and the CD player.

R (REMOTE): Operation of the CD player is possible on only the RC-601MKII.

Operation of the CD player except the **OPEN/CLOSE** key is disabled.

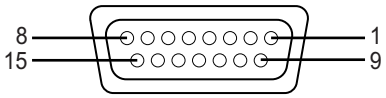
When the RC-601MKII is not connected, operation of the CD player is enabled regardless of the setting of this item.



Control from the RS-232C interface

The CD player can be controlled on the serial interface from a PC or other external equipment using the **REMOTE (SERIAL)** terminal (15-pin D-Sub connector, RS-232C-compliant) on the rear panel. For details, contact us.

REMOTE（SERIAL）



Pin Arrangement

Pin No.	Signal Name	IN/OUT	
1	SHIELD	–	Shielded (shell ground)
2	RX	IN	Receive data
3	(Reserved)	–	Reserved
4	(Reserved)	–	Reserved
5	(Reserved)	–	Reserved
6	GND	–	Ground
7	(Reserved)	–	Reserved
8	(Reserved)	–	Reserved
9	TX	OUT	Send data
10	(Reserved)	–	Reserved
11	(Reserved)	–	Reserved
12	(Reserved)	–	Reserved
13	(Reserved)	–	Reserved
14	(Reserved)	–	Reserved
15	(Reserved)	–	Reserved

Setting the baud rate

When the **REMOTE (SERIAL)** terminal is used to control the CD player, select the appropriate baud rate from the following using menu No. 23 (“RS232C”).

B-0: (default when RC-601MKII is connected)

B-1: 1,200 bps

B-2: 2,400 bps

B-3: 4,800 bps

B-4: 9,600 bps

B-5: 19,200 bps

B-6: 38,400 bps

SPECIFICATIONS

Rating

Model:	CD player
Discs used:	Compact discs (12 cm, 8 cm)
Compatible discs:	Audio CD (CD-DA), CD-R, CD-RW,
Number of audio channels:	2 channels
Number of quantized bits:	16-bit linear/channel
Sampling frequency:	44.1 kHz
Transmission rate:	4.3218 MB/sec
Modulation method:	EFM
Pickup drive system:	Objective lens drive system, optical type 3 beams
Objective lens drive system:	2D parallel drive system
Light source:	Semiconductor laser
Wavelength:	780 nm

ANALOG OUTPUTS

BALANCED (L, R)

Connector:	XLR 3-31 or equivalent
Specified output level:	+4 dBu
Max. output level:	+24 dBu, +22 dBu, +20 dBu, +15 dBu (according to output level setting)
Output level calibration variable range:	0 dB to -6 dB or more
Output impedance:	150 Ω

UNBALANCED (L, R)

Connector:	RCA
Specified output level:	-10 dBV
Max. output level:	+6 dBV
Output impedance:	100 Ω

PHONES

Connector:	Stereo phone jack
Max. output level:	50 mW + 50 mW (at 32 Ω load)

DIGITAL OUTPUTS

AES/EBU

Connector:	XLR 3-31 or equivalent
Output signal format:	IEC60958-4 (AES/EBU)
Output impedance:	110 Ω
Sampling frequency:	44.1 kHz, 48 kHz (at word synchronization)

SPDIF

Connector:	RCA pin jack
Output signal format:	IEC60958-3 (S/PDIF)
Output impedance:	75 Ω
Sampling frequency:	44.1 kHz, 48 kHz (at word synchronization)

Other I/O

WORD SYNC IN

Connector:	BNC
Input impedance:	75 Ω (automatic termination)
Input level:	TTL level
Synchronizing frequency range:	44.1 kHz ±0.1% and 48 kHz ±0.1%

WORD SYNC THRU

Connector:	BNC

REMOTE (PARALLEL)

Connector:	37-pin D-Sub female

REMOTE (SERIAL)

Connector:	15-pin D-Sub female
Electrical characteristics:	RS-232C-compliant

Analog Output Electrical Characteristics

The following characteristics are the balanced and unbalanced analog output specifications.

Playback frequency response:	20 Hz to 20 kHz, ±0.5 dB
Signal-to-noise ratio:	102 dB or more (20 kHz LPF, A-weighted)
Dynamic range:	98 dB or more (20 kHz LPF, A-weighted) [1 kHz max. output level -60 dB]
Distortion (THD+N):	0.008% or less (20 kHz LPF) [1 kHz max. output level]
Channel Separation:	90 dB or more [1 kHz]
Wow flutter:	Measured limit value or less

Other Characteristics

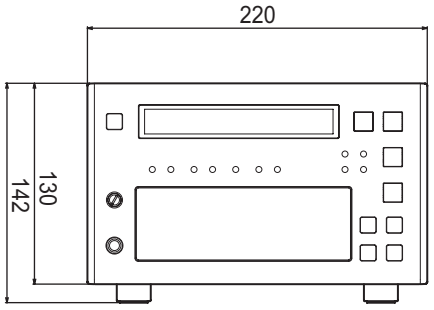
Audio rise time:	Within 10 msec
Anti-shock time:	20 seconds

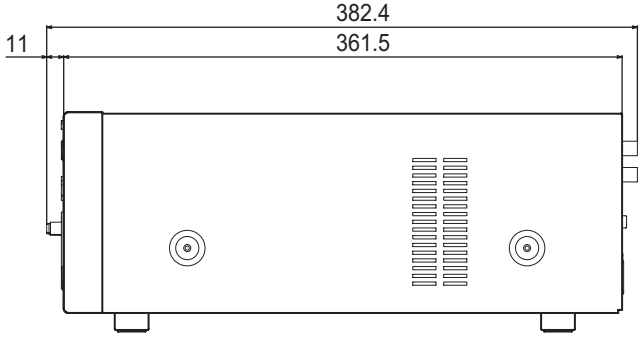
General

Power requirements:	
USA/CND:	120 V AC, 60 Hz
EUR/UK:	230 V AC, 50 Hz
AUS:	240 V AC, 50 Hz
Power consumption:	24 W
External dimensions:	220 W x 142 H x 382.4 D (mm) (including feet and protrusions)
Weight:	6.0 kg
Operating temperature:	5 to 35°C
Max. tilt of installation surface:	5 degrees
Accessories:	Power cable, Owner's Manual, Warranty

- Specifications and external appearance are subject to change without notice in the interest of product improvement.
- Note that illustrations in the Owner's Manual may differ on some products due to product improvements.

External Dimensions





List of Error Messages

If the following error messages are displayed during CD player use, try performing the remedies described in the following table.

Indication	Description	Remedy
ERR01	TOC READ Error	• The disc is scratched. → Replace the disc. • The disc is dirty. → Clean the disc.
ERR02	GFS Error	
ERR03	Focus Error	
ERR04	SUBQ Error	Replace the disc.
ERR05	TRAY LOADING Error	Check the disc tray for foreign objects.
ERR06	SLED Error	Turn the power OFF then back ON again.
ERR07	SYSTEM Error	
ERR08	MEMORY Error	

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CD-601MKII

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TASCAM
TEAC Professional Division

SCHEMATIC DIAGRAM
回路図

CD-601MKⅡ & RC-601MKⅡ

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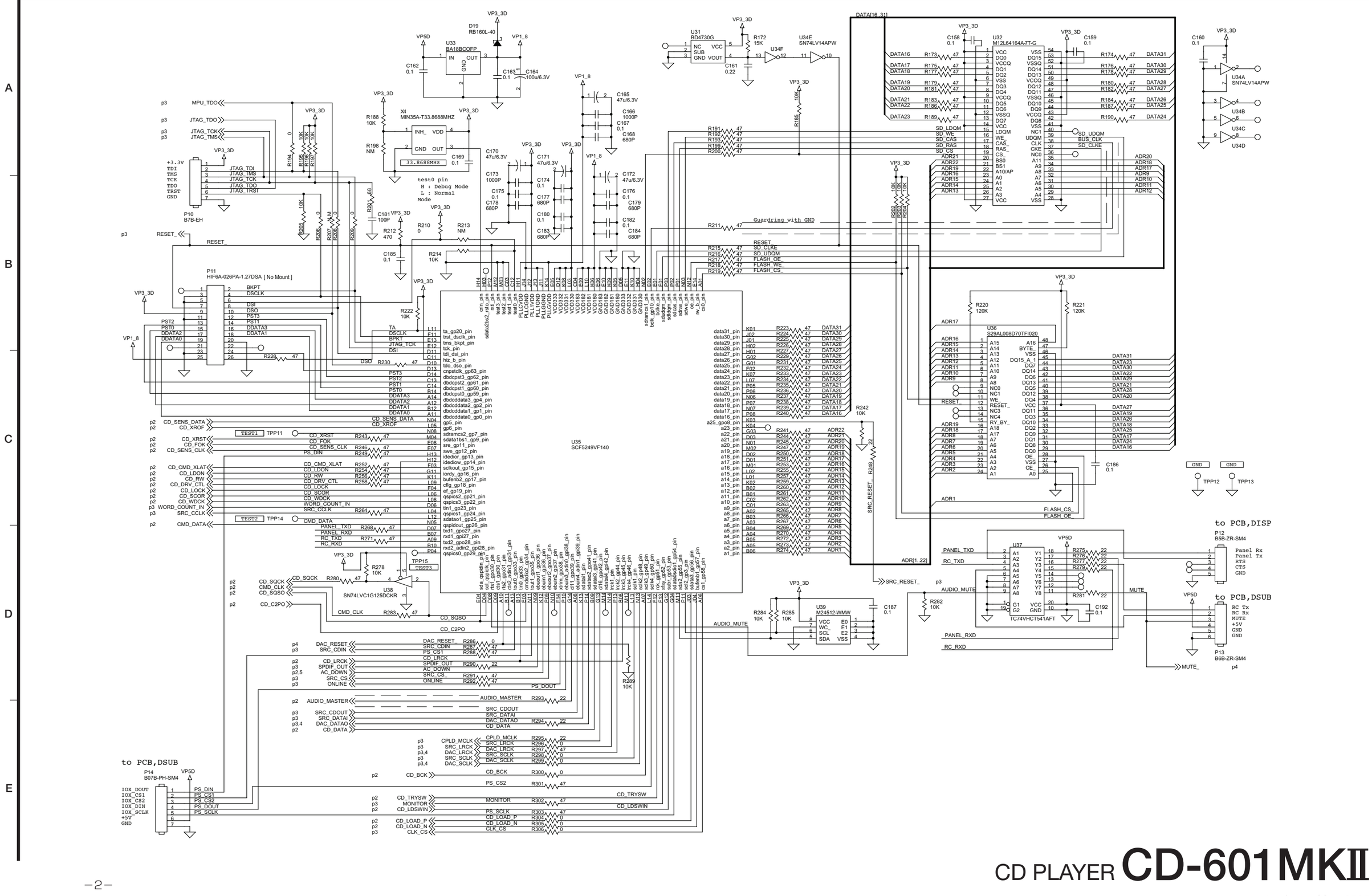

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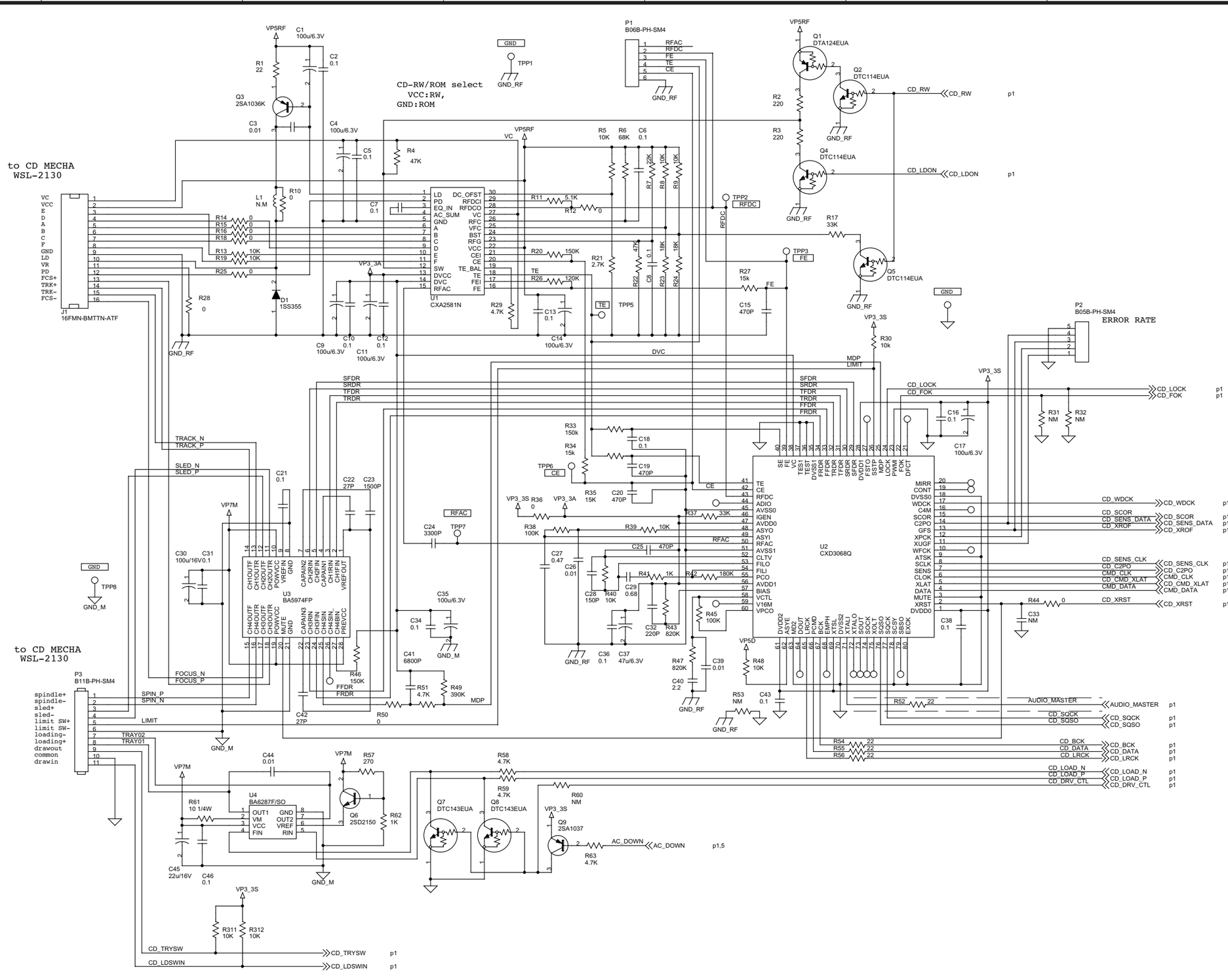

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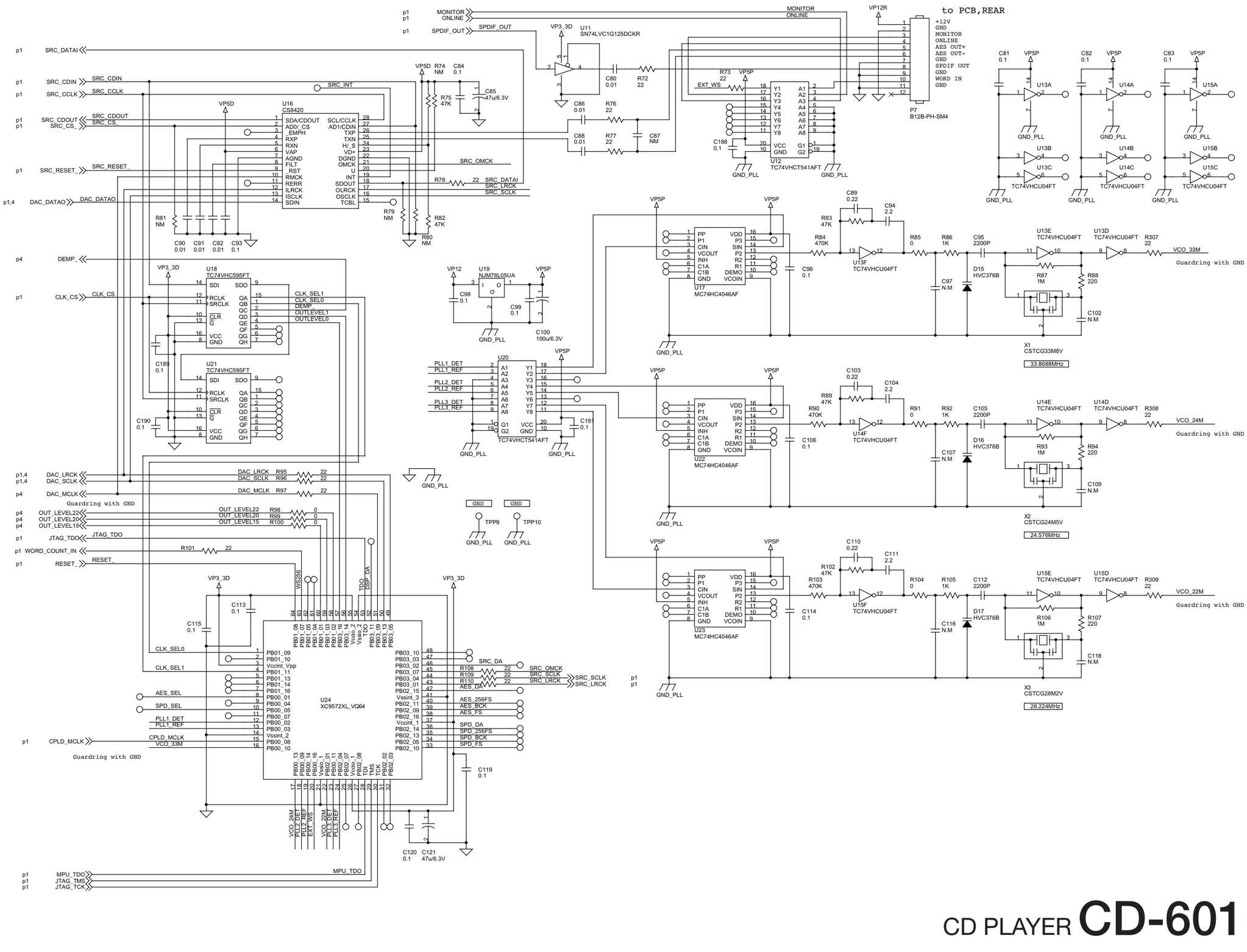

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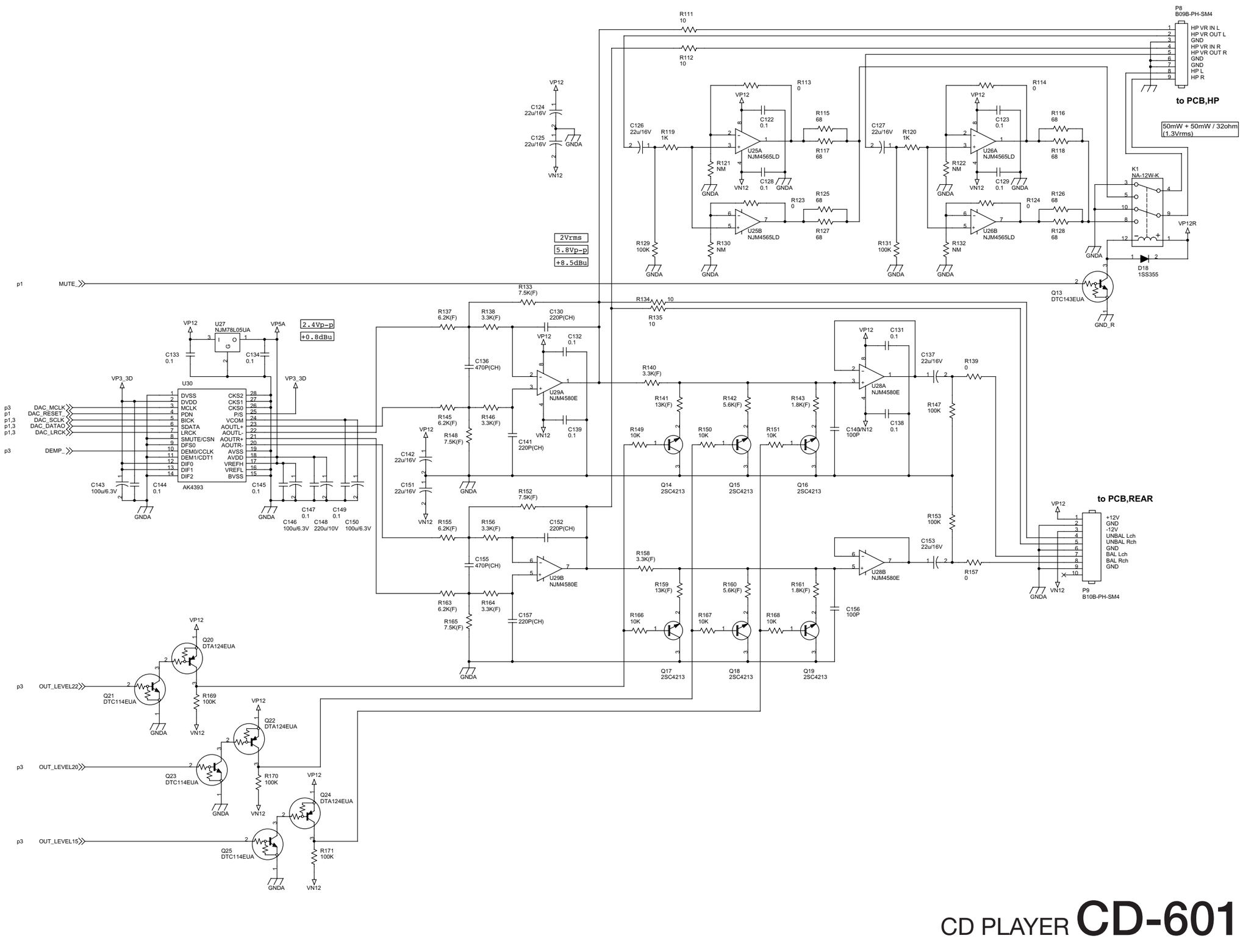

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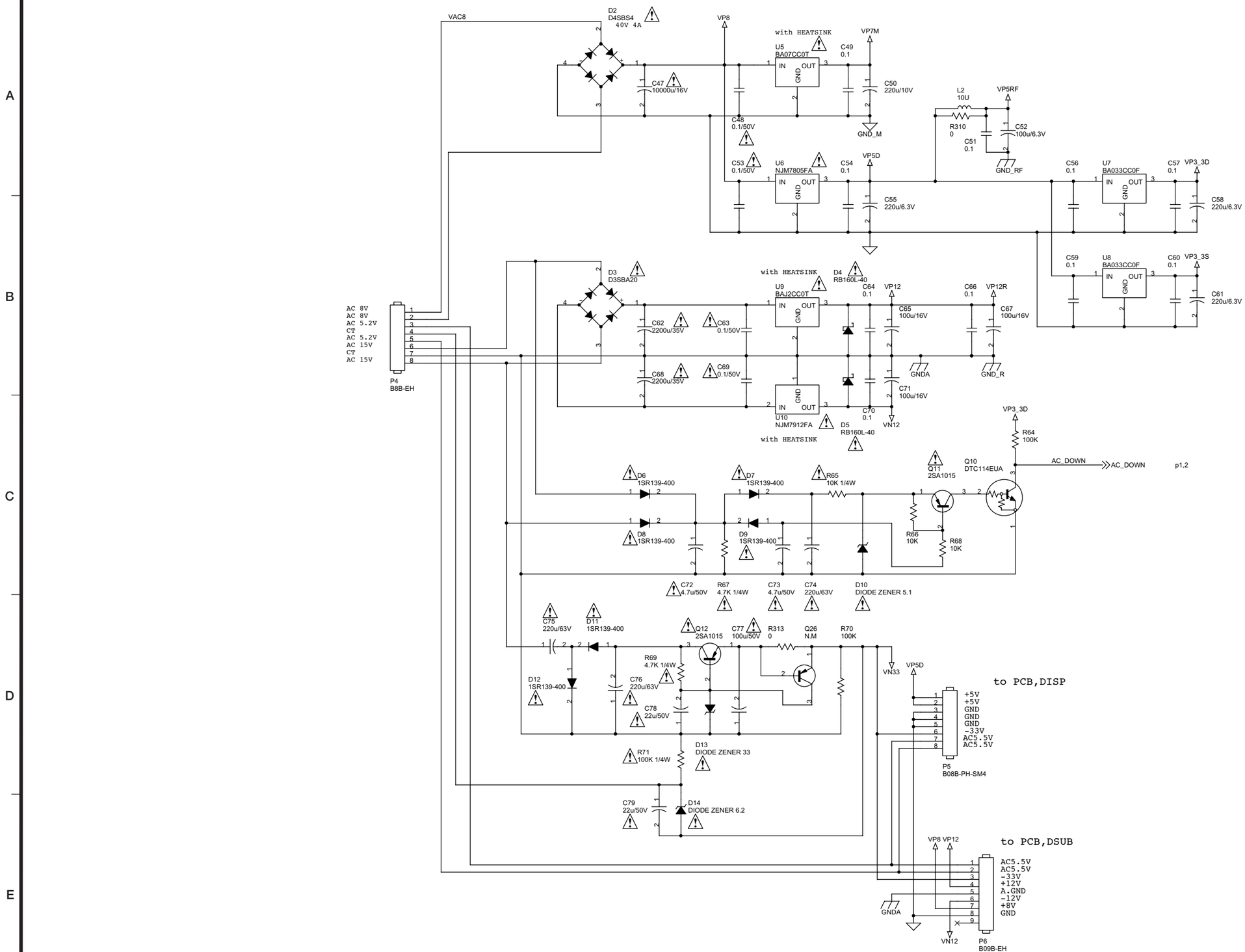

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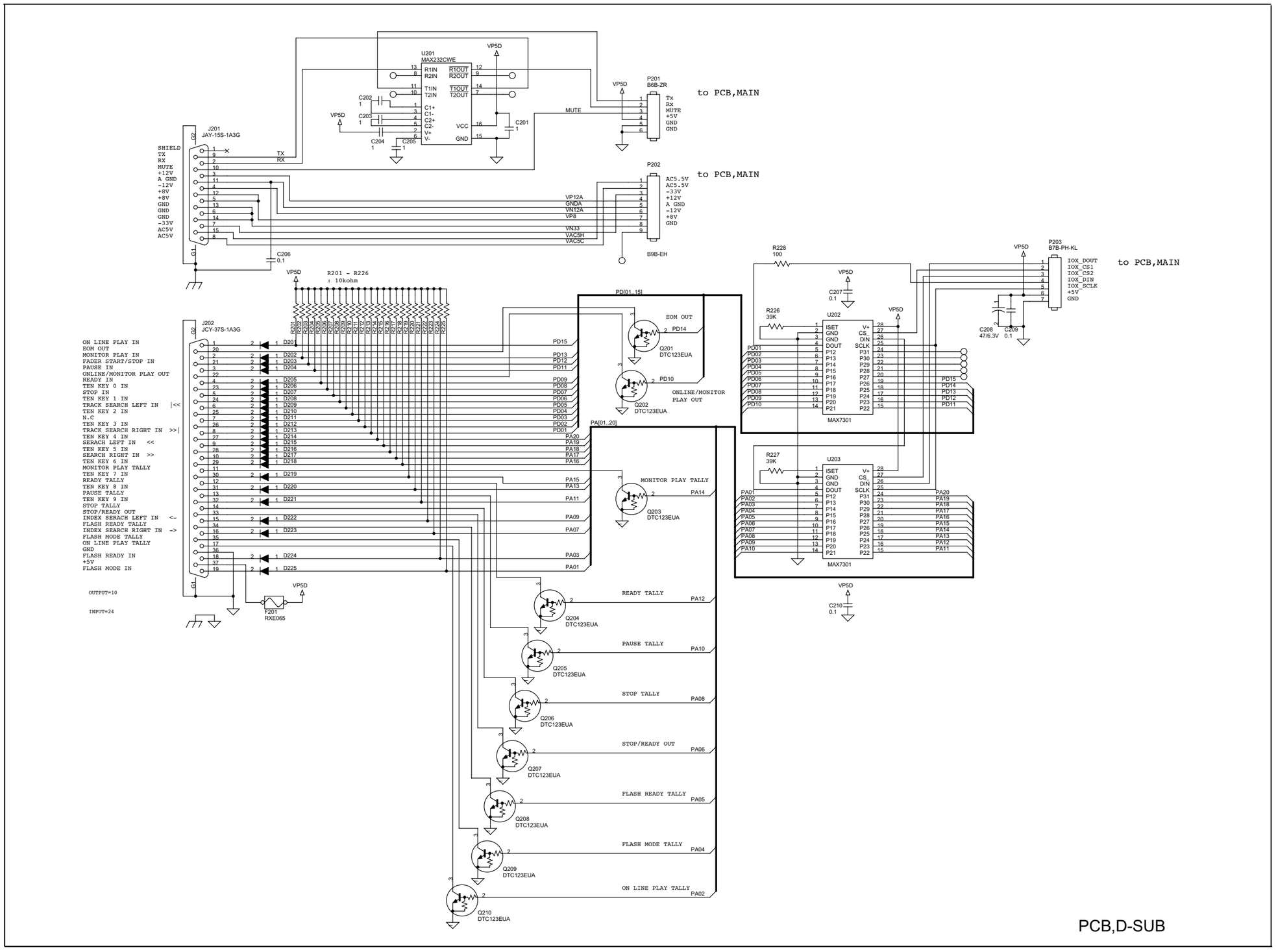
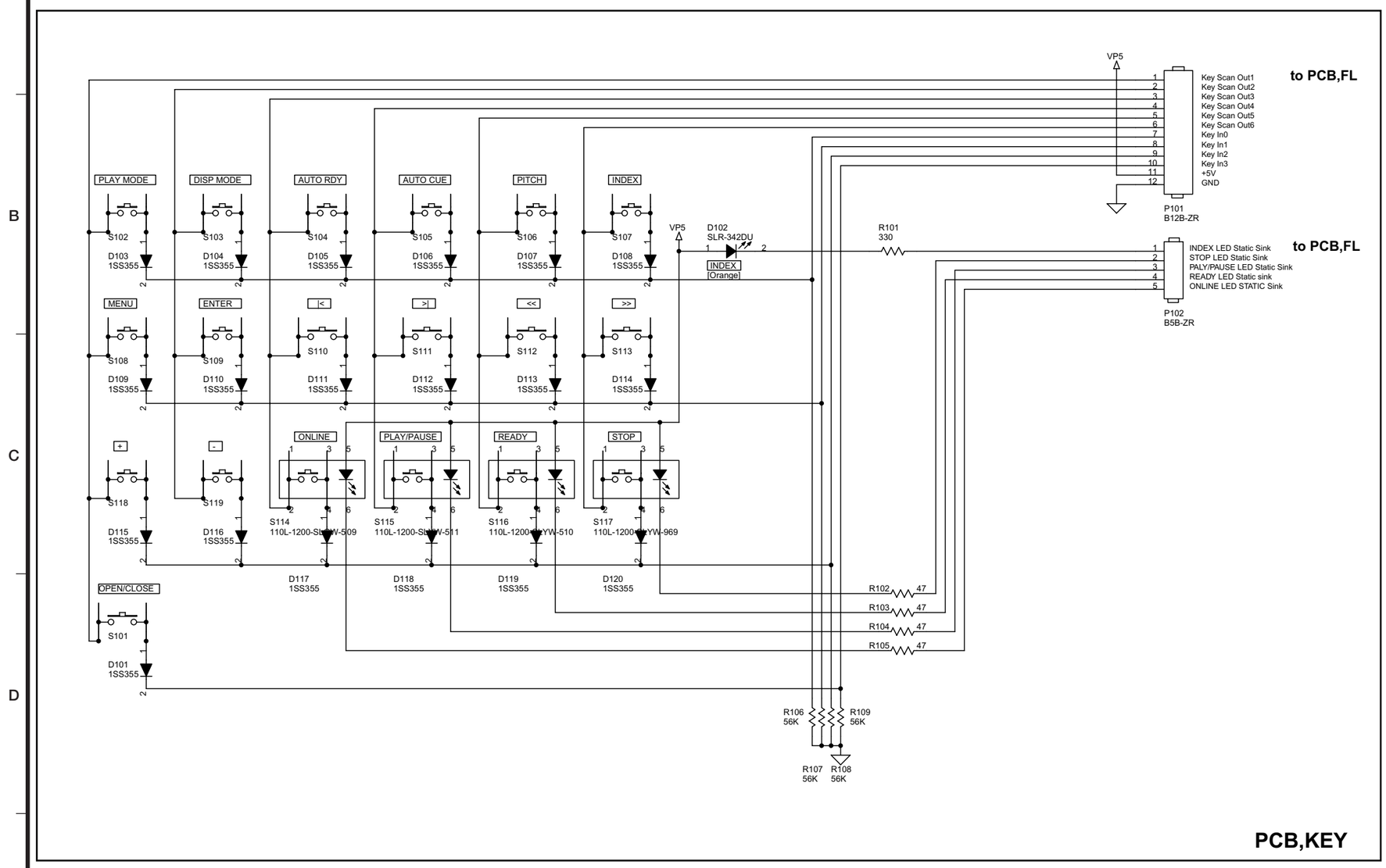
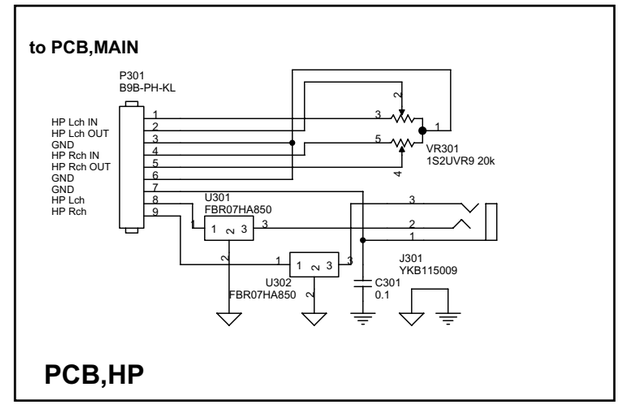
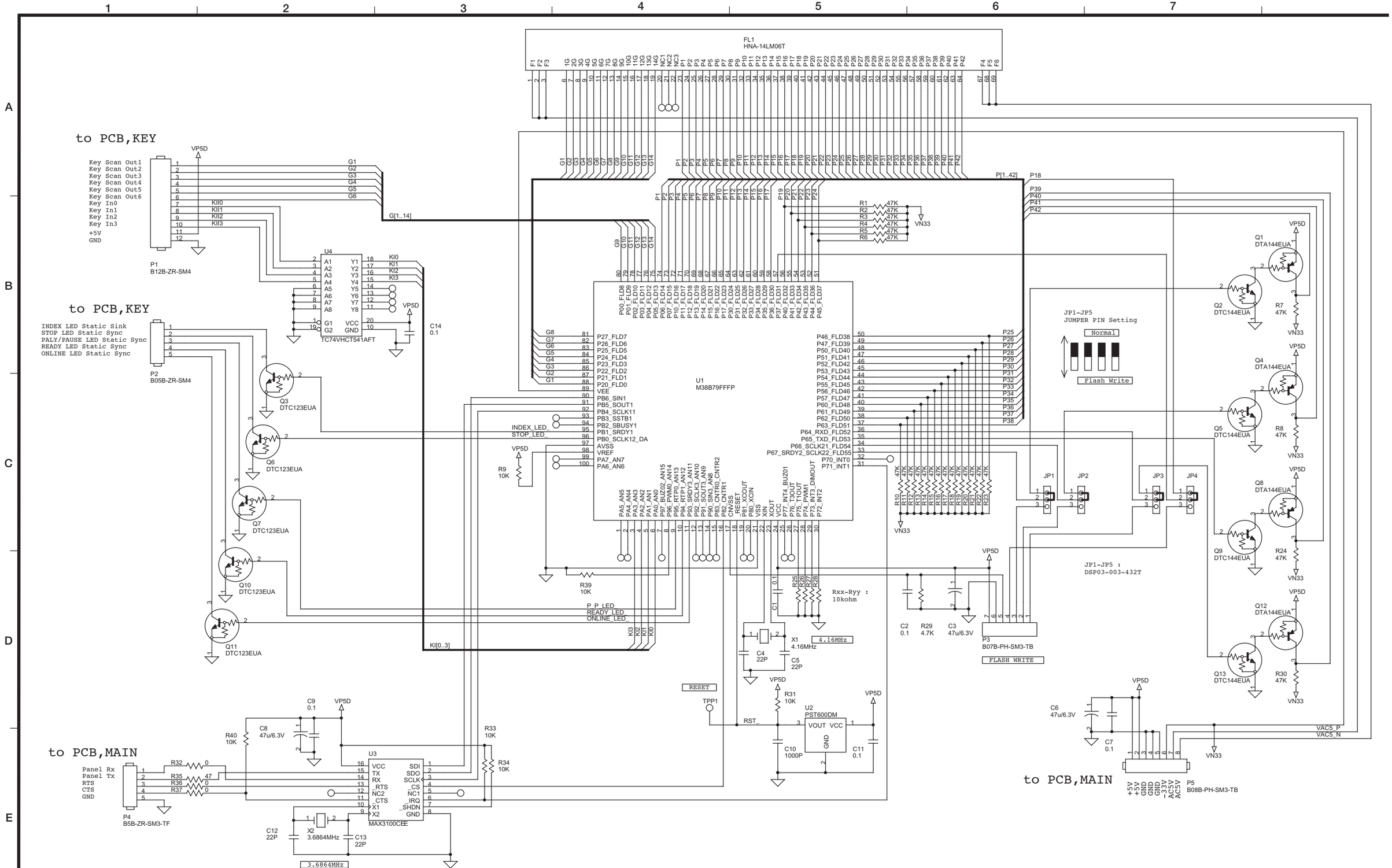

U201
MAX232CWE
R1IN
R2IN
T1IN
T2IN
R1OUT
R2OUT
T1OUT
T2OUT
C1+
C1-
C2+
C2-
V+
V-
VCC
GND
C201
C202
C203
C204
C205
VP5D
P201
B6B-ZR
Tx
Rx
MUTE
+5V
GND
GND
to PCB,MAIN
MUTE
J201
JAY-15S-1A3G
SHIELD
TX
RX
MUTE
+12V
A GND
-12V
+8V
+8V
GND
GND
GND
-33V
AC5V
AC5V
C206
0.1
P202
AC5.5V
AC5.5V
-33V
+12V
A GND
-12V
+8V
GND
B9B-EH
to PCB,MAIN
VP12A
GNDA
VN12A
VP8
VN33
VAC5H
VAC5C
R201 - R226
: 10kohm
J202
JCY-37S-1A3G
ON LINE PLAY IN
EOM OUT
MONITOR PLAY IN
FADER START/STOP IN
PAUSE IN
ONLINE/MONITOR PLAY OUT
READY IN
TEN KEY 0 IN
STOP IN
TEN KEY 1 IN
TRACK SEARCH LEFT IN |<<
TEN KEY 2 IN
N.C
TEN KEY 3 IN
TRACK SEARCH RIGHT IN >>|
TEN KEY 4 IN
SERACH LEFT IN <<
TEN KEY 5 IN
SEARCH RIGHT IN >>
TEN KEY 6 IN
MONITOR PLAY TALLY
TEN KEY 7 IN
READY TALLY
TEN KEY 8 IN
PAUSE TALLY
TEN KEY 9 IN
STOP TALLY
STOP/READY OUT
INDEX SERACH LEFT IN <-
FLASH READY TALLY
INDEX SEARCH RIGHT IN ->
FLASH MODE TALLY
ON LINE PLAY TALLY
GND
FLASH READY IN
+5V
FLASH MODE IN
OUTPUT=10
INPUT=24
F201
RXE065
PD[01..15]
PA[01..20]
EOM OUT
ONLINE/MONITOR PLAY OUT
MONITOR PLAY TALLY
READY TALLY
PAUSE TALLY
STOP TALLY
STOP/READY OUT
FLASH READY TALLY
FLASH MODE TALLY
ON LINE PLAY TALLY
Q201 DTC123EUA
Q202 DTC123EUA
Q203 DTC123EUA
Q204 DTC123EUA
Q205 DTC123EUA
Q206 DTC123EUA
Q207 DTC123EUA
Q208 DTC123EUA
Q209 DTC123EUA
Q210 DTC123EUA
R228
100
R226
39K
R227
39K
U202
U203
MAX7301
ISET
GND
GND
DOUT
CS_
DIN
SCLK
V+
C207
0.1
C208
47/6.3V
C209
0.1
C210
0.1
P203
B7B-PH-KL
IOX_DOUT
IOX_CS1
IOX_CS2
IOX_DIN
IOX_SCLK
+5V
GND
to PCB,MAIN

PCB,D-SUB


PLAY MODE
DISP MODE
AUTO RDY
AUTO CUE
PITCH
INDEX
MENU
ENTER
|<
>|
<<
>>
+
-
ONLINE
PLAY/PAUSE
READY
STOP
OPEN/CLOSE
S101
S102
S103
S104
S105
S106
S107
S108
S109
S110
S111
S112
S113
S114
S115
S116
S117
S118
S119
D101 1SS355
D102 SLR-342DU
INDEX [Orange]
D103 1SS355
D104 1SS355
D105 1SS355
D106 1SS355
D107 1SS355
D108 1SS355
D109 1SS355
D110 1SS355
D111 1SS355
D112 1SS355
D113 1SS355
D114 1SS355
D115 1SS355
D116 1SS355
D117 1SS355
D118 1SS355
D119 1SS355
D120 1SS355
S114 110L-1200-SURW-509
S115 110L-1200-SURW-511
S116 110L-1200-GYW-510
S117 110L-1200-GYW-969
VP5
R101 330
R102 47
R103 47
R104 47
R105 47
R106 56K
R107 56K
R108 56K
R109 56K
P101 B12B-ZR
Key Scan Out1
Key Scan Out2
Key Scan Out3
Key Scan Out4
Key Scan Out5
Key Scan Out6
Key In0
Key In1
Key In2
Key In3
+5V
GND
to PCB,FL
P102 B5B-ZR
INDEX LED Static Sink
STOP LED Static Sink
PALY/PAUSE LED Static Sink
READY LED Static sink
ONLINE LED STATIC Sink
to PCB,FL
PCB,KEY


to PCB,MAIN
P301 B9B-PH-KL
HP Lch IN
HP Lch OUT
GND
HP Rch IN
HP Rch OUT
GND
GND
HP Lch
HP Rch
VR301 1S2UVR9 20k
U301 FBR07HA850
U302 FBR07HA850
J301 YKB115009
C301 0.1
PCB,HP



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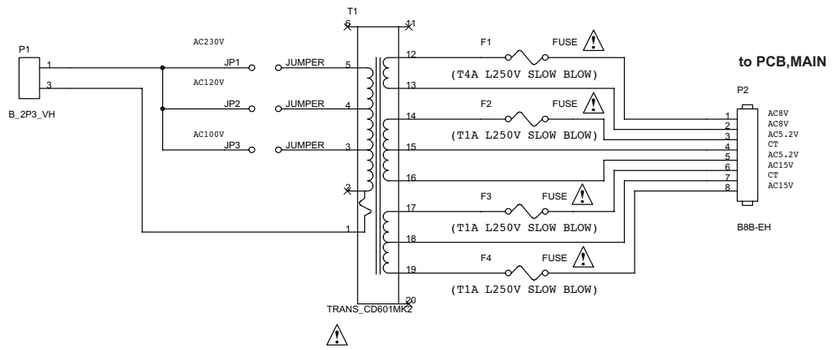
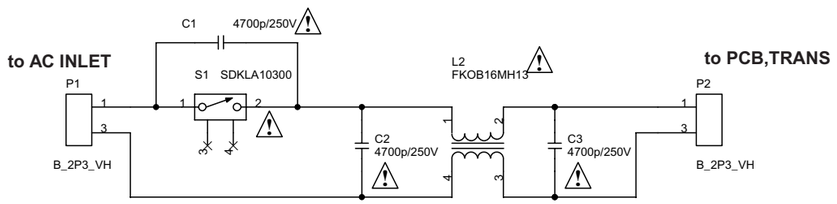
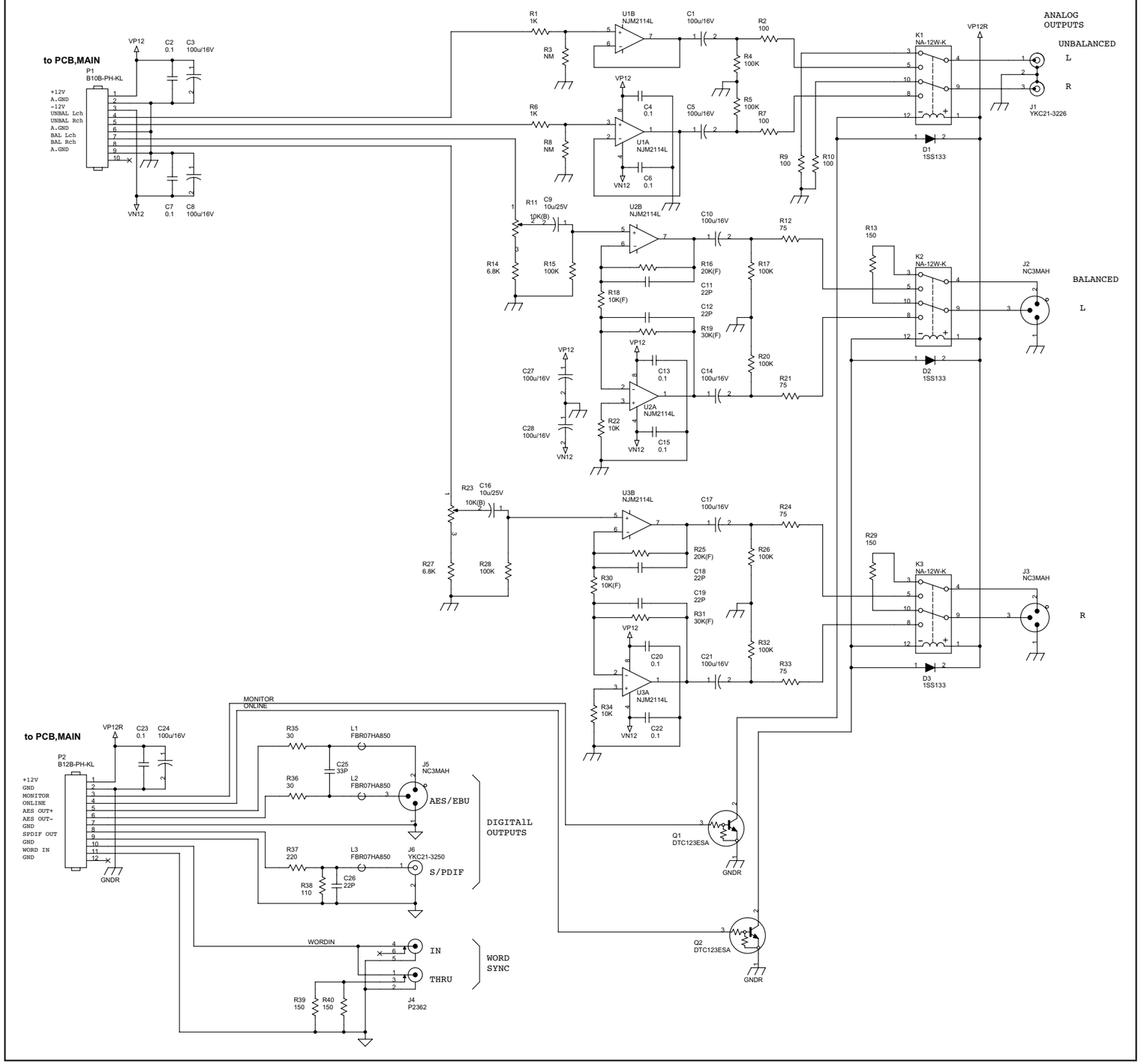
PCB,TRANS



PCB,PWR SW



PCB,REAR



CD PLAYER **CD-601MKII**

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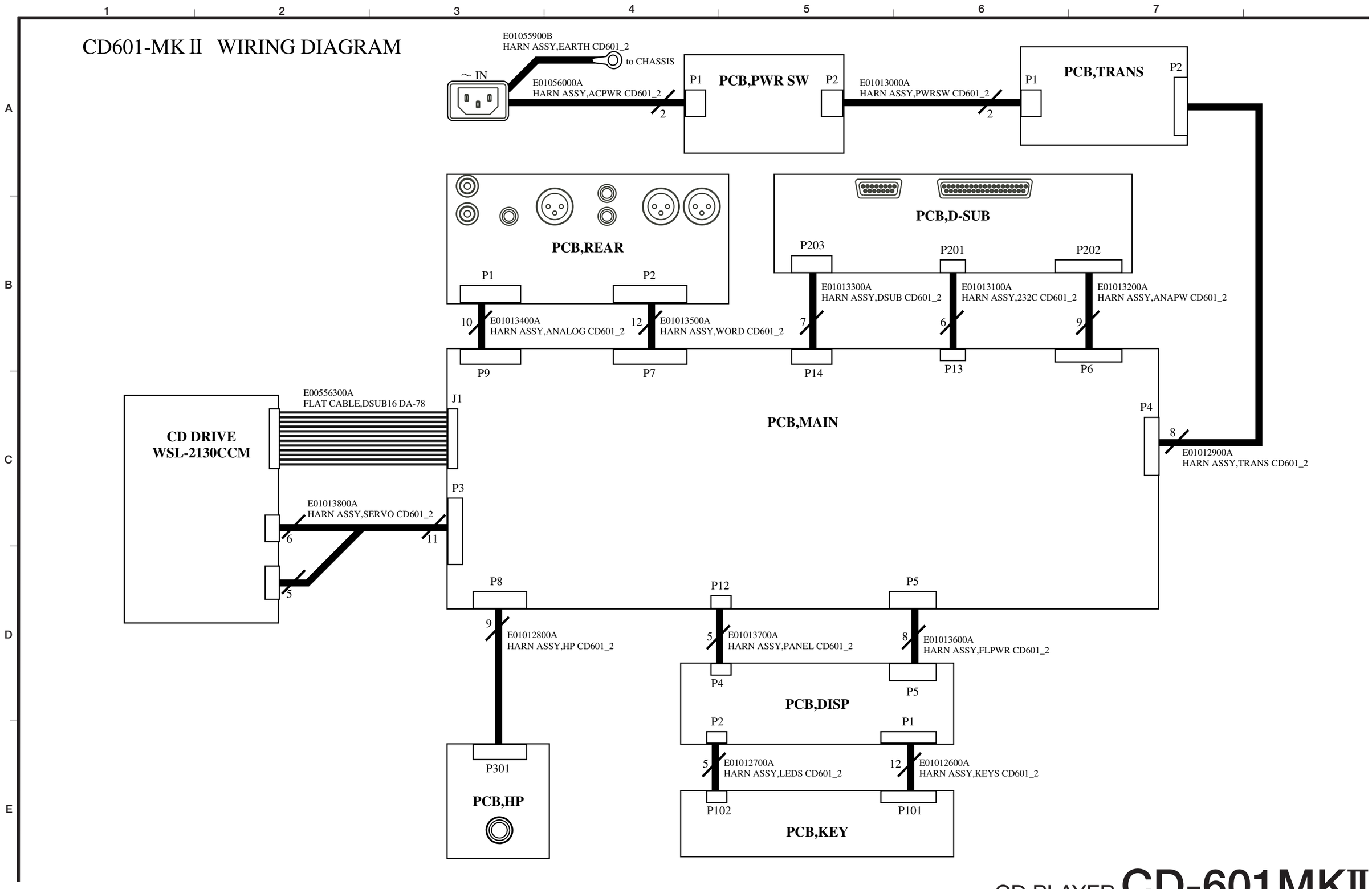
CD601-MK II WIRING DIAGRAM



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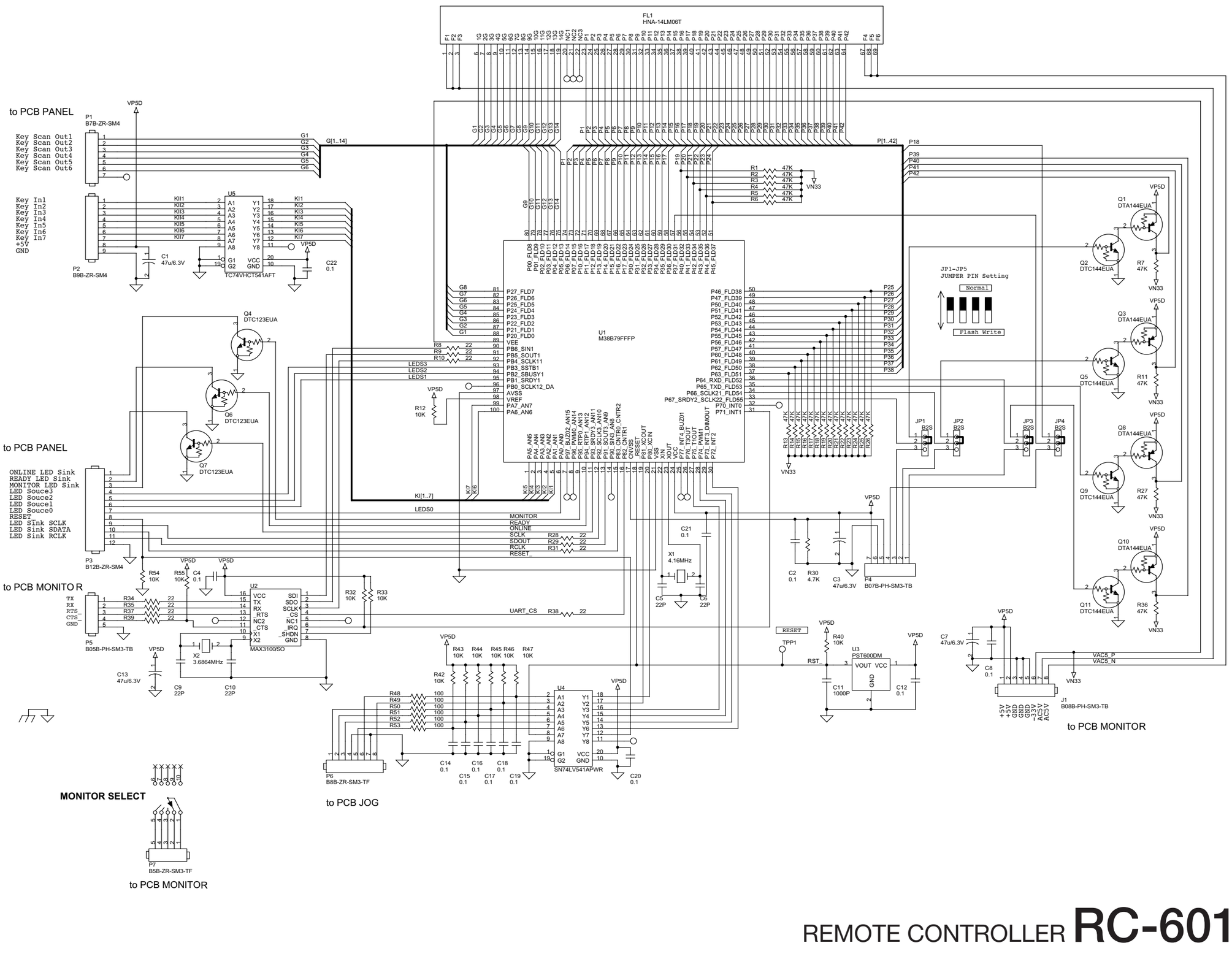
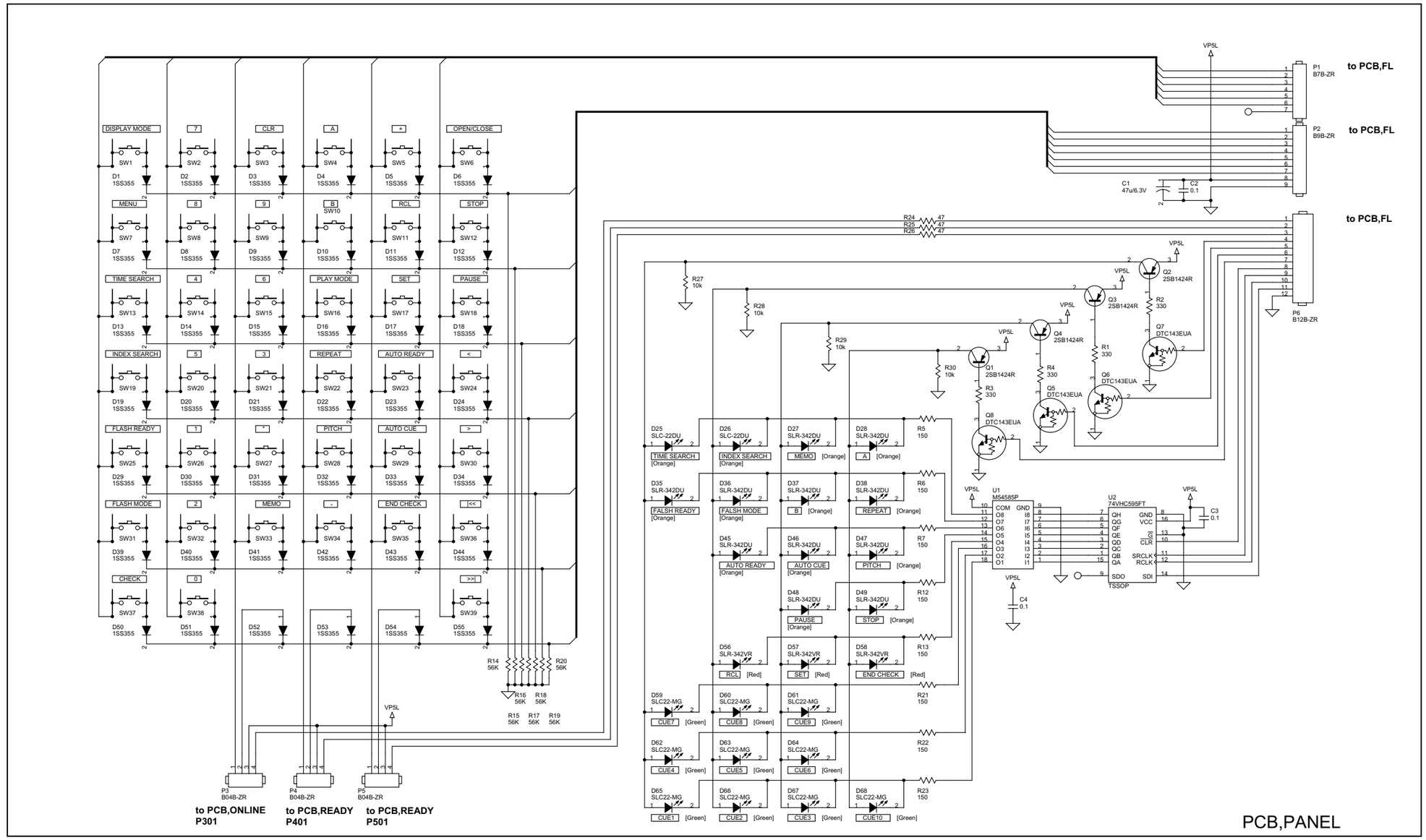

FL1
HNA-14LM06T
U1
M38B79FFFP
U2
MAX3100SO
U3
PST600DM
U4
SN74LV541APWR
U5
TC74VHCT541AFT
JP1-JP5
JUMPER PIN Setting
Normal
Flash Write
RESET
to PCB PANEL
to PCB MONITOR
to PCB JOG
MONITOR SELECT
Key Scan Out1
Key Scan Out2
Key Scan Out3
Key Scan Out4
Key Scan Out5
Key Scan Out6
Key In1
Key In2
Key In3
Key In4
Key In5
Key In6
Key In7
+5V
GND
ONLINE LED Sink
READY LED Sink
MONITOR LED Sink
LED Souce3
LED Souce2
LED Soucel
LED Souce0
RESET
LED Sink SCLK
LED Sink SDATA
LED Sink RCLK
TX
RX
RTS
CTS
GND
+5V
+5V
GND
GND
GND
-3.3V
AC5V
AC5V
VAC5_P
VAC5_N
G[1..14]
P[1..42]
KI[1..7]
LEDS0
LEDS1
LEDS2
LEDS3
MONITOR
READY
ONLINE
SCLK
SDOUT
RCLK
RESET_
UART_CS
P1 B7B-ZR-SM4
P2 B9B-ZR-SM4
P3 B12B-ZR-SM4
P4 B07B-PH-SM3-TB
P5 B05B-PH-SM3-TB
P6 B8B-ZR-SM3-TF
P7 B5B-ZR-SM3-TF
J1 B08B-PH-SM3-TB
Q1 DTA144EUA
Q2 DTC144EUA
Q3 DTA144EUA
Q4 DTC123EUA
Q5 DTC144EUA
Q6 DTC123EUA
Q7 DTC123EUA
Q8 DTA144EUA
Q9 DTC144EUA
Q10 DTA144EUA
Q11 DTC144EUA
VP5D
VN33
C1 47u/6.3V
C2 0.1
C3 47u/6.3V
C4 0.1
C5 22P
C6 22P
C7 47u/6.3V
C8 0.1
C9 22P
C10 22P
C11 1000P
C12 0.1
C13 47u/6.3V
C14 0.1
C15 0.1
C16 0.1
C17 0.1
C18 0.1
C19 0.1
C20 0.1
C21 0.1
C22 0.1
X1 4.16MHz
X2 3.6864MHz
R1 47K
R2 47K
R3 47K
R4 47K
R5 47K
R6 47K
R7 47K
R11 47K
R27 47K
R36 47K
R8 22
R9 22
R10 22
R12 10K
R28 22
R29 22
R31 22
R30 4.7K
R32 10K
R33 10K
R34 22
R35 22
R37 22
R38 22
R39 22
R40 10K
R42 10K
R43 10K
R44 10K
R45 10K
R46 10K
R47 10K
R48 100
R49 100
R50 100
R51 100
R52 100
R53 100
R54 10K
R55 10K
TPP1


DISPLAY MODE
7
CLR
A
+
OPEN/CLOSE
MENU
8
9
B
RCL
STOP
TIME SEARCH
4
6
PLAY MODE
SET
PAUSE
INDEX SEARCH
5
3
REPEAT
AUTO READY
<
FLASH READY
1
*
PITCH
AUTO CUE
>
FLASH MODE
2
MEMO
-
END CHECK
<<
CHECK
0
>>|
SW1 SW2 SW3 SW4 SW5 SW6
SW7 SW8 SW9 SW10 SW11 SW12
SW13 SW14 SW15 SW16 SW17 SW18
SW19 SW20 SW21 SW22 SW23 SW24
SW25 SW26 SW27 SW28 SW29 SW30
SW31 SW32 SW33 SW34 SW35 SW36
SW37 SW38 SW39
D1 1SS355 D2 1SS355 D3 1SS355 D4 1SS355 D5 1SS355 D6 1SS355
D7 1SS355 D8 1SS355 D9 1SS355 D10 1SS355 D11 1SS355 D12 1SS355
D13 1SS355 D14 1SS355 D15 1SS355 D16 1SS355 D17 1SS355 D18 1SS355
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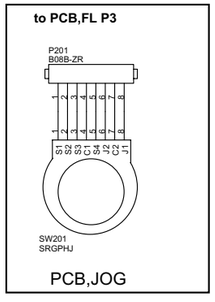
D39 1SS355 D40 1SS355 D41 1SS355 D42 1SS355 D43 1SS355 D44 1SS355
D50 1SS355 D51 1SS355 D52 1SS355 D53 1SS355 D54 1SS355 D55 1SS355
R14 56K R20 56K
R16 56K R18 56K
R15 56K R17 56K R19 56K
VP5L
P3 B04B-ZR
P4 B04B-ZR
P5 B04B-ZR
to PCB,ONLINE P301
to PCB,READY P401
to PCB,READY P501
P1 B7B-ZR
P2 B9B-ZR
P6 B12B-ZR
to PCB,FL
to PCB,FL
to PCB,FL
C1 47u/6.3V
C2 0.1
R24 47
R25 47
R26 47
R27 10k
R28 10k
R29 10k
R30 10k
Q1 2SB1424R
Q2 2SB1424R
Q3 2SB1424R
Q4 2SB1424R
Q5 DTC143EUA
Q6 DTC143EUA
Q7 DTC143EUA
Q8 DTC143EUA
R1 330
R2 330
R3 330
R4 330
D25 SLC-22DU TIME SEARCH [Orange]
D26 SLC-22DU INDEX SEARCH [Orange]
D27 SLR-342DU MEMO [Orange]
D28 SLR-342DU A [Orange]
R5 150
D35 SLR-342DU FALSH READY [Orange]
D36 SLR-342DU FALSH MODE [Orange]
D37 SLR-342DU B [Orange]
D38 SLR-342DU REPEAT [Orange]
R6 150
D45 SLR-342DU AUTO READY [Orange]
D46 SLR-342DU AUTO CUE [Orange]
D47 SLR-342DU PITCH [Orange]
R7 150
D48 SLR-342DU PAUSE [Orange]
D49 SLR-342DU STOP [Orange]
R12 150
D56 SLR-342VR RCL [Red]
D57 SLR-342VR SET [Red]
D58 SLR-342VR END CHECK [Red]
R13 150
D59 SLC22-MG CUE7 [Green]
D60 SLC22-MG CUE8 [Green]
D61 SLC22-MG CUE9 [Green]
R21 150
D62 SLC22-MG CUE4 [Green]
D63 SLC22-MG CUE5 [Green]
D64 SLC22-MG CUE6 [Green]
R22 150
D65 SLC22-MG CUE1 [Green]
D66 SLC22-MG CUE2 [Green]
D67 SLC22-MG CUE3 [Green]
D68 SLC22-MG CUE10 [Green]
R23 150
U1 M54585P
U2 74VHC595FT TSSOP
C3 0.1
C4 0.1
PCB,PANEL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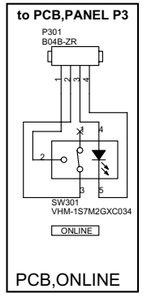
SW201 SRGPHJ
PCB,JOG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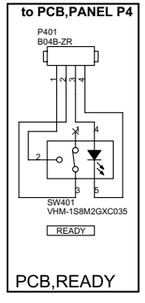
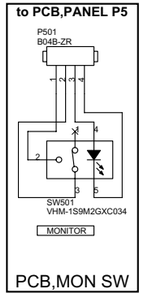
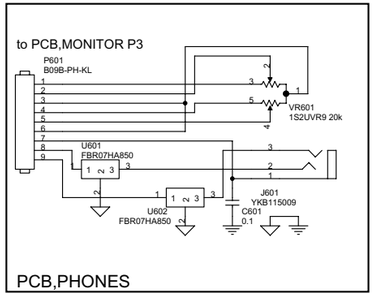
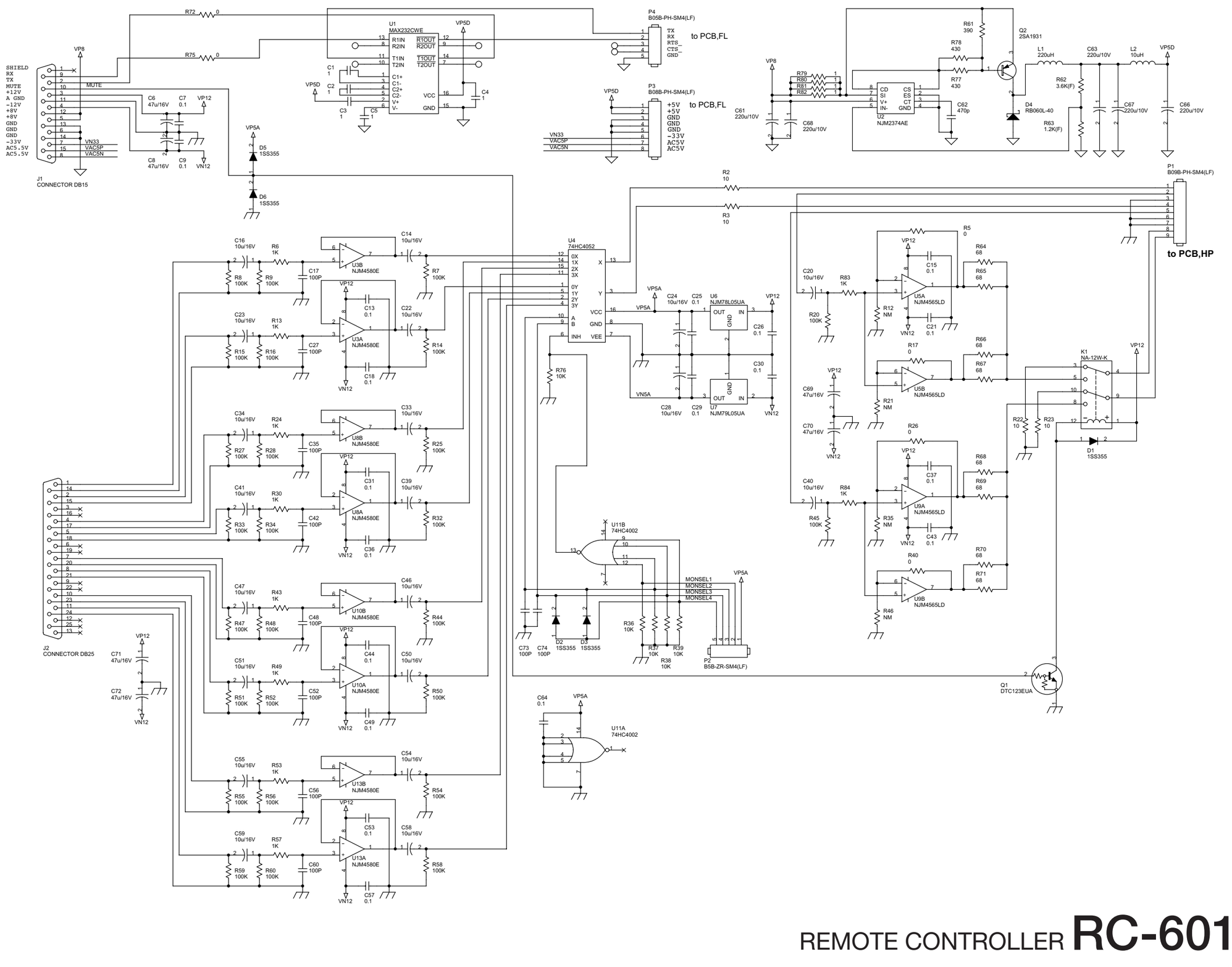
P301 B04B-ZR
SW301 VHM-1S7M2GXC034
ONLINE
PCB,ONLINE


to PCB,PANEL P4
P401 B04B-ZR
SW401 VHM-1S8M2GXC035
READY
PCB,READY


to PCB,PANEL P5
P501 B04B-ZR
SW501 VHM-1S9M2GXC034
MONITOR
PCB,MON SW

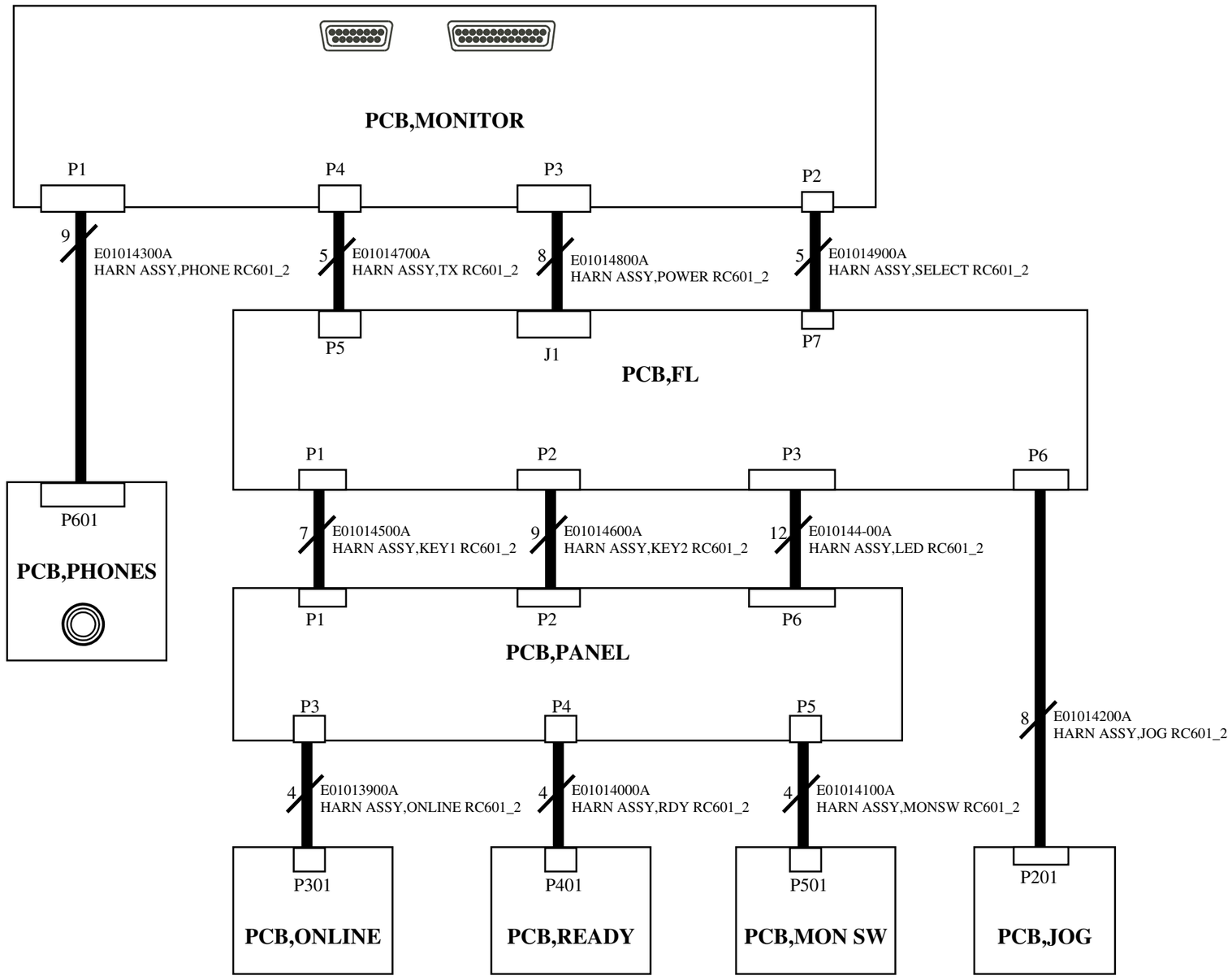

to PCB,MONITOR P3
P601 B09B-PH-KL
VR601 1S2UVR9 20k
U601 FBR07HA850
U602 FBR07HA850
J601 YKB115009
C601 0.1
PCB,PHONES



REMOTE CONTROLLER **RC-601MKII**

1 st Issue; May 2005

RC601-MK Ⅱ WIRING DIAGRAM



AK4393

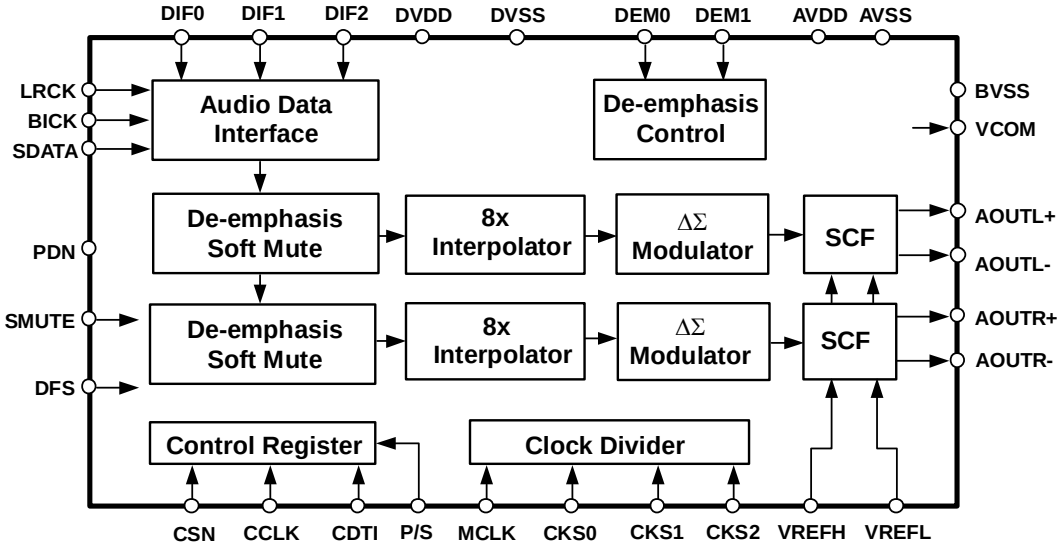
Advanced Multi-Bit 96kHz 24-Bit ΔΣ DAC

GENERAL DESCRIPTION

The AK4393 is a high performance stereo DAC for the 96kHz sampling mode of DAT, DVD including a 24bit digital filter. The AK4393 introduces the advanced multi-bit system for ΔΣ modulator. This new architecture achieves the wider dynamic range, while keeping much the same superior distortion characteristics as conventional Single-Bit way. In the AK4393, the analog outputs are filtered in the analog domain by switched-capacitor filter (SCF) with high tolerance to clock jitter. The analog outputs are full differential output, so the device is suitable for hi-end applications. The operating voltages support analog 5V and digital 3.3V, so it is easy to I/F with 3.3V logic IC.

FEATURES

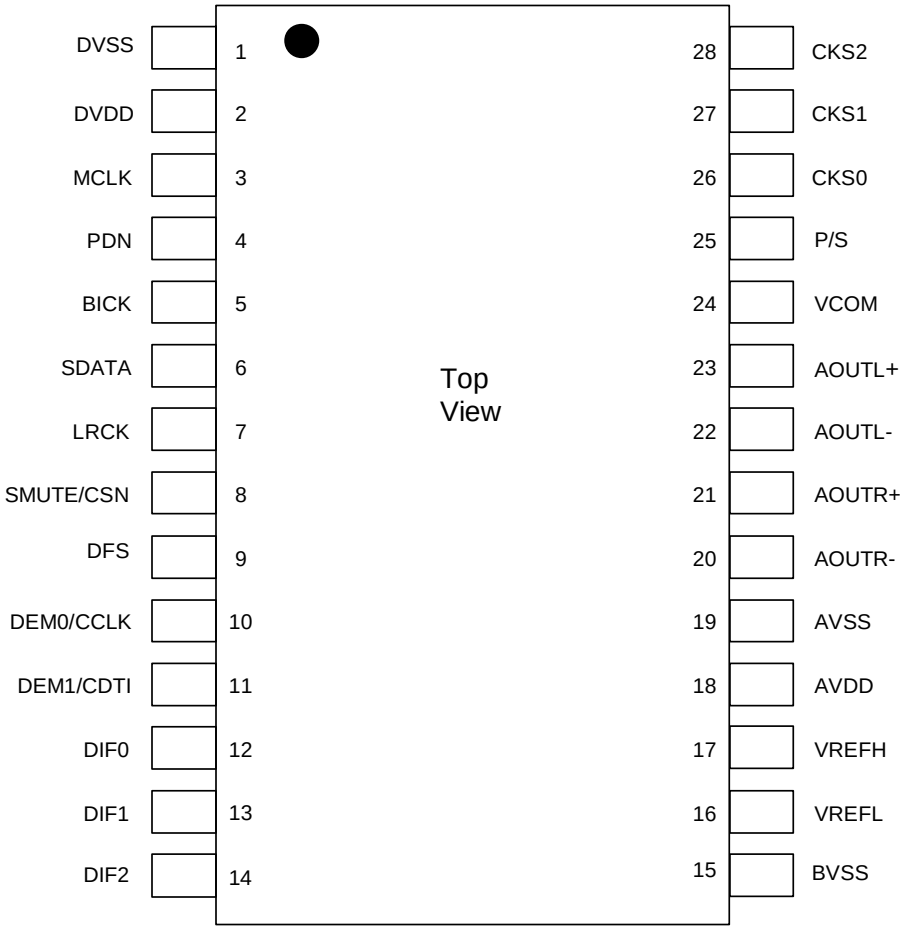
- **128x Oversampling**
- **Sampling Rate up to 108kHz**
- **24Bit 8x Digital Filter**
  Ripple: ±0.005dB, Attenuation: 75dB
- **High Tolerance to Clock Jitter**
- **Low Distortion Differential Output**
- **Digital de-emphasis for 32, 44.1, 48 & 96kHz sampling**
- **Soft Mute**
- **THD+N: -100dB**
- **DR, S/N: 120dB**
- **I/F format : MSB justified, 16/20/24bit LSB justified, I^2S**
- **Master Clock: Normal Speed: 256fs, 384fs, 512fs or 768fs**
  Double Speed: 128fs, 192fs, 256fs or 384fs
- **Power Supply: 4.75 to 5.25V (Analog), 3 to 5.25V (Digital)**
- **Small Package: 28pin VSOP**



■ Ordering Guide

AK4393VF	-40 ~ +85 °C	28pin VSOP (0.65mm pitch)
AKD4393	Evaluation Board	

■ Pin Layout



PIN/FUNCTION

No.	Pin Name	I/O	Function
1	DVSS	-	Digital Ground Pin
2	DVDD	-	Digital Power Supply Pin, 3.3V or 5.0V
3	MCLK	I	Master Clock Input Pin
4	PDN	I	Power-Down Mode Pin When at "L", the AK4393 is in power-down mode and is held in reset. The AK4393 should always be reset upon power-up.
5	BICK	I	Audio Serial Data Clock Pin The clock of 64fs or more than is recommended to be input on this pin.
6	SDATA	I	Audio Serial Data Input Pin 2's complement MSB-first data is input on this pin.
7	LRCK	I	L/R Clock Pin
8	SMUTE	I	Soft Mute Pin in parallel mode When this pin goes "H", soft mute cycle is initiated. When returning "L", the output mute releases.
	CSN	I	Chip Select Pin in serial mode
9	DFS	I	Double Speed Sampling Mode Pin (Internal pull-down pin) "L": Normal Speed , "H": Double Speed
10	DEM0	I	De-emphasis Enable Pin in parallel mode
	CCLK	I	Control Data Clock Pin in serial mode
11	DEM1	I	De-emphasis Enable Pin in parallel mode
	CDTI	I	Control Data Input Pin in serial mode
12	DIF0	I	Digital Input Format Pin
13	DIF1	I	Digital Input Format Pin
14	DIF2	I	Digital Input Format Pin
15	BVSS	-	Substrate Ground Pin, 0V
16	VREFL	I	Low Level Voltage Reference Input Pin
17	VREFH	I	High Level Voltage Reference Input Pin
18	AVDD	-	Analog Power Supply Pin, 5.0V
19	AVSS	-	Analog Ground Pin, 0V
20	AOUTR-	O	Rch Negative analog output Pin
21	AOUTR+	O	Rch Positive analog output Pin
22	AOUTL-	O	Lch Negative analog output Pin
23	AOUTL+	O	Lch Positive analog output Pin
24	VCOM	O	Common Voltage Output Pin, 2.6V
25	P/S	I	Parallel/Serial Select Pin (Internal pull-up pin) "L": Serial control mode, "H": Parallel control mode
26	CKS0	I	Master Clock Select Pin
27	CKS1	I	Master Clock Select Pin
28	CKS2	I	Master Clock Select Pin

Note: All input pins except internal pull-up/down pins should not be left floating.

ABSOLUTE MAXIMUM RATINGS

(AVSS, BVSS, DVSS = 0V; Note 1)

Parameter		Symbol	min	max	Units
Power Supplies:	Analog	AVDD	-0.3	6.0	V
	Digital	DVDD	-0.3	6.0	V
	| BVSS-DVSS | (Note 2)	Δ GND	-	0.3	V
Input Current , Any pin Except Supplies		IIN	-	±10	mA
Input Voltage		VIND	-0.3	DVDD+0.3	V
Ambient Operating Temperature		Ta	-40	85	°C
Storage Temperature		Tstg	-65	150	°C

Notes: 1. All voltages with respect to ground.
2. AVSS, BVSS and DVSS must be connected to the same analog ground plane.

WARNING: Operation at or beyond these limits may result in permanent damage to the device.
Normal operation is not guaranteed at these extremes.

RECOMMENDED OPERATING CONDITIONS

(AVSS, BVSS, DVSS=0V; Note 1)

Parameter		Symbol	min	typ	max	Units
Power Supplies:	Analog	AVDD	4.75	5.0	5.25	V
(Note 3)	Digital	DVDD	3.0	3.3	5.25	V
Voltage Reference	"H" voltage reference	VREFH	AVDD-0.5	-	AVDD	V
(Note 4)	"L" voltage reference	VREFL	AVSS	-	-	V
	VREFH-VREFL	Δ VREF	3.0	-	AVDD	V

Notes: 3. The power up sequence between AVDD and DVDD is not critical.
4. Analog output voltage scales with the voltage of (VREFH-VREFL).
AOUT (typ.@0dB) = (AOUT+) - (AOUT-) = ±2.4Vpp×(VREFH-VREFL)/5.

* AKM assumes no responsibility for the usage beyond the conditions in this data sheet.

ANALOG CHARACTERISTICS

(Ta = 25°C; AVDD = 5V, DVDD = 3.3V; AVSS, BVSS, DVSS = 0V, VREFH = AVDD, VREFL = AVSS;
fs = 44.1kHz; BICK = 64fs; Signal Frequency = 1kHz; 24bit Input Data; Measurement Bandwidth = 20Hz~20kHz;
$R_L \geq 600\Omega$; External circuit: Figure 11; unless otherwise specified)

Parameter			min	typ	max	Units
Resolution					24	Bits
Dynamic Characteristics (Note 5)						
THD+N	fs=44.1kHz	0dBFS		-100	-90	dB
	BW=20kHz	-60dBFS		-53	-	dB
	fs=96kHz	0dBFS		-97	-86	dB
	BW=40kHz	-60dBFS		-51	-	dB
Dynamic Range (-60dBFS with A-weighted)	fs=44.1kHz	(Note 6)	112	117		dB
		(Note 7)	-	120		dB
	fs=96kHz		111	116		dB
		(Note 7)	-	118		dB
S/N (A-weighted	fs=44.1kHz	(Note 8)	112	117		dB
		(Note 7)	-	120		dB
	fs=96kHz		111	116		dB
		(Note 7)	-	118		dB
Interchannel Isolation (1kHz)			100	120		dB
DC Accuracy						
Interchannel Gain Mismatch				0.15	0.3	dB
Gain Drift		(Note 9)		20	-	ppm/°C
Output Voltage		(Note 10)	±2.25	±2.4	±2.55	Vpp
Load Resistance		(Note 11)	600			Ω
Output Current					3.5	mA
Power Supplies						
Power Supply Current						
Normal Operation (PDN = "H")						
AVDD				60	-	mA
DVDD(fs=44.1kHz)				3	-	mA
DVDD(fs=96kHz)				5	-	mA
AVDD + DVDD					90	mA
Power-Down Mode (PDN = "L")						
AVDD + DVDD		(Note 12)		10	50	μA
Power Supply Rejection		(Note 13)		50		dB

Notes: 5. At 44.1kHz, measured by Audio Precision, System Two. Averaging mode.
At 96kHz, measured by ROHDE & SCHWARZ, UPD. Averaging mode.
Refer to the eva board manual.
6. 101dB at 16bit data and 116dB at 20bit data.
7. By Figure12. External LPF Circuit Example 2.
8. S/N does not depend on input bit length.
9. The voltage on (VREFH-VREFL) is held +5V externally.
10. Full-scale voltage (0dB). Output voltage scales with the voltage of (VREFH-VREFL).
AOUT (typ.@0dB) = (AOUT+) - (AOUT-) = ±2.4Vpp×(VREFH-VREFL)/5.
11. For AC-load. 1kΩ for DC-load.
12. In the power-down mode. P/S = DVDD, and all other digital input pins including clock pins (MCLK, BICK and LRCK) are held DVSS.
13. PSR is applied to AVDD, DVDD with 1kHz, 100mVpp. VREFH pin is held +5V.

FILTER CHARACTERISTICS (fs = 44.1kHz)

(Ta = 25°C; AVDD = 4.75~5.25V; DVDD = 3.0~5.25V; fs = 44.1kHz; Normal Speed Mode; DEM = OFF)

Parameter		Symbol	min	typ	max	Units
Digital Filter						
Passband ±0.01dB (Note 14)		PB	0		20.0	kHz
-6.0dB			-	22.05	-	kHz
Stopband (Note 14)		SB	24.1			kHz
Passband Ripple		PR			± 0.005	dB
Stopband Attenuation		SA	75			dB
Group Delay (Note 15)		GD	-	28	-	1/fs
Digital Filter + SCF						
Frequency Response 0 ~ 20.0kHz			-	± 0.2	-	dB

Note: 14. The passband and stopband frequencies scale with fs.
For example, PB = 0.4535×fs (@±0.01dB), SB = 0.546×fs.
15. The calculating delay time which occurred by digital filtering. This time is from setting the 16/20/24bit data of both channels to input register to the output of analog signal.

FILTER CHARACTERISTICS (fs = 96kHz)

(Ta = 25°C; AVDD = 4.75~5.25V; DVDD = 3.0~5.25V; fs = 96kHz; Double Speed Mode; DEM = OFF)

Parameter		Symbol	min	typ	max	Units
Digital Filter						
Passband ±0.01dB (Note 14)		PB	0		43.5	kHz
-6.0dB			-	48.0	-	kHz
Stopband (Note 14)		SB	52.5			kHz
Passband Ripple		PR			± 0.005	dB
Stopband Attenuation		SA	75			dB
Group Delay (Note 15)		GD	-	28	-	1/fs
Digital Filter + SCF						
Frequency Response 0 ~ 40.0kHz			-	± 0.3	-	dB

DC CHARACTERISTICS

(Ta = 25°C; AVDD = 4.75~5.25V; DVDD = 3.0~5.25V)

Parameter		Symbol	min	typ	max	Units
High-Level Input Voltage		VIH	70%DVDD	-	-	V
Low-Level Input Voltage		VIL	-	-	30%DVDD	V
Input Leakage Current	(Note 16)	Iin	-	-	± 10	μA

Note: 16. DFS and P/S pins have internal pull-down or pull-up devices, nominally 100kΩ.

SWITCHING CHARACTERISTICS

(Ta = 25°C; AVDD = 4.75~5.25V; DVDD = 3.0~5.25V; C_L = 20pF)

Parameter	Symbol	min	typ	max	Units
Master Clock Timing (Note 17)					
Normal Speed: 256fs, Double Speed: 128fs	fCLK	7.7		13.824	MHz
Pulse Width Low	tCLKL	28			ns
Pulse Width High	tCLKH	28			ns
Normal Speed: 384fs, Double Speed: 192fs	fCLK	11.5		20.736	MHz
Pulse Width Low	tCLKL	20			ns
Pulse Width High	tCLKH	20			ns
Normal Speed: 512fs, Double Speed: 256fs	fCLK	15.4		27.648	MHz
Normal Speed: 768fs, Double Speed: 384fs	fCLK	23.0		41.472	MHz
Pulse Width Low	tCLKL	7			ns
Pulse Width High	tCLKH	7			ns
LRCK Frequency (Note 18)					
Normal Speed Mode (DFS = "L")	fsn	30	44.1	54	kHz
Double Speed Mode (DFS = "H")	fsd	60	88.2	108	kHz
Duty Cycle	Duty	45		55	%
Serial Interface Timing					
BICK Period	tBCK	140			ns
BICK Pulse Width Low	tBCKL	60			ns
Pulse Width High	tBCKH	60			ns
BICK "↑" to LRCK Edge (Note 19)	tBLR	20			ns
LRCK Edge to BICK "↑" (Note 19)	tLRB	20			ns
SDATA Hold Time	tSDH	20			ns
SDATA Setup Time	tSDS	20			ns
Control Interface Timing					
CCLK Period	tCCK	200			ns
CCLK Pulse Width Low	tCCKL	80			ns
Pulse Width High	tCCKH	80			ns
CDTI Setup Time	tCDS	50			ns
CDTI Hold Time	tCDH	50			ns
CSN High Time	tCSW	150			ns
CSN "↓" to CCLK "↑"	tCSS	50			ns
CCLK "↑" to CSN "↑"	tCSH	50			ns
Reset Timing					
PDN Pulse Width (Note 20)	tPW	150			ns

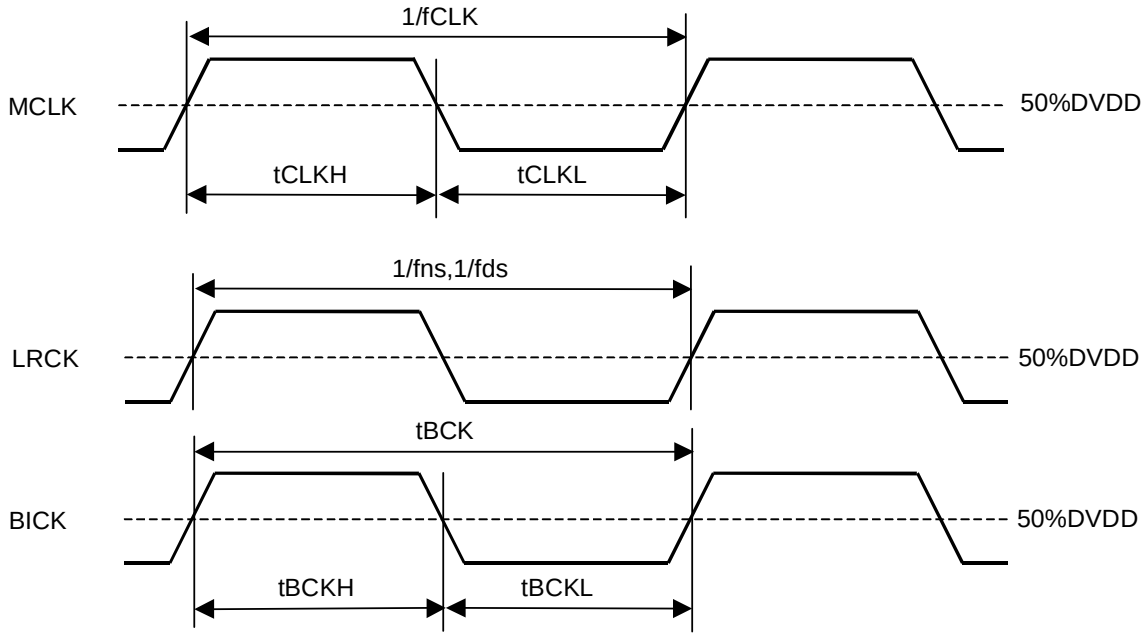
Notes: 17. **For Double Speed mode please see Appendix A for relationship of MCLK and BCLK/LRCK.**

18. When the normal and double speed modes are switched, AK4393 should be reset by PDN pin or RSTN bit.

19. BICK rising edge must not occur at the same time as LRCK edge.

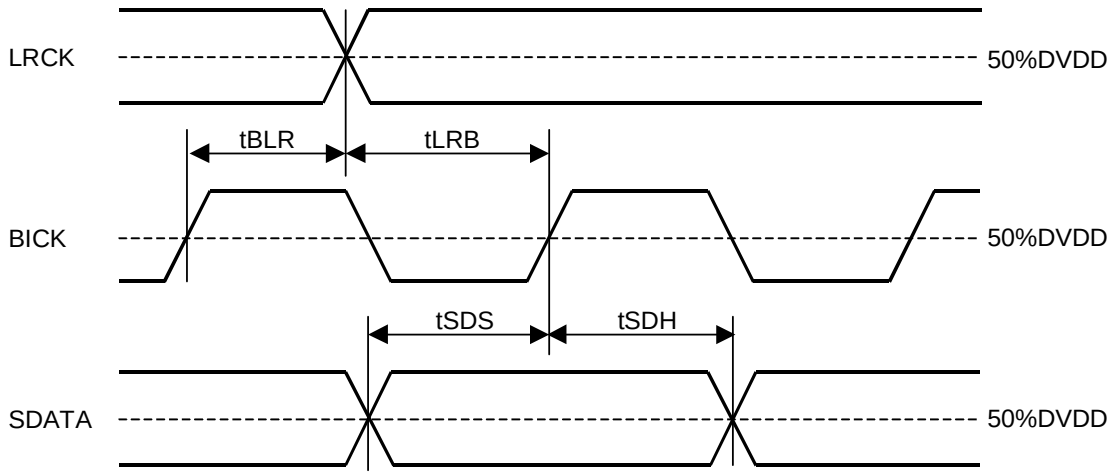
20. The AK4393 can be reset by bringing PDN "L" to "H".
When the states of CKS2-0 or DFS change, the AK4393 should be reset by PDN pin or RSTN bit.

■ **Timing Diagram**

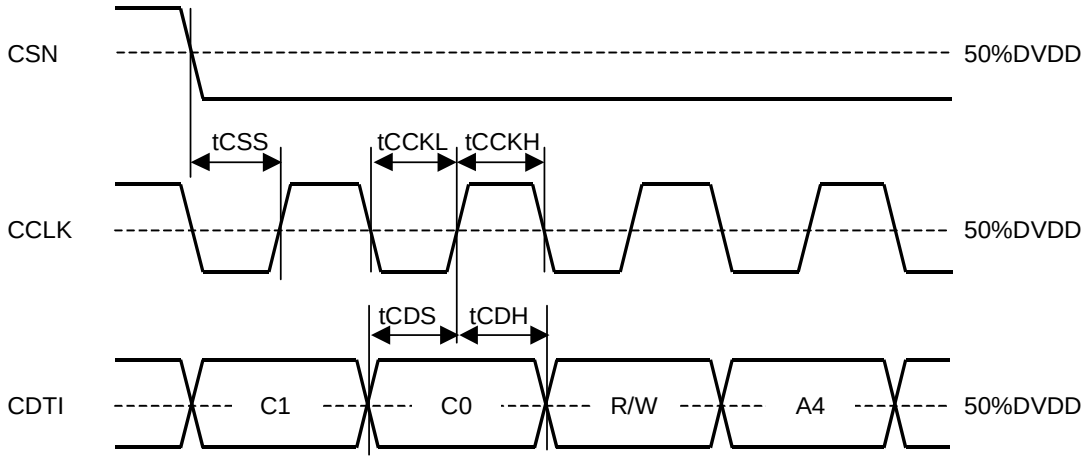


Clock Timing

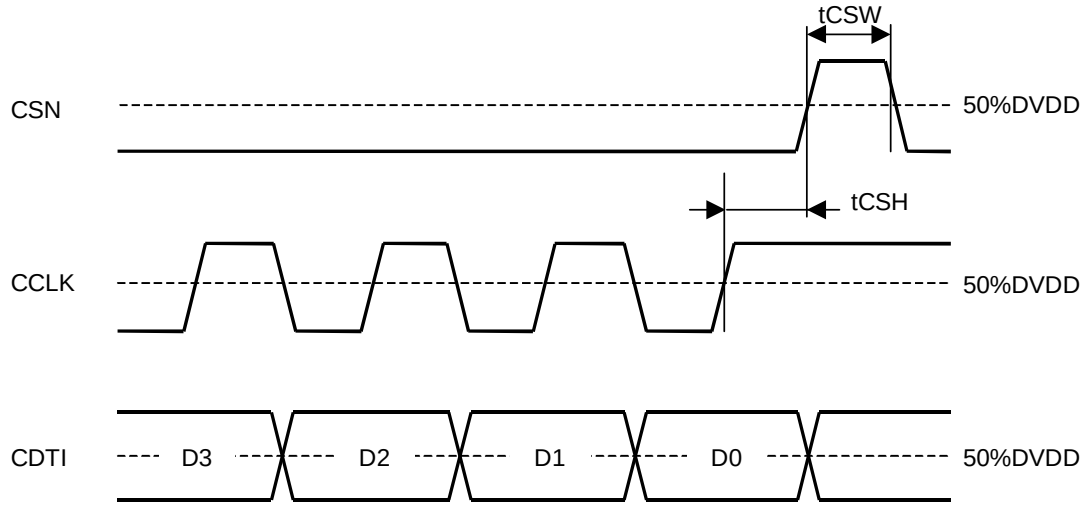
For Double Speed mode timing please see Appendix A for relationship of MCLK and BCLK/LRCK.



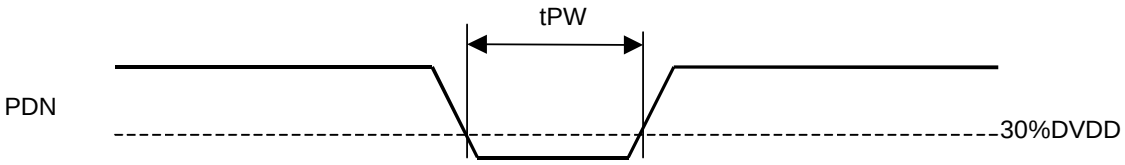
Audio Interface Timing



WRITE Command Input Timing



WRITE Data Input Timing



Power-down Timing

OPERATION OVERVIEW

■ System Clock

The external clocks, which are required to operate the AK4393, are MCLK, LRCK and BICK. The master clock (MCLK) should be synchronized with LRCK but the phase is not critical. **However, in Double Speed Mode, the phase relationship between MCLK and LRCK/BICK is limited. (Refer to Appendix A).** The MCLK is used to operate the digital interpolation filter and the delta-sigma modulator. The sampling speed is set by DFS (Table 1). The sampling rate (LRCK), CKS0/1/2 and DFS determine the frequency of MCLK (Table 2).

All external clocks (MCLK, BICK and LRCK) should always be present whenever the AK4393 is in normal operation mode (PDN = "H"). If these clocks are not provided, the AK4393 may draw excess current because the device utilizes dynamic refreshed logic internally. If the external clocks are not present, the AK4393 should be in the power-down mode (PDN = "L") or in the reset mode (RSTN = "0"). After exiting reset at power-up etc., the AK4393 is in power-down mode until MCLK and LRCK are input.

DFS	Sampling Rate (fs)		
0	Normal Speed Mode	30kHz~54kHz	Default
1	Double Speed Mode	60kHz~108kHz	

Table 1. Sampling Speed

Mode	CKS2	CKS1	CKS0	Normal	Double	
0	0	0	0	256fs	128fs	Default
1	0	0	1	256fs	256fs	
2	0	1	0	384fs	192fs	
3	0	1	1	384fs	384fs	
4	1	0	0	512fs	256fs	
5	1	0	1	512fs	N/A	
6	1	1	0	768fs	384fs	
7	1	1	1	768fs	N/A	

Table 2. System Clocks

LRCK	MCLK				BICK
fs	256fs	384fs	512fs	768fs	64fs
32.0kHz	8.1920MHz	12.2880MHz	16.3840MHz	24.5760MHz	2.0480MHz
44.1kHz	11.2896MHz	16.9344MHz	22.5792MHz	33.8688MHz	2.8224MHz
48.0kHz	12.2880MHz	18.4320MHz	24.5760MHz	36.8640MHz	3.0720MHz

Table 3. System clock example (Normal Speed Mode)

LRCK	MCLK				BICK
fs	128fs	192fs	256fs	384fs	64fs
88.2kHz	11.2896MHz	16.9344MHz	22.5792MHz	33.8688MHz	5.6448MHz
96.0kHz	12.2880MHz	18.4320MHz	24.5760MHz	36.8640MHz	6.1440MHz

Table 4. System clock example (Double Speed Mode)

■ Audio Serial Interface Format

Data is shifted in via the SDATA pin using BICK and LRCK inputs. Five data formats are supported and selected by the DIF0-2 as shown in Table 5. In all formats the serial data is MSB-first, 2's compliment format and is latched on the rising edge of BICK. Mode 2 can be used for 20 and 16 MSB justified formats by zeroing the unused LSBs.

Mode	DIF2	DIF1	DIF0	Mode	BICK	Figure
0	0	0	0	0: 16bit LSB Justified	≥32fs	Figure 1
1	0	0	1	1: 20bit LSB Justified	≥40fs	Figure 2
2	0	1	0	2: 24bit MSB Justified	≥48fs	Figure 3
3	0	1	1	3: I^2S Compatible	≥48fs	Figure 4
4	1	0	0	4: 24bit LSB Justified	≥48fs	Figure 2

Table 5. Audio Data Formats

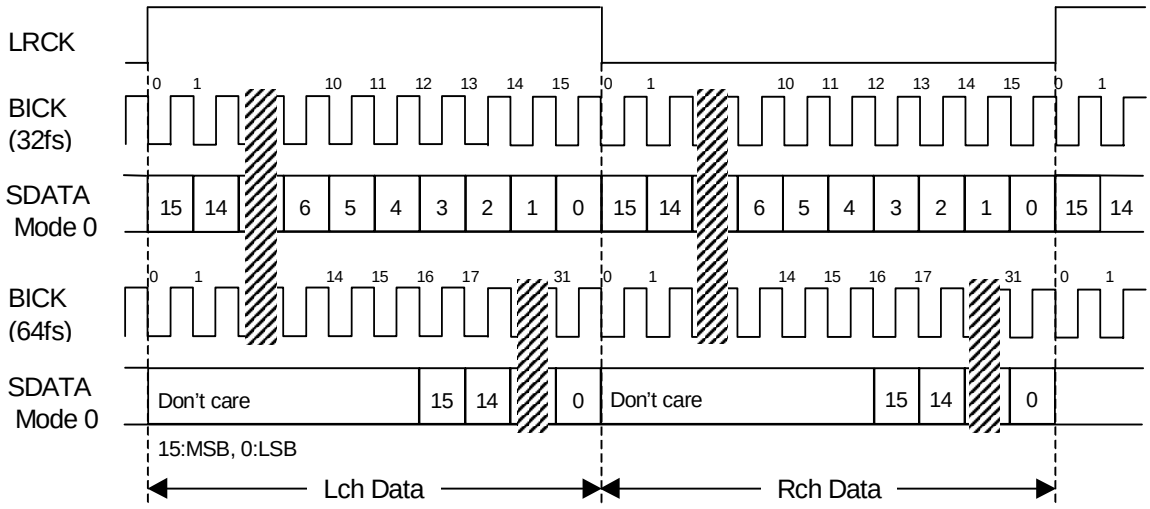


Figure 1. Mode 0 Timing

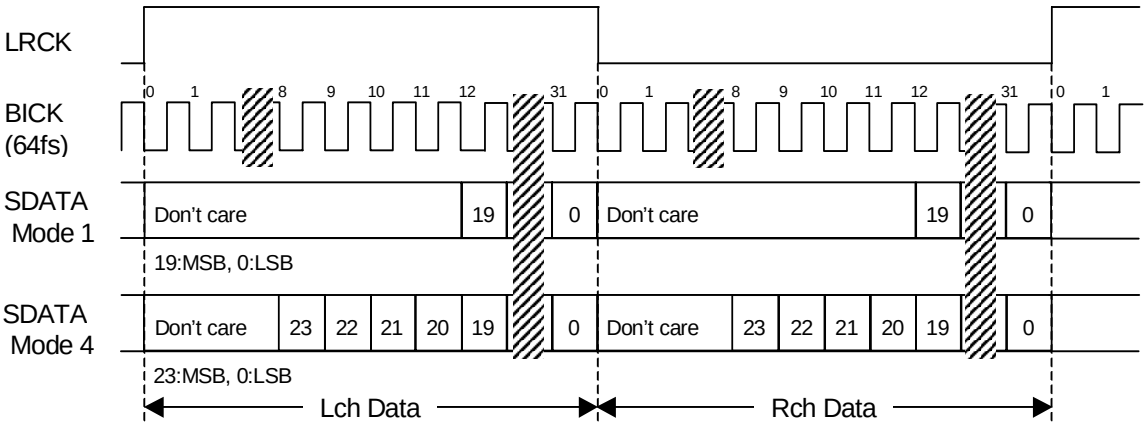


Figure 2. Mode 1,4 Timing

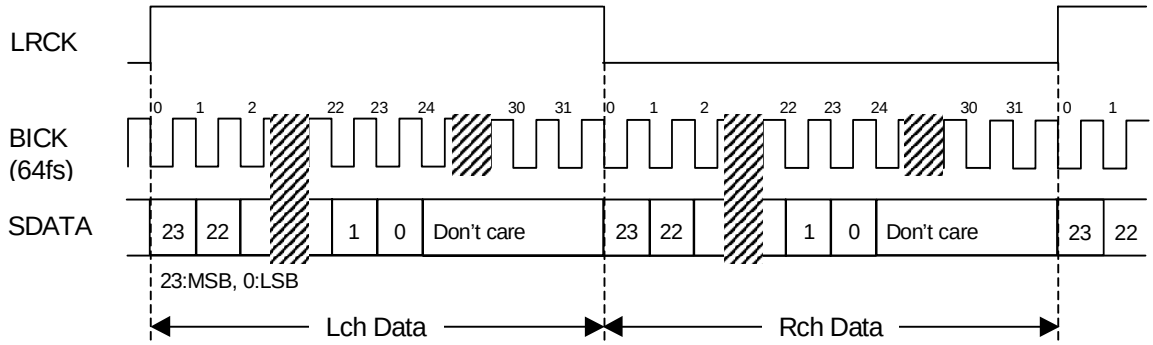


Figure 3. Mode 2 Timing

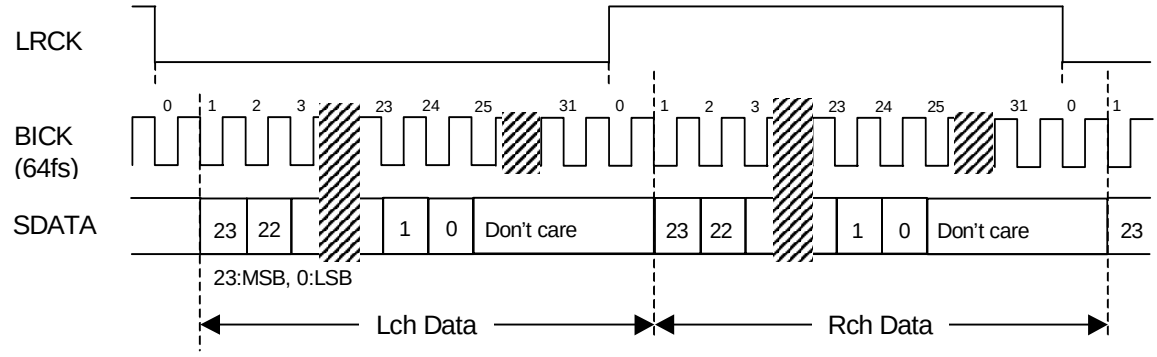


Figure 4. Mode 3 Timing

■ De-emphasis filter

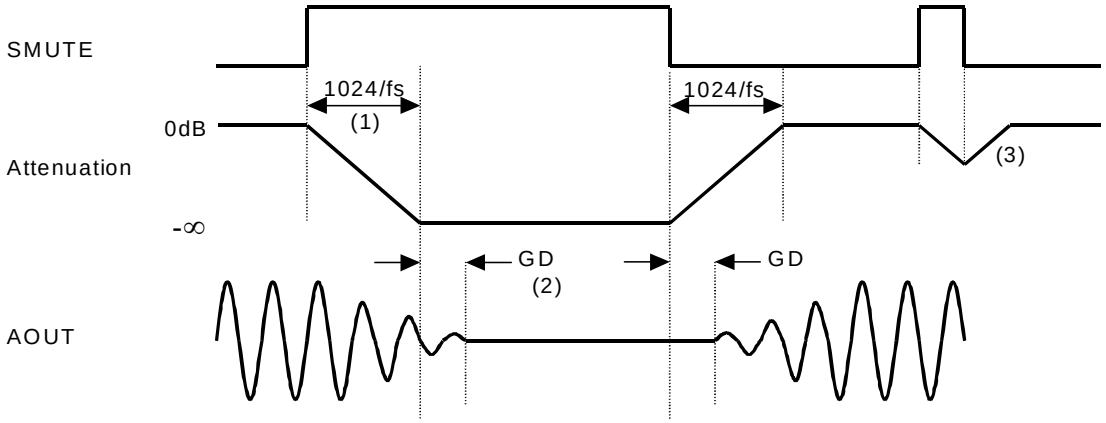
A digital de-emphasis filter is available for 32, 44.1, 48 or 96kHz sampling rates (tc = 50/15μs) and is enabled or disabled with the DEM0, DEM1 and DFS input pins.

DEM1	DEM0	DFS	Mode	
0	0	0	44.1kHz	Default
0	1	0	OFF	
1	0	0	48kHz	
1	1	0	32kHz	
0	0	1	OFF	
0	1	1	OFF	
1	0	1	96kHz	
1	1	1	OFF	

Table 6. De-emphasis filter control

■ Soft mute operation

Soft mute operation is performed at digital domain. When SMUTE goes to "H", the output signal is attenuated by -∞ during 1024 LRCK cycles. When SMUTE is returned to "L", the mute is cancelled and the output attenuation gradually changes to 0dB during 1024 LRCK cycles. If the soft mute is cancelled within 1024 LRCK cycles after starting the operation, the attenuation is discontinued and returned to 0dB. The soft mute is effective for changing the signal source without stopping the signal transmission.



Notes:

(1) The output signal is attenuated by -∞ during 1024 LRCK cycles (1024/fs).
(2) Analog output corresponding to digital input has the group delay (GD).
(3) If the soft mute is cancelled within 1024 LRCK cycles, the attenuation is discontinued and returned to 0dB.

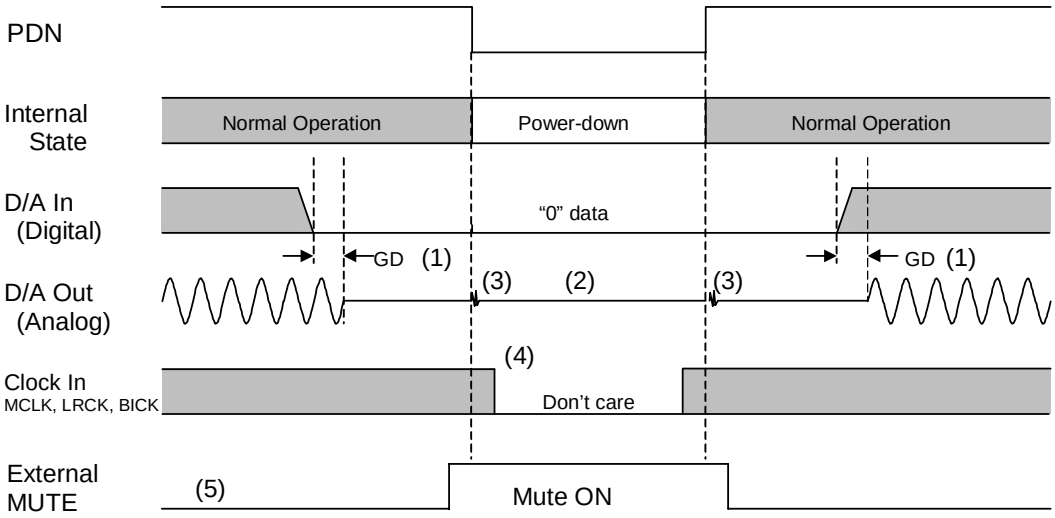
Figure 5. Soft mute operation

■ System Reset

The AK4393 should be reset once by bringing PDN = "L" upon power-up. The AK4393 is powered up and the internal timing starts clocking by LRCK "↑" after exiting reset and power down state by MCLK. The AK4393 is in the power-down mode until MCLK and LRCK are input.

■ Power-Down

The AK4393 is placed in the power-down mode by bringing PDN pin "L" and the anlog outputs are floating (Hi-Z). Figure 6 shows an example of the system timing at the power-down and power-up.



Notes:

(1) The analog output corresponding to digital input has the group delay (GD).
(2) Analog outputs are floating (Hi -Z) at the power-down mode.
(3) Click noise occurs at the edge of PDN signal. This noise is output even if "0" data is input.
(4) The external clocks (MCLK, BICK and LRCK) can be stopped in the power-down mode (PDN = "L").
(5) Please mute the analog output externally if the click noise (3) influences system application. The timing example is shown in this figure.

Figure 6. Power-down/up sequence example

■ Click Noise from analog output

Click noise occurs from analog output in the following cases.

1) When switching de-emphasis mode by DEM0, DEM1 and DFS pins,
2) When switching serial data mode by DIF0, DIF1 and DIF2 pins,
3) When going and exiting power down mode by PDN pin,
4) When switching normal speed and double speed by DFS pin,

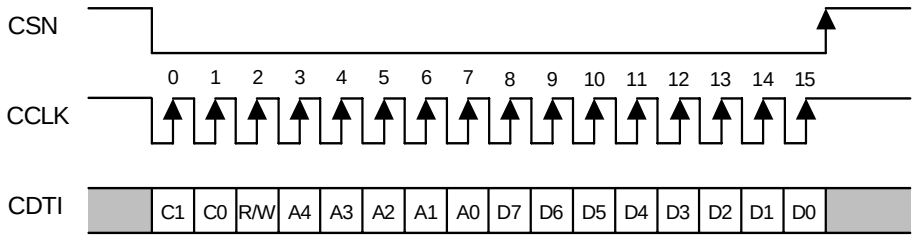
However in case of 1) & 2), If the input data is "0" or the soft mute is enabled (after 1024 LRCK cycles from SMUTE = "H"), no click noise occur except for switching DFS pin.

■ Mode Control Interface

Pins (parallel control mode) or registers (serial control mode) can control each functions of the AK4393. For DIF2-0, CKS2-0 and DFS, the setting of pin and register are "ORed" internally. So, even serial control mode, pin setting can also control these functions.

The serial control interface is enabled by the P/S pin = "L". In this mode, pin setting must be all "L". Internal registers may be written by 3-wire µP interface pins: CSN, CCLK and CDTI. The data on this interface consists of Chip address (2bits, C1/0; fixed to "01"), Read/Write (1bit; fixed to "1"), Register address (MSB first, 5bits) and Control data (MSB first, 8bits). The AK4393 latches the data on the rising edge of CCLK, so data should be clocked in on the falling edge. The writing of data becomes valid by CSN "↑". The clock speed of CCLK is 5MHz(max). The CSN and CCLK must be fixed to "H" when the register does not be accessed.

PDN = "L" resets the registers to their default values. When the state of P/S pin is changed, the AK4393 should be reset by PDN = "L". In serial mode, the internal timing circuit is reset by RSTN bit, but the registers are not initialized.



C1-C0: Chip Address (Fixed to "01")
R/W: READ/WRITE (Fixed to "1", Write only)
A4-A0: Register Address
D7-D0: Control Data

Figure 7. Control I/F Timing

*The AK4393 does not support the read command and chip address. C1/0 and R/W are fixed to "011"
*When the AK4393 is in the power down mode (PDN = "L") or the MCLK is not provided, writing into the control register is inhibited.
*For setting the registers, the following sequence is recommended.

- Control 1 register
  (1) Writing RSTN = "0" and other bits (D6-D1) to the register at the same time.
  (2) Writing RSTN = "1" to the register. The other bits are no change.
- Control 2 register
  This writing sequence has no limitation like control 1 register.

*When RSTN = "0", the click noise is output from AOUT pins.
*If the mode setting is done without setting RSTN = "0", large noise may be output from AOUT pins. (Especially when CKS0/1/2 are changed.)

■ Register Map

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Control 1	0	CKS2	CKS1	CKS0	DIF2	DIF1	DIF0	RSTN
01H	Control 2	0	0	0	0	DFS	DEM1	DEM0	SMUTE
02H	Test	TEST7	TEST6	TEST5	TEST4	TEST3	TEST2	TEST1	TEST0

Notes:

For addresses from 03H to 1FH, data must not be written.

When PDN pin goes to "L", the registers are initialized to their default values. When RSTN bit goes to "0", the only internal timing is reset and the registers are not initialized to their default values. DIF2-0, CKS2-0 and DFS bits are ORed with pins respectively.

■ Register Definitions

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Control 1	0	CKS2	CKS1	CKS0	DIF2	DIF1	DIF0	RSTN
default		0	0	0	0	0	0	0	1

RSTN: Internal timing reset

0: Reset. All registers are not initialized.

1: Normal Operation

When the states of CKS2-0 or DFS change, the AK4393 should be reset by PDN pin or RSTN bit.

DIF2-0: Audio data interface modes (see Table 5)

Initial: "000", Mode 0

Register bits are ORed with DIF2-0 pins if P/S = "L".

CKS2-0: Master Clock Frequency Select (see Table 2)

Initial: "000", Mode 0

Register bits are ORed with CKS2-0 pins if P/S = "L".

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
01H	Control 2	0	0	0	0	DFS	DEM1	DEM0	SMUTE
default		0	0	0	0	0	0	0	0

SMUTE: Soft Mute Enable

0: Normal operation

1: DAC outputs soft-muted

DEM1-0: De-emphasis response (see Table 6)

Initial: "00", 44.1kHz

DFS: Sampling speed control (see Table 1)

0: Normal speed

1: Double speed

Register bit is ORed with DFS pin if P/S = "L".

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
02H	Test	TEST7	TEST6	TEST5	TEST4	TEST3	TEST2	TEST1	TEST0
default		0	0	0	0	0	0	0	0

TEST7-0: Test mode. Do not write any data to 02H.

SYSTEM DESIGN

Figure 8 and 9 show the system connection diagram. An evaluation board (AKD4393) is available which demonstrates the optimum layout, power supply arrangements and measurement results.

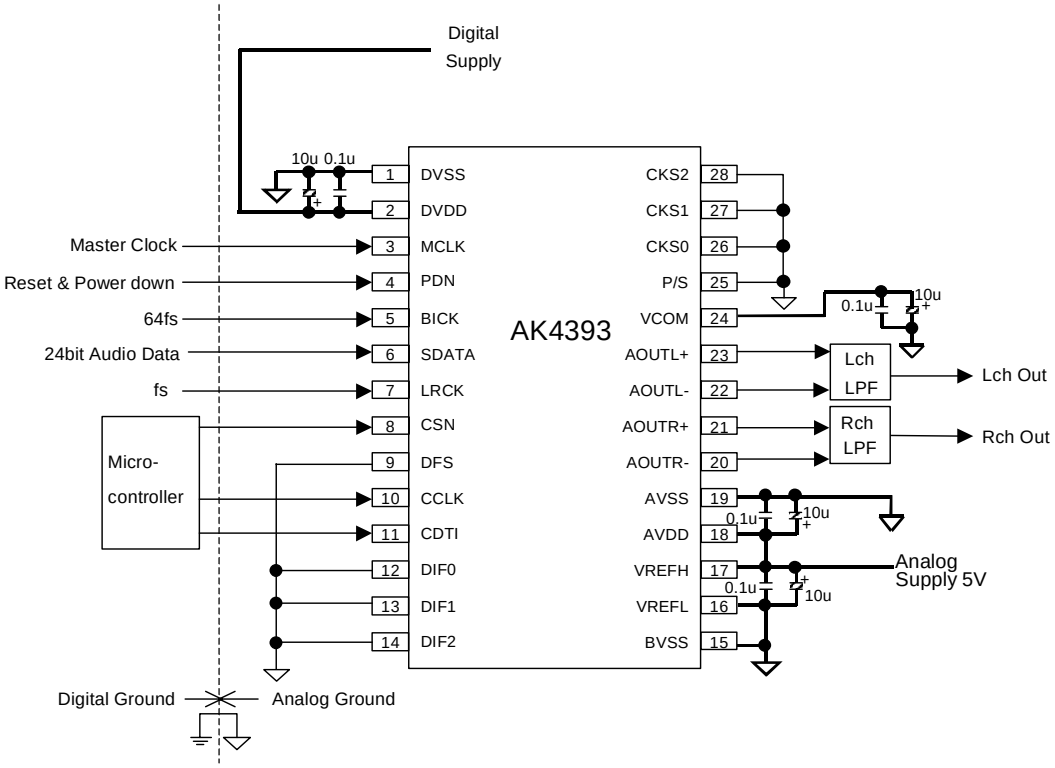


Figure 8. Typical Connection Diagram (Serial mode)

Notes:

- LRCK = fs, BICK = 64fs.
- Power lines of AVDD and DVDD should be distributed separately from the point with low impedance of regulator etc.
- AVSS, BVSS and DVSS must be connected to the same analog ground plane.
- When AOUT drives some capacitive load, some resistor should be added in series between AOUT and capacitive load.
- All input pins except pull-down/pull-up pins should not be left floating.

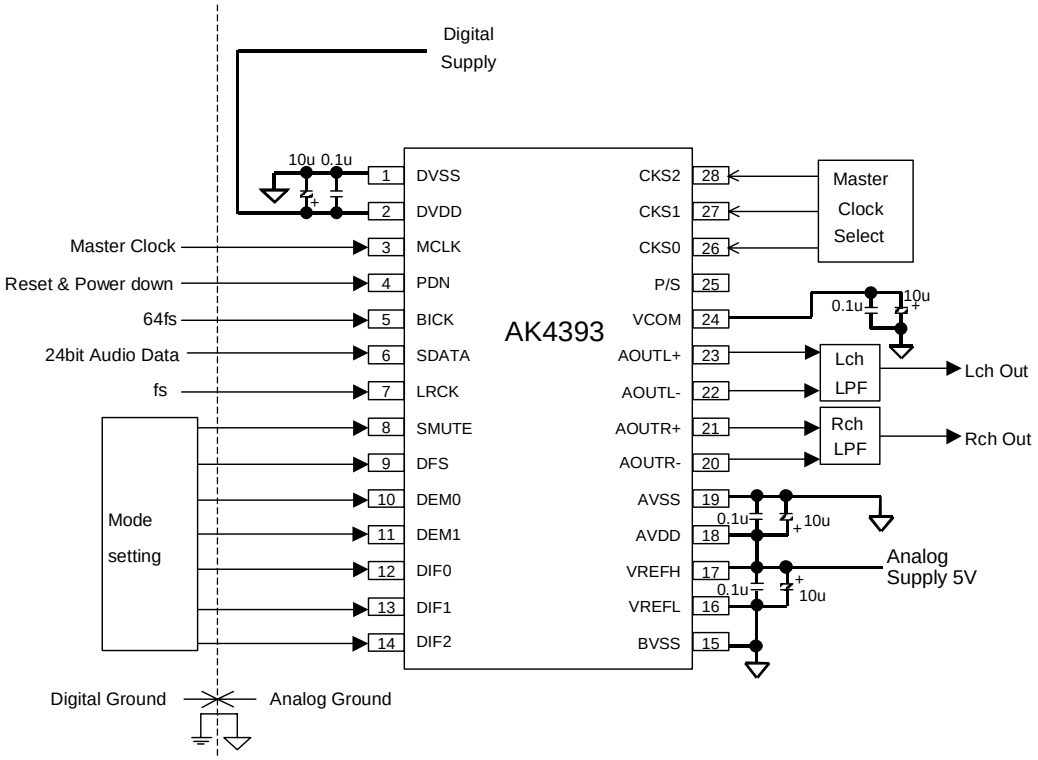


Figure 9. Typical Connection Diagram (Parallel mode)

Notes:

- LRCK = fs, BICK = 64fs.
- Power lines of AVDD and DVDD should be distributed separately from the point with low impedance of regulator etc.
- AVSS, BVSS and DVSS must be connected to the same analog ground plane.
- When AOUT drives some capacitive load, some resistor should be added in series between AOUT and capacitive load.
- All input pins except pull-down/pull-up pins should not be left floating.

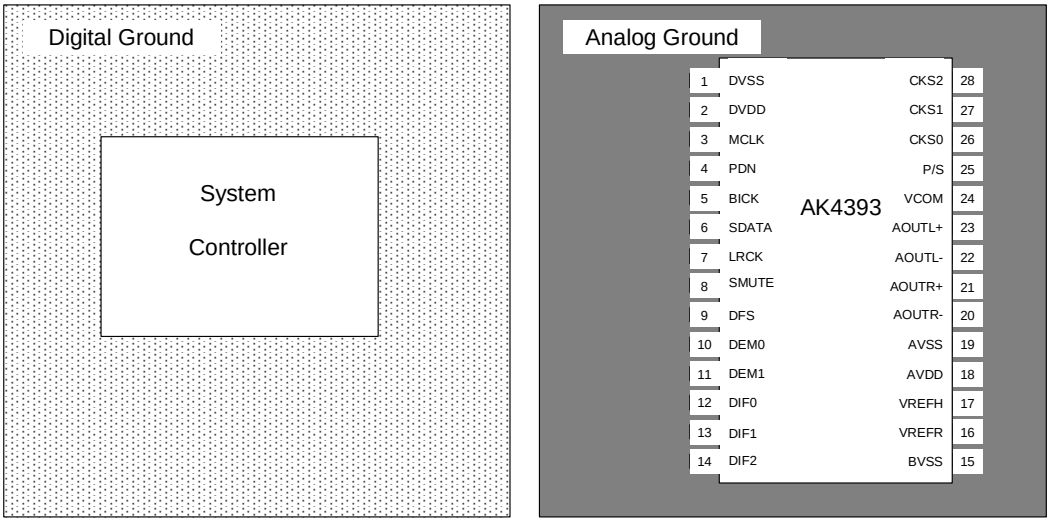


Figure 10. Ground Layout

1. Grounding and Power Supply Decoupling

To minimize coupling by digital noise, decoupling capacitors should be connected to AVDD and DVDD, respectively. AVDD is supplied from analog supply in system and DVDD is supplied from digital supply in system. If AVDD and DVDD are supplied separately, the power up sequence is not critical. **AVSS, BVSS and DVSS must be connected to analog ground plane.** System analog ground and digital ground should be connected together near to where the supplies are brought onto the printed circuit board. Decoupling capacitors for high frequency should be placed as near as possible.

2. Voltage Reference

The differential Voltage between VREFH and VREFL set the analog output range. VREFH pin is normally connected to AVDD and VREFL pin is normally connected to AVSS. VREFH and VREFL should be connected with a 0.1µF ceramic capacitor. VCOM is a signal ground of this chip. An electrolytic capacitor 10µF parallel with a 0.1µF ceramic capacitor attached to VCOM pin eliminates the effects of high frequency noise. No load current may be drawn from VCOM pin. All signals, especially clocks, should be kept away from the VREFH, VREFL and VCOM pins in order to avoid unwanted coupling into the AK4393.

3. Analog Outputs

The analog outputs are full differential outputs and 2.4Vpp (typ@VREF=5V) centered around VCOM. The differential outputs are summed externally, V_{AOUT} = (AOUT+) - (AOUT-) between AOUT+ and AOUT-. If the summing gain is 1, the output range is 4.8Vpp (typ@VREF=5V). The bias voltage of the external summing circuit is supplied externally. The input data format is 2's complement. The output voltage (V_{AOUT}) is a positive full scale for 7FFFFFH (@24bit) and a negative full scale for 800000H (@24bit). The ideal V_{AOUT} is 0V for 000000H(@24bit).

The internal switched-capacitor filters attenuate the noise generated by the delta-sigma modulator beyond the audio passband.

Figure 11 shows an example of external LPF circuit summing the differential outputs by an op-amp.
Figure 12 shows an example of differential outputs and LPF circuit example by three op-amps.

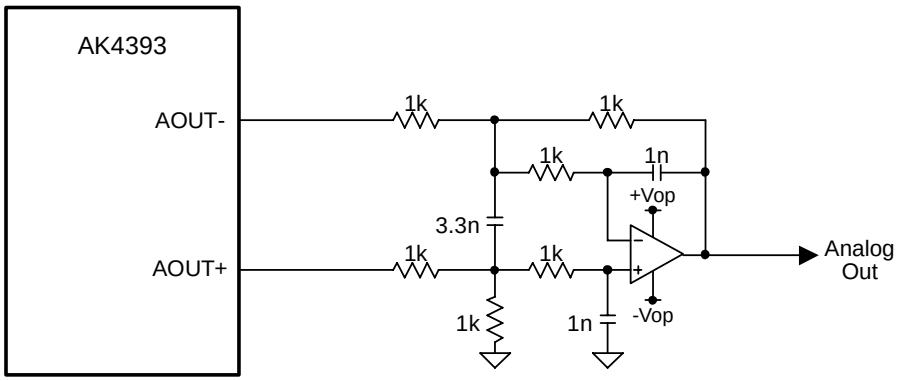


Figure 11. External LPF Circuit Example 1

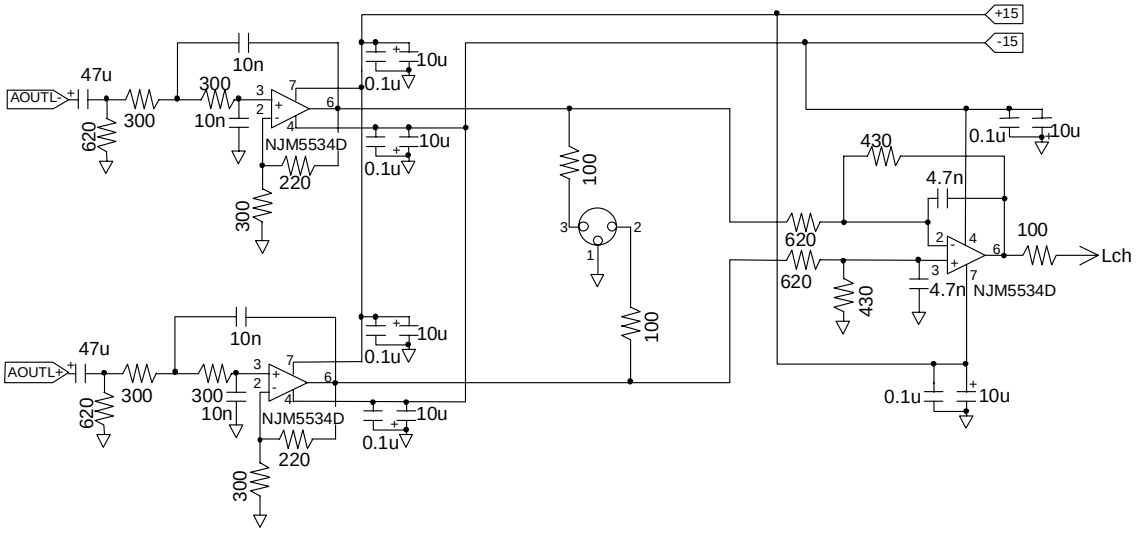
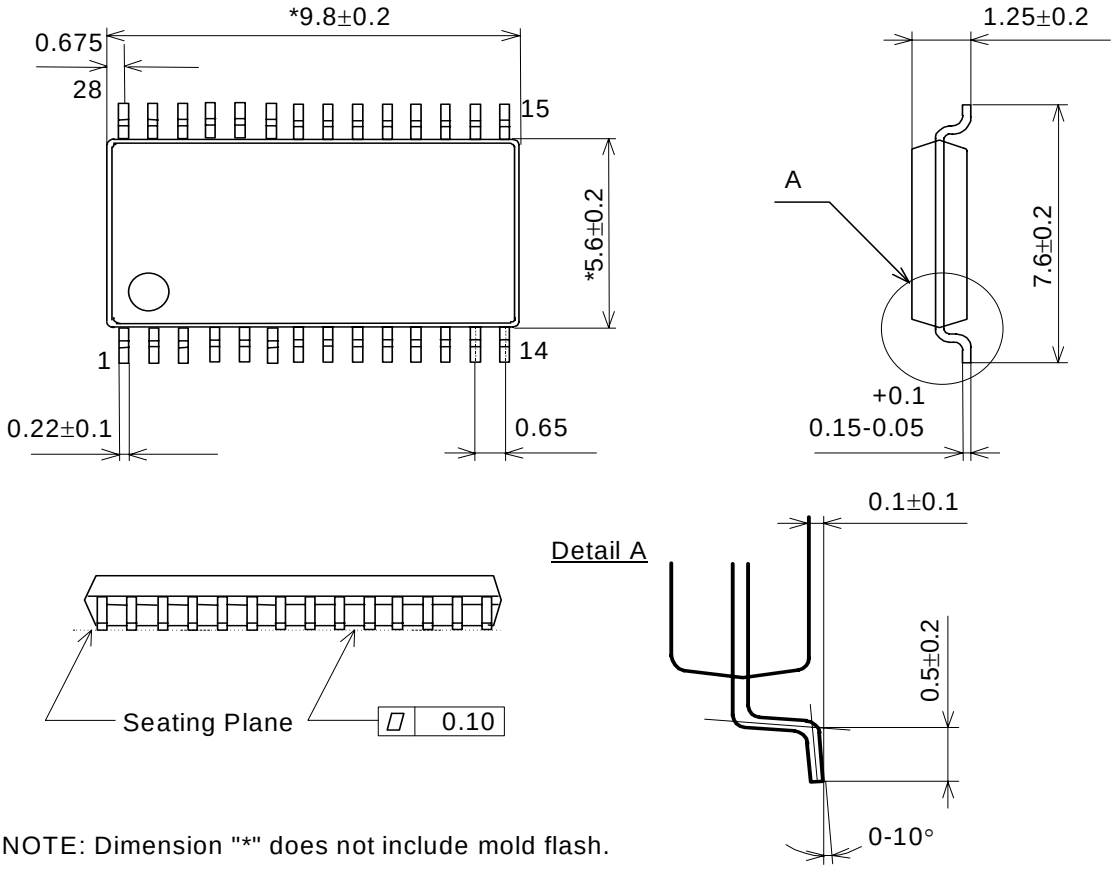


Figure 12. External LPF Circuit Example 2

PACKAGE

28pin VSOP (Unit: mm)

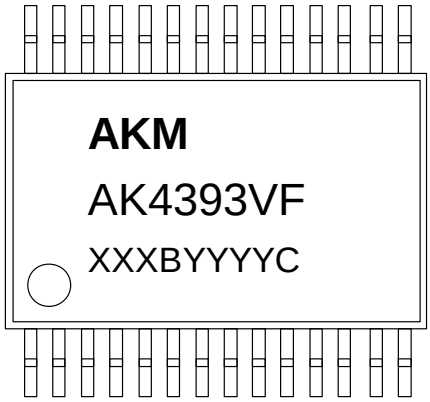


NOTE: Dimension "*" does not include mold flash.

■ **Material & Lead finish**

Package molding compound: Epoxy
Lead frame material: Cu
Lead frame surface treatment: Solder plate

MARKING



XXXXBYYYYC data code identifier

XXXB: Lot number (X : Digit number, B : Alpha character)
YYYYC: Assembly date (Y : Digit number C : Alpha character)

Appendix A

In Double Speed Mode, the phase relationship between MCLK and LRCK/BICK is limited (Table 7). If the phase relationship happens during this prohibited period, it is possible to occur the inverse of output channel. The phase relationship must be set to avoid the prohibited period when the AK4393 operates at Double Speed Mode. The prohibited period is specified by the combination of digital power supply voltage (DVDD), MCLK frequency and audio data format (Table 5). When the audio data formats are 16/20/24bit LSB Justified (Mode 0,1,4) and 24bit MSB Justified (Mode 2), the phase relationship (tLRM: Figure 11) between the rising edge of LRCK and the rising edge of MCLK has the prohibited period of min to max in Table 7. In case of I^2S Compatible (Mode 3), the relationship between the falling edge of BICK and the rising edge of MCLK has the prohibited period (tBCM: Figure 12)

Sampling Mode	Digital Power Supply, DVDD	MCLK Frequency	Mode Setting				Prohibited Period		Units
			CKS2	CKS1	CKS0	DFS	min	max	
Double Speed	3.0 to 5.25V	128fs	0	0	0	1	0.4	1.7	ns
Double Speed	3.0 to 5.25V	192fs	0	1	0	1	-0.5	0.8	ns
Double Speed	3.0 to 5.25V	256fs	0	0	1	1	-0.7	0.7	ns
Double Speed	3.0 to 5.25V	256fs	1	0	0	1	-0.7	0.7	ns
Double Speed	3.0 to 5.25V	384fs	0	1	1	1	-1.7	-0.3	ns
Double Speed	3.0 to 5.25V	384fs	1	1	0	1	-1.7	-0.3	ns
Double Speed	4.75 to 5.25V	128fs	0	0	0	1	0.8	1.5	ns
Double Speed	4.75 to 5.25V	192fs	0	1	0	1	-0.2	0.5	ns
Double Speed	4.75 to 5.25V	256fs	0	0	1	1	-0.3	0.4	ns
Double Speed	4.75 to 5.25V	256fs	1	0	0	1	-0.3	0.4	ns
Double Speed	4.75 to 5.25V	384fs	0	1	1	1	-1.0	-0.3	ns
Double Speed	4.75 to 5.25V	384fs	1	1	0	1	-1.0	-0.3	ns

Table **7**. Prohibited Period

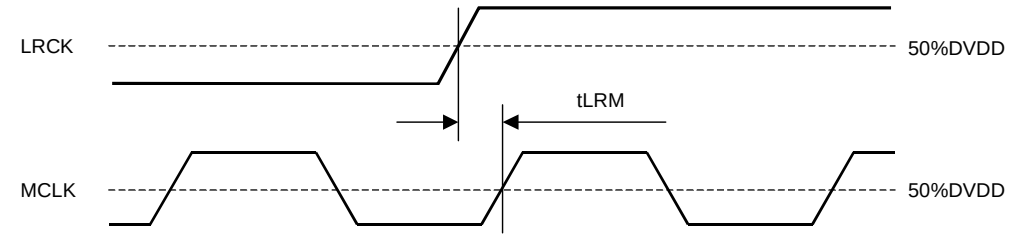


Figure 11. 16/20/24bit LSB Justified, 24bit MSB Justified

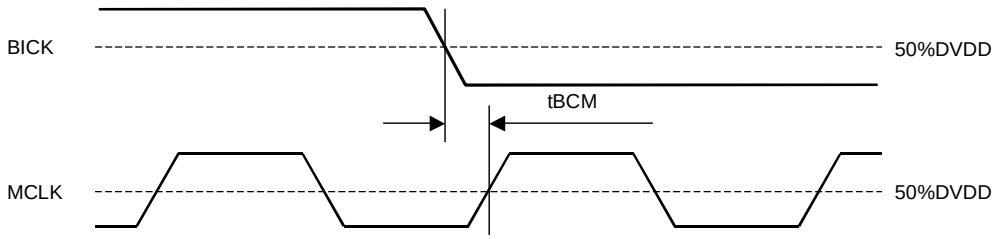
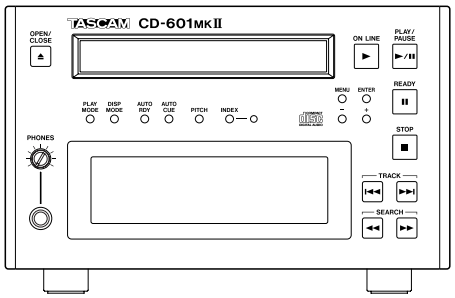


Figure 12. I^2S Compatible



TASCAM
TEAC Professional Division

SERVICE MANUAL

CD-601MKⅡ & RC-601MKⅡ

COMPACT disc DIGITAL AUDIO

CD Player

CONTENTS

目次

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : MAY,2005

S-0143

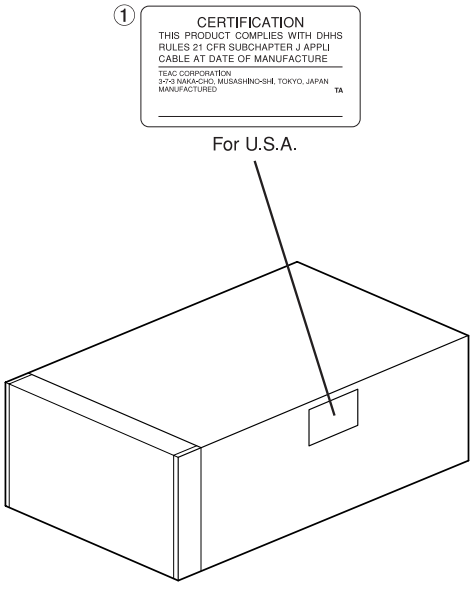
1. SAFETY INFOMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

● CAUTION
USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Optical pickup:

Type	:	KSS-213C
Manufacturer	:	SONY Corporation
Laser output	:	Less than 0.4 mW on the objective lens
Wavelength	:	760-800 nm



2. SPECIFICATIONS
仕様

CD-601MKII

Rating

Model:	CD player
Discs used:	Compact discs (12 cm, 8 cm)
Compatible discs:	Audio CD (CD-DA), CD-R, CD-RW,
Number of audio channels:	2 channels
Number of quantized bits:	16-bit linear/channel
Sampling frequency:	44.1 kHz
Transmission rate:	4.3218 MB/sec
Modulation method:	EFM
Pickup drive system:	Objective lens drive system, optical type 3 beams
Objective lens drive system:	2D parallel drive system
Light source:	Semiconductor laser
Wavelength:	780 nm

ANALOG OUTPUTS

BALANCED (L, R)

Connector:	XLR 3-31 or equivalent
Specified output level:	+4 dBu
Max. output level:	+24 dBu, +22 dBu, +20 dBu, +15 dBu (according to output level setting)
Output level calibration variable range:	0 dB to -6 dB or more
Output impedance:	150 Ω

UNBALANCED (L, R)

Connector:	RCA
Specified output level:	-10 dBV
Max. output level:	+6 dBV
Output impedance:	100 Ω

PHONES

Connector:	Stereo phone jack
Max. output level:	50 mW + 50 mW (at 32 Ω load)

DIGITAL OUTPUTS

AES/EBU

Connector:	XLR 3-31 or equivalent
Output signal format:	IEC60958-4 (AES/EBU)
Output impedance:	110 Ω
Sampling frequency:	44.1 kHz, 48 kHz (at word synchronization)

SPDIF

Connector:	RCA pin jack
Output signal format:	IEC60958-3 (S/PDIF)
Output impedance:	75 Ω
Sampling frequency:	44.1 kHz, 48 kHz (at word synchronization)

Other I/O

WORD SYNC IN

Connector:	BNC
Input impedance:	75 Ω (automatic termination)
Input level:	TTL level
Synchronizing frequency range:	44.1 kHz ±0.1% and 48 kHz ±0.1%

CD-601MKII

定格

形式：	CD プレーヤー
使用ディスク：	コンパクトディスク（12 cm, 8 cm）
再生可能ディスク：	オーディオCD（CD-DA）、CD-R、CD-RW、
音声チャンネル数：	2 チャンネル
量子化ビット数：	16 ビットリニア／チャンネル
サンプリング周波数：	44.1 kHz
伝送レート：	4.3218 MB/sec
変調方式：	EFM
ピックアップ駆動方式：	対物レンズ駆動方式、光学式3ビーム
対物レンズ駆動方式：	2 次元平行駆動方式
光源：	半導体レーザー
波長：	780 nm

ANALOG OUTPUTS

BALANCED（L, R）

コネクター：	XLR 3-31 相当
規定出力レベル：	+4 dBu
最大出力レベル：	+24 dBu、+22 dBu、+20 dBu、+15 dBu（出力レベル設定による）
出力レベルキャリブレーション可変範囲：	0dB ～− 6dB 以上
出力インピーダンス：	150 Ω

UNBALANCED（L, R）

コネクター：	RCA
規定出力レベル：	−10 dBV
最大出力レベル：	+6 dBV
出力インピーダンス：	100 Ω

PHONES

コネクター：	ステレオホンジャック
最大出力レベル	50 mW + 50 mW（32 Ω負荷時）

DIGITAL OUTPUTS

AES/EBU

コネクター：	XLR 3-31 相当
出力信号フォーマット：	IEC60958-4（AES/EBU）
出力インピーダンス：	110 Ω
サンプリング周波数：	44.1 kHz、48 kHz（WORD 同期時）

SPDIF

コネクター：	RCA ピンジャック
出力信号フォーマット：	IEC60958-3（S/PDIF）
出力インピーダンス：	75 Ω
サンプリング周波数：	44.1 kHz、48 kHz（WORD 同期時）

その他の入出力

WORD SYNC IN

コネクター：	BNC
入力インピーダンス：	75 Ω（自動ターミネート）
入力レベル：	TTL レベル
同期周波数範囲：	44.1 kHz ±0.1%および48 kHz ±0.1%

WORD SYNC THRU
Connector: BNC

REMOTE (PARALLEL)
Connector: 37-pin D-Sub female

REMOTE (SERIAL)
Connector: 15-pin D-Sub female
Electrical characteristics: RS-232C-compliant

Analog Output Electrical Characteristics

The following characteristics are the balanced and unbalanced analog output specifications.
Playback frequency response: 20 Hz to 20 kHz, ±0.5 dB
Signal-to-noise ratio: 102 dB or more (20 kHz LPF, A-weighted)
Dynamic range: 98 dB or more (20 kHz LPF, A-weighted) [1 kHz max. output level -60 dB]
Distortion (THD+N): 0.008% or less (20 kHz LPF) [1 kHz max. output level]
Channel Separation: 90 dB or more [1 kHz]
Wow flutter: Measured limit value or less

Other Characteristics

Audio rise time: Within 10 msec
Anti-shock time: 20 seconds

General

Power requirements:
USA/CND: 120 V AC, 60 Hz
EUR/UK: 230 V AC, 50 Hz
AUS: 240 V AC, 50 Hz
Power consumption: 24 W
External dimensions: 220 W x 142 H x 382.4 D (mm) (including feet and protrusions)
Weight: 6.0 kg
Operating temperature: 5 to 35°C
Max. tilt of installation surface: 5 degrees
Accessories: Power cable, Owner's Manual, Warranty

* Specifications and external appearance are subject to change without notice in the interest of product improvement.
* Note that illustrations in the Owner's Manual may differ on some products due to product improvements.

WORD SYNC THRU
コネクター： BNC

REMOTE（PARALLEL）
コネクター： 37P D-SUB メス

REMOTE（SERIAL）
コネクター： 15P D-SUB メス
電気的特性： RS-232C 準拠

アナログ出力電気的特性

以下の特性はバランスおよびアンバランスのアナログ出力の仕様です。
再生周波数特性： 20 Hz ～ 20 kHz, ±0.5 dB
S/N 比： 102 dB 以上（20 kHz LPF, A-weighted）
ダイナミックレンジ： 98 dB 以上（20 kHz LPF, A-weighted）［1 kHz 最大出力レベル−60dB］
歪率（THD+N）： 0.008 %以下（20 kHz LPF）［1 kHz 最大出力レベル］
チャンネル セパレーション： 90 dB 以上［1 kHz］
ワウフラッター： 測定限界値以下

その他の特性

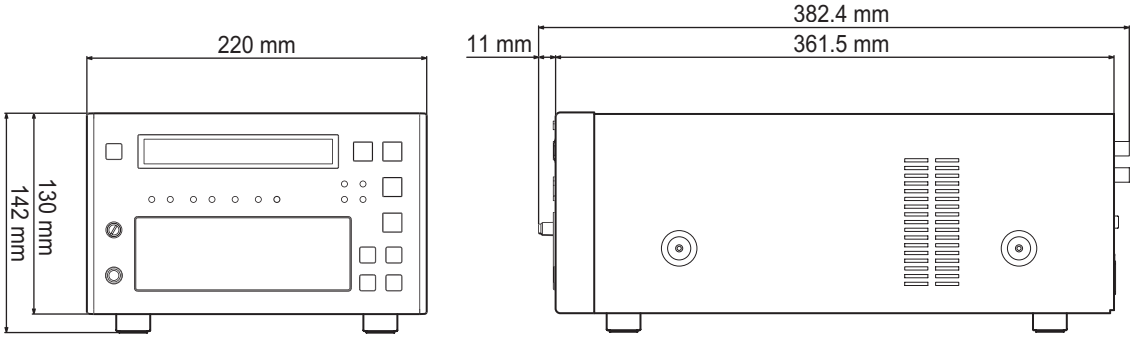
音声立ち上がり時間： 10 msec 以内
アンチショック時間： 20 秒

一般

電源： AC100 V、50/60 Hz
消費電力： 24 W
外形寸法： 220 W × 142 H × 382.4 D（mm）（フット、突起部含む）
質量： 6.0 kg
動作温度： 5 ～ 35 ℃
設置時傾斜： 5 度以内
付属品： 電源コード、取扱説明書、保証書

* 仕様および外観は改善のため予告なく変更することがあります。
* 製品の改善により、取扱説明書のイラストなどが、一部製品と異なることがあります。あらかじめご了承ください。

Dimensional drawing 外形寸法図



RC-601MKII

I/O

PHONES

Connector:	Stereo phone jack
Max. output level:	50 mW + 50 mW (at 32 Ω load)

PLAYER UNIT

Connector:	D-Sub 15-pin
Electrical characteristics:	RS-232C-compliant

MONITOR IN

Connector:	D-Sub 25-pin
Max. input level:	+6 dBV

Headphone output electrical characteristics

Playback frequency characteristics:	
	20 Hz to 20 kHz, +1.0/-2.0 dB
Signal-to-noise ratio:	70 dB or more
	(20 kHz LPF, A-weighted)
Distortion (THD + N):	0.5 % or less (20 kHz LPF)
	[1 kHz max. output level]

General

Power requirements:	DC power supplied from CD-601MKII
External dimensions:	216 W x 69 H x 201 D (mm)
	(including feet and protrusions)
Weight:	1.3 kg (excluding cables)
Accessories:	Connector cable (5 m), Owner's Manual, Warranty

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* Note that illustrations in the Owner's Manual may differ on some products due to product improvements.

RC-601MKII

入出力

PHONES

コネクター：	ステレオホンジャック
最大出力レベル：	50 mW + 50 mW（32 Ω負荷時）

PLAYER UNIT

コネクター：	D サブ15 ピン
電気的特性：	RS-232C 準拠

MONITOR IN

コネクター：	D サブ25 ピン
最大入力レベル：	+6 dBV

ヘッドホン出力電気的特性

再生周波数特性：	20 Hz ～ 20 kHz, + 1.0/− 2.0 dB
S/N 比：	70 dB 以上
	（20 kHz LPF, A-weighted）
歪率 (THD + N)：	0.5 %以下（20 kHz LPF）
	［1 kHz 最大出力レベル］

一般

電源：	CD-601MKII よりDC 電源供給
外形寸法：	216 W × 69 H × 201 D（mm）
	（フット、突起部含む）
質量：	1.3 kg（接続ケーブルを含まず）
付属品：	接続ケーブル（5 m）、取扱説明書、保証書

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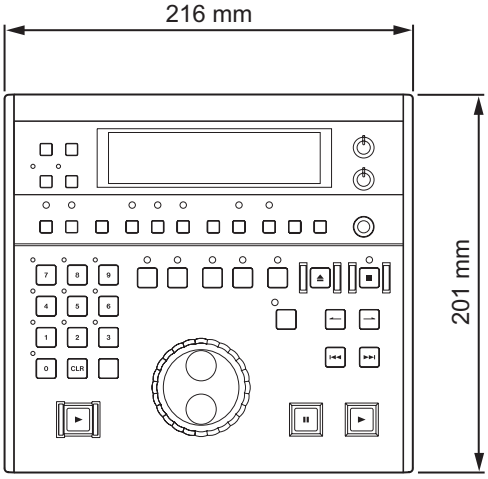
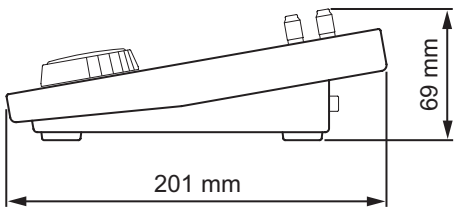
* 製品の改善により、取扱説明書のイラストなどが、一部製品と異なることがあります。あらかじめご了承ください。

Dimensional drawing 外形寸法図





3. CD-601MKII TEST MODE

CD-601MKII テストモード

1. Panel Test Mode

You can check on the key inputs, LED illumination, etc. by starting the CPU, which is located behind the front panel, in test mode.

1-1. Getting Panel Test Mode Enabled

Switch on the power while holding down a pair of front panel keys specified below.
To switch between test mode functions, press a pair of keys.

MENU key + AUTO RDY key: Key input checks

MENU key + DISP MODE key: LEDs and display segments all lit

MENU key + PLAY MODE key: Version readout

1. パネルテストモード

CD-601MKIIのフロントパネル部に搭載されたCPUをテストモードで起動する事により、キー入力やLED点灯などのチェックを行う事ができます。

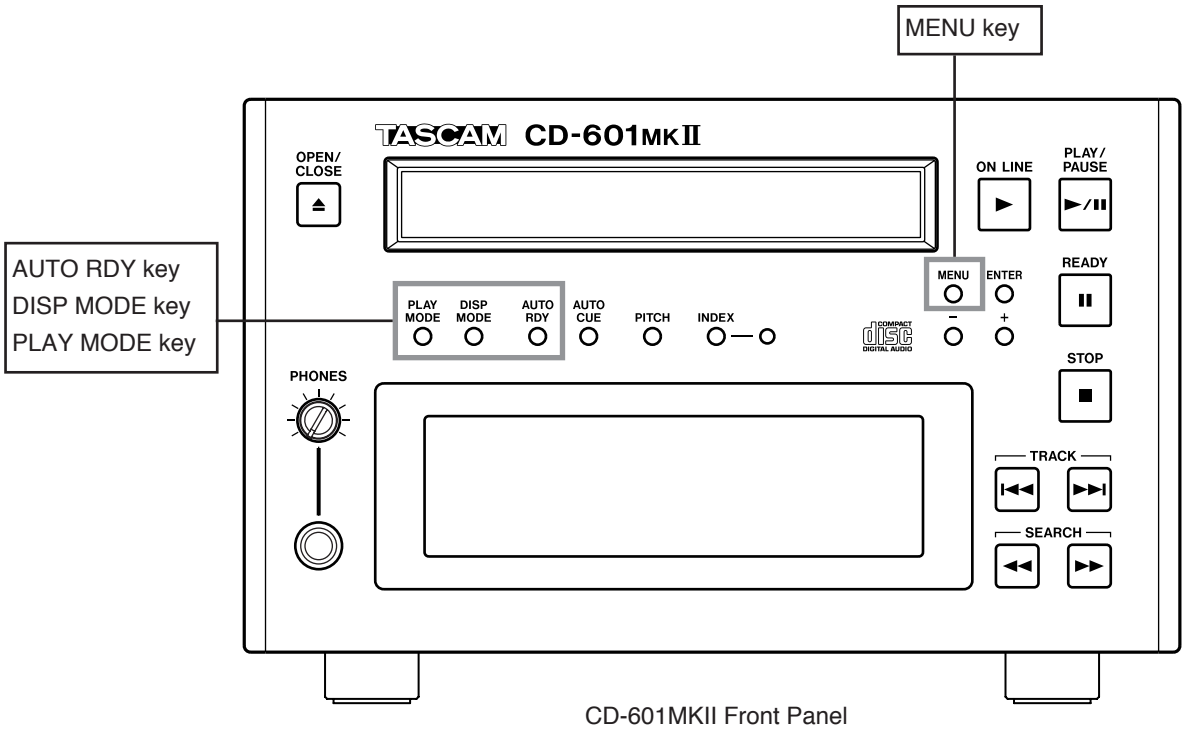
1-1. パネルテストモードの起動方法

CD-601MKIIフロントパネルの下記のキーを押しながらCD-601MKIIの電源を投入する事によりテストモードが起動します。
テストモードのいずれかの機能が起動した後は下記のキーを押す事により機能を切り替える事ができます。

MENUキー + AUTO RDYキー：キー入力チェック

MENUキー + DISP MODEキー：LED、表示窓全点灯

MENUキー + PLAY MODEキー：バージョン表示



CD-601MKII Front Panel
CD-601MKII フロントパネル

1-2. Operations

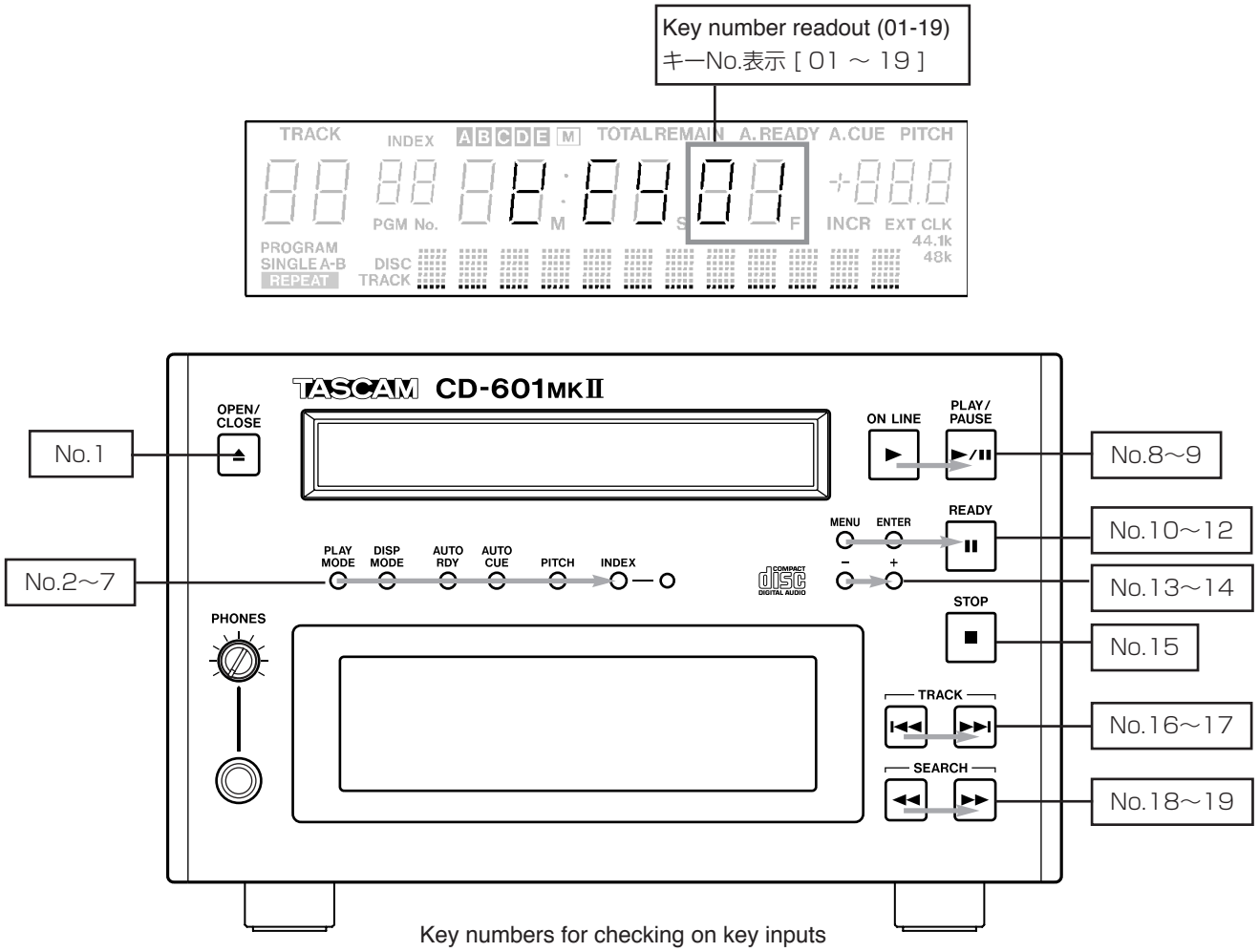
1-2-1. Key input checks

When you press and hold down a key, a number assigned to that key is displayed providing confirmation that the key works reliably. The key number assignments are shown below.
If there is an LED related to a key held down, that LED turns on and remains lit solid until another key is held down.

1-2. 動作仕様

1-2-1. キー入力チェック

キー入力チェックでは任意のキーを押すと、キーを押している間表示窓上にキーNo.が表示され正常にキー入力が行われている事を表します。
キーNo.は下図の通りです。
またキーに対応したLEDがある場合にはキーを押すとLEDが点灯し、他のキーが押されるまで点灯を保持します。



Key numbers for checking on key inputs
キー入力チェック時のキーNo.

You cannot check on the PHONES knob.

PHONESつまみの動作チェックはできません。

1-2-2. LEDs and display segments all lit

All the display patterns and LED indicators are lit.

1-2-2. LED、表示窓全点灯

表示窓の全表示パターンおよび全てのLEDが点灯します。

1-2-3. Firmware version display

You can check the firmware version of the panel CPU located behind the CD-601MKII's front panel.

1-2-3. ファームウェアバージョン表示

CD-601MK「のフロント部に搭載されたパネルCPUのファームウェアバージョンが表示されます。

1-3. Quitting Panel Test Mode

Recycle the power and the CD-601MKII restarts in the normal mode.

1-3. パネルテストモードの終了

電源を再投入する事により、パネルテストモードを終了し、通常のモードで起動します。

2. CD Test Mode

By letting the CD-601MKII's main CPU start in test mode, you can see information on the CD servo system, etc.

2. CDテストモード

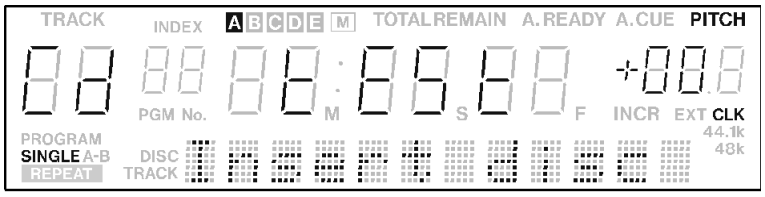
CD-601MKIIのメインCPUをテストモードで起動する事により、CDサーボ制御などの情報を表示する事ができます。

2-1. Getting CD Test Mode Enabled

Press the OPEN/CLOSE key to let the disc tray slide out, and then hold down the two SEARCH keys (FWD and REV) at the same time and press the DISP MODE key.

2-1. CDテストモードの起動方法

OPEN/CLOSEキーを押してディスクトレイを開いた状態でFWD方向、REV方向の2つのSEARCHキーを同時に押しながら、DISP MODEキーを押す事によりCDテストモードが起動します。



Insert a disc on the tray and press the OPEN/CLOSE key to let the tray slide in.

ディスクをトレイに載せOPEN/CLOSEキーを押してディスクトレイを閉じます。

2-2. Operations

The CD test mode provides five display modes (A-E). To switch among them, press the DISP MODE key. Switching from one display mode to another display mode causes the letter display (A-E) to change in the memory bank section of the display window, indicating the current display mode.

2-2-1. Display mode A

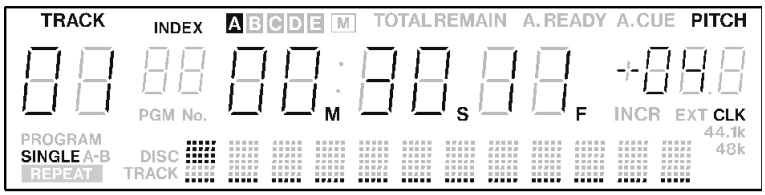
Shows track numbers and track elapsed time during playback.

2-2. 動作仕様

CDテストモードではA～Eの5つの表示モードがあり、モードの切り替えはDISP MODEキーで行います。表示モードを切り替えると表示窓のメモリーバンク表示部がA～Eを表示し、現在の表示モードを示します。

2-2-1. 表示モードA

再生時にトラック番号、トラック経過時間を表示します。

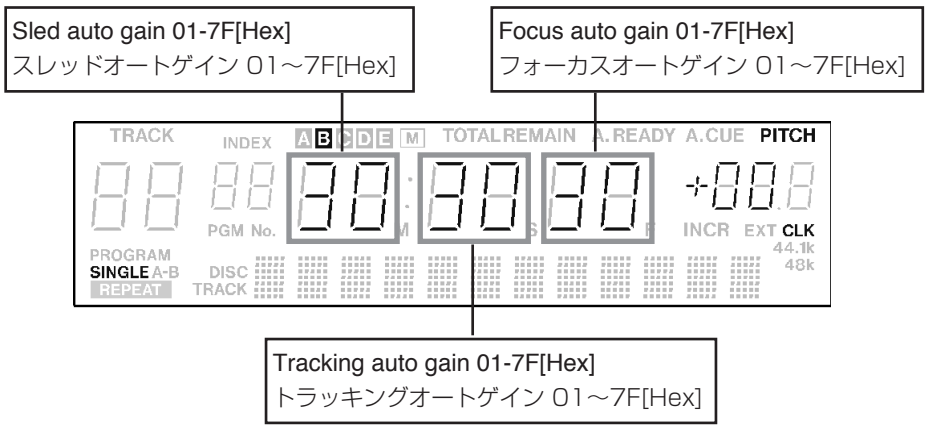


2-2-2. Display mode B

With the CD-601MKII, the digital servo-controlled auto gain control feature determines the most suitable servo constant disc by disc. You can check the most suitably set focus servo gain and tracking servo gain in display mode B.

2-2-2. 表示モードB

CD-601MKIIではデジタルサーボのオートゲインコントロール機能によりディスク毎に最適なサーボ定数を決定します。表示モードBでは最適に設定されたフォーカスサーボ、トラッキングサーボのゲインを確認する事ができます。

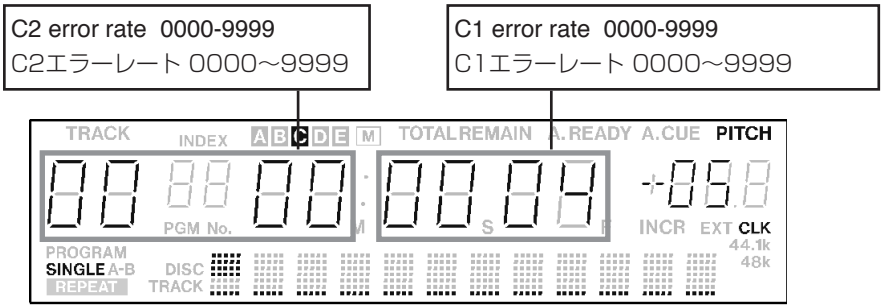


2-2-3. Display mode C

Shows C1 and C2 error rates during playback.

2-2-3. 表示モードC

再生中にC1,C2エラーレートを表示します。

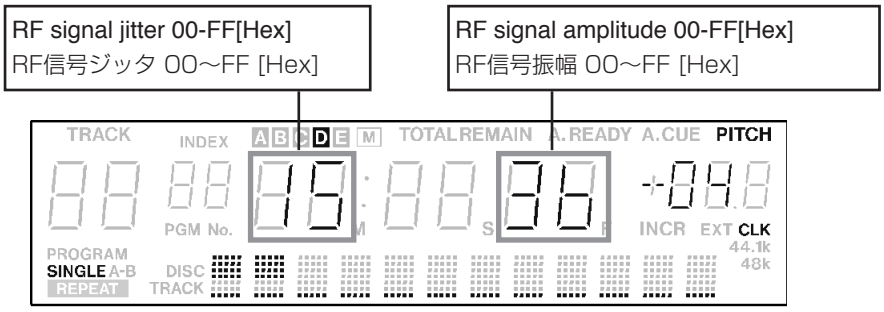


2-2-4. Display mode D

Shows RF signal jitter and its amplitude during playback.

2-2-4. 表示モードD

再生中にRF信号のジッタ、振幅を表示します。

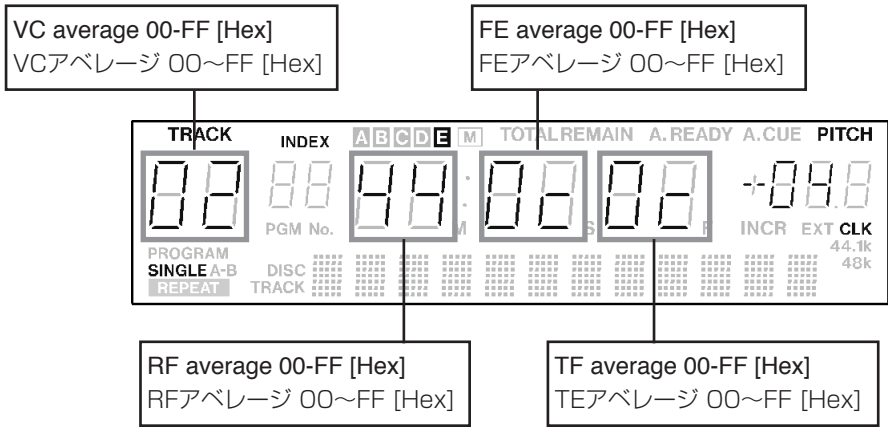


2-2-5. Display mode E

Shows measured values of offset in digital servo.

2-2-5. 表示モードE

デジタルサーボのオフセット測定値を表示します。



2-2-6. Items shown in all display modes A-E

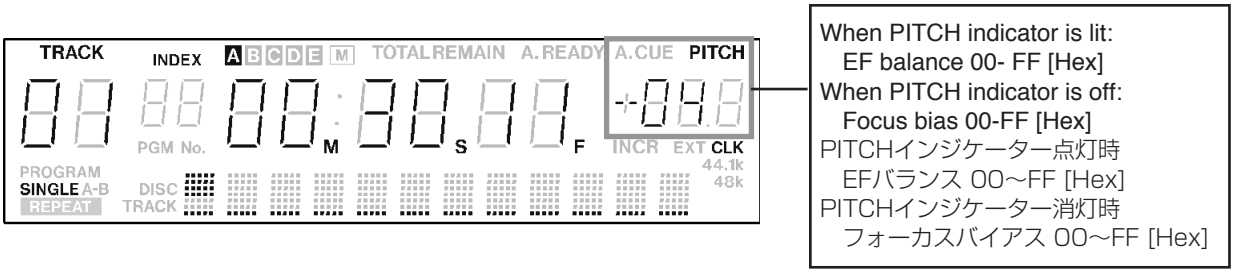
The EF balance and focus bias of digital servo are shown in the pitch control display section regardless of which display mode is currently enabled.

To switch between the two display items, press the MENU key.

2-2-6. 表示モードA～E共通の表示項目

ピッチコントロール表示部にはデジタルサーボのEFバランス、フォーカスバイアスを表示します。

切り替えはMENUキーで行います。



2-3. Quitting CD test mode

Recycle the power and the CD-601MKII restarts in the normal mode.

2-3. CDテストモードの終了

電源を再投入する事により、CDテストモードを終了し、通常のモードで起動します。

3. Other Features

3-1. Clearing Total Motor Running Time

With the CD-601MKII, the total running time of the motor of the CD mechanism can be displayed via menus, and it needs to be cleared when replacing the CD mechanism.

- **How to clear the total motor running time:**

a) With the disc tray open, hold down the AUDIO RDY and AUTO CUE keys and press the STOP key. The total motor running time so far is displayed.

b) Press the ENTER key and "-SURE-" is displayed.

c) Press the ENTER key again and the total motor running time is cleared.

3-2. Setting Back to Factory Defaults

You can clear the settings of menu-setting parameters, backup memory, disc memory and total motor running time all at once to set them back to factory defaults.

- **How to do so:**
  With the disc tray opened, press the PLAY MODE, DISP MODE and ENTER keys at the same time and "F_CLEAR" is displayed showing that the settings and memories have been set back to factory defaults.

3-3. Firmware Version Readout

- **To check the firmware version:**
  With the disc tray opened, press the PITCH, INDEX and ENTER keys at the same time and the firmware version of the CPU is displayed.

3. その他の機能

3-1. モーター積算時間クリア

CD-601MKIIではメニュー操作でCDメカニズムのモーター駆動の積算時間を表示する事ができますが、CDメカニズムを交換した場合には、この積算時間をクリアする必要があります。

- **操作方法**

a) ディスクトレイが開いている状態でAUTO RDYキー、AUTO CUEキーを押しながら、STOPキーを押します。表示窓に現在のモーター積算時間が表示されます。

b) ENTERキーを押すと表示窓に ミSURE- と表示します。

c) もう一度ENTERキーを押すとモーター積算時間がクリアされます。

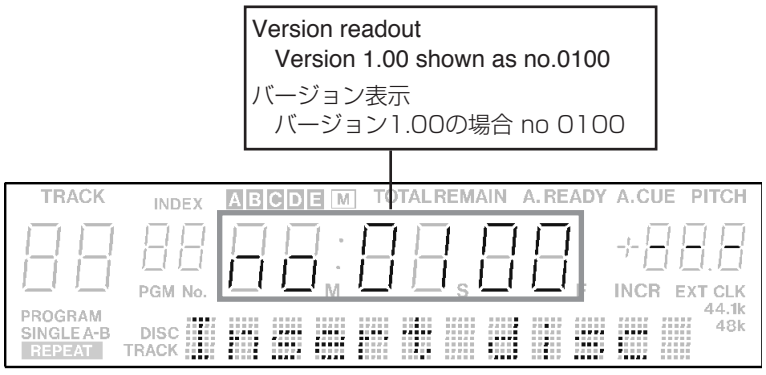
3-2. 工場出荷時設定

メニュー項目の設定値、バックアップメモリー、ディスクメモリー、モーター積算時間の全てをクリアし、工場出荷時の状態にする事ができます。

- **操作方法**
  ディスクトレイが開いている状態でPLAY MODEキー、DISP MODEキー、ENTAERキーを同時に押すと、表示窓に F_CLEAR と表示し、工場出荷時の設定となります。

3-3. ファームウェアバージョン表示

- **操作方法**
  ディスクトレイが開いている状態でPITCHキー、INDEXキー、 ENTERキーを同時に押す事とメインCPUのファームウェアバージョンが表示されます。



After checking the firmware version, recycle the power to let the CD-601MKII start in the normal mode.

バージョン表示を確認したら電源を再投入し、通常のモードで起動します。

4. Firmware Update

4-1. Getting Ready

Have the updater disc available.

4-2. Updating

a) Hold down the OPEN/CLOSE key and switch on the power. You need to hold down the key until the display reads "UP DATE".

b) Insert the updater disc on the disc tray and close this.

When data is read in from the updater disc correctly, the display shows the current version number.

4. ファームウェアアップデート

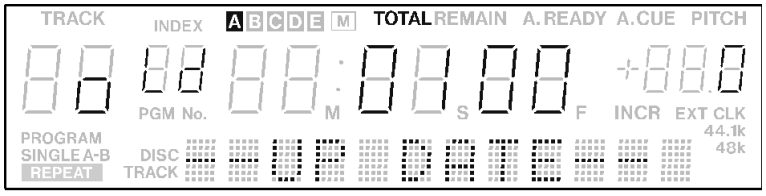
4-1. 準備

ファームウェアアップデート用のCDディスクを用意します。

4-2. 操作方法

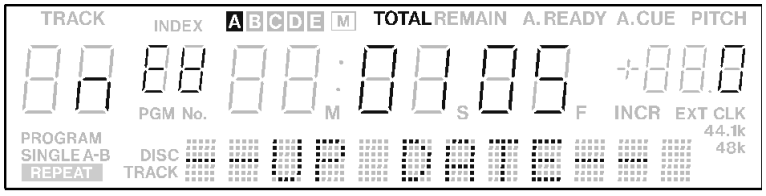
a) OPEN/CLOSEキーを押しながら、電源を投入します。この時、表示窓にUP DATE の表示が出るまでOPEN/CLOSEキーを押し続けます。

b) ディスクトレイにアップデート用のCDディスクを載せ、ディスクトレイを閉じます。
アップデートディスクを正常に読み取ると表示窓に現在のバージョンが表示されます。



c) Press the ENTER key and the updater disc version is shown.

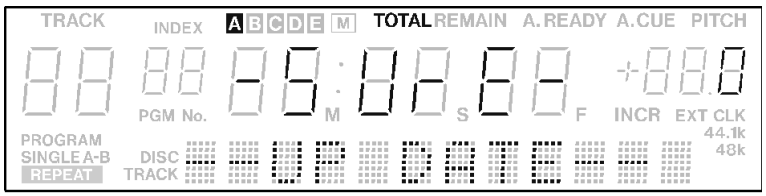
c) ENTERキーを押すとアップデート用ディスクのバージョンが表示されます。



The display looks like this if the current version is 1.00.
現在のバージョンが1.00の時の表示例

d) Press the ENTER key again and the display reads "-SURE-".

d) もう一度ENTERキーを押すと表示窓に ミSURE- と表示されます。

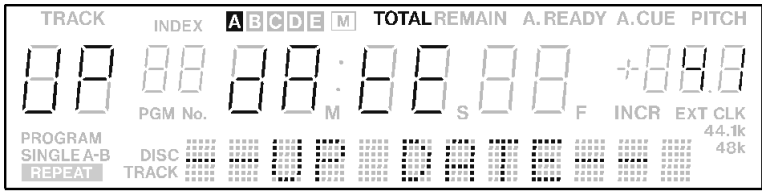


The display looks like this if the updater version is 1.05.
アップデートディスクのバージョンが1.05の時の表示例

e) Press the ENTER key again and updating starts.

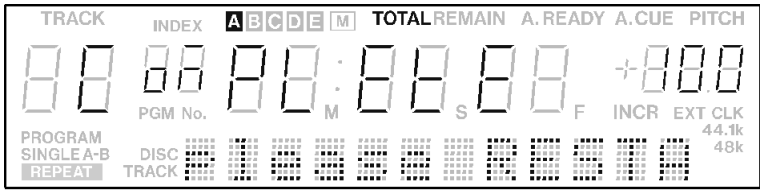
The progress of the update is displayed (0 up to 100) in the pitch control readout section of the display window.

e) さらに、もう一度ENTERキーを押すとアップデート動作を開始します。この時表示窓のピッチコントロール表示部にアップデート動作の進行状況が0~100の間の数値で表示されます。



Upon completion of the update, the display reads "COMPLETE".

アップデート動作が終了すると表示窓にCOMPLETE と表示します。



f) Recycle the power and the CD-601MKII restarts with the firmware updated.

f) 電源を再投入するとアップデートしたファームウェアバージョンで起動します。

4. RC-601MKII TEST MODE

RC-601MKII テストモード

You can check on the key inputs, LED illumination, etc. by starting the CPU mounted in the RC-601MKII, in test mode.

1. Getting Panel Test Mode Enabled

With the RC-601MKII connected to the CD-601MKII, switch on the power while holding down a pair of front panel keys specified below.

To switch between test mode functions, press a pair of keys.

MENU key + numerical key 7: Key input checks

MENU key + numerical key 8: LEDs and display segments all lit

MENU key + numerical key 9: Version display

RC-601MKIIに搭載されたCPUをテストモードで起動する事により、キー入力やLED点灯などのチェックを行う事ができます。

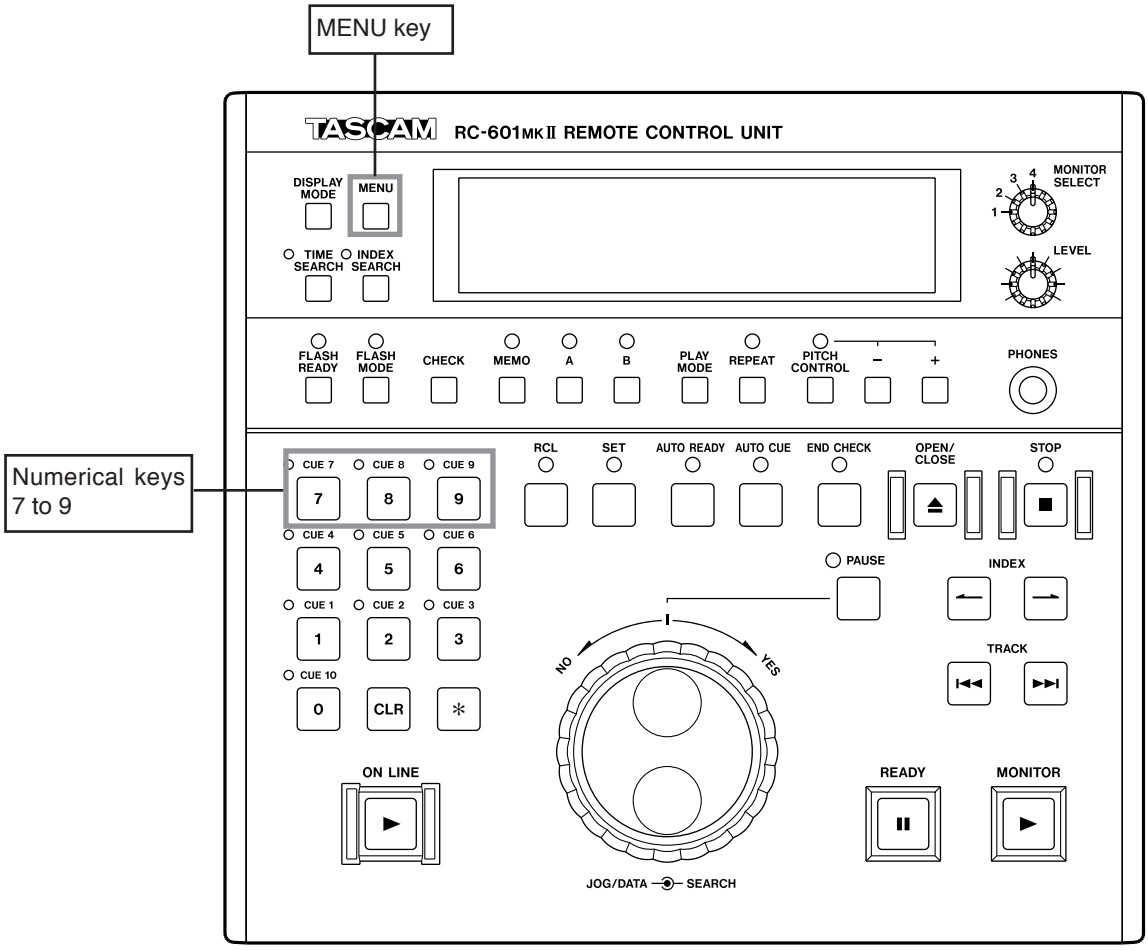
1. テストモードの起動方法

RC-601MKIIをCD-601MKIIに接続した状態でRC-601MKIIトップパネルの下記のキーを押しながらCD-601MKIIの電源を投入する事によりテストモードが起動します。
テストモードのいずれかの機能が起動した後は下記のキーを押す事により機能を切り替える事ができます。

MENUキー + 7キー（テンキー）：キー入力チェック

MENUキー + 8キー（テンキー）：LED、表示窓全点灯

MENUキー + 9キー（テンキー）：バージョン表示



RC-601MKII Top Panel
RC-601MKII トップパネル

2. Operations

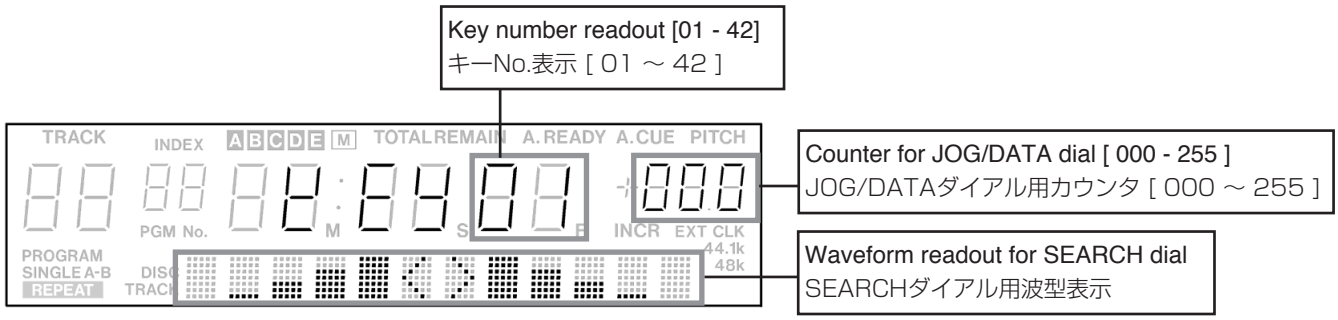
2-1. Key input checks

When you press and hold down a key, a number assigned to that key is displayed providing confirmation that the key works reliably. The key number assignments are shown below.
If there is an LED related to a key held down, that LED turns on and remains lit solid until another key is held down.

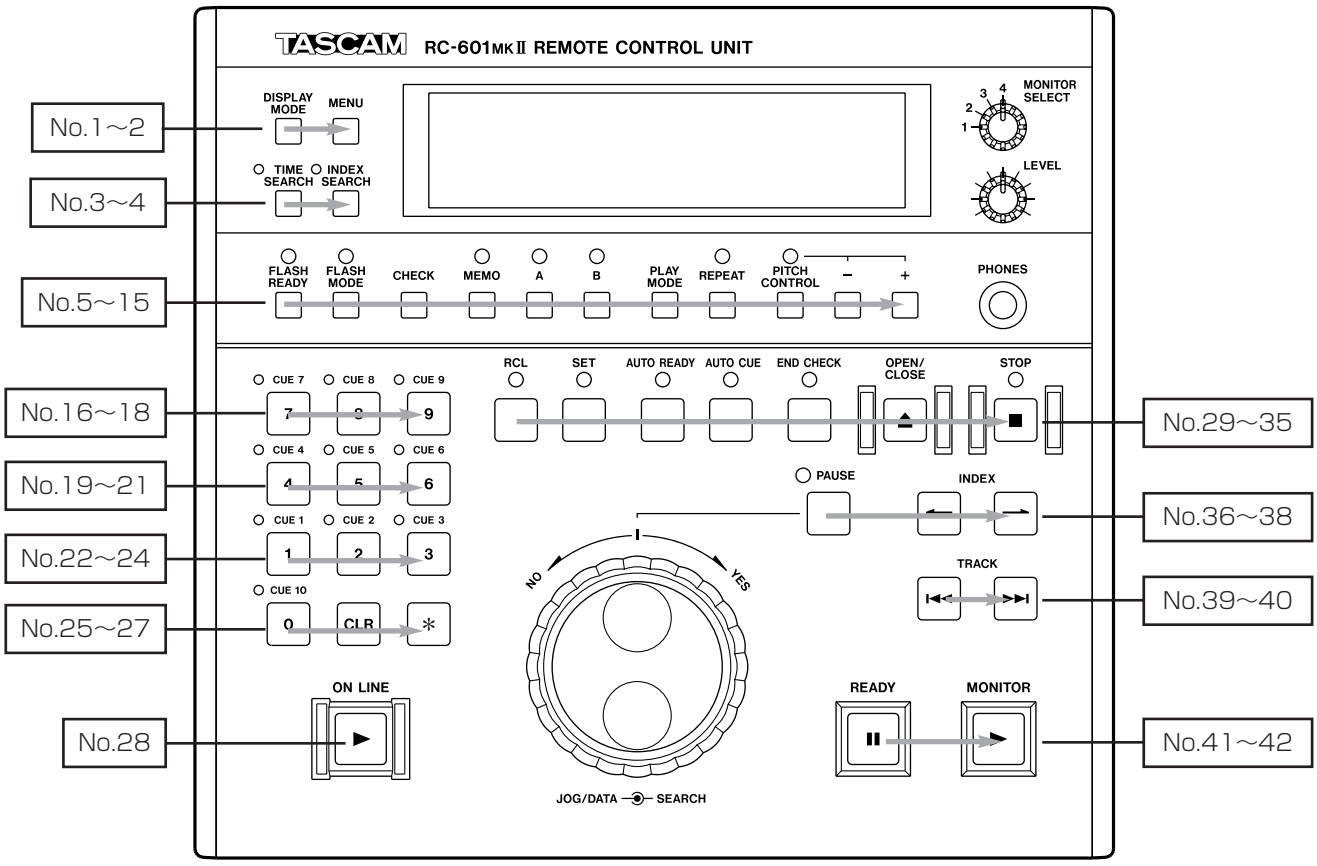
2. 動作仕様

2-1. キー入力チェック

キー入力チェックでは任意のキーを押すと、キーを押している間表示窓上にキーNo.が表示され正常にキー入力が行われている事を表します。
キーNo.は下図の通りです。
またキーに対応したLEDがある場合にはキーを押すとLEDが点灯し、他のキーが押されるまで点灯を保持します。



The display window looks like this when checking on key inputs. キー入力チェック時の表示窓



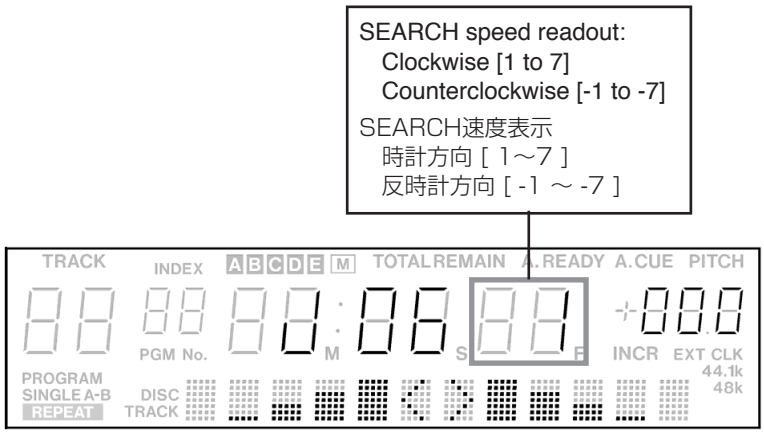
Key numbers for checking on key inputs キー入力チェック時のキーNo.

Rotate the JOG/DATA dial clockwise and the counter in the display window increases from up to 255; similarly, when rotating the dial counterclockwise, the counter decreases.

JOG/DATAダイアルを回すと表示窓上のJOG/DATAダイアル用カウンタ表示が000～255の範囲で、時計方向に回した場合は増加、反時計方向に回した場合は減少します。

Rotate the SEARCH dial clockwise and the display reads search speeds 1 to 7 as a function of the rotation angle; similarly, when rotating the dial counterclockwise, the display reads -1 to -7. Also, the waveform shown in the SEARCH dial readout changes as a function of the SEARCH direction and speed.

SEARCHダイアルを回すとSAEARCHダイアルの角度により時計方向は1～7、反時計方向は-1～-7とそれぞれ7段階のSEARCH速度が表示され、またSEARCHダイアル用表示エリアの波型の表示がSEARCH方向、速度に応じて動きます。



Readouts when checking on the SEARCH dial.
SEARCHダイアル入力チェック時の表示窓

＊ You cannot check the functions of the MONITOR SELECT and LEVEL knobs.

＊ MONITOR SELECTつまみ、LEVELつまみの動作チェックはできません。

2-2. LEDs and display segments all lit

All the display patterns and LED indicators are lit.

2-2. LED、表示窓全点灯

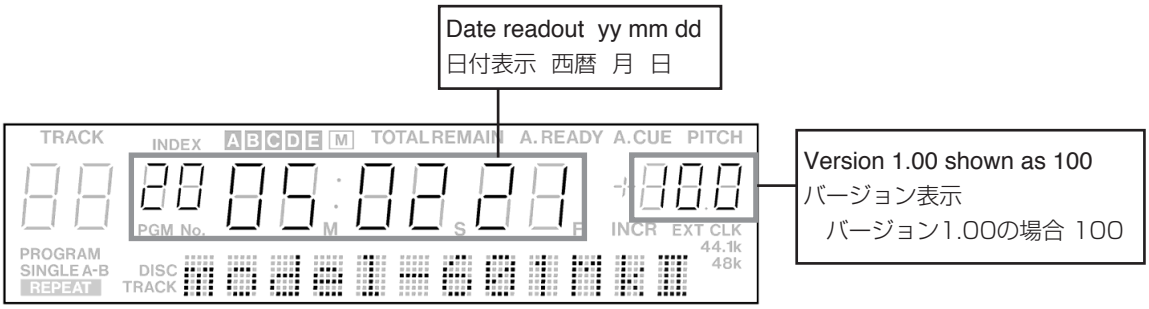
表示窓の全表示パターンおよび全てのLEDが点灯します。

2-3. Firmware version readout

The firmware version of the CPU mounted in the RC-601MKII is shown.

2-3. ファームウェアバージョン表示

RC-601MKIIに搭載されたCPUのファームウェアバージョンが表示されます。



Readouts when firmware version is shown.
ファームウェアバージョン表示時の表示窓

3. Quitting Panel Test Mode

Recycle the power and the RC-601MKII restarts in the normal mode.

3. テストモードの終了

CD-601MKIIの電源を再投入する事により、テストモードを終了し、通常のモードで起動します。

5. LIST OF ERROR MESSAGES

エラーメッセージ一覧

If the following error messages are displayed during CD player use, try performing the remedies described in the following table.

Indication	Description	Remedy
ERR01	TOC READ Error	• The disc is scratched. → Replace the disc. • The disc is dirty. → Clean the disc.
ERR02	GFS Error	
ERR03	Focus Erro	
ERR04	SUBQ Error	Replace the disc.
ERR05	TRAY LOADING Error	Check the disc tray for foreign objects.
ERR06	SLED Error	Turn the power OFF then back ON again.
ERR07	SYSTEM Error	
ERR08	MEMORY Error	

使用中に以下のエラーメッセージが表示された場合、以下の対処を行なってみてください。

表示	内容	対処
ERR01	TOC READ Error	ディスクに傷がある →ディスクを交換してください。 ディスクが汚れている →ディスクをクリーニングしてください。
ERR02	GFS Error	
ERR03	Focus Error	
ERR04	SUBQ Error	ディスクを交換してください。
ERR05	TRAY LOADING Error	トレイに異物がないか確認してください。
ERR06	SLED Error	電源を再投入してください。
ERR07	SYSTEM Error	
ERR08	MEMORY Error	

PARTS LIST SECTION

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA

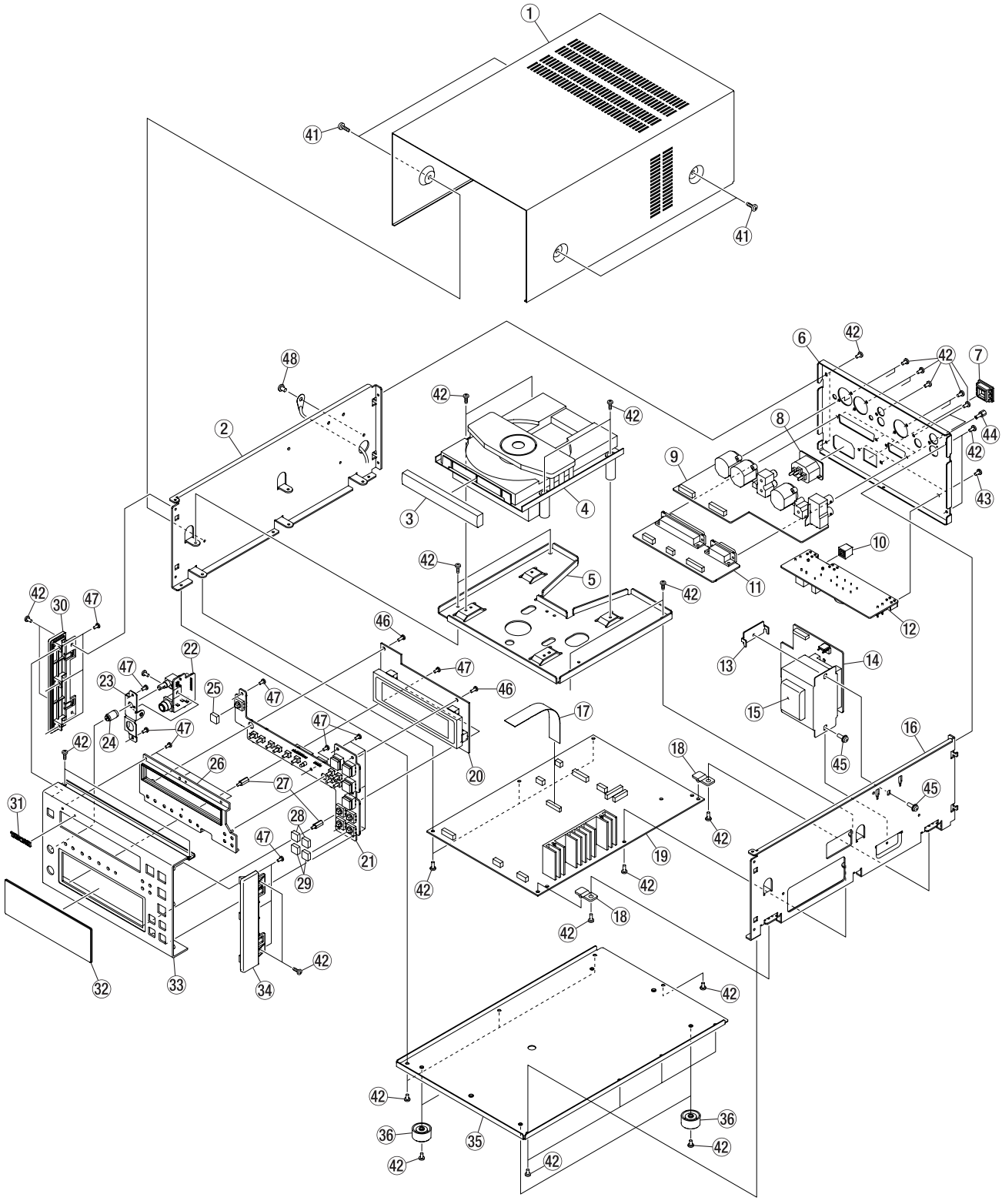
注　意

- プリント基板図は部品面を示しています。
- *印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ず指定の部品を使用してください。
- 仕向先
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA

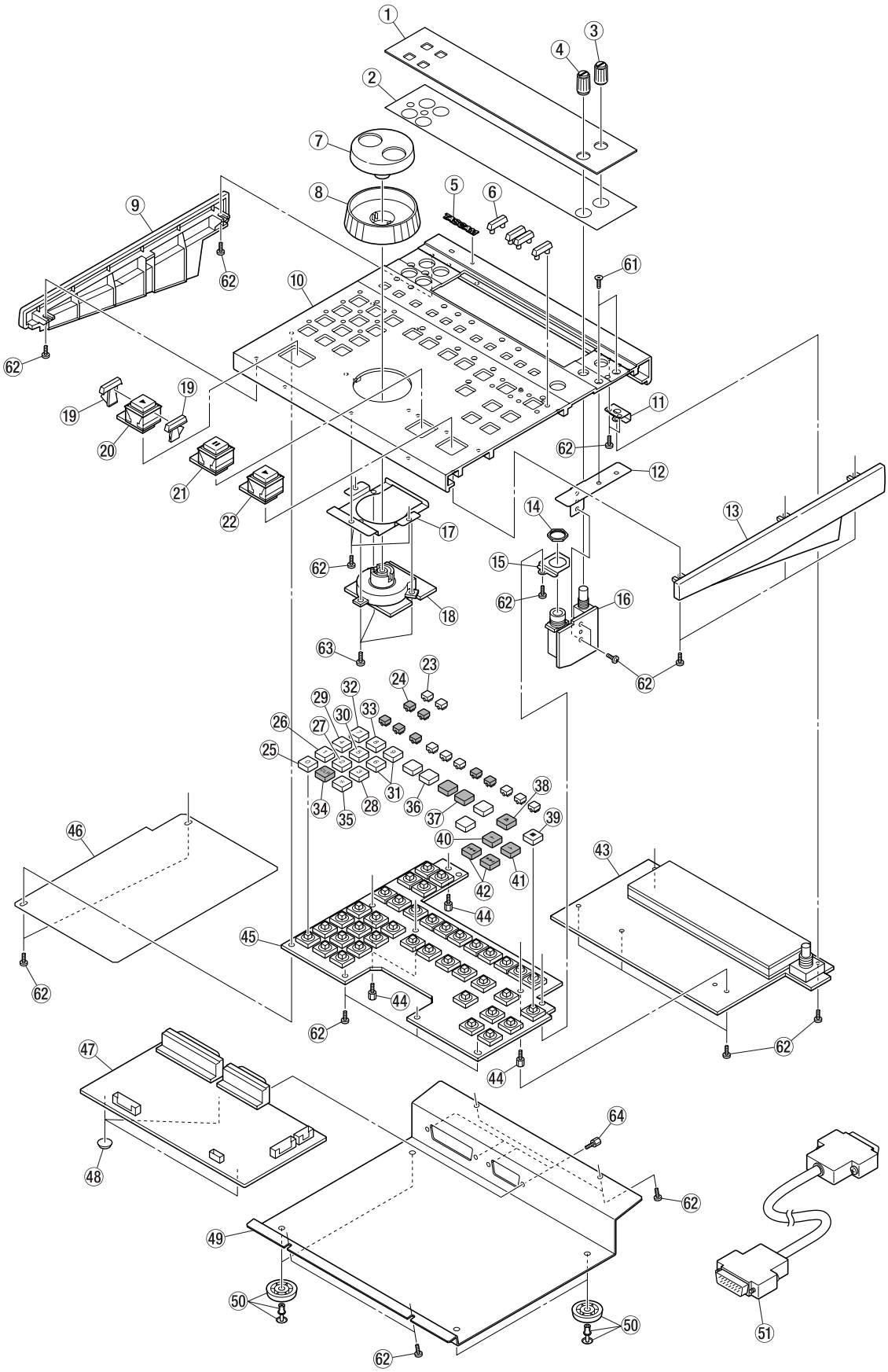
6. EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

EXPLODED VIEW-1



EXPLODED VIEW-2



EXPLODED VIEW-1

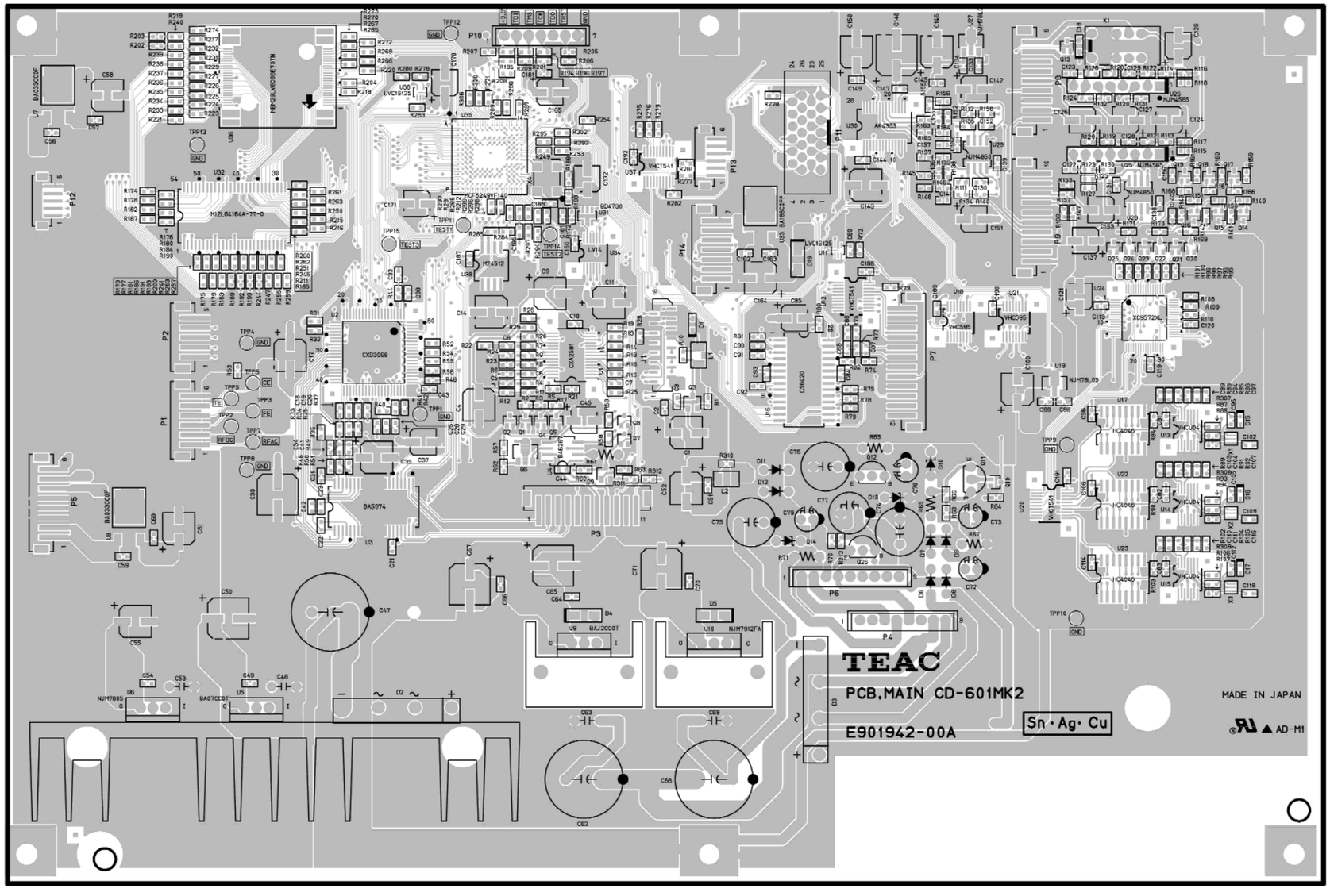
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1-1	M00808600B	BONNET,N27 HOLE	
1-2	5801477101	CHASSIS,SIDE(L) G	
1-3	M01821000A	PANEL,TRAY (N32)	
1-4	M0203760	MECH ASSY,CD WSL-2130CCM	
1-5	M01820800A	CHASSIS,CENTER CD601MK2	
1-6	M01820900A	REAR PANEL,CD601MK2	
1-7	5801486601	ESC D P-N15-A	
1-8	5332030400	ACｲﾝﾚｯﾄ M1816	
1-9	E95194600A	PCB ASSY,REAR CD601MK2	GATHER PCB REAR Assy(Refer to page 27)
1-10	5801503800	BUTTON, EJECT (P-N15-A)	
1-11	E95194700A	PCB ASSY,D-SUB CD601MK2	GATHER PCB KEY Assy(Refer to page 26)
1-12	E95230400A	PCB ASSY,PWR SW CD601MK2	GATHER PCB REAR Assy(Refer to page 27)
1-13	5801486701	BRACKET,TRANS G	
1-14	E95194901A	PCB ASSY,TRANS DM CD601MK	(Refer to page 25)
1-14	E95194920A	PCB ASSY,TRANS T/C CD601M	(Refer to page 25)
1-14	E95194940A	PCB ASSY,TRANS AUS CD601M	(Refer to page 25)
1-14	E95194950A	PCB ASSY,TRANS EURY CD601	(Refer to page 25)
1-14	E95194960A	PCB ASSY,TRANS UKY CD601M	(Refer to page 25)
1-14	E95194956A	PCB ASSY,TRANS TM CD601MK	(Refer to page 25)
1-14	E95194904A	PCB ASSY,TRANS KOR CD601M	(Refer to page 25)
1-15	E01018100A	TRANS,POWER CD-601MK2	
1-16	5801477201	CHASSIS,SIDE(R) G	
1-17	E00556300A	FLAT CABLE,DSUB16 DA-78	
1-18	5730041100	PCBHNG	
1-19	E95194200A	PCB ASSY,MAIN CD601MK2	(Refer to page 23 & 24)
1-20	E95194400A	PCB ASSY,DISP CD601MK2	(Refer to page 25)
1-21	E95194300A	PCB ASSY,KEY CD601MK2	GATHER PCB KEY Assy(Refer to page 26)
1-22	E95194500A	PCB ASSY,HP CD601MK2	GATHER PCB KEY Assy(Refer to page 26)
1-23	M01820600A	BRACKET,HP CD601MK2	
1-24	M00826100B	KNOB,N38/N32	
1-25	M00515100A	BUTTON,G-EJECT	
1-26	M01820500B	ESCUTCHEON,FRT CD601MK2	
1-27	M0204860	SPACER,BSB-2611	
1-28	5801453900	BTN ,G-SKIP	
1-29	5801454000	BTN ,G-SEARCH	
1-30	5801476500	ｻｲﾄﾞｴｽｶﾂｼｮﾝ L	
1-31	5720254101	ﾈｰﾑﾌﾟﾚｰﾄ,TASCAM(S)	
1-32	M01820700A	WINDOW,CD601MK2	
1-33	M01820400A	FRONT PANEL,CD601MK2	
1-34	5801476600	ｻｲﾄﾞｴｽｶﾂｼｮﾝ R	
1-35	5801477501	CHASSIS,BOTTOM G	
1-36	M0204870	FOOT,D22 H12.5 FF1011	
1-41	5800612400	ﾎﾞﾝﾈｯﾄﾋﾞｽ M3X8 V-360C	
1-42	B00199708A	SCREW,BPB 3*8FZB G	
1-43	5780023006	SCREW,BPA 3*6 FNB	
1-44	5801536400	DSUBﾛｯｸﾈｼﾞ M2.6X0.45	
1-45	B00176210A	SCREW,PPAB 4*10 FZC G	
1-46	B00198906A	SCREW,BPP 2.6*6FZC G	
1-47	5780012604	SCREW,BPA 2.6*4 FNI	
1-48	B00171508A	SCREW,BPA 4*8 FZB G	

EXPLODED VIEW-2

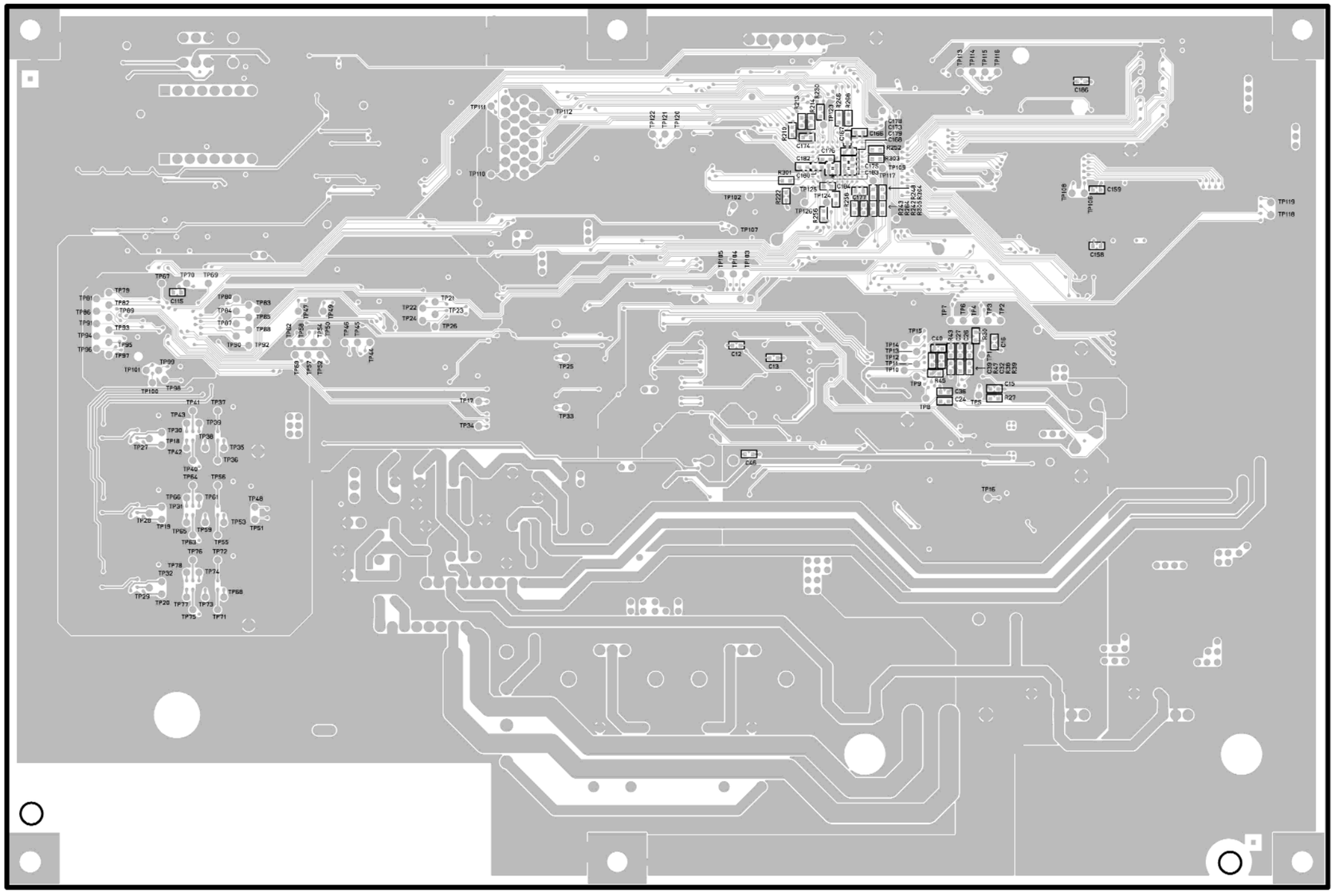
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2-1	M02097700A	WINDOW,TOP	
2-2	M02097800A	WINDOW INNER	
2-3	M02147900A	KNOB,N38/N32 CUT1.5	
2-4	M00826100B	KNOB,N38/N32	
2-5	5720254101	ﾈｰﾑﾌﾟﾚｰﾄ, TASCAM(S)	
2-6	5801066600	ﾎﾞﾀﾝｶﾞｰﾄﾞ	
2-7	M00001802A	KNOB,JOG N36	
2-8	M00001902A	KNOB,SHUTTLE N36	
2-9	5801454600	ｻｲﾄﾞﾊﾟﾈﾙ (L)	
2-10	M02097100A	TOP PANEL,RC-601MK2	
2-11	M02097500A	BRACKET,B	
2-12	M02097600A	BRACKET,C	
2-13	5801454700	ｻｲﾄﾞﾊﾟﾈﾙ (R)	
2-14	5317003300	ﾅｯﾄ (1/4ｼﾞﾔｸﾖｳ)	
2-15	M02097400A	BRACKET,A	
2-16	E95229100A	PCB ASSY,PHONES RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-17	M02097300A	BRACKET,JOG	
2-18	E95228700A	PCB ASSY,JOG RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-19	5730040600	ｻｲﾄﾞﾊﾞﾘｱ VH-0976-G	
2-20	E95228800A	PCB ASSY,ONLINE RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-21	E95228900A	PCB ASSY,READY RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-22	E95229000A	PCB ASSY,MON SW RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-23	5801454101	BTN W6	
2-24	5801451201	BTN G6	
2-25	1634319100	BTN 0	
2-26	1634319101	BTN 1	
2-27	1634319102	BTN 2	
2-28	1634319103	BTN 3	
2-29	1634319104	BTN 4	
2-30	1634319105	BTN 5	
2-31	1634319106	BTN 6	
2-32	1634319107	BTN 7	
2-33	1634319108	BTN 8	
2-34	5801453300	BTN ,G-CLEAR	
2-35	5801453500	BTN ,W-FUNCT.	
2-36	5801104900	BTN W	
2-37	5801104800	BTN G	
2-38	M00515100A	BUTTON,G-EJECT	
2-39	5801453600	BTN ,W-STOP	
2-40	5801453700	BTN ,G-INDEX(F)	
2-41	5801453800	BTN ,G-INDEX(R)	
2-42	5801453900	BTN ,G-SKIP	
2-43	E95229200A	PCB ASSY,FL RC601MK2	(Refer to page 29)
2-44	M0209570	SPACER,BSB-2605	
2-45	E95228600A	PCB ASSY,PANEL RC601MK2	GATHER PCB (A) Assy(Refer to page 28)
2-46	M02164800A	SHIELD SHEET	
2-47	E95229300A	PCB ASSY,MONITOR RC601MK2	(Refer to page 29)
2-48	16362624	ﾗﾊﾞｰ ﾌｯﾄ (SJ-5003)	
2-49	M02097200A	BOT PANEL,RC-601MK2	
2-50	5800268000	ﾚｯｸﾞ V-77C	
2-51	E01019000A	CABLE ASSY,RC-601MK2	
2-61	5780222606	ｻﾗ M2.6X6 (ｸﾛNI)	
2-62	B00173905A	SCREW,BPA 2.6*5 FZC G	
2-63	B00175606A	SCREW,PPS 3*6 FZC G	
2-64	5801536400	DSUB ﾛｯｸﾈｼﾞ M2.6X0.45	

7. PC BOARDS AND PARTS LIST
基板図とパーツリスト

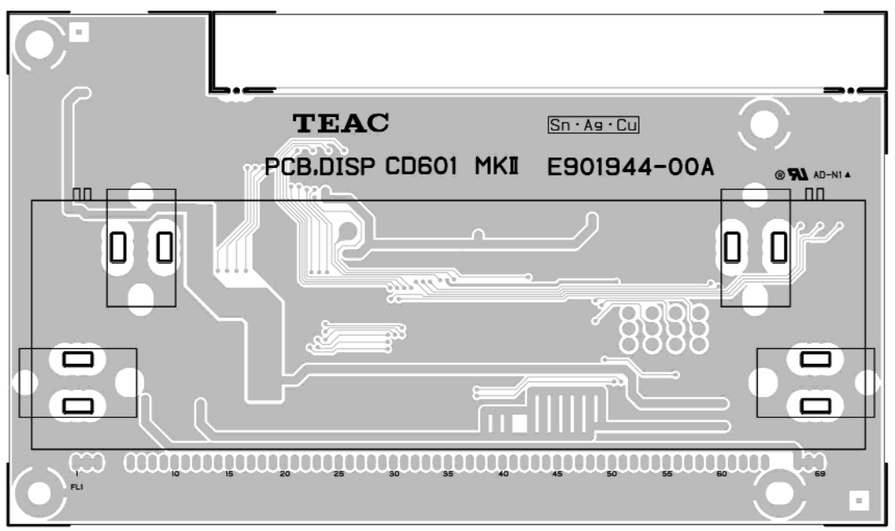
MAIN PCB ASSY (CD-601MKII) (SIDE A)



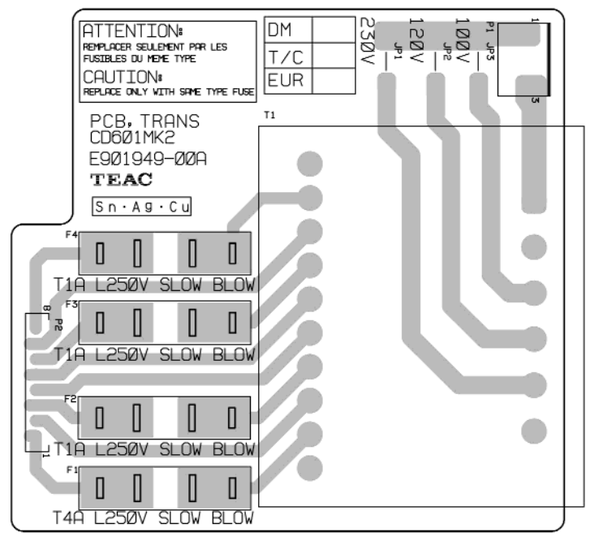
MAIN PCB ASSY (CD-601MKII) (SIDE B)



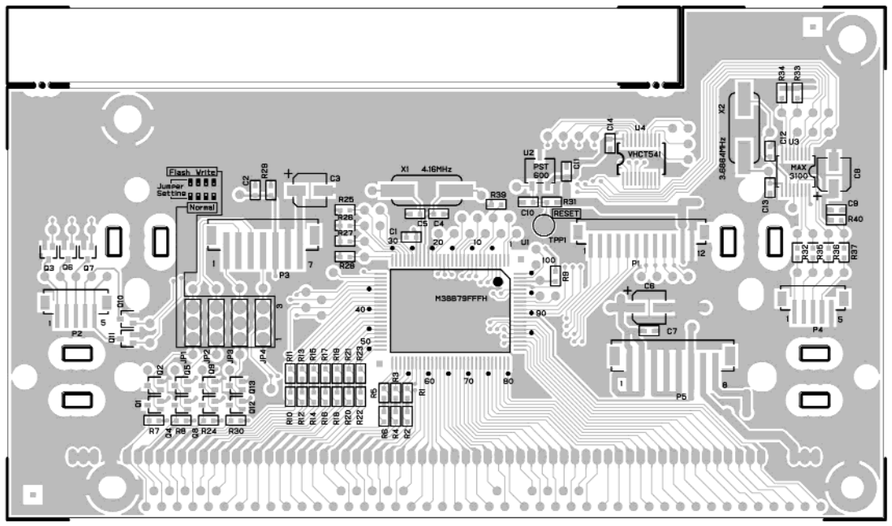
DISP PCB ASSY (CD-601MKII) (SIDE A)



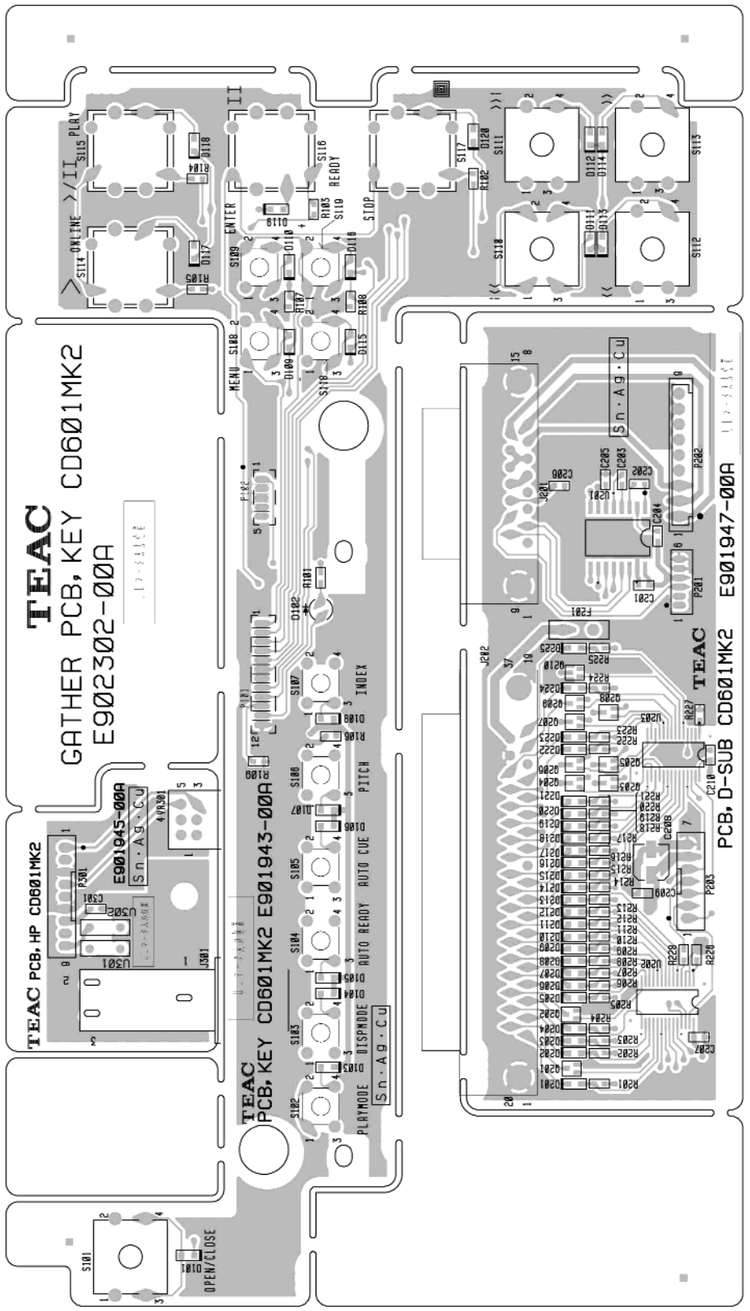
TRANS PCB ASSY (CD-601MKII)



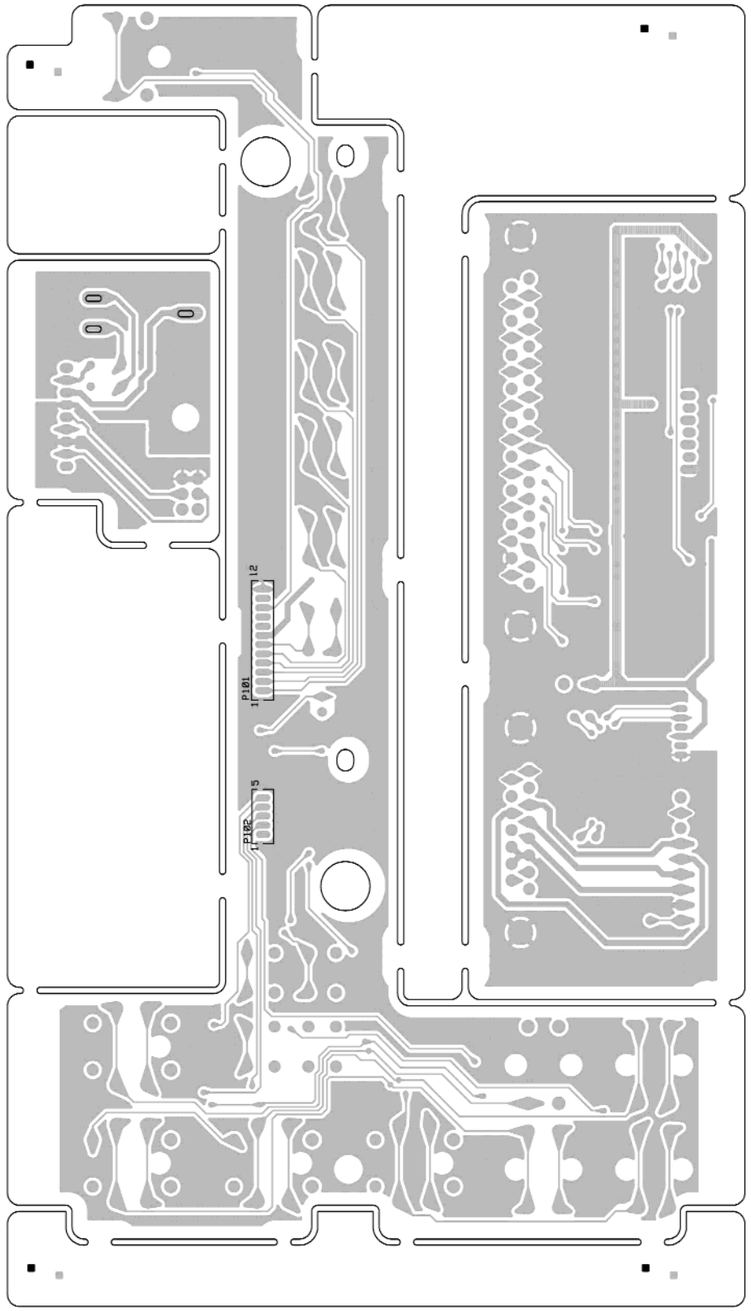
DISP PCB ASSY (CD-601MKII) (SIDE B)



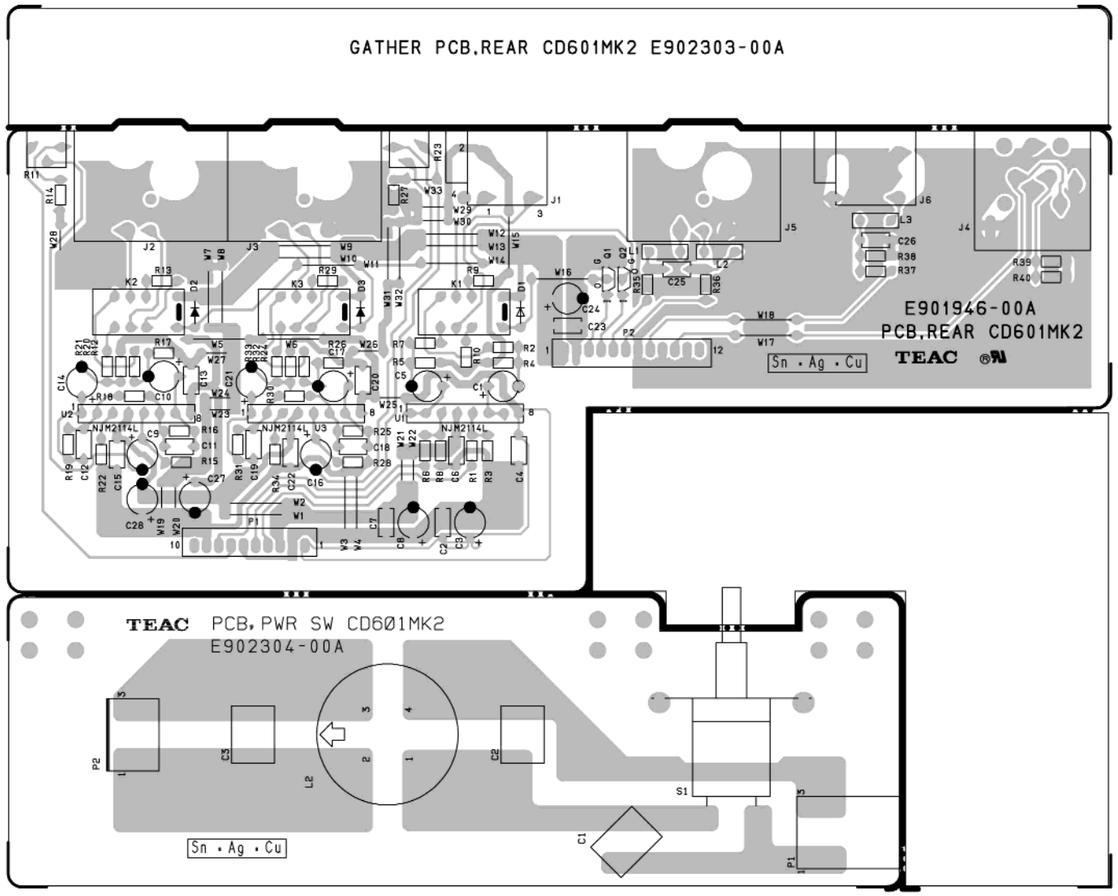
GATHER PCB KEY ASSY (PCB KEY, PCB HP, PCB D-SUB) (CD-601MKII) (SIDE A)



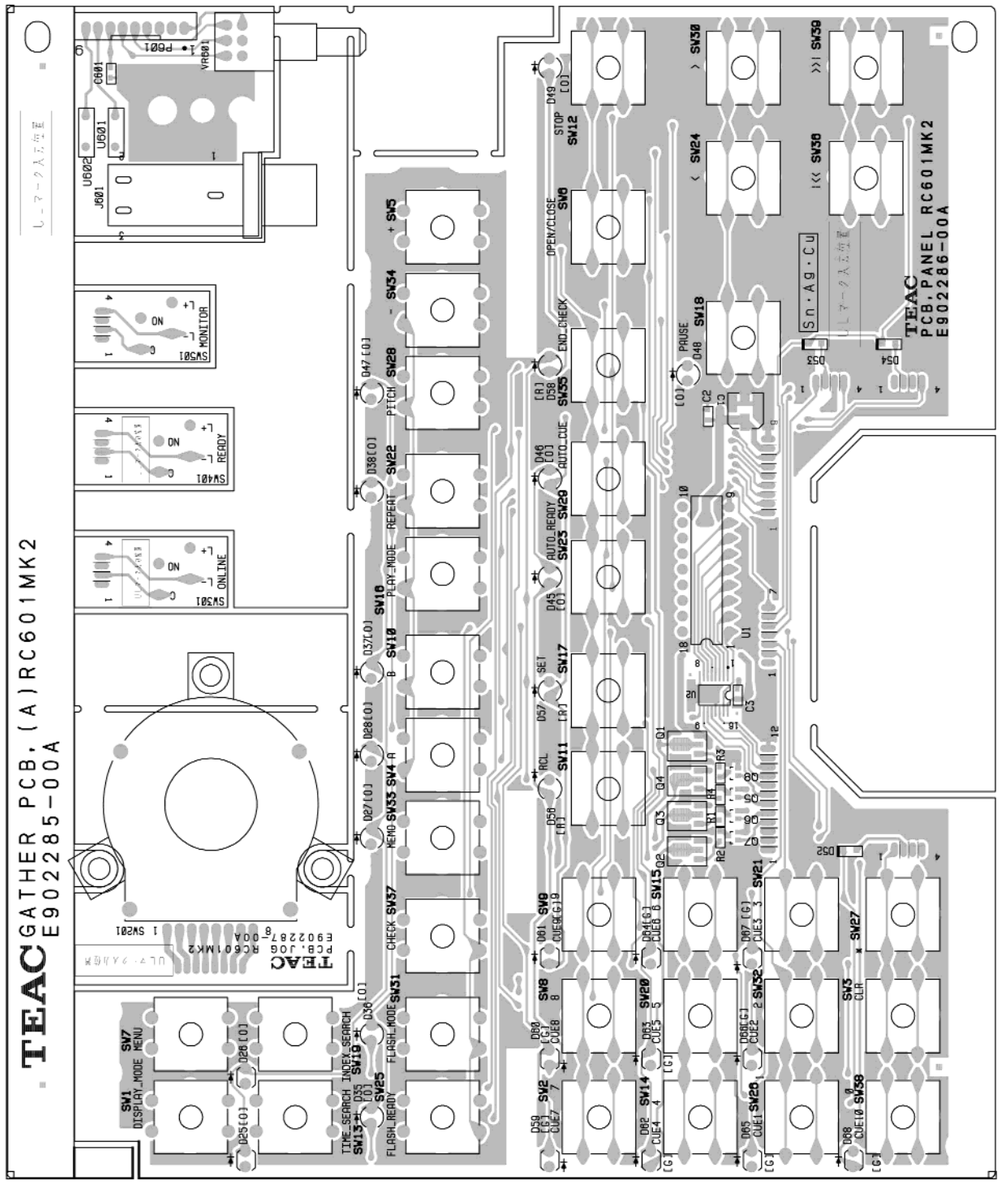
GATHER PCB KEY ASSY (PCB KEY, PCB HP, PCB D-SUB) (CD-601MKII) (SIDE B)



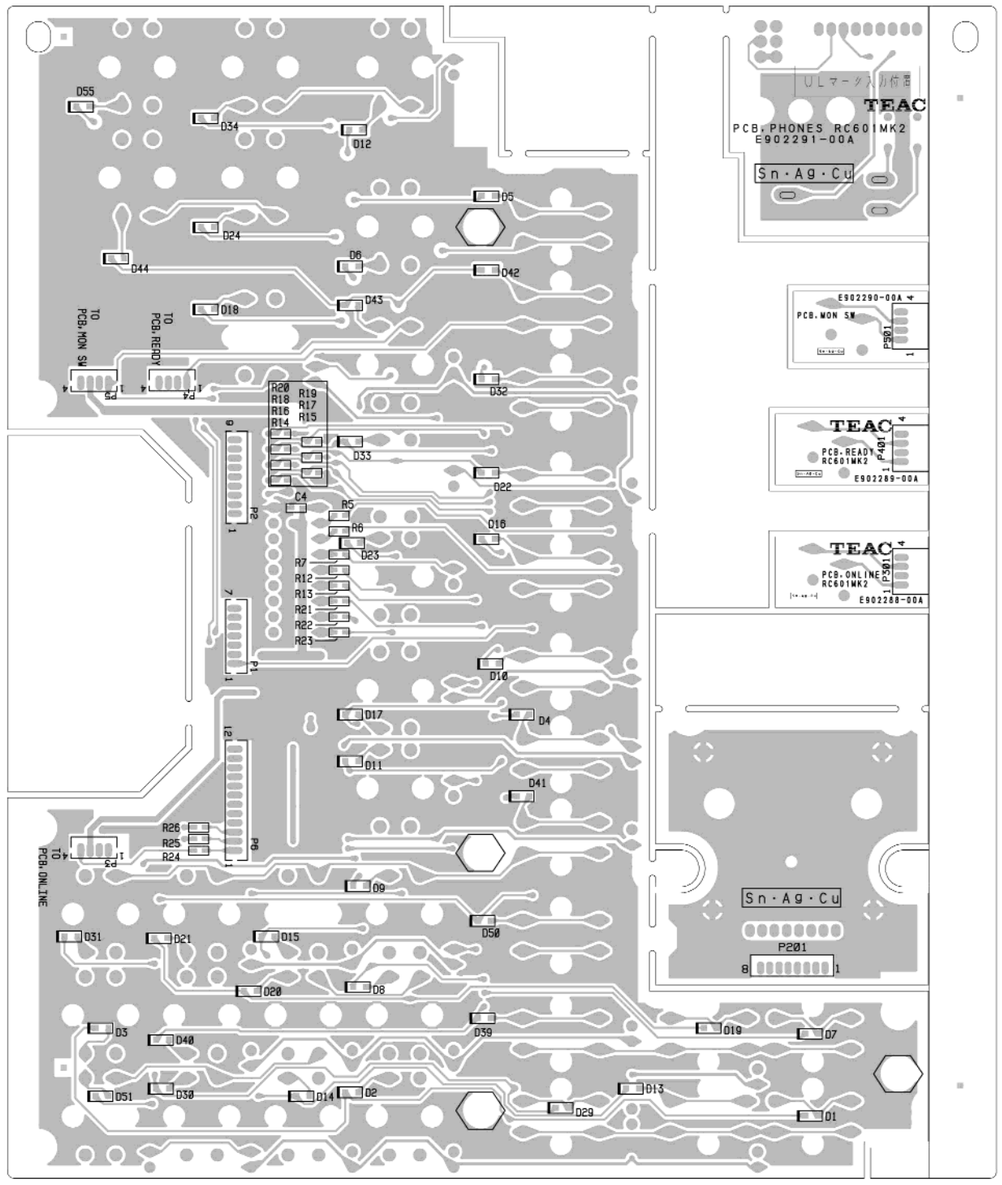
GATHER PCB REAR ASSY (PCB REAR, PCB PW SW) (CD-601MKII)



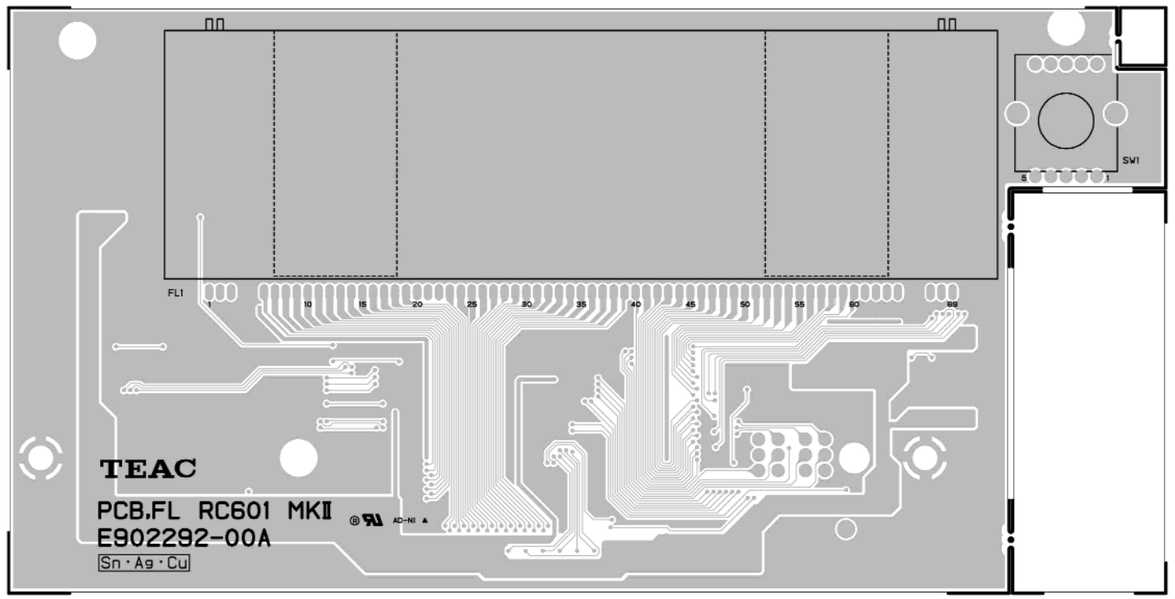
GATHER PCB (A) ASSY (PCB PANEL, PCB JOG, PCB ON LINE, PCB READY, PCB MON SW, PCB PHONE) (RC-601MKII) (SIDE A)



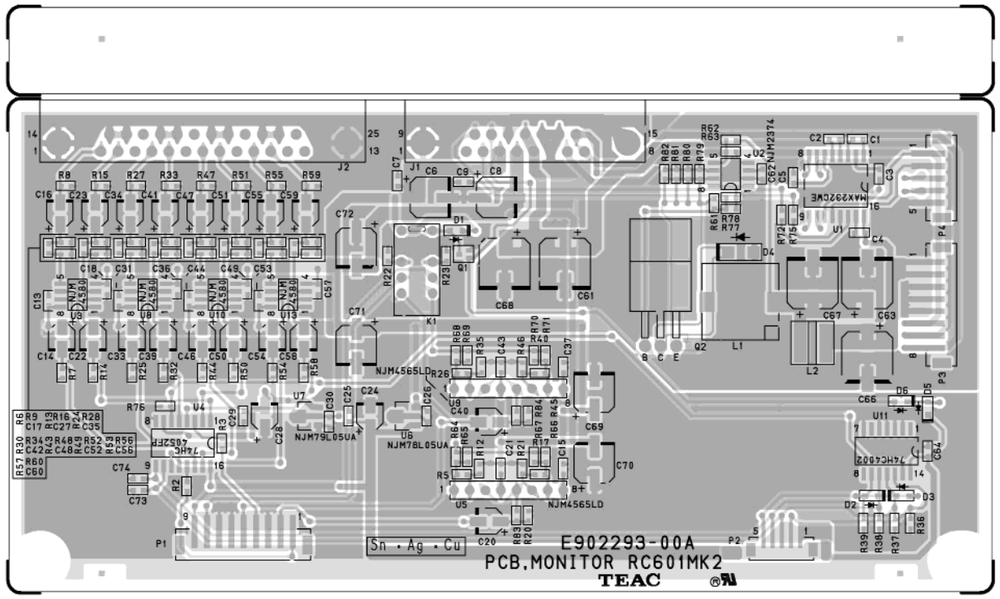
GATHER PCB (A) ASSY (PCB PANEL, PCB JOG, PCB ON LINE, PCB READY, PCB MON SW, PCB PHONE) (RC-601MKII) (SIDE B)



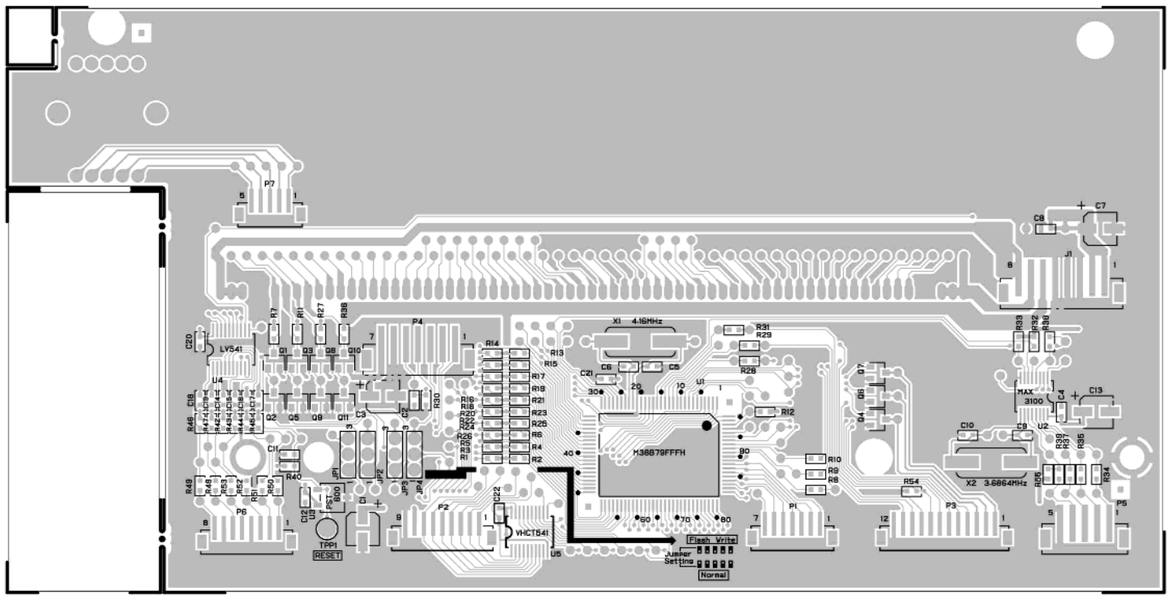
FL PCB ASSY (RC-601MKII) (SIDE A)



MONITOR PCB ASSY (RC-601MKII)



FL PCB ASSY (RC-601MKII) (SIDE B)



MAIN PCB ASSY (CD-601MK2)

REF.NO.		PARTS NO.	DESCRIPTION
			PCB ASSY,MAIN CD601MK2
		E95194200A	PCB ASSY,MAIN CD601MK2
C47	⚠	C0037740	CE, 16V 10000UF M UVY
C48,C53	⚠	5263167923	ﾒﾀﾗｲｽﾞﾞｺﾝ 0.10UF 50V J VT
C62,C68	⚠	C0045540	CE, 35V 2200UF M UVZ
C63,C69	⚠	5263167923	ﾒﾀﾗｲｽﾞﾞｺﾝ 0.10UF 50V J VT
C72,C73	⚠	5260461420	ｹﾐｺﾝ 4.7UF 50V M AU VT
C74-C76	⚠	C0013310	CE, 63V 220UF M
C77	⚠	5260463420	ｹﾐｺﾝ 100UF 50V M AU VT
C78,C79	⚠	5260462020	ｹﾐｺﾝ 22UF 50V M AU VT
D1,D18		S0022094	DIODE,1SS355
D10	⚠	5224584921	ZENER DIO RD5.1ESB2 FT
D11,D12	⚠	13411641	DIO 1SR139-400 T-32
D13	⚠	5224592821	ZENER DIO RD 33ESB1 FT
D14	⚠	5224585621	ZENER DIO RD6.2ESB1 FT
D15-D17		S0035214	DIODE,HVC376B-TRF
D19		S0021344	DIODE,RB160L-40
D2	⚠	S0048880	DIODE,D4SBS4
D2		5800501502	HTSK 42-NB
D3	⚠	5228013400	ｼﾘｺﾝｽﾀｯｸ D3SBA20
D4,D5	⚠	S0021344	DIODE,RB160L-40
D6-D9	⚠	13411641	DIO 1SR139-400 T-32
J1		E0079454	CONNECTOR,16FMN-BMTTN-ATF
K1		E0095530	RELAY,NA-12W-K GXX
L2		E0042284	COIL,10UH 10%
P1		E0101954	CONNECTOR,B 6B-PH-SM4(LF)
P10		5336303700	ｺﾈｸﾀｰﾌﾟﾗｸﾞ B7B-EH ﾀﾃ.ｼﾛ
P12		E0102344	CONNECTOR,B 5B-ZR-SM4(LF)
P13		E0102354	CONNECTOR,B 6B-ZR-SM4(LF)
P14		E0101964	CONNECTOR,B 7B-PH-SM4(LF)
P2		E0101944	CONNECTOR,B 5B-PH-SM4(LF)
P3		E0102004	CONNECTOR,B11B-PH-SM4(LF)
P4		5336303800	ｺﾈｸﾀｰﾌﾟﾗｸﾞ B8B-EH ﾀﾃ.ｼﾛ
P5		E0101974	CONNECTOR,B 8B-PH-SM4(LF)
P6		5336303900	ｺﾈｸﾀｰﾌﾟﾗｸﾞ B9B-EH ﾀﾃ.ｼﾛ
P7		E0102014	CONNECTOR,B12B-PH-SM4(LF)
P8		E0101984	CONNECTOR,B 9B-PH-SM4(LF)
P9		E0101994	CONNECTOR,B10B-PH-SM4(LF)
Q1,Q20		S0046744	TRANSISTOR,DTA124EUA
Q2,Q4		S0022044	TRANSISTOR,DTC114EUA-T106
Q3		S0014904	TRANSISTOR,2SA1036K
Q5,Q10		S0022044	TRANSISTOR,DTC114EUA-T106
Q6		S0038874	TRANSISTOR,2SD2150
Q7,Q8		S0050664	TRANSISTOR,DTC143EUA
Q9		S0028584	TRANSISTOR,2SA1037AK
Q11,Q12	⚠	5230012920	TR,2SA1015 GR TPE2
Q13		S0050664	TRANSISTOR,DTC143EUA
Q14-Q19		S0050054	TRANSISTOR,2SC4213A TE85L
Q21,Q23		S0022044	TRANSISTOR,DTC114EUA-T106
Q22,Q24		S0046744	TRANSISTOR,DTA124EUA
Q25		S0022044	TRANSISTOR,DTC114EUA-T106

MAIN PCB ASSY (CD-601MK2)

REF.NO.		PARTS NO.	DESCRIPTION
R65	⚠	R0101341	RD, 1/4W 10KOHM J
R67,R69	⚠	R0101261	RD, 1/4W 4.7KOHM J
R71	⚠	R0101581	RD, 1/4W 100KOHM J
U1		S0058383	IC,CXA2581N
U2		S0058393	IC,CXD3068Q
U3		S0058403	IC,BA5974FP
U4		S0058413	IC,BA6287F
U5	⚠	S0058710	IC,BA07CC0T
U6	⚠	13447952	IC LIN NJM7805FA
U7,U8		S0056704	IC,BA033CC0FP-E2 GB0
U9	⚠	S0058720	IC,BAJ2CC0T
		5730039200	HEATSINK,OSH-2425-SFL
U10	⚠	13447973	IC LIN NJM7912FA
		5730039200	HEATSINK,OSH-2425-SFL
U11,U38		S0053294	IC,SN74LVC1G125DCKR
U12,U20		S0037164	IC,TC74VHCT541AFT(EL)
U13-U15		S0056844	IC,TC74VHCU04FT GS1
U16		S0058433	IC,CS8420-CSZ/D1
U17		5220123500	IC DGTL MC74HC4046AFEL G
U18,U21		S0056854	IC,TC74VHC595FT GS1
U19,U27		13447922	IC NJM78L05UA-TE1
U22,U23		5220123500	IC DGTL MC74HC4046AFEL G
U24		S0058443	IC,XC9572XL-10VQG64C
U25,U26		5220444000	IC ANLG NJM4565LD
U28,U29		S0015174	IC,NJM4580E
U30		S0035234	IC,AK4393
U31		S0044704	IC,BD4730G
U32		S0055053	IC,M12L64164A-7T-G
U33		S0058764	IC,BA18BC0FP
U34		S0028864	IC,SN74LV14APW-EL
U35		S0052333	IC,SCF5249VF140
U36		S0059093	IC,S29AL008D70TFI020
U37		S0037164	IC,TC74VHCT541AFT(EL)
U39		S0058424	IC,M24512-WMW6
X1		E01075500A	RESONATOR,CSTCG 33.8688MH
X2		E01075300A	RESONATOR,CSTCG 24.576MHZ
X3		E01075400A	RESONATOR,CSTCG 28.224MHZ
X4		E0056384	RESONATOR,MIN35A-T33.8688

DISP PCB ASSY (CD-601MK2)

REF.NO.		PARTS NO.	DESCRIPTION
			PCB ASSY,DISP CD601MK2
		E95194400A	PCB ASSY,DISP CD601MK2
FL1		E01008400A	ELCTRN RAY DSPL,CD-601MK2
JP1-JP4		5334045100	CONN PL 3P DSP03-003
JP1-JP4		5334042400	CONN SKT 2P DSP01-
P1		E0102414	CONNECTOR,B12B-ZR-SM4(LF)
P2		E0102344	CONNECTOR,B 5B-ZR-SM4(LF)
P3		E0101964	CONNECTOR,B 7B-PH-SM4(LF)
P4		E0102344	CONNECTOR,B 5B-ZR-SM4(LF)
P5		E0101974	CONNECTOR,B 8B-PH-SM4(LF)
Q1,Q4		S0018834	TRANSISTOR,DTA144EUA-T106
Q10,Q11		S0029814	TRANSISTOR,DTC123EUA
Q2,Q5		S0019214	TRANSISTOR,DTC144EUA T106
Q3		S0029814	TRANSISTOR,DTC123EUA
Q6,Q7		S0029814	TRANSISTOR,DTC123EUA
Q8,Q12		S0018834	TRANSISTOR,DTA144EUA-T106
Q9,Q13		S0019214	TRANSISTOR,DTC144EUA T106
U1		S0055603	IC,M38B79FFFP(FLASH)
U2		S0058744	IC,PST600DM
U3		S0055614	IC,MAX3100CEE
U4		S0037164	IC,TC74VHCT541AFT(EL)
X1		E0100863	RESONATOR,SD3 4.16MHz
X2		E0100853	RESONATOR,SD3 3.6864MHz
		5801532101	FL GDE
		M00539400A	CUSHION,

TRANS PCB ASSY (CD-601MK2)

REF.NO.		PARTS NO.	DESCRIPTION
		E95194901A	PCB ASSY,TRANS DM CD601MK[J]
		E95194920A	PCB ASSY,TRANS T/C CD601M [US/C]
		E95194940A	PCB ASSY,TRANS AUS CD601M [A]
		E95194950A	PCB ASSY,TRANS EURY CD601 [E]
		E95194960A	PCB ASSY,TRANS UKY CD601M [UK]
		E95194904A	PCB ASSY,TRANS KOR CD601M [KOR]
F1	⚠	E0077660	T-LAG FUSE,4.0A IEC
F1,F2		E0034560	CLIP FUSE,H0446
F2-F4	⚠	E0077600	T-LAG FUSE,1.0A IEC
F3,F4		E0034560	CLIP FUSE,H0446
P1		5336376200	CONN PLUG B2P3-VH
P2		E0102490	CONNECTOR,B 8B-EH(LF)
T1	⚠	E01018100A	TRANS,POWER CD-601MK2

GATHER PCB A, KEY ASSY (CD-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
	E95230200A	GATHER PCBA,KEY CD601MK2
		PCB ASSY,KEY CD601MK2
D101	S0022094	DIODE,1SS355
D102	5225018500	LED,SLR-342DU3F
D102	5730041000	LEDSPCR LH-5 L=3
D103-D120	S0022094	DIODE,1SS355
P101	E0102290	CONNECTOR,B12B-ZR(LF)
P102	E0102220	CONNECTOR,B 5B-ZR(LF)
S101	5302104400	ﾀｸﾄSW SKHCAA
S102-S109	5302107700	ﾀｸﾄSW SKHHAP0001
S110-S113	5302104400	ﾀｸﾄSW SKHCAA
S114	5300058900	PLAY SW SLGW-509
S115	5300059100	P/P SW SLYW-511
S116	5300059000	PAUSE SW SLYW-510
S117	E00481301A	SW,STOP 110L-1200-SLYW
S118,S119	5302107700	ﾀｸﾄSW SKHHAP0001
		PCB ASSY,HP CD601MK2
J301	5330009000	3ｷﾖｸ ｼﾞｬｯｸ(ﾎｰﾝ) YKB115009
P301	E0102120	CONNECTOR,B 9B-PH-KL(LF)
U301,U302	5347027620	ﾋﾞｰｽﾞﾌｴﾗｲﾄFBR07HA850ﾃｰﾌﾟ
VR301	R00843500A	VAR RES,1S2UVR9 20KX2 L15
		PCB ASSY,D-SUB CD601MK2
D201-D225	S0022094	DIODE,1SS355
F201	E0039090	CKT PTCT,RXE065
J201	E0032210	CONNECTOR,DSUB 15PIN
J202	E0032230	CONNECTOR,DSUB 37PIN
P201	E0102230	CONNECTOR,B 6B-ZR(LF)
P202	E0102500	CONNECTOR,B 9B-EH(LF)
P203	E0102100	CONNECTOR,B 7B-PH-KL(LF)
Q201-Q210	S0029814	TRANSISTOR,DTC123EUA
U201	S0002103	IC,DIGITAL MAX232CWE
U202,U203	S0058753	IC,MAX7301AAI

GATHER PCB A, REAR ASSY (CD-601MK2)

REF.NO.		PARTS NO.	DESCRIPTION
		E95230300A	GATHER PCBA,REAR CD601MK2
			PCB ASSY,REAR CD601MK2
D1-D3		5224015020	DIO 1SS133T-77 FT
J1		E0021750	JACK,YKC21-3226 RCA 2P
J2,J3		E0035610	JACK,NC3MAH(XLR)
J4		E0048060	40CK,BNC 2P-2SP2362
J5		E0035610	JACK,NC3MAH(XLR)
J6		E0020230	JACK,RCA PIN J(ORG)
K1-K3		E0095530	RELAY,NA-12W-K GXX
L1-L3		5347027620	ﾋﾞｰｽﾞﾌｪﾗｲﾄFBR07HA850ﾃｰﾌﾟ
P1		E0102130	CONNECTOR,B10B-PH-KL(LF)
P2		E0102150	CONNECTOR,B12B-PH-KL(LF)
R11,R23		5280036300	ﾊﾝｺﾃｲVR 6ｶﾞﾀ 10KB ﾀﾃｶﾞﾀ
U1-U3		5220448100	IC ANLG NJM2114L
			PCB ASSY,PWR SW CD601MK2
C1-C3	⚠	E0066080	SPK KILLER,0.0047UF250V
L2	⚠	5292806300	FILTER, FKOB16MH13
P2		5336376200	CONN PLUG B2P3-VH
P1		5336376600	CONN PLUG,B2P3S-VH
S1	⚠	E0085700	SW,PUSH SDKLA10300

WIRE SECT, (CD-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
		WIRE SECT,CD601MK2
	E01012600A	HARN ASSY,KEYS CD601_2
	E01012700A	HARN ASSY,LEDS CD601_2
	E01012800A	HARN ASSY,HP CD601_2
	E01012900A	HARN ASSY,TRANS CD601_2
	E01013000A	HARN ASSY,PWRSW CD601_2
	E01013100A	HARN ASSY,232C CD601_2
	E01013200A	HARN ASSY,ANAPW CD601_2
	E01013300A	HARN ASSY,DSUB CD601_2
	E01013400A	HARN ASSY,ANALOG CD601_2
	E01013500A	HARN ASSY,WORD CD601_2
	E01013600A	HARN ASSY,FLPWR CD601_2
	E01013700A	HARN ASSY,PANEL CD601_2
	E01013800A	HARN ASSY,SERVO CD601_2
	E01056000A	HARN ASSY,ACPWR CD601_2
	E01055900A	HARN ASSY,EARTH CD601_2
	E00556300A	FLAT CABLE,DSUB16 DA-78

GATHER PCB A, ASSY (RC-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
	E95228500A	GATHER PCBA,(A) RC-601MK2
		PCB ASSY,PANEL RC601MK2
D1-D24	S0022094	DIODE,1SS355
D25,D26	13419439	ｺｳﾃﾞﾝｿｼ SLC-22 DU3
D25,D26	M0209550	SPACER,LED LH-5-2.5
D27,D28	5225018500	LED,SLR-342DU3F
D29-D34	S0022094	DIODE,1SS355
D35-D38	5225018500	LED,SLR-342DU3F
D39-D44	S0022094	DIODE,1SS355
D45-D49	5225018500	LED,SLR-342DU3F
D45-D49	M0209560	SPACER,LED LH-5-3.5
D50,D51	S0022094	DIODE,1SS355
D52-54	S0022094	DIODE,1SS355
D55	S0022094	DIODE,1SS355
D56-D58	5225013500	LED,SLR-342VR3F (R)
	M0209560	SPACER,LED LH-5-3.5
D59-D68	13419441	ｺｳﾃﾞﾝｿｼ SLC-22 MG3
	M0209550	SPACER,LED LH-5-2.5
P1	E0102240	CONNECTOR,B 7B-ZR(LF)
P2	E0102260	CONNECTOR,B 9B-ZR(LF)
P3	E0102210	CONNECTOR,B 4B-ZR(LF)
P4	E0102210	CONNECTOR,B 4B-ZR(LF)
P5	E0102210	CONNECTOR,B 4B-ZR(LF)
P6	E0102290	CONNECTOR,B12B-ZR(LF)
Q1-Q4	S0038024	TRANSISTOR,2SB1424
Q5-Q8	S0050664	TRANSISTOR,DTC143EUA
SW1-SW39	5302104400	ﾀｸﾄSW SKHCAA
U1	5232256900	ﾄﾗﾝｼﾞｽﾀｰｱﾚｰ M54585P
U2	S0056854	IC,TC74VHC595FT GS1
		PCB ASSY,JOG RC601MK2
P201	E0102250	CONNECTOR,B 8B-ZR(LF)
SW201	E0000460	ENCODER,SRGPHJ
		PCB ASSY,ONLINE RC601MK2
P301	5334084300	CONN PL S04B-ZR W
SW301	5300057600	ﾗｲﾄｽｲｯﾁ(O)VHM-1S7M2GXC034
		PCB ASSY,READY RC601MK2
P401	5334084300	CONN PL S04B-ZR W
SW401	5300057700	ﾗｲﾄｽｲｯﾁ(R)VHM-1S8M2GXC035
		PCB ASSY,MON SW RC601MK2
P501	5334084300	CONN PL S04B-ZR W
SW501	5300057800	ﾗｲﾄｽｲｯﾁ(M)VHM-1S9M2GXC034
		PCB ASSY,PHONES RC601MK2
J601	5330009000	3ｷﾖｸ ｼﾞｬｯｸ(ﾎｰﾝ) YKB115009
P601	E0102120	CONNECTOR,B 9B-PH-KL(LF)
U601,U602	5347027620	ﾋﾞｰｽﾞﾌｪﾗｲﾄFBR07HA850ﾃｰﾌﾟ
VR601	R00843500A	VAR RES,1S2UVR9 20KX2 L15

FL PCB, ASSY (RC-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
	E95229200A	PCB ASSY,FL RC601MK2
FL1	E01008400A	ELCTRN RAY DSPL,CD-601MK2
J1	E0101974	CONNECTOR,B 8B-PH-SM4(LF)
JP1-JP4	5334045100	CONN PL 3P DSP03-003
JP1-JP4	5334042400	CONN SKT 2P DSP01-
P1	E0102364	CONNECTOR,B 7B-ZR-SM4(LF)
P2	E0102384	CONNECTOR,B 9B-ZR-SM4(LF)
P3	E0102414	CONNECTOR,B12B-ZR-SM4(LF)
P4	E0101964	CONNECTOR,B 7B-PH-SM4(LF)
P5	E0101944	CONNECTOR,B 5B-PH-SM4(LF)
P6	5336386800	CONN PL 8P B8BZRSM3TF
P7	E0102344	CONNECTOR,B 5B-ZR-SM4(LF)
Q1,Q3	S0018834	TRANSISTOR,DTA144EUA-T106
Q2,Q5	S0019214	TRANSISTOR,DTC144EUA T106
Q4	S0029814	TRANSISTOR,DTC123EUA
Q6,Q7	S0029814	TRANSISTOR,DTC123EUA
Q8,Q10	S0018834	TRANSISTOR,DTA144EUA-T106
Q9,Q11	S0019214	TRANSISTOR,DTC144EUA T106
SW1	E0100900	SW,ROTARY 1-4 SRBV
TPP1	5317002100	DHﾁｴｯｸﾋﾟﾝ IPS-1136
U1	S0055603	IC,M38B79FFFP(FLASH)
U2	S0055614	IC,MAX3100CEE
U3	S0058744	IC,PST600DM
U4	S0046854	IC,SN74LV541APWR
U5	S0037164	IC,TC74VHCT541AFT(EL)
X1	E0100863	RESONATOR,SD3 4.16MHz
X2	E0100853	RESONATOR,SD3 3.6864MHz
	M02097900A	RUBBER SHEET,

MONITOR PCB, ASSY (RC-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
	E95229300A	PCB ASSY,MONITOR RC601MK2
D1,D2	S0022094	DIODE,1SS355
D3	S0022094	DIODE,1SS355
D4	S0028854	DIODE,RB060L-40TE25
D5,D6	S0022094	DIODE,1SS355
J1	E0032210	CONNECTOR,DSUB 15PIN
J2	E0082140	CONNECTOR,DSUB 25S
K1	E0095530	RELAY,NA-12W-K GXX
L1	E0087974	COIL,220UH 1.3A
L2	E0069824	COIL,CDRH5D28-100NC
P1	E0101984	CONNECTOR,B 9B-PH-SM4(LF)
P2	E0102344	CONNECTOR,B 5B-ZR-SM4(LF)
P3	E0101974	CONNECTOR,B 8B-PH-SM4(LF)
P4	E0101944	CONNECTOR,B 5B-PH-SM4(LF)
Q1	S0029814	TRANSISTOR,DTC123EUA
Q2	S0051500	TRANSISTOR,2SA1930
U1	S0002103	IC,DIGITAL MAX232CWE
U10,U13	S0015174	IC,NJM4580E
U11	S0056304	IC,CD74HC4002NSR
U2	S0058774	IC,NJM2374AE
U3,U8	S0015174	IC,NJM4580E
U4	S0020124	IC,MC74HC4052F
U5,U9	5220444000	IC ANLG NJM4565LD
U6	13447922	IC NJM78L05UA-TE1
U7	S0028474	IC,NJM79L05UA-TE1

WIRE SECT, (RC-601MK2)

REF.NO.	PARTS NO.	DESCRIPTION
	E01013900A	HARN ASSY,ONLINE RC601_2
	E01014000A	HARN ASSY,RDY RC601_2
	E01014100A	HARN ASSY,MONSW RC601_2
	E01014200A	HARN ASSY,JOG RC601_2
	E01014300A	HARN ASSY,PHONE RC601_2
	E01014400A	HARN ASSY,LED RC601_2
	E01014500A	HARN ASSY,KEY1 RC601_2
	E01014600A	HARN ASSY,KEY2 RC601_2
	E01014700A	HARN ASSY,TX RC601_2
	E01014800A	HARN ASSY,POWER RC601_2
	E01014900A	HARN ASSY,SELECT RC601_2

8. INCLUDED ACCESSORIES
付属品

INCLUDED ACCESSORIES (CD601MK2)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	5350014400	AC CD ASSY DM [J]	
	5347009000	ｱﾀﾞﾌﾟﾀｰ DM KPR-18 [J]	
	15922303	3 ｼﾝ ｺｰﾄﾞｾｯﾄ (0306B-0303B) [E,K]	
	E0084150	POWER CORD,3CUL 34894 [US/C]	
	5350018600	3 ｼﾝ ｺｰﾄﾞｾｯﾄ AUS [A]	
	5350018500	3 ｼﾝ ｺｰﾄﾞｾｯﾄ (13A ﾋｭｰｽﾞ)UK [UK]	
	D00811700A	OWNERS MNL,J CD601MK2 [J]	
	D00811701A	OWNERS MNL,E CD601MK2 [EXCEPTJ]	
	D00865500A	OWNERS MNL,QSG(E)CD601MK2 [EXCEPTJ]	
	D00865501A	OWNERS MNL,QSG(F)CD601MK2 [E]	
	D00865502A	OWNERS MNL,QSG(G)CD601MK2 [E]	
	D00865503A	OWNERS MNL,QSG(I)CD601MK2 [E]	
	D00865504A	OWNERS MNL,QSG(S)CD601MK2 [E]	

INCLUDED ACCESSORIES (RC601MK2)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	E01019000A	CABLE ASSY,RC-601MK2	
	D00865100A	OWNERS MNL,RC-601MK2 [J]	
	D00865200A	OWNERS MNL,RC-601MK2 [EXCEPT J]	
	D00865600A	OWNERS MNL,QSG(E)RC601MK2 [EXCEPT J]	
	D00865601A	OWNERS MNL,QSG(F)RC601MK2 [EXCEPT J]	
	D00865602A	OWNERS MNL,QSG(G)RC601MK2 [EXCEPT J]	
	D00865603A	OWNERS MNL,QSG(I)RC601MK2 [EXCEPT J]	
	D00865604A	OWNERS MNL,QSG(S)RC601MK2 [EXCEPT J]	

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [JEX] : JAPAN & ASIA

注　意

- プリント基板図は部品面を示しています。
- * 印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ず指定の部品を使用してください。
- 仕向先
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [JEX] : JAPAN & ASIA

This Quick Start Guide describes the basic operation of the CD-601MKII CD player.

By connecting the RC-601MKII remote control unit to the CD-601MKII, you can enhance the functions. However, you can carry out the basic operation from the CD-601MKII panel.

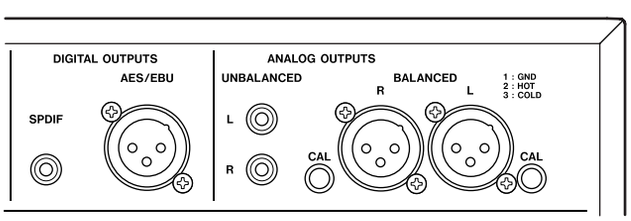
About the "Online" and "Monitor" playback

The CD-601MKII provides two different playback conditions: "online" and "monitor" playback.

According to our basic design concept, online playback is used for on-the-air or an actual performance, while monitor playback is used for cueing or checking audio before online playback.

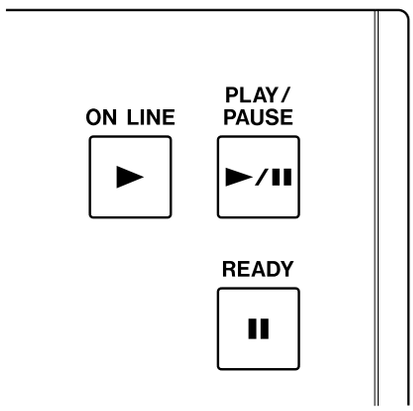
The BALANCED analog and AES/EBU digital outputs are designed for online playback outputs, while the UNBALANCED analog and SPDIF digital outputs are originally designed for monitor playback outputs.

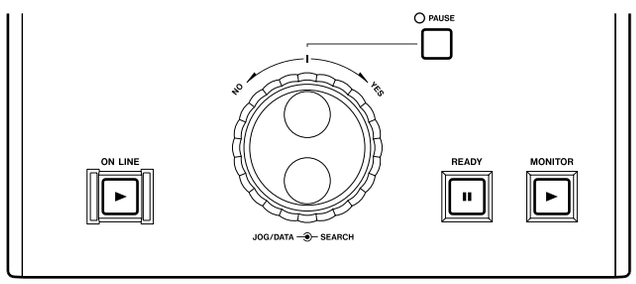
However, by default, both online and monitor playback signals are output from all the CD-601MKII outputs. Using the menu system, you can make the on-line playback signals to be output from the BALANCED analog and AES/EBU digital outputs only, and/or make the monitor playback signals to be output from the UNBALANCED analog and SPDIF digital outputs only.



Playback and pause keys for "online" and "monitor" playback

The CD-601MKII, as well as the RC-601MKII, provides independent keys for "online" and "monitor" playback.





For Monitor playback

On the CD-601MKII, use the PLAY/PAUSE key for playback or pause (pressing the key alternates between these conditions).

On the RC-601MKII, use the MONITOR key for playback and the PAUSE key for pause.

For Online playback

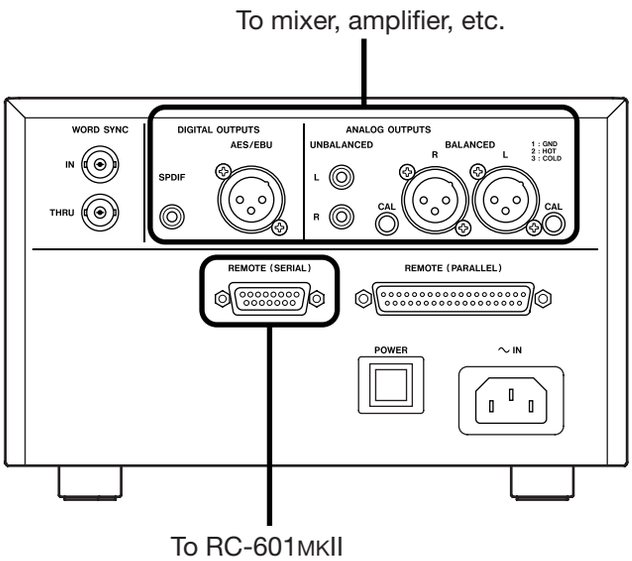
Use the ON LINE key for playback and the READY key for pause (both the CD-601MKI and RC-601MKII provide these keys).

- You can start "online" playback only when the CD-601MKII is "READY" (unless you turn off the fail safe mode via the menu system).
- You can stop "online" playback only by pressing the STOP key.

The point to which the CD-601MKII locates when pressing the READY key depends on the current transport status.

- While monitor-paused: the current point
- While stopped or monitor-playing: The point where you started monitor playback from monitor-pause status most recently.

Connection



If you have the RC-601MKII remote control unit, connect the PLAYER UNIT port on the RC-601MKII rear panel to the REMOTE (SERIAL) port on the CD-601MKII rear panel using the cable supplied with the RC-601MKII.

- Make audio connection between the CD-601MKII outputs and an external audio device.

As described above, by default, both online and monitor playback signals are output from all the outputs. Therefore, you simply use the appropriate output connector(s) on the CD-601MKII that match the connector(s) of the external device.

Playing back a desired track (SINGLE PLAY)

The following describes the procedure for selecting a desired track, checking the track using the monitor playback function, and executing online playback.

1. Press the PLAY MODE key to light "SINGLE" on the left of the display.

2. Press the PLAY/PAUSE key on the CD-601MKII (or the PAUSE key on the RC-601MKII) to enter "monitor pause".

3. Use the TRACK keys (or the numeric keys on the RC-601MKII) to select a desired track for playback.

The CD-601MKII enters "monitor pause" at the beginning of the selected track.

4. To check the track sound, press the PLAY/PAUSE key on the CD-601MKII (or the MONITOR key on the RC-601MKII) to start "monitor playback".

5. If the track is OK, press the READY key.

The CD-601MKII locates to the beginning of the audio of the track.

6. Press the ON LINE key to start "online playback".

At the end of the track, the CD-601MKII automatically stops.

Playing back from the desired point on a track

To play back from the desired point on a track, follow the procedure below after selecting a desired track on step 3 in "*Playing back a desired track (SINGLE PLAY)*" above.

4. Search the desired point using the SEARCH keys on the CD-601MKII, or the JOG/DATA dial or the SEARCH dial on the RC-601MKII.

Note

You can also use the monitor playback function to move forwards by pressing the PLAY/PAUSE key on the CD-601MKII or the MONITOR key on the RC-601MKII. If you do so, pause the CD-601MKII at the desired point by pressing the PLAY/PAUSE key on the CD-601MKII or the PAUSE key on the RC-601MKII.

5. Press the PLAY/PAUSE key on the CD-601MKII or the MONITOR key on the RC-601MKII to enter "monitor playback" for checking the point.

6. If the point is OK, press the READY key.

The CD-601MKII locates to the point you set in step 5 above.

If you want to trim the point, press the PLAY/PAUSE key on the CD-601MKII or the PAUSE key on the RC-601MKII to enter "monitor pause", and go back to step 5 above.

7. Press the ON LINE key to start "online playback".

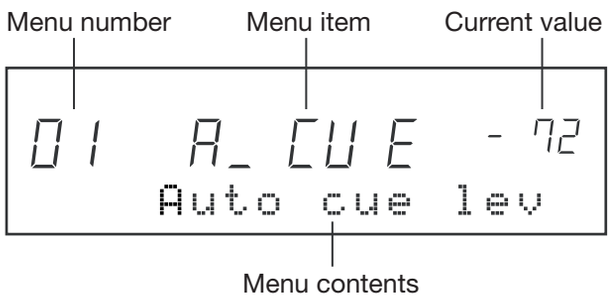
At the end of the track, the CD-601MKII automatically stops.

Menu system

Using the menu system, you can make various settings for the CD-601MKII.

Basic menu operation

1. To access to the menu system, press the MENU key on the CD-601MKII or RC-601MKII.



You must execute the following operation using the same unit of which you pressed the MENU key above.

2. Use the +/– keys on the CD-601MKII or the JOG/DATA dial on the RC-601MKII to select the desired menu item.

3. Press the ENTER key on the CD-601MKII or the * key on the RC-601MKII to confirm the menu item.

4. Use the +/– keys on the CD-601MKII or the JOG/DATA dial on the RC-601MKII to select the desired option.

5. Press the ENTER key on the CD-601MKII or the * key on the RC-601MKII to confirm the setting.

The CD-601MKII automatically exits the menu system.

Note

See the CD-601MKII Owner's Manual for the contents of each menu item.

Menu items for outputs

Online play output (Menu No. 02)

This menu item determines the output connectors that feed an online playback signal.

The default is "Off" and an online playback signal is output from all the outputs.

By setting this item to "On", an online playback signal is output only from the BALANCED analog and AES/EBU digital outputs.

Monitor play output (Menu No. 03)

This menu item determines the output connectors that feed a monitor playback signal.

The default is "Off" and a monitor playback signal is output from all the outputs.

By setting it to "On", a monitor playback signal is output only from the UNBALANCED analog and SPDIF digital outputs.

Menu items

The menu includes the following menu items:

Menu No.	Menu title	Function
01	A_CUE	Sets the auto cue threshold.
02	ONLINE	Selects outputs for online playback signals.
03	MONI	Selects outputs for monitor playback signals.
04	CLOCK	Selects the clock source between Internal and External.
05	PROG	Creates the program for program playback.
06	INCR_P	Selects on/off of the incremental play function.
07	TIMER	Selects on/off of the timer play function.
08	OUTPUT	Selects stereo or mono for output signals.
09	OUT_L	Sets the output level.
10	F_SAFE	Selects on/off of the fail safe function during online playback and online ready.
11	EOM	Makes setting of the countdown display for track ending.
12	E_CHK	Sets the end check time.
13	BANK	Selects a desired Memory BANK.
14	F_STAR	Sets the fader start polarity.
15	F_STOP	Sets the CD-601MKII status after fader.
16	CUE_UP	Selects the CD-601MKII status after auto cue or auto ready function works between READY and PAUSE.
17	RMT	Selects whether making the CD-601MKII keys ineffective or effective.
18	FRAME	Selects whether showing the frame indication or not on the display.
19	TIME	Selects the time display mode.
20	CUESET	Selects the condition for automatic CUE point memory.
21	A_CLR	Used to clear memory.
22	USER	Selects a user bank.
23	RS232C	Selects the baud rate of the RS-232C port.
(Without a number)	xxxxH	Shows the total motor operating time.

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D00865500A
Printed in Japan

TASCAM
TEAC Professional Division

SCHEMATIC DIAGRAM
回路図

CD-601MKⅡ & RC-601MKⅡ

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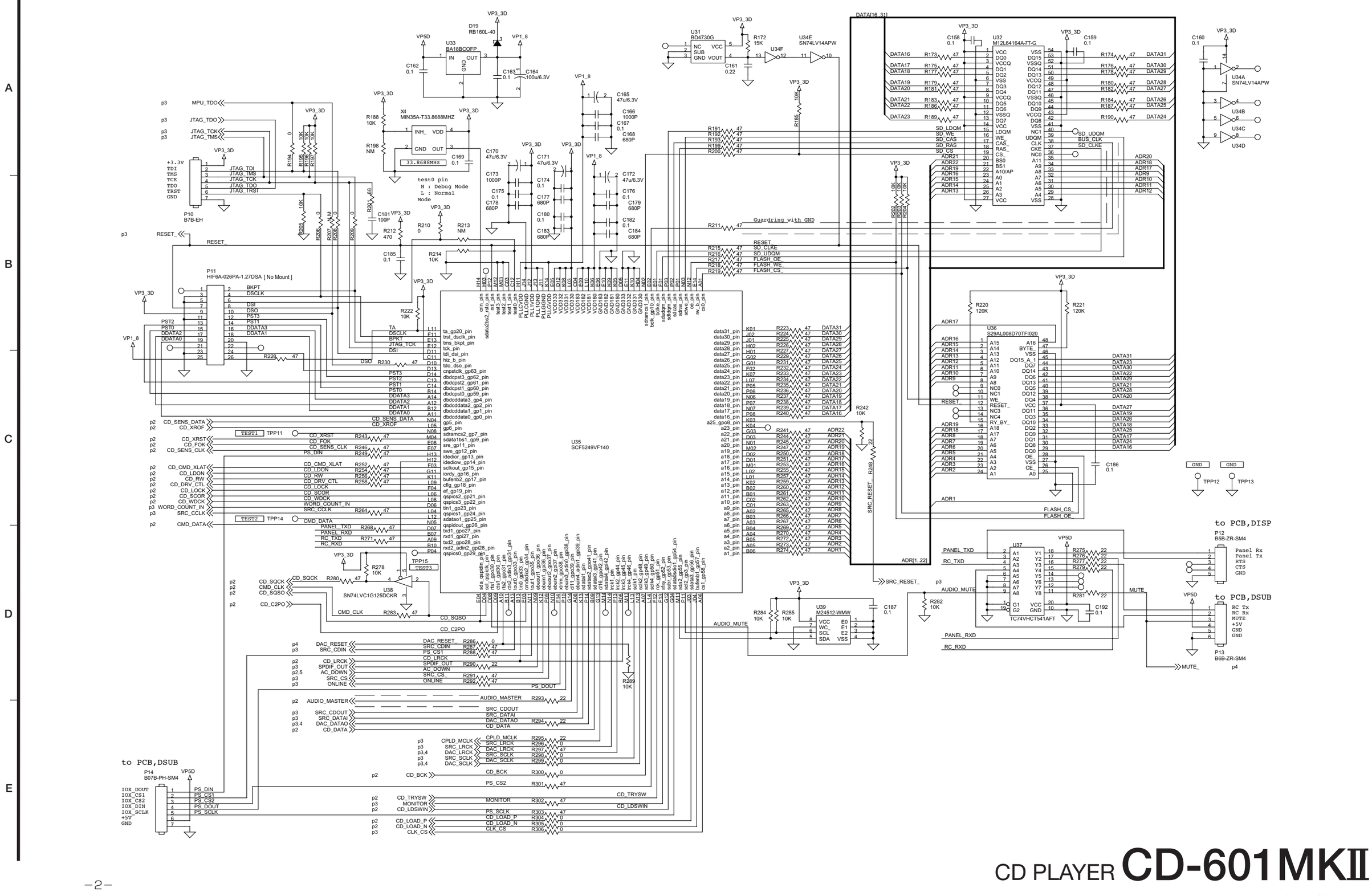

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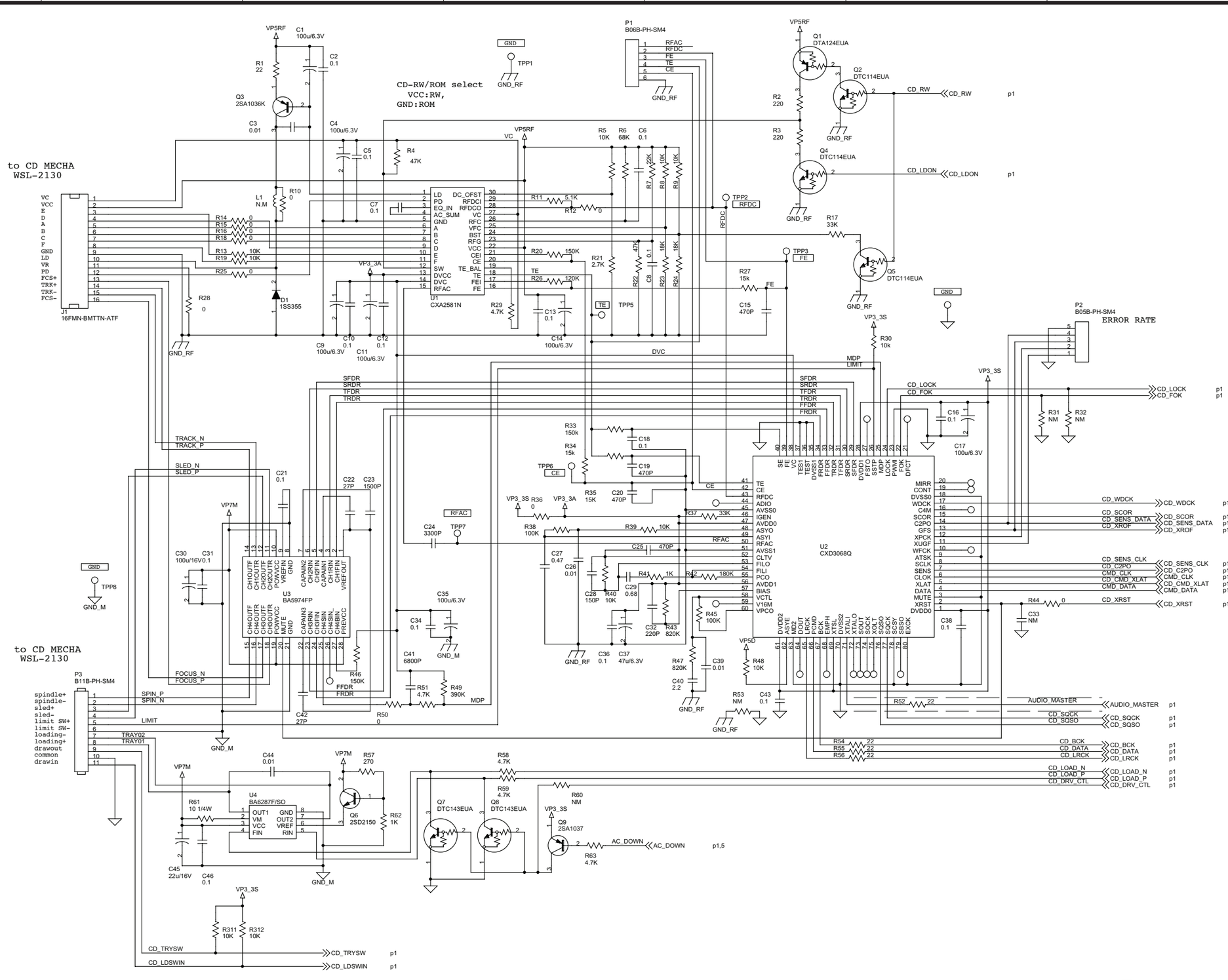

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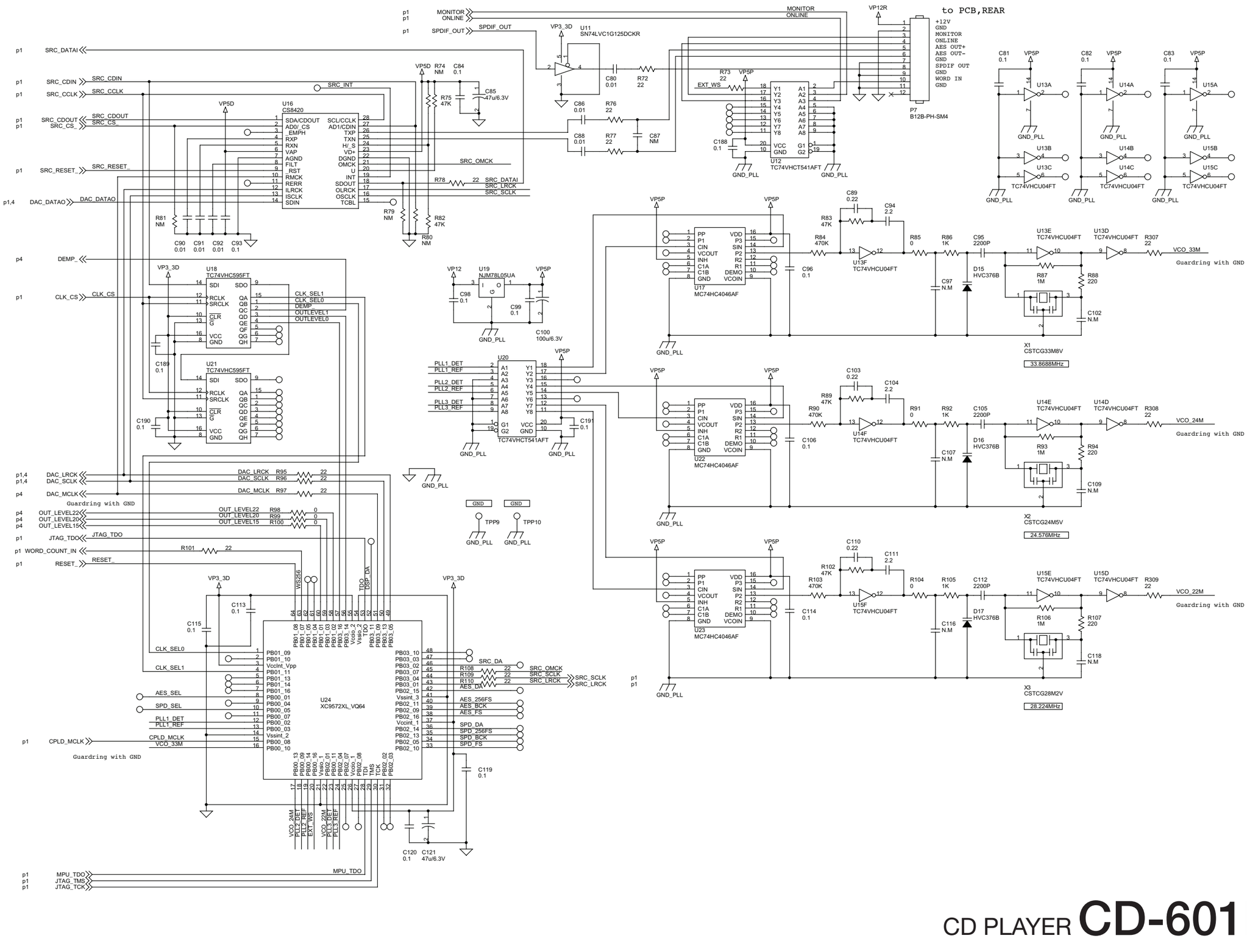

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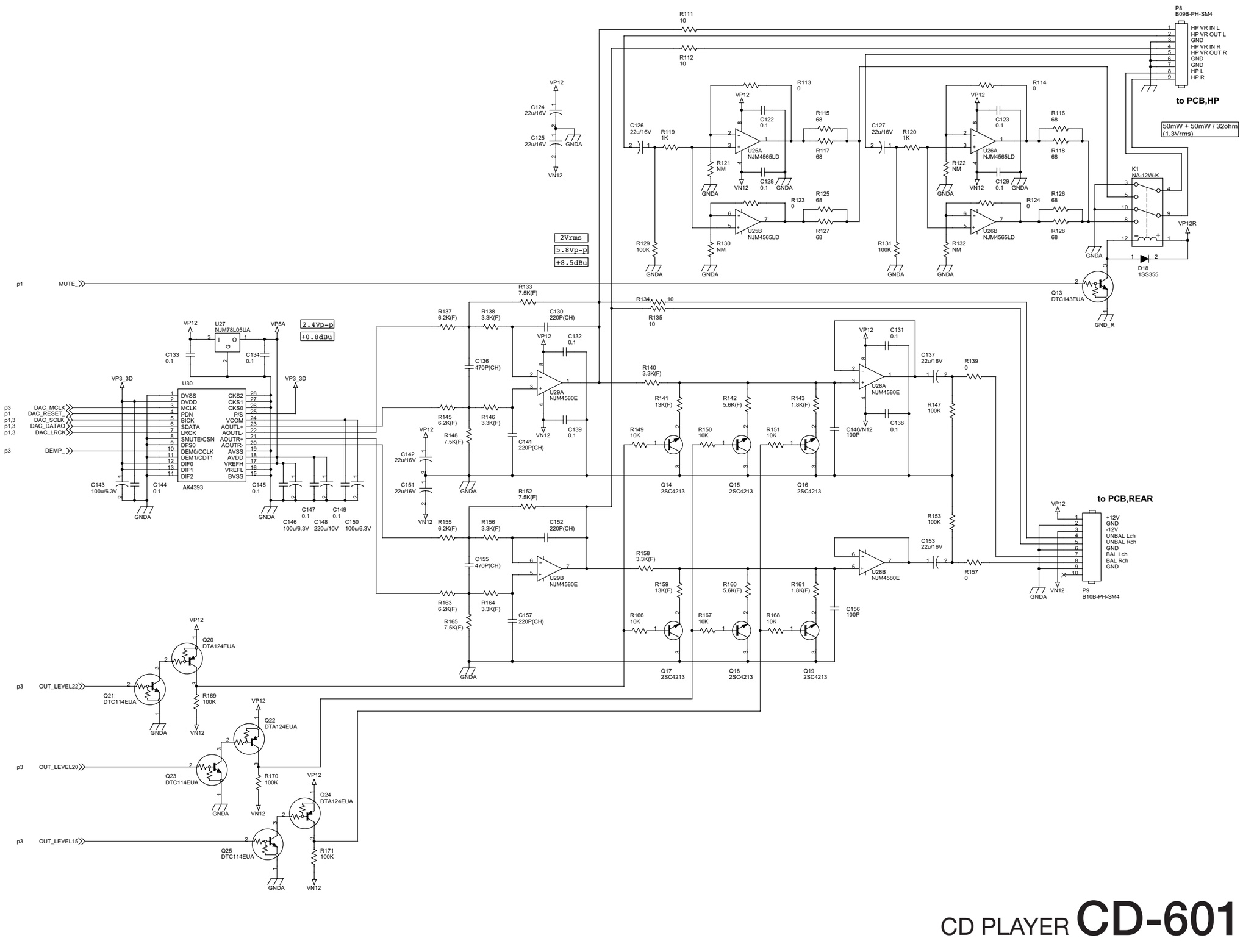

CD PLAYER CD-601MKII

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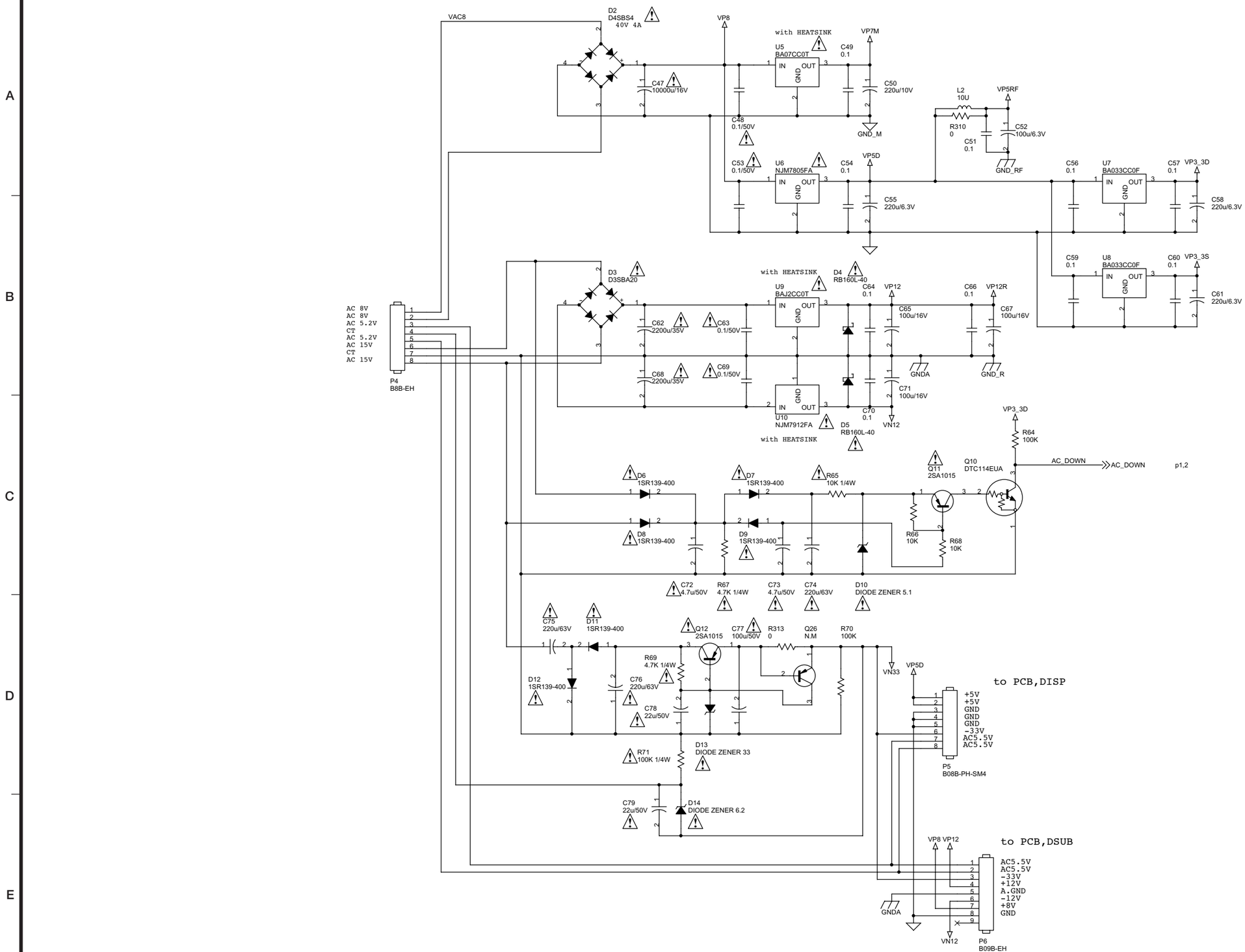

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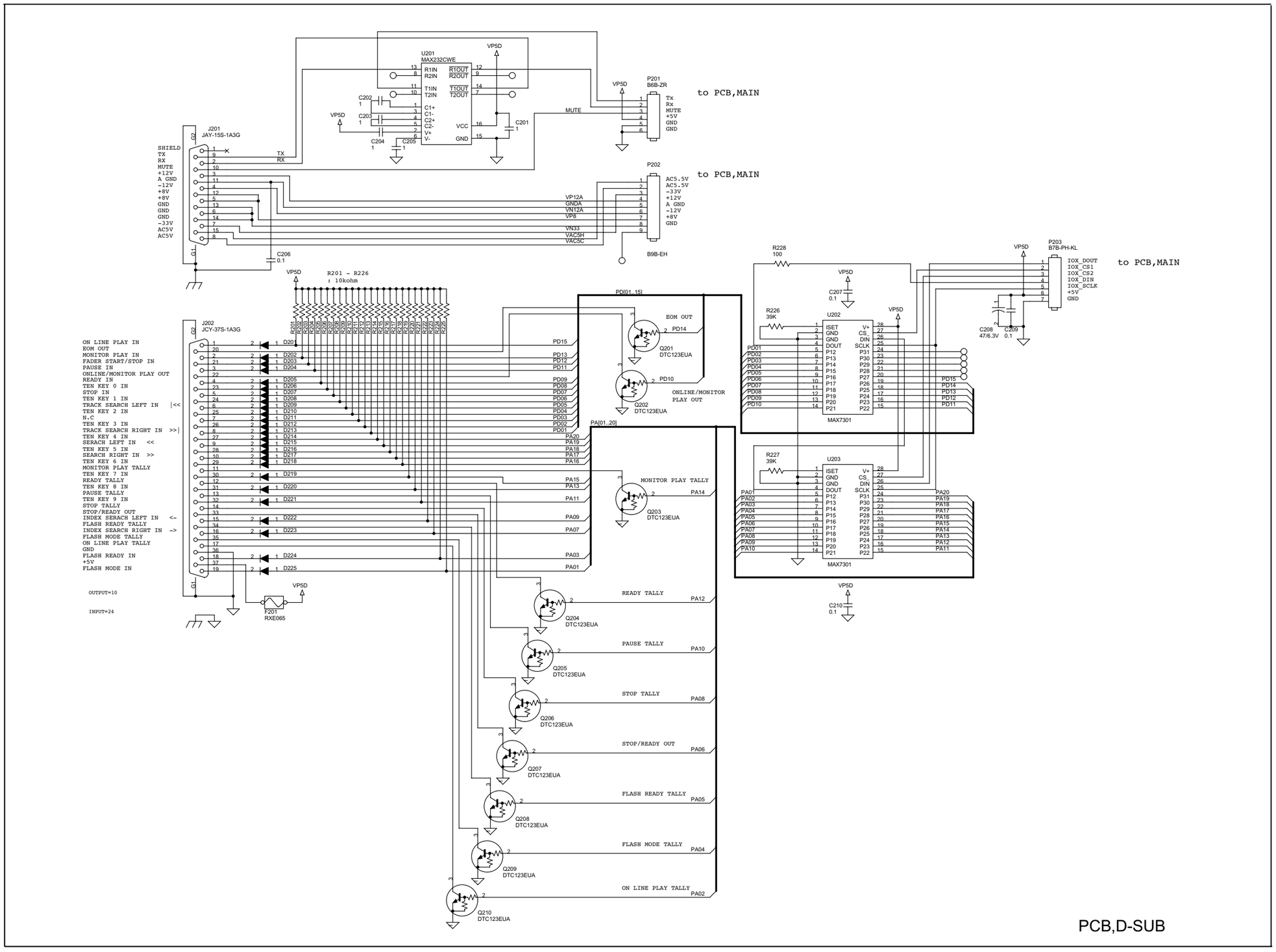
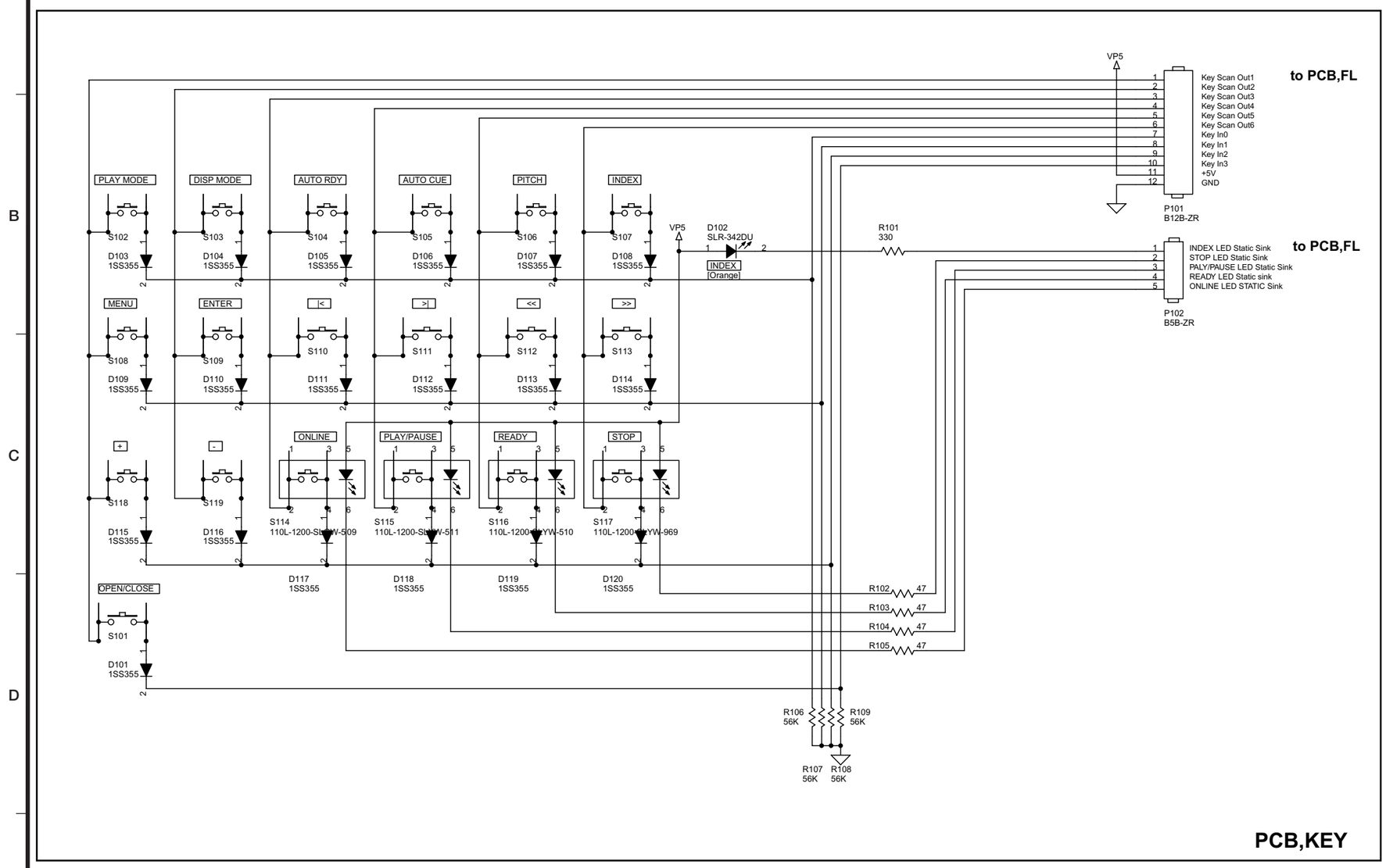
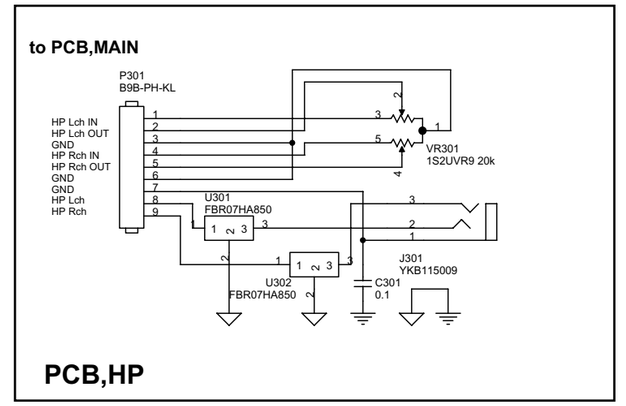
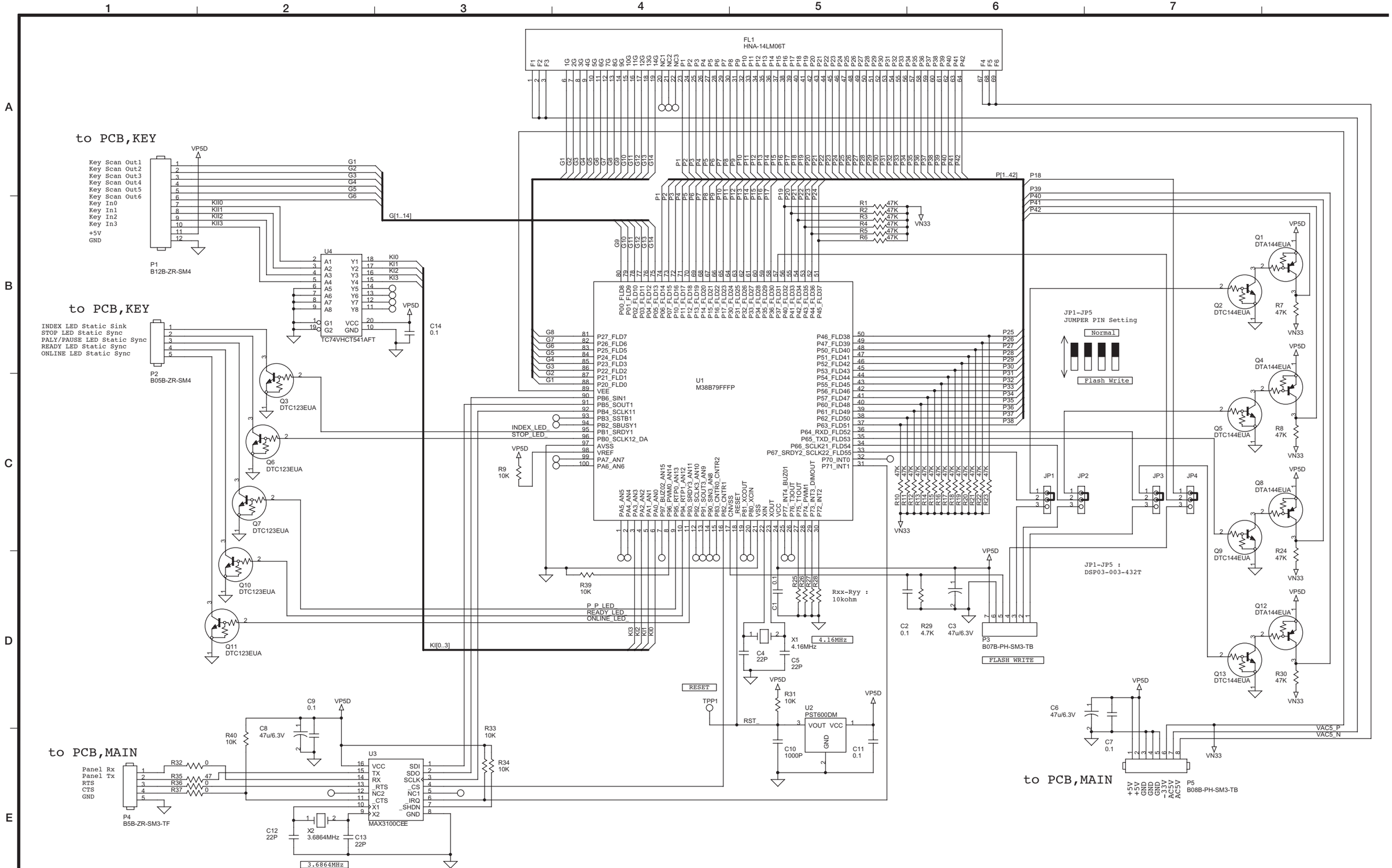

U201
MAX232CWE
R1IN
R2IN
T1IN
T2IN
R1OUT
R2OUT
T1OUT
T2OUT
C1+
C1-
C2+
C2-
V+
V-
VCC
GND
C201
C202
C203
C204
C205
VP5D
P201
B6B-ZR
Tx
Rx
MUTE
+5V
GND
GND
to PCB,MAIN
MUTE
J201
JAY-15S-1A3G
SHIELD
TX
RX
MUTE
+12V
A GND
-12V
+8V
+8V
GND
GND
GND
-33V
AC5V
AC5V
C206
0.1
P202
AC5.5V
AC5.5V
-33V
+12V
A GND
-12V
+8V
GND
B9B-EH
to PCB,MAIN
VP12A
GNDA
VN12A
VP8
VN33
VAC5H
VAC5C
R201 - R226
: 10kohm
J202
JCY-37S-1A3G
ON LINE PLAY IN
EOM OUT
MONITOR PLAY IN
FADER START/STOP IN
PAUSE IN
ONLINE/MONITOR PLAY OUT
READY IN
TEN KEY 0 IN
STOP IN
TEN KEY 1 IN
TRACK SEARCH LEFT IN |<<
TEN KEY 2 IN
N.C
TEN KEY 3 IN
TRACK SEARCH RIGHT IN >>|
TEN KEY 4 IN
SERACH LEFT IN <<
TEN KEY 5 IN
SEARCH RIGHT IN >>
TEN KEY 6 IN
MONITOR PLAY TALLY
TEN KEY 7 IN
READY TALLY
TEN KEY 8 IN
PAUSE TALLY
TEN KEY 9 IN
STOP TALLY
STOP/READY OUT
INDEX SERACH LEFT IN <-
FLASH READY TALLY
INDEX SEARCH RIGHT IN ->
FLASH MODE TALLY
ON LINE PLAY TALLY
GND
FLASH READY IN
+5V
FLASH MODE IN
OUTPUT=10
INPUT=24
F201
RXE065
PD[01..15]
PA[01..20]
EOM OUT
ONLINE/MONITOR PLAY OUT
MONITOR PLAY TALLY
READY TALLY
PAUSE TALLY
STOP TALLY
STOP/READY OUT
FLASH READY TALLY
FLASH MODE TALLY
ON LINE PLAY TALLY
Q201 DTC123EUA
Q202 DTC123EUA
Q203 DTC123EUA
Q204 DTC123EUA
Q205 DTC123EUA
Q206 DTC123EUA
Q207 DTC123EUA
Q208 DTC123EUA
Q209 DTC123EUA
Q210 DTC123EUA
R228
100
R226
39K
R227
39K
U202
U203
MAX7301
ISET
GND
GND
DOUT
CS_
DIN
SCLK
V+
C207
0.1
C208
47/6.3V
C209
0.1
C210
0.1
P203
B7B-PH-KL
IOX_DOUT
IOX_CS1
IOX_CS2
IOX_DIN
IOX_SCLK
+5V
GND
to PCB,MAIN

PCB,D-SUB


PLAY MODE
DISP MODE
AUTO RDY
AUTO CUE
PITCH
INDEX
MENU
ENTER
|<
>|
<<
>>
+
-
ONLINE
PLAY/PAUSE
READY
STOP
OPEN/CLOSE
S101
S102
S103
S104
S105
S106
S107
S108
S109
S110
S111
S112
S113
S114
S115
S116
S117
S118
S119
D101 1SS355
D102 SLR-342DU
INDEX [Orange]
D103 1SS355
D104 1SS355
D105 1SS355
D106 1SS355
D107 1SS355
D108 1SS355
D109 1SS355
D110 1SS355
D111 1SS355
D112 1SS355
D113 1SS355
D114 1SS355
D115 1SS355
D116 1SS355
D117 1SS355
D118 1SS355
D119 1SS355
D120 1SS355
S114 110L-1200-SURW-509
S115 110L-1200-SURW-511
S116 110L-1200-GYW-510
S117 110L-1200-GYW-969
VP5
R101 330
R102 47
R103 47
R104 47
R105 47
R106 56K
R107 56K
R108 56K
R109 56K
P101 B12B-ZR
Key Scan Out1
Key Scan Out2
Key Scan Out3
Key Scan Out4
Key Scan Out5
Key Scan Out6
Key In0
Key In1
Key In2
Key In3
+5V
GND
to PCB,FL
P102 B5B-ZR
INDEX LED Static Sink
STOP LED Static Sink
PALY/PAUSE LED Static Sink
READY LED Static sink
ONLINE LED STATIC Sink
to PCB,FL
PCB,KEY


to PCB,MAIN
P301 B9B-PH-KL
HP Lch IN
HP Lch OUT
GND
HP Rch IN
HP Rch OUT
GND
GND
HP Lch
HP Rch
VR301 1S2UVR9 20k
U301 FBR07HA850
U302 FBR07HA850
J301 YKB115009
C301 0.1
PCB,HP



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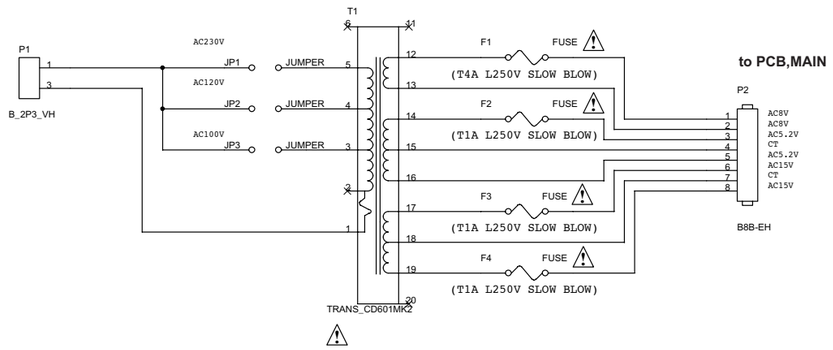
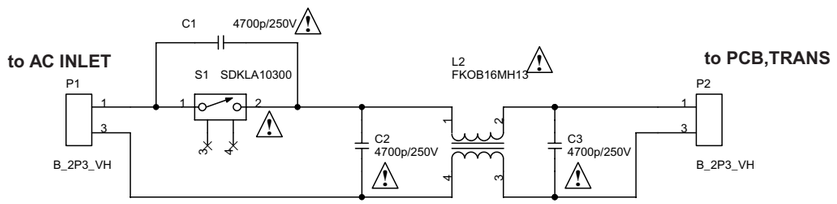
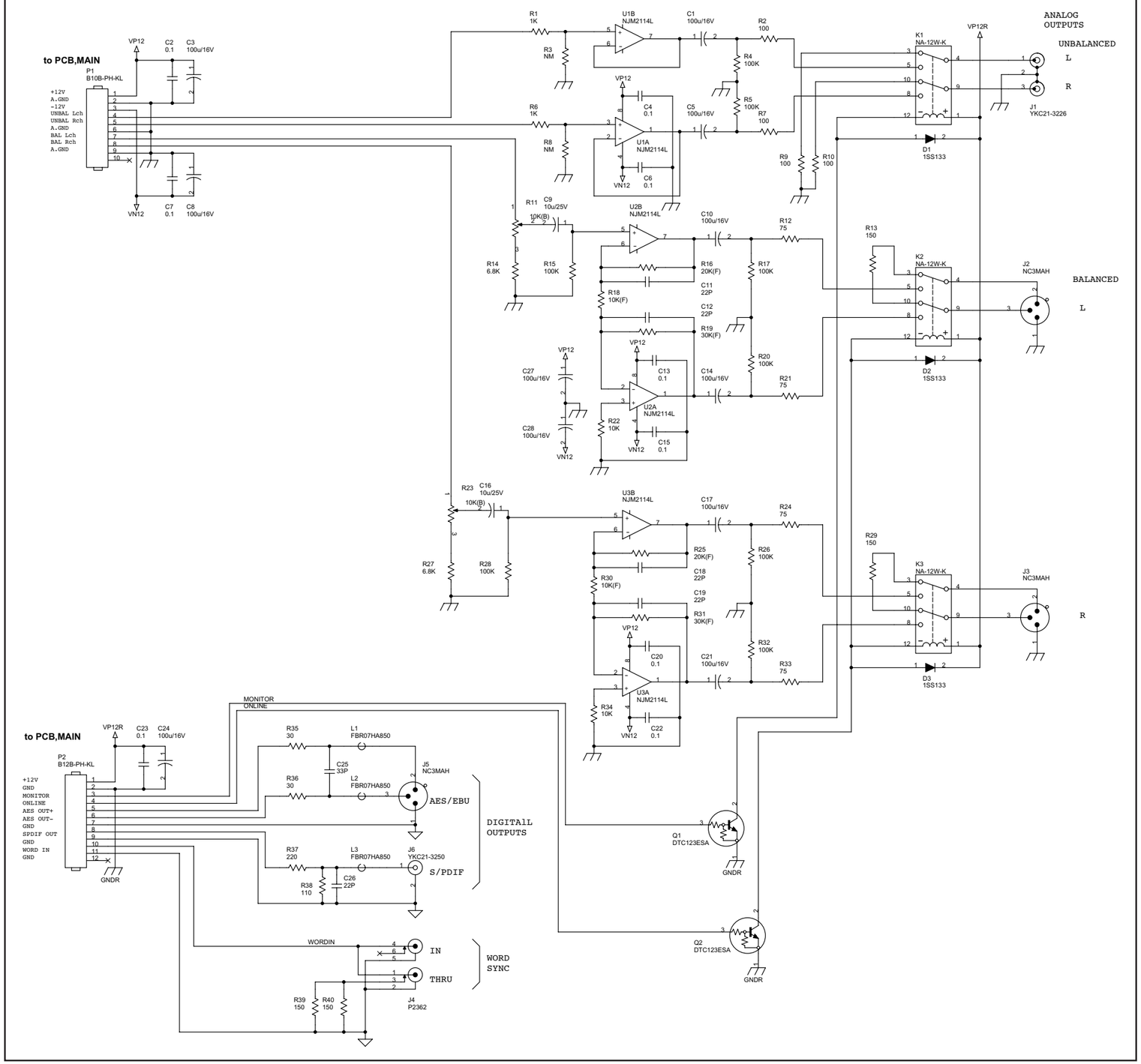
PCB,TRANS



PCB,PWR SW



PCB,REAR



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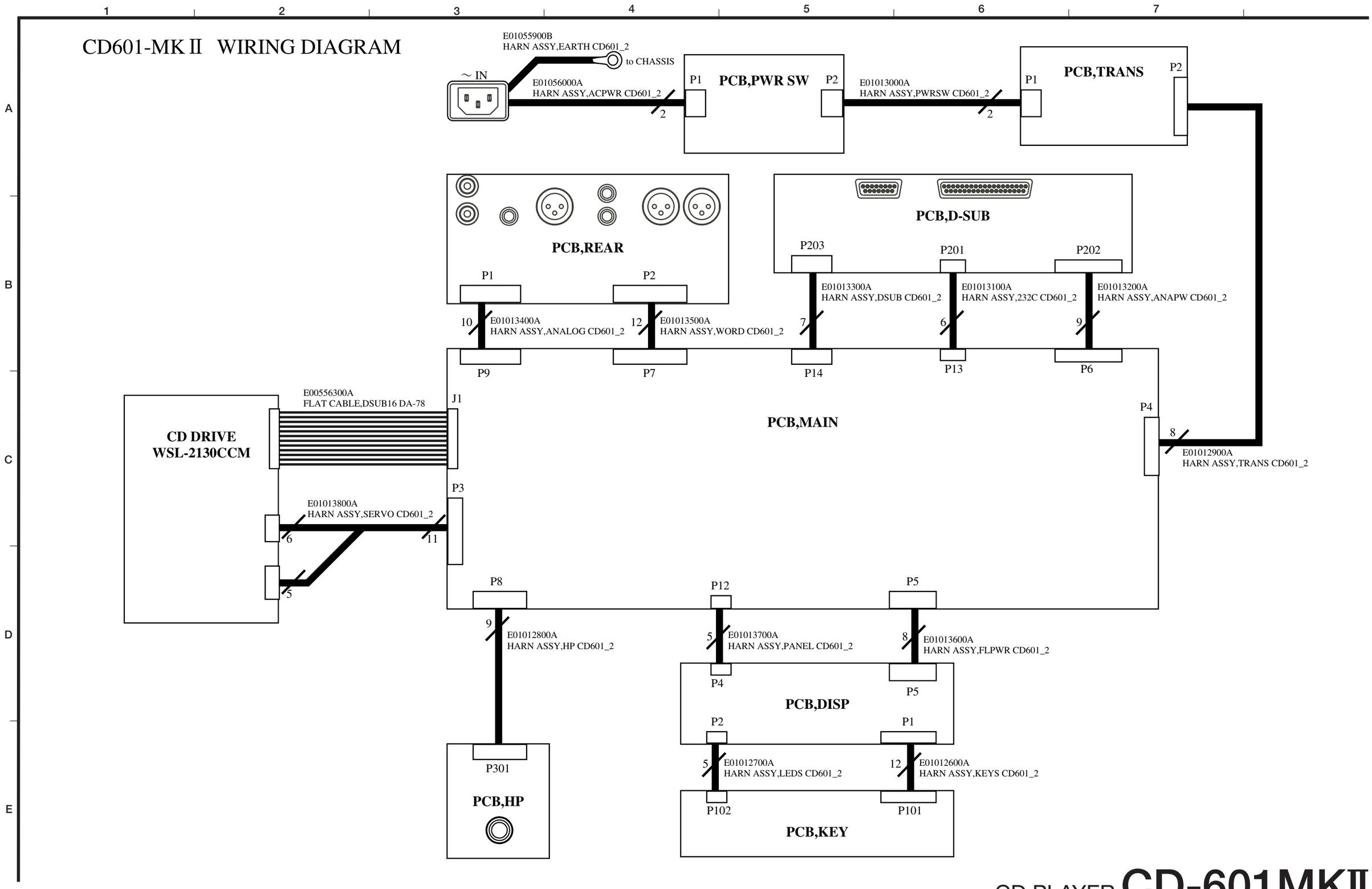
CD601-MK II WIRING DIAGRAM



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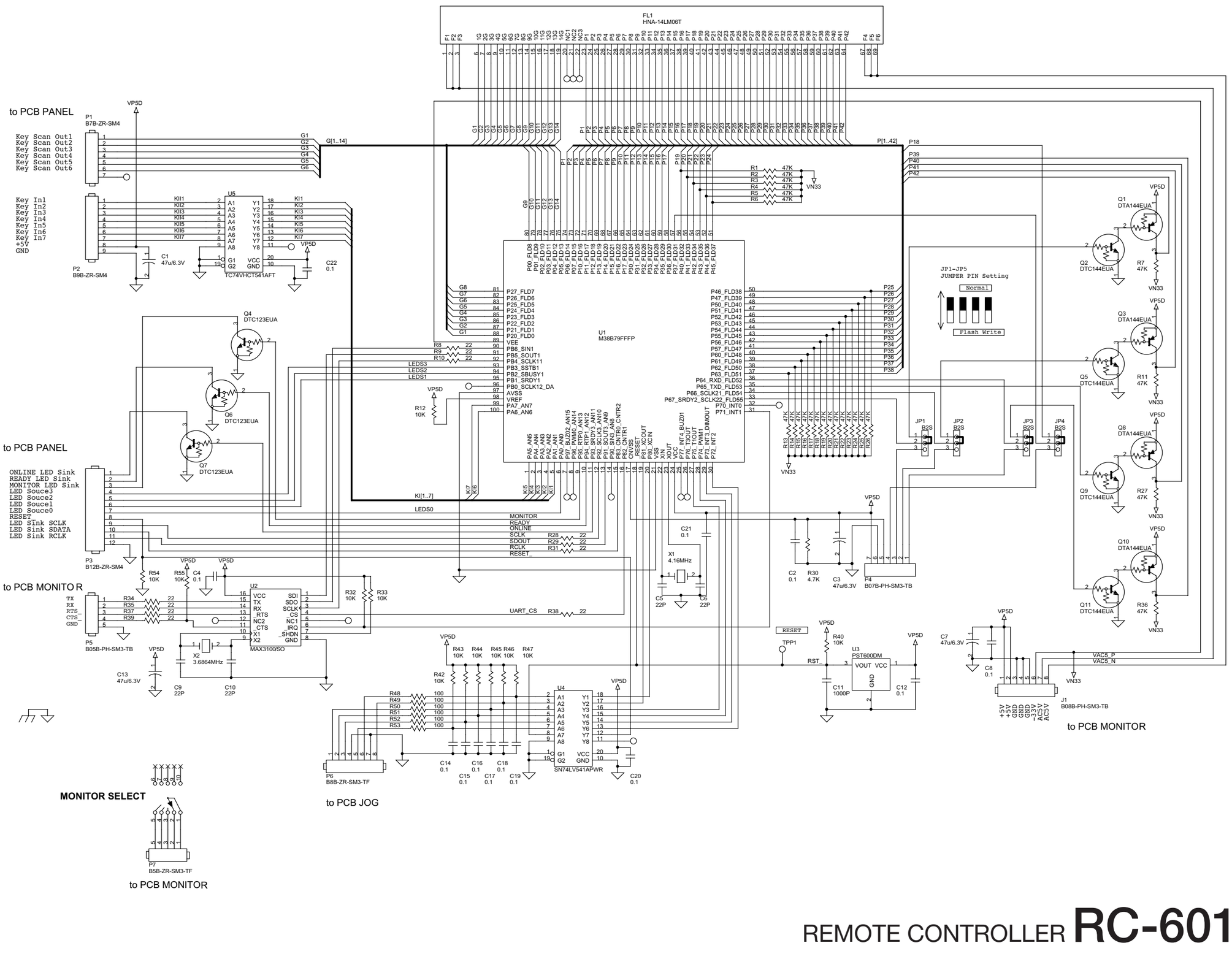
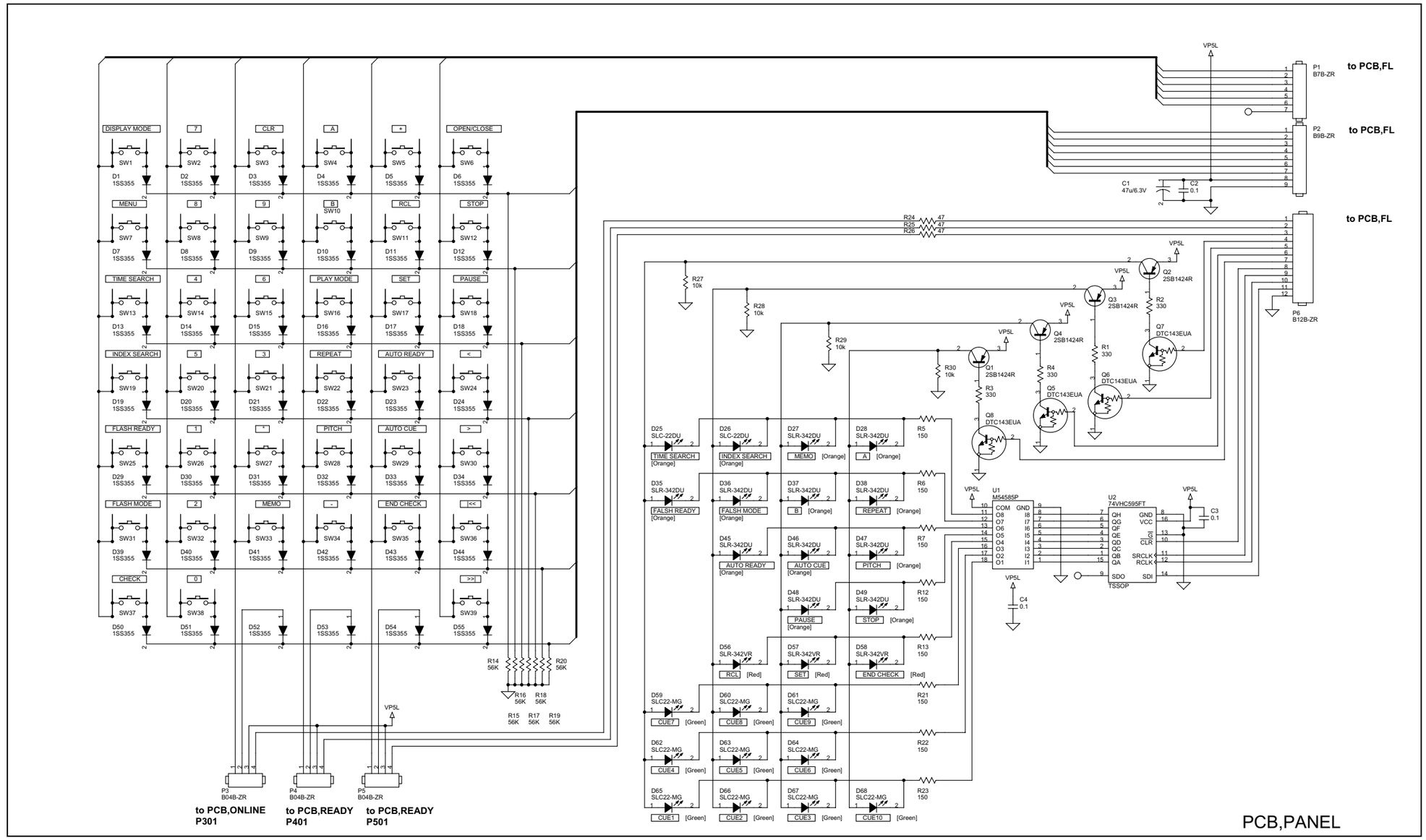
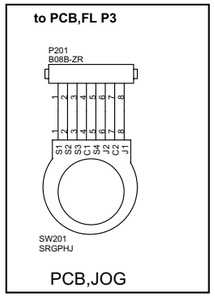
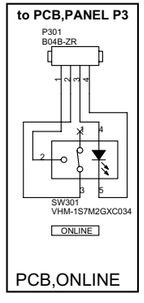
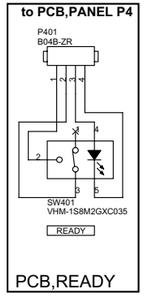
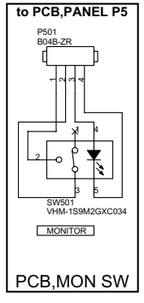

FL1
HNA-14LM06T
U1
M38B79FFFP
U2
MAX3100SO
U3
PST600DM
U4
SN74LV541APWR
U5
TC74VHCT541AFT
JP1-JP5
JUMPER PIN Setting
Normal
Flash Write
RESET
to PCB PANEL
to PCB MONITOR
to PCB JOG
MONITOR SELECT
Key Scan Out1
Key Scan Out2
Key Scan Out3
Key Scan Out4
Key Scan Out5
Key Scan Out6
Key In1
Key In2
Key In3
Key In4
Key In5
Key In6
Key In7
+5V
GND
ONLINE LED Sink
READY LED Sink
MONITOR LED Sink
LED Souce3
LED Souce2
LED Soucel
LED Souce0
RESET
LED Sink SCLK
LED Sink SDATA
LED Sink RCLK
TX
RX
RTS
CTS
GND
+5V
+5V
GND
GND
GND
-3.3V
AC5V
AC5V
VAC5_P
VAC5_N
G[1..14]
P[1..42]
KI[1..7]
LEDS0
LEDS1
LEDS2
LEDS3
MONITOR
READY
ONLINE
SCLK
SDOUT
RCLK
RESET_
UART_CS
P1 B7B-ZR-SM4
P2 B9B-ZR-SM4
P3 B12B-ZR-SM4
P4 B07B-PH-SM3-TB
P5 B05B-PH-SM3-TB
P6 B8B-ZR-SM3-TF
P7 B5B-ZR-SM3-TF
J1 B08B-PH-SM3-TB
Q1 DTA144EUA
Q2 DTC144EUA
Q3 DTA144EUA
Q4 DTC123EUA
Q5 DTC144EUA
Q6 DTC123EUA
Q7 DTC123EUA
Q8 DTA144EUA
Q9 DTC144EUA
Q10 DTA144EUA
Q11 DTC144EUA
VP5D
VN33
C1 47u/6.3V
C2 0.1
C3 47u/6.3V
C4 0.1
C5 22P
C6 22P
C7 47u/6.3V
C8 0.1
C9 22P
C10 22P
C11 1000P
C12 0.1
C13 47u/6.3V
C14 0.1
C15 0.1
C16 0.1
C17 0.1
C18 0.1
C19 0.1
C20 0.1
C21 0.1
C22 0.1
X1 4.16MHz
X2 3.6864MHz
R1 47K
R2 47K
R3 47K
R4 47K
R5 47K
R6 47K
R7 47K
R11 47K
R27 47K
R36 47K
R8 22
R9 22
R10 22
R12 10K
R28 22
R29 22
R31 22
R30 4.7K
R32 10K
R33 10K
R34 22
R35 22
R37 22
R38 22
R39 22
R40 10K
R42 10K
R43 10K
R44 10K
R45 10K
R46 10K
R47 10K
R48 100
R49 100
R50 100
R51 100
R52 100
R53 100
R54 10K
R55 10K
TPP1

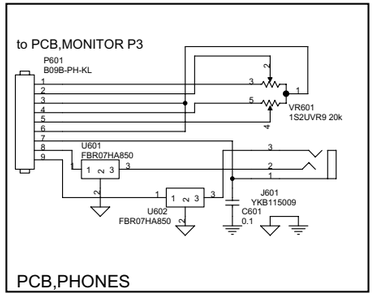

DISPLAY MODE
7
CLR
A
+
OPEN/CLOSE
MENU
8
9
B
RCL
STOP
TIME SEARCH
4
6
PLAY MODE
SET
PAUSE
INDEX SEARCH
5
3
REPEAT
AUTO READY
<
FLASH READY
1
*
PITCH
AUTO CUE
>
FLASH MODE
2
MEMO
-
END CHECK
<<
CHECK
0
>>|
SW1 SW2 SW3 SW4 SW5 SW6
SW7 SW8 SW9 SW10 SW11 SW12
SW13 SW14 SW15 SW16 SW17 SW18
SW19 SW20 SW21 SW22 SW23 SW24
SW25 SW26 SW27 SW28 SW29 SW30
SW31 SW32 SW33 SW34 SW35 SW36
SW37 SW38 SW39
D1 1SS355 D2 1SS355 D3 1SS355 D4 1SS355 D5 1SS355 D6 1SS355
D7 1SS355 D8 1SS355 D9 1SS355 D10 1SS355 D11 1SS355 D12 1SS355
D13 1SS355 D14 1SS355 D15 1SS355 D16 1SS355 D17 1SS355 D18 1SS355
D19 1SS355 D20 1SS355 D21 1SS355 D22 1SS355 D23 1SS355 D24 1SS355
D29 1SS355 D30 1SS355 D31 1SS355 D32 1SS355 D33 1SS355 D34 1SS355
D39 1SS355 D40 1SS355 D41 1SS355 D42 1SS355 D43 1SS355 D44 1SS355
D50 1SS355 D51 1SS355 D52 1SS355 D53 1SS355 D54 1SS355 D55 1SS355
R14 56K R20 56K
R16 56K R18 56K
R15 56K R17 56K R19 56K
VP5L
P3 B04B-ZR
P4 B04B-ZR
P5 B04B-ZR
to PCB,ONLINE P301
to PCB,READY P401
to PCB,READY P501
P1 B7B-ZR
P2 B9B-ZR
P6 B12B-ZR
to PCB,FL
to PCB,FL
to PCB,FL
C1 47u/6.3V
C2 0.1
R24 47
R25 47
R26 47
R27 10k
R28 10k
R29 10k
R30 10k
Q1 2SB1424R
Q2 2SB1424R
Q3 2SB1424R
Q4 2SB1424R
Q5 DTC143EUA
Q6 DTC143EUA
Q7 DTC143EUA
Q8 DTC143EUA
R1 330
R2 330
R3 330
R4 330
D25 SLC-22DU TIME SEARCH [Orange]
D26 SLC-22DU INDEX SEARCH [Orange]
D27 SLR-342DU MEMO [Orange]
D28 SLR-342DU A [Orange]
R5 150
D35 SLR-342DU FALSH READY [Orange]
D36 SLR-342DU FALSH MODE [Orange]
D37 SLR-342DU B [Orange]
D38 SLR-342DU REPEAT [Orange]
R6 150
D45 SLR-342DU AUTO READY [Orange]
D46 SLR-342DU AUTO CUE [Orange]
D47 SLR-342DU PITCH [Orange]
R7 150
D48 SLR-342DU PAUSE [Orange]
D49 SLR-342DU STOP [Orange]
R12 150
D56 SLR-342VR RCL [Red]
D57 SLR-342VR SET [Red]
D58 SLR-342VR END CHECK [Red]
R13 150
D59 SLC22-MG CUE7 [Green]
D60 SLC22-MG CUE8 [Green]
D61 SLC22-MG CUE9 [Green]
R21 150
D62 SLC22-MG CUE4 [Green]
D63 SLC22-MG CUE5 [Green]
D64 SLC22-MG CUE6 [Green]
R22 150
D65 SLC22-MG CUE1 [Green]
D66 SLC22-MG CUE2 [Green]
D67 SLC22-MG CUE3 [Green]
D68 SLC22-MG CUE10 [Green]
R23 150
U1 M54585P
U2 74VHC595FT TSSOP
C3 0.1
C4 0.1
PCB,PANEL

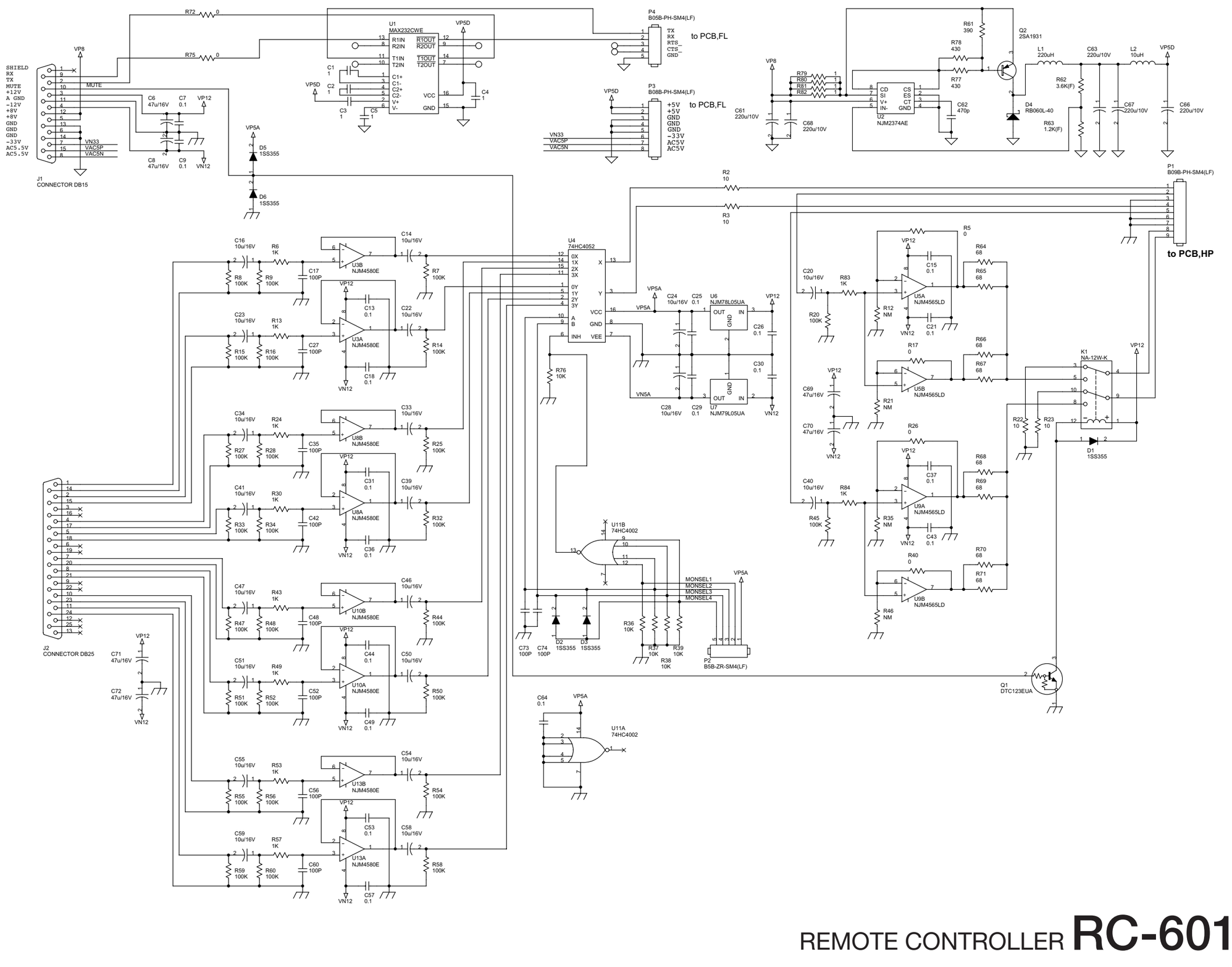

to PCB,FL P3
P201 B08B-ZR
SW201 SRGPHJ
PCB,JOG


to PCB,PANEL P3
P301 B04B-ZR
SW301 VHM-1S7M2GXC034
ONLINE
PCB,ONLINE


to PCB,PANEL P4
P401 B04B-ZR
SW401 VHM-1S8M2GXC035
READY
PCB,READY


to PCB,PANEL P5
P501 B04B-ZR
SW501 VHM-1S9M2GXC034
MONITOR
PCB,MON SW

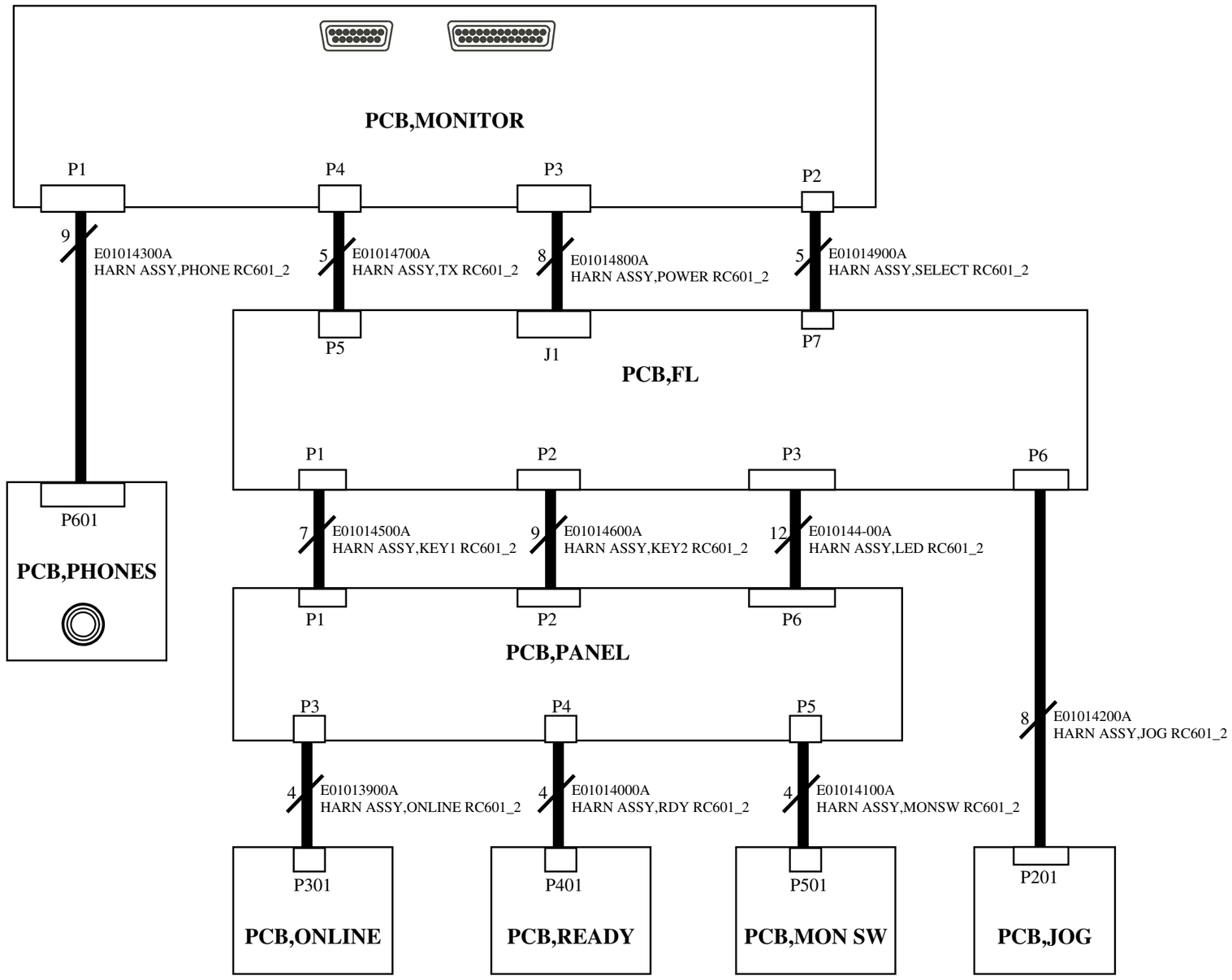

to PCB,MONITOR P3
P601 B09B-PH-KL
VR601 1S2UVR9 20k
U601 FBR07HA850
U602 FBR07HA850
J601 YKB115009
C601 0.1
PCB,PHONES



REMOTE CONTROLLER **RC-601MKII**

1 st Issue; May 2005

RC601-MK Ⅱ WIRING DIAGRAM



TEAC

TECHNICAL INFORMATION

No. **0821**

TASCAM CD-601mk2 V1.11 Firmware Update

DATE 30th September 2008

The firmware V1.11 for CD-601MKll has been released with some bugs fixes from V1.10.
V1.11 on the products with S/N0180001 and higher:

Bug fixes:

1. Disc Information could not be overwritten on each Memory Bank after 100 Disc Information were saved with RC-601mk2. – fixed –
2. Auto Ready did not work when Repeat is ON. – fixed -

How to Firmware Update

1. Getting Ready

Have the updater disc available. Put the following files in the disc (CD-R/CD-RW).
C6C00111.upd

2. Updating

a) Hold down the OPEN/CLOSE key and switch on the power. You need to hold down the key until the display reads "UP DATE".
b) Insert the updater disc on the disc tray and close this. When data is read in from the update disc correctly, the display shows the current version number.
c) Press the ENTER key and the updater disc version is shown.
d) Press the ENTER key again and the display reads "-SURE-".
e) Press the ENTER key again and updating starts.
The progress of the update is displayed (0 up to 100) in the pitch control readout section of the display window. Upon completion of the update, the display reads "COMPLETE".
f) Recycle the power and the CD-601MKII restarts with the firmware updated.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware.

TEAC TECHNICAL INFORMATION

9611

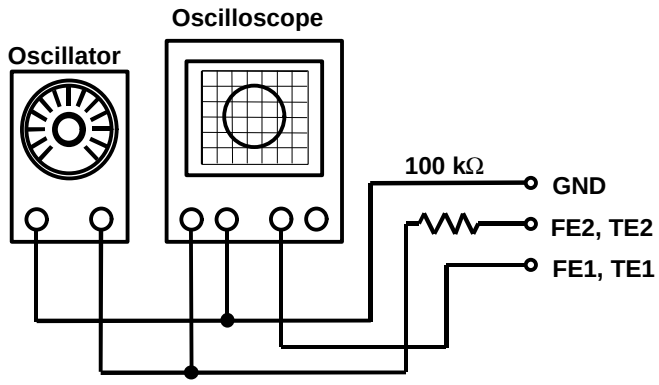
CD Players, Servo Gain Adjustment

31st May 1996

To attain a correct adjustment of the Focus and the Tracking Gain, a table shown below is newly provided for various CD Players.

	TEST DISC to be used			
	TEAC MCD-111		SONY YEDS-18	
	FOCUS GAIN	TRACKING GAIN	FOCUS GAIN	TRACKING GAIN
VRDS-7 /10 / 20	1070 Hz / 10Vp-p	1300 Hz / 10Vp-p	1050 Hz / 10Vp-p	1090 Hz / 10Vp-p
P-500 / 700	1080 Hz / 10Vp-p	1500 Hz / 10Vp-p	1050 Hz / 10Vp-p	1300 Hz / 10Vp-p
P-2 / 2S	1050 Hz / 10Vp-p	1440 Hz / 10Vp-p	1050 Hz / 10Vp-p	1250 Hz / 10Vp-p
CD-3	1170 Hz / 10Vp-p	1700 Hz / 10Vp-p	1140 Hz / 10Vp-p	1510 Hz / 10Vp-p
CD-5	1040 Hz / 10Vp-p	1630 Hz / 10Vp-p	1040 Hz / 10Vp-p	1460 Hz / 10Vp-p
CD-401	1015 Hz / 3Vp-p	1860 Hz / 3Vp-p	1010 Hz / 3Vp-p	1730 Hz / 3Vp-p
CD-401MK2	965 Hz / 10Vp-p	1700 Hz / 10Vp-p	930 Hz / 10Vp-p	1485 Hz / 10Vp-p
CD-601	1170 Hz / 10Vp-p	1600 Hz / 10Vp-p	----------	----------

The value of resistor to feed an external oscillator is unified to 100 kΩ resistor as shown below.
Play the track 4, and adjust Focus (Tracking) Gain pots so that phase between FE 1 (TE 1) and the oscillator becomes 90°.



TEAC TECHNICAL INFORMATION

9504

CD-601, Thrust Bearing of Turntable Assy

27th April 1995

This information is a revised edition of Technical Information No. 9316.

Symptom **:** Hard to adjust focus servo, fails play intermittently.

Cause **:** Wear of Thrust Bearing.

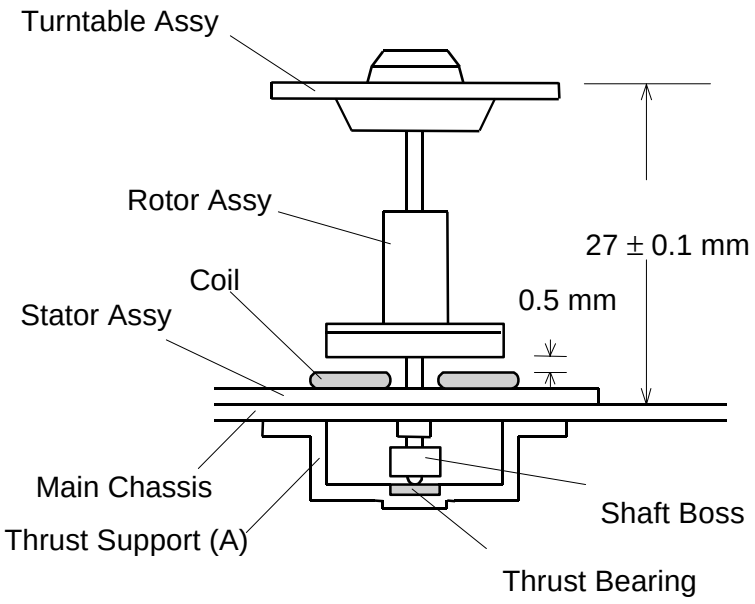
Remedy **:** Material change of Thrust Bearing. Products of serial number 170001 and up have sapphire made Thrust Bearing, 0.5 t, Part No. **M002785-00A**.

1 When Thrust Bearing is replaced, note following **:**

* On the products of serial number up to 69999, Turntable Assy should be replaced with new one, Part No. **58014781-02** introduced on Technical Information No. 9316.
* On the products of serial number 70001 and up, no change of Turntable Assy required.
* Apply adhesive to **frosted surface** on the Thrust Bearing and stick it on Thrust Support (A).

2 After Thrust Bearing (& Turntable Assy) is replaced, ensure following **:**

* Gap between Coil and Rotor Assy **:** 0.5 mm
* Turntable Height **:** 27 ± 0.1 mm
* Shaft Boss does not touch any others.



TEAC

TECHNICAL INFORMATION

No. **1002**

TASCAM CD-601MK2 V1.12 Firmware Update

DATE 5th Feb. 2010

The firmware V1.12 for CD-601MK2 has been released with some bug fix from V1.11.

Bug fix:
The "MONO" setting in OUTPUT (Menu No.8) did not keep after changing the CD disk.
The display showed "MONO" but the Output was set to Stereo. – fixed-

How to Firmware Update:
Refer to SERVICE MANUAL for CD-601MK2, "4. Firmware Update", page 12.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware.
"cd-601mk2_v1.12.zip"