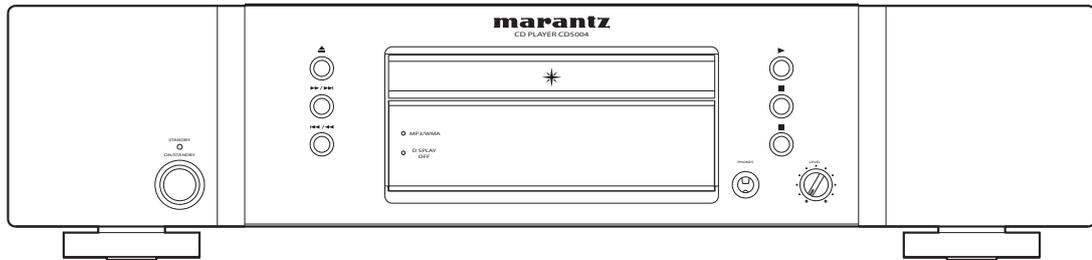


Service Manual

CD5004 /N1B/N1SG

U1B/K1SG/K1B

CD Player



CD5004

• For purposes of improvement, specifications and design are subject to change without notice.

• Please use this service manual with referring to the operating instructions without fail.

• Some illustrations using in this service manual are slightly different from the actual set.

marantz®

CD5004

Ver. 1

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC
100 CORPORATE DRIVE
MAHWAH, NEW JERSEY 07430
USA

EUROPE / TRADING

D&M EUROPE B. V.
P. O. BOX 8744, BUILDING SILVERPOINT
BEEEMDSTRAAT 11, 5653 MA EINDHOVEN
THE NETHERLANDS
PHONE : +31 40 2507844
FAX : +31 40 2507860

CANADA

D&M Canada Inc.
5 505 APPLE CREEK BLVD.
MARKHAM, ONTARIO L3R 5B1
CANADA
PHONE : 905 415 9292
FAX : 905 475 4159

JAPAN

D&M Holdings Inc.
D&M BUILDING, 2 1 NISSHIN CHO,
KAWASAKI KU, KAWASAKI SHI,
KANAGAWA, 210 8569 JAPAN

株式会社 ディーアンドエムホールディングス

本 社 〒210-8569
神奈川県川崎市川崎区日進町2-1 D&Mビル

KOREA

D&M SALES AND MARKETING KOREA LTD.
2F, YEON BLDG.,
88 5, BANPO DONG, SEOCHO GU,
SEOUL KOREA
PHONE : +82 2 715 9041
FAX : +82 2 715 9040

CHINA

D&M SALES AND MARKETING SHANGHAI LTD.
ROOM.808 SHANGHAI AIRPORT CITY TERMINAL
NO.1600 NANJING (WEST) ROAD, SHANGHAI,
CHINA. 200040
TEL : 021 6248 5151
FAX : 021 6248 4434

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠.

Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

⚠がついている部品は、安全上重要な部品です。必ず指定されている部品番号のものを使用して下さい。

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 60065.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

091105DM/DG

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

Be sure to test for leakage current with the AC plug in both polarities, in addition, in each power ON, OFF and STANDBY mode, if applicable.

CAUTION Please heed the points listed below during servicing and inspection.

⊙ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels. Be sure to heed these cautions and the cautions indicated in the handling instructions.

⊙ Caution concerning electric shock!

- (1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

⊙ Caution concerning disassembly and assembly!

Through great care is taken when manufacturing parts from sheet metal, there may in some rare cases be burrs on the edges of parts which could cause injury if fingers are moved across them. Use gloves to protect your hands.

⊙ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked \triangle on wiring diagrams and parts lists, be sure to use the designated parts.

⊙ Be sure to mount parts and arrange the wires as they were originally!

For safety reasons, some parts use tape, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

⊙ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation resistance tester, check that the inplug and the externally exposed metal parts (antenna terminal, headphones terminal, input terminal, etc.) is 1M Ω or greater. If it is less, the set must be inspected and repaired.

CAUTION Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists in this service manual. Be sure to replace them with parts with the designated part number.

(1) Schematic diagrams Indicated by the \triangle mark.

(2) Parts lists Indicated by the \triangle mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

NOTE FOR SCHEMATIC DIAGRAM

WARNING:

Parts marked with this symbol \triangle have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM / M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

NOTE FOR PARTS LIST

PARTS INFORMATION

RESISTORS

1) 00MGD05 x x x 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W

2) 00MGD05 x x x 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

① — Resistance value

Examples ;

① Resistance value

0.1 Ω001	10 Ω100	1k Ω102	100k Ω104
0.5 Ω005	18 Ω180	2.7k Ω272	680k Ω684
1 Ω010	100 Ω101	10k Ω103	1M Ω105
6.8 Ω068	390 Ω391	22k Ω223	4.7M Ω475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

CERAMIC CAP.

3) 00MDD1 x x x x 370,



Examples ;

② Tolerance (Capacity deviation)
 $\pm 0.25\text{pF}$ 0
 $\pm 0.5\text{pF}$ 1
 $\pm 5\%$ 5

* Tolerance of COMMON PARTS handled here are as follows :

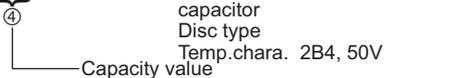
0.5pF ~ 5pF $\pm 0.25\text{pF}$
 6pF ~ 10pF $\pm 0.5\text{pF}$
 12pF ~ 560pF $\pm 5\%$

③ Capacity value

0.5pF005	3pF030	100pF 101
1pF010	10pF 100	220pF 221
1.5pF015	47pF470	560pF 561

CERAMIC CAP.

4) 00MDK16 x x x 300,



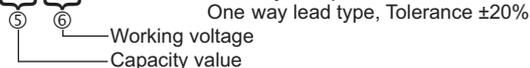
Examples ;

④ Capacity value

100pF101	1000pF 102	10000pF 103
470pF471	2200pF 222	

ELECTROLY CAP. (Z)

5) 00MEA x x x x x x 10,



Examples ;

⑤ Capacity value

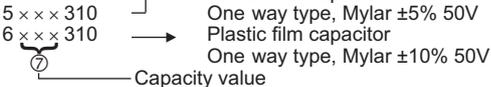
0.1 μF104	4.7 μF475	100 μF ... 107
0.33 μF334	10 μF106	330 μF ... 337
1 μF105	22 μF226	1100 μF ... 118
		2200 μF ... 228

⑥ Working voltage

6.3V.....006	25V.....025
10V.....010	35V.....035
16V.....016	50V.....050

FILM CAP. (Z)

6) 00MDF15 x x x 350



Examples ;

⑦ Capacity value

0.001 μF (1000pF) 102	0.1 μF 104
0.0018 μF182	0.56 μF ... 564
0.01 μF103	1 μF 105
0.015 μF153	

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
00MNH05 x x x 140	RF25S x x x x Ω J	($\pm 5\%$ 1/4W)
00MNH05 x x x 120	RF50S x x x x Ω J	($\pm 5\%$ 1/2W)
00MNH85 x x x 110	RF73B2A x x x x Ω J	($\pm 5\%$ 1/10W)
00MNH95 x x x 140	RF73B2E x x x x Ω J	($\pm 5\%$ 1/4W)

* Resistance value Resistance value (0.1 - 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
00MNF05 x x x 140	ERD 2FCJ x x x	($\pm 5\%$ 1/4W)
00MRF05 x x x 140		
00MNF02 x x x 140	ERD 2FCG x x x	($\pm 2\%$ 1/4W)
00MRF02 x x x 140		

* Resistance value * Resistance value

Examples ;

* Resistance value

0.1 Ω001	10 Ω100	1k Ω102	100k Ω104
0.5 Ω005	18 Ω180	2.7k Ω272	680k Ω684
1 Ω010	100 Ω101	10k Ω103	1M Ω105
6.8 Ω068	390 Ω391	22k Ω223	4.7M Ω475

ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL

NOTE ON FUSE :

Regarding to all parts of parts code **00MFS20xxx2xx**, replace only with Wickmann Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

\triangle がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

WARNING AND LASER SAFETY INSTRUCTIONS

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.



(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor elektrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle IC und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD). Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, das Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevita potrebbe essere fortemente ridatta in caso di non osservazione della piu grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt terug gebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerats darf nicht verändert werden. Fur Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiaggio idetici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis a l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne.

LASER SAFETY

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.



USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURE OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AVOID DIRECT EXPOSURE TO BEAM

WARNING

The use of optical instruments with this product will increase eye hazard. Repair handling should take place as much as possible with a disc loaded inside the player

WARNING LOCATION: INSIDE ON LASER COVERSIELD

CAUTION VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL Å PNES UNNGÅ EKSPONERING FOR STRÅLEN
VARNING SYNLIG OCH OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD BETRAKTA EJ STRÅLEN
VARO! AVATT AESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LASER SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN
VORSICHT SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETSEN
DANGER VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
ATTENTION RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU

TECHNICAL SPECIFICATIONS

□ Audio characteristics

- Channels: 2 channels
- Frequency response: 2 Hz to 20 kHz
- Dynamic range: 100 dB
- Signal-to-noise ratio: 110 dB
- Channel separation: 110 dB (1 kHz)
- Harmonic distortion: 0.002% (1 kHz)
- Wow & flutter: Precision of quartz
- Audio output: 2.25 V rms, stereo
- Headphone output: 18 mW/32 ohms (variable maximum)
- Digital output
- Coaxial output (pin jack): 0.5 Vp-p, 75 ohms
- Optical output (square optical connector): -19 dBm

□ Optical readout system

- Laser: AlGaAs semiconductor
- Wavelength: 780 nm

□ Signal system

- Sampling frequency: 44.1 kHz
- Quantization: 16-bit linear PCM

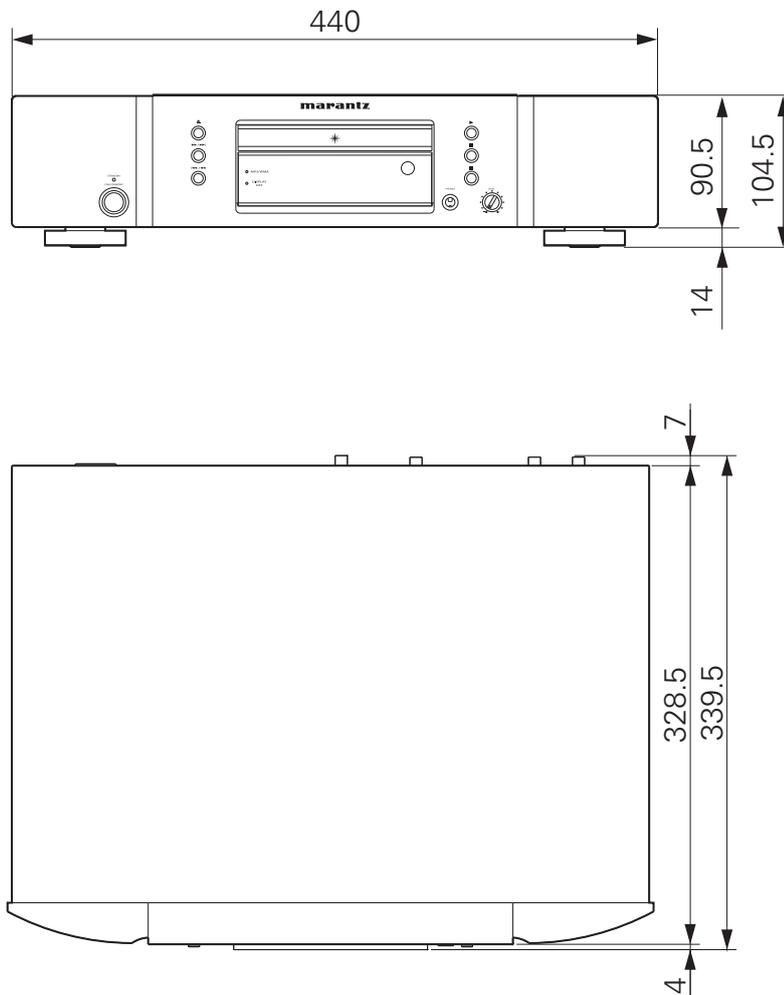
□ Power supply

- N version: AC 230 V 50 Hz
- U version: AC 120 V 60 Hz
- K version: AC 220 V 50 Hz
- Power consumption: 14 W
- Standby power consumption: 0.4 W

□ Cabinet, etc.

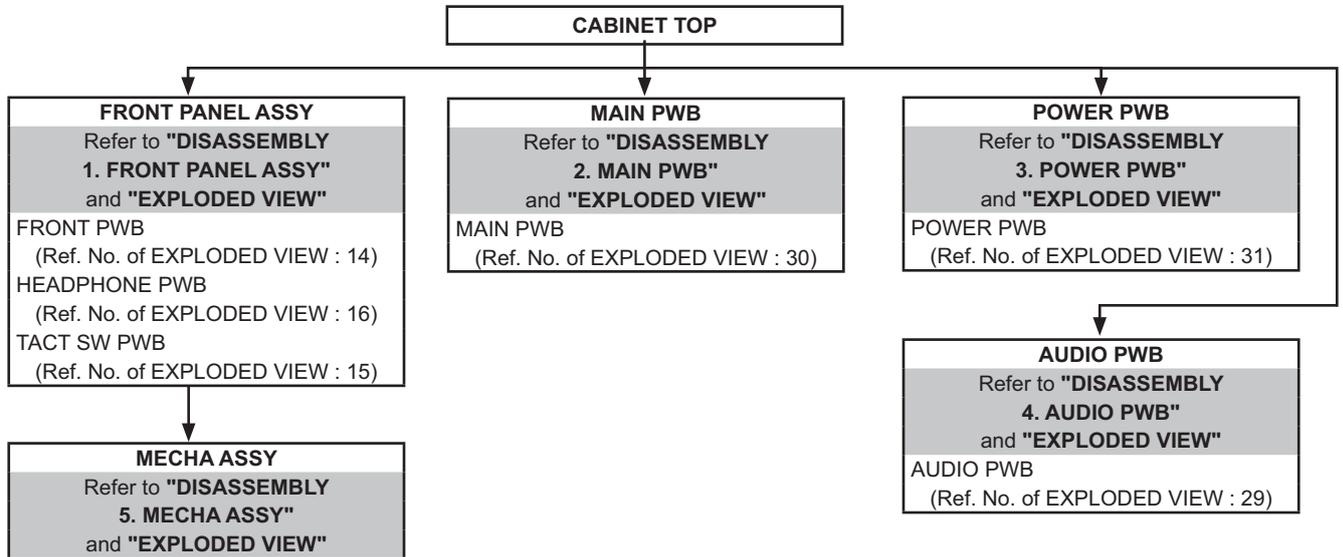
- Accessories
- Remote controller: 1
- AAA batteries: 2
- AC power cord: 1
- Audio connecting cord: 1
- Remote control connecting cord: 1
- Maximum outer dimensions
- Width: 440mm
- Height: 104.5mm
- Depth: 339.5mm
- Weight: 5.1kg
- Allowable operating temperature: +5 to +35°C
- Allowable operating humidity: 5 to 90% (no condensation)

DIMENSION



DISASSEMBLY

- Disassemble in order of the arrow of the figure of following flow.
- In the case of the re-assembling, assemble it in order of the reverse of the following flow.
- In the case of the re-assembling, observe "attention of assembling" it.
- If wire bundles are untied or moved to perform adjustment or parts replacement etc., be sure to rearrange them neatly as they were originally bundled or placed afterward.
Otherwise, incorrect arrangement can be a cause of noise generation.

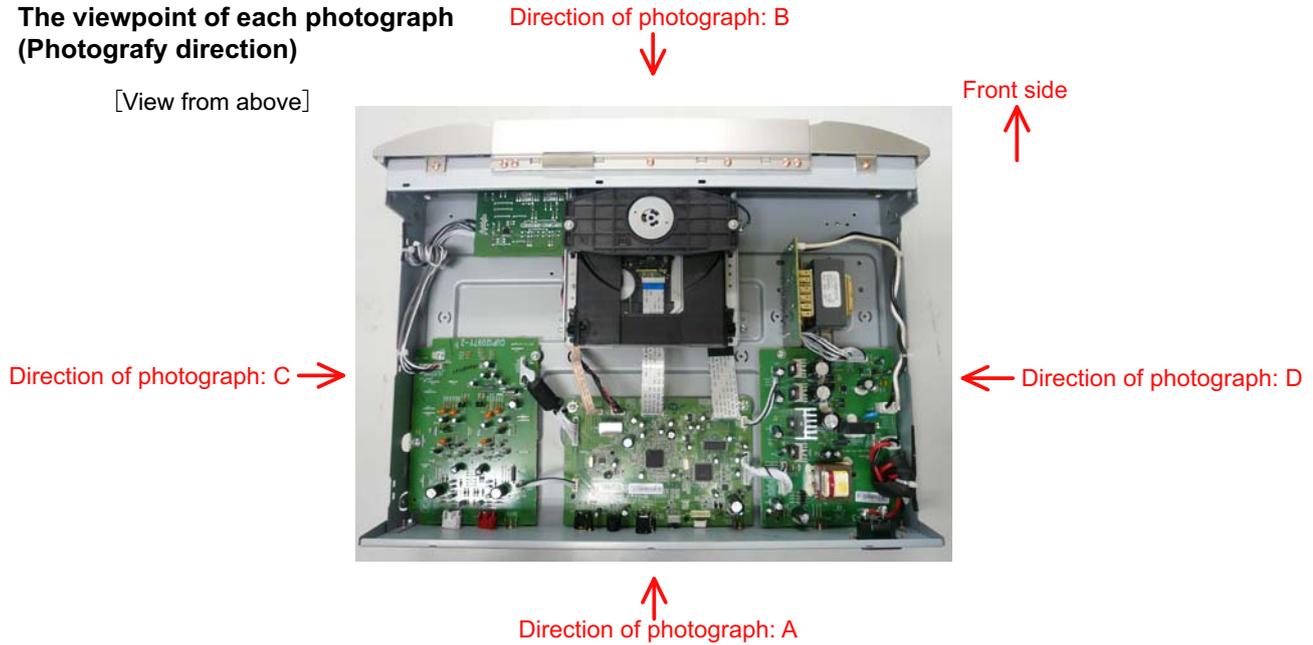


About the photos used for descriptions in the "DISASSEMBLY" section.

- The direction from which the photographs used herein were photographed is indicated at "Direction of photograph: ****" at the left of the respective photographs.
- Refer to the table below for a description of the direction in which the photos were taken.
- Photographs for which no direction is indicated were taken from above the product.
- The photograph is CD5004 K1SG.

The viewpoint of each photograph (Photografy direction)

[View from above]



1. FRONT PANEL ASSY

Proceeding : **TOP COVER** → **FRONT PANEL ASSY**

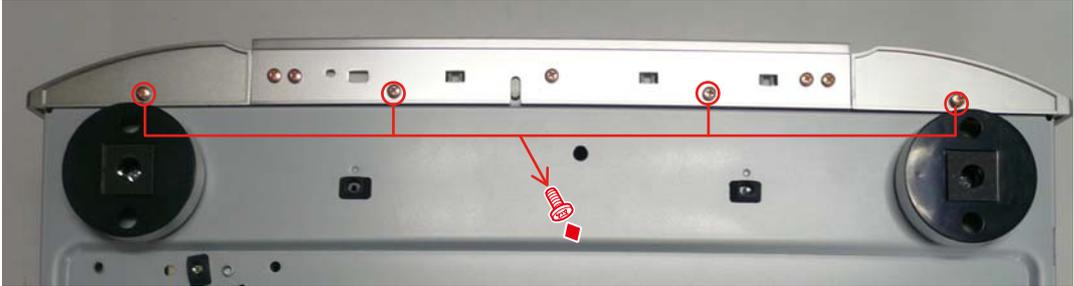
(1) Remove the Loadr Panel.

Direction of photograph: B

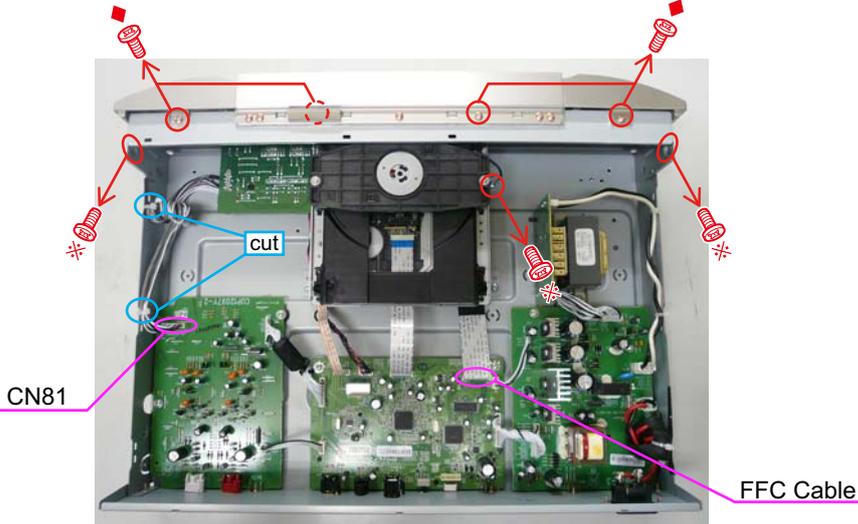


(2) Remove the screws.

View from bottom



(3) Disconnect the connector wire and FFC Cable. Remove the screws. Cut the wire clamp bands.



Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in FRONT PANEL ASSY.

2. MAIN PWB

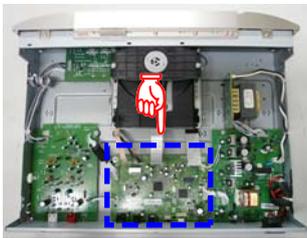
Proceeding : **TOP COVER** → **MAIN PWB**

(1) Remove the screws.

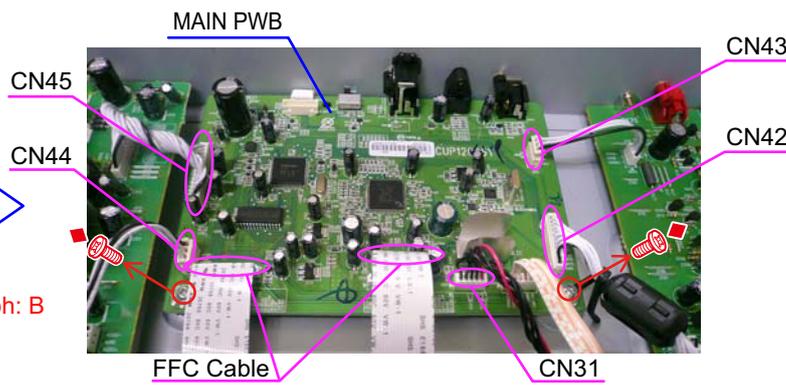
Direction of photograph: A



(2) Remove the screws. Disconnect the connectors wire and FFC Cable.



Direction of photograph: B



3. POWER PWB

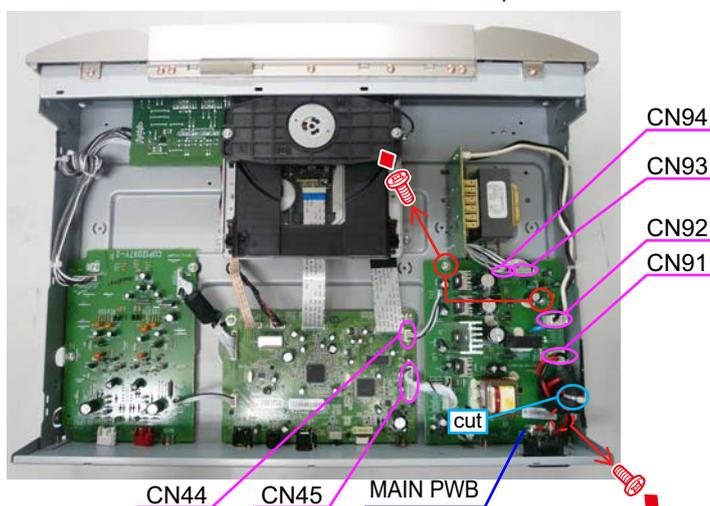
Proceeding : **TOP COVER** → **POWER PWB**

(1) Remove the screws.

Direction of photograph: A



(2) Remove the screws. Disconnect the connector wires. Cut the wire clamp band.

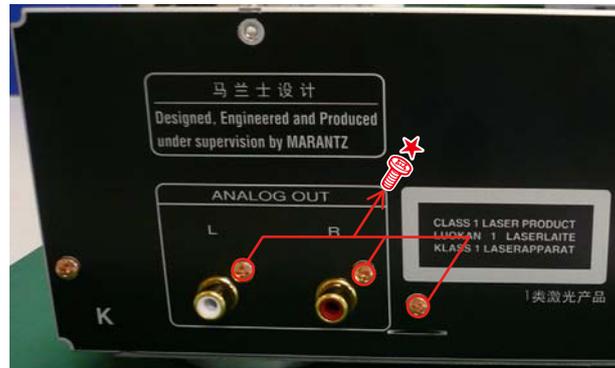


4. AUDIO PWB

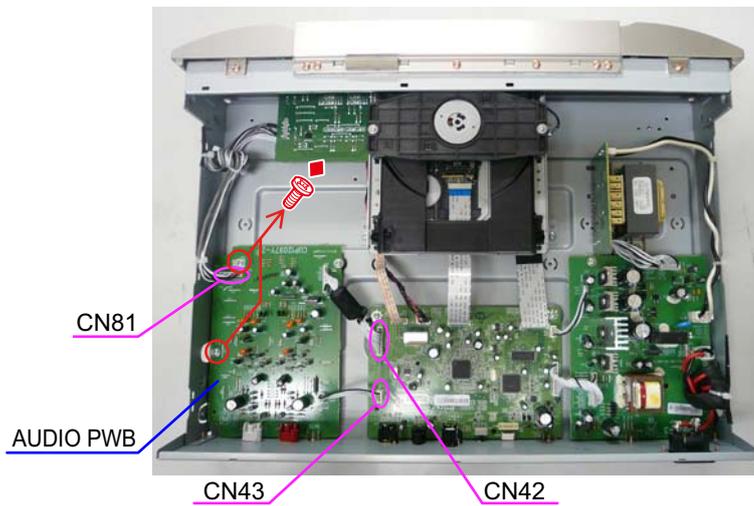
Proceeding : **TOP COVER** → **AUDIO PWB**

(1) Remove the screws.

Direction of photograph: A



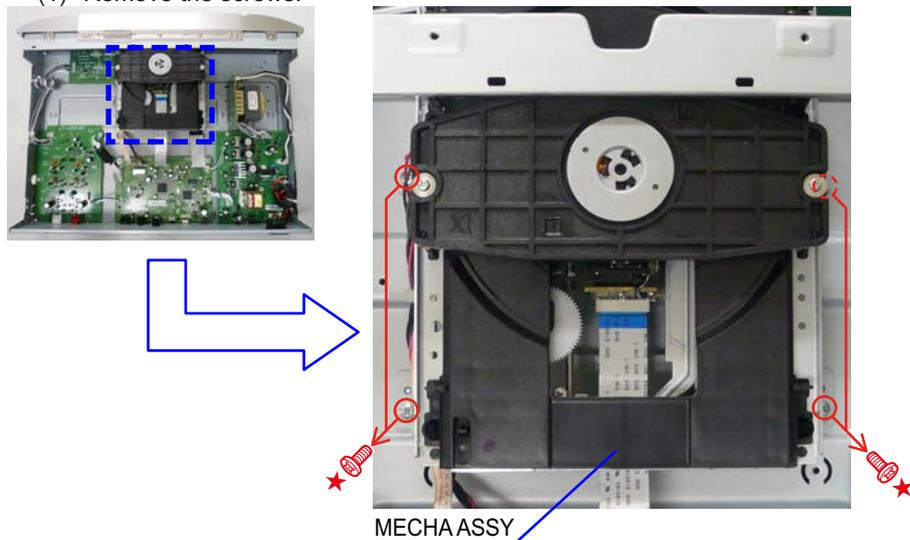
(2) Remove the screws. Disconnect the connector wires.



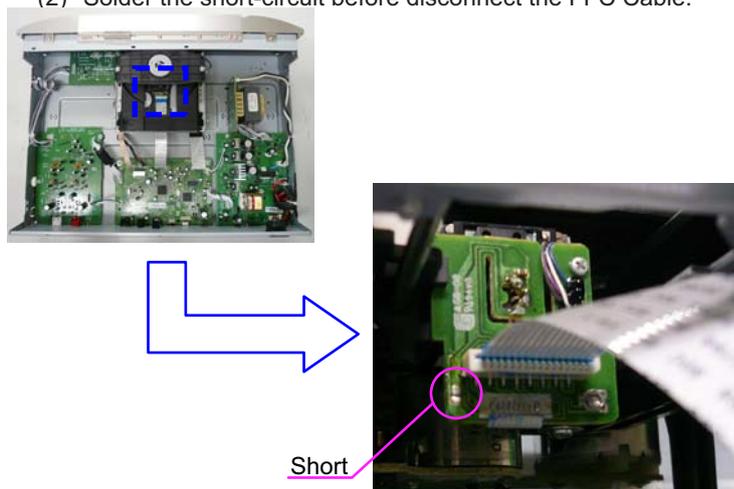
5. MECHA ASSY

Proceeding : **TOP COVER** → **FRONT PANEL ASSY** → **MECHA ASSY**

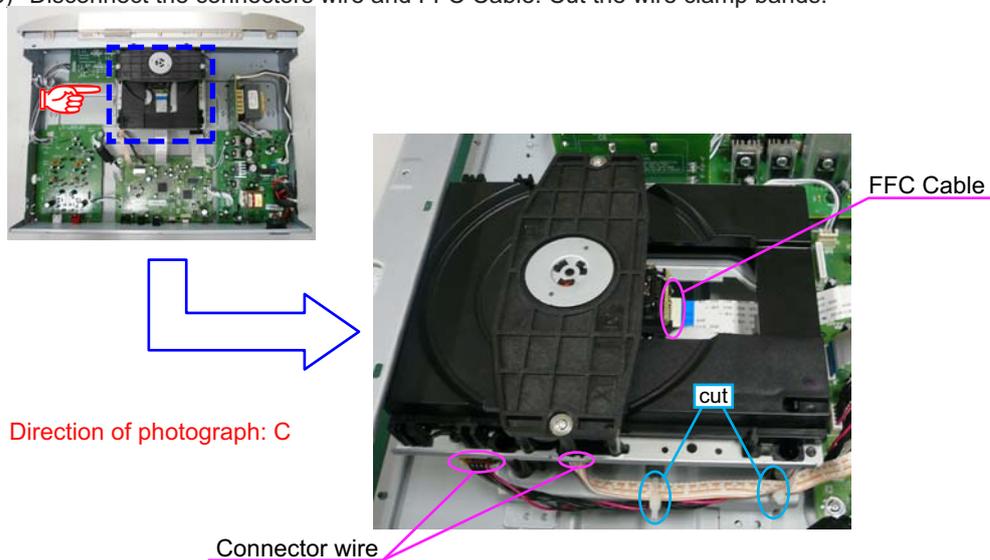
(1) Remove the screws.



(2) Solder the short-circuit before disconnect the FFC Cable.



(3) Disconnect the connectors wire and FFC Cable. Cut the wire clamp bands.

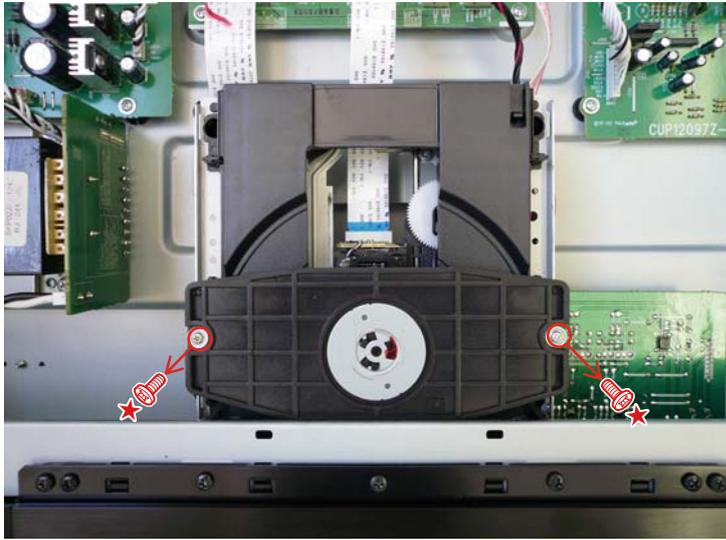


Direction of photograph: C

REMOVING DISCS

(1) Remove the Top Cover.

(2) Remove the screws.



(3) Remove the disc clamper.

SERVICE MODE AND TAKING THE DISC OUT OF EMERGENCY

[A] SERVICE MODE

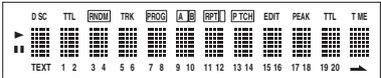
- (1) Insert mains cable plug in the outlet. (The Unit is standby mode.)
- (2) Press the <ON / STANDBY> button While pressing ►►/►►I and ■ Button. Model name is displayed.



- (3) Press ►►/►►I button. Version of microprocessor is displayed.



- (4) Press ►►/►►I button. Light up all FL segment.



- (5) Press ►►/►►I button. Serial number is displayed.



- (6) Press ►►/►►I button. Playback time is displayed.



To return to a previous display at anytime, press I◀◀/◀◀ button.

Press the <ON / STANDBY> button to quit Service Mode.

HOW TO THE RESET OF PLAYBACK TIME

When replacing CD MECHANISM (TRAVERSE), please reset Playback time (total) in the following procedure.

- (1) Procedure 6 of SERVICE MODE, Playback time (total) is displayed.

PTime : 00051h

The display is a time unit. (Example: "10050 hours, 0 minute, 1 second " is 10051h)
The maximum Playback time is 65536h.

- (2) Press ■ Button 3 seconds and more.
PTime Clear? is displayed.

PTime Clear?

- (3) Press ► Button.
Done is displayed after PTime:00000h is displayed.
Play back time (total) was reset.

Done → PTime : 00000h

Press the <ON / STANDBY> button to quit Service Mode.

HOW TO INITIALIZE THE CD PLYAER

Initialize the CD player when μ com, peripheral parts of μ com, or MAIN P.W.B. unit has been replaced in servicing.

※ All user setting will be lost and its factory setting will be restored when this initialization is made. Be sure to memorize your setting for restoring again after the initialization.

- (1) Insert mains cable plug in the outlet. (The Unit is standby mode.)
- (2) Press ■ and the <ON / STANDBY> Buttons simultaneously 4 seconds and more.
EEPROM Clear is displayed after No Disc is displayed.
The microprocessor initialized to factory setting.

EEPROM Clear → No Disc

VERSION UPGRADE PROCEDURE OF FIRMWARE

ABOUT REPLACE THE MICROPROCESSOR WITH A NEW ONE

When replaced of the U-PRO (Microprocessor) or the Flash ROM, confirm contents of the following.

PWB Name	Ref. No.	Description	After replaced	Remark
MAIN	IC21	T5CD2(F AAD JZ) CD5004	B	

After replaced

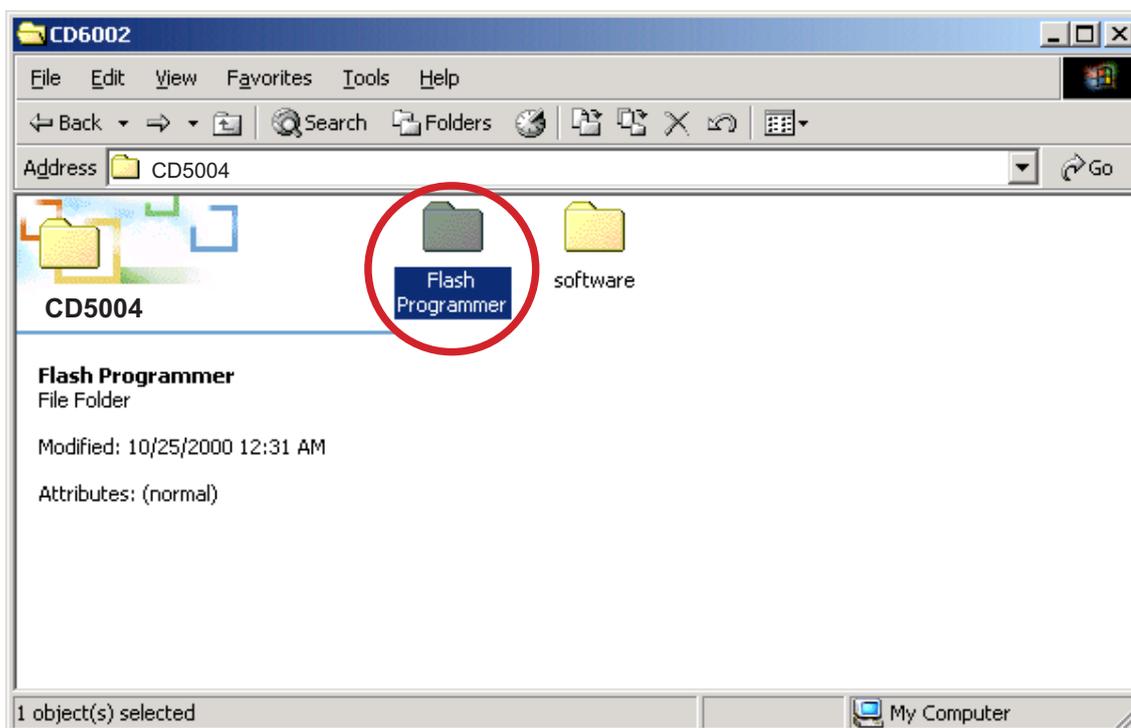
- A :** Mask ROM (With software). No need write-in of software to the microprocessor.
- B :** Flash ROM (With software). Usually, no need write-in of software. But, when the software was updated, you should be write-in of the new software to the microprocessor or flash ROM. Please check the software version.
- C :** Empty Flash ROM (Without software). You should be write-in of the software to the microprocessor or flash ROM. Refer to "Update procedure" or "writing procedure", when you should be write-in the software.

Necessary Equipment

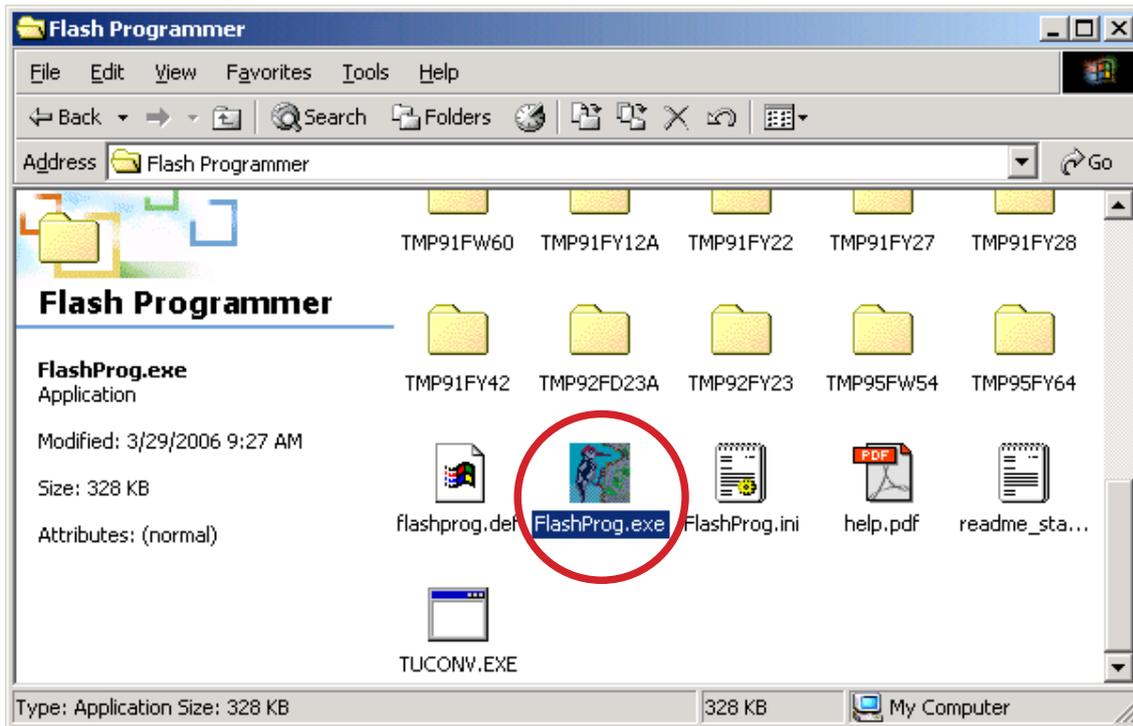
- Windows PC (OS: Windows 2000 or Windows XP) with Serial port.
- RS-232C Dsub-9 pin cable (female to female/straight type).
- Connection JIG (90M-SR4500JIG)
- Update tool (FlashProg.exe, other files and folders in Flash Programmer folder)
- Update data (CD5004_yymmdd_x.s2h4)

1. Update for software

- (1) Put the "Flash Programmer" and "software" folder into anywhere on your PC's hard disc.
- (2) Double click the "Flash Programmer" folder.

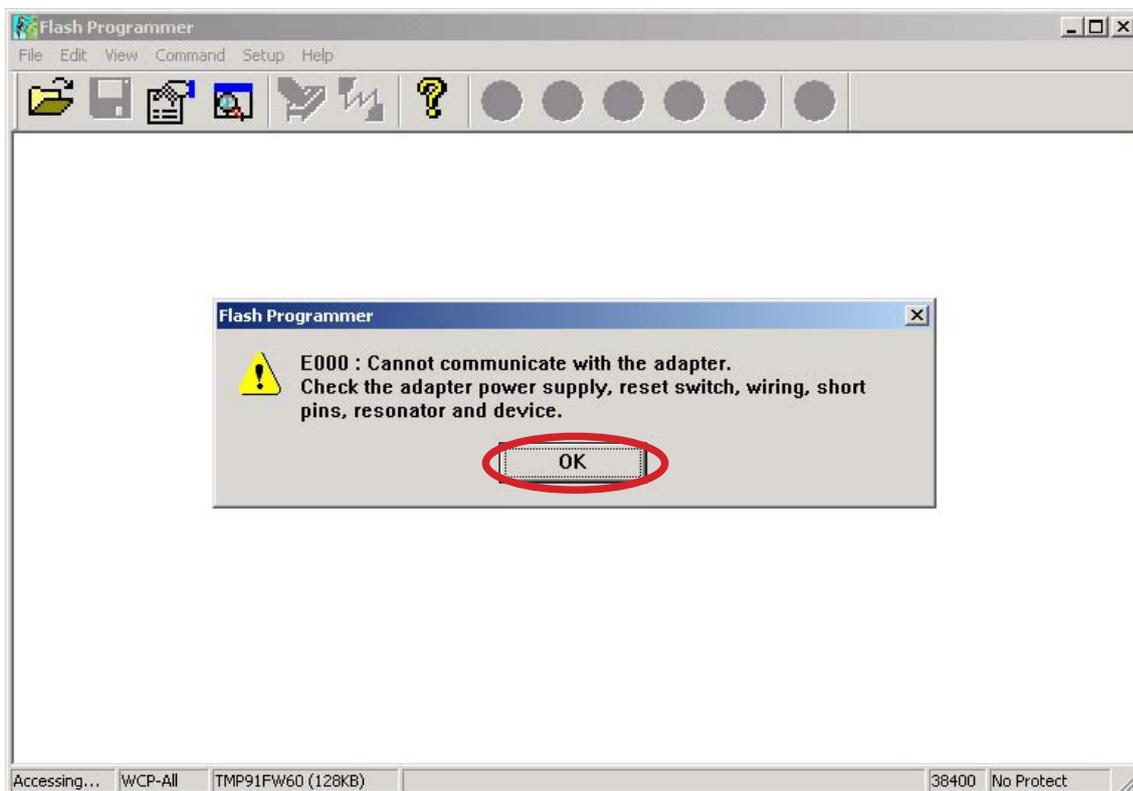


(3) Double click FlashProg.exe, and launch the Flash Programmer.



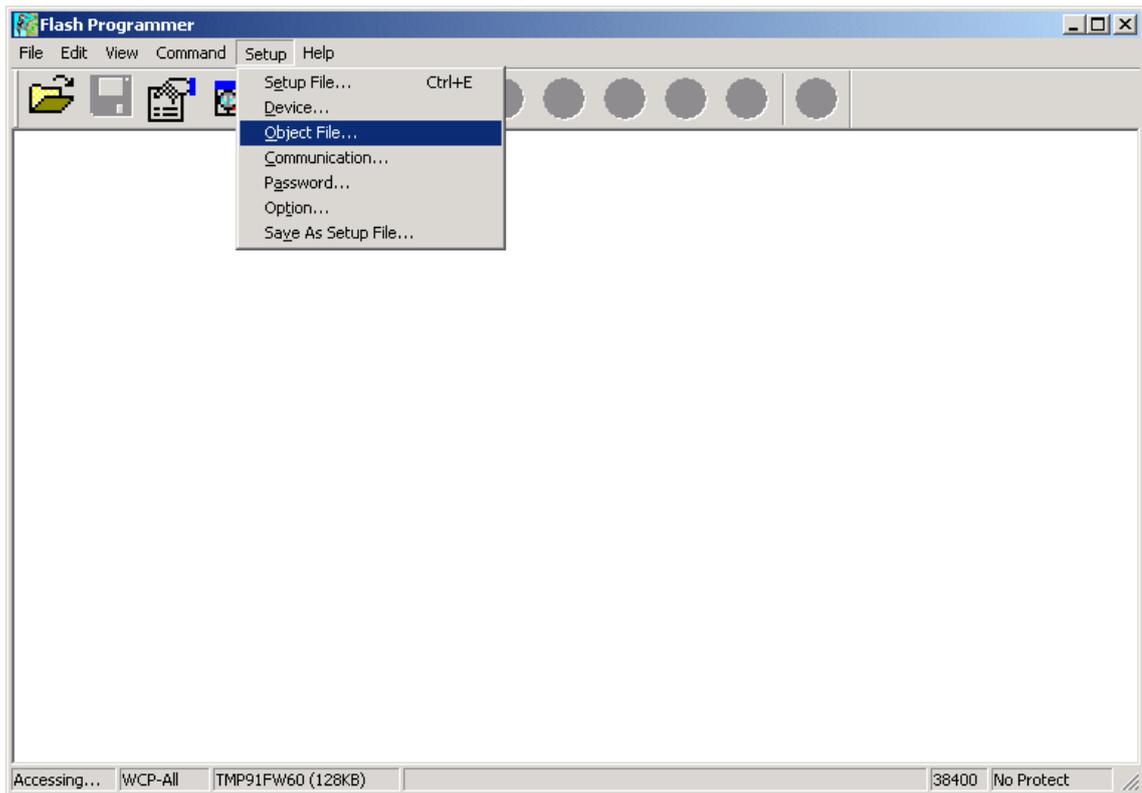
NOTE : When a Flash Programmer does not launch even if double-clicked FlashProg.exe, please refer to "2. When a Flash Programmer did not launch".

(4) Click OK.

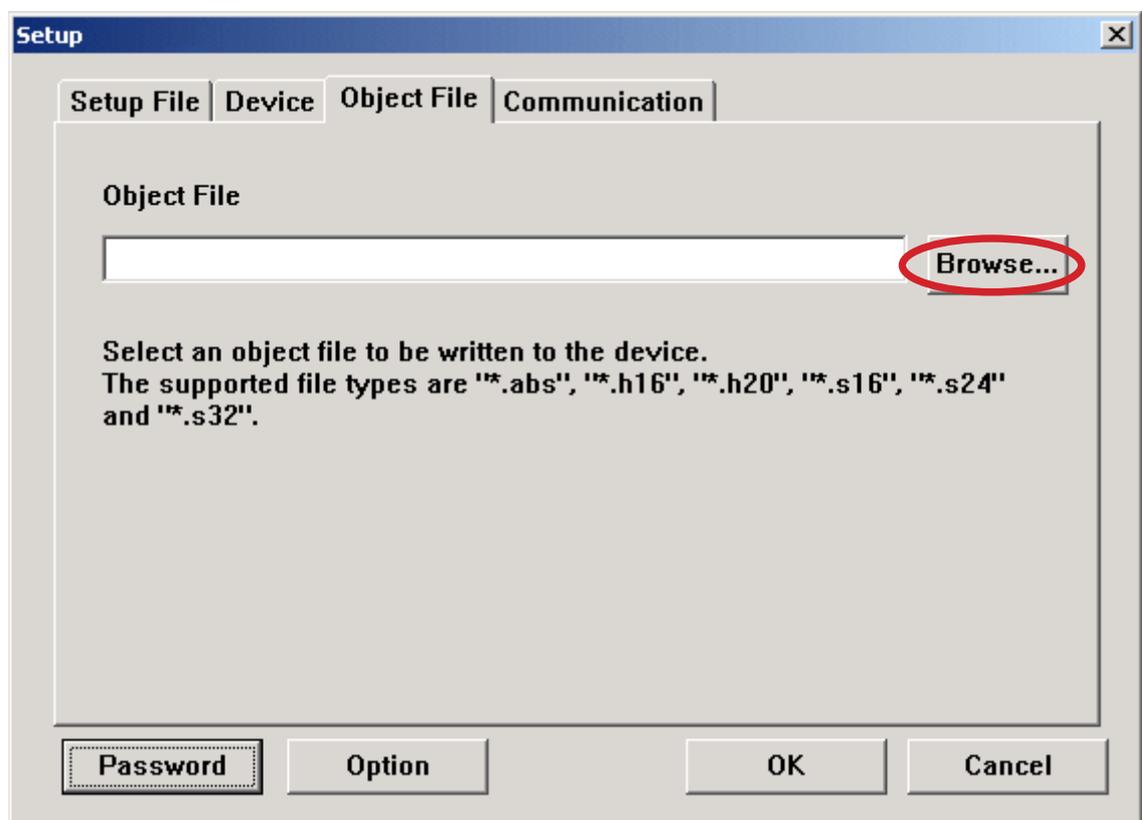


NOTE : Since Flash Programmer communicates with the unit automatically, the following dialog box appears when it fails in communication.

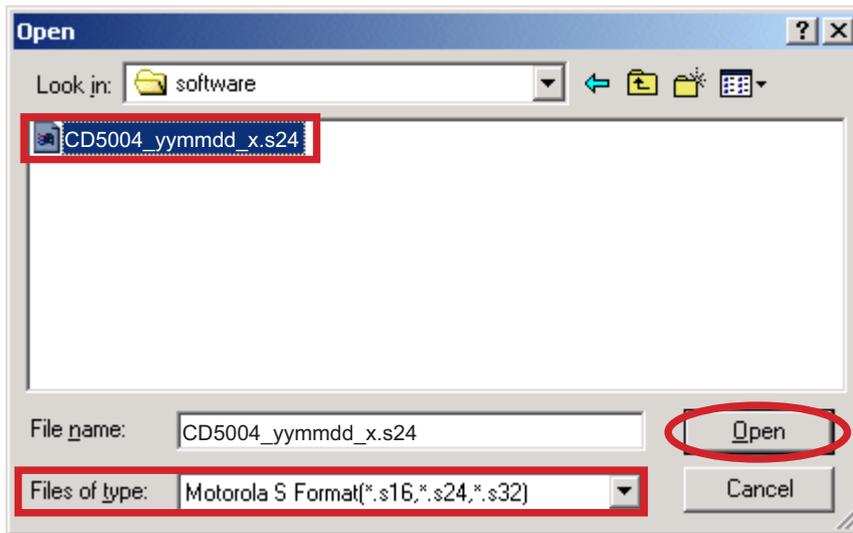
(5) Click the Setup in the menu bar and select the Object file.



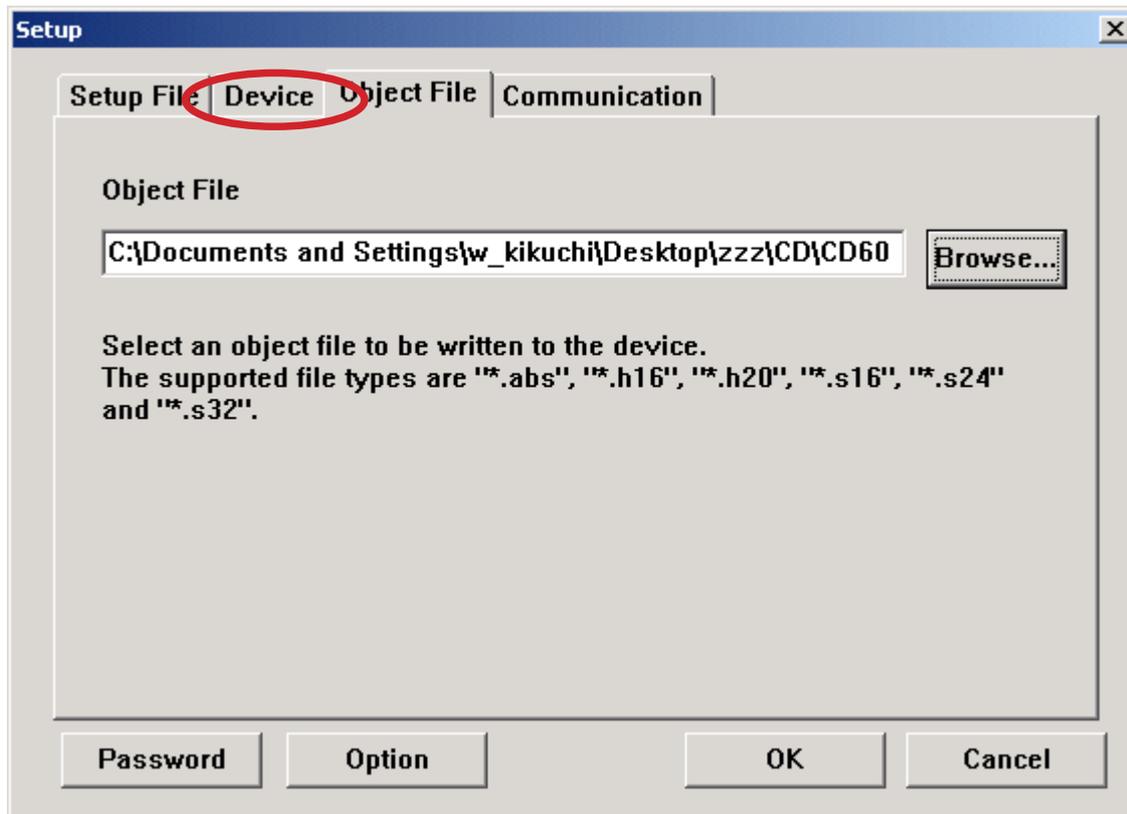
(6) Click Browse.



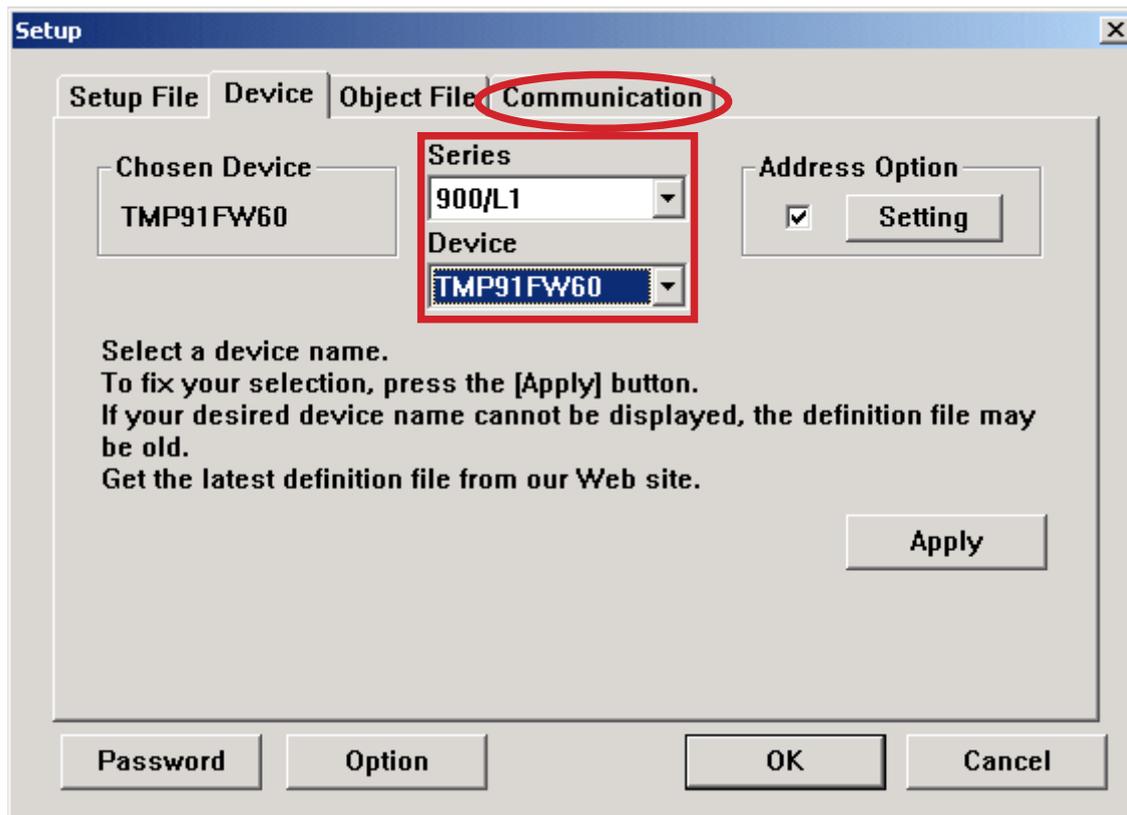
- (7) Choose the Motorola S Format(*.s16,*.s24,*.s32) in Files of type.
Choose the CD5004_yymmdd_x.s24, and click Open.
NOTE : The yy is two digits of year. The mm is month. The dd is date. The x is release number.



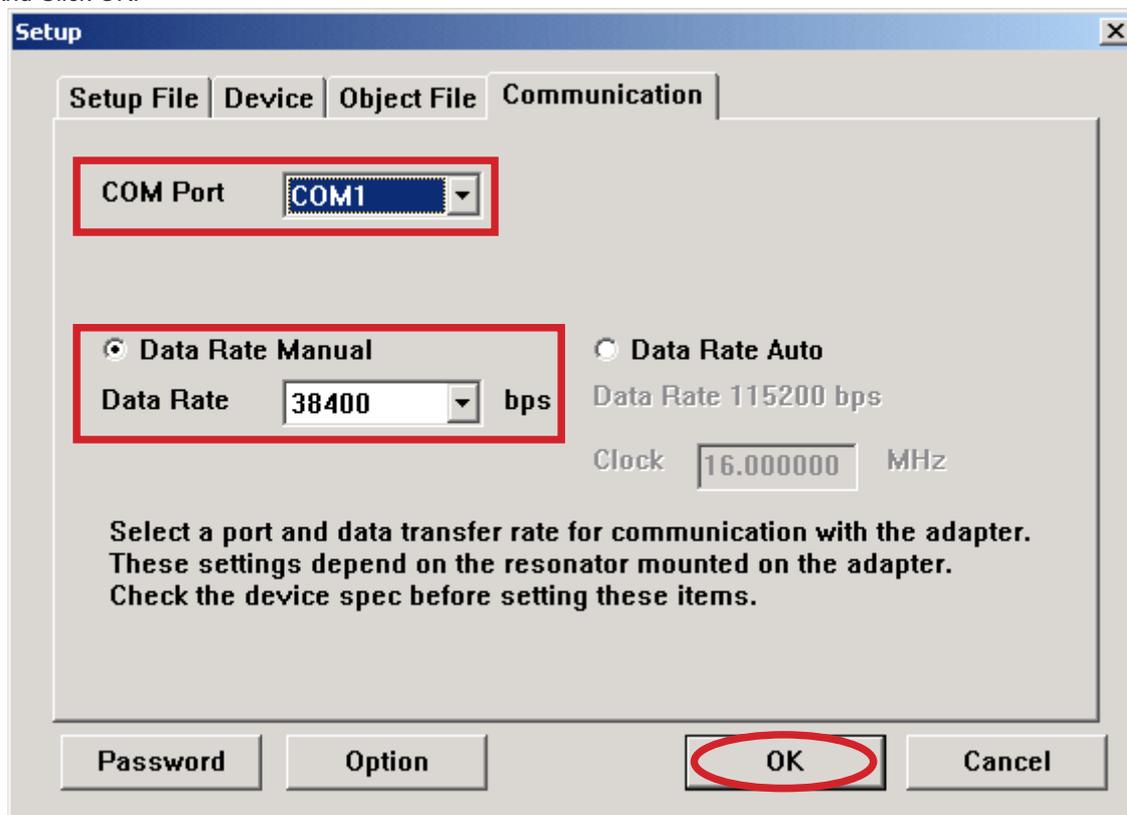
- (8) Click Device tab.



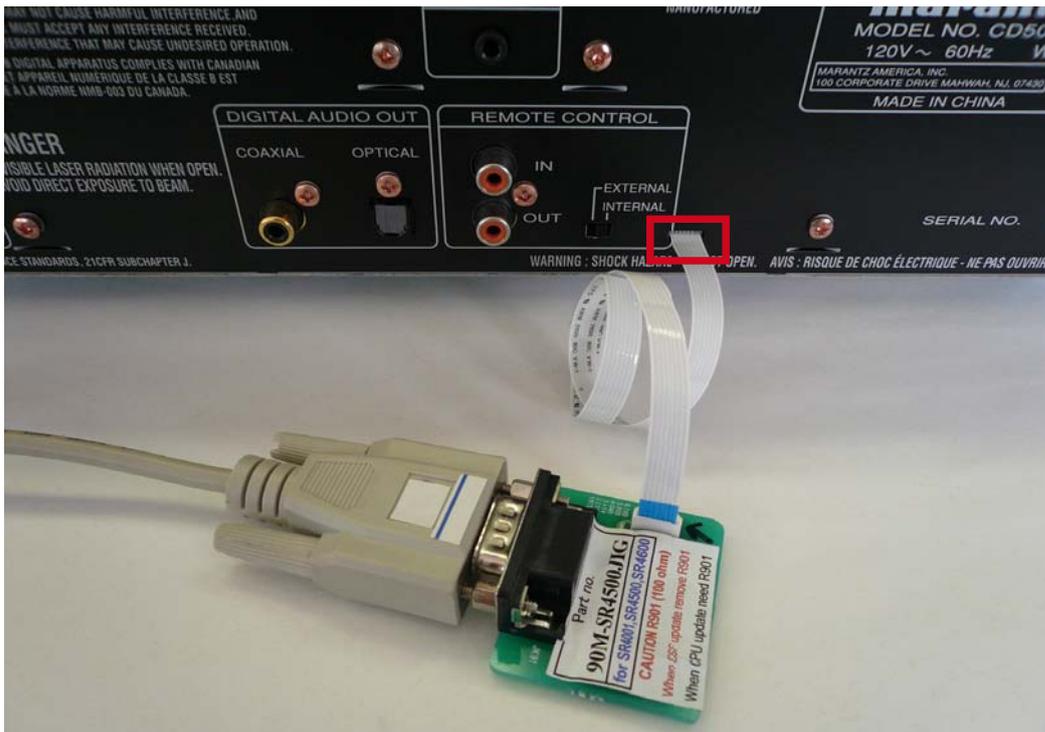
- (9) Choose the TMP91FW60 in the Device, and choose the 900/L1 in the Series.
And click Communication tab.



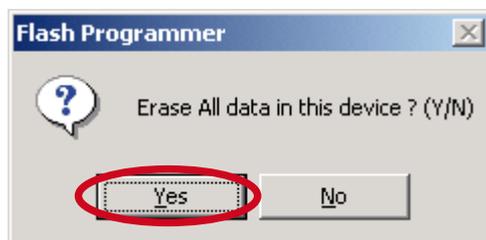
- (10) Choose the Serial port number in the COM Port.
Check the Data Rate Manual, and choose the 38400 in the Data Rare.
And Click OK.



- (11) Disconnect the mains cord from the unit.
- (12) Connect the RS-232C on the connection JIG and the Serial Port of windows PC with RS-232C cable.
- (13) Connect FFC (upside contact) to the rear panel of the unit from connection JIG.



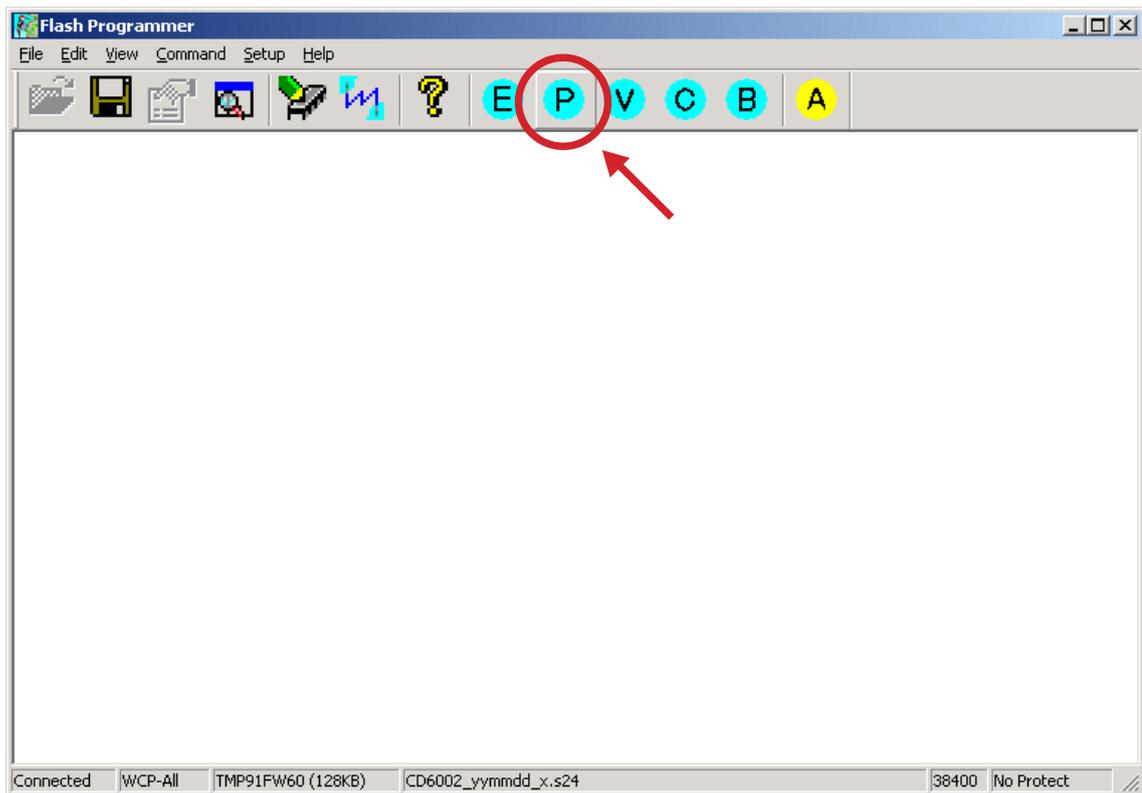
- (14) Connect the mains cord into the unit.
- (15) If the connection with the Flash Programmer is successfully made, a dialogue box saying "Erase All data in this devise? (Y/N)" appears automatically. If the connection fails, error message will appear. (Ex.: E000) Click Yes.



- (16) Click OK.



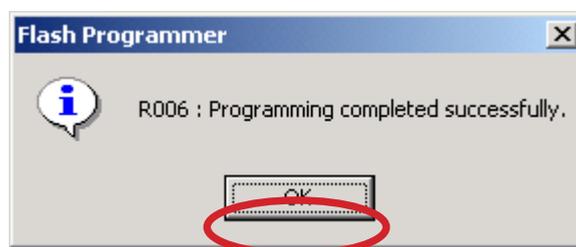
(17) Click P (Program) to start update.



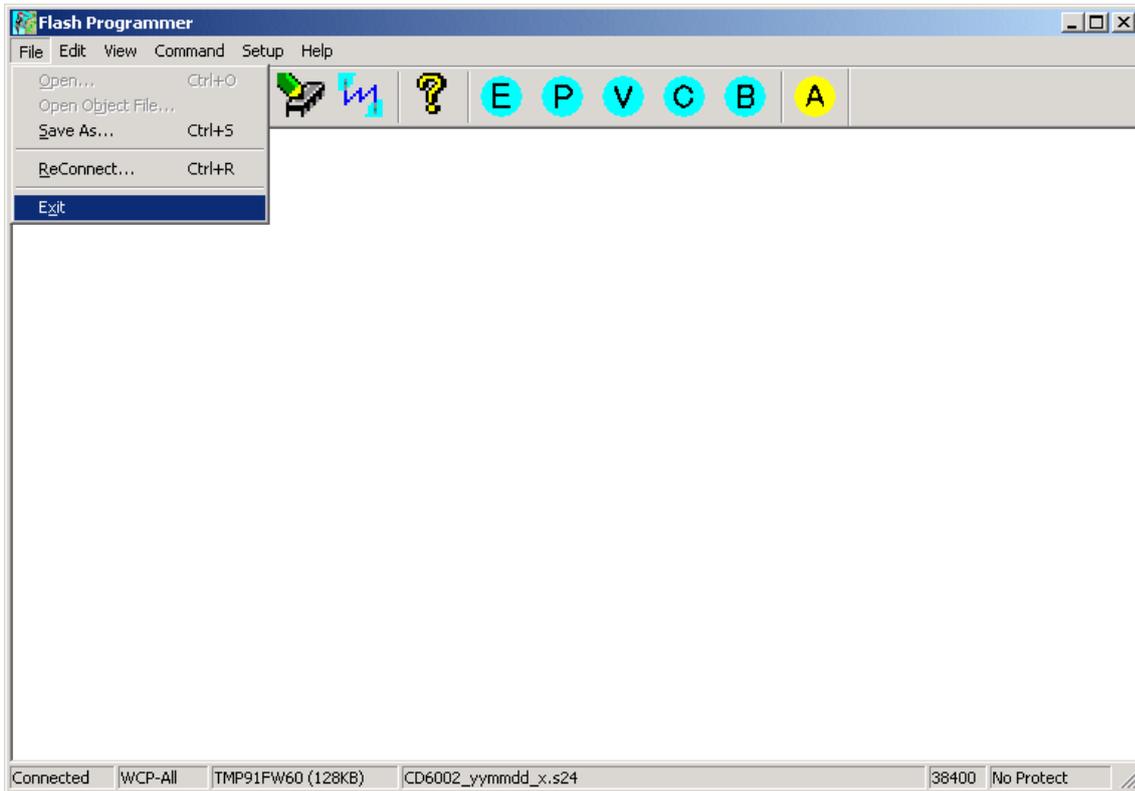
(18) Software is written into the microprocessor.
The writing of software takes about 50 seconds.



(19) If the software is updated successfully, a dialog box saying "R006: Programming completed successfully." appears.
Click OK.



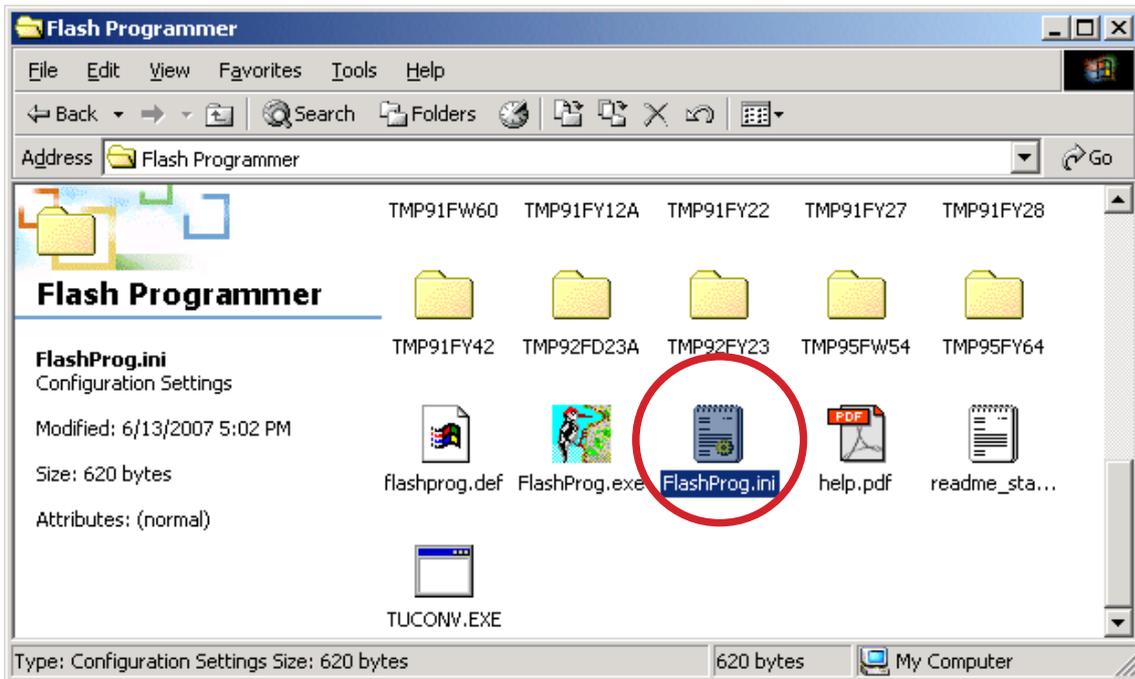
(20) Click the File in the menu bar and select the Exit.



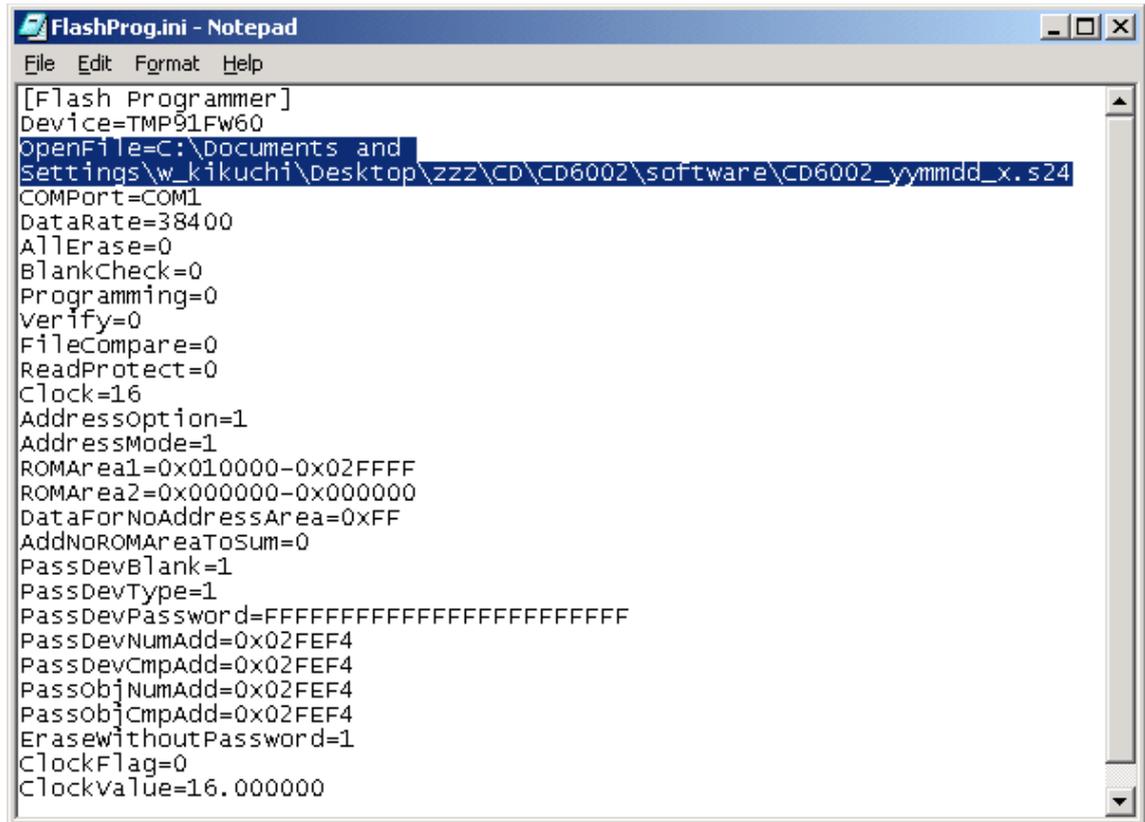
(21) Disconnect mains cord from the unit, and then disconnect FFC of connection JIG from the unit.

2. When a Flash Programmer did not launch

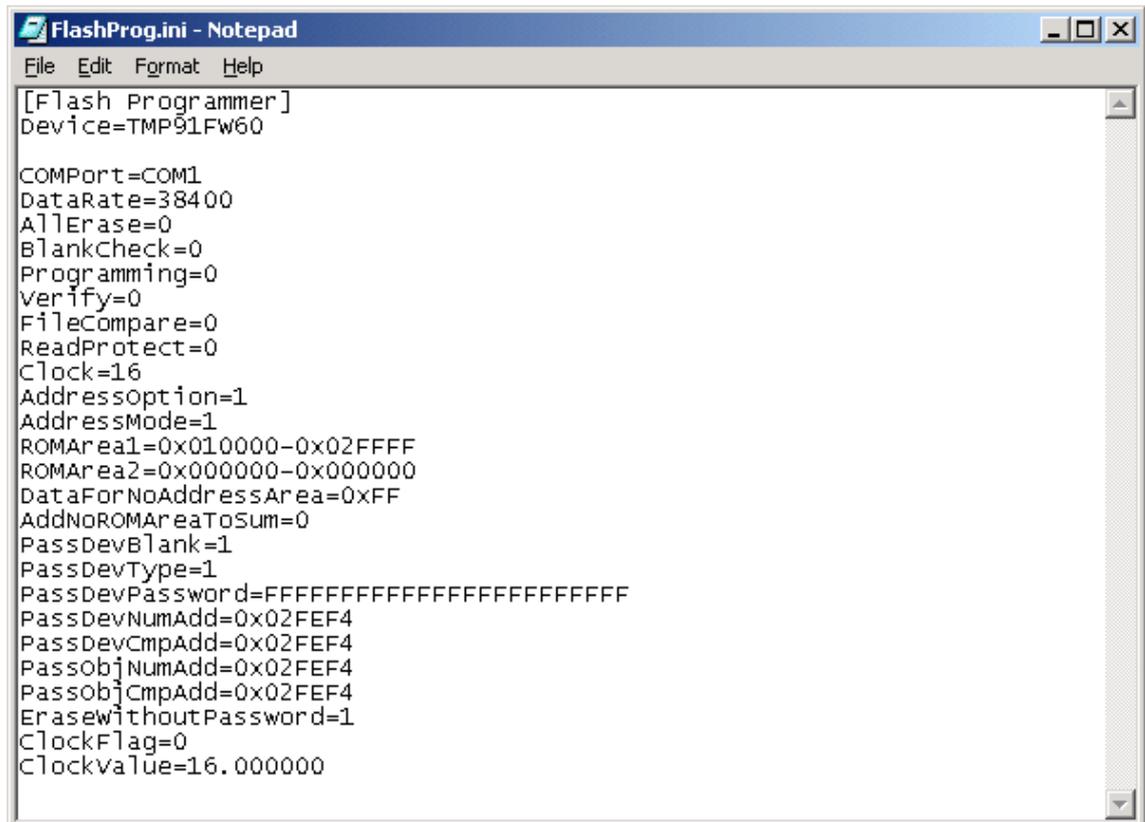
(1) Open the FlashProg.ini in the Flash Programmer folder by text editor. (EX.: Notepad, etc)



(2) Delete the text "OpenFile=C:\...(your PC setting)...\\???.s24".



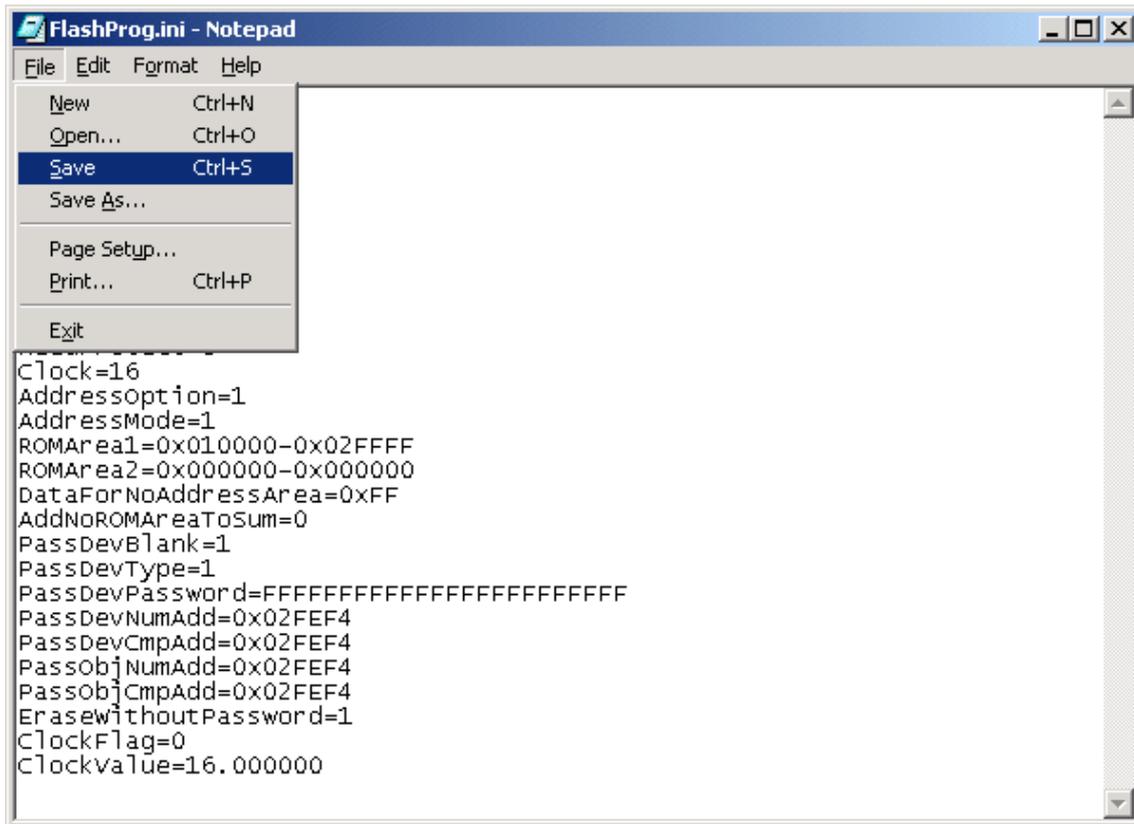
```
FlashProg.ini - Notepad
File Edit Format Help
[Flash Programmer]
Device=TMP91FW60
OpenFile=C:\Documents and Settings\w_kikuchi\Desktop\zzz\CD\CD6002\software\CD6002_yymmdd_x.s24
COMPort=COM1
DataRate=38400
AllErase=0
BlankCheck=0
Programming=0
Verify=0
FileCompare=0
ReadProtect=0
Clock=16
AddressOption=1
AddressMode=1
ROMArea1=0x010000-0x02FFFF
ROMArea2=0x000000-0x000000
DataForNoAddressArea=0xFF
AddNoROMAreaToSum=0
PassDevBlank=1
PassDevType=1
PassDevPassword=FFFFFFFFFFFFFFFFFFFFFFFF
PassDevNumAdd=0x02FEF4
PassDevCmpAdd=0x02FEF4
PassObjNumAdd=0x02FEF4
PassObjCmpAdd=0x02FEF4
EraseWithoutPassword=1
ClockFlag=0
ClockValue=16.000000
```



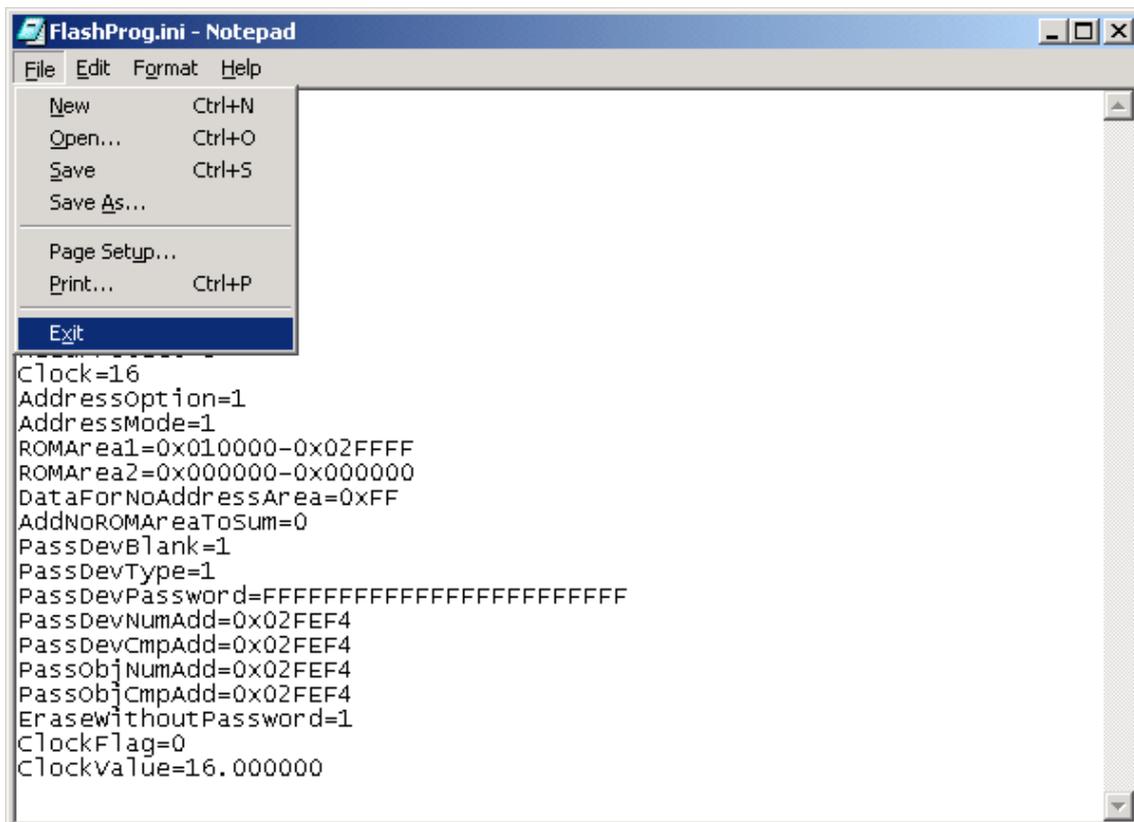
```
FlashProg.ini - Notepad
File Edit Format Help
[Flash Programmer]
Device=TMP91FW60

COMPort=COM1
DataRate=38400
AllErase=0
BlankCheck=0
Programming=0
Verify=0
FileCompare=0
ReadProtect=0
Clock=16
AddressOption=1
AddressMode=1
ROMArea1=0x010000-0x02FFFF
ROMArea2=0x000000-0x000000
DataForNoAddressArea=0xFF
AddNoROMAreaToSum=0
PassDevBlank=1
PassDevType=1
PassDevPassword=FFFFFFFFFFFFFFFFFFFFFFFF
PassDevNumAdd=0x02FEF4
PassDevCmpAdd=0x02FEF4
PassObjNumAdd=0x02FEF4
PassObjCmpAdd=0x02FEF4
EraseWithoutPassword=1
ClockFlag=0
ClockValue=16.000000
```

(3) Save the FlashProg.ini.



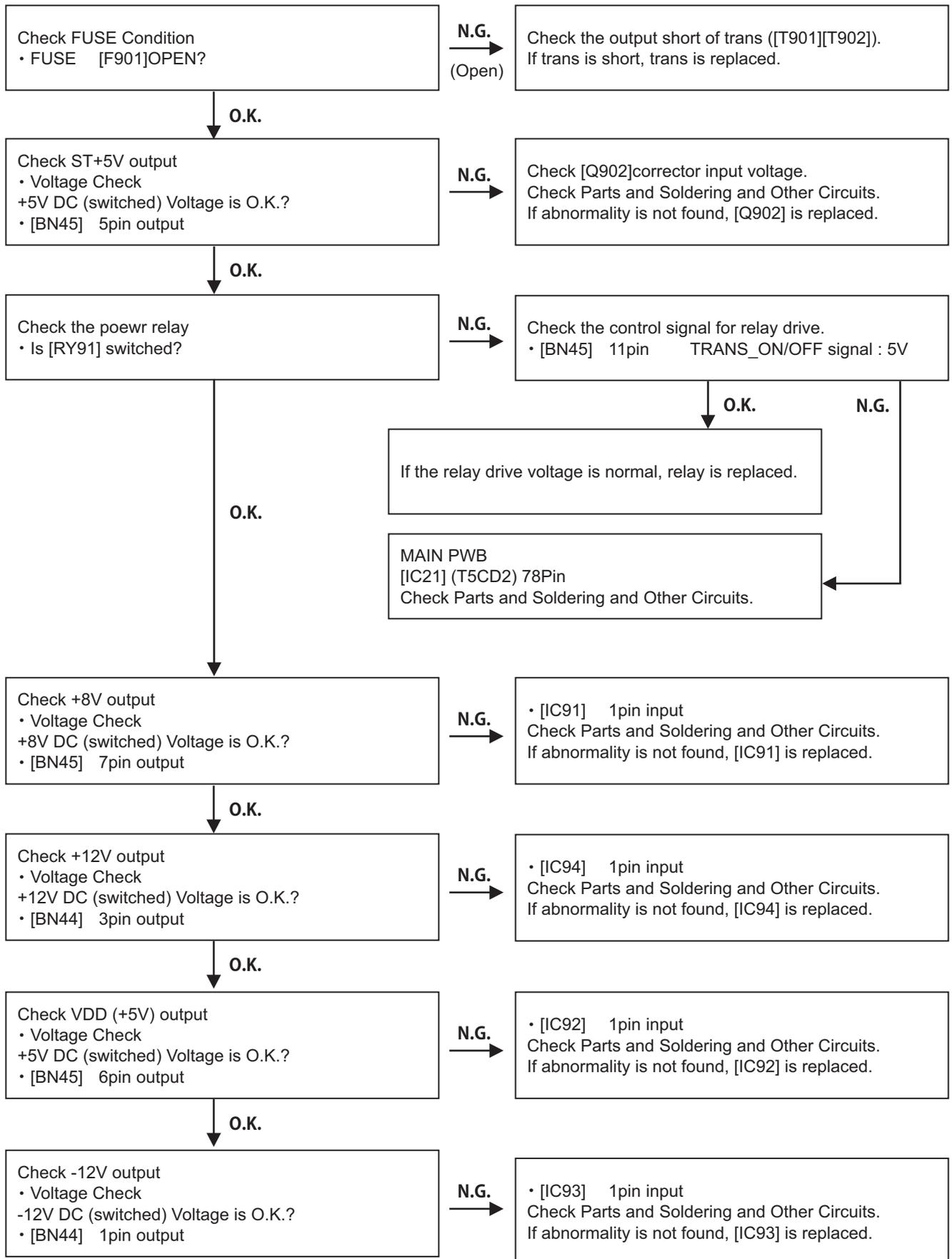
(4) Close the text editor.



(5) Probably you can launch the Flash Programmer. Go to the 1. Update Procedure step 3.

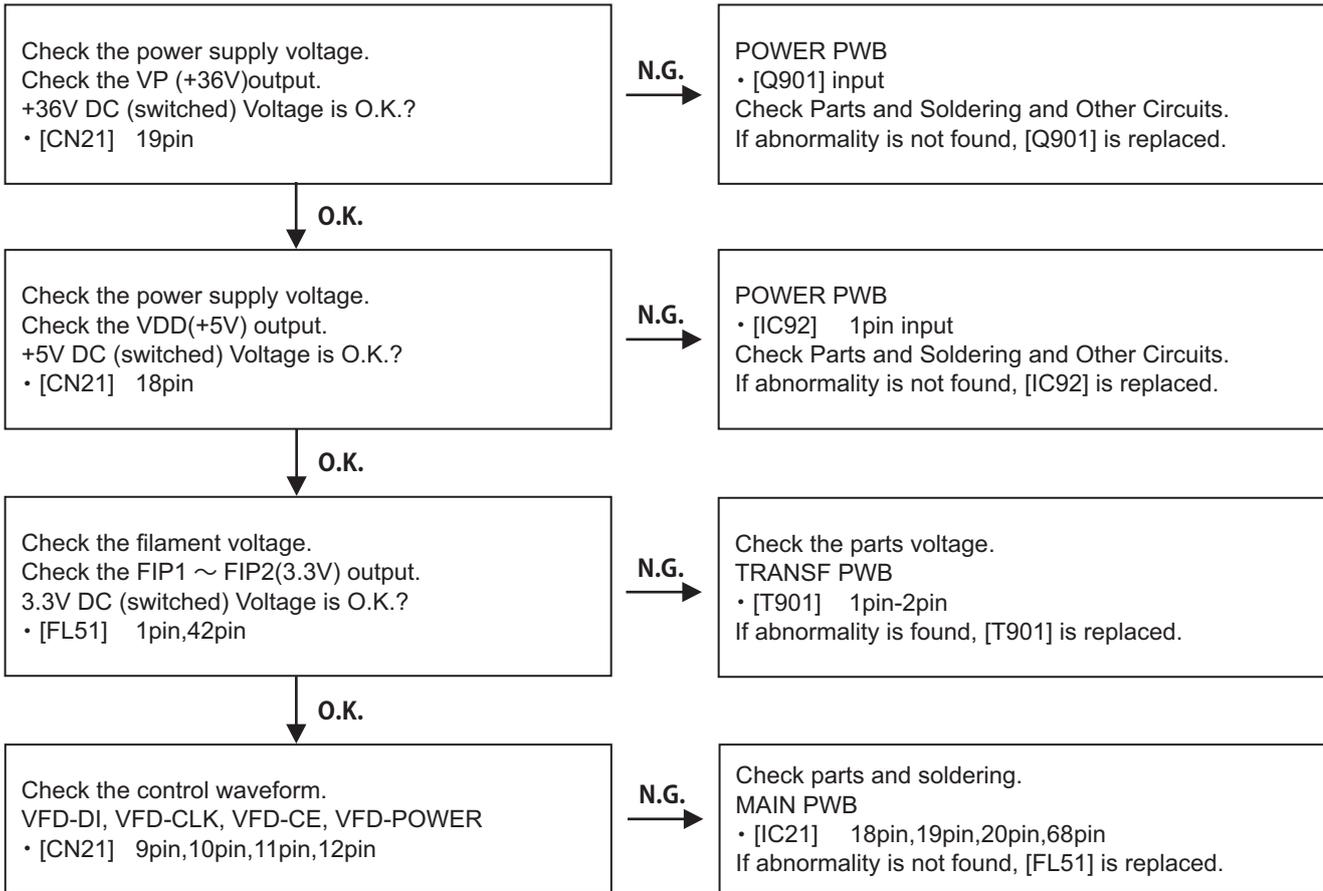
TROUBLE SHOOTING

1. POWER PWB

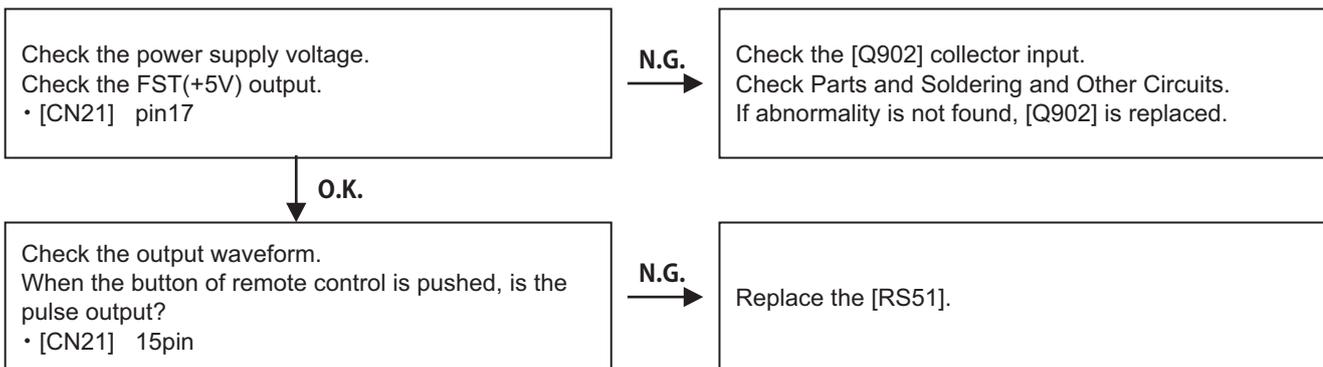


2. FRONT PWB

2.1. FL TUBE dosen't light

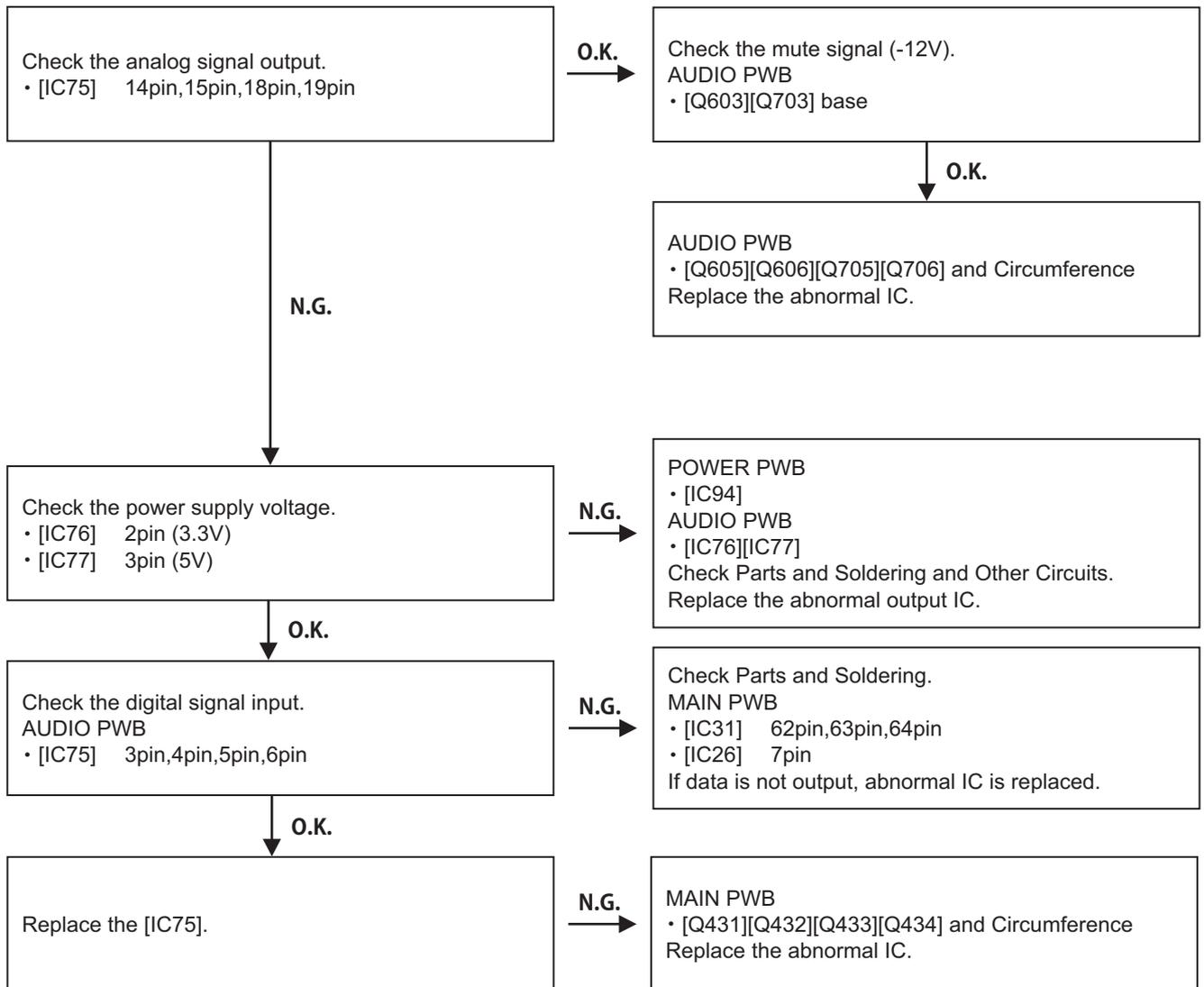


2.2. Remotcontrol is not accepted.



3. AUDIO PWB

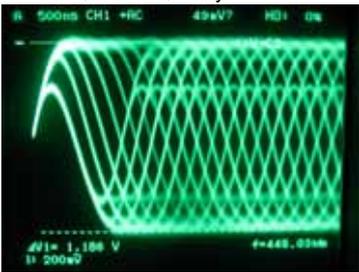
3.1 No Audio output



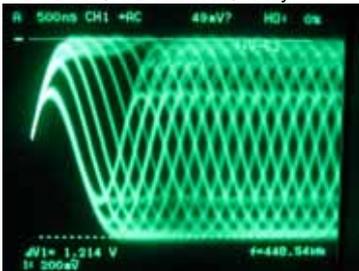
2. WAVEFORMS

1. DISC PLAY RF WAVEFORM (EYE-PATTERN)

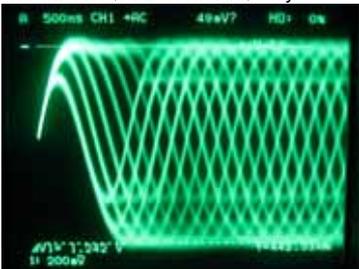
1.1 CD (TCD-784) Play



1.2 CD-R (TCD-R000RM) Play

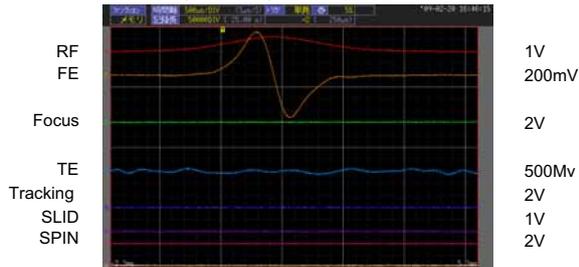


1.3 CD-RW (TCD-W000RM) Play

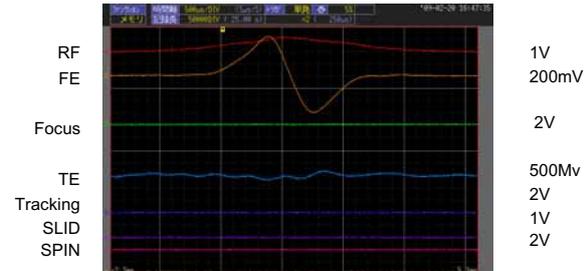


2. DISC DETECTION

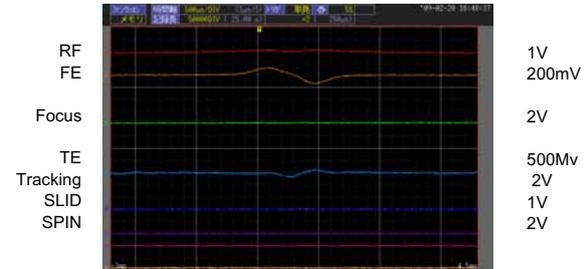
2.1 CD (TCD-784) DISC DETECTION



2.2 CD-R (TCD-R000RM) DISC DETECTION



2.3 CD-RW (TCD-W000RM) DISC DETECTION



3. TOC READ

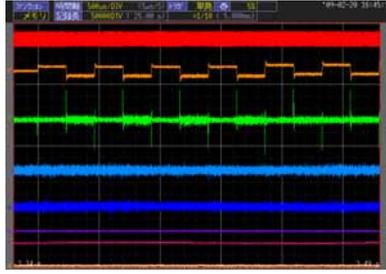
3.1 CD (TCD-784) TOC READ



1V
200mV
2V
500Mv
2V
1V
2V

4. FOCUS ADJUSTMENT

4.1 CD (TCD-784) FOCUS ADJUSTMENT

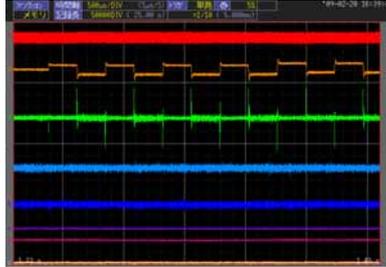


3.2 CD-R (TCD-R000RM) TOC READ



1V
200mV
2V
500Mv
2V
1V
2V

4.2 CD-R (TCD-R000RM) FOCUS ADJUSTMENT



3.3 CD-RW (TCD-W000RM) TOC READ

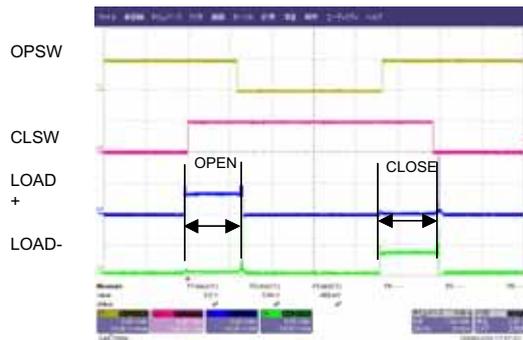


1V
200mV
2V
500Mv
2V
1V
2V

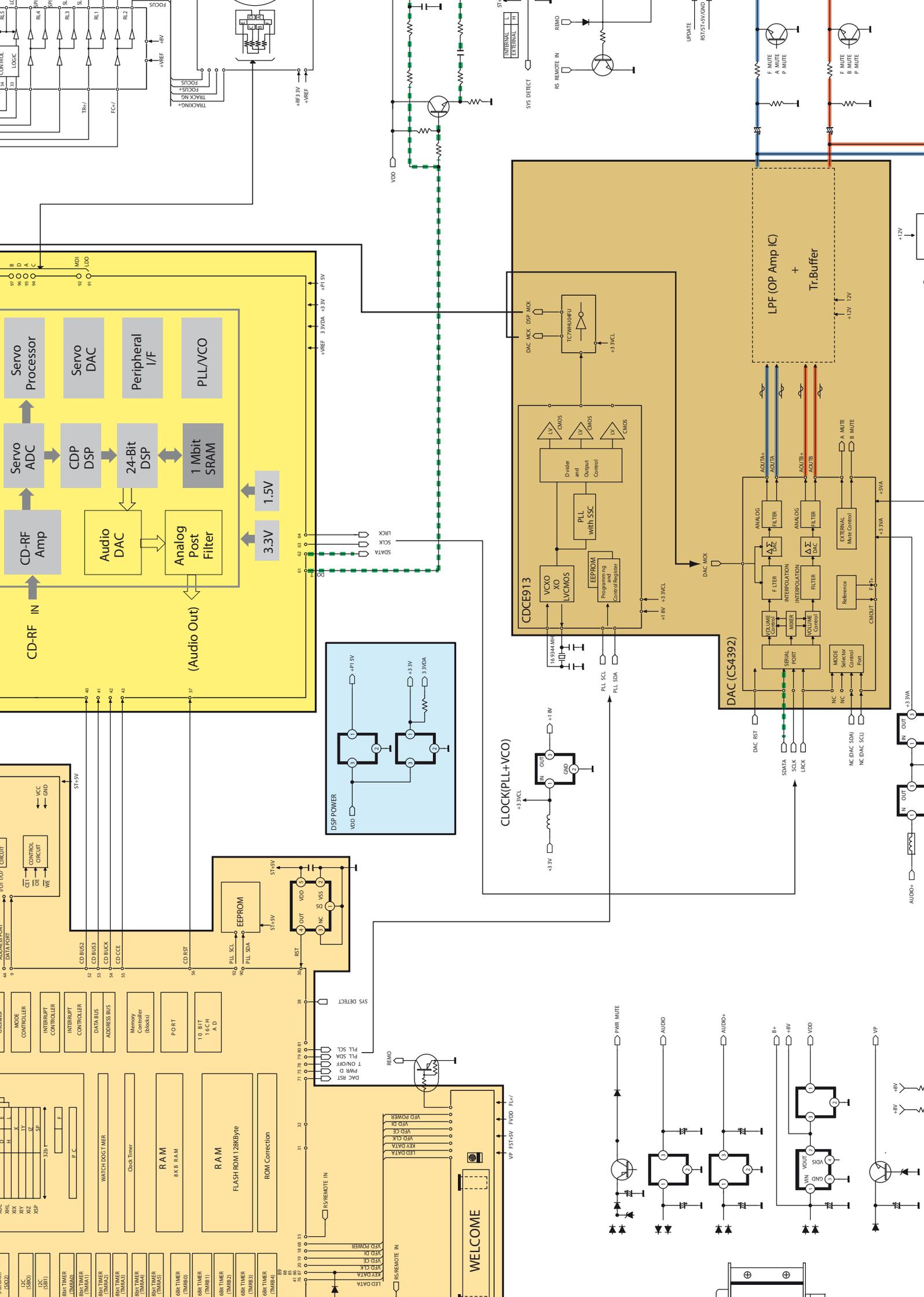
4.3 CD-R (TCD-R000RM) FOCUS ADJUSTMENT

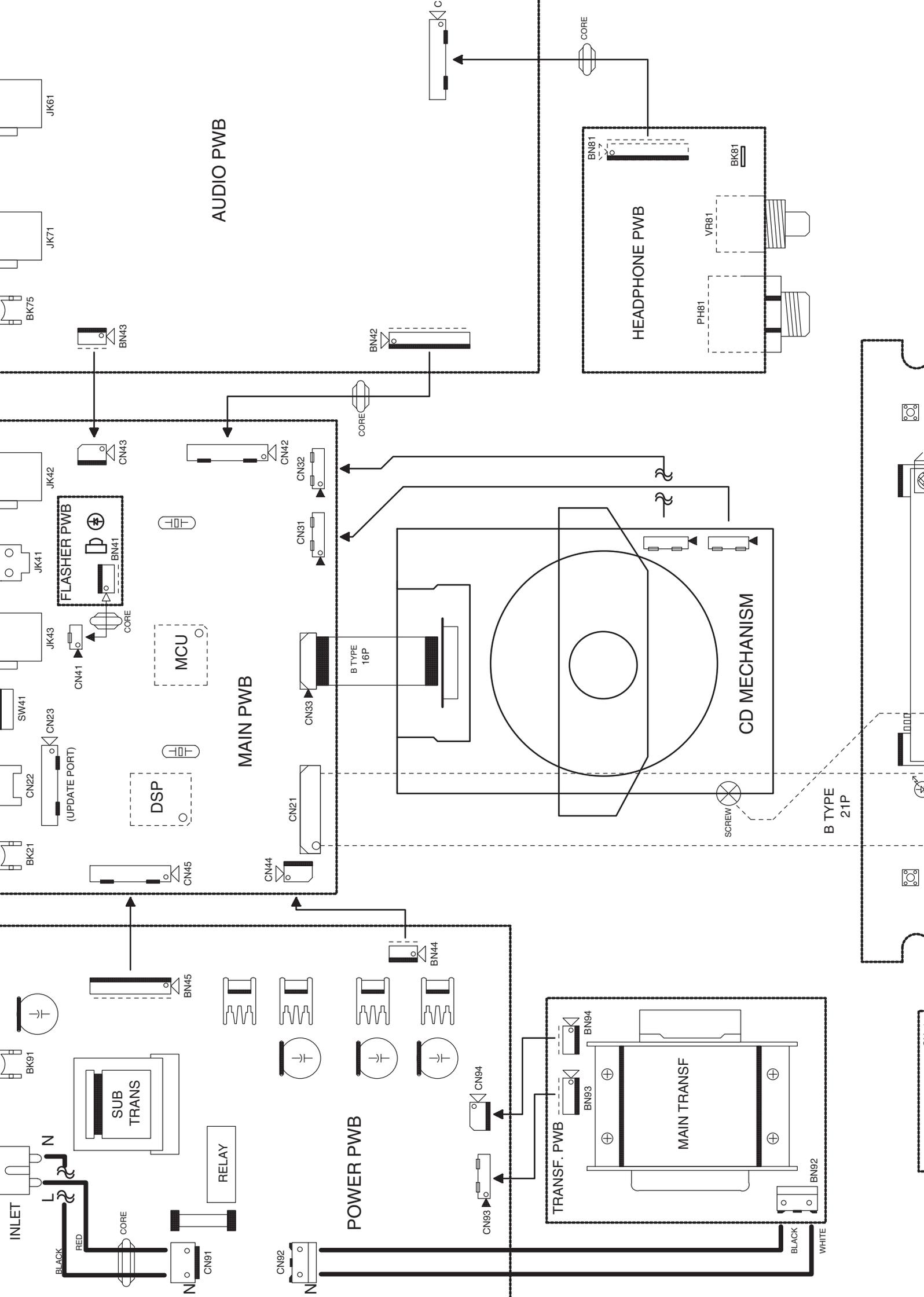


5. LOADER OPEN-CLOSE

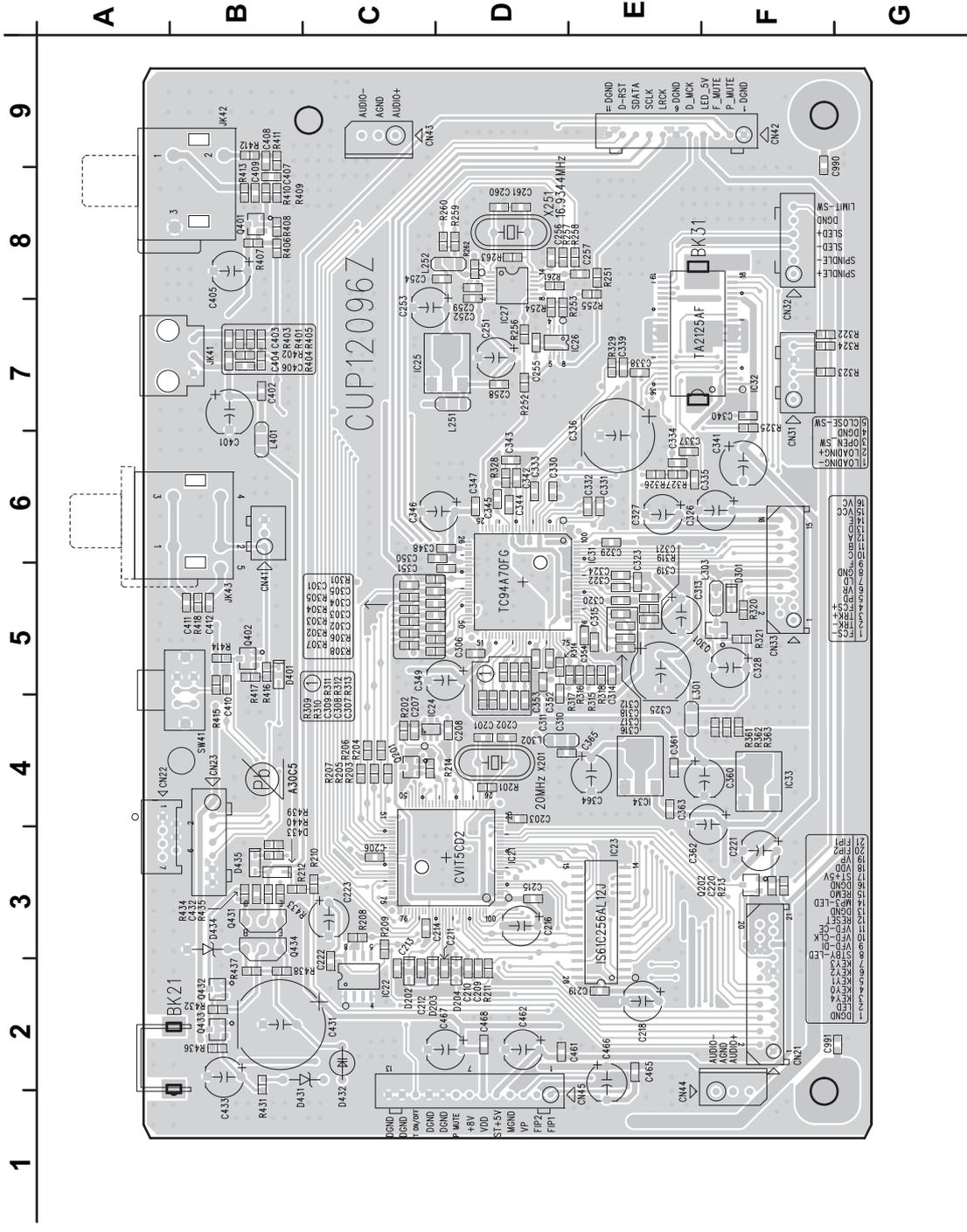


5V
5V
5V
5V





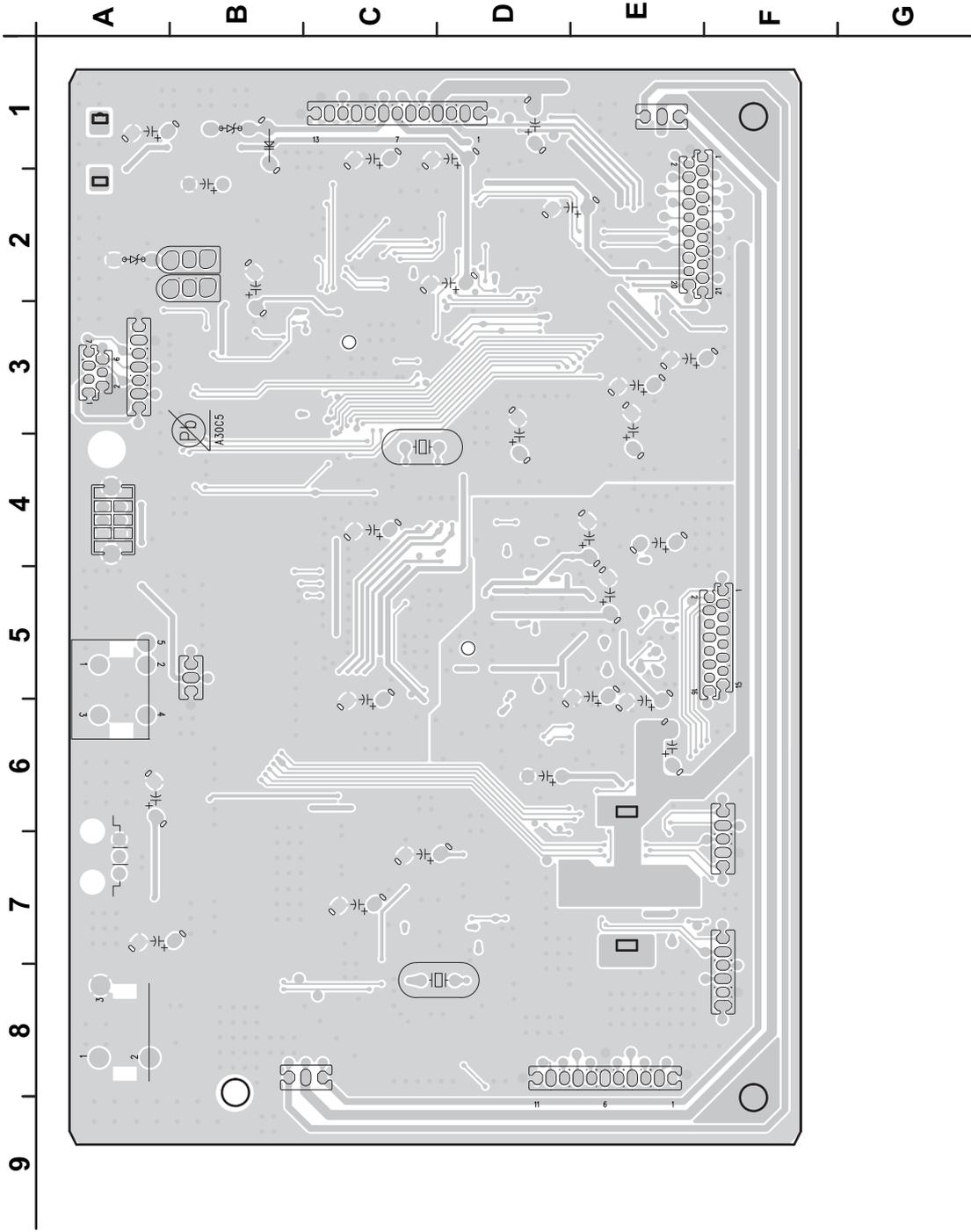
MAIN (COMPONENT SIDE)

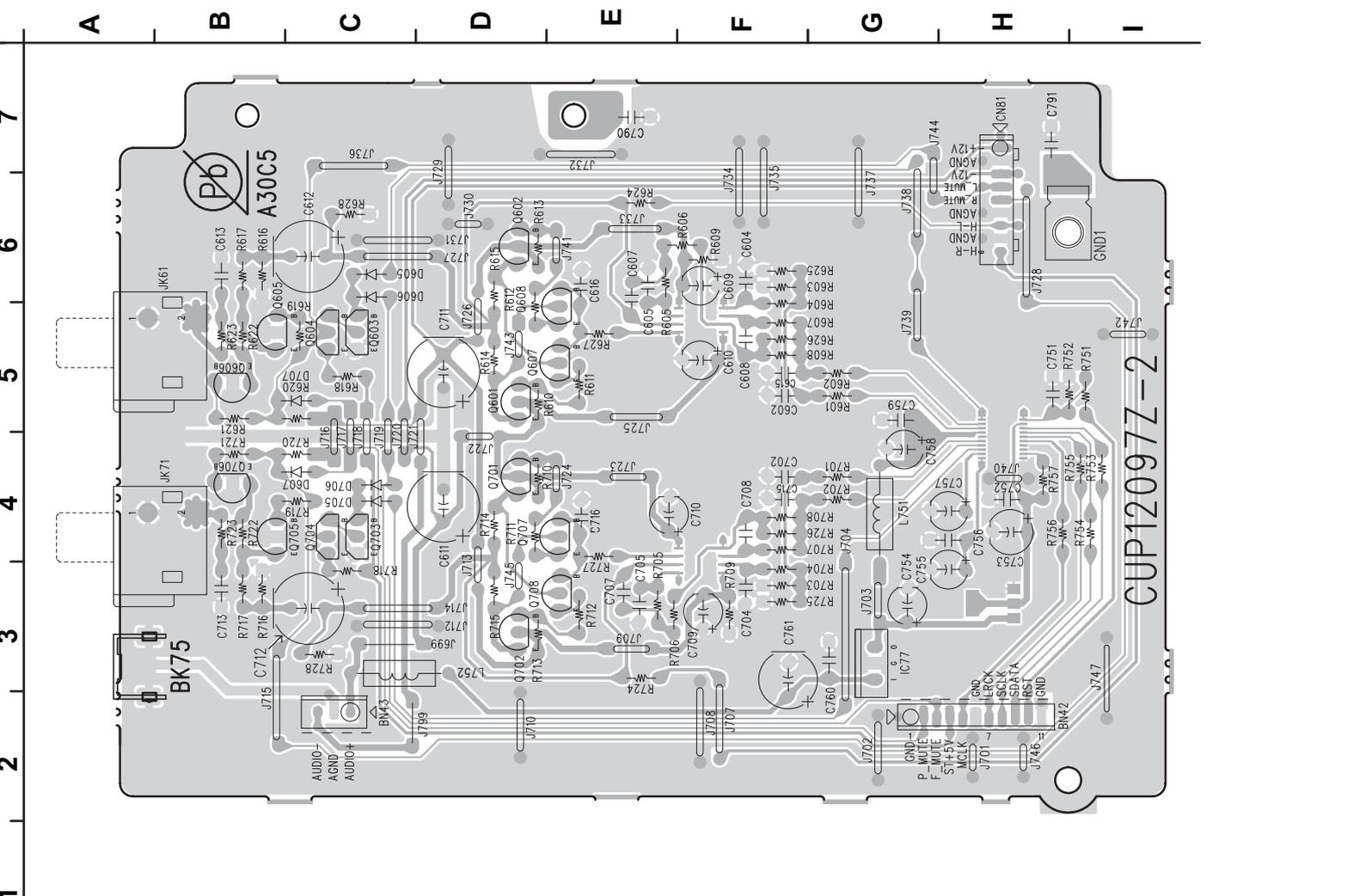
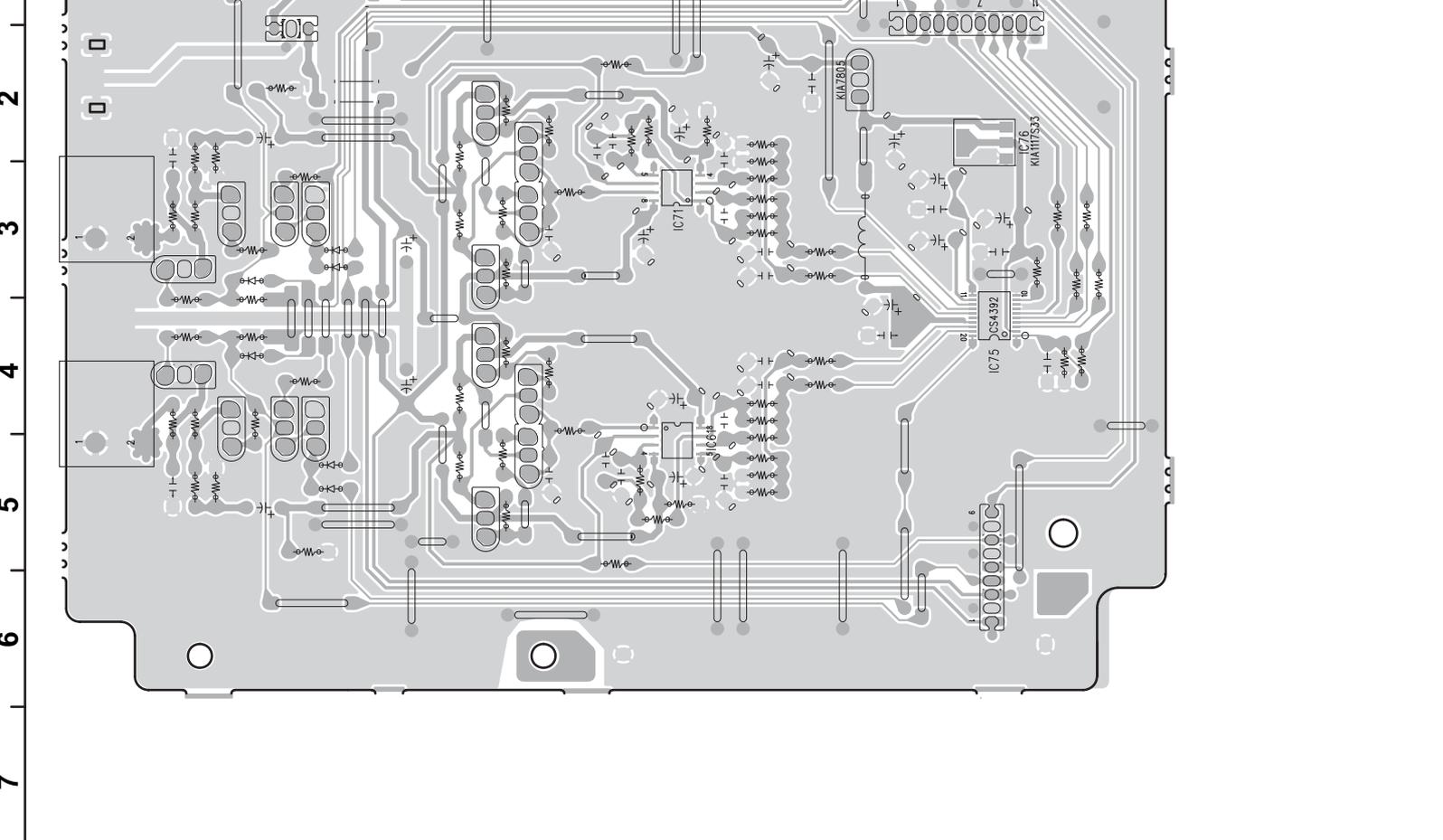


A B C D E F G

1 2 3 4 5 6 7 8 9

MAIN (FOIL SIDE)





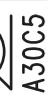
COMPONENT SIDE

POWER (FOIL SIDE)

1 2 3 4 5 6 7

13 14 15 16 17 18

CUP12097Z-3



A30C5

REF NO. F901
T 630mA L 250V
C05003/11B/F/N/F B

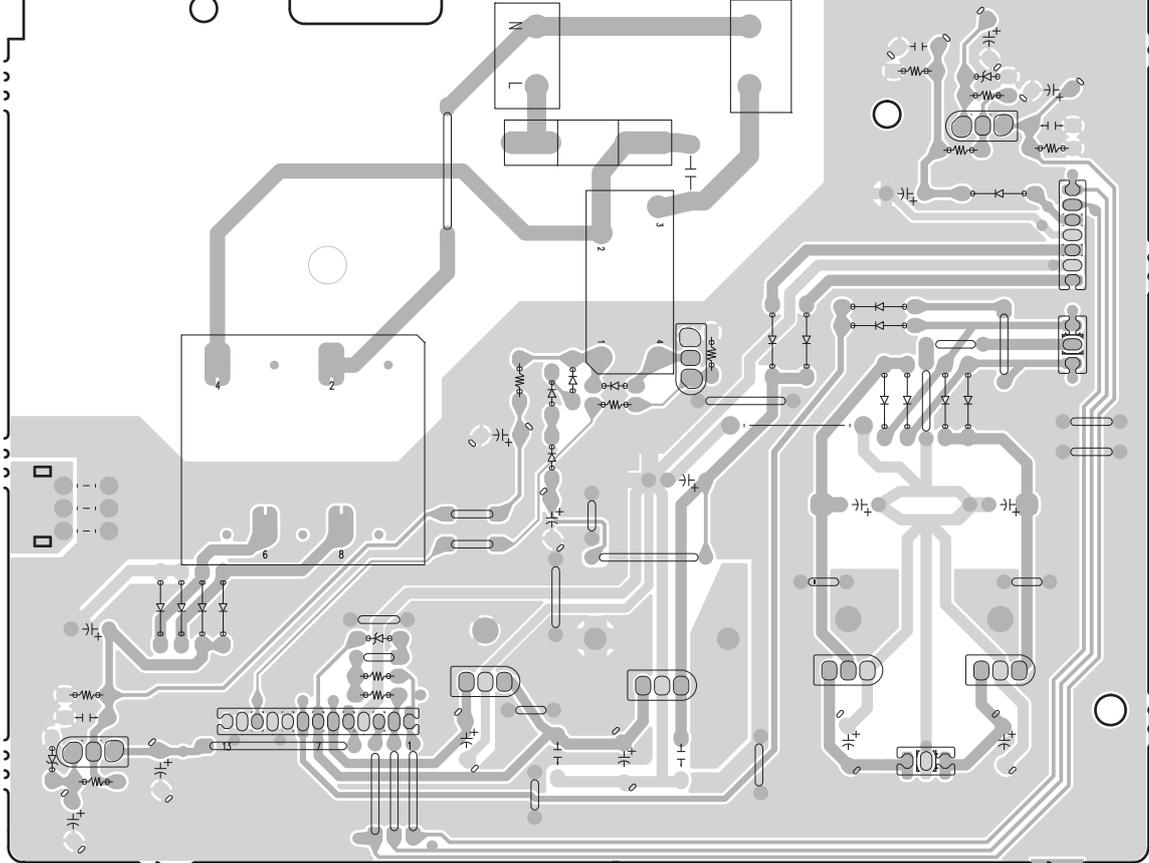
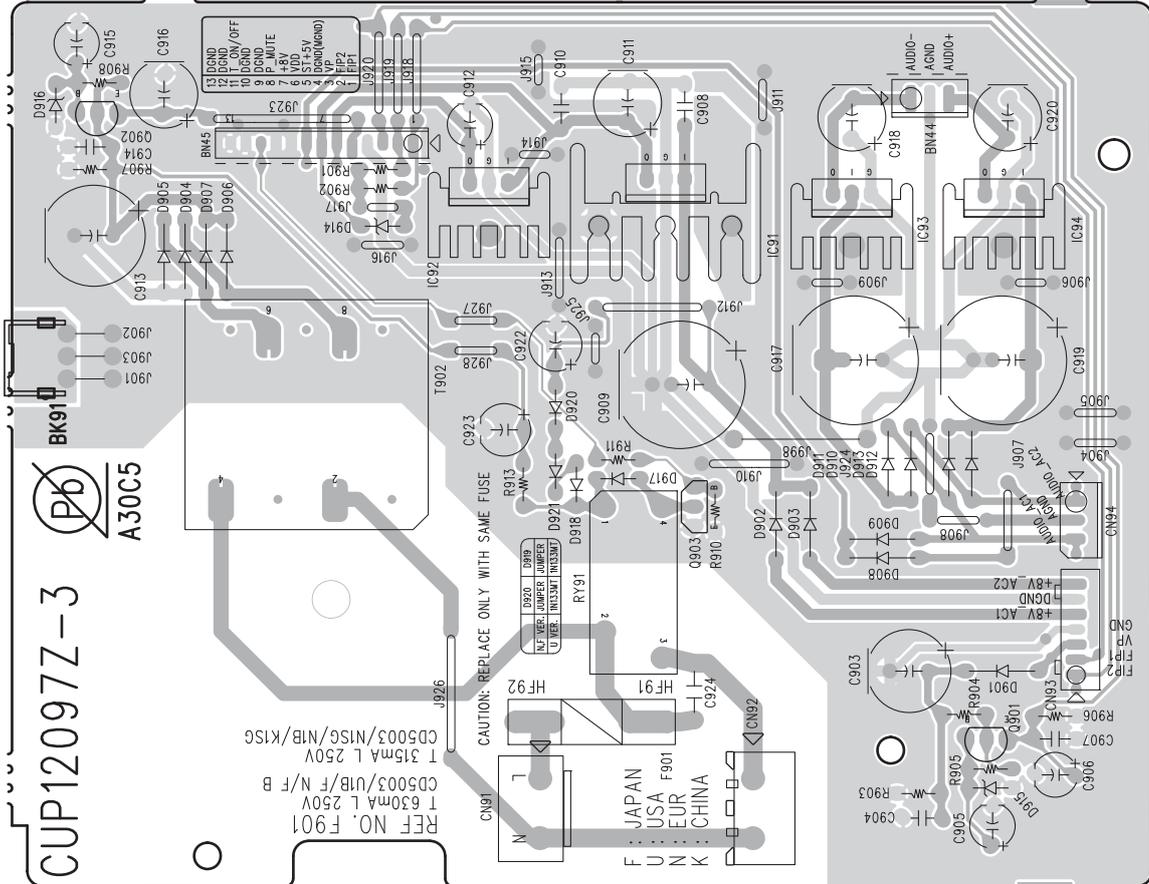
T 315mA L 250V
C05003/11SG/11B/K/1SG

F : JAPAN
U : USA F901
N : EUR
K : CHINA

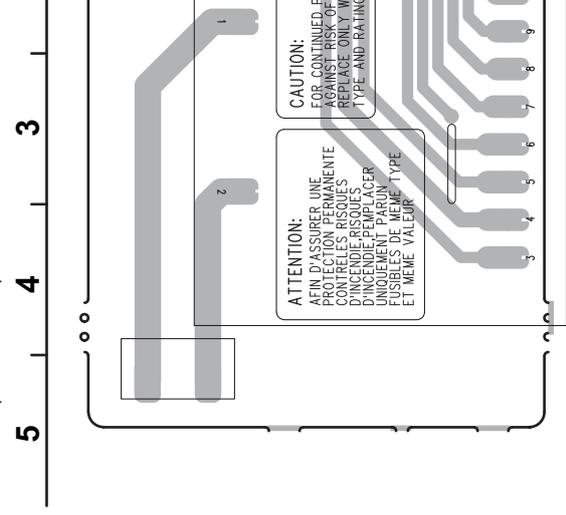
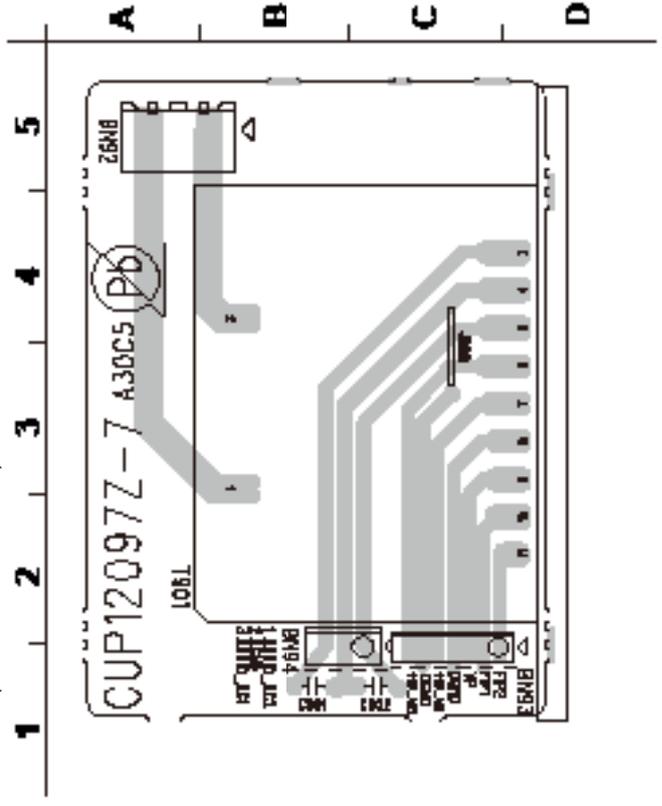
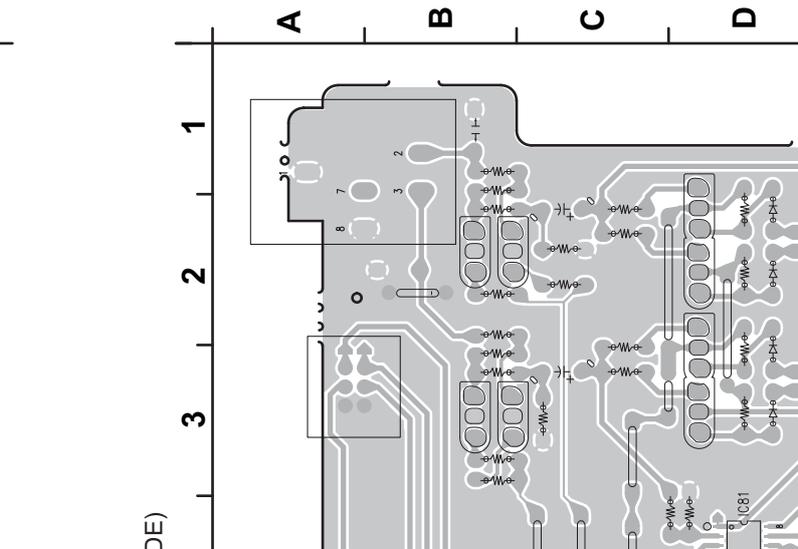
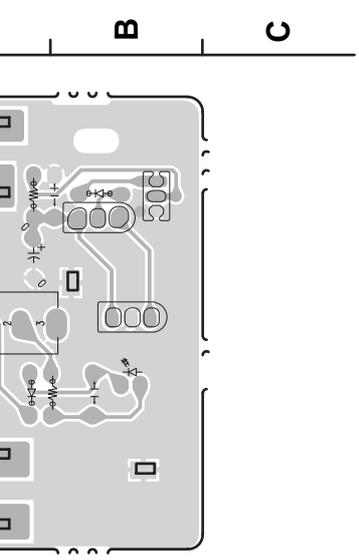
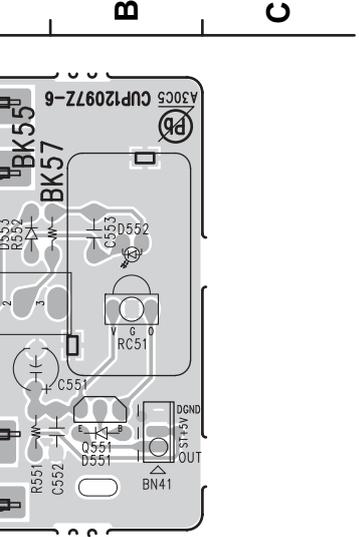
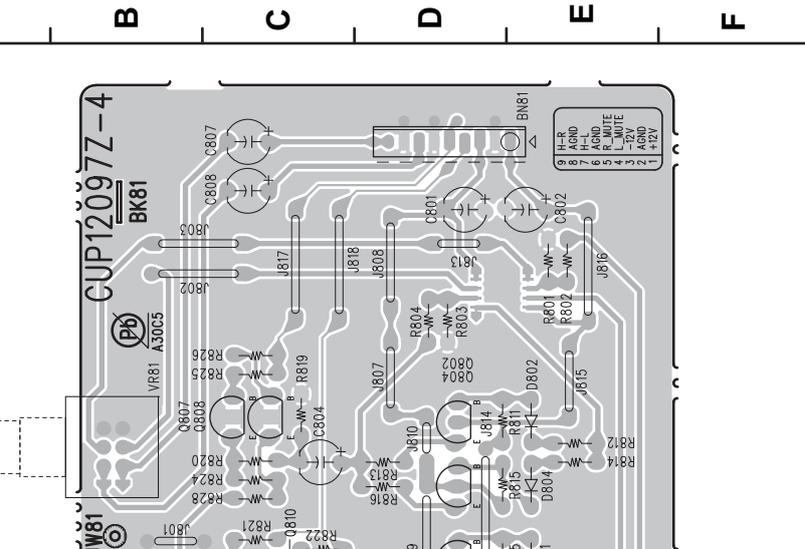
CN81

CAUTION: REPLACE ONLY WITH SAME FUSE

D920 D918
N/V VER. JUMPER (JUMPER)
U/V VER. (INSULATOR) D921



A B C D E F G H

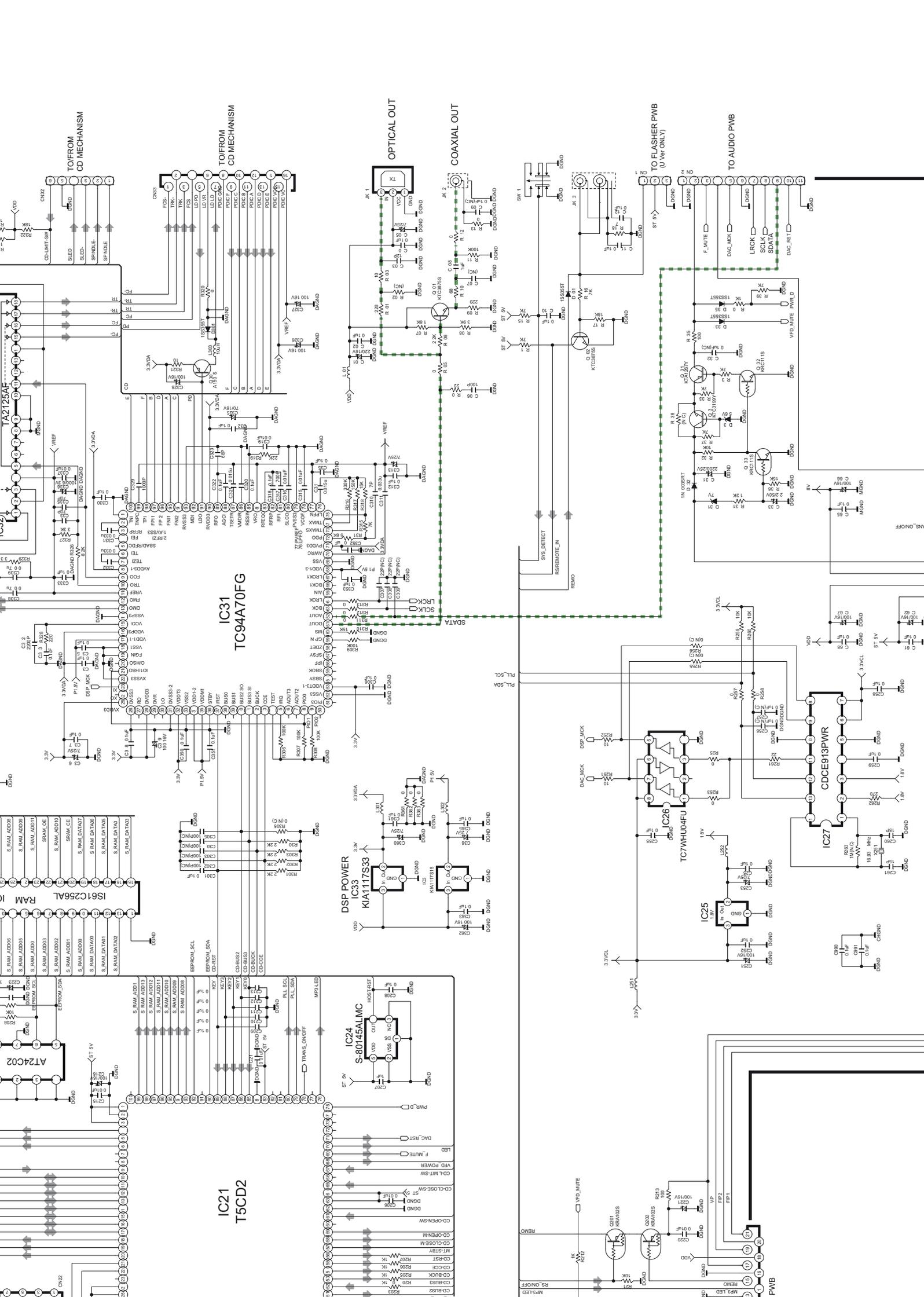


ATTENTION:
AFIN D'ASSURER UNE
PROTECTION PERMANENTE
CONTRE LES RISQUES
D'INCENDIE, RISQUES
D'ARC ELCTRIFIANT, FUSIBLES
UNIQUEMENT PARMI LES
FUSIBLES DE MEME TYPE
ET MEME VALEUR.

CAUTION:
FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE
REPLACE ONLY WITH
FUSES OF SAME TYPE AND RATING.

TRANSF (COMPONENT SIDE)

TRANSF (FOIL SIDE)



TO/FROM
CD MECHANISM

TO/FROM
CD MECHANISM

OPTICAL OUT

COAXIAL OUT

TO FLASHER PWB
(U Ver ONLY)

TO AUDIO PWB

IC31
TC94A70FG

DSP POWER
IC33
KIA1117S33

IC25
78V

IC26
TCT7WHU04FU

IC27
ODCE913PWR

IC24
S-80145ALMC

AT24C02

IS61C256AL

IC21
T5CD2

IC27

IC26

IC25

IC33

IC31

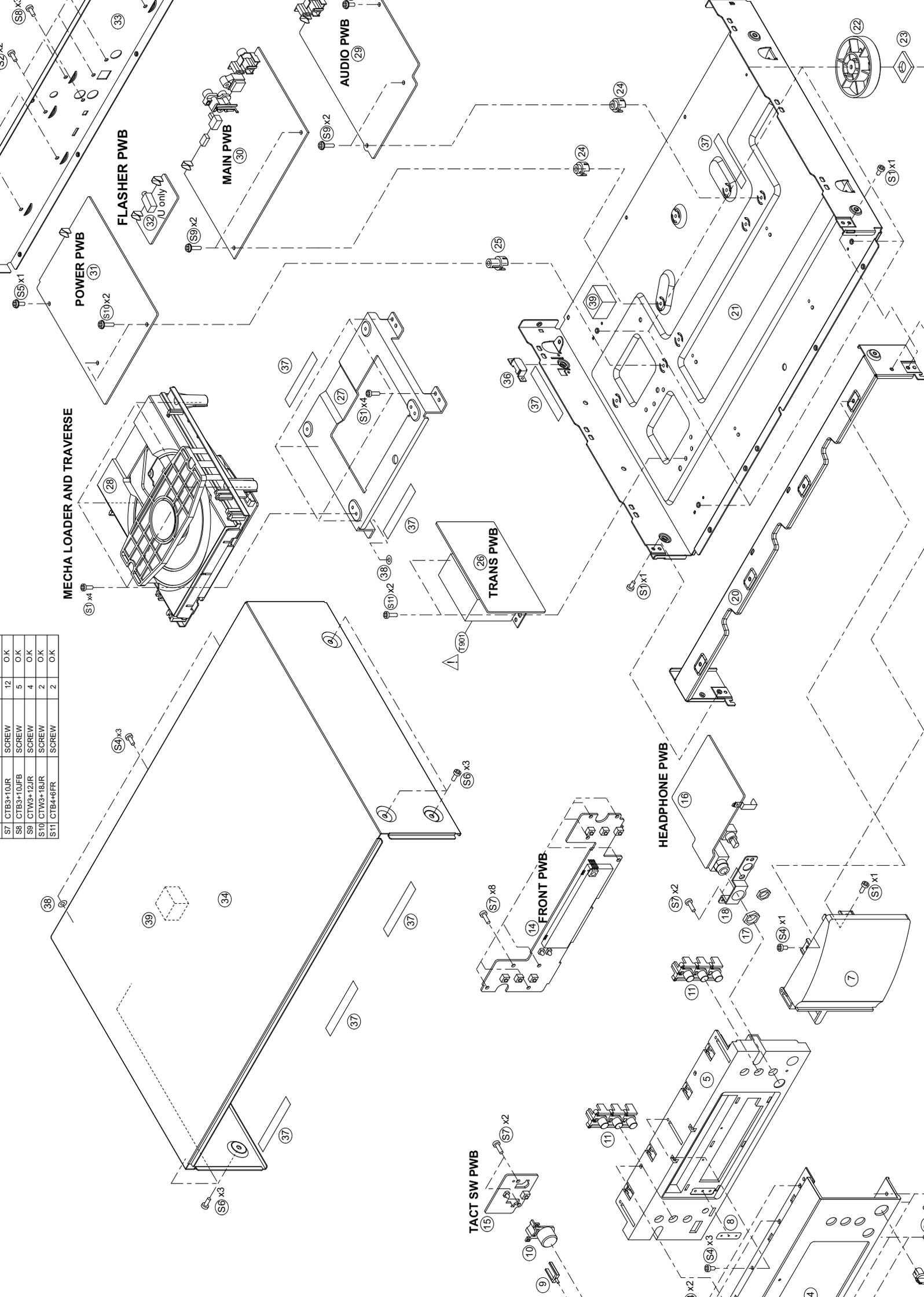
IC24

IC25

IC26

IC27

S7	CTB3*10JR	SCREW	12	O.K
S8	CTB3*10JFB	SCREW	5	O.K
S9	CTW3*12JR	SCREW	4	O.K
S10	CTW3*18JR	SCREW	2	O.K
S11	CTB4*6FR	SCREW	2	O.K



MECHA LOADER AND TRAVERSE

POWER PWB (31)

FLASHER PWB (32)

MAIN PWB (30)

AUDIO PWB (29)

TRANS PWB (26)

FRONT PWB (14)

HEADPHONE PWB (16)

TACT SW PWB (15)

(22)

(23)

(S1) x1

(S9) x2

(S9) x2

(S10) x2

(S9) x1

(S1) x4

(S1) x4

(S11) x2

(S1) x2

(S9) x1

(S1) x1

(S4) x3

(S6) x3

(S7) x8

(S7) x2

(S4) x1

(S1) x1

(34)

(39)

(37)

(37)

(37)

(11)

(18)

(17)

(7)

(15)

(10)

(9)

(11)

(5)

(8)

(4)

(21)

(37)

(24)

(24)

(25)

(36)

(37)

(39)

PARTS LIST OF EXPLODED VIEW

* Parts for which "nsp" is indicated on this table cannot be supplied.

* P.W.B. ASS'Y for which "nsp" is indicated on this table cannot be supplied. When repairing the P.W.B. ASS'Y, check the board parts table and order replacement parts.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

Note: The symbols in the column "Remarks" indicate the following destinations.

U : North America model

N : Europe model

K : China model

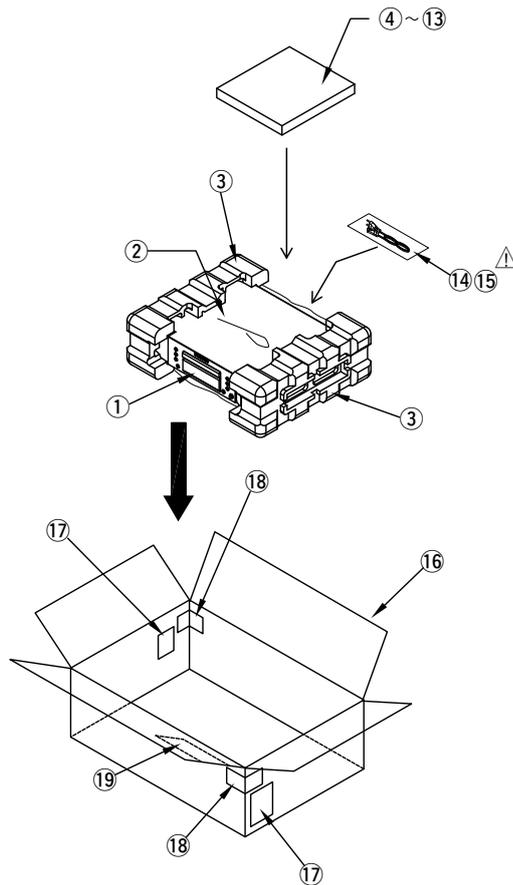
B : Black model

SG : Silver Gold model

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
29	nsp	AUDIO PWB ASSY	K,N	COP12097B	1	
29	nsp	AUDIO PWB ASSY	U	COP12097D	1	
32	nsp	FLASHER IN PWB ASSY	U	COP12097D	1	
14	nsp	FRONT PWB ASSY	K,N	COP12097B	1	
14	nsp	FRONT PWB ASSY	U	COP12097D	1	
16	nsp	HEADPHONE PWB ASSY	K,N	COP12097B	1	
16	nsp	HEADPHONE PWB ASSY	U	COP12097D	1	
30	nsp	MAIN PWB ASSY	K,N	COP12096B	1	
30	nsp	MAIN PWB ASSY	U	COP12096C	1	
31	nsp	POWER PWB ASSY	K,N	COP12097B	1	
31	nsp	POWER PWB ASSY	U	COP12097D	1	
15	nsp	TACT SW PWB ASSY	K,N	COP12097B	1	
15	nsp	TACT SW PWB ASSY	U	COP12097D	1	
26	nsp	TRANSF. PWB ASSY	K,N	COP12097B	1	
26	nsp	TRANSF. PWB ASSY	U	COP12097D	1	
1	421410006004M	MARANTZ BADGE (AL) M1 MODEL		CGB1A206	1	
2	943402009350M	TRAY COVER	SG	CGR1A455RMWD10	1	*
2	943402009340M	TRAY COVER	B	CGR1A455XB37	1	*
3	943416002190M	WINDOW FIP		CGU1A423A12Z	1	
4	943402009330M	FRONT PANEL	SG	CKM1A203WC62	1	*
4	943402009320M	FRONT PANEL	B	CKM1A203XC23	1	*
5	443510004038M	CHASSIS CENTER MOLD SG	SG	CGW1A462RMD10	1	
5	443510004007M	CHASSIS CENTER MOLD BL	B	CGW1A462B37	1	
6	943402009310M	PANEL SIDE L	SG	CGW1A463R0WD10	1	*
6	943402009300M	PANEL SIDE L	B	CGW1A463RNXB37	1	*
7	402510021032M	PANEL ESCUTCHEON R SG	SG	CGW1A464RLD10	1	
7	402510021001M	PANEL ESCUTCHEON R BL	B	CGW1A464RKB37	1	
8	nsp	SHEET LED		CGX1A411Z	1	
9	481510003006M	LENS POWER INDICATOR		CGL1A274	1	
10	411510021036M	BUTTON POWER SWITCH SG	SG	CBT1A1072RMD10	1	
10	411510015017M	BUTTON POWER TACT BL	B	CBT1A1072	1	
11	411510019033M	BUTTON3 KEY SG	SG	CBT1A1084RMD10	2	
11	411510019002M	BUTTON3 KEY BL	B	CBT1A1084	2	
17	nsp	NUT PHONE		CNE1A013	2	
18	nsp	BRACKET HEADPHONE		CMD1A677	1	
20	nsp	STAY FRAME FRONT		CUF1A004	1	
21	nsp	BOTTOM CHASSIS CD5003		CUA1A289	1	
22	00M243W057210	LEG FOR SILVER		CKL2A042H46	4	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
23	00M32CW107010	SHEET CUSHION FOOT		CHG1A360	4	
24	nsp	HOLDER PWB		CHE170	2	
25	nsp	HOLDER PWB		CHE1A030	1	
27	nsp	BRACKET SUPPORT MECHANISM		CMD1A676	1	
28	943302002290M	MECHA LOADER AND TRAVERSE		CJDWSL11VF	1	
33	nsp	REAR PANEL K	K	CKF3A390T	1	
33	nsp	REAR PANEL N	N	CKF3A390V	1	
33	nsp	REAR PANEL U	U	CKF4A390W	1	
34	401310003033M	LID TOP COVER SG	SG	CKC2A187D11	1	
34	401310003002M	LID TOP COVER BL	B	CKC2A187K117	1	
35	00M24AW154120	KNOB LEVEL SG	SG	CBN1A170RMD10	1	
35	00M24AW154020	KNOB LEVEL BL	B	CBN1A170	1	
36	nsp	COVER SCREW		CMD1A495	1	
37	nsp	TAPE HEMELON		CHS1A032	6	
38	nsp	WASHER GROUND COPPER		CNW1A035	4	
39	nsp	BUFFER CUSHION RUBBER		CHG1A157	2	
△	40	00MYJ04002640	R-301(21) AC INLET		CJJ8A006ZW	1
★	41	90M-FC500030R	FERRITE COREFERRITE RING 29X7.7X19		CLZ9W003Z	1
★	42	90M-FC500130R	FERRITE COREFERRITE CORE		CLZ9Z071Z	1
△	T901	90M-TS002510R	TRANSF POWER TRANSF. (EUR/UK)	K,N	CLT5M025YE	1
△	T901	90M-TS002530R	TRANSF POWER TRANSF. (TC)	U	CLT5M025YU	1
WIRES						
★	201	943606002310S	FPC FFC 21P 250MM 1MM		CWC4F4A21A250B	1
★	202	943606002320S	FPC FFC 16P 150MM CD MECHA		CWC4F2A16A150B	1
★	203	nsp	CORD WIRE ASSY		CWZCD6002BN95	1
★	204	nsp	CORD WIRE ASSY 5P 2500MM		CWB1B005250EG	1
★	205	nsp	CORD WIRE ASSY		CWB5A906220EG	1
★	206	nsp	CORD WIRE ASSY		CWZCD6002BN95ZA	1

PACKING VIEW



PARTS LIST OF PACKING VIEW

* Parts for which "nsp" is indicated on this table cannot be supplied.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

Note: The symbols in the column "Remarks" indicate the following destinations.

U : North America model
B : Black model

N : Europe model
SG : Silver Gold model

K : China model

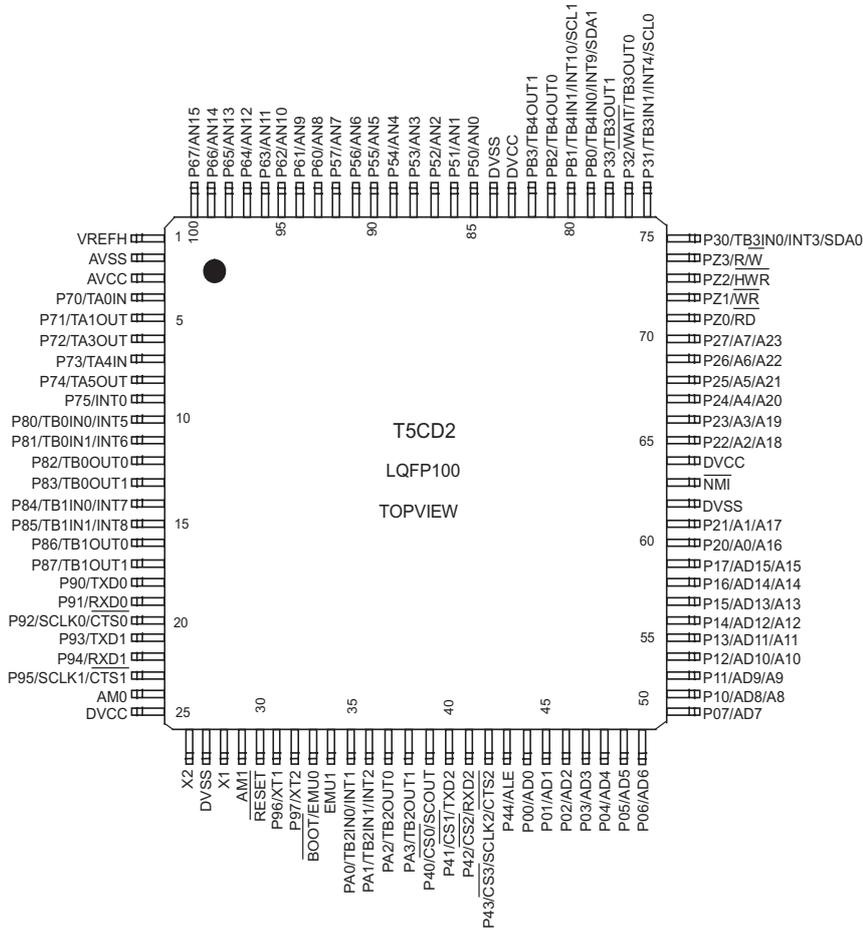
Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
1	-	set	-	1	
2	nsp	POLY BAG	CPB1A013Y	1	
3	943533002300M	CUSHION CD5003	CPS1A821	2	
4	nsp	POLY BAG	CPB1061W	1	
5	541110510059M	MANUAL CD5004/K	K CQX1A1534Z	1	*
5	541110510035M	MANUAL CD5004/N	N CQX1A15321	1	*
5	541110510028M	MANUAL CD5004/U	U CQX1A1533Z	1	*
6	nsp	BATTERY	CABR03PPB	2	
7	307010035001M	UNIT KIT REMOTE CONTROLLER RC002CD	CARTCD5003M	1	
8	90M-ZD000440R	CONN. CORD PIN	CJS4M009X	1	
9	90M-ZD000510R	CONN. CORD PIN	CJS4N014Z	1	
10	nsp	CARD, POST MARANTZ F	U CQE1A131W	1	
11	nsp	SHEET, SALES ADDRESS	U CQE1A132V	1	
12	nsp	STAPLE	CPL0905	3	
13	nsp	WARRANTY CARD	K CQE1A449Z	1	
14	nsp	POLY BAG	CPB11A008Z	1	
△	90M-ZC000650R	MAINS CORD FOR K	K CJA2N075Z	1	
△	943611002340S	MAINS CORD UL	U CJA2A070Z	1	
△	90M-ZC000320R	MAINS CORD 2WIRE 10A/250V	N CJA2B054Z	1	
16	531210136002M	CARTON CASE	CPG1A870T	1	*
17	nsp	SHIPPING LABEL	CQB1A993Z	2	
18	nsp	LABEL, WHITE M1 SG	N1SG, K1SG CQB1A908Z	2	

SEMICONDUCTORS

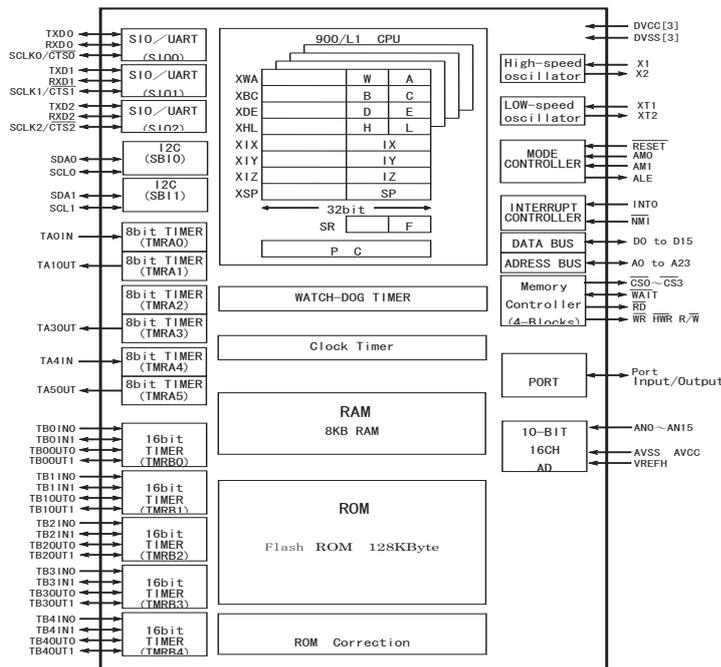
Only major semiconductors are shown, general semiconductors etc. are omitted to list.
The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.

1. IC's

T5CD2 (MAIN : IC21)



Block Diagram

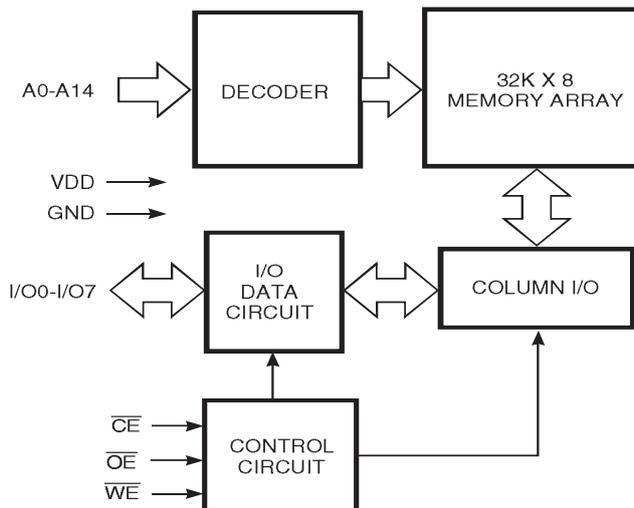
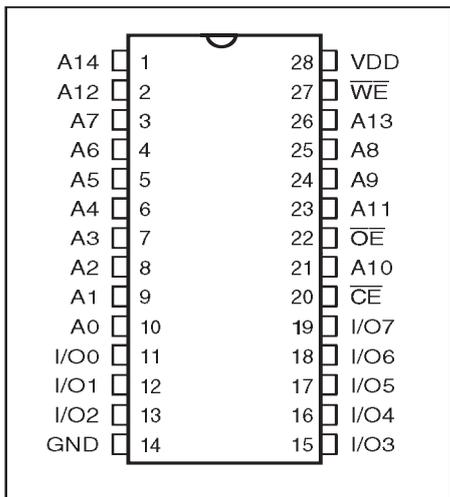


Terminal Function

Pin No.	Port Name	I/O	Use	Power off	Name	Port Setting		Note
						Act	init	
1	VREFH				VREFH			ADC power, connect with +5V
2	AVSS				GND			GND
3	AVCC				AVCC			MCU power, connect with +5V
4	P70/TA0IN	I/O	O	L	/SRAM_WE	L	I	sram write enable
5	P71/TA1OUT	I/O	O	L	/SRAM_OE	L	I	sram output enable
6	P72/TA3OUT	I/O	O	L	/SRAM_CE	L	I	sram chip enable
7	P73/TA4IN	I/O			NC			open
8	P74/TA5OUT	I/O			NC			open
9	P75/INT0	I/O	I	-	RS/REMOTE	-	I	remote in
10	P80/TB0IN0/INT5	I/O	I/O	L	SRAM_DATA00	-	I	sram_data_00
11	P81/TB0IN1/INT6	I/O	I/O	L	SRAM_DATA01	-	I	sram_data_01
12	P82/TB0OUT0	I/O	I/O	L	SRAM_DATA02	-	I	sram_data_02
13	P83/TB0OUT1	I/O	I/O	L	SRAM_DATA03	-	I	sram_data_03
14	P84/TB1IN0/INT7	I/O	I/O	L	SRAM_DATA04	-	I	sram_data_04
15	P85/TB1IN1/INT8	I/O	I/O	L	SRAM_DATA05	-	I	sram_data_05
16	P86/TB1OUT0	I/O	I/O	L	SRAM_DATA06	-	I	sram_data_06
17	P87/TB1OUT1	I/O	I/O	L	SRAM_DATA07	-	I	sram_data_07
18	P90/TXD0	I/O	O	L	VFD_DATA	-		vfd data
19	P91/RXD0	I/O	O	L	VFD_CS	L		vfd chip select
20	P92/SCLK0/CTS0	I/O	O	L	VFD_CLK	L	I	vfd clock
21	P93/TXD1	I/O	O	L	UPDATE_TXD	-	I	used when connect with update tool
22	P94/RXD1	I/O	I	I	UPDATE_RXD	-	I	used when connect with update tool
23	P95/SCLK1/CTS1	I/O			NC	-	I	open
24	AM0				AM0			chip operate select, connect with +5V
25	DVCC				DVCC			MCU power, connect with +5V
26	X2				X2			oscillator(20MHz)
27	DVSS				DVSS			GND
28	X1				X1			oscillator(20MHz)
29	AM1				AM1			chip operate select, connect with +5V
30	/RESET				/RESET			MCU reset
31	P96/XT1	I/O			NC			open
32	P97/XT2	I/O			NC			open
33	/BOOT/EMU0				BOOT			update mode select
34	EMU1	I/O			NC			open
35	PA0/TB2IN0/INT1	I/O	I	-	RS/REMOTE	-	I	remote in
36	PA1/TB2IN1/INT2	I/O			NC			open
37	PA2/TB2OUT0	I/O	O	H	BUSOUT	-	I	bus out
38	PA3/TB2OUT1	I/O	I	-	SYSTEM_DETECT	-	I	system detect
39	P40/CS0/SCOUT	I/O	O	-	RS_ON/OFF	-	I	remote signal kill control
40	P41/CS1/TXD2	I/O	O	L	CTRL	H	I	Unit power control
41	P42/CS2/RXD2	I/O	O	H	LED	L		stanby LED control
42	P43/CS3/SCLK2/CTS2	I/O			NC			open
43	P44/ALE	I/O			NC			open
44	P00/AD0	I/O	O	L	SRAM_ADD00	-	I	sram_address_00
45	P01/AD1	I/O	O	L	SRAM_ADD01	-	I	sram_address_01
46	P02/AD2	I/O	O	L	SRAM_ADD02	-	I	sram_address_02
47	P03/AD3	I/O	O	L	SRAM_ADD03	-	I	sram_address_03
48	P04/AD4	I/O	O	L	SRAM_ADD04	-	I	sram_address_04
49	P05/AD5	I/O	O	L	SRAM_ADD05	-	I	sram_address_05
51	P07/AD7	I/O	O	L	SRAM_ADD07	-	I	sram_address_07

Pin No.	Port Name	I/O	Use	Power off	Name	Port Setting		Note
						Act	init	
52	P10/AD8/A8	I/O	I	I	CD_BUS2	-	I	receive data from CD DSP
53	P11/AD9/A9	I/O	O	L	CD_BUS3	-	I	send command to CD DSP
54	P12/AD10/A10	I/O	O	L	CD_BUCK	-	I	communication clock with CD DSP
55	P13/AD11/A11	I/O	O	L	CD_CCE	L	I	communication chip enable with CD DSP
56	P14/AD12/A12	I/O	O	L	DSP_RESET	L	I	CD DSP reset
57	P15/AD13/A13	I/O	O	L	MT_STBY	H	I	motor stanby
58	P16/AD14/A14	I/O	O	L	CD_CLOSE_M	H	I	cd close motor
59	P17/AD15/A15	I/O	O	L	CD_OPEN_M	H	I	cd open motor
60	P20/A0/A16	I/O			NC			open
61	P21/A1/A17	I/O	I	I	CD_OPEN_SW	-	I	cd open switch
62	DVSS				DVSS			GND
63	/NMI				/NMI			external interrupt, connect with +5V
64	DVCC				DVCC			MCU power, connect with +5V
65	P22/A2/A18	I/O	I	I	CD_CLOSE_SW	-	I	cd close switch
66	P23/A3/A19	I/O			NC			open
67	P24/A4/A20	I/O	I	I	CD_LIMIT_SW	-	I	cd inner switch
68	P25/A5/A21	I/O	O	L	VFD_POWER	H	I	vfd blink control
69	P26/A6/A22	I/O	O	H	F_MUTE	H	I	preout mute control
70	P27/A7/A23	I/O	O	L	DISPLAY_P	L	I	FIP display on/off control
71	PZ0/RD	I/O	O	L	DAC_RESET	L	H	DAC reset
72	PZ1/WR	I/O	O	L	NC			open
73	PZ2/HWR	I/O	O	L	DAC_CLK	-	I	DAC clock
74	PZ3/R/W	I/O	O	L	DAC_DATA	-	I	DAC data
75	P30/TB3IN0/INT3/SDA0	I/O	O	L	TRANS_ON/OFF	H	I	trans change control
76	P31/TB3IN1/INT4/SCL0	I/O	O	L	MP3_LED_P	H	I	MP3 LED control
77	P32/WAIT/TB3OUT0	I/O	O	L	WMA_LED_P	H	I	WMA LED control
78	P33/TB3OUT1	I/O			NC			open
79	PB0/TB4IN0/INT9/SDA1	I/O	O	L	PLL_SDA_	-	I	Pitch data Control
80	PB1/TB4IN1/INT10/SCL1	I/O	O	L	PLL_SCL	-	I	Pitch clock Control
81	PB2/TB4OUT0	I/O	O	L	PLL_PLL	L	I	Pitch chip enable Control
82	PB3/TB4OUT1	I/O	O	L	PLL_EX_SEL	-	I	PLL Ex Select Pin
83	DVCC				DVCC			MCU power, connect with +5V
84	DVSS				DVSS			GND
85	P50/AN0	I/O	I	I	KEY0	-	I	key1 input
86	P51/AN1	I/O	I	I	KEY1	-	I	key2 input
87	P52/AN2	I/O	I	I	KEY2	-	I	key3 input
88	P53/AN3	I/O			NC			open
89	P54/AN4	I/O			NC			open
90	P55/AN5	I/O			NC			open
91	P56/AN6	I/O			NC			open
92	P57/AN7	I/O			NC			open
93	P60/AN8	I/O	O	L	SRAM_ADD08	-	I	sram_address_08
94	P61/AN9	I/O	O	L	SRAM_ADD09	-	I	sram_address_09
95	P62/AN10	I/O	O	L	SRAM_ADD10	-	I	sram_address_10
96	P63/AN11	I/O	O	L	SRAM_ADD11	-	I	sram_address_11
97	P64/AN12	I/O	O	L	SRAM_ADD12	-	I	sram_address_12
98	P65/AN13	I/O	O	L	SRAM_ADD13	-	I	sram_address_13
99	P66/AN14	I/O	O	L	SRAM_ADD14	-	I	sram_address_14
100	P67/AN15	I/O			NC			open

IS61C256AL (MAIN : IC23)
PIN CONFIGURATION
28-Pin SOJ



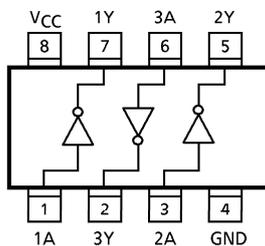
PIN DESCRIPTIONS

A0-A14	Address Inputs
\overline{CE}	Chip Enable Input
\overline{OE}	Output Enable Input
\overline{WE}	Write Enable Input
I/O0-I/O7	Bidirectional Ports
VDD	Power
GND	Ground

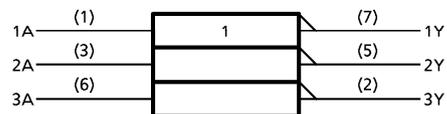
TRUTH TABLE

Mode	\overline{WE}	\overline{CE}	\overline{OE}	I/O Operation
Not Selected (Power-down)	X	H	X	High-Z
Output Disabled	H	L	H	High-Z
Read	H	L	L	DOUT
Write	L	L	X	DIN

TC7WHU04FU (MAIN : IC26)
PIN ASSIGNMENT (TOP VIEW)



LOGIC DIAGRAM



TRUTH TABLE

A	Y
L	H
H	L

CDCE913PWR (MAIN: IC27)

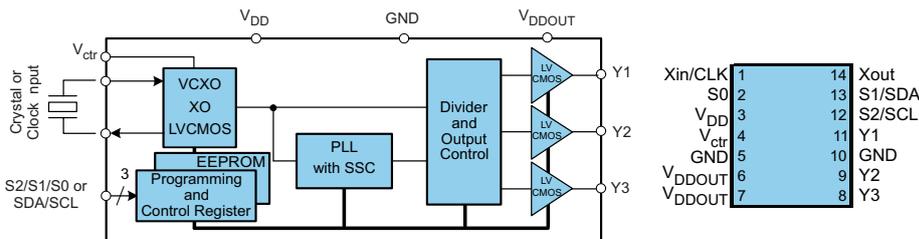
Programmable 1-PLL VCXO Clock Synthesizer With 1.8-V, 2.5-V, and 3.3-V Outputs

FEATURES

- Member of Programmable Clock Generator Family
 - CDCE913/CDCE913: 1-PLL, 3 Outputs
 - CDCE925/CDCE925: 2-PLL, 5 Outputs
 - CDCE937/CDCE937: 3-PLL, 7 Outputs
 - CDCE949/CDCE949: 4-PLL, 9 Outputs
- In-System Programmability and EEPROM
 - Serial Programmable Volatile Register
 - Nonvolatile EEPROM to Store Customer Setting
- Flexible Input Clocking Concept
 - External Crystal: 8 MHz to 32 MHz
 - On-Chip VCXO: Pull Range ± 150 ppm
 - Single-Ended LVCMOS up to 160 MHz
- Free Selectable Output Frequency up to 230 MHz
- Low-Noise PLL Core
 - PLL Loop Filter Components Integrated
 - Low Period Jitter (Typical 50 ps)
- Separate Output Supply Pins
 - CDCE913: 3.3 V and 2.5 V
 - CDCE913: 1.8 V
- Flexible Clock Driver
 - Three User-Definable Control Inputs [S0/S1/S2], for example., SSC Selection, Frequency Switching, Output Enable, or Power Down
 - Generates Highly Accurate Clocks for Video, Audio, USB, IEEE1394, RFID, Bluetooth™, WLAN, Ethernet™, and GPS
 - Generates Common Clock Frequencies Used With TI-DaVinci™, OMAP™, DSPs
 - Programmable SSC Modulation
 - Enables 0-PPM Clock Generation
- 1.8-V Device Power Supply
 - Wide Temperature Range -40°C to 85°C
- Packaged in TSSOP
- Development and Programming Kit for Easy PLL Design and Programming (TI Pro-Clock™)

APPLICATIONS

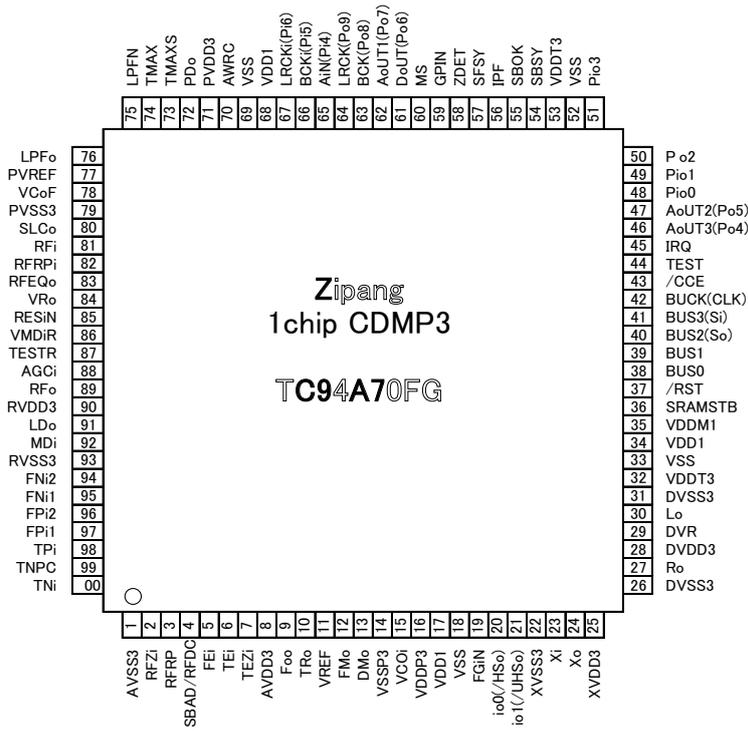
- D-TV, STB, IP-STB, DVD-Player, DVD-Recorder, Printer



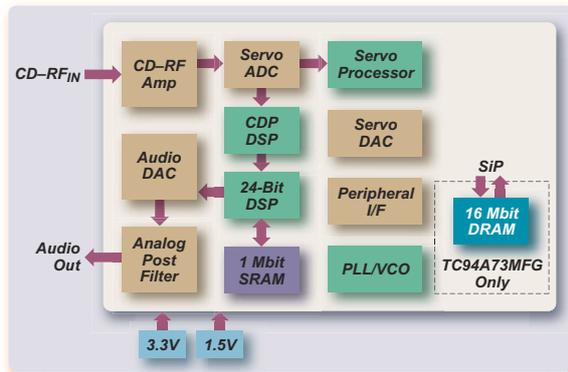
Terminal Function

TERMINAL		I/O	DESCRIPTION
NAME	PIN TSSOP14		
Y1–Y3	11, 9, 8	O	LVC MOS outputs
Xin/CLK	1	I	Crystal oscillator input or LVC MOS clock Input (selectable via SDA/SCL bus)
Xout	14	O	Crystal oscillator output (leave open or pullup when not used)
V _{Ctrl}	4	I	VCXO control voltage (leave open or pullup when not used)
V _{DD}	3	Power	1.8-V power supply for the device
V _{DDOUT}	6, 7	Power	CDCE913: 1.8-V supply for all outputs
			CDCE913: 3.3-V or 2.5-V supply for all outputs
GND	5, 10	Ground	Ground
S0	2	I	User-programmable control input S0; LVC MOS inputs; internal pullup 500k
SDA/S1	13	I/O or I	SDA: bidirectional serial data input/output (default configuration), LVC MOS internal pullup; or S1: user-programmable control input; LVC MOS inputs; internal pullup 500k
SCL/S2	12	I	SCL: serial clock input LVC MOS (default configuration), internal pullup 500k or S2: user-programmable control input; LVC MOS inputs; internal pullup 500k

TC94A70FG (MAIN : IC31)



Block Diagram



Terminal Function

Pin No.	Symbol	I/O	Description	Default	Remarks
1	AVSS3		Grounding pin for 3.3V CD analog circuits.		
2	RFZi	I 3A/I/F	Input pin for RF ripple zero cross signal.	I	Connect to RFRP by 0.033uF
3	RFRP	O 3A/I/F	RF ripple signal output pin.	O	
4	SBAD/RFDC	O 3A/I/F	Sub beam addition signal or RFDC (Hologram PUH RF peak detection signal) signal output pin	O	Monitor pin for the signal.
5	FEi	O 3A/I/F	Focus error signal input pin.	O	
6	TEi	O 3A/I/F	Tracking error signal input pin.	O	
7	TEZi	I 3A/I/F	Tracking error signal zero cross input pin.	I	Connect to TEI by 0.033uF
8	AVDD3		Power supply pin for 3.3 V CD analog circuits.		
9	FoO	O 3A/I/F	Focus servo equalizer output pin.	O	Built in series resistor 3.3k Ω
10	TRO	O 3A/I/F	Tracking servo equalizer output pin.	O	
11	VREF		Reference voltage pin for analog circuits(1.65V)		Connect to VRO and PVREF. Connect 0.1uF
12	FMO	O 3A/I/F	Feed servo equalizer output pin.	O	Built in series resistor 3.3k Ω 3 state output (AVDD3,AVSS3,VREF)
13	DMO	O 3A/I/F	Disc servo equalizer output pin	O	
14	VSSP3		Grounding pin for 3.3V DSP VCO circuits.		
15	VCOi	I 3A/I/F	DSP VCO control voltage input pin.	I	
16	VDDP3		Power supply pin for 3.3V DSP VCO circuit.		
17	VDD1		Power supply pin for 1.5V digital circuit		
18	VSS		Grounding pin for 1.5V digital circuit.		
19	FGIN	I 3I/F	FG signal input pin for CAV. CLV "L", CAV FG input	I	Analog input
20	io0(IHSo)	I/O 3I/F	General Input/output port 0 (CD) (Playback speed mode flag output pin.)	I	Schmitt input CMOS PORT
21	io1(IJHSo)	I/O 3I/F	General Input/output port 1 (CD) (Playback speed mode flag output pin.)	I	Schmitt input CMOS PORT
22	XVSS3		Grounding pin for 3.3V system clock oscillator circuit.		
23	Xi	I 3A/I/F	Input pin for system clock oscillator Circuit (External Rfb 1MΩ)	I	X'tal
24	Xo	O 3A/I/F	Output pin for system clock oscillator circuit	O	X'tal
25	XVDD3		Power supply pin for 3.3 V system clock oscillator circuit		

Pin No.	Symbol	I/O	Description	Default	Remarks
26	DVSS3		Grounding pin for 3.3V DAC circuit		
27	Ro	O 3A/I/F	R channel audio output pin of Audio DAC.	O	No capacitor required to DVR pin when built in audio DAC is not in use, however, connect 3.3V to DVDD3 and GND to DVSS3.
28	DVDD3		Power supply pin for 3.3V Audio DAC circuit.		
29	DVR		Reference voltage pin for Audio DAC.		
30	Lo	O 3A/I/F	L channel audio output pin of Audio DAC	O	
31	DVSS3		Grounding pin for 3.3V Audio DAC circuit		
32	VDDT3		Power supply pin for 3.3 V digital I/O circuit.		For CD and DSP I/O
33	VSS		Grounding pin for 3.3V digital circuit		
34	VDD1		Power supply pin for 1.5V digital circuit.		
35	VDDM1		Power supply pin for 1.5V 1Mbit SRAM.		
36	SRAMSTB	I 3I/F	1Mbit SRAM stand by pin	I	Schmitt input
37	/RST	I 3I/F	Reset signal input pin.	I	Schmitt input
38	BUS0	I/O 3I/F	Data input/output pin 0 for microcontroller interface	I	Schmitt input CMOS PORT
39	BUS1	I/O 3I/F	Data input/output pin 1 for microcontroller interface	I	Schmitt input CMOS PORT
40	BUS2(So)	I/O 3I/F	Data input/output pin 2 for microcontroller interface (Serial output)	I	Schmitt input CMOS PORT
41	BUS3(Si)	I/O 3I/F	Data input/output pin 3 for microcontroller interface (Serial input)	I	Schmitt input CMOS PORT
42	BUCK(CLK)	I 3I/F	Clock input pin for the microcontroller interface. (Clock input for Serial communication interface)	I	Schmitt input
43	/CCE	I 3I/F	Chip enable signal input pin for microcontroller interface.	I	Schmitt input
44	TEST	I 3I/F	Setting pin for LSI test mode. (Connect to GND in normal operation)	I	Schmitt input
45	IRQ	I 3I/F	DSP interruption pin.(Pull down by 100kΩ when not in use)	I	Schmitt input
46	AoUT3(Po4)	O 3I/F	Audio data output pin 3 (DSP general output port 4)	O	CMOS PORT
47	AoUT2(Po5)	O 3I/F	Audio data output pin 2 (DSP general output port 5)	O	CMOS PORT
48	Pio0	I/O 3I/F	DSP general input/output port 0	I	Schmitt input CMOS PORT
49	Pio1	I/O 3I/F	DSP general input/output port 1	I	Schmitt input CMOS PORT
50	Pio2	I/O 3I/F	DSP general input/output port 2	I	Schmitt input CMOS PORT
51	Pio3	I/O 3I/F	DSP general input/output port 3	I	Schmitt input CMOS PORT
52	VSS		Grounding pin for 3.3V digital circuit		
53	VDDT3		Power supply pin for 3.3 V digital I/O circuit.		For CD and DSP I/O
54	SBSY	O 3I/F	Sub code block sync output pin	O	CMOS PORT
55	SBOK	O 3I/F	CRCC check result output pin for sub code Q data.	O	CMOS PORT

Pin No.	Symbol	I/O	Description	Default	Remarks
56	IPF	O 3I/F	Correction flag output	O	CMOS PORT
57	SFSY	O 3I/F	Servo internal register read clock output pin	O	CMOS PORT
58	ZDET	O 3I/F	Internal Audio DAC Zero data detection flag output	O	CMOS PORT
59	GPIN	I 3I/F	CD General Input port(Pull down by 100KΩ when not in use)	I	Schmitt input
60	MS	I 3I/F	Microprocessor I/F mode selection pin. "L" Parallel I/F "H" Serial I/F	I	
61	DoUT(Po6)	O 3I/F	Digital Audio output (SPDIF) pin (DSP general output port 6)	O	CMOS PORT
62	AoUT1(Po7)	O 3I/F	Audio data output pin 1(DSP general output port 7)	O	CMOS PORT
63	BCKo(Po8)	O 3I/F	Bit clock output pin for AoUT (DSP general output port 8)	O	CMOS PORT
64	LRCKo(Po9)	O 3I/F	L/R channel clock output pin (DSP general output port 9)	O	CMOS PORT
65	AiN(Pi4)	I 3I/F	Audio data input for Audio DAC (DSP general input port 4)	I	Schmitt input
66	BCKi(Pi5)	I 3I/F	Bit clock input pin for AiN (DSP general input port 5)	I	Schmitt input
67	LRCKi(Pi6)	I 3I/F	L/R channel clock for AiN (DSP general input port 6)	I	Schmitt input
68	VDD1		Power supply pin for 1.5V digital circuit.		
69	VSS		Grounding pin for 1.5V digital circuit.		
70	AWRC	O 3A/I/F	VCO control pin for active wide range PLL	O	Applicable in CLV/CAV mode. Connect 0.033 uF.
71	PVDD3		Power supply pin for 3.3V CD PLL circuit.		
72	PDo	O 3A/I/F	EFM and PLCK Phase difference signal output pin.	O	4-state output (F VDD3, Hiz PVSS3 PVREF)
73	TMAXS	O 3A/I/F	TMAX detection result output pin	O	3 state output (PVDD3 PVSS3 Hiz)
74	TMAX	O 3A/I/F	TMAX detection result output pin	O	3 state output(PVDD3,PVSS3,Hiz)
75	LPFN	I 3A/I/F	PLL circuit LPF amplifier inversion input pin	I	Connect resistor of LPF, refer to application circuit diagram.
76	LPFo	O 3A/I/F	PLL circuit LPF amplifier Output pin	O	Connect capacitor of LPF, refer to application circuit diagram.
77	PVREF		PLL circuit 1.65 V reference voltage pin.		Connected to VREF and VRO inside of IC. Connect 0.1uF.
78	VCoF	O 3A/I/F	VCO filter pin	O	Connect 0.01uF.
79	PVSS3		Grounding pin for 3.3V CD PLL circuit.		
80	SLCo	O 3A/I/F	EFM slice level output pin. Output impedance 2.5k Ω both of analog/digital slice mode.	O	Connect capacitor according with servo frequency band.
81	RFi	I 3A/I/F	RF signal input pin	I	Zin is selectable by command. Zin : 20k Ω, 10k Ω, 5k Ω
82	RFRPi	I 3A/I/F	RF ripple signal input pin	I	

Pin No.	Symbol	I/O	Description	Default	Remarks
83	RFEQo	O 3A/I/F	RF equalizer circuit output pin.	O	Connect to RFRPi by 0.1uF to RfI by 4700pF.
84	VRO	O 3A/I/F	1.65 V reference voltage output pin.	O	Connected to VREF and PVREF inside of IC. Connect 0.1uF+100uF.
85	RESIN	O 3A/I/F	Pin for connecting a resistor for reference current generation.	O	Connect 22k Ω//0.01uF.
86	VMDiR		Reference voltage output pin for LD APC.		Connect 0.1uF
87	TESTR	O 3A/I/F	LPF connection pin for RFEQO offset correction circuit.	O	Connect more than 0.015uF.
88	AGCi	I 3A/I/F	RF signal AGC amplifier input pin	I	
89	RFO	O 3A/I/F	RF signal generation amplifier output pin	O	
90	RVDD3		Power supply for 3.3V RF amplifier core circuit.		
91	LDo	O 3A/I/F	Laser diode amplifier output pin.		
92	MDI	I 3A/I/F	Monitor photodiode amplifier input pin.	I	Reference Voltage 178mVtyp.
93	RVSS3		Grounding pin for RF amplifier core circuit		
94	FNI2	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode C.	I	
95	FNI1	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode A.	I	
96	FPI2	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode D.	I	
97	FPI1	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode B.	I	
98	TPi	I 3A/I/F	Sub beam signal input pin. To be connected to PIN diode F.	I	
99	TNPC	O 3A/I/F	TNI/TPi input common capacitor connection pin.	O	Connect to VRO by capacitor.
100	TNi	I 3A/I/F	Sub beam signal input pin. To be connected to PIN diode E.	I	

* 3A I/F 3 V analog circuit input/output pin.
1.5 I/F 1.5V digital input/output pin.
3 I/F 3 V digital input/output pin.

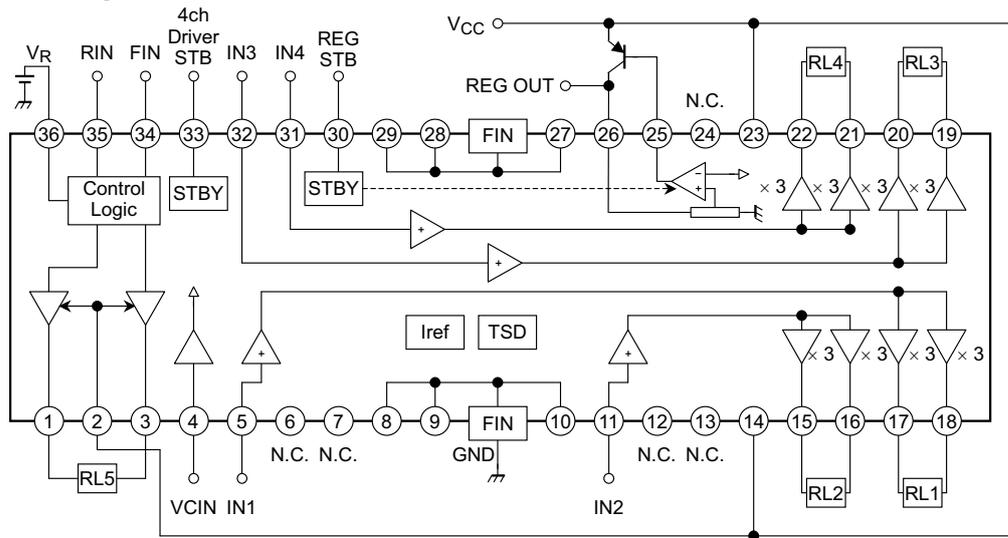
Note The servo output pins (FOO, TRO, FMO, and DMO) become undefined or GND level under the following conditions

- /RST pin = Low
- Crystal oscillation stopped according to the instructions by the Stop crystal oscillation command
- Power supply for CD is OFF.
- SRAMSTB pin High

To prevent the undefined pin states from affecting the servo circuitry or any other mechanical blocks in the system, appropriate measures should be taken, such as using a driver IC supporting a standby feature to place the system in standby mode while either of the above conditions is satisfied.

TA2125AF (MAIN : IC32)

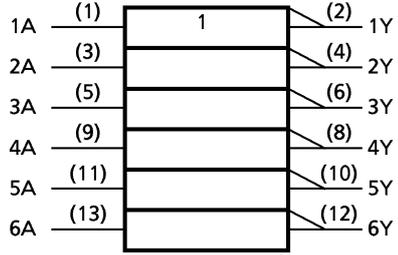
Block Diagram



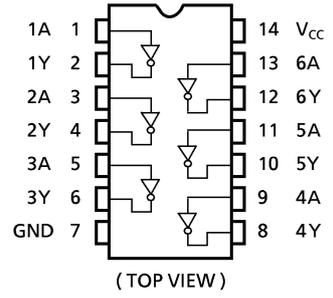
Terminal Function

No.	Symbol	Function	
1	OUT5A	Output terminal	H-bridge
2	V _M	Supply voltage terminal for Logic	H-bridge
3	OUT5B	Output terminal	H-bridge
4	V _{CIN}	Input reference voltage	4ch BTL
5	N1	Input for ch1	4ch BTL
6	N.C.	Open	—
7	N.C.	Open	—
8	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
9	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
10	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
11	N2	Input for ch2	4ch BTL
12	N.C.	Open	—
13	N.C.	Open	—
14	V _{CC1}	Supply voltage terminal for ch1/ch2	4ch BTL
15	OUT2M	Inverted output for ch2	4ch BTL
16	OUT2P	Non-inverted output for ch2	4ch BTL
17	OUT1M	Inverted output for ch1	4ch BTL
18	OUT1P	Non-inverted output for ch1	4ch BTL
19	OUT3P	Non-inverted output for ch3	4ch BTL
20	OUT3M	Inverted output for ch3	4ch BTL
21	OUT4P	Non-inverted output for ch4	4ch BTL
22	OUT4M	Inverted output for ch4	4ch BTL
23	V _{CC2}	Supply voltage terminal for ch3/ch4	4ch BTL
24	N.C.	Open	—
25	REG	Connection with BASE of PNP Tr	Regulator
26	REG OUT	Output for regulator (5 V)	Regulator
27	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
28	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
29	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (F N)	—
30	REG STBY	Standby control for regulator	Regulator
31	N4	Input for ch4	4ch BTL
32	N3	Input for ch3	4ch BTL
33	STBY	Standby control for 4ch BTL	4ch BTL
34	FIN	Logic control input	H-bridge
35	RIN	Logic control input	H-bridge
36	VR	Supply voltage terminal for motor driver	H-bridge

TC74HCU04AFNG (FRONT: IC51)
IEC LOGIC SYMBOL



PIN ASSIGNMENT

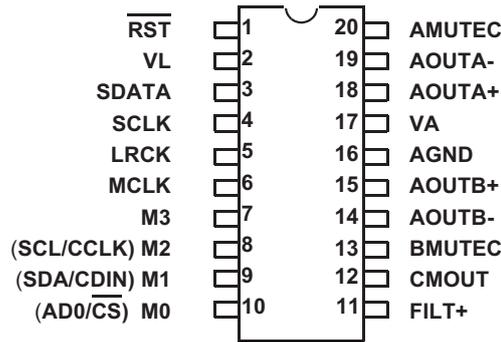


TRUTH TABLE

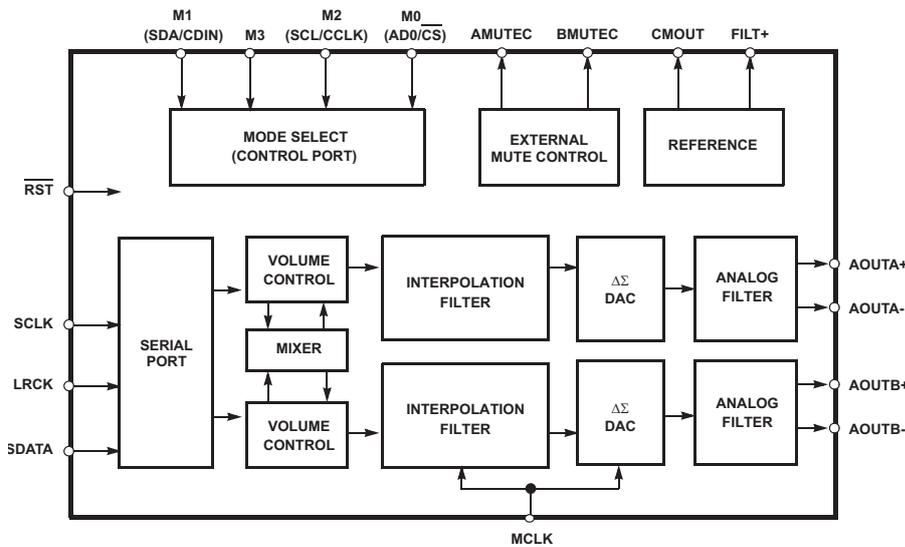
A	Y
L	H
H	L

CS4392KZZ (AUDIO: IC75)

1. PIN DESCRIPTION - PCM DATA MODE



Block Diagram



Terminal Function

RST	1	Reset (Input) - Powers down device and resets all internal registers to their default settings.
VL	2	Logic Power (Input) - Positive power for the digital input/output.
SDATA	3	Serial Audio Data (Input) - Input for two's complement serial audio data.
SCLK	4	Serial Clock (Input/Output) - Serial clock for the serial audio interface.
LRCK	5	Left Right Clock (Input/Output) - Determines which channel, Left or Right, is currently active on the serial audio data line.
MCLK	6	Master Clock (Input) - Clock source for the delta-sigma modulator and digital filters.
FILT+	11	Positive Voltage Reference (Output) - Positive reference voltage for the internal sampling circuits.
CMOUT	12	Common Mode Voltage (Output) - Filter connection for internal quiescent voltage.
AMUTE	20	Mute Control (Output) - The Mute Control pin goes high during power-up initialization, reset, muting, power-down or if the master clock to left/right clock frequency ratio is incorrect.
BMUTE	13	
AOUTB-	14	Differential Analog Output (Outputs) - The full scale differential analog output level is specified in the Analog Characteristics specification table.
AOUTB+	15	
AOUTA+	18	
AOUTA-	19	
AGND	16	Ground (Input)
VA	17	Analog Power (Input) - Positive power for the analog section.
Control Port Mode Definitions		
M3	7	Mode Selection (Input) - This pins should be tied to GND level during control port mode.
SCL/CCLK	8	Serial Control Port Clock (Input) - Serial clock for the serial control port.
SDA/CDIN	9	Serial Control Data (Input/Output) - SDA is a data I/O line in I ² C mode. CDIN is the input data line for the control port interface in SPI mode.
AD0/CS	10	Address Bit 0 (I²C) / Control Port Chip Select (SPI) (Input/Output) - AD0 is a chip address pin in I ² C mode; CS is the chip select signal for SPI format.
Stand-Alone Mode Definitions		
M3	7	Mode Selection (Input) - Determines the operational mode of the device.
M2	8	
M1	9	
M0	10	

PARTS LIST OF P.W.B. UNIT

* Parts for which "nsp" is indicated on this table cannot be supplied.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

Note: The symbols in the column "Remarks" indicate the following destinations.

U : North America model

N : Europe model

K : China model

AUDIO PWB (CUP12097Z-2)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC61	00MHC10102090	IC NJM2068M		HVINJM2068MTE1	
IC71	00MHC10102090	IC NJM2068M		HVINJM2068MTE1	
IC75	00MHC10025880	IC CS4392KZZ		HVIC S4392KZZ	
IC76	90M HC900150R	IC KIA1117S/F33 REGULATOR(SOT 223)		CVIKIA1117S33	
IC77	00MHC3890599F	IC KIA7805API		HVIKIA7805API	
Q601	00MHT800931A0	TRS KTC3200GR		HVTKTC3200GRT	
Q602	00MHT600121A0	TRS KTA1268GR		HVTKTA1268GRT	
Q603	90M BA001460R	TRS KRC107M		HVTKRC107MT	
Q604	00MBA10002000	TRS KRA104M		HVTKRA104MT	
Q605	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q606	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q607	00MHT600121A0	TRS KTA1268GR		HVTKTA1268GRT	
Q608	00MHT800931A0	TRS KTC3200GR		HVTKTC3200GRT	
Q701	00MHT800931A0	TRS KTC3200GR		HVTKTC3200GRT	
Q702	00MHT600121A0	TRS KTA1268GR		HVTKTA1268GRT	
Q703	90M BA001460R	TRS KRC107M		HVTKRC107MT	
Q704	00MBA10002000	TRS KRA104M		HVTKRA104MT	
Q705	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q706	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q707	00MHT600121A0	TRS KTA1268GR		HVTKTA1268GRT	
Q708	00MHT800931A0	TRS KTC3200GR		HVTKTC3200GRT	
D605	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D606	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D607	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D705	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D706	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D707	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
CAPACITORS GROUP					
C602	nsp	FILM CAP3300PF 100V J MYLAR		HCQ1H332JZT	
C604	00MOF15331540	FILM CAPAPPSVA0100J33100 POLYPROPYLENE		CCMP2A331JN09T	
C605	nsp	FILM CAP1000PF 100V J MYLAR		HCQ1H102JZT	
C607	nsp	FILM CAP1500PF 100V J MYLAR		HCQ1H152JZT	
C608	943133002360S	FILM CAPAPPSVA0100J10100 POLYPROPYLENE		CCMP2A101JN09T	
C609	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C610	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C611	00MOA227016R0	ELECT CAP220UF 16V		CCEA1CR0A221T	
C612	00MOA107025Z0	ELECT CAP100UF 25V		HCEA1ER101T	
C615	nsp	FILM CAP1000PF 100V J MYLAR		HCQ1H102JZT	
C616	943133002360S	FILM CAPAPPSVA0100J10100 POLYPROPYLENE		CCMP2A101JN09T	
C702	nsp	FILM CAP3300PF 100V J MYLAR		HCQ1H332JZT	
C704	00MOF15331540	FILM CAPAPPSVA0100J33100 POLYPROPYLENE		CCMP2A331JN09T	
C705	nsp	FILM CAP1000PF 100V J MYLAR		HCQ1H102JZT	
C707	nsp	FILM CAP1500PF 100V J MYLAR		HCQ1H152JZT	
C708	943133002360S	FILM CAPAPPSVA0100J10100 POLYPROPYLENE		CCMP2A101JN09T	
C709	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C710	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C711	00MOA227016R0	ELECT CAP220UF 16V		CCEA1CR0A221T	
C712	00MOA107025Z0	ELECT CAP100UF 25V		HCEA1ER101T	
C715	nsp	FILM CAP1000PF 100V J MYLAR		HCQ1H102JZT	
C716	943133002360S	FILM CAPAPPSVA0100J10100 POLYPROPYLENE		CCMP2A101JN09T	
C751	nsp	CER. CAP120PF 50V CERAMIC		CCBS1H121KBT	
C752	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C753	00MOA22701620	ELECT CAP220UF 16V		CCEA1CH221T	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C754	00MOA10701620	ELECT CAP100UF 16V		CCEA1CH101T		
C755	00MOA22605020	ELECT CAP22UF 50V		CCEA1HH220T		
C756	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT		
C757	00MOA22605020	ELECT CAP22UF 50V		CCEA1HH220T		
C758	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T		
C759	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT		
C760	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT		
C761	00MOA22702520	ELECT CAP220UF 25V		CCEA1EH221T		
C790	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT		
C791	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT		
OTHERS PARTS GROUP						
BK75	nsp	BRACKET FOR PWB		CMD1A569		
BN42	nsp	CORD WIRE ASSY 11P 100MM		CWB1B911100EN		
BN43	nsp	CORD WIRE ASSY CWB1		C903080BM		
CN81	nsp	CONN 9P STRAIGHT 00906 0030		CJP09GA19ZY		
GND1	nsp	TERMINAL MET37 0002		HJT1A025		
JK61	943643002370S	TERMINAL CINCH JACK 1P WHITE (GL)		CJJ4M064Z		
JK71	943643002380S	TERMINAL CINCH JACK 1P RED (GL)		CJJ4M065Z		
L751	90M FN000090R	EMI FILTERBEAD		KLZ9H001Z		
L752	90M FN000090R	EMI FILTERBEAD		KLZ9H001Z		

FRONT PWB (CUP12097Z-1)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC51	90M HC700550R	IC TC74HCU04AFNG		HVI74HCU04AFNG	
Q502	90M BA001460R	TRS KRC107M		HVTKRC107MT	
Q503	90M BA001460R	TRS KRC107M		HVTKRC107MT	
D502	90M HI101120R	L.E.D SLR325VRA47		KVDSL325VRA47	
D503	90M HI101120R	L.E.D SLR325VRA47		KVDSL325VRA47	
FL51	90M HQ300610R	FL DISPLAY FOR CD5400		CFLHCA12SS18T	
CAPACITORS GROUP					
C501	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C502	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C503	00MEJ47601640	ELECT CAP47 UF 16V KS		CCEA1CKS470T	
C504	00MEJ47601640	ELECT CAP47 UF 16V KS		CCEA1CKS470T	
C505	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
OTHERS PARTS GROUP					
BK51	nsp	BRACKET FL DISPLAY HOLDER		CMD1A504	
BK52	nsp	BRACKET FL DISPLAY HOLDER		CMD1A504	
BN51	nsp	CORD WIRE ASSY		CWB1B905050EN	
CN21	nsp	CONN 21P FPC WAFER		CJP21GA117ZY	
L501	90M FN000090R	EMI FILTERBEAD		KLZ9H001Z	
L502	90M FN000090R	EMI FILTERBEAD		KLZ9H001Z	
L503	90M FN000090R	EMI FILTERBEAD		KLZ9H001Z	
RS51	00MHW10004210	PHOTO UNITRPM6936 V4		CRVRPM6936V4	
S502	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	
S503	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	
S504	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	
S505	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	
S506	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	
S507	90M SP001400R	PUSH SWTACT SW EVQ22505R		CST1A023ZT	

HEADPHONE PWB (CUP12097Z-4)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC81	00MHC10102090	IC NJM2068M		HVINJM2068MTE1	
Q801	00MHT800951B0	TRS KTC3203Y		HVTKTC3203YT	
Q802	00MHT800951B0	TRS KTC3203Y		HVTKTC3203YT	
Q803	00MHT600141B0	TRS KTA1271Y		HVTKTA1271YT	
Q804	00MHT600141B0	TRS KTA1271Y		HVTKTA1271YT	
Q807	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q808	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q809	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
Q810	00MHT805501B0	TRS KTC2874B		HVTKTC2874BT	
D801	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D802	00MHD20015210	DIODE DIODE 1SS133T 77		CVD1SS133MT	
D803	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D804	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
CAPACITORS GROUP					
C801	00MOA10701620	ELECT CAP100UF 16V		CCEA1CH101T	
C802	00MOA10701620	ELECT CAP100UF 16V		CCEA1CH101T	
C803	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C804	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C805	nsp	CER. CAP1000PF 50V B CERAMIC		CCBS1H102KBT	
C806	nsp	CER. CAP1000PF 50V B CERAMIC		CCBS1H102KBT	
C807	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
C808	00MOA47602520	ELECT CAP47UF 25V		CCEA1EH470T	
OTHERS PARTS GROUP					
BN81	nsp	CORD WIRE ASSY 9P 280MM		CWZCD5003BN81ZA	
BN81(1)	90M FC500030R	FERRITE COREFERRITE RING 29X7.7X19		CLZ9W003Z	
BN81(2)	nsp	CORD WIRE ASSY 9P 280MM		CWZCD5003BN81	
PH81	90M YT004500R	JACK H/P SILVER PJ 612A 51		CJJ2E026Z	
VR81	943671002420S	VER. RES 10KA A CURVE		CVV3J02A103Z	

MAIN PWB (CUP12096Z)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC21	943243002430M	U PROT5CD2(F AAD JZ) MAIN CPU CD5003			
IC22	90M HC109780R	IC AT24C02NSU EEPROM(2K)			
IC23	943246002440S	IC IS61C256AL 12JLI			
IC24	00MHC10099540	IC S 80145ALMC			
IC25	943231002450S	IC KIA1117S18 RTK/			
IC26	00MHC008005K0	IC TC7WHU04FU(TE12			
IC27	943235002460S	IC CDCE913PWR			
IC31	90M HC110060R	IC TC94A70FG CD DSP			
IC32	90M HC109470R	IC TA2125AFG			
IC33	90M HC900150R	IC KIA1117S/F33 REGULATOR(SOT 223)			
IC34	90M HC900160R	IC LM1117S15 REGULATOR(SOT 223)			
D202	00MHZ21303210	DIODE DIODE 1SS355	NOTE : When update Firmware, please confirm a last version in SDI.		
D203	00MHZ21303210	DIODE 1SS355			
D204	00MHZ21303210	DIODE 1SS355			
D301	00MHZ21303210	DIODE 1SS355			
D401	00MHZ21303210	DIODE 1SS355			
D431	90M HD302440R	ZENER DIODE ZJ4.7B 1/2W			
D432	90M HD201750R	DIODE 1N4003 CVD			
D433	00MHZ21303210	DIODE 1SS355			
D434	90M HD302460R	ZENER DIODE ZJ5.6B 1/2W			
D435	00MHZ21303210	DIODE 1SS355			
Q201	90M HX600010R	CHIP TRS.KRA102S			
Q202	90M HX600010R	CHIP TRS.KRA102S			
Q301	90M HX600020R	CHIP TRS.KTA1504S Y RTK			
Q401	90M HX800100R	CHIP TRS.KTC3875S Y RTK			
Q402	90M HX800100R	CHIP TRS.KTC3875S Y RTK			
Q431	00MHT600111B0	TRS.KTA1267Y			
Q432	90M HX800090R	CHIP TRS.KRC111S			
Q433	90M HX800090R	CHIP TRS.KRC111S			
Q434	00MHT30001000	TRS.KTC3199Y			
CAPACITORS GROUP					
C201	00MDD95330300	CER. CAP.33PF 50V			
C202	00MDD95330300	CER. CAP.33PF 50V			
C203	00MDK96103300	CER. CAP.0.01UF 50V KC			
C206	00MDK96103300	CER. CAP.0.01UF 50V KC			
C207	90M DK900090R	CER. CAP.1UF 10V KC			
C208	00MDK96104300	CER. CAP.0.1UF 50V K			
C209	00MDK96104300	CER. CAP.0.1UF 50V K			
C210	00MDK96104300	CER. CAP.0.1UF 50V K			
C211	00MDK96104300	CER. CAP.0.1UF 50V K			
C212	00MDK96104300	CER. CAP.0.1UF 50V K			
C213	00MDK96104300	CER. CAP.0.1UF 50V K			
C214	00MDK96103300	CER. CAP.0.01UF 50V KC			
C215	00MDK96103300	CER. CAP.0.01UF 50V KC			
C216	00MOA10701620	ELECT CAP.100UF 16V			
C218	00MOA47602520	ELECT CAP.47UF 25V			
C219	00MDK96104300	CER. CAP.0.1UF 50V K			
C220	00MDK96103300	CER. CAP.0.01UF 50V KC			
C221	00MOA10701620	ELECT CAP.100UF 16V			
C222	00MDK96104300	CER. CAP.0.1UF 50V K			
C223	00MOA47602520	ELECT CAP.47UF 25V			
C251	00MOA10701620	ELECT CAP.100UF 16V			
C252	00MDK96104300	CER. CAP.0.1UF 50V K			
C253	00MOA47602520	ELECT CAP.47UF 25V			
C254	00MDK96104300	CER. CAP.0.1UF 50V K			
C255	00MDK96104300	CER. CAP.0.1UF 50V K			
C258	00MDK96104300	CER. CAP.0.1UF 50V K			
C259	00MDK96104300	CER. CAP.0.1UF 50V K			
C260	00MDD9515030R	CER. CAP.15PF 50V JA			
C261	00MDD9515030R	CER. CAP.15PF 50V JA			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C301	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C306	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C310	00MDD95470300	CER. CAP.47PF 50V JA		CCUS1H470JA	
C311	00MDK96333300	CER. CAP.0.033UF 50V K		CCUS1H333KC	
C312	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C313	00MOA47602520	ELECT CAP.47UF 25V		CCEA1EH470T	
C314	00MDK96153300	CER. CAP.0.015UF 50V		CCUS1H153KC	
C315	00MDK96103300	CER. CAP.0.01UF 50V KC		CCUS1H103KC	
C316	00MDK96103300	CER. CAP.0.01UF 50V KC		CCUS1H103KC	
C317	00MDK96472300	CER. CAP.4700PF 50V KC		CCUS1H472KC	
C318	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C319	00MDK96103300	CER. CAP.0.01UF 50V KC		CCUS1H103KC	
C320	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C321	00MDK96153300	CER. CAP.0.015UF 50V		CCUS1H153KC	
C322	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C323	00MDD95680300	CER. CAP.68PF 50V JA		CCUS1H680JA	
C324	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C325	00MOA47701620	ELECT CAP.470UF 16V ZF		CCEA1CH471T	
C326	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C327	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C328	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C329	00MDK96102300	CER. CAP.1000PF 50V KC		CCUS1H102KC	
C330	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C331	00MDK96333300	CER. CAP.0.033UF 50V K		CCUS1H333KC	
C332	00MDK96333300	CER. CAP.0.033UF 50V K		CCUS1H333KC	
C333	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C334	00MDD95471300	CER. CAP.470PF 50V JA		CCUS1H471JA	
C335	00MDD95471300	CER. CAP.470PF 50V JA		CCUS1H471JA	
C336	90M OA000630R	ELECT CAP.KZH 6.3V/1000UF		CCEA0JKZH102KS	
C337	00MDK96103300	CER. CAP.0.01UF 50V KC		CCUS1H103KC	
C338	00MDK96473300	CER. CAP.0.043UF 50V KC		CCUS1H473KC	
C339	00MDK96473300	CER. CAP.0.043UF 50V KC		CCUS1H473KC	
C340	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C341	00MOA22701620	ELECT CAP.220UF 16V		CCEA1CH221T	
C342	00MDK96222300	CER. CAP.2200PF 50V KC		CCUS1H222KC	
C343	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C344	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C345	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C346	00MOA47602520	ELECT CAP.47UF 25V		CCEA1EH470T	
C347	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C348	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C349	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C350	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C351	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C352	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C353	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C354	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C360	00MOA47602520	CER. CAP.47UF 25V		CCEA1EH470T	
C361	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C362	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C363	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C364	00MOA47602520	ELECT CAP.47UF 25V		CCEA1EH470T	
C365	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C401	00MOA22701620	ELECT CAP.220UF 16V		CCEA1CH221T	
C402	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C403	00MDD95120300	CER. CAP.12PF 50V JA		CCUS1H120JA	
C404	00MDK96104300	CER. CAP 0 1UF 50V K CCUS1H104KC0.1UF 50V K		CCUS1H104KC	
C405	00MOA47602520	ELECT CAP.47UF 25V		CCEA1EH470T	
C406	00MDD95101300	CER. CAP.100PF 50V JA		CCUS1H101JA	
C408	90M DK900090R	CER. CAP.1UF 10V KC		CCUS1A105KC	
C410	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C411	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C412	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C431	00MOA22802520	ELECT CAP.2200UF 25V		CCEA1EH222E	
C433	00MOA22505020	ELECT CAP.2.2UF 50V		CCEA1HH2R2T	
C461	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C462	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C465	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C466	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C467	00MOA10701620	ELECT CAP.100UF 16V		CCEA1CH101T	
C468	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C990	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
C991	00MDK96104300	CER. CAP.0.1UF 50V K		CCUS1H104KC	
OTHERS PARTS GROUP					
BK21	nsp	BRACKET FOR PWB		CMD1A569	
BK31	nsp	HEAT SINK		CMY1A267	
CN21	nsp	CONN.21P FPC WAFER		CJP21GA117ZY	
CN22	nsp	CONN.7P WAFER CARD CABLE		CJP07GB113ZY	
CN23	nsp	CONN.7P STRAIGHT 20017WS 07		CJP07GA19ZY	
CN31	nsp	CONN.5P STRAIGHT 20017WS 05		CJP05GA19ZY	
CN32	nsp	CONN.6P STRAIGHT		CJP06GA19ZY	
CN33	nsp	CONN.16P WAFER CARD CABLE		CJP16GA117ZY	
CN41	nsp	CONN.3P STRAIGHT 20017WS 03	U	CJP03GA19ZY	
CN42	nsp	CONN.11P WAFER STRAIGHT 20017WS 11		CJP11GA19ZY	
CN43	nsp	CONN.3P STRAIGHT YMW025 03R		CJP03GA01ZY	
CN44	nsp	CONN.3P STRAIGHT YMW025 03R		CJP03GA01ZY	
CN45	nsp	CONN.13P WAFER STRAIGHT 20017WS 13		CJP13GA19ZY	
JK41	90M YT005310R	OPT. CONN.TOTX177L		HJSTOTX177L	
JK42	943646000840S	TERMINAL CINCH 1P JACK BLACK		CJJ4M056W	
JK43	90M YT003120R	TERMINAL CINCH 2P JE0200598N		CJJ4N036Z	
L251	90M FN000260R	EMI FILTERHU 1H3216 121		CLZ91002Z	
L252	90M FN000260R	EMI FILTERHU 1H3216 121		CLZ91002Z	
L301	90M FN000260R	EMI FILTERHU 1H3216 121		CLZ91002Z	
L302	90M FN000260R	EMI FILTERHU 1H3216 121		CLZ91002Z	
L303	nsp	CHIP INDUCTFI C3216 103KJT		HLQ09E100KRZ	
L401	90M FN000260R	EMI FILTERHU 1H3216 121		CLZ91002Z	
SW41	90M SS000710R	SLIDE SWITCH		KSS2B016Z	
X201	90M JX001100R	X'TAL 20MHZ		HOX20000E220C	
X251	90M JX001390R	X'TAL 16.9344MHZ		HOX16934A120C	

POWER PWB (CUP12097Z-3)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC91	90M HC300780R	IC KIA7808API		HVIKIA7808API	
IC92	00MHC3890599F	IC KIA7805API		HVIKIA7805API	
IC93	00MHC3991209F	IC KIA7912PI		HVIKIA7912PI	
IC94	00MHC3891299F	IC KIA7812API		HVIKIA7812API	
Q901	90M HT800040R	TRS KSC2316Y		HVTKSC2316YT	
Q902	90M HT800040R	TRS KSC2316Y		HVTKSC2316YT	
△ Q903	00MHT327851H0	TRS KSC2785Y		HVTKSC2785YT	
D901	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D902	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D903	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D904	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D905	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D906	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D907	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D908	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D909	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D910	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D911	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D912	90M HD201730R	DIODE 1N4003		CVD1N4003ST	
D913	90M HD201730R	DIODE DIODE 1N4003		CVD1N4003ST	
D914	90M HD302470R	ZENER DIODE ZJ6.2B 1/2W		CVDZJ6.2BT	
D915	90M HD302430R	ZENER DIODE ZJ36B		CVDZJ36BT	
D916	90M HD302460R	ZENER DIODE ZJ5.6B 1/2W		CVDZJ5.6BT	
D917	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D918	00MHD20015210	DIODE 1SS133T 77		CVD1SS133MT	
D920	nsp	CORD SN95/PB5 0.6	K,N	C3A206	
D920	00MHD20015210	DIODE 1SS133T 77	U	CVD1SS133MT	
D921	nsp	CORD SN95/PB5 0.6	K,N	C3A206	
D921	00MHD20015210	DIODE 1SS133T 77	U	CVD1SS133MT	
CAPACITORS GROUP					
C903	00MOA22706320	ELECT CAP220UF 63V		CCEA1JH221E	
C904	nsp	FILM CAP0.1UF 100V		CCUMT2A104KB	
C905	00MOA22505020	ELECT CAP2.2UF 50V		CCEA1HH2R2T	
C906	00MOA10605020	ELECT CAP10UF 50V		CCEA1HH100T	
C907	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C908	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C909	90M OA000560R	ELECT CAP4700UF 35V 16X30		CCEA1VH472E	
C910	nsp	CER. CAP0.1UF 50V Z CERAMIC		CCBS1H104ZFT	
C911	00MOA47701620	ELECT CAP470UF 16V ZF		CCEA1CH471T	
C912	00MOA10701620	ELECT CAP100UF 16V		CCEA1CH101T	
C913	00MOA10802520	ELECT CAP1000UF 25V		CCEA1EH102E	
C914	nsp	CER. CAP0.022UF 50V Z CERAMIC		CCBS1H223ZFT	
C915	00MOA10701620	ELECT CAP100UF 16V		CCEA1CH101T	
C916	00MOA47701620	ELECT CAP470UF 16V ZF		CCEA1CH471T	
C917	00MOA33802520	ELECT CAP3300UF 25V		CCEA1EH332E	
C918	00MOA47701620	ELECT CAP470UF 16V ZF		CCEA1CH471T	
C919	00MOA33802520	ELECT CAP3300UF 25V		CCEA1EH332E	
C920	00MOA47701620	ELECT CAP470UF 16V ZF		CCEA1CH471T	
C922	00MOA10702520	ELECT CAP100UF 25V		CCEA1EH101T	
C923	00MOA10702520	ELECT CAP100UF 25V		CCEA1EH101T	
△ C924	90M DK100770R	CER. CAP 0.0047UF 2.5KV CERAMIC		KCKDKS472ME	
OTHERS PARTS GROUP					
BK91	nsp	BRACKETBRACKET FOR PWB		CMD1A569	
BN44	nsp	CORD WIRE ASSY		CWB1C903080BM	
BN45	nsp	CORD WIRE ASSY 13P 80MM		CWB1C913080EN	
CN91	nsp	CONN 7.92MM(YUNHO)		CJP02KA060ZY	
CN92	nsp	CONN 2P WAFER		CJP02GA89ZY	

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	CN93	nsp	CONN 7P STRAIGHT 20017WS 07		CJP07GA19ZY		
	CN94	nsp	CONN 3P STRAIGHT YMW025 03R		CJP03GA01ZY		
	△ F901	90M FS001260R	FUSE T 315MA L 250V	K,N	KBA2C0315TLEY		
	△ F901	90M FS001370R	FUSE 250V T 0.63A	U	KBA2C0630TLEY		
	HF91	nsp	CONN HOLDER FUSE		KJCFC5S		
	HF92	nsp	CONN HOLDER FUSE		KJCFC5S		
	RY91	90M LY000340R	RELAY SDT S 112DMR		HSL1A008ZE		
	△ T902	943101002400M	TRANSF. SUB CD5003 N	K,N	CLT5I012ZE		
	△ T902	943101002410M	TRANSF. SUB CD5003 U	U	CLT5I012ZU		

FLASHER IN PWB (CUP12097Z 6)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
Q551	00MBA10001000	TRS KRA102M	U		HVTKRA102MT
D551	00MHD20015210	DIODE 1SS133T 77	U		CVD1SS133MT
D552	90M HI200020R	L.E.DSIR 34ST3F	U		BVDSIR34ST3F
D553	00MHD20015210	DIODE 1SS133T 77	U		CVD1SS133MT
CAPACITORS GROUP					
C551	00MOA10701620	ELECT CAP100UF 16V	U		CCEA1CH101T
C552	nsp	CER. CAP0.1UF 50V Z CERAMIC	U		CCBS1H104ZFT
OTHERS PARTS GROUP					
BK55	nsp	BRACKET FOR PWB	U		CMD1A569
BK56	nsp	BRACKET FOR PWB	U		CMD1A569
BK57	nsp	BRACKET SHIELD	U		CMD1A512
BN41	nsp	CORD WIRE ASSY	U		CWB1B903180EN
JK55	90M YT004860R	TERMINAL 3.5MM JACK STEREO PJ 308 02	U		CJJ2D008Z
RC51	90M HW100690R	PHOTO UNITRPM674CBR S	U		CRVRPM6936

TACT SW PWB (CUP12097Z-5)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
Q501	90M BA001460R	TRS KRC107M			HVTKRC107MT
D501	263710016400S	L.E.D SLI 325URT31W TP			CVDSL325URT31WT055
CAPACITORS GROUP					
C506	nsp	CER. CAP0.1UF 50V Z CERAMIC			CCBS1H104ZFT
OTHERS PARTS GROUP					
CN51	nsp	CONN 5P WAFER 20017WR 05			CJP05GB46ZY
JW51	nsp	CORD WIRE ASSY			CWE7202100AR
S501	90M SP001400R	PUSH SWTACT SW EVQ22505R			CST1A023ZT

TRANSF. SW PWB (CUP12097Z-7)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
OTHERS PARTS GROUP					
BN92	nsp	CORD WIRE ASSY 2P 250MM			WB4F932250UZ
BN93	nsp	CORD WIRE ASSY 7P 80MM			WB1C907080EN
BN94	nsp	CORD WIRE ASSY			WB1C903080BM

