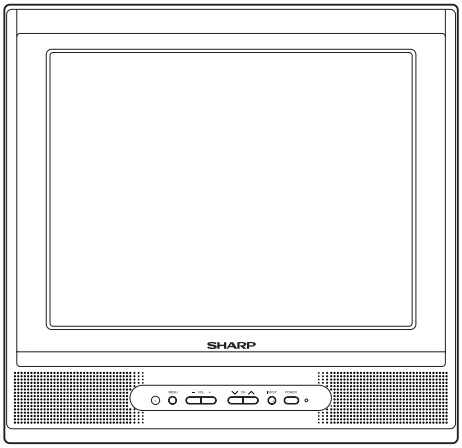
SHARP SERVICE MANUAL

S74Y1LC13SH1U

SERVICE MANUAL

LCD COLOR TV

MODEL LC-13SH1U



LCD COLOR TV

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In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

CONTENTS

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SPECIFICATIONS

<TUNER>

ANT. Input ..... 75ohm Unbal., F type
Reference Level ..... 20Vp-p (CRT Green Cathode)
Test Input Signal ..... 400Hz 30% modulation

Description	Condition	Unit	Nominal	Limit
1. Intermediate Freq.	Picture Sound	MHz MHz	45.75 41.25	- -
2. Color Killer Sens.	CH-2 CH-10 CH-55	dBμV dBμV dBμV	15 15 15	20 20 20
3. AFT Pull In Range (10mV input)	-	MHz	±2.1	±0.7

<LCD PANEL>

Description	Condition	Unit	Nominal	Limit
1. Number of Pixels	Horizontal Vertical	pixels pixels	640 x 3 480	- -
2. Brightness		cd/m^2	420	-
3. Color Gamut	-	%	64	-
4. Response Time	-	msec	16	-
5. Support Color	-	-	16mil.(8bit)	-
6. Viewing Angle (at contrast 1:10 min.)	Horizontal Vertical	° °	-85 to 85 -85 to 85	-

The LCD panel is manufactured to provide many years of useful life. Occasionally a few non active pixels may appear as a tiny spec of color. This is not to be considered a defect in the LCD screen.

<VIDEO>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	Horizontal Vertical	% %	5 5	- -
2. Color Temperature (80% WHITE)	- x y	°K	8500+10MPCD 0.292 0.307	- ±0.01 ±0.01
3. Color Temperature (40% WHITE)	- x y	°K	9000 0.286 0.299	- ±0.01 ±0.01
4. Resolution	Horizontal Vertical	line line	400 350	- -

<AUDIO>

All items are measured across 8Ω load at speaker output terminal with L.P.F.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD: Lch/Rch	W	1.0/1.0	0.8/0.8
2. Audio Distortion	500mW: Lch/Rch	%	1.0/1.0	4.0/4.0
3. Audio Freq. Response	-3dB: Lch -3dB: Rch	Hz Hz	50 to 12K 50 to 12K	- -

Note:

Nominal specifications represent the design specifications. All units should be able to approximate these. Some will exceed and some may drop slightly below these specifications. Limit specifications represent the absolute worst condition that still might be considered acceptable. In no case should a unit fail to meet limit specifications.

IMPORTANT SAFEGUARDS AND PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Safety Precautions for TV Circuit

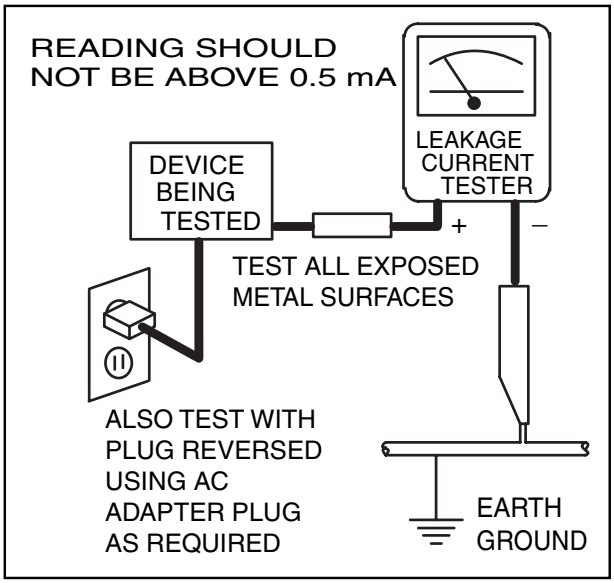
1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items:

a. Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

c. Antenna Cold Check - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

d. Leakage Current Hot Check - With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

e. X-Radiation and High Voltage Limits - Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place. High voltage must be measured each time servicing is performed that involves B+, horizontal deflection or high voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold down.") Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit

specifications given on instrument labels and in the Product Safety & X-Radiation Warning note on the service data chassis schematic. High voltage is maintained within specified limits by close tolerance safety-related components/adjustments in the high-voltage circuit. If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.
3. **Design Alteration Warning -** Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.
4. **Picture Tube Implosion Protection Warning -** The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.
5. **Hot Chassis Warning -**

a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and maybe safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.

b. Some TV receiver chassis normally have 85V AC(RMS) between chassis and earth ground regardless of the AC plug polarity. This chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.

c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.

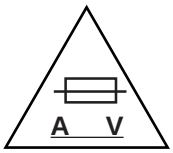
6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas:a. near sharp edges,b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts,c. the AC supply,d. high voltage, and,e. antenna wiring. Always inspect in all areas for pinched, out of place, or frayed wiring. Check AC power cord for damage.
7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
8. **Product Safety Notice -** Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc.. Parts that have special safety characteristics are identified by a (⚠) on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The product's safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly inspected to confirm they comply with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.



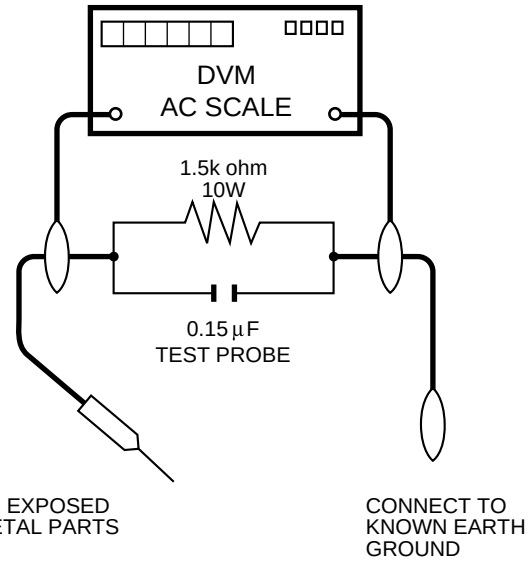
CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE F3701 (2.0A, 250V), F3702 (1.25A, 250V), AND F6701 (6.3A, 250V) FUSE.

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 110~240 volt AC outlet, and connect the DC power cable into the receiver's DC jack. (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)
  Any reading of 0.75V peak (this corresponds to 0.5 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

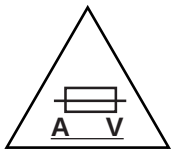
Many electrical and mechanical parts in LCD television have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the ***Replacement Parts Lists*** and ***Schematic Diagrams***.
For continued protection, replacement parts must be identical to those used in the original circuit.
The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.



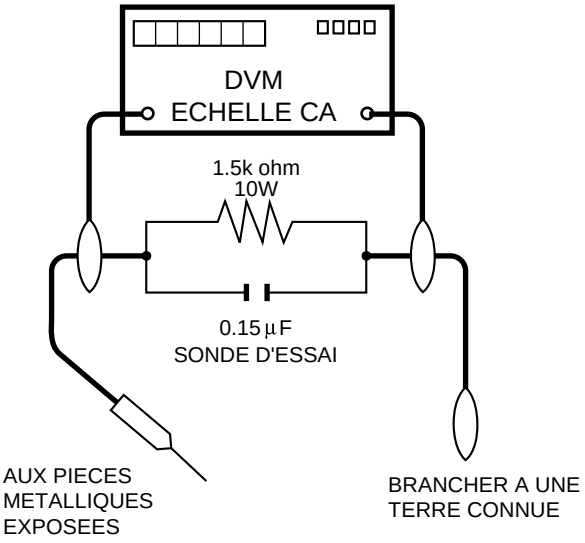
PRECAUTION: POUR LA PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE, REMPLACER LE FUSIBLE PAR UN FUSIBLE DE MEME TYPE F3701 (2.0A, 250V), F3702 (1.25A, 250V) F6701 (6.3A, 250V).

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 110-240V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1.5kΩ 10 watts en parallèle avec un condensateur de 0.15μF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000Ω/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance.
  Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  Tous les courants mesurés ne doivent pas dépasser 0,5 mA.
  Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

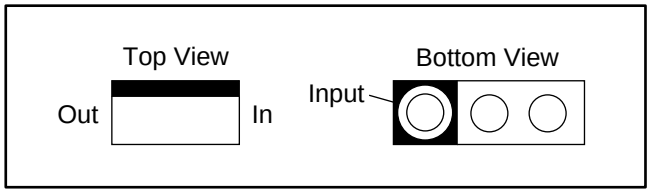
De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "⚠" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine.
L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

STANDARD NOTES FOR SERVICING

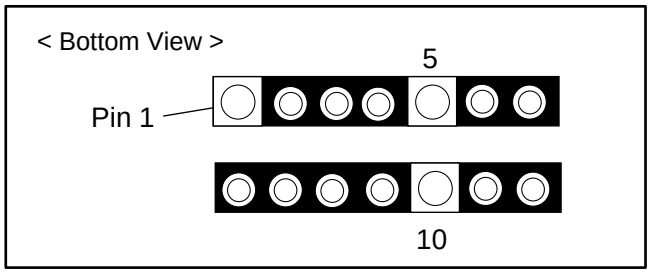
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

Circuit Board Indications

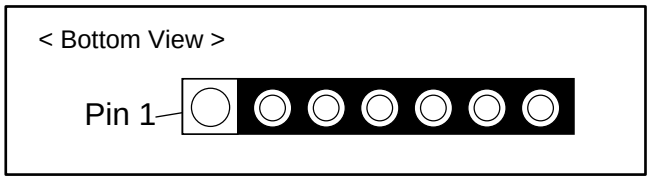
a. The output pin of the 3 pin Regulator ICs is indicated as shown.



b. For other ICs, pin 1 and every fifth pin are indicated as shown.

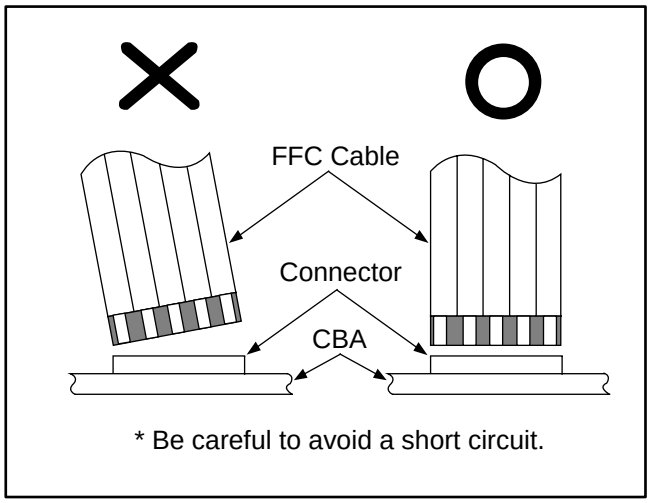


c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Precautions for Using Lead-free Solder

1 Employing lead-free solder

Pb free mark (as shown below) indicates lead-free solder, and is attached on the PWBs and service manuals. For PWBs with Pb free mark, be sure to use lead-free solder. For PWB without Pb free mark, use standard solder. The alphabetical character following Pb shows the type of lead-free solder.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description	Code
ZHNDAi123250E	J	ϕ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg(1roll)	BM

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

(1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

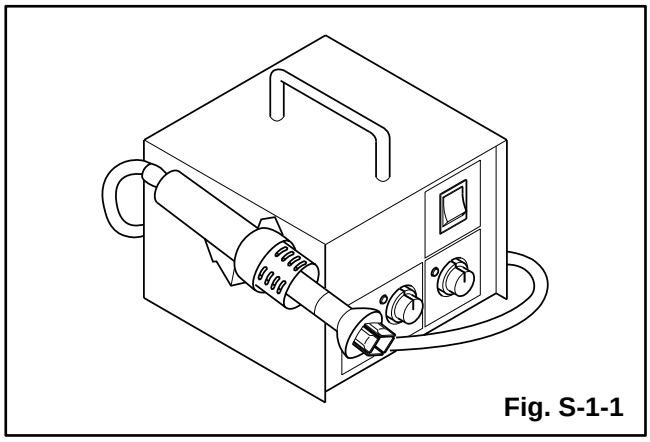


Fig. S-1-1

(2) Remove the flat pack-IC with tweezers while applying the hot air.

(3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

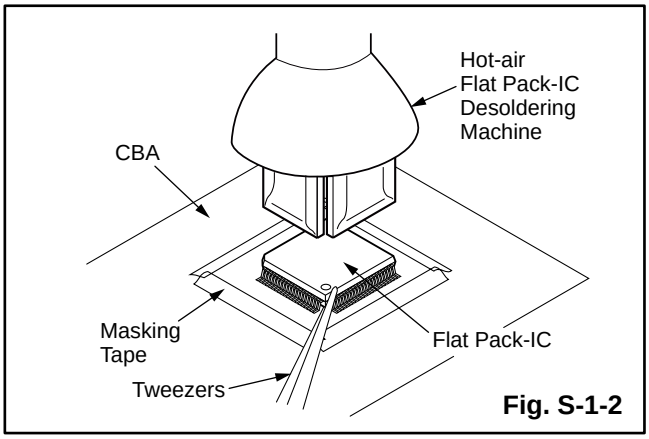


Fig. S-1-2

With Soldering Iron:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

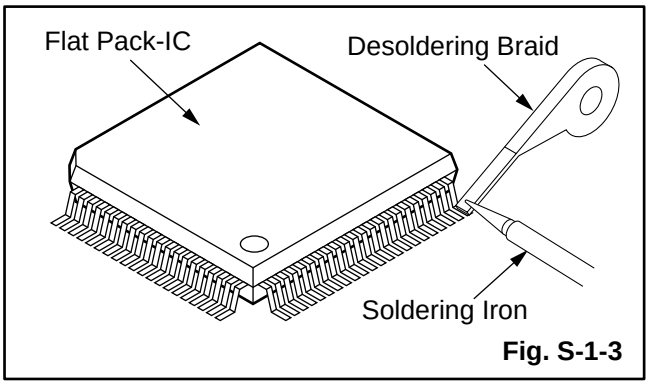


Fig. S-1-3

(2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

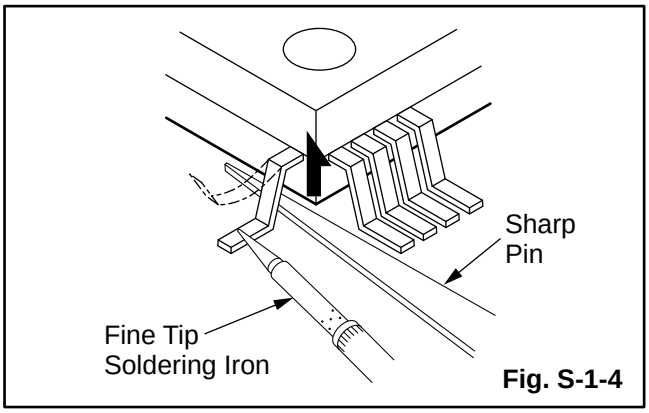


Fig. S-1-4

(3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

(2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

(3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.

(4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

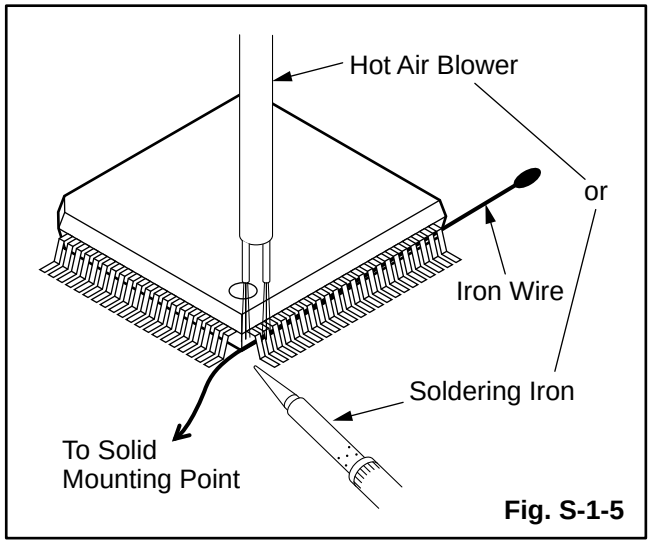


Fig. S-1-5

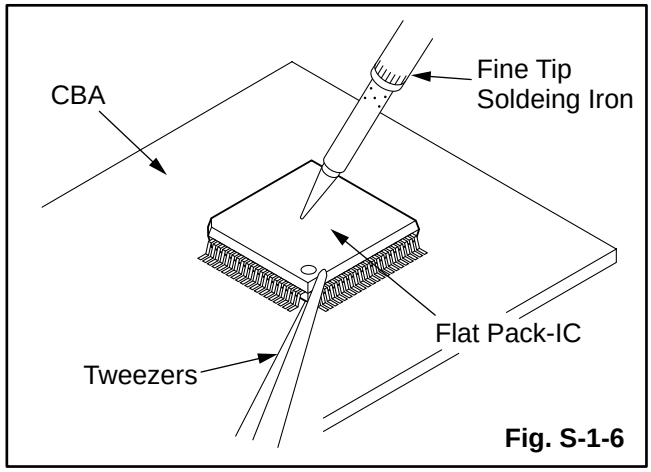


Fig. S-1-6

2. Installation

(1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.

(2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)

(3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

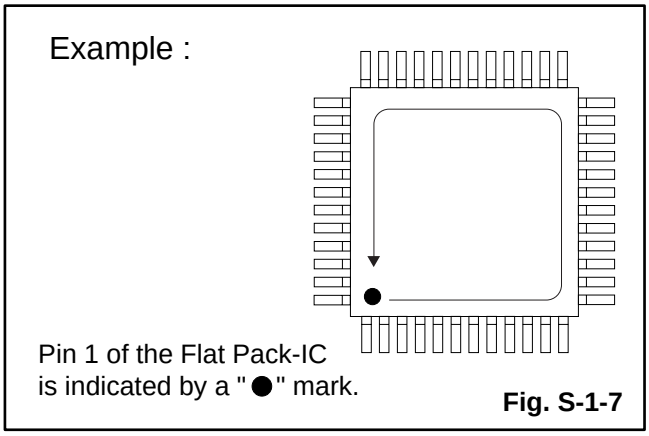


Fig. S-1-7

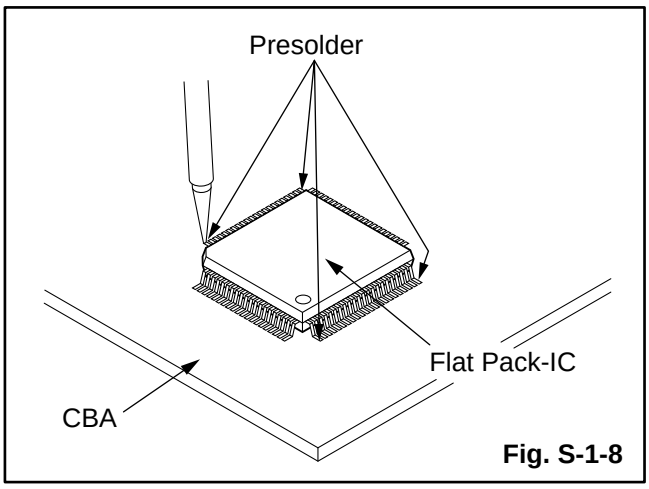


Fig. S-1-8

Instructions for Handling Semi-conductors

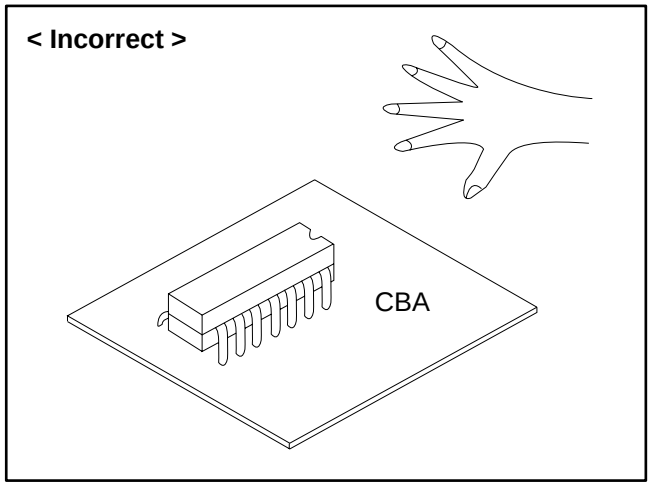
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

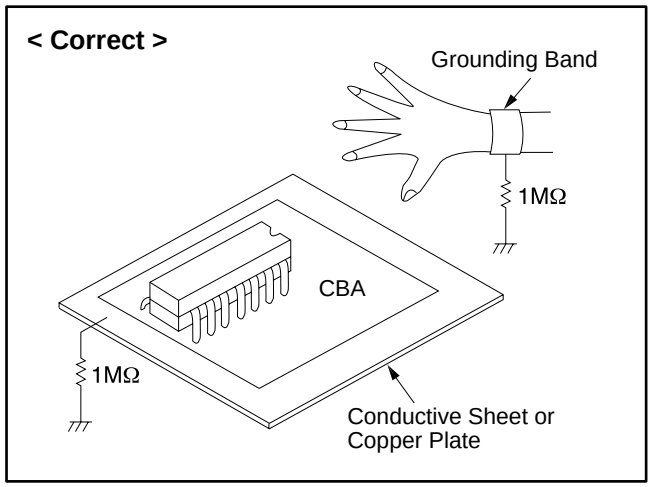
1. Ground for Human Body

Be sure to wear a grounding band (1MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



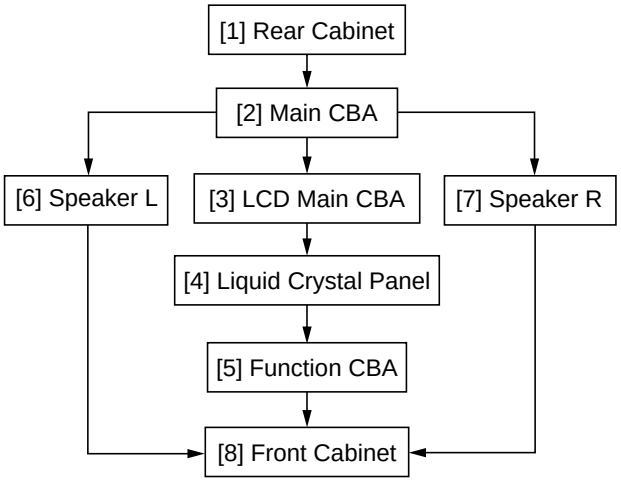


CABINET DISASSEMBLY INSTRUCTIONS

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Rear Cabinet	D1	7(S-1), (S-2)	-
[2]	Main CBA	D2 D3	3(S-3), 3(S-4), 2(S-5), *CN101A, *CN102A, *CN103A, *CN801, *CN802, *CN401, *CN402, *CN403, *CN404, *CN104	-
[3]	LCD Main CBA	D2 D3	4(S-6), *CN310A, *CN311A, *CN321A	-
[4]	Liquid Crystal Panel	D2 D3	4(S-7)	-
[5]	Function CBA	D2 D3	3(S-8)	-
[6]	Speaker L	D2 D3	2(S-9)	-
[7]	Speaker R	D2 D3	2(S-10)	-
[8]	Front Cabinet	D2	----------	-
↑ ①	↑ ②	↑ ③	↑ ④	↑ ⑤

① : Identification (location) No. of parts in the figures

② : Name of the part

③ : Figure Number for reference

④ : Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or de-soldered.
P=Spring, L=Locking Tab, S=Screw,
CN=Connector,
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 5(S-1) = five Screws (S-1),
2(L-2) = two Locking Tabs (L-2)

⑤ : Refer to "Reference Notes."

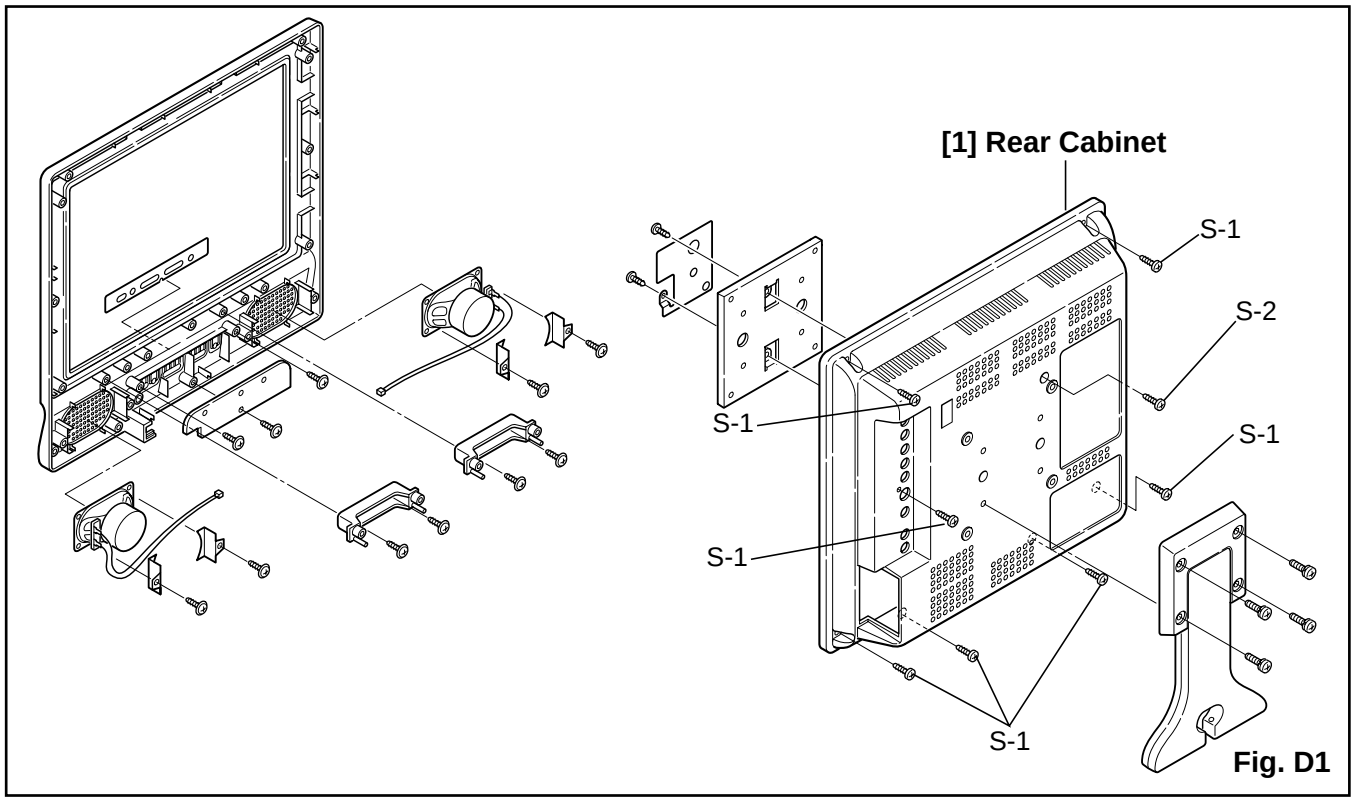


Fig. D1

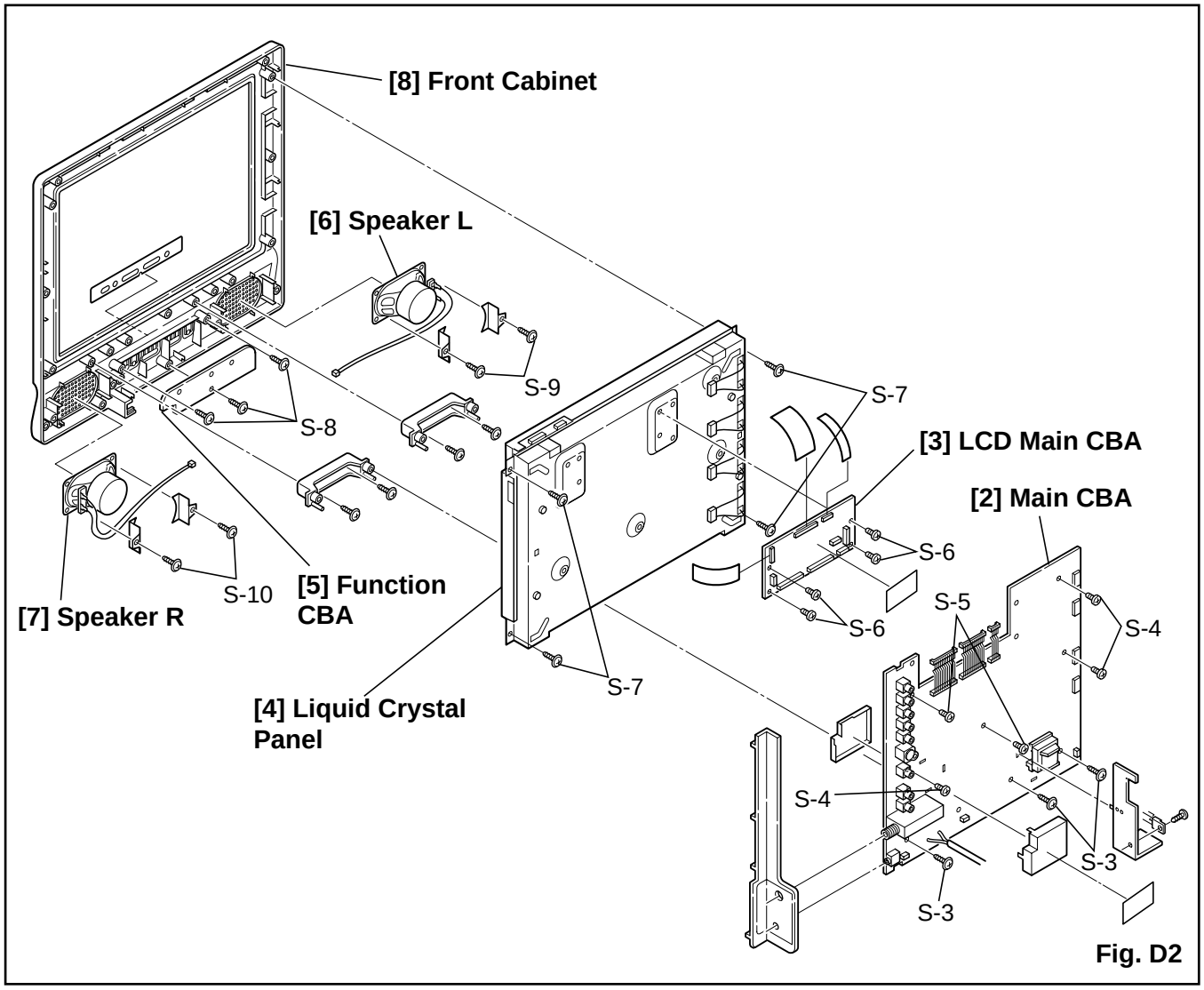

[8] Front Cabinet
[6] Speaker L
S-9
S-8
S-7
[3] LCD Main CBA
[2] Main CBA
S-6
S-6
S-5
S-4
S-10
[5] Function CBA
[7] Speaker R
S-7
[4] Liquid Crystal Panel
S-4
S-3
S-3

Fig. D2

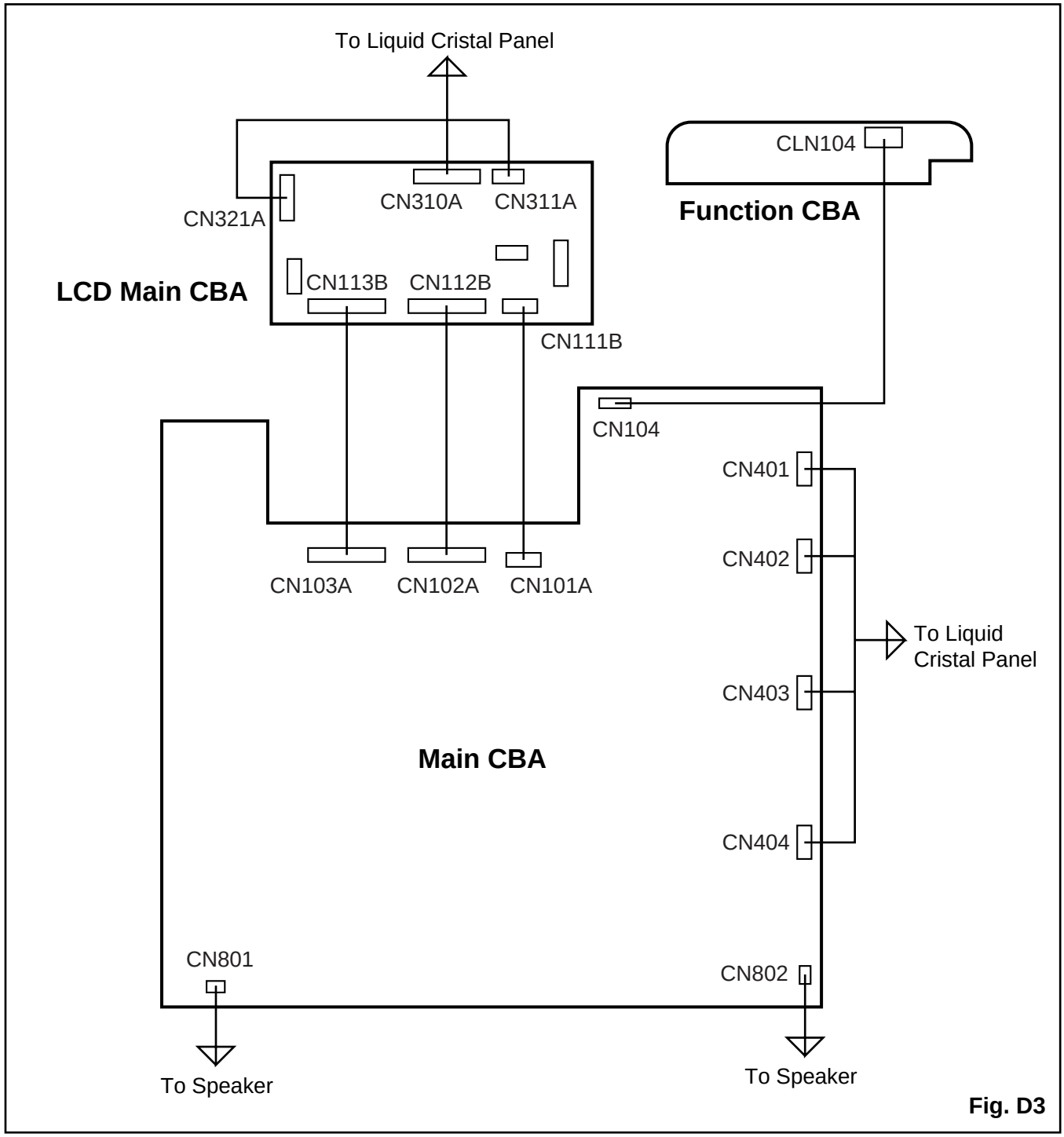

To Liquid Cristal Panel
CLN104
Function CBA
CN321A
CN310A
CN311A
LCD Main CBA
CN113B
CN112B
CN111B
CN104
CN401
CN402
CN103A
CN102A
CN101A
To Liquid
Cristal Panel
CN403
Main CBA
CN404
CN801
CN802
To Speaker
To Speaker

Fig. D3

ELECTRICAL ADJUSTMENT INSTRUCTIONS

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

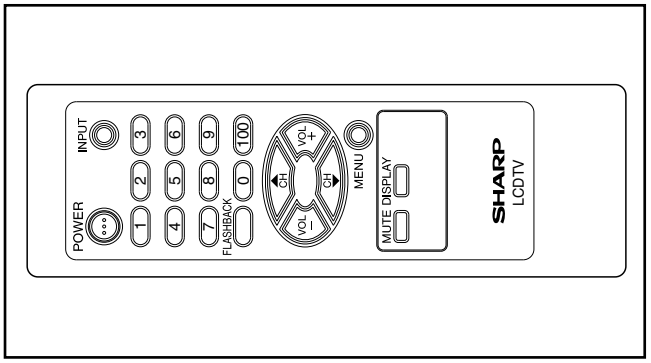
NOTE:

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed.

Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

1. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
2. Remote control unit (attached remote control unit)



3. Color Analyzer
4. DC Voltmeter

How to set up the service mode:

Service mode:

1. Turn the power on. (Use main power on the TV unit.)
2. In standby mode, simultaneously press “POWER” button and “MENU” button on the TV unit. Version of micro computer will display on the LCD or display. (Ex: 0001AGP-0.11, 0002AGP-0.14 or 0003AGP-0.17)

1. Initial Setting

General

Enter the Service mode.

Set the each initial data as shown on table 1 below.

Table 1: Initial Data

ITEM	BUTTON (on the service remote control)	DATA VALUE
BRT	MENU → 1	126
CNT		198
CLR-R		72
CLR-B		72
TNT		56
V-TNT		65
SHR		28
S-BRT	MENU → 2	126
S-CNT		198
S-CLR-R		72
S-CLR-B		72
S-TNT		65
S-SHR		28
C-BRT	MENU → 3	126
C-CNT		198
C-CLR-R		67
C-CLR-B		72
C-TNT		72
C-SHR		28
SAIDO	5	143
C-SAIDO		143
NORMAL	0	74
DARK		150
COR(C/D1)	Vol down → 1	512
COG(C/D1)	Vol down → 2	512
COB(C/D1)	Vol down → 3	512
DR(C/D1)	Vol down → 4	130
DG(C/D1)	Vol down → 5	132
DB(C/D1)	Vol down → 6	116
C-COR(C/D2)	Vol down → 1	512
C-COG(C/D2)	Vol down → 2	512
C-COB(C/D2)	Vol down → 3	512
C-DR(C/D2)	Vol down → 4	130

ITEM	BUTTON (on the service remote control)	DATA VALUE
C-DG(C/D2)	Vol down → 5	127
C-DB(C/D2)	Vol down → 6	131
7F	Vol down	FF
LANGUAGE		SPA/FRA
STEREOTYP		MTS
ACCESSCODE		ON
BLACKLIGHT		ON
HD		OFF
HRD		OFF
NCM		OFF
ASPECT		OFF

2. +B Adjustment

Purpose: To obtain correct operation.

Symptom of Misadjustment: The picture is dark and the unit does not operate correctly.

Test point	Adj. Point	Mode	Input
TP401(B+) TP300(GND)	VR601	---	---
M. EQ.		**Spec.**	
DC Voltmeter		+13.0±0.5V DC.	

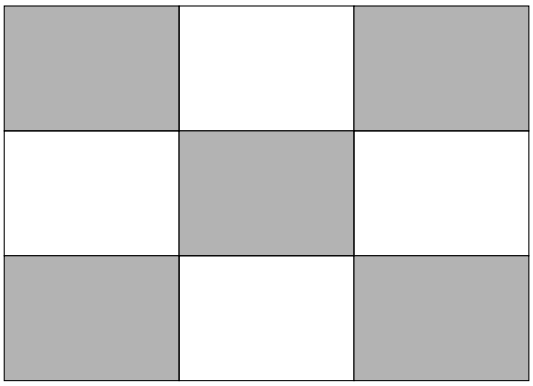
Note: TP401, TP300(GND), VR601 --- Main CBA

1. Connect DC Volt Meter to TP401 and TP300(GND).
2. Adjust VR601 so that the voltage of TP401 becomes +13.0±0.5V DC.

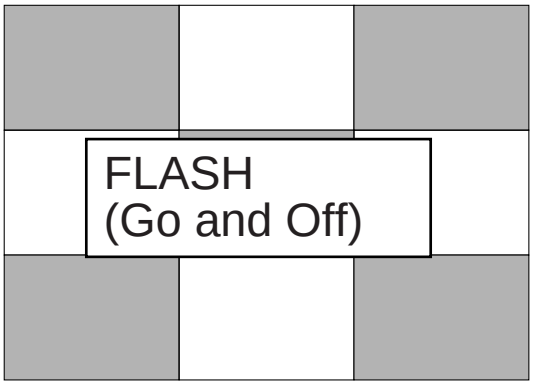
3. Flicker Adjustment

Note: Use remote control unit

1. Enter the Service mode. (See page 5-1)
2. Press “2” button on the remote control unit. The following screen appears.



3. If Flicker Adjustment is not fit, the screen become the following.



4. Press “CH ▲/▼” buttons on the remote control unit until flash stops.

4. TV Reset to Default

To reset software, press “5” button on the remote control unit for at least 5 seconds after pressing “FLASHBACK” button on the remote control unit.

The following adjustment normally are not attempted in the field. Only when replacing the LCD Panel then adjust as a preparation.

5. White Balance Adjustment

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Method 1

Vary the "RCUTOFF", "BCUTOFF", "RGAIN" and "BGAIN" settings of the adjustment process below.

Adjustment Process

RCUTOFF	0	Red cut - off adjustment
GCUTOFF	0	Green cut - off adjustment
BCUTOFF	0	Blue cut - off adjustment
R-GAIN	0	White balance
G-GAIN	0	White balance
B-GAIN	0	White balance

1. Receive the black signal (white 40%).

   Adjust the "RCUTOFF" and "BCUTOFF" settings to have the black color temperature as specified.
2. Receive the white 80% signal.

   Adjust two of the "R-GAIN", "G-GAIN" and "B-GAIN" settings in the decreasing direction to be visible white.

   Note: Make sure at least one of the "R-GAIN", "G-GAIN" and "B-GAIN" settings is "0".
3. Check to see if the black and white color temperatures are as specified. If not, repeat the above steps 1 and 2.

Method 2

Test point	Adj. Point	Mode	Input
Screen	CH ▲ / ▼ buttons	VIDEO 1 VIDEO 2	White Purity (APL 80% and 40%)

M. EQ.	Spec.	
Pattern Generator, Color analyzer	APL 80%	x (0.282 to 0.302) y (0.297 to 0.317)
	APL 40%	x (0.276 to 0.296) y (0.289 to 0.309)

Figure

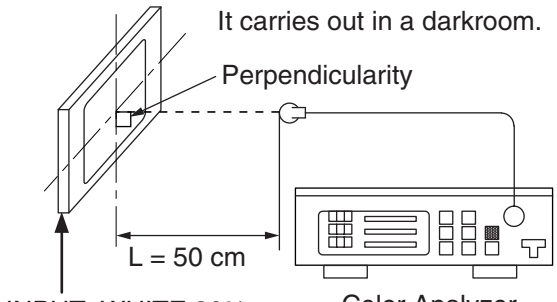


Fig. 2

Note: Use remote control unit

1. Operate the unit for more than 20 minutes.
2. Input the White Purity (APL 80%).
3. Set the color analyzer to the CHROMA mode and bring the optical receptor to the center on the LCD-Panel surface after zero point calibration as shown above.

   Note: The optical receptor must be set perpendicularly to the LCD Panel surface.
4. Enter the Service mode. Press "VOL ▼" button on the remote control unit and select "C/D" mode.
5. When "x" value and "y" value are not within specification, adjust "DB" or "DR". Refer to "1. Initial Setting."
6. Input the White Purity (APL 40%).
7. Press "VOL ▼" button on the remote control unit and select "C/D" mode.
8. When "x" value and "y" value are not within specification, adjust "COB" or "COR". Refer to "1. Initial Setting."
9. Also VIDEO 2 mode.

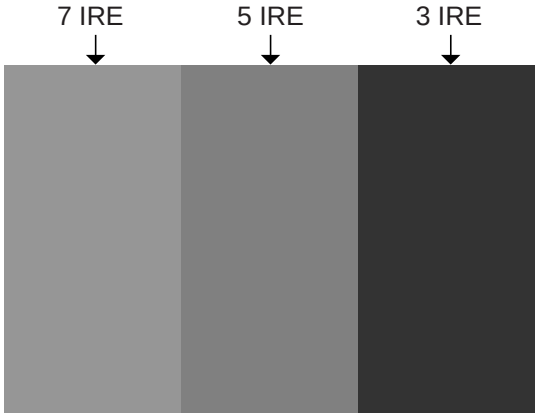
6. Sub-Brightness Adjustment

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Confirmation at [VIDEO-1]

1. Set CG951 to 7/5/3 IRE 3-step grayscale.



TEST PATTERN (7/5/3 IRE)

2. Apply CG951 video signal to VIDEO1 input.
3. Enter the Service mode.
4. Make sure that contrast and brightness controls are set to initial position.
5. Confirm “5 IRE” position was biginning to bright.
6. If “5 IRE” position was bigining to bright, no need to adjust.
7. If “5 IRE” position is not avilable or to be highly brightness, then adjust the following values by using remote control unit. Refer to “1. Initial Setting.”

   RF/VIDEO1: BRT

   VIDEO2: C-BRT

Confirmation at [VIDEO-2]

1. Set CG951 to 7/5/3 IRE 3-step grayscale.
2. Apply CG951 video signal to “Y” input.
3. Enter the Service mode.
4. Make sure that contrast and brightness controls are set to initial position.
5. Confirm “5 IRE” position was beginning to bright.
6. If “5 IRE” position was beginning to bright, no need to adjust.
7. If “5 IRE” position is not available or to be highly brightness, then adjust the following values by using remote control unit. Refer to “1. Initial Setting.”

   RF/VIDEO1: BRT

   VIDEO2: C-BRT

TROUBLESHOOTING

Table of Contents for the Troubleshooting Flow Charts

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

1. POWER SUPPLY SECTION

FLOW CHART NO.1

The power cannot be turned on.

↓

Is the fuse (F601) normal?

No → See FLOW CHART No.2 <The fuse blows out.>

↓ Yes

Is normal state restored when once unplugged power cord is plugged again several seconds?

No → Check if there is any leak or short-circuiting on the primary circuit component, and service it if defective. (Q601,Q603.T601,D605,D606,D607,D608,C605, C606,C610,C654)

↓ Yes

Is the AL +3.3V line voltage normal?

No → (same as above)

↓ Yes

Check each rectifying circuit of the secondary circuit and service it if defective.

FLOW CHART NO.2

The fuse blows out.

↓

Check the presence that the primary component is leaking or shorted and service it if defective.

Check the presence that the rectifying diode or circuit is shorted in each rectifying circuit of secondary side, and service it if defective.

↓

After servicing, replace the fuse.

FLOW CHART NO.3

When the output voltage fluctuates.

↓

Does the photocoupler circuit on the secondary side operate normally?

No → Check IC601,D646,D649 and their periphery, and service it if defective.

↓ Yes

Check IC601,D612,D613,D615 and their periphery, and service it if defective.

FLOW CHART NO.4

When buzz sound can be heard in the vicinity of power circuit.

↓

Check if there is any short-circuit on the rectifying diode and the circuit in each rectifying circuit of the secondary side, and service it if defective. (IC603,IC604,D630,D631,D632,D633,D635,D645)

FLOW CHART NO.5

AL-8V is not outputted.

↓

Is approximately -8V voltage supplied to the anode of D631?

No → Check D631 and the periphery circuit, and service it if defective.

↓ Yes

Check if their is any leak or short-circuit on the loaded circuit, and service it if defective.

FLOW CHART NO.6

AL+3.3V is not outputted.

↓

Is 3.3V voltage supplied to the cathode of D514?

No → Check D635,C637 and their periphery circuit, and service it if defective.

↓ Yes

Check if there is any leak or short-circuit on the loaded circuit and service it if defective.

FLOW CHART NO.7

AL+40V is not outputted.

↓

Is approximately 40V voltage supplied to the emitter of Q516?

No → Check D645,D646,C644 and their periphery circuit, and service it if defective.

↓ Yes

Is the voltage of base on Q516 lower than the voltage of emitter on Q516 when turning the power on?

No → Check Q517 and P-ON-H line, and service it if defective.

↓ Yes

Replace Q516.

FLOW CHART NO.8

AL+5V is not outputted.

↓

Is 5V voltage supplied to the cathode of D633?

No → Check D633,C635 and their periphery circuit, and service it if defective.

↓ Yes

Check if there is any leak or short-circuit on the loaded circuit and service it if defective.

FLOW CHART NO.9

AL+33V is not outputted.

↓

Is approximately 40V voltage supplied to the emitter of Q516?

No → See FLOW CHART No.7

↓ Yes

Check D641,C648,C649,R658 and their periphery circuit, and service it if defective.

FLOW CHART NO.10

AL+12V is not outputted.

↓

Is approximately 12V voltage supplied to the cathode of D630?

No → Check D630,D632 and their periphery circuit, and service it if defective.

↓ Yes

Is 12V voltage supplied to the emitter of Q427?

No → Check C634,C636,L630 and their periphery circuit, and service it if defective.

↓ Yes

Is the voltage of base on Q427 lower than the voltage of emitter on Q427 when turning the power on?

No → Check Q401 and BACKLIGHT-SW line, and service it if defective.

↓ Yes

Replace Q427.

FLOW CHART NO.11

REG+5V(1) is not outputted.

↓

Is approximately 12V voltage supplied to Pin(1) of IC604? → No → See FLOW CHART No.9

↓ Yes

Check IC604,C603 and their periphery circuit, and service it if defective.

FLOW CHART NO.12

REG+5V(2) is not outputted.

↓

Is 7.4V voltage supplied to Pin(1) of IC603? → No → See FLOW CHART No.8

↓ Yes

Check IC603,C673 and their periphery circuit, and service it if defective.

FLOW CHART NO.13

P-ON+3.3V(D) is not outputted.

↓

Is approximately 4.7V voltage supplied to Pin(1) of IC502? → No → See FLOW CHART No.6

↓ Yes

Check IC502,IC505 and there periphery circuit service and it if defective.

FLOW CHART NO.14

P-ON+3.3V(A) is not outputted.

↓

Is 4.7V voltage supplied to Pin(1) of IC504? → No → See FLOW CHART No.6

↓ Yes

Check IC504 and the periphery circuit, and service it if defective.

FLOW CHART NO.15

P-ON+1.8V(D) is not outputted.

↓

Is 3.5V voltage supplied to Pin(1) of IC503? → No → See FLOW CHART No.6

↓ Yes

Check IC503 and the periphery circuit, and service it if defective.

FLOW CHART NO.16

PANEL+24V is not outputted.

↓

Is approximately 40V voltage supplied to the collector of Q501?

No → See FLOW No.7

↓ Yes

Check Q501,Q502,Q511 and their periphery circuit, and service it if defective.

FLOW CHART NO.17

PANEL+5.4V is not outputted.

↓

Is approximately 12V voltage supplied to the collector of Q503?

No → See FLOW No.10

↓ Yes

Check Q503,Q504,Q514 and their periphery circuit, and service it if defective.

FLOW CHART NO.18

PANEL-12V is not outputted.

↓

Is approximately -8V voltage supplied to the emitter of Q505?

No → See FLOW No.5

↓ Yes

Check Q505 and the periphery circuit, and service it if defective.

FLOW CHART NO.19

PANEL+12V is not outputted.

↓

Is approximately 12V voltage supplied to the collector of Q515?

No → See FLOW No.10

↓ Yes

Check Q515,Q516,Q517 and their periphery circuit, and service it if defective.

FLOW CHART NO.20

PANEL+9V is not outputted.

↓

Is approximately 12V voltage supplied to Pin(1) of IC506?

No → See FLOW No.19

↓ Yes

Check IC506 and their periphery circuit, and service it if defective.

FLOW CHART NO.21

The key operation is not functioning.

↓

Are the contact point and installation state of the key switches (SW101,SW102,SW103,SW104,SW105, SW107,SW116) normal?

No → Re-install the switches (SW101,SW102,SW103, SW104,SW105,SW107,SW116) correctly or replace the poor switch.

↓ Yes

When pressing each switches (SW101,SW102, SW103,SW104,SW105,SW107,SW116) do the voltage of each pin of CN102A (shown below) increase?
SW101,102,103,104,105,107 : CN102A PIN 6
SW116 : CN102A PIN 7

No → Check the switches (SW101,SW102,SW103,SW104, SW105,SW107,SW116) and their periphery, and service it if defective.

↓ Yes

Replace LCD MAIN CBA UNIT.

FLOW CHART NO.22

No operation is possible from the remote control unit.

↓

Operation is possible from the remote control unit.

↓ Yes

Is 3.3 voltage supplied to Pin(3) terminal of the infrared remote control receiver (RCV101)?

No → Check P-ON+3.3V(D) line and service it if defective.

↓ Yes

Is the "L" pulse sent out Pin(1) terminal of receiver (RCV101) when the infrared remote control is activated?

No → Replace the infrared remote control receiver (RCV101) or the remote control unit.

↓ Yes

Is the "L" pulse supplied to the Pin(1) of CN102A?

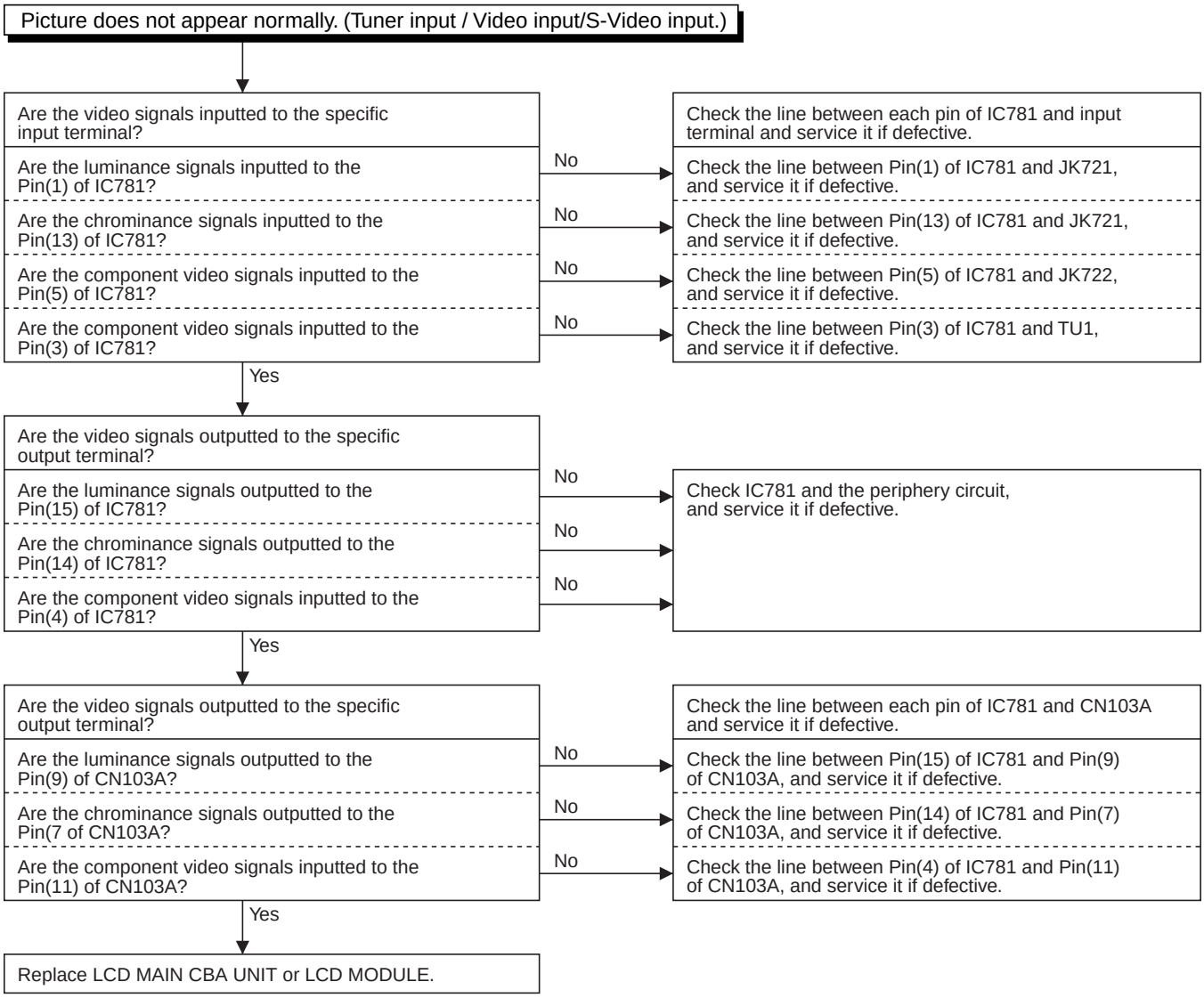
No → Check the line between Pin(1) terminal of receiver (RCV101) and Pin(1) of CN102A , and service it if defective.

↓ Yes

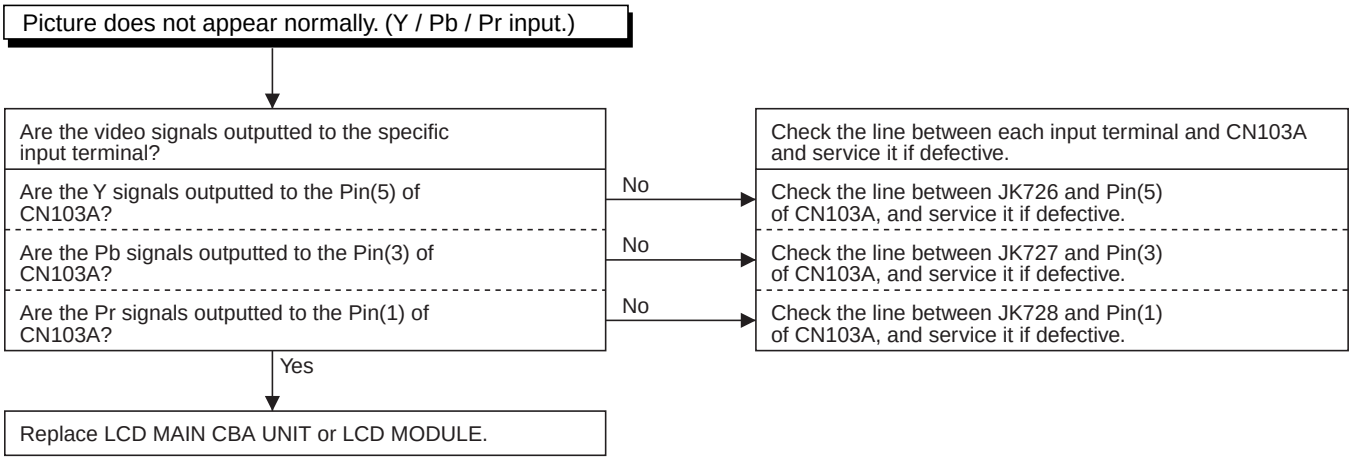
Replace LCD MAIN CBA UNIT.

2. VIDEO SIGNAL SECTION

FLOW CHART NO.23

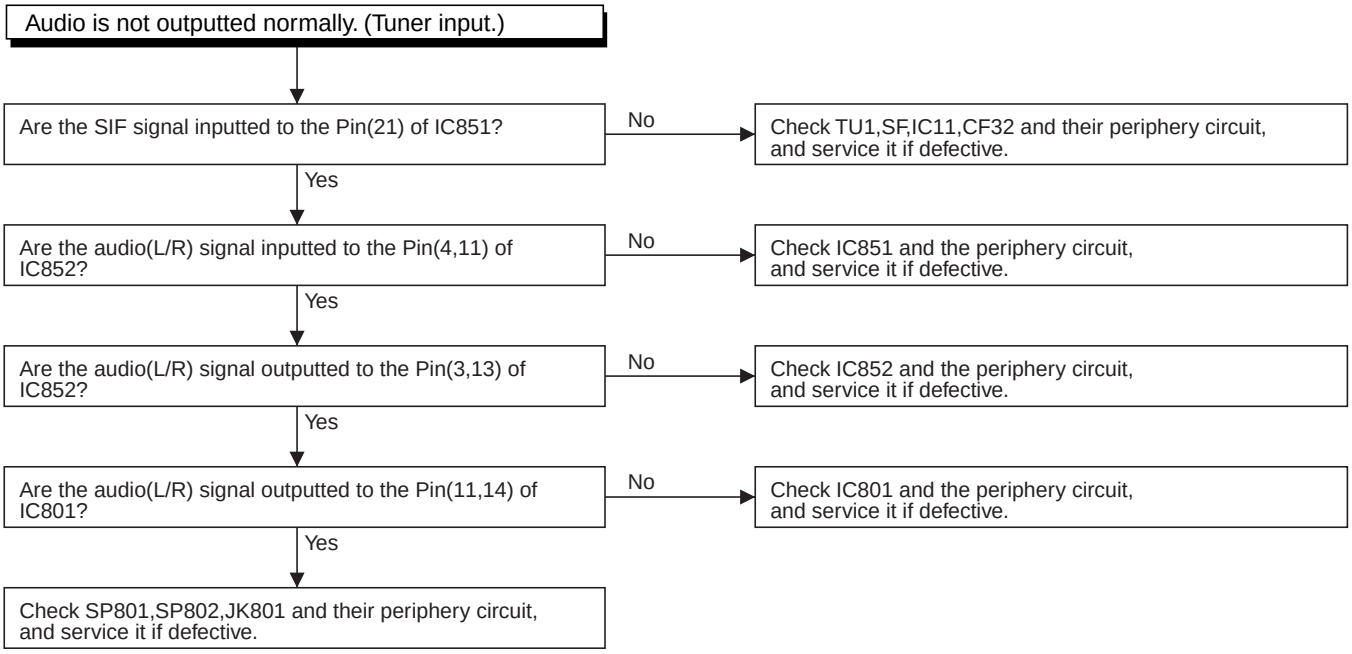


FLOW CHART NO.24

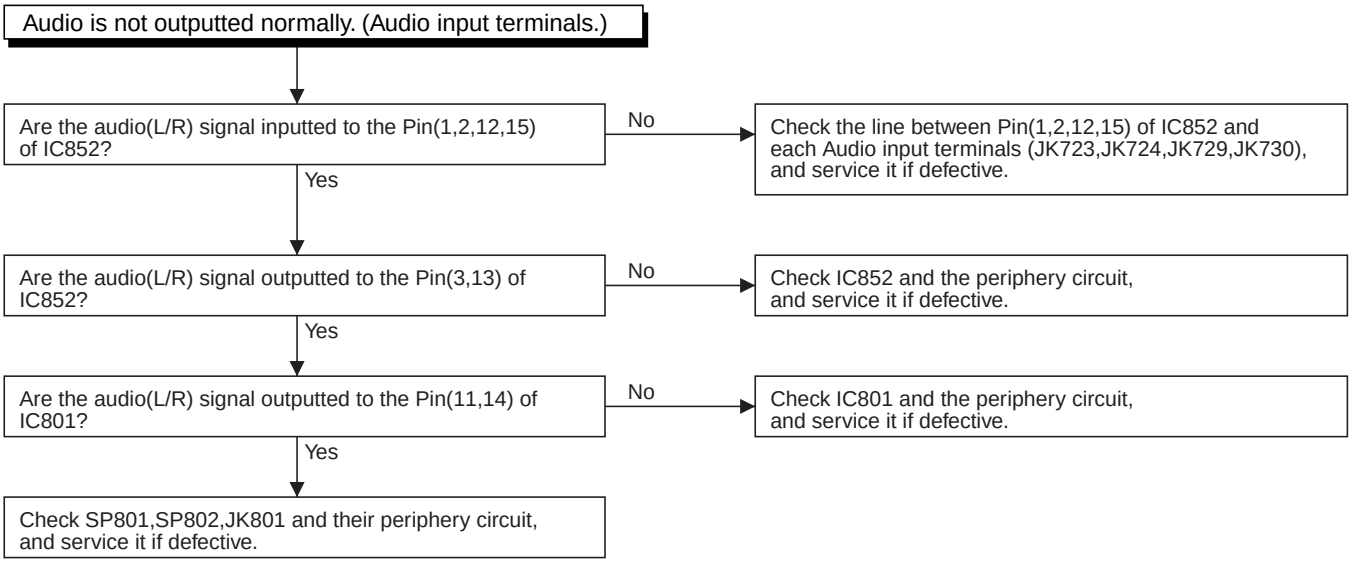


3. AUDIO SIGNAL SECTION

FLOW CHART NO.25

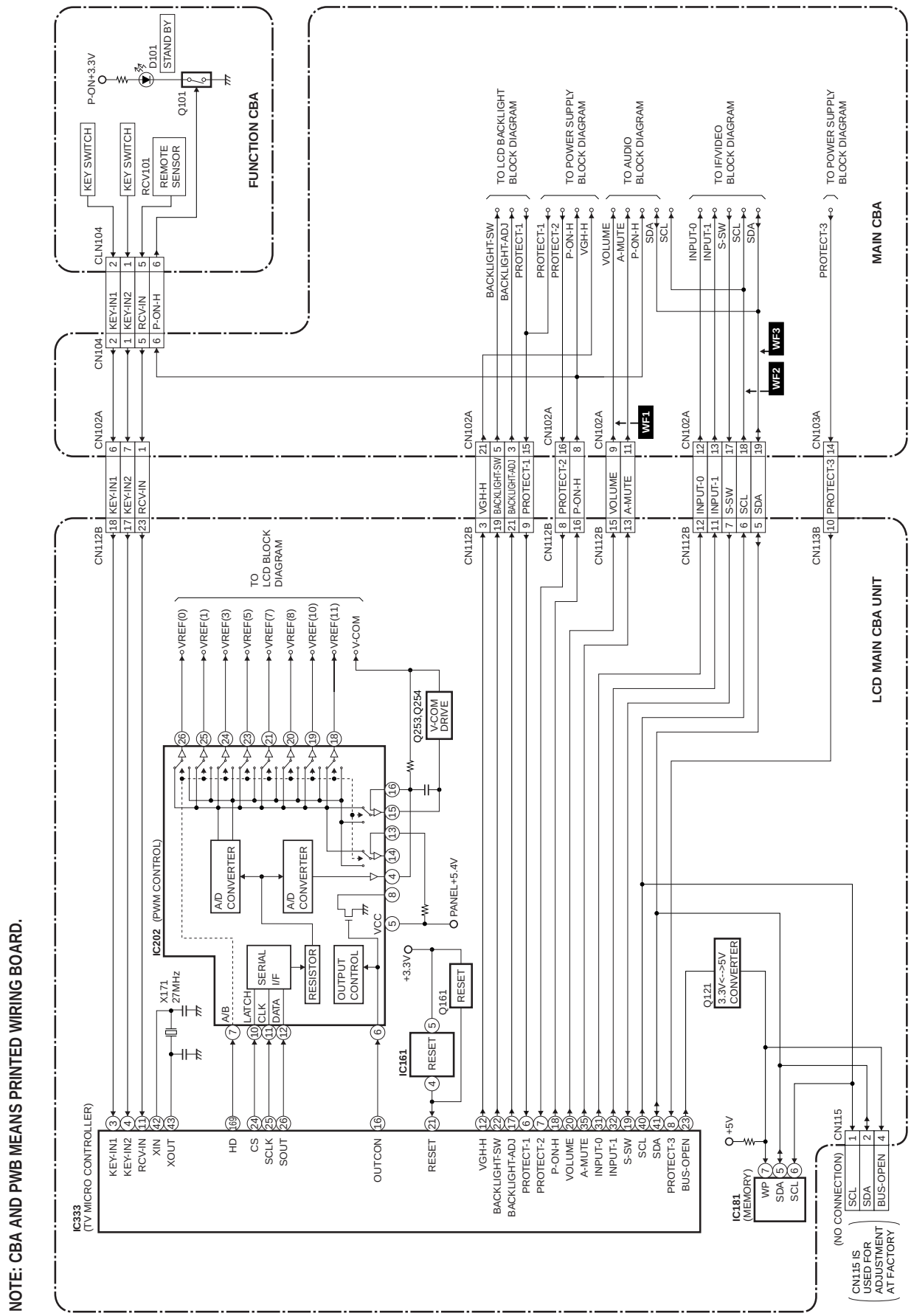


FLOW CHART NO.26



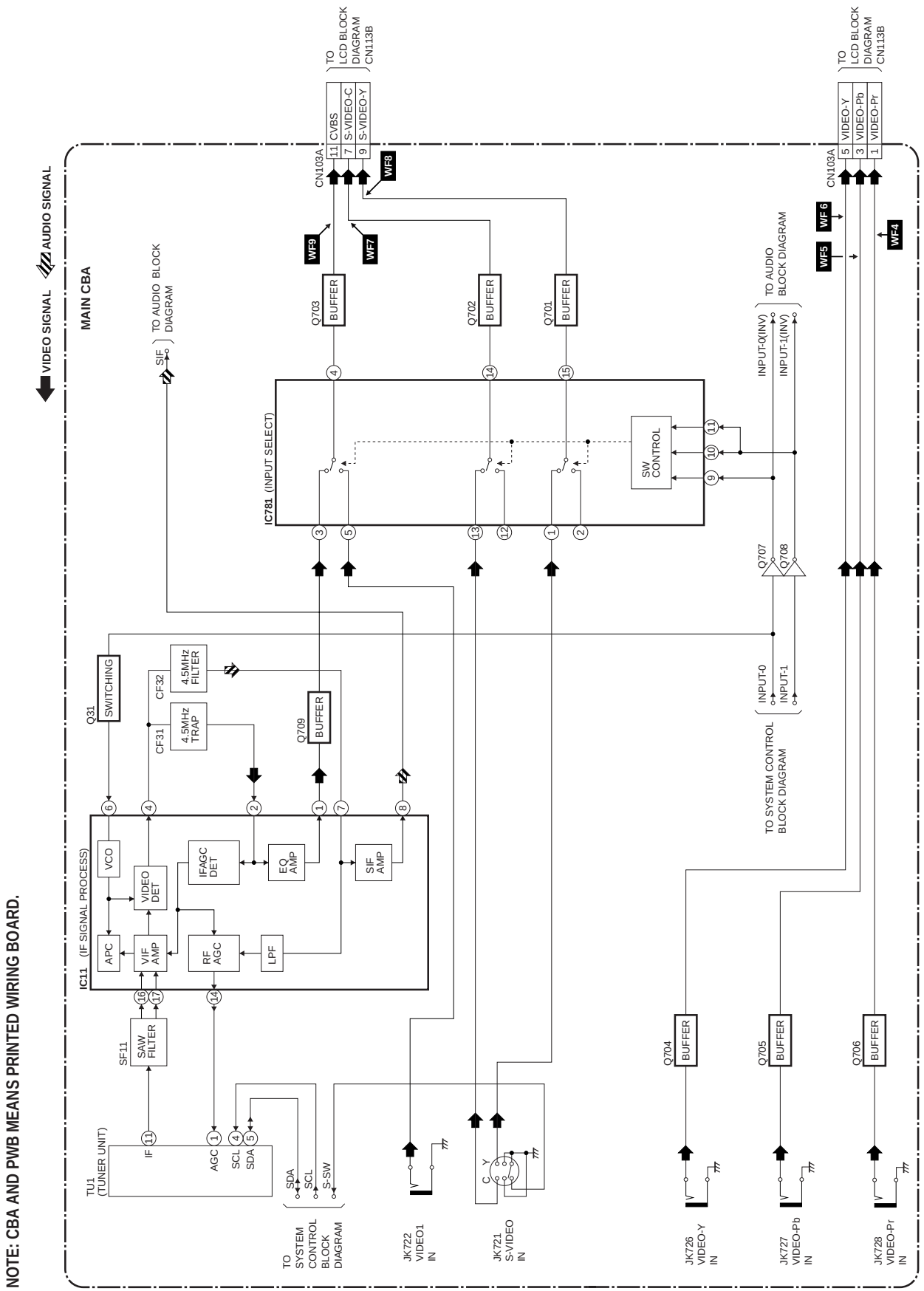
BLOCK DIAGRAMS

System Control Block Diagram



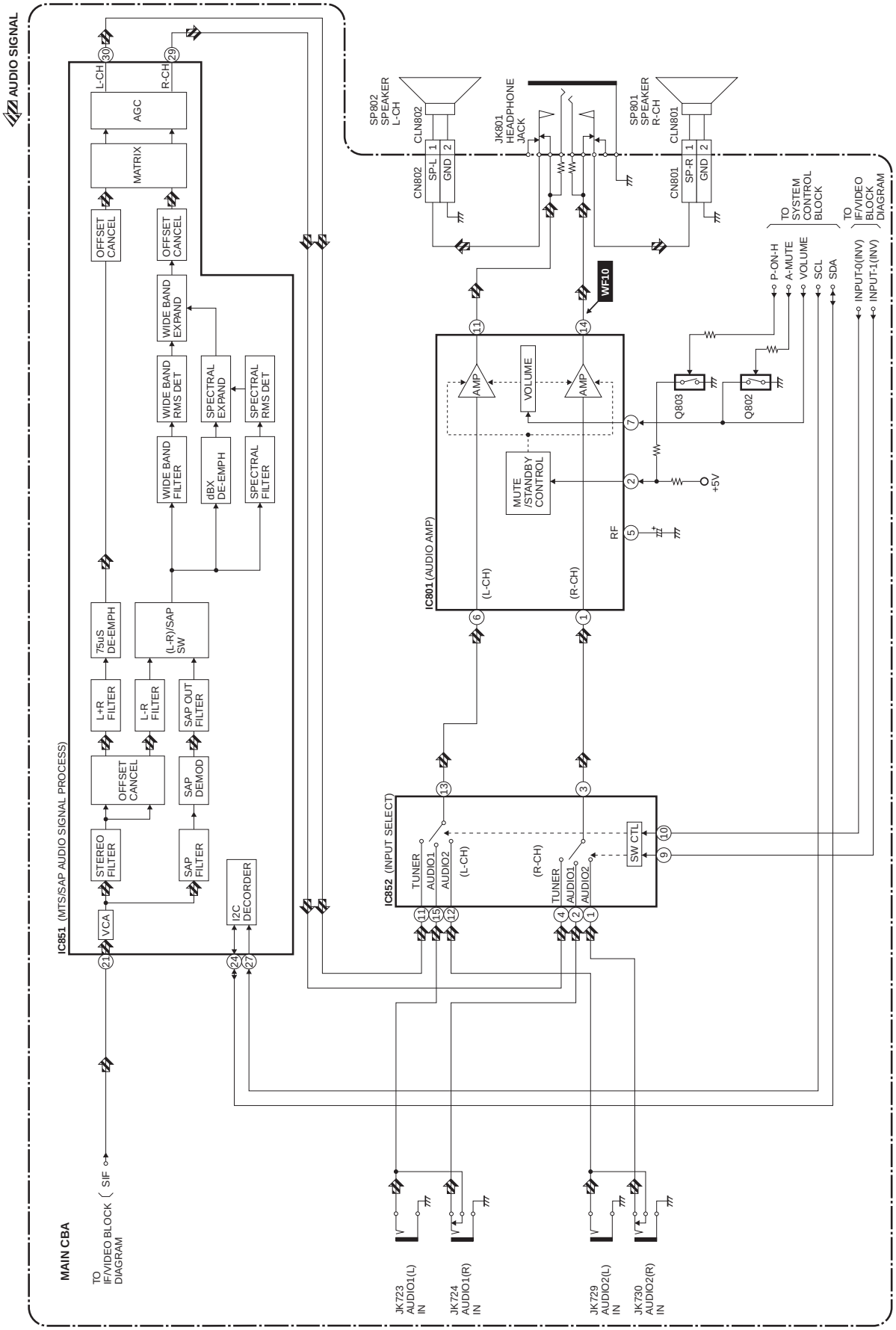
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

IF/Video Block Diagram



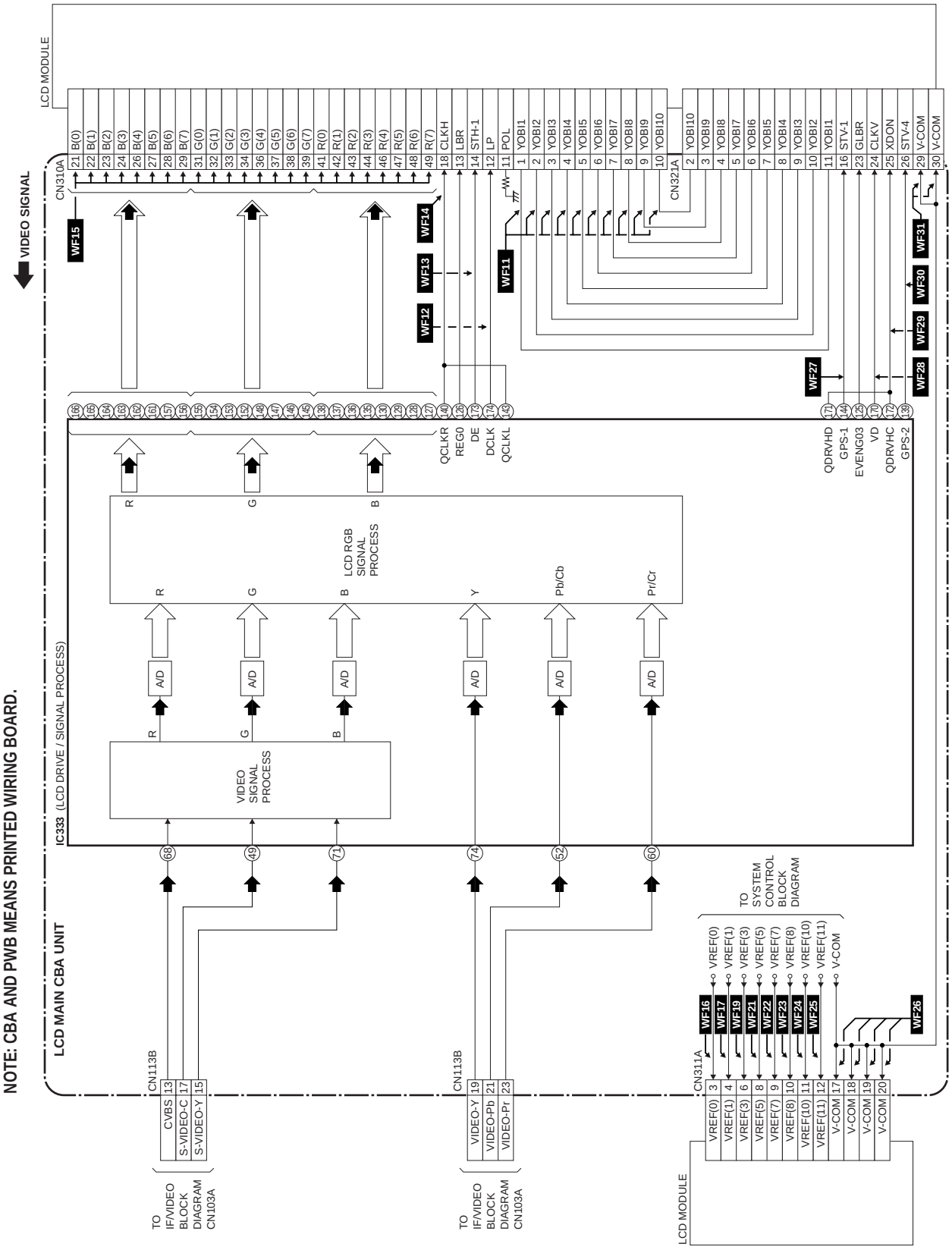
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

Audio Block Diagram

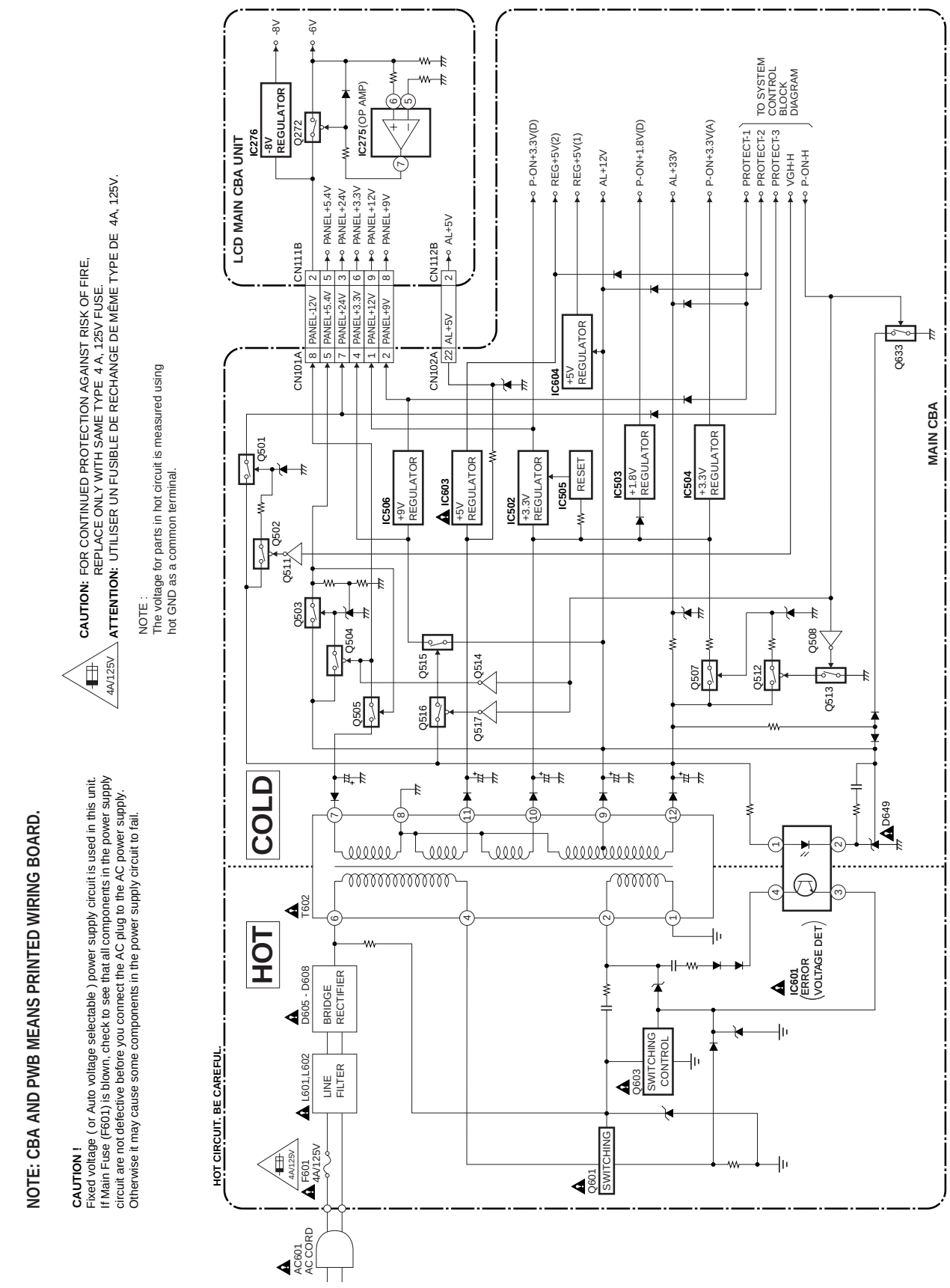


NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

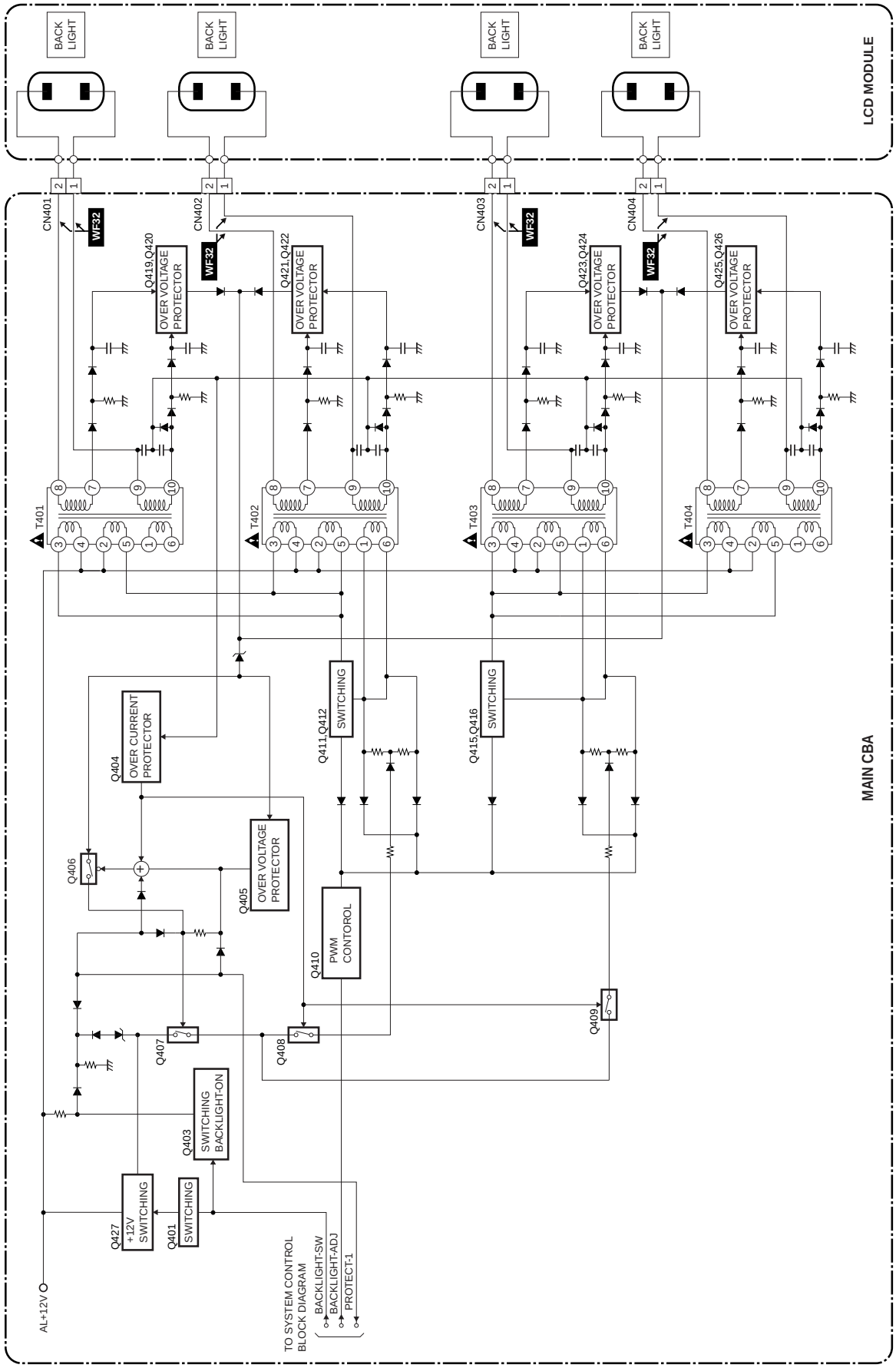
LCD Block Diagram



Power Supply Block Diagram



LCD Backlight Block Diagram



NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

Standard Notes

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Note:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}$μF).
5. All voltages are DC voltages unless otherwise specified.

Note of Capacitors:

ML --- Mylar Cap. PP --- Metallized Film Cap. SC --- Semiconductor Cap. L --- Low Leakage type

Temperature Characteristics of Capacitors are noted with the following:

B --- ±10% CH --- 0±60ppm/°C CSL --- +350~-1000ppm/°C

Tolerance of Capacitors are noted with the following:

Z --- +80~-20%

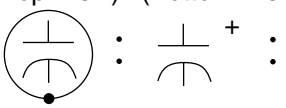
Note of Resistors:

CEM --- Cement Res. MTL --- Metal Res. F --- Fuse Res.

Capacitors and transistors are represented by the following symbols.

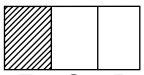
CBA Symbols

(Top View) (Bottom View)



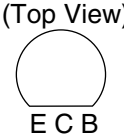
Electrolytic Capacitor

(Bottom View)



Transistor or Digital Transistor

(Top View)



NPN Transistor

(Top View)

PNP Transistor

(Top View)

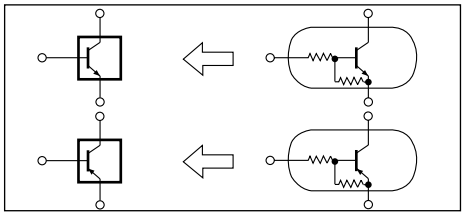
NPN Digital Transistor

(Top View)

PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. **CAUTION:** FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.
   ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE DE_A,_V.

2. **CAUTION:**
   Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

   If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. **Note:**

(1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.

(2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

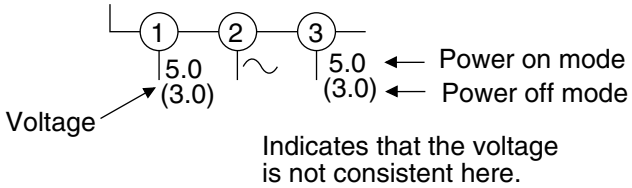
4. **Wire Connectors**

(1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).

(2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

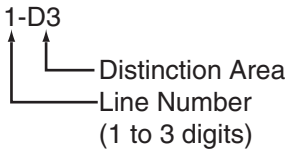
5. **Note:** Mark "●" is a leadless (chip) component.

6. **Voltage indications on the schematics are as shown below:**
   Plug the TV power cord into a standard AC outlet.:

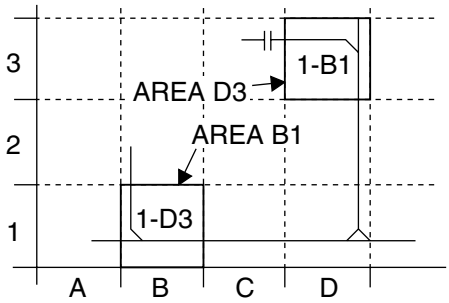


Unit: Volts

7. **How to read converged lines**



Examples:
1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".



8. **Test Point Information**

: Indicates a test point with a jumper wire across a hole in the PCB.

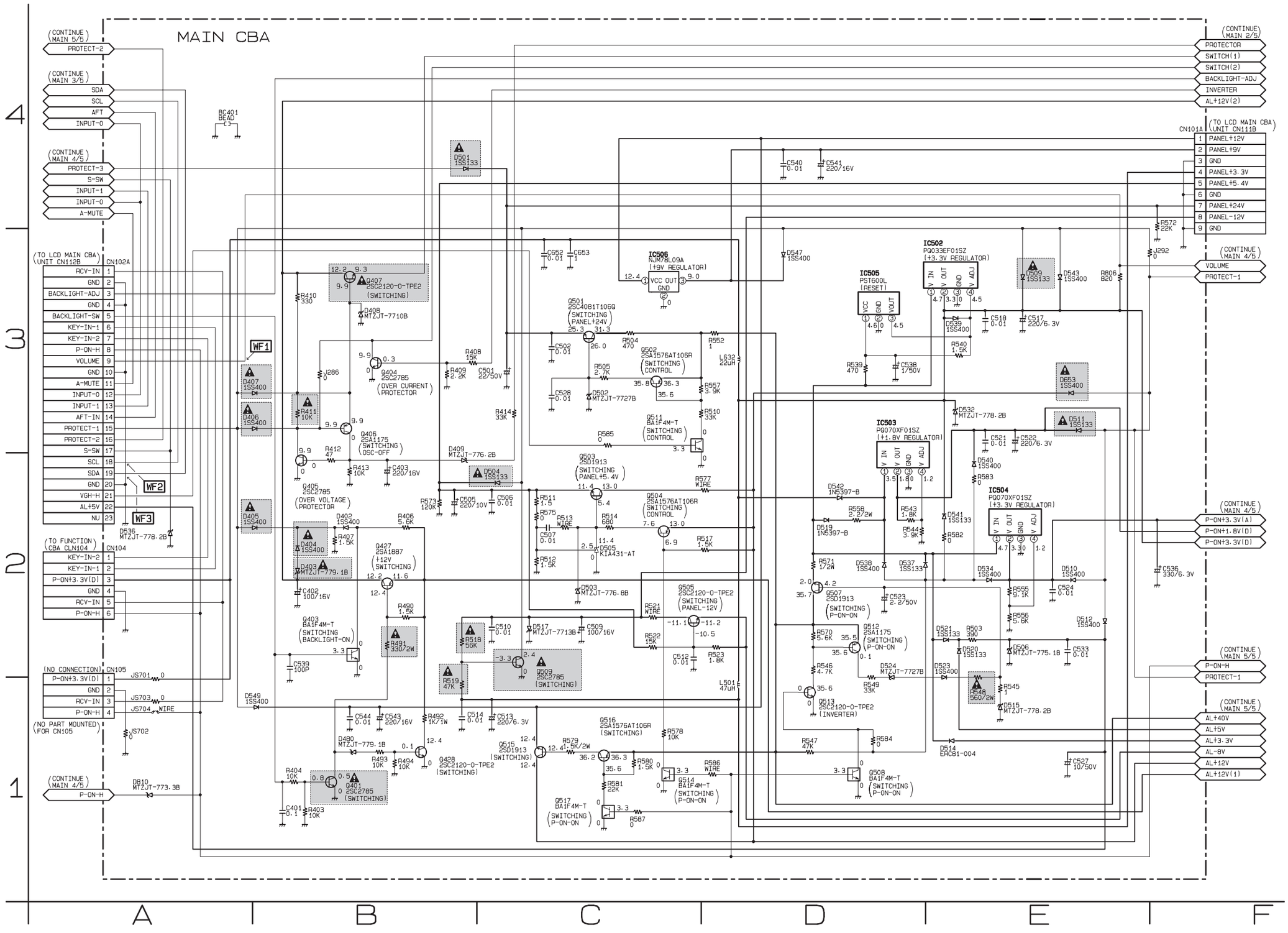
: Used to indicate a test point with a component lead on foil side.

: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

Main 1/5 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

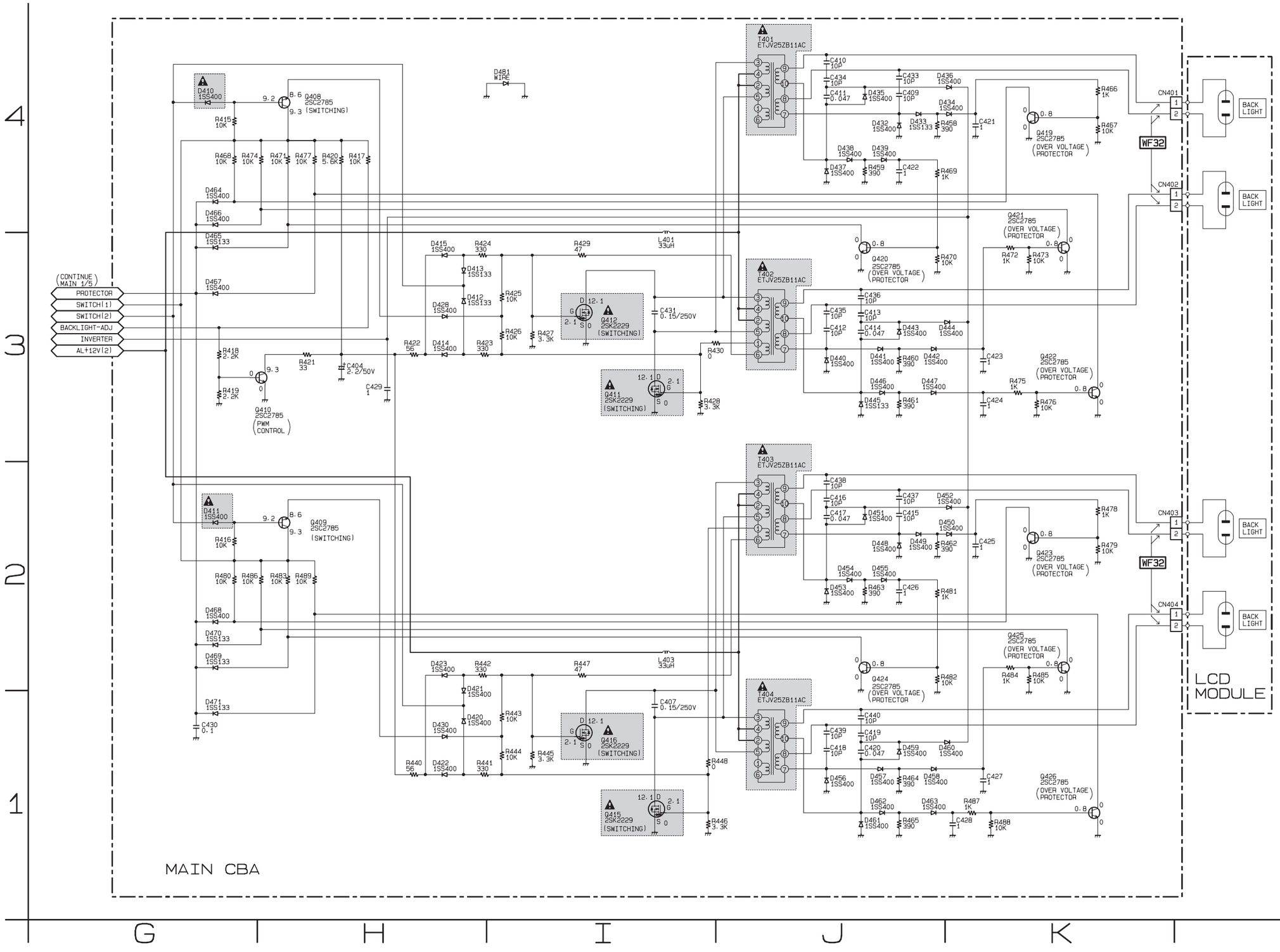


MAIN 1/5

Ref No.	Position
ICS	
IC502	E-3
IC503	D-3
IC504	E-2
IC505	D-3
IC506	C-3
TRANSISTORS	
Q401	B-1
Q403	B-2
Q404	B-3
Q405	B-2
Q406	B-3
Q407	B-3
Q427	B-2
Q428	B-1
Q501	C-3
Q502	C-3
Q503	C-2
Q504	C-2
Q505	C-2
Q507	D-2
Q508	D-1
Q509	C-2
Q511	C-3
Q512	D-2
Q513	D-1
Q514	C-1
Q515	C-1
Q516	C-1
Q517	C-1
CONNECTORS	
CN101A	F-4
CN102A	A-3
CN104	A-2
CN105	A-1

Main 2/5 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

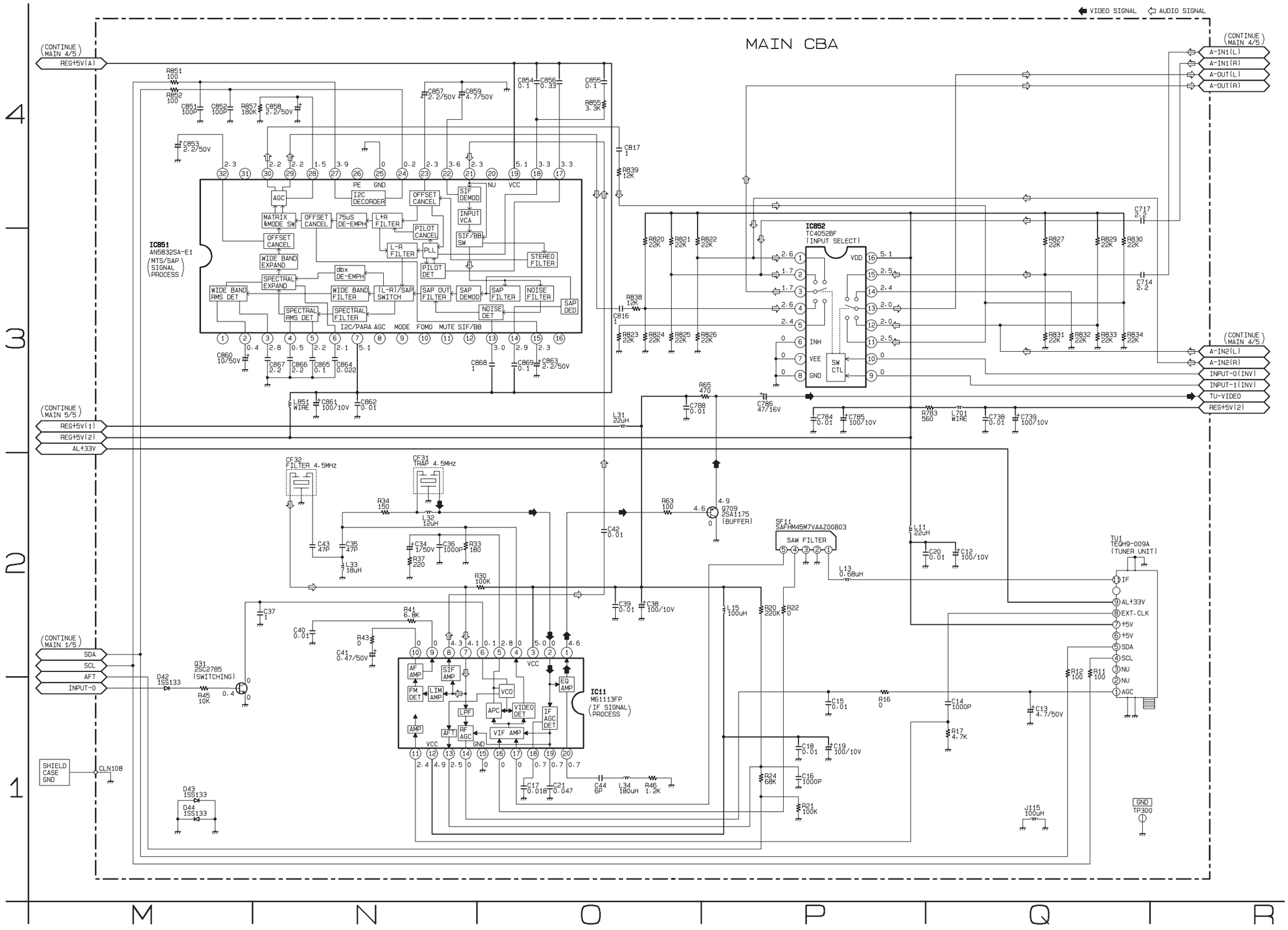


MAIN 2/5

Ref No.	Position
TRANSISTORS	
Q408	H-4
Q409	H-2
Q410	H-3
Q411	I-3
Q412	I-3
Q415	I-1
Q416	I-1
Q419	K-4
Q420	J-3
Q421	K-3
Q422	K-3
Q423	K-2
Q424	J-2
Q425	K-2
Q426	K-1
CONNECTORS	
CN401	K-4
CN402	K-4
CN403	K-2
CN404	K-2

Main 3/5 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

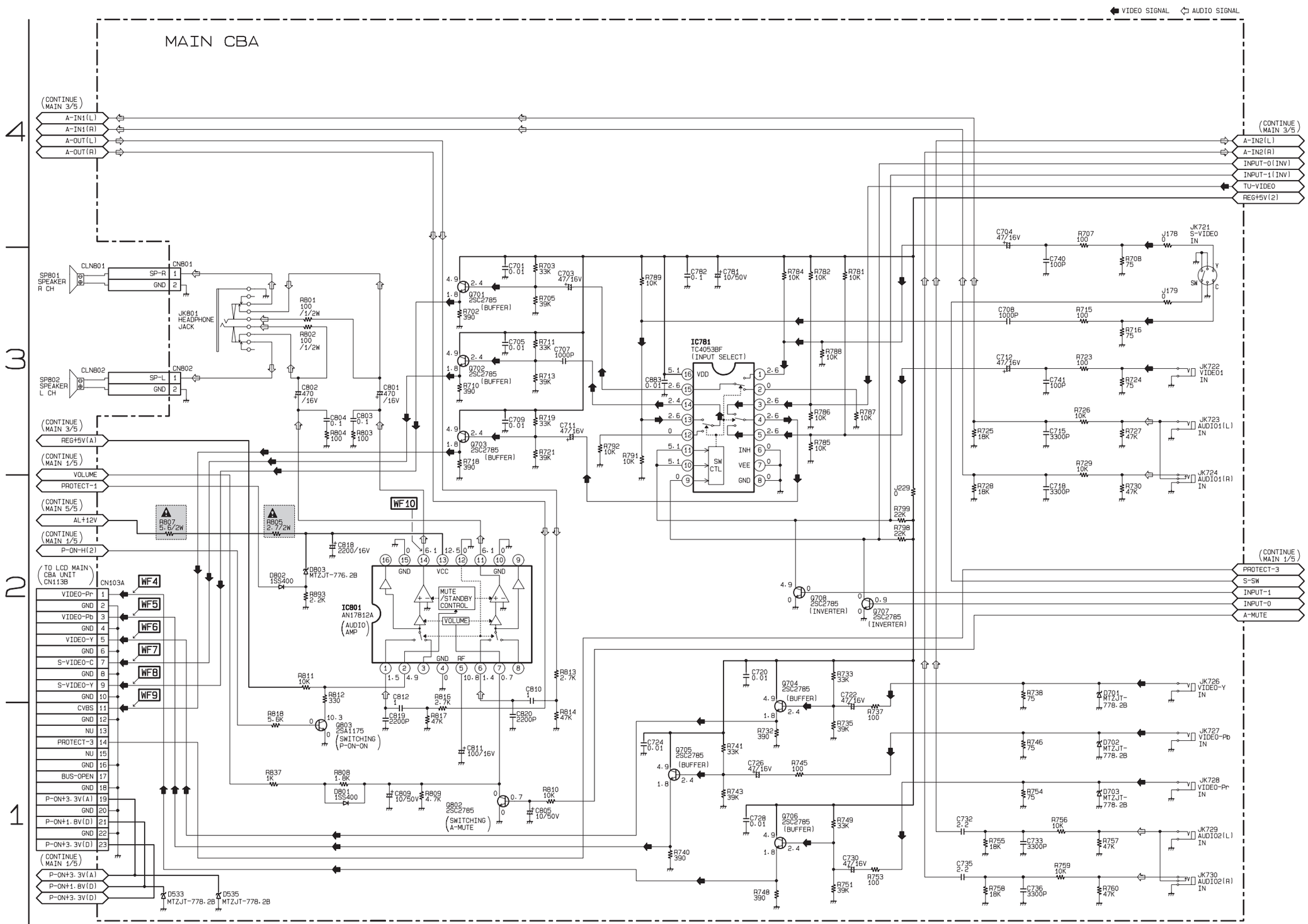


MAIN 3/5

Ref No.	Position
ICS	
IC11	O-1
IC851	M-3
IC852	P-3
TRANSISTORS	
Q31	M-1
Q709	P-2
TEST POINT	
TP300	Q-1

Main 4/5 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.



MAIN 4/5

Ref No.	Position
ICS	
IC781	U-3
IC801	T-2
TRANSISTORS	
Q701	T-3
Q702	T-3
Q703	T-3
Q704	V-1
Q705	U-1
Q706	V-1
Q707	V-2
Q708	V-2
Q802	T-1
Q803	T-1
CONNECTORS	
CN103A	S-2
CN801	S-3
CN802	S-3

Main 5/5 Schematic Diagram

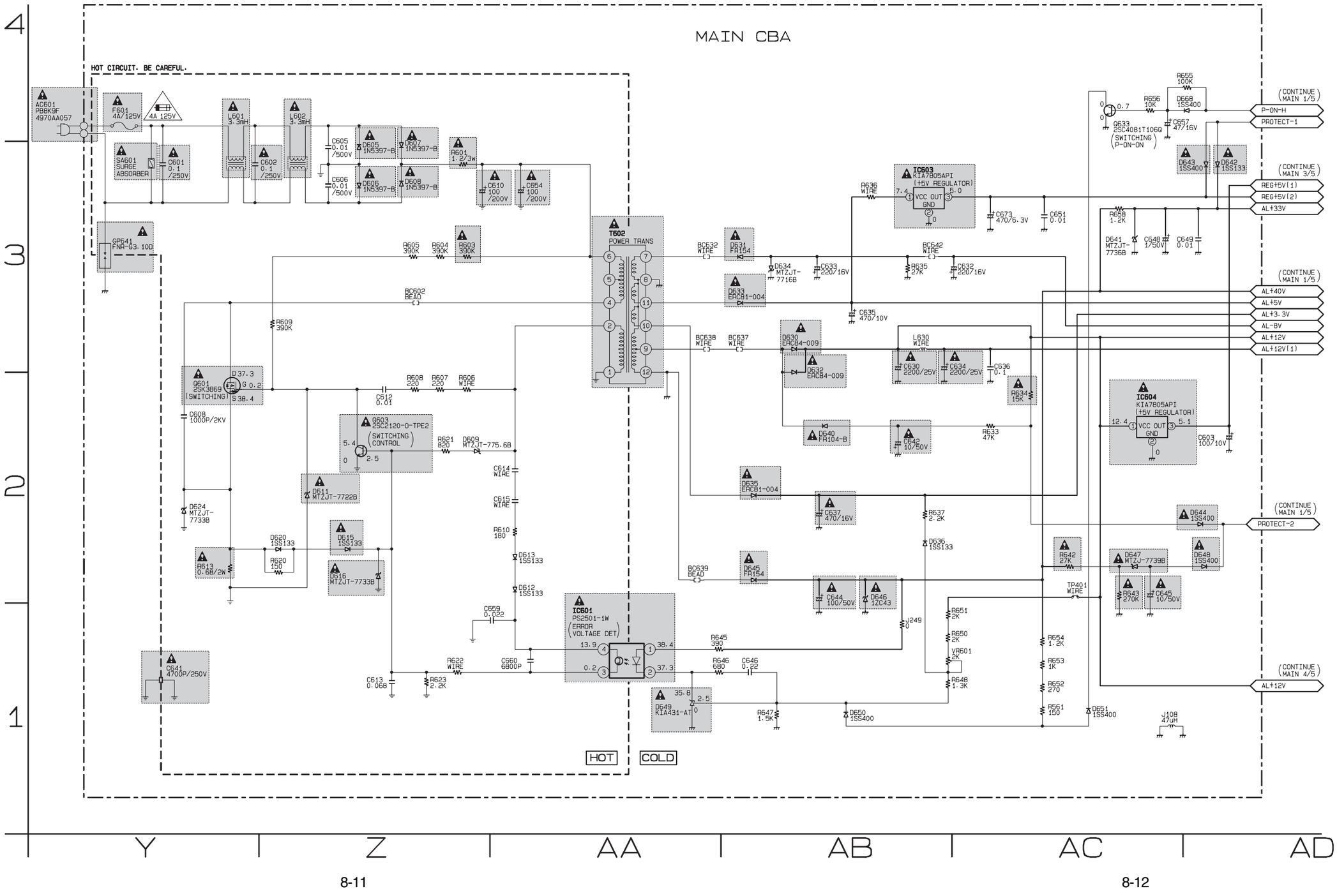
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

4A/125V

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

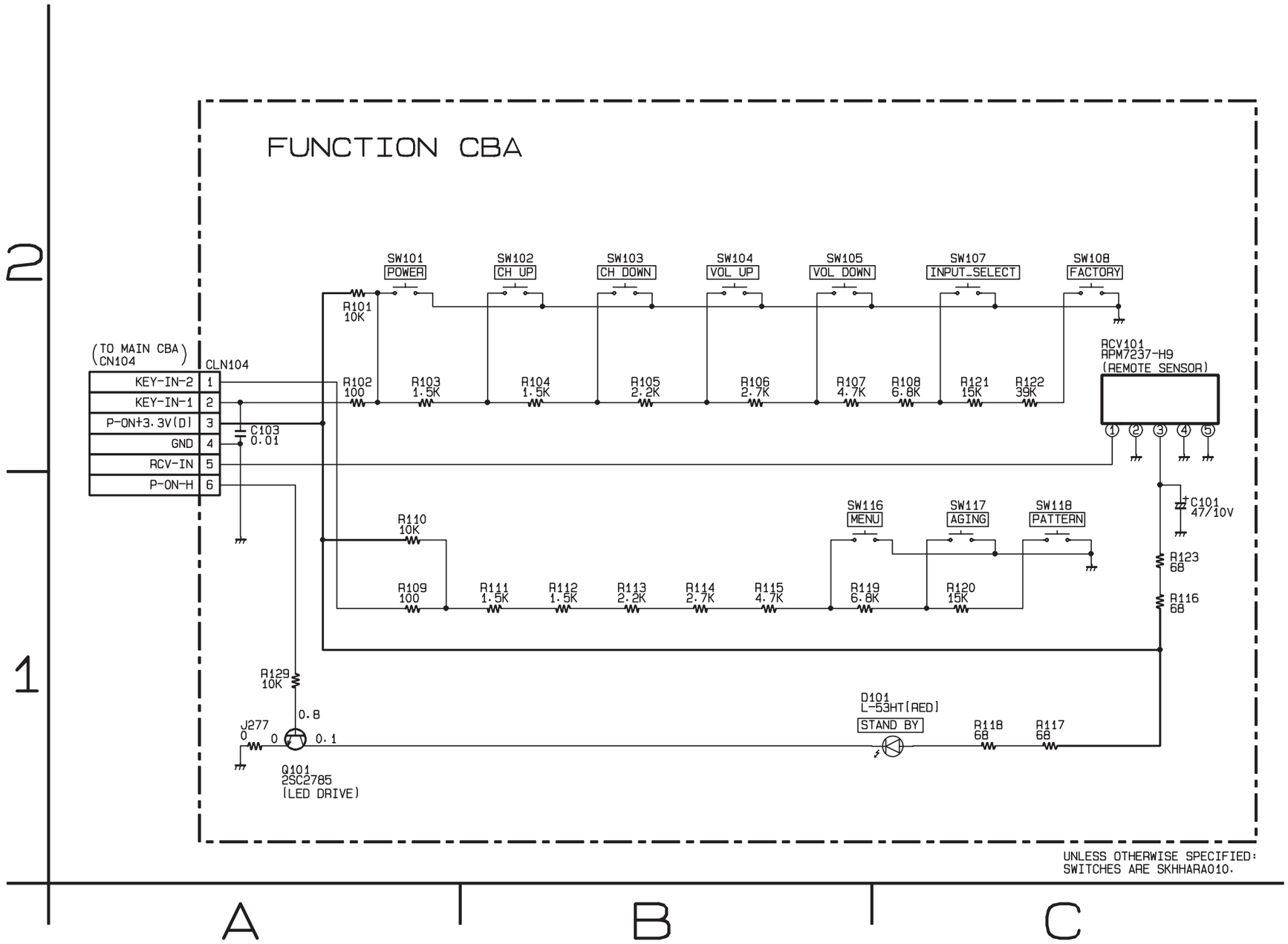


MAIN 5/5

Ref No.	Position
ICS	
IC601	AA-1
IC603	AB-3
IC604	AC-2
TRANSISTORS	
Q601	Y-2
Q603	Z-2
Q633	AC-4
VARIABLE RESISTOR	
VR601	AB-1
TEST POINT	
TP401	AC-2

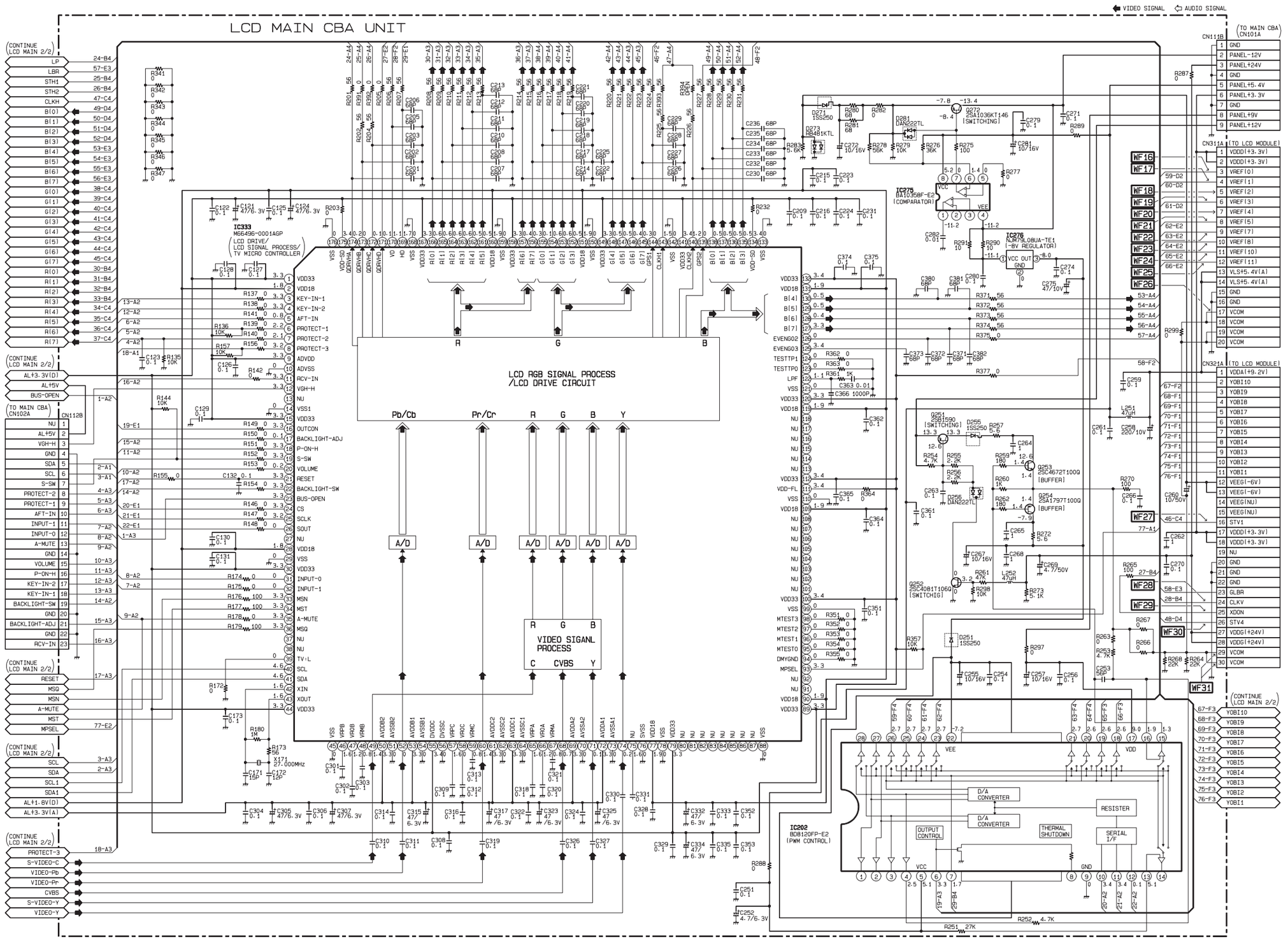
Function Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.



LCD Main 1/2 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

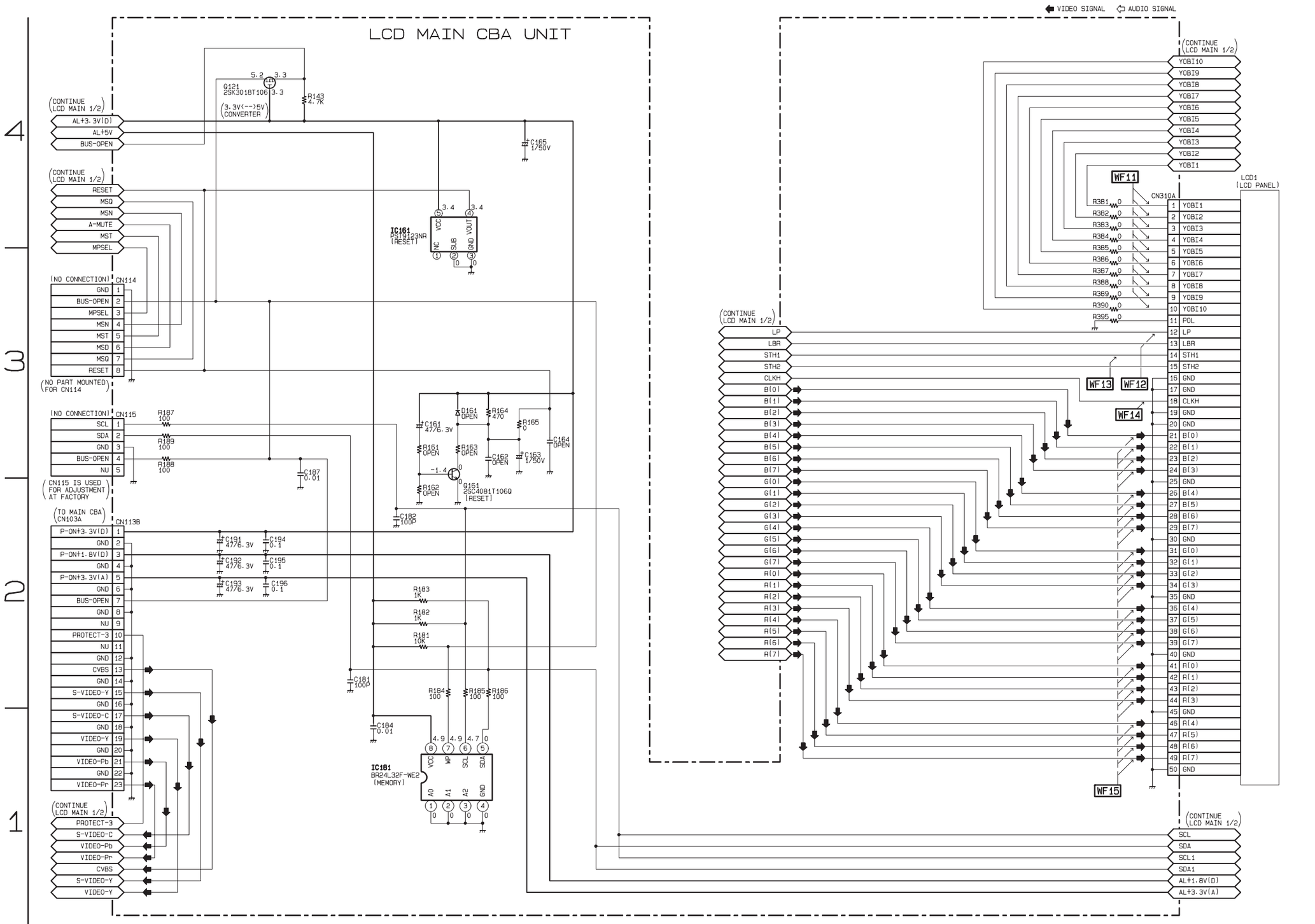


LCD 1/2

Ref No.	Position
ICS	
IC202	D-1
IC275	D-4
IC276	E-4
IC333	B-4
TRANSISTORS	
Q251	E-3
Q252	E-2
Q253	E-3
Q254	E-2
Q272	E-4
CONNECTORS	
CN111B	F-4
CN112B	A-3
CN311A	F-4
CN321A	F-3

LCD Main 2/2 Schematic Diagram

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.



LCD 2/2

Ref No.	Position
ICS	
IC161	H-4
IC181	H-1
TRANSISTORS	
Q121	G-4
Q161	H-2
CONNECTORS	
CN113B	G-2
CN114	G-3
CN115	G-3
CN310A	K-4

Main CBA Top View

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

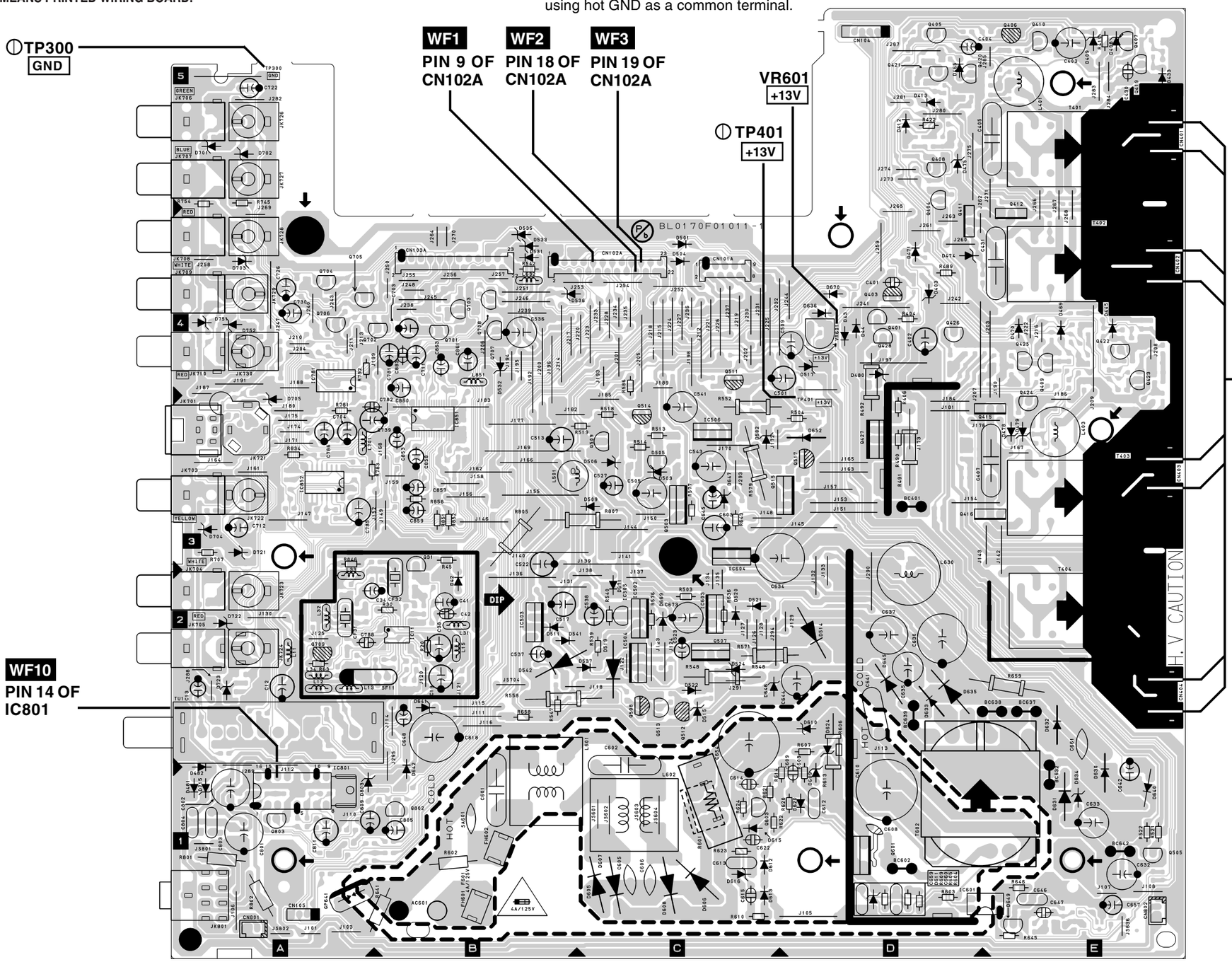
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

4A/125V

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED. ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.



Main CBA Bottom View

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

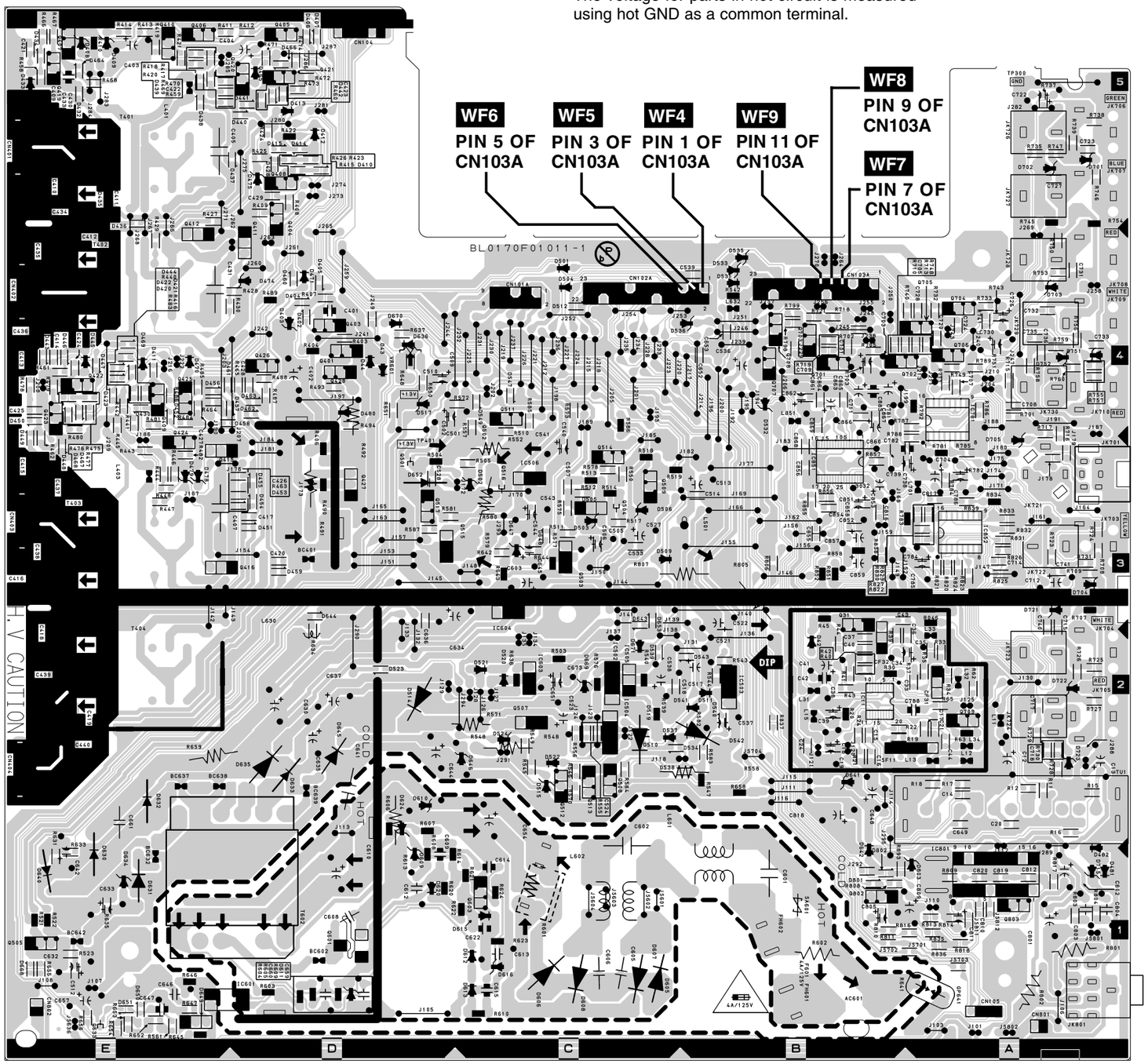
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

4A/125V

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 4A, 125V.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED. ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.

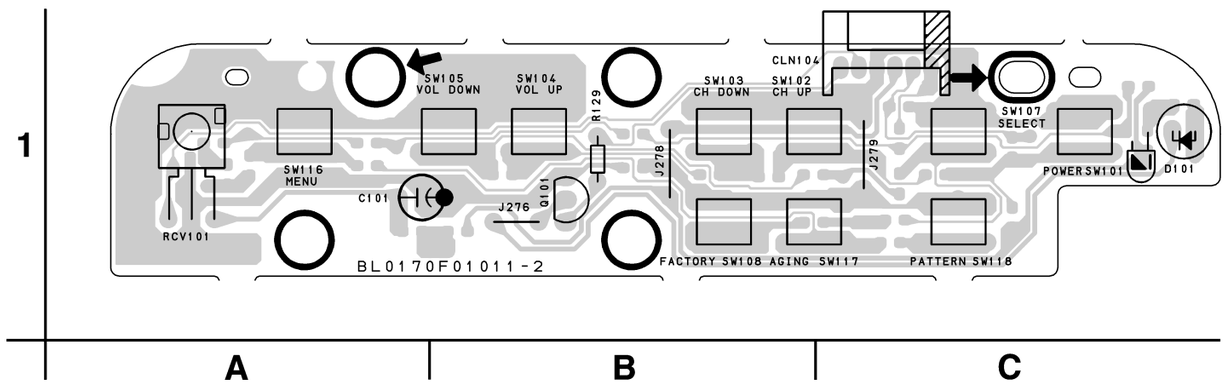


MAIN CBA

Ref No.	Position	Ref No.	Position
ICS		TRANSISTORS	
IC11	B-2	Q505	E-1
IC502	C-2	Q507	C-2
IC503	B-2	Q508	C-2
IC504	C-2	Q509	C-3
IC505	C-2	Q511	C-4
IC506	C-3	Q512	C-2
IC601	D-1	Q513	C-2
IC603	C-2	Q514	C-3
IC604	C-3	Q515	C-3
IC781	A-4	Q516	C-3
IC801	A-1	Q517	D-3
IC851	B-3	Q601	D-1
IC852	A-3	Q603	C-1
TRANSISTORS		Q633	E-1
Q31	B-3	Q701	B-4
Q401	D-4	Q702	A-4
Q403	D-4	Q703	B-4
Q404	D-5	Q704	A-4
Q405	D-5	Q705	A-4
Q406	E-5	Q706	A-4
Q407	E-5	Q707	B-4
Q408	D-5	Q708	B-4
Q409	E-4	Q709	A-2
Q410	E-5	Q802	B-1
Q411	D-4	Q803	A-1
Q412	E-5	CONNECTORS	
Q415	E-3	CN101A	C-4
Q416	D-3	CN102A	C-4
Q419	E-5	CN103A	B-4
Q420	D-5	CN104	D-5
Q421	D-5	CN401	E-5
Q422	E-4	CN402	E-4
Q423	E-4	CN403	E-3
Q424	E-4	CN404	E-2
Q425	E-4	CN801	A-1
Q426	D-4	CN802	E-1
Q427	D-3	VARIABLE RESISTOR	
Q428	D-4	VR601	D-4
Q501	D-3	TEST POINTS	
Q502	C-4	TP300	A-5
Q503	C-3	TP401	D-3
Q504	C-3		

Function CBA Top View

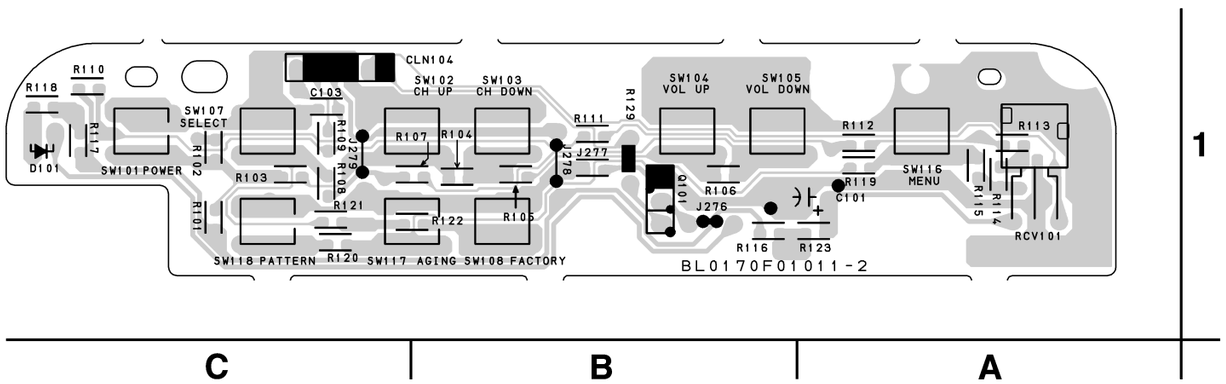
NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.



FUNCTION

Ref No.	Position
TRANSISTOR	
Q101	B-1
CONNECTOR	
CLN104A	C-1

Function CBA Bottom View



WAVEFORMS & VOLTAGE CHART

MAIN

CN101A

PIN NO.	Voltage / WF No.
1	12.4
2	9.0
3	0
4	3.3
5	5.0
6	0
7	25.2
8	-10.9
9	0

CN102A

PIN NO.	Voltage / WF No.
1	3.3
2	0
3	0
4	0
5	3.3
6	3.3
7	3.3
8	3.3
9	WF1
10	0
11	3.3
12	0.9
13	0
14	1.8
15	2.3
16	2.1
17	3.3
18	WF2
19	WF3
20	0
21	3.2
22	4.8
23	-----

CN103A

PIN NO.	Voltage / WF No.
1	WF4
2	0
3	WF5
4	0
5	WF6
6	0
7	WF7
8	0
9	WF8
10	0
11	FW9
12	0
13	-----
14	3.3
15	-----
16	0
17	-----
18	0
19	3.3
20	0
21	1.8
22	0
23	3.3

CN104

PIN NO.	Voltage / WF No.
1	3.3
2	3.3
3	3.3
4	0
5	0
6	0

CN105

PIN NO.	Voltage / WF No.
1	3.3
2	0
3	3.3
4	3.3

CN401

PIN NO.	Voltage / WF No.
1	WF32
2	WF32

CN402

PIN NO.	Voltage / WF No.
1	WF32
2	WF32

CN403

PIN NO.	Voltage / WF No.
1	WF32
2	WF32

CN404

PIN NO.	Voltage / WF No.
1	WF32
2	WF32

LCD MAIN

CN310A

PIN NO.	Voltage / WF No.
1	WF11
2	WF11
3	WF11
4	WF11
5	WF11
6	WF11
7	WF11
8	WF11
9	WF11
10	WF11
11	0
12	WF12
13	0
14	WF13
15	0
16	0
17	0
18	WF14
19	0
20	0
21	WF15
22	WF15
23	WF15
24	WF15
25	0
26	WF15
27	WF15
28	WF15
29	WF15
30	0
31	WF15
32	WF15
33	WF15
34	WF15
35	0
36	WF15
37	WF15
38	WF15
39	WF15
40	0
41	WF15
42	WF15
43	WF15
44	WF15
45	0
46	WF15
47	WF15
48	WF15
49	WF15
50	0

CN311A

PIN NO.	Voltage / WF No.
1	3.3
2	3.3
3	WF16
4	WF17
5	WF18
6	WF19
7	WF20
8	WF21
9	WF22
10	WF23
11	WF24
12	WF25
13	4.8
14	4.8
15	0
16	0
17	WF26
18	WF26
19	WF26
20	WF26

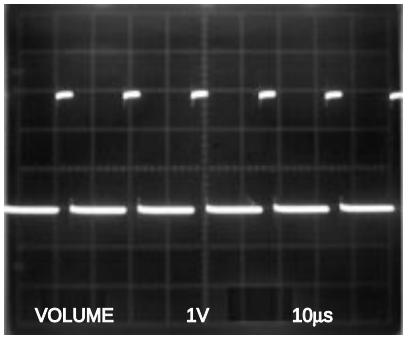
CN321A

PIN NO.	Voltage / WF No.
1	4.8
2	WF11
3	WF11
4	WF11
5	WF11
6	WF11
7	WF11
8	WF11
9	WF11
10	WF11
11	WF11
12	-10.5
13	-10.5
14	-----
15	-----
16	WF27
17	3.3
18	3.3
19	-----
20	0
21	0
22	0
23	0
24	WF28
25	WF29
26	WF30
27	25.6
28	25.6
29	WF31
30	WF31

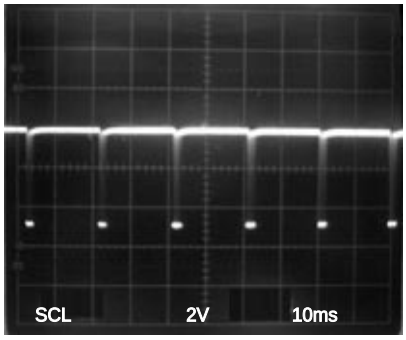
WF1 ~ WF10 = Waveforms to be observed at
Waveform check points.
(Shown in Schematic Diagram.)

Input: NTSC Color Bar Signal (with 1kHz Audio Signal)

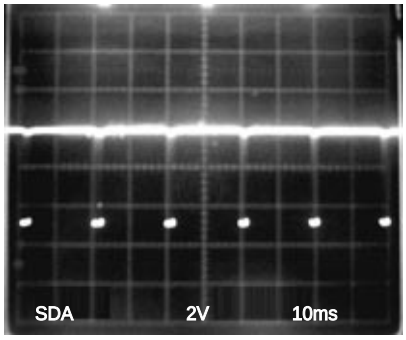
WF1 Pin 9 of CN102A (MAIN)
Pin 15 of CN112B (LCD MAIN)



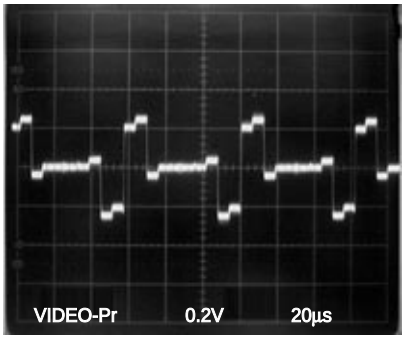
WF2 Pin 18 of CN102A (MAIN)
Pin 6 of CN112B (LCD MAIN)



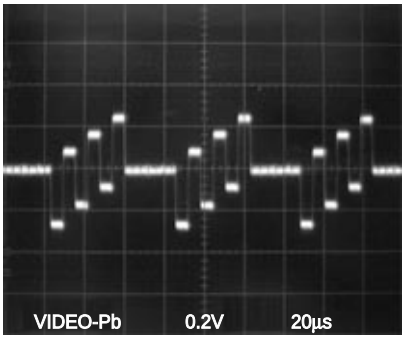
WF3 Pin 19 of CN102A (MAIN)
Pin 5 of CN112B (LCD MAIN)



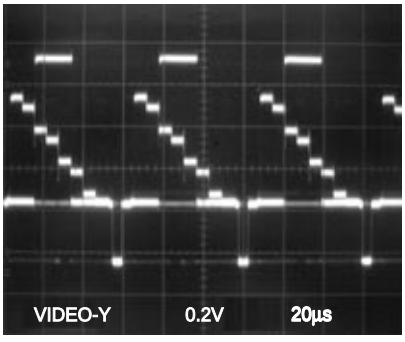
WF4 Pin 1 of CN103A (MAIN)
Pin 23 of CN113B (LCD MAIN)



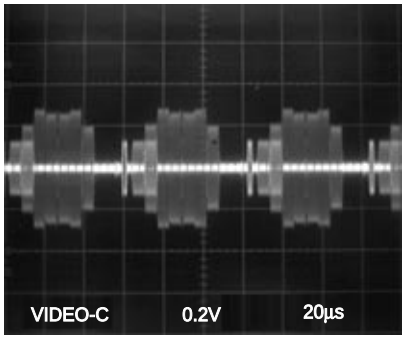
WF5 Pin 3 of CN103A (MAIN)
Pin 21 of CN113B (LCD MAIN)



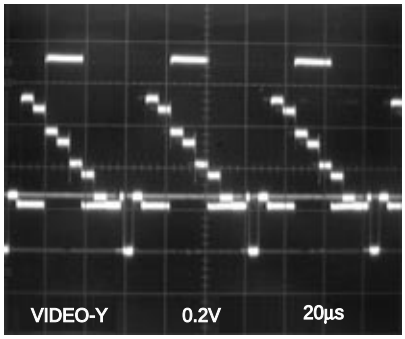
WF6 Pin 5 of CN103A (MAIN)
Pin 19 of CN113B (LCD MAIN)



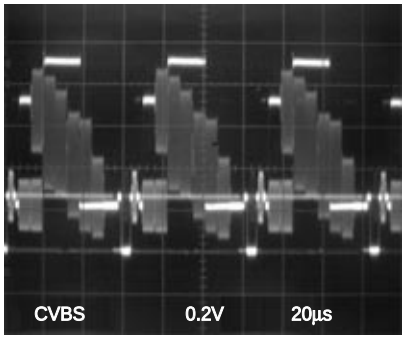
WF7 Pin 7 of CN103A (MAIN)
Pin 17 of CN113B (LCD MAIN)



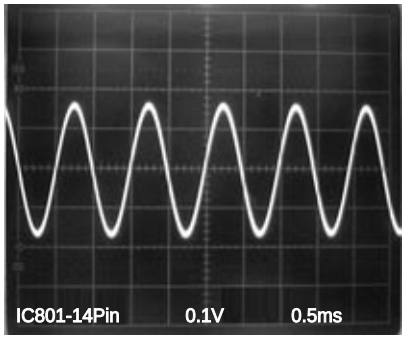
WF8 Pin 9 of CN103A (MAIN)
Pin 15 of CN113B (LCD MAIN)



WF9 Pin 11 of CN103A (MAIN)
Pin 13 of CN113B (LCD MAIN)

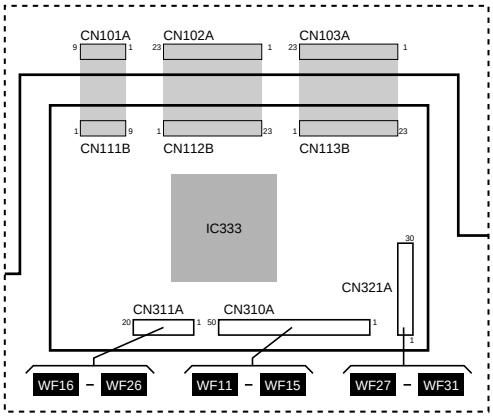


WF10 Pin 14 of IC801 (MAIN)



LCD CBA Measurement Point

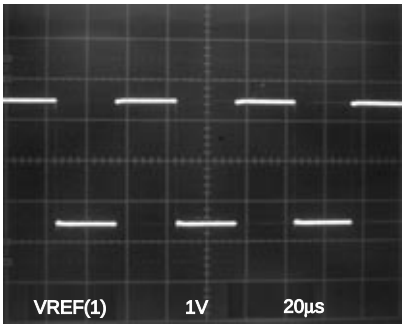
CAUTION!
Since the handling of CN310A,CN311A and CN321A tends to lead to destruction easily , be careful of it enough. (especially CN321A.)



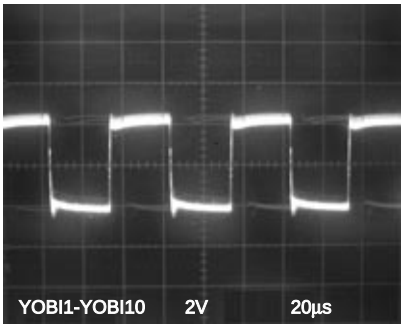
WF11 ~ WF20 = Waveforms to be observed at Waveform check points. (Shown in Schematic Diagram.)

Input: NTSC Color Bar Signal (with 1kHz Audio Signal)

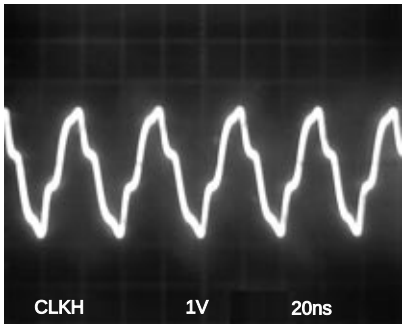
WF17 Pin 4 of CN311A (LCD MAIN)



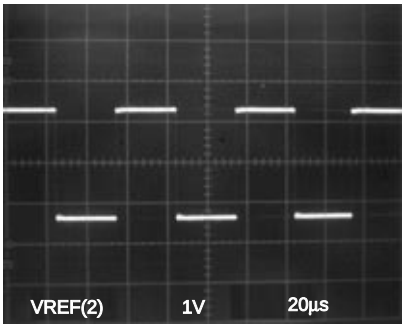
WF11 Pin 1 - 10 of CN310A (LCD MAIN)
Pin 11 - 2 of CN321A (LCD MAIN)



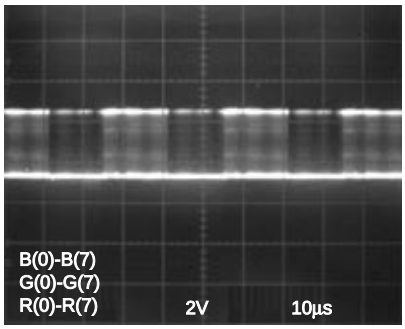
WF14 Pin 18 of CN310A (LCD MAIN)



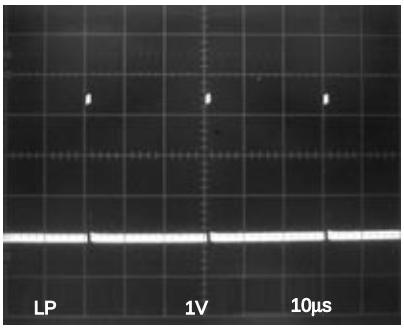
WF18 Pin 5 of CN311A (LCD MAIN)



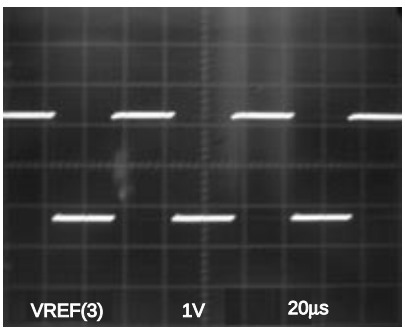
WF15 Pin 21 - 24 , 26 - 29 , 31 - 34 , 36 - 39 , 41 - 44 , 46 - 49 of CN310A (LCD MAIN)



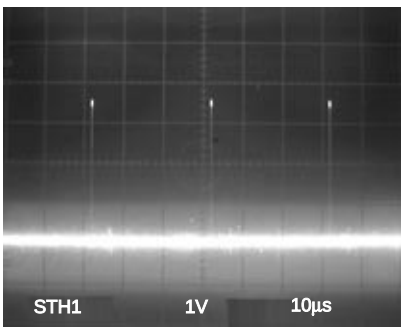
WF12 Pin 12 of CN310A (LCD MAIN)



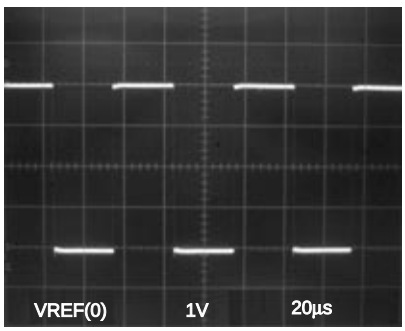
WF19 Pin 6 of CN311A (LCD MAIN)



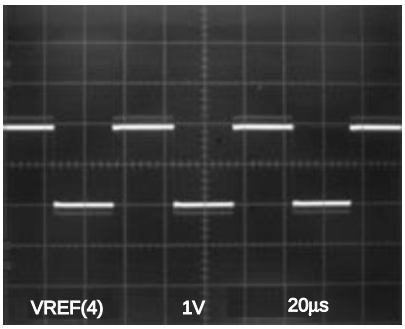
WF13 Pin 14 of CN310A (LCD MAIN)



WF16 Pin 3 of CN311A (LCD MAIN)



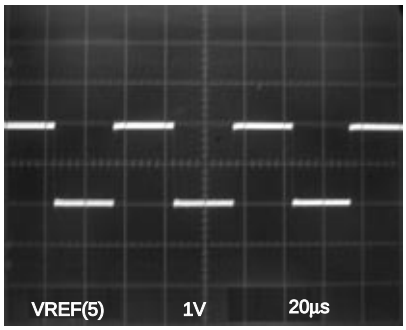
WF20 Pin 7 of CN311A (LCD MAIN)



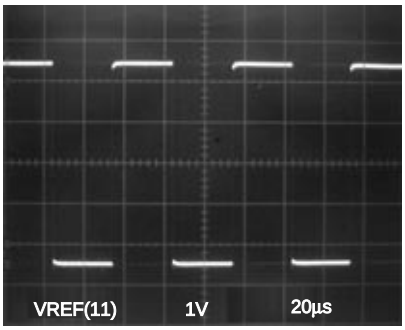
WF21 ~ WF32 = Waveforms to be observed at Waveform check points. (Shown in Schematic Diagram.)

Input: NTSC Color Bar Signal (with 1kHz Audio Signal)

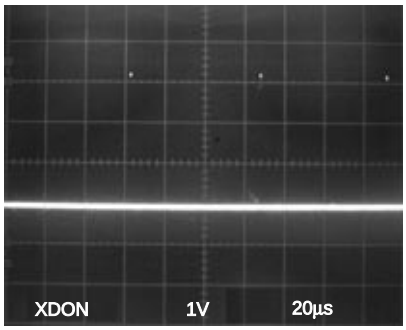
WF21 Pin 8 of CN311A (LCD MAIN)



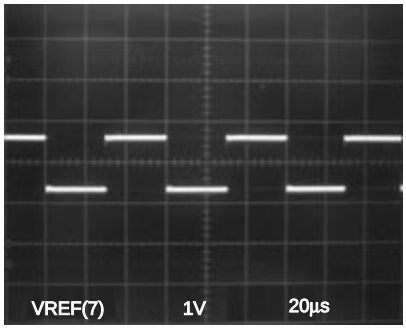
WF25 Pin 12 of CN311A (LCD MAIN)



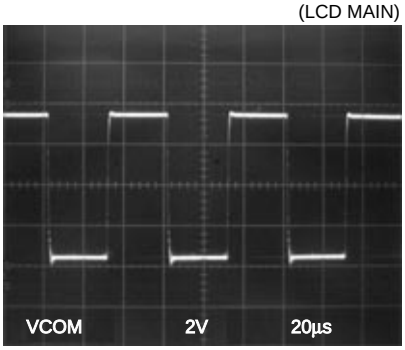
WF29 Pin 25 of CN321A (LCD MAIN)



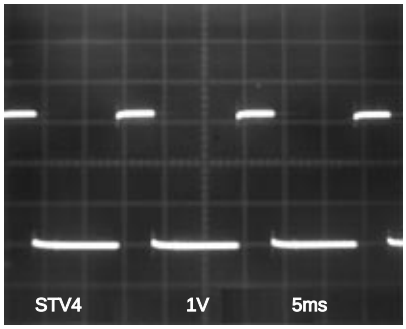
WF22 Pin 9 of CN311A (LCD MAIN)



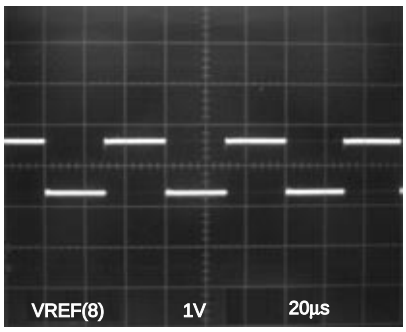
WF26 Pin 17 - 20 of CN311A (LCD MAIN)



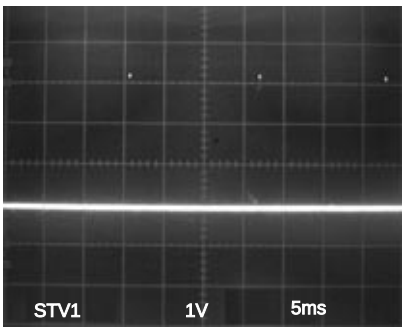
WF30 Pin 26 of CN321A (LCD MAIN)



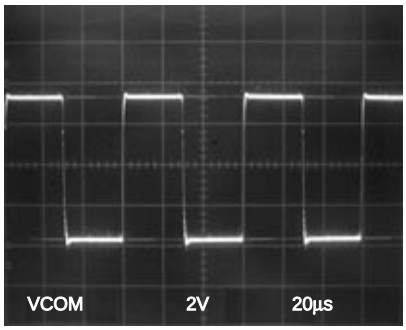
WF23 Pin 10 of CN311A (LCD MAIN)



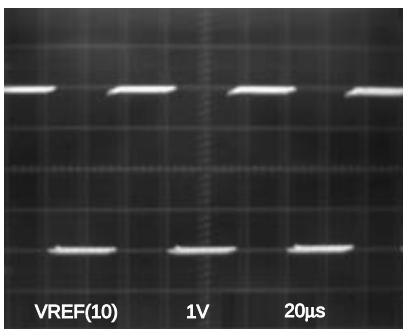
WF27 Pin 16 of CN321A (LCD MAIN)



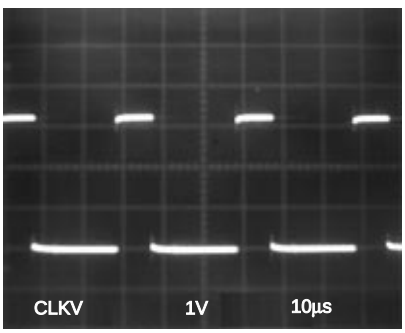
WF31 Pin 29 - 30 of CN321A (LCD MAIN)



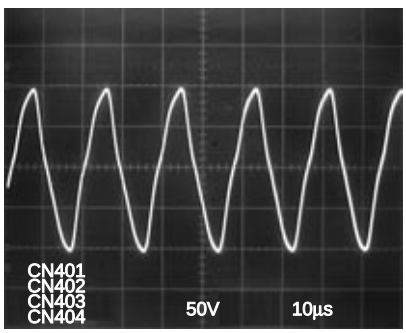
WF24 Pin 11 of CN311A (LCD MAIN)



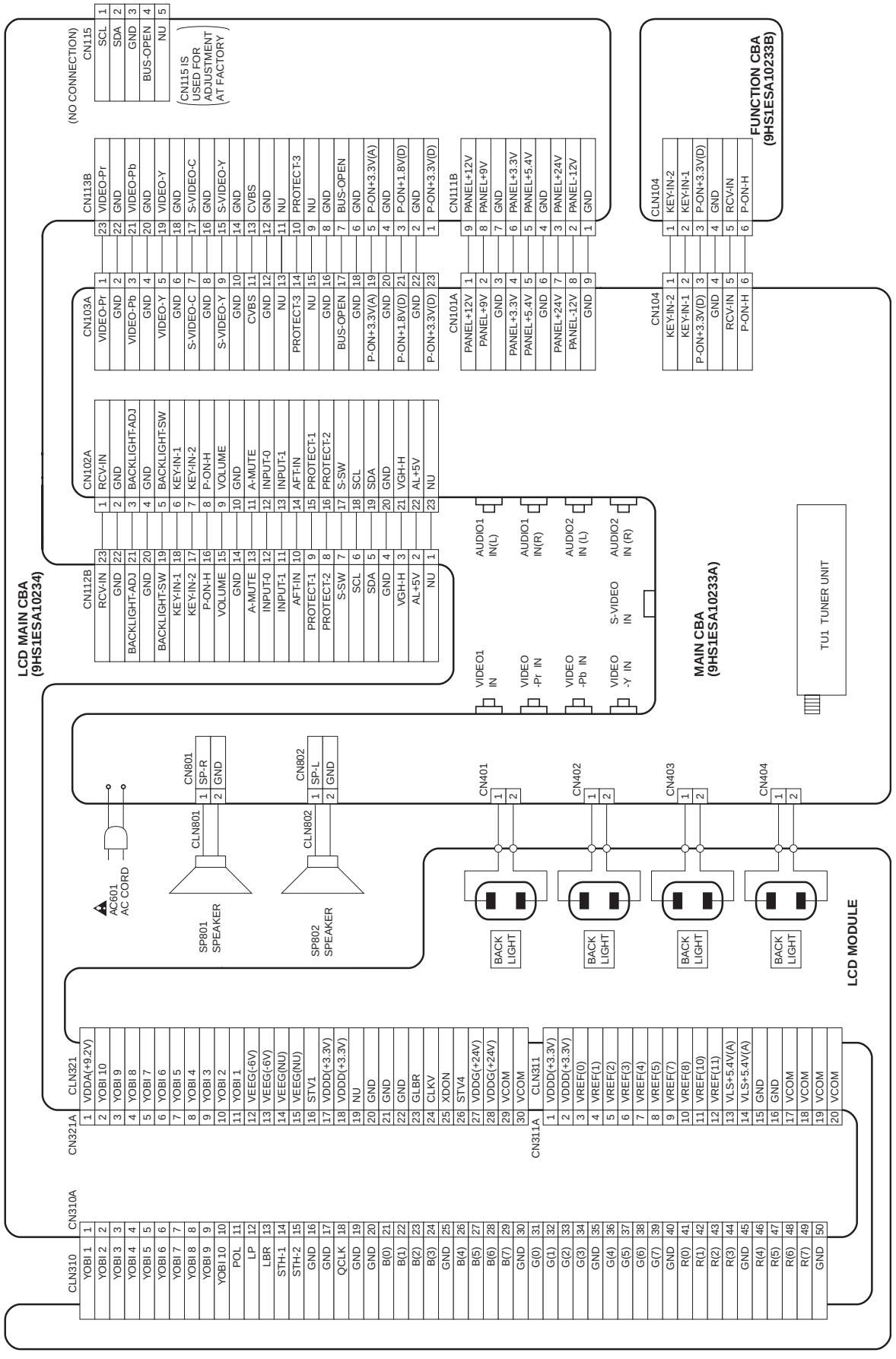
WF28 Pin 24 of CN321A (LCD MAIN)



WF32 Pin 1 - 2 of CN401,CN402, CN403,CN404 (MAIN CBA)



WIRING DIAGRAM



NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

IC PIN FUNCTION DESCRIPTIONS

IC11 (VIF/SIF)

Pin No.	Signal Name	Function
1	Video out	Video Output
2	Video in	Video det Input
3	Vcc	Power Supply
4	Video det out	Video det Output
5	APC	APC Filter
6	VCO_F/B	VCO Feedback
7	SIF in	SIF Input
8	SIF out	SIF Output
9	Audio out	Audio Output
10	Audio Level Cont.	AF Bypass
11	Ref Signal	Standard Frequency Input
12	Logic Vcc	Power Supply
13	AFT	AFT Output
14	RF AGC	RF AGC Output
15	GND	GND
16	VIF in 1	IF Input
17	VIF in 2	IF Input
18	IF AGC1	IF AGC Filter
19	IF AGC2	IF AGC Filter
20	EQ AMP F/B	Equalizer Feedback

IC502 (VOLTAGE REGULATOR)

Pin No.	Signal Name	Function
1	Vin	Input Power Supply
2	Vo	Output Power Supply
3	GND	GND
4	O	Control ON/OFF

IC503/IC504 (VOLTAGE REGULATOR)

Pin No.	Signal Name	Function
1	Vin	Input Power Supply
2	Vo	Output Power Supply
3	GND	GND
4	Vadj	Control Output Voltage

IC505 (PST600L)

Pin No.	Signal Name	Function
1	Vcc	Input Power Supply
2	GND	GND
3	Vout	Output Power Supply

IC506 (NJM78L09A)

Pin No.	Signal Name	Function
1	COMMON	GND
2	INPUT	Input Power Supply
3	OUTPUT	Output Power Supply

IC601 (PHOTOCOUPLER)

Pin No.	Signal Name	Function
1	Anode	Input Pulse
2	Cathode	Input Monitor
3	Emitter	Input Power Supply
4	Collector	Output Power Supply

IC603/IC604 (VOLTAGE REGULATOR)

Pin No.	Signal Name	Function
1	INPUT	Input Power Supply
2	COMMON(GND)	GND
3	OUTPUT	Output Power Supply

IC781 [TC4053BF(EL.N)]

Pin No.	Signal Name	Function
1	1Y	Video Signal Input
2	0Y	Video Signal Input
3	1Z	Video Signal Input
4	Z-COM	Video Signal Output
5	0Z	Video Signal Input
6	INH	GND
7	Vee	GND
8	Vss	GND
9	C	Switching Control

Pin No.	Signal Name	Function
10	B	Switching Control
11	A	Switching Control
12	0X	Video Signal Input
13	1X	Video Signal Input
14	X-COM	Video Signal Output
15	Y-Com	Video Signal Output
16	Vdd	Power Supply

IC801 (AN17812A)

Pin No.	Signal Name	Function
1	Ch1 IN A	Audio (R ch) Input
2	Mute/Standby	Mute Switching
3	Ch1 IN B	Not Used
4	Input GND	GND
5	RF	RF
6	Ch2 IN A	Audio (L ch) Input
7	Vol	Volume Control
8	Ch2 IN B	Not Used
9	Monitor2	Not Used
10	Power GND 2	GND
11	Ch2 Output	Audio (L ch) Output
12	INSW	GND
13	Vcc	Power Supply
14	Ch1 Output	Audio (R ch) Output
15	Power GND 1	GND
16	Monitor1	Not Used

IC851 (MTS DECORDER)

Pin No.	Signal Name	Function
1	NC	Not Used
2	WB TIME	Set Detection Recovery Time of Wide Expander Effective Value
3	WB DET	Input Detection Circuit of Wide Expander Effective Value
4	SPE TIME	Set Detection Recovery Time of Variable De-Emphasis Effective Value
5	SPE DET	Input Detection Circuit of Variable De-Emphasis Effective Value
6	SPE FIL	Adjust Variable De-Emphasis Level
7	I2C/PARA	Control Mode Switching
8	AGCSW	Not Used
9	MODE	Not Used
10	FOMO	Not Used
11	MUTE	Not Used
12	SIF/BB	Not Used
13	NOISE DET	Detect Noise of SAP Malfunction Protection Circuit
14	SAP DET	Detect Carrier Level of SAP Signal
15	L+R REF	Filter
16	NC	Not Used
17	PILOT DET	Detect Stereo Pilot Signal
18	PLL	Connect Stereo PLL Low Pass Filter
19	Vcc	Power Supply
20	NC	Not Used
21	INPUT	Input Composite Signal
22	SIRREF	Detect SIF Mode
23	STERO REF	Filter
24	SDA/SAPID	IIC Bus Data Input/Switch SAP
25	GND	GND
26	PE	Not Used
27	SCL/STID	IIC Bus Clock Input/Switch Stereo
28	AGC DET	Detect AGC Level
29	Rout	R-ch Line Out Output
30	Lout	L-ch Line Out Output
31	NC	Not Used
32	L-R REF	dbx Output

IC852 (SWITCHING)

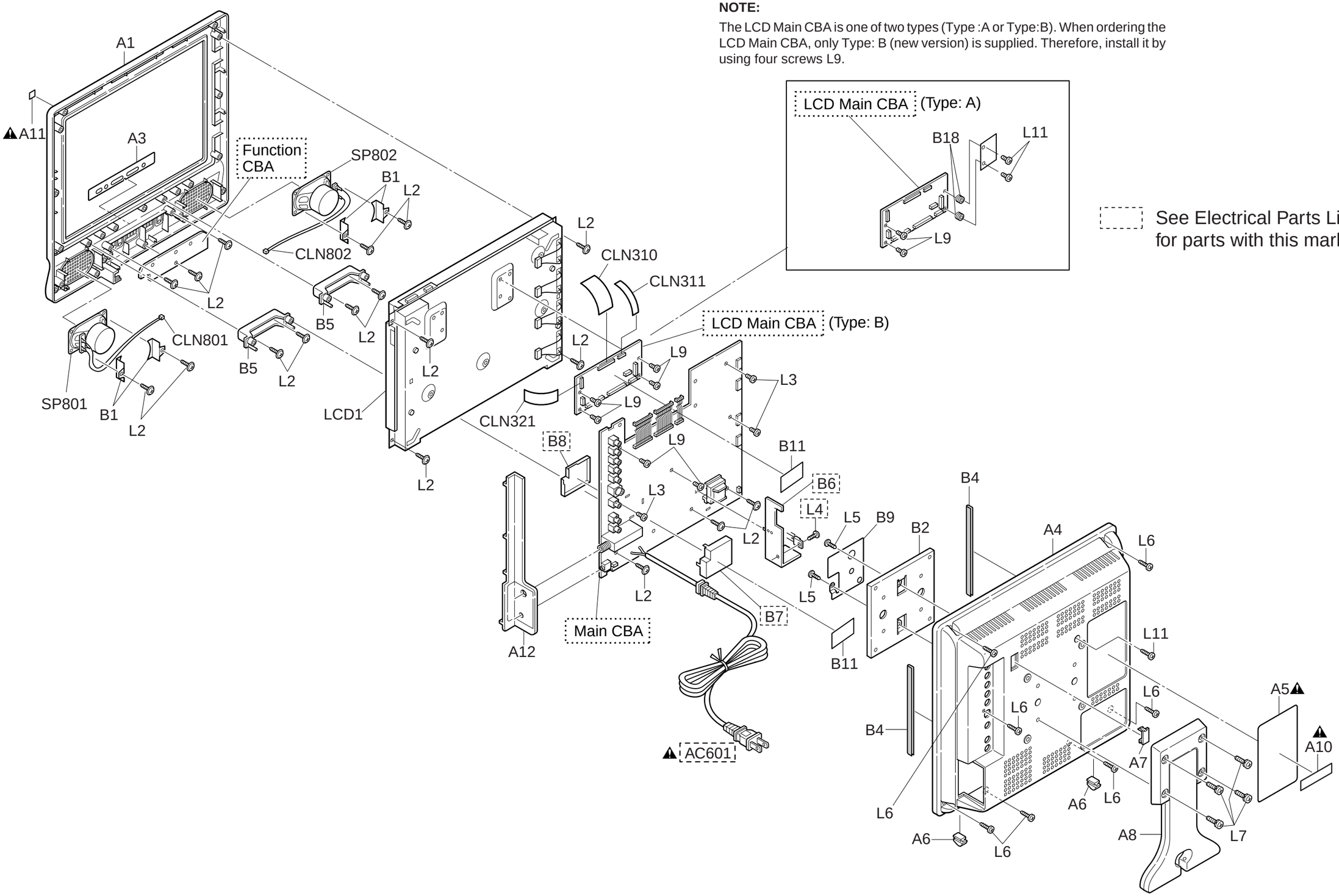
Pin No.	Signal Name	Function
1	0Y	Audio (R ch) Input
2	2Y	Audio (R ch) Input
3	Y-COM	Audio (R ch) Output
4	3Y	Audio (R ch) Input
5	1Y	Audio (R ch) Input
6	INH	Not Used

Pin No.	Signal Name	Function
7	Vee	Not Used
8	Vss	Not Used
9	B	Switching Control
10	A	Switching Control
11	3X	Audio (L ch) Input
12	0X	Audio (L ch) Input
13	X-COM	Audio (L ch) Output
14	1X	Audio (L ch) Input
15	2X	Audio (L ch) Input
16	Vdd	Power Supply

EXPLODED VIEWS

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

Cabinet

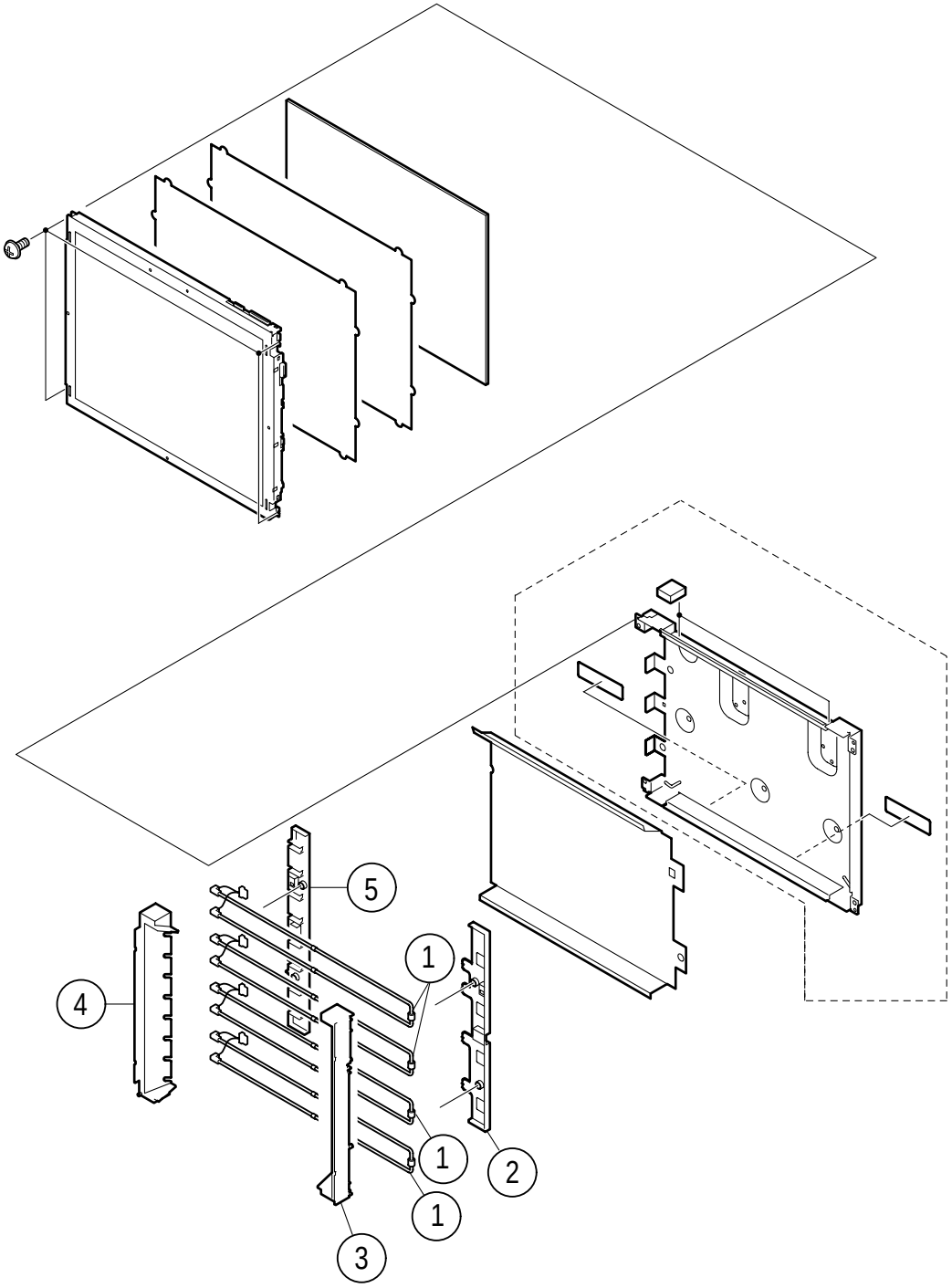


NOTE:

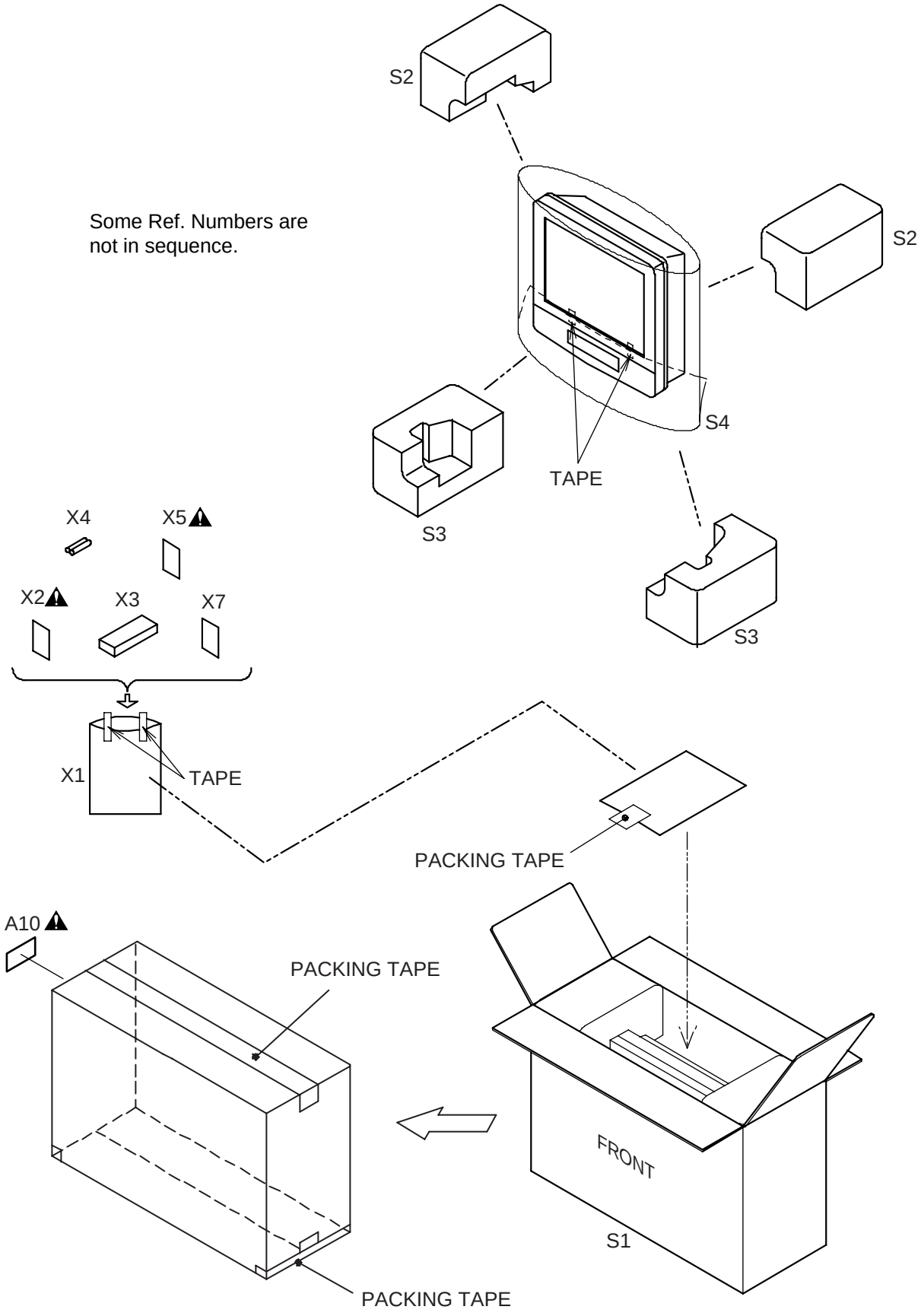
The LCD Main CBA is one of two types (Type :A or Type:B). When ordering the LCD Main CBA, only Type: B (new version) is supplied. Therefore, install it by using four screws L9.

See Electrical Parts List for parts with this mark.

LCD Panel Display



Packing


Some Ref. Numbers are not in sequence.
S2
S2
S4
TAPE
S3
S3
X4
X5
X2
X3
X7
X1
TAPE
PACKING TAPE
A10
PACKING TAPE
FRONT
S1
PACKING TAPE

MECHANICAL PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual ; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER 2. REF. NO.
3. PART NO. 4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

LISTE DES PIÈCES MÉCHANIQUES

CHANGE DES PIECES

Les pièces de rechange qui pr élelesentent ces caract éleristiques sp éleciales de s élecurit éle, sont identifi élees dans ce manuel : les pièces élelectriques qui pr élesentent ces particularit éles, sont rep éler élee par la marque ⚠ et sont hachur élees dans les listes de pièces et dans les diagrammes sch élematiques.

La substitution d'une pièce de rechange par une autre qui ne pr éLesente pas les m éoemes caract éLeristiques de s élecurit éle que la pièce recommand élee parl'usine et dans ce manuel de service, peut provoquer une éLelectrocution, un incendie ou toutautre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

1. NUMERO DU MODELE 2. NO. DE REF
3. NO. DE PIECE 4. DESCRIPTION

in **CANADA**: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100

Ref. No.	Part No.	Description
A1	9HS1EM020095	FRONT CABINET L0171UB
A3	9HS1EM320095	CONTROL PLATE L0270UA
A4	9HS1EM020052	REAR CABINET L0170UA
A5⚠	————	RATING LABEL L0171UB
A6	9HS1EM420247	RUBBER FOOT L0170UA
A7	9HS1EM420287	CONNECTER CAP L0170UA
A8	9HS1EMN20093	PHOTO STAND ASSEMBLY L0170UA
A10⚠	————	BARCODE LABEL(SET) L0171UB
A11⚠	————	ENERGY STAR LABEL L0170UA
A12	9HS1EM120038	13V JACK HOLDER L0170UA
B1	9HS1EM420278	SPEAKER HOLDER L0170UA
B2	9HS1EM220038	STAND HOLDER L0170UA
B4	9HS1EM420019	CLOTH(10X190XT0.3) L0200UA
B5	9HS1EM320078	13V PCB HOLDER L0170UA
B9	9HS1EM420428	INSULATION SHEET L0170UA
B11	9HS0EM408976	CLOTH(20X65XT0.3) L0336JG
B18	9HS1EM420522	RUBBER CUSHION
CLN310	9HSX1L0170-006	FFC WIRE 50PIN WX1L0170-006
CLN311	9HSX1L0170-004	FFC WIRE 20PIN WX1L0170-004
CLN321	9HSX1L0170-005	FFC WIRE 30PIN WX1L0170-005
CLN801	9HSX1L0170-001	SPEAKER WIRE ASSEMBLY WX1L0170-001
CLN802	9HSX1L0170-002	SPEAKER WIRE ASSEMBLY WX1L0170-002
L2	9HSGCMP3100	SCREW, P-TIGHT M3X10 WASHER HEAD+
L3	9HSGBMS3060	SCREW, S-TIGHT M3X6 BIND HEAD+
L5	9HSGBMP3080	P-TIGHT SCREW 3X8 BIND +
L6	9HSGBKP3100	SCREW, P-TIGHT 3X10 BIND HEAD+
L7	9HSGBKS4180	SCREW, S-TIGHT M4X18 BIND HEAD+
L9	9HS1EM420446	DOUBLE SEMS SCREW M3X8
L11	9HS1EM420498	DOUBLE SEMS SCREW M3X10 M3X10
LCD1	9HSLCD100SH002	LIQUID CRYSTAL PANEL 13" LQ130V3FZ50
SP801	9HSSD0807XQ002	SPEAKER S0407F10

Ref. No.	Part No.	Description
SP802	9HSSD0807XQ002	SPEAKER S0407F10
S1	9HS1EM320121	CARTON
S2	9HS1EM020053	STYROFOAM TOP L0170UA
S3	9HS1EM020054	STYROFOAM BOTTOM L0170UA
S4	9HS0EM301908	SET BAG L0110UA
X1	9HS0EM408420	BAG POLYETHYLENE 235X365XT0.03
X2⚠	9HS1EMN20180	OWNER'S MANUAL L0270UA"EN/FR"
X3	9HSREMT21SH001	REMOTE CONTROL RRMCGA336WJSA
X4	9HSB0M451T0001	DRY BATTERY R6P/2S
X5⚠	9HS1EMN20181	OWNER'S MANUAL SPANISH/WARRANTY
X7	9HS1EMN20157	QUESTIONNAIRE CARD L0170UA

LCD Panel Display

Ref. No.	Part No.	Description
1	KLMP-A048WJZZ	Lamp Unit, x4
2	LHLDZA429WJKZ	Lamp Holder-R (Bottom)
3	LHLDZA433WJKZ	Lamp Holder-R (Top)
4	LHLDZA434WJKZ	Lamp Holder-L (Top)
5	LHLDZA435WJKZ	Lamp Holder-L (Bottom)

ELECTRICAL PARTS LIST

PARTS REPLACEMENT

NOTE: CBA AND PWB MEANS PRINTED WIRING BOARD.

Replacement parts which have these special safety characteristics identified in this manual ; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER 2. REF. NO.
3. PART NO. 4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

LISTE DES PIÈCES ÉLECTRIQUES

CHANGE DES PIECES

REMARQUE : CBA ET PWB SIGNIFIENT “CARTE DE CIRCUITS IMPRIMES”.

Les pièces de rechange qui pr élelesentent ces caract éleristiques sp éleciales de s élecurit éle, sont identifi élees dans ce manuel : les pièces élelectriques qui pr élesentent ces particularit éles, sont rep éler élee par la marque ⚠ et sont hachur élees dans les listes de pièces et dans les diagrammes sch élematiques.

La substitution d'une pièce de rechange par une autre qui ne pr éLesente pas les m éoemes caract éLeristiques de s élecurit éle que la pièce recommand élee parl'usine et dans ce manuel de service, peut provoquer une éLelectrocution, un incendie ou toutautre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

1. NUMERO DU MODELE 2. NO. DE REF
3. NO. DE PIECE 4. DESCRIPTION

in **CANADA**: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100

PRINTED WIRING BOARD ASSEMBLYS

Ref. No.	Part No.	Description
	9HSL0170G04012	LCD MAIN CBA
	9HS1ESA10233	MAIN CBA + FUNCTION CBA
		Consists of the following
	9HS1ESA10233A	MAIN CBA
	9HS1ESA10233B	FUNCTION CBA

LCD MAIN CBA [9HSL0170G04012]

Ref. No.	Part No.	Description
CAPACITORS		
C121	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C122	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C123	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C124	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C125	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C126	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C127	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C128	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C129	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C130	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V

Ref. No.	Part No.	Description
C131	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C132	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C161	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47μ/6.3V M
C163	9HSA1J010SP062	CHIP ELECTROLYTIC CAP. 1μF/50V M
C165	9HSA1J010SP062	CHIP ELECTROLYTIC CAP. 1μF/50V M
C171	9HSHD1JJ3CH150	CHIP CERAMIC CAP. CH J 15pF/50V
C172	9HSHD1JJ3CH120	CHIP CERAMIC CAP. CH J 12pF/50V
C173	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C181	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C182	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C184	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V
C187	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V
C191	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47μ/6.3V M
C192	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47μ/6.3V M
C193	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47μ/6.3V M
C194	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C195	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C196	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C201	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C202	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C203	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C205	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C206	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C207	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C208	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C209	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C210	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C211	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C212	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C213	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C214	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C215	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C216	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C217	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C218	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C219	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C220	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C221	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C222	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C223	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C224	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C225	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C226	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C227	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C228	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C229	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C230	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C231	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V
C232	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C233	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C234	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C235	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C236	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C251	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C252	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47μ/6.3V M
C253	9HSHD1JJ3CH560	CHIP CERAMIC CAP. CH J 56pF/50V
C254	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C255	9HSA1C100SP062	CHIP E.C CHIP E.C 10μ/16V
C256	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C257	9HSA1C100SP062	CHIP E.C CHIP E.C 10μ/16V
C258	9HSA1A221SP012	CHIP ELECTROLYTIC CAP. 220μF/10V M
C259	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C260	9HSA1J100SP062	CHIP ELECTROLYTIC CAP. 10μF/50V M
C261	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C262	9HSHD1CK30B105	CHIP CERAMIC CAP. B K 1μF/16V
C263	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V
C264	9HSHD1CK30B105	CHIP CERAMIC CAP. B K 1μF/16V
C265	9HSHD1CK30B105	CHIP CERAMIC CAP. B K 1μF/16V
C266	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V

Ref. No.	Part No.	Description
C267	9HSA1C100SP062	CHIP E.C CHIP E.C 10µ/16V
C268	9HSHD1CK30B105	CHIP CERAMIC CAP. B K 1µF/16V
C269	9HSA1J4R7SP062	CHIP ELECTROLYTIC CAP. 4.7µF/50V
C270	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C271	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C272	9HSA1C100SP062	CHIP E.C CHIP E.C 10µ/16V
C274	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C275	9HSA1A470SP062	CHIP ELECTROLYTIC CAP. 47µF/10V
C279	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C280	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C281	9HSA1C100SP062	CHIP E.C CHIP E.C 10µ/16V
C282	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C301	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C302	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C303	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C304	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C305	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C306	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C307	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C308	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C309	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C310	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C311	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C312	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C313	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C314	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C315	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C316	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C317	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C318	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C319	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C320	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C321	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C322	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C323	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C324	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C325	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C326	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C327	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C328	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C329	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C330	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C331	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C332	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C333	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C334	9HSA0K470SP062	CHIP ELECTROLYTIC CAP. 47µ/6.3V M
C335	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C351	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C352	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C353	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C361	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C362	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C363	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C364	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C365	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C366	9HSHD1JK30B102	CHIP CERAMIC CAP.(1608) B K 1000pF/50V
C371	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C372	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C373	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C374	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C375	9HSHD1JZ30F104	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V
C380	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C381	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
C382	9HSHD1JJ3CH680	CHIP CERAMIC CAP.(1608) CH J 68pF/50V
CONNECTORS		
CN111B	9HSCTWD09TG003	FPC CONNECTOR 9P 127303109K3
CN112B	9HSCTWD23TG003	FPC CONNECTOR 23P 127303123K3
CN113B	9HSCTWD23TG003	FPC CONNECTOR 23P 127303123K3
CN115	9HS3PHD05JG002	CONNECTOR BASE 5P B5B-PH-SM3-TB

Ref. No.	Part No.	Description
CN310A	9HSC9SD50ER003	FPC/FFC CONNECTOR IMSA-9637S-50Y905
CN311A	9HSC9SD20ER003	FPC/FFC CONNECTOR IMSA-9637S-20Y905
CN321A	9HSC9SD30ER003	FPC FFC CONNECTOR IMSA-9637S-30Y905
DIODES		
D251	9HSD1Z001SS250	SWITCHING DIODE 1SS250
D255	9HSD1Z001SS250	SWITCHING DIODE 1SS250
D256	9HSD1Z00DAN222	SWITCHING DIODE DAN222 TL
D271	9HSD1Z001SS250	SWITCHING DIODE 1SS250
D273	9HSD1Z00RB481K	SHOTTKY DIODE RB481K TL
D281	9HSD1Z00DAN222	SWITCHING DIODE DAN222 TL
ICs		
IC161	9HSSBLA0TMM077	IC(RESET) PST9123NR
IC181	9HSSZBA0TRM067	IC EEPROM(32K) BR24L32F-WE2
IC202	9HSSZAA0TRM012	FLASH CONTROL IC FOR DSC BD8120FP-E2
IC275	9HSSMLA0TRM006	IC,OPERATIONNAL AMPLIFIER BA10358F-E2
IC276	9HSSZBA0TJR074	IC NJM79L08UA-TE1-#ZZZB
IC333	9HSSZAA0RHT048	TIMER MICON M66496-0001AGP
COILS		
L251	9HSLC470MTU038	CHIP INDUCTOR LB2012T470M
L252	9HSLC470MTU038	CHIP INDUCTOR LB2012T470M
TRANSISTORS		
Q121	9HSF1Z02SK3018	FET 2SK3018 T106
Q161	9HSQ1Q02SC4081	TRANSISTOR 2SC4081 T106 Q
Q251	9HSQ1Q2SB1590K	CHIP TRANSISTOR 2SB1590
Q252	9HSQ1Q02SC4081	TRANSISTOR 2SC4081 T106 Q
Q253	9HSQCQ02SC4672	CHIP TRANSISTOR 2SC4672T100Q
Q254	9HSQCQ02SA1797	CHIP TRANSISTOR 2SA1797T100Q
Q272	9HSQ8R2SA1036K	CHIP TRANSISTOR 2SA1036K(R) T146
RESISTORS		
R135	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R136	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R137	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R138	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R139	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R140	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R141	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R142	9HSRXAJR5Z0471	CHIP RES.(1608) 1/10W J 470Ω
R143	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R144	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R146	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R147	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R148	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R149	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R150	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R151	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R152	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R153	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R154	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R155	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R156	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R157	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R164	9HSRXAJR5Z0471	CHIP RES.(1608) 1/10W J 470Ω
R165	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R172	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R173	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R174	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R175	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R176	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R177	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R178	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R179	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R180	9HSRXAJR5Z0105	CHIP RES.(1608) 1/10W J 1MΩ
R181	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R182	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R183	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R184	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R185	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R186	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R187	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω

Ref. No.	Part No.	Description
R188	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R189	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R201	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R202	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R203	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R204	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R205	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R206	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R207	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R208	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R209	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R210	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R211	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R212	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R213	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R214	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R215	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R216	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R217	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R218	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R219	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R220	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R221	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R222	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R223	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R224	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R225	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R226	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R227	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R228	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R229	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R230	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R231	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R232	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R251	9HSRXAFR5H2702	CHIP RES.(1608) 1/10W F 27k Ω
R252	9HSRXAFR5H4701	CHIP RES.(1608) 1/10W F 4.7k Ω
R253	9HSRXAFR5H4701	CHIP RES.(1608) 1/10W F 4.7k Ω
R254	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R255	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R256	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R257	9HSRX2JR9Z05R6	CHIP RES 1/2W J 5.6Ω
R259	9HSRXAJR5Z0181	CHIP RES.(1608) 1/10W J 180Ω
R260	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R261	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R262	9HSRXAJR5Z0181	CHIP RES.(1608) 1/10W J 180Ω
R263	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R264	9HSRX8JR6Z0223	CHIP RES.(2125) 1/8W J 22k Ω
R265	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R266	9HSRX8JR6Z0000	CHIP RES.(2125) 1/8W 0Ω
R267	9HSRX8JR6Z0000	CHIP RES.(2125) 1/8W 0Ω
R268	9HSRX8JR6Z0223	CHIP RES.(2125) 1/8W J 22k Ω
R270	9HSRX2JR9Z0101	CHIP RES. 1/2W J 100Ω
R272	9HSRX2JR9Z05R6	CHIP RES 1/2W J 5.6Ω
R273	9HSRX2JR9Z0512	CHIP RES 1/2W J 5.1k Ω
R275	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R276	9HSRXAFR5H3602	CHIP RES.(1608) 1/10W F 36k Ω
R277	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R278	9HSRXAFR5H5602	CHIP RES.(1608) 1/10W F 56k Ω
R279	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R280	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R281	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R282	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R283	9HSRXAJR5Z0562	CHIP RES.(1608) 1/10W J 5.6k Ω
R287	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R288	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R289	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R290	9HSRXAJR5Z0100	CHIP RES.(1608) 1/10W J 10Ω
R291	9HSRXAJR5Z0100	CHIP RES.(1608) 1/10W J 10Ω
R297	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω

Ref. No.	Part No.	Description
R298	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R299	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R341	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R342	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R343	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R344	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R345	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R346	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R347	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R351	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R352	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R353	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R354	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R355	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R357	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R361	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R362	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R363	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R364	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R371	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R372	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R373	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R374	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R375	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R377	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R381	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R382	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R383	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R384	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R385	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R386	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R387	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R388	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R389	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R390	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R391	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R392	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R393	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R395	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
MISCELLANEOUS		
X171	9HSXC276CDS002	X'TAL SMD-49 27.000MHz

MAIN CBA + FUNCTION CBA [9HS1ESA10233]

Ref. No.	Part No.	Description
	9HS1ESA10233	MAIN CBA + FUNCTION CBA
		Consists of the following
	9HS1ESA10233A	MAIN CBA
	9HS1ESA10233B	FUNCTION CBA

MAIN CBA [9HS1ESA10233A]

Ref. No.	Part No.	Description
CAPACITORS		
C12	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C13	9HSE1JMASSL4R7	ELECTROLYTIC CAP. 4.7µF/50V M H7
C14	9HSHD1EJ3CH102	CHIP CERAMIC CAP. CH J 1000pF/25V
C15	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C16	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C17	9HSHD1JK30B183	CHIP CERAMIC CAP. B K 0.018µF/50V
C18	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C19	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C20	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C21	9HSHD1JK30B473	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V
C34	9HSE1JMASSL010	ELECTROLYTIC CAP. 1µF/50V M H7
C35	9HSHD1JJ3CH470	CHIP CERAMIC CAP.(1608) CH J 47pF/50V
C36	9HSHD1EJ3CH102	CHIP CERAMIC CAP. CH J 1000pF/25V

Ref. No.	Part No.	Description
C37	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C38	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C39	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C40	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C41	9HSE1JMASSLR47	ELECTROLYTIC CAP. 0.47µF/50V M H7
C42	9HSA1J103TU011	CERAMIC CAP.(AX) B K 0.01µF/50V
C43	9HSHD1JJ3CH470	CHIP CERAMIC CAP.(1608) CH J 47pF/50V
C44	9HSHD1JD3CH6R0	CHIP CERAMIC CAP. CH D 6pF/50V
C401	9HSA1J104TU011	CERAMIC CAP.(AX) B K 0.1µF/50V
C402	9HSE1CMASSL101	ELECTROLYTIC CAP. 100µF/16V M H7
C403	9HSE1CMASSL221	ELECTROLYTIC CAP. 220µF/16V M H7
C404	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C407	9HST2E154MS041	PP CAP. 0.15µF/250V J
C409	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C410	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C411	9HSHD1JK30B473	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V
C412	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C413	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C414	9HSHD1JK30B473	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V
C415	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C416	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C417	9HSHD1JK30B473	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V
C418	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C419	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C420	9HSHD1JK30B473	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V
C421	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C422	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C423	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C424	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C425	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C426	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C427	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C428	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C429	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C430	9HSA1J104TU011	CERAMIC CAP.(AX) B K 0.1µF/50V
C431	9HST2E154MS041	PP CAP. 0.15µF/250V J
C433	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C434	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C435	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C436	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C437	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C438	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C439	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C440	9HSA3F100NR060	CHIP CERAMIC CAP GRM42A5C3F100JW01L
C501	9HSE1JMASSL220	ELECTROLYTIC CAP. 22µF/50V M H7
C502	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C505	9HSE1AMASSL221	ELECTROLYTIC CAP. 220µF/10V M H7
C506	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C507	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C509	9HSE1CMASSL101	ELECTROLYTIC CAP. 100µF/16V M H7
C510	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C512	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C513	9HSE0KMASSL221	ELECTROLYTIC CAP. 220µF/6.3V M H7
C514	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C517	9HSE0KMASSL221	ELECTROLYTIC CAP. 220µF/6.3V M H7
C518	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C521	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C522	9HSE0KMASSL221	ELECTROLYTIC CAP. 220µF/6.3V M H7
C523	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C524	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C527	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C528	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C533	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C536	9HSE0KMASSL331	ELECTROLYTIC CAP. 330µF/6.3V M H7
C538	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C539	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C540	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C541	9HSE1CMASSL221	ELECTROLYTIC CAP. 220µF/16V M H7
C543	9HSE1CMASSL221	ELECTROLYTIC CAP. 220µF/16V M H7

Ref. No.	Part No.	Description
C544	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C601⚠	9HST2E104MS037	METALLIZED FILM CAP. 0.1µF/250V
C602⚠	9HST2E104MS037	METALLIZED FILM CAP. 0.1µF/250V
C603	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C605	9HSCD2JKP0B103	CERAMIC CAP. B K 0.01µF/500V
C606	9HSCD2JKP0B103	CERAMIC CAP. B K 0.01µF/500V
C608	9HSCD3DKP0B102	CERAMIC CAP. B K 1000pF/2KV
C610⚠	9HSE2DMZPDL101	ELECTROLYTIC CAP. 100µF/200V M
C612	9HSMA1JJS00103	FILM CAP.(P) 0.01µF/50V J
C613	9HSMA1JJS00683	FILM CAP.(P) 0.068µF/50V J
C614	9HSJW5.0T	PCB JUMPER D0.6-P5.0
C615	9HSJW5.0T	PCB JUMPER D0.6-P5.0
C630⚠	9HSE1EMZPDL222	ELECTROLYTIC CAP. 2200µF/25V M
C632	9HSE1CMASSL221	ELECTROLYTIC CAP. 220µF/16V M H7
C633	9HSE1CMASSL221	ELECTROLYTIC CAP. 220µF/16V M H7
C634⚠	9HSE1EMZPDL222	ELECTROLYTIC CAP. 2200µF/25V M
C635	9HSE1AMASTL471	ELECTROLYTIC CAP. 470µF/10V M
C636	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C637⚠	9HSE1CMASDL471	ELECTROLYTIC CAP. 470µF/16V M
C641⚠	9HSA2E472MR050	SAFETY CAP. 4700pF/250V KX
C642⚠	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C644⚠	9HSE1JMASTL101	ELECTROLYTIC CAP. 100µF/50V M
C645⚠	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C646	9HSMA1JJS00224	MYLAR CAP. 0.22µF/50V J
C648	9HSE1JMASSL010	ELECTROLYTIC CAP. 1µF/50V M H7
C649	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C651	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C652	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C653	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C654⚠	9HSE2DMZPDL101	ELECTROLYTIC CAP. 100µF/200V M
C657	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C659	9HSMA1JJS00223	FILM CAP.(P) 0.022µF/50V J
C660	9HSMA1JJS00682	FILM CAP.(P) 0.0068µF/50V J
C673	9HSE0KMASTL471	ELECTROLYTIC CAP. 470µF/6.3V M
C701	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C703	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C704	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C705	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C707	9HSHD1EJ3CH102	CHIP CERAMIC CAP. CH J 1000pF/25V
C708	9HSHD1EJ3CH102	CHIP CERAMIC CAP. CH J 1000pF/25V
C709	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C711	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C712	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C714	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C715	9HSHD1JK30B332	CHIP CERAMIC CAP.(1608) B K 3300pF/50V
C717	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C718	9HSHD1JK30B332	CHIP CERAMIC CAP.(1608) B K 3300pF/50V
C720	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C722	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C724	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C726	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C728	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C730	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C732	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C733	9HSHD1JK30B332	CHIP CERAMIC CAP.(1608) B K 3300pF/50V
C735	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C736	9HSHD1JK30B332	CHIP CERAMIC CAP.(1608) B K 3300pF/50V
C738	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C739	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C740	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C741	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C781	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C782	9HSA1J104TU011	CERAMIC CAP.(AX) B K 0.1µF/50V
C784	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C785	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C786	9HSE1CMASSL470	ELECTROLYTIC CAP. 47µF/16V M H7
C788	9HSCA1EZTFZ103	CERAMIC CAP.(AX) F Z 0.01µF/25V
C801	9HSE1CMASDL471	ELECTROLYTIC CAP. 470µF/16V M
C802	9HSE1CMASDL471	ELECTROLYTIC CAP. 470µF/16V M

Ref. No.	Part No.	Description
C803	9HSMA1JJS00104	FILM CAP.(P) 0.1µF/50V J
C804	9HSMA1JJS00104	FILM CAP.(P) 0.1µF/50V J
C805	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C809	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C810	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C811	9HSE1CMASSL101	ELECTROLYTIC CAP. 100µF/16V M H7
C812	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C816	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C817	9HSHD1AZ30F105	CHIP CERAMIC CAP. F Z 1µF/10V
C818	9HSE1CMZPDL222	ELECTROLYTIC CAP. 2200µF/16V M
C819	9HSHD1JK30B222	CHIP CERAMIC CAP. B K 2200pF/50V
C820	9HSHD1JK30B222	CHIP CERAMIC CAP. B K 2200pF/50V
C851	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C852	9HSHD1JJ3CH101	CHIP CERAMIC CAP.(1608) CH J 100pF/50V
C853	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C854	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C855	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C856	9HSHD1AK30B334	CHIP CERAMIC CAP.(1608) B K 0.33µF/10V
C857	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C858	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C859	9HSE1JMASSL4R7	ELECTROLYTIC CAP. 4.7µF/50V M H7
C860	9HSE1JMASSL100	ELECTROLYTIC CAP. 10µF/50V M H7
C861	9HSE1AMASSL101	ELECTROLYTIC CAP. 100µF/10V M H7
C862	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V
C863	9HSE1JMASSL2R2	ELECTROLYTIC CAP. 2.2µF/50V M H7
C864	9HSHD1JK30B223	CHIP CERAMIC CAP.(1608) B K 0.022µF/50V
C865	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C866	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C867	9HSHD1AZ30F225	CHIP CERAMIC CAP. F Z 2.2µF/10V
C868	9HSHD1CK30B105	CHIP CERAMIC CAP. B K 1µF/16V
C869	9HSHD1JK30B104	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V
C883	9HSCA1EZTFZ103	CERAMIC CAP.(AX) F Z 0.01µF/25V
CONNECTORS		
CN104	9HS3PHC06JG001	PH CONNECTOR, TOP 6P B6B-PH-K-S
CN401	9HSB17D02AP001	BACK LIGHT CONNECTOR 1717369-1
CN402	9HSB17D02AP001	BACK LIGHT CONNECTOR 1717369-1
CN403	9HSB17D02AP001	BACK LIGHT CONNECTOR 1717369-1
CN404	9HSB17D02AP001	BACK LIGHT CONNECTOR 1717369-1
CN801	9HS383C02UG002	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000
CN802	9HS383C02UG002	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000
CN101A	9HS3TWA09TG001	TWG CONNECTOR 09P TWG-P09P-A1
CN102A	9HS3TWA23TG001	TWG CONNECTOR 23P TWG-P23P-A1
CN103A	9HS3TWA23TG001	TWG CONNECTOR 23P TWG-P23P-A1
DIODES		
D42	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D43	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D44	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D402	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D403	9HSDTB0MTZJ9R1	ZENER DIODE MTZJT-779.1B
D404⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D405⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D406⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D407⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D408	9HSDTB00MTZJ10	ZENER DIODE MTZJT-7710B
D409	9HSDTB0MTZJ6R2	ZENER DIODE MTZJT-776.2B
D410⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D411⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D412	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D413	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D414	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D415	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D420	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D421	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D422	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D423	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D428	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D430	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D432	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D433	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)

Ref. No.	Part No.	Description
D434	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D435	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D436	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D437	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D438	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D439	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D440	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D441	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D442	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D443	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D444	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D445	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D446	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D447	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D448	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D449	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D450	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D451	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D452	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D453	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D454	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D455	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D456	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D457	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D458	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D459	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D460	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D461	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D462	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D463	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D464	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D465	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D466	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D467	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D468	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D469	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D470	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D471	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D480	9HSDTB0MTZJ9R1	ZENER DIODE MTZJT-779.1B
D481	9HSJW5.0T	PCB JUMPER D0.6-P5.0
D501⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D502	9HSDTB00MTZJ27	ZENER DIODE MTZJT-7727B
D503	9HSDTB0MTZJ6R8	ZENER DIODE MTZJT-776.8B
D504⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D505	9HSSZLA0TJY001	IC:SHUNT REGULATOR KIA431-AT
D506	9HSDTB0MTZJ5R1	ZENER DIODE MTZJT-775.1B
D509⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D510	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D511⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D512	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D514	9HSDPZERC81004	SCHOTTKY BARRIER DIODE ERC81-004
D515	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D517	9HSDTB00MTZJ13	ZENER DIODE MTZJT-7713B
D519	9HSDLZ001N5397	DIODE 1N5397-B
D520	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D521	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D523	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D524	9HSDTB00MTZJ27	ZENER DIODE MTZJT-7727B
D532	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D533	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D534	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D535	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D536	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D537	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D538	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D539	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D540	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D541	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D542	9HSDLZ001N5397	DIODE 1N5397-B

Ref. No.	Part No.	Description
D543	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D547	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D549	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D605⚠	9HSDLZ001N5397	DIODE 1N5397-B
D606⚠	9HSDLZ001N5397	DIODE 1N5397-B
D607⚠	9HSDLZ001N5397	DIODE 1N5397-B
D608⚠	9HSDLZ001N5397	DIODE 1N5397-B
D609	9HSDTB0MTZJ5R6	ZENER DIODE MTZJT-775.6B
D611⚠	9HSDTB00MTZJ22	ZENER DIODE MTZJT-7722B
D612	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D613	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D615⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D616⚠	9HSDTB00MTZJ33	ZENER DIODE MTZJT-7733B
D620	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D624	9HSDTB00MTZJ33	ZENER DIODE MTZJT-7733B
D630⚠	9HSDLZERC84009	SCHOTTKY BARRIER DIODE ERC84-009
D631⚠	9HSDLZ000FR154	DIODE FR154
D632⚠	9HSDLZERC84009	SCHOTTKY BARRIER DIODE ERC84-009
D633⚠	9HSDPZERA81004	SCHOTTKY BARRIER DIODE ERA81-004
D634	9HSDTB00MTZJ16	ZENER DIODE MTZJT-7716B
D635⚠	9HSDPZERC81004	SCHOTTKY BARRIER DIODE ERC81-004
D636	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D640	9HSDLZ000FR104	DIODE FR104-B
D641	9HSDTB00MTZJ36	ZENER DIODE MTZJT-7736B
D642⚠	9HSDTZ001SS133	SWITCHING DIODE 1SS133(T-77)
D643⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D644⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D645⚠	9HSDLZ000FR154	DIODE FR154
D646⚠	9HSDQZ0001ZC43	DIODE 1ZC43
D647⚠	9HSDTB00MTZJ39	ZENER DIODE MTZJT-7739B
D648⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D649⚠	9HSSZLA0TJY001	IC:SHUNT REGULATOR KIA431-AT
D650	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D651	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D653⚠	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D668	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D701	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D702	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D703	9HSDTB0MTZJ8R2	ZENER DIODE MTZJT-778.2B
D801	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D802	9HSD1Z001SS400	SWITCHING DIODE 1SS400
D803	9HSDTB0MTZJ6R2	ZENER DIODE MTZJT-776.2B
D810	9HSDTB0MTZJ3R3	ZENER DIODE MTZJT-773.3B
ICs		
IC11	9HSSZBA0SHT019	IC:VIF/SIF M61113FP
IC502	9HSSZBA0SSH014	VOLTAGE REGULATOR PQ033EF01SZ
IC503	9HSSZBA0SSH026	VOLTAGE REGULATOR PQ070XF01SZ
IC504	9HSSZBA0SSH026	VOLTAGE REGULATOR PQ070XF01SZ
IC505	9HSSBLA0TMM018	IC PST600L
IC506	9HSSBLA0ZJR024	IC NJM78L09
IC601⚠	9HSPEW0PS25011	PHOTOCOUPLER PS2501-1W
IC603⚠	9HSSBBA0SJY011	VOLTAGE REGULATOR KIA7805API
IC604	9HSSBBA0SJY011	VOLTAGE REGULATOR KIA7805API
IC781	9HSSZBA0TTS131	IC TC4053BF(EL.N)
IC801	9HSSZBA0SMS017	IC AN17812A
IC851	9HSSZBA0TMS003	IC:MTS DECORDER AN5832SA-E1
IC852	9HSSZBA0TTS096	IC:SWITCHING TC4052BF(EL)
COILS		
L11	9HSLARKBSTU220	INDUCTOR 22µH-K-5FT
L13	9HSLAXJATTUR68	INDUCTOR 0.68µH-J-26T
L15	9HSLAXJATTU101	INDUCTOR 100µH-J-26T
L31	9HSLAXJATTU220	INDUCTOR 22µH-J-26T
L32	9HSLAXJATTU120	INDUCTOR 12µH-J-26T
L33	9HSLAXJATTU180	INDUCTOR 18µH-J-26T
L34	9HSLAXJATTU181	INDUCTOR 180µH-J-26T
L401	9HSLC150MMS003	CHOKE COIL ELC10D150EM
L403	9HSLC150MMS003	CHOKE COIL ELC10D150EM
L501	9HSLBD00PKV007	CHOKE COIL 47µH-K
L601⚠	9HSLBG00ZTU012	LINE FILTER TLF14CB3321R0

Ref. No.	Part No.	Description
L602⚠	9HSLBG00ZTU012	LINE FILTER TLF14CB3321R0
L630	9HSJW7.5T	PCB JUMPER D0.6-P7.5
L632	9HSLAXJATTU220	INDUCTOR 22μH-J-26T
L701	9HSJW5.0T	PCB JUMPER D0.6-P5.0
L851	9HSJW5.0T	PCB JUMPER D0.6-P5.0
TRANSISTORS		
Q31	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q401⚠	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q403	9HSQSZ00BA1F4M	RES. BUILT-IN TRANSISTOR BA1F4M-T
Q404	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q405	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q406	9HSQSF02SA1175	TRANSISTOR 2SA1175(F)
Q407⚠	9HSQS002SC2120	TRANSISTOR 2SC2120-O-TPE2
Q408	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q409	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q410	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q411⚠	9HSFVZ2SK2229Q	FET 2SK2229(TP,Q)
Q412⚠	9HSFVZ2SK2229Q	FET 2SK2229(TP,Q)
Q415⚠	9HSFVZ2SK2229Q	FET 2SK2229(TP,Q)
Q416⚠	9HSFVZ2SK2229Q	FET 2SK2229(TP,Q)
Q419	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q420	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q421	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q422	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q423	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q424	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q425	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q426	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q427	9HSQWZ02SA1887	TRANSISTOR 2SA1887
Q428	9HSQS002SC2120	TRANSISTOR 2SC2120-O-TPE2
Q501	9HSQ1Q02SC4081	TRANSISTOR 2SC4081 T106 Q
Q502	9HSQ1R2SA1576A	TRANSISTOR 2SA1576A T106R
Q503	9HS2SD1913R***	TRANSISTOR 2SD1913(R)
Q504	9HSQ1R2SA1576A	TRANSISTOR 2SA1576A T106R
Q505	9HSQS002SC2120	TRANSISTOR 2SC2120-O-TPE2
Q507	9HS2SD1913R***	TRANSISTOR 2SD1913(R)
Q508	9HSQSZ00BA1F4M	RES. BUILT-IN TRANSISTOR BA1F4M-T
Q509⚠	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q511	9HSQSZ00BA1F4M	RES. BUILT-IN TRANSISTOR BA1F4M-T
Q512	9HSQSF02SA1175	TRANSISTOR 2SA1175(F)
Q513	9HSQS002SC2120	TRANSISTOR 2SC2120-O-TPE2
Q514	9HSQSZ00BA1F4M	RES. BUILT-IN TRANSISTOR BA1F4M-T
Q515	9HS2SD1913R***	TRANSISTOR 2SD1913(R)
Q516	9HSQ1R2SA1576A	TRANSISTOR 2SA1576A T106R
Q517	9HSQSZ00BA1F4M	RES. BUILT-IN TRANSISTOR BA1F4M-T
Q601⚠	9HSFWZ2SK3869Q	FET 2SK3869(Q)
Q603⚠	9HSQS002SC2120	TRANSISTOR 2SC2120-O-TPE2
Q633	9HSQ1Q02SC4081	TRANSISTOR 2SC4081 T106 Q
Q701	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q702	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q703	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q704	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q705	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q706	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q707	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q708	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q709	9HSQSF02SA1175	TRANSISTOR 2SA1175(F)
Q802	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
Q803	9HSQSF02SA1175	TRANSISTOR 2SA1175(F)
RESISTORS		
R11	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R12	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R16	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R17	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R20	9HSCX4JATZ0224	CARBON RES. 1/4W J 220k Ω
R21	9HSRXAJR5Z0104	CHIP RES.(1608) 1/10W J 100k Ω
R22	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R24	9HSRXAJR5Z0683	CHIP RES.(1608) 1/10W J 68k Ω
R30	9HSCX4JATZ0104	CARBON RES. 1/4W J 100k Ω

Ref. No.	Part No.	Description
R33	9HSRXAJR5Z0181	CHIP RES.(1608) 1/10W J 180Ω
R34	9HSRXAJR5Z0151	CHIP RES.(1608) 1/10W J 150Ω
R37	9HSRXAJR5Z0221	CHIP RES.(1608) 1/10W J 220Ω
R41	9HSRXAJR5Z0682	CHIP RES.(1608) 1/10W J 6.8k Ω
R43	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R45	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
R046	9HSCX4JATZ0122	CARBON RES. 1/4W J 1.2k Ω
R63	9HSCX4JATZ0101	CARBON RES. 1/4W J 100Ω
R65	9HSRXAJR5Z0471	CHIP RES.(1608) 1/10W J 470Ω
R403	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R404	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
R406	9HSCX4JATZ0562	CARBON RES. 1/4W J 5.6k Ω
R407	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R408	9HSRXAJR5Z0153	CHIP RES.(1608) 1/10W J 15k Ω
R409	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R410	9HSCX4JATZ0331	CARBON RES. 1/4W J 330Ω
R411	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R412	9HSRXAJR5Z0470	CHIP RES.(1608) 1/10W J 47Ω
R413	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R414	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R415	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R416	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R417	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R418	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R419	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R420	9HSRXAJR5Z0562	CHIP RES.(1608) 1/10W J 5.6k Ω
R421	9HSRXAJR5Z0330	CHIP RES.(1608) 1/10W J 33Ω
R422	9HSCX4JATZ0560	CARBON RES. 1/4W J 56Ω
R423	9HSRXAJR5Z0331	CHIP RES.(1608) 1/10W J 330Ω
R424	9HSRXAJR5Z0331	CHIP RES.(1608) 1/10W J 330Ω
R425	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R426	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R427	9HSRXAJR5Z0332	CHIP RES.(1608) 1/10W J 3.3k Ω
R428	9HSRXAJR5Z0332	CHIP RES.(1608) 1/10W J 3.3k Ω
R429	9HSRXAJR5Z0470	CHIP RES.(1608) 1/10W J 47Ω
R430	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R440	9HSRXAJR5Z0560	CHIP RES.(1608) 1/10W J 56Ω
R441	9HSRXAJR5Z0331	CHIP RES.(1608) 1/10W J 330Ω
R442	9HSRXAJR5Z0331	CHIP RES.(1608) 1/10W J 330Ω
R443	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R444	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R445	9HSRXAJR5Z0332	CHIP RES.(1608) 1/10W J 3.3k Ω
R446	9HSRXAJR5Z0332	CHIP RES.(1608) 1/10W J 3.3k Ω
R447	9HSRXAJR5Z0470	CHIP RES.(1608) 1/10W J 47Ω
R448	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R458	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R459	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R460	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R461	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R462	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R463	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R464	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R465	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R466	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R467	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R468	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R469	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R470	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R471	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R472	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R473	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R474	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R475	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R476	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R477	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R478	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R479	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R480	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R481	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω

Ref. No.	Part No.	Description
R482	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R483	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R484	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R485	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R486	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R487	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R488	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R489	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
R490	9HSCX4JATZ0152	CARBON RES. 1/4W J 1.5k Ω
R491⚠	9HSN02331KE009	METAL OXIDE FILM RES 2W J 330Ω
R492	9HSN01102KE009	METAL OXIDE FILM RES. 1W J 1k Ω
R493	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R494	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R503	9HSCX4JATZ0391	CARBON RES. 1/4W J 390Ω
R504	9HSCX4JATZ0471	CARBON RES. 1/4W J 470Ω
R505	9HSRXAJR5Z0272	CHIP RES.(1608) 1/10W J 2.7k Ω
R510	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R511	9HSRXAFR5H1501	CHIP RES.(1608) 1/10W F 1.5k Ω
R512	9HSRXAFR5H1501	CHIP RES.(1608) 1/10W F 1.5k Ω
R513	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R514	9HSCX4JATZ0681	CARBON RES. 1/4W J 680Ω
R517	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R518⚠	9HSCX4JATZ0563	CARBON RES. 1/4W J 56k Ω
R519⚠	9HSCX4JATZ0473	CARBON RES. 1/4W J 47k Ω
R521	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R522	9HSCX4JATZ0153	CARBON RES. 1/4W J 15k Ω
R523	9HSRXAJR5Z0182	CHIP RES.(1608) 1/10W J 1.8k Ω
R539	9HSCX4JATZ0471	CARBON RES. 1/4W J 470Ω
R540	9HSCX4JATZ0152	CARBON RES. 1/4W J 1.5k Ω
R543	9HSRXAFR5H1801	CHIP RES.(1608) 1/10W F 1.8k Ω
R544	9HSRXAFR5H3901	CHIP RES.(1608) 1/10W F 3.9k Ω
R545	9HSRXAJR5Z01R0	CHIP RES.(1608) 1/10W J 1Ω
R546	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R547	9HSCX4JATZ0473	CARBON RES. 1/4W J 47k Ω
R548	9HSN02561KE009	METAL OXIDE FILM RES. 2W J 560Ω
R549	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R552	9HSN01JZQZ01R0	METAL OXIDE RES. 1W J 1.0Ω
R555	9HSRXAFR5H9101	CHIP RES.(1608) 1/10W F 9.1k Ω
R556	9HSRXAFR5H5601	CHIP RES.(1608) 1/10W F 5.6k Ω
R557	9HSRXAJR5Z0392	CHIP RES.(1608) 1/10W J 3.9k Ω
R558	9HSN022R2KE009	METAL OXIDE FILM RES. 2W J 2.2Ω
R561	9HSRXAFR5H1500	CHIP RES.(1608) 1/10W F 150Ω
R570	9HSRXAJR5Z0562	CHIP RES.(1608) 1/10W J 5.6k Ω
R571	9HSN021R0KE009	METAL OXIDE FILM RES. 2W J 1Ω
R572	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R573	9HSRXAJR5Z0124	CHIP RES.(1608) 1/10W J 120k Ω
R575	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R577	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R578	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R579	9HSN02152KE009	METAL OXIDE FILM RES 2W J 1.5k Ω
R580	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R581	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R582	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R583	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R584	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R585	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R586	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R587	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
R601⚠	9HSW031R2PG007	CEMENT RES. 3W K 1.2Ω
R603⚠	9HSCX4JATZ0394	CARBON RES. 1/4W J 390k Ω
R604	9HSCX4JATZ0394	CARBON RES. 1/4W J 390k Ω
R605	9HSCX4JATZ0394	CARBON RES. 1/4W J 390k Ω
R606	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R607	9HSCX4JATZ0221	CARBON RES. 1/4W J 220Ω
R608	9HSCX4JATZ0221	CARBON RES. 1/4W J 220Ω
R609	9HSCX4JATZ0394	CARBON RES. 1/4W J 390k Ω
R610	9HSCX4JATZ0181	CARBON RES. 1/4W J 180Ω
R613	9HSN02R68KE009	METAL OXIDE FILM RES. 2W J 0.68Ω
R620	9HSCX4JATZ0151	CARBON RES. 1/4W J 150Ω

Ref. No.	Part No.	Description
R621	9HSCX4JATZ0821	CARBON RES. 1/4W J 820Ω
R622	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R623	9HSCX4JATZ0222	CARBON RES. 1/4W J 2.2k Ω
R633	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R634⚠	9HSRXAJR5Z0153	CHIP RES.(1608) 1/10W J 15k Ω
R635	9HSRXAJR5Z0273	CHIP RES.(1608) 1/10W J 27k Ω
R636	9HSJW5.0T	PCB JUMPER D0.6-P5.0
R637	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R642⚠	9HSRXAJR5Z0273	CHIP RES.(1608) 1/10W J 27k Ω
R643⚠	9HSCX4JATZ0274	CARBON RES. 1/4W J 270k Ω
R645	9HSCX4JATZ0391	CARBON RES. 1/4W J 390Ω
R646	9HSCX4JATZ0681	CARBON RES. 1/4W J 680Ω
R647	9HSRXAFR5H1501	CHIP RES.(1608) 1/10W F 1.5k Ω
R648	9HSRXAJR5Z0132	CHIP RES.(1608) 1/10W J 1.3k Ω
R650	9HSRXAJR5Z0202	CHIP RES.(1608) 1/10W J 2k Ω
R651	9HSRXAJR5Z0202	CHIP RES.(1608) 1/10W J 2k Ω
R652	9HSRXAFR5H2700	CHIP RES. 1/10W F 270Ω
R653	9HSRXAFR5H1001	CHIP RES.(100PPM) 1/10W F 1.0k Ω
R654	9HSRXAFR5H1201	CHIP RES. 1/10W F 1.2k Ω
R655	9HSRXAJR5Z0104	CHIP RES.(1608) 1/10W J 100k Ω
R656	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R658	9HSCX4JATZ0122	CARBON RES. 1/4W J 1.2k Ω
R702	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R703	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R705	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R707	9HSCX4JATZ0101	CARBON RES. 1/4W J 100Ω
R708	9HSRXAJR5Z0750	CHIP RES.(1608) 1/10W J 75Ω
R710	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R711	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R713	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R715	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R716	9HSRXAJR5Z0750	CHIP RES.(1608) 1/10W J 75Ω
R718	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R719	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R721	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R723	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R724	9HSRXAJR5Z0750	CHIP RES.(1608) 1/10W J 75Ω
R725	9HSRXAJR5Z0183	CHIP RES.(1608) 1/10W J 18k Ω
R726	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R727	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R728	9HSRXAJR5Z0183	CHIP RES.(1608) 1/10W J 18k Ω
R729	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R730	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R732	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R733	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R735	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R737	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R738	9HSRXAJR5Z0750	CHIP RES.(1608) 1/10W J 75Ω
R740	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R741	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R743	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R745	9HSCX4JATZ0101	CARBON RES. 1/4W J 100Ω
R746	9HSRXAJR5Z0750	CHIP RES.(1608) 1/10W J 75Ω
R748	9HSRXAJR5Z0391	CHIP RES.(1608) 1/10W J 390Ω
R749	9HSRXAJR5Z0333	CHIP RES.(1608) 1/10W J 33k Ω
R751	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R753	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R754	9HSCX4JATZ0750	CARBON RES. 1/4W J 75Ω
R755	9HSRXAJR5Z0183	CHIP RES.(1608) 1/10W J 18k Ω
R756	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R757	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R758	9HSRXAJR5Z0183	CHIP RES.(1608) 1/10W J 18k Ω
R759	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R760	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R781	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
R782	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R783	9HSCX4JATZ0561	CARBON RES. 1/4W J 560Ω
R784	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R785	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω

Ref. No.	Part No.	Description
R786	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R787	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R788	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R789	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R791	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R792	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
R798	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R799	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R801	9HSCX2JZQZ0101	CARBON RES. 1/2W J 100Ω
R802	9HSCX2JZQZ0101	CARBON RES. 1/2W J 100Ω
R803	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R804	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R805⚠	9HSN022R7KE009	METAL OXIDE FILM RES. 2W J 2.7Ω
R806	9HSRXAJR5Z0821	CHIP RES.(1608) 1/10W J 820Ω
R807⚠	9HSN025R6KE009	METAL OXIDE FILM RES 2W J 5.6Ω
R808	9HSRXAJR5Z0182	CHIP RES.(1608) 1/10W J 1.8k Ω
R809	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R810	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R811	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R812	9HSCX4JATZ0331	CARBON RES. 1/4W J 330Ω
R813	9HSRXAJR5Z0272	CHIP RES.(1608) 1/10W J 2.7k Ω
R814	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R816	9HSRXAJR5Z0272	CHIP RES.(1608) 1/10W J 2.7k Ω
R817	9HSRXAJR5Z0473	CHIP RES.(1608) 1/10W J 47k Ω
R818	9HSRXAJR5Z0562	CHIP RES.(1608) 1/10W J 5.6k Ω
R820	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R821	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R822	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R823	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R824	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R825	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R826	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R827	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R829	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R830	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R831	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R832	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R833	9HSRXAJR5Z0223	CHIP RES.(1608) 1/10W J 22k Ω
R834	9HSCX4JATZ0223	CARBON RES. 1/4W J 22k Ω
R837	9HSRXAJR5Z0102	CHIP RES.(1608) 1/10W J 1k Ω
R838	9HSRXAJR5Z0123	CHIP RES.(1608) 1/10W J 12k Ω
R839	9HSRXAJR5Z0123	CHIP RES.(1608) 1/10W J 12k Ω
R851	9HSCX4JATZ0101	CARBON RES. 1/4W J 100Ω
R852	9HSCX4JATZ0101	CARBON RES. 1/4W J 100Ω
R855	9HSRXAJR5Z0332	CHIP RES.(1608) 1/10W J 3.3k Ω
R857	9HSRXAJR5Z0184	CHIP RES.(1608) 1/10W J 180k Ω
R893	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
MISCELLANEOUS		
AC601⚠	9HSAC0172LW015	AC CORD PB8K9F4970AA057
B6	9HS1EM420281	HEAT SINK PJT ASSEMBLY L0170UA
B7	9HS1EM320080	SHIELD BOX TOP L0371UB
B8	9HS1EM320081	SHIELD BOX BOTTOM L0371UB
BC401	9HSLBF00ZTU021	BEAD INDUCTORS FBR07HA121TB-00
BC602	9HSLBF00ZTU021	BEAD INDUCTORS FBR07HA121TB-00
BC632	9HSJW5.0T	PCB JUMPER D0.6-P5.0
BC637	9HSJW5.0T	PCB JUMPER D0.6-P5.0
BC638	9HSJW5.0T	PCB JUMPER D0.6-P5.0
BC639	9HSLBF00ZTU021	BEAD INDUCTORS FBR07HA121TB-00
BC642	9HSJW5.0T	PCB JUMPER D0.6-P5.0
CF31	9HSBE455PMR003	CERAMIC TRAP 4.5MHz
CF32	9HSBB455PMR004	CERAMIC FILTER SFSRA4M50CF00-B0
CLN108	9HSX3001A63304	WIRE 040/BLA/AWG26#1007
F601⚠	9HSAGU20CAG402	FUSE 4.00A/125V
FH601	9HSH01Z00LY001	FUSE HOLDER MSF-015
FH602	9HSH01Z00LY001	FUSE HOLDER MSF-015
GP641⚠	9HSAZ000LD6005	GAP. FNR-G3.10D
J108	9HSLBD00PKV007	CHOKE COIL 47μH-K
J115	9HSLAXJATTU101	INDUCTOR 100μH-J-26T
J178	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω

Ref. No.	Part No.	Description
J179	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
J229	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
J249	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
J286	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
J292	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
JK721	9HSYEJ040JC001	Y/C JACK YKF51-5558N
JK722	9HSXRJ010RP005	RCA JACK AV1-06-001 YELLOW
JK723	9HSXRJ010RP006	RCA JACK AV1-06-002 WHITE
JK724	9HSYRJ010RP001	RCA JACK AV1-06-003 RED
JK726	9HSXRJ010RP007	RCA JACK AV1-06-006(G)
JK727	9HSXRJ010RP008	RCA JACK AV1-06-005(B)
JK728	9HSXRJ010RP009	RCA JACK AV1-06-004(R)
JK729	9HSXRJ010RP006	RCA JACK AV1-06-002 WHITE
JK730	9HSYRJ010RP001	RCA JACK AV1-06-003 RED
JK801	9HSYSL020LY002	HEADPHONE JACK MSJ-035-10A B
JS701	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
JS702	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
JS703	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
JS704	9HSJW7.5T	PCB JUMPER D0.6-P7.5
L4	9HSGBMB3080	SCREW, B-TIGHT M3X8 BIND HEAD+
SA601⚠	9HSVQZ10D471KB	SURGE ABSORBER 470V+-10PER
SF11	9HSBB456PMR010	SAW FILTER SAFHM45M7VAAZ00B03
T401⚠	9HSTZ00CPMS005	INVERTER TRANS ETJV25ZB11AC
T402⚠	9HSTZ00CPMS005	INVERTER TRANS ETJV25ZB11AC
T403⚠	9HSTZ00CPMS005	INVERTER TRANS ETJV25ZB11AC
T404⚠	9HSTZ00CPMS005	INVERTER TRANS ETJV25ZB11AC
T602⚠	9HSTT00CPKT158	POWER TRANS 4745
TP300	9HSJW17.5T	PCB JUMPER D0.6-P17.5
TP401	9HSJW10.0T	PCB JUMPER D0.6-P10.0
TU1	9HSTUNNTUAL038	TUNER TEQH9-009A
VR601	9HSRCB202HH014	CARBON P.O.T 2k Ω B

FUNCTION CBA [9HS1ESA10233B]

Ref. No.	Part No.	Description
CAPACITORS		
C101	9HSE1AMASSL470	ELECTROLYTIC CAP. 47μF/10V M H7
C103	9HSHD1JK30B103	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V
DIODE		
D101	9HSP4Z000L53HT	LED L-53HT
TRANSISTOR		
Q101	9HSQSF02SC2785	TRANSISTOR 2SC2785(F)
RESISTORS		
R101	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R102	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R103	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R104	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R105	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R106	9HSRXAJR5Z0272	CHIP RES.(1608) 1/10W J 2.7k Ω
R107	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R108	9HSRXAJR5Z0682	CHIP RES.(1608) 1/10W J 6.8k Ω
R109	9HSRXAJR5Z0101	CHIP RES.(1608) 1/10W J 100Ω
R110	9HSRXAJR5Z0103	CHIP RES.(1608) 1/10W J 10k Ω
R111	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R112	9HSRXAJR5Z0152	CHIP RES.(1608) 1/10W J 1.5k Ω
R113	9HSRXAJR5Z0222	CHIP RES.(1608) 1/10W J 2.2k Ω
R114	9HSRXAJR5Z0272	CHIP RES.(1608) 1/10W J 2.7k Ω
R115	9HSRXAJR5Z0472	CHIP RES.(1608) 1/10W J 4.7k Ω
R116	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R117	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R118	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R119	9HSRXAJR5Z0682	CHIP RES.(1608) 1/10W J 6.8k Ω
R120	9HSRXAJR5Z0153	CHIP RES.(1608) 1/10W J 15k Ω
R121	9HSRXAJR5Z0153	CHIP RES.(1608) 1/10W J 15k Ω
R122	9HSRXAJR5Z0393	CHIP RES.(1608) 1/10W J 39k Ω
R123	9HSRXAJR5Z0680	CHIP RES.(1608) 1/10W J 68Ω
R129	9HSCX4JATZ0103	CARBON RES. 1/4W J 10k Ω
SWITCHES		

Ref. No.	Part No.	Description
SW101	9HSST0101AL060	TACT SWITCH SKHHARA010
SW102	9HSST0101AL060	TACT SWITCH SKHHARA010
SW103	9HSST0101AL060	TACT SWITCH SKHHARA010
SW104	9HSST0101AL060	TACT SWITCH SKHHARA010
SW105	9HSST0101AL060	TACT SWITCH SKHHARA010
SW107	9HSST0101AL060	TACT SWITCH SKHHARA010
SW116	9HSST0101AL060	TACT SWITCH SKHHARA010
MISCELLANEOUS		
CLN104	9HSX1L0170-003	WIRE ASSEMBLY WX1L0170-003
J277	9HSRXAZR5Z0000	CHIP RES.(1608) 1/10W 0Ω
RCV101	9HSSESJRSRM006	PHOTO LINK MODULE RPM7237-H9

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