SUPPLEMENT

Symphonic

SERVICE MANUAL

This service manual shows only the differences between the model WF15L5 and the original model 6615LF4.
All other information is described in the service manual of the model 6615LF4.

15″ COLOR LCD TELEVISION

WF15L5

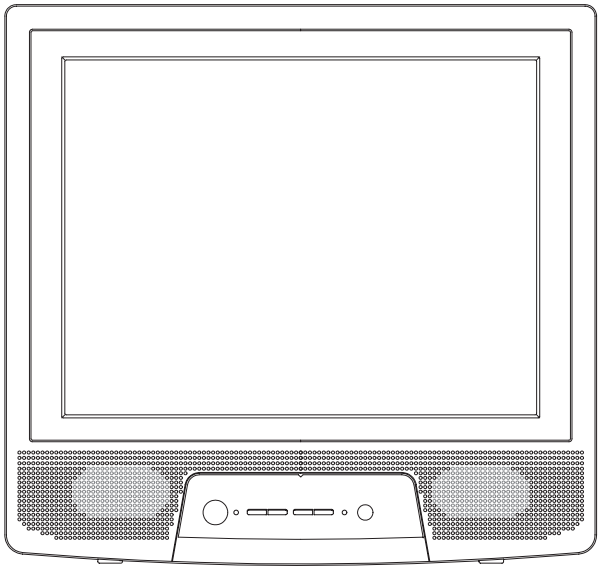
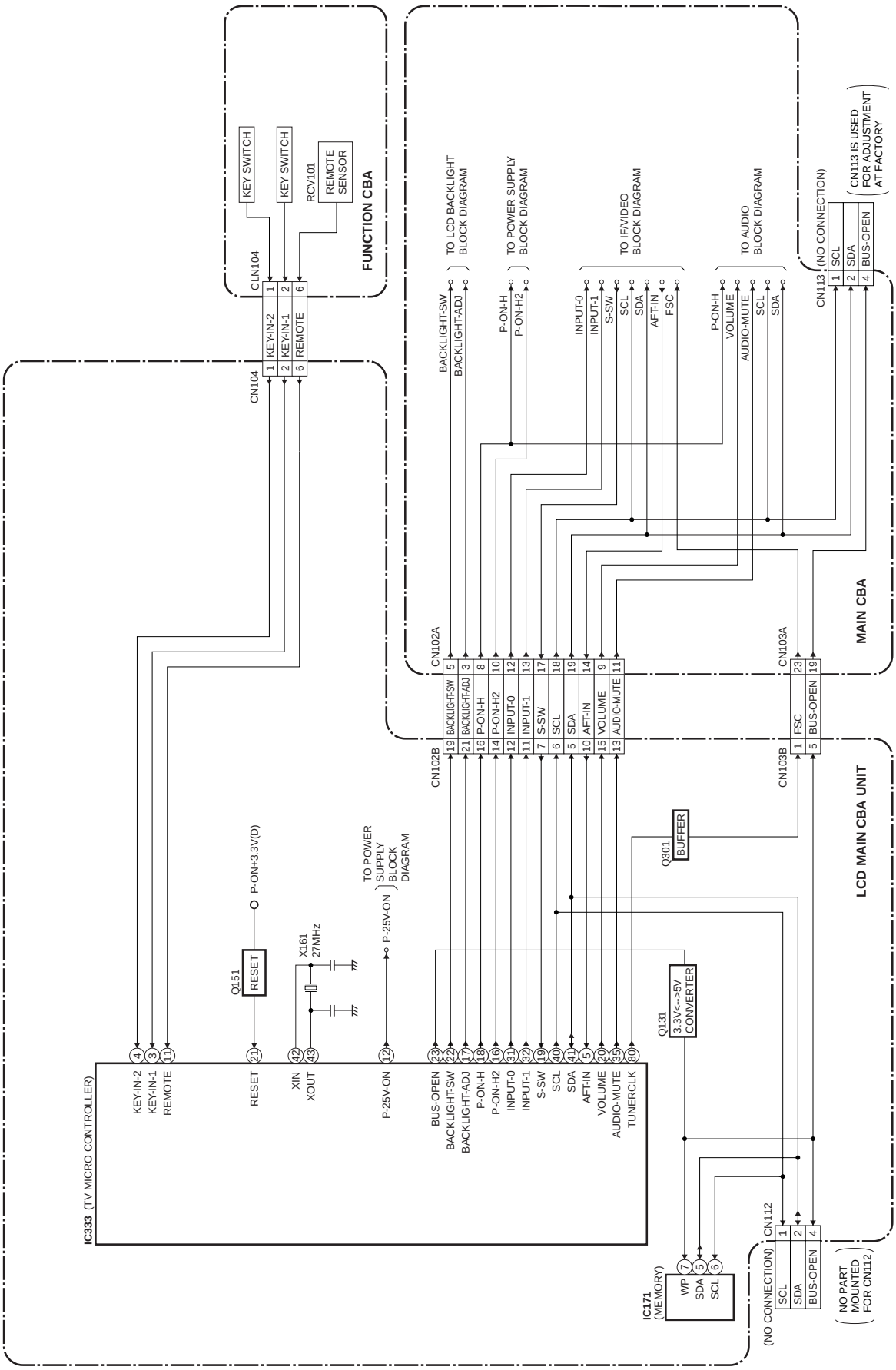


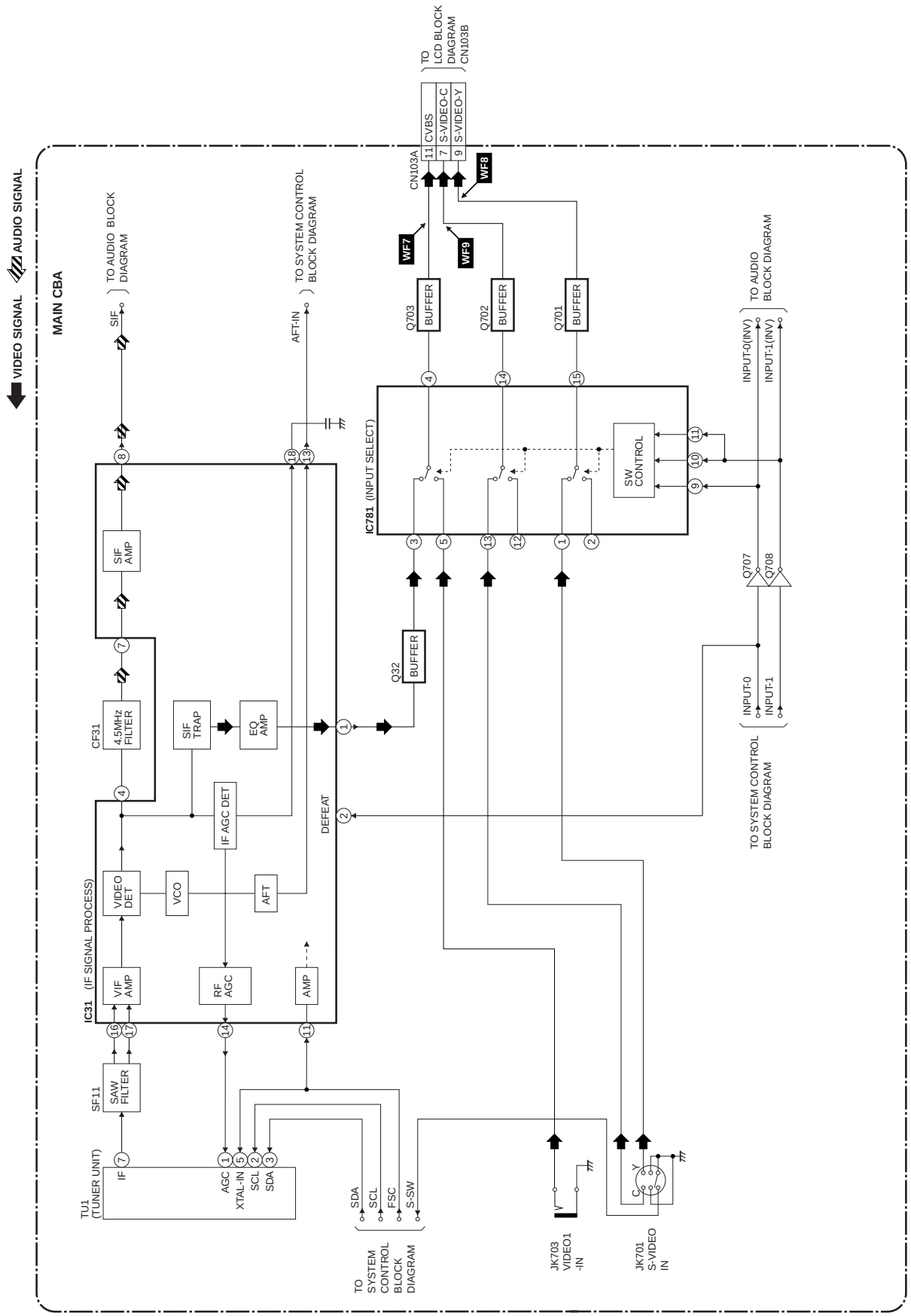
TABLE OF CONTENTS

BLOCK DIAGRAMS

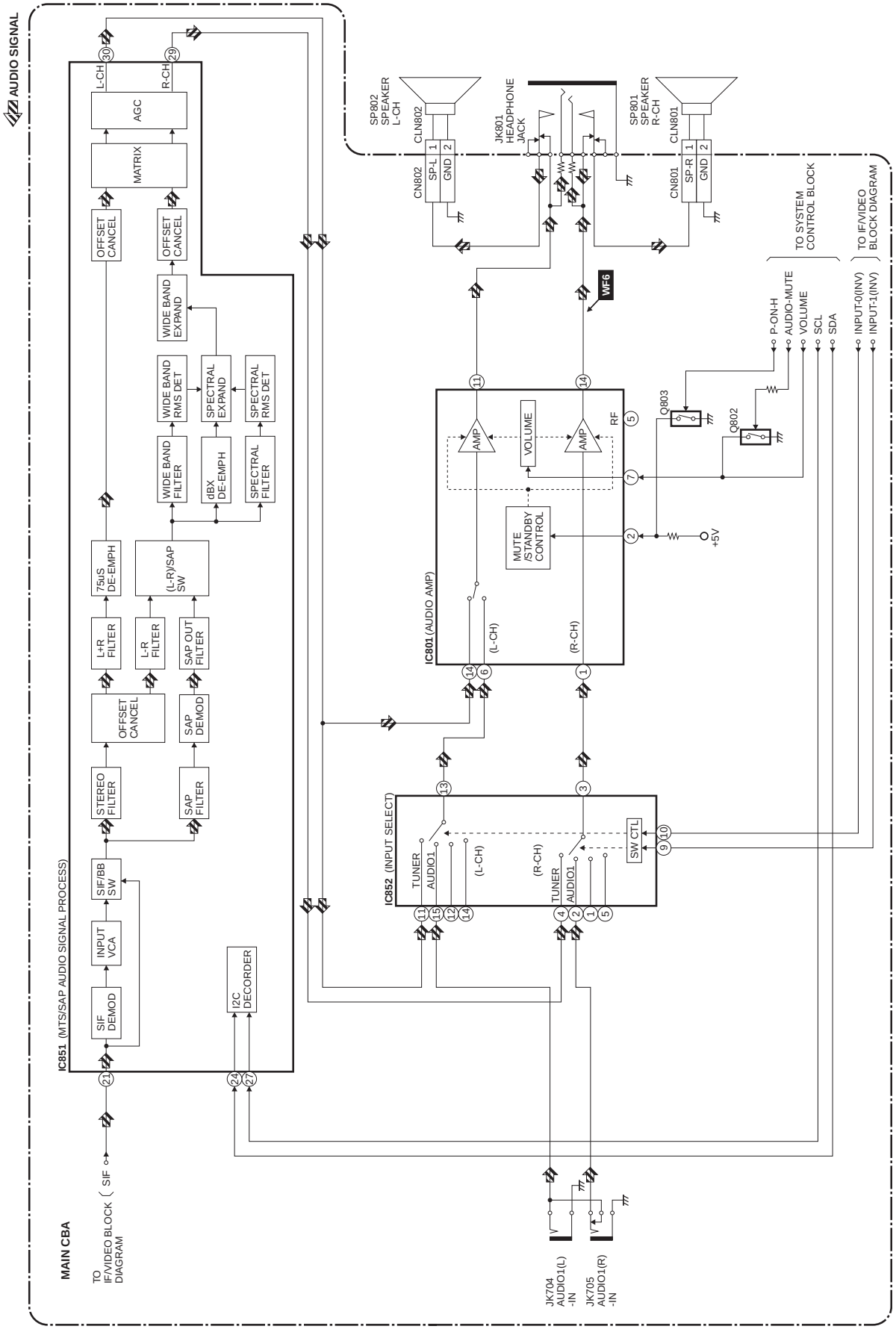
System Control Block Diagram



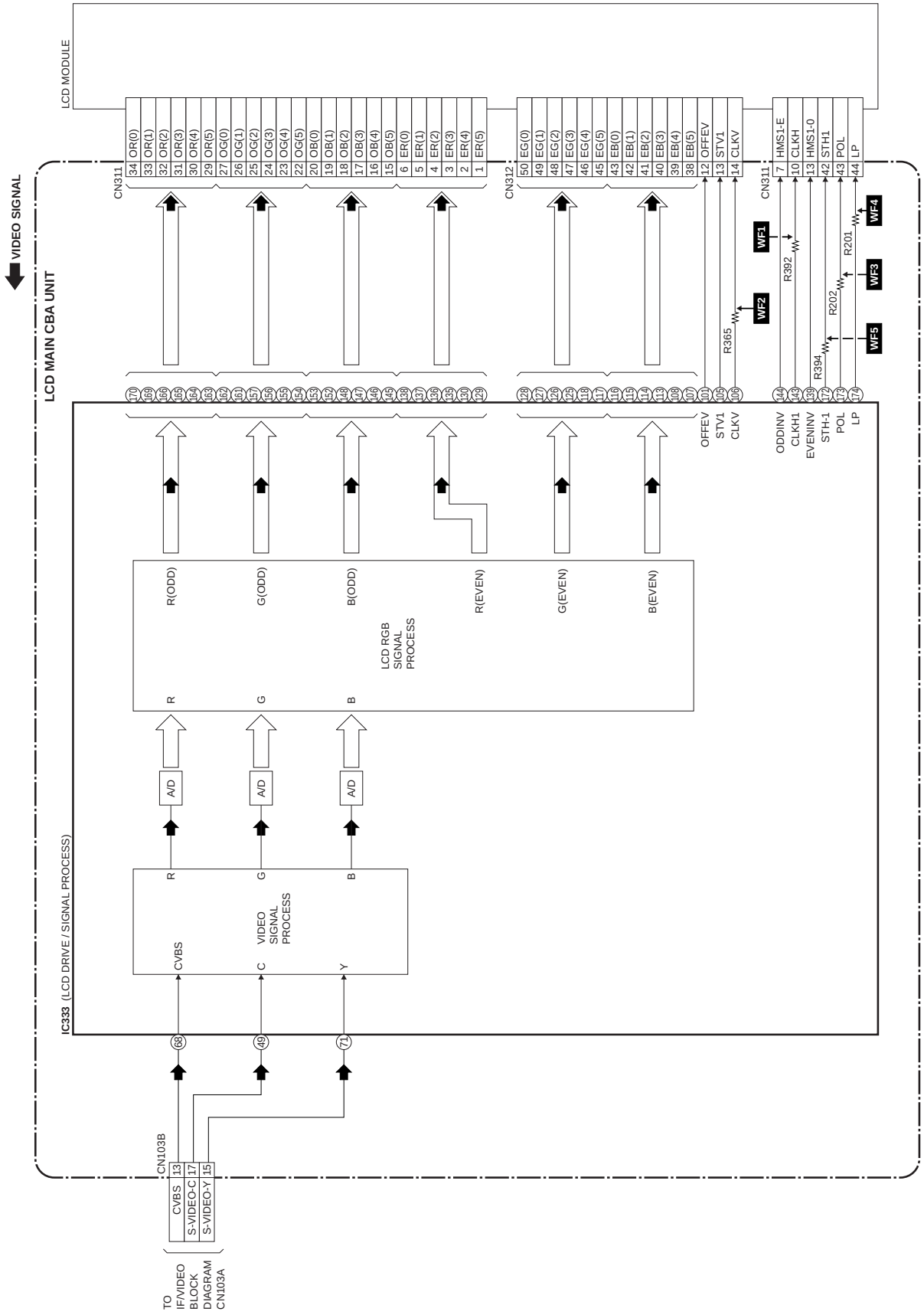
IF/Video Block Diagram



Audio Block Diagram



LCD Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

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.

Notes:

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±60 ppm/°C CSL --- +350~-1000 ppm/°C

Tolerance of Capacitors are noted with the following:

Z --- +80~-20%

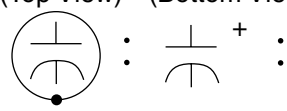
Note of Resistors:

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

Capacitors and transistors are represented by the following symbols.

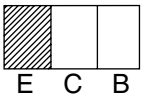
CBA Symbols

(Top View) (Bottom View)



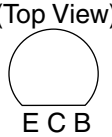
Electrolytic Capacitor

(Bottom View)



Transistor or Digital Transistor

(Top View)



NPN Transistor

(Top View)

PNP Transistor

(Top View)

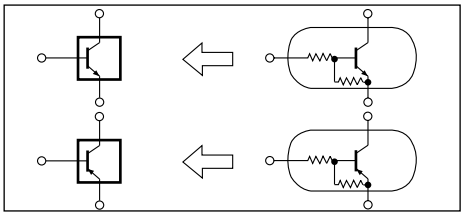
NPN Digital Transistor

(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:

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.

ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE_A,_V.

2. CAUTION:

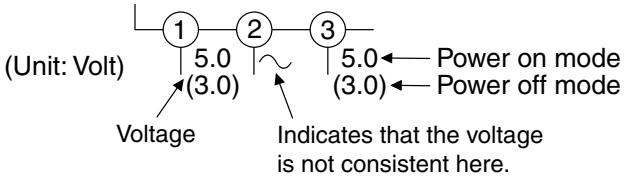
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the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

3. Note:

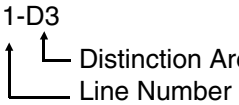
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications on the schematics are as shown below:

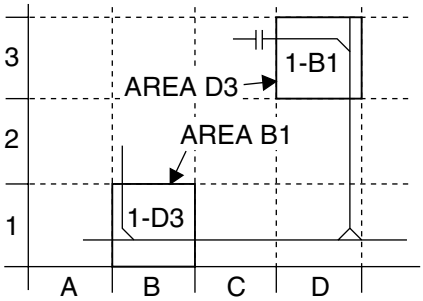
Plug the TV power cord into a standard AC outlet.:



5. How to read converged lines



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



6. 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.

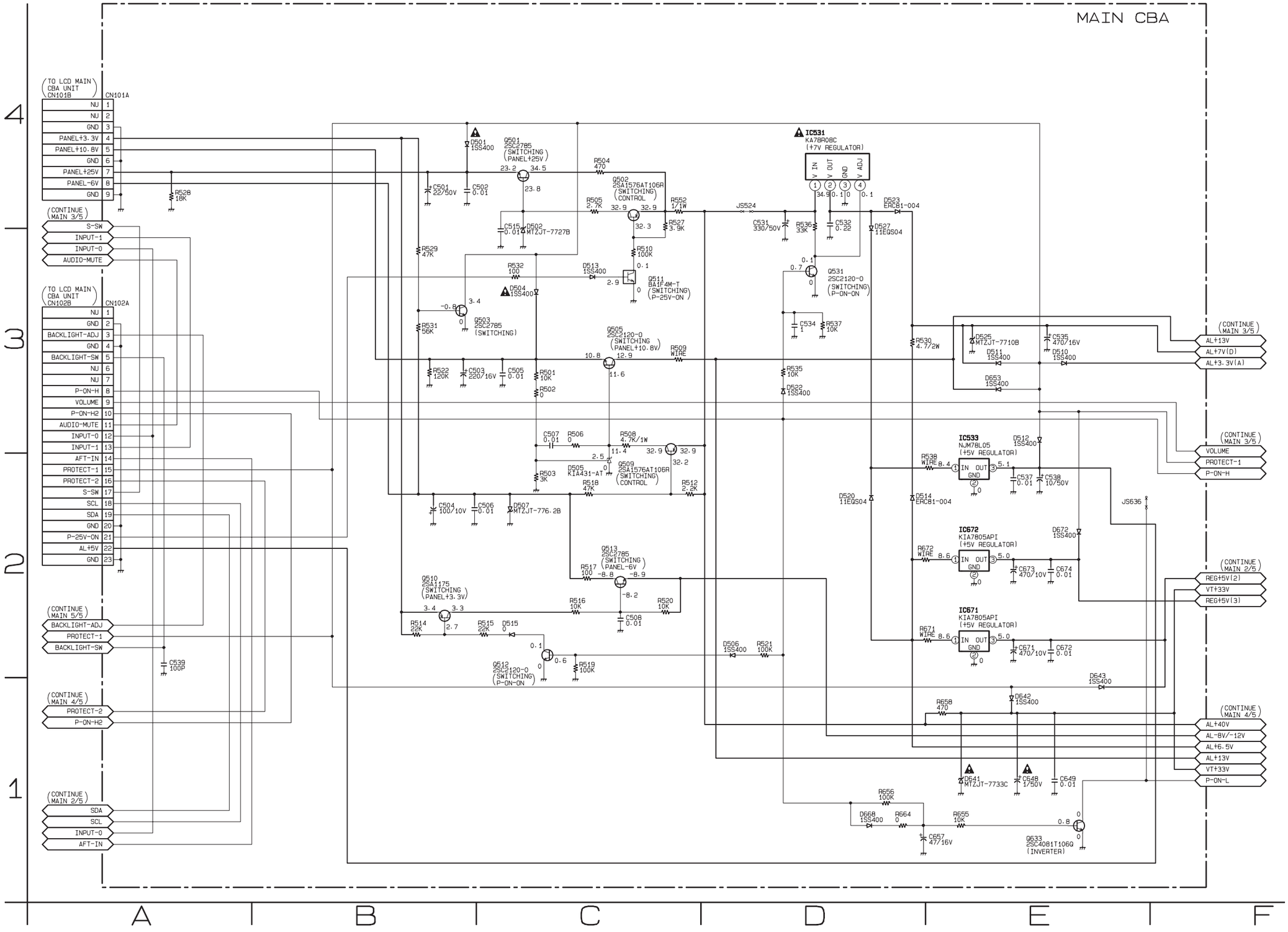
 : Used to indicate a test point with no test pin.

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

Main 1/5 Schematic Diagram

MAIN 1/5

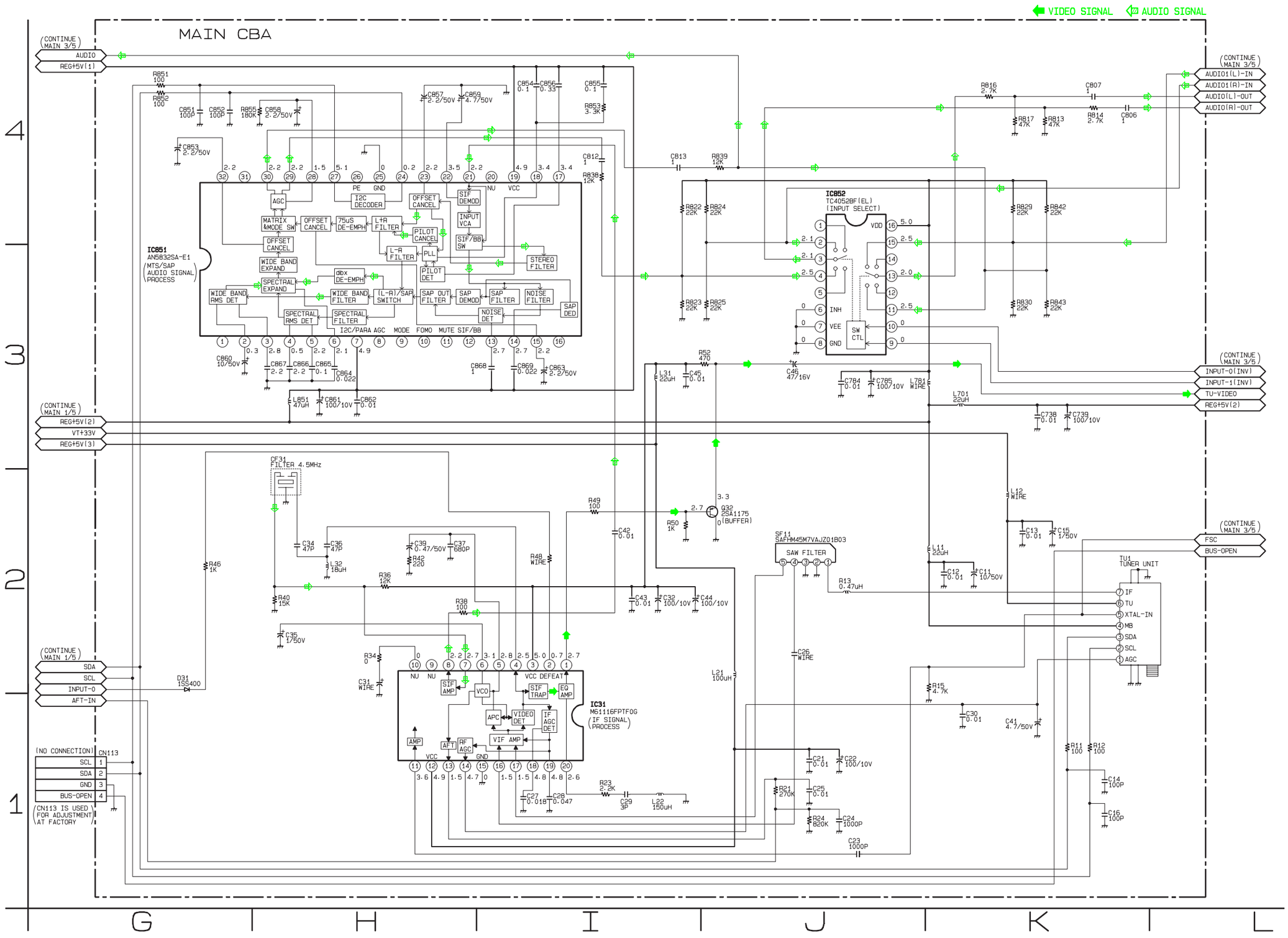
Ref No.	Position
ICS	
IC531	D-4
IC533	E-3
IC671	E-2
IC672	E-2
TRANSISTORS	
Q501	C-4
Q502	C-4
Q503	B-3
Q505	C-3
Q509	C-3
Q510	B-2
Q511	C-3
Q512	C-2
Q513	C-2
Q531	D-3
Q633	E-1
CONNECTORS	
CN101A	A-4
CN102A	A-3



Main 2/5 Schematic Diagram

MAIN 2/5

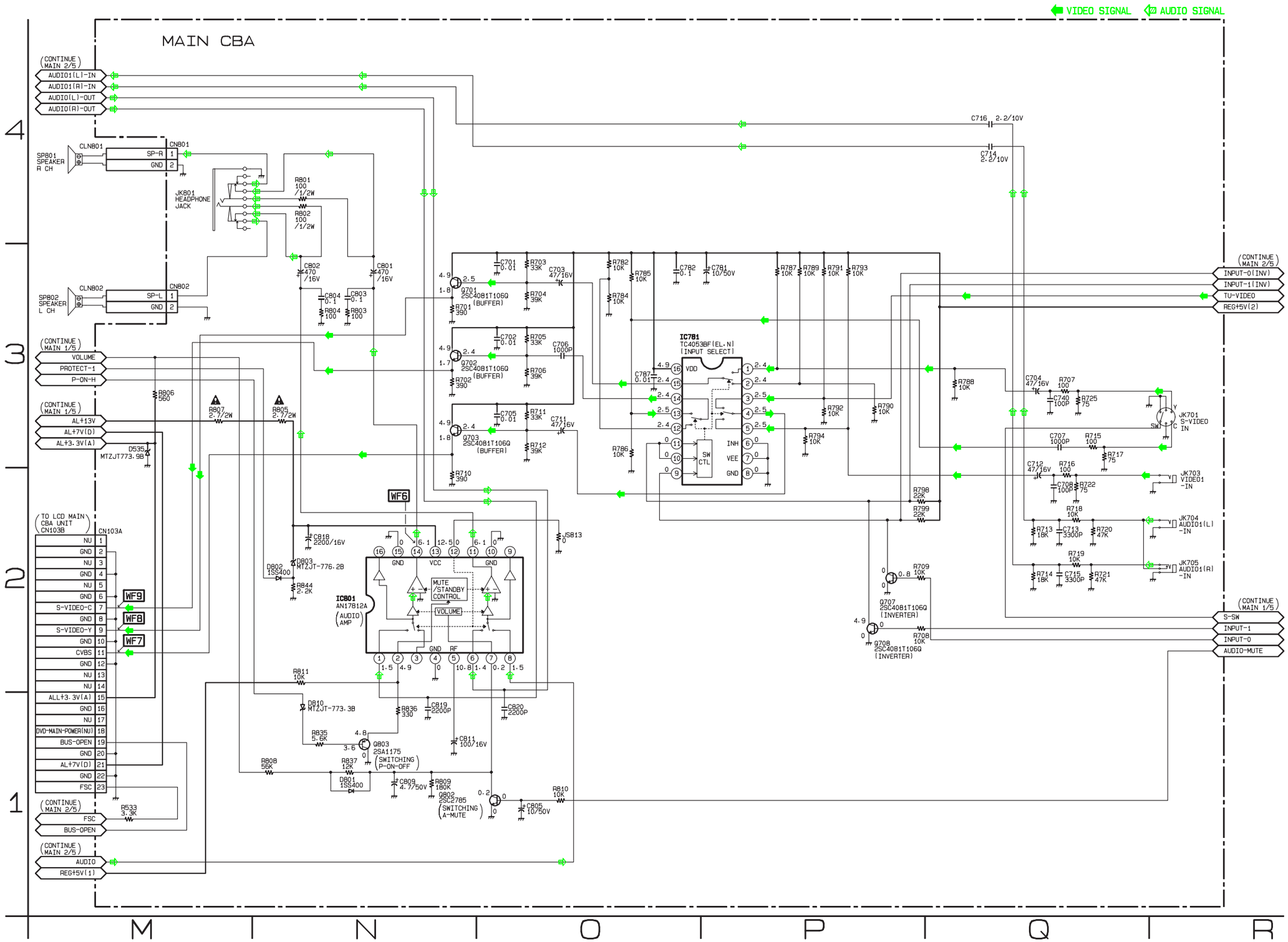
Ref No.	Position
ICS	
IC31	I-1
IC851	H-3
IC852	J-4
TRANSISTOR	
Q32	J-2
CONNECTOR	
CN113	G-1



Main 3/5 Schematic Diagram

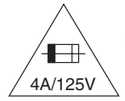
MAIN 3/5

Ref No.	Position
ICS	
IC781	P-3
IC801	N-2
TRANSISTORS	
Q701	N-3
Q702	N-3
Q703	N-3
Q704	P-1
Q705	O-1
Q706	P-1
Q707	P-2
Q708	P-2
Q802	O-1
Q803	N-1
CONNECTORS	
CN801	M-4
CN802	M-3
CN103A	M-2



Main 4/5 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.



CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 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.

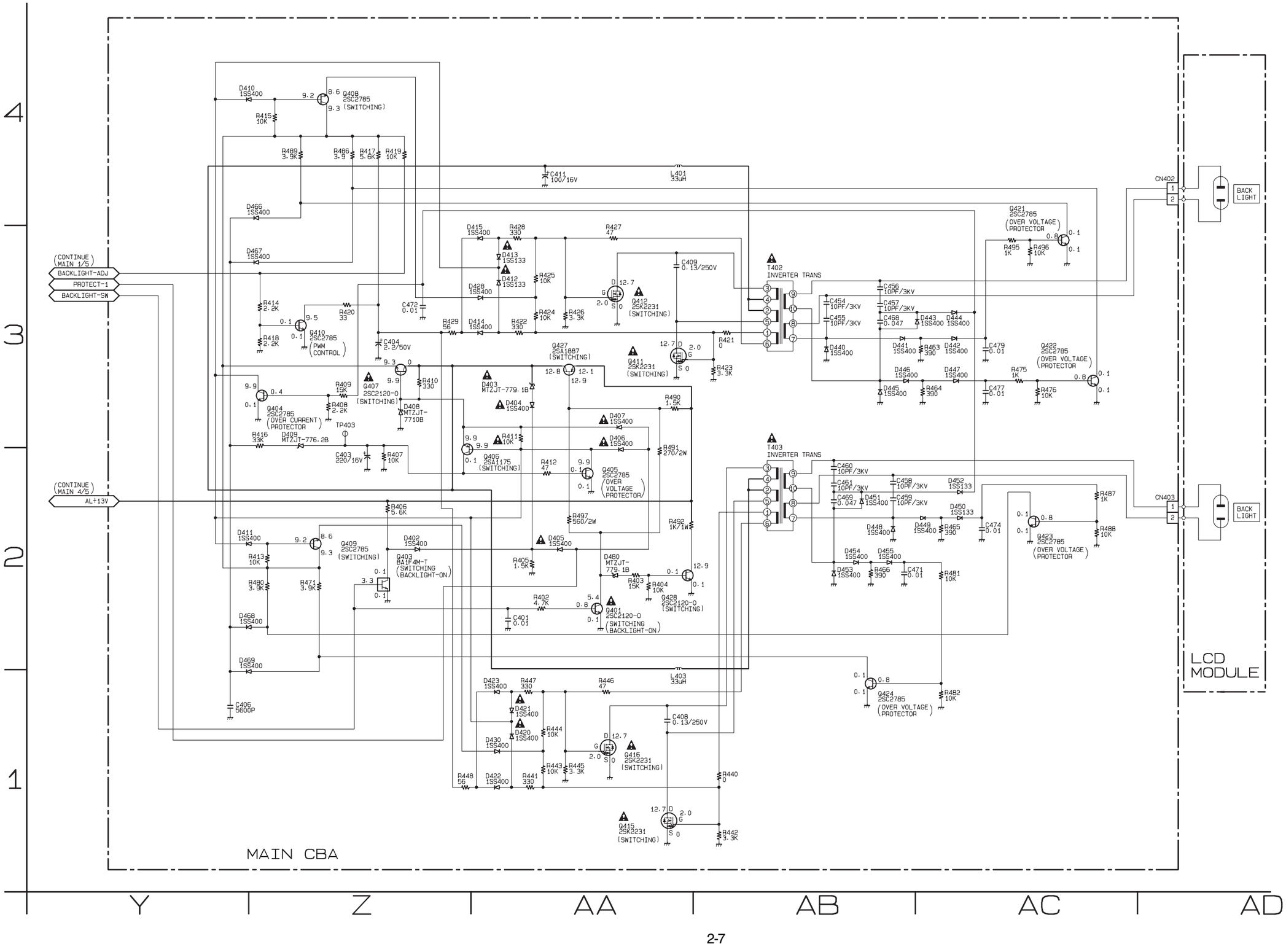
MAIN 4/5

Ref No.	Position
IC	
IC601	U-1
TRANSISTORS	
Q601	S-2
Q603	T-2
Q661	W-2
TESTPOINT	
TP402	X-4

Main 5/5 Schematic Diagram

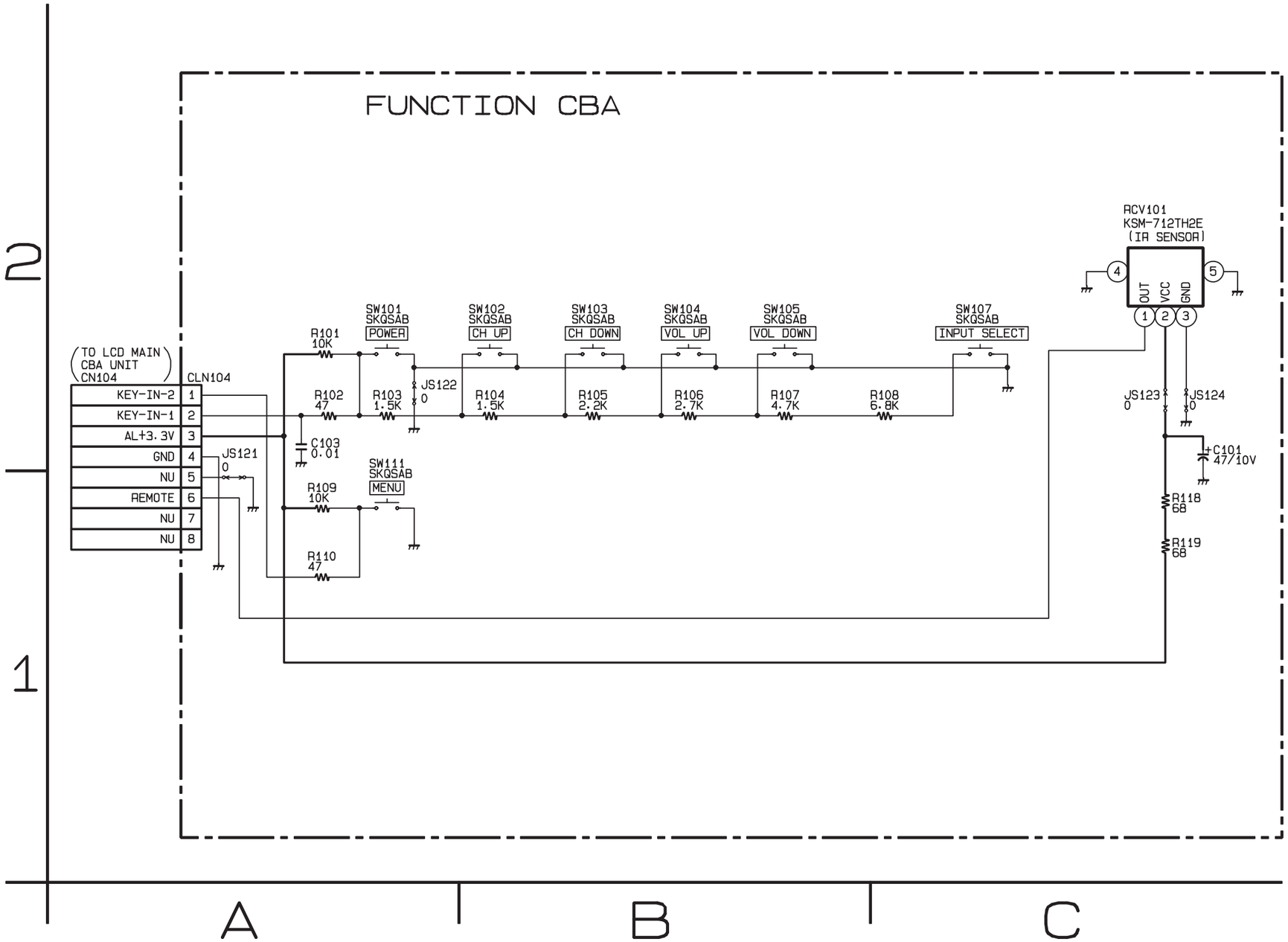
MAIN5/5

Ref No.	Position
TRANSISTORS	
Q401	AA-2
Q403	Z-2
Q404	Z-3
Q405	AA-2
Q406	AA-2
Q407	Z-3
Q408	Z-4
Q409	Z-2
Q410	Z-3
Q411	AA-3
Q412	AA-3
Q415	AA-1
Q416	AA-1
Q421	AC-4
Q422	AC-3
Q423	AC-2
Q424	AB-1
Q427	AA-3
Q428	AA-2
CONNECTORS	
CN402	AD-4
CN403	AD-2
TESTPOINT	
TP403	Z-3



L3120SCM5

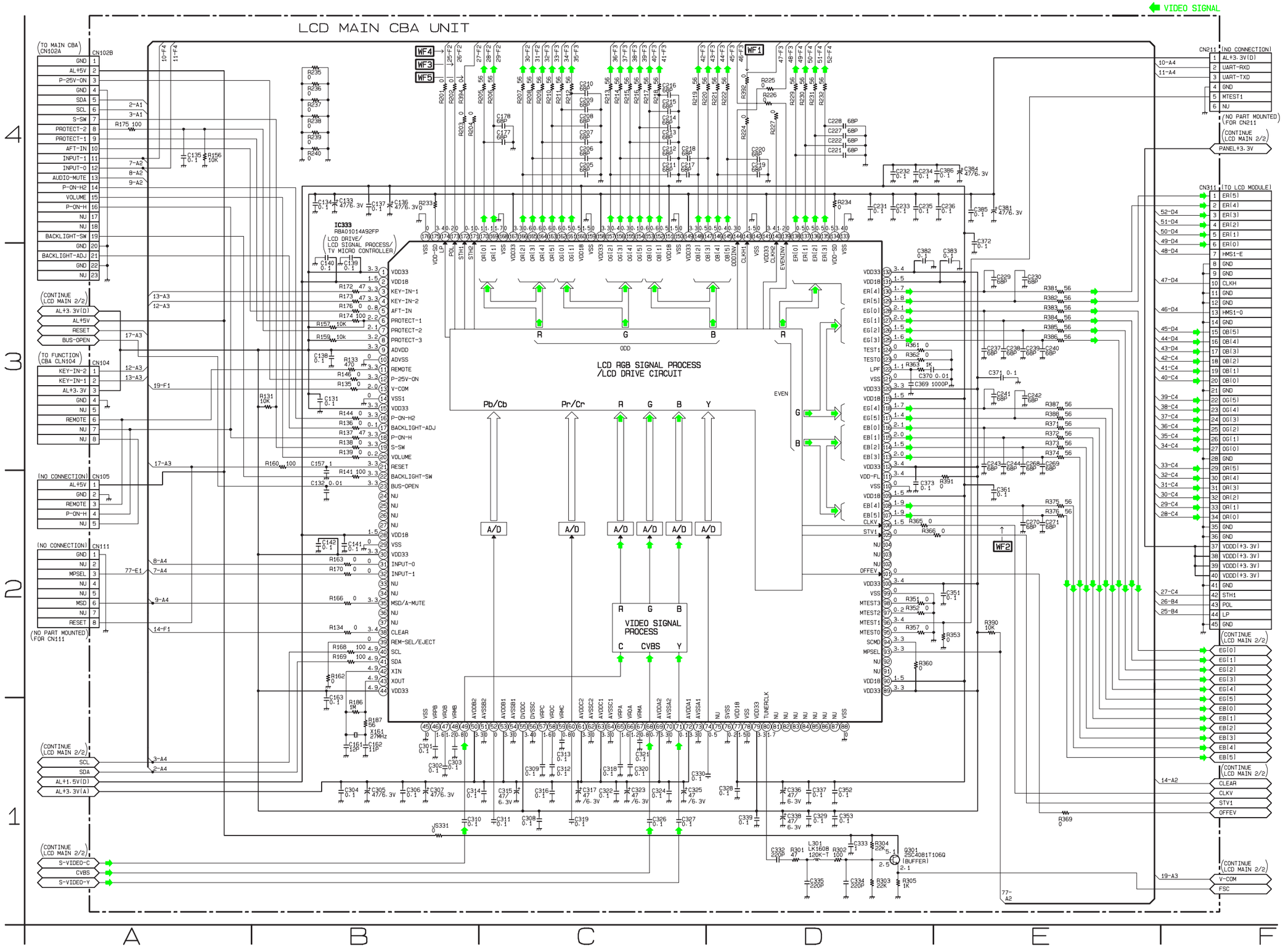
Function Schematic Diagram



LCD Main 1/2 Schematic Diagram

LCD MAIN 1/2

Ref No.	Position
IC	
IC333	B-3
TRANSISTOR	
Q301	D-1
CONNECTORS	
CN104	A-3
CN105	A-2
CN111	A-2
CN211	F-4
CN311	F-4
CN102B	A-4

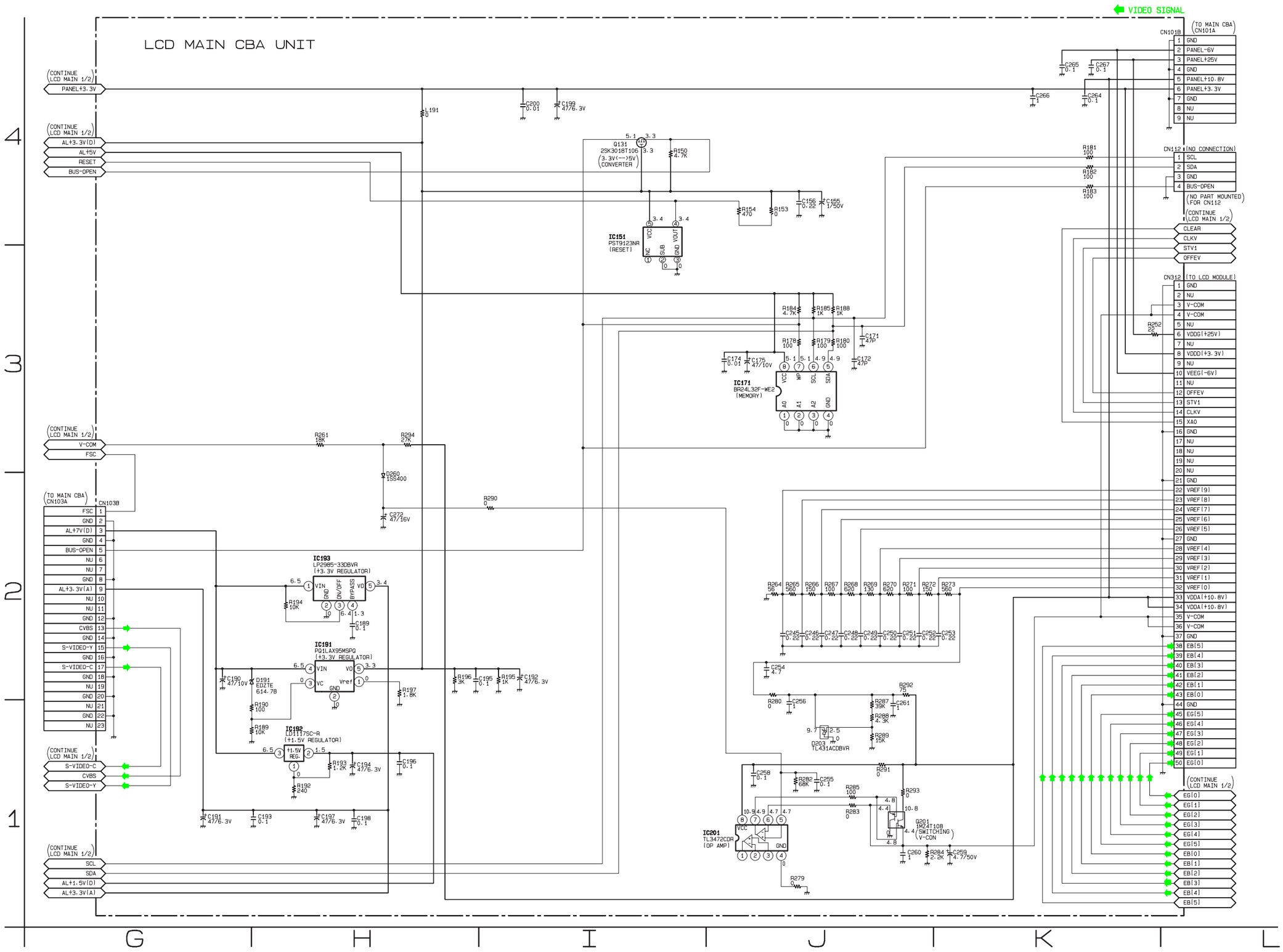


L3120SCL1

LCD Main 2/2 Schematic Diagram

LCD MAIN 2/2

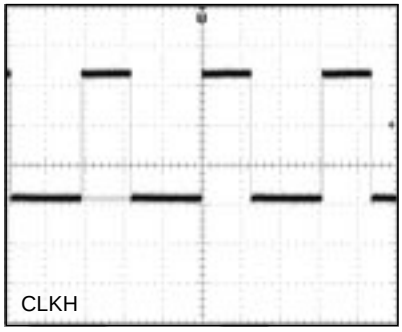
Ref No.	Position
ICS	
IC151	I-3
IC171	J-3
IC191	H-2
IC192	H-1
IC193	H-2
IC201	J-1
TRANSISTORS	
Q131	I-4
Q201	J-1
CONNECTORS	
CN112	L-4
CN312	L-3
CN101B	L-4
CN103B	G-2



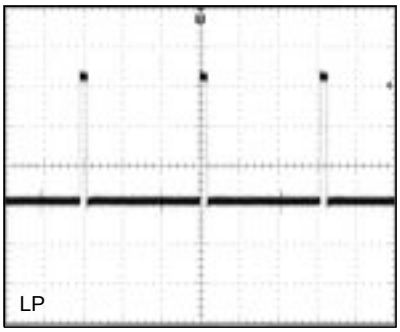
WAVEFORMS

WF1 ~ WF9 = Waveforms to be observed at
Waveform check points.
(Shown in Schematic Diagram.)

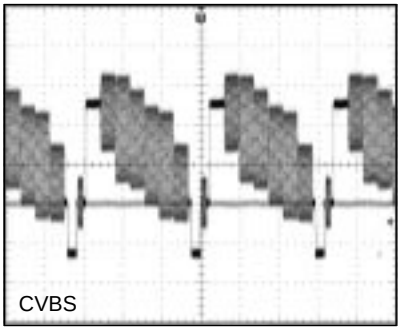
Input: NTSC Color Bar Signal (with 1kHz Audio Signal)



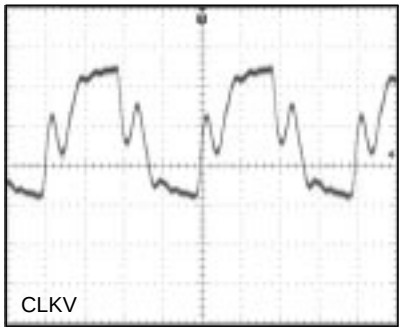
WF1 1DIV: 1.0V 10µs
R392



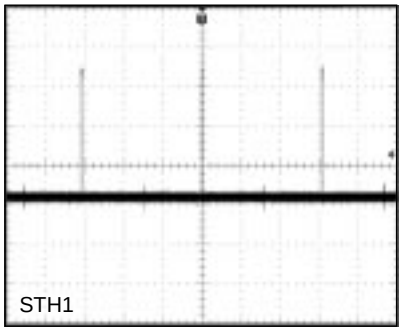
WF4 1DIV: 1.0V 10µs
R201



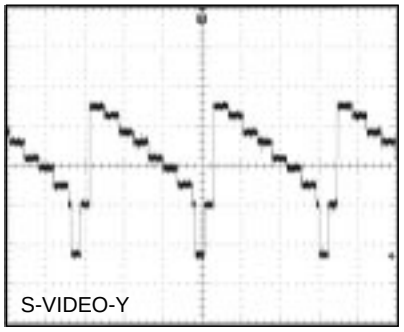
WF7 1DIV: 200mV 20µs
Pin 11 of CN103A



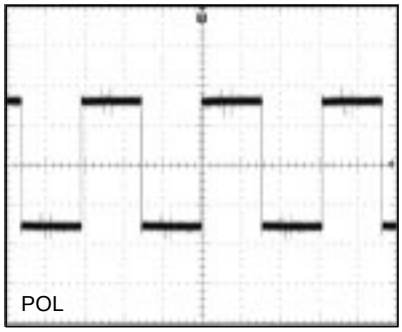
WF2 1DIV: 1.0V 20ns
R365



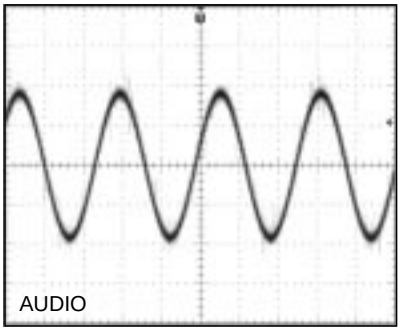
WF5 1DIV: 1.0V 10µs
R394



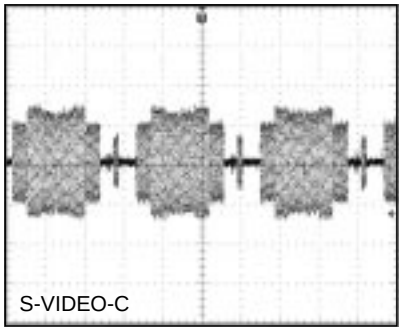
WF8 1DIV: 200mV 20µs
Pin 9 of CN103A



WF3 1DIV: 1.0V 20µs
R202

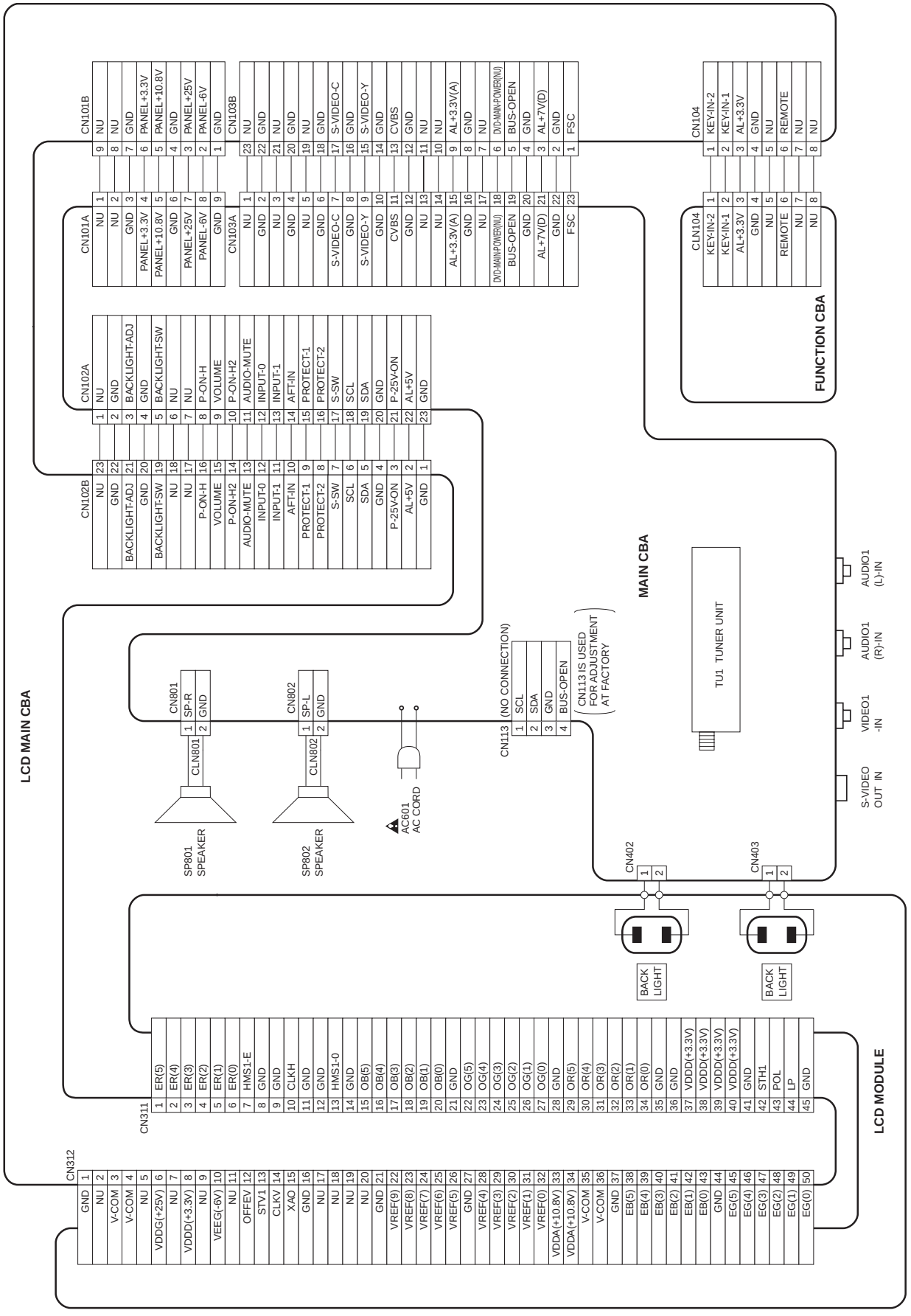


WF6 1DIV: 100mV 400 µs
Pin 14 of IC801



WF9 1DIV: 200mV 20µs
Pin 7 of CN103A

WIRING DIAGRAM



Different parts from the original model (6615LF4)

Ref. No.	Description	Part No.
MECHANICAL PARTS		
A1	FRONT CABINET L0200UA	1EM020010C
A2	Not used	
A3	CONTROL PLATE L3120UL	1EM320480
A4	REAR CABINET L3120UL	1EM120388
A6⚠	RATING LABEL L3120UL	----------
B4	JACK HOLDER L3120UL	1EM320461
S1	CARTON L3120UL	1EM421264
S2	STYROFOAM TOP L3100UA	1EM020146A
S3	STYROFOAM BOTTOM L3100UA	1EM020147A
S6	LABEL EAS(H3761UD) MAKER NO.ZLLFNSLE1	----------
X2⚠	OWNERS MANUAL L3120UL	1EMN20510A
X3	REMOCON UNIT 170/ECNLC301/ NE903UD	NE903UD
ELECTRICAL PARTS		
	LCD MAIN CBA & LIQUID CRYSTAL PANEL UNIT	1FSA10070
	MMA CBA	1ESA11081
	MAIN CBA	----------
C158	Not used	
C162	CHIP CERAMIC CAP. CH J 11pF/ 50V	CHD1JJ3CH110
C177	CHIP CERAMIC CAP.(1608) CH J 68pF/50V	CHD1JJ3CH680
C178	CHIP CERAMIC CAP.(1608) CH J 68pF/50V	CHD1JJ3CH680
C190	CHIP ELECTROLYTIC CAP. 47µF/ 10V	CA1A470SP062
C331	Not used	
C722	Not used	
C726	Not used	
C730	Not used	
C734	Not used	
C735	Not used	
C736	Not used	
C751	Not used	
C752	Not used	
C753	Not used	
C754	Not used	
D191	ZENER DIODE EDZTE61 4.7B	QD1B00EDZ4R7
D701	Not used	
D702	Not used	
D703	Not used	
IC191	VOLTAGE REGULATOR PQ1LAX95MSPQ	QSZBA0TSH053
IC192	VOLTAGE REGULATOR LD1117SC-R	NSZBA0TSS229
IC333	DIGITAL VIDEO PROCESSOR R8A01014A92FP	QSZAA0RHT070
JK706	Not used	
JK707	Not used	
JK708	Not used	
JK709	Not used	
JK710	Not used	
Q704	Not used	

Ref. No.	Description	Part No.
Q705	Not used	
Q706	Not used	
R140	Not used	
R143	Not used	
R145	Not used	
R164	Not used	
R165	Not used	
R167	Not used	
R189	CHIP RES.(1608) 1/10W J 10kΩ	RRXAJR5Z0103
R190	CHIP RES.(1608) 1/10W J 100Ω	RRXAJR5Z0101
R192	CHIP RES.(1608) 1/10W F 240Ω	RRXAFR5H2400
R193	CHIP RES. 1/10W F 1.2kΩ	RRXAFR5H1201
R195	CHIP RES.(1608) 1/10W J 1kΩ	RRXAJR5Z0102
R196	CHIP RES. 1/10W F 3.0kΩ	RRXAFR5Z3001
R197	CHIP RES. 1/10W F 1.8kΩ	RRXAFR5Z1801
R732	Not used	
R733	Not used	
R734	Not used	
R735	Not used	
R736	Not used	
R738	Not used	
R739	Not used	
R740	Not used	
R741	Not used	
R742	Not used	
R743	Not used	
R744	Not used	
R747	Not used	
R748	Not used	
R749	Not used	
R752	Not used	
R755	Not used	
R756	Not used	
R757	Not used	
R758	Not used	
R759	Not used	
R820	Not used	
R821	Not used	
R826	Not used	
R827	Not used	
R831	Not used	
R832	Not used	
R833	Not used	
R834	Not used	

WF15L5
L3120UL
2005-06-25