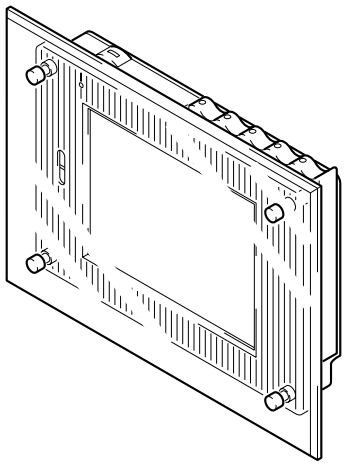
PHD-A55

SERVICE MANUAL

Self Diagnosis Supported model

Ver 1.1 1999. 08



US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Hong Kong Model

MEMORY STICK ™

SPECIFICATIONS

System

Memory	Memory stick

LCD screen

Screen size	5.5 inch
LCD panel	TFT
Total dot number	224640 dots

General

Power requirements	8.4 V
Power consumption	During playback: 8.6 W During standby: 1.6 W
Operation temperature	32°F to + 104°F (0°C to + 40°C)
Storage temperature	– 4°F to + 140°F (– 20°C to + 60°C)
Dimensions	Approx. 8 1/2 × 6 1/2 × 1 5/8 in. (215 × 162 × 40 mm) (w/h/d)
Mass	Approx. 2 lb. (900 g)
Speaker	Dynamic Speaker
Supplied accessories	AC power adaptor, AC-PLM3 (1) Color frame (1) Operating Instructions (1)

Design and specifications are subject to change without notice.

DIGITAL PHOTO FRAME

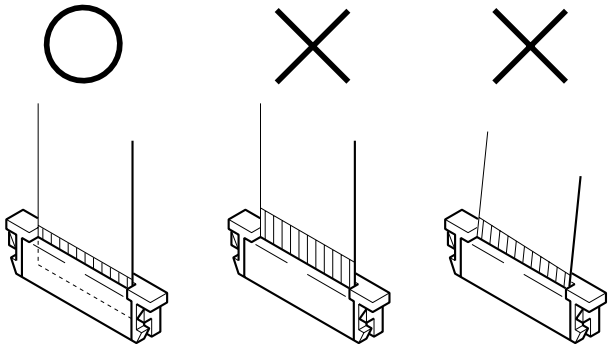
MICROFILM

SONY®

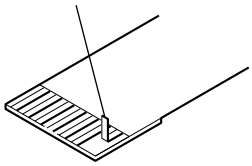
SERVICE NOTE

• NOTE FOR REPAIR

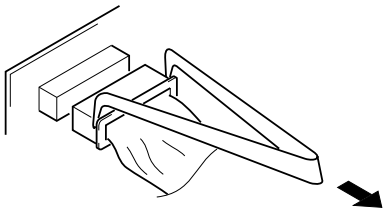
Make sure that the flat cable and flexible board are not cracked of bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



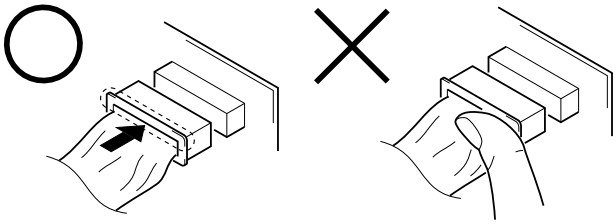
Cut and remove the part of gilt which comes off at the point. (Take care that there are some pieces of gilt left inside)



When remove a connector, don't pull at wire of connector.
Be in danger of the snapping of a wire.



When installing a connector, don't press down at wire of connector.
Be in danger of the snapping of a wire.



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270 ˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

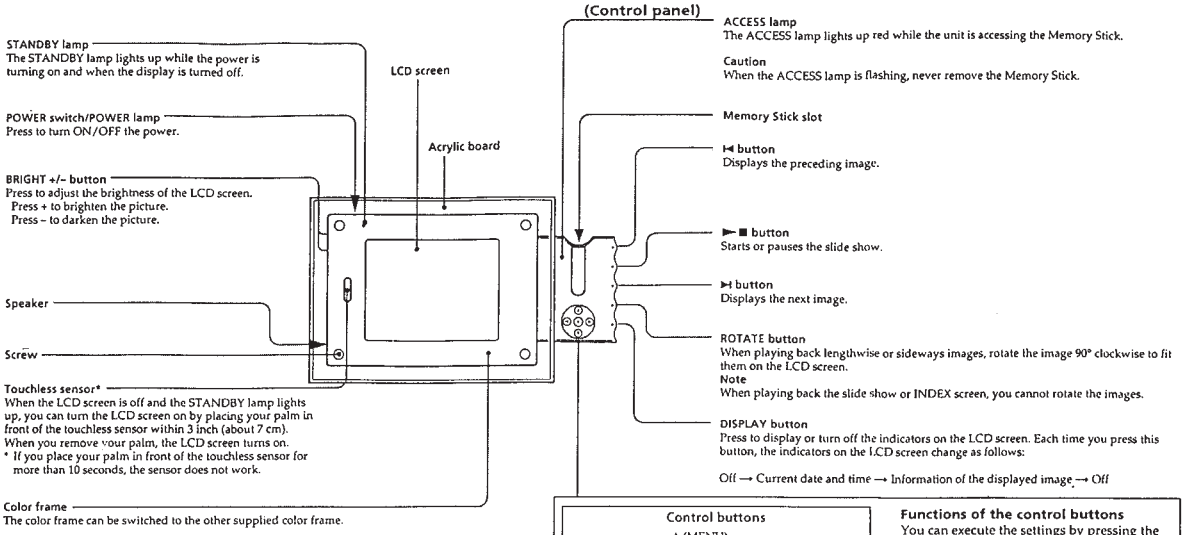
TABLE OF CONTENTS

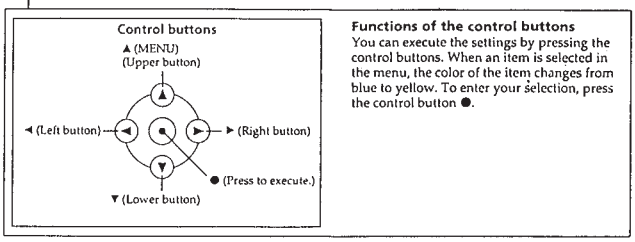
SECTION 1
GENERAL

This section is extracted from instruction manual.

Parts identification

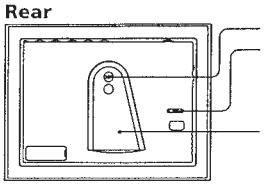
Surface





Functions of the control buttons
You can execute the settings by pressing the control buttons. When an item is selected in the menu, the color of the item changes from blue to yellow. To enter your selection, press the control button ●.

Rear



To change the color frame

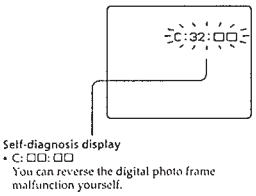
❶ Remove the 4 screws.
❷ Remove the acrylic board.
❸ Remove the color frame and replace with the other supplied color frame.

Note on the function of touchless sensor
You can set up this unit to turn off the LCD screen with the touchless sensor. While pressing the ▶/■ button, press the power switch.
If you place your palm within 3 inch (about 7 cm) in front of the sensor for more than 3 seconds, when you remove your palm, the LCD screen will turn off.

Auto LCD screen off
If a image is constantly played back for more than 12 hours, and you do not perform any additional operation on the unit in that time, the LCD screen turns off automatically to prevent the image burn-in on the screen.

Self-diagnosis display

The digital photo frame has a self-diagnosis display. This function displays the digital photo frame condition with five-digits (a combination of a letter and figures) on the LCD screen. If this occurs check the following code chart. The five-digits display informs you of the digital photo frame's current condition. The last two digits (indicated by □□) will differ depending on the state of the digital photo frame.



Self-diagnosis display
• C: □□: □□
You can reverse the digital photo frame malfunction yourself.

First three digits	Cause and/or Corrective Action
C:32:□□	• Trouble is with the hardware. → Turn the power off and on again.
C:13:□□	• An unformatted Memory Stick is installed. → Format the Memory Stick.

Precautions

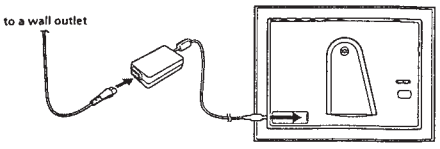
When images recorded with DCR-TRV900/TRV900E or DSC-D700 and images recorded with the other units are on the same Memory Stick, the images recorded with DCR-TRV900/TRV900E or DSC-D700 are not played back.
The images processed with a computer may not be played back.
You cannot display INDEX screen, rotate images, and write print marks on the Memory Sticks recorded with DSC-D700.

Warning and notice messages

Various messages appear on the LCD screen. Check them with the following list.

Message	Meaning/Remedy
NO MEMORY STICK	• No Memory Stick has been inserted. → Insert a Memory Stick.
SYSTEM ERROR	• Trouble is with the hardware. → Turn on the power again.
MEMORY STICK ERROR	• Trouble is with the Memory Stick. → Insert another Memory Stick.
FORMAT ERROR	• Failed to format the Memory Stick. → Insert the proper Memory Stick.
MEMORY STICK LOCKED	• The tab on the Memory Stick is set to LOCK position. → Set it to recording position.
NO MEMORY SPACE	• The Memory Stick is full, and cannot write the print marks. → Delete images you do not want to keep.
FILE ERROR	• Failed in playing back images. → Delete the file.
FILE PROTECT	• The image is protected. → Release protection of the image.
NO FILE	• No image has been recorded on the Memory Stick. → Insert the recorded Memory Stick. → Insert the proper Memory Stick.

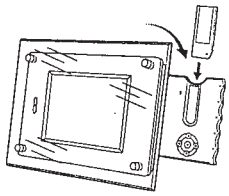
Prepare the power source



Note on the AC power adaptor
Use only the AC-power adaptor supplied. Do not use any other AC power adaptor.

Prepare the Memory Stick

Open the control panel and insert a Memory Stick with recorded images with the ▼ mark facing front.

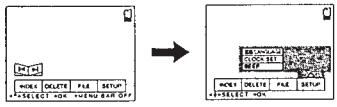


You can use the buttons on the edge of the control panel when the panel is closed.

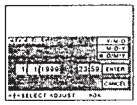
Setting the date and time

When you use the digital photo frame first, set the date and time. If they are not set, the CLOCK SET screen in step 4 appears whenever you turn the unit on.

❶ Press the POWER switch to turn on the power.
❷ Press ▲ of the control button.
The menu bar appears on the LCD screen.
❸ Select "SETUP" with the control button, then press ●.

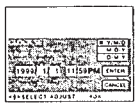


❹ Select "CLOCK SET" with the control button, then press ●.



❺ Select the desired display of the date with the control button, then press ●.
Y/M/D (year/month/day)
M/D/Y (month/day/year)
D/M/Y (day/month/year)

❻ Select the date and time with the control button, then press ●.
The item to be changed is indicated with ▲/▼. Select the number by pressing the control button, then press ● to execute.
When "D/M/Y" is selected, set the time on a 24-hour cycle.



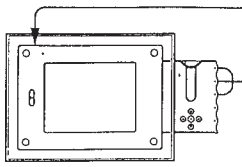
❼ Select "ENTER" with the control button, then press ● to start the clock.

To cancel setting the date and time
Select "CANCEL" with the control button, then press ●.

Playing back images

Insert a Memory Stick with recorded images.

Playing back still images



❶ Press the POWER switch to turn on the power.
The power lamp lights up and the last recorded image is played back.

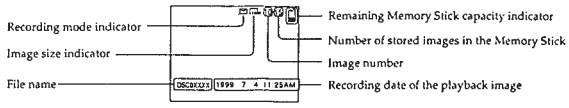
❷ Select the desired image with the control button.
⏮ : To display the preceding image.
▶■ : To play back the slide show.
⏭ : To display the next image.

Playing back moving images

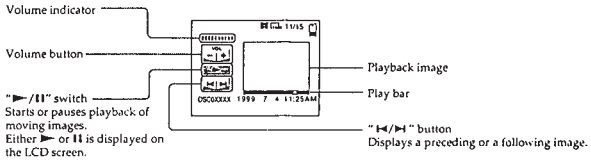
❶ Select the desired moving image with the control button.
❷ Select ▶ on the LCD screen with the control button, then press ●.
The moving image and sound start.
❚❚ : To pause.
VOL. +: To turn the volume up.
VOL. –: To turn the volume down.

The indicators during playback

During playback still images (STILL)

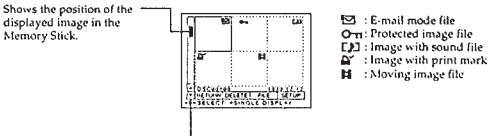


During playback moving images (MOVIE)



In INDEX screen

❶ Press ▲ of the control button.
The menu bar appears on the LCD screen.
❷ Select "INDEX" with the control button, then press ●.
Six images are displayed at a time.



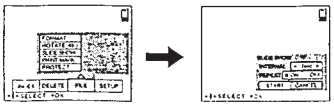
To display the other six images
Select "▲/▼" in the lower left corner of the LCD screen with the control button, then press ▲ or ▼ of the control button.

To return to the normal playback screen (Single screen)
Select the desired image or select "RETURN" with the control button, then press ●.

Setting the slide show

Playing back all still images one after another automatically.

❶ Press ▲ of the control button.
The menu bar appears on the LCD screen.
❷ Select "FILE" with the control button, then press ●.
❸ Select "SLIDE SHOW" with the control button, then press ●.



❹ Enter each item with the control button, then press ●.
INTERVAL: 3 seconds, 10 seconds, one minute, 15 minutes or one day.
REPEAT ON: Plays back images in a continuous loop until "CANCEL" is selected.
OFF: After all images are played back, the slide show ends.
❺ Select "START" with the control button, then press ●.
Slide show starts.
To turn off the indicators on the LCD screen, press ▼ of the control button or DISPLAY.

To cancel the setting
Select "CANCEL" with the control button in the step 5, then press ●.

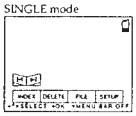
To operate the slide show
Pause: Select "❚❚" with the control button, then press ●.
Start: Select "▶" with the control button, then press ●.
Search: Select "⏮/⏭"on the LCD screen with the control button, then press ◀ or ▶.

About the time of INTERVAL
The time of interval is approximately estimated.

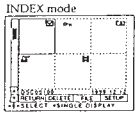
Changing the menu setting

❶ Press ▲ of the control button.
The menu bar appears on the LCD screen.

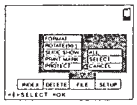
SINGLE mode



INDEX mode



❷ Select the desired item with the control button, then press ●.
The color of the item changes from blue to yellow.



❸ Select the desired item with the control button, then press ●.
Return to the menu bar in the step 1 after setting ends.

To cancel the menu setting

Press ▼ of the control button repeatedly until the menu bar disappears.

Setting the mode of each item

• is set at the factory

SINGLE mode

Menu	Item	Mode Setting	Meaning
INDEX	——		Select this item to display six recorded images at a time.
DELETE		OK	Delete displayed image.
		• CANCEL	Cancel deleting image.
FILE	FORMAT	OK	Format a Memory Stick.
		• CANCEL	Cancel formatting a Memory Stick.
	ROTATE (90°)		Select this item to rotate images.
	SLIDE SHOW	INTERVAL	Select this item to play back images in a continuous loop.
		REPEAT	
		START	
		• CANCEL	Cancel setting the slide show.
	PIRINT MARK	ON	To write the print mark on the image.
		OFF	Remove the print mark.
	PROTECT	ON	Protect displayed image.
		OFF	Release protection of the image.
SET UP	言語/LANGUAGE*		Select the language of the display on the LCD screen.
	CLOCK SET*		Set the date and time.
	BEEP*	ON	Normally set to ON.
		OFF	Turn off the beep sound.

* These settings are held in memory even when the AC power adaptor is removed.

INDEX mode

Menu	Item	Mode Setting	Meaning
RETURN	——		Return to the SINGLE screen.
DELETE		ALL	Delete all images.
		SELECT	Delete the selected images.
FILE	FORMAT	OK	Format a Memory Stick.
		• CANCEL	Cancel formatting a Memory Stick.
	PRINT MARK	ALL	Choose OFF to remove all the print marks.
		SELECT	Choose ON/OFF to write/remove the print mark on a selected image.
		• CANCEL	Cancel writing the print mark.
	PROTECT	ALL	Choose ON/OFF to protect/unprotect all images.
		SELECT	Choose ON/OFF to protect/unprotect selected images.
		• CANCEL	Cancel protecting the image.

"SET UP" menu is the same as SINGLE mode.

Troubleshooting

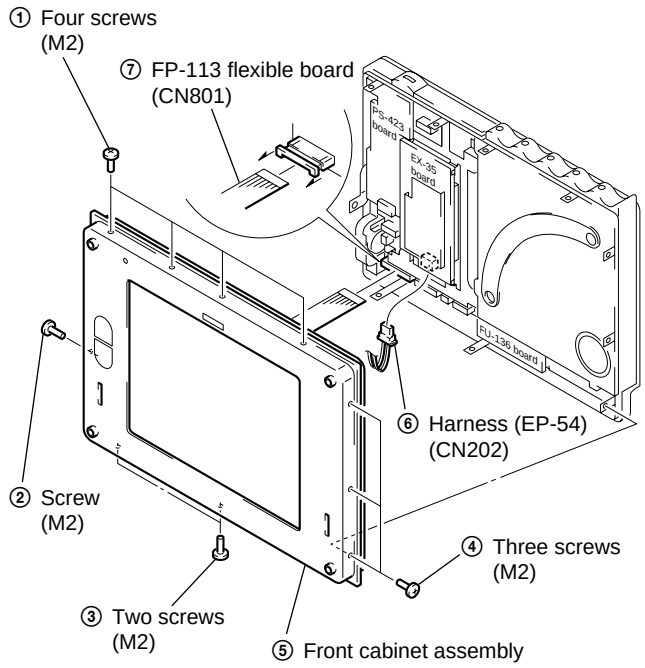
Should any problem persist after you have made those checks, consult your nearest Sony dealer.

Symptom	Cause and/or Solution
You cannot play back the images.	• No Memory Stick has been installed. • No image has been recorded on the Memory Stick. → Install a Memory Stick with recorded images.
The picture is noisy.	• The digital photo frame is placed near a TV or other equipment that uses strong magnets. → Place the digital photo frame away from the TV, etc.
The picture is too dark.	• You are shooting a subject with the light source behind the subject. → Adjust brightness of the LCD screen.
You cannot rotate or delete an image.	• The write protect tab on the Memory Stick is set to LOCK. → Set it to the recording position. • The image is protected. → Cancel the protection of the image.
The LCD screen turns off automatically.	• The sleep switch is set to 30 MIN. or 60 MIN.. → Turn off the sleep switch. • A single image has constantly played back for more than 12 hours. → Perform any operation to automatically turn the screen back on.

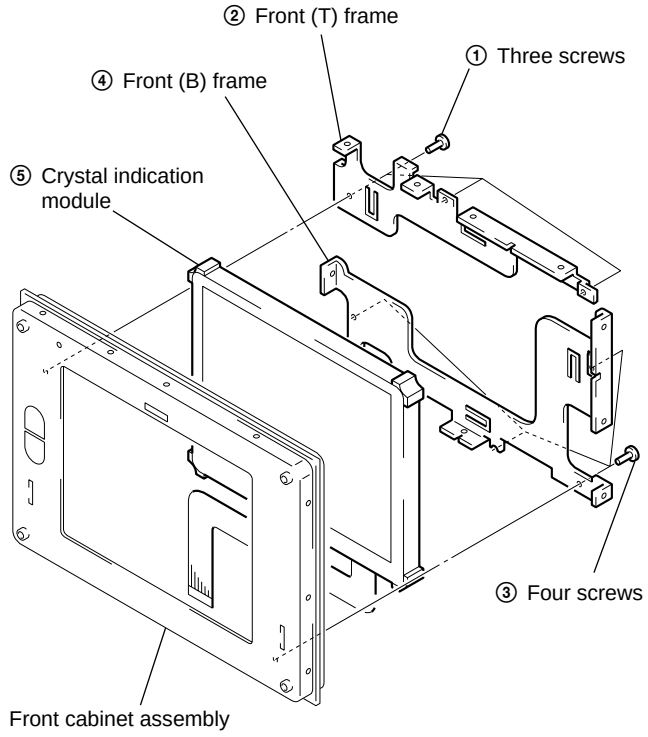
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

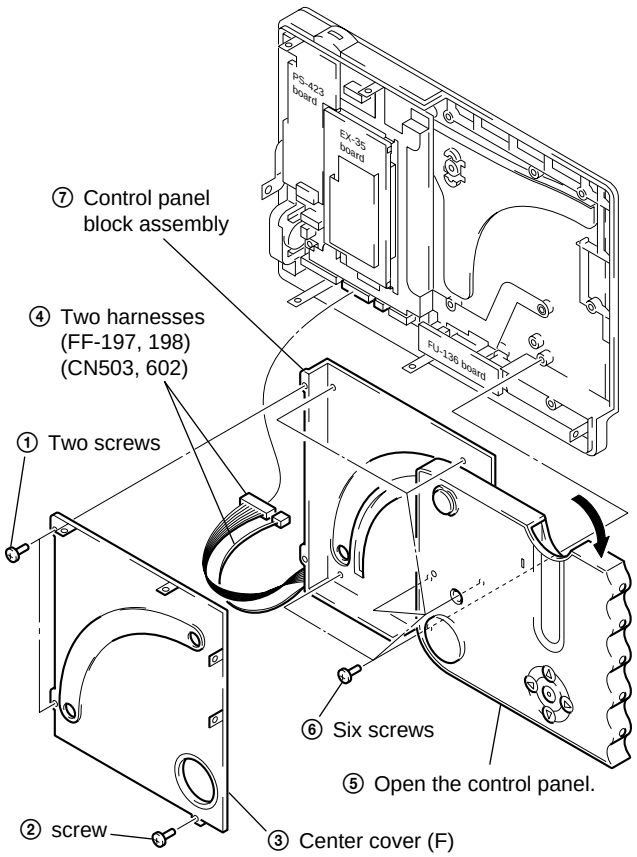
2-1. REMOVAL OF FRONT CABINET ASSEMBLY



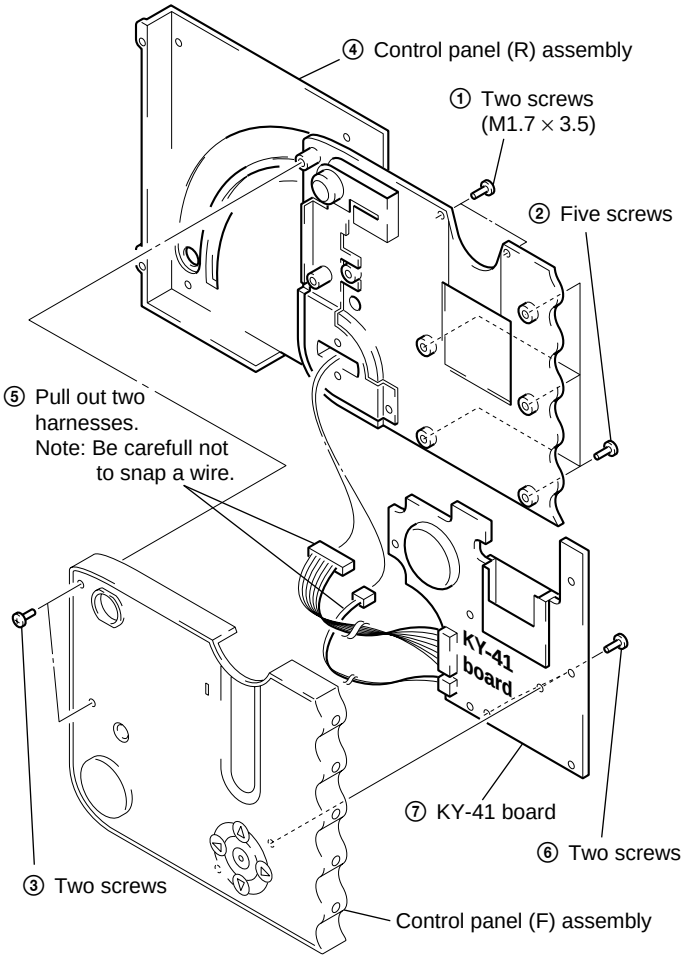
2-2. REMOVAL OF CRYSTAL INDICATION MODULE



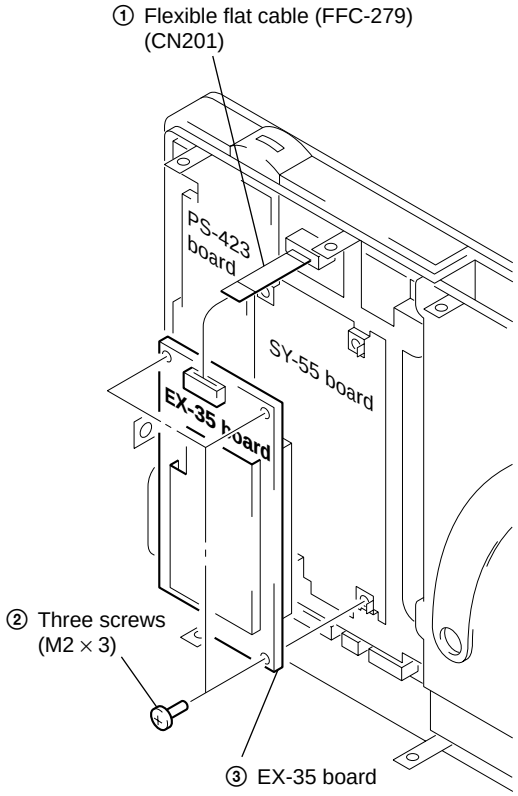
2-3. REMOVAL OF CONTROL PANEL BLOCK ASSEMBLY



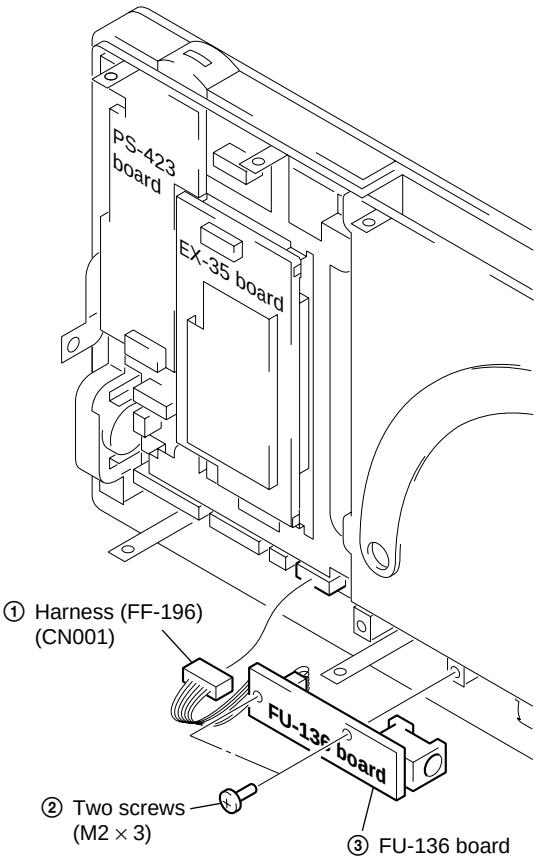
2-4. REMOVAL OF KY-41 BOARD



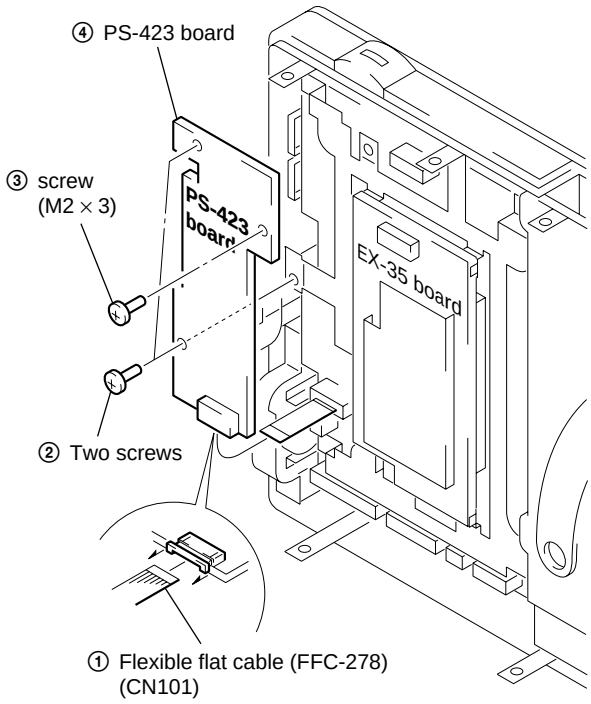
2-5. REMOVAL OF EX-35 BOARD



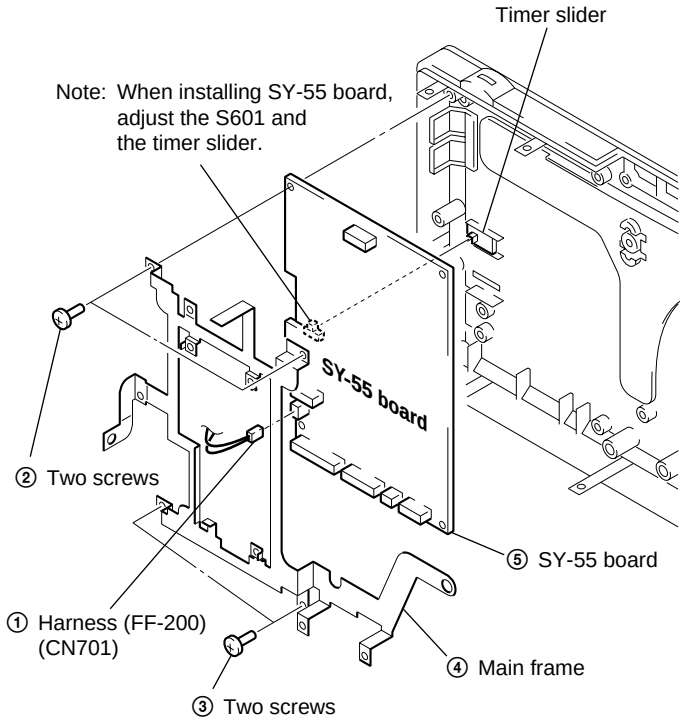
2-6. REMOVAL OF FU-136 BOARD



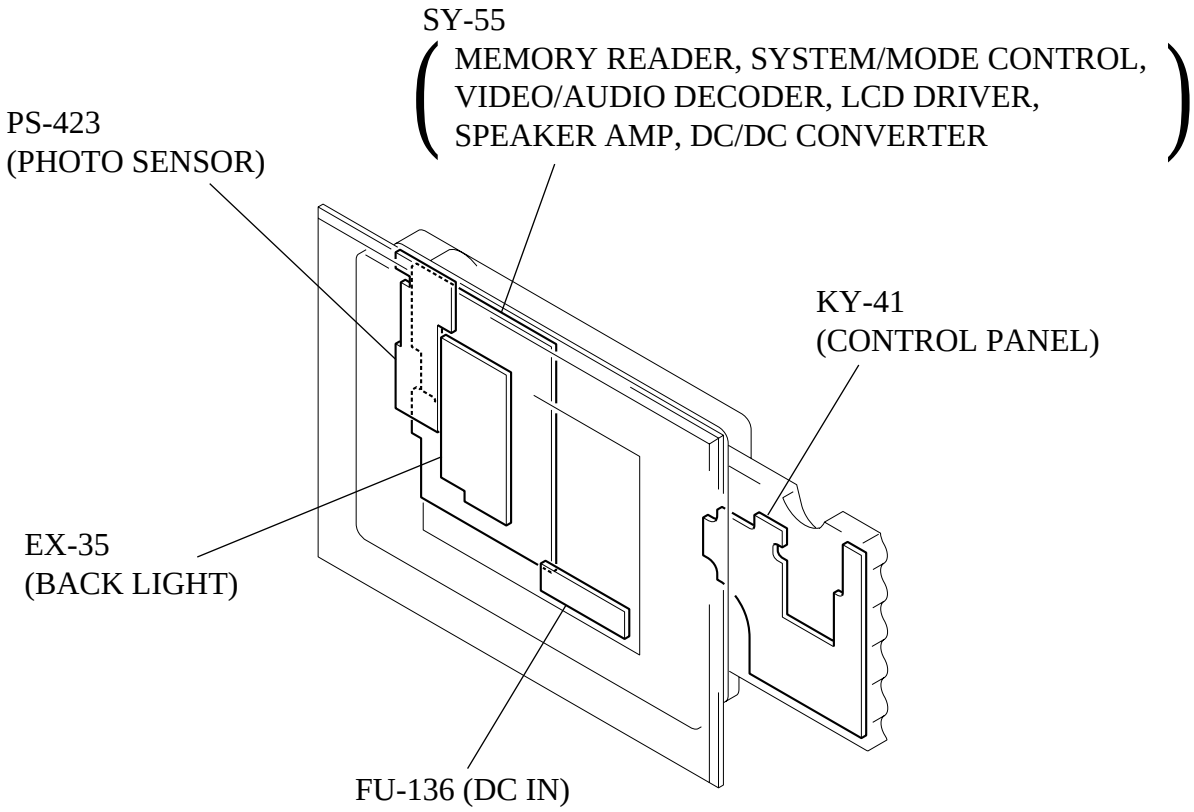
2-7. REMOVAL OF PS-423 BOARD



2-8. REMOVAL OF SY-55 BOARD

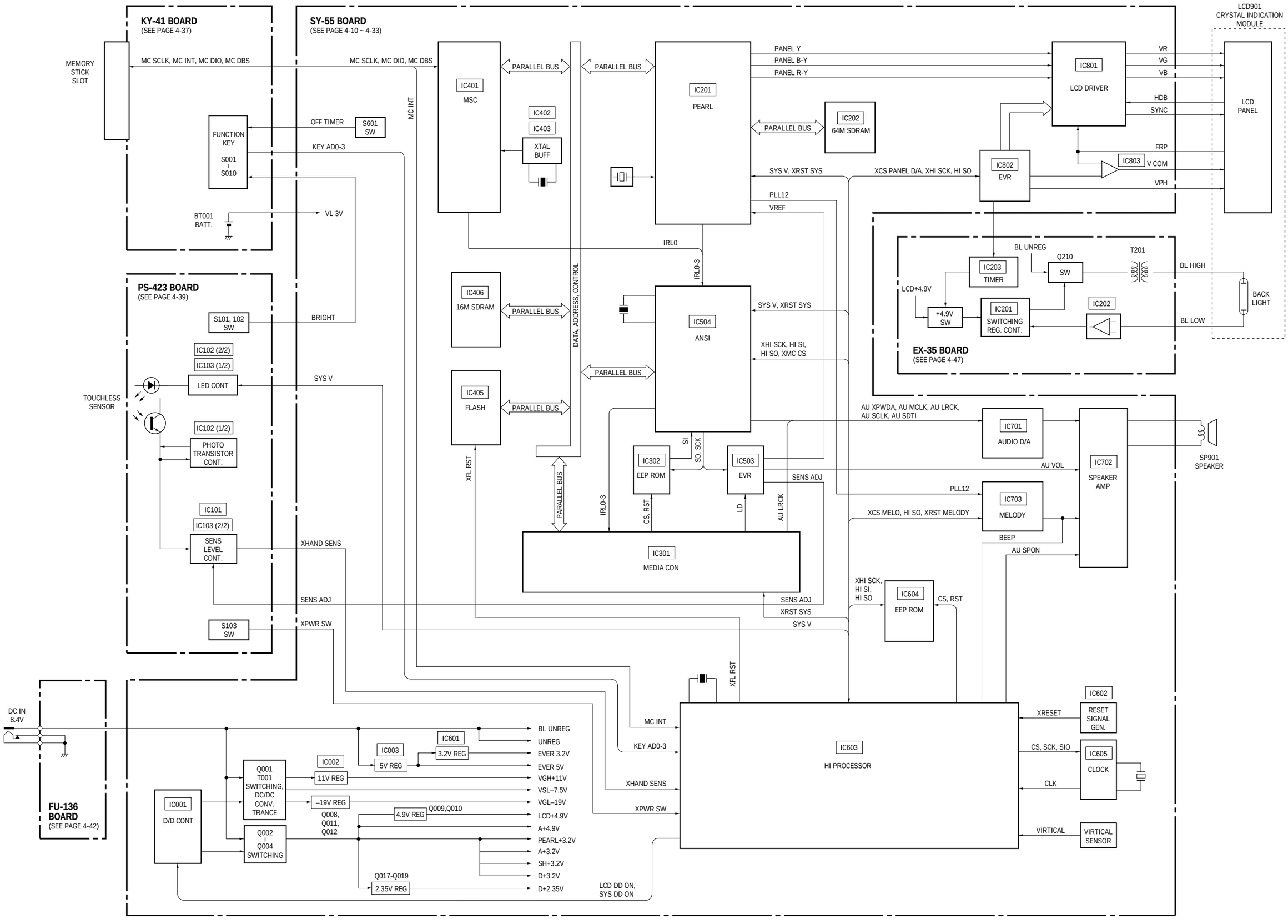


2-9. CIRCUIT BOARDS LOCATION

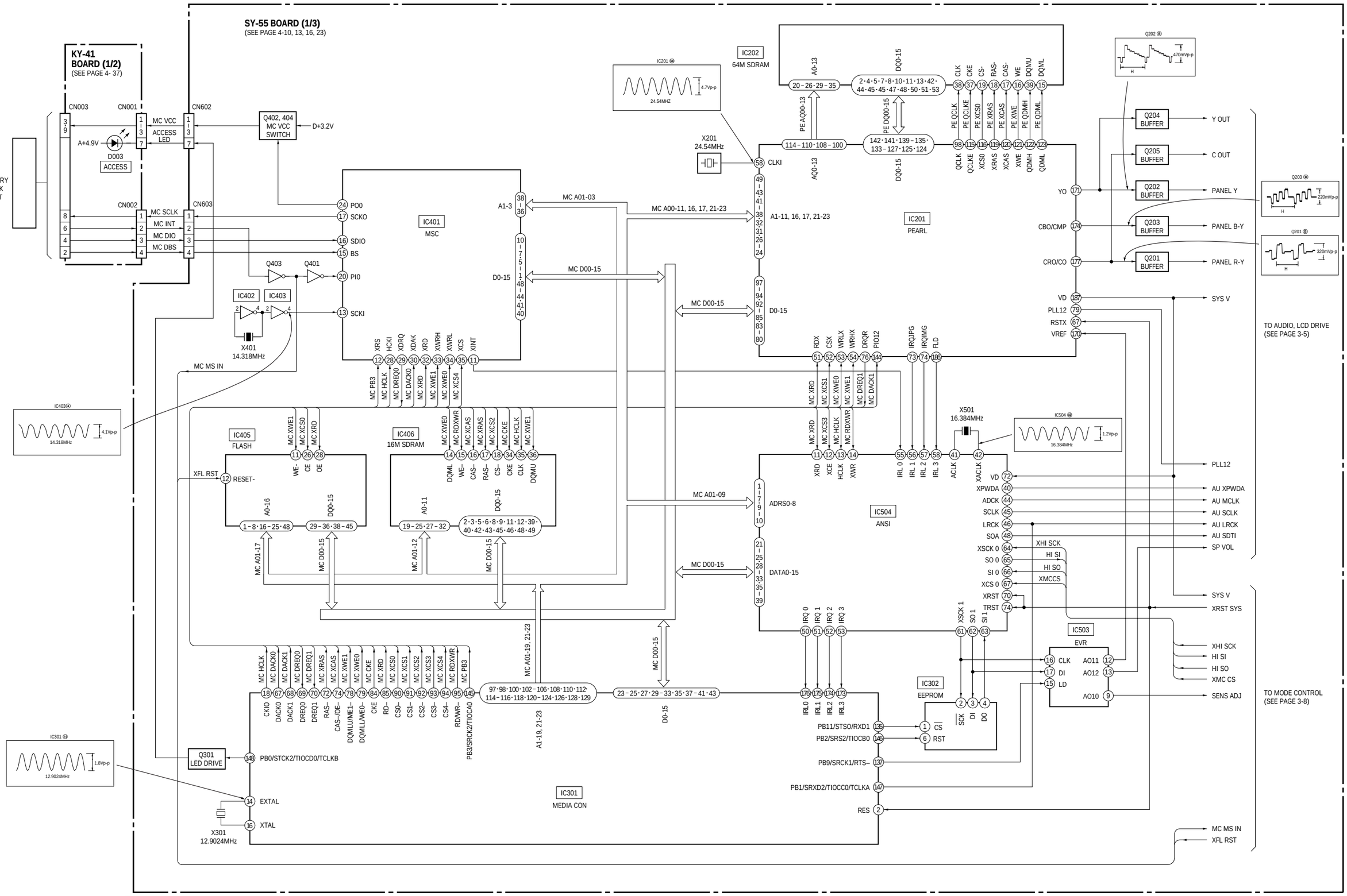


SECTION 3
BLOCK DIAGRAMS

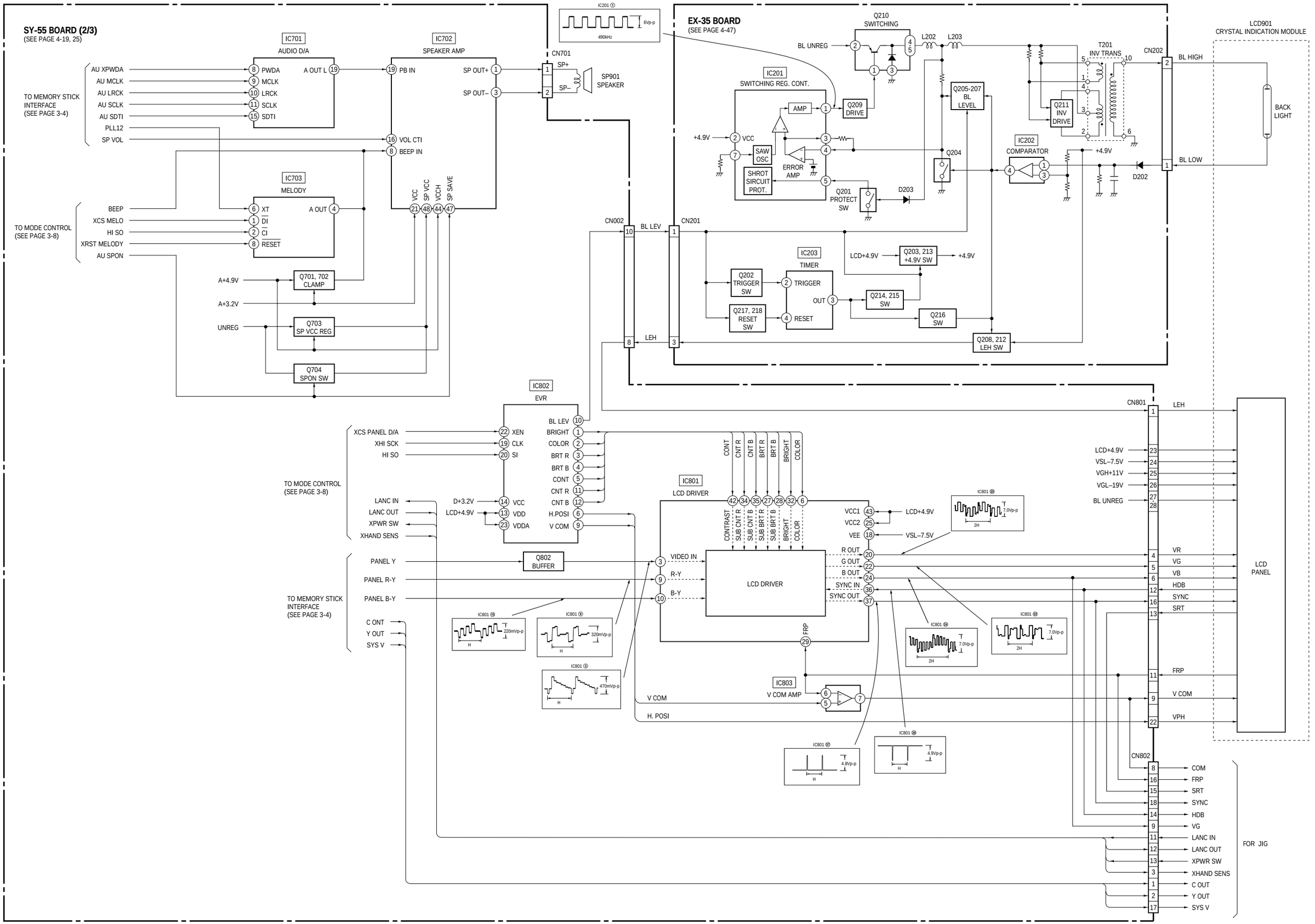
3-1. OVERALL BLOCK DIAGRAM



3-2. MEMORY STICK INTERFACE BLOCK DIAGRAM

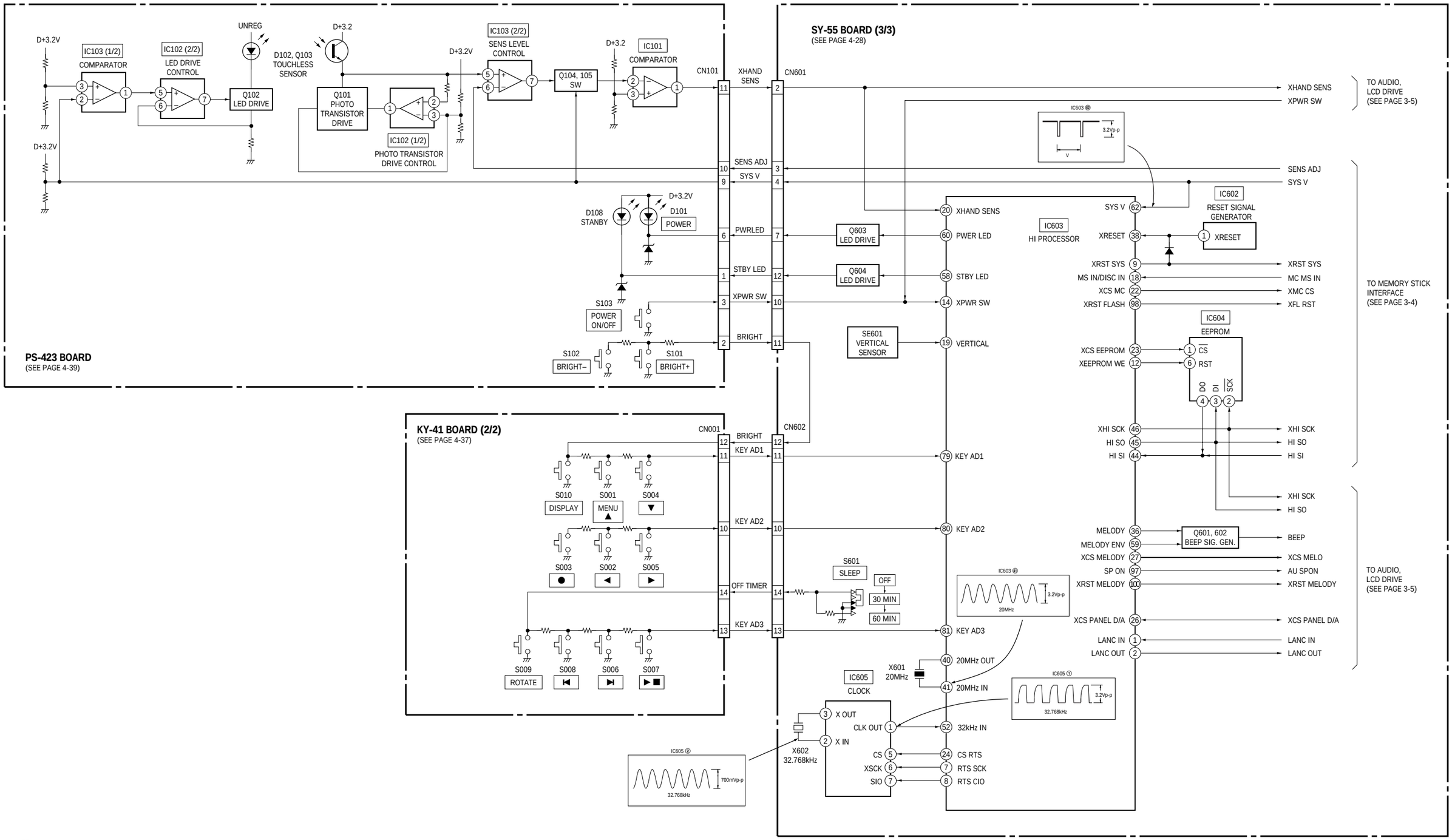


3-3. AUDIO, LCD DRIVE BLOCK DIAGRAM



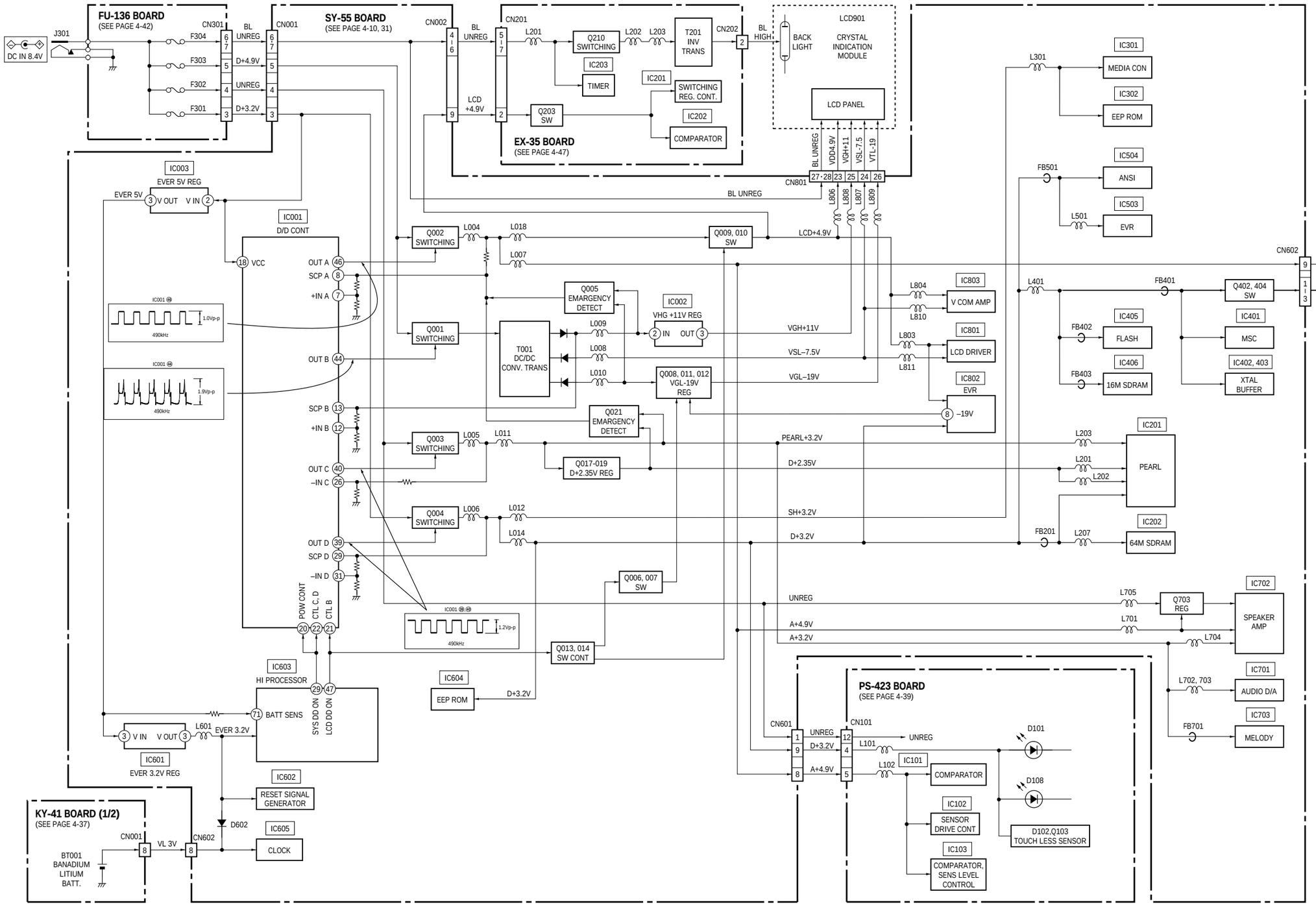
05

3-4. MODE CONTROL BLOCK DIAGRAM



05

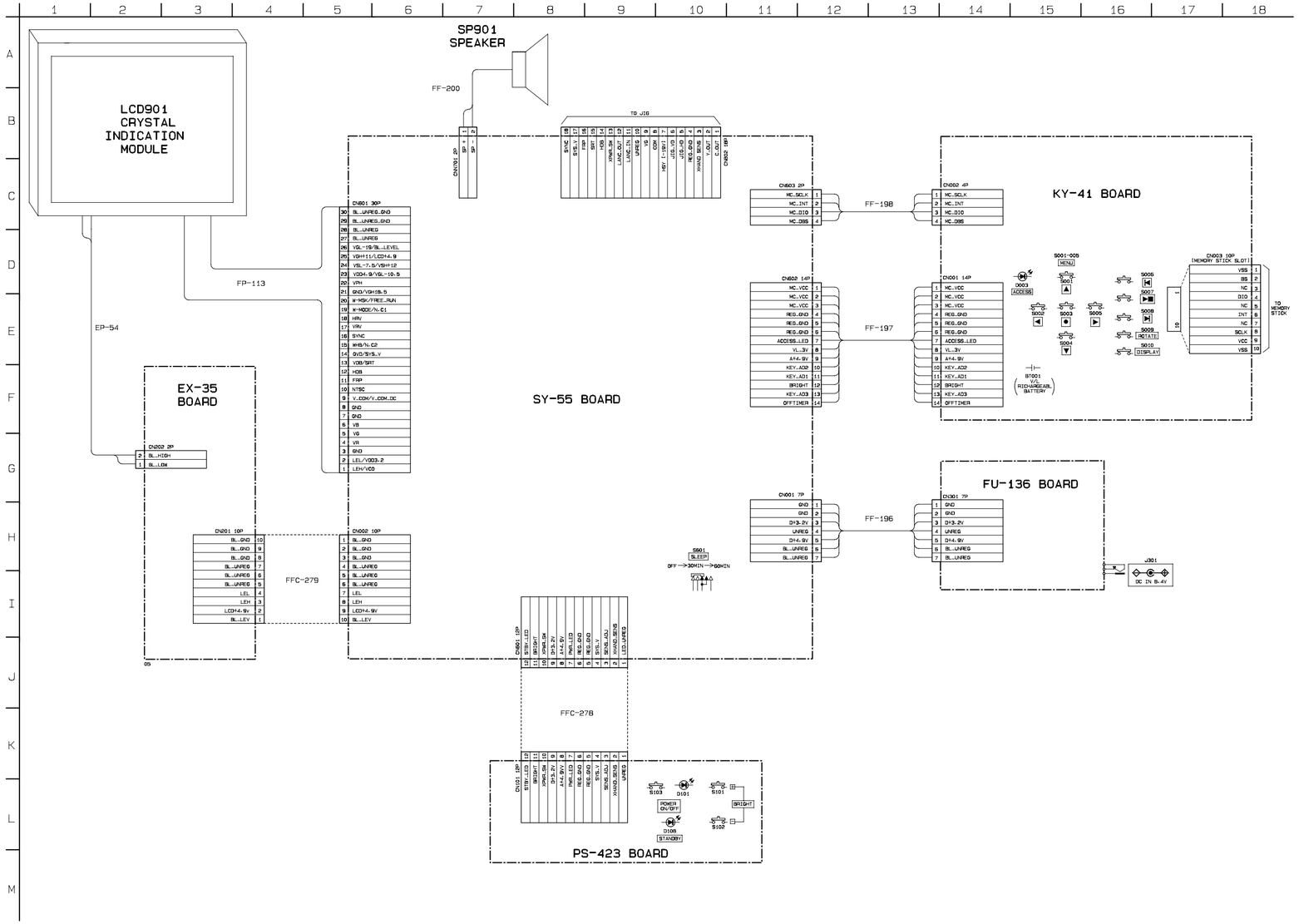
3-5. POWER BLOCK DIAGRAM



05

SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



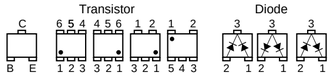
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block)

For printed wiring boards:

- ▒▒▒ : Pattern from the side which enables seeing. (The other layers' pattern are not indicated)
- Circled numbers refer to waveforms.
- Through hole is omitted.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.

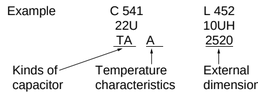
Transistor



Diode

For schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF : µµF 50V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ.
- Caution when replacing chip parts. New parts must be attached after removal of chip. Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- Some chip part will be indicated as follows.

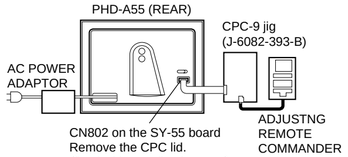


- Constants of resistors, capasitors, ICs and etc with XX indicate that they are not used. In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → EDIT PB/XREC → PB/REC
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- : B+ Line.*
- : B– Line.*
- : IN/OUT direction of B line (+, –).*
- : adjustment for repair.*
- Circled numbers refer to waveforms.*

* Indicated by the color red.

Measuring conditions voltage and waveform:

- Voltages and waveforms are measured between the measurement points and graound when color bar signal is generated at test signal generate mode. They are reference values and reference waveforms.* (VOM of DC 10 M Ω input impedance is used)
- Voltage values change depending upon input impedance of VOM used.
- Connection of equipment



- How to generate inside test signal (color bar). (Refer to table 5-2-1. on page 5-4)
  Connect adjusting rmote commander to PHD-A55.
  Select page: 5, address: F1, and set data: 04.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

SY-55 (MEMORY READER, SYSTEM/MODE CONTROL, VIDEO/AUDIO DECODER, LCD DRIVER, SPEKER AMP, DC/DC CONVERTER) PRINTED WIRING BOARD
– Ref. No.: SY-55 board; 2,000 series –

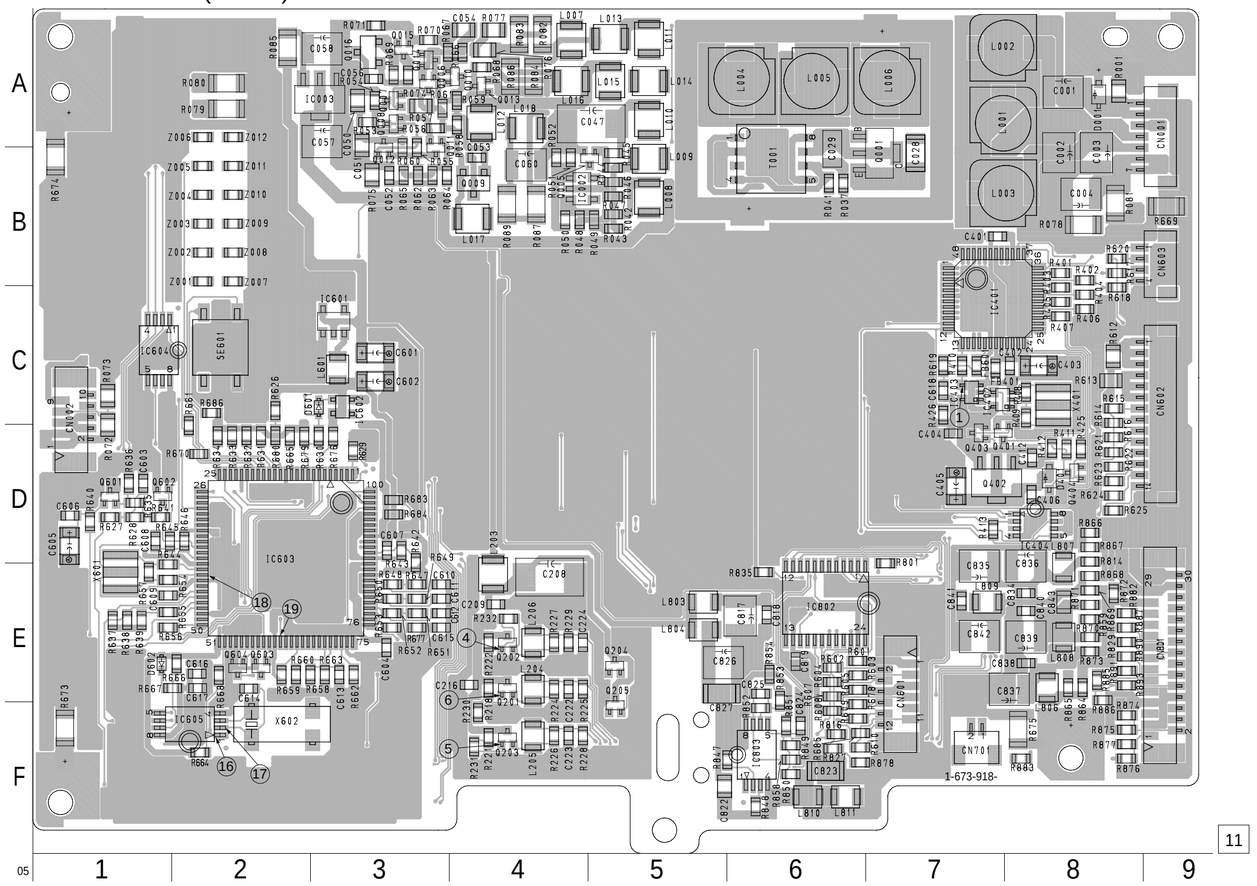
- **For Printed Wiring Board.**
- SY-55 board is 6-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor

There are few cases that the part isn't mounted in this model is printed on this diagram.

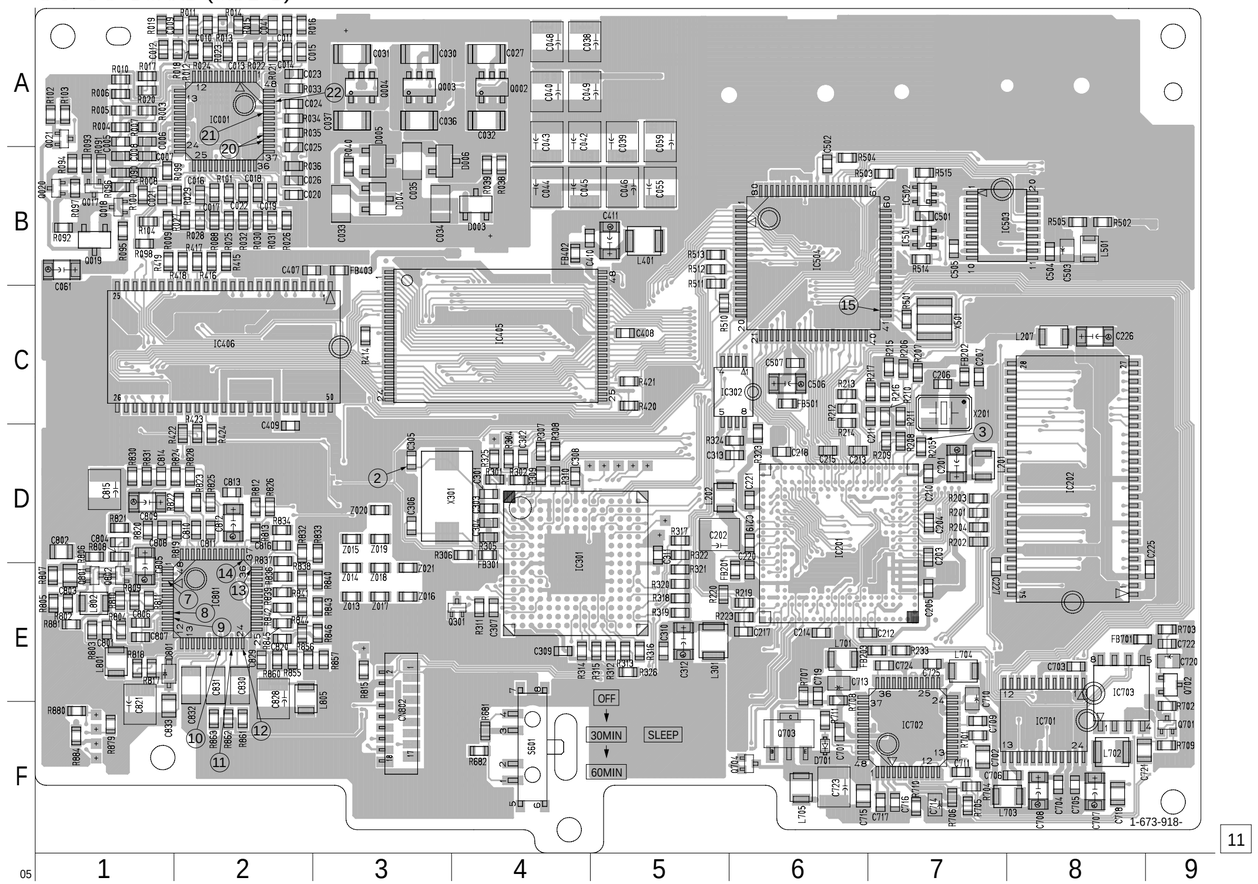
SY-55 BOARD (SIDE A)

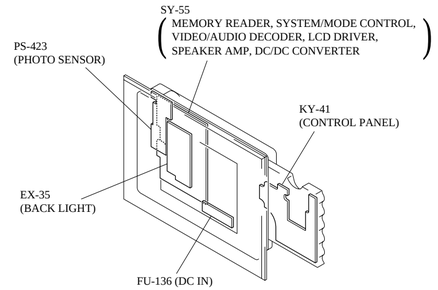
C001	A-8	IC601	C-3	R061	A-3	R637	E-1
C002	B-8	IC602	C-3	R062	B-3	R638	E-1
C003	B-8	IC603	D-2	R063	B-3	R639	E-1
C004	B-8	IC604	C-1	R064	B-3	R640	D-1
C028	B-7	IC605	F-2	R065	B-3	R642	D-3
C029	B-6	IC802	E-6	R066	A-4	R643	D-3
C047	A-5	IC803	F-6	R067	A-3	R644	E-1
C050	A-3			R068	A-4	R645	D-1
C051	A-3	L001	A-7	R072	D-1	R646	D-2
C052	B-3	L002	A-7	R075	B-3	R647	E-3
C053	B-4	L003	B-7	R076	A-4	R648	E-3
C054	A-4	L004	A-6	R078	B-8	R649	E-3
C057	A-3	L005	A-6	R079	A-2	R650	E-3
C058	A-3	L006	A-7	R080	A-2	R651	E-3
C060	B-4	L007	A-4	R081	B-8	R652	E-3
C208	E-4	L008	B-5	R083	A-4	R653	E-3
C209	E-4	L009	B-5	R084	A-4	R654	E-1
C216	E-4	L010	A-5	R085	A-2	R655	E-1
C401	B-7	L011	A-5	R087	B-4	R657	E-1
C402	C-8	L012	A-4	R218	E-4	R658	E-2
C403	C-8	L013	A-5	R221	F-4	R659	E-2
C404	D-7	L014	A-5	R222	E-4	R660	E-2
C405	D-7	L017	B-4	R224	E-4	R661	D-2
C406	D-8	L018	A-4	R225	E-4	R662	E-3
C412	D-8	L203	E-4	R226	F-4	R663	E-3
C601	C-3	L601	C-3	R227	E-4	R664	F-2
C602	C-3	L803	E-5	R228	F-4	R665	D-2
C603	D-1	L804	E-5	R229	E-4	R666	E-2
C604	E-3	L806	E-8	R401	B-8	R667	E-2
C605	D-1	L807	E-8	R402	B-8	R668	E-2
C606	D-1	L808	E-8	R403	C-8	R669	B-9
C607	D-3	L809	E-7	R404	C-8	R670	D-2
C608	D-1	L810	F-6	R405	C-8	R673	F-1
C609	E-1	L811	F-6	R406	C-8	R674	B-1
C610	E-3			R407	C-8	R675	F-8
C613	E-3	Q001	B-7	R408	C-8	R676	D-3
C614	E-2	Q005	B-4	R409	C-8	R677	E-3
C615	E-3	Q006	A-3	R410	C-7	R678	F-6
C617	E-2	Q007	A-3	R411	D-8	R679	D-2
C817	E-6	Q008	A-3	R412	D-8	R680	D-2
C818	E-6	Q009	B-4	R413	D-7	R683	D-3
C819	E-6	Q010	A-4	R425	D-8	R684	D-3
C822	F-5	Q011	A-3	R426	C-7	R685	F-6
C823	F-6	Q012	B-3	R601	E-6	R686	C-2
C824	F-6	Q013	A-4	R602	E-6	R814	D-8
C826	E-5	Q014	A-3	R603	E-6	R835	E-6
C827	E-5	Q201	E-4	R604	E-6	R847	F-5
C834	E-8	Q202	E-4	R605	E-6	R848	F-6
C836	E-8	Q203	E-4	R607	E-6	R849	F-6
C837	E-8	Q204	E-5	R608	F-6	R850	F-6
C838	E-8	Q205	E-5	R609	F-6	R852	F-6
C839	E-8	Q401	D-7	R610	F-6	R853	E-6
C840	E-8	Q402	D-7	R612	C-8	R854	E-6
C841	E-7	Q403	D-7	R613	C-8	R859	E-8
C842	E-7	Q404	D-8	R614	C-8	R864	E-8
		Q601	D-1	R615	C-8	R866	D-8
CN001	A-9	Q602	D-1	R616	D-8	R868	E-8
CN002	C-1	Q603	E-2	R617	B-8	R871	E-8
CN601	E-7	Q604	E-2	R618	C-8	R873	E-8
CN602	C-9			R619	C-7	R875	F-8
CN603	B-9	R001	A-8	R620	B-8	R876	F-8
CN701	F-7	R037	B-6	R621	D-8	R878	F-6
CN801	E-9	R042	B-5	R622	D-8	R882	E-8
		R044	B-5	R623	D-8	R885	E-8
D001	A-8	R045	B-5	R624	D-8	R887	E-8
D401	D-8	R047	B-5	R625	D-8	R890	E-8
D601	C-2	R049	B-5	R626	C-2	R891	E-8
D602	E-1	R050	B-4	R627	D-1	R893	E-8
		R051	B-4	R628	D-1		
FB401	C-7	R052	B-4	R629	D-3	SE601	C-2
FB601	C-7	R053	A-3	R630	D-3		
		R054	A-3	R631	D-2	T001	B-6
IC002	B-4	R055	B-3	R632	D-2		
IC003	A-3	R056	A-3	R633	D-2	X401	C-8
IC401	C-7	R057	A-3	R634	D-2	X601	E-1
IC402	C-7	R058	A-4	R635	D-1	X602	F-2
IC403	C-7	R059	A-4	R636	D-1		

SY-55 BOARD (SIDE A)



SY-55 BOARD (SIDE B)



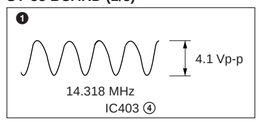


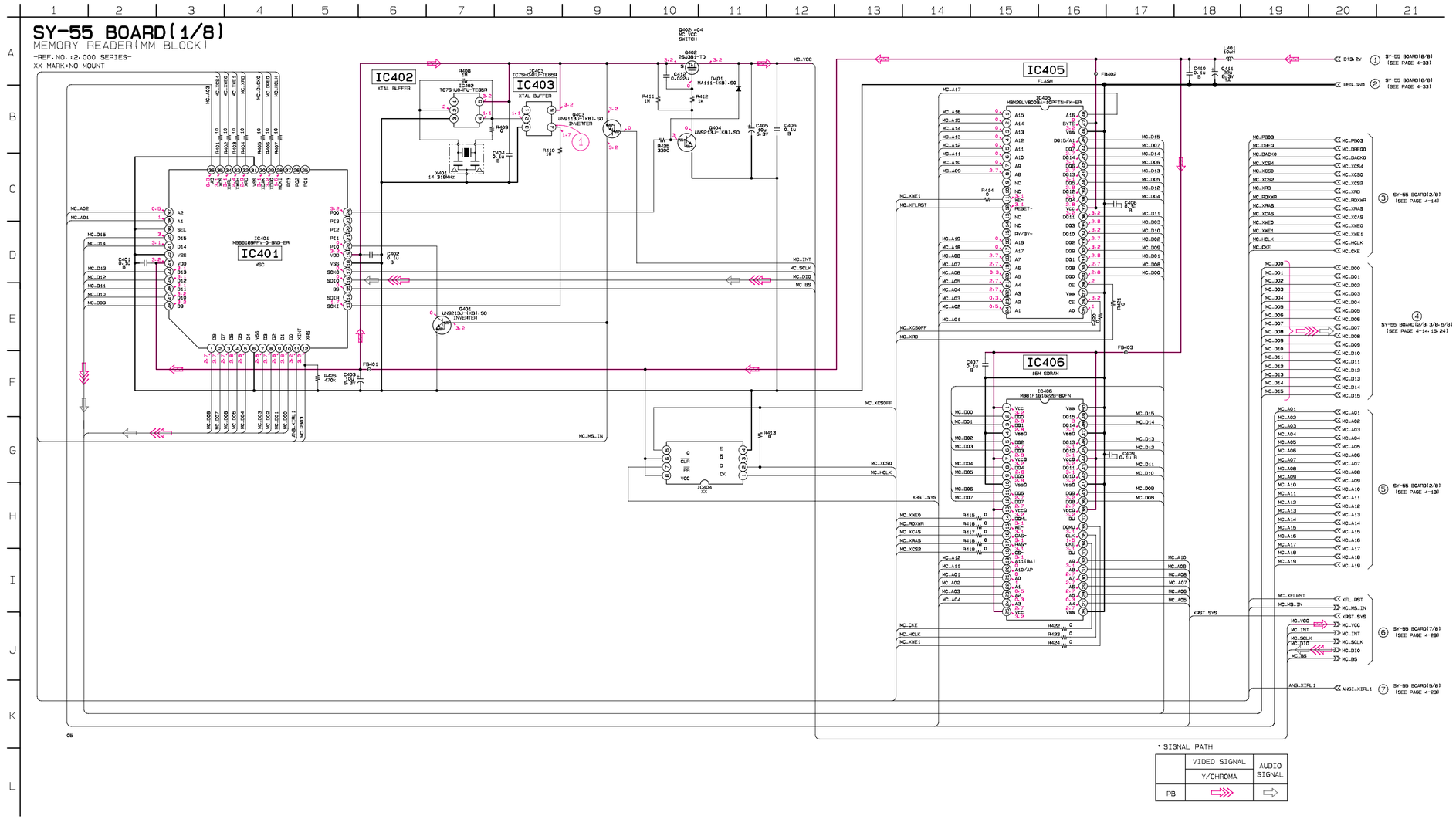
SY-55 BOARD (SIDE B)

C005	A-1	C502	B-6	IC801	E-2	R206	C-7	R825	D-2
C006	A-1	C503	B-8			R208	D-7	R826	D-2
C007	B-1	C504	B-8	L201	D-7	R210	C-7	R828	D-2
C008	B-1	C505	B-7	L202	D-5	R211	C-7	R830	D-1
C009	A-1	C506	C-6	L207	C-8	R212	C-6	R831	D-1
C011	A-2	C507	C-6	L301	E-5	R213	C-6	R832	D-2
C012	A-1	C701	F-6	L401	B-5	R214	D-6	R833	D-3
C013	A-2	C702	F-7	L501	B-8	R217	C-7	R834	D-2
C014	A-2	C703	E-8	L701	E-6	R219	E-6	R836	E-2
C015	A-2	C704	F-8	L702	F-8	R223	E-6	R837	D-2
C017	B-2	C705	F-8	L703	F-8	R233	E-7	R839	E-2
C018	B-2	C706	F-8	L704	E-7	R301	D-4	R840	E-3
C019	B-2	C707	F-7	L705	F-6	R302	D-4	R841	E-2
C020	B-2	C708	F-8			R304	D-4	R842	E-2
C023	A-2	C709	F-7	Q002	A-4	R305	D-4	R843	E-3
C024	A-2	C710	F-7	Q003	A-3	R306	D-4	R844	E-2
C025	A-2	C711	F-7	Q004	A-3	R307	D-4	R845	E-2
C026	B-2	C713	E-6	Q017	B-1	R308	D-4	R846	E-3
C027	A-4	C714	F-7	Q018	B-1	R309	D-4	R855	E-2
C030	A-3	C715	F-6	Q019	B-1	R310	D-4	R856	E-2
C031	A-3	C716	F-7	Q021	A-1	R311	E-4	R860	E-2
C032	A-4	C717	F-7	Q301	E-4	R312	E-5	R861	F-2
C033	B-3	C718	F-8	Q701	F-9	R313	E-5	R862	F-2
C034	B-3	C720	E-9	Q702	E-9	R314	E-4	R863	F-2
C035	B-3	C721	F-8	Q703	F-6	R315	E-5	R879	F-1
C036	A-3	C722	E-9	Q704	E-6	R316	E-5	R880	F-1
C037	A-3	C723	F-6	Q802	E-1	R317	D-5	R881	E-1
C038	A-4	C724	E-7			R318	E-5	R884	F-1
C039	A-5	C725	E-7	R004	A-1	R319	E-5		
C040	A-4	C805	E-1	R005	A-1	R320	E-5	S601	F-4
C042	A-4	C806	E-1	R006	A-1	R321	E-5		
C045	B-4	C807	E-1	R007	A-1	R322	D-5	X201	C-7
C046	B-5	C808	D-1	R008	B-1	R323	D-6	X301	D-3
C048	A-4	C809	D-1	R010	A-1	R324	D-6	X501	C-7
C055	B-5	C810	D-2	R011	A-2	R325	D-4		
C059	A-5	C811	D-2	R012	A-2	R326	E-5		
C061	B-1	C812	D-2	R013	A-2	R414	C-3		
C201	D-7	C814	D-1	R014	A-2	R415	B-2		
C202	D-5	C815	D-1	R015	A-2	R416	B-2		
C203	D-7	C816	D-2	R016	A-2	R417	B-2		
C204	D-7	C820	E-2	R017	A-1	R418	B-2		
C205	E-7	C821	F-1	R018	A-2	R419	B-2		
C206	C-7	C828	E-2	R019	A-1	R420	C-5		
C207	C-7	C829	E-2	R020	A-1	R421	C-5		
C210	D-7	C830	E-2	R021	A-2	R422	D-2		
C211	C-7	C831	E-2	R022	A-2	R423	D-2		
C212	E-7	C832	E-2	R023	A-2	R424	D-2		
C213	D-6	C833	F-1	R024	A-2	R501	C-7		
C214	E-6			R025	B-2	R503	B-7		
C215	D-6	CN802	F-3	R026	B-2	R504	B-6		
C217	E-6			R027	B-2	R505	B-8		
C218	D-6	D003	B-4	R028	B-2	R510	C-5		
C219	D-6	D005	A-3	R029	B-2	R511	C-5		
C220	E-6	D006	B-4	R030	B-2	R512	B-5		
C221	D-6	D801	E-1	R031	B-2	R513	B-5		
C225	E-9			R032	B-2	R514	B-7		
C226	C-8	FB201	E-6	R033	A-2	R515	B-7		
C227	E-7	FB202	C-7	R034	A-2	R681	F-4		
C301	D-4	FB203	E-7	R035	A-2	R682	F-4		
C302	D-4	FB301	D-4	R036	B-2	R701	F-7		
C303	D-4	FB402	B-4	R039	B-4	R702	F-9		
C304	D-4	FB403	B-3	R040	B-3	R703	E-9		
C305	D-3	FB501	C-6	R090	B-1	R704	F-7		
C306	D-3	FB701	E-8	R091	B-1	R705	F-7		
C307	E-4			R092	B-1	R708	F-6		
C308	D-4	IC001	A-2	R093	B-1	R709	F-9		
C309	E-4	IC201	D-6	R095	B-1	R808	D-1		
C310	E-5	IC202	D-8	R097	B-1	R809	E-1		
C311	D-5	IC301	D-4	R099	B-1	R810	E-1		
C312	E-5	IC302	C-6	R101	B-2	R811	E-1		
C313	D-6	IC405	C-4	R102	A-1	R813	D-2		
C407	B-2	IC406	C-2	R103	A-1	R815	E-3		
C408	C-5	IC503	B-7	R201	D-7	R818	E-1		
C409	D-2	IC504	B-6	R202	D-7	R819	D-2		
C410	B-4	IC701	F-8	R203	D-7	R821	D-1		
C411	B-5	IC702	F-7	R204	D-7	R822	D-2		
C501	B-7	IC703	E-8	R205	D-7	R823	D-2		

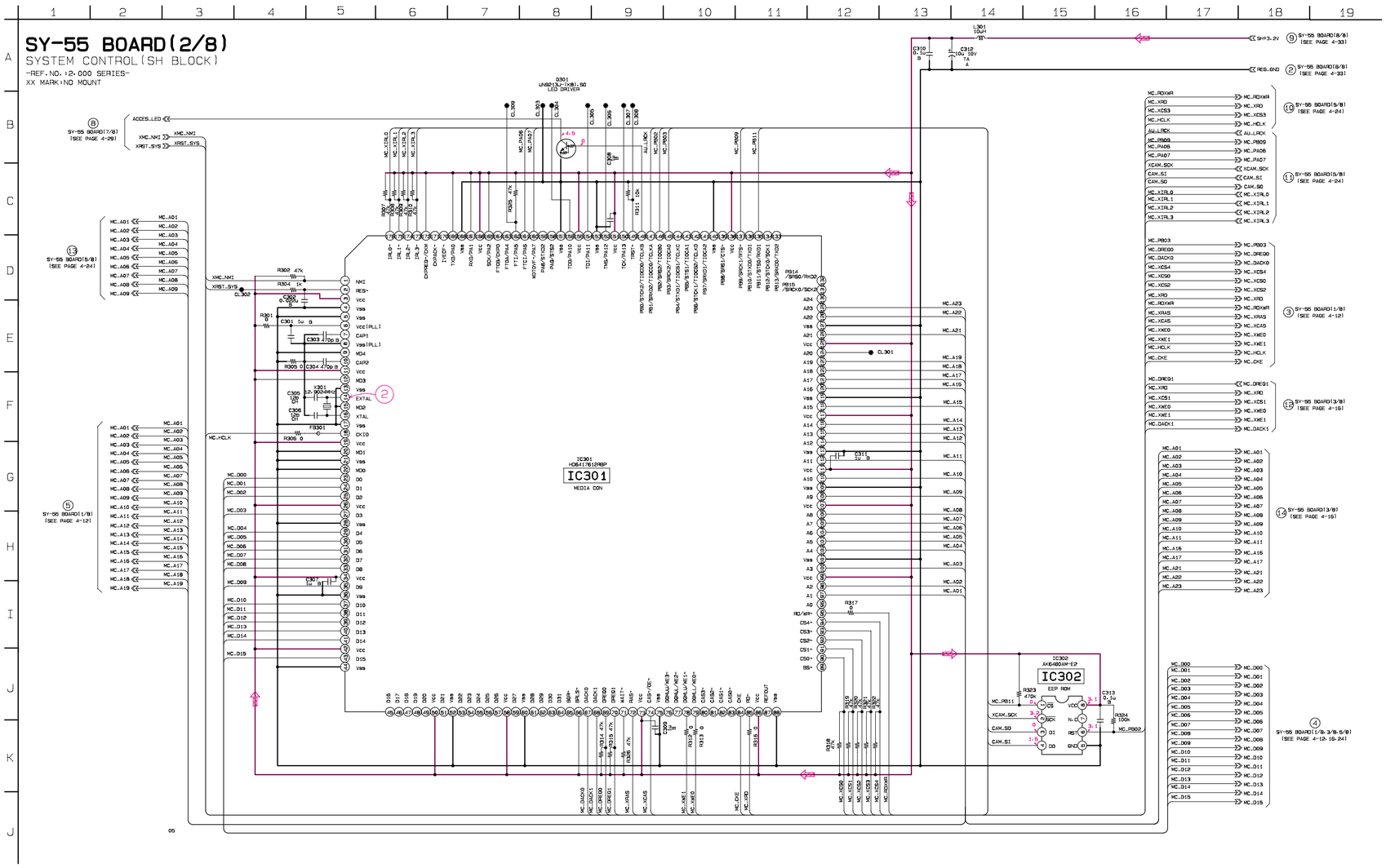
SY-55 (MOMERY READER) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.

SY-55 BOARD (1/8)

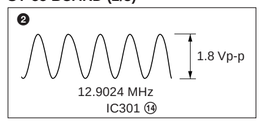




SY-55 (SYSTEM CONTROL) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.

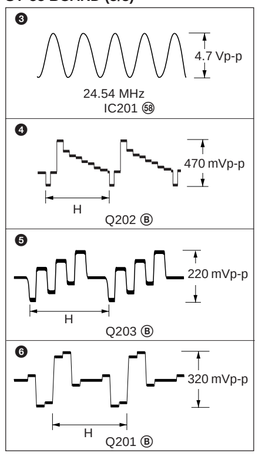


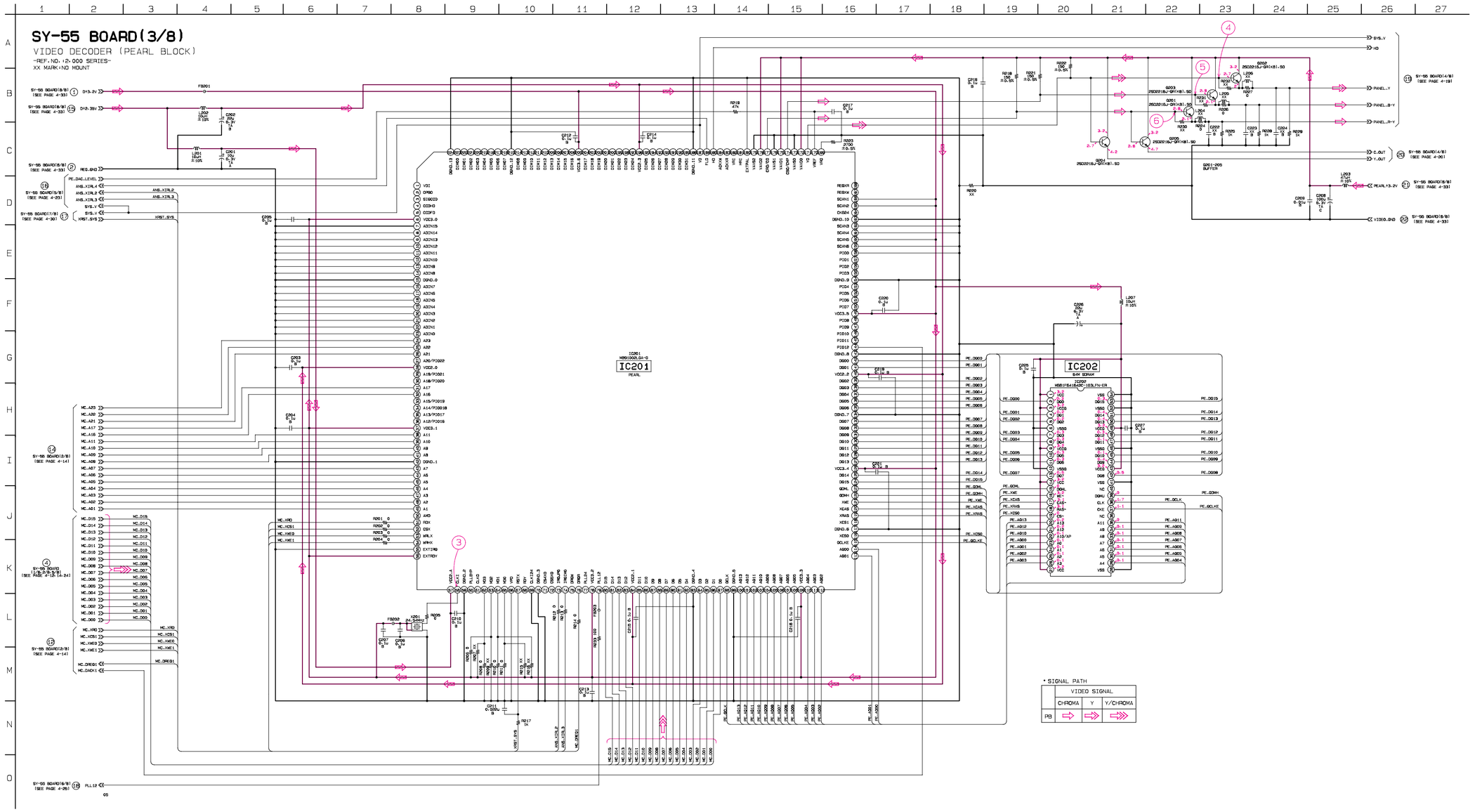
SY-55 BOARD (2/8)



SY-55 (VIDEO DECODER) SCHEMATIC DIAGRAM • See page 4-5 SY-55 for printed wiring board.

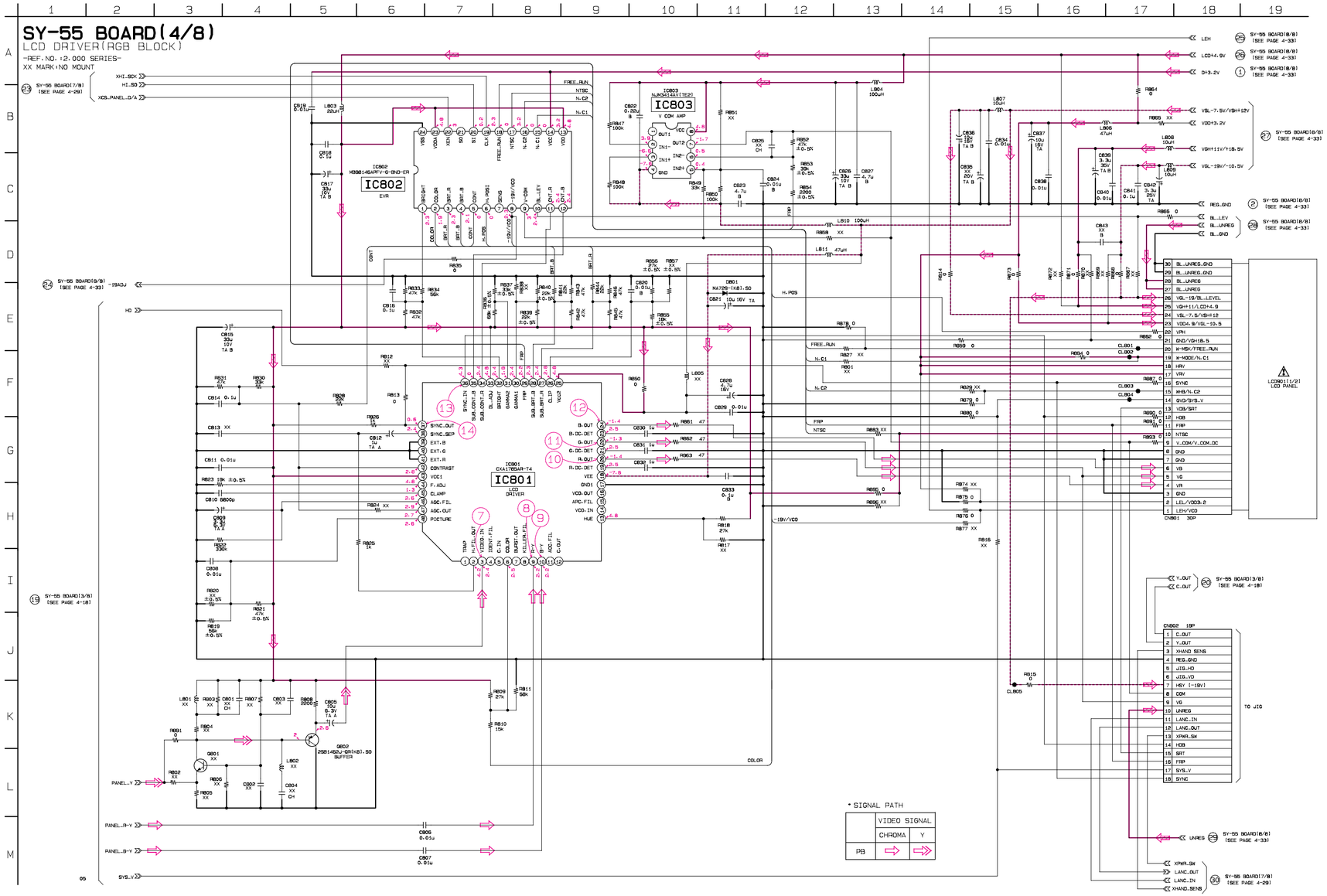
SY-55 BOARD (3/8)



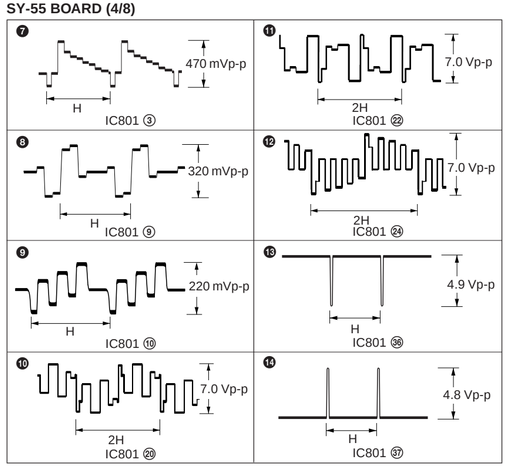


VIDEO DECODER
SY-55 (3/8)

SY-55 (LCD DRIVER) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.



SY-55 BOARD (4/8)

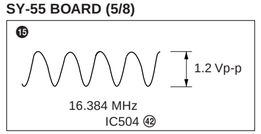


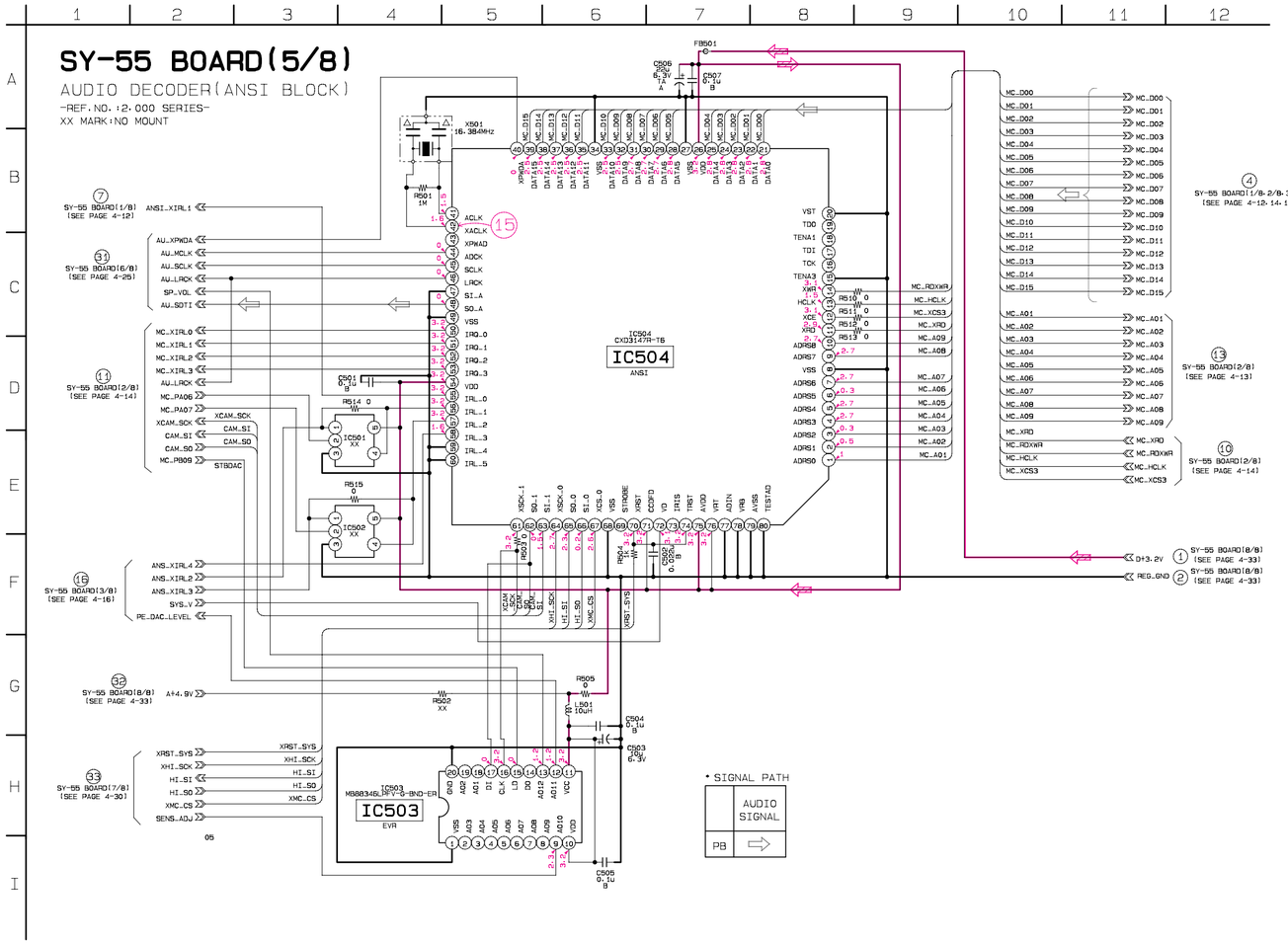
Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

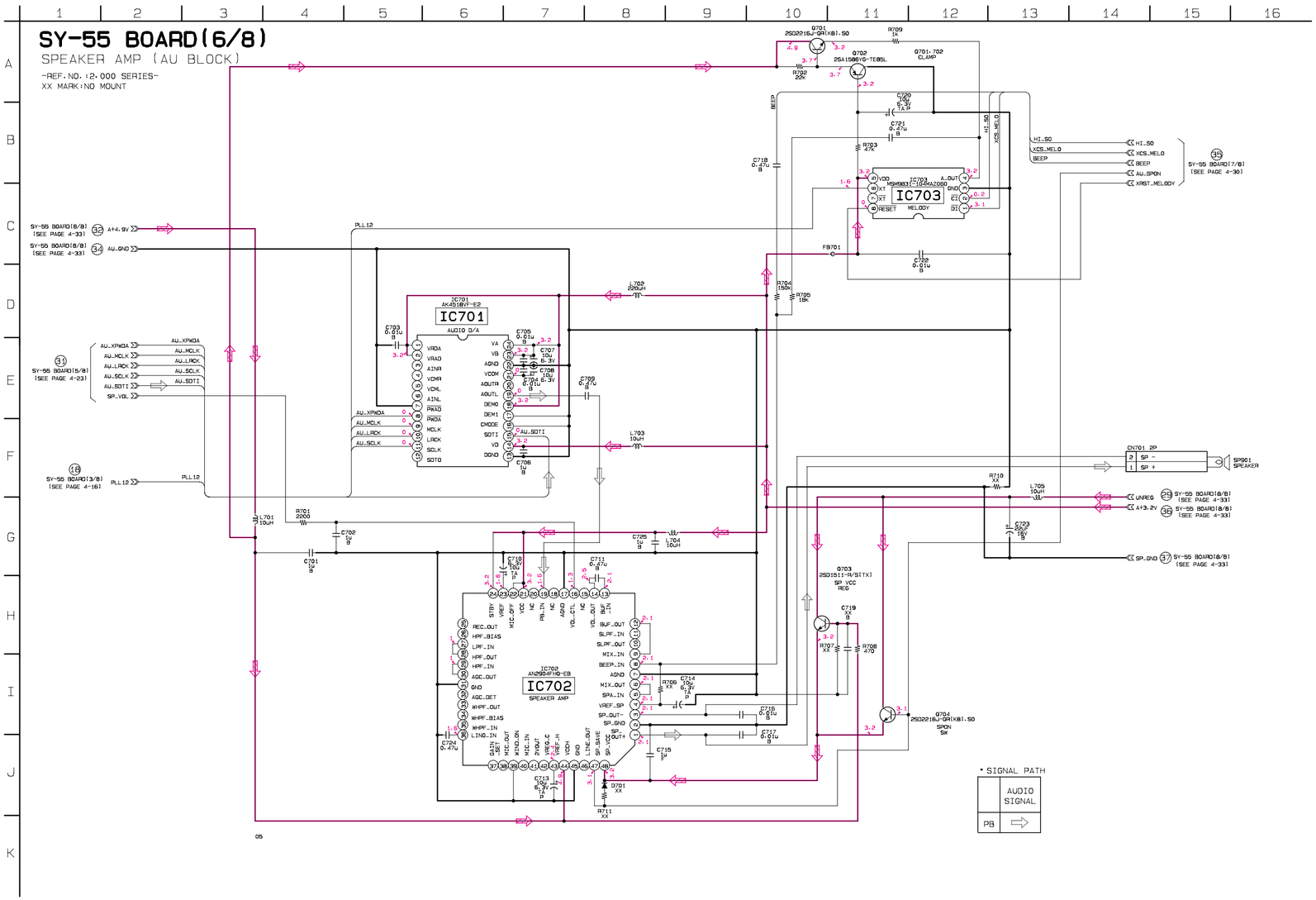
SY-55 (AUDIO DECODER) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.

SY-55 BOARD (5/8)





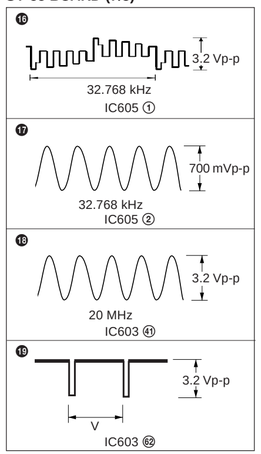
SY-55 (SPEAKER AMP) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.

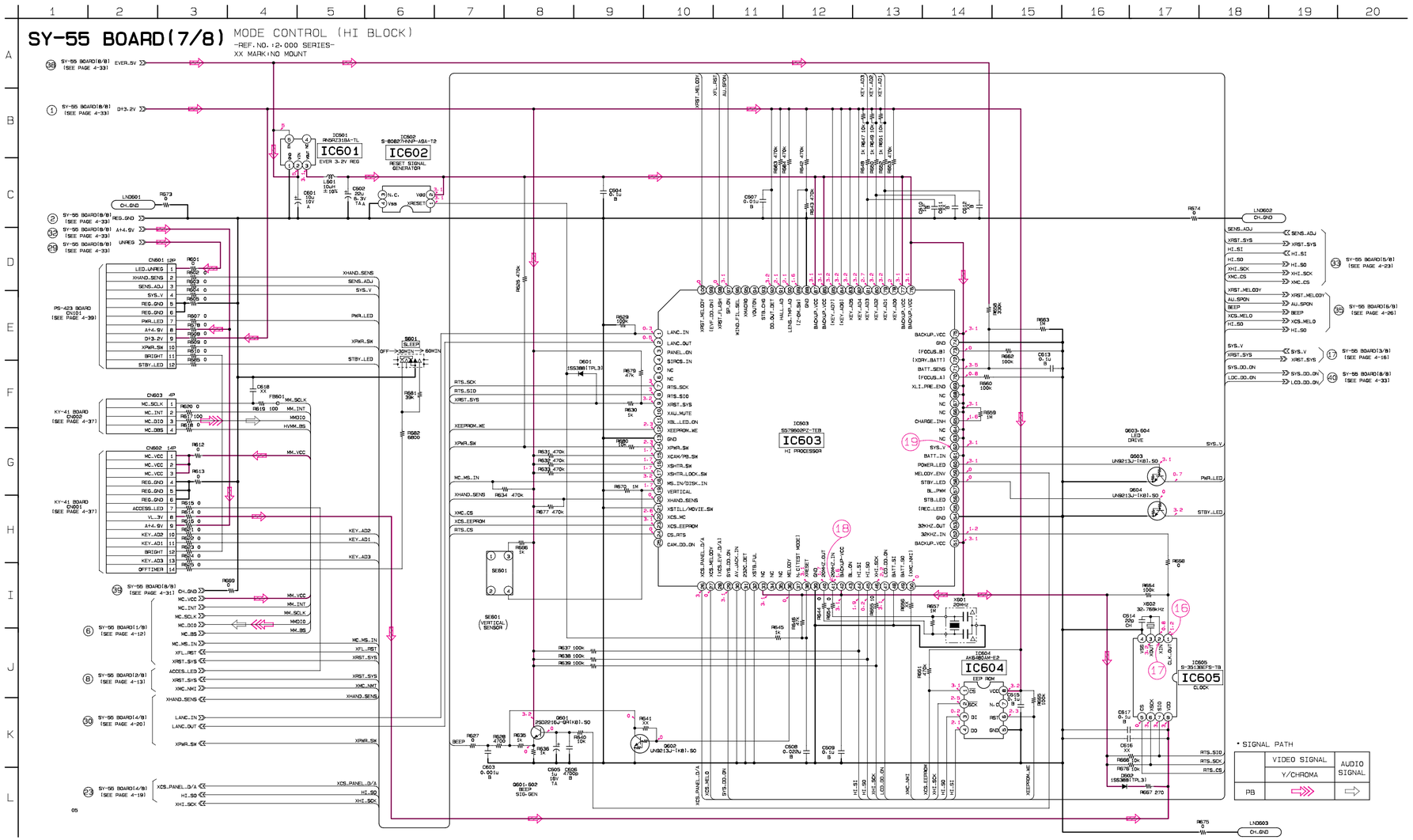


SPEAKER AMP
SY-55 (6/8)

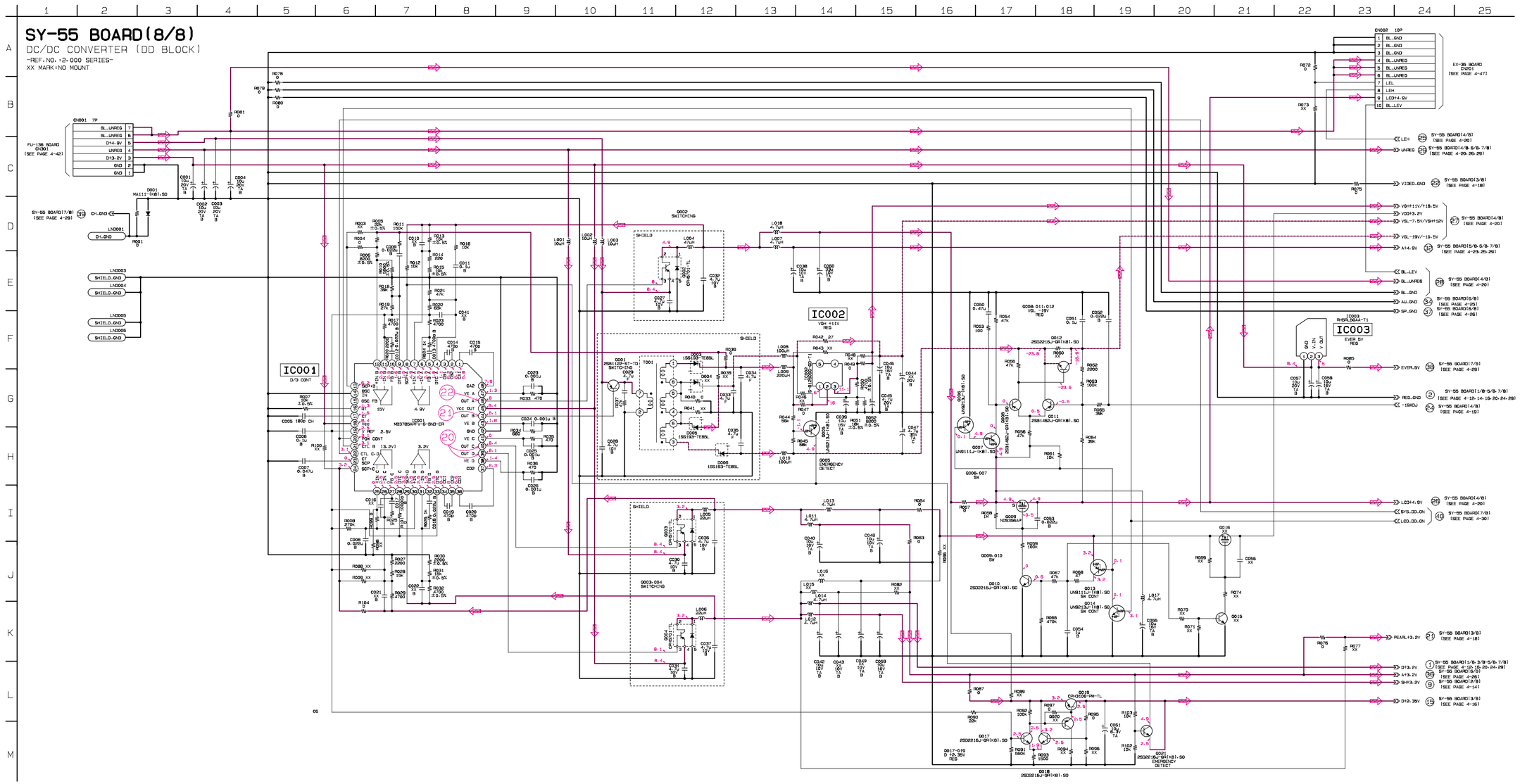
SY-55 (MODE CONTROL) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.

SY-55 BOARD (7/8)





SY-55 (DC/DC CONVERTER) SCHEMATIC DIAGRAM • See page 4-5 for SY-55 printed wiring board.



DC/DC CONVERTER
SY-55 (8/8)

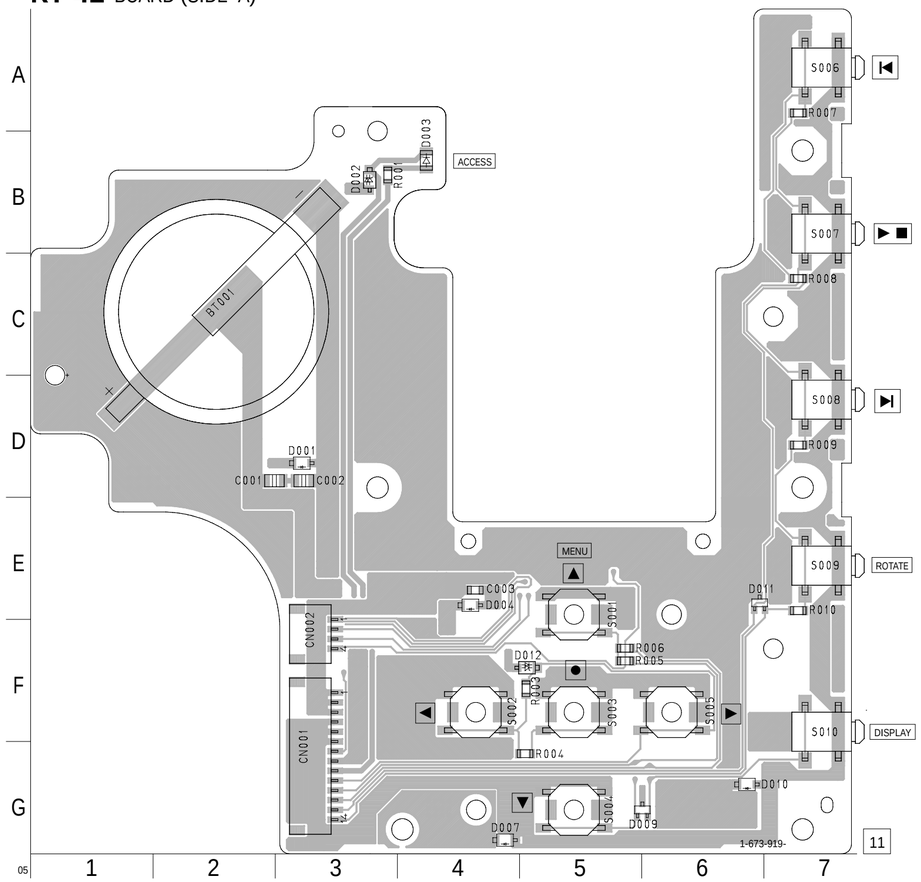
KY-41 (CONTROL PANEL) PRINTED WIRING BOARD

– Ref. No.: KY-41 board; 1,000 series –

• For Printed Wiring Board.

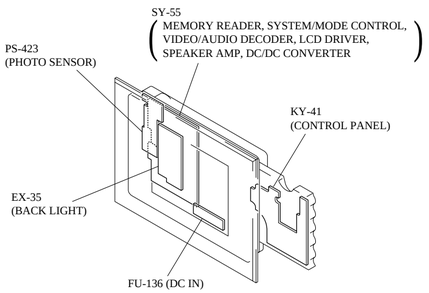
There are few cases that the part isn't mounted in this model is printed on this diagram.

KY-41 BOARD (SIDE A)

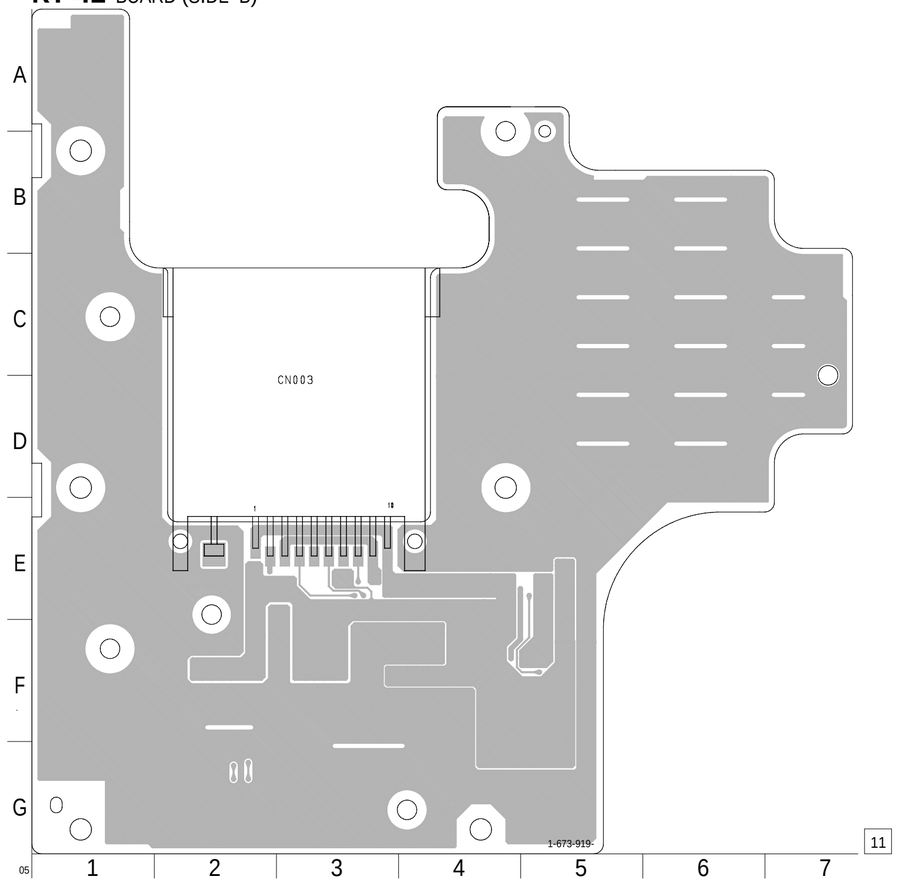


KY-41 BOARD (SIDE A)

BT001	C-2
C001	D-3
C002	D-3
C003	E-4
CN001	G-3
CN002	F-3
D001	D-3
D002	B-3
D003	B-4
D004	E-4
D007	G-4
D009	G-5
D010	G-7
D011	E-6
D012	F-5
R001	B-3
R003	F-5
R004	G-5
R005	F-5
R006	F-5
R007	A-7
R008	C-7
R009	D-7
R010	F-7
S001	E-5
S002	F-4
S003	F-5
S004	G-5
S005	F-6
S006	A-7
S007	B-7
S008	D-7
S009	E-7
S010	F-7



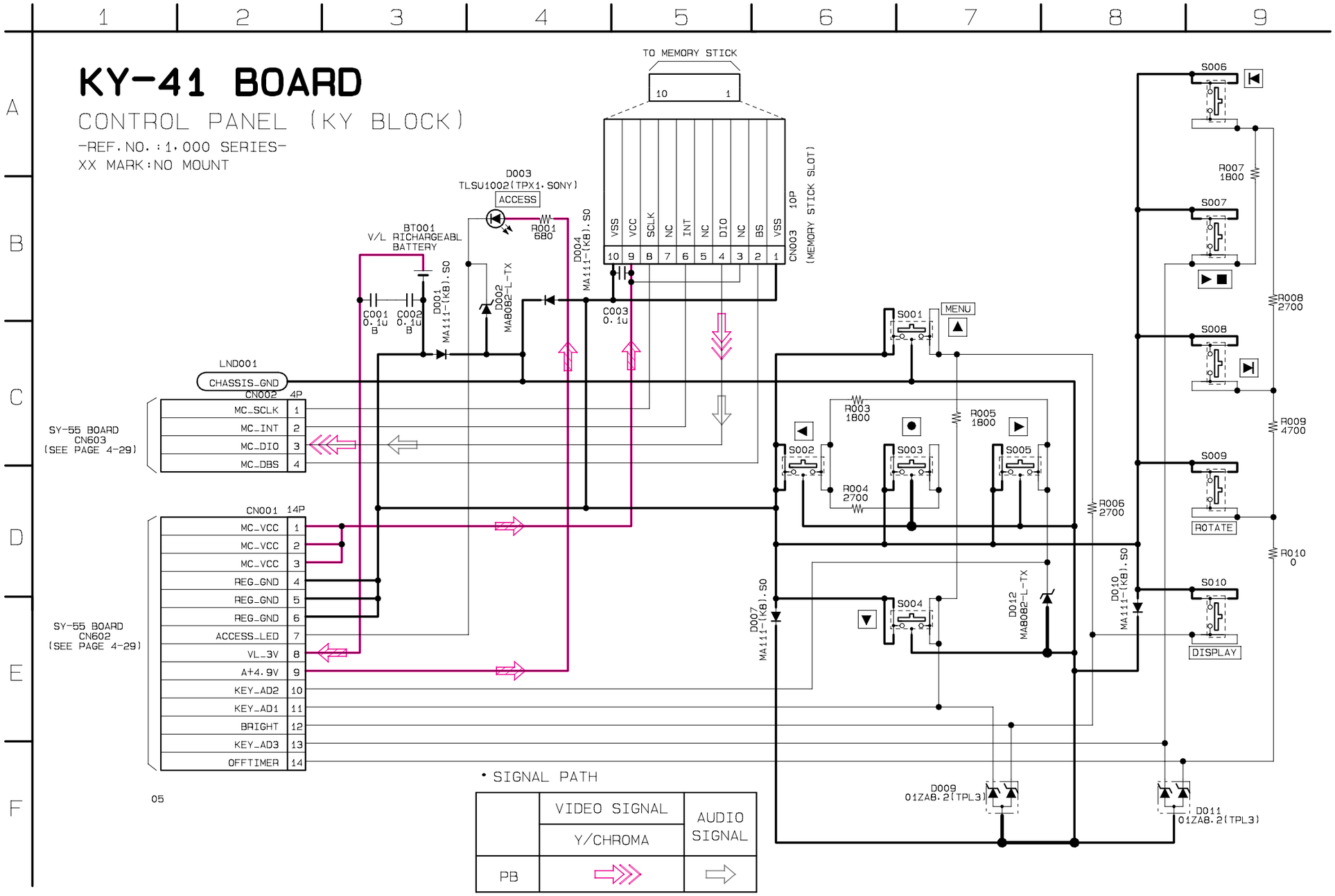
KY-41 BOARD (SIDE B)



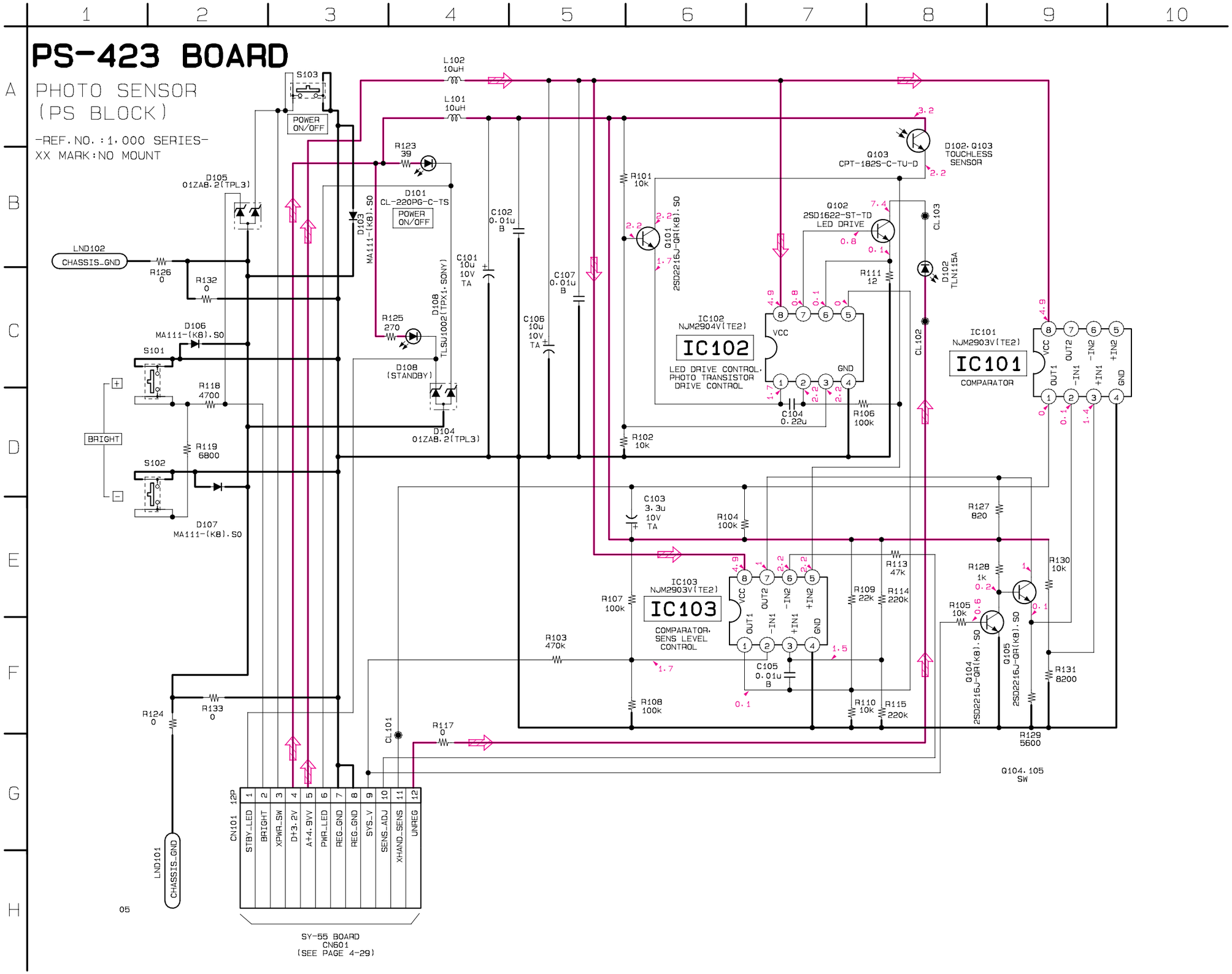
KY-41 BOARD (SIDE B)

CN003	C-3

KY-41 (CONTROL PANEL) SCHEMATIC DIAGRAM



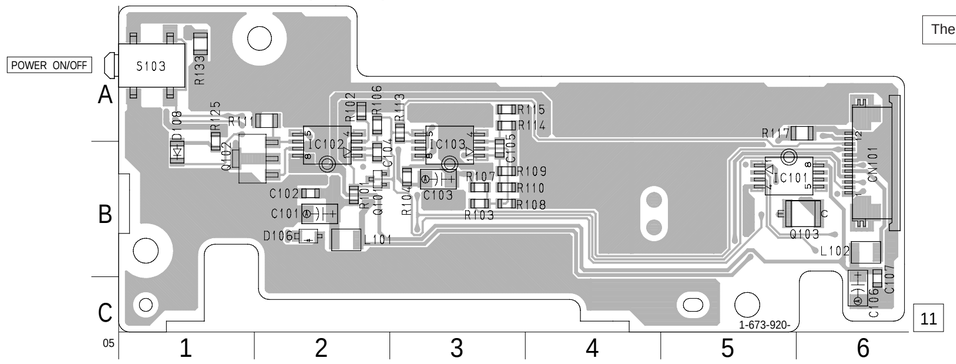
PS-423 (PHOTO SENSOR) SCHEMATIC DIAGRAM



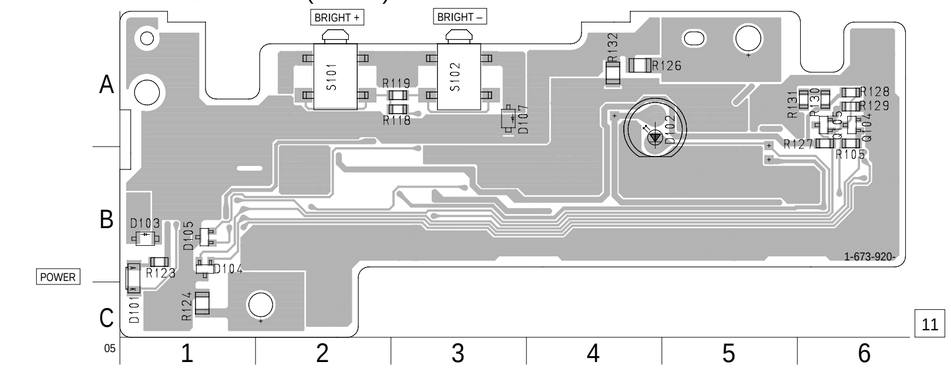
PS-423 (PHOTO SENSOR) PRINTED WIRING BOARD

– Ref. No.: PS-423 board; 1,000 series –

PS-423 BOARD (SIDE A)



PS-423 BOARD (SIDE B)



- **For Printed Wiring Board.**
- Chip transistor

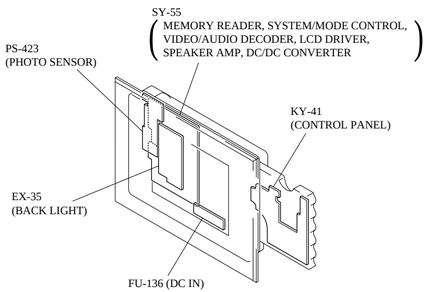
There are few cases that the part isn't mounted in this model is printed on this diagram.

PS-423 BOARD (SIDE A)

C101	B-2	Q101	B-2
C102	B-2	Q102	B-1
C103	B-3	Q103	B-6
C104	B-2		
C105	B-3	R101	B-2
C106	C-6	R102	A-2
C107	C-6	R103	B-3
		R104	B-3
CN101	B-6	R106	A-2
		R107	B-3
D106	B-2	R108	B-3
D108	A-1	R109	B-3
		R113	A-3
IC101	B-5	R114	A-3
IC102	B-2	R115	A-3
IC103	B-3	R117	A-6
		R125	B-1
L101	B-2	R133	A-1
L102	B-6		
		S103	A-1

PS-423 BOARD (SIDE B)

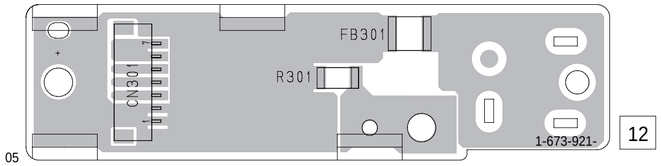
D101	C-1	R127	A-6
D102	A-5	R128	A-6
D103	B-1	R129	A-6
D104	B-1	R130	A-6
D105	B-1	R131	A-6
D107	A-3	R132	A-4
Q104	A-6	S101	A-2
Q105	A-6	S102	A-3
R105	A-6		
R118	A-3		
R119	A-3		
R123	B-1		
R124	C-1		
R126	A-4		



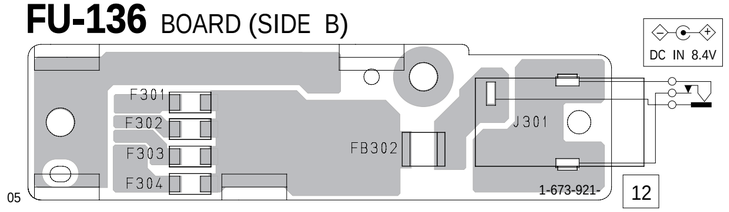
FU-136 (DC IN) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

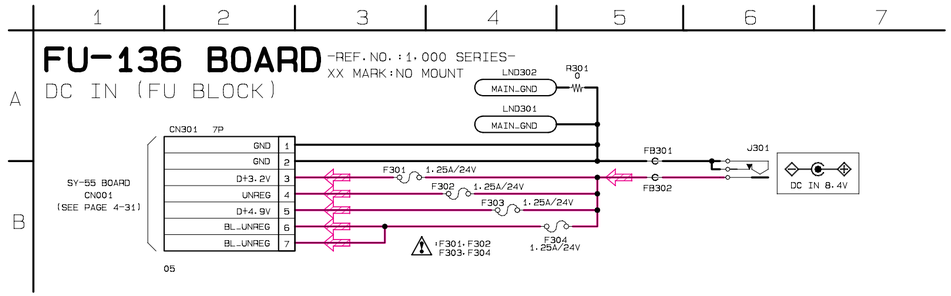
– Ref. No.: FU-136 board; 1,000 series –

FU-136 BOARD (SIDE A)



FU-136 BOARD (SIDE B)





Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

EX-35 (BACK LIGHT) PRINTED WIRING BOARD

– Ref. No.: EX-35 board; 1,000 series –

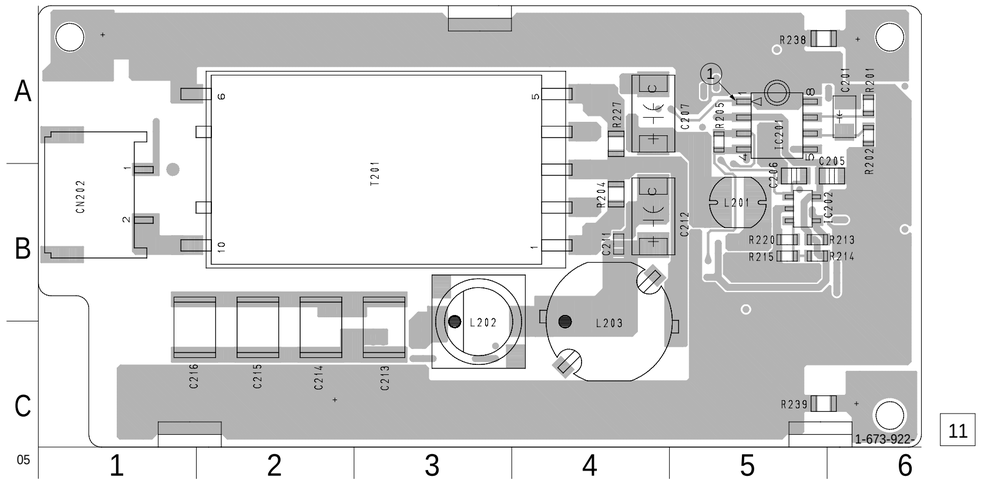
- **For Printed Wiring Board.**
- EX-35 board is 4-layer print board. However, the patterns of layers 2 and 3 have not been included in the diagram.
- Chip transistor

There are few cases that the part isn't mounted in this model is printed on this diagram.

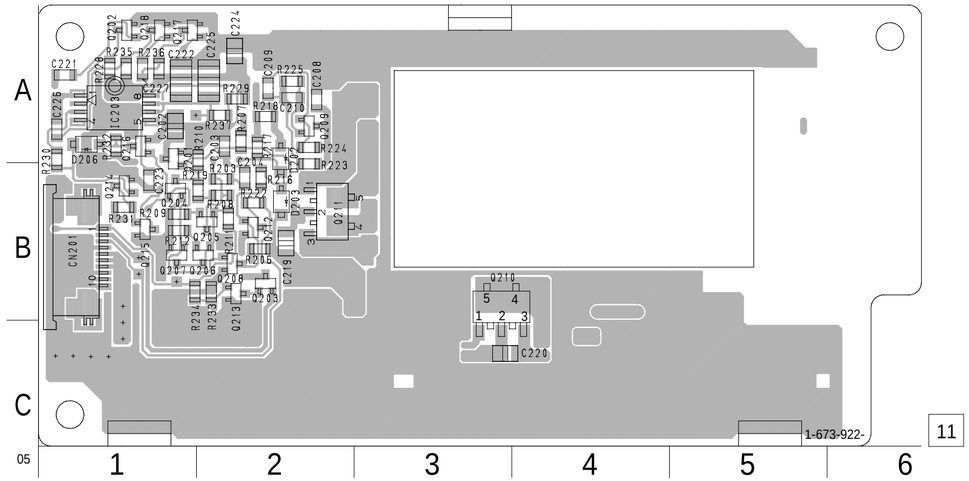
EX-35 BOARD (SIDE A)

C201	A-6
C205	B-5
C206	B-5
C207	A-4
C211	B-4
C212	B-4
C213	C-3
C214	C-2
C215	C-2
C216	C-1
CN202	B-1
IC201	A-5
IC202	A-5
L201	B-5
L202	C-3
L203	C-4
R201	A-6
R202	A-6
R204	B-4
R205	B-5
R213	B-5
R214	B-5
R215	B-5
R227	A-4
R238	A-5
R239	C-5
T201	B-3

EX-35 BOARD (SIDE A)

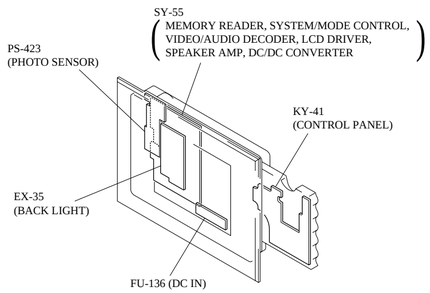


EX-35 BOARD (SIDE B)

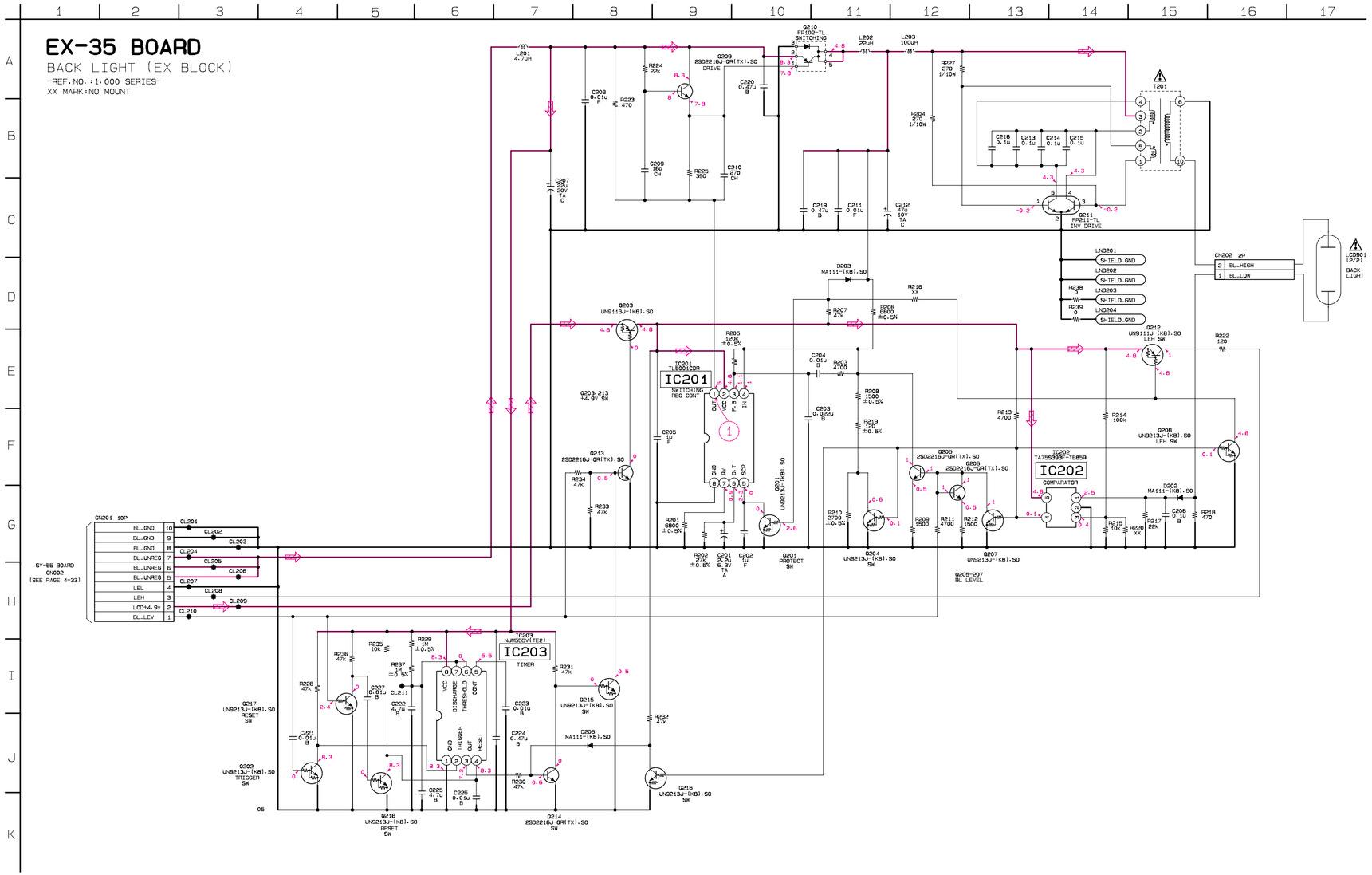


EX-35 BOARD (SIDE B)

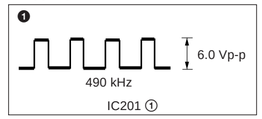
C202	A-1
C203	A-2
C204	B-2
C208	A-2
C209	A-2
C210	A-2
C219	B-2
C220	C-3
C221	A-1
C222	A-1
C223	B-1
C224	A-2
C225	A-2
C226	A-1
C227	A-1
CN201	B-1
D202	A-2
D203	B-2
D206	A-1
IC203	A-1
Q201	A-1
Q202	A-1
Q203	B-2
Q204	B-1
Q205	B-2
Q206	B-2
Q207	B-1
Q208	B-2
Q209	A-2
Q210	B-3
Q211	B-2
Q212	B-2
Q213	B-2
Q214	B-1
Q215	B-1
Q216	A-1
Q217	A-1
Q218	A-1
R203	B-2
R206	B-2
R207	A-2
R208	B-2
R209	B-1
R210	A-2
R211	B-2
R212	B-1
R217	A-2
R218	A-2
R219	B-1
R222	B-2
R223	A-2
R224	A-2
R225	A-2
R228	A-1
R229	A-2
R230	A-1
R231	B-1
R232	A-1
R233	B-2
R234	B-1
R235	A-1
R236	A-1
R237	A-2



EX-35 (BACK LIGHT) SCHEMATIC DIAGRAM



EX-35 BOARD



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

SECTION 5
ELECTRICAL ADJUSTMENTS

5-1. PREPARATIONS BEFORE ADJUSTMENTS

5-1-1. Used Equipment

1) Oscilloscope with 2-phenomenon, 30 MHz band, and delay mode (Unless specified otherwise, use a 10 : 1 probe)
2) Digital voltmeter
3) Adjusting remote control unit (J-6082-053-B)
4) CPC-9 jig (J-6082-393-B). (CN802 of the SY-55 board)
5) Memory stick for the V COM adjustment (PHMS1-1)
   Part code: 8-967-990-03

5-1-2. Connection of Equipment

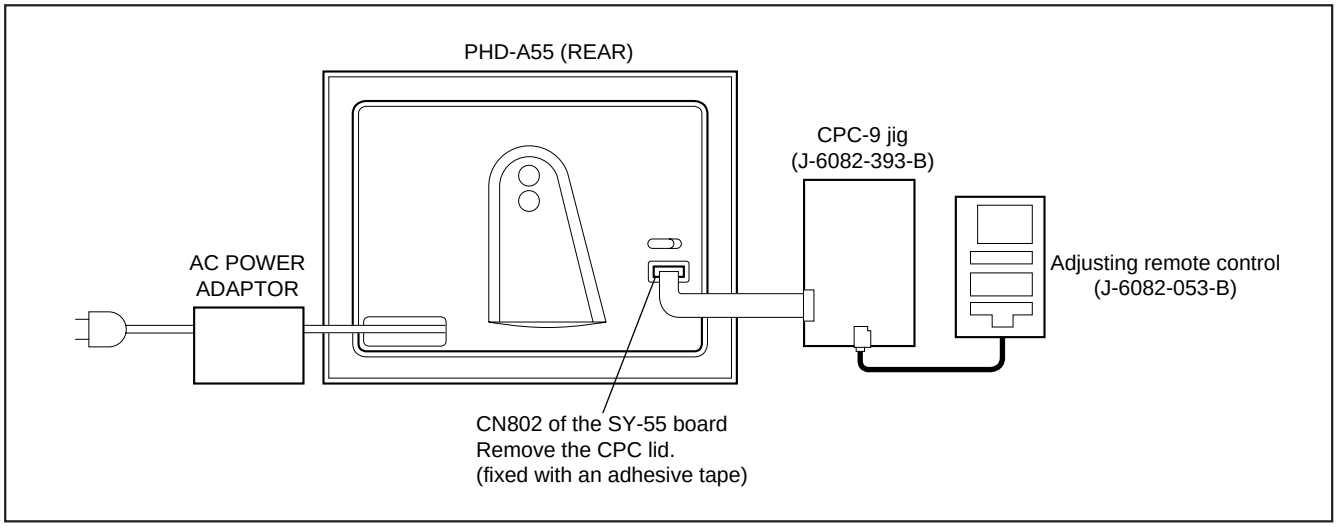


Fig. 5-1-1.

5-1-3. Adjusting Connectors (SY-55 Board CN802)

The adjusting points are concentrated at CN802 of the SY-55 board. Connect the instruments via the CPC-9 jig (J-6082-393-B).

Pin No.	Signal Name	Pin No.	Signal Name
1	C OUT	2	Y OUT
3	XHAND SENS	4	REG GND
5	JIG HD	6	JIG VD
7	HSY(–19V)	8	COM
9	VG	10	UNREG
11	LANC IN	12	LANC OUT
13	XPWR SW	14	HDB
15	SRT	16	FRP
17	SYS V	18	SYNC

Table 5-1-1.

5-1-4. Adjusting Remote Commander

The adjusting remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjusting remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Used Adjusting Remote Commander

1) Connect the adjusting remote commander to the remote (LANC) terminal. (Refer to Fig. 5-1-1.)
2) Adjust the HOLD switch of the adjusting remote commander to “HOLD” (SERVICE position).
3) Turn on the power with the POWER switch of the unit.

If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 5-1-2.

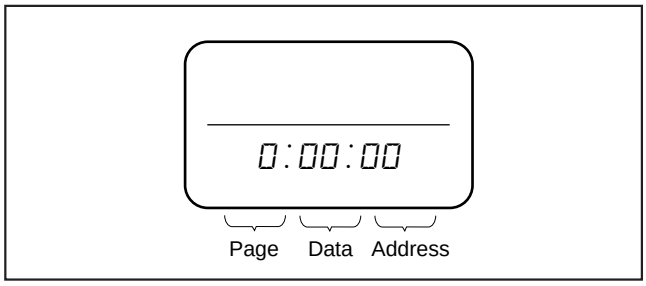


Fig. 5-1-2.

4) Operate the adjusting remote commander as follows.
   • Changing the page
     The page increases when the EDIT SEARCH + button is pressed, and decreases when the EDIT SEARCH – button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0 1 2 3 4 5 6 7 8 9 A B C D E F
LCD Display	0 1 2 3 4 5 6 7 8 9 A b c d E F
Decimal notation conversion value	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Table 5-1-2.

   • Changing the address
     The address increases when the FF (►►) button is pressed, and decreases when the REW (◄◄) button is pressed. There are altogether 256 addresses, from 00 to FF.
   • Changing the data (Data setting)
     The data increases when the PLAY (►) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
   • Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data in the nonvolatile memory. (The new adjustment data will not be recorded in the nonvolatile memory if this step is not performed)

2. Precautions Upon Using The Adjusting Remote Commander

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

5-1-5. Data Processing

The calculation of the adjusting remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Table 5-1-3. indicates the hexadecimal notation- the decimal notation, calculation table.

Hexadecimal nontation-Decimal notation

The lower digits of the hexadecimal notation / The upper digits of the hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	D (d) ②	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
①→ B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note : ( ) indicate the adjusting remote control unit display.

(Example) In the case that the adjusting remote control unit display are BD (bd).
As the upper digit of the hexadecimal notation is B (b), and the lower digit is D (d), the intersection “189” of the ① and ② in the above table is the decimal notation to be calculated.

Table 5-1-3.

5-2. LCD ADJUSTMENT

Note 1: A back light (fluorescent tube) is driven with high voltage AC power. Therefore, do not touch the back light directly, otherwise you will feel an electric shock.

Note 2: Taken an extreme care not to destroy the liquid crystal display module by static electricity when replacing it.

Note 3: Adjust the brightness to the center with the BRIGHT +/– buttons (S101, 102 on PS-423 Board).

[Generating method of test signals for adjustment]

If "Test signal generated" is specified in the Mode item, select page: 5, address: F1, and enter data given in the following table with the adjusting remote commander.

Data	Signal
01	100 IRE (100%) white signal
02	50 IRE (50%) white signal
03	Stair-step signal of 10 steps (non burst)
04	color bar
05	Red single color
06	Green single color
07	Blue single color

Table 5-2-1.

1. LCD Initial Data Input

Mode	Playback
Signal	Arbitrary
Adjustment Page	D
Adjustment Address	80 to 8F

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, and enter the data given in the following table.

Note: Press the PAUSE button of the adjusting remote commander each time the data are set, as the data are written to non-volatile memory (EEPROM).

3) Select page: 0, address: 01, and set data: 00.

Address	Data	Remark
80	7B	Bright Adjustment
81	69	Color Adjustment
82	6E	White Balance Adjustment
83	6E	
84	87	Contrast Adjustment
85	5F	H Position Adjustment
86	00	Fixed value
87	7A	Panel –19 V Adjustment
88	95	V COM Adjustment
89	60	Fixed value
8A	80	
8B	80	
8C	60	
8D	00	
8E	22	
8F	00	

2. Panel –19 V Adjustment (SY-55 Board)

Adjust the power supply voltage of the LCD panel correctry.

Mode	Playback
Signal	Arbitrary
Measurement Point	Pin ⑦ of CN802 (HSY (–19 V))
Measuring Instrument	Digital voltmeter
Adjustment Page	D
Adjustment Address	87
Specified Value	A = –19 ± 0.05 Vdc

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 87, and change data to adjust the –19 V power supply voltage (A) to the specified value.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

3. H Position Adjustment (SY-55 Board)

Adjust the horizontal position of the LCD panel correctry.
The image will shift to the left or right, if disordered.

Mode	Test signal generated (Refer to Table 5-2-1.)
Signal	Color bar
Measurement Point	CH1: Pin ⑯ of CN802 (FRP) CH2: Pin ⑱ of CN802 (SYNC)
Measuring Instrument	Oscilloscope Trigger source: CH1
Adjustment Page	D
Adjustment Address	85
Specified Value	T = 4.82 ± 0.05 µsec

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 85, and change data to adjust the time difference (T) between FRP waveform and SYNC waveform to the specified value.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

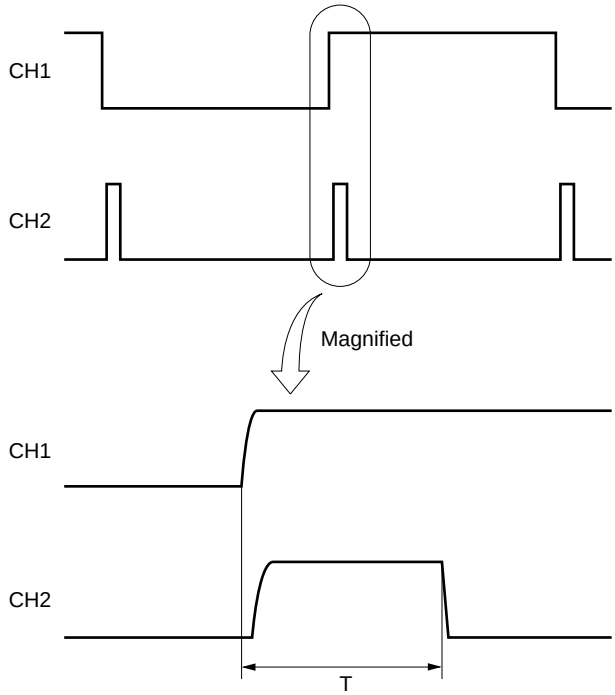


Fig. 5-2-1.

4. Bright Adjustment (SY-55 Board)

This adjustment sets correctly the VIDEO signal level that drives the LCD. If disordered, LCD screen will not be sharp, or will white blur or black blur.

Mode	Test signal generated (Refer to Table 5-2-1.)
Signal	Stair-step signal of 10 steps (non burst)
Measurement Point	Pin ⑨ of CN802 (VG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	80
Specified Value	A = 4.00 ± 0.05 V p-p

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 80, and change data to adjust the voltage (A) between pedestals of inverting waveform and non-inverting waveform to the specified value.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.
5) Check that the specification value of the “Contrast Adjustment” is satisfied. If not, perform the “Contrast Adjustment”.

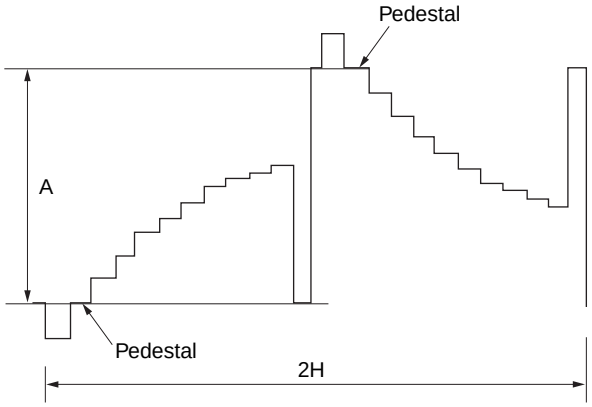


Fig. 5-2-2.

5. Contrast Adjustment (SY-55 Board)

This adjustment sets correctly the VIDEO signal level that drives the LCD. If disordered, LCD screen will not be sharp, or will white blur or black blur.

Mode	Test signal generated (Refer to Table 5-2-1.)
Signal	Stair-step signal of 10 steps (non burst)
Measurement Point	Pin ⑨ of CN802 (VG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	84
Specified Value	A = 2.70 ± 0.05 Vp-p

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 84, and change data to adjust the voltage (A) between 0 IRE (pedestal) and 90 IRE (white 90%) to the specified value.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.
5) Check that the specification value of the “Bright Adjustment” is satisfied. If not, perform the “Bright Adjustment”.

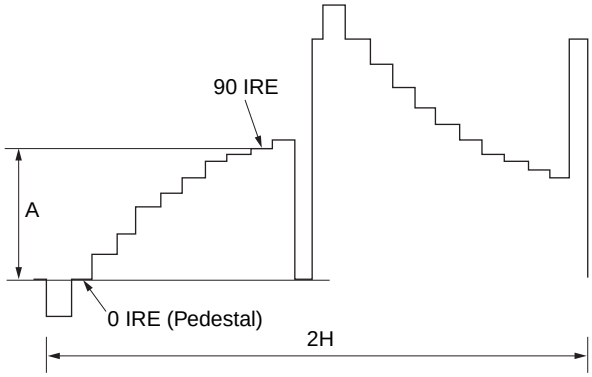


Fig. 5-2-3.

6. Color Adjustment (SY-55 Board)

Set the color to standard value.
The color will be too dark or light, if disordered.

Mode	Test signal generated (Refer to Table 5-2-1.)
Signal	Color bar
Measurement Point	Pin ⑨ of CN802 (VG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	81
Specified Value	A= 0.28 ± 0.05 Vp-p

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 81, and change data so that the white to green level (A) satisfies the specification value.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

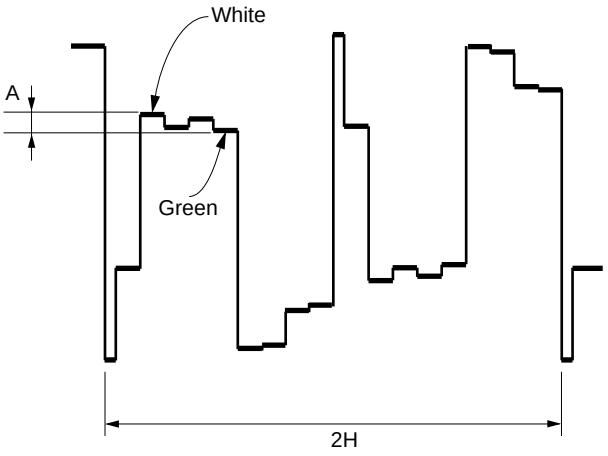


Fig. 5-2-4.

7. V COM Adjustment (SY-55 Board)

This adjustment corrects the DC bias of common electrode drive signals of the LCD panel. If shifted, the LCD screen will be coarse, or flicker, or vertical streaks will appear.

Mode	Play back
Signal	Memory stick for V COM ajustment (PHMS1-1) V COM adjustment signal
Measurement Point Measuring Instrument	Check on LCD screen
Adjustment Page	D
Adjustment Address	88

Note: The “CONTRAST adjustment” and “BRIGHT adjustment” must be already finished.
The mode must not be “test signal generation” mode.
(Check that Select page: 5, address: F1, and set data: 00)

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 88, and change data so as to attain same brightness on the left and right sides of screen.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

8. White Balance Adjustment (SY-55 Board)

This adjustment corrects the white balance.
If disordered, the colors on LCD screen will not be reproduced correctly.

Mode	Test signal generated (Refer to Table 5-2-1.)
Signal	50 IRE (50%) white signal
Measurement Point Measuring Instrument	Check on LCD screen
Adjustment Page	D
Adjustment Address	82, 83
Specified Value	LCD screen must not be colored.

Note: Check the white balance only when either of the following parts was replaced, and make adjustment only if necessary.
1. Liquid crystal display module
2. IC801

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Check that the LCD screen is not colored. If colored, select page: D, addresses: 82 and 83. Then change data so that the LCD screen is not colored.
3) Press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

5-3. TOUCHLESS SENSOR ADJUSTMENT

1. Touchless Sensor Adjustment (PS-423 Board)

Mode	Playback
Signal	Arbitrary
Measurement Point	Pin ③ of CN802 (XHAND SENS) on SY-55 board
Measuring Instrument	Digital voltmeter
Adjustment Page	F
Adjustment Address	66
Specified Value	D_1= “60” to “90”

Adjusting method

1) Select page: 0, address: 01, and set data: 01.
2) Do not place something that intercepts the sensor, so that the sensor does not operate.
3) Increase data on page: F, address: 66 starting from “50”, and obtain data as D_1 when the voltage of XHAND SENS (Pin ③ of CN802) rises over 2.7 Vdc from 0 Vdc.
4) Make sure that D_1=“60” to “90”.
5) Place something that intercepts the sensor, so that the sensor operates. (Within 1cm from acrylic plate)
6) $D_2 = D_1$ + “09”.
   (Example) • D_1 = “80” : D_2 = “80” + “09” = “89”
   • D_1 = “82” : D_2 = “82” + “09” = “8B”
7) Select page: F, address: 66, and set data: D_2. Then press the PAUSE button of the adjusting remote commander.
8) Select page: 0, address: 01, and set data: 00.

2. Touchless Sensor Check (PS-423 Board)

Mode	Playback
Signal	Arbitrary
Measurement Point	Pin ③ of CN802 (XHAND SENS) on SY-55 board
Measuring Instrument	Digital voltmeter
Specified Value	Position of something acrylicplate, which intercepts the sensor 6cm: A=0.5 Vdc or less 8cm: A=3 Vdc or more 1cm: A=0.5 Vdc or less

Check method

1) Place something that intercepts the sensor at 6 cm position from acrylic plate, so that the sensor operates.
2) Make sure that the voltage (A) of XHAND SENS (Pin ③ of CN802) satisfies the specified value.
3) Place something that intercepts the sensor at 8 cm position from acrylic plate, so that the sensor operates.
4) Make sure that the voltage (A) of XHAND SENS (Pin ③ of CN802) satisfies the specified value.
5) Place something that intercepts the sensor at 1 cm position from acrylic plate, so that the sensor operates.
6) Make sure that the voltage (A) of XHAND SENS (Pin ③ of CN802) satisfies the specified value.

SECTION 6
REPAIR PARTS LIST

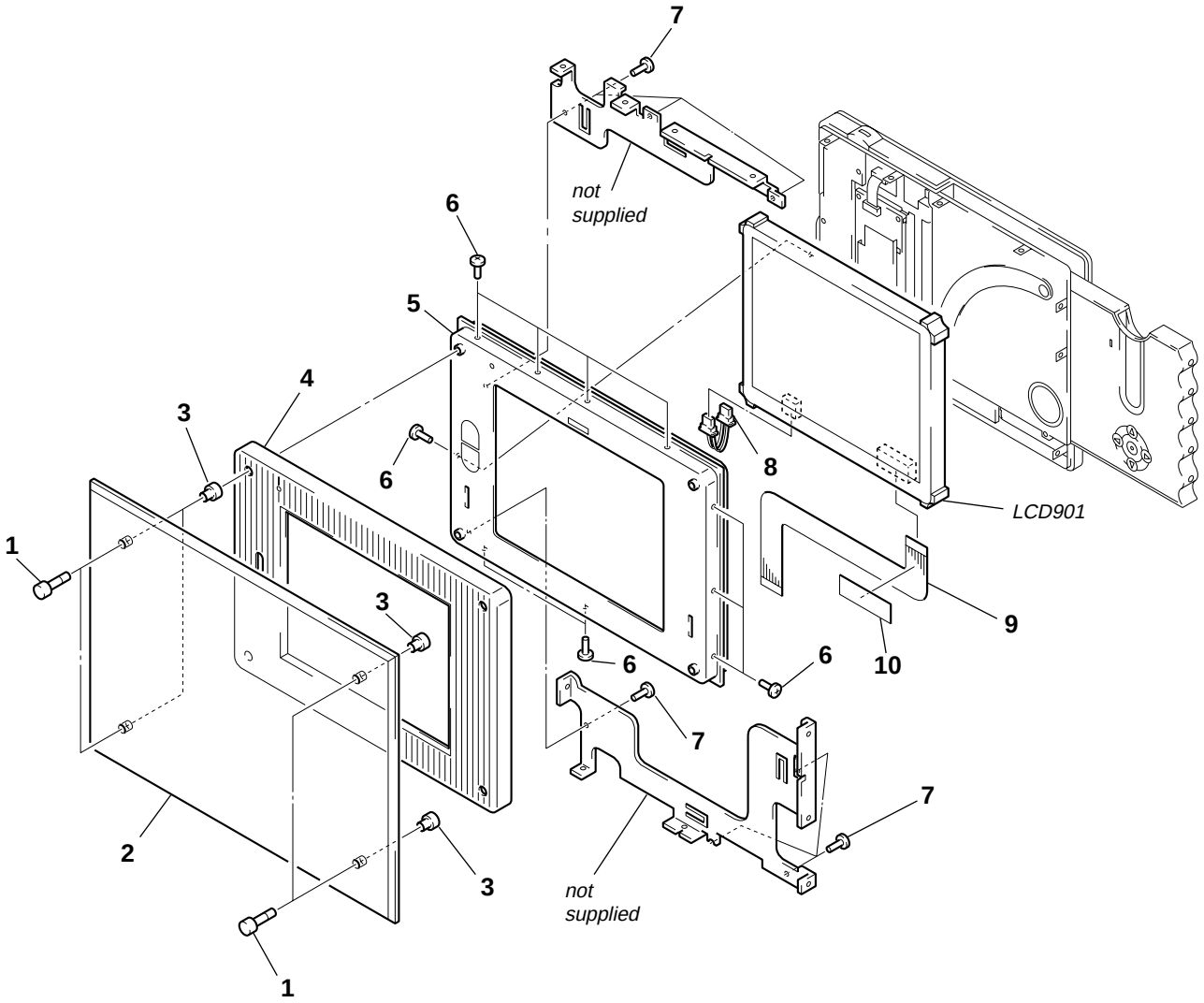
6-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

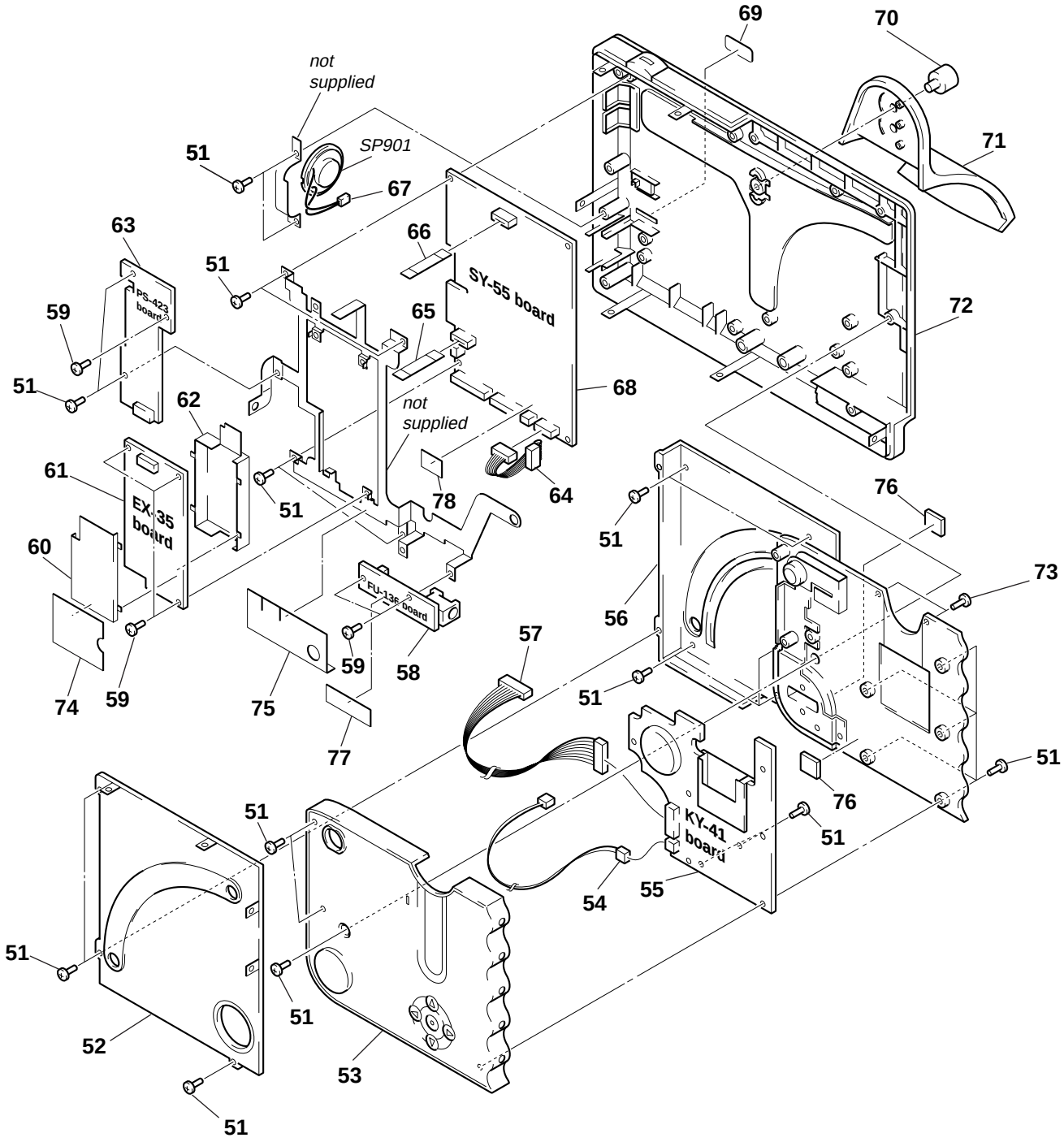
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

6-1-1. FRONT CABINET ASSEMBLY



Ref. No.	Part No.	Description	Remark
1	X-3949-792-1	SCREW ASSY, PANEL	
2	3-055-652-01	PANEL, CLEAR	
3	3-055-654-01	SPACER, PANEL	
4	3-055-653-01	PLATE, ORNAMENTAL (GREEN STONE)	
4	3-055-653-11	PLATE, ORNAMENTAL (TERRA COTTA)	
5	X-3949-659-1	CABINET ASSY, FRONT	
6	3-968-729-81	SCREW (M2), LOCK ACE, P2	
7	3-948-339-01	SCREW, TAPPING	
⚠8	1-959-825-11	HARNESS (EP-54)	
9	1-673-923-11	FP-113 FLEXIBLE BOARD	
10	3-056-245-01	FP GUARD	
⚠LCD901	1-801-904-24	MODULE, CRYSTAL INDICATION	

6-1-2. REAR CABINET AND CONTROL PANEL ASSEMBLIES



Ref. No.	Part No.	Description	Remark
51	3-948-339-01	SCREW, TAPPING	
* 52	3-055-644-01	COVER (F), CENTER	
53	X-3949-661-1	PANEL (F) ASSY, CONTROL	
54	1-959-714-11	HARNESS (FF-198)	
* 55	A-7074-005-A	KY-41 BOARD, COMPLETE	
56	X-3949-662-1	PANEL (R) ASSY, CONTROL	
57	1-959-713-11	HARNESS (FF-197)	
* 58	A-7074-003-A	FU-136 BOARD, COMPLETE	
59	3-713-786-21	SCREW (M2X3)	
* 60	3-978-724-11	CASE (B), EX SHIELD	
* 61	A-7074-002-A	EX-35 BOARD, COMPLETE	
* 62	3-978-723-11	CASE (A), EX SHIELD	
* 63	A-7074-004-A	PS-423 BOARD, COMPLETE	
64	1-959-712-11	HARNESS (FF-196)	
65	1-790-730-11	CABLE, FLEXIBLE FLAT (FFC-278)	
66	1-790-721-11	CABLE, FLEXIBLE FLAT (FFC-279)	
67	1-959-824-11	HARNESS (FF-200)	
68	A-7094-496-A	SY-55 BOARD, COMPLETE	
69	3-055-650-01	LID, CPC	
70	X-3949-815-1	SCREW ASSY, STAND	
71	X-3949-663-1	STAND ASSY	
72	X-3949-660-1	CABINET ASSY, REAR	
73	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2	
74	3-056-243-01	SHEET, SHIELD	
75	3-056-244-01	SHEET, FRAME	
76	3-056-326-01	FF SPACER	
77	3-056-245-01	FP GUARD	
* 78	3-056-454-01	SHEET, SY SHIELD	
SP901	1-505-278-11	SPEAKER (DIA 2.3cm)	

6-2. ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-7074-002-A	EX-35 BOARD, COMPLETE			
		**********			
		(Ref.No. 1,000 Series)			
		< CAPACITOR >			
C201	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C204	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C207	1-113-981-11	TANTAL. CHIP	22uF	20%	20V
C208	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C209	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C210	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C211	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C212	1-113-642-11	TANTAL. CHIP	47uF	20%	10V
C213	1-117-749-11	FILM CHIP	0.1uF	20%	50V
C214	1-117-749-11	FILM CHIP	0.1uF	20%	50V
C215	1-117-749-11	FILM CHIP	0.1uF	20%	50V
C216	1-117-749-11	FILM CHIP	0.1uF	20%	50V
C219	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C220	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C222	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C223	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C224	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C225	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C226	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C227	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN201	1-691-348-11	CONNECTOR, FFC/FPC (ZIF) 10P			
CN202	1-778-330-21	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D202	8-719-073-01	DIODE MA111-(K8).S0			
D203	8-719-073-01	DIODE MA111-(K8).S0			
D206	8-719-073-01	DIODE MA111-(K8).S0			
		< IC >			
IC201	8-759-521-35	IC TL5001CDR			
IC202	8-759-075-70	IC TA75S393F-TE85R			
IC203	8-759-574-64	IC NJM555V(TE2)			
		< COIL >			
L201	1-414-863-11	INDUCTOR 4.7uH			
L202	1-411-705-11	INDUCTOR 22uH			
L203	1-415-929-21	INDUCTOR 100uH			
		< TRANSISTOR >			
Q201	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q202	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q203	8-729-037-61	TRANSISTOR	UN9113J-(K8).SO		
Q204	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q205	8-729-037-52	TRANSISTOR	2SD2216J-QR(TX).SO		
Q206	8-729-037-52	TRANSISTOR	2SD2216J-QR(TX).SO		
Q207	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q208	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q209	8-729-037-52	TRANSISTOR	2SD2216J-QR(TX).SO		
Q210	8-729-823-84	TRANSISTOR	FP102-TL		
Q211	8-729-042-87	TRANSISTOR	FP211-TL		
Q212	8-729-042-58	TRANSISTOR	UN9111J-(K8).SO		
Q213	8-729-037-52	TRANSISTOR	2SD2216J-QR(TX).SO		
Q214	8-729-037-52	TRANSISTOR	2SD2216J-QR(TX).SO		
Q215	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q216	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q217	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q218	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
		< RESISTOR >			
R201	1-218-867-11	RES, CHIP	6.8K	0.50%	1/16W
R202	1-218-881-11	RES, CHIP	27K	0.50%	1/16W
R203	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R204	1-216-035-00	METAL CHIP	270	5%	1/10W
R205	1-218-897-11	RES, CHIP	120K	0.50%	1/16W
R206	1-218-867-11	RES, CHIP	6.8K	0.50%	1/16W
R207	1-216-841-11	METAL CHIP	47K	5%	1/16W
R208	1-218-851-11	RES, CHIP	1.5K	0.50%	1/16W
R209	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R210	1-218-857-11	RES, CHIP	2.7K	0.50%	1/16W
R211	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R212	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R214	1-216-845-11	METAL CHIP	100K	5%	1/16W
R215	1-216-833-91	RES, CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R217	1-216-837-11	METAL CHIP	22K	5%	1/16W
R218	1-216-817-11	METAL CHIP	470	5%	1/16W
R219	1-218-825-11	RES, CHIP	120	0.50%	1/16W
R222	1-216-810-11	METAL CHIP	120	5%	1/16W
R223	1-216-817-11	METAL CHIP	470	5%	1/16W
R224	1-216-837-11	METAL CHIP	22K	5%	1/16W
R225	1-216-816-11	METAL CHIP	390	5%	1/16W
R227	1-216-035-00	METAL CHIP	270	5%	1/10W
R228	1-216-841-11	METAL CHIP	47K	5%	1/16W
R229	1-216-857-11	METAL CHIP	1M	5%	1/16W
R230	1-216-841-11	METAL CHIP	47K	5%	1/16W
R231	1-216-841-11	METAL CHIP	47K	5%	1/16W
R232	1-216-841-11	METAL CHIP	47K	5%	1/16W
R233	1-216-841-11	METAL CHIP	47K	5%	1/16W
R234	1-216-841-11	METAL CHIP	47K	5%	1/16W
R235	1-216-833-91	RES, CHIP	10K	5%	1/16W
R236	1-216-841-11	METAL CHIP	47K	5%	1/16W
R237	1-216-857-11	METAL CHIP	1M	5%	1/16W
R238	1-216-295-91	SHORT	0		
R239	1-216-295-91	SHORT	0		
		< TRANSFORMER >			
⚠T201	1-431-547-11	TRANSFORMER, DC/AC INVERTER			
*	A-7074-003-A	FU-136 BOARD, COMPLETE			
		**********			
		(Ref.No. 1,000 Series)			
		< CONNECTOR >			
CN301	1-784-210-21	CONNECTOR 7P			
		< FUSE >			
⚠F301	1-533-709-	FUSE (SMD) (1.25A)			
⚠F302	1-533-709-	FUSE (SMD) (1.25A)			
⚠F303	1-533-709-	FUSE (SMD) (1.25A)			
⚠F304	1-533-709-	FUSE (SMD) (1.25A)			
		< FERRITE BEAD >			
FB301	1-469-450-21	INDUCTOR	0UH		
FB302	1-469-450-21	INDUCTOR	0UH		
		< JACK >			
J301	1-778-380-11	JACK,DC(POLARITY UNIFIED TYPE)			
		(DC IN 8.4V)			
		< RESISTOR >			
R301	1-216-296-11	SHORT	0		
*	A-7074-005-A	KY-41 BOARD, COMPLETE			
		**********			
		(Ref.No. 1,000 Series)			
		< BATTERY >			
BT001	1-528-694-11	BATTERY, V/L RICHARGEABL			

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C001	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C002	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C003	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN001	1-778-336-21	PIN, CONNECTOR (PC BOARD) 14P			
CN002	1-770-621-21	PIN, CONNECTOR 4P			
CN003	1-785-498-11	CONNECTOR, MEMORY STICK			
		(MEMORY STICK SLOT)			
		< DIODE >			
D001	8-719-073-01	DIODE MA111-(K8).S0			
D002	8-719-422-86	DIODE MA8082-L-TX			
D003	8-719-061-82	DIODE TLSU1002(TPX1,SONY)			
D004	8-719-073-01	DIODE MA111-(K8).S0 (ACCESS)			
D007	8-719-073-01	DIODE MA111-(K8).S0			
D009	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D010	8-719-073-01	DIODE MA111-(K8).S0			
D011	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D012	8-719-422-86	DIODE MA8082-L-TX			
		< RESISTOR >			
R001	1-216-819-11	METAL CHIP	680	5%	1/16W
R003	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R004	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R005	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R006	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R007	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R008	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R009	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R010	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SWITCH >			
S001	1-692-111-11	SWITCH, KEY BOARD (MENU, ▲)			
S002	1-692-111-11	SWITCH, KEY BOARD (◀)			
S003	1-692-111-11	SWITCH, KEY BOARD (●)			
S004	1-692-111-11	SWITCH, KEY BOARD (▼)			
S005	1-692-111-11	SWITCH, KEY BOARD (▶)			
S006	1-692-088-41	SWITCH, TACTILE (I◀)			
S007	1-692-088-41	SWITCH, TACTILE (▶ ■)			
S008	1-692-088-41	SWITCH, TACTILE (▶I)			
S009	1-692-088-41	SWITCH, TACTILE (ROTATE)			
S010	1-692-088-41	SWITCH, TACTILE (DISPLAY)			
*	A-7074-004-A	PS-423 BOARD, COMPLETE			
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		(Ref.No. 1,000 Series)			
		< CAPACITOR >			
C101	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C104	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description			Remark
C106	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN101	1-691-350-21	CONNECTOR, FFC/FPC (ZIF) 12P			
		< DIODE >			
D101	8-719-058-14	DIODE CL-220PG-C-TS (POWER)			
D102	8-719-057-82	DIODE TLN115A (TOUCHLESS SENSOR)			
D103	8-719-073-01	DIODE MA111-(K8).S0			
D104	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D105	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D106	8-719-073-01	DIODE MA111-(K8).S0			
D107	8-719-073-01	DIODE MA111-(K8).S0			
D108	8-719-061-82	DIODE TLSU1002(TPX1,SONY) (STANDBY)			
		< IC >			
IC101	8-759-338-95	IC NJM2903V(TE2)			
IC102	8-759-337-40	IC NJM2904V(TE2)			
IC103	8-759-338-95	IC NJM2903V(TE2)			
		< COIL >			
L101	1-414-754-11	INDUCTOR 10uH			
L102	1-414-754-11	INDUCTOR 10uH			
		< TRANSISTOR >			
Q101	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q102	8-729-822-05	TRANSISTOR	2SD1622-ST-TD		
Q103	8-729-049-61	TRANSISTOR	CPT-182S-C-TU-D (TOUCHLESS SENSOR)		
Q104	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q105	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
		< RESISTOR >			
R101	1-216-833-91	RES, CHIP	10K	5%	1/16W
R102	1-216-833-91	RES, CHIP	10K	5%	1/16W
R103	1-216-853-11	METAL CHIP	470K	5%	1/16W
R104	1-216-845-11	METAL CHIP	100K	5%	1/16W
R105	1-216-833-91	RES, CHIP	10K	5%	1/16W
R106	1-216-845-11	METAL CHIP	100K	5%	1/16W
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W
R109	1-216-837-11	METAL CHIP	22K	5%	1/16W
R113	1-216-841-11	METAL CHIP	47K	5%	1/16W
R114	1-216-849-11	METAL CHIP	220K	5%	1/16W
R115	1-216-849-11	METAL CHIP	220K	5%	1/16W
R117	1-216-295-91	SHORT	0		
R118	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R119	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R123	1-216-804-11	METAL CHIP	39	5%	1/16W
R124	1-216-295-91	SHORT	0		
R125	1-216-814-11	METAL CHIP	270	5%	1/16W
R126	1-216-295-91	SHORT	0		
R127	1-216-820-11	METAL CHIP	820	5%	1/16W
R128	1-216-821-11	METAL CHIP	1K	5%	1/16W
R129	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R130	1-216-833-91	RES, CHIP	10K	5%	1/16W
R131	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R132	1-216-295-91	SHORT	0		
R133	1-216-295-91	SHORT	0		

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S101	1-692-088-41	SWITCH, TACTILE (BRIGHT +)	
S102	1-692-088-41	SWITCH, TACTILE (BRIGHT –)	
S103	1-692-088-41	SWITCH, TACTILE (POWER ON/OFF)	

A-7094-496-A SY-55 BOARD, COMPLETE
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(Ref.No. 2,000 Series)

		< CAPACITOR >			
C001	1-113-985-11	TANTAL. CHIP	10uF	20%	20V
C002	1-113-985-11	TANTAL. CHIP	10uF	20%	20V
C003	1-113-985-11	TANTAL. CHIP	10uF	20%	20V
C004	1-113-985-11	TANTAL. CHIP	10uF	20%	20V
C005	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V
C006	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C007	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C008	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C009	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C011	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C012	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C013	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C014	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C015	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C017	1-162-970-91	CERAMIC CHIP	10000PF	10%	16V
C018	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C019	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C020	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C023	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C024	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C025	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C026	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C027	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C028	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C029	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C030	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C031	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C032	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C033	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C034	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C035	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C036	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C037	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C038	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C039	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C040	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C042	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C045	1-135-214-21	TANTAL. CHIP	4.7uF	20%	20V
C046	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C047	1-104-920-11	TANTAL. CHIP	4.7uF	20%	35V
C048	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C050	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C051	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C052	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C053	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C054	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C055	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C057	1-113-985-11	TANTAL. CHIP	10uF	20%	20V
C058	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C059	1-135-216-11	TANTALUM CHIP	10uF	20%	10V

SY-55

Ref. No.	Part No.	Description			Remark
C060	1-113-682-91	TANTALUM CHIP	33uF	20%	10V
C061	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C201	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C202	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C203	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C204	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C205	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C206	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C207	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C208	1-111-253-11	TANTAL. CHIP	100uF	20%	6.3V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C211	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C212	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C213	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C214	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C215	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C216	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C217	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C218	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C219	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C220	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C221	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C225	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C226	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C227	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C301	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C302	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C303	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C304	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C305	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C306	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C307	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C308	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C309	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C310	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C311	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C312	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C313	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C401	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C402	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C403	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C404	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C405	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C406	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C407	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C408	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C409	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C410	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C411	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C412	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C501	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C502	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C503	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C504	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C506	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C507	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C601	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C602	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C604	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C605	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C606	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C608	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C609	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C610	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C613	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C614	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C615	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C617	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C701	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C702	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C704	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C706	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C707	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C708	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C709	1-113-619-11	CERAMIC CHIP	0.47uF	10%	6.3V
C710	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C711	1-113-619-11	CERAMIC CHIP	0.47uF	10%	6.3V
C713	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C714	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C715	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C716	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C717	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C718	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C720	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C721	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C722	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C723	1-119-751-11	TANTAL. CHIP	22uF	20%	16V
C724	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C725	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C805	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C806	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C807	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C808	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C809	1-104-912-11	TANTAL. CHIP	3.3uF	20%	6.3V
C810	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C811	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C812	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C814	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C815	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C816	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C817	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C818	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C819	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C820	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C821	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C822	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C823	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C824	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C826	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C827	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C828	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C829	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C831	1-107-682-11	CERAMIC CHIP	1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C832	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C833	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C834	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C836	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C837	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C838	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C839	1-113-992-11	TANTAL. CHIP	3.3uF	20%	35V
C840	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C841	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C842	1-135-213-21	TANTAL. CHIP	3.3uF	20%	25V
		< CONNECTOR >			
CN001	1-784-210-21	CONNECTOR 7P			
* CN002	1-764-519-11	CONNECTOR, FFC/FPC (ZIF) 10P			
* CN601	1-764-521-11	CONNECTOR, FFC/FPC (ZIF) 12P			
CN602	1-793-027-21	CONNECTOR 14P			
CN603	1-779-884-11	CONNECTOR 4P			
CN701	1-784-650-21	CONNECTOR 2P			
CN801	1-750-361-21	CONNECTOR, FFC/FPC (ZIF) 30P			
CN802	1-764-526-11	CONNECTOR, FFC/FPC 18P			
		< DIODE >			
D001	8-719-073-01	DIODE MA111-(K8).S0			
D003	8-719-801-48	DIODE 1SS193-TE85L			
D005	8-719-801-48	DIODE 1SS193-TE85L			
D006	8-719-801-48	DIODE 1SS193-TE85L			
D401	8-719-073-01	DIODE MA111-(K8).S0			
D601	8-719-056-48	DIODE 1SS388(TPL3)			
D602	8-719-056-48	DIODE 1SS388(TPL3)			
D801	8-719-073-28	DIODE MA729-(K8).S0			
		< FERRITE BEAD >			
FB201	1-414-228-11	INDUCTOR CHIP 0UH			
FB202	1-414-228-11	INDUCTOR CHIP 0UH			
FB203	1-500-282-11	INDUCTOR CHIP 0UH			
FB301	1-216-864-11	METAL CHIP 0	5%	1/16W	
FB401	1-414-228-11	INDUCTOR CHIP 0UH			
FB402	1-414-228-11	INDUCTOR CHIP 0UH			
FB403	1-414-228-11	INDUCTOR CHIP 0UH			
FB501	1-414-228-11	INDUCTOR CHIP 0UH			
FB601	1-500-282-11	INDUCTOR CHIP 0UH			
FB701	1-414-228-11	INDUCTOR CHIP 0UH			
		< IC >			
IC001	8-759-060-94	IC MB3785APFV-G-BND-ER			
IC002	8-759-281-13	IC S-81250SG-QD-T1			
IC003	8-759-442-54	IC RH5RL50AA-T1			
IC201	8-759-586-38	IC MB91002LGA-G			
IC202	8-759-586-08	IC MB81F641642C-103LFN-ER			
IC301	8-759-585-34	IC HD6417612RBP			
IC302	8-759-445-94	IC AK6480AM-E2			
IC401	8-759-584-32	IC MB86189PFV-G-BND-ER			
IC402	8-759-271-88	IC TC7SHU04FU-TE85R			
IC403	8-759-271-86	IC TC7SH04FU-TE85R			
IC405	8-759-586-09	IC MBM29LV800BA-10PFTN-FK-ER			
IC406	8-759-567-37	IC MB81F161622B-80FN			
IC503	8-759-426-25	IC MB88346LPFV-G-BND-ER			
IC504	8-752-398-19	IC CXD3147R-T6			
IC601	8-759-525-53	IC RN5RZ31BA-TL			
IC602	8-759-525-51	IC S-80827HNNP-A9A-T2			
IC603	8-759-586-40	IC S579SGX50160MP1PZ-TEB			
IC604	8-759-445-94	IC AK6480AM-E2			
IC605	8-759-538-14	IC S-3513BEFS-TB			
IC701	8-759-566-19	IC AK4518-VF-E2			
IC702	8-759-582-00	IC AN2904FHQ-EB			
IC703	8-759-547-46	IC MSM9831-104MAZ060			
IC801	8-752-070-03	IC CXA1785AR-T4			
IC802	8-759-427-85	IC MB88146APFV-G-BND-ER			
IC803	8-759-359-49	IC NJM3414AV(TE2)			
		< COIL >			
L001	1-416-344-11	INDUCTOR 10uH			
L002	1-416-344-11	INDUCTOR 10uH			
L003	1-416-344-11	INDUCTOR 10uH			
L004	1-416-511-11	INDUCTOR 47uH			
L005	1-416-345-11	INDUCTOR 22uH			
L006	1-416-345-11	INDUCTOR 22uH			
L007	1-414-396-21	INDUCTOR 4.7uH			
L008	1-414-404-11	INDUCTOR 100uH			
L009	1-414-406-11	INDUCTOR 220uH			
L010	1-414-404-11	INDUCTOR 100uH			
L011	1-414-396-21	INDUCTOR 4.7uH			
L012	1-414-396-21	INDUCTOR 4.7uH			
L013	1-414-396-21	INDUCTOR 4.7uH			
L014	1-414-396-21	INDUCTOR 4.7uH			
L017	1-414-396-21	INDUCTOR 4.7uH			
L018	1-414-396-21	INDUCTOR 4.7uH			
L201	1-414-754-11	INDUCTOR 10uH			
L202	1-414-754-11	INDUCTOR 10uH			
L203	1-410-389-11	INDUCTOR 47uH			
L207	1-414-754-11	INDUCTOR 10uH			
L301	1-414-398-11	INDUCTOR 10uH			
L401	1-414-398-11	INDUCTOR 10uH			
L501	1-414-771-91	INDUCTOR CHIP 10uH			
L601	1-414-754-11	INDUCTOR 10uH			
L701	1-414-754-11	INDUCTOR 10uH			
L702	1-414-406-11	INDUCTOR 220uH			
L703	1-414-754-11	INDUCTOR 10uH			
L704	1-414-754-11	INDUCTOR 10uH			
L705	1-414-754-11	INDUCTOR 10uH			
L803	1-414-755-11	INDUCTOR 22uH			
L804	1-414-757-11	INDUCTOR 100uH			
L806	1-414-756-11	INDUCTOR 47uH			
L807	1-414-754-11	INDUCTOR 10uH			
L808	1-414-754-11	INDUCTOR 10uH			
L809	1-414-754-11	INDUCTOR 10uH			
L810	1-414-757-11	INDUCTOR 100uH			
L811	1-414-756-11	INDUCTOR 47uH			
		< TRANSISTOR >			
Q001	8-729-804-41	TRANSISTOR	2SB1122-ST-TD		
Q002	8-729-047-74	TRANSISTOR	CPH5701-TL		
Q003	8-729-047-74	TRANSISTOR	CPH5701-TL		
Q004	8-729-047-74	TRANSISTOR	CPH5701-TL		
Q005	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q006	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q007	8-729-042-58	TRANSISTOR	UN9111J-(K8).SO		
Q008	8-729-037-53	TRANSISTOR	2SB1462J-QR(K8).SO		
Q009	8-729-041-23	TRANSISTOR	NDS356AP		
Q010	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		

Ref. No.	Part No.	Description			Remark
Q011	8-729-037-53	TRANSISTOR	2SB1462J-QR(K8).SO		
Q012	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q013	8-729-042-58	TRANSISTOR	UN9111J-(K8).SO		
Q014	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q017	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q018	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q019	8-729-043-94	TRANSISTOR	CPH3106-PM-TL		
Q021	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q201	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q202	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q203	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q204	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q205	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q301	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q401	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q402	8-729-032-00	TRANSISTOR	2SJ381-TD		
Q403	8-729-037-61	TRANSISTOR	UN9113J-(K8).SO		
Q404	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q601	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q602	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q603	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q604	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q701	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q702	8-729-230-60	TRANSISTOR	2SA1586YG-TE85L		
Q703	8-729-024-39	TRANSISTOR	2SD1511-R/S(TX)		
Q704	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q802	8-729-037-53	TRANSISTOR	2SB1462J-QR(K8).SO		
		< RESISTOR >			
R001	1-216-295-91	SHORT	0		
R004	1-216-864-11	METAL CHIP	0	5%	1/16W
R005	1-218-879-11	RES, CHIP	22K	0.50%	1/16W
R006	1-218-869-11	RES, CHIP	8.2K	0.50%	1/16W
R007	1-218-871-11	RES, CHIP	10K	0.50%	1/16W
R008	1-216-850-11	METAL CHIP	270K	5%	1/16W
R010	1-218-865-11	RES, CHIP	5.6K	0.50%	1/16W
R011	1-216-847-11	METAL CHIP	150K	5%	1/16W
R012	1-216-833-91	RES, CHIP	10K	5%	1/16W
R013	1-218-871-11	RES, CHIP	10K	0.50%	1/16W
R014	1-218-831-11	RES, CHIP	220	0.50%	1/16W
R015	1-218-871-11	RES, CHIP	10K	0.50%	1/16W
R016	1-216-833-91	RES, CHIP	10K	5%	1/16W
R017	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R018	1-216-840-11	METAL CHIP	39K	5%	1/16W
R019	1-216-838-11	METAL CHIP	27K	5%	1/16W
R020	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R021	1-216-841-11	METAL CHIP	47K	5%	1/16W
R022	1-218-891-11	RES, CHIP	68K	0.50%	1/16W
R023	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R024	1-216-821-11	METAL CHIP	1K	5%	1/16W
R025	1-216-821-11	METAL CHIP	1K	5%	1/16W
R026	1-216-821-11	METAL CHIP	1K	5%	1/16W
R027	1-218-855-11	RES, CHIP	2.2K	0.50%	1/16W
R028	1-218-875-11	RES, CHIP	15K	0.50%	1/16W
R029	1-218-863-11	RES, CHIP	4.7K	0.50%	1/16W
R030	1-218-855-11	RES, CHIP	2.2K	0.50%	1/16W
R031	1-218-875-11	RES, CHIP	15K	0.50%	1/16W
R032	1-218-863-11	RES, CHIP	4.7K	0.50%	1/16W
R033	1-216-817-11	METAL CHIP	470	5%	1/16W
R034	1-216-819-11	METAL CHIP	680	5%	1/16W

Ref. No.	Part No.	Description			Remark
R035	1-216-817-11	METAL CHIP	470	5%	1/16W
R036	1-216-817-11	METAL CHIP	470	5%	1/16W
R037	1-216-841-11	METAL CHIP	47K	5%	1/16W
R039	1-216-864-11	METAL CHIP	0	5%	1/16W
R040	1-216-864-11	METAL CHIP	0	5%	1/16W
R042	1-216-802-11	RES, CHIP	27	5%	1/16W
R044	1-216-842-11	METAL CHIP	56K	5%	1/16W
R045	1-216-843-11	METAL CHIP	68K	5%	1/16W
R047	1-216-864-11	METAL CHIP	0	5%	1/16W
R049	1-216-864-11	METAL CHIP	0	5%	1/16W
R050	1-218-863-11	RES, CHIP	4.7K	0.50%	1/16W
R051	1-218-877-11	RES, CHIP	18K	0.50%	1/16W
R052	1-218-869-11	RES, CHIP	8.2K	0.50%	1/16W
R053	1-216-809-11	METAL CHIP	100	5%	1/16W
R054	1-216-841-11	METAL CHIP	47K	5%	1/16W
R055	1-216-841-11	METAL CHIP	47K	5%	1/16W
R056	1-216-841-11	METAL CHIP	47K	5%	1/16W
R057	1-216-295-91	SHORT	0		
R058	1-216-857-11	METAL CHIP	1M	5%	1/16W
R059	1-216-845-11	METAL CHIP	100K	5%	1/16W
R061	1-216-833-91	RES, CHIP	10K	5%	1/16W
R062	1-218-855-11	RES, CHIP	2.2K	0.50%	1/16W
R063	1-218-895-11	RES, CHIP	100K	0.50%	1/16W
R064	1-218-885-11	RES, CHIP	39K	0.50%	1/16W
R065	1-218-885-11	RES, CHIP	39K	0.50%	1/16W
R066	1-216-853-11	METAL CHIP	470K	5%	1/16W
R067	1-216-841-11	METAL CHIP	47K	5%	1/16W
R068	1-216-805-11	METAL CHIP	47	5%	1/16W
R072	1-216-295-91	SHORT	0		
R075	1-216-295-91	SHORT	0		
R076	1-216-295-91	SHORT	0		
R078	1-216-296-91	SHORT	0		
R079	1-216-296-91	SHORT	0		
R080	1-216-296-91	SHORT	0		
R081	1-216-296-91	SHORT	0		
R083	1-216-296-91	SHORT	0		
R084	1-216-296-91	SHORT	0		
R085	1-216-296-91	SHORT	0		
R087	1-216-296-91	SHORT	0		
R090	1-216-837-11	METAL CHIP	22K	5%	1/16W
R091	1-216-854-11	METAL CHIP	560K	5%	1/16W
R092	1-216-845-11	METAL CHIP	100K	5%	1/16W
R093	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R095	1-216-864-11	METAL CHIP	0	5%	1/16W
R097	1-216-864-11	METAL CHIP	0	5%	1/16W
R099	1-216-864-11	METAL CHIP	0	5%	1/16W
R101	1-216-864-11	METAL CHIP	0	5%	1/16W
R102	1-216-833-91	RES, CHIP	10K	5%	1/16W
R103	1-216-833-91	RES, CHIP	10K	5%	1/16W
R201	1-216-864-11	METAL CHIP	0	5%	1/16W
R202	1-216-864-11	METAL CHIP	0	5%	1/16W
R203	1-216-864-11	METAL CHIP	0	5%	1/16W
R204	1-216-864-11	METAL CHIP	0	5%	1/16W
R205	1-216-864-11	METAL CHIP	0	5%	1/16W
R206	1-216-864-11	METAL CHIP	0	5%	1/16W
R208	1-216-864-11	METAL CHIP	0	5%	1/16W
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R211	1-216-864-11	METAL CHIP	0	5%	1/16W
R212	1-216-864-11	METAL CHIP	0	5%	1/16W
R213	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remark
R214	1-216-864-11	METAL CHIP	0	5%	1/16W
R217	1-216-821-11	METAL CHIP	1K	5%	1/16W
R218	1-218-827-11	RES, CHIP	150	0.50%	1/16W
R219	1-216-841-11	METAL CHIP	47K	5%	1/16W
R221	1-218-827-11	RES, CHIP	150	0.50%	1/16W
R222	1-218-827-11	RES, CHIP	150	0.50%	1/16W
R223	1-218-857-11	RES, CHIP	2.7K	0.50%	1/16W
R224	1-216-864-11	METAL CHIP	0	5%	1/16W
R225	1-216-821-11	METAL CHIP	1K	5%	1/16W
R226	1-216-864-11	METAL CHIP	0	5%	1/16W
R227	1-216-864-11	METAL CHIP	0	5%	1/16W
R228	1-216-821-11	METAL CHIP	1K	5%	1/16W
R229	1-216-821-11	METAL CHIP	1K	5%	1/16W
R233	1-216-809-11	METAL CHIP	100	5%	1/16W
R301	1-216-864-11	METAL CHIP	0	5%	1/16W
R302	1-216-841-11	METAL CHIP	47K	5%	1/16W
R304	1-216-821-11	METAL CHIP	1K	5%	1/16W
R305	1-216-864-11	METAL CHIP	0	5%	1/16W
R306	1-216-864-11	METAL CHIP	0	5%	1/16W
R307	1-216-841-11	METAL CHIP	47K	5%	1/16W
R308	1-216-841-11	METAL CHIP	47K	5%	1/16W
R309	1-216-841-11	METAL CHIP	47K	5%	1/16W
R310	1-216-841-11	METAL CHIP	47K	5%	1/16W
R311	1-216-833-91	RES, CHIP	10K	5%	1/16W
R312	1-216-864-11	METAL CHIP	0	5%	1/16W
R313	1-216-864-11	METAL CHIP	0	5%	1/16W
R314	1-216-841-11	METAL CHIP	47K	5%	1/16W
R315	1-216-841-11	METAL CHIP	47K	5%	1/16W
R316	1-216-864-11	METAL CHIP	0	5%	1/16W
R317	1-216-864-11	METAL CHIP	0	5%	1/16W
R318	1-216-841-11	METAL CHIP	47K	5%	1/16W
R319	1-216-841-11	METAL CHIP	47K	5%	1/16W
R320	1-216-841-11	METAL CHIP	47K	5%	1/16W
R321	1-216-841-11	METAL CHIP	47K	5%	1/16W
R322	1-216-841-11	METAL CHIP	47K	5%	1/16W
R323	1-216-853-11	METAL CHIP	470K	5%	1/16W
R324	1-216-845-11	METAL CHIP	100K	5%	1/16W
R325	1-216-841-11	METAL CHIP	47K	5%	1/16W
R326	1-216-841-11	METAL CHIP	47K	5%	1/16W
R401	1-216-797-11	METAL CHIP	10	5%	1/16W
R402	1-216-797-11	METAL CHIP	10	5%	1/16W
R403	1-216-797-11	METAL CHIP	10	5%	1/16W
R404	1-216-797-11	METAL CHIP	10	5%	1/16W
R405	1-216-797-11	METAL CHIP	10	5%	1/16W
R406	1-216-797-11	METAL CHIP	10	5%	1/16W
R407	1-216-797-11	METAL CHIP	10	5%	1/16W
R408	1-216-857-11	METAL CHIP	1M	5%	1/16W
R409	1-216-864-11	METAL CHIP	0	5%	1/16W
R410	1-216-797-11	METAL CHIP	10	5%	1/16W
R411	1-216-857-11	METAL CHIP	1M	5%	1/16W
R412	1-216-821-11	METAL CHIP	1K	5%	1/16W
R413	1-216-864-11	METAL CHIP	0	5%	1/16W
R414	1-216-864-11	METAL CHIP	0	5%	1/16W
R415	1-216-864-11	METAL CHIP	0	5%	1/16W
R416	1-216-864-11	METAL CHIP	0	5%	1/16W
R417	1-216-864-11	METAL CHIP	0	5%	1/16W
R418	1-216-864-11	METAL CHIP	0	5%	1/16W
R419	1-216-864-11	METAL CHIP	0	5%	1/16W
R420	1-216-864-11	METAL CHIP	0	5%	1/16W
R421	1-216-864-11	METAL CHIP	0	5%	1/16W
R422	1-216-864-11	METAL CHIP	0	5%	1/16W
R423	1-216-864-11	METAL CHIP	0	5%	1/16W
R424	1-216-864-11	METAL CHIP	0	5%	1/16W
R425	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R426	1-216-853-11	METAL CHIP	470K	5%	1/16W
R501	1-216-857-11	METAL CHIP	1M	5%	1/16W
R503	1-216-864-11	METAL CHIP	0	5%	1/16W
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W
R505	1-216-864-11	METAL CHIP	0	5%	1/16W
R510	1-216-864-11	METAL CHIP	0	5%	1/16W
R511	1-216-864-11	METAL CHIP	0	5%	1/16W
R512	1-216-864-11	METAL CHIP	0	5%	1/16W
R513	1-216-864-11	METAL CHIP	0	5%	1/16W
R514	1-216-864-11	METAL CHIP	0	5%	1/16W
R515	1-216-864-11	METAL CHIP	0	5%	1/16W
R601	1-216-864-11	METAL CHIP	0	5%	1/16W
R602	1-216-864-11	METAL CHIP	0	5%	1/16W
R603	1-216-864-11	METAL CHIP	0	5%	1/16W
R604	1-216-864-11	METAL CHIP	0	5%	1/16W
R605	1-216-864-11	METAL CHIP	0	5%	1/16W
R607	1-216-864-11	METAL CHIP	0	5%	1/16W
R608	1-216-864-11	METAL CHIP	0	5%	1/16W
R609	1-216-864-11	METAL CHIP	0	5%	1/16W
R610	1-216-864-11	METAL CHIP	0	5%	1/16W
R612	1-216-295-91	SHORT	0		
R613	1-216-295-91	SHORT	0		
R614	1-216-864-11	METAL CHIP	0	5%	1/16W
R615	1-216-864-11	METAL CHIP	0	5%	1/16W
R616	1-216-864-11	METAL CHIP	0	5%	1/16W
R617	1-216-809-11	METAL CHIP	100	5%	1/16W
R618	1-216-864-11	METAL CHIP	0	5%	1/16W
R619	1-216-809-11	METAL CHIP	100	5%	1/16W
R620	1-216-864-11	METAL CHIP	0	5%	1/16W
R621	1-216-864-11	METAL CHIP	0	5%	1/16W
R622	1-216-864-11	METAL CHIP	0	5%	1/16W
R623	1-216-864-11	METAL CHIP	0	5%	1/16W
R624	1-216-864-11	METAL CHIP	0	5%	1/16W
R625	1-216-864-11	METAL CHIP	0	5%	1/16W
R626	1-216-853-11	METAL CHIP	470K	5%	1/16W
R627	1-216-864-11	METAL CHIP	0	5%	1/16W
R628	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R629	1-216-845-11	METAL CHIP	100K	5%	1/16W
R630	1-216-821-11	METAL CHIP	1K	5%	1/16W
R631	1-216-853-11	METAL CHIP	470K	5%	1/16W
R632	1-216-853-11	METAL CHIP	470K	5%	1/16W
R633	1-216-853-11	METAL CHIP	470K	5%	1/16W
R634	1-216-853-11	METAL CHIP	470K	5%	1/16W
R635	1-216-821-11	METAL CHIP	1K	5%	1/16W
R636	1-216-821-11	METAL CHIP	1K	5%	1/16W
R637	1-216-845-11	METAL CHIP	100K	5%	1/16W
R638	1-216-845-11	METAL CHIP	100K	5%	1/16W
R639	1-216-845-11	METAL CHIP	100K	5%	1/16W
R640	1-216-833-91	RES, CHIP	10K	5%	1/16W
R642	1-216-853-11	METAL CHIP	470K	5%	1/16W
R643	1-216-853-11	METAL CHIP	470K	5%	1/16W
R644	1-216-864-11	METAL CHIP	0	5%	1/16W
R645	1-216-821-11	METAL CHIP	1K	5%	1/16W
R646	1-216-841-11	METAL CHIP	47K	5%	1/16W
R647	1-216-833-91	RES, CHIP	10K	5%	1/16W
R648	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R649	1-216-833-91	RES, CHIP	10K	5%	1/16W
R650	1-216-821-11	METAL CHIP	1K	5%	1/16W
R651	1-216-833-91	RES, CHIP	10K	5%	1/16W
R652	1-216-821-11	METAL CHIP	1K	5%	1/16W
R653	1-216-853-11	METAL CHIP	470K	5%	1/16W
R654	1-216-864-11	METAL CHIP	0	5%	1/16W
R655	1-216-797-11	METAL CHIP	10	5%	1/16W
R657	1-216-857-11	METAL CHIP	1M	5%	1/16W
R658	1-218-907-11	RES, CHIP	330K	0.50%	1/16W
R659	1-216-857-11	METAL CHIP	1M	5%	1/16W
R660	1-216-845-11	METAL CHIP	100K	5%	1/16W
R661	1-216-853-11	METAL CHIP	470K	5%	1/16W
R662	1-216-845-11	METAL CHIP	100K	5%	1/16W
R663	1-216-857-11	METAL CHIP	1M	5%	1/16W
R664	1-216-845-11	METAL CHIP	100K	5%	1/16W
R665	1-216-845-11	METAL CHIP	100K	5%	1/16W
R666	1-216-833-91	RES, CHIP	10K	5%	1/16W
R667	1-216-814-11	METAL CHIP	270	5%	1/16W
R668	1-216-864-11	METAL CHIP	0	5%	1/16W
R669	1-216-296-91	SHORT	0		
R670	1-216-857-11	METAL CHIP	1M	5%	1/16W
R673	1-216-296-91	SHORT	0		
R674	1-216-296-91	SHORT	0		
R675	1-216-296-91	SHORT	0		
R676	1-216-833-91	RES, CHIP	10K	5%	1/16W
R677	1-216-853-11	METAL CHIP	470K	5%	1/16W
R678	1-216-864-11	METAL CHIP	0	5%	1/16W
R679	1-216-841-11	METAL CHIP	47K	5%	1/16W
R680	1-216-833-91	RES, CHIP	10K	5%	1/16W
R681	1-216-840-11	METAL CHIP	39K	5%	1/16W
R682	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R683	1-216-853-11	METAL CHIP	470K	5%	1/16W
R684	1-216-853-11	METAL CHIP	470K	5%	1/16W
R685	1-216-864-11	METAL CHIP	0	5%	1/16W
R686	1-216-821-11	METAL CHIP	1K	5%	1/16W
R701	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R702	1-216-837-11	METAL CHIP	22K	5%	1/16W
R703	1-216-841-11	METAL CHIP	47K	5%	1/16W
R704	1-216-847-11	METAL CHIP	150K	5%	1/16W
R705	1-216-836-11	METAL CHIP	18K	5%	1/16W
R708	1-216-817-11	METAL CHIP	470	5%	1/16W
R709	1-216-821-11	METAL CHIP	1K	5%	1/16W
R808	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R809	1-216-838-11	METAL CHIP	27K	5%	1/16W
R810	1-216-835-11	METAL CHIP	15K	5%	1/16W
R811	1-216-843-11	METAL CHIP	68K	5%	1/16W
R813	1-216-864-11	METAL CHIP	0	5%	1/16W
R814	1-216-864-11	METAL CHIP	0	5%	1/16W
R815	1-216-864-11	METAL CHIP	0	5%	1/16W
R818	1-216-838-11	METAL CHIP	27K	5%	1/16W
R819	1-218-889-11	RES, CHIP	56K	0.50%	1/16W
R821	1-218-887-11	RES, CHIP	47K	0.50%	1/16W
R822	1-216-851-11	METAL CHIP	330K	5%	1/16W
R823	1-218-877-11	RES, CHIP	18K	0.50%	1/16W
R825	1-216-821-11	METAL CHIP	1K	5%	1/16W
R826	1-216-821-11	METAL CHIP	1K	5%	1/16W
R828	1-216-837-11	METAL CHIP	22K	5%	1/16W
R830	1-216-839-11	METAL CHIP	33K	5%	1/16W
R831	1-216-841-11	METAL CHIP	47K	5%	1/16W
R832	1-216-841-11	METAL CHIP	47K	5%	1/16W
R833	1-216-841-11	METAL CHIP	47K	5%	1/16W
R834	1-216-842-11	METAL CHIP	56K	5%	1/16W
R835	1-216-864-11	METAL CHIP	0	5%	1/16W
R836	1-218-891-11	RES, CHIP	68K	0.50%	1/16W
R837	1-218-883-11	RES, CHIP	33K	0.50%	1/16W
R839	1-218-879-11	RES, CHIP	22K	0.50%	1/16W
R840	1-218-879-11	RES, CHIP	22K	0.50%	1/16W
R841	1-216-837-11	METAL CHIP	22K	5%	1/16W
R842	1-216-841-11	METAL CHIP	47K	5%	1/16W
R843	1-216-841-11	METAL CHIP	47K	5%	1/16W
R844	1-216-837-11	METAL CHIP	22K	5%	1/16W
R845	1-216-841-11	METAL CHIP	47K	5%	1/16W
R846	1-216-841-11	METAL CHIP	47K	5%	1/16W
R847	1-216-845-11	METAL CHIP	100K	5%	1/16W
R848	1-216-845-11	METAL CHIP	100K	5%	1/16W
R849	1-216-839-11	METAL CHIP	33K	5%	1/16W
R850	1-216-845-11	METAL CHIP	100K	5%	1/16W
R852	1-218-887-11	RES, CHIP	47K	0.50%	1/16W
R853	1-218-885-11	RES, CHIP	39K	0.50%	1/16W
R854	1-218-855-11	RES, CHIP	2.2K	0.50%	1/16W
R855	1-218-877-11	RES, CHIP	18K	0.50%	1/16W
R856	1-218-881-11	RES, CHIP	27K	0.50%	1/16W
R859	1-216-864-11	METAL CHIP	0	5%	1/16W
R860	1-216-864-11	METAL CHIP	0	5%	1/16W
R861	1-216-805-11	METAL CHIP	47	5%	1/16W
R862	1-216-805-11	METAL CHIP	47	5%	1/16W
R863	1-216-805-11	METAL CHIP	47	5%	1/16W
R864	1-216-864-11	METAL CHIP	0	5%	1/16W
R866	1-216-864-11	METAL CHIP	0	5%	1/16W
R868	1-216-864-11	METAL CHIP	0	5%	1/16W
R871	1-216-864-11	METAL CHIP	0	5%	1/16W
R873	1-216-864-11	METAL CHIP	0	5%	1/16W
R875	1-216-864-11	METAL CHIP	0	5%	1/16W
R876	1-216-864-11	METAL CHIP	0	5%	1/16W
R878	1-216-864-11	METAL CHIP	0	5%	1/16W
R879	1-216-864-11	METAL CHIP	0	5%	1/16W
R880	1-216-864-11	METAL CHIP	0	5%	1/16W
R881	1-216-864-11	METAL CHIP	0	5%	1/16W
R882	1-216-864-11	METAL CHIP	0	5%	1/16W
R884	1-216-864-11	METAL CHIP	0	5%	1/16W
R885	1-216-864-11	METAL CHIP	0	5%	1/16W
R887	1-216-864-11	METAL CHIP	0	5%	1/16W
R890	1-216-864-11	METAL CHIP	0	5%	1/16W
R891	1-216-864-11	METAL CHIP	0	5%	1/16W
R893	1-216-864-11	METAL CHIP	0	5%	1/16W

< SWITCH >

S601	1-571-506-41	SWITCH, SLIDE (SLEEP)

< SENSOR >

SE601	1-771-701-21	SWITCH, SLANT (VERTICAL SENSOR)

< TRANSFORMER >

T001	1-431-549-11	TRANSFORMER, DC-DC CONVERTER

< VIBRATOR >

X201	1-781-412-21	OSCILLATOR, CRYSTAL (24.54MHz)
X301	1-781-413-21	VIBRATOR, CRYSTAL (12.9024MHz)
X401	1-767-989-21	VIBRATOR, CERAMIC (14.318MHz)

Ref. No.	Part No.	Description	Remark
X501	1-781-160-21	VIBRATOR, CERAMIC (16.384MHz)	
X601	1-767-450-11	VIBRATOR, CERAMIC (20MHz)	
X602	1-760-458-21	VIBRATOR, CRYSTAL (32.768kHz)	

MISCELLANEOUS
****

⚠8	1-959-825-11	HARNESS (EP-54)	
9	1-673-923-11	FP-113 FLEXIBLE BOARD	
54	1-959-714-11	HARNESS (FF-198)	
57	1-959-713-11	HARNESS (FF-197)	
64	1-959-712-11	HARNESS (FF-196)	
65	1-790-730-11	CABLE, FLEXIBLE FLAT (FFC-278)	
66	1-790-721-11	CABLE, FLEXIBLE FLAT (FFC-279)	
67	1-959-824-11	HARNESS (FF-200)	
SP901	1-505-278-11	SPEAKER (DIA 2.3cm)	
⚠LCD901	1-801-904-24	MODULE, CRYSTAL INDICATION	

ACCESSORIES
****

⚠	1-475-822-22	ADAPTOR, AC (AC-PLM3)	
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (E)	
⚠	1-575-131-11	CORD, POWER (AEP, E)	
⚠	1-696-819-11	CORD, POWER (Australian)	
⚠	1-769-608-11	CORD, POWER (AEP, UK, E, Hong Kong)	
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P	(UK, Hong Kong)
⚠	1-790-107-22	CORD, POWER (US, Canadian)	
	3-056-065-11	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-056-065-21	MANUAL, INSTRUCTION (GERMAN) (AEP, E)	
	3-056-065-31	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
	3-056-065-41	MANUAL, INSTRUCTION (RUSSIAN) (AEP, E)	
	3-056-065-51	MANUAL, INSTRUCTION (KOREAN) (E)	
	3-866-612-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH)	(UK)
	3-866-612-21	MANUAL, INSTRUCTION	(GERMAN, FRENCH) (Canadian, AEP, E)
	3-866-612-31	MANUAL, INSTRUCTION	(ITALIAN, DUTCH) (AEP)
	3-866-612-41	MANUAL, INSTRUCTION	(PORTUGUESE, RUSSIAN) (AEP, E)
	3-866-612-51	MANUAL, INSTRUCTION	(CHINESE) (E, Hong Kong)
	3-866-612-61	MANUAL, INSTRUCTION (ARABIC, KOREAN)	(E)
	3-866-612-71	MANUAL, INSTRUCTION (SWEDISH) (AEP, E)	
	X-3949-793-1	SCREW ASSY, ORNAMENTAL PLATE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

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