DPA-300

SERVICE MANUAL

US Model
Canadian Model

U.S and foreign patents licensed from Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	NEW
MD Mechanism Type	MDM-2BR
Base Unit Name	MBU-2
Optical Pick-up Name	KMS-210A/J-N

SPECIFICATIONS

System

Recording format — Picture MD recording system

Data compression/saving system — JPEG
- FINE mode : 128kB (the maximum 1,000 images)
- STANDARD mode : 64kB (the maximum 2,000 images)

Revolutions — 400 rpm to 900 rpm (CLV)

Error correction — Advanced Cross Interleave Reed Solomon Code (ACIRC)

Laser — Semiconductor laser (λ = 780 nm)
Emission duration : continuous

Laser output — Max 44.6 µW
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Sampling frequency — 44.1 kHz

Coding — Adaptive TRansform Acoustic Coding (ATRAC)

Modulation system — EFM (Eight to Fourteen Modulation)

Number of channels — 2 stereo channels

Input — VIDEO INPUT
Input signal : 1Vp-p (75 Ω unbalanced)
Y/C INPUT, Mini DIN 4-pin
Luminance signal : 1Vp-p (75 Ω unbalanced)
Chrominance signal : 0.286 Vp-p (75 Ω unbalanced)
AUDIO IN (L/R)
Input level : 2 Vrms (full bit)
Input impedance : more than 47 kΩ
FS1/FS2 (RED/WHITE) connectors

Output — VIDEO OUTPUT
Output signal : 1 Vp-p (75 Ω unbalanced)
Y/C OUTPUT, Mini DIN 4-pin
Luminance signal : 1 Vp-p (75 Ω unbalanced)
Chrominance signal : 0.286 Vp-p (75 Ω unbalanced)
AUDIO OUT (L/R)
Output level : 2 Vrms (full bit)
Output impedance : more than 47 kΩ

— Continued on next page —

DIGITAL STILL RECORDER

MICROFILM

SONY®

General

Power requirements	Sony AC Power Adaptor AC-DA300 (supplied) connected at the DC IN 12 V jack : 120V AC, 60Hz (US model)
Power consumption	20 W
Operating temperature	5 °C to 35 °C (41°F to 95°F)
Operating humidity	30% to 85%
Dimensions	Approx. 280 × 80 × 290 mm ($11^1/_8 \times 3^1/_4 \times 11^1/_2$ inches) (w/h/d, including projecting parts and controls)
Mass	Approx. 2.5 kg (5 lb. 8 oz)
Supplied accessories	AC power adaptor AC-DA300 Remote commander RMT-DA300 (1) Size AA (R6) batteries (2)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of 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.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

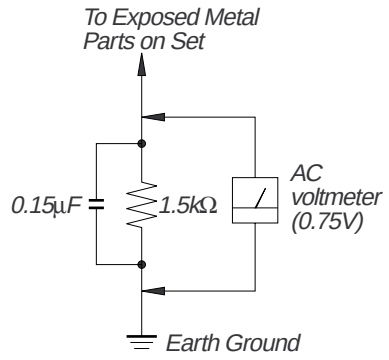

Fig. A. Using an AC voltmeter to check AC leakage.

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 IDENTIFÉS 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 PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

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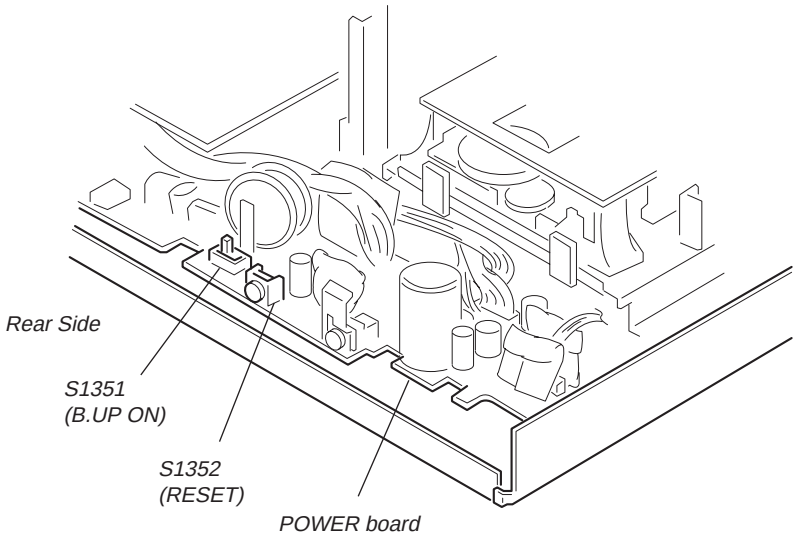
SECTION 1
SERVICING NOTE

[About Switches on POWER Board]

- Backup Power ON/OFF Switch (S1351 B. UP ON)
  Be sure to turn this switch to OFF when removing and inserting connectors to and from the circuit boards.
  This switch protects semiconductors from breakdown due to static electricity.
  Set this switch to ON during normal operation. The DPA-300 does not work unless this switch is set to ON.

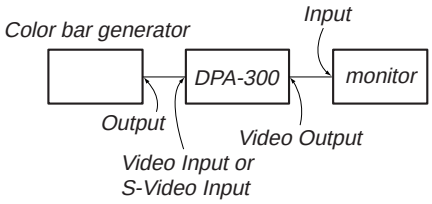
- Reset Switch (S1352 RESET)
  This switch resets forcibly system of DPA-300. Press the reset switch when microprocessor runs away, or when DPA-300 does not operate normally, or when the main power is desired to turn ON, OFF and back ON momentarily during test mode, etc.



[How to Set the Mode Displaying the Through Picture]

Input the color bar signal and enter this mode as follows to check the DPA-300 for voltages, waveforms and to implement a part of adjustments.

Connection:



When the equipment connection is completed, set up this mode by following the procedures in the order given below.

1. Turn the main power ON. (Turn on the main power of color bar generator, DPA-300 and monitor.)
2. Connect the color bar signal to video input.

Color bar signal specifications to be input

Color bar signal for voltage and waveform measurement

WHITE (75%)	YELLOW	CYAN	GREEN	MAGENTA	RED	BLUE	BLACK

Color bar signal for adjustment

WHITE (75%)	YELLOW	CYAN	GREEN	MAGENTA	RED	BLUE	BLACK
Q	I	WHITE (100%)			BLACK		

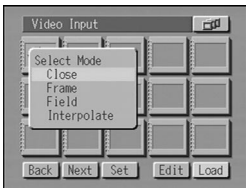
3. Insert the MD data disc.
   List of album appears.

When the MD data disc has not been formatted, format it.

4. Select “Load” using the ◁ ▷ ▽ △ button and press the ENTER button.
   The message “Create new album and add photos?” appears.

5. Select “Yes” using the ◁ ▷ ▽ △ button and press the ENTER button.
   The new album to load the pictures are created. When an album is created, the loading menu appears.

6. Select “Video input” using the ▽ △ button and press the ENTER button.
   The display from which the modes can be selected, appears



7. Select “Frame” using the ▽ △ button and press the ENTER button.
   Mode differs depending on the type of input signal supplied from the video equipment connected.

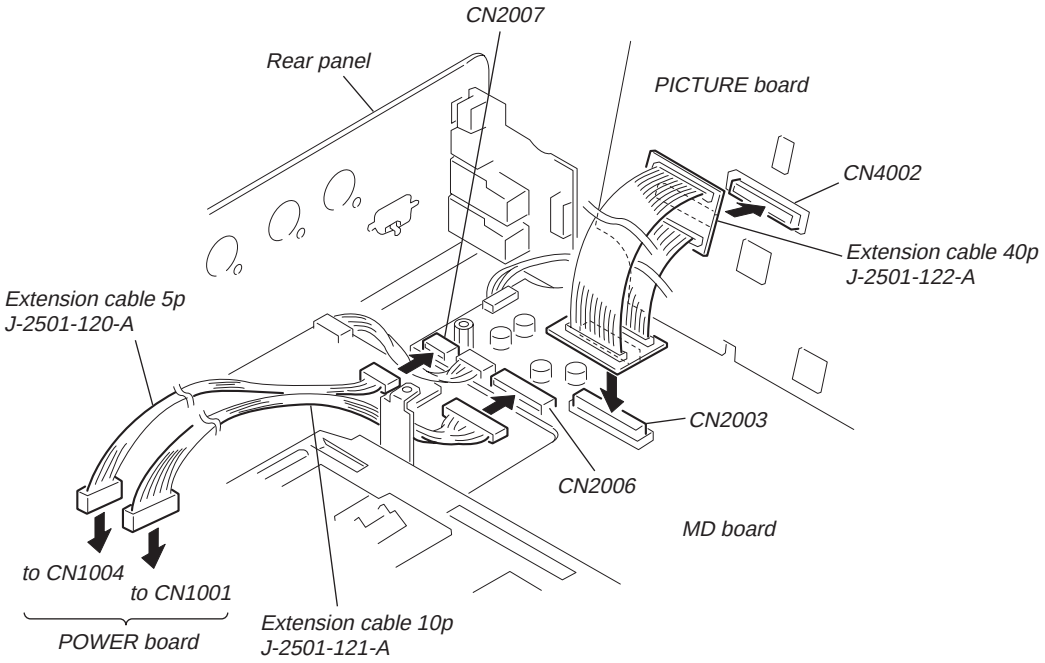
8. Select “OK” using the ◁ ▷ ▽ △ button and press the ENTER button.

9. Color bars supplied to the Video Input connector, appear on monitor when the ENTER button is pressed.

Note : When the ENTER button is pressed in the state of step 9, the picture is loaded and the DPA-300 exits the Through mode. When the ENTER button is pressed incorrectly, follow the instruction shown on the monitor screen and return to the state of step 9.

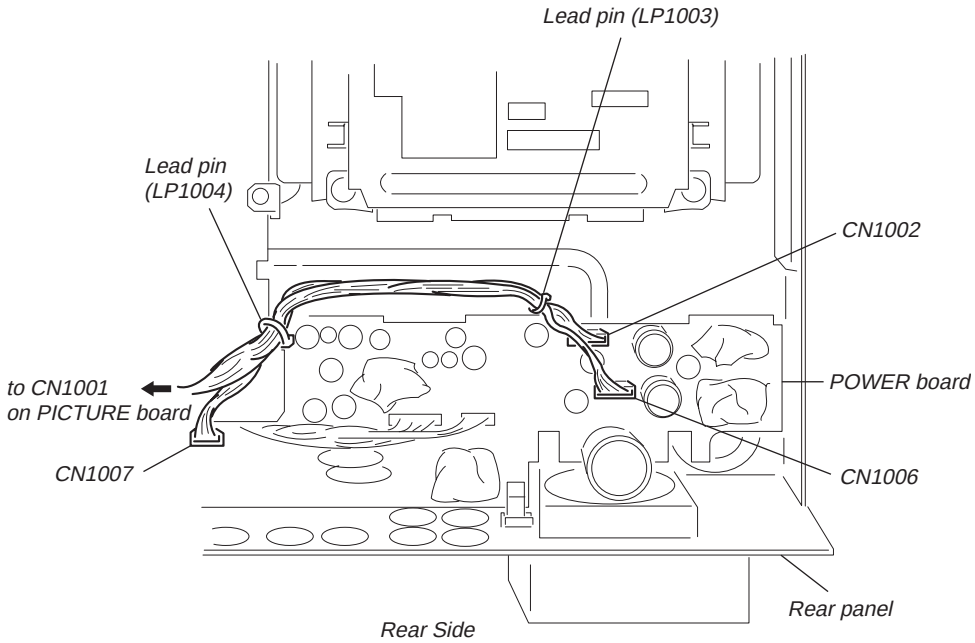
[About Extension Cable]

To check the MD board, connect the PICTURE board and the POWER board using the extension cables as shown before starting to check.



[How to Route the Cables]

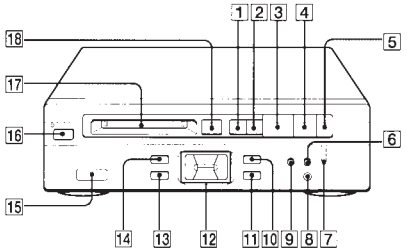
Be sure to route the cables which connect the POWER board CN1002, CN1006, CN1007 and PICTURE board CN1001 as shown.



Index to parts and controls

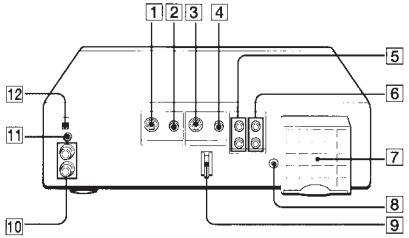
Main unit

(front panel)



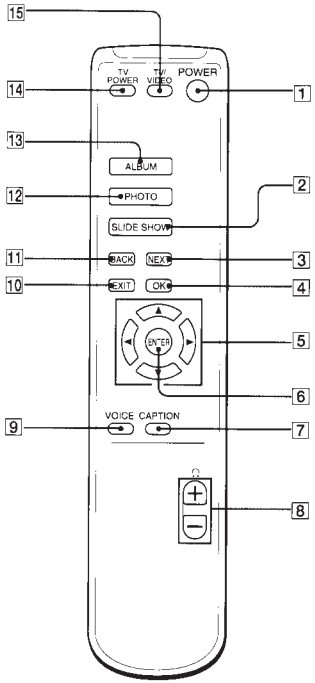
1 ALBUM button
2 PHOTO button
3 LIVE/PLAY button
4 CAPTURE button
5 REC (recording) button
6 NEXT button
7 BUSY indicator
8 Remote sensor
9 BACK button
10 AUDIO DUB (dubbing) button
11 ENTER button
12 Cursor (←/↑/↓/→) buttons
13 IR (Infrared) LINK button
14 SLIDE SHOW button
15 IrDA port
16 POWER switch
17 MiniDataDisc slot
18 ⏏ EJECT button

(rear panel)



1 Y/C (S video) INPUT connector
2 VIDEO INPUT connector
3 Y/C (S video) OUTPUT connector
4 VIDEO OUTPUT connector
5 AUDIO IN (input) (L/R) connectors
6 AUDIO OUT (output) (L/R) connectors
7 Air filter
8 DC IN (input) 12V connector
9 RESET button
10 FS2 (WHITE/RED) connectors
11 FS1 connector
12 REC MODE (recording mode select) switch

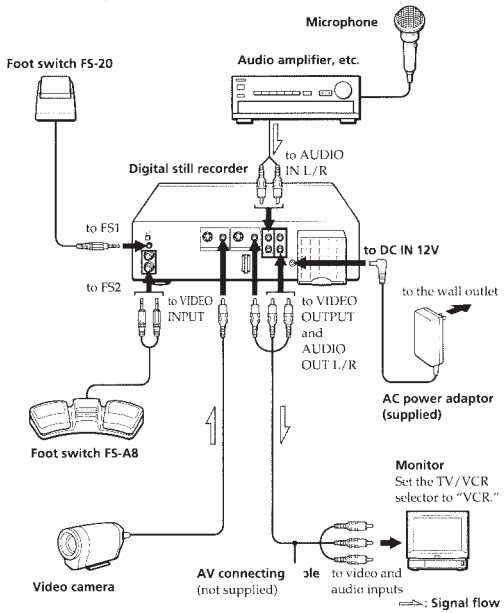
Remote commander



1 POWER switch
2 SLIDE SHOW button
3 NEXT button
4 OK button
5 ◄/▼/▲/► (cursor) buttons
6 ENTER button
7 CAPTION button
8 (The buttons are not to be used with the unit.)
9 VOICE button
10 EXIT button
11 BACK button
12 PHOTO button
13 ALBUM button
14 TV POWER button
Turns on and off the television.
15 TV/VIDEO button
Switches TV/VIDEO input with the television.

Making connections

Connect the monitor and video camera to capture images from the video camera and display them on the monitor. Also connect the AC power adaptor, the microphone to record narration, and the foot switch to control the capturing and recording operations.



Notes

- You cannot use a TV that has an antenna (aerial) connector only.
- Connect the AC power adaptor after you finish all the other connections.
- Use the AC power adaptor supplied. Do not use any other AC power adaptor since it may cause the digital still recorder to malfunction.
- When replacing the AC power adaptor, use the same type number AC-DA300.

Polarity of the plug

When you connect the color video printer UP-2100/2300, etc.

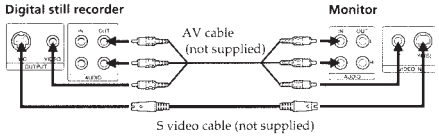
Connect the video connecting cable (not supplied) to the VIDEO OUTPUT connector of the digital still recorder and video input connector of the printer.

1 Connect the monitor.

Use the AV cable (not supplied) as follows:

Digital still recorder	AV cable	Monitor
VIDEO OUTPUT connector*	Yellow plug	Video input connector
AUDIO OUT R (red) connector	Red plug	Audio input R connector
AUDIO OUT L (white) connector	White plug	Audio input L connector

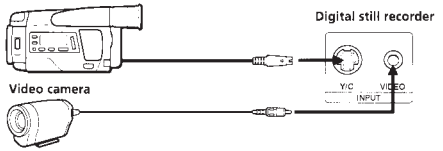
* If your monitor has the Y/C (S video) input connector, use an S video cable (not supplied) to connect the monitor to the Y/C connector of the digital still recorder and the monitor for better picture quality.



(continued)

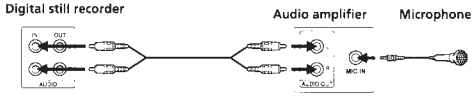
2 Connect the video camera.

Connect the video output connector of the video camera to the VIDEO INPUT connector of the digital still recorder. When your video camera has the Y/C (S video) output connector, connect it to the Y/C connector of the digital still recorder for better picture quality.



3 Connect the microphone via an audio amplifier.

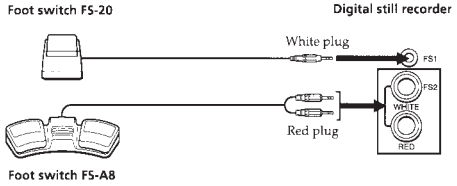
Connect the microphone to the MIC IN connector of an audio amplifier and then the audio output connectors to the AUDIO IN L/R of the digital still recorder. (You can also connect a CD player in the same way as an audio amplifier.)



4 Connect the foot switch.

Connect the foot switch FS-20 or/and foot switch FS-A8 as follows:

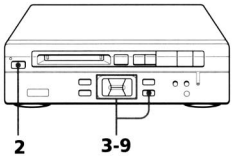
Foot switch	(plug)	Digital still recorder
FS-20		FS1 connector
FS-A8	(red plug)	FS2 RED connector
	(white plug)	FS2 WHITE connector

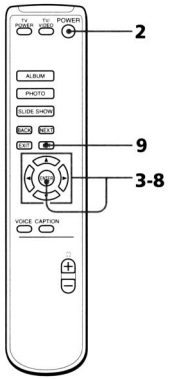


5 Connect the AC power adaptor supplied.

Connect the AC power adaptor supplied to the DC IN 12V connector of the digital still recorder and to the AC wall outlet.

Setting the clock





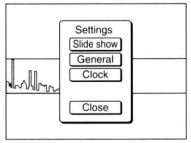
Note
If you disconnect the AC power cord or suspension of power occurs for more than a week, the clock stops working. Set the clock again.

Before starting operation, set the internal clock. The date and time of capturing an image are recorded on the MiniDataDisc.

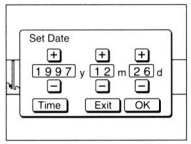
1 **Turn on the power of the monitor and set the TV/VCR selector to "VCR."**

2 **Turn on the power of the digital still recorder.**
The power indicator lights in green. The start-up screen appears.

3 **Press ENTER.**
The Settings menu appears on the monitor screen.



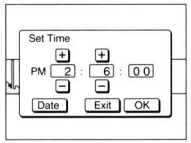
4 **Press the cursor (↑/↓) buttons to highlight Clock, then press ENTER.**
The Set Date menu appears.



5 **Set the year ("y"): Press the cursor (←/↑/↓/→) buttons to highlight [+] or [–] and press ENTER.**
Each time you press ENTER, the year changes.

6 **Repeat step 5 to set the month ("m") and day ("d").**

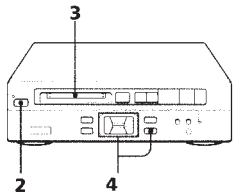
7 **Press the cursor (←/↑/↓/→) buttons to highlight [Time] and press ENTER.**
The Set Time menu appears.

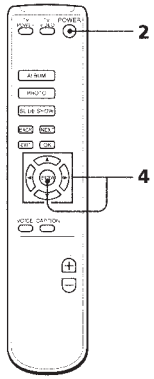


8 **Repeat step 5 to set the hour and minutes.**

9 **Press the cursor (←/↑/↓/→) buttons to highlight [OK] and press ENTER to start the clock.**
When using the commander, press OK. The Set Time menu disappears from the screen.

Formatting a MiniDataDisc



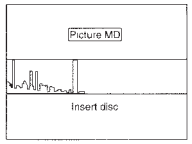


Tip
You can also initialize a used MiniDataDisc. For the details, see page 39.

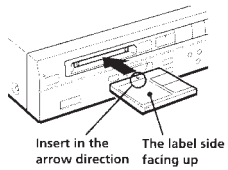
You can use a recordable MiniDataDisc with the MD DATA logo. Before starting operation, format a MiniDataDisc for the digital still recorder.

1 **Turn on the power of the monitor and set the TV/VCR selector to "VCR."**

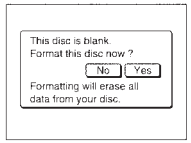
2 **Turn on the power of the digital still recorder.**
The power indicator lights in green. The start-up screen appears.



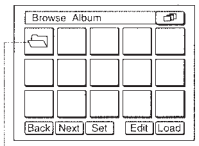
3 **Insert a recordable MiniDataDisc in the direction of the arrow with the label side facing up.**



When a new MiniDataDisc is inserted, the formatting dialog appears.



4 **Press the cursor (←/↑/↓/→) buttons to highlight [Yes] and then press ENTER.**
Formatting a MiniDataDisc starts. When it is completed, the Browse Album screen appears.
The album for scrapbook is displayed. (For scrapbook, see page 28.)



Scrapbook

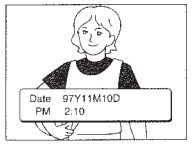
Displaying the date

Displaying the date with the remote commander

1 **Display the image whose date you want to display.**

2 **Press CAPTION.**
Each time you press CAPTION, the display changes as follows:

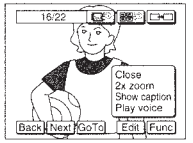
Caption → Date/Time → No display



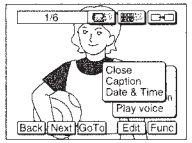
Displaying the date with the main unit

1 **Display the image whose date you want to display.**

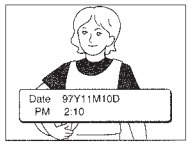
2 **Press the cursor (←/↑/↓/→) buttons to highlight [Func] and press ENTER.**
The Function menu appears.



3 **Press the cursor (↑/↓) buttons to highlight [Show caption] and press ENTER.**
The Show caption menu appears.



4 **Press the cursor (↑/↓) buttons to highlight [Date & Time] and press ENTER.**
The date stored with the image is displayed. To hide the date, press ENTER again.



Note
When no date is stored, an error message stating "No Date/Time" is displayed.

Warning and notice messages

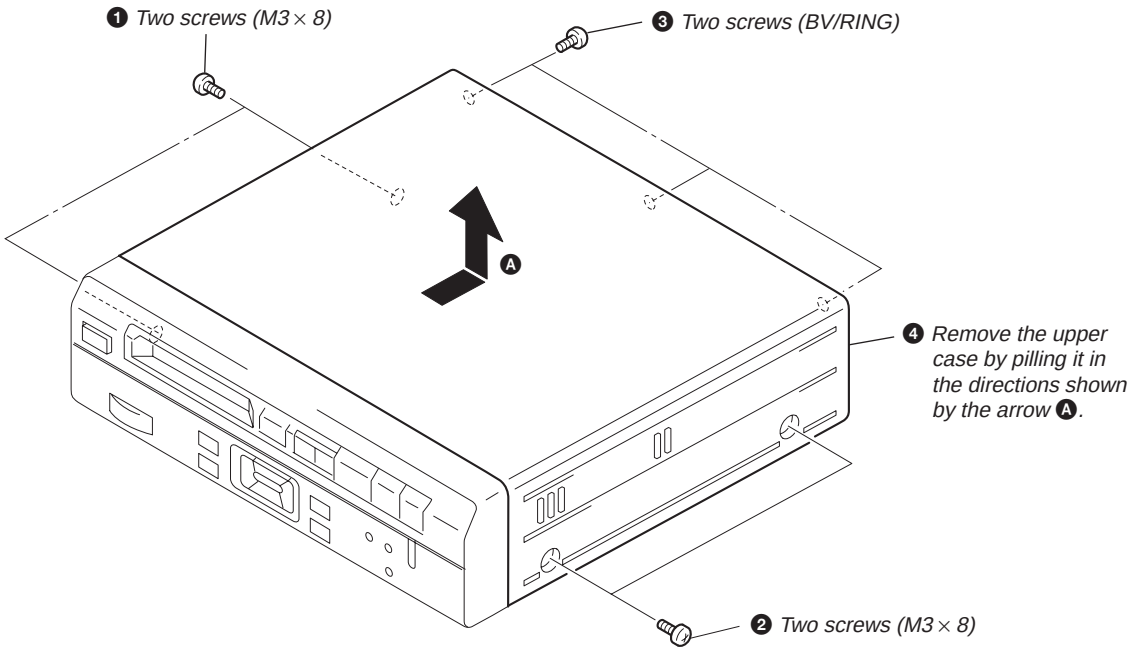
Various messages appear on the monitor screen. Check them with the following list.

Message	Meaning/Remedy
Album full.	The album is already filled with the maximum number of images. Use another album.
Cannot edit this album. Remake index file for editing?	Rearranging the albums for this unit is necessary.
Cannot create any more album.	You cannot create more than 30 albums in a MiniDataDisc including the scrapbook.
Cannot delete. Album is in use. Cannot delete. Music is in use. Cannot delete. Photo is in use.	Albums, photos, and music created or used with another device are protected and cannot be deleted.
Cannot delete album. Album contains protected photos.	The protected photo cannot be deleted. Cancel protection setting before deleting an album.
Cannot display photo. Photo data incorrect. Cannot display. Title data incorrect.	The photo whose data or title is incorrect cannot be displayed. Capture an image again.
Cannot edit this album. Cannot edit. Not enough space on disc.	When the disc space is full or the album contains protected photos, the album cannot be edited. Cancel protection setting or delete unnecessary images before editing.
Cannot move. Album is in use. Cannot move. Photo is in use.	Albums and photos created or used with another device are protected and cannot be moved.
Cannot select any more. Cannot save any more.	You have already selected or saved the maximum number of images.
Capture error. Cannot save this photo. Capture error. Not enough space on disc.	Capture error occurred because of some communication error or no disc space. Use a new MiniDataDisc or check that the disc space is enough and try saving an image again.
Exportation error. Cancel export.	An error occurred while exporting an image. Resume exporting an image again.
Format this disc now? Formatting will erase all data from your disc. Format disc for editing/recording? All data on disc will be erased.	A MiniDataDisc formatted or used with another device cannot be used with this unit. Format the MiniDataDisc for this unit.
MiniDataDisc protected. Contains no photos.	A protected blank MiniDataDisc is inserted. Slide the protection tab to the recordable position and reinsert it.
Not enough space. Cancel export.	The MiniDataDisc is full. Delete unnecessary images before starting exporting an image.
Printing error. Cancel print job.	An error occurred while printing. Resume printing again.
Remaking index file. Please wait about 10 to 30 minutes.	Rearranging the albums for this unit is necessary.
This disc is blank. Format this disc now?	A blank MiniDataDisc is inserted. Format the MiniDataDisc for the unit.
Writing test error. Please refer to instruction manual.	A error occurred during the disc writing test. (To prevent possible writing errors, the unit performs the tests to check disc and laser pickup status when a MiniDataDisc is first accessed for writing.) Reinsert the MiniDataDisc. If the message appears again, replace with a new MiniDataDisc. If the message persists with the new MiniDataDisc, the laser pickup may be degraded.

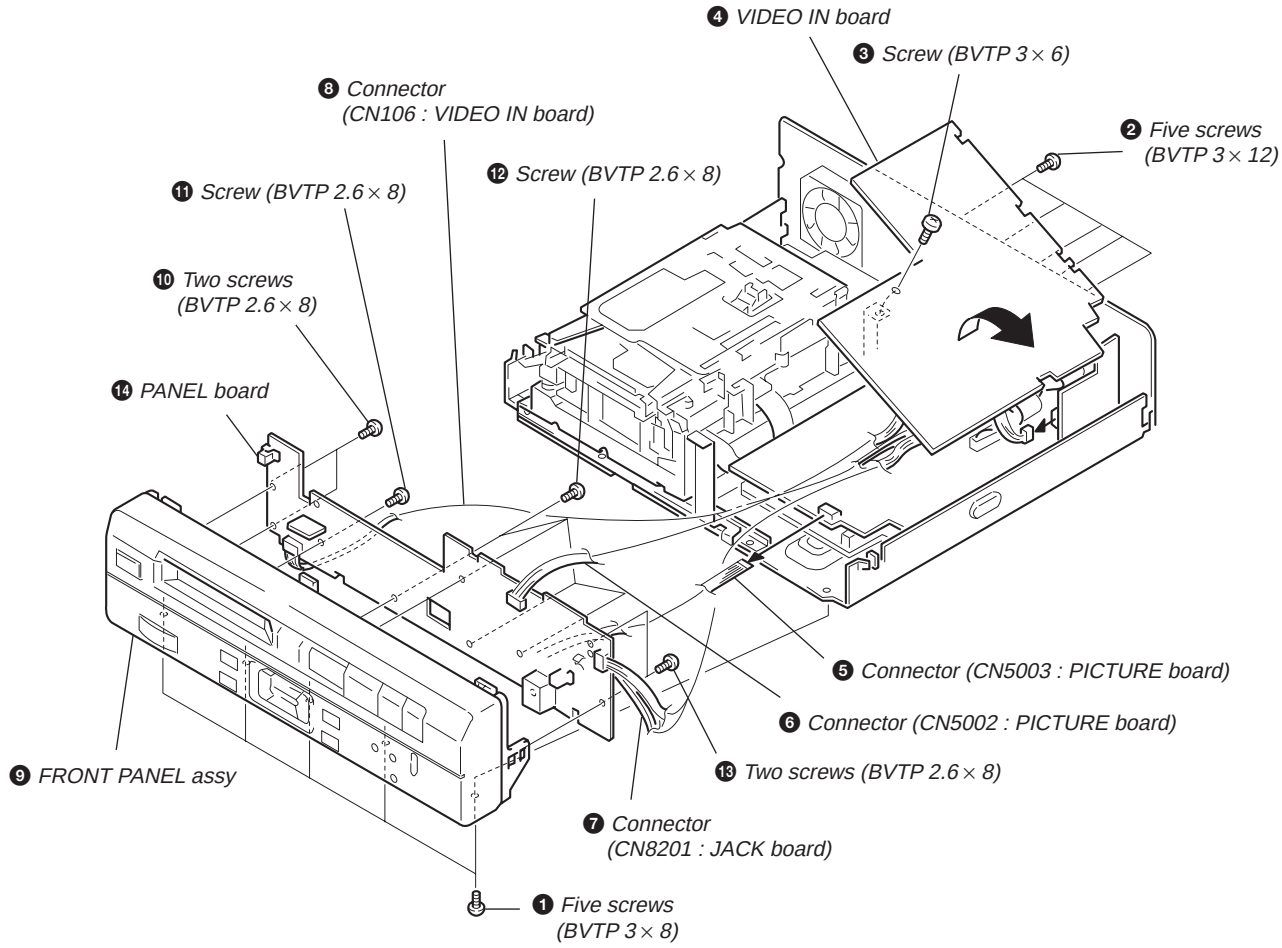
SECTION 3
DISASSEMBLY

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

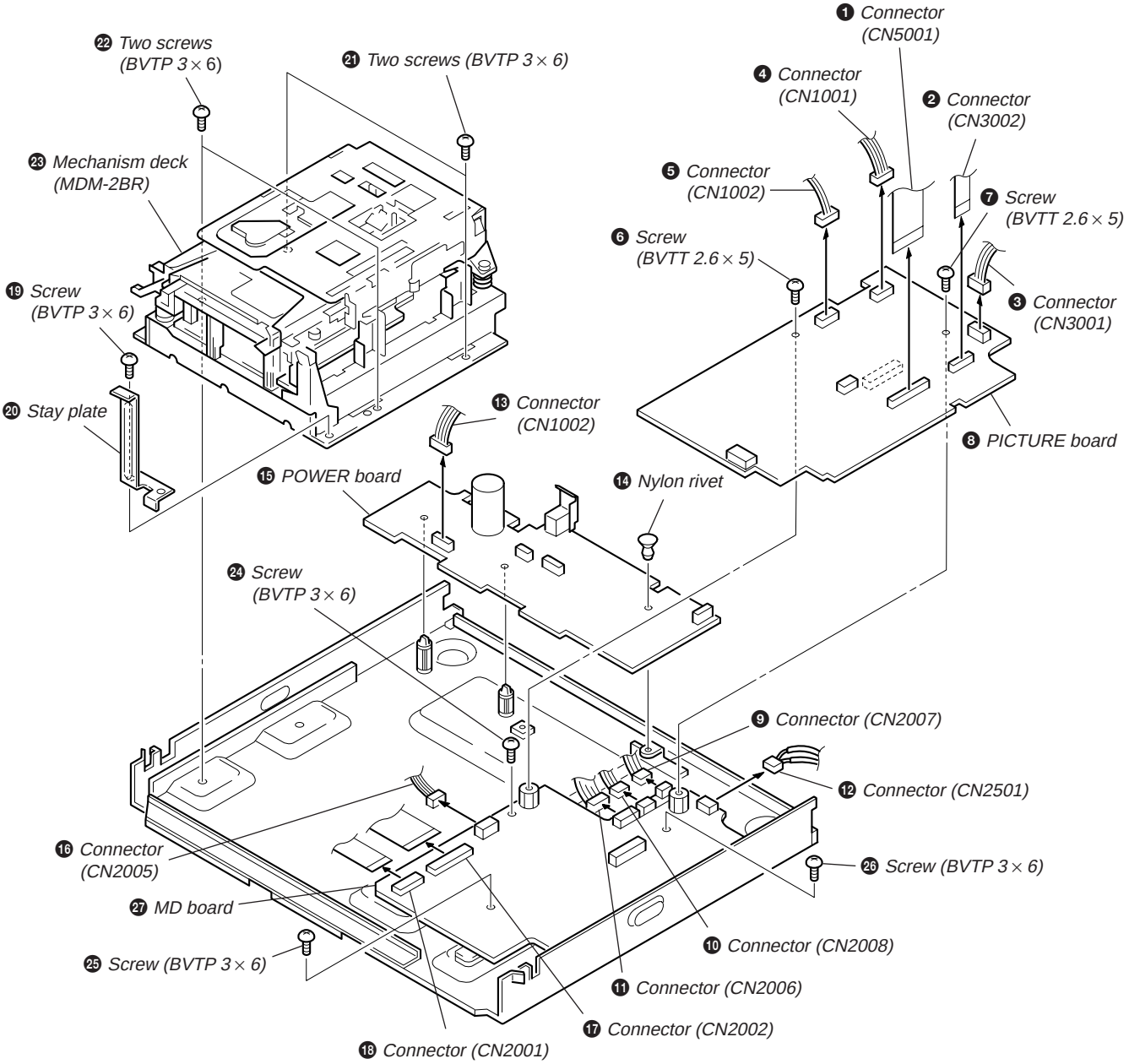
3-1. UPPER CASE



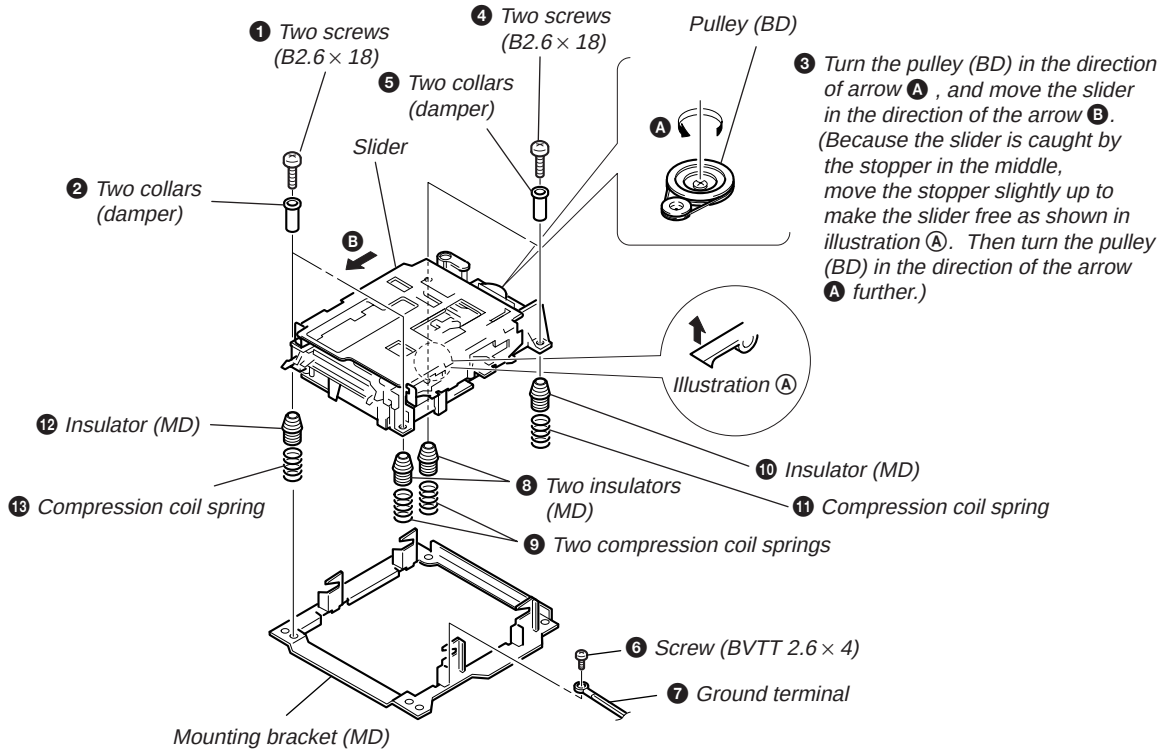
3-2. FRONT PANEL , PANEL BOARD AND VIDEO IN BOARD



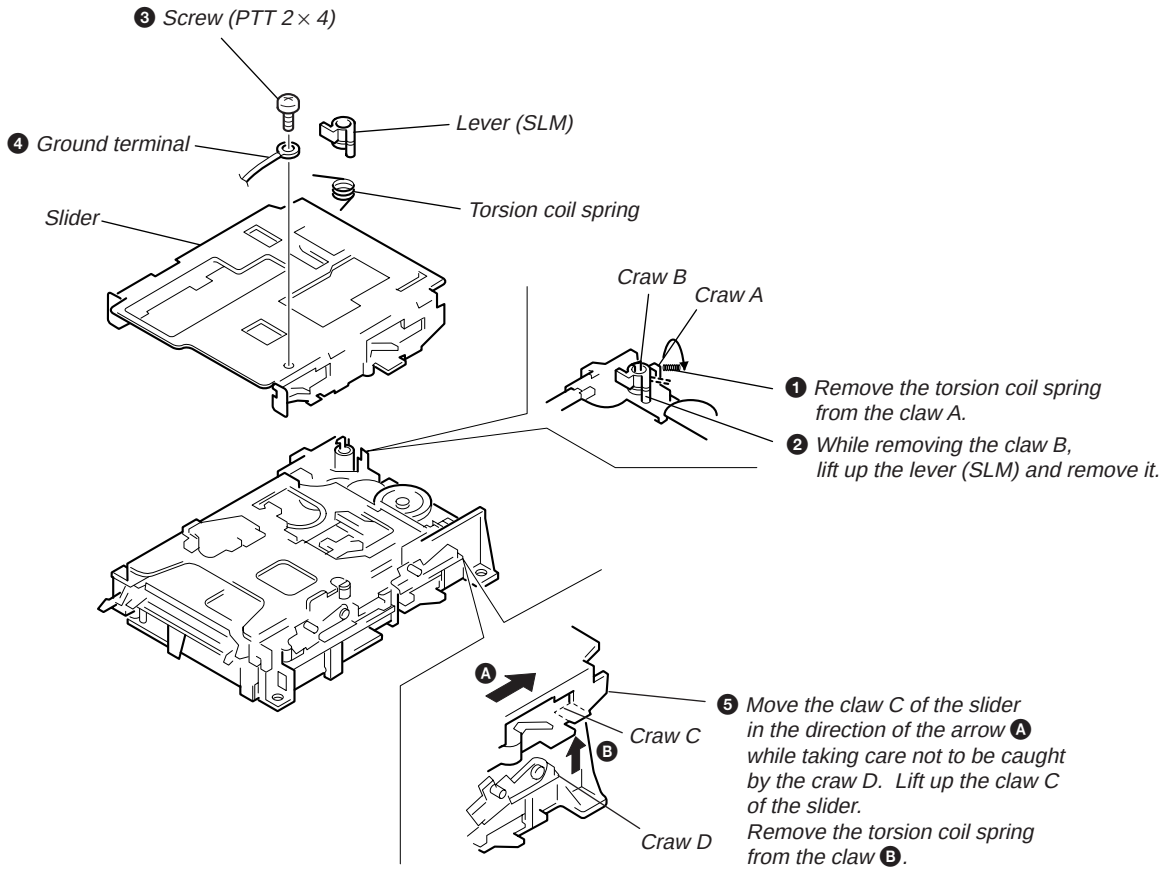
3-3. PICTURE BOARD, POWER BOARD AND MECHANISM DECK



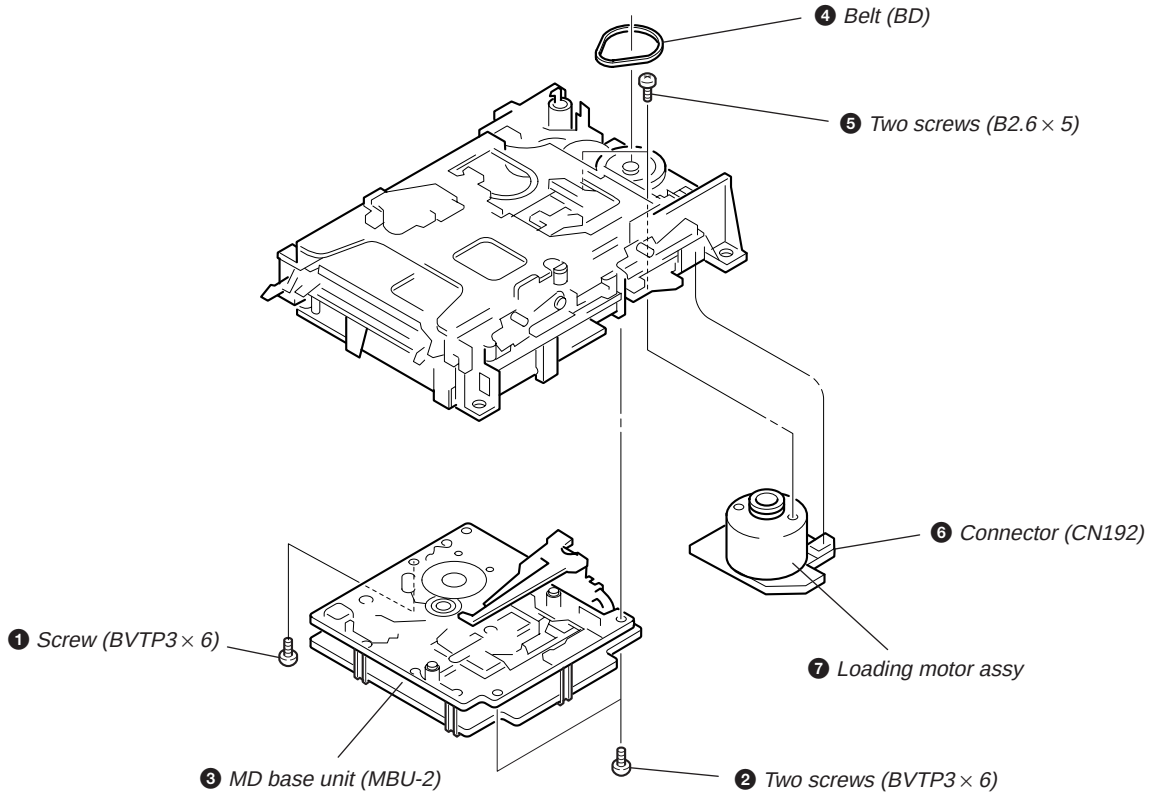
3-4. MD MECHANISM DECK



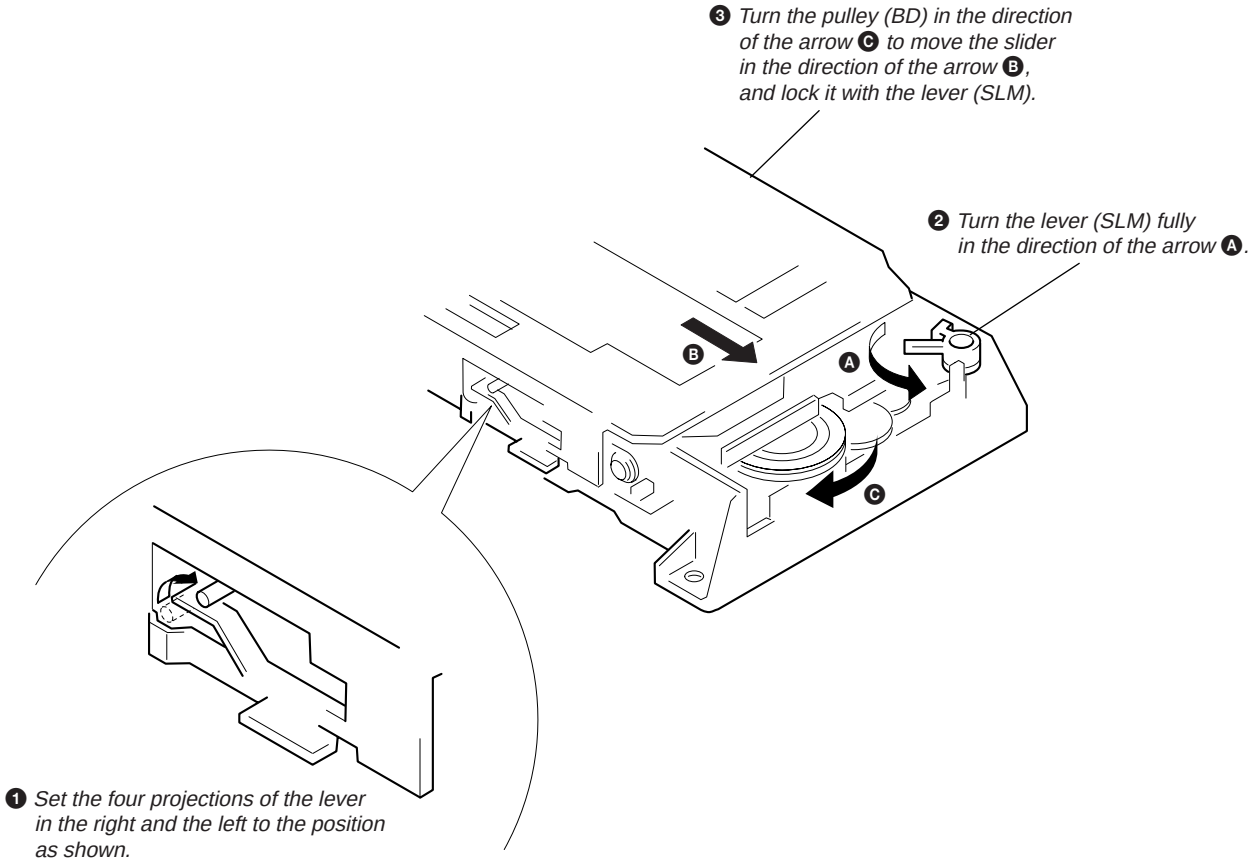
3-5. SLIDER (MD MECHANISM)



3-6. MD BASE UNIT (MBU-2) AND LOADING MOTOR ASSY



3-7. HOW TO ATTACH THE SLIDER (MD MECHANISM)

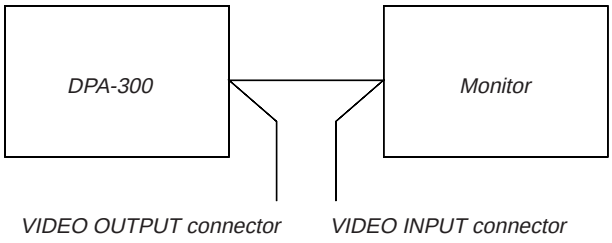


SECTION 4
TEST MODE

[PREPARATION FOR USE OF TEST MODE]

Connect the equipment as shown below before starting the test mode.

Connection:



- How to Enter the Test Mode
  While pressing the ▶▶| button, press the RESET button.

- How to Exit the Test Mode
  Remove the AC adapter from wall outlet.

There are two test modes. One is the audio test mode and the other is the video test mode. When the DPA-300 enters the test mode, main menu appears allowing operator to select either audio test mode or video test mode. Select the desired test mode by pressing the cross marked button (↑ , ↓), and press the ENTER button.

- Main menu

Close
Audio Test
Video Test
Capture Mode
Audio Test

Refer to the respective items for more details.

Audio Test Mode → Page 15
Video Test Mode → Page 17

AUDIO SECTION

[INTRODUCTION]

Enter the test mode referring to [PREPARATION FOR USE OF TEST MODE] in the left column of this page.
All of the messages described as "displayed" in section " 5. ELECTRICAL ADJUSTMENT " appears on monitor screen during adjustment.

1. BASIC OPERATIONS OF THE TEST MODE

All operations are performed using the cross marked button (↑ , ↓ , → , ←), and press the ENTER button. The respective buttons have the following functions.

Function Name	Function
↑ , ↓ button	Changes parameters and modes
→ button	Proceeds onto the next steps. Confirms the entry.
← button	Returns to the previous step. Stop operations.

2. SELECTING THE TEST MODE

Select the desired test mode from the ten test modes by pressing the ↑ , ↓ buttons.

Display	Contents
TEMP ADJUST	Temperature compensation offset adjustment
LDPWR ADJUST	Laser power adjustment
EFBAL ADJUST	Traverse adjustment
FBIAS ADJUST	Focus bias adjustment
FBIAS CHECK	Focus bias check
CPLAY MODE	Continuous playback mode
CREC MODE	Continuous recording mode
EEP MODE	Non-volatile memory mode (*1)
Vol MODE	The mode corresponding to the electronic volume control mode (*1)
Ver. xx.xx	Displays version No. of MD microprocessor
Virgin mode	TOC all clear mode (*1)
Total Time	WR = x: xx (Laser total write hours) SP = x: xx (Spindle rotation hours)

- For detailed description of each adjustment mode, refer to the " 5. ELECTRICAL ADJUSTMENTS ".
- If a different adjustment mode has been selected by mistake, press the ← button to exit from it.

*1: The EEP MODE, Vol MODE, Ver.xx.xx and Virgin mode are not used in servicing. If set accidentally, press the ← button immediately to exit it.

2-1. OPERATING THE CONTINUOUS PLAYBACK MODE

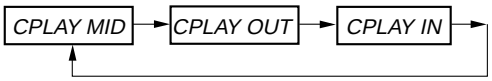
1. Entering the Continuous Playback Mode

① Set the MO or CD disc in the unit. (Whichever recordable discs or discs for playback only are available.)
② Press the ↑ button or ↓ button and display "CPLAY MODE".
③ Press the → button to change the display to "CPLAY IN".
④ When access completes, the display changes to "C1= □□□□ AD= □□".

Note: The numbers "□" displayed are undefinite numbers.

2. Changing the Parts to be Played-back

① Press the → button during continuous playback to change the display as below.



② When access completes, the display changes to "C1= □□□□ AD= □□".

Note: The numbers "□" displayed are undefinite numbers.

3. Exitting the Continuous Playback Mode

① Press the ← button. The display will change to "CPLAY MODE".
② Press the ⏏ button and remove the disc.

Notes:

1. The playback start address for IN, MID, and OUT are as follows.
   IN : 40h cluster
   MID : 300h cluster
   OUT : 700h cluster

2-2. OPERATING THE CONTINUOUS RECORDING MODE

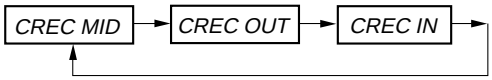
1. Entering the Continuous Recording Mode

① Set the MO disc in the unit.
② Press the ↑ button or ↓ button and display "CREC MODE".
③ Press the → button to change the display to "CREC IN".
④ When access completes, the display changes to "CREC (□□□□)" .

Note: The numbers "□" displayed are undefinite numbers.

2. Changing the Parts to be Recorded

① When the → button is pressed access is completed, the display changes as below.



② When access completes, the display changes to "CREC (□□□□)" .

Note: The numbers "□" displayed sare undefinite numbers.

3. Ending the Continuous Recording Mode

① Press the ← button. The display will change to "CREC MODE".
② Press the ⏏ button and remove the disc.

Notes:

1. The recording start address for IN, MID, and OUT are as follows.
   IN : 40h cluster
   MID : 300h cluster
   OUT : 700h cluster
2. The ← button can be used to stop recording anytime.
3. During the test mode, the erasing-protection tab will not be detected. Therefore be careful not to set the continuous recording mode when a disc not to be erased is set in the unit.
4. Do not perform continuous recording for long periods of time above 5 minutes.
5. During continuous recording, be careful not to apply vibration.

2-3. NON-VOLATILE MEMORY MODE

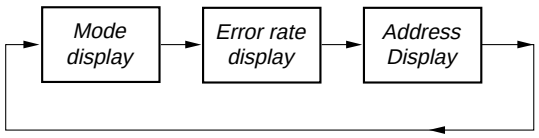
This mode reads and writes the contents of the non-volatile memory. It is not used in servicing.
If set accidentally, press the ← button immediately to exit it.

3. FUNCTIONS OF OTHER BUTTONS

Button	Function
LIVE/PLAY	• Sets continuous playback when pressed in the STOP state. • When pressed during continuous playback, the tracking servo turns on/off.
CAPTURE	Stop continuous playback and continuous recording.
PHOTO	The sled moves to the outer circumference only when this is pressed.
ALBUM	The sled moves to the inner circumference only when this is pressed.
IR LINK	Switches the diaplay when pressed.

4. TEST MODE DISPLAYS

Each time the IR LINK button pressed, the display changes in the following order.



1. MODE display
   Displays “TEMP ADJUST”, “CPLAY MODE”, etc..

2. Error rate display
   Error rates are displayed as follows.
   C1= □□□□ AD= □□□□
   C1= : Indicates C1 error
   AD= : Indicates ADER

3. Address display
   Address are displayed as follows.
   h= □□□□ s= □□□□ (MO pits and CD)
   h= □□□□ a= □□□□ (MO grooves)
   h= : Header address
   a= : ADIP address
   s= : SUB Q address

Note: “—” is displayed when the address cannot be read.

5. PRECAUTIONS FOR USE OF TEST MODE

1. As loading related operations will be performed regardless of the test mode operations being performed, be sure to check that the disc is stopped before setting and removing it. Even if the ⏏ button is pressed while the disc is rotating during continuous playback, continuous recording, etc., the disc will not stop rotating. Therefore, it will be ejected while rotating. Be sure to press the ⏏ button after pressing the ← button and the rotation of disc is stopped.
2. The erasing-protection tab is not detected in the test mode. Therefore, operating in the recording laser emission modes suchas continuous resord mode, traverse adjustment mode, etc., the recorded contents will be erased regardless of the position of the tab. When using a disc that is not to be erased in the test mode, be careful not to enter the continuous recording mode and traverse adjustment mode.

VIDEO SECTION

[INTRODUCTION]

Enter the test mode referring to [PREPARATION FOR USE OF TEST MODE] on page 15.

- **VIDEO TEST MODE**

Enter the video test mode by selecting VIDEO on the main menu. The various video test signals are output from built-in microprocessor in the video test mode.

- **Menu**

The menu as shown appears. Select the desired submenu by pressing the cross marked button (↑, ↓), and press the ENTER button.

Color Bar ..... The color bars signal is output.
Blue Back ..... All blue screen appears.
Half Tone ..... All gray screen appears.
White ..... 100% white signal is output.

- When a desired submenu is selected, the specified screen appears, but the submenu remains on the display.
  Press “Close” to clear the submenu. The submenu disappears and the specified screen appears.
  Return to the main menu of the test mode by pressing the ENTER button.

SECTION 5
ELECTRICAL ADJUSTMENTS

AUDIO SECTION

[INTRODUCTION]

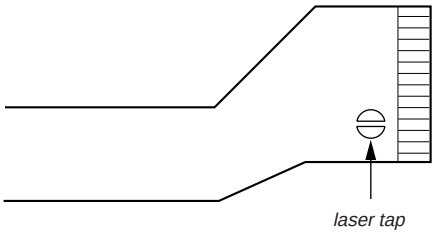
Enter the test mode referring to [PREPARATION FOR USE OF TEST MODE] on page 15.
All of the messages described as “displayed” appears on monitor screen during adjustment.

Precautions for Checking Laser Diode Emission

To check the emission of the laser diode during adjustments, never view directly from the top as this may lose your eye-sight.

Precautions for Use of optical pick-up (KMS-210A)

As the laser diode in the optical pick-up is easily damaged by static electricity, solder the laser tap of the flexible board when using it. Before disconnecting the connector, desolder first. Before connecting the connector, be careful not to remove the solder. Also take adequate measures to prevent damage by static electricity. Handle the flexible board with care as it breaks easily.



Optical pick-up flexible board

- Abbreviation
  MO : Recordable disc
  CD : Disc for playback only

Precautions for Adjustments

1) When replacing the following parts, perform the adjustments and checks with ○ in the order shown in the following table.

	Optical Pick-up	BD Board		
		IC171	D101	IC101, IC121, IC191
1. Temperature compensation offset adjustment	×	○	○	○
2. Laser power adjustment	○	×	×	○
3. Traverse adjustment	○	○	×	○
4. Focus bias adjustment	○	○	×	○
5. Error rate check	○	○	×	○

2) Set the test mode when performing adjustments.
   After completing the adjustments, exit the test mode.
3) Perform the adjustments in the order shown.
4) Use the following tools and measuring devices.
   - Check Disc (CD) TGYS-1 (Parts No. 4-963-646-01)
   - Laser power meter LPM-8001 (Parts No. J-2501-046-A)
   - Oscilloscope
   - Digital voltmeter
   - Thermometer
5) When observing several signals on the oscilloscope, etc., make sure that VC and ground do not connect inside the oscilloscope.
   (VC and ground will become short-circuited.)

Creating Continuously Recorded Disc

* This disc is used in focus bias adjustment and error rate check. The following describes how to create a continuous recording disc.

1. Insert a MO disc (blank disc) commercially available.
2. Press the [↑], [↓] buttons and display “CREC MODE”.
3. Press the [→] button and display “CREC IN”.
4. Press the [→] button again to display “CREC MID”.
   “CREC (0300” is displayed for a moment and recording starts.
5. Complete recording within 5 minutes.
6. Press the [←] button and stop recording .
7. Press the [⏏] button and remove the MO disc.

The above has been how to create a continuous recording data for the focus bias adjustment and error rate check.

Note :

- Be careful not to apply vibration during continuous recording.

Temperature Compensation Offset Adjustment

Save the temperature data at that time in the non-volatile memory as 25 ˚C reference data.

Note :

1. Usually, do not perform this adjustment.
2. Perform this adjustment in an ambient temperature of 22 ˚C to 28 ˚C. Perform it immediately after the power is turned on when the internal temperature of the unit is the same as the ambient temperature.
3. When D101 has been replaced, perform this adjustment after the temperature of this part has become the ambient temperature.

Adjusting Method :

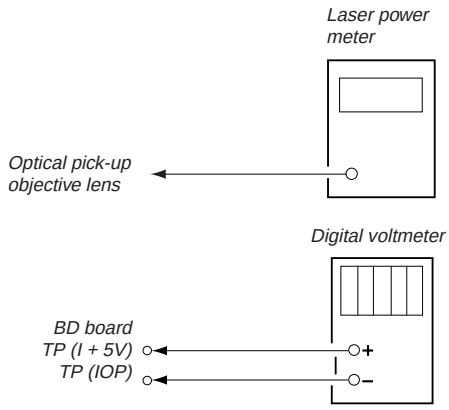
1. Press the [↑], [↓] buttons and display “TEMP ADJUST”.
2. Press the [→] button and select the “TEMP ADJUST” mode.
3. “TEMP = ▯▯” and the current temperature data will be displayed.
4. To save the data, press the [→] button.
   When not saving the data, press the [←] button.
5. When the [→] button is pressed, “TEMP = ▯▯ SAVE” will be displayed for some time, followed by “TEMP ADJUST”.
   When the [←] button is pressed, “TEMP ADJUST” will be displayed.

Specifications :

The “TEMP = ▯▯” should be within “E0 - EF”, “F0 - FF”, “00 - 0F”, “10 - 1F” and “20 - 2F”.

Laser Power Adjustment

Connection :



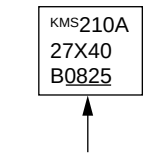
Adjusting Method :

1. Set the laser power meter on the objective lens of the optical pick-up. (When it cannot be set properly, press the ALBUM button or PHOTO button and move the optical pick-up.)
   Connect the digital volt meter to TP (IOP) and TP (I+5V).
2. Press the [↑], [↓] buttons and display “LDPWR ADJUST”.
   (Laser power : For adjustment)
3. Press the [→] button twice and display “LD $ 4B = 3.5 mW”.
4. Adjust RV102 of the BD board so that the reading of the laser power meter becomes $3.45^{+0.1}_{-0}$ mW.
5. Press the [→] button and display “LD $ 96 = 7.0 mW”.
   (Laser power : MO writing)
6. Check that the laser power meter and digital voltmeter readings satisfy the specified value.

Specification :

Laser power meter reading : 7.0 ± 0.3 mW
Digital voltmeter reading : Optical pick-up displayed value ± 10%

(Optical pick-up label)



Iop = 82.5 mA in this case
Iop (mA) = Digital voltmeter reading (mV)/ 1 (Ω)

7. Press the [→] button and display “LD $ 0F = 0.7 mW”.
   (Laser power : MO reading)
8. Check that the laser power meter at this time satisfies the specified value.

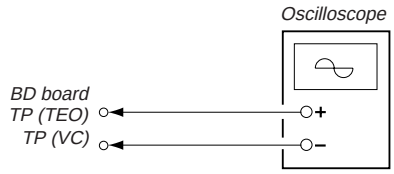
Specification :

Laser power meter reading : 0.70 ± 0.1 mW

9. Press the [←] button and display “LDPWR ADJUST”, and stop laser emission.
   (The [←] button is effective at all times to stop the laser emission.)

Traverse Adjustment

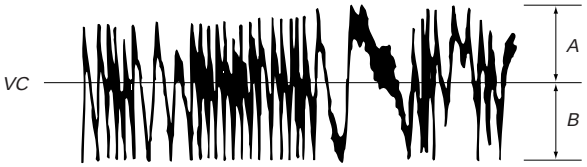
Connection :



Adjusting method :

1. Connect an oscilloscope to TP (TEO) and TP (VC) of the BD board.
2. Load a MO disc (any available on the market).
3. Press the ALBUM button or PHOTO button and move the optical pick-up outside the pit.
4. Press the ↑ , ↓ buttons and display "EFBAL ADJUST".
5. Press the → button and display "EFBAL MO-W".
   (Laser power WRITE power/Focus servo ON/tracking servo OFF/spindle (S) servo ON)
6. Adjust RV101 of the BD board so that the waveform of the oscilloscope becomes the specified value.
   (MO groove write power traverse adjustment)

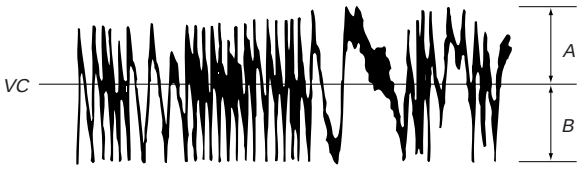
(Traverse Waveform)



Specification A = B

7. Press the → button and display "EFB = $ ⬚ MO-R".
   (Laser power : MO reading)
8. Press the ↑ , ↓ buttons so that the waveform of the oscilloscope becomes the specified value.
   (When the ↑ , ↓ buttons are pressed, the ⬚ of "EFB = $ ⬚" changes and the waveform changes.) In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.
   (MO groove read power traverse adjustment)

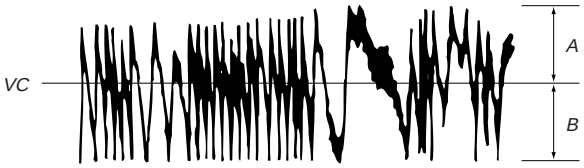
(Traverse Waveform)



Specification A=B

9. Press the → button, display "EFB = $ ⬚ SAVE" for a moment and save the adjustment results in the non-volatile memory.
   Next "EFBAL MO-P" is displayed.
10. Press the → button and display "EFB = $ ⬚ MO-P".
    The optical pick-up moves to the pit area automatically and servo is imposed.
11. Press the ↑ , ↓ buttons until the waveform of the oscilloscope moves closer to the specified value.
    In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.

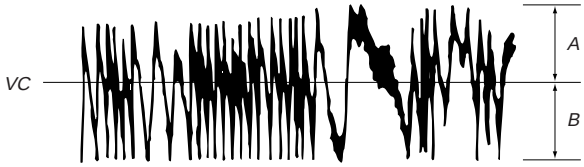
(Traverse Waveform)



Specification A=B

12. Press the → button, display "EFB = $ ⬚ SAVE" for a moment and save the adjustment results in the non-volatile memory.
    Next "EFBAL CD" is displayed. The disc stops rotating automatically.
13. Press the ⏏ button and remove the MO disc.
14. Load the check disc (MD) TDYS-1.
15. Press the → button and display "EFB = $ ⬚ CD". Servo is imposed automatically.
16. Press the ↑ , ↓ buttons so that the waveform of the oscilloscope moves closer to the specified value.
    In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.

(Traverse Waveform)

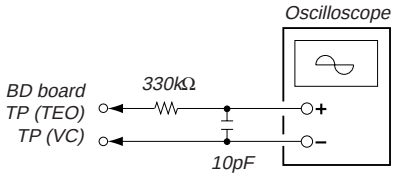


Specification A=B

17. Press the → button, display "EFB = $ ⬚ SAVE" for a moment and save the adjustment results in the non-volatile memory.
    Next "EFBAL ADJUST" is displayed.
18. Press the ⏏ button and remove the test disc TDYS-1.

Note 1 : Data will be erased during MO reading if a recorded disc is used in this adjustment.

Note 2 : If the traverse waveform is not clear, connect the oscilloscope as shown in the following figure so that it can be seen more clearly.



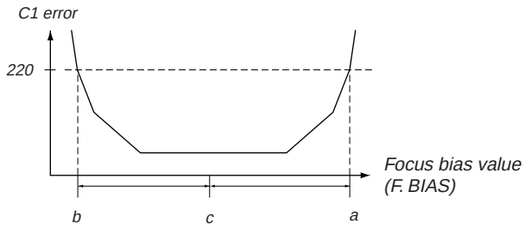
Focus Bias Adjustment

Adjusting Method :

1. Load a continuously recorded disc (Refer to “Page 18 Creating Continuously Recorded Disc”.).
2. Press the ↑ , ↓ buttons and display “CPLAY MODE”.
3. Press the → button twice and display “CPLAY MID”.
4. Press the ← button when “C1 =□□□□□AD =□□” is displayed.
5. Press the ↑ , ↓ buttons and display “FBIAS ADJUST”.
6. Press the → button and display “□□□□□/□□ a =□□”.
   The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [a =] indicate the focus bias value.
7. Press the ↑, ↓ buttons and find the focus bias value at which the C1 error rate becomes 220.
8. Press the → button and display “□□□□□/□□ b =□□”.
9. Press the ↑ , ↓ buttons and find the focus bias value at which the C1 error rate becomes 220.
10. Press the → button and display “□□□□□/□□ c =□□”.
11. Check that the C1 error rate is below 50 and ADER is 00. Then press the → button.
12. If the “(□□” in “□□-□□-□□ (□□” is above 20, press the → button.
    If below 20, press the ← button and repeat the adjustment from step 2 again.
13. Press the ⏏ button to remove the continuously recorded disc.

Note 1 : The relation between the C1 error and focus bias is as shown in the following figure. Find points a and b in the following figure using the above adjustment. The focal point position c is automatically calculated from points a and b.

Note 2 : As the C1 error rate changes, perform the adjustment using the average value.



Error Rate Check

CD Error Rate Check

Checking Method :

1. Load a check disc TGYS-1.
2. Press the ↑ , ↓ buttons and display “CPLAY MODE”.
3. Press the → button twice and display “CPLAY MID”.
4. “C1 =□□□□□AD =□□” is displayed.
5. Check that the C1 error rate is below 20.
6. Press the ← button, stop playback, press the ⏏ button, and remove the test disc.

MO Error Rate Check

Checking Method :

1. Load a continuously recorded disc (Refer to “Page 18 Creating Continuously Recorded Disc”.).
2. Press the ↑ , ↓ buttons and display “CPLAY MODE”.
3. Press the → button twice and display “CPLAY MID”.
4. “C1 =□□□□□AD =□□” is displayed.
5. If the C1 error rate is below 50, check that ADER is 00.
6. Press the ← button, stop playback, press the ⏏ button, and remove the continuously recorded disc.

Focus Bias Check

Change the focus bias and check the focus tolerance amount.

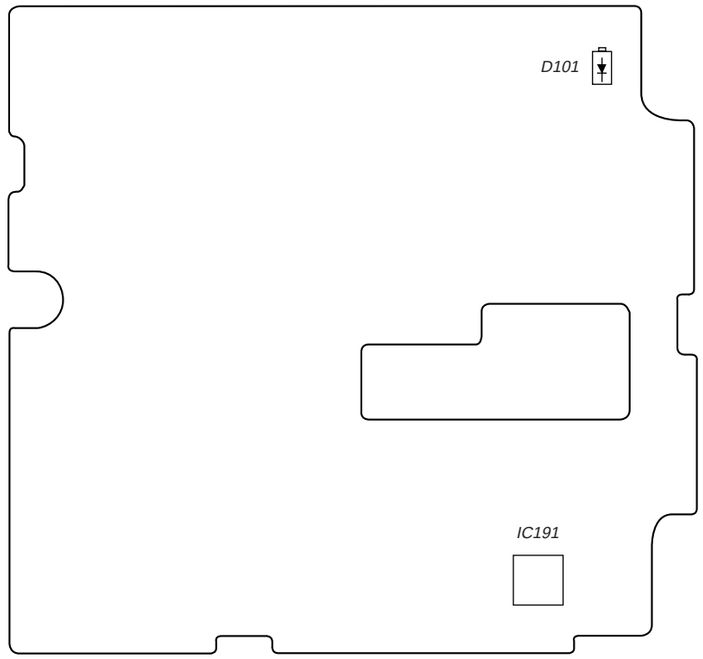
Checking Method :

1. Load a continuously recorded disc (Refer to “Page 18 Creating Continuously Recorded Disc”.).
2. Press the ↑ , ↓ buttons and display “CPLAY MODE”.
3. Press the → button twice and display “CPLAY MID”.
4. Press the ← button when “C1 =□□□□□AD =□□” is displayed.
5. Press the ↑ , ↓ buttons and display “FBIAS CHECK”.
6. Press the → button and display “ □□□□□/□□ c =□□”.
   The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [c =] indicate the focus bias value.
   Check that the C1 error is below 50 and ADER is 00.
7. Press the → button and display “ □□□□□/□□ b =□□”.
   Check that the C1 error is not below 220 and ADER is not above 00 every time.
8. Press the → button and display “□□□□□/□□ a =□□”.
   Check that the C1 error is not below 220 and ADER is not above 00 every time.
9. Press the ← button, next press the ⏏ button, and remove the continuously recorded disc.

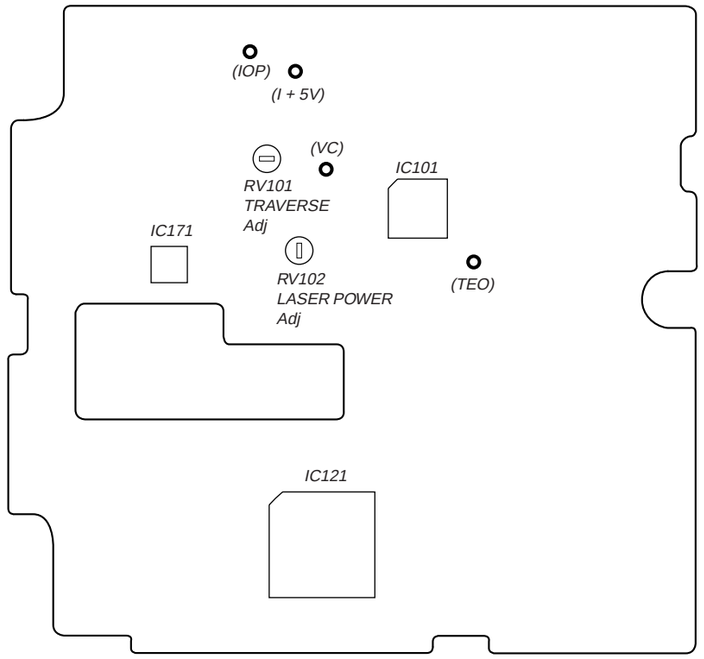
Note 1 : If the C1 error and ADER are above 00 at points a or b, the focus bias adjustment may not have been carried out properly. Adjust perform the beginning again.

Adjusting Points and Connecting Points

[BD BOARD] (SIDE A)



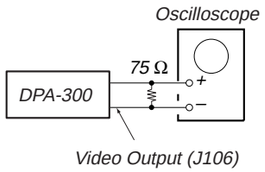
[BD BOARD] (SIDE B)



VIDEO SECTION

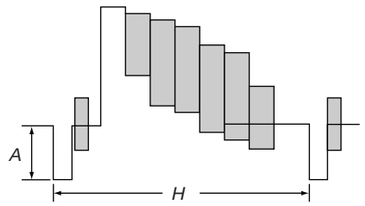
[SYNC LEVEL ADJUSTMENT]

Connection:



Adjustment Procedure:
1. Connect an oscilloscope and monitor to the Video Output (J106) of the DPA-300.
2. Enter the video test mode. Output the color bar from the DPA-300. (Refer to page 15.) After color bar output is confirmed, disconnect a monitor.
3. Adjust RV3003 on the PICTURE board until the level (A) satisfies the specification on an oscilloscope.

Waveform:



Specification: 286 ± 15 mVp-p
(Measured in the 50 mV range of oscilloscope)

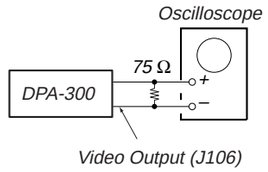
Adjustment Location: PICTURE board

- Reference -
Pattern of built-in color bar signal

WHITE (100%)	YELLOW	CYAN	GREEN	MAGENTA	RED	BLUE	BLACK

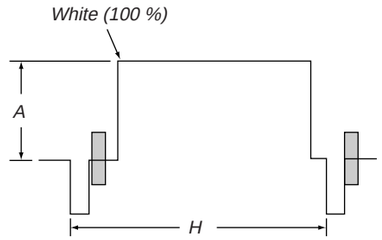
[WHITE LEVEL ADJUSTMENT]

Connection:



Adjustment Procedure:
1. Connect an oscilloscope and monitor to the Video Output (J106) of the DPA-300.
2. Enter the video test mode. Output the 100 % white signal from the DPA-300. (Refer to page 15.) After the 100 % white signal is confirmed, disconnect a monitor.
3. Observe waveform on an oscilloscope. Adjust RV3001 on the PICTURE board until the level (A) of the color bar's white peak (100 %) satisfies the specification on an oscilloscope.

Waveform:

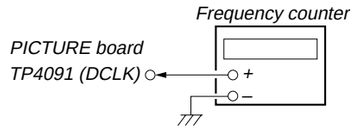


Specification: 714 ± 30 mVp-p
(Measured in the 100 mV range of oscilloscope)

Adjustment Location: PICTURE board

[CLOCK ADJUSTMENT]

Connection:

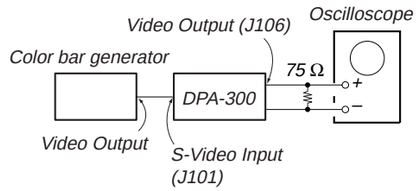


Adjustment Procedure:
1. Connect a frequency counter to TP4091 (DCLK) on the PICTURE board.
2. Turn the POWER switch of the DPA-300 to ON.
3. Adjust CT4001 on the PICTURE board until frequency of TP4091 (DCLK) satisfies the specification.

Specification: 12.272725 MHz ± 30 Hz
Adjustment Location: PICTURE board

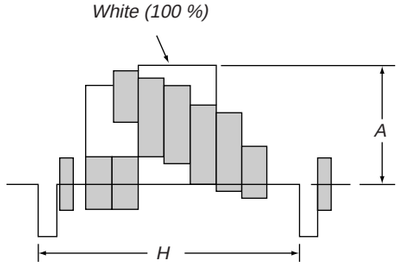
[S INPUT Y-SIGNAL AMPLITUDE ADJUSTMENT]

Connection:



Adjustment Procedure:
1. Connect a color bar generator to the S-Video input (J101) of the DPA-300.
2. Connect an oscilloscope and monitor to Video Output (J106) of the DPA-300.
3. Output the 100 % white color bar signal from a color bar generator.
4. Set the mode in which the Through picture is displayed. (Refer to SERVICE NOTE on page 5.) After the mode is set, disconnect a monitor.
5. Adjust RV403 of the VIDEO-IN board until the 100 % white level (A) satisfies the specification on an oscilloscope.

Waveform:

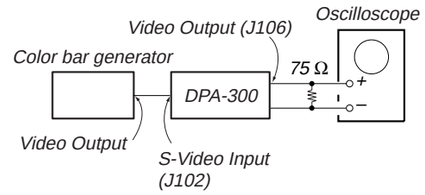


Specification: 714 ± 30 mVp-p

Adjustment Location: VIDEO-IN board

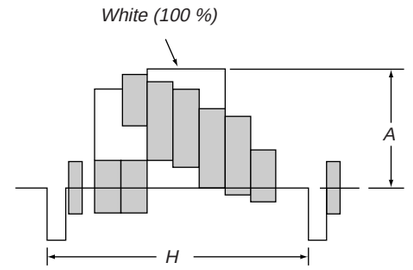
[Y OUTPUT AMPLITUDE ADJUSTMENT]

Connection:



Adjustment Procedure:
1. Connect a color bar generator to the Video input (J102) of the DPA-300.
2. Connect an oscilloscope and monitor to Video Output (J106) of the DPA-300.
3. Output the 100 % white color bar signal from a color bar generator.
4. Set the mode in which the Through picture is displayed. (Refer to SERVICE NOTE on page 5.) After the mode is set, disconnect a monitor.
5. Adjust RV402 of the VIDEO-IN board until the 100 % white level (A) satisfies the specification on an oscilloscope.

Waveform:

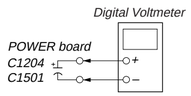


Specification: 714 ± 30 mVp-p

Adjustment Location: VIDEO-IN board

[+6 V ADJUSTMENT]

Connection:



Adjustment Procedure:

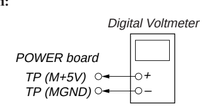
1. Connect a digital voltmeter across C1204 of the POWER board.
2. Adjust RV1111 on the POWER board until the digital voltmeter reading satisfies the specification.
3. Connect a digital voltmeter across C1501 of the POWER board.
4. Adjust RV1201 on the POWER board until the digital voltmeter reading satisfies the specification.

Specification: 6.0 ± 0.1 V

Adjustment Location: POWER board

[+5.3 V ADJUSTMENT]

Connection:



Adjustment Procedure:

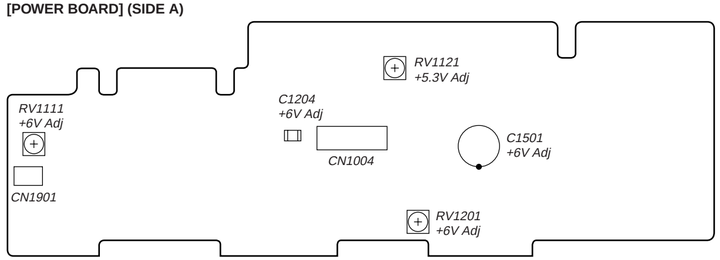
1. Connect a digital voltmeter to TP (M+5 V) and TP (MGND) of the POWER board.
2. Adjust RV1121 on the POWER board until the digital voltmeter reading satisfies the specification.

Specification: 5.3 ± 0.1 V

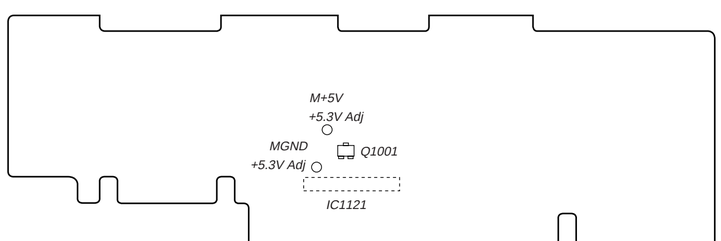
Adjustment Location: POWER board

Adjusting Points and Connecting Points

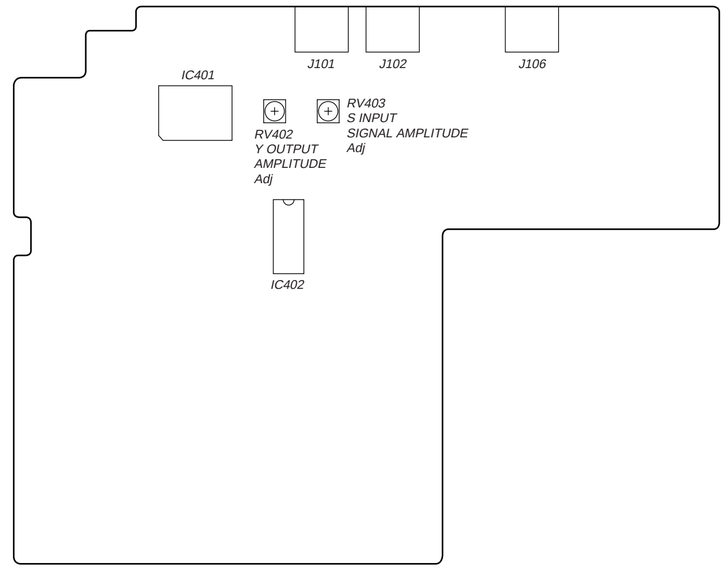
[POWER BOARD] (SIDE A)



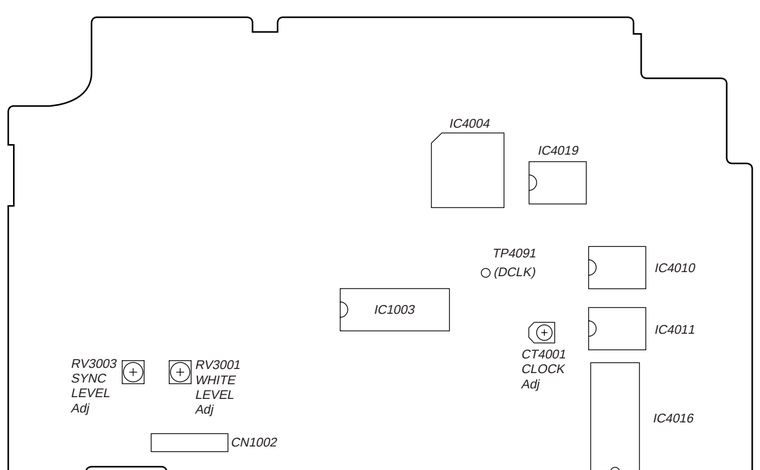
[POWER BOARD] (SIDE B)



[VIDEO-IN BOARD] (SIDE A)

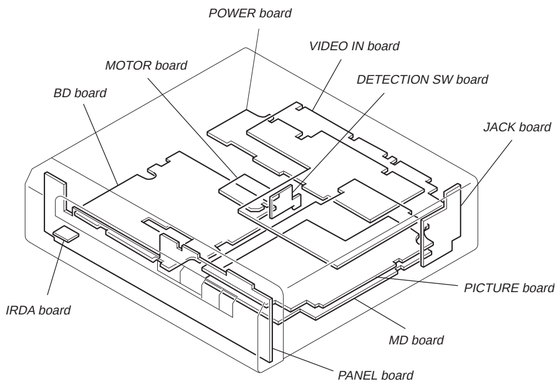


[PICTURE BOARD] (SIDE A)

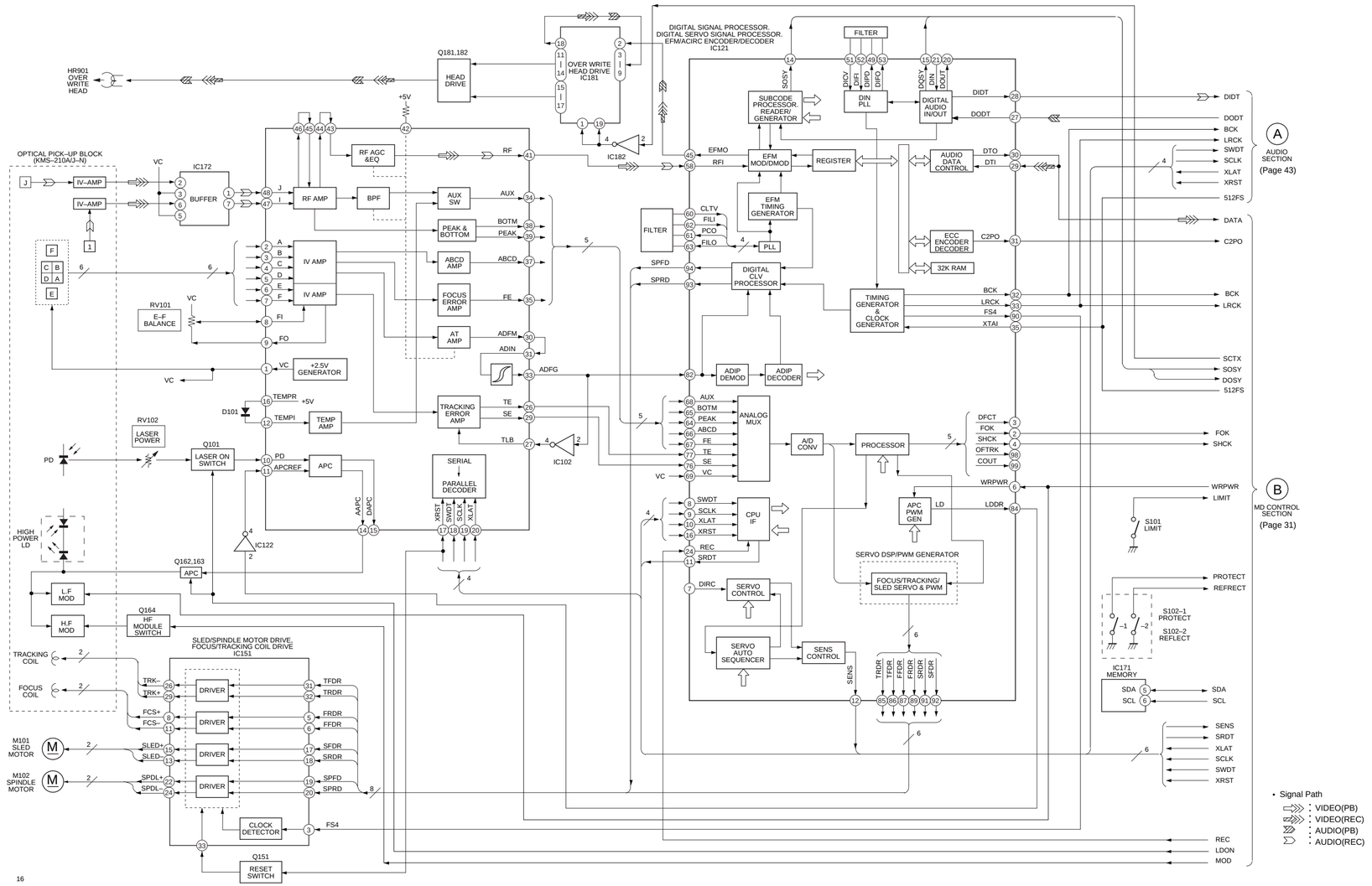


SECTION 6
DIAGRAMS

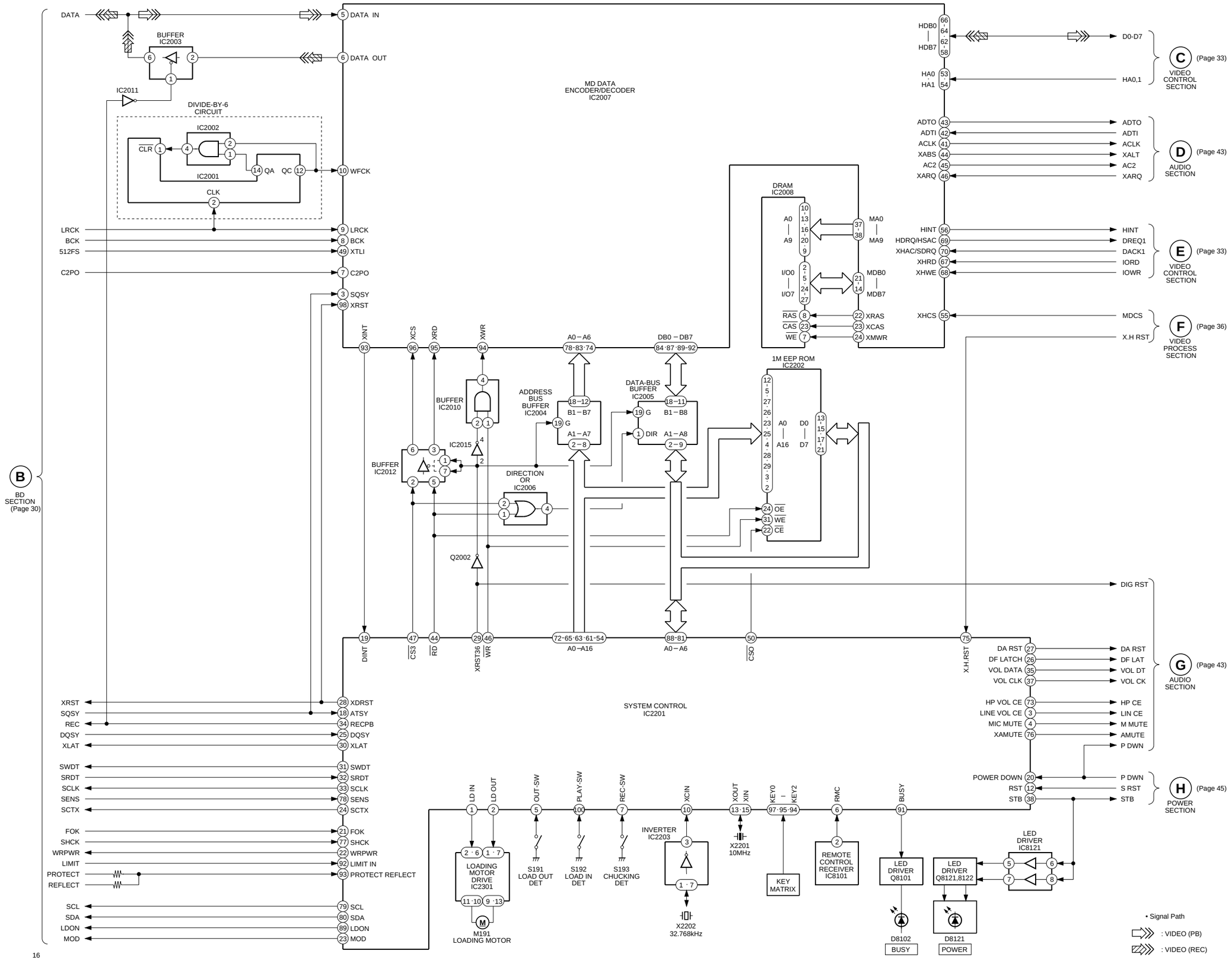
6-1. CIRCUIT BOARD LOCATION



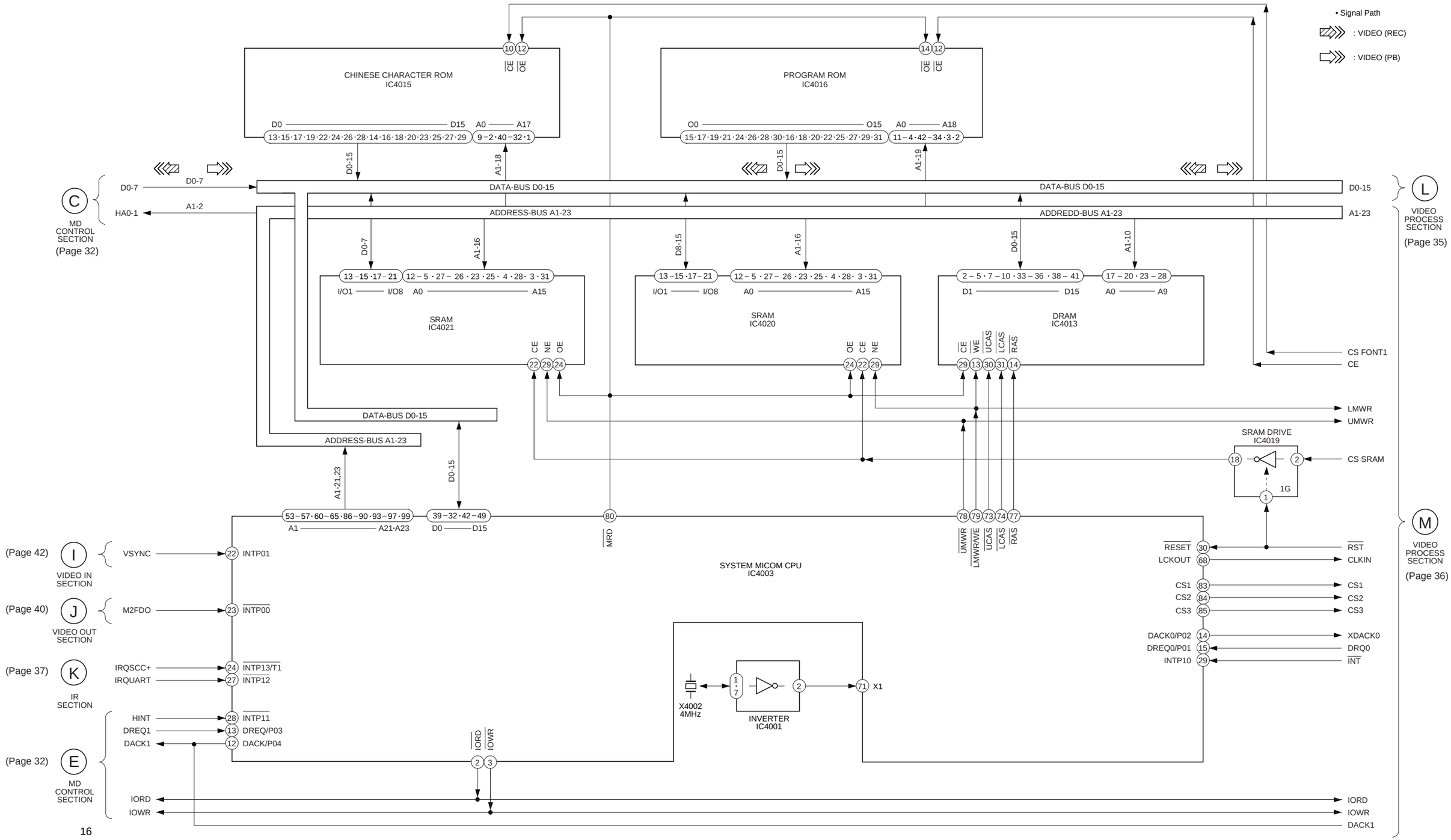
6-2. BLOCK DIAGRAM — BD SECTION —



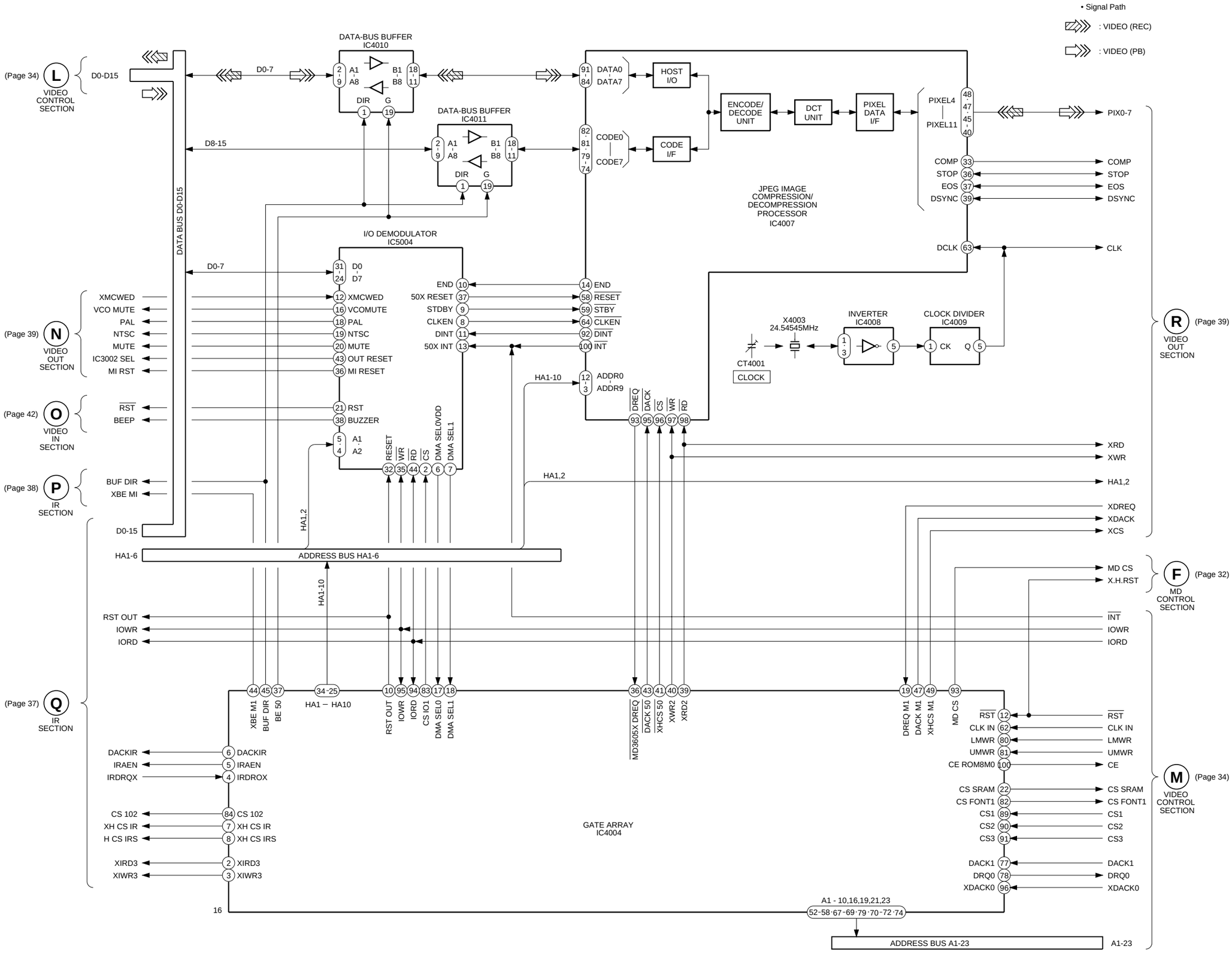
6-3. BLOCK DIAGRAM — MD CONTROL SECTION —



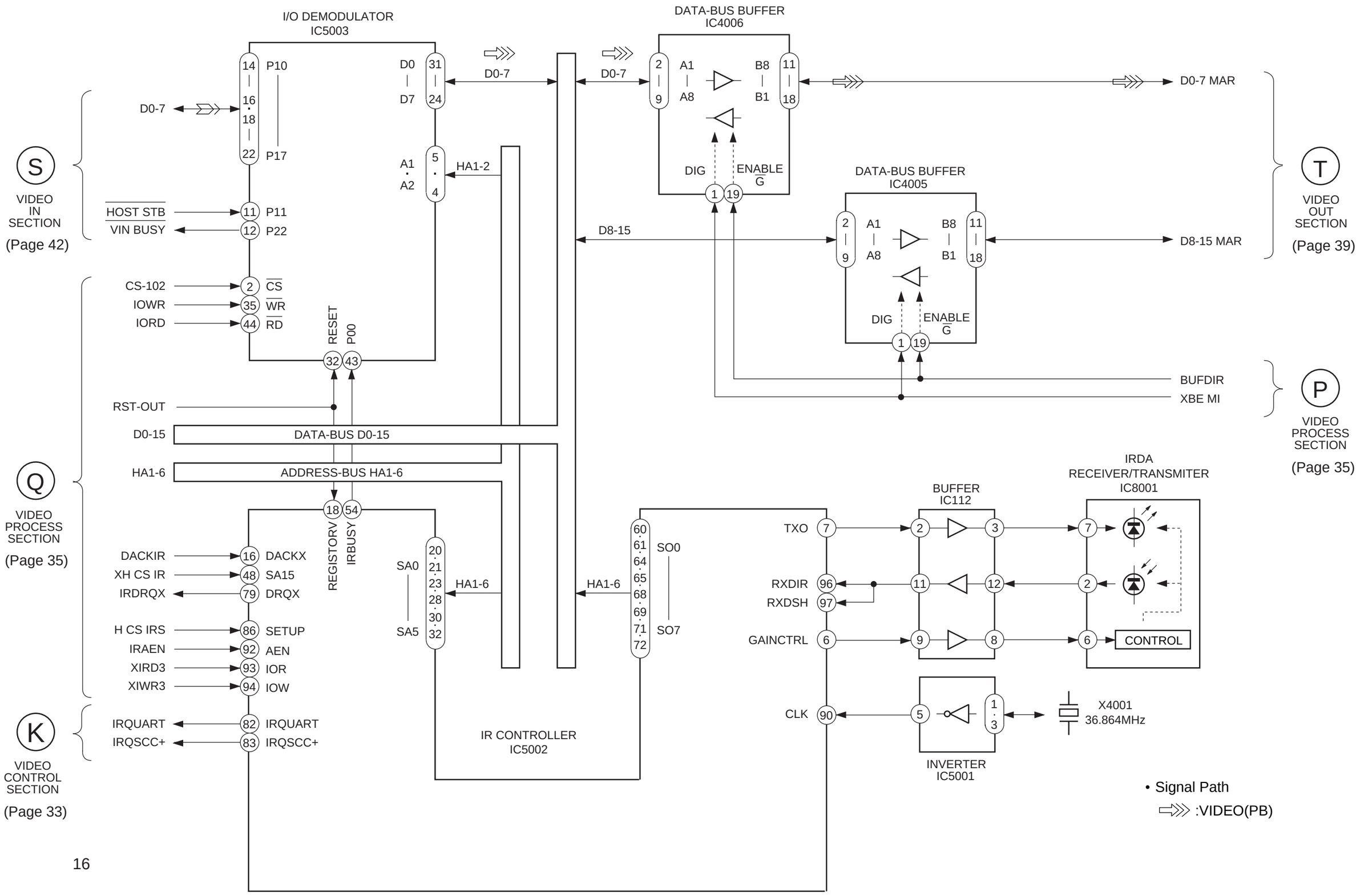
6-4. BLOCK DIAGRAM — VIDEO CONTROL SECTION —



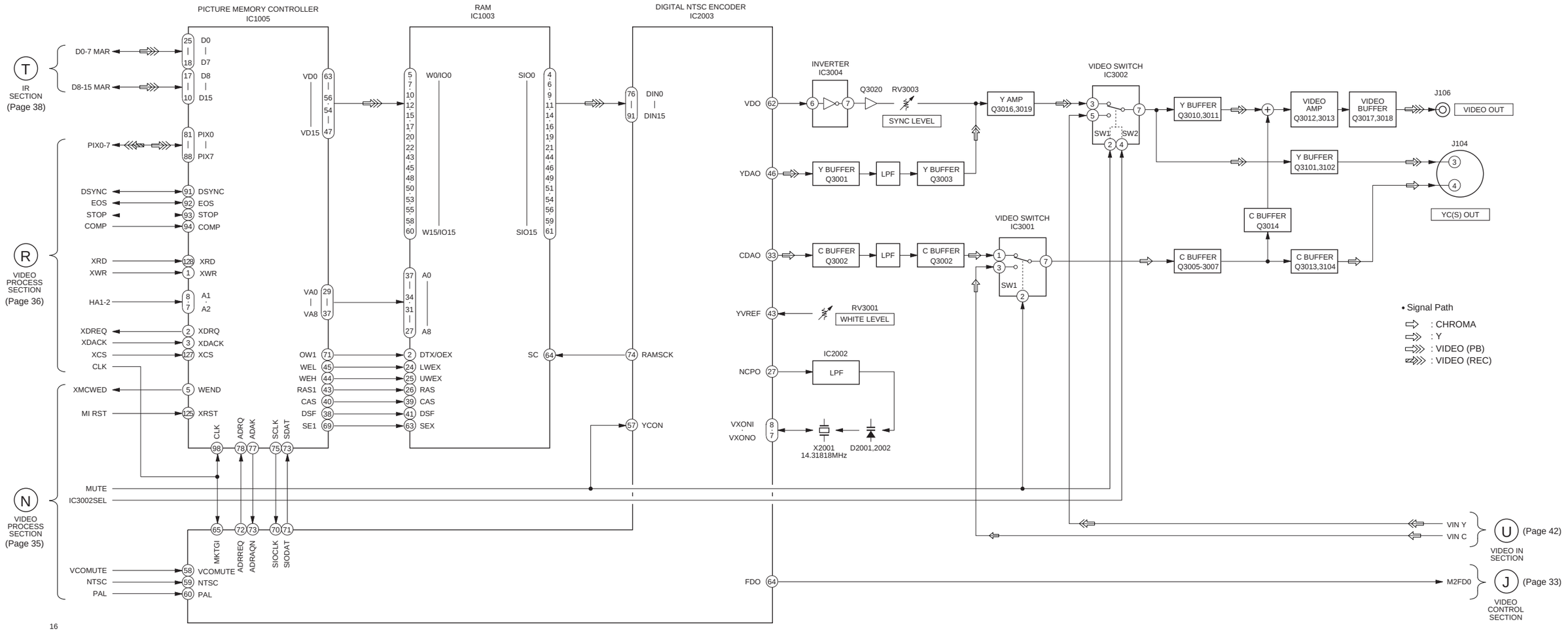
6-5. BLOCK DIAGRAM — VIDEO PROCESS SECTION —



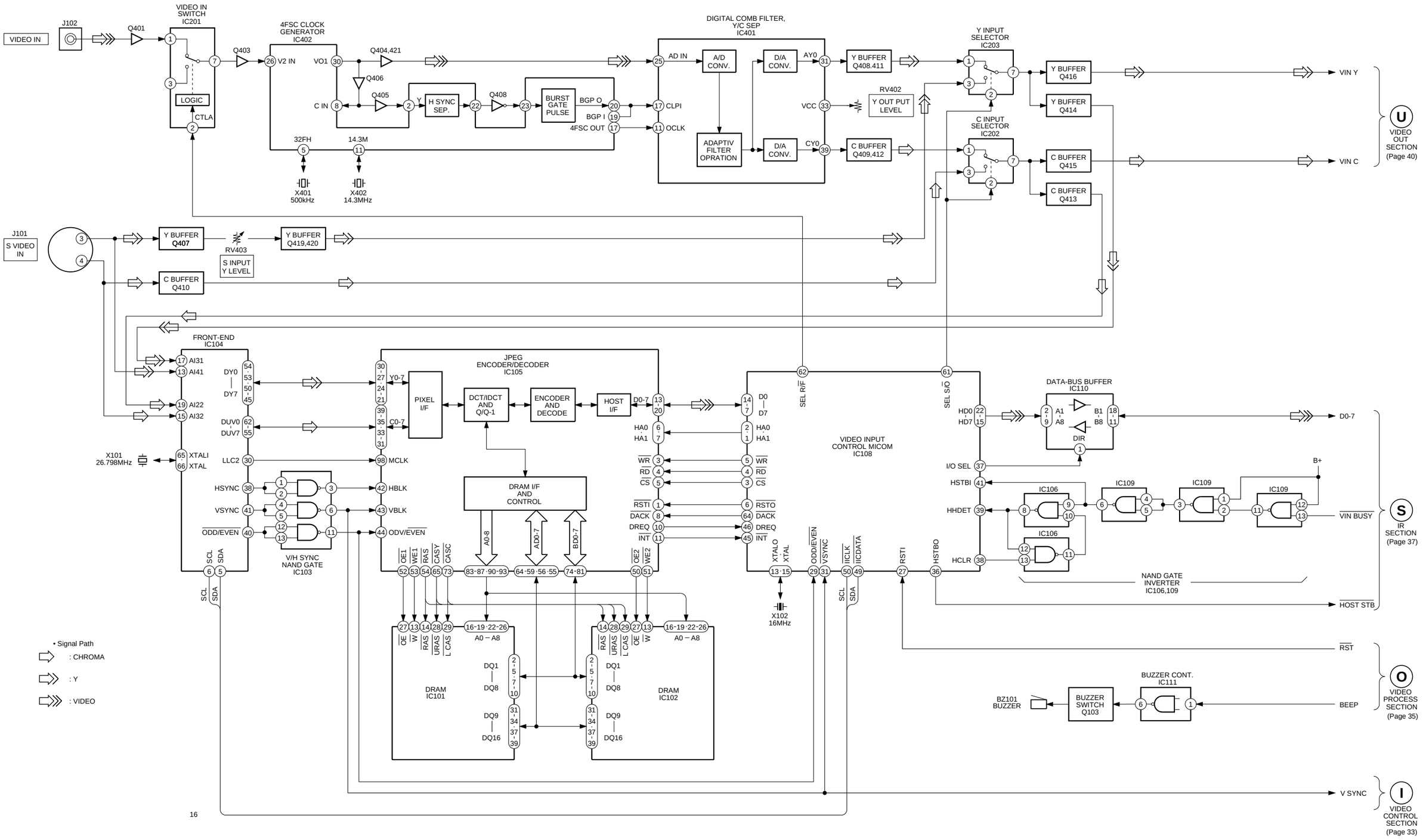
6-6. BLOCK DIAGRAM — IR SECTION —



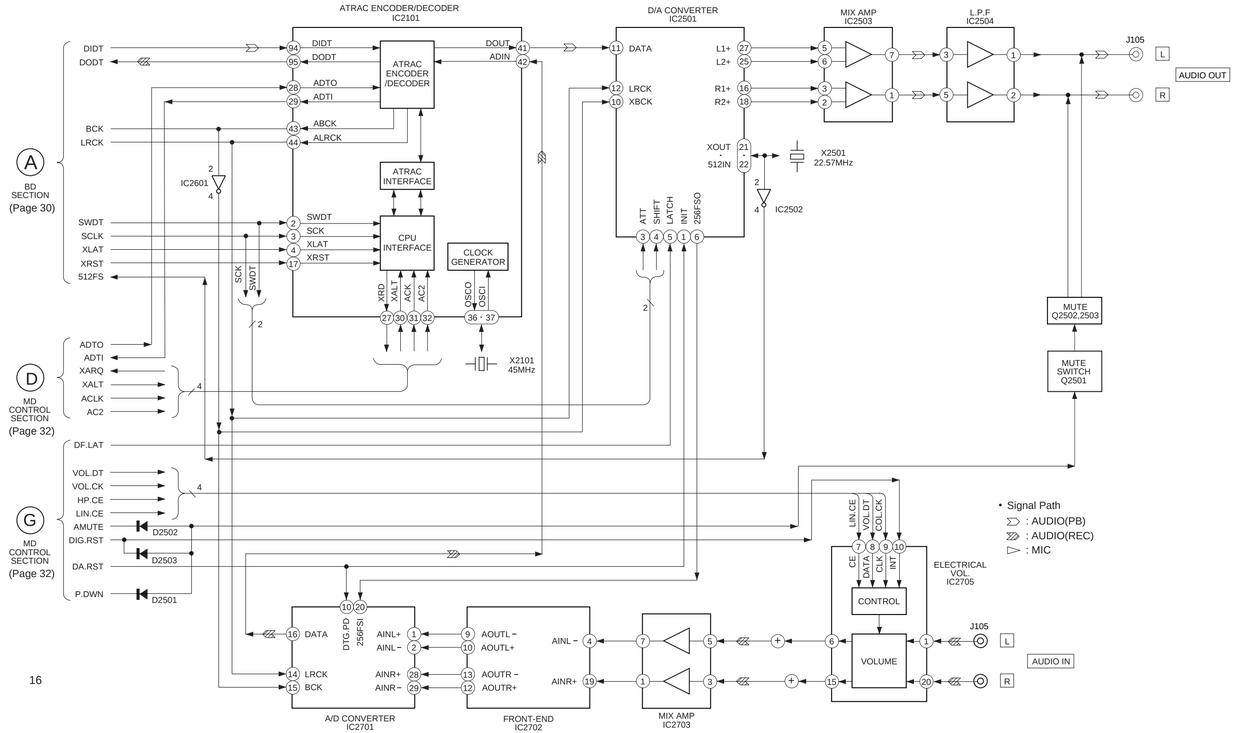
6-7. BLOCK DIAGRAM — VIDEO OUT SECTION —



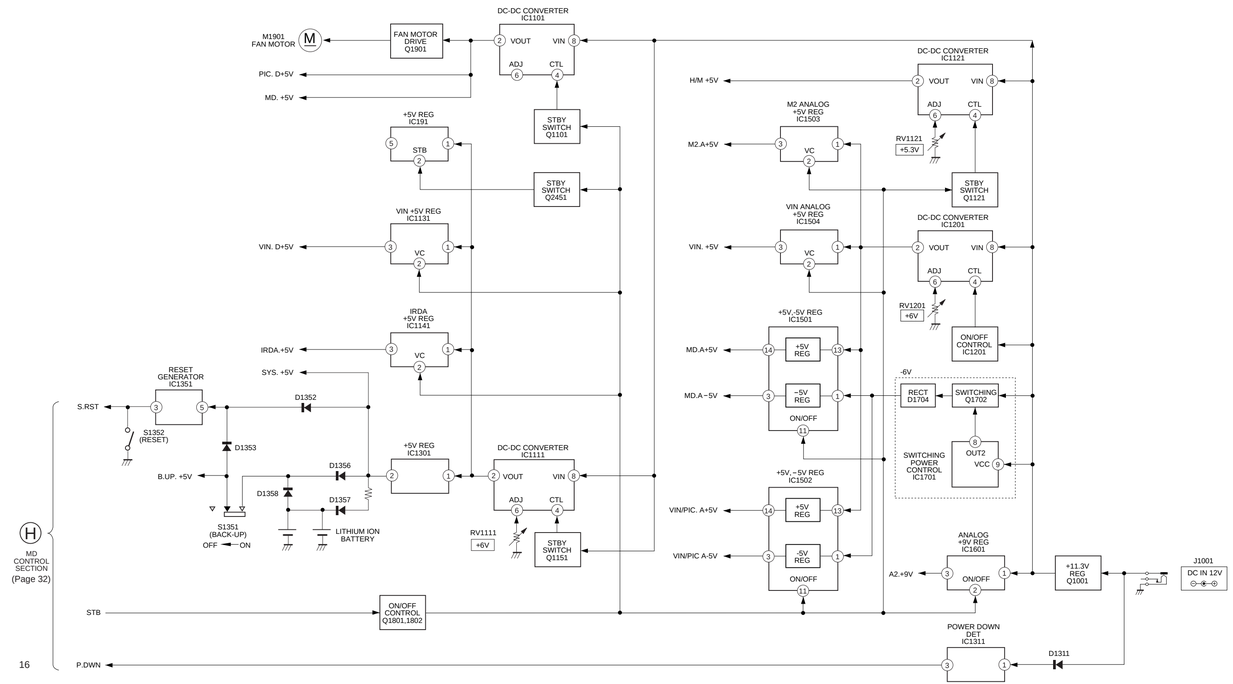
6-8. BLOCK DIAGRAM — VIDEO IN SECTION —



6-9. BLOCK DIAGRAM — AUDIO SECTION —



6-10. BLOCK DIAGRAM — POWER SECTION —

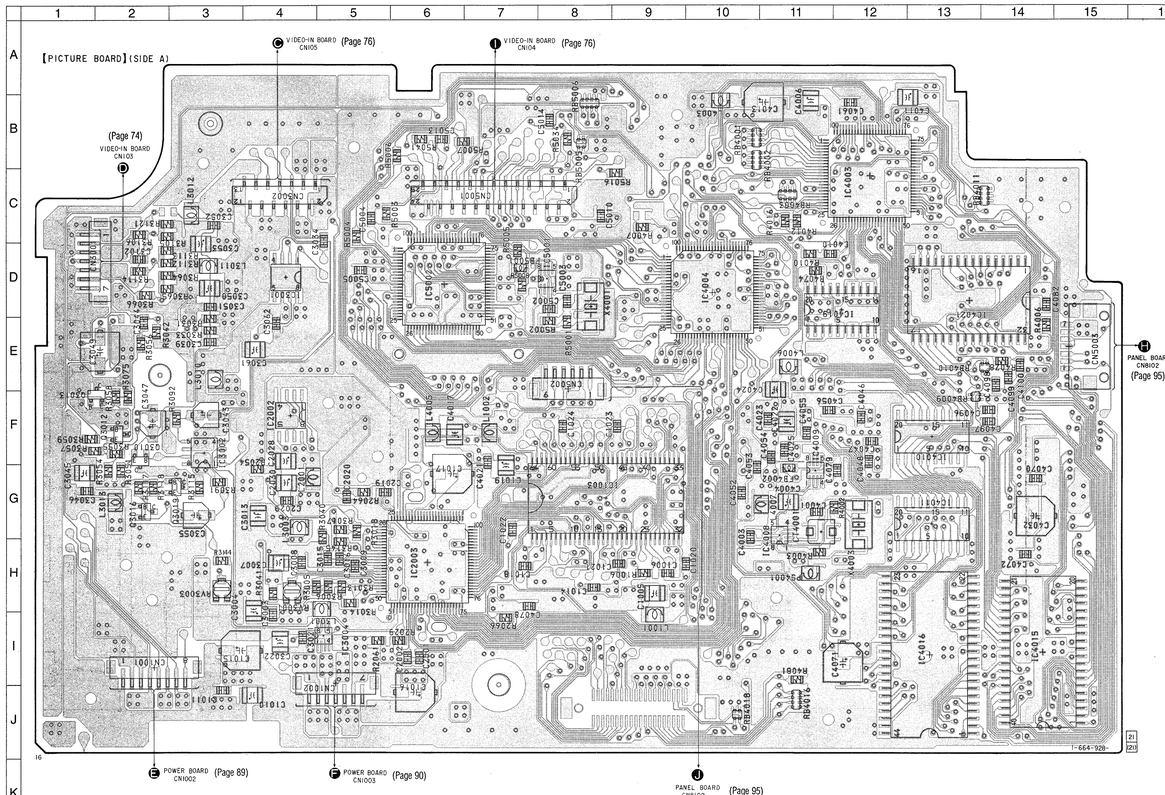


6-11. PRINTED WIRING BOARD — PICTURE SECTION —

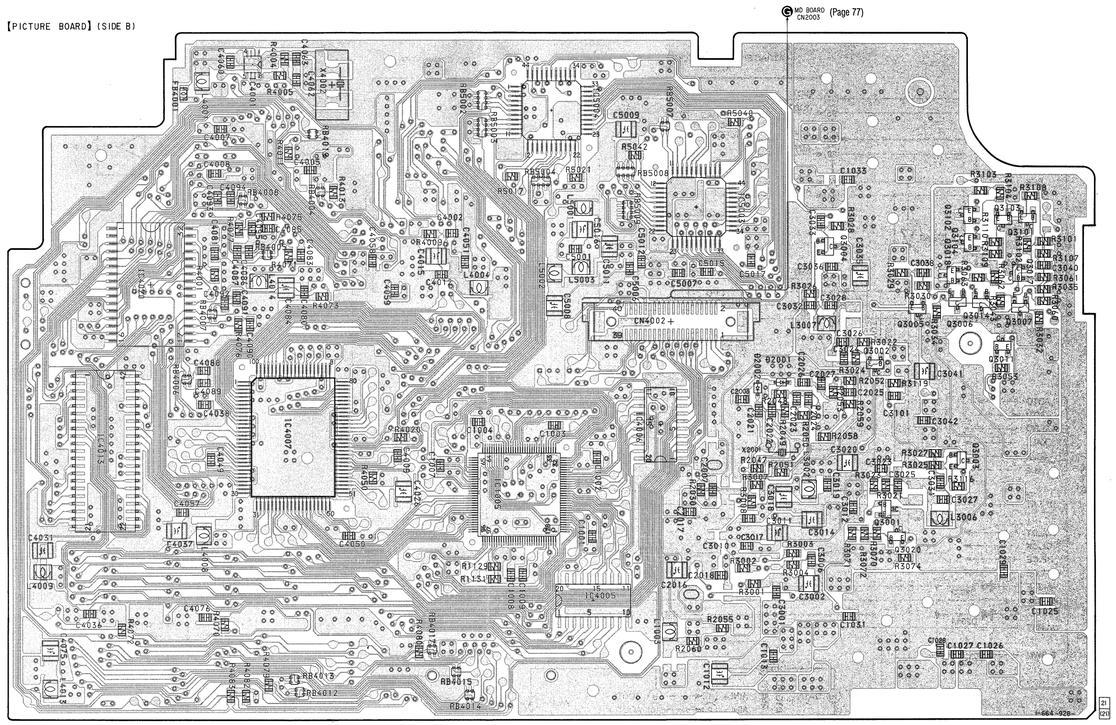
• Semiconductor Location

Ref. No.	Location
D2001	F-27
D2002	F-26
IC1003	G-8
IC1005	G-23
IC2002	F-4
IC2003	H-6
IC3001	D-4
IC3002	F-3
IC3004	I-5
IC4001	B-20
IC4003	C-12
IC4004	D-10
IC4005	I-24
IC4006	F-25
IC4007	G-20
IC4008	H-11
IC4009	F-11
IC4010	F-13
IC4011	G-13
IC4013	G-18
IC4015	I-14
IC4016	I-13
IC4019	D-12
IC4020	E-18
IC4021	D-13
IC5001	D-8
IC5002	D-5
IC5003	C-26
IC5004	B-24
Q3001	H-28
Q3002	E-28
Q3003	G-29
Q3004	D-28
Q3005	E-29
Q3006	E-29
Q3007	E-30
Q3010	F-2
Q3011	F-30
Q3012	F-2
Q3013	F-1
Q3014	E-29
Q3016	G-2
Q3017	D-30
Q3018	D-29
Q3019	G-3
Q3020	H-28
Q3101	D-30
Q3102	D-29
Q3103	C-30
Q3104	D-29

【PICTURE BOARD】(SIDE A)



【PICTURE BOARD】(SIDE B)



Note:

• ○ ○ : Through hole.

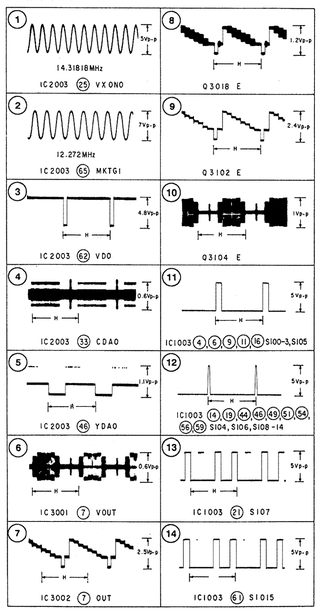
• ▒▒▒ : Pattern from the side which enables seeing.

6-12. SCHEMATIC DIAGRAM — PICTURE (1/3) SECTION —

• See Page 107,108 for IC Block Diagrams.

【PICTURE BOARD (1/3)】

• Waveform

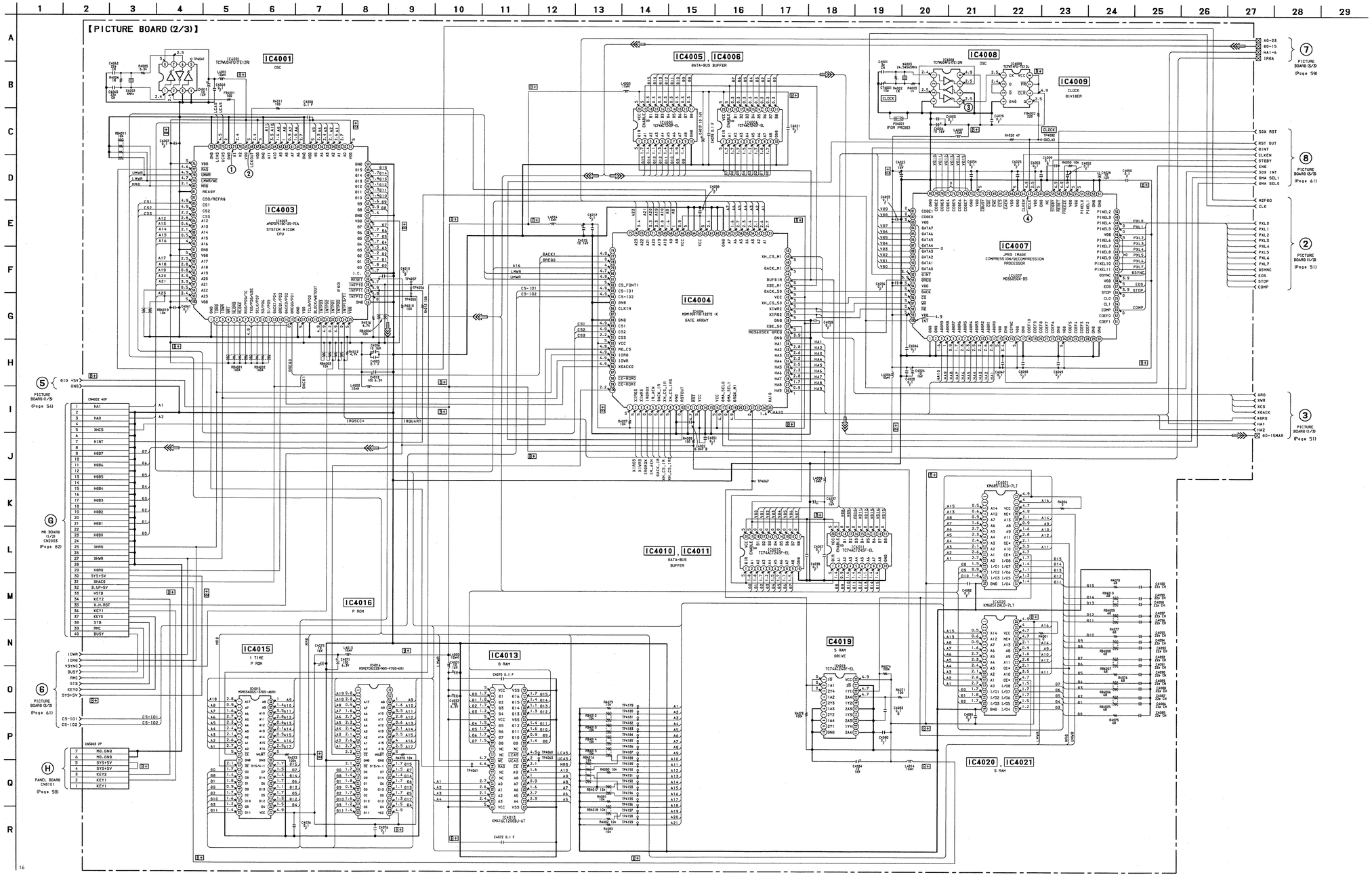


Note:

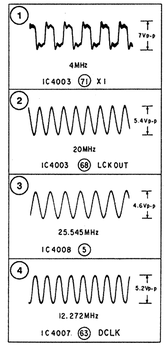
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- B− : B− Line.
- : adjustment for repair.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : With color bar signal input.
  (See page 5 of Service Note)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : CHROMA
  : Y
  : VIDEO

6-13. SCHEMATIC DIAGRAM — PICTURE (2/3) SECTION —

• See Page 47 for Printed Wiring Board.
• See Page 107, 108 IC Block Diagrams.



• Waveform

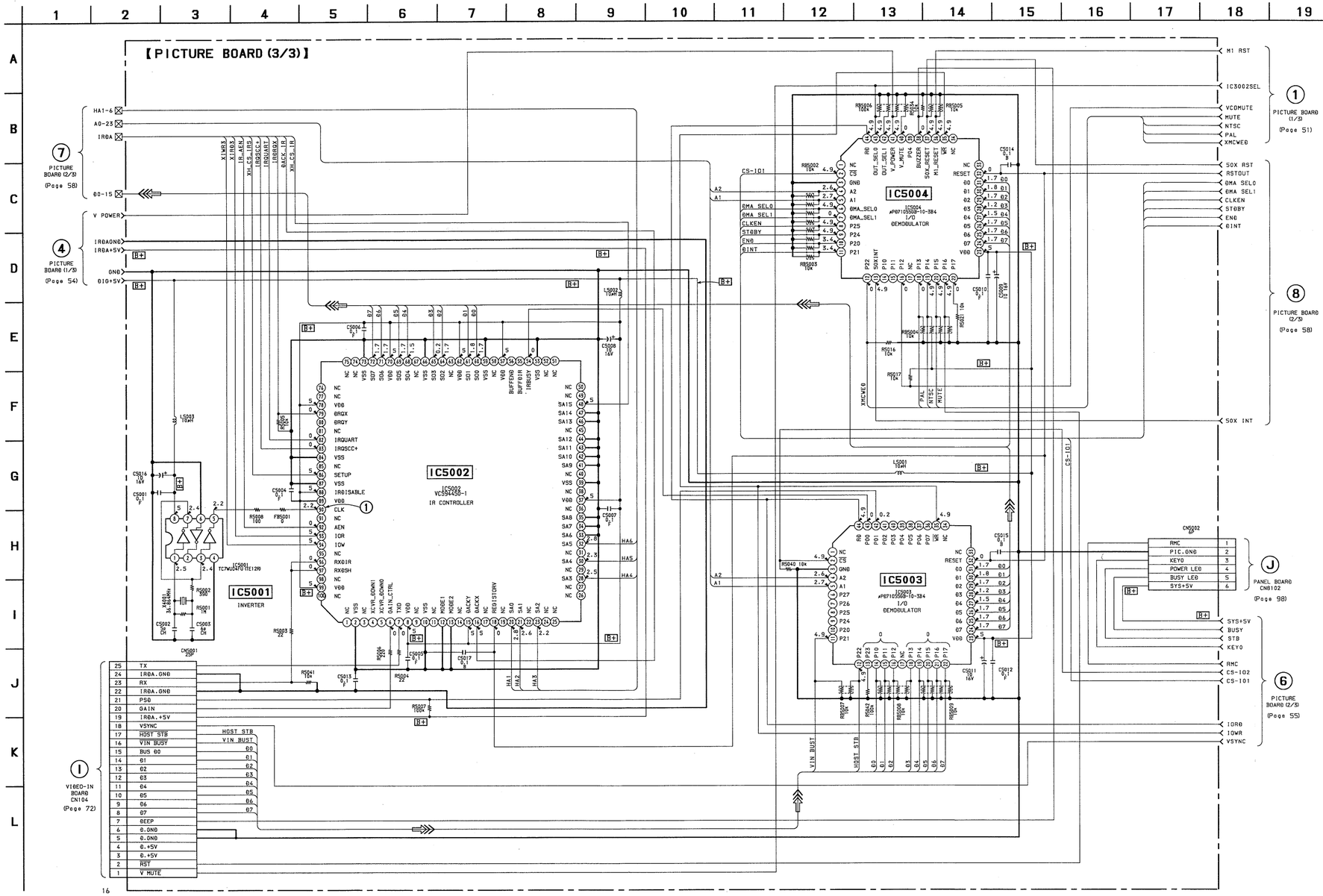


Note:

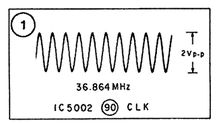
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : With color bar signal input.
  (See page 5 of Service Note)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇒ : VIDEO

6-14. SCHEMATIC DIAGRAM — PICTURE (3/3) SECTION —

• See Page 47 for Printed Wiring Board.
• See Page 107, 108 IC Block Diagrams.



• **Waveform**



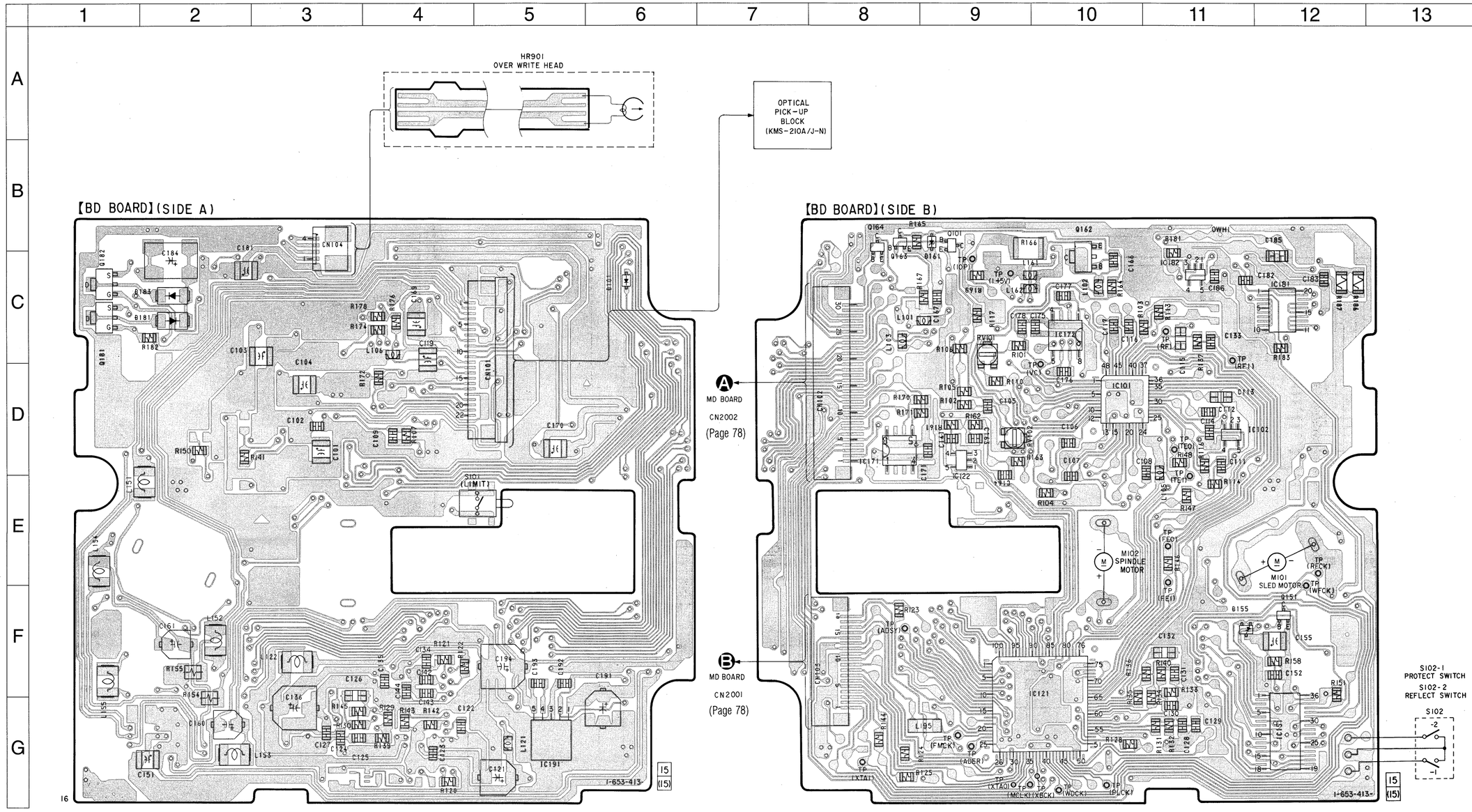
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- B+ : B+ Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : With color bar signal input.
  (See page 5 of Service Note)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇛ : VIDEO

6-15. PRINTED WIRING BOARD — BD SECTION —

• Semiconductor Location

Ref. No.	Location
D101	C-6
D155	F-11
D161	B-8
D181	C-2
D183	C-2
IC101	D-10
IC102	D-11
IC121	F-9
IC122	D-9
IC151	G-12
IC171	D-8
IC172	C-10
IC181	C-12
IC182	C-11
IC191	G-5
Q101	B-9
Q151	F-11
Q162	B-10
Q163	B-8
Q164	B-8
Q181	C-1
Q182	C-1

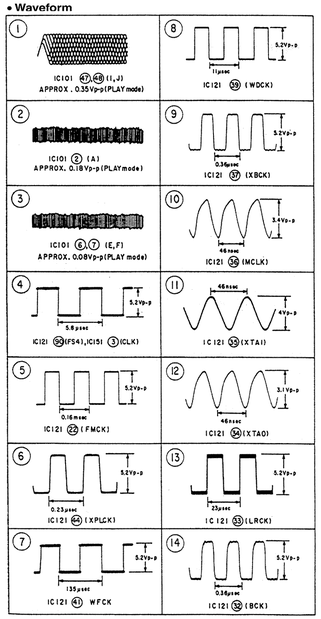


Note:
• ○ : Through hole.
• ▒ : Pattern from the side which enables seeing.

6-16. SCHEMATIC DIAGRAM — BD SECTION —

• See Page 102, 103 for IC Block Diagrams.

• Waveform

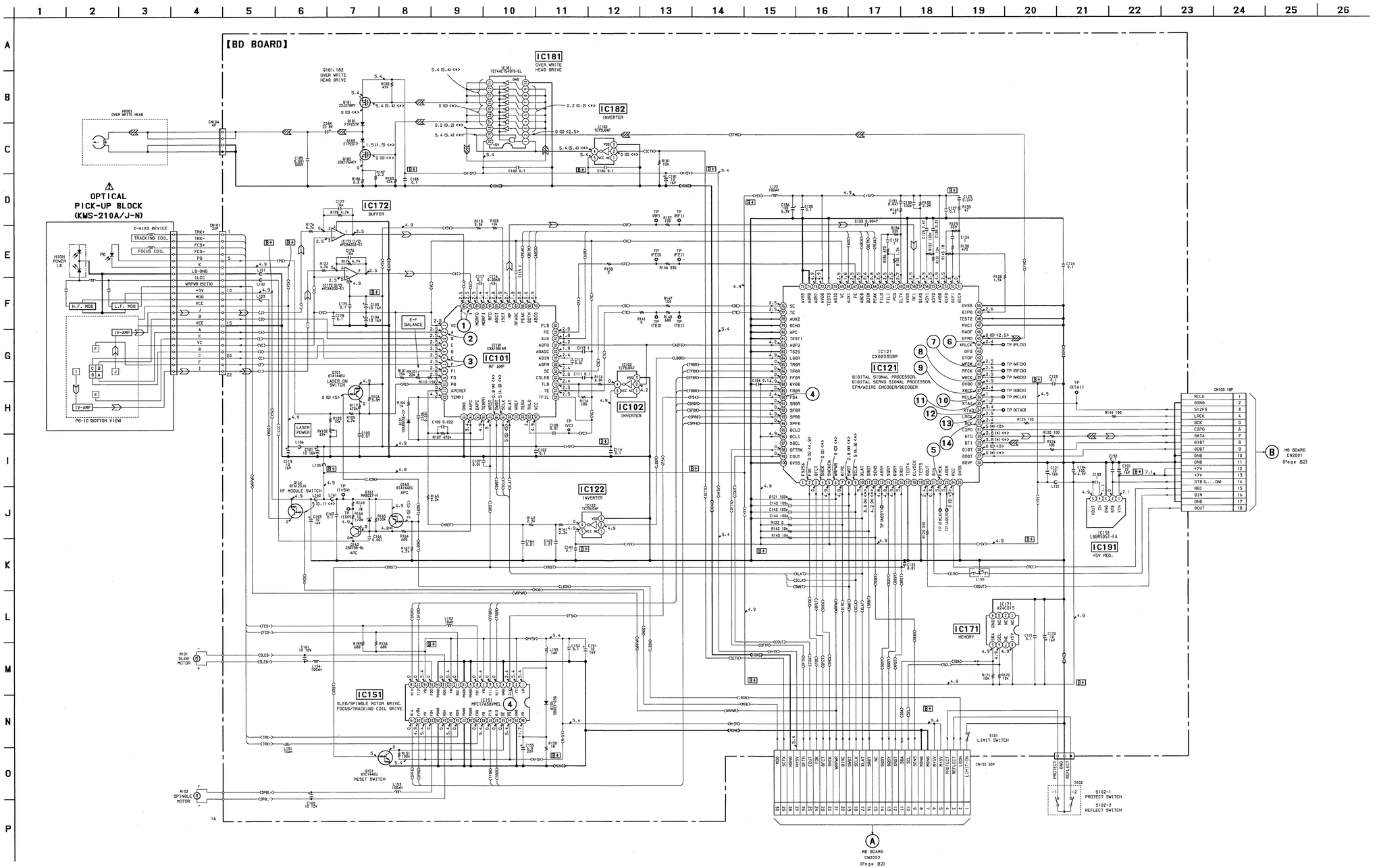


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- ▭ : panel designation.

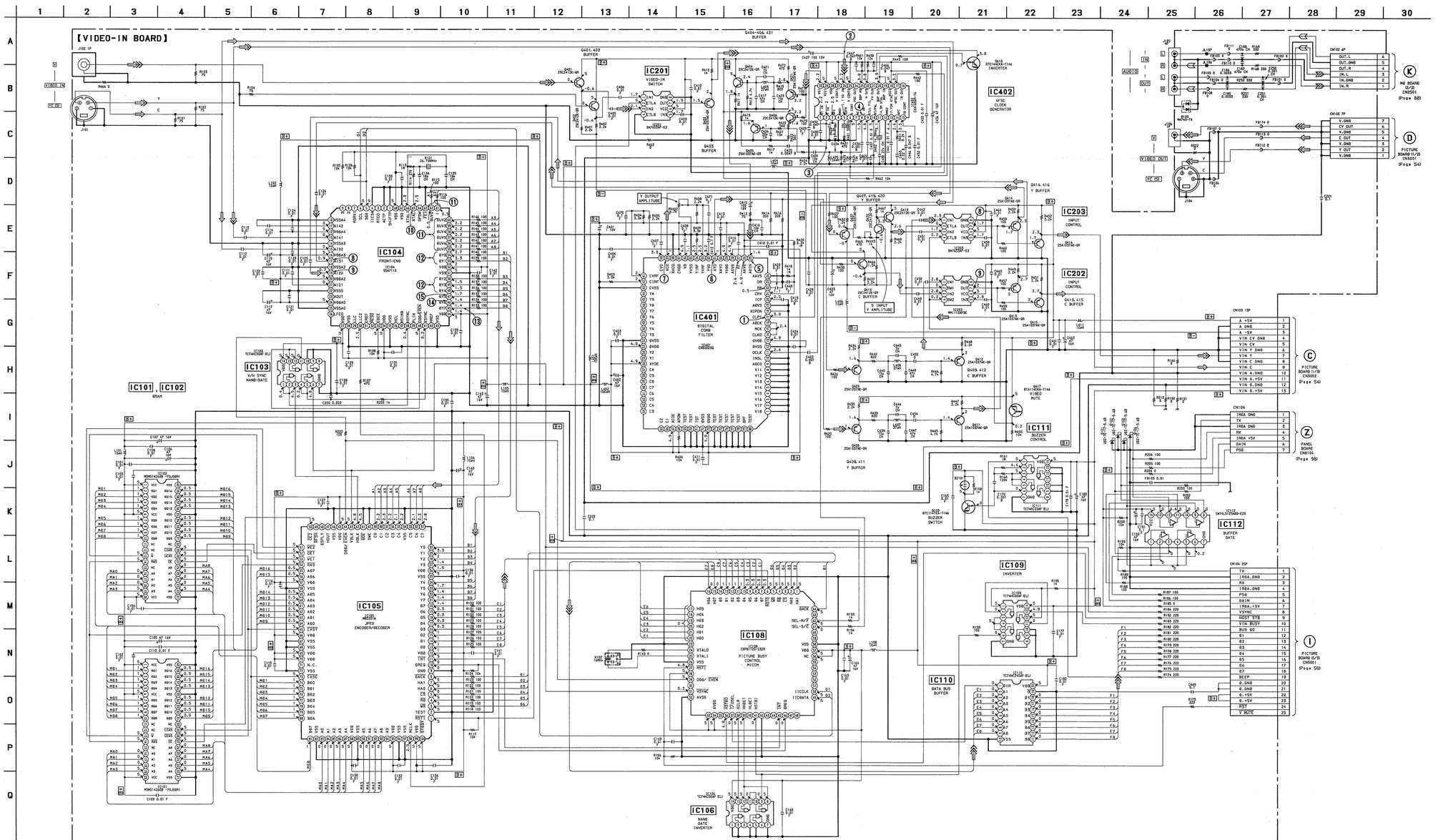
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
  ( ) : PB
  < > : REC
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB
  ▷▷ : REC



6-17. SCHEMATIC DIAGRAM — VIDEO IN SECTION —

• See Page 104 to 106 IC Block Diagrams.



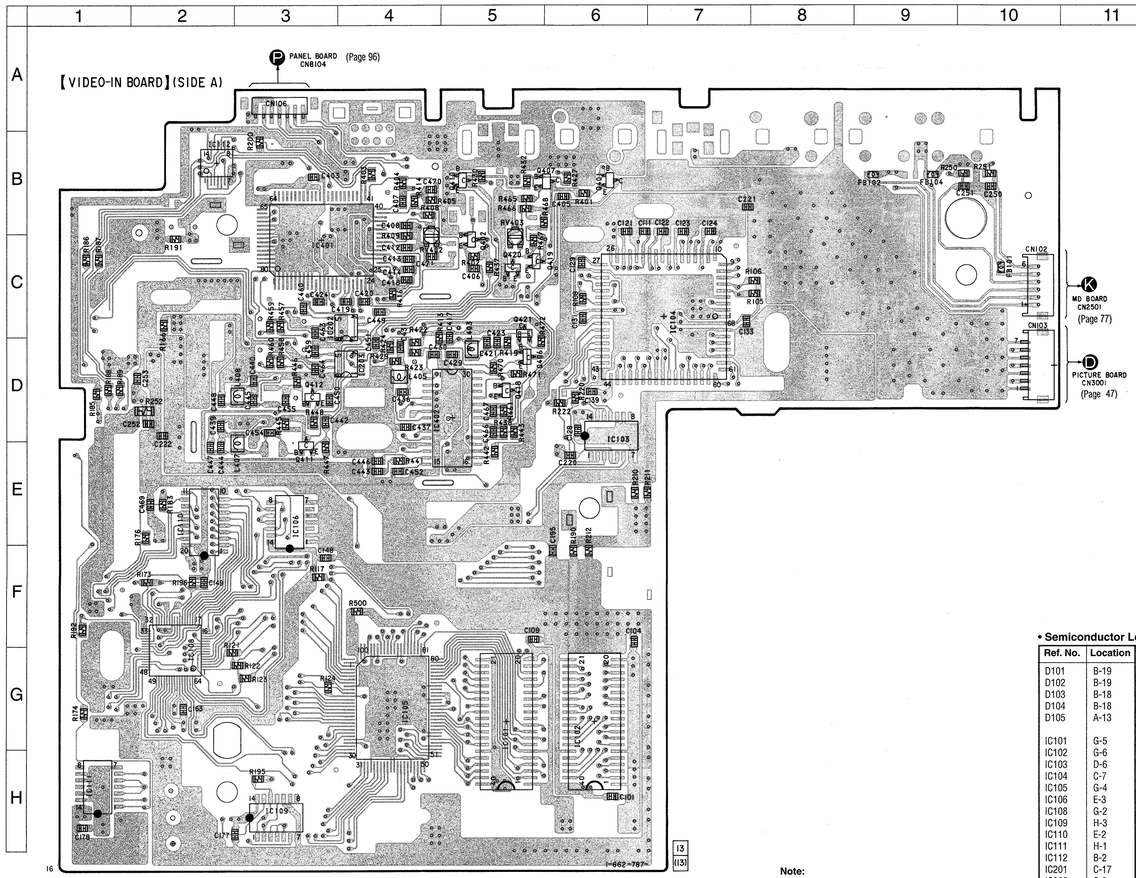
• Waveform

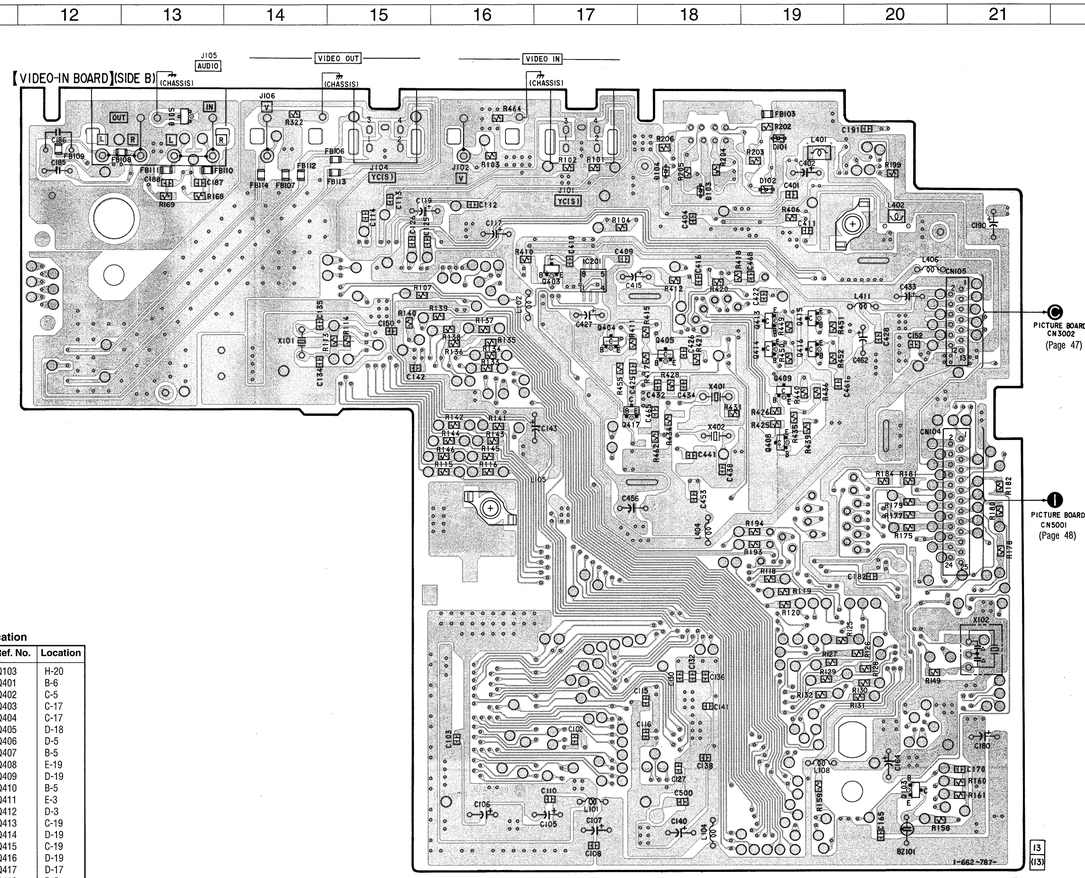
1	14.3MHz 1Vp-p IC402 (17) 4FSC OUT	9	0.6Vp-p IC104 (9) AI22, IC202 (7) OUT
2	1Vp-p IC402 (26) V2 IN	10	3.5Vp-p 26.798MHz IC104 (65) XTAL
3	0.7Vp-p IC402 (2) Y IN	11	5Vp-p 0.2μsec div IC104 (55)-(62) DUV7-DUV0
4	240mVp-p IC402 (8) C IN	12	5Vp-p 0.1μsec div IC104 (48)-(50), (53)(54) DY4-DY0
5	0.6Vp-p IC401 (25) AD IN	13	5Vp-p IC104 (45) DY7
6	1.5Vp-p IC401 (31) AY O	14	5Vp-p IC104 (46) Y6
7	0.7Vp-p IC401 (39) AC O	15	5Vp-p IC104 (47) DY5
8	1.2Vp-p IC104 (7) AI31 , IC203 (7) OUT		

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B− Line.
- ▭ : adjustment for repair.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : With color bar signal input.
  (See page 5 of Service Note)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CHROMA
  ⇨ : Y
  ⇨ : VIDEO
  ⇨ : PB
  ⇨ : REC

6-18. PRINTED WIRING BOARD — VIDEO IN SECTION —





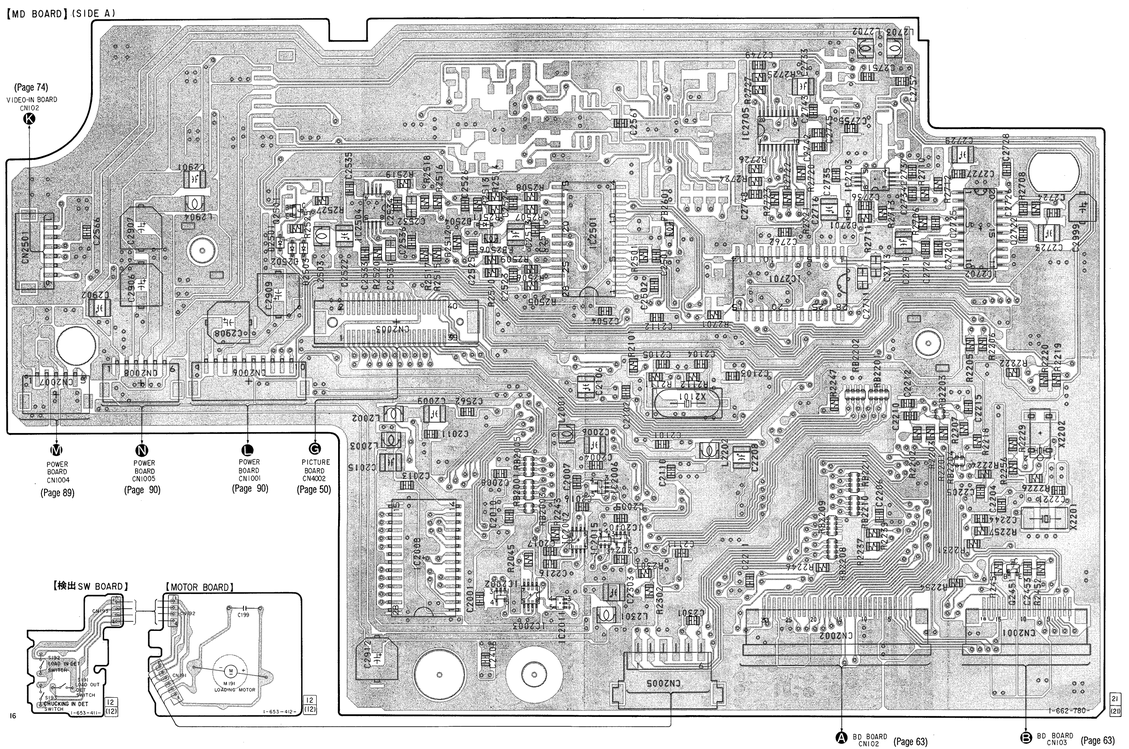
Note:

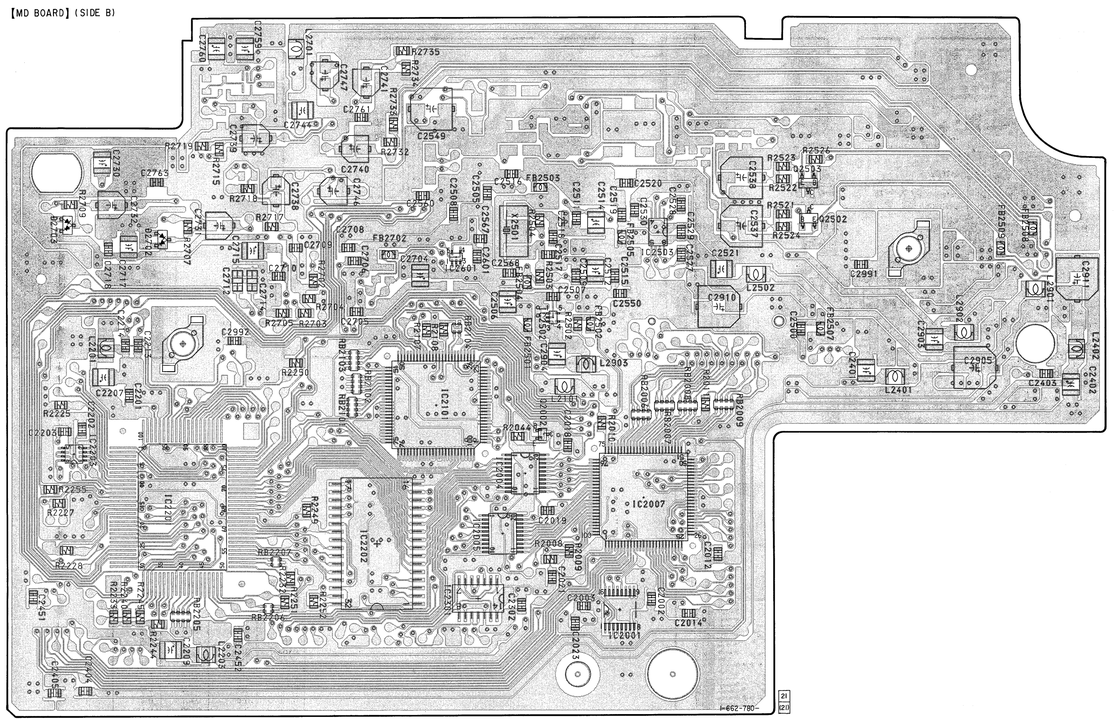
- ○—— : parts extracted from the component side.
- ○ : Through hole.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	B-19	Q103	H-20
D102	B-19	Q401	B-6
D103	B-18	Q402	C-5
D104	B-18	Q403	C-17
D105	A-13	Q404	C-17
		Q405	D-18
IC101	G-5	Q406	D-5
IC102	G-6	Q407	B-5
IC103	D-6	Q408	E-19
IC104	C-7	Q409	D-19
IC105	G-4	Q410	B-5
IC106	E-3	Q411	E-3
IC108	G-2	Q412	D-3
IC109	H-3	Q413	C-19
IC110	E-2	Q414	D-19
IC111	H-1	Q415	C-19
IC112	B-2	Q416	D-19
IC201	C-17	Q417	D-17
IC202	C-3	Q418	D-5
IC203	D-4	Q419	C-6
IC401	C-3	Q420	C-5
IC402	D-4	Q421	C-5

6-19. PRINTED WIRING BOARD — MD SECTION —





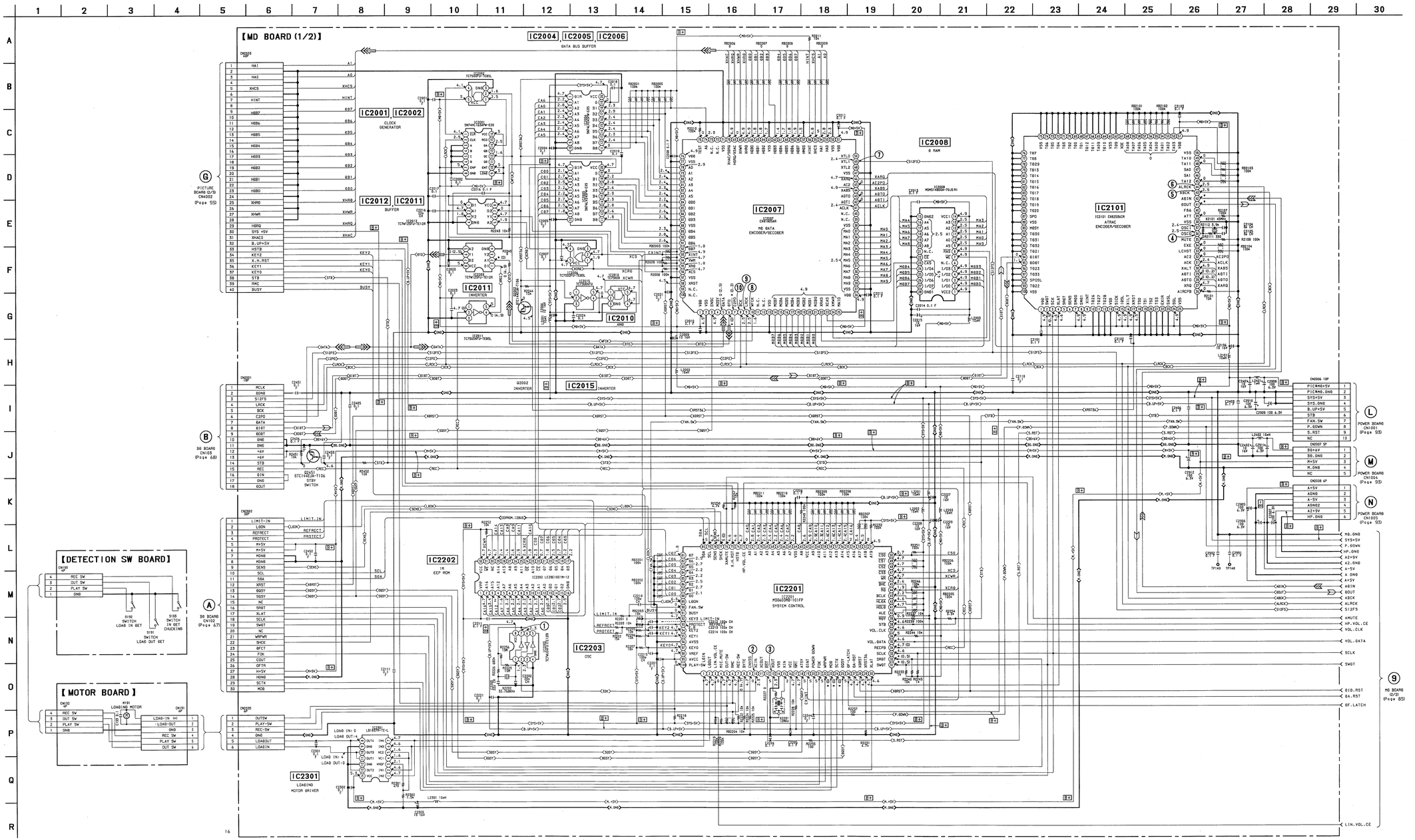
• Semiconductor Location

Ref. No.	Location
D2501	D-4
D2502	D-4
D2503	D-5
D2504	D-6
D2701	D-11
D2702	D-17
D2703	D-16
IC2001	I-23
IC2002	H-7
IC2003	I-7
IC2004	G-22
IC2005	H-21
IC2006	G-8
IC2007	G-24
IC2008	H-6
IC2010	H-9
IC2011	I-8
IC2012	H-8
IC2015	H-8
IC2101	F-21
IC2201	G-18
IC2202	H-20
IC2203	G-17
IC2301	I-21
IC2501	D-8
IC2502	E-22
IC2503	D-24
IC2504	D-5
IC2601	D-21
IC2701	D-11
IC2702	D-13
IC2703	C-11
IC2705	B-10
Q2002	F-22
Q2451	H-13
Q2501	D-4
Q2502	D-26
Q2503	C-26

Note:
- ○ : Through hole.
- ▒ : Pattern from the side which enables seeing.

6-20. SCHEMATIC DIAGRAM — MD (1/2) SECTION —

• See Page 99 to 101 for IC Block Diagrams.



• Waveform

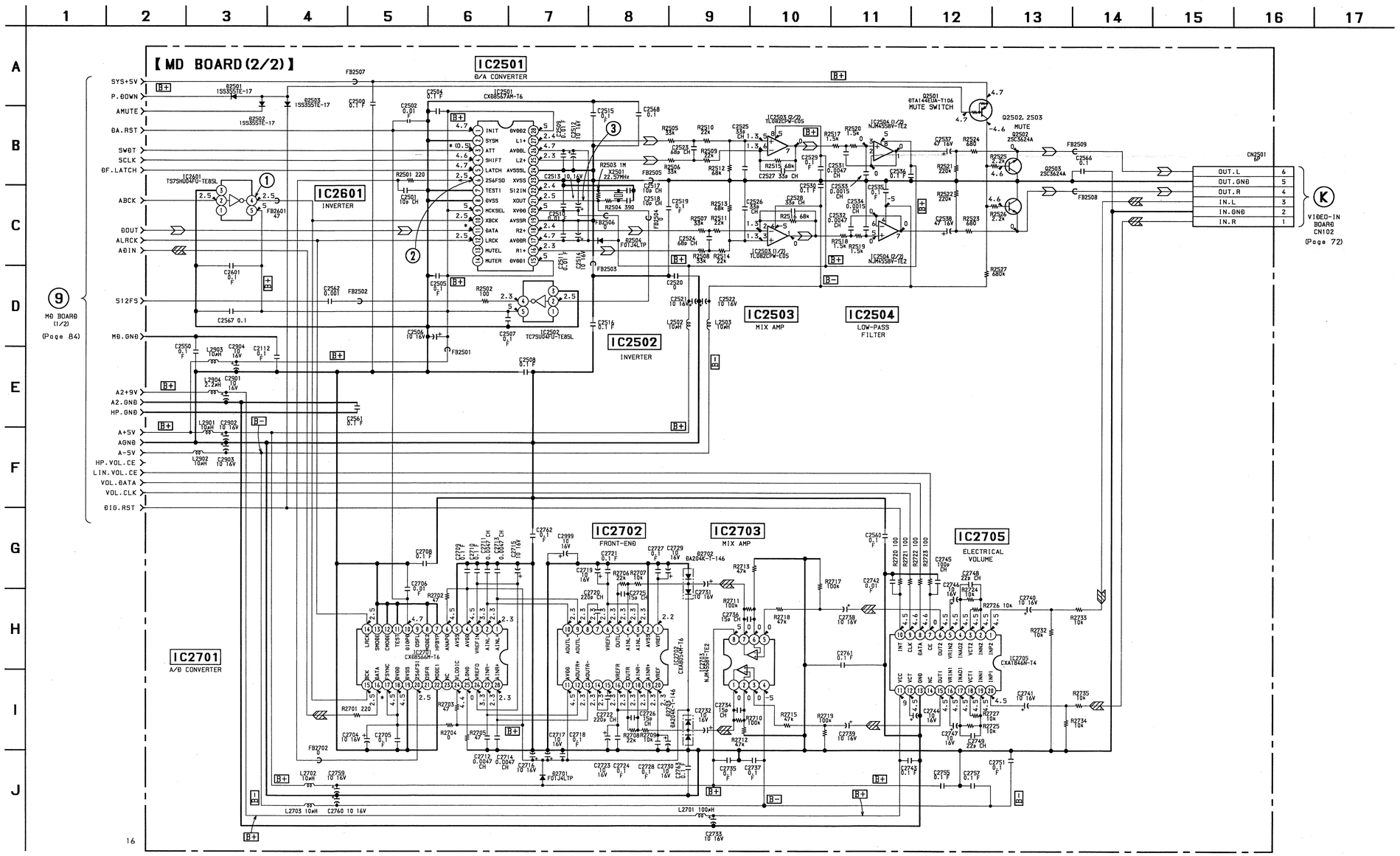
①	32.768KHz IC2203 ⑦	⑥	44KHz IC2101 ㊹ ALRCK
②	32.768KHz IC2201 ⑩ XCIN	⑦	22.57MHz IC2007 ㊾ XTLI
③	10MHz IC2201 ⑬ XOUT	⑧	7KHz IC2007 ⑩ WFCK
④	45MHz IC2101 ㊻ OSCO	⑨	44KHz IC2007 ⑨ LRCK
⑤	2.82 MHz IC2101 ㊸ ABCK	⑩	2.82MHz IC2007 ⑧ BCK

Note:

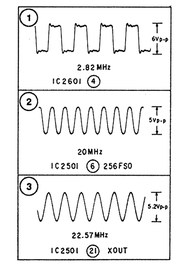
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- B− : B− Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : REC/PB
  ( ) : PB
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.

6-21. SCHEMATIC DIAGRAM — MD (2/2) SECTION —

• See Page 77 for Printed Wiring Board.
• See Page 99 to 101 IC Block Diagrams.



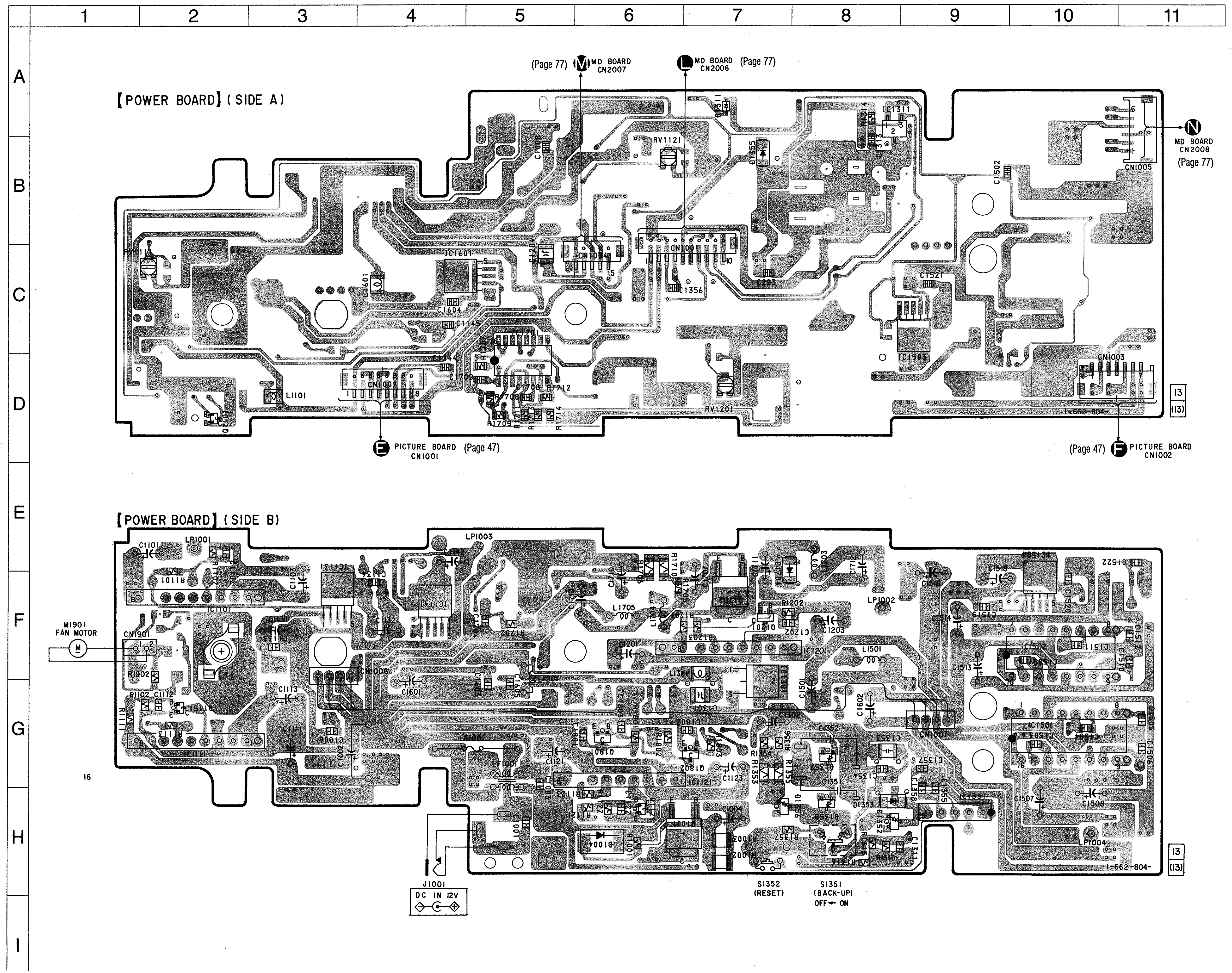
• **Waveform**



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- B− : B− Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : REC/PB
  ( ) : PB
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : PB
  : REC
  : MIC

6-22. PRINTED WIRING BOARD — POWER SECTION —



• Semiconductor Location

Ref. No.	Location
D1004	H-6
D1311	A-7
D1352	H-8
D1353	H-8
D1355	B-7
D1356	H-8
D1357	G-8
D1358	H-8
D1704	F-7
IC1101	F-2
IC1111	G-2
IC1121	F-8
IC1131	E-3
IC1141	F-4
IC1201	G-7
IC1301	G-7
IC1311	A-8
IC1351	H-9
IC1501	G-10
IC1502	F-10
IC1503	D-9
IC1504	E-10
IC1601	C-4
IC1701	C-5
Q1001	H-7
Q1101	D-2
Q1121	H-6
Q1151	G-2
Q1201	F-7
Q1702	F-7
Q1801	G-6
Q1802	G-7

Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▭ : panel designation.

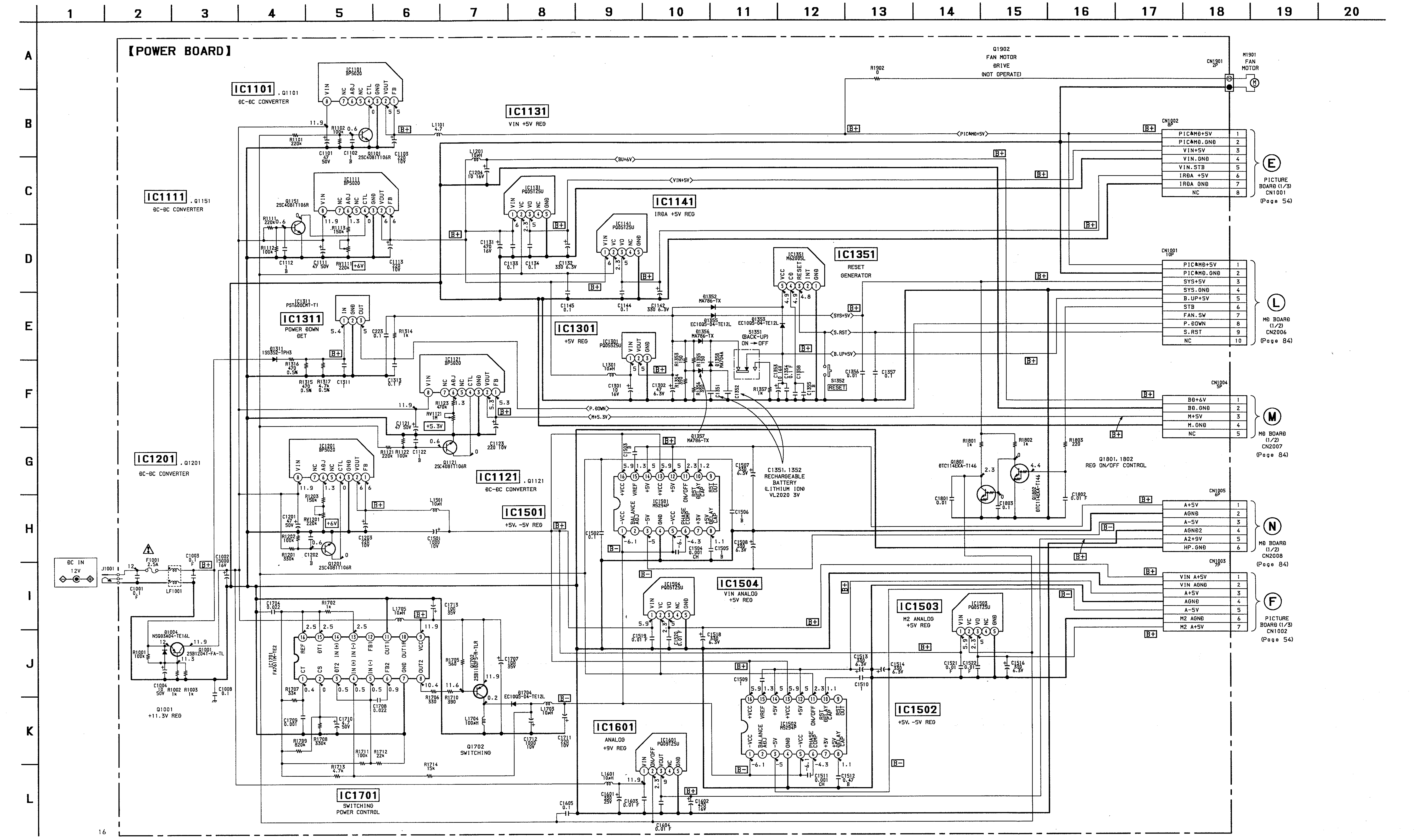
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B– Line.
- ▭ : adjustment for repair.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.

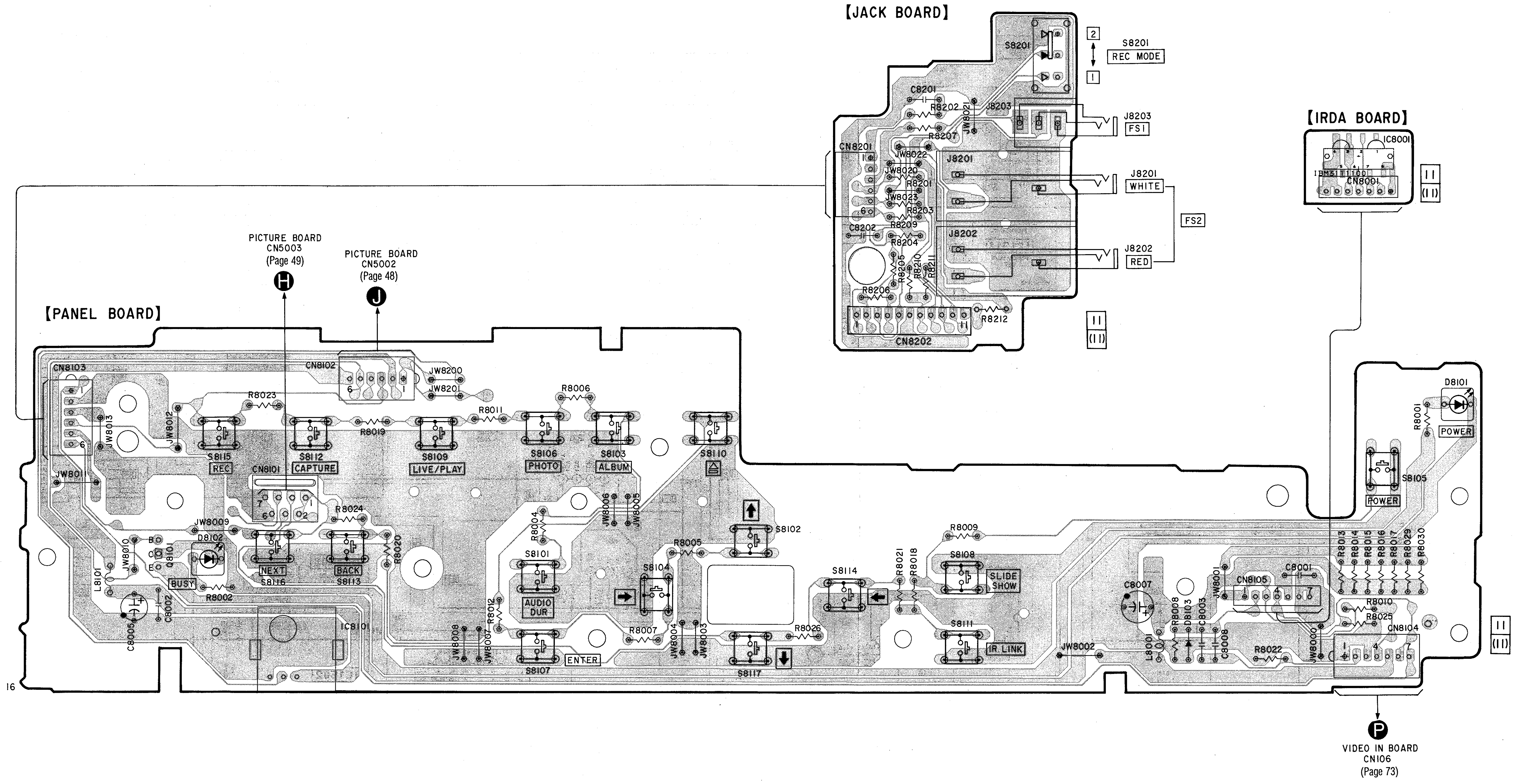
Note on Printed Wiring Boards:
- o——— : parts extracted from the component side.
- ○ : Through hole.
- ░░ : Pattern from the side which enables seeing.

6-23. SCHEMATIC DIAGRAM — POWER SECTION —

• See Page 109, 110 IC Block Diagrams.

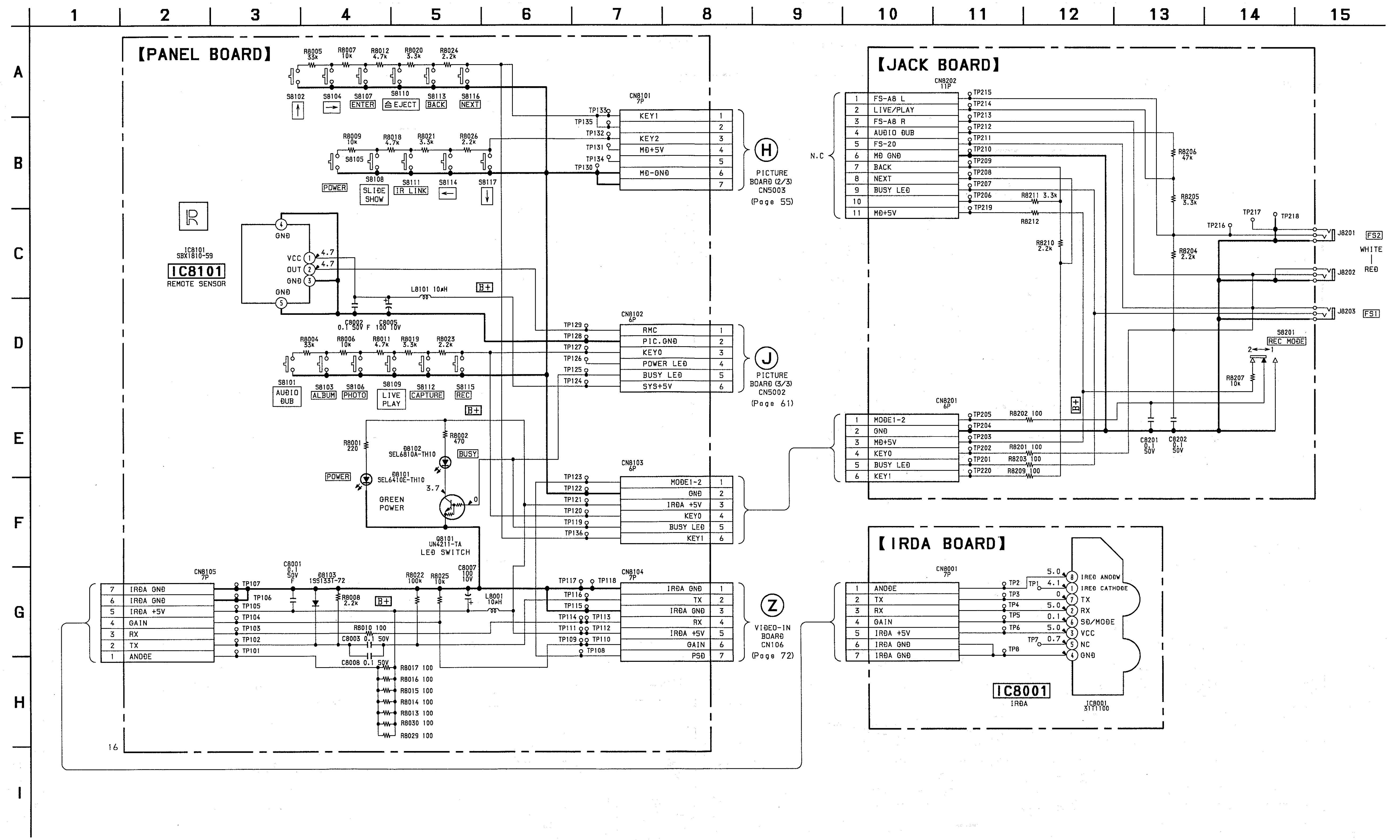


6-24. PRINTED WIRING BOARD — PANEL SECTION —



6-25. SCHEMATIC DIAGRAM — PANEL SECTION —

• See Page 110 IC Block Diagrams.

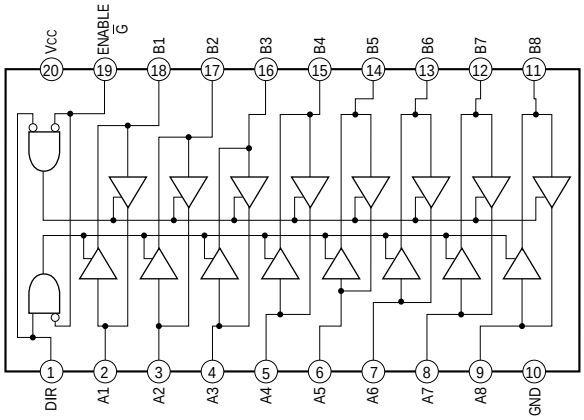


Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.

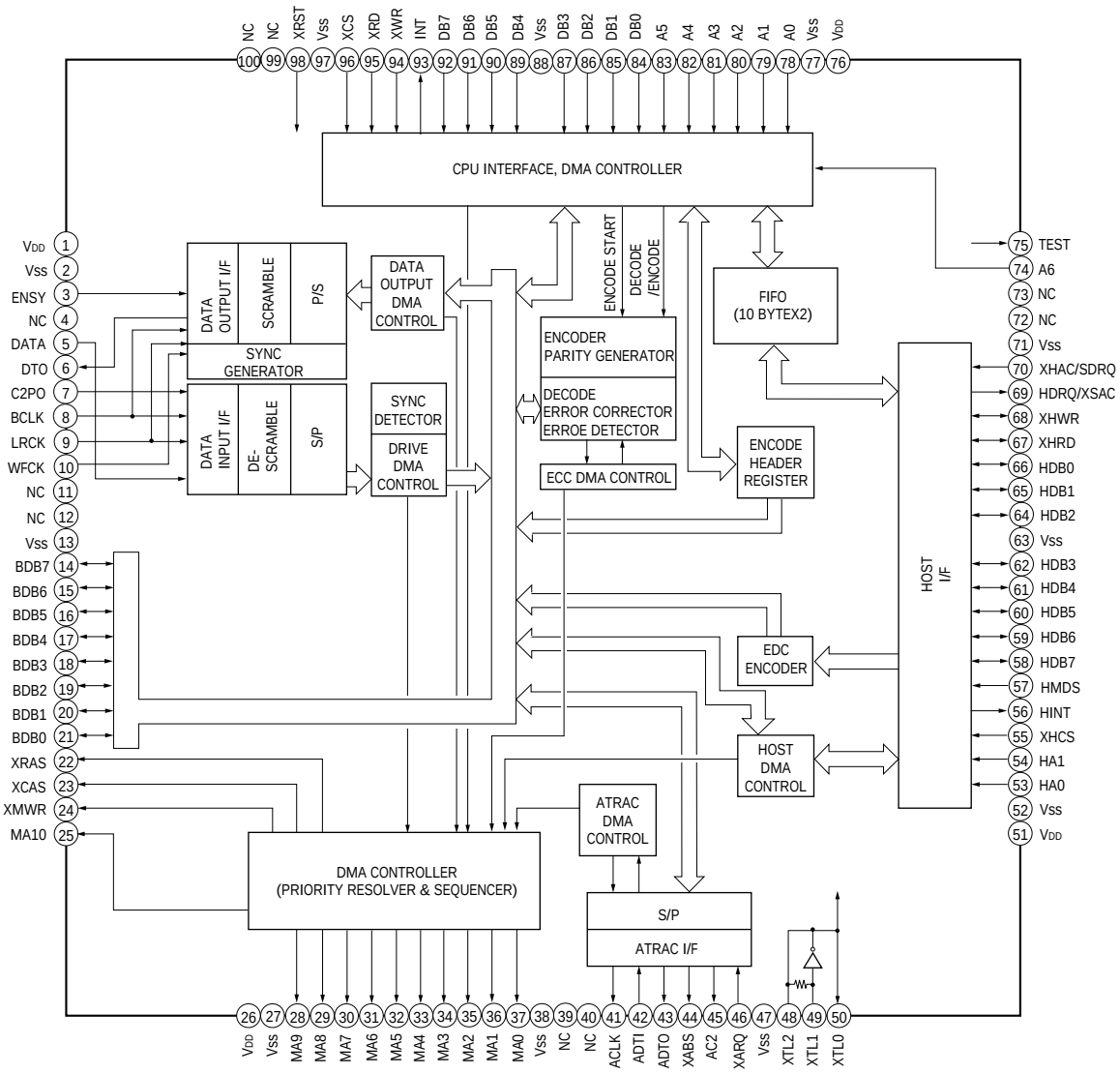
Note on Printed Wiring Board:
- o—— : parts extracted from the component side.
- ░░ : Pattern from the side which enables seeing.

6-26. IC BLOCK DIAGRAMS
— MD SECTION —

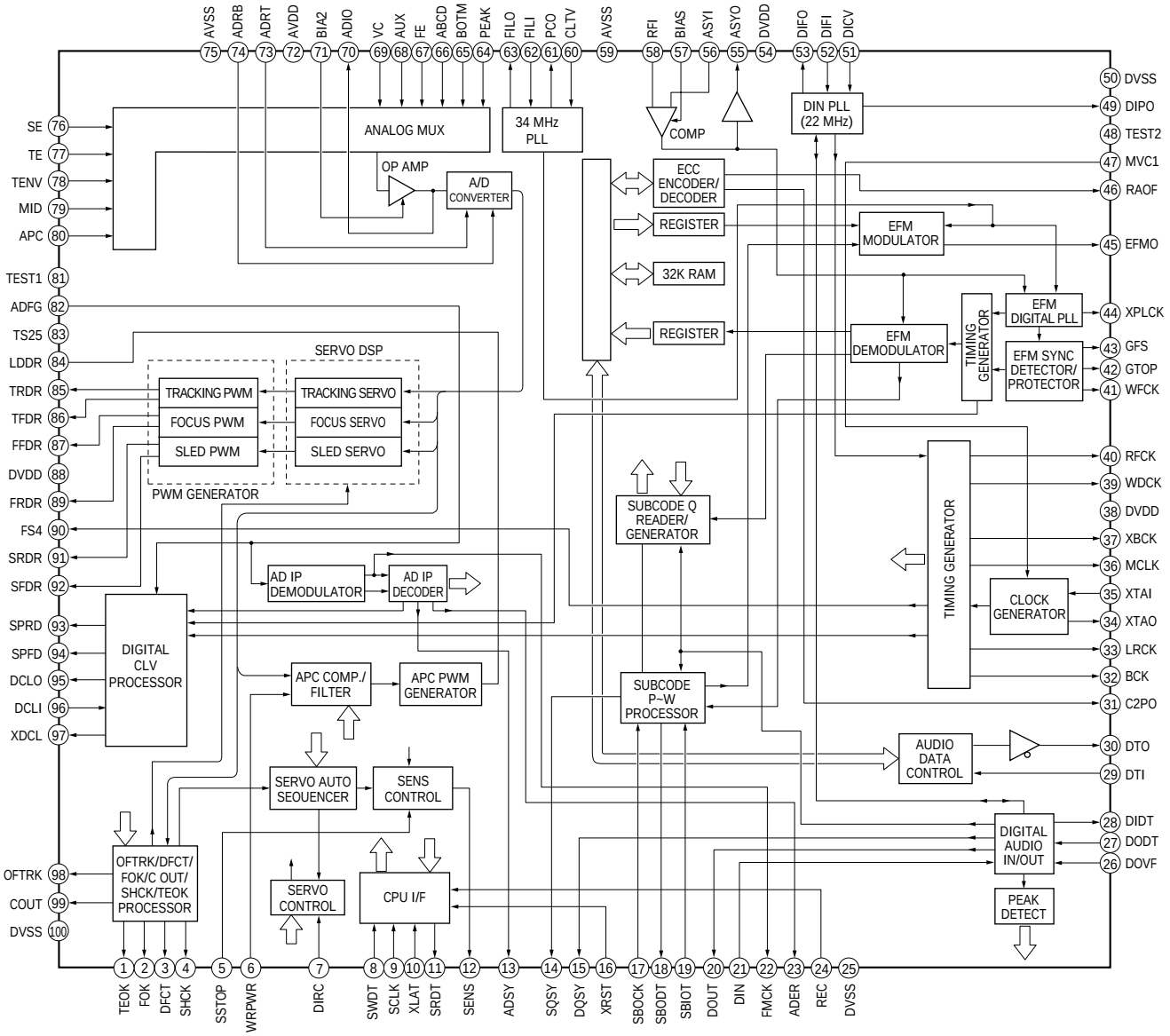
IC2004, 2005 SN74LV245PW-E05



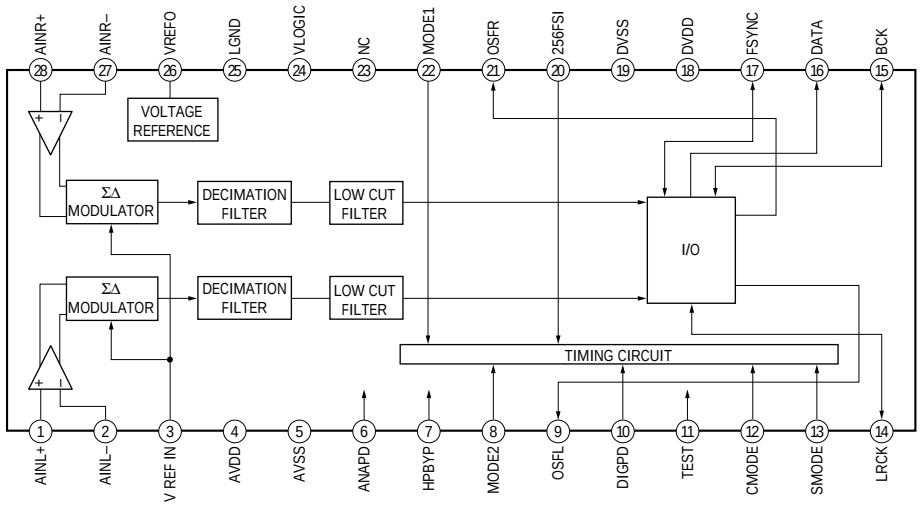
IC2007 CXD1805AR



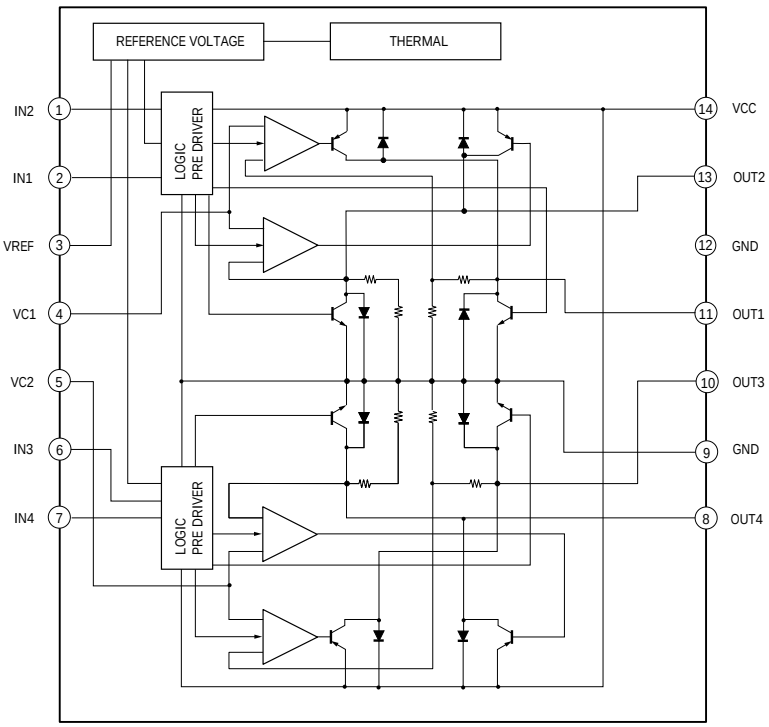
IC2101 CXD2536R



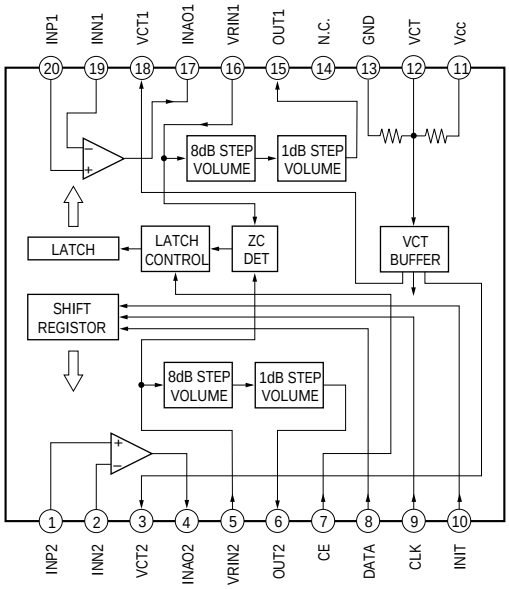
IC2701 CXD8566M



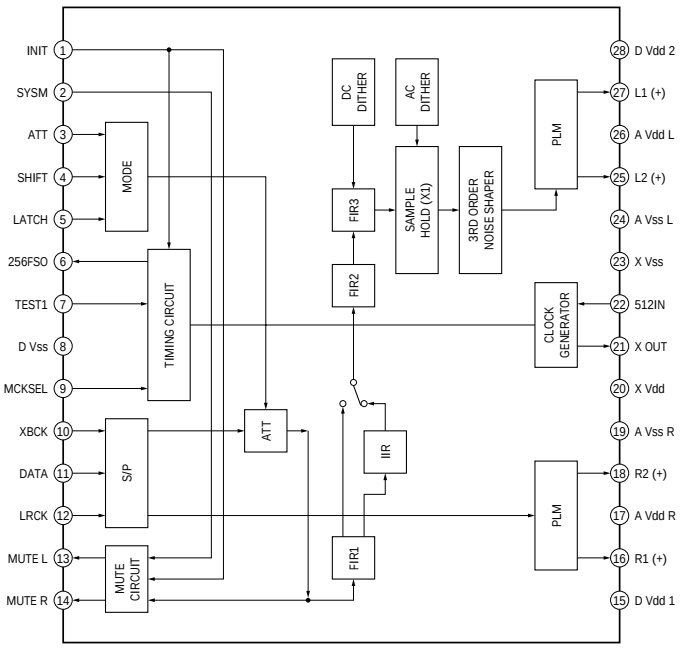
IC2301 LB1837M-TE-L



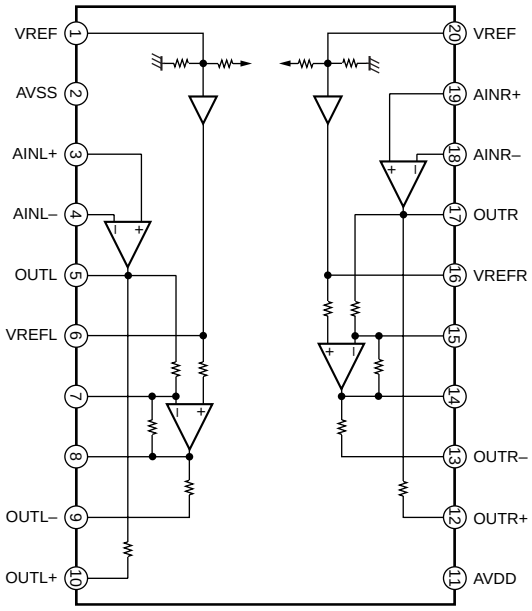
IC2705 CXA1846N



IC2501 CXD8567AM

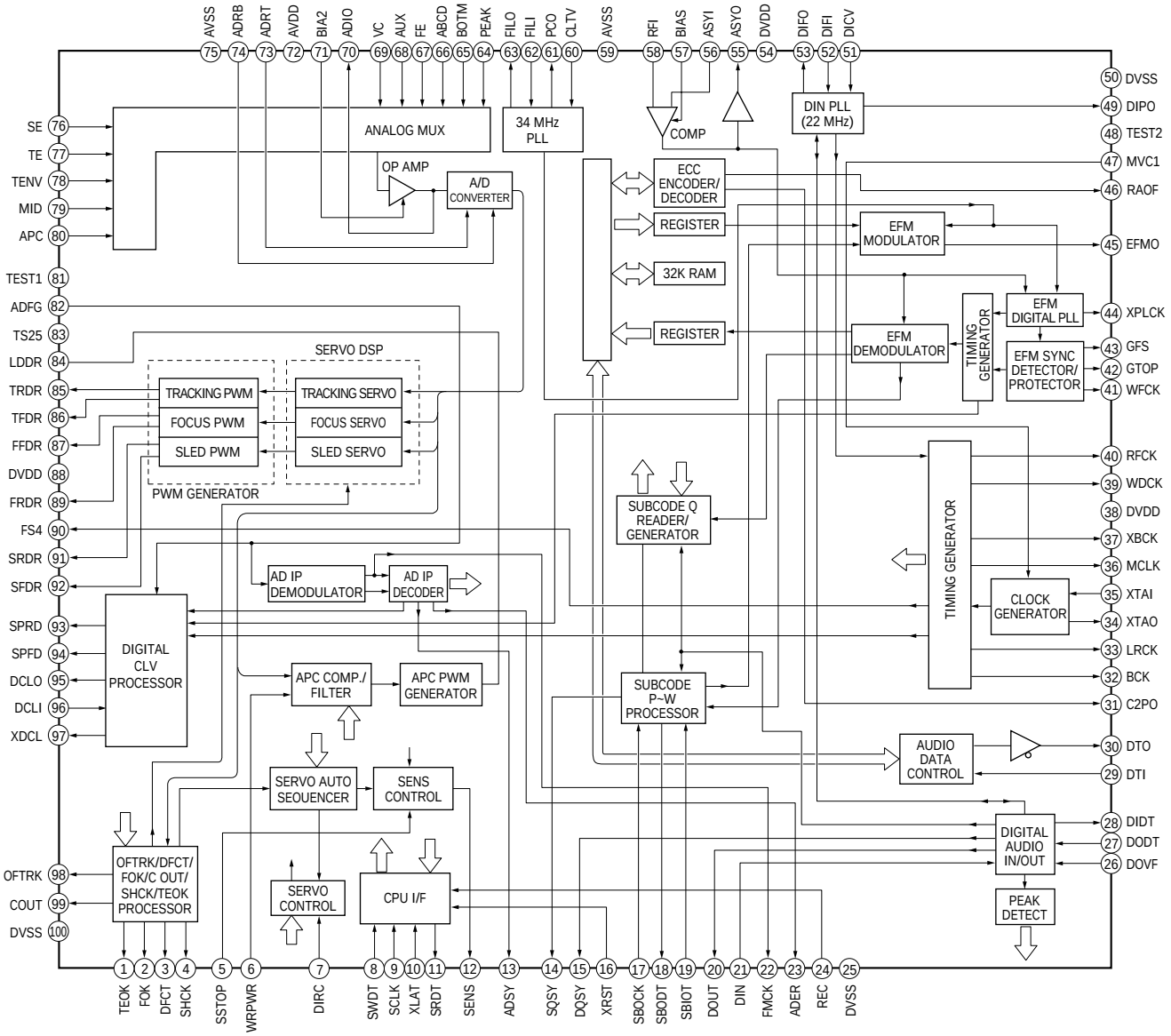


IC2702 CXA8054M

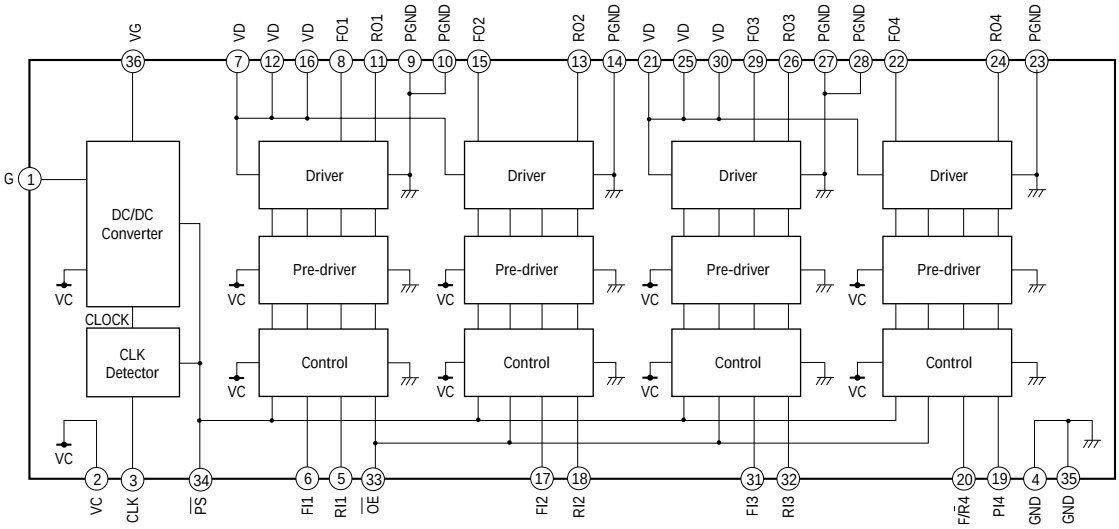


— BD SECTION —

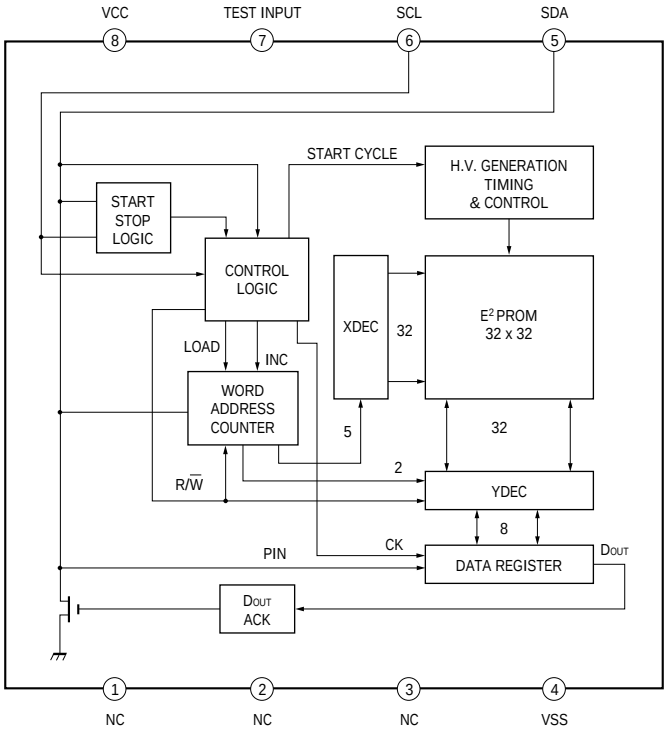
IC121 CXD2535CR



IC151 MPC17A38VMEL

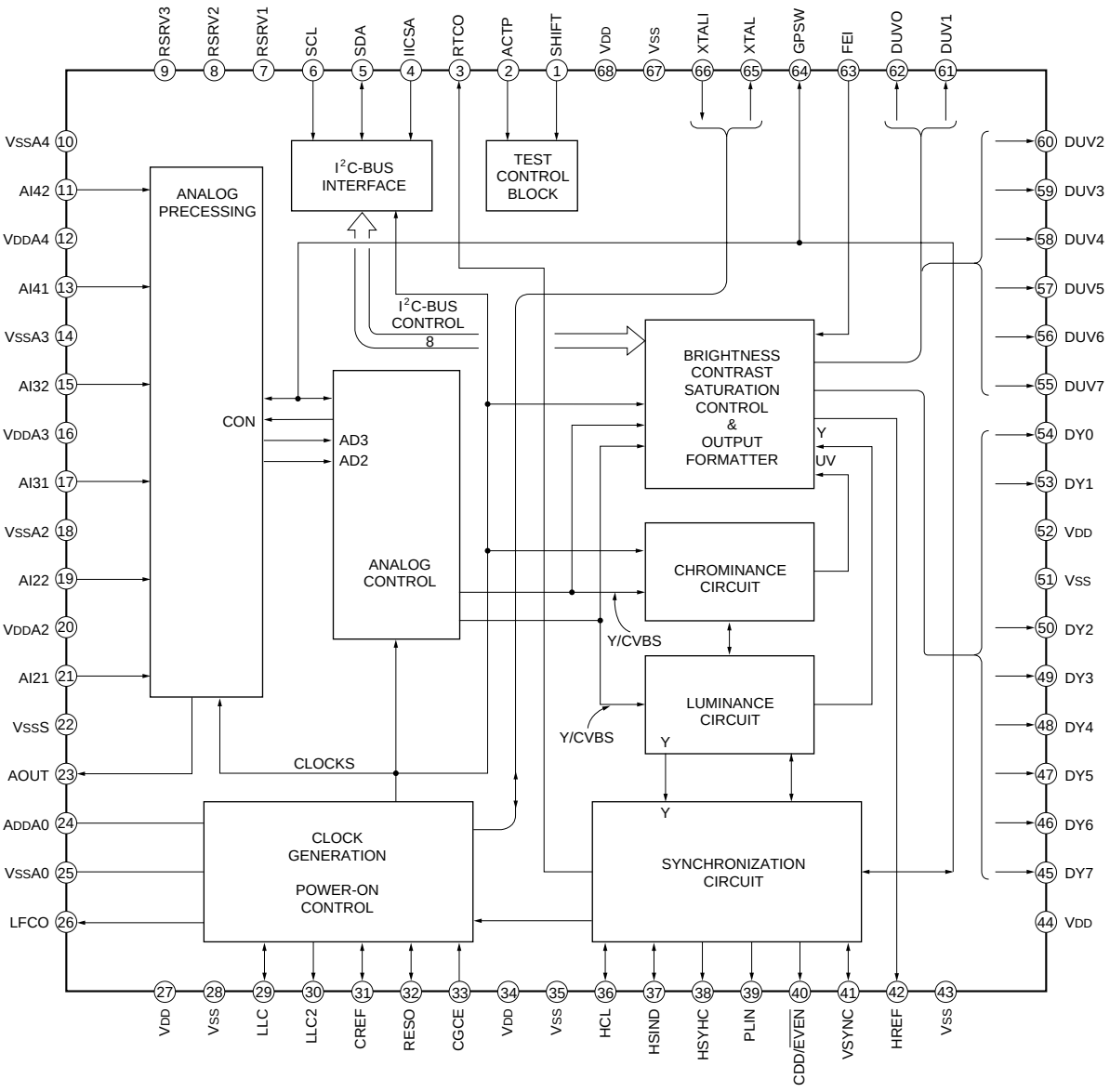


IC171 X24C01S

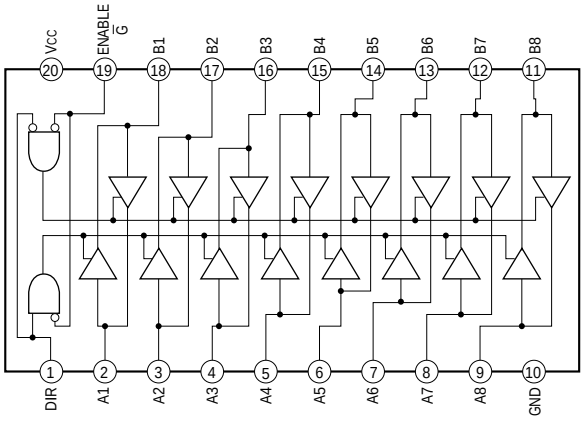


— VIDEO SECTION —

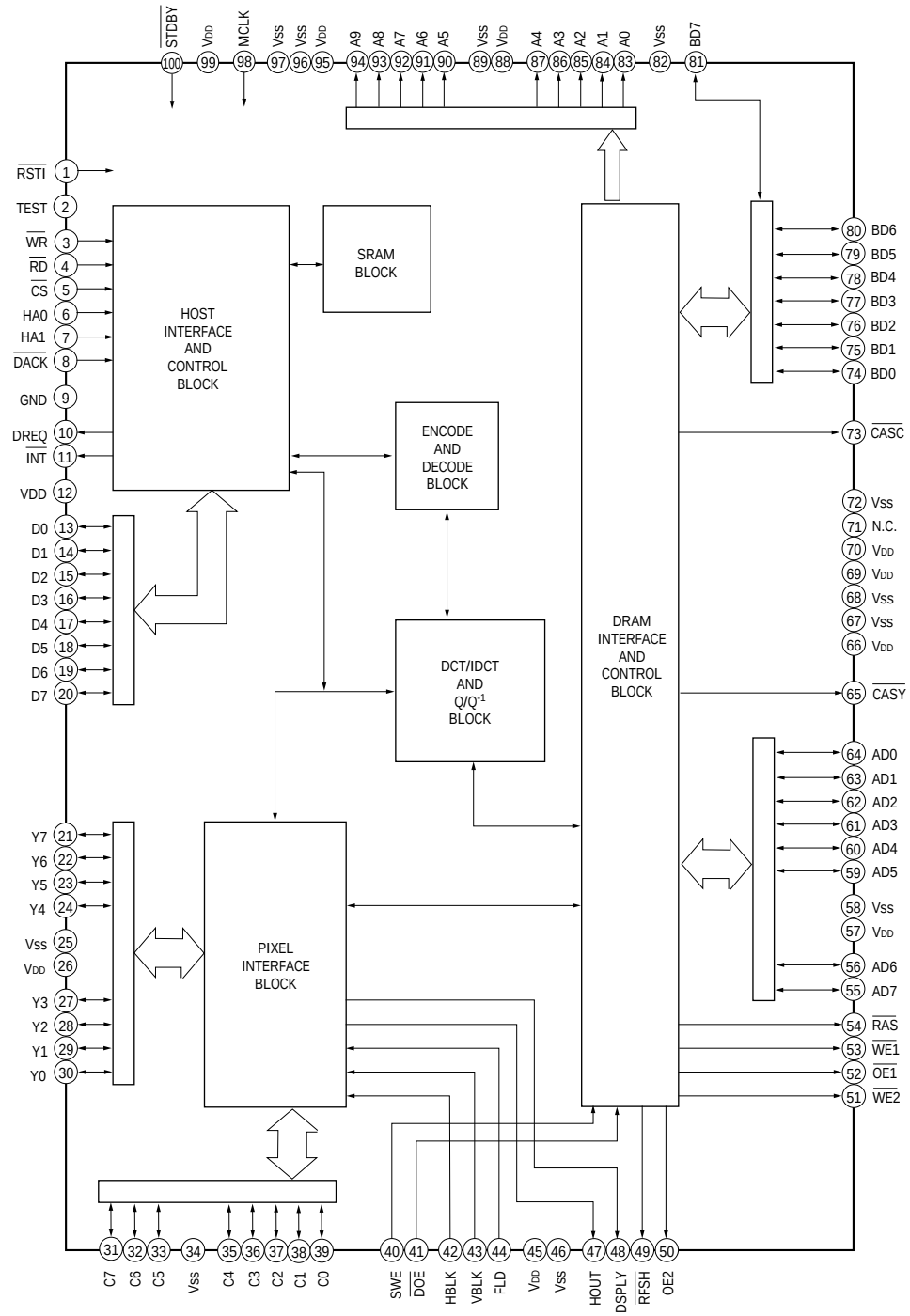
IC104 SAA7110AWP



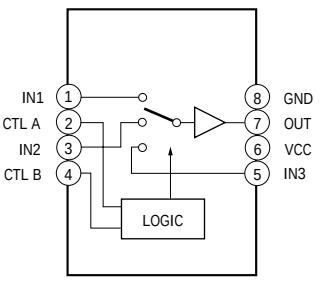
IC110 TC74HC245AF (EL)



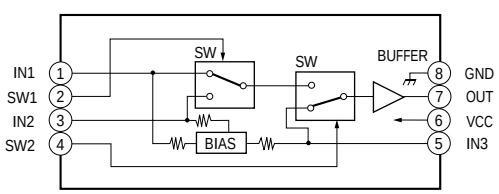
IC105 MD2201A



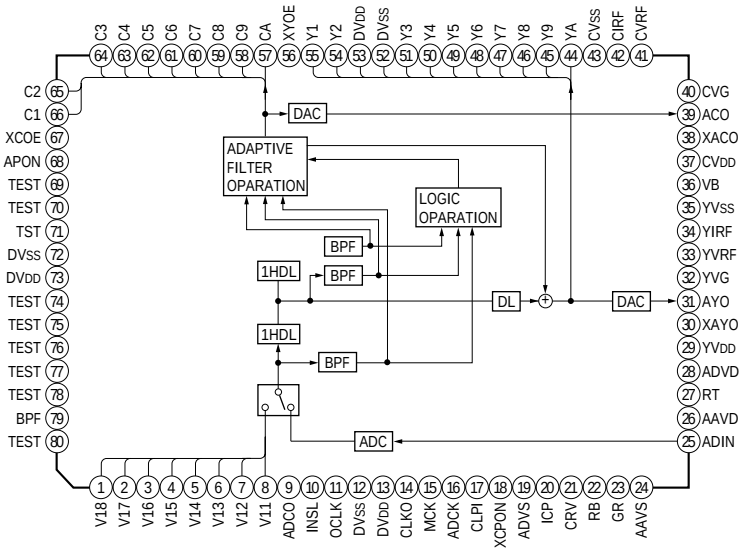
IC201, 203 BA7653AF-E2



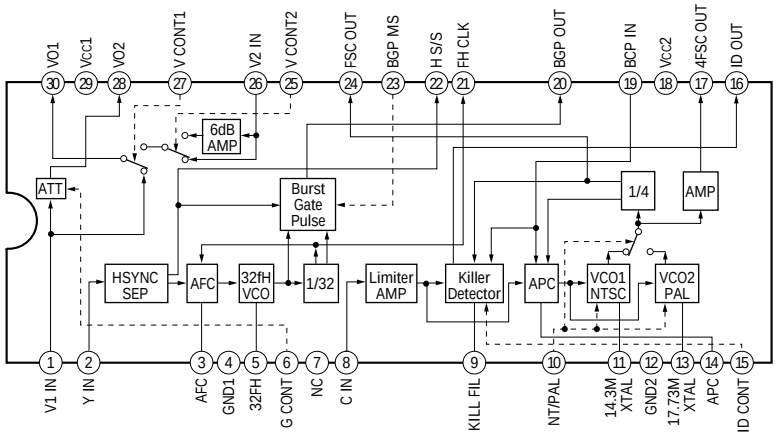
IC202 MM1113XFBE



IC401 CXD2023Q

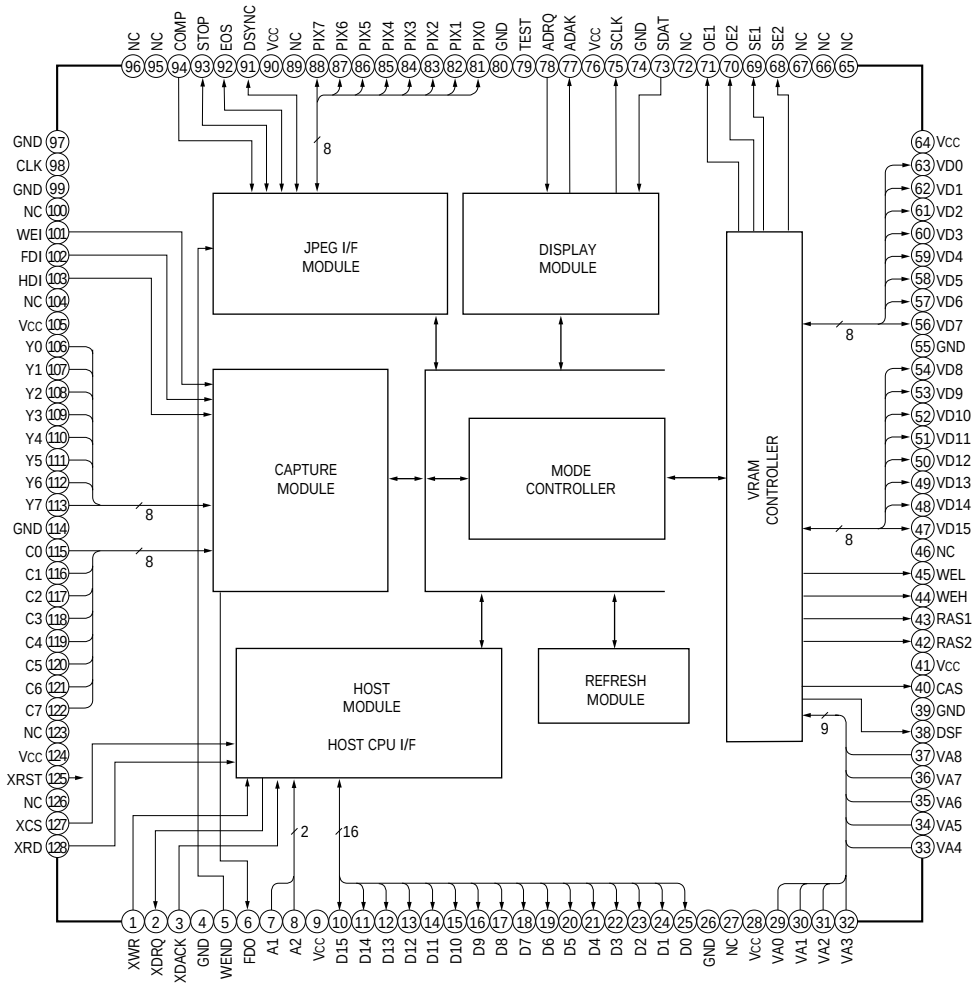


IC402 CXA1686M

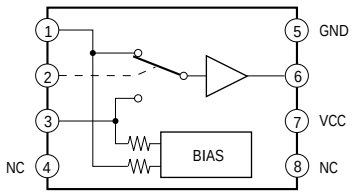


— PICTURE SECTION —

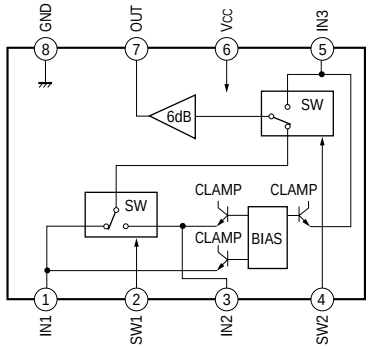
IC1005 CXD8648R-AV



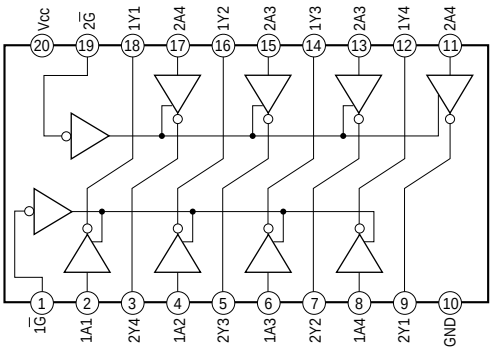
IC3001 NJM2233BM



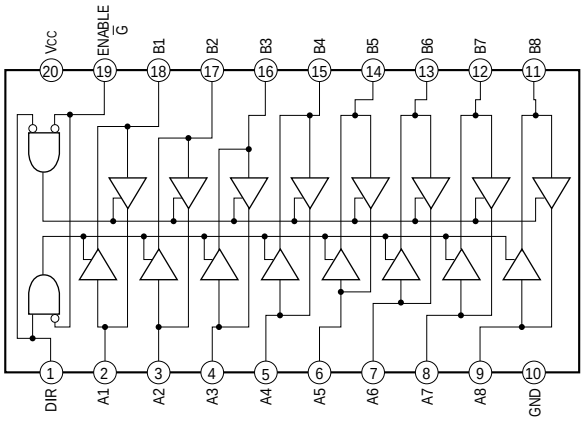
IC3002 MM1118XFBE



IC4019 TC74AC240F-EL

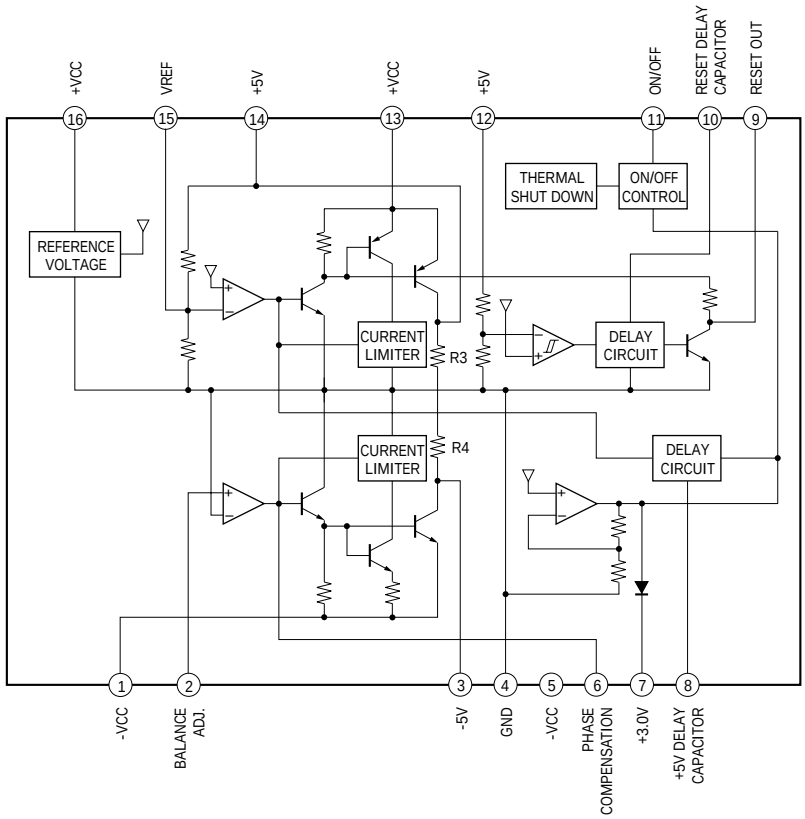


IC4005, 4006, 4010, 4011 TC74ACT245F-EL

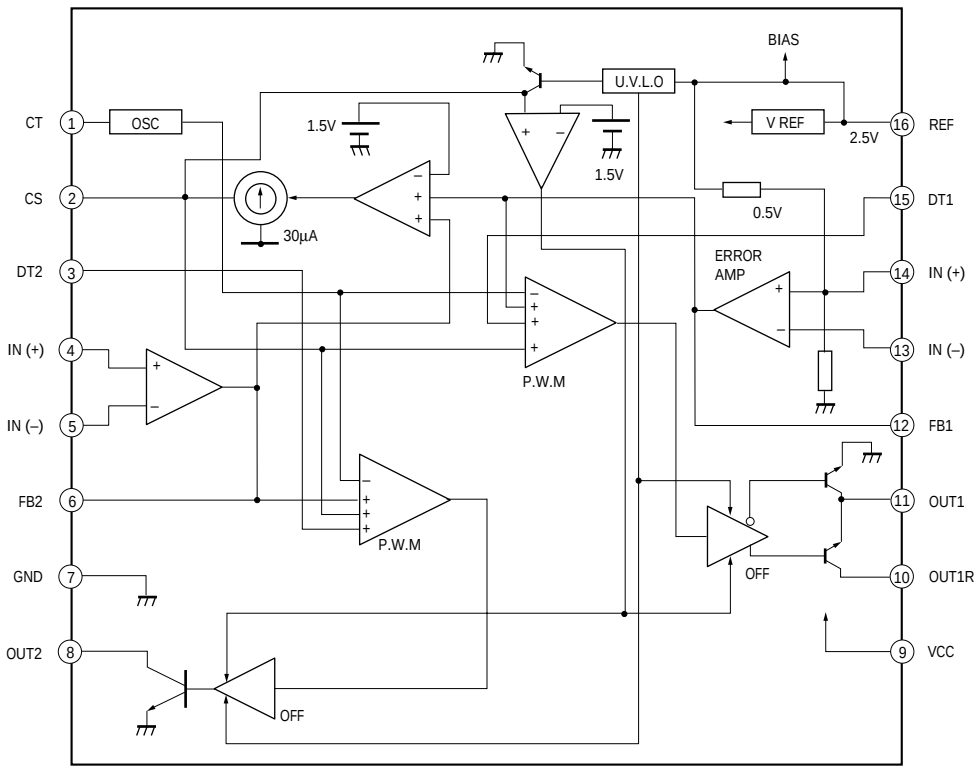


— POWER SECTION —

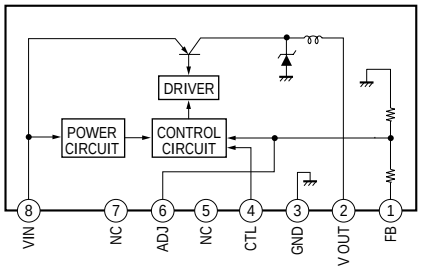
IC1501, 1502 M5294P



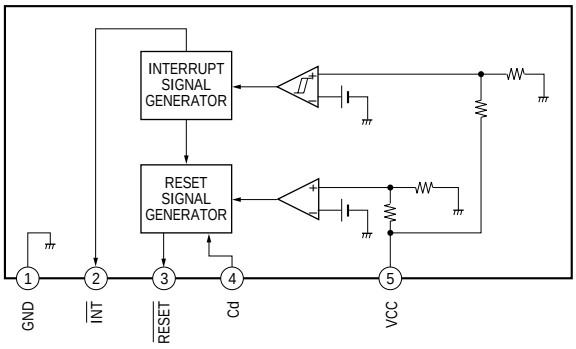
IC1701 FA7611M



IC1101, 1111, 1121, 1201 BP5020

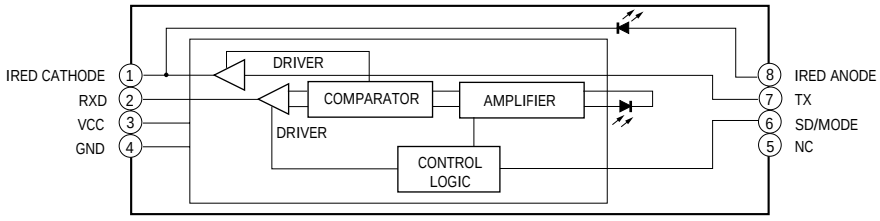


IC1351 M62005L



— IRDA SECTION —

IC8001 IBM31T1100 (K)



6-27. IC PIN FUNCTION

• IC101 RF AMPLIFIER (CXA1981AR) / BD BOARD

Pin No.	Pin Name	I/O	Description
1	VC	O	Middle point voltage (+2.5V) generation output
2 ~ 7	A ~ F	I	Input of signal from optical pick-up detector
8	FI	I	F operation amplifier input
9	FO	O	F operation amplifier output
10	PD	I	Front monitor Connected to photo diode
11	APCREF	I	Input for setting laser power
12	TEMPI	I	Temperature sensor connection pin
13	GND	—	Ground
14	AAPC	O	APC LD amplifier output
15	DAPC	O	Digital APC output (Not used)
16	TEMPR	O	Temperature sensor reference voltage output
17	XRST	I	Input of reset signal from system controller Reset: “L”
18	SWDT	I	Input of write data signal from system controller
19	SCLK	I	Input of clock signal from system controller
20	XLAT	I	Input of latch signal from system controller
21	VREF	O	Reference voltage output (Not used)
22	TENV	O	Tracking envelop signal output (Not used)
23	THLD	I	Track hold capacitor connection pin
24	VCC	—	Power supply (+5V)
25	TFIL	I	Track hold input (Connected to VC)
26	TE	O	Output of tracking error signal to CXD2535CR
27	TLB	I	Input of add signal to tracking error
28	CSLED	I	Sled error LPF pin
29	SE	O	Output of sled error signal to CXD2535CR
30	ADFM	O	ADIP FM signal output
31	ADIN	I	Inputs ADIP FM signal by AC coupling
32	ADAGC	I	Connection pin of external capacitor for ADIP AGC
33	ADFG	O	Output of ADIP dual FM signal to CXD2535CR (22.05 kHz±1 kHz)
34	AUX	O	Output of auxiliary signal to CXD2535CR
35	FE	O	Output of focus error signal to CXD2535CR
36	FLB	I	Focus bias control input (Not used)
37	ABCD	O	Output of light amount signal to CXD2535CR
38	BOTM	O	Output of bottom hold signal of light amount signal to CXD2535CR
39	PEAK	O	Output of peak hold signal of light amount signal to CXD2535CR
40	RFAGC	I	Connection pin of RF AGC circuit external capacitor
41	RF	O	Output of playback EFM RF signal to CXD2535CR
42	ISET	I	Internal circuit constant setting pin 22 kHz BPF center frequency (Fixed at “H”)
43	AGCT	I	Inputs RF signal by AC coupling
44	RFO	O	Output pin of RF signal
45	MORFI	I	Inputs MO RF signal by AC coupling
46	MORFO	O	Output pin of MO RF signal
47, 48	I, J	I	Input of signal from optical pick-up detector

• IC104 FRONT END (SAA7110AWP) / VIDEO-IN BOARD

Pin No.	Pin Name	I/O	Description
1	SHIFTTP	I	Test pin. (Fixed to “L”)
2	ACTP	I	Test pin. (Fixed to “L”)
3	RTCO	O	Real time control output (Not used)
4	IICSA	I	IIC bus slave address selection signal input (Not used) “L”: Slave address = 9CH write, 9DH read “H”: Slave address = 9DH write, 9FH read
5	SDA	I/O	IIC bus serial data input/output
6	SCL	I	IIC bus serial clock input
7 ~ 9	RSRV1 ~ RSRV3	—	Not used
10	VSSA4	—	Analog Ground-4
11	AI42	I	Analog input (Not used)
12	VDDA4	—	Analog power supply-4 (+5 V)
13	AI41	I	Y (luminance) signal analog input
14	VSSA3	—	Analog Ground-3
15	AI32	I	C (chroma) signal analog input
16	VDDA3	—	Analog power supply-3 (+5 V)
17	AI31	I	Y (luminance) signal analog input
18	AVSS2	—	Analog Ground-2
19	AI22	I	C (chroma) signal analog input
20	AVDD2	—	Analog power supply-2 (+5 V)
21	AI21	I	Analog input (Not used)
22	VSSS	—	Sub-state Ground
23	AOUT	O	Analog test output (Not used)
24	VDDA0	—	Power supply for internal clock circuit (+ 5 V)
25	VSSA0	—	Ground for internal clock circuit
26	LFCO	O	External clock circuit control signal output (Not used)
27	VDD	—	Power supply (+5 V)
28	VSS	—	Ground
29	LLC	I/O	Line lock clock input/output (32 MHz). Pin-33 CGCE is “H”: Output, “L”: Input
30	LLC2	O	1/2 signal output of line lock clock (16 MHz). Pin-33 CGCE is “H” output, “L”: High impedance
31	CREF	I/O	Reference clock input/output. Pin-33 CGCE is “H”: Output, “L”: Input (Not used)
32	$\overline{\text{RESO}}$	I/O	Reset input/output. Pin-33 CGCE is “H”: Output, “L”: Input (Not used)
33	CGCE	I	Internal clock circuit enable input. (Not used)
34	VDD	—	Power supply (+5 V)
35	VSS	—	Ground
36	HCL	I/O	Horizontal clamp pulse input/output (Not used)
37	HSIND	I/O	Horizontal sync display signal input/output (Not used)
38	HSYNC	O	Horizontal sync signal output
39	PLIN	O	Not used
40	ODD/$\overline{\text{EVEN}}$	O	ODD/EVEN identification signal output

Pin No.	Pin Name	I/O	Description
41	VSYNC	I/O	Vertical sync signal output
42	HREF	O	Vertical reference signal output (Not used)
43	VSS	—	Ground
44	VDD	—	Power supply (+5 V)
45 ~ 50	DY7 ~ DY2	O	Upper 6 bits of Y (luminance) signal digital output
51	VSS	—	Ground
52	VDD	—	Power supply (+5 V)
53, 54	DT1, DY0	O	Lower two bits of Y (luminance) signal digital output
55 ~ 62	DUV7 ~ DUV0	O	C (chroma) signal digital output
63	$\overline{\text{FEI}}$	I	Enable input. “L”: Active
64	GPSW	O	Not used
65	XTAL	O	Clock output (26.8 MHz)
66	XTALI	I	Clock input (26.8 MHz)
67	VSS	—	Ground
68	VDD	—	Power supply (+5 V)

• IC105 JPEG ENCODER/DECODER (MD2201A) / VIDEO-IN BOARD

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>$\overline{\text{RSTI}}$</td><td>I</td><td>Reset input</td></tr>
<tr><td>2</td><td>TEST</td><td>—</td><td>Test terminal. (Fixed to “L”)</td></tr>
<tr><td>3</td><td>$\overline{\text{WR}}$</td><td>I</td><td>Data bus write signal input</td></tr>
<tr><td>4</td><td>$\overline{\text{RD}}$</td><td>I</td><td>Data bus read signal input</td></tr>
<tr><td>5</td><td>$\overline{\text{CS}}$</td><td>I</td><td>Data bus chip select signal input</td></tr>
<tr><td>6, 7</td><td>HA0, HA1</td><td>I</td><td>I/O address input</td></tr>
<tr><td>8</td><td>$\overline{\text{DACK}}$</td><td>I</td><td>DMA transfer acknowledge signal input. (Compressed data and picture data only are valid.)</td></tr>
<tr><td>9</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>10</td><td>DREQ</td><td>O</td><td>DMA transfer request signal output. (Compressed data and picture data only are valid.)</td></tr>
<tr><td>11</td><td>$\overline{\text{INT}}$</td><td>O</td><td>End signal output of the respective mode processing. “L”: Mode ended. “H”: Mode is continued or mode has not started yet</td></tr>
<tr><td>12</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>13 ~ 20</td><td>D0 ~ D7</td><td>I/O</td><td>Data bus input/output. (Compressed data, picture data, command, status)</td></tr>
<tr><td>21 ~ 24</td><td>Y7 ~ Y4</td><td>I/O</td><td>Y-data bus during synchronous pixel input/output</td></tr>
<tr><td>25</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>26</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>27 ~ 30</td><td>Y3 ~ Y0</td><td>I/O</td><td>Y-data bus during synchronous pixel input/output</td></tr>
<tr><td>31 ~ 33</td><td>C7 ~ C5</td><td>I/O</td><td>Cb/Cr-data bus during synchronous pixel input/output. (Cb and Cr are mutually interleaved when input and output.)</td></tr>
<tr><td>34</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>35 ~ 39</td><td>C4 ~ C0</td><td>I/O</td><td>Cb/Cr-data bus during synchronous pixel input/output. (Cb and Cr are mutually interleaved when input and output.)</td></tr>
<tr><td>40</td><td>SWE</td><td>I</td><td>DRAM selection input
<table>
<tr><th rowspan="2">DRAM control</th><th colspan="2">SWE</th></tr>
<tr><th>L</th><th>R</th></tr>
<tr><td>$\overline{\text{WE1}}$
$\overline{\text{OE1}}$</td><td>Active at CAS address
0 to 511</td><td>Active at CAS address
0 to 1023</td></tr>
<tr><td>$\overline{\text{WE2}}$
$\overline{\text{OE2}}$</td><td>Active at CAS address
512 to 1023</td><td>Active at CAS address
1024 to 2047</td></tr>
</table></td></tr>
<tr><td>41</td><td>$\overline{\text{DOE}}$</td><td>I</td><td>DRAM control setting put. “L”: Normal access, “H”: Hi-Z</td></tr>
<tr><td>42</td><td>HBLK</td><td>I</td><td>Horizontal sync data effective period input during sync signal input/output.
(Refresh operation during blanking period Data access during real display mode.)</td></tr>
<tr><td>43</td><td>VBLK</td><td>I</td><td>Vertical sync data effective period input during sync signal input/output.</td></tr>
<tr><td>44</td><td>ODD/EVEN</td><td>I</td><td>Odd/even field identification signal input during sync signal input/output.
“H”: First field, “L”: Second field</td></tr>
<tr><td>45</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>46</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>47</td><td>HOUT</td><td>O</td><td>HBLK is delayed for the time equivalent to internal processing time, and is output. (Not used)</td></tr>
<tr><td>48</td><td>DSPLY</td><td>O</td><td>Status output indicating that Y/C data bus is output status when this pin is “H”</td></tr>
<tr><td>49</td><td>$\overline{\text{RFSH}}$</td><td>O</td><td>DRAM status output. “L”: During refreshing, “H”: Normal operation</td></tr>
<tr><td>50</td><td>$\overline{\text{OE2}}$</td><td>O</td><td>Read enable signal 2 output</td></tr>
<tr><td>51</td><td>$\overline{\text{WE2}}$</td><td>O</td><td>Write enable signal 2 output</td></tr>
<tr><td>52</td><td>$\overline{\text{OE1}}$</td><td>O</td><td>Read enable signal 1 output</td></tr>
<tr><td>53</td><td>$\overline{\text{WE1}}$</td><td>O</td><td>Write enable signal 1 output</td></tr>
<tr><td>54</td><td>$\overline{\text{RAS}}$</td><td>O</td><td>Row address selection signal output</td></tr>
<tr><td>55, 56</td><td>AD7, AD6</td><td>I/O</td><td>Y data bus input/output with DRAM</td></tr>
<tr><td>57</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>58</td><td>VSS</td><td>—</td><td>Ground</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
59 ~ 64	AD5 ~ AD0	I/O	Y data bus input/output with DRAM
65	$\overline{\text{CASY}}$	O	Y-component column address selection signal output
66	VDD	—	Power supply (+5 V)
67, 68	VSS	—	Ground
69, 70	VDD	—	Power supply (+5 V)
71	N.C.	—	Not used
72	VSS	—	Ground
73	$\overline{\text{CASC}}$	O	C-component column address selection signal output
74 ~ 81	BD0 ~ BD7	I/O	Cb/Cr data bus input/output with DRAM
82	VSS	—	Ground
83 ~ 87	A0 ~ A4	O	Address output to DRAM
88	VDD	—	Power supply (+5 V)
89	VSS	—	Ground
90 ~ 93	A5 ~ A8	O	Address output to DRAM
94	A9	O	Address output (Not used)
95	VDD	—	Power supply (+5 V)
96, 97	VSS	—	Ground
98	MCLK	I	Clock input
99	VDD	—	Power supply (+5 V)
100	$\overline{\text{STDBY}}$	I	Standby input. “L”: Standby, “H”: Normal operation

• IC108 VIDEO INPUT CONTROL MICROPROCESSOR (CXP81120-032R) / VIDEO-IN BOARD

Pin No.	Pin Name	I/O	Description
1, 2	HA1, HA0	O	I/O address output to JPEG encoder/decoder
3	$\overline{CS}$	O	Chip select output to JPEG encoder/decoder
4	$\overline{RD}$	O	Data read signal output to JPEG encoder/decoder
5	$\overline{WR}$	O	Data write signal output to JPEG encoder/decoder
6	$\overline{RSTO}$	O	Reset output to JPEG encoder/decoder
7 ~ 14	D7 ~ D0	I/O	Data input/output to JPEG encoder/decoder
15 ~ 22	HD7 ~ HD0	I/O	Data input/output with host controller
23	—	I	Not used
24	XTALO	O	Clock output (16 MHz)
25	XTALI	I	Clock input (16 MHz)
26	VSS	—	Ground
27	$\overline{RSTI}$	I	Reset input. “L”: reset
28	—	I	Not used
29	ODD/$\overline{EVEN}$	I	Used field identification input
30	—	O	Not used
31	$\overline{VSYNC}$	I/O	Vertical sync signal input/output
32	AVSS	—	Analog Ground
33	—	I	Reference voltage input (+5 V)
34	AVDD	—	Analog power supply (+5 V)
35	—	O	Not used
36	$\overline{HSTBO}$	O	Strobe signal output to host controller
37	$\overline{I}$/O SEL	O	Data input/output selection output. “H”: Output
38	HCLR	O	Clear signal output. “L”: Clear
39	HHDET	I	H signal detection input from host controller
40	HLDET	I	L signal detection input from host controller
41	HSTBI	I	Strobe signal input from host controller
42	—	I	Not used
43, 44	—	O	Not used
45	$\overline{INT}$	I	End signal input from JPEG encoder/decoder. “L”: End
46	DREQ	I	Data transfer request input from JPEG encoder/decoder. “L”: Request
47, 48	—	I/O	Not used
49	IICDATA	I/O	IIC control data input/output with front end
50	IICCLK	O	IIC control clock output to front end
51 ~ 55	—	O	Not used
56	NC	—	Not used
57	VDD	—	Power supply (+5 V)
58	VSS	—	Ground
59 ,60	—	O	Not used
61	SEL-S/$\overline{C}$	O	Chip select signal output to video switch
62	SEL-P/$\overline{F}$	O	Chip select signal output to video switch
63	—	O	Not used
64	$\overline{DACK}$	O	Acknowledge signal output to JPEG encoder/decoder. “L”: Acknowledge

• IC121 DIGITAL SIGNAL PROCESS, DIGITAL SERVO SIGNAL PROCESS (CXD2535CR) / BD BOARD

Pin No.	Pin Name	I/O	Description
1	FS256	O	11.2896 MHz clock output (MCLK) (Not used)
2	FOK	O	Output of FOK signal to system controller Outputs "H" when focus is set
3	DFCT	O	Outputs defect ON/OFF switching signal to ATRAC encoder/decoder
4	SHCK	O	Outputs track jump detection signal to system controller
5	SHCKEN	I	Track jump detection enable input (Not used) (Fixed at "H")
6	WRPWR	I	Inputs laser power switching signal from system controller
7	DIRC	I	Disc drive recording/playback switching signal input (Fixed at "H")
8	SWDT	I	Inputs write data signal from system controller
9	SCLK	I	Inputs serial clock signal from system controller
10	XLAT	I	Inputs serial latch signal from system controller
11	SRDT	O	Outputs read data signal to system controller
12	SENS	O (3)	Outputs internal status (SENSE) to system controller
13	ADSY	O	ADIP sync signal output (Not used)
14	SQSY	O	Output subcode Q sync (SCOR) to system controller Outputs "L" every 13.3 msec Outputs "H" at all most mostly
15	DQSY	O	Outputs digital-in U-bit CD format subcode Q sync (SCOR) to system controller Outputs "L" every 13.3 msec Outputs "H" at all most mostly
16	XRST	I	Inputs reset signal from system controller Reset: "L"
17	TEST4	I	Test input (Fixed at "L")
18	CLVSCK	O	Not used
19	TEST5	I	Test input (Fixed at "L")
20	DOUT	O	Digital audio signal output (For optical output)
21	DIN	I	Digital audio signal input (For optical input) (Not used)
22	FMCK	O	ADIP FM demodulation clock signal output
23	ADER	O	ADIP CRC flag output "H":Error
24	REC	I	Input of recording/playback switching signal from system controller Recording: "H" Playback: "L"
25	DVSS	—	Ground (Digital)
26	DOVF	I	Digital audio output validity flag input (Fixed at "L")
27	DODT	I	Input of 16bit data for digital audio output
28	DIDT	O	Output of 16bit data for digital audio input to ATRAC encoder/decoder
29	DTI	I	Input of recording audio data signal from ATRAC encoder/decoder
30	DTO	O (3)	Output of playback audio data signal to ATRAC encoder/decoder
31	C2PO	O	Outputs C2PO signal to ATRAC encoder/decoder (Output indicating data error status) Playback: C2PO ("H") Digital recording: Digital-in-Vflag Analog recording: "L"
32	BCK	O	Outputs bit clock signal (2.8224 MHz) (MCLK)
33	LRCK	O	Outputs L/R clock signal (44.1 kHz) (MCLK)
34	XTAO	O	System clock (512 fs=22.5792 MHz) signal output
35	XTAI	I	Input of system clock (512fs=22.5792 MHz) signal input
36	MCLK	O	MCLK clock (22.5792 MHz) signal output (Not used)
37	XBCK	O	Pin 32 (BCK) inversion output (Not used)
38	DVDD	—	Power supply (+5V) (Digital)
39	WDCK	O	WDCK clock (88.2 kHz) signal output (MCLK)
40	RFCK	O	RFCK clock (7.35 kHz) signal output (MCLK)

Pin No.	Pin Name	I/O	Description
41	WFCK	O	WFCK clock (7.35 kHz) signal output (Playback: EFM decoder PLL Recording: EFM encoder PLL)
42	GTOP	O	“H”: Opens playback EFM frame sync protection window
43	GFS	O	“H”: Playback EFM sync and interpolation protection timing match
44	XPLCK	O	EFM decoder PLL clock output (98 fs=4.3218 MHz) Falling edge and EFM signal edge match
45	EFMO	O	EFM signal output (Recording)
46	RAOF	O	Internal RAM overflow detection signal output (decoder monitor output) Outputs “H” when the disc rotation exceeds ±4F jitter margin during playback
47	MVCI	I	Digital-in PLL oscillation input (Not used) (Fixed at “L”)
48	TEST2	I	Test pin (Fixed at “L”)
49	DIPD	O (3)	Digital-in PLL phase comparison output Internal VCO: (Frequency: Low n “H”) External VCO: (Frequency: Low n “L”)
50	DVSS	—	Ground (Digital)
51	DICV	I (A)	Digital-in PLL internal VCO control voltage input
52	DIFI	I (A)	Filter input when digital-in PLL internal VCO is used
53	DIFO	O (A)	Filter output when digital-in PLL internal VCO is used (Not used)
54	AVDD	—	Power supply (+5V) (Analog)
55	ASYO	O	Playback EFM full-swing output (L=VSS, H=VDD)
56	ASYI	I (A)	Playback EFM asymmetry comparate voltage input
57	BIAS	I (A)	Playback EFM asymmetry circuit constant current input
58	RFI	I (A)	Inputs playback EFM RF signal from RF amplifier
59	AVSS	—	Ground (Analog)
60	CLTV	I (A)	Decoder PLL master clock PLL VCO control voltage input
61	PCO	O (3)	Decoder PLL master clock PLL phase comparison output
62	FILI	I (A)	Decoder PLL master clock PLL filter input
63	FILO	O (3)	Decoder PLL master clock PLL filter output
64	PEAK	I (A)	Inputs peak hold signal for light amount signal from RF amplifier
65	BOTM	I (A)	Inputs bottom hold signal for light amount signal from RF amplifier
66	ABCD	I (A)	Light amount signal from RF amplifier
67	FE	I (A)	Input of focus error signal from RF amplifier
68	AUX1	I (A)	Input of auxiliary signal from RF amplifier
69	VC	I (A)	Input of middle point voltage (+2.5V) from RF amplifier
70	ADIO	O (A)	A/D converter input signal monitor output
71	TEST3	I (A)	Test input (Fixed at “L”)
72	AVDD	—	Power supply (+5V) (Analog)
73	ADRT	I (A)	A/D converter operation range upper limit voltage input (Fixed at “H”)
74	ADRB	I (A)	A/D converter operation range lower limit voltage input (Fixed at “L”)
75	AVSS	—	Ground (Analog)
76	SE	I (A)	Input of sled error signal from RF amplifier
77	TE	I (A)	Input of tracking error signal from RF amplifier
78	AUX2	I (A)	Auxiliary input pin 2 (Fixed at “L”)
79	DCHG	I (A)	Connected to ground
80	APC	I (A)	Laser APC input (Fixed at “L”)

• Abbreviation
EFM : Eight to Fourteen Modulation
PLL : Phase Locked Loop
* (3) of I/O is 3-state output, (A) is analog output.

Pin No.	Pin Name	I/O	Description
81	TEST1	I	Test pin (Fixed at “L”)
82	ADFG	I	Input of ADIP dual FM signal from RF amplifier (22.05 kHz ±1 kHz) (TTL Schmidt input)
83	TS25	I	Test pin (Fixed at “L”)
84	LDDR	O	Laser APC signal output
85	TRDR	O	Tracking servo drive signal output (–)
86	TFDR	O	Tracking servo drive signal output (+)
87	FFDR	O	Focus servo drive signal output (+)
88	DVDD	—	Power supply (+5V) (Digital)
89	FRDR	O	Focus servo drive signal output (–)
90	FS4	O	176.4 kHz clock signal output (MCLK) (Not used)
91	SRDR	O	Sled servo drive signal output (–)
92	SFDR	O	Sled servo drive signal output (+)
93	SPRD	O	Spindle servo drive signal output (–)
94	SPFD	O	Spindle servo drive signal output (+)
95	DCLO	O	Not used normally
96	DCLI	I	Not used normally (Fixed at “H”)
97	XDCL	O	Not used normally
98	OFTRK	O	Off track signal output (Not used)
99	COUT	O	Traverse count signal output (Not used)
100	DVSS	—	Ground (Digital)

• IC401 DIGITAL COMB FILTER (CXD2023Q) / VIDEO-IN BOARD

Pin No.	Pin Name	I/O	Description
1	VI8	I	Digital input (MSB) (Not used)
2 ~ 7	VI7 ~ VI2	I	Digital input (Not used)
8	VI1	I	Digital input (LSB) (Not used)
9	ADCO	I	When this pin is “H”, the video signal input coming from the A/D converter (input pin A/DIN) is output to the Y output terminal (YA to Y3) in the form of 8-bit digital data with delay of 3.5 clocks. When this pin is “L”, this is normal mode. (Fixed to “L”.)
10	INSL	I	Input selection of comb filter. “H”: Digital input. “L”: Analog input (Fixed to “L”.)
11	OCLK	I	Clock amplifier input (14.3 MHz)
12	DVSS	—	Digital Ground
13	DVDD	—	Digital power supply (+5 V)
14	CLKO	O	Clock amplifier output (14.3 MHz)
15	MCK	I	Clock input (Connected pin-14)
16	ADCK	I	Clock input to A/D converter (Connected pin-14)
17	CLPI	I	A/D converter clamp pulse input. The signal voltage when the clamp pulse is Low, is clamped.
18	XCPON	I	When this pin is “H”, the clamp function is turned “OFF” so that the normal A/D converter function only works. When this pin is “L”, the clamp function is turned “ON”. (Fixed to “L”.)
19	ADVS	—	Digital Ground for A/D converter
20	ICP	I	Voltage integrator terminal for clamp control
21	CRV	I	Clamp reference voltage input
22	RB	O	Reference voltage (Bottom) standard value (+0.5 V)
23	GR	—	Guard ring (Connected to Ground)
24	AAVS	—	Analog Ground for A/D converter
25	ADIN	I	Comb filter analog input (A/D converter input)
26	AAVD	—	Analog power supply for A/D converter (+5 V)
27	RT	O	Reference voltage (Top) standard value (+2.6 V)
28	ADVD	—	Digital power supply for A/D converter (+5 V)
29	YVDD	—	Power supply for Y-A/D converter (+5 V)
30	XAYO	O	AYO inverted current output terminal (Connected to Ground)
31	AYO	O	Analog luminance signal output
32	YVG	O	Connected to capacitor
33	YVRF	I	Full scale value setting terminal for analog luminance signal
34	YIRF	O	An external resistor having “16R” that is 16 times with respect to the output resistance “R” of the AYO terminal, is connected to this pin
35	YVSS	—	Ground for Y-D/A converter
36	VB	O	Connected to capacitor
37	CVDD	—	Analog power supply for C-D/A converter (+5 V)
38	XACO	I	ACO inverted current output terminal (Connected to Ground)
39	ACO	O	Analog chroma signal output
40	CVG	O	Connected to capacitor
41	CVRF	I	Full scale value setting terminal for analog chroma signal
42	CIRF	O	An external resistor having “16R” that is 16 times with respect to the output resistance “R” of the ACO terminal, is connected to this pin
43	CVSS	—	Ground for C-D/A converter
44	YA	O	Digital luminance signal output (MSB)
45 ~ 51	Y9 ~ Y3	O	Digital luminance signal output (Not used)

Pin No.	Pin Name	I/O	Description
52	DVSS	—	Digital Ground
53	DVDD	—	Digital power supply (+5 V)
54	Y2	O	Digital luminance signal output (Not used)
55	Y1	O	Digital luminance signal output (LSB) (Not used)
56	XYOE	I	Digital luminance signal output control “H”: High impedance, “L”: Enable (Fixed to “H”)
57	CA	O	Digital chroma signal output (MSB) (Not used)
58 ~ 65	C9 ~ C2	O	Digital chroma signal output (Not used)
66	C1	O	Digital chroma signal output (LSB) (Not used)
67	XCOE	I	Digital chroma signal output control “H”: High impedance, “L”: Enable (Fixed to “H”)
68	APCN	I	Aperture correction selection. “H”: Deterioration of frequency response due to aperture effect is corrected. Aperture correction works on the Y output even in the through mode (TST ON). “L”: Standard mode (Fixed to “L”.)
69, 70	TEST	I	Test terminal (Fixed to “H”)
71	TST	I	Y-output through mode. “H”: The input composite video signal is output from the Y-output. At this time, the output signal is delayed after input by 1H + 18 clocks (with digital input). The C output that is separated by Y/C separator is output to the C-output. “L”: Y/C separation mode (Fixed to “L”.)
72	DVSS	—	Digital Ground
73	DVDD	—	Digital power supply (+5 V)
74 ~ 78	TEST	I	Test terminal (Fixed to “H”)
79	BPF	I	When this pin is “H”, Fixed to separation with BPF. When this pin is “L”, this is normal mode. (Fixed to “L”.)
80	TEST	I	Test terminal (Fixed to “H”)

• **IC1005 PICTURE MEMORY CONTROLLER (CXD8648R-AV) / PICTURE BOARD (1/3)**

Pin No.	Pin Name	I/O	Description
1	XWR	I	Host data bus write signal input. “L”: Active
2	XDRQ	O	Low pulse is output during DMA transfer request
3	XDACK	I	DMA acknowledge signal input. “L”: Active
4	GND	—	Ground
5	WEND	O	JPEG stream window end signal output. “L”: End
6	FDO	O	Register set timing frame pulse output during the picture-input lock mode. “L”: Active (Not used)
7, 8	A2, A1	I	Address input from host CPU
9	VCC	—	Power supply (+5 V)
10 ~ 25	D15 ~ D0	I/O	Data bus input/output with host CPU
26	GND	—	Ground
27	TP2	—	Not used
28	VCC	—	Power supply (+5 V)
29 ~ 37	VA0 ~ VA8	O	Address output to VRAM
38	DSF	O	Special function enable signal output to VRAM
39	GND	—	Ground
40	CAS	O	Column address strobe signal output to VRAM
41	VCC	—	Power supply (+5 V)
42	RAS2	O	Row address strobe signal output to VRAM (Not used)
43	RAS1	O	Row address strobe signal output to VRAM
44	WEH	O	Upper bytes data write enable signal output to VRAM
45	WEL	O	Lower bytes data write enable signal output to VRAM
46	TP3	—	Not used
47 ~ 54	VD15 ~ VD8	I/O	Data bus input/output with VRAM
55	GND	—	Ground
56 ~ 63	VD7 ~ VD0	I/O	Data bus input/output with VRAM
64	VCC	—	Power supply (+5 V)
65 ~ 67	TP4 ~ TP6	—	Not used
68	SE2	O	Serial data enable output to VRAM (Not used)
69	SE1	O	Serial data enable output to VRAM
70	OE2	O	Data transfer/output enable output to VRAM (Not used)
71	OE1	O	Data transfer/output enable output to VRAM
72	TP7	—	Not used
73	SDAT	I	Serial clock input from digital NTSC encoder
74	GND	—	Ground
75	SCLK	O	Serial clock output to digital NTSC encoder
76	VCC	—	Power supply (+5 V)
77	ADAK	O	Address acknowledge output to digital NTSC encoder. “L”: Active
78	ADRQ	I	Address transfer request input from digital NTSC encoder. “H”: Active
79	TEST	I	Test pin (Fixed “L”)
80	GND	—	Ground

Pin No.	Pin Name	I/O	Description
81 ~ 88	PIX0 ~ PIX7	I/O	Picture data input/output with JPEG image compression/expansion processing (Compression during
89	TP8	—	output and expansion during input)
90	VCC	—	Not used
91	DSYNC	I/O	Power supply (+5 V) Block data start signal input/output with JPEG image compression/expansion processing (Compression
92	EOS	I/O	during output and expansion during input) Final data scan information signal input/output with JPEG image compression/expansion processing
93	STOP	I/O	Picture data feed approved/not-approved signal input/output with JPEG image compression/expansion processing (Compression during output and expansion during input)
94	COMP	I	CODER's internal status signal input from JPEG image compression/expansion processing. "H": Compression, "L": Expansion
95, 96	TP9, TP10	—	Not used
97	GND	—	Ground
98	CLK	I	System clock input (12.27 MHz)
99	GND	—	Ground
100	TP11	—	Not used
101	WEI	I	Picture effective data signal input (Amount equivalent to 480H). "H": Active
102	FDI	I	Frame sync signal input. "L": Active
103	HDI	I	Horizontal sync signal input. "L": Active
104	TP12	—	Not used
105	VCC	—	Power supply (+5 V)
106 ~ 113	Y0 ~ Y7	I	Luminance signal input during input-lock mode (Not used)
114	GND	—	Ground
115 ~ 122	C0 ~ C7	I	Color difference signal input during input-lock mode. Signals are input sequentially in the order of Cb then Cr (Not used)
123	TP13	—	Not used
124	VCC	—	Power supply (+5 V)
125	XRST	I	System reset input. "L": Active
126	TP14	—	Not used
127	XCS	I	Chip select signal input. "L": Active
128	XRD	I	Host data bus read-out signal input. "L": Active

• IC2003 DIGITAL NTSC ENCODER (CXD8649R-AV) / PICTURE BOARD (1/3)

Pin No.	Pin Name	I/O	Description
1 ~ 4	COT6 ~ COT9	O	Chroma signal digital output (Not used)
5	GND	—	Ground
6 ~ 15	YOT0 ~ YOT9	O	Y (luminance) signal digital output (Not used)
16	BISTO	O	BIST output (Not used)
17	XCS	O	Chip select signal output for BIST (Fixed to “H”)
18	VXOPI	I	PAL clock input (Not used)
19	VXOPO	O	PAL clock output (Not used)
20	GND	—	Ground
21	FHSCO	O	Divider output to 4 FSC (Not used)
22	FHMKO	O	Divider output of H signal to 24 MHz (Not used)
23	DVCC	—	Digital power supply (+5 V)
24	VXONI	I	NTSC clock input (14.3 MHz)
25	VXONO	O	NTSC clock output (14.3 MHz)
26	DGND	—	Digital Ground
27	NCPO	O	NTSC phase comparator output
28	PPCM0	O	PAL phase comparator output (Not used)
29	PPCWLO	O	PAL phase comparator output (Window type L-side) (Not used)
30	PPCWHO	O	PAL phase comparator output (Window type H-side) (Not used)
31	PLLLOCK	O	PLL lock detection signal output. “H”: Lock, “L”: Unlock
32	LOCKIN	I	PLL lock signal input
33	CDAO	O	Chroma signal D/A output
34	AVCC	—	Analog power supply (+5 V)
35	CIREF	I	Reference current input to chroma signal D/A converter
36	CVREF	I	Reference voltage input to chroma signal D/A converter
37	CCOMP	I	Connected to capacitor
38	CBIAS	I	Chroma bias input
39, 40	AGND	—	Analog Ground
41	YBIAS	I	Y (luminance) bias input
42	YCOMP	I	Connected to capacitor
43	YVREF	I	Reference voltage input to Y (luminance) signal D/A converter
44	YIREF	I	Reference current input to Y (luminance) signal D/A converter
45	AVCC	—	Analog power supply (+5 V)
46	YDAO	O	Y (luminance) signal D/A output
47	MPHDET	O	Phase comparator output to 24 MHz VCO
48	AGND	—	Analog Ground
49	MVCOIN	I	VCO control voltage input
50, 51	MR1, MR2	I	Connected to the VCO reference resistor
52	MTEST	I	VCO test pin (Open)
53	AVCC	—	Analog power supply (+5 V)
54	DVCC	—	Digital power supply (+5 V)
55	WIDEID	O	WIDE ID signal output (Not used)

Pin No.	Pin Name	I/O	Description
56	TEST	I	Test pin (Fixed “L”)
57	YCON	I	Y/C signal D/A output control signal input
58	VCOMUTE	I	VCO oscillation control signal input
59	NTSC	I	Mode control signal input. “H”: NTSC
60	PAL	I	Mode control signal input. “L”: PAL
61	ATEST	I	Analog test pin (Fixed to “L”)
62	VDO	O	VD or SYNC signal output
63	HDO	O	HD signal output
64	FDO	O	FD signal output
65	MKTGI	I	12 MHz input
66	4FSC	O	4 FSC output
67	DGND	—	Digital Ground
68	M2CKI	I	24 MHz input
69	M2CKO	O	24 MHz output
70	SIOCLK	I	Serial clock input
71	SIODAT	O	Serial data output
72	ADRREQ	O	Address request signal output
73	ADRAQN	I	Address acknowledge signal input
74	RAMSCK	O	RAM read clock output
75	DVCC	—	Digital power supply (+5 V)
76 ~ 91	DIN0 ~ DIN15	I	Data input
92	DGND	—	Digital Ground
93	MCLK	O	12 MHz output (Not used)
94	DVCC	—	Digital power supply (+5 V)
95 ~ 100	COT0 ~ COT5	O	Chroma signal digital output (Not used)

• **IC2007 MD ENCODER/DECODER (CXD1805AR) / MD BOARD (1/2)**

Pin No.	Pin Name	I/O	Description
1	VDD	—	Power supply (+5 V)
2	VSS	—	Ground
3	ENSC	I	Subcode Q sync (SCOR) input from CXD2535CR
4	MOSY	—	Not used
5	DATA	I	Playback picture data signal input
6	DTO	O	Record picture data signal output
7	C2PO	I	C2PO signal input from CXD2535CR
8	BCK	I	Bit clock input (2.8224 MHz) (MCLK system)
9	LRCK	I	L/R clock input (44.1 kHz) (MCLK system)
10	WFCK	I	Write frame clock input
11	NC	—	Not used
12	NC	—	Not used
13	VSS	—	Ground
14 ~ 21	MOB7 ~ MOB0	I/O	Buffer memory data bus
22	XRAS	O	Row address strobe output to buffer memory
23	XCAS	O	Column address strobe output to buffer memory
24	XMWR	O	Data write output to buffer memory
25	MAIO	O	Address output to buffer memory
26	VDD	—	Power supply (+5 V)
27	VSS	—	Ground
28 ~ 37	MA9 ~ MA0	O	Address output to buffer memory
38	VSS	—	Ground
39	NC	—	Not used
40	NC	—	Not used
41	ACLK	O	Data transfer clock output to ATRAC encoder/decoder
42	ADTI	I	Data input from ATRAC encoder/decoder
43	ADTO	O	Data output to ATRAC encoder/decoder
44	XABS	O	Data transfer sync pulse output to ATRAC encoder/decoder
45	AC2	O	C2PO signal output to ATRAC encoder/decoder
46	XARQ	I	Data request input from ATRAC encoder/decoder
47	VSS	—	Ground
48	XTL2	O	System clock output (Not used)
49	XTL1	I	System clock (22.5792 MHz) input
50	XTL0	O	Clock output (Not used)
51	VDD	—	Power supply (+5 V)
52	VSS	—	Ground
53, 54	HA0, HA1	I	Address input from host
55	XHCS	I	Chip select input from host
56	HINT	O	Interrupt request output to host
57	HMDS	I	Host mode selection input (Fixed to “L”)

Pin No.	Pin Name	I/O	Description
58 ~ 62	HDB7 ~ HDB3	I/O	Host data bus
63	VSS	—	Ground
64 ~ 66	HDB2 ~ HDB0	I/O	Host data bus
67	XHRD	I/O	Data read strobe signal input/output from host or to IRDA
68	XHWR	I/O	Data write strobe signal input/output from host or to IRDA
69	HDRQ/XSAC	O	Data request output to host, or data acknowledge output to IRDA
70	XHAC/SDRQ	I	Data acknowledge input from host, or data request input from IRDA
71	VSS	—	Ground
72	NC	—	Not used
73	NC	—	Not used
74	A6	I	CPU address input
75	TEST	O	Test signal input
76	VDD	—	Power supply (+5 V)
77	VSS	—	Ground
78 ~ 83	A0 ~ A5	I	CPU address input
84 ~ 87	DB0 ~ DB3	I/O	CPU data bus
88	VSS	—	Ground
89 ~ 92	DB4 ~ DB7	I/O	CPU data bus
93	XINT	O	Interrupt request output to system control
94	XWR	I	Internal register write strobe input from system control
95	XRD	I	Internal register read strobe input from system control
96	XCS	I	Chip select input from system control
97	VSS	—	Ground
98	XRST	I	Reset input
99	NC	—	Not used
100	NC	—	Not used

• IC2101 ATRAC ENCODER/DECODER (CXD2536R) / MD BOARD (1/2)

Pin No.	Pin Name	I/O	Description
1	VDD	—	Power supply (+5 V)
2	SWDT	I	Write data input from system control
3	SCK	I	Serial clock input from system control
4	XLAT	I	Serial latch input from system control
5	SRDT	O/Z	Read-out data output (Not used)
6	SENS	O/Z	Internal status (SENSE) output (Not used)
7	SCMD0	I	Serial command control mode input (Fixed to “H”)
8	SCMD1	I	Serial command control mode input (Fixed to “H”)
9	XINT	O	Interrupt status output
10	TD26	I	Record/playback selection input (Fixed to “L”)
11	TD27	I	Write/monitor mode selection signal input (Fixed to “L”)
12	TD28	I	Write data transmission timing input. Used also as ON/OFF output of magnetic field head
13	VSS	—	Ground
14	SICK	I	Chip reservation pin (Fixed to “H”)
15	IDSL	I	Chip reservation pin (Fixed to “H”)
16	XILT	I	Chip reservation pin (Fixed to “H”)
17	XRST	I	Reset signal input from system control. “L” at reset.
18 ~ 21	TS0 ~ TS3	I	Test pin (Fixed to “L”)
22	EXIR	I	Chip reservation pin (Fixed to “L”)
23	SASL	I	Block selection when single is used. “L”: ATRAC, “H”: RAM Controller (Fixed to “L”)
24	SGL	I	Normally fixed to “L”. Fixed to “H” when single is used as ATRAC or RAM controller. (Fixed to“H”)
25	VSS	—	Ground
26	AIRCPB	O	ATRAC and external audio block record/playback mode signal output terminal (Not used)
27	XRQ	O	ATRAC I/F data request signal output
28	ADTO	I	ATRAC decode data signal input terminal
29	ADTI	O	ATRAC encode data signal output terminal
30	XALT	I	ATRAC I/F data transfer sync pulse signal input terminal
31	ACK	I	ATRAC I/F data transfer clock signal input terminal
32	AC2	I	ATRAC I/F C2PO signal input terminal
33	LCHST	I/O	ATRAC I/F L-channel start data signal input/output terminal (Not used)
34	EXE	I/O	ATRAC I/F EXE signal input/output terminal (Not used)
35	MUTE	I/O	ATRAC I/F MUTE signal input/output terminal (Not used)
36	OSCO	O	Clock output (45 MHz)
37	OSCI	I	Clock input (45 MHz)
38	VSS	—	Ground
39	ATT	I/O	ATRAC I/F ATT signal input/output terminal (Not used)
40	F86	O	ATRAC block 11.6 msec timing signal output terminal (Not used)
41	DOUT	O	Audio data signal output to D/A converter
42	ADIN	I	Audio data signal input from A/D converter
43	ABCK	O	Bit clock signal output
44	ALRCK	O	L/R clock signal output
45	TA12	O	Address signal output (Not used)
46, 47	SA1, SA0	O	Address signal output (Not used)

O/Z: The pin goes to high impedance when output data is not present.

Pin No.	Pin Name	I/O	Description
48, 49	TA11, TA10	O	Address signal output (Not used)
50	VSS	—	Ground
51	VDD	—	Power supply (+5 V)
52 ~ 55	TA03 ~ TA00	O	Address signal output (Not used)
56 ~ 60	TA04 ~ TA08	O	Address signal output (Not used)
61	XOE	O	Output enable control signal output (Not used)
62	TD9	O	Column address strobe signal output (Not used)
63	VSS	—	Ground
64	TD10	O	Chip select signal output (Not used)
65	TA09	O	Address signal output (Not used)
66	TD11	O	Row address strobe signal output (Not used)
67	TD12	O	Read/write control signal output (Not used)
68, 69	TD1, TD0	I/O	Data signal input/output terminal (Not used)
70 ~ 74	TD2 ~ TD6	I/O	Data signal input/output terminal (Not used)
75	VSS	—	Ground
76	TD7	I/O	Data signal input/output terminal (Not used)
77	TD8	I/O	Error (C2PO) data input/output terminal with external RAM (Not used)
78	TD29	I	External RAM selection input for error data write. (“H”: External RAM) (Fixed to “L”)
79	TD13	O	RAM access BUSY signal output (Not used)
80	TD14	O	ATRAC data EMPTY or immediately before FULL (“H” when DSC = ASC +1) (Not used) (Fixed to “L”)
81	TD15	O	ATRAC data FULL or immediately before EMPTY (“H” when ASC = DSC +1) (Not used) (Fixed to “L”)
82	TD16	O	ATRAC data is EMPTY (“H” when ASC = DSC) (Not used) (Fixed to “L”)
83	TD17	O	Output signal indicating main/sub of playback data. (“H”: Sub, ringing. “L”: Main) (Not used) (Fixed to “L”)
84	TD18	O	Insertion signal output (Not used)
85	TD19	O	DSC counter mode output (Not used)
86	TD20	O	DSC counter mode output (Not used)
87	SPO	O	System clock (512 fs = 22.5792 MHz) signal output (Not used)
88	VSS	—	Ground
89	MDSY	O	Main data sync detection signal output (Not used)
90	TD30	I	L/R clock signal input (44.1 kHz)
91	TD31	I	Bit clock signal input (2.8224 MHz)
92	TD32	I	C2PO signal input (Indicates error status of data)
93	TD21	I/O	During recording: Record audio data signal output During playback: Playback audio data signal input
94	DIDT	I	16-bit data input for CXD2535CR digital audio input
95	DODT	O	16-bit data output for CXD2535CR digital audio output
96	TD23	O	Disc drive, EFM encoder/decoder playback mode output (Not used)
97	TD33	I	Defect ON/OFF switching signal input (Not used) (Fixed to “L”)
98	SPOSL	I	Pin-87 (SPO) input/output switching input. (“L”: IN, “H”: OUT) (Not used) (Fixed to “L”)
99	TD22	O	RAM controller internal master clock output terminal (Not used)
100	VSS	—	Ground

• **IC2201 SYSTEM CONTROL (M30600M8-101FP) / MD BOARD (1/2)**

Pin No.	Pin Name	I/O	Description
1	LDIN	O	Loading motor control output
2	LDOUT	O	
3	LIN. VOL. CE	O	LINE input electronic volume control signal output
4	MIC. MUTE	O	MIC input mute control signal output
5	OUT-SW	I	Detection signal input from loading OUT switch
6	RMC	I	Remote control signal input
7	REC-SW	I	Detection signal input from loading OUT switch (“L” at REC position)
8	BYTE	I	Not used (Fixed to “H”)
9	CNVSS	I	Not used (Fixed to “L”)
10	XCIN	I	Clock signal input for watch (32 kHz)
11	XCOUT	O	Clock signal output for watch (32 kHz) (Not used)
12	RST	I	System reset signal input
13	XOUT	O	System clock output (10 MHz)
14	VSS	—	Ground
15	XIN	I	System clock input (10 MHz)
16	VCC	—	Power supply (+5 V)
17	NMI	I	Not used (Fixed to “H”)
18	ATSY	I	ATIP SYNC or SUBQ SYNC input from CXD2535CR
19	DINT	I	Interrupt signal input from MD encoder/decoder
20	POWER DOWN	I	Power down detection input (Power down at “L”)
21	FOK	I	FOK signal input from CXD2535CR
22	WRPWR	O	Laser power switching signal output to CXD2535CR and optical block
23	RMS	O	Laser modulation switching signal output
24	SCTX	O	Magnetic field head ON/OFF output
25	DQSY	I	DIGITAL IN SUBQ SYNC input from CXD2535CR
26	DF-LATCH	O	Latch signal output to D/A converter
27	DA-RST	O	Reset signal output to A/D and D/A converter
28	XDRST	O	Reset signal output to RF amplifier, CXD2535CR, MD encoder/decoder and motor driver
29	XRST36	O	Reset signal output to ATRAC encoder/decoder
30	XLAT	O	Latch signal output to serial bus
31	SWDT	O	Write data output signal to serial bus
32	SRDT	I	Read data input signal of serial bus
33	SCLK	O	Clock signal output to serial bus
34	RECPB	O	Record or playback switching signal output to CXD2535CR
35	VOL. DATA	O	Serial data output signal to electronic volume
36	—	I	Not used
37	VOL. CLK	O	Serial clock signal output to electronic volume
38	STB	O	Strobe signal output to power supply circuit
39	RDY	I	Not used (Fixed to “H”)
40	ALE	O	

Pin No.	Pin Name	I/O	Description
41	HOLD	I	Not used (Fixed to “H”)
42	HLDA	O	
43	BCLK	O	Bit clock output (Not used) (Fixed to “H”)
44	RD	O	Data read strobe signal output
45	BHE	O	Bus high bytes enable signal output
46	WR	O	Data write strobe signal output
47	CS3	O	Chip select output to MD encoder/decoder
48, 49	CS2, CS1	I	Not used (Fixed to “H”)
50	CS0	O	Chip select output to flash ROM
51 ~ 53	A19 ~ A17	O	Address output (Not used)
54 ~ 61	A16 ~ A9	O	Address output
62	VCC	—	Power supply (+5 V)
63	A8	O	Address output
64	VSS	—	Ground
65 ~ 72	A7 ~ A0	O	Address output
73	HP. VOL. CE	O	Chip enable signal output to HEADPHONE electronic volume
74	HSTB	O	Not used
75	X. H. RST	O	Reset signal output to host (V821)
76	XAMUTE	O	LINE OUT mute output. Mute at “L”
77	SHCK	I	Track jump signal input from CXD2535CR
78	SENS	I	Internal status input from CXD2535CR
79	SCL	O	Clock signal output to backup memory
80	SDA	I/O	Data signal input/output with backup memory
81 ~ 88	D7 ~ D0	I/O	Data bus
89	LDON	O	Laser ON/OFF control output. ON at “H”
90	FANSW	O	Cooling fan drive voltage selection signal output. Low output at “H”
91	BUSY	O	BUSY lamp. ON at “H”
92	XLIMIT-IN	I	Detection signal input from LIMIT IN switch. Limit in at “L”
93	PROTECT, REFLECT	I	PROTECT and REFLECT signal input
94, 95	KEY2, KEY1	I	Key input
96	AVSS	—	Ground
97	KEY0	I	Key input
98	Vref	—	Reference voltage input (+5 V)
99	AVCC	—	Analog power supply (+5 V)
100	PLAY-SW	I	Loading switch detection signal input (Chucking at “L”)

• **IC2701 A/D CONVERTER (CXD8566M) / MD BOARD (2/2)**

Pin No.	Pin Name	I/O	Description
1	INLP	I	L-channel analog (+) input
2	INLM	I	L-channel analog (–) input
3	REFI	I	Reference voltage input (+3.2 V)
4	AVDD	—	Analog power supply of modulator block (+5 V)
5	AVSS	—	Analog Ground of modulator block
6	ANAPD	I	Modulator block power down. “H”: Normal operation. “L”: Power down (Fixed to “H”)
7	HPBYP	I	Test terminal. (Fixed to “L”)
8	MODE2	I	Mode setting terminal. (Fixed to “L”)
9	OSFL	O	L-channel over-flow flag output (Not used)
10	DIGPD	I	Decimation filter block power down. “H”: Normal operation. “L”: Power down/Reset
11	TEST	I	Test terminal. (Fixed to “L”)
12	CMODE	I	Master clock selection. “H”: 384 fs “L”: 256 fs (Fixed to “L”)
13	MODE0	I	Mode setting terminal. (Fixed to “L”)
14	LRCK	I/O	LRCK output during master mode. LRCK input during slave mode
15	SCLK	I/O	BCK output during master mode. BCK input during slave mode
16	DOUT	O	Data output
17	FSYNC	I/O	SYNC output during master mode. FSYNC input during slave mode (Fixed to “H”)
18	DVDD	—	Power supply of decimation filter block (+5 V)
19	DVSS	—	Ground of decimation filter block (+5 V)
20	MCLK	I	Master clock input (256 fs)
21	OSFR	O	R-channel over-flow flag ooutput (Not used)
22	MODE1	I	Mode setting terminal. (Fixed to “L”)
23	NC	—	Not used
24	VLOGIC	—	Logic power supply of modulator block (+5 V)
25	LGND	—	Logic Ground of modulator block
26	REFO	O	Reference voltage output
27	INRM	I	R-channel analog (–) input
28	INRP	I	R-channel analog (+) input

• IC4003 SYSTEM MICROPROCESSOR CPU (µPD70741GC-25-7EA) / PICTURE BOARD (2/3)

Pin No.	Pin Name	I/O	Description
1	GND	—	Ground
2	$\overline{\text{IORD}}$	O (3)	Read strobe signal output to I/O data
3	$\overline{\text{IOWR}}$	O (3)	Write strobe signal output to I/O data
4	$\overline{\text{NMI}}$	I	Non-maskable interrupt request input (Not used)
5	$\overline{\text{HLDRQ}}$	I	Bus right request input (Not used)
6	$\overline{\text{HLDAK}}$	O	Bus acknowledge signal output (Not used)
7	RXD/P09/TC	O	DMA end signal output (Not used)
8	TXD/P08/UBE	O (3)	Data bus higher bytes enable signal output (Not used)
9	SCLK/P07	I/O	Serial clock input/output of CSI (Not used)
10	SO/P6	O	Serial data output of CSI (Not used)
11	SI/P5	I	Serial data input of CSI (Not used)
12	DACK1/P04	O	DMA acknowledge signal output (Channel 1)
13	DREQ1/P03	I	DMA request signal input (Channel 1)
14	DACK0/P02	O	DMA acknowledge signal output (Channel 0)
15	DREQ0/P01	I	DMA request signal input (Channel 0)
16	GND	—	Ground
17	VDD	—	Power supply (+5 V)
18	TCLR/P00	I	External clear and start signal input to timer 0 (Not used)
19	BLOCK/WDTOUT	O	Bus prohibit signal output, or WDT overflow signal output (Not used)
20 ~ 23	INTP03 ~ INTP00	I	Interrupt request input (Not used)
24	INTP13/TI	I	Interrupt request input (Not used)
25	$\overline{\text{VDD}}$	—	Power supply (+5 V)
26	GND	—	Ground
27 ~ 29	INTP12 ~ INTP10	I	Interrupt request input
30	$\overline{\text{RESET}}$	I	System reset input
31	I.C.	—	Connected Ground
32 ~ 39	D0 ~ D7	I/O (3)	Data bus input/output
40	VDD	—	Power supply (+5 V)
41	GND	—	Ground
42 ~ 49	D8 ~ D15	I/O (3)	Data bus input/output
50	GND	—	Ground
51	VDD	—	Power supply (+5 V)
52	A0	O (3)	Address bus output (Not used)
53 ~ 57	A1 ~ A5	O (3)	Address bus output
58	VDD	—	Power supply (+5 V)
59	GND	—	Ground
60 ~ 65	A6 ~ A11	O (3)	Address bus output
66	GND	—	Ground
67	VDD	—	Power supply (+5 V)
68	LCKOUT	O	System clock output
69	VDD	—	Power supply (+5 V)
70	X2	I	Clock input (Not used)

Pin No.	Pin Name	I/O	Description
71	X1	I	Clock input (4 MHz)
72	GND	—	Ground
73	UCAS	O (3)	Column address strobe signal output to higher data of DRAM
74	LCAS	O (3)	Column address strobe signal output to lower data of DRAM
75	GND	—	Ground
76	VDD	—	Power supply (+5 V)
77	$\overline{\text{RAS}}$	O (3)	Row address strobe signal output to DRAM
78	$\overline{\text{UMWR}}$	O (3)	Write strobe signal output to higher data of memory
79	$\overline{\text{LMWR/WE}}$	O (3)	Write strobe signal output to lower data of memory
80	$\overline{\text{MRD}}$	O (3)	Read strobe signal output to memory
81	READY	I	Bus cycle end ready signal input (Not used)
82	CS0/REFRQ	O (3)	Chip select signal, or refresh request signal output to DRAM (Not used)
83 ~ 85	CS1 ~ CS3	O (3)	Chip select signal output
86 ~ 90	A12 ~ A16	O (3)	Address bus output
91	GND	—	Ground
92	VDD	—	Power supply (+5 V)
93 ~ 97	A17 ~ A21	O (3)	Address bus output
98	A22	O (3)	Address bus output (Not used)
99	A23	O (3)	Address bus output
100	VDD	—	Power supply (+5 V)

* (3) of I/O is 3-state output.

• **IC4004 GATE ARRAY (MSM10S0110-122TS-K) / PICTURE BOARD (2/3)**

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SEL}}$	I	ROM selection input. “H”: External ROM. “L”: ROM on board. (Fixed to “H”)
2	IRD3	O	IRDA I/O read signal output
3	IWR3	O	IRDA I/O write signal output
4	DREQ IR	I	DMA request signal input (IRDA)
5	IR AEN	O	IRDA address enable signal output
6	DACK IR	O	DMA acknowledge signal output (IRDA)
7	H CS IR	O	Chip select output (IRDA)
8	H CS IR S	O	
9	GND	—	Ground
10	RST OUT	O	Reset output to IRDA and I/O expansion
11	—	—	Not used
12	$\overline{\text{RST}}$	I	Reset input
13	VCC	—	Power supply (+5 V)
14	—	—	Not used
15	—	—	
16	VCC	—	Power supply (+5 V)
17	DMA SEL0	I	DMA select signal 0 input
18	DMA SEL1	I	DMA select signal 1 input
19	DRQ M1	I	DMA request signal input from system microprocessor CPU
20	—	—	Not used
21	—	—	
22	CS SRAM	O	Chip select signal output to SRAM
23	—	—	Not used
24	—	—	
25 ~ 34	HA10 ~ HA1	O	Address bus signal output (System microprocessor CPU, JPEG image compression/expansion processing)
35	GND	—	Ground
36	$\overline{\text{MD36050X DREQ}}$	O	DMA request signal to JPEG image compression/expansion processing
37	BE 50	O	Bus buffer enable signal output
38	GND	—	Ground
39	XIRD2	O	I/O read signal output
40	XIWR2	O	I/O write signal output
41	X CS 50	O	Chip select output to JPEG image compression/expansion processing
42	VCC	—	Power supply (+5 V)
43	DACK 50	O	DMA acknowledge signal output to JPEG image compression/expansion processing
44	XBE M1	O	Bus buffer enable signal output
45	BUFDIR	O	Bus buffer input/output select output
46	—	—	Not used
47	DACK M1	O	DMA acknowledge signal output to system microprocessor CPU
48	—	—	Not used
49	XH CS M1	O	Chip select output to JPEG image compression/expansion processing

Pin No.	Pin Name	I/O	Description
50, 51	—	—	Not used
52 ~ 58	A1 ~ A7	I	Address bus signal output (CPU)
59	GND	—	Ground
60, 61	—	—	Not used
62	CLKIN	I	Clock input
63	VCC	—	Power supply (+5 V)
64, 65	—	—	Not used
66	VCC	—	Power supply (+5 V)
67 ~ 72	A8 ~ A10, A19 ~ A21	I	Address bus signal output (CPU)
73	A22	—	Not used
74	A23	I	Address bus signal output (CPU)
75, 76	—	—	Not used
77	DACK1	I	DMA acknowledge signal input
78	DRQ0	O	DMA request signal output
79	A16	I	Address bus signal output (CPU)
80	LMWR	I	Memory lower bits signal write strobe input
81	UMWR	I	Memory higher bits signal write strobe input
82	CS FONT1	O	Chip select output (Chinese character ROM)
83	CS-IO1	O	Chip select output (Expansion I/O 1)
84	CS-IO2	O	Chip select output (Expansion I/O 2)
85	GND	—	Ground
86, 87	—	—	Not used
88	GND	—	Ground
89 ~ 91	CS1 ~ CS3	I	Chip select input
92	VCC	—	Power supply (+5 V)
93	MD CS	O	Chip select output (MD microprocessor)
94	IORD	I	Expansion I/O read signal input
95	IOWR	I	Expansion I/O write signal input
96	XDACK0	I	DMA acknowledge signal input
97 ~ 99	—	—	Not used
100	CE ROM8M0	O	Chip select output (P ROM)

• IC4007 JPEG IMAGE COMPRESSION/EXPANSION (MD36050X-B5) / PICTURE BOARD (2/3)

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1, 2</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>3 ~ 12</td><td>ADDR9 ~ ADDR0</td><td>I</td><td>Address bus input</td></tr>
<tr><td>13</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>14</td><td>END</td><td>O</td><td>Compression/expansion end signal output</td></tr>
<tr><td>15</td><td>CSYNC</td><td>I/O</td><td>The respective blocks' start signal output (Not used)</td></tr>
<tr><td>16</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>17</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>18 ~ 22</td><td>COEF10 ~ COEF6</td><td>O</td><td>The DCT coefficient under processing is output to outside the IC (Not used)</td></tr>
<tr><td>23</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>24</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>25 ~ 28</td><td>COEF5 ~ COEF2</td><td>O</td><td>The DCT coefficient under processing is output to outside the IC (Not used)</td></tr>
<tr><td>29, 30</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>31, 32</td><td>COEF1, COEF0</td><td>O</td><td>The DCT coefficient under processing is output to outside the IC (Not used)</td></tr>
<tr><td>33</td><td>COMP</td><td>O</td><td>CODER's internal status signal output. "H": Compression. "L": Expansion</td></tr>
<tr><td>34, 35</td><td>CL1, CL0</td><td>O/Z</td><td>Component signal output used during expansion (Not used)
<table>
<tr><th>CL0</th><th>CL1</th><th>Component signal used</th></tr>
<tr><td>L</td><td>L</td><td>Component 1 or non-interleave</td></tr>
<tr><td>L</td><td>H</td><td>Component 2</td></tr>
<tr><td>H</td><td>L</td><td>Component 3</td></tr>
<tr><td>H</td><td>H</td><td>Component 4</td></tr>
</table></td></tr>
<tr><td>36</td><td>STOP</td><td>I/O</td><td>Active low control terminal.
During compression: Data field to picture data controller is OK or NG output
During expansion: Picture data controller ready OK signal input</td></tr>
<tr><td>37</td><td>EOS</td><td>I/O</td><td>Active low control terminal.
Input or output in synchronous with the final data of each scan. During compression: Input.
During expansion: Output</td></tr>
<tr><td>38</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>39</td><td>DSYNC</td><td>I/O</td><td>Block data start signal input/output. During compression: Input. During expansion : Output</td></tr>
<tr><td>40 ~ 45</td><td>PIXEL11 ~ PIXEL6</td><td>I/O</td><td>Original picture data and expanded picture data access input/output</td></tr>
<tr><td>46</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>47, 48</td><td>PIXEL5, PIXEL4</td><td>I/O</td><td>Original picture data and expanded picture data access input/output</td></tr>
<tr><td>49, 50</td><td>PIXEL3, PIXEL2</td><td>I/O</td><td>Original picture data and expanded picture data access input/output (Not used)</td></tr>
<tr><td>51, 52</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>53, 54</td><td>PIXEL1, PIXEL0</td><td>I/O</td><td>Original picture data and expanded picture data access input/output (Not used)</td></tr>
<tr><td>55, 56</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>57</td><td>$\overline{\text{FREEZE}}$</td><td>I</td><td>Operation freeze input. "H": Normal operation. "L": Operation freeze (Fixed to "H")</td></tr>
<tr><td>58</td><td>$\overline{\text{RESET}}$</td><td>I</td><td>Reset input. "L": Reset</td></tr>
<tr><td>59</td><td>$\overline{\text{STDBY}}$</td><td>I</td><td>Standby signal input. "L": Standby</td></tr>
<tr><td>60</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>61</td><td>GND</td><td>—</td><td>Ground</td></tr>
<tr><td>62</td><td>VDD</td><td>—</td><td>Power supply (+5 V)</td></tr>
<tr><td>63</td><td>DCLK</td><td>I</td><td>System clock input (24.54545 MHz)</td></tr>
<tr><td>64</td><td>CLKEN</td><td>I</td><td>Internal clock control terminal. "H": Normal operation. "L": Clock line stop</td></tr>
<tr><td>65</td><td>GND</td><td>—</td><td>Ground</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
66	VDD	—	Power supply (+5 V)
67	$\overline{\text{CAEN}}$	O	Numbers of access synchronous output of device connected to CODE bus. “L”: Synchronized (Notused)
68	$\overline{\text{CCS}}$	O	Control output of device connected to CODE bus (Not used)
69	$\overline{\text{CWE}}$	O	Compression data write signal output to device connected to CODE bus (Not used)
70	$\overline{\text{COE}}$	O	Compression data read signal output to device connected to CODE bus (Not used)
71	$\overline{\text{CBUSY}}$	I	BUSY signal input from device connected to CODE bus (Not used)
72	VDD	—	Power supply (+5 V)
73	GND	—	Ground
74 ~ 79	CODE7 ~ CODE2	I/O	High speed access to compression data during master mode. During compression: Output. During expansion: Input
80	GND	—	Ground
81, 82	CODE1, CODE0	I/O	High speed access to compression data during master mode. During compression: Output. During expansion: Input
83	VDD	—	Power supply (+5 V)
84 ~ 91	DATA7 ~ DATA0	I/O	Host data bus input/output
92	$\overline{\text{DINT}}$	O	Interrupt signal output
93	$\overline{\text{DREQ}}$	O	DMA transfer request signal output to host. “L”: Request
94	VDD	—	Power supply (+5 V)
95	$\overline{\text{DACK}}$	I	DMA transfer acknowledge input from host. “L”: Acknowledge
96	$\overline{\text{CS}}$	I	Chip select input from host. “L”: Active
97	$\overline{\text{WR}}$	I	Host data bus write signal input
98	$\overline{\text{RD}}$	I	Host data bus read signal input
99	VDD	—	Power supply (+5 V)
100	$\overline{\text{INT}}$	O	Interrupt request output to host. “L”: Acknowledge

• **IC5003 I/O EXPANSION (µPD71055GB-10-3B4) / PICTURE BOARD (3/3)**

Pin No.	Pin Name	I/O	Description
1	NC	—	Not used
2	$\overline{CS}$	I	Chip select input from gate array
3	GND	—	Ground
4, 5	A2, A1	I	Address input
6 ~ 10	P27 ~ P24, P20	—	Not used
11	P21	I	BUSY signal input from image loading control microprocessor
12	P22	O	Strobe signal output to image loading control microprocessor
13	P23	—	Not used
14 ~ 16	P10 ~ P12	I/O	Data input/output
17	NC	—	Not used
18 ~ 22	P13 ~ P17	I/O	Data input/output
23	VDD	—	Power supply (+5 V)
24 ~ 31	D7 ~ D0	I/O	Data input/output
32	RESET	I	Reset input
33, 34	NC	—	Not used
35	$\overline{WR}$	I	Write strobe input
36 ~ 41	P07 ~ P02	—	Not used
42	P01	I	PSD signal input from IRDA
43	P00	I	BUSY signal input from IR controller
44	RD	I	Read strobe input

• **IC5004 I/O EXPANSION (μPD71055GB-10-3B4) / PICTURE BOARD (3/3)**

Pin No.	Pin Name	I/O	Description
1	NC	—	Not used
2	$\overline{CS}$	I	Chip select input from gate array
3	GND	—	Ground
4, 5	A2, A1	I	Address input
6	DMA SEL0	O	DMA select signal output to JPEG image compression/expansion processing
7	DMA SEL1	O	
8	P25	O	Clock enable output to JPEG image compression/expansion processing
9	P24	O	Standby signal output to JPEG image compression/expansion processing
10	P20	I	End signal input from JPEG image compression/expansion processing
11	P21	I	Data interrupt signal input from JPEG image compression/expansion processing
12	P22	I	Write enable output to picture memory controller
13	50XINT	I	Interrupt signal input
14, 15	P10, P11	—	Not used
16	P12	O	VCO reset output to digital NTSC encoder
17	NC	—	Not used
18	P13	O	PAL selection output to digital NTSC encoder (Not used)
19	P14	O	NTSC selection output to digital NTSC encoder
20	P15	O	Picture output mute output to digital NTSC encoder
21	P16	O	Reset output
22	P17	—	Not used
23	VDD	—	Power supply (+5 V)
24 ~ 31	D7 ~ D0	I/O	Data input/output
32	RESET	I	Reset input
33, 34	NC	—	Not used
35	$\overline{WR}$	I	Write strobe input
36	M1 RESET	O	Reset output to picture memory controller
37	50X RESET	O	Reset output to JPEG image compression/expansion processing
38	BUZZER	O	Buzzer control signal output
39	P04	—	Not used
40	V MUTE	—	
41	V POWER	O	Power supply strobe output to VIDEO IN
42	OUT SEL1	—	Not used
43	OUT SEL0	O	Video input/output selection output to video switch
44	RD	I	Read strobe input

• IC5002 IR CONTROLLER (VCS94450-1) / PICTURE BOARD (3/3)

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>2</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>3</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>4</td><td>XCVR DOWN1</td><td>O</td><td rowspan="2">Power ON/OFF output to IR transceiver. “H”: IR OFF (Not used)</td></tr>
<tr><td>5</td><td>XCVR DOWN0</td><td>O</td></tr>
<tr><td>6</td><td>GAIN CTRL</td><td>O</td><td>Power control output to IR transmitter and gain control output to IR receiver</td></tr>
<tr><td>7</td><td>TXO</td><td>O</td><td>Transmission data output to IR device</td></tr>
<tr><td>8</td><td>VDD</td><td>—</td><td>+5 V power supply</td></tr>
<tr><td>9</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>10</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>11</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>12, 13</td><td>MODE1, MODE2</td><td>I</td><td>Test mode setting terminal (Fixed to “L”)
<table>
<tr><th>MODE1</th><th>MODE2</th><th>Contents of mode</th></tr>
<tr><td>L</td><td>L</td><td>Normal operation</td></tr>
<tr><td>L</td><td>H</td><td>UART-A</td></tr>
<tr><td>H</td><td>L</td><td>UART-B</td></tr>
<tr><td>H</td><td>H</td><td>SCC+</td></tr>
</table></td></tr>
<tr><td>14</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>15</td><td>DACKY</td><td>I</td><td>DMA acknowledge signal input (Fixed to “H”)</td></tr>
<tr><td>16</td><td>DACKX</td><td>I</td><td>DMA acknowledge signal input from gate array</td></tr>
<tr><td>17</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>18</td><td>REGISTORV</td><td>I</td><td>Reset input. “H”: Reset</td></tr>
<tr><td>19</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>20, 21</td><td>SA0, SA1</td><td>I</td><td>Address bus input</td></tr>
<tr><td>22</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>23</td><td>SA2</td><td>I</td><td>Address bus input</td></tr>
<tr><td>24 ~ 27</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>28</td><td>SA3</td><td>I</td><td>Address bus input</td></tr>
<tr><td>29</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>30</td><td>SA4</td><td>I</td><td>Address bus input</td></tr>
<tr><td>31</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>32</td><td>SA5</td><td>I</td><td>Address bus input</td></tr>
<tr><td>33 ~ 35</td><td>SA6 ~ SA8</td><td>I</td><td>Address bus input (Not used)</td></tr>
<tr><td>36</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>37</td><td>VDD</td><td>—</td><td>+5 V power supply</td></tr>
<tr><td>38</td><td>NC</td><td>—</td><td>Not used</td></tr>
<tr><td>39</td><td>VSS</td><td>—</td><td>Ground</td></tr>
<tr><td>40</td><td>NC</td><td>—</td><td>Not used</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
41 ~ 44	SA9 ~ SA12	I	Address bus input (Not used)
45	NC	—	Not used
46 ~ 48	SA13 ~ SA15	I	Address bus input (Not used)
49 ~ 52	NC	—	Not used
53	VSS	—	Ground
54	IRBUSY	O	IR controller status signal output. “H”: Under loading
55	BUFFDIR	O	Buffer direction command output (Not used)
56	BUFFEND	O	Buffer enable signal output (Not used)
57	VDD	—	+5 V power supply
58	NC	—	Not used
59	VSS	—	Ground
60, 61	SO0, SO1	I/O	Data bus input/output
62	VDD	—	+5 V power supply
63	NC	—	Not used
64, 65	SO2, SO3	I/O	Data bus input/output
66	VSS	—	Ground
67	NC	—	Not used
68, 69	SO4, SO5	I/O	Data bus input/output
70	VDD	—	+5 V power supply
71, 72	SO6, SO7	I/O	Data bus input/output
73	VSS	—	Ground
74 ~ 77	NC	—	Not used
78	VDD	—	+5 V power supply
79	DRQX	I/O	DMA send request output to gate array
80	DRQY	O	DMA receive request output (Not used)
81	NC	—	Not used
82	IRQUART	O	Interrupt request output to gate array. This output occurs when UART-A is “H”
83	IRQSCC+	O	Interrupt request output to gate array. This output occurs when the WRAP bit of either SCC+ or UART-B is “H”
84	VSS	—	Ground
85	NC	—	Not used
86	SETUP	I	Access enable input to POS register. “L”: Active
87	VSS	—	Ground
88	IRDISABLE	I	The internal IR function is disabled when “L” (Fixed to “H”)
89	VDD	—	+5 V power supply
90	CLK	I	Clock input (36.864 MHz)
91	NC	—	Not used
92	AEN	I	Address enable input
93	IOR	I	I/O read signal input
94	IOW	I	I/O write signal input

Pin No.	Pin Name	I/O	Description
95	NC	—	Not used
96	RXDIR	I	Low frequency receive data input from IR
97	RXDSH	I	High frequency receive data input from IR
98	NC	—	Not used
99	VDD	—	+5 V power supply
100	NC	—	Not used

SECTION 7
EXPLODED VIEWS

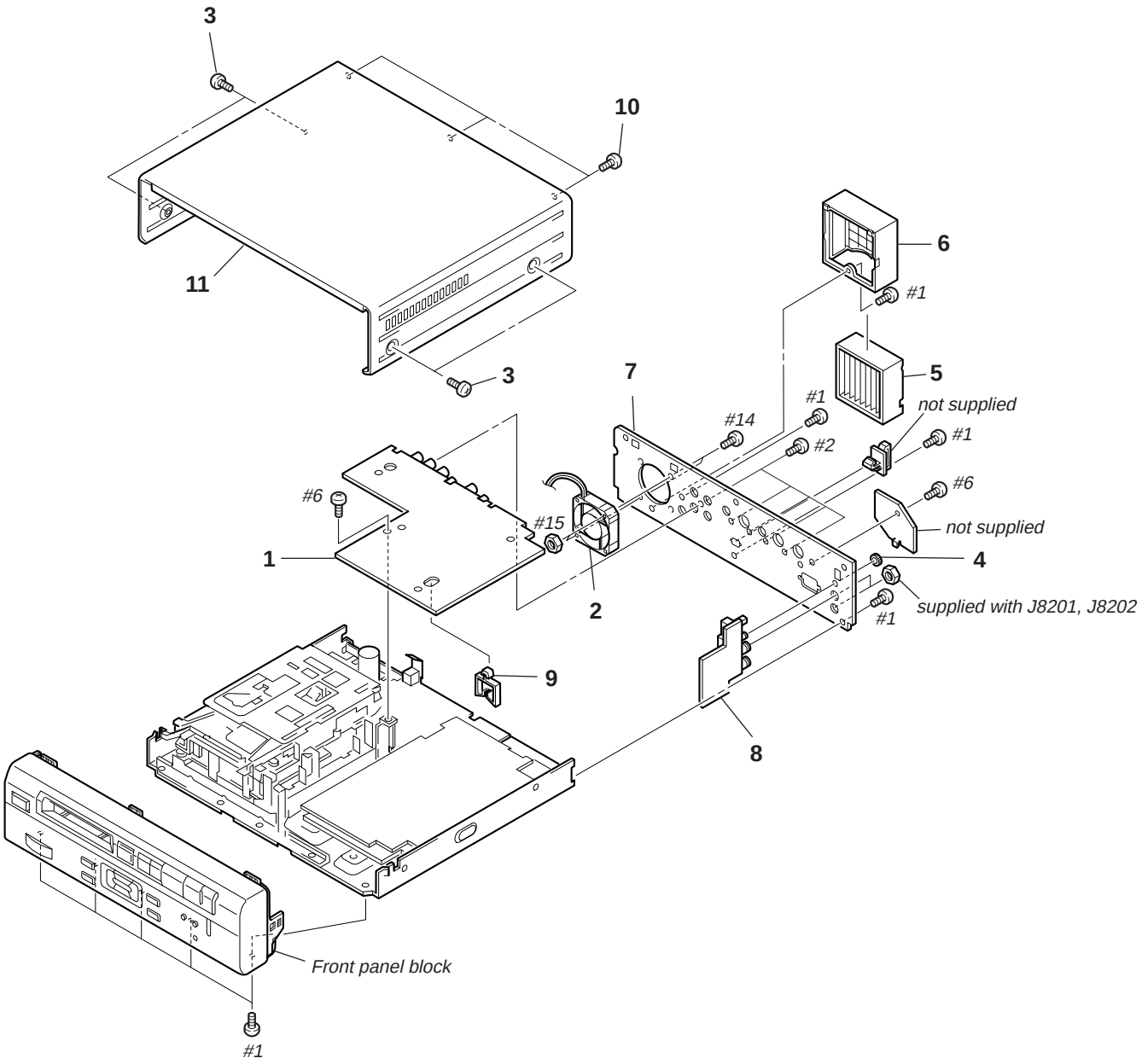
NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded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

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

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

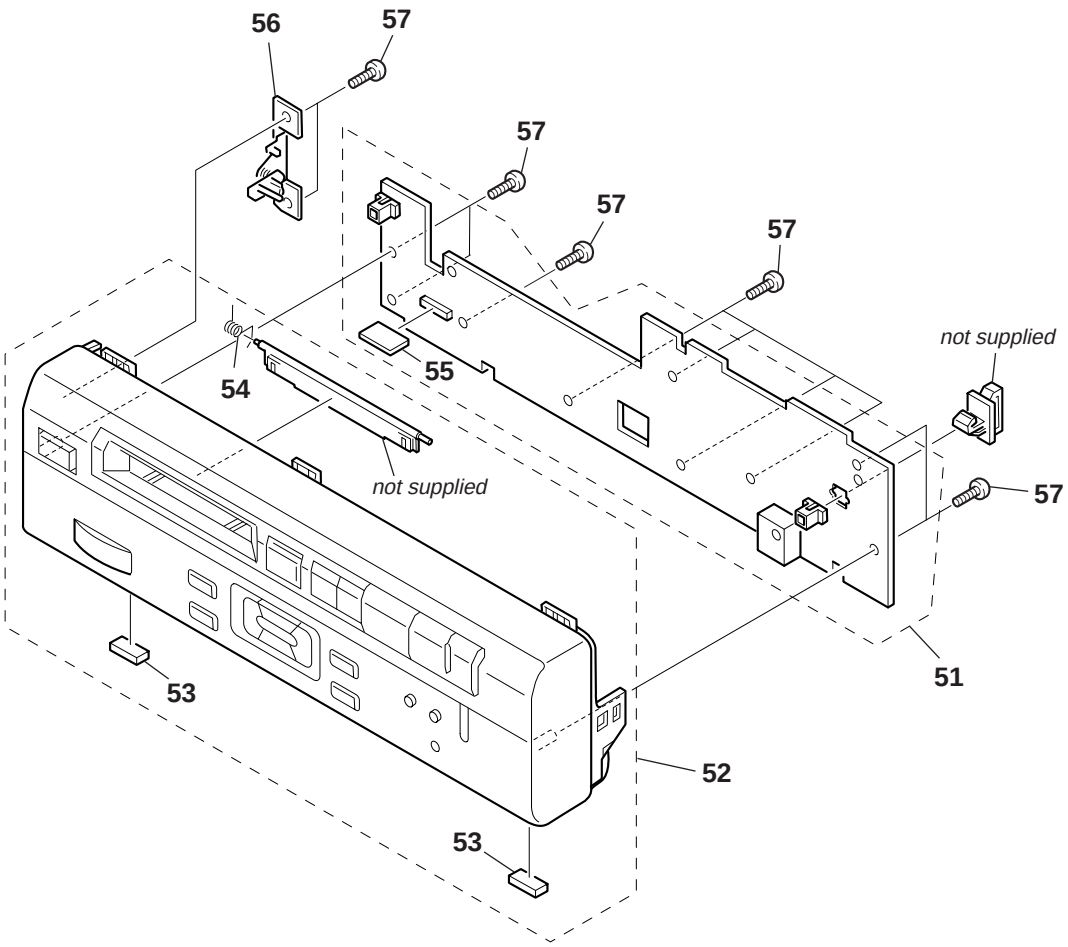
Les composants identifiés par une marque ! sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. UPPER CASE SECTION



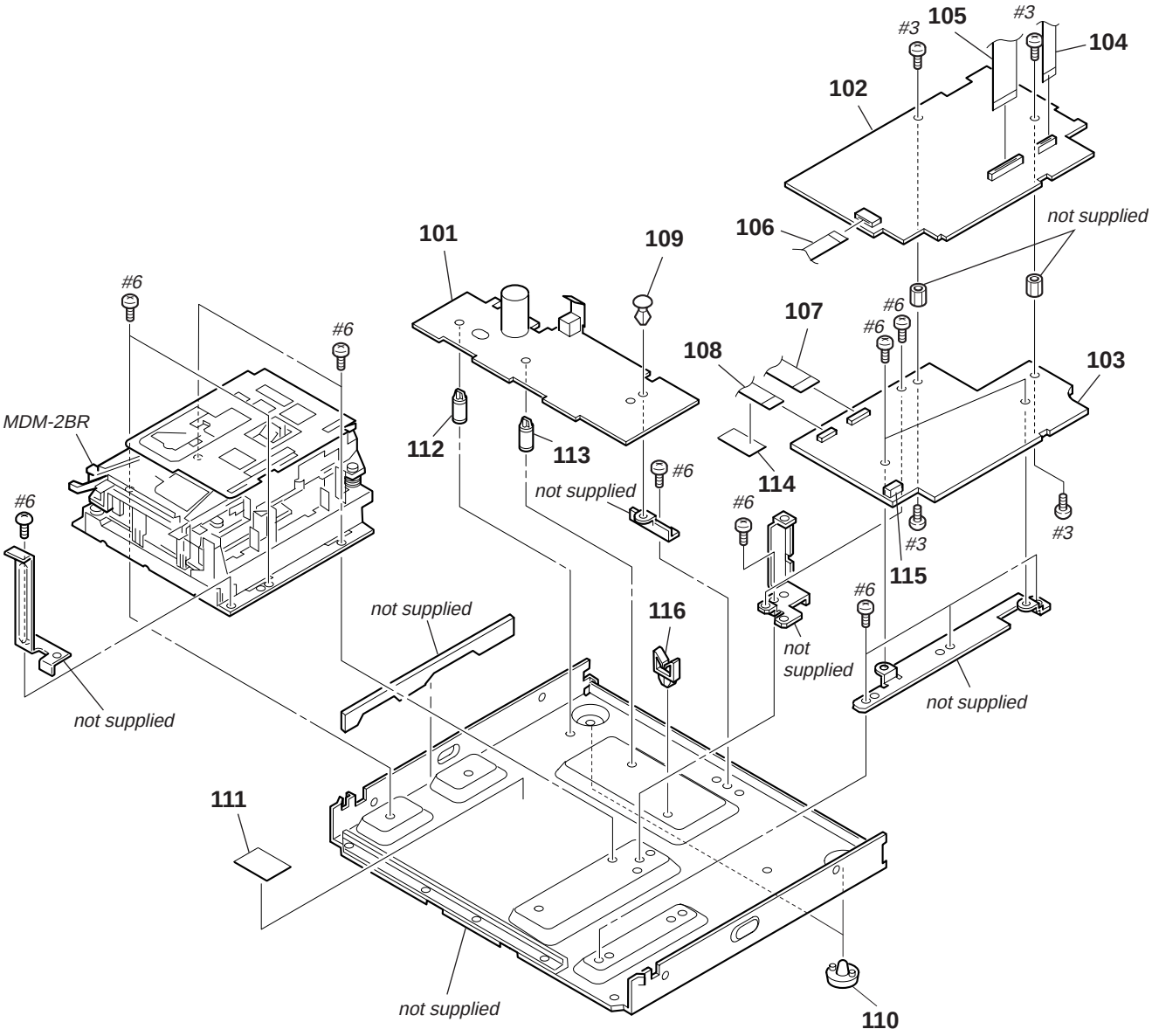
Ref. No.	Part No.	Description	Remarks
* 1	A-4699-901-A	VIDEO IN BOARD, COMPLETE	
2	1-698-851-11	FAN, DC	
3	3-704-366-11	SCREW (CASE) (M3 × 8)	
4	3-724-182-01	NUT (SMALL JACK), M6	
5	A-8042-756-B	FILTER	
6	4-624-933-01	HOLDER, FILTER	
* 7	4-996-502-01	PANEL, REAR	
* 8	1-668-277-11	JACK BOARD	
* 9	4-309-753-00	HOLDER, WIRE	
10	3-704-515-31	SCREW (BV/RING)	
11	4-969-922-92	UPPER CASE	

7-2. FRONT PANEL SECTION



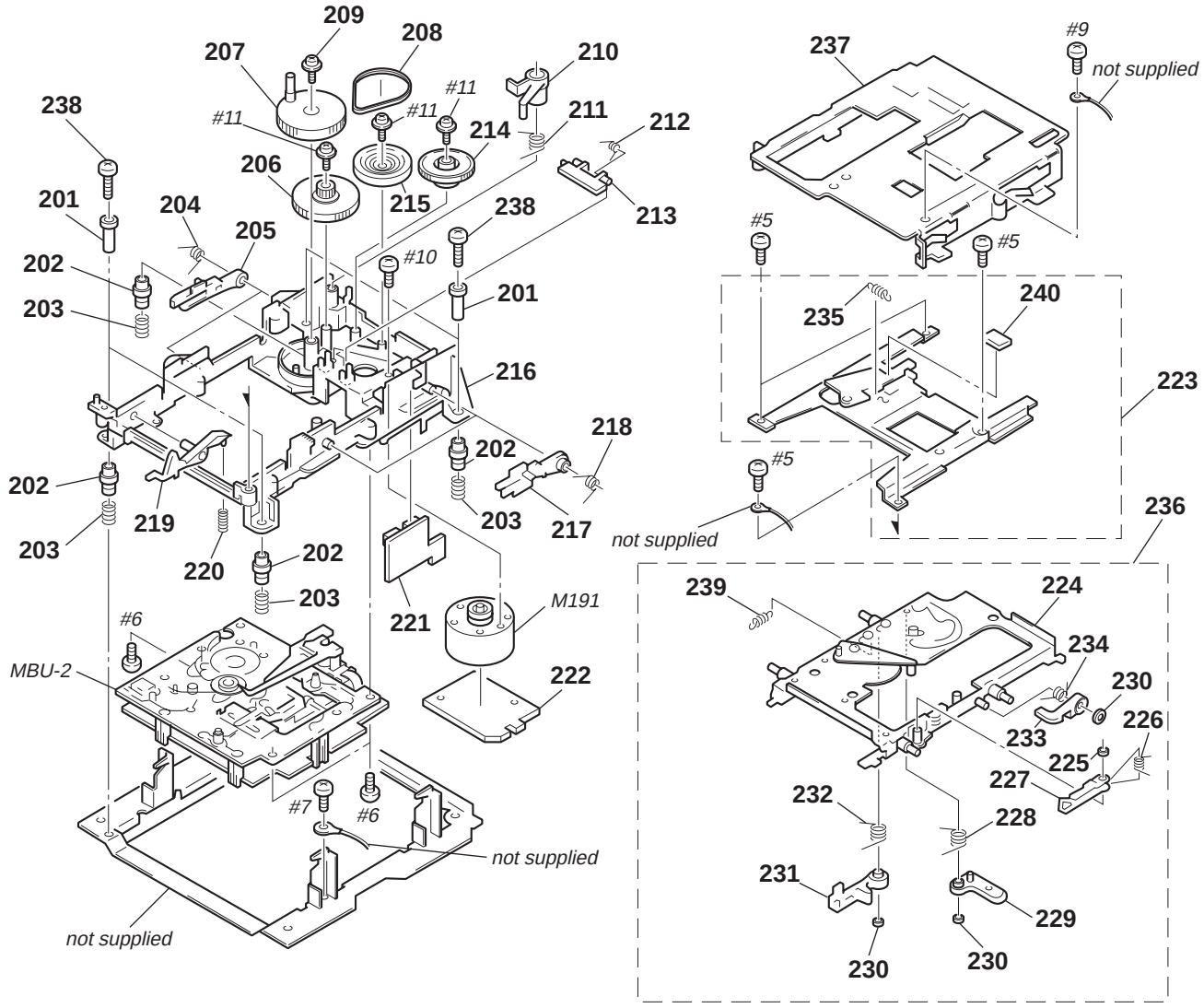
Ref. No.	Part No.	Description	Remarks
* 51	A-4699-905-A	PANEL BOARD, COMPLETE	
52	X-4949-319-1	PANEL ASSY, FRONT	
* 53	4-930-336-71	FOOT (FELT)	
54	4-978-356-01	SPRING (LID), TORSION	
* 55	1-668-276-11	IRDA BOARD	
56	A-4660-730-A	BRACKET (LEVER) ASSY	
57	4-951-620-01	SCREW (2.6 × 8), +BVTP	

7-3. BOTTOM CABINET SECTION



Ref. No.	Part No.	Description	Remarks
* 101	A-4699-903-A	POWER BOARD, COMPLETE	
* 102	A-4699-908-A	PICTURE BOARD, COMPLETE	
* 103	A-4699-910-A	MD BOARD, COMPLETE	
104	1-783-069-11	WIRE (FLAT TYPE) (13 CORE)	
105	1-783-070-11	WIRE (FLAT TYPE) (25 CORE)	
106	1-777-555-21	WIRE (FLAT TYPE) (7 CORE)	
107	1-777-553-11	WIRE (FLAT TYPE) (30 CORE)	
108	1-777-552-11	WIRE (FLAT TYPE) (18 CORE)	
109	4-812-134-11	RIVET (DIA. 3.5), NYLON	
110	4-965-822-01	FOOT	
* 111	3-703-044-26	LABEL, CAUTION	
* 112	3-672-754-01	HOLDER, PC BOARD	
* 113	3-682-419-71	HOLDER, P.C.B	
114	3-831-441-99	CUSHION	
115	4-999-924-01	CUSHION (A)	
116	4-309-753-00	HOLDER, WIRE	

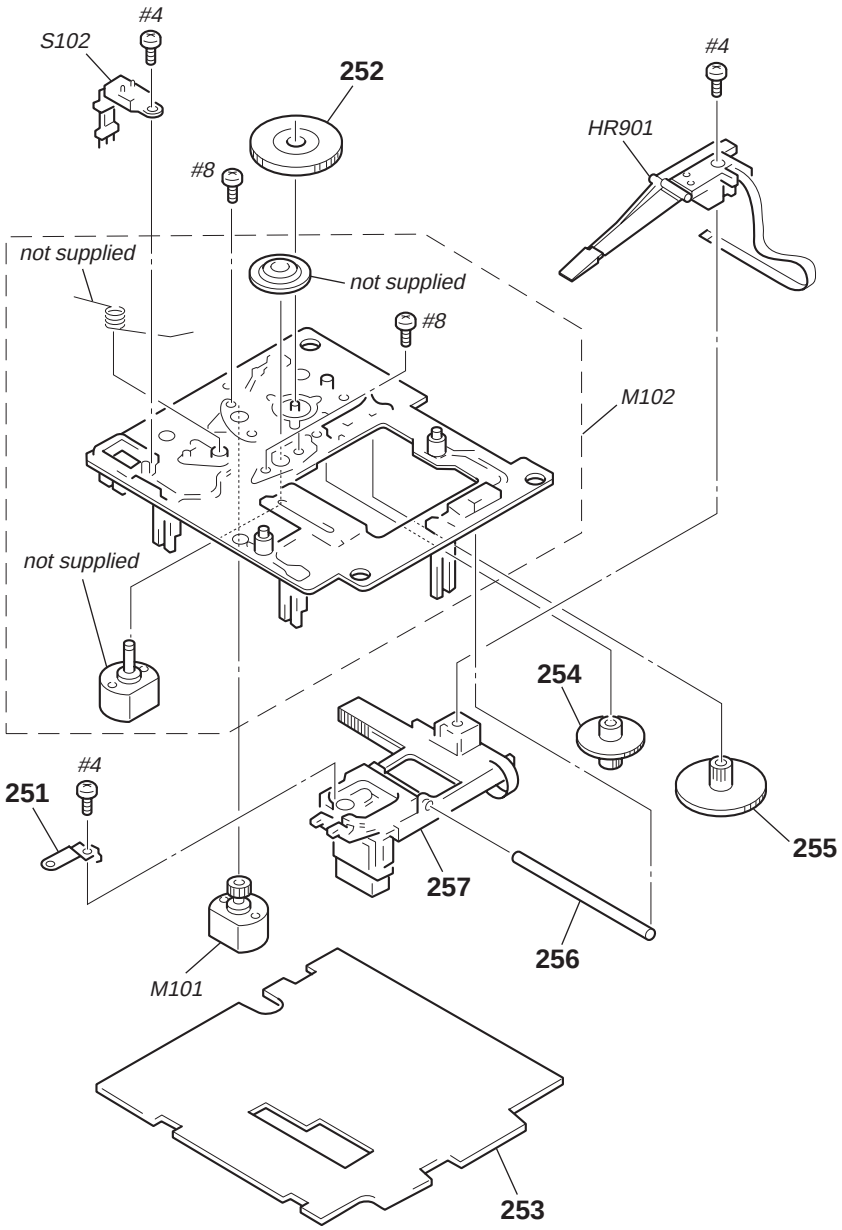
7-4. MECHANISM SECTION (MDM-2BR)



Ref. No.	Part No.	Description	Remarks
201	4-983-100-01	COLLAR (DAMPER)	
202	4-967-671-01	INSULATOR (MD)	
203	4-967-673-01	SPRING, COMPRESSION	
204	4-967-668-01	SPRING (UDL), TORSION	
205	4-967-667-01	LEVER (UDL)	
206	4-977-610-01	GEAR (BD-B)	
207	X-4945-069-1	CAM ASSY	
208	4-967-656-01	BELT (BD)	
209	4-933-134-01	SCREW (+PTPWH M2.6X6)	
210	4-967-637-01	LEVER (SLM)	
211	4-984-426-01	SPRING (SLM), TORSION	
212	4-968-273-01	SPRING (OWH), TORSION	
213	4-968-272-01	LEVER (OWH)	
214	4-977-609-01	GEAR (BD-A)	
215	4-977-608-01	PULLEY (BD)	
216	4-977-777-01	BASE (BD)	
217	4-967-669-01	LEVER (UDR)	
218	4-967-670-01	SPRING (UDR), TORSION	
219	4-979-400-01	LEVER (DOOR)	
220	4-970-710-01	SPRING, COMPRESSION	
* 221	1-653-411-11	DETECTION SW BOARD	

Ref. No.	Part No.	Description	Remarks
* 222	1-653-412-11	MOTOR BOARD	
223	A-4672-087-A	BRACKET (LVO) ASSY	
224	X-4947-136-2	HOLDER ASSY	
225	4-968-919-11	WASHER, STOPPER	
226	4-967-646-01	SPRING (SHT), TORSION	
227	4-967-645-01	LEVER (SHT)	
228	4-983-106-02	SPRING (LM), TORSION	
229	4-967-639-01	LEVER (LM)	
230	4-968-919-01	WASHER, STOPPER	
231	4-967-641-01	LEVER (L)	
232	4-967-642-01	SPRING (L), TORSION	
233	4-982-040-01	LEVER (LOCK)	
234	4-982-099-01	SPRING (LOCK), TORSION	
235	4-967-664-05	SPRING, TENSION	
236	A-4672-071-B	HOLDER COMPLETE ASSY	
* 237	X-4945-872-1	SLIDER (M) ASSY	
238	4-972-910-01	SCREW (2.6X18), +B	
239	4-971-743-02	SPRING, TENSION	
240	4-983-110-01	CUSHION (LVO)	
241	4-991-727-01	STOPPER (SLD)	
M191	A-4660-646-A	MOTOR (LOADING) ASSY	

7-5. BASE UNIT SECTION (MBU-2)



Ref. No.	Part No.	Description	Remarks
251	4-967-679-01	SPRING (OP), LEAF	
252	4-967-675-01	GEAR (SL-A)	
* 253	A-4673-174-A	BD BOARD, COMPLETE	
254	4-967-676-01	GEAR (SL-B)	
255	4-967-677-01	GEAR (SL-C)	
256	4-967-678-01	SHAFT (OP)	

Ref. No.	Part No.	Description	Remarks
⚠ 257	8-583-009-12	OPTICAL PICK-UP KMS-210A/J-N	
HR901	1-500-304-21	HEAD, OVER LIGHT	
M101	A-4660-651-A	MOTOR (SLED) ASSY	
M102	A-4660-650-A	CHASSIS ASSY, BU	
S102	1-762-148-11	SWITCH, PUSH (2 KEY)	

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 numéro spécifié.

SECTION 8
ELECTRICAL PARTS LIST

BD

NOTE:

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

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 numéro spécifié.

- 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, -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.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-4673-174-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C104	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C105	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C106	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C107	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C114	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C116	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C117	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C121	1-126-395-11	ELECT	22uF	20%	16V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C125	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C126	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C127	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C128	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C129	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C130	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C131	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C132	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C133	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C134	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C135	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C136	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C143	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C144	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C152	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C155	1-104-916-11	TANTAL. CHIP	6.8uF	20%	20V
C160	1-104-601-11	ELECT CHIP	10uF	20%	10V
C161	1-104-601-11	ELECT CHIP	10uF	20%	10V
C163	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C164	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C166	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C167	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C169	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C170	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C171	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C176	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C177	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C182	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C183	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C184	1-107-836-11	ELECT CHIP	22uF	20%	8V
C185	1-164-611-11	CERAMIC CHIP	0.001uF	10%	500V
C186	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C191	1-126-395-11	ELECT	22uF	20%	16V
C192	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C193	1-164-346-11	CERAMIC CHIP	1uF		16V
C194	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
		< CONNECTOR >			
CN101	1-766-508-11	CONNECTOR, FFC/FPC (ZIF) 22P			
CN102	1-766-510-21	CONNECTOR, FFC/FPC 30P			
CN103	1-766-509-21	CONNECTOR, FFC/FPC 18P			
CN104	1-766-898-21	HOUSING, CONNECTOR(PC BOARD) 4P			
		< DIODE >			
D101	8-719-988-62	DIODE 1SS355			
D155	8-719-031-17	DIODE 1SS322-TE85L			
D161	8-719-421-15	DIODE MA8027-L			
D181	8-719-033-60	DIODE F1P2STP			
D183	8-719-033-60	DIODE F1P2STP			
		< IC >			
IC101	8-752-072-68	IC CXA1981AR			
IC102	8-759-243-19	IC TC7SU04F			
IC121	8-752-378-79	IC CXD2535CR			
IC122	8-759-243-19	IC TC7SU04F			
IC151	8-759-179-60	IC MPC17A38VMEL			
IC171	8-759-504-12	IC X24C01S			
IC172	8-759-149-73	IC UPC842G2			
IC181	8-759-095-65	IC TC74ACT540FS			
IC182	8-759-243-19	IC TC7SU04F			
IC191	8-759-822-99	IC L88MS05T-FA			

BD DETECTION SW

Ref. No.	Part No.	Description				Remarks
		< COIL >				
L101	1-414-234-11	INDUCTOR CHIP	0uH			
L102	1-414-234-11	INDUCTOR CHIP	0uH			
L103	1-414-234-11	INDUCTOR CHIP	0uH			
L105	1-414-234-11	INDUCTOR CHIP	0uH			
L106	1-414-234-11	INDUCTOR CHIP	0uH			
L121	1-414-234-11	INDUCTOR CHIP	0uH			
L122	1-412-039-51	INDUCTOR CHIP	100uH			
L151	1-412-622-51	INDUCTOR	10uH			
L152	1-412-622-51	INDUCTOR	10uH			
L153	1-412-039-51	INDUCTOR CHIP	100uH			
L154	1-412-039-51	INDUCTOR CHIP	100uH			
L155	1-410-980-51	INDUCTOR CHIP	1mH			
L161	1-414-234-11	INDUCTOR CHIP	0uH			
L162	1-414-234-11	INDUCTOR CHIP	0uH			
L195	1-233-316-21	FERRITE	0uH			
		< TRANSISTOR >				
Q101	8-729-905-12	TRANSISTOR	DTA144EU			
Q151	8-729-029-14	TRANSISTOR	DTC144EUA-T106			
Q162	8-729-101-07	TRANSISTOR	2SB798-DL			
Q163	8-729-905-12	TRANSISTOR	DTA144EU			
Q164	8-729-924-19	TRANSISTOR	DTA123JU			
Q181	8-729-018-75	TRANSISTOR	2SJ278MY			
Q182	8-729-017-65	TRANSISTOR	2SK1764KY			
		< RESISTOR >				
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R104	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R105	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R106	1-216-133-00	METAL CHIP	3.3M	5%	1/10W	
R107	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R110	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R113	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R114	1-216-025-91	RES,CHIP	100	5%	1/10W	
R116	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R117	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R120	1-216-025-91	RES,CHIP	100	5%	1/10W	
R121	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R122	1-216-295-91	SHORT	0			
R123	1-216-037-00	METAL CHIP	330	5%	1/10W	
R124	1-216-025-91	RES,CHIP	100	5%	1/10W	
R125	1-216-025-91	RES,CHIP	100	5%	1/10W	
R128	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R129	1-216-037-00	METAL CHIP	330	5%	1/10W	
R130	1-216-041-00	METAL CHIP	470	5%	1/10W	
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R132	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R133	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R134	1-216-037-00	METAL CHIP	330	5%	1/10W	
R135	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R136	1-216-041-00	METAL CHIP	470	5%	1/10W	
R137	1-216-025-91	RES,CHIP	100	5%	1/10W	
R139	1-216-017-91	RES,CHIP	47	5%	1/10W	
R140	1-216-017-91	RES,CHIP	47	5%	1/10W	

Ref. No.	Part No.	Description			Remarks
R141	1-216-295-91	SHORT	0		
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W
R143	1-216-073-00	METAL CHIP	10K	5%	1/10W
R144	1-216-025-91	RES,CHIP	100	5%	1/10W
R145	1-216-121-91	RES,CHIP	1M	5%	1/10W
R146	1-216-037-00	METAL CHIP	330	5%	1/10W
R147	1-216-025-91	RES,CHIP	100	5%	1/10W
R148	1-216-045-00	METAL CHIP	680	5%	1/10W
R150	1-216-295-91	SHORT	0		
R151	1-216-097-91	RES,CHIP	100K	5%	1/10W
R154	1-220-262-11	RES,CHIP	680	5%	1/4W
R155	1-220-262-11	RES,CHIP	680	5%	1/4W
R158	1-216-121-91	RES,CHIP	1M	5%	1/10W
R161	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R162	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R163	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R164	1-216-045-00	METAL CHIP	680	5%	1/10W
R165	1-216-097-91	RES,CHIP	100K	5%	1/10W
R166	1-220-250-11	RES,CHIP	10	5%	1/2W
R167	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R169	1-219-724-11	METAL CHIP	1	1%	1/4W
R170	1-216-073-00	METAL CHIP	10K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R174	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R176	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R178	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R181	1-216-073-00	METAL CHIP	10K	5%	1/10W
R182	1-216-089-91	RES,CHIP	47K	5%	1/10W
R183	1-216-089-91	RES,CHIP	47K	5%	1/10W
R186	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R187	1-216-134-00	METAL CHIP	2.2	5%	1/8W
		< VARIABLE RESISTOR >			
RV101	1-241-396-11	RES, ADJ, METAL GLAZE 22K			
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K			
		< SWITCH >			
S101	1-572-467-61	SWITCH, PUSH (1 KEY)(LIMIT)			
**********					
*	1-653-411-11	DETECTION SW BOARD			
		**********			
		< CONNECTOR >			
CN193	1-770-010-21	CONNECTOR, BOARD TO BOARD 4P			
		< SWITCH >			
S191	1-762-149-11	SWITCH, PUSH (1 KEY) (LOAD OUT)			
S192	1-762-149-11	SWITCH, PUSH (1 KEY) (LOAD IN)			
S193	1-762-149-11	SWITCH, PUSH (1 KEY) (CHUCKING)			
**********					

Ref. No.	Part No.	Description				Remarks
*	1-668-276-11	IRDA BOARD				
		**********				
		< CONNECTOR >				
CN8001	1-766-724-11	CONNECTOR, BOARD TO BOARD 7P				
		< IC >				
IC8001	8-749-013-15	IC IBM31T1100(K)				
**********						
*	1-668-277-11	JACK BOARD				
		**********				
		< CAPACITOR >				
C8201	1-164-159-11	CERAMIC	0.1uF		50V	
C8202	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN8201	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P				
		< JACK >				
J8201	1-784-249-11	JACK (LARGE TYPE) 1P (WHITE)				
J8202	1-784-249-11	JACK (LARGE TYPE) 1P (RED)				
J8203	1-507-743-21	JACK, STEREO MINIATURE (FS1)				
		< RESISTOR >				
R8201	1-247-807-31	CARBON	100	5%	1/4W	
R8202	1-247-807-31	CARBON	100	5%	1/4W	
R8203	1-247-807-31	CARBON	100	5%	1/4W	
R8204	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R8205	1-247-843-11	CARBON	3.3K	5%	1/4W	
R8206	1-249-437-11	CARBON	47K	5%	1/4W	
R8207	1-249-429-11	CARBON	10K	5%	1/4W	
R8209	1-247-807-31	CARBON	100	5%	1/4W	
R8210	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R8211	1-247-843-11	CARBON	3.3K	5%	1/4W	
		< SWITCH >				
S8201	1-553-725-21	SWITCH, SLIDE (REC MODE)				
**********						
*	A-4699-910-A	MD BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C2001	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2002	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2003	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2004	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2005	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2006	1-104-913-11	TANTAL. CHIP	10uF	20%	16V	
C2007	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2008	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C2009	1-104-913-11	TANTAL. CHIP	10uF	20%	16V	
C2010	1-163-038-91	CERAMIC CHIP	0.1uF		25V	

Ref. No.	Part No.	Description			Remarks
C2011	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2012	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2013	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2014	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2015	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2016	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2017	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2018	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2019	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2021	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2023	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2024	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2101	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2103	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2104	1-163-091-00	CERAMIC CHIP	8PF		50V
C2105	1-163-091-00	CERAMIC CHIP	8PF		50V
C2106	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2110	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2111	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2201	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2202	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C2203	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2204	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2205	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2206	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2207	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2208	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2209	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2210	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2211	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2212	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2213	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2214	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2215	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2216	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2221	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2244	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2301	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2302	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2303	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2401	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2402	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2403	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2404	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2405	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2406	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2451	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2452	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2453	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2500	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2501	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C2502	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2504	1-163-038-91	CERAMIC CHIP	0.1uF		25V

MD

Ref. No.	Part No.	Description			Remarks
C2505	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2506	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2507	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2508	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2509	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2510	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2511	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2512	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2513	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2514	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2515	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2516	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2517	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C2518	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C2519	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2520	1-216-295-91	SHORT	0		
C2521	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2522	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2523	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C2524	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C2525	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C2526	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C2527	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C2528	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C2529	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2530	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2531	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2532	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2533	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C2534	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C2535	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2536	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2537	1-126-204-11	ELECT CHIP	47uF	20%	16V
C2538	1-126-204-11	ELECT CHIP	47uF	20%	16V
C2549	1-126-204-11	ELECT CHIP	47uF	20%	16V
C2550	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2560	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2561	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2562	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C2566	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2567	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2568	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2601	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2704	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2705	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2706	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2708	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2709	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2710	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2711	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2712	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2713	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2714	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
C2715	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2716	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2717	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2718	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2719	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2720	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C2721	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C2722	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C2723	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2724	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2725	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2726	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2727	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2728	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2729	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2730	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2731	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2732	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2733	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2734	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2735	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2736	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2737	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2738	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2739	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2740	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2741	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2742	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C2743	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2744	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2745	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2746	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2747	1-124-779-00	ELECT CHIP	10uF	20%	16V
C2748	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2749	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2751	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2755	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2757	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2759	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2760	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2761	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2762	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2763	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2901	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2902	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2903	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2904	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2905	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2906	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2907	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2908	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2909	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2910	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2911	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2912	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2991	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2992	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2999	1-124-779-00	ELECT CHIP	10uF	20%	16V

< CONNECTOR >

CN2001	1-766-509-21	CONNECTOR, FFC/FPC 18P	
CN2002	1-766-510-21	CONNECTOR, FFC/FPC 30P	
* CN2003	1-766-418-11	CONNECTOR, BOARD TO BOARD 40P	
CN2005	1-774-180-11	PIN, CONNECTOR (PC BOARD) 6P	
CN2006	1-695-223-21	PIN, CONNECTOR (SMD) 10P	

Ref. No.	Part No.	Description			Remarks
CN2007	1-569-775-21	PIN, CONNECTOR 5P			
CN2008	1-580-789-21	PIN, CONNECTOR (SMD) 6P			
CN2501	1-580-789-21	PIN, CONNECTOR (SMD) 6P			
		< DIODE >			
D2501	8-719-988-62	DIODE 1SS355			
D2502	8-719-988-62	DIODE 1SS355			
D2503	8-719-988-62	DIODE 1SS355			
D2504	8-719-056-15	DIODE F01J4L			
D2701	8-719-056-15	DIODE F01J4L			
D2702	8-719-914-42	DIODE DA204K			
D2703	8-719-914-42	DIODE DA204K			
		< FERRITE BEAD >			
FB2501	1-414-234-11	INDUCTOR CHIP 0UH			
FB2502	1-414-234-11	INDUCTOR CHIP 0UH			
FB2503	1-414-234-11	INDUCTOR CHIP 0UH			
FB2504	1-216-295-91	SHORT 0			
FB2505	1-414-234-11	INDUCTOR CHIP 0UH			
FB2506	1-216-295-91	SHORT 0			
FB2507	1-414-234-11	INDUCTOR CHIP 0UH			
FB2508	1-414-234-11	INDUCTOR CHIP 0UH			
FB2509	1-414-234-11	INDUCTOR CHIP 0UH			
FB2601	1-216-017-91	RES,CHIP 47	5%	1/10W	
FB2702	1-216-295-91	SHORT 0			
		< IC >			
IC2001	8-759-050-11	IC SN74HC163APW-E20			
IC2002	8-759-058-54	IC TC7S00FU(TE85R)			
IC2003	8-759-327-60	IC TC7W125FU-TE12R			
IC2004	8-759-393-81	IC SN74LV245PW-E05			
IC2005	8-759-393-81	IC SN74LV245PW-E05			
IC2006	8-759-058-64	IC TC7S32FU(TE85R)			
IC2007	8-752-372-86	IC CXD1805AR			
IC2008	8-759-438-20	IC MSM514800A-70JSR1			
IC2010	8-759-196-96	IC TC7SH08FU-TE85R			
IC2011	8-759-058-59	IC TC7SU04FU-TE85L			
IC2012	8-759-327-60	IC TC7W125FU-TE12R			
IC2015	8-759-058-59	IC TC7SU04FU-TE85L			
IC2101	8-752-371-17	IC CXD2536R			
IC2201	8-759-435-87	IC M30600M8-101FP			
IC2202	8-759-425-24	IC LE28C1001M-12-TRA			
IC2203	8-759-096-87	IC TC7WU04FU(TE12R)			
IC2301	8-759-433-95	IC LB1837M-TE-L			
IC2501	8-759-362-47	IC CXD8567AM			
IC2502	8-759-058-59	IC TC7SU04FU-TE85L			
IC2503	8-759-359-66	IC TL082CPW-E05			
IC2504	8-759-278-58	IC NJM4558V-TE2			
IC2601	8-759-271-89	IC TS7SHU04FU-TE85L			
IC2701	8-759-352-63	IC CXD8566M			
IC2702	8-759-352-59	IC CXA8054M			
IC2703	8-759-278-58	IC NJM4558V-TE2			
IC2705	8-752-067-30	IC CXA1846N			

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L2001	1-414-398-11	INDUCTOR 10uH			
L2002	1-414-398-11	INDUCTOR 10uH			
L2003	1-414-398-11	INDUCTOR 10uH			
L2101	1-414-398-11	INDUCTOR 10uH			
L2201	1-414-398-11	INDUCTOR 10uH			
L2202	1-414-398-11	INDUCTOR 10uH			
L2203	1-414-398-11	INDUCTOR 10uH			
L2301	1-414-398-11	INDUCTOR 10uH			
L2401	1-414-392-21	INDUCTOR 1uH			
L2402	1-414-398-11	INDUCTOR 10uH			
L2502	1-414-398-11	INDUCTOR 10uH			
L2503	1-414-398-11	INDUCTOR 10uH			
L2701	1-414-404-11	INDUCTOR 100uH			
L2702	1-414-398-11	INDUCTOR 10uH			
L2703	1-414-398-11	INDUCTOR 10uH			
L2901	1-414-398-11	INDUCTOR 10uH			
L2902	1-414-398-11	INDUCTOR 10uH			
L2903	1-414-398-11	INDUCTOR 10uH			
L2904	1-414-394-11	INDUCTOR 2.2uH			
		< TRANSISTOR >			
Q2002	8-729-029-14	TRANSISTOR DTC144EUA-T106			
Q2451	8-729-029-14	TRANSISTOR DTC144EUA-T106			
Q2501	8-729-028-91	TRANSISTOR DTA144EUA-T106			
Q2502	8-729-107-46	TRANSISTOR 2SC3624A-L15			
Q2503	8-729-107-46	TRANSISTOR 2SC3624A-L15			
		< RESISTOR >			
R2008	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2009	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2010	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2011	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2044	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2045	1-216-295-91	SHORT 0			
R2101	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2107	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2108	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2111	1-216-037-00	METAL CHIP 330	5%	1/10W	
R2112	1-216-063-91	RES,CHIP 3.9K	5%	1/10W	
R2201	1-216-295-91	SHORT 0			
R2202	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R2203	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2205	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2206	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2207	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2218	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2219	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2220	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2222	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2224	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2225	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2226	1-216-117-00	METAL CHIP 680K	5%	1/10W	
R2227	1-216-295-91	SHORT 0			
R2228	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R2229	1-218-179-11	RES,CHIP 10M	5%	1/10W	
R2231	1-216-065-00	METAL CHIP 4.7K	5%	1/10W	
R2232	1-216-097-91	RES,CHIP 100K	5%	1/10W	
R2233	1-216-049-91	RES,CHIP 1K	5%	1/10W	

MD MOTOR

Ref. No.	Part No.	Description			Remarks
R2237	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2239	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2240	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2243	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2244	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2245	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2246	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2247	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2249	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2250	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R2251	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2252	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2254	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R2255	1-216-025-91	RES,CHIP	100	5%	1/10W
R2256	1-218-179-11	RES,CHIP	10M	5%	1/10W
R2257	1-216-025-91	RES,CHIP	100	5%	1/10W
R2301	1-216-041-00	METAL CHIP	470	5%	1/10W
R2302	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R2451	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2452	1-216-025-91	RES,CHIP	100	5%	1/10W
R2501	1-216-033-00	METAL CHIP	220	5%	1/10W
R2502	1-216-025-91	RES,CHIP	100	5%	1/10W
R2503	1-216-121-91	RES,CHIP	1M	5%	1/10W
R2504	1-216-039-00	METAL CHIP	390	5%	1/10W
R2505	1-216-085-00	METAL CHIP	33K	5%	1/10W
R2506	1-216-085-00	METAL CHIP	33K	5%	1/10W
R2507	1-216-085-00	METAL CHIP	33K	5%	1/10W
R2508	1-216-085-00	METAL CHIP	33K	5%	1/10W
R2509	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2510	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2511	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2512	1-216-093-00	METAL CHIP	68K	5%	1/10W
R2513	1-216-093-00	METAL CHIP	68K	5%	1/10W
R2514	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2515	1-216-093-00	METAL CHIP	68K	5%	1/10W
R2516	1-216-093-00	METAL CHIP	68K	5%	1/10W
R2517	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R2518	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R2519	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R2520	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R2521	1-216-105-91	RES,CHIP	220K	5%	1/10W
R2522	1-216-105-91	RES,CHIP	220K	5%	1/10W
R2523	1-216-045-00	METAL CHIP	680	5%	1/10W
R2524	1-216-045-00	METAL CHIP	680	5%	1/10W
R2525	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R2526	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R2527	1-216-117-00	METAL CHIP	680K	5%	1/10W
R2701	1-216-033-00	METAL CHIP	220	5%	1/10W
R2702	1-216-017-91	RES,CHIP	47	5%	1/10W
R2703	1-216-017-91	RES,CHIP	47	5%	1/10W
R2704	1-216-295-91	SHORT	0		
R2705	1-216-017-91	RES,CHIP	47	5%	1/10W
R2706	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2707	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2708	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2709	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2710	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2711	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2712	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2713	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2715	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2717	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2718	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2719	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2720	1-216-025-91	RES,CHIP	100	5%	1/10W
R2721	1-216-025-91	RES,CHIP	100	5%	1/10W
R2722	1-216-025-91	RES,CHIP	100	5%	1/10W
R2723	1-216-025-91	RES,CHIP	100	5%	1/10W
R2724	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2725	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2726	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2727	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2732	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2733	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2735	1-216-073-00	METAL CHIP	10K	5%	1/10W

< CONPOSITION CIRCUIT BLOCK >

RB2001	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2003	1-236-436-11	NETWORK, RES 100K	
RB2005	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2006	1-239-711-11	NETWORK RESISTOR (CHIP) 0	
RB2007	1-239-711-11	NETWORK RESISTOR (CHIP) 0	
RB2008	1-239-711-11	NETWORK RESISTOR (CHIP) 0	
RB2009	1-239-711-11	NETWORK RESISTOR (CHIP) 0	
RB2101	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2102	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2103	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2104	1-236-436-11	NETWORK, RES 100K	
RB2201	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2202	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2203	1-236-424-11	NETWORK, RES 10K	
RB2204	1-236-424-11	NETWORK, RES 10K	
RB2205	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2206	1-236-436-11	NETWORK, RES 100K	
RB2207	1-236-436-11	NETWORK, RES 100K	
RB2208	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2209	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2210	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB2211	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	

< VIBRATOR >

X2101	1-760-841-11	VIBRATOR, CRYSTAL 45MHz	
X2201	1-767-273-11	VIBRATOR, CERAMIC (CHIP TYPE) 10MHz	
X2202	1-760-928-21	VIBRATOR, CRYSTAL 32.768kHz	
X2501	1-579-870-21	VIBRATOR, CRYSTAL 22.57MHz	

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* 1-653-412-11 MOTOR BOARD
****

< CAPACITOR >

C199	1-164-159-11	CERAMIC	0.1uF	50V

< CONNECTOR >

* CN191	1-568-944-11	PIN, CONNECTOR 6P	
CN192	1-770-011-41	CONNECTOR, BOARD TO BOARD 4P	

****

Ref. No.	Part No.	Description			Remarks
*	A-4699-905-A	PANEL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C8001	1-164-159-11	CERAMIC	0.1uF		50V
C8002	1-164-159-11	CERAMIC	0.1uF		50V
C8003	1-164-159-11	CERAMIC	0.1uF		50V
C8005	1-124-584-00	ELECT	100uF	20%	10V
C8007	1-124-584-00	ELECT	100uF	20%	10V
C8008	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN8101	1-691-644-11	SOCKET, CONNECTOR 7P			
CN8103	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN8104	1-564-723-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CN8105	1-766-600-21	CONNECTOR, BOARD TO BOARD 7P			
		< DIODE >			
D8101	8-719-301-42	DIODE SEL2410E (POWER)			
D8102	8-719-313-45	DIODE SEL6810A-TH10 (BUSY)			
D8103	8-719-911-19	DIODE 1SS119			
		< IC >			
IC8101	8-742-018-00	IC SBX1810-59			
		< COIL >			
L8001	1-410-526-11	INDUCTOR	10uH		
L8101	1-410-526-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q8101	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R8001	1-249-409-11	CARBON	220	5%	1/4W F
R8002	1-249-413-11	CARBON	470	5%	1/4W F
R8004	1-249-435-11	CARBON	33K	5%	1/4W
R8005	1-249-435-11	CARBON	33K	5%	1/4W
R8006	1-249-429-11	CARBON	10K	5%	1/4W
R8007	1-249-429-11	CARBON	10K	5%	1/4W
R8008	1-249-421-11	CARBON	2.2K	5%	1/4W F
R8009	1-249-429-11	CARBON	10K	5%	1/4W
R8010	1-247-807-31	CARBON	100	5%	1/4W
R8011	1-249-425-11	CARBON	4.7K	5%	1/4W F
R8012	1-249-425-11	CARBON	4.7K	5%	1/4W F
R8013	1-247-807-31	CARBON	100	5%	1/4W
R8014	1-247-807-31	CARBON	100	5%	1/4W
R8015	1-247-807-31	CARBON	100	5%	1/4W
R8016	1-247-807-31	CARBON	100	5%	1/4W
R8017	1-247-807-31	CARBON	100	5%	1/4W
R8018	1-249-425-11	CARBON	4.7K	5%	1/4W F
R8019	1-247-843-11	CARBON	3.3K	5%	1/4W
R8020	1-247-843-11	CARBON	3.3K	5%	1/4W
R8021	1-247-843-11	CARBON	3.3K	5%	1/4W
R8022	1-249-441-11	CARBON	100K	5%	1/4W
R8023	1-249-421-11	CARBON	2.2K	5%	1/4W F
R8024	1-249-421-11	CARBON	2.2K	5%	1/4W F
R8025	1-249-429-11	CARBON	10K	5%	1/4W
R8026	1-249-421-11	CARBON	2.2K	5%	1/4W F
R8029	1-247-807-31	CARBON	100	5%	1/4W
R8030	1-247-807-31	CARBON	100	5%	1/4W
		< SWITCH >			
S8101	1-554-303-21	SWITCH, TACTILE (AUDIO DUB)			
S8102	1-554-303-21	SWITCH, TACTILE (⬆)			
S8103	1-554-303-21	SWITCH, TACTILE (ALBUM)			
S8104	1-554-303-21	SWITCH, TACTILE (➡)			
S8105	1-554-303-21	SWITCH, TACTILE (POWER)			
S8106	1-554-303-21	SWITCH, TACTILE (PHOTO)			
S8107	1-554-303-21	SWITCH, TACTILE (ENTER)			
S8108	1-554-303-21	SWITCH, TACTILE (SLIDE SHOW)			
S8109	1-554-303-21	SWITCH, TACTILE (LIVE/PLAY)			
S8110	1-554-303-21	SWITCH, TACTILE (EJECT)			
S8111	1-554-303-21	SWITCH, TACTILE (IR LINK)			
S8112	1-554-303-21	SWITCH, TACTILE (CAPTURE)			
S8113	1-554-303-21	SWITCH, TACTILE (BACK)			
S8114	1-554-303-21	SWITCH, TACTILE (⬅)			
S8115	1-554-303-21	SWITCH, TACTILE (REC)			
S8116	1-554-303-21	SWITCH, TACTILE (NEXT)			
S8117	1-554-303-21	SWITCH, TACTILE (⬇)			
**********					
*	A-4699-908-A	PICTURE BOARD, COMPLETE			
		**********			
*	4-921-941-31	CUSHION (FL)			
		< CAPACITOR >			
C1001	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1002	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1003	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1004	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1005	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1006	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1007	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1008	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1009	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1010	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1011	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1012	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1013	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1014	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1015	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1016	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1017	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1018	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1019	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1020	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1021	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1022	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1023	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1024	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1025	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1026	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1027	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1028	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1029	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1031	1-163-038-91	CERAMIC CHIP	0.1uF		25V

PICTURE

Ref. No.	Part No.	Description			Remarks
C1033	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2001	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2002	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2003	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2007	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2016	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2017	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2018	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2019	1-163-085-00	CERAMIC CHIP	2PF		50V
C2020	1-163-085-00	CERAMIC CHIP	2PF		50V
C2021	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C2022	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C2023	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C2024	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C2025	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2026	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2027	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2028	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C2029	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C2030	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3001	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3002	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3003	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3004	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3006	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3007	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C3008	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3009	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3010	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3011	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3012	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3013	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3014	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C3015	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3016	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3017	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3018	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3019	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3020	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3021	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3022	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3023	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C3024	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C3025	1-216-295-91	SHORT	0		
C3026	1-216-295-91	SHORT	0		
C3027	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C3028	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C3031	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C3032	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C3033	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3034	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3035	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3036	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3038	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C3039	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3040	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3041	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3042	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3043	1-124-779-00	ELECT CHIP	10uF	20%	16V
C3044	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C3045	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3046	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3047	1-124-779-00	ELECT CHIP	10uF	20%	16V
C3049	1-126-204-11	ELECT CHIP	47uF	20%	16V
C3050	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3051	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3052	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3053	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3055	1-124-779-00	ELECT CHIP	10uF	20%	16V
C3061	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C3062	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3063	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C3101	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3102	1-216-295-91	SHORT	0		
C4001	1-163-220-11	CERAMIC CHIP	3PF	0.25PF	50V
C4002	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C4003	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4004	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4005	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4006	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4007	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4008	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4009	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4010	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4011	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4012	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4013	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C4015	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4017	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4021	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4022	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4023	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4024	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4025	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4026	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4031	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4032	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C4036	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4037	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4038	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4046	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4047	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4048	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4049	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4050	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4051	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4052	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4053	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4054	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4055	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4056	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4057	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4058	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4059	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4060	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4061	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4062	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4063	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4070	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4071	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

Ref. No.	Part No.	Description			Remarks
C4072	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4075	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4076	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4078	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4079	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4080	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4081	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4082	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4083	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C4084	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4085	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4086	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4087	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4088	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4089	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4090	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4091	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4092	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4093	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4094	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4095	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4096	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4097	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4098	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4099	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4100	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C5001	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5002	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C5003	1-163-089-00	CERAMIC CHIP	6PF		50V
C5004	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5005	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5006	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5007	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5008	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C5009	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C5010	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5011	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C5012	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5013	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5014	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5015	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5016	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C5017	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5018	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN1001	1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD) 8P			
* CN1002	1-764-177-11	PIN, CONNECTOR (SMD)(1.5MM) 7P			
* CN3001	1-764-177-11	PIN, CONNECTOR (SMD)(1.5MM) 7P			
CN3002	1-778-274-11	CONNECTOR, FFC/FPC 13P			
CN4002	1-778-442-11	CONNECTOR, BOARD TO BOARD 40P			
CN5001	1-774-769-11	CONNECTOR, FFC/FPC 25P			
CN5002	1-573-806-21	PIN, CONNECTOR (1.5MM) (SMD) 6P			
CN5003	1-750-537-11	CONNECTOR, FLEXIBLE 7P			
		< TRIMMER >			
CT4001	1-141-422-11	CAP, ADJ 10PF			

Ref. No.	Part No.	Description			Remarks
		< DIODE >			
D2001	8-719-031-68	DIODE HVU359-TRU			
D2002	8-719-031-68	DIODE HVU359-TRU			
		< FERRITE BEAD >			
FB4001	1-216-025-91	RES,CHIP	100	5%	1/10W
FB4002	1-216-033-00	METAL CHIP	220	5%	1/10W
FB5001	1-216-295-91	SHORT	0		
		< IC >			
IC1003	8-759-438-19	IC MSM5416283-60GS-KR1			
IC1005	8-759-438-23	IC CXD8648R-AV			
IC2002	8-759-983-69	IC LM358PS			
IC2003	8-759-438-22	IC CXD8649R-AV			
IC3001	8-759-710-86	IC NJM2233BM			
IC3002	8-759-324-99	IC MM1118XFBE			
IC3004	8-759-096-87	IC TC7WU04FU(TE12R)			
IC4001	8-759-096-87	IC TC7WU04FU(TE12R)			
IC4003	8-759-426-14	IC uPD70741GC-25-7EA			
IC4004	8-759-494-44	IC MSM10S0110-122TS-K			
IC4005	8-759-448-57	IC TC74ACT245F-EL			
IC4006	8-759-448-57	IC TC74ACT245F-EL			
IC4007	8-759-428-92	IC MD36050X-B5			
IC4008	8-759-096-87	IC TC7WU04FU(TE12R)			
IC4009	8-759-083-94	IC TC7W74FU			
IC4010	8-759-448-57	IC TC74ACT245F-EL			
IC4011	8-759-448-57	IC TC74ACT245F-EL			
IC4013	8-759-527-09	IC KM416C1200BJ-6T			
IC4015	8-759-454-29	IC MSM534002C-37GS-AKR1			
IC4016	8-759-530-90	IC MSM27C822ZB-F7GS-KR1			
IC4019	8-759-448-56	IC TC74AC240F-EL			
IC4020	8-759-448-35	IC KM68512ALG-7LT			
IC4021	8-759-448-35	IC KM68512ALG-7LT			
IC5001	8-759-096-87	IC TC7WU04FU(TE12R)			
IC5002	8-759-434-47	IC VCS94450-1			
IC5003	8-759-154-60	IC UPD71055GB-10-3B4			
IC5004	8-759-154-60	IC UPD71055GB-10-3B4			
		< COIL >			
L1001	1-414-398-11	INDUCTOR	10uH		
L1002	1-414-398-11	INDUCTOR	10uH		
L1003	1-414-398-11	INDUCTOR	10uH		
L2001	1-414-398-11	INDUCTOR	10uH		
L3001	1-414-398-11	INDUCTOR	10uH		
L3002	1-414-398-11	INDUCTOR	10uH		
L3003	1-414-398-11	INDUCTOR	10uH		
L3006	1-414-767-11	INDUCTOR	27uH		
L3007	1-414-767-11	INDUCTOR	27uH		
L3010	1-414-404-11	INDUCTOR	100uH		
L3011	1-414-398-11	INDUCTOR	10uH		
L3012	1-414-398-11	INDUCTOR	10uH		
L3013	1-414-398-11	INDUCTOR	10uH		
L4001	1-414-398-11	INDUCTOR	10uH		
L4003	1-414-398-11	INDUCTOR	10uH		
L4004	1-414-398-11	INDUCTOR	10uH		
L4005	1-414-398-11	INDUCTOR	10uH		
L4006	1-414-398-11	INDUCTOR	10uH		
L4007	1-414-398-11	INDUCTOR	10uH		
L4008	1-414-398-11	INDUCTOR	10uH		

PICTURE

Ref. No.	Part No.	Description			Remarks
L4009	1-414-398-11	INDUCTOR	10uH		
L4013	1-414-398-11	INDUCTOR	10uH		
L4014	1-414-398-11	INDUCTOR	10uH		
L5001	1-414-398-11	INDUCTOR	10uH		
L5002	1-414-398-11	INDUCTOR	10uH		
L5003	1-414-398-11	INDUCTOR	10uH		
		< IC LINK >			
* PS4001	1-537-814-11	CHIP, CHECKER			
		< TRANSISTOR >			
Q3001	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3002	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3003	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3004	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3005	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3006	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3007	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3010	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3011	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3012	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3013	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3014	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3016	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3017	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q3018	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3019	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3020	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3101	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q3102	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q3103	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q3104	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R1006	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1129	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1131	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2029	1-216-295-91	SHORT	0		
R2030	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2047	1-216-121-91	RES,CHIP	1M	5%	1/10W
R2048	1-216-091-00	METAL CHIP	56K	5%	1/10W
R2049	1-216-091-00	METAL CHIP	56K	5%	1/10W
R2050	1-216-117-00	METAL CHIP	680K	5%	1/10W
R2051	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R2052	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2053	1-216-085-00	METAL CHIP	33K	5%	1/10W
R2054	1-216-295-91	SHORT	0		
R2055	1-216-295-91	SHORT	0		
R2058	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2059	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2060	1-216-295-91	SHORT	0		
R2061	1-216-295-91	SHORT	0		
R2064	1-216-025-91	RES,CHIP	100	5%	1/10W
R2066	1-216-025-91	RES,CHIP	100	5%	1/10W
R3001	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3002	1-216-081-00	METAL CHIP	22K	5%	1/10W
R3003	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3004	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3005	1-216-053-00	METAL CHIP	1.5K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R3006	1-216-025-91	RES,CHIP	100	5%	1/10W
R3007	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R3008	1-216-025-91	RES,CHIP	100	5%	1/10W
R3013	1-216-025-91	RES,CHIP	100	5%	1/10W
R3014	1-216-025-91	RES,CHIP	100	5%	1/10W
R3017	1-216-025-91	RES,CHIP	100	5%	1/10W
R3018	1-216-025-91	RES,CHIP	100	5%	1/10W
R3021	1-216-047-91	RES,CHIP	820	5%	1/10W
R3022	1-216-047-91	RES,CHIP	820	5%	1/10W
R3023	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R3024	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R3025	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R3026	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R3027	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3028	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3029	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3030	1-216-041-00	METAL CHIP	470	5%	1/10W
R3031	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3032	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3033	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R3034	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R3035	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R3040	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R3041	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R3042	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R3043	1-216-025-91	RES,CHIP	100	5%	1/10W
R3051	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3053	1-216-025-91	RES,CHIP	100	5%	1/10W
R3054	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3055	1-216-041-00	METAL CHIP	470	5%	1/10W
R3056	1-216-041-00	METAL CHIP	470	5%	1/10W
R3057	1-216-045-00	METAL CHIP	680	5%	1/10W
R3058	1-216-041-00	METAL CHIP	470	5%	1/10W
R3059	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R3060	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3061	1-216-025-91	RES,CHIP	100	5%	1/10W
R3062	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R3063	1-216-025-91	RES,CHIP	100	5%	1/10W
R3064	1-216-041-00	METAL CHIP	470	5%	1/10W
R3065	1-216-041-00	METAL CHIP	470	5%	1/10W
R3066	1-216-021-00	METAL CHIP	68	5%	1/10W
R3070	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3071	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3072	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3074	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3075	1-216-011-00	METAL CHIP	27	5%	1/10W
R3091	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3092	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3101	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3102	1-216-025-91	RES,CHIP	100	5%	1/10W
R3103	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R3104	1-216-025-91	RES,CHIP	100	5%	1/10W
R3105	1-216-041-00	METAL CHIP	470	5%	1/10W
R3106	1-216-021-00	METAL CHIP	68	5%	1/10W
R3107	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3108	1-216-025-91	RES,CHIP	100	5%	1/10W
R3109	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R3110	1-216-025-91	RES,CHIP	100	5%	1/10W
R3112	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3113	1-216-049-91	RES,CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R3114	1-216-021-00	METAL CHIP	68	5%	1/10W
R3115	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3116	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3117	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3118	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3119	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3121	1-216-041-00	METAL CHIP	470	5%	1/10W
R3144	1-216-295-91	SHORT	0		
R3145	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R4001	1-216-025-91	RES,CHIP	100	5%	1/10W
R4001	1-216-295-91	SHORT	0		
R4002	1-216-121-91	RES,CHIP	1M	5%	1/10W
R4003	1-216-049-91	RES,CHIP	1K	5%	1/10W
R4004	1-216-121-91	RES,CHIP	1M	5%	1/10W
R4005	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R4006	1-216-295-91	SHORT	0		
R4007	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4009	1-216-025-91	RES,CHIP	100	5%	1/10W
R4010	1-216-017-91	RES,CHIP	47	5%	1/10W
R4011	1-216-025-91	RES,CHIP	100	5%	1/10W
R4012	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R4013	1-216-025-91	RES,CHIP	100	5%	1/10W
R4016	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R4020	1-216-017-91	RES,CHIP	47	5%	1/10W
R4050	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4070	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4071	1-216-025-91	RES,CHIP	100	5%	1/10W
R4072	1-216-097-91	RES,CHIP	100K	5%	1/10W
R4073	1-216-097-91	RES,CHIP	100K	5%	1/10W
R4074	1-216-097-91	RES,CHIP	100K	5%	1/10W
R4075	1-216-021-00	METAL CHIP	68	5%	1/10W
R4076	1-216-021-00	METAL CHIP	68	5%	1/10W
R4077	1-216-021-00	METAL CHIP	68	5%	1/10W
R4078	1-216-021-00	METAL CHIP	68	5%	1/10W
R4079	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4080	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4081	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4082	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4083	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5001	1-216-121-91	RES,CHIP	1M	5%	1/10W
R5002	1-216-039-00	METAL CHIP	390	5%	1/10W
R5003	1-216-009-00	METAL CHIP	22	5%	1/10W
R5004	1-216-009-00	METAL CHIP	22	5%	1/10W
R5005	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5006	1-216-033-00	METAL CHIP	220	5%	1/10W
R5007	1-216-097-91	RES,CHIP	100K	5%	1/10W
R5008	1-216-025-91	RES,CHIP	100	5%	1/10W
R5016	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5017	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5021	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5034	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5040	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5041	1-216-073-00	METAL CHIP	10K	5%	1/10W
R5042	1-216-097-91	RES,CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description	Remarks
		< CONPOSITION CIRCUIT BLOCK >	
RB1002	1-236-420-11	NETWORK, RES 4.7K	
RB4001	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB4002	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB4003	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB4004	1-236-424-11	NETWORK, RES 10K	
RB4005	1-236-398-11	NETWORK, RES 68	
RB4006	1-236-398-11	NETWORK, RES 68	
RB4007	1-236-398-11	NETWORK, RES 68	
RB4008	1-236-398-11	NETWORK, RES 68	
RB4009	1-236-398-11	NETWORK, RES 68	
RB4010	1-236-398-11	NETWORK, RES 68	
RB4011	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB4012	1-236-424-11	NETWORK, RES 10K	
RB4013	1-236-424-11	NETWORK, RES 10K	
RB4014	1-236-424-11	NETWORK, RES 10K	
RB4015	1-236-424-11	NETWORK, RES 10K	
RB4016	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB4017	1-236-424-11	NETWORK, RES 10K	
RB4018	1-236-424-11	NETWORK, RES 10K	
RB4019	1-236-424-11	NETWORK, RES 10K	
RB5002	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB5003	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB5004	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB5005	1-236-424-11	NETWORK, RES 10K	
RB5006	1-236-907-11	NETWORK RESISTOR (CHIP) 100K	
RB5007	1-236-424-11	NETWORK, RES 10K	
RB5008	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
RB5009	1-236-908-11	NETWORK RESISTOR (CHIP) 10K	
		< VARIABLE RESISTOR >	
RV3001	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (WHITE LEVEL)	
RV3003	1-241-396-11	RES, ADJ, METAL GLAZE 22K (SYNC LEVEL)	
		< VIBRATOR >	
X2001	1-527-722-00	VIBRATOR, CRYSTAL 14.31818MHz	
X4001	1-767-348-11	VIBRATOR, CRYSTAL 36.864MHz	
X4002	1-767-340-11	VIBRATOR, CRYSTAL 4MHz	
X4003	1-767-187-11	VIBRATOR, CRYSTAL 24.545MHz	
**********			
*	A-4699-903-A	POWER BOARD, COMPLETE	
		**********	
		< CAPACITOR >	

C223	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1001	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1002	1-117-404-11	ELECT	15000uF	20%	16V
C1003	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1004	1-126-964-11	ELECT	10uF	20%	50V
C1008	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1101	1-124-910-11	ELECT	47uF	20%	50V
C1102	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1103	1-127-516-11	ELECT	220uF	20%	10V
C1111	1-124-910-11	ELECT	47uF	20%	50V

POWER

Ref. No.	Part No.	Description			Remarks
C1112	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1113	1-127-516-11	ELECT	220uF	20%	10V
C1121	1-124-910-11	ELECT	47uF	20%	50V
C1122	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1123	1-127-516-11	ELECT	220uF	20%	10V
C1131	1-126-935-11	ELECT	470uF	20%	16V
C1132	1-128-057-11	ELECT	330uF	20%	6.3V
C1133	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1134	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1142	1-128-057-11	ELECT	330uF	20%	6.3V
C1144	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1145	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1201	1-124-910-11	ELECT	47uF	20%	50V
C1202	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1203	1-127-516-11	ELECT	220uF	20%	10V
C1204	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1301	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1302	1-126-154-11	ELECT	47uF	20%	6.3V
C1311	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1313	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1351	1-528-750-11	BATTERY, V/L RECHARGEABLE			
C1352	1-528-750-11	BATTERY, V/L RECHARGEABLE			
C1353	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C1354	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1355	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1356	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1357	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1358	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1501	1-126-926-11	ELECT	1000uF	20%	10V
C1502	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1503	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1504	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C1505	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1506	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1507	1-128-057-11	ELECT	330uF	20%	6.3V
C1508	1-128-057-11	ELECT	330uF	20%	6.3V
C1509	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1510	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1511	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C1512	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C1513	1-128-057-11	ELECT	330uF	20%	6.3V
C1514	1-128-057-11	ELECT	330uF	20%	6.3V
C1516	1-128-057-11	ELECT	330uF	20%	6.3V
C1518	1-128-057-11	ELECT	330uF	20%	6.3V
C1519	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1520	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1521	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1522	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1601	1-126-940-11	ELECT	330uF	20%	25V
C1602	1-126-935-11	ELECT	470uF	20%	16V
C1603	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1604	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1605	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C1704	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C1707	1-126-948-11	ELECT	100uF	20%	35V

Ref. No.	Part No.	Description			Remarks
C1708	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C1709	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C1710	1-126-963-11	ELECT	4.7uF	20%	50V
C1711	1-127-516-11	ELECT	220uF	20%	10V
C1712	1-126-926-11	ELECT	1000uF	20%	10V
C1713	1-126-948-11	ELECT	100uF	20%	35V
C1801	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1802	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1803	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN1001	1-766-382-11	PIN, CONNECTOR (1.5MM)(SMD)10P			
CN1002	1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P			
* CN1003	1-580-756-21	PIN, CONNECTOR 7P			
CN1004	1-573-768-21	PIN, CONNECTOR (1.5MM) (SMD)5P			
CN1005	1-580-789-21	PIN, CONNECTOR (SMD) 6P			
* CN1901	1-568-951-11	PIN, CONNECTOR 2P			
		< DIODE >			
D1004	8-719-028-74	DIODE NSQ03A04			
D1311	8-719-016-74	DIODE 1SS352			
D1352	8-719-026-23	DIODE MA786			
D1353	8-719-210-39	DIODE EC10QS-04			
D1355	8-719-210-39	DIODE EC10QS-04			
D1356	8-719-026-23	DIODE MA786			
D1357	8-719-026-23	DIODE MA786			
D1358	8-719-023-22	DIODE MA704A			
D1704	8-719-210-39	DIODE EC10QS-04			
		< FUSE >			
⚠F1001	1-532-780-21	FUSE, MICRO 2.5A 125V			
		< IC >			
IC1101	8-749-011-33	IC BP5020			
IC1111	8-749-011-33	IC BP5020			
IC1121	8-749-011-33	IC BP5020			
IC1131	8-759-182-86	IC PQ05TZ5U			
IC1141	8-759-182-86	IC PQ05TZ5U			
IC1201	8-749-011-33	IC BP5020			
IC1301	8-759-182-84	IC PQ05SZ5U			
IC1311	8-759-067-98	IC PST600CMT-T1			
IC1351	8-759-327-15	IC M62005L			
IC1501	8-759-631-40	IC M5294P			
IC1502	8-759-631-40	IC M5294P			
IC1503	8-759-182-86	IC PQ05TZ5U			
IC1504	8-759-182-86	IC PQ05TZ5U			
IC1601	8-759-182-88	IC PQ09TZ5U			
IC1701	8-759-946-09	IC FA7611M			
		< JACK >			
J1001	1-774-741-11	JACK, DC (DC IN 12V)			

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 numéro spécifié.

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L1101	1-414-430-11	INDUCTOR	4.7uH		
L1201	1-414-741-11	INDUCTOR	10uH		
L1301	1-414-398-11	INDUCTOR	10uH		
L1501	1-414-741-11	INDUCTOR	10uH		
L1601	1-414-398-11	INDUCTOR	10uH		
L1703	1-414-741-11	INDUCTOR	10uH		
L1704	1-408-615-31	INDUCTOR	100uH		
L1705	1-414-741-11	INDUCTOR	10uH		
		< LINE FILTER >			
LF1001	1-411-799-11	INDUCTOR	0uH		
		< TRANSISTOR >			
Q1001	8-729-033-94	TRANSISTOR	2SB1204T-FA-TL		
Q1101	8-729-905-35	TRANSISTOR	2SC4081T106R		
Q1121	8-729-905-35	TRANSISTOR	2SC4081T106R		
Q1151	8-729-905-35	TRANSISTOR	2SC4081T106R		
Q1201	8-729-905-35	TRANSISTOR	2SC4081T106R		
Q1702	8-729-921-93	TRANSISTOR	2SB1182F5-QR		
Q1801	8-729-900-53	TRANSISTOR	DTC114EK		
Q1802	8-729-900-53	TRANSISTOR	DTC114EK		
		< RESISTOR >			
R1001	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1002	1-220-264-11	RES,CHIP	1K	5%	1/4W
R1003	1-220-264-11	RES,CHIP	1K	5%	1/4W
R1101	1-216-105-91	RES,CHIP	220K	5%	1/10W
R1102	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1111	1-216-105-91	RES,CHIP	220K	5%	1/10W
R1112	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1113	1-216-101-00	METAL CHIP	150K	5%	1/10W
R1121	1-216-105-91	RES,CHIP	220K	5%	1/10W
R1122	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1123	1-216-113-00	METAL CHIP	470K	5%	1/10W
R1201	1-216-109-00	METAL CHIP	330K	5%	1/10W
R1202	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1203	1-216-101-00	METAL CHIP	150K	5%	1/10W
R1314	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1315	1-216-643-11	METAL CHIP	470	0.5%	1/10W
R1316	1-216-643-11	METAL CHIP	470	0.5%	1/10W
R1317	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R1353	1-216-178-00	RES,CHIP	150	5%	1/8W
R1354	1-216-039-00	METAL CHIP	390	5%	1/10W
R1355	1-216-178-00	RES,CHIP	150	5%	1/8W
R1356	1-216-039-00	METAL CHIP	390	5%	1/10W
R1357	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1702	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1705	1-216-043-91	RES,CHIP	560	5%	1/10W
R1706	1-216-186-00	RES,CHIP	330	5%	1/8W
R1707	1-216-085-00	METAL CHIP	33K	5%	1/10W
R1708	1-216-109-00	METAL CHIP	330K	5%	1/10W
R1709	1-216-119-00	METAL CHIP	820K	5%	1/10W
R1710	1-216-188-00	RES,CHIP	390	5%	1/8W
R1711	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1712	1-216-081-00	METAL CHIP	22K	5%	1/10W
R1713	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R1714	1-216-077-00	METAL CHIP	15K	5%	1/10W
R1801	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1802	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1803	1-216-033-00	METAL CHIP	220	5%	1/10W
R1902	1-216-295-91	SHORT	0		
		< VARIABLE RESISTOR >			
RV1111	1-241-399-11	RES, ADJ, METAL GLAZE 220K (+6V)			
RV1121	1-241-470-11	RES, ADJ, METAL GLAZE 1M (5.3V)			
RV1201	1-241-399-11	RES, ADJ, METAL GLAZE 220K (+6V)			
		< SWITCH >			
S1351	1-553-977-00	SWITCH, SLIDE (BACK UP)			
S1352	1-554-088-00	SWITCH, KEY BOARD (RESET)			

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*	A-4699-901-A	VIDEO IN BOARD, COMPLETE			
		**********			
		< BUZZER >			
BZ101	1-504-920-11	BUZZER			
		< CAPACITOR >			
C101	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C103	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C104	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C105	1-124-589-11	ELECT	47uF	20%	16V
C106	1-124-589-11	ELECT	47uF	20%	16V
C107	1-124-589-11	ELECT	47uF	20%	16V
C108	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C109	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C111	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C112	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C113	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C114	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C115	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C116	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C117	1-124-589-11	ELECT	47uF	20%	16V
C119	1-124-589-11	ELECT	47uF	20%	16V
C121	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C122	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C124	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C125	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C127	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C128	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C129	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C130	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C131	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C132	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C133	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C134	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C135	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C136	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C138	1-163-031-11	CERAMIC CHIP	0.01uF		50V

VIDEO IN

Ref. No.	Part No.	Description			Remarks
C139	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C140	1-124-589-11	ELECT	47uF	20%	16V
C141	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C142	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C143	1-124-589-11	ELECT	47uF	20%	16V
C148	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C149	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C150	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C152	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C163	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C164	1-124-589-11	ELECT	47uF	20%	16V
C165	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C170	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C177	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C178	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C180	1-124-589-11	ELECT	47uF	20%	16V
C182	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C185	1-137-367-11	FILM	0.0033uF	5%	50V
C186	1-137-367-11	FILM	0.0033uF	5%	50V
C187	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C188	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C190	1-124-589-11	ELECT	47uF	20%	16V
C191	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C195	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C220	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C221	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C222	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C250	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C251	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C252	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C253	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C401	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C402	1-124-589-11	ELECT	47uF	20%	16V
C403	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C404	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C405	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C406	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C407	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C408	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C409	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C410	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C411	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C412	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C413	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C414	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C415	1-124-584-00	ELECT	100uF	20%	10V
C416	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C417	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C418	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C419	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C420	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C421	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C422	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C423	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C424	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C425	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C426	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C427	1-124-584-00	ELECT	100uF	20%	10V
C428	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C429	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C430	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C431	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C432	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C433	1-124-589-11	ELECT	47uF	20%	16V
C434	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C436	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C437	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C438	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C439	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C440	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C441	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C442	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C443	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C444	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C445	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C446	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C447	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C448	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C449	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C450	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C451	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C452	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C453	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C454	1-216-295-91	SHORT	0		
C455	1-216-295-91	SHORT	0		
C456	1-124-589-11	ELECT	47uF	20%	16V
C459	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C460	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C461	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C462	1-124-589-11	ELECT	47uF	20%	16V
C463	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C463	1-216-295-91	SHORT	0		
C464	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C465	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C466	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C467	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C468	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C469	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C470	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C471	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C500	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN102	1-580-789-21	PIN, CONNECTOR (SMD) 6P			
* CN103	1-580-756-21	PIN, CONNECTOR 7P			
CN104	1-779-636-11	CONNECTOR, FFC/FPC 25P			
CN105	1-779-203-11	CONNECTOR, FFCC/FPC 13P			
* CN106	1-764-177-11	PIN, CONNECTOR (SMD)(1.5MM) 7P			
		< DIODE >			
D101	8-719-158-15	DIODE RD5.6S-B			
D102	8-719-158-15	DIODE RD5.6S-B			
D103	8-719-158-15	DIODE RD5.6S-B			
D104	8-719-158-15	DIODE RD5.6S-B			
D105	8-719-027-45	DIODE MA740			

Ref. No.	Part No.	Description		Remarks
		< FERRITE BEAD >		
FB101	1-216-295-91	SHORT	0	
FB102	1-216-295-91	SHORT	0	
FB103	1-163-031-11	CERAMIC CHIP	0.01µF	50V
FB104	1-216-295-91	SHORT	0	
FB106	1-216-295-91	SHORT	0	
FB107	1-216-295-91	SHORT	0	
FB108	1-216-295-91	SHORT	0	
FB109	1-216-295-91	SHORT	0	
FB110	1-216-295-91	SHORT	0	
FB111	1-216-295-91	SHORT	0	
FB112	1-216-295-91	SHORT	0	
FB113	1-216-295-91	SHORT	0	
FB114	1-216-295-91	SHORT	0	
		< IC >		
IC101	8-759-438-15	IC MSM514260B70JSDR1		
IC102	8-759-438-15	IC MSM514260B70JSDR1		
IC103	8-759-032-01	IC MC74HC00AF		
IC104	8-759-433-99	IC SAA7110AWP		
IC105	8-759-433-97	IC MD2201A		
IC106	8-759-032-01	IC MC74HC00AF		
IC108	8-752-879-46	IC CXP81120-032R		
IC109	8-759-032-01	IC MC74HC00AF		
IC110	8-759-236-83	IC TC74HC245AF(EL)		
IC111	8-759-032-01	IC MC74HC00AF		
* IC112	8-759-346-77	IC SN74LS125ADB-E20		
IC201	8-759-295-66	IC BA7653AF-E2		
IC202	8-759-446-66	IC MM1113XFBE		
IC203	8-759-295-66	IC BA7653AF-E2		
IC401	8-752-352-20	IC CXD2023Q		
IC402	8-752-062-80	IC CXA1686M		
		< JACK >		
J101	1-784-248-11	CONNECTOR (ROUND TYPE)(VIDEO IN YC(S))		
J102	1-779-744-11	JACK, PIN 1P (VIDEO IN V)		
J104	1-784-248-11	CONNECTOR (ROUND TYPE) (VIDEO OUT YC(S))		
J105	1-766-396-11	JACK, PIN 4P (AUDIO)		
J106	1-779-744-11	JACK, PIN 1P (VIDEO OUT V)		
		< COIL >		
L101	1-408-970-21	INDUCTOR	10uH	
L102	1-408-970-21	INDUCTOR	10uH	
L104	1-408-970-21	INDUCTOR	10uH	
L105	1-408-970-21	INDUCTOR	10uH	
L108	1-408-970-21	INDUCTOR	10uH	
L401	1-414-404-11	INDUCTOR	100uH	
L402	1-414-404-11	INDUCTOR	100uH	
L403	1-410-386-11	INDUCTOR CHIP	27uH	
L404	1-408-970-21	INDUCTOR	10uH	
L405	1-410-656-11	INDUCTOR CHIP	150uH	
L406	1-408-970-21	INDUCTOR	10uH	
L407	1-410-386-11	INDUCTOR CHIP	27uH	
L408	1-410-386-11	INDUCTOR CHIP	27uH	
L411	1-408-970-21	INDUCTOR	10uH	

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q103	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q401	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q402	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q403	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q404	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q405	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q406	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q407	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q408	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q409	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q410	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q411	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q412	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q413	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q414	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q415	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q416	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q417	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q418	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q419	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q420	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q421	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
		< RESISTOR >			
R101	1-216-022-00	METAL CHIP	75	5%	1/10W
R102	1-216-022-00	METAL CHIP	75	5%	1/10W
R103	1-216-022-00	METAL CHIP	75	5%	1/10W
R104	1-216-022-00	METAL CHIP	75	5%	1/10W
R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-295-91	SHORT	0		
R106	1-216-073-00	METAL CHIP	10K	5%	1/10W
R107	1-216-041-00	METAL CHIP	470	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R113	1-216-121-91	RES,CHIP	1M	5%	1/10W
R114	1-216-035-00	METAL CHIP	270	5%	1/10W
R115	1-216-025-91	RES,CHIP	100	5%	1/10W
R116	1-216-025-91	RES,CHIP	100	5%	1/10W
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R118	1-216-025-91	RES,CHIP	100	5%	1/10W
R119	1-216-025-91	RES,CHIP	100	5%	1/10W
R120	1-216-025-91	RES,CHIP	100	5%	1/10W
R121	1-216-025-91	RES,CHIP	100	5%	1/10W
R122	1-216-025-91	RES,CHIP	100	5%	1/10W
R123	1-216-025-91	RES,CHIP	100	5%	1/10W
R124	1-216-073-00	METAL CHIP	10K	5%	1/10W
R125	1-216-025-91	RES,CHIP	100	5%	1/10W
R126	1-216-025-91	RES,CHIP	100	5%	1/10W
R127	1-216-025-91	RES,CHIP	100	5%	1/10W
R128	1-216-025-91	RES,CHIP	100	5%	1/10W
R129	1-216-025-91	RES,CHIP	100	5%	1/10W
R130	1-216-025-91	RES,CHIP	100	5%	1/10W
R131	1-216-025-91	RES,CHIP	100	5%	1/10W
R132	1-216-025-91	RES,CHIP	100	5%	1/10W
R133	1-216-025-91	RES,CHIP	100	5%	1/10W

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Ref. No.	Part No.	Description			Remarks
R134	1-216-025-91	RES,CHIP	100	5%	1/10W
R135	1-216-025-91	RES,CHIP	100	5%	1/10W
R136	1-216-025-91	RES,CHIP	100	5%	1/10W
R137	1-216-025-91	RES,CHIP	100	5%	1/10W
R138	1-216-025-91	RES,CHIP	100	5%	1/10W
R139	1-216-025-91	RES,CHIP	100	5%	1/10W
R140	1-216-025-91	RES,CHIP	100	5%	1/10W
R141	1-216-025-91	RES,CHIP	100	5%	1/10W
R142	1-216-025-91	RES,CHIP	100	5%	1/10W
R143	1-216-025-91	RES,CHIP	100	5%	1/10W
R144	1-216-025-91	RES,CHIP	100	5%	1/10W
R145	1-216-025-91	RES,CHIP	100	5%	1/10W
R146	1-216-025-91	RES,CHIP	100	5%	1/10W
R149	1-216-295-91	SHORT	0		
R158	1-216-049-91	RES,CHIP	1K	5%	1/10W
R159	1-216-025-91	RES,CHIP	100	5%	1/10W
R160	1-216-099-00	METAL CHIP	120K	5%	1/10W
R161	1-216-121-91	RES,CHIP	1M	5%	1/10W
R166	1-216-295-91	SHORT	0		
R168	1-216-037-00	METAL CHIP	330	5%	1/10W
R169	1-216-037-00	METAL CHIP	330	5%	1/10W
R173	1-216-033-00	METAL CHIP	220	5%	1/10W
R174	1-216-033-00	METAL CHIP	220	5%	1/10W
R175	1-216-033-00	METAL CHIP	220	5%	1/10W
R176	1-216-033-00	METAL CHIP	220	5%	1/10W
R177	1-216-033-00	METAL CHIP	220	5%	1/10W
R178	1-216-033-00	METAL CHIP	220	5%	1/10W
R179	1-216-033-00	METAL CHIP	220	5%	1/10W
R180	1-216-033-00	METAL CHIP	220	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-033-00	METAL CHIP	220	5%	1/10W
R183	1-216-033-00	METAL CHIP	220	5%	1/10W
R184	1-216-033-00	METAL CHIP	220	5%	1/10W
R185	1-216-295-91	SHORT	0		
R186	1-216-025-91	RES,CHIP	100	5%	1/10W
R187	1-216-025-91	RES,CHIP	100	5%	1/10W
R188	1-216-025-91	RES,CHIP	100	5%	1/10W
R189	1-216-025-91	RES,CHIP	100	5%	1/10W
R190	1-216-295-91	SHORT	0		
R191	1-216-295-91	SHORT	0		
R192	1-216-033-00	METAL CHIP	220	5%	1/10W
R193	1-216-049-91	RES,CHIP	1K	5%	1/10W
R194	1-216-049-91	RES,CHIP	1K	5%	1/10W
R195	1-216-049-91	RES,CHIP	1K	5%	1/10W
R196	1-216-073-00	METAL CHIP	10K	5%	1/10W
R199	1-216-073-00	METAL CHIP	10K	5%	1/10W
R200	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-025-91	RES,CHIP	100	5%	1/10W
R203	1-216-025-91	RES,CHIP	100	5%	1/10W
R204	1-216-295-91	SHORT	0		
R205	1-216-025-91	RES,CHIP	100	5%	1/10W
R206	1-216-025-91	RES,CHIP	100	5%	1/10W
R210	1-216-295-91	SHORT	0		
R211	1-216-295-91	SHORT	0		
R212	1-216-295-91	SHORT	0		
R220	1-216-049-91	RES,CHIP	1K	5%	1/10W
R222	1-216-025-91	RES,CHIP	100	5%	1/10W
R250	1-216-037-00	METAL CHIP	330	5%	1/10W
R251	1-216-037-00	METAL CHIP	330	5%	1/10W
R252	1-216-296-91	SHORT	0		
R322	1-216-295-91	SHORT	0		
R401	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R402	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R403	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R404	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R405	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R406	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R409	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R410	1-216-049-91	RES,CHIP	1K	5%	1/10W
R411	1-216-049-91	RES,CHIP	1K	5%	1/10W
R412	1-216-022-00	METAL CHIP	75	5%	1/10W
R413	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R414	1-216-032-00	METAL CHIP	200	5%	1/10W
R415	1-216-049-91	RES,CHIP	1K	5%	1/10W
R416	1-216-032-00	METAL CHIP	200	5%	1/10W
R417	1-216-049-91	RES,CHIP	1K	5%	1/10W
R418	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R419	1-216-047-91	RES,CHIP	820	5%	1/10W
R420	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W
R422	1-216-043-91	RES,CHIP	560	5%	1/10W
R423	1-216-043-91	RES,CHIP	560	5%	1/10W
R424	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R425	1-216-025-91	RES,CHIP	100	5%	1/10W
R426	1-216-025-91	RES,CHIP	100	5%	1/10W
R427	1-216-025-91	RES,CHIP	100	5%	1/10W
R428	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R429	1-216-077-00	METAL CHIP	15K	5%	1/10W
R430	1-216-025-91	RES,CHIP	100	5%	1/10W
R431	1-216-041-00	METAL CHIP	470	5%	1/10W
R432	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R434	1-216-073-00	METAL CHIP	10K	5%	1/10W
R435	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R436	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R437	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R438	1-216-073-00	METAL CHIP	10K	5%	1/10W
R439	1-216-047-91	RES,CHIP	820	5%	1/10W
R440	1-216-047-91	RES,CHIP	820	5%	1/10W
R441	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R442	1-216-025-91	RES,CHIP	100	5%	1/10W
R443	1-216-025-91	RES,CHIP	100	5%	1/10W
R445	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R446	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R447	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R448	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R449	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R450	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R451	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R452	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R455	1-216-073-00	METAL CHIP	10K	5%	1/10W
R457	1-216-025-91	RES,CHIP	100	5%	1/10W
R458	1-216-025-91	RES,CHIP	100	5%	1/10W
R459	1-216-025-91	RES,CHIP	100	5%	1/10W
R460	1-216-025-91	RES,CHIP	100	5%	1/10W
R461	1-216-073-00	METAL CHIP	10K	5%	1/10W
R462	1-216-073-00	METAL CHIP	10K	5%	1/10W
R464	1-216-295-91	SHORT	0		
R465	1-216-041-00	METAL CHIP	470	5%	1/10W
R466	1-216-053-00	METAL CHIP	1.5K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R467	1-216-049-91	RES,CHIP	1K	5%	1/10W
R468	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R470	1-216-025-91	RES,CHIP	100	5%	1/10W
R471	1-216-025-91	RES,CHIP	100	5%	1/10W
R472	1-216-041-00	METAL CHIP	470	5%	1/10W
R500	1-216-295-91	SHORT	0		
		< VARIABLE RESISTOR >			
RV402	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (Y OUTPUT AMPLITUDE)			
RV403	1-241-392-11	RES, ADJ, METAL GLAZE 1K (S INPUT Y AMPLITUDE)			
		< VIBRATOR >			
X101	1-767-213-11	VIBRATOR, CRYSTAL 26.798MHz			
X102	1-767-396-11	VIBRATOR, CERAMIC 16MHz			
X401	1-577-611-11	OSCILALTOR, CERAMIC 500kHz			
X402	1-567-878-11	OSCILLATOR, CRYSTAL 14.31818MHz			

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MISCELLANEOUS
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2	1-698-851-11	FAN, DC			
104	1-783-069-11	WIRE (FLAT TYPE) (13 CORE)			
105	1-783-070-11	WIRE (FLAT TYPE) (25 CORE)			
106	1-777-555-21	WIRE (FLAT TYPE) (7 CORE)			
107	1-777-553-11	WIRE (FLAT TYPE) (30 CORE)			
108	1-777-552-11	WIRE (FLAT TYPE) (18 CORE)			
111	1-777-554-11	WIRE (FLAT TYPE) (6 CORE)			
⚠257	8-583-009-12	OPTICAL PICK-UP KMS-210A/J-N			
HR901	1-500-304-21	HEAD, OVER LIGHT			
M101	A-4660-651-A	MOTOR (SLED) ASSY			
M102	A-4660-650-A	CHASSIS ASSY, BU			
M191	A-4660-646-A	MOTOR (LOADING) ASSY			
S102	1-762-148-11	SWITCH, PUSH (2 KEY)			

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Ref. No.	Part No.	Description	Remarks
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-539-11	REMOTE COMMANDER (RMT-DA300)	
	1-475-540-11	ADAPTOR, AC (AC-DA300)	
	3-862-160-11	MANUAL, INSTRUCTION (ENGLISH)	
	4-981-643-01	BATTERY COVER (RMT-DA300)	

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****
HARDWARE LIST
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#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 N-S
#2	7-685-648-79	SCREW +BVTP 3 × 12 TYPE2 N-S
#3	7-685-861-01	SCREW +BVTT 2.6 × 5 (S)
#4	7-685-105-19	TPG +P 2 × 8, TYPE 2, NON-SLIT
#5	7-685-104-19	SCREW +P 2 × 6 TYPE2 NON-SLIT
#6	7-685-645-79	SCREW +BVTP 3 × 6 TYPE2 N-S
#7	7-685-860-04	SCREW +BVTT 2.6 × 4 (S)
#8	7-627-852-08	SCREW,PRECISION +P 1.7 × 2.5
#9	7-685-781-09	SCREW +PTT 2 × 4 (S)
#10	7-621-775-20	SCREW +B 2.6 × 5
#11	7-621-770-67	SCREW +PWH 2.6 × 6
#12	7-685-850-04	SCREW +BVTT 2 × 3 (S)
#13	7-685-862-09	SCREW +BVTT 2.6 × 6 (S)
#14	7-682-652-09	SCREW +PS 3 × 16
#15	7-684-023-04	N 3, TYPE 2
#16	7-685-871-01	SCREW +BVTT 3 × 6 (S)

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 numéro spécifié.

9-922-743-11

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Home A&V Products Company

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