

MDP-1150

RMT-1050

SERVICE MANUAL

US Model
Canadian Model



SPECIFICATIONS

Type
Signal readout
Signal format system
Playing time

CD/CDV/LD Player
Optical (Laser beam reflection)
EIA standard, NTSC color system
(minutes)

LD	CAV	30 cm (12 in) double-sided	60
		20 cm (8 in) double-sided	28
		20 cm (6 in) single-sided	14
	CLV	30 cm (12 in) double-sided	120
		20 cm (8 in) double-sided	40
		20 cm (8 in) single-sided	20
CD	12 cm (5 in) single-sided	74	
	8 cm (3 in) single-sided	20	
CDV	Audio portion	20	
	Video portion	5	

Video specifications

Horizontal video resolution 425 lines
Signal-to-noise ratio More than 49 dB

Input/output specifications

Video output 1, 2 1.0 Vp-p, 75 ohms, unbalanced
Stereo L, R
Audio output Analog: 200 mVrms (1 kHz, 40% modulation)
Digital: 200 mVrms (1 kHz, -20 dB)
Monaural (only for RFU adaptor)
MIX output: 77.5 mVrms (1 kHz, -20 dB)
S video output Luminance: 1 Vp-p, 75 ohms, unbalanced, sync negative
Chrominance: 0.286 Vp-p, 75 ohms, unbalanced
Headphone output 28 mW (32 ohms)
Impedance = 8 ohms
RFU DC output Mini mini jack DC 5 V
BAR CODE jack MINI-DIN connector (6 pin)

— Continued on next page —

Digital audio specifications

Frequency response 4 Hz to 20kHz (±0.5 dB)
Signal-to-noise ratio More than 108 dB (EIAJ)*
Dynamic range More than 99 dB (EIAJ)
Total harmonic distortion 0.003% (EIAJ)
Wow and flutter Below measurement limit (±0.001% W.PEAK) (EIAJ)

 CD VIDEO CD/CDV/LD PLAYER
SONY®

External control interface

Interface RS-232C
(25-pin D-SUB type)

* Measured according to EIAJ (Electronic Industries Association of Japan) standards.

Power requirements

Power requirements 120 V AC, 60 Hz
Power consumption 39 W
Weight 8.8 kg (19 lb 6 oz)
Dimensions (w/h/d) Approx. 430 × 115 × 420 mm
(17 × 4-1/2 × 16-1/2 in.)
Operating temperature +5°C to +35 °C
Ambient humidity 5% to 90%

Remote Commander RMT-1050



Principle of operation Infrared pulse
Power requirements 3 V DC (2 size AA batteries)
Dimensions (w/h/d) Approx. 62 × 44.5 × 185 mm
(2-7/16×1-13/16×7-3/8 in.)
Weight Approx. 170 g (6 oz)
(including batteries)

Supplied accessories


Remote Commander RMT-1050 (1)
Size AA (R6) batteries (2)
RFU adaptor RFU-90 UC (1)
Video cable (phono plug 1 ↔ phono plug 1) (1)
Audio cable (phono plug 2 ↔ phono plug 2) (1)
MDP-1150 Interface manual (1)

Design and specifications are subject to change without notice.

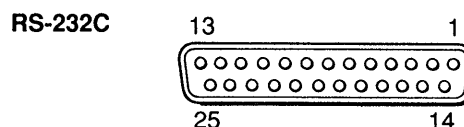
SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

Signal assignment



Pin No.	Signal
1	FG (Frame ground)
2	TxD (Transmit data)
3	RxD (Receive data)
4	RTS (Request to send)
5	CTS (Clear to send)
6	DSR (Data set ready)
7	GND
20	DTR (Data terminal ready)

Each signal conforms to the RS-232C specifications. (Output level ON: more than +5 V, OFF: less than -5 V)

Note

Check the RS-232C pin assignment of the external computer to be connected. There is a modem mode and terminal mode for pin assignment. The RS-232C pin assignment for this player is the terminal mode.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION:

The use of optical instrument with this product will increase eye hazard.

CAUTION

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

SAFETY CHECK-OUT

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

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

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)

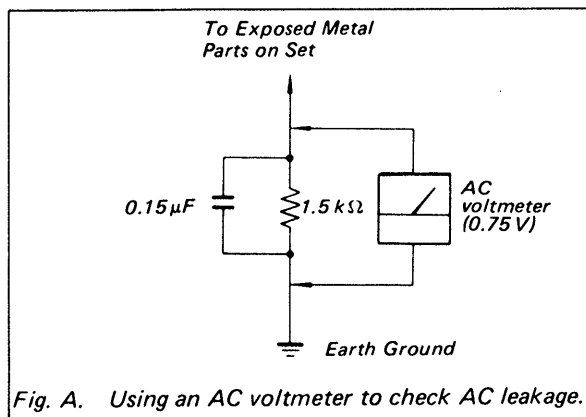


Fig. A. Using an AC voltmeter to check AC leakage.

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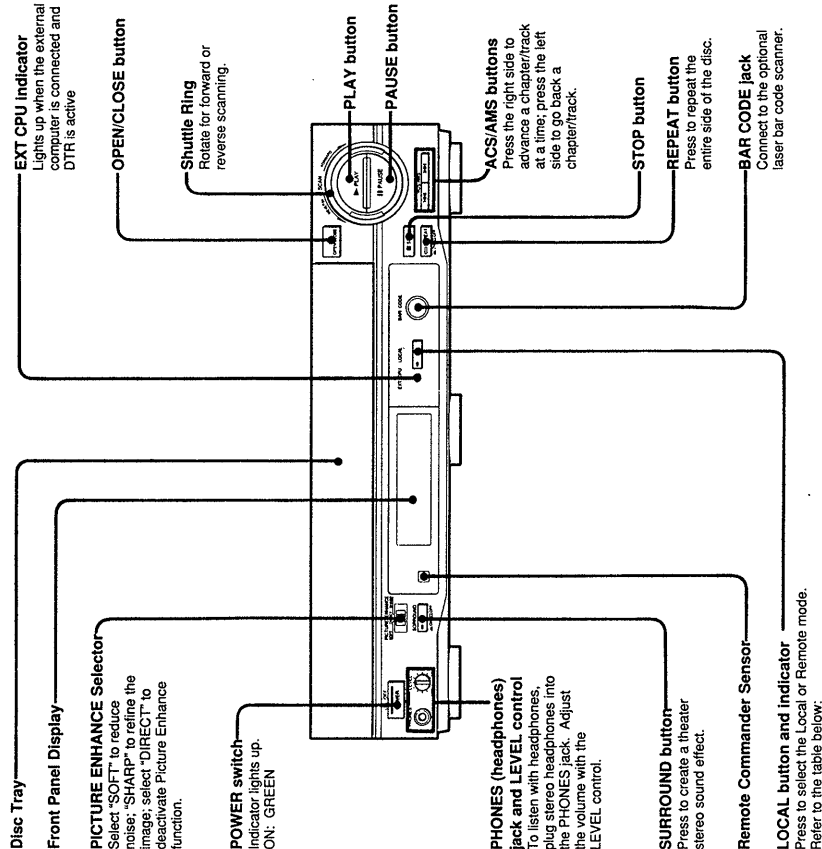
This section is extracted from instruction manual.

SECTION 1 GENERAL

Installation and Connection

Front and Rear Panel Controls and Supplied Accessories

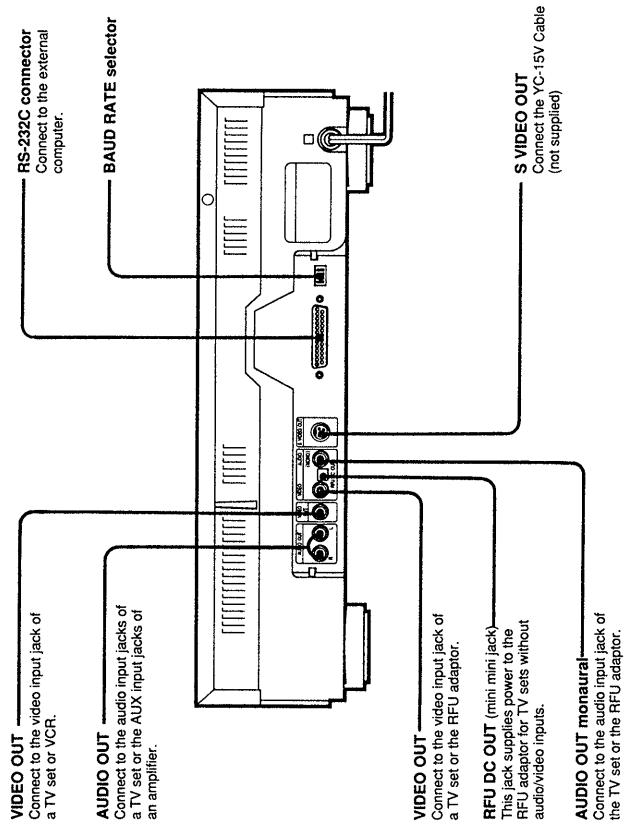
Front Panel



Mode	LOCAL indicator	EXT CPU indicator	Operating equipment
Local*	Lit	Lit	The all equipment including the external computer can be used at a time. Operated by using only the external computer.
Remote	Unit	Unit	Operated by using the player, the Remote or optional barcord scanner (or barcord remote commander). The external computer cannot be used.

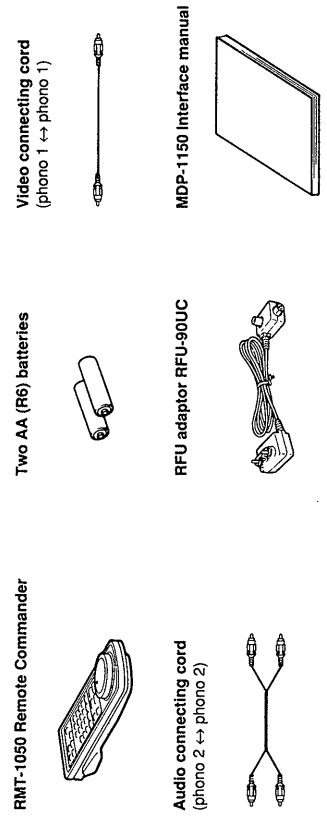
* When you operate by the external computer, be sure to select the Remote mode.

Rear Panel



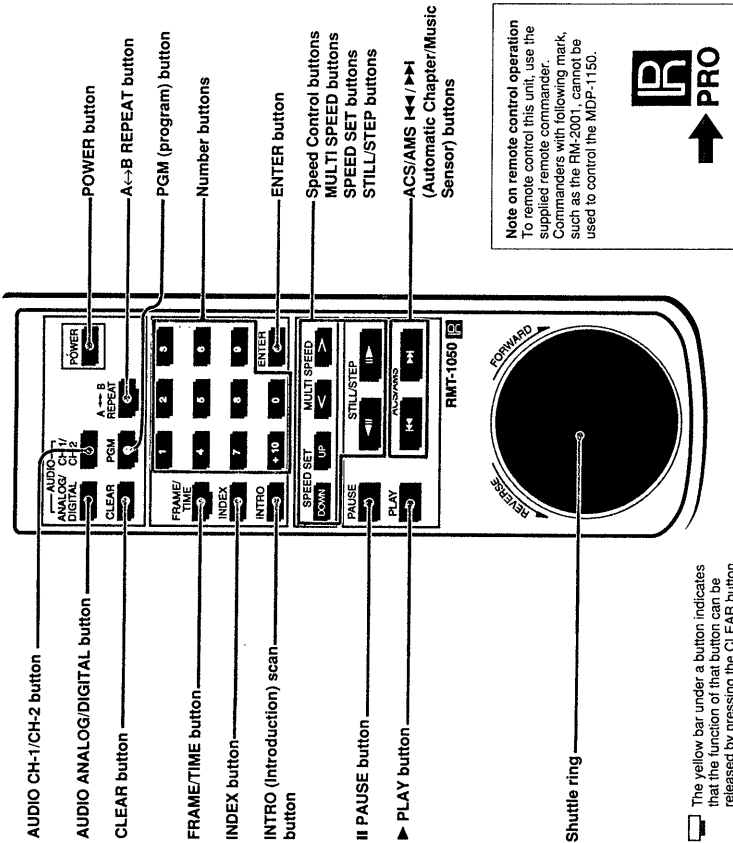
Accessories

Make sure the shipping box contains the following accessories:



Controls on the Remote Commander

You can use the Remote Commander (the Remote) to control the player or the identical buttons on the player itself. AUDIO ANALOG/DIGITAL, FRAME/TIME, STILL/STEP, MULTI SPEED and SPEED SET buttons are not used CD and CDV disc.



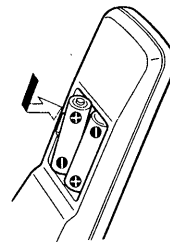
The yellow bar under a button indicates that the function of that button can be released by pressing the CLEAR button.

To Activate the Remote Commander

Open the back cover, and insert two size AA (R6) batteries according to the polarity indicated in the illustration. The batteries will last for about 6 months. If the range of the Remote Commander becomes noticeably short, replace all the batteries with new ones. If the Remote Commander is not to be used for a long time, remove the batteries to avoid damage from possible battery leakage.

Remote Commander Precautions

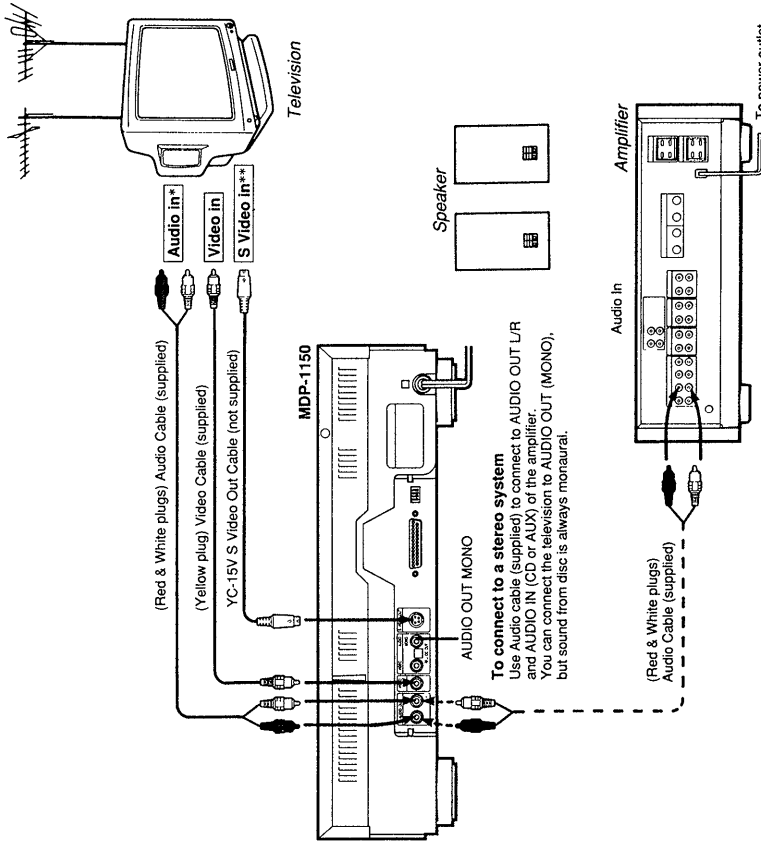
Do not let sunlight or powerful artificial light fall directly on the Remote Commander Sensor on the front panel of the player as it may interfere with Remote Commander operation or damage the sensor.



Insert two size AA (R6) batteries.

How to Connect the Television and Audio Equipment

To play LDs or CDVs, hook up a television to the Multi Disc Player. Before connecting or disconnecting any of the cables, turn off all equipment. Use the supplied yellow video connecting cable to connect the television. Once you have hooked up the television, set the input selector on the TV to "Video". To achieve full stereo sound from your Multi Disc Player, hook up a stereo system following the diagram below. Use the supplied red and white audio connecting cable and use this to connect the Multi Disc Player to your amplifier or receiver.

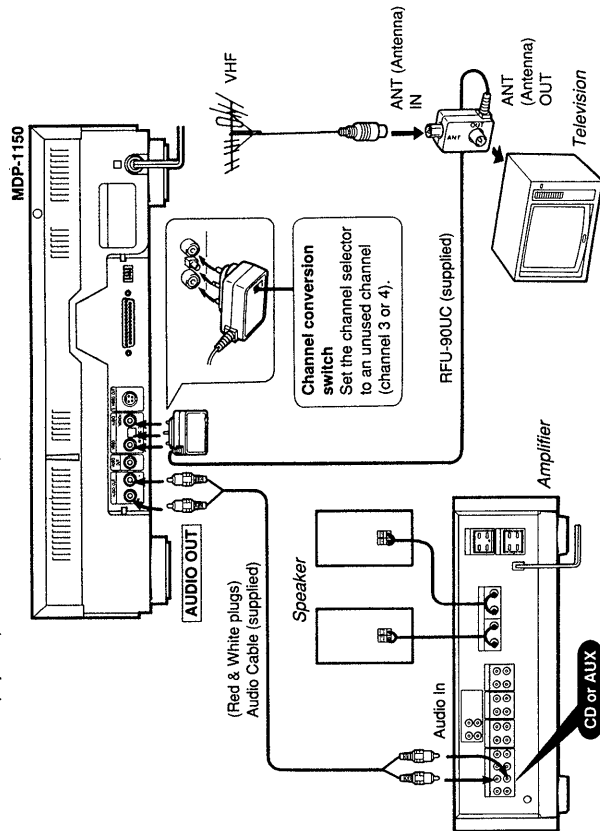


Connecting Notes:

- Make sure all equipment is turned off before connecting or disconnecting any cables.
 - Connection methods may differ; when in doubt about a connection consult the TV or VCR manufacturer's manual.
 - If noise emits from the video or audio input, try moving the equipment farther apart.
 - Firmly insert plugs into the jacks. A loose connection may cause noise.
 - To prevent later interference with TV broadcast reception, turn off all equipment connected but not currently in use.
- * If the TV only has a monaural phono jack for audio input, use a VMC-720M/730M Connecting Cable (not supplied).
 ** If your TV has an S Video Input jack, obtain a YC-15V S Video Connecting Cable, and use this instead of the supplied video cable to connect your television to the S VIDEO OUT connector on the Multi Disc Player.

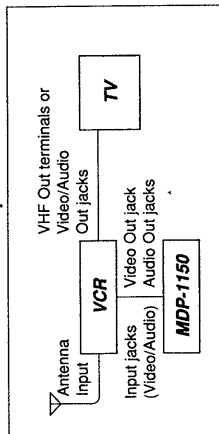
When Your TV Does Not Have Audio/Video Inputs

Use the supplied RFU-90UC RFU adaptor and audio cable to connect the player to the television and amplifier. After connecting the cable, set the channel conversion switch at the rear of the RFU-90UC to an unused channel, 3CH or 4CH. To receive the playback picture of the Laser disc, you must set the switch to unused position.



If you connect the Multi Disc Player to the TV via the RFU-90UC, the audio signal of the disc is reproduced in monaural.

Television/VCR Hook-Up



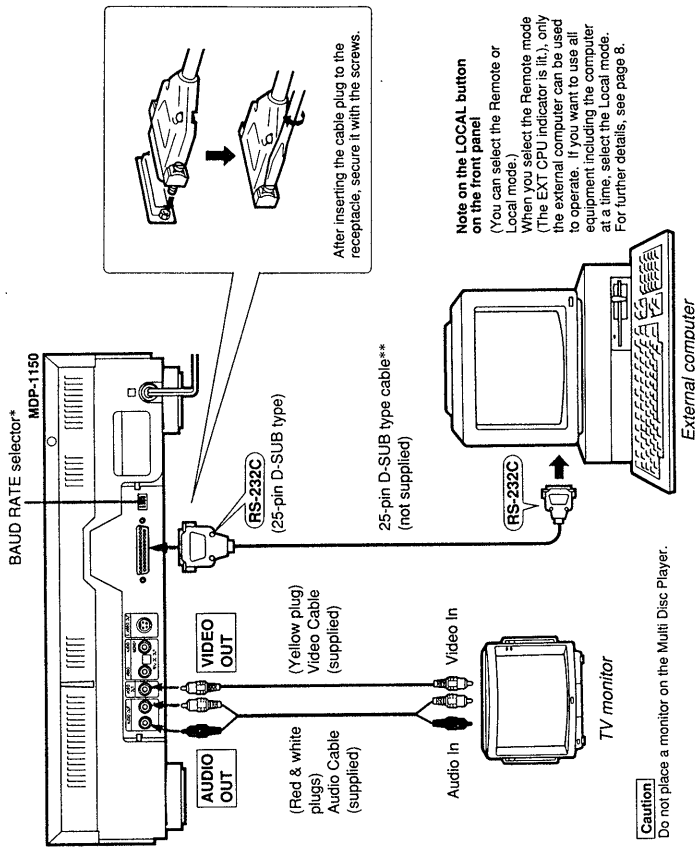
Connect to the external video/audio inputs of a VCR.

Why is it necessary to select 3 or 4 channel?

The Multi disc player sends its output to the TV as a VHF broadcast signal. Selecting an unused channel avoids interfering with regular broadcasts. When watching regular TV programs, turn the player off so that you can obtain a better picture. If TV picture quality is not satisfactory, refer to the manufacturer's manual and adjust the reception.

How to Connect the External Computer and TV Monitor

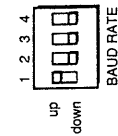
Use a standard RS-232C interface cable (not supplied) to connect the computer to the Multi Disc Player. After connecting, press the LOCAL button on the front panel to select an operation mode.



Caution
Do not place a monitor on the Multi Disc Player.

*Note on the BAUD RATE selector

Select the data transmission speed on the RS-232C line. The baud rate can be set to 9600, 4800, 2400, or 1200 baud. Be sure that the speed set on this player is matched to that on the connected computer. The data speed is initially set to 1200 at the factory.



Example: The baud rate is set to 2400.

Switch setting	Baud rate			
	1	2	3	4
down	down	down	down	down
up	up	down	down	down
down	down	up	down	down
up	up	up	down	down

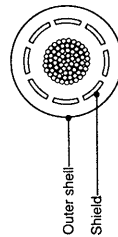
Set the switches to the desired positions using the tip of a ball-point pen or a similar object.

For details on connection with an external computer, refer to operating manual of the computer, and for operation, refer to the supplied MDP-1150 interface manual.

Note on the LOCAL button on the front panel
(You can select the Remote or Local mode.)
When you select the Remote mode (The EXT CPU indicator is lit.), only the external computer can be used to operate. If you want to use all equipment including the computer at a time, select the Local mode. For further details, see page 6.

After inserting the cable plug to the receptacle, secure it with the screws.

**** RS-232C Interface Cable for an External Computer Connection**
Interface cable to be connected to the I/O connector (RS-232C, 25-pin D SUB type) must be shielded as follows.






About pin assignment, refer page 35.

To Play a Laser Disc

This section shows you how to conduct all the procedures associated with playing LDs.

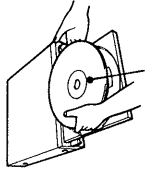
How to Load and Play an LD (Laser Disc)

After you have connected the Multi Disc Player to the TV and/or stereo system, you can begin playing a laser disc. Locate the POWER and PLAY buttons on the Remote Commander (the Remote) or the front panel of the player. The OPEN/CLOSE and STOP buttons are located only on the player.

- Turn on the TV and stereo system.**
 TV. Set the input selector on the TV to "Video".
 Stereo System. Turn on the amplifier or receiver and select CD or AUX for audio output.
- Turn on the multi disc player.**
 POWER  
 Player or Remote Commander
- Open the disc tray.**
 Press the OPEN/CLOSE button on the player. 

4 Place the disc on the tray.

Carefully center a single disc on the tray. If you insert more than one disc, or if the disc is not seated properly, it may not play or it may damage the disc.



5 Start playback.

Press PLAY (▶) on the Remote or inside the Shuttle Ring on the player.
 You can also start playback by pushing the disc tray.



At the moment play begins, screen noise may occur due to the synchronization of the signal phases.

To Advance or Reverse

Rotate the Shuttle Ring.
 (See page 17)



To Advance or Go Back a Chapter at a Time

Press or hold down the ACS/AMS button.
 (See page 18)



To Interrupt Play

Press PAUSE (⏸). The sound mutes and the blue screen appears. To resume playback, press PLAY (▶).



To Stop Playback

Press STOP (■) on the player.
 To play again from the beginning, press PLAY (▶).



To Stop Play and Remove the Disc

Press OPEN/CLOSE (⏏) on the player.
 Remove the disc and close the empty tray.



To Have the Player Pause Before Starting

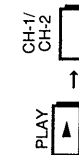


Press the PAUSE (⏸) button on the player or the Remote Commander immediately after doing step 4 on page 14.
 The tray closes and the player waits at the start of the disc until you press PLAY (▶).

To Activate Play with an Optional Timer

Set the timer with the AC power cord connected to the player.
 When the timer supplies power at the preset time, the player starts playing the disc. If there is no disc in the player, the player goes off automatically.

To Play a Stereo LD or a Second Audio Program (SAP) LD



Press PLAY (▶), then keep pressing the CH-1/CH-2 button.
 This function alternates the sound output on a disc that has been recorded on two sound tracks, such as bilingual discs.

The procedure below indicates how the output and the display changes with each press.

Procedure	Display	Output Sound	
		Stereo Disc	SAP Disc
1 Press PLAY (▶).	1/L 2/R	Stereo (Both speakers)	Soundtrack 1 (left channel) Soundtrack 2 (right channel)
2 Press CH-1/CH-2.	1/L	Left speaker	Soundtrack 1 (left channel)
3 Press CH-1/CH-2 again. Press CH-1/CH-2 again to return to stereo status.	2/R	Right speaker	Soundtrack 2 (right channel)

To Switch from Digital to Analog Sound



Press the ANALOG/DIGITAL button to switch the player to analog or digital sound. Digital affords a better quality sound reproduction. If the LD contains a digital sound signal, the player automatically sends that output to the amplifier or receiver. When you press the ANALOG/DIGITAL button on the Remote, you can switch to analog sound.
 With certain discs there may be a difference in volume.

Discs with a (CX) Label

Discs bearing the (CX) label are recorded with the CX Noise Reduction system, which gives lower noise levels and higher dynamic range.

To Get the Surround Sound Effect

Press the SURROUND button on the player to achieve three-dimensional sound quality from your disc.



Understanding Displays and Messages When Playing LDs

You can determine player operating status or disc information in one of two ways: (1) by displaying the information on the TV screen, or (2) by looking at the front panel display. Locate the INDEX button on the Remote.

To View On-Screen Information

Press INDEX on the Remote. To turn off the display, press INDEX again.

Reading the On-Screen Messages

The illustration below is an example of what appears on screen while the player is operating. The table below is a key to the messages that appear on the right.

Screen Display	Current Status of the Player
OPEN	Disc tray open
CLOSE	Disc tray closed
PLAY	Playing LD
STOP	Operation stopped
PAUSE	Operation momentarily stopped
SEARCH	Variable speed (Shuttle Ring) scan
X 1/2	Searching
	Scanning at 1/2-speed

Screen Display	Currently Playing
SIDE A CAV	Standard-play disc side A**
SIDE B CAV	Standard-play disc side B
SIDE A CLV	Extended-play disc side A
SIDE B CLV	Extended-play disc side B
1/L	First soundtrack/left channel
2/R	Second soundtrack/right channel
DIGITAL	Digital sound
ANALOG	Analog sound

* Discs not indicating time data to the second indicate instead as two-digit numbers such as "0:22".

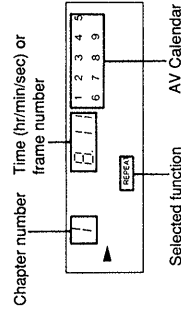
** Some discs do not contain Side A or B identification coding. In that case, disc side indications may not be accurate.

Reading the Front Panel Display

The illustration to the right is an example of what is displayed on the front panel of the player.

Finding Out Play Status

When playing an LD containing TOC (Table of Contents) data, the AV Calendar shows information on the total number of selections on the disc or those programmed to play. As selections are played, the corresponding numbers on the display disappear.



How to Search Using Variable Speed Play (for CAV discs)

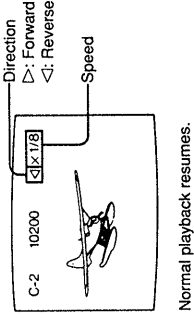
To find a scene, play the disc reverse or forward at varying speeds. * Use Multi Speed and Speed Set for CAV standard-play LDs. Use the Shuttle Ring, which lets you scan gradually, for all discs. Locate the MULTI SPEED, SPEED SET, INDEX buttons and the Shuttle Ring on the Remote.

To Change Speed and Direction (Multi Speed)

- 1 Press MULTI SPEED to select the direction.
 - To reverse <
 - To advance >
- 2 Press SPEED SET to select the speed.
 - To reduce speed DOWN
 - To increase speed UP

(You can press SPEED SET first, or do either step without the other.)
- 3 Press INDEX.

The play speed and direction appear on screen.



Normal playback resumes.

Discs with Automatic Picture Stop Code

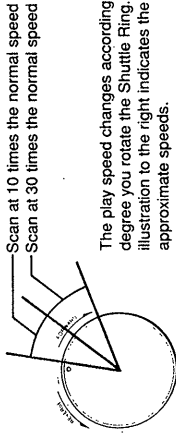
When an automatic picture stop code (found on educational discs) is encountered during variable speed play, the unit automatically stops at that frame. To resume playback, press PLAY, MULTI SPEED, or turn the Shuttle Ring.

Extended-Play (CLV) or Non-CAV Discs

Variable Speed Play, Freeze Frame, and Step Play are not possible with CLV discs. When these buttons are pressed, the message "INVALID KEY" appears on the screen.

To Change Speed and Direction Gradually (Variable Speed Scan)**

Rotate the Shuttle Ring in the forward or reverse direction.



Release the Shuttle Ring.

To Resume Normal Play

* A certain amount of visual noise and instability is inevitable with all variable speed operations.
 ** Scanning speed varies as the laser beam moves away from the center of a CLV disc.

How to Search by Chapter Numbers

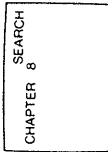
LDs are divided into sections called "chapters". Chapters are usually listed on the jacket or label of the disc. By entering the desired chapter number, you can have the player find the chapter and play it. Use ACS/AMS—Automatic Chapter Sensing/Automatic Music Sensing—to advance or go back a chapter at a time. Locate the number buttons on the Remote and the ACS/AMS buttons on the front panel of the player.

To Locate a Particular Chapter

For example, to locate chapter 8, press "8" on the Remote.

8

The player starts searching for Chapter 8.



The player finds Chapter 8 and starts playing from the beginning of Chapter 8.

To Enter a Number Greater Than 10*
 Press +10 and one of the number buttons.

Do this to make a numerical sum. For example, to enter 14, press +10 → 4; to enter 30, press +10, +10, +10 and 0.

+10 → +10 → +10 → 0

If you make a mistake while entering numbers, press CLEAR then enter the correct numbers.

To Check the Current Chapter Number

INDEX

Press INDEX on the Remote to display the chapter number (upper left-hand corner) on screen. You can also look at the AV Calendar on the front panel display for the chapters on the disc left to be played.

To Advance or Go Back a Chapter at a Time (Skip Search)

ACS/AMS

Press ACS/AMS (◀) once to return to the beginning of the current chapter.

Press ACS/AMS (▶) to advance to the beginning of the next chapter.

Press ACS/AMS (◀▶) twice before the picture reappears to return to the beginning of the previous chapter.

PLAY

Press PLAY (▶).

To Resume Normal Play

How to Search by Frame Number or Time—Frame/Time Search

Video scenes are counted as a series of still pictures or "frames". The player keeps track of the number of frames that have been played from the beginning of the disc to the current position. Similarly, the player also keeps track of the elapsed playing time from the beginning of the disc. To play from a particular frame or time, use the Frame/Time Search function. Locate the FRAME/TIME, ENTER buttons, and number buttons on the Remote.

On CAV (standard-play) discs, enter a frame number. On CLV (extended-play) discs, enter the time.*

To Enter the Elapsed Frame or Time

FRAME/
TIME

The screen displays the current frame (for CAVs) or current time (for CLVs) as "00000".

1 Press the FRAME/TIME button.

4

Enter five digits for CAVs.

Enter four digits for CLVs displaying the time to the second.

Enter two digits for CLVs displaying the time to the minute.

1 → 2 → 3 → 4 → 0

Sample Entry for CAV Discs
 To locate frame number 12340, press the number buttons in the order on the right:

Sample Entry for CLV Discs

To locate the 12-minute, 5-second point, press the number buttons in the order on the right:

1 → 2 → 0 → 5

If you make a mistake, press FRAME/TIME again to return the display to zero, and then enter the correct numbers.

ENTER

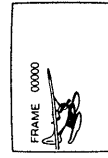
3 Press ENTER on the Remote. Play starts from the time or frame specified in step 2.

To Check the Frame/Time Numbers

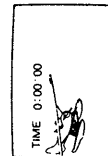
INDEX

These numbers appear on screen when you press INDEX. You can also find them on the front panel display.

CAV (standard-play) disc



CLV (extended-play) disc



To Cancel Frame/Time Search

CLEAR or STOP

Before pressing the ENTER button, press CLEAR. If you have already pressed the ENTER button, press STOP (■) on the player.

In addition to play mode, you can conduct Frame/Time Search while in Freeze-Frame, Variable Speed Play, Repeat or Pause mode. When the specified frame or time appears after the search, play continues in the same mode.





* "CAV" or "CLV" should be noted somewhere on the disc jacket.

** If you enter a frame or time number not contained on the disc, play stops.

How to Play Frame-by-Frame (for CAV discs)

Once you have found a particular scene, you can examine the progression of that scene by advancing or reversing the action one frame at a time (Step Play), or freezing the action into a still picture (Freeze Frame).* Locate the STILL/STEP button on the Remote.

To Play One Frame at a Time (Step Play)

- 1 Press STILL/STEP once.  The frame freezes.
- 2 Press STILL/STEP repeatedly. Hold down the button for continuous frame-by-frame action.  Each press shifts the image one frame backward or forward.
 To reverse 
 To advance 

In addition to pause mode, you can achieve Step Play while the player is in play mode by pressing one of the STILL/STEP buttons while the disc is playing.

To Freeze the Action (Freeze Frame)



Press STILL/STEP once.

To Resume Normal Play



Press PLAY (▶).

Extended-Play (CLV) Discs

Freeze Frame and Step Play are not possible with CLV discs. When the STILL button is pressed, the message "INVALID KEY" appears on the screen.

How to Replay the Same LD Selections

These instructions show you how to program the player to play the same scenes over and over until you signal the repetition to stop. You can replay a single side or a section between one pair of points on the disc. Locate the REPEAT button on the player and the A↔B REPEAT button on the Remote.

To Repeat the Entire Side of the Disc

Press REPEAT on the player. "REPEAT" lights up in the front panel display. When the player reaches the end of one side, it returns to the beginning of the disc and starts playing that side again.

At the end of one side of the disc.

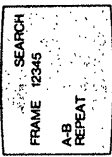

Press REPEAT.

To Cancel REPEAT



Press REPEAT.

To Repeat One Section of the Disc

- 1 Go back to the start of the scene you want replayed. This marks where replay is to begin.
- 2 Press A↔B REPEAT at the beginning of where you want replay to begin.
- 3 Let the player run to the end of the scene you want repeated. The "A -" indication lights up, and "B" indication in the front panel flashes.  → 
- 4 Press A↔B REPEAT again. This marks where replay is to end.

"REPEAT A-B" lights up in the front panel display. The player repeatedly plays the same scene between the two points selected.

Press CLEAR.

To Cancel A-B REPEAT



* This function can only be performed on CAV discs.

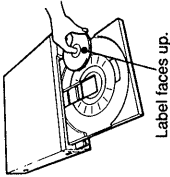
To Play a Compact Disc

This section explains how to perform procedures associated with playing CDs.

How to Load and Play a CD (Compact Disc)

After you have connected the Multi Disc Player to the stereo system, you can begin playing a compact disc. Locate the POWER and PLAY buttons on the Remote or the front panel of the player. The OPEN/CLOSE and STOP buttons are located only on the player.

- 1 **Turn on the stereo system.**
Turn on the amplifier or receiver and select CD, AUX or other desired audio input.
- 2 **Turn on the multi disc player.**
Press the POWER button on the player or Remote Commander.
- 3 **Open the disc tray.**
Press the OPEN/CLOSE button on the player.
- 4 **Place the disc on the tray.**
Carefully center a single CD on the tray. If you insert more than one disc, or the disc is not seated properly, it may not play or it may damage the disc.



- 5 **Start playback.**
Press PLAY (▶) on the Remote or inside the Shuttle Ring on the player. You can also start playback by pressing the disc tray.

At the moment play begins, screen noise may occur due to the synchronization of the signal phases.

To Advance or Reverse

To Advance or Go Back One Track at a Time To go back To advance



To Interrupt Play To resume playback, press PLAY (▶).

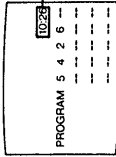
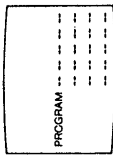
To Stop Playback To play again from the beginning, press PLAY (▶).

To Stop Play and Remove the Disc Press OPEN/CLOSE on the player. Remove the CD and close the empty tray.

How to Play Only Certain Chapters—Programmed Play

You can choose, in any order you like, the chapters the MDP plays. This playlist is stored in the player until you either remove the disc or turn off the power. After playing all the selections, the player stops and waits for your next command. Locate the number buttons, PGM and PLAY buttons on the Remote.

- 1 **Press PGM on the Remote.**
"PROGRAM" flashes in the front panel display. "PROGRAM ---" appears on screen.
- 2 **Press one of the number buttons.**
Press numbers for all the chapters you want played.
For example, press 5, 4, 2, and 6 to play those chapters in that order.
- 3 **Press PLAY (▶).**



The total playing time of the programmed chapters shows on screen for LDs containing TOC (Table of Contents) data.

To Change an Entry Press CLEAR, and then PGM. Enter the correct chapter number.

To Enter a Number Greater Than 10 Press +10 and one of the number buttons, following the same procedure as on page 18.

To Cancel Programmed Play Press CLEAR. The player resumes normal playback.

To Advance or Go Back a Chapter** Press ACS/AMS (◀▶ or ▶▶).

To Check the Contents of the Program Press PGM. The flashing number indicates the chapter now playing. The display disappears after 3 seconds.

* If you enter 0 or chapter numbers greater than 21, or if total play time exceeds 100 minutes, the total play time is not displayed.
** The player does not go back to previous chapters if the Shuttle Ring is rotated to the left, although, it does advance to forward chapters if rotated to the right. To go back to preceding chapters hold down the ACS/AMS (◀▶) button.

To Have the Player Pause Before Starting

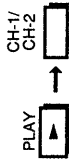


Press the **PAUSE** (||) button on the player or the Remote instead of pressing **PLAY**.
The tray closes and the player waits at the start of the disc until you press **PLAY** (▶).

To Activate Playback with an Optional Timer

Set the timer with the **AC power cord** connected to the player. When the timer supplies power at the preset time, the player starts playing the disc. If there is no disc in the player, the player goes off automatically.

To Play a Stereo CD or a Second Audio Program (SAP) CD



Press **PLAY** (▶), then keep pressing the **CH-1/CH-2** button. The procedure below indicates how the output and the display change with each press.

Procedure	Display	Output Sound	
		Stereo Disc	SAP Disc
1 Press PLAY (▶).	1/L 2/R	Stereo (Both channels)	Soundtrack 1 (left channel) Soundtrack 2 (right channel)
2 Press CH-1/CH-2 .	1/L	Left channel	Soundtrack 1 (left channel)
3 Press CH-1/CH-2 again. Press CH-1/CH-2 again to return to stereo status.	2/R	Right channel	Soundtrack 2 (right channel)

To Get the Surround Sound Effect

Press the **SURROUND** button on the player to achieve three-dimensional sound quality from your disc.



Understanding Displays and Messages When Playing CDs

You can determine player operating status or disc information in one of two ways: (1) by displaying the information on the TV screen, or (2) by looking at the front panel display. Locate the **INDEX** button on the Remote.



Turn on the television, and press **INDEX** on the Remote.
To turn off the display, press **INDEX** again.

Reading the On-Screen Messages

The screen below is an example of what is displayed. The table is a key to the messages that appear on the right.

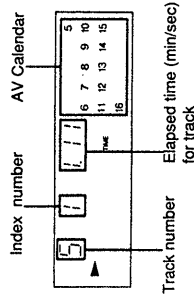
Message (Examples)	Screen Display	Current Status of the Player
Elapsed time per track	1-2	Disc tray open
Index number	1-1	Disc tray closed
Current track number	AUDIO 1:16	Playing CD
Number of tracks and total playing time	32:55	Operation stopped
	PAUSE	Operation momentarily stopped
		Variable Speed (Shuttle Ring)
		Scanning
		Searching

Reading the Front Panel Display

The illustration to the right is an example of what is displayed on the front panel of the player.

Finding Out Play Status

When playing a CD, the **AV Calendar** shows information on the total number of tracks on the disc or those programmed to play. As tracks are played, the corresponding numbers on the display disappear.

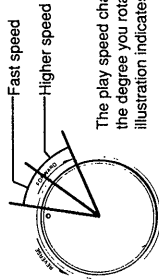


How to Locate a Certain Track

CDs are divided into sections called "tracks". To find a point within a track, use the Shuttle Ring. To find and play from the beginning of a certain track, use the number buttons. In addition, use the ACS/AMS buttons to advance or go back one track at a time. Locate the number buttons on the Remote, Shuttle Ring and ACS/AMS buttons on the Remote or the front panel of the player.

To Find a Certain Point on the Disc

Rotate the Shuttle Ring in the forward or reverse direction.



The play speed changes gradually according to the degree you rotate the Shuttle Ring. The illustration indicates the speed levels.

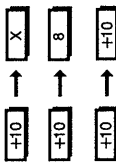
To Locate a Particular Track

Press one of the number buttons on the Remote to enter the track number you want played.



To Enter a Number Greater Than 10

Press +10 and one of the number buttons.



Do this to make a numerical sum. For example, to enter 18, press +10 and 8; to enter 20, press +10, +10 and 0.

If you make a mistake while entering a numbers, press CLEAR then enter the current number.

To Check the Current Track Number

See the AV Calendar on the front panel display.

To Advance or Go Back One Track at a Time

Press ACS/AMS (◀▶) once to return to the beginning of the current track. Press it again to return to the beginning of the previous track.



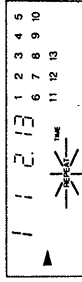
Press ACS/AMS (▶▶) to advance to the beginning of the next track.

How to Replay the Same CD Selections

You can program the player to play the same selections over and over until you signal the repetition to stop. You can replay the entire disc, or a section between one pair of points on the disc. Locate the REPEAT button on the player and the A↔B REPEAT button on the Remote.

To Repeat the Entire the Disc

Press REPEAT on the player.



"REPEAT" lights up in front panel display. The player plays all tracks on the CD. When the player reaches the end of the disc, it plays again.

To Cancel REPEAT

Press REPEAT. "REPEAT" disappears.

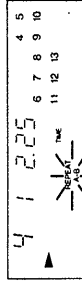


To Repeat One Section of the Disc

- Go back to the start of the section you want replayed.
- Press A↔B REPEAT to mark the beginning of the section.
- Let the player run to the end of the section you want repeated.
- Press A↔B REPEAT again to mark the end of the section.



The "A-B" indication begins flashing in the front panel.



"REPEAT A-B" lights up in the front panel display. The player repeatedly plays the tracks between the two selected points.

To Cancel A-B REPEAT

Press CLEAR.

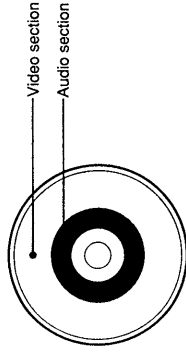


To Play a Compact Disc Video

This section explains basic procedures for playing CDVs and VSDs. Since CDV and VSD play holds so many functions in common with CD and LD play, see other sections of this manual for details of applicable functions mentioned here.

How to Load and Play a CDV (Compact Disc Video) or VSD (Video Single Disc)

CDVs are divided into two sections: video and audio. The video section of the disc consists of 5 minutes of video play with digital audio output. The audio section consists of 20 minutes of solely digital audio output (playable on any CD player). Thus, the CDV has the function of both an LD and CD combined in one disc. The audio and the video sections of the CDV are assigned track numbers. The track on the video section corresponds to the chapter on the LD and the same on the CD.



- 1 Turn on the TV, stereo system (if connected), and Multi Disc Player.
- 2 Place the disc on the tray.
- 3 Press PLAY (▶).
Play begins from the video section. To start play from the audio section, using the number buttons, enter the track number that starts the audio section.

At the moment play begins, screen noise may occur due to the synchronization of the signal phases.

To Stop and Remove the Disc	(Player)
To Advance or Reverse	(Player)
To Interrupt Play	
To Find a Certain Audio or Video Track	
To Play Certain Video Tracks	→ →
To Repeat All Selections	(Player)
To Repeat a Section of the Disc	→ REPEAT (twice)
To Variable Speed Play (Audio and Video)	Shuttle Ring
To Variable Speed Play (Video)	MULTI SPEED or SPEED SET

How to Play Only Certain Tracks—Programmed Play

You can program, in any order you like, the tracks the MDF plays. This playlist is stored in the player until you either remove the disc or turn off the power. Program up to 20 tracks. After playing all the selections, the player stops and waits for your next command. Locate the number, PGM and PLAY buttons on the Remote.

- 1 Press PGM on the Remote.
- 2 Press one of the number buttons.

The total playing time of the programmed tracks is displayed on the front panel display.*
- 3 Press PLAY (▶).

To Change an Entry	→ Press CLEAR and PGM. Then, enter the correct track numbers.
To Enter a Number Greater Than 10	→ Press +10 and one of the number buttons following the same procedure as on page 18.
To Cancel Programmed Play	Press CLEAR. The player resumes normal playback.
To Advance or Go Back**	Press ACS/AMS (◀▶ or ▶▶). The player moves to the preceding or following programmed tracks.
To Check the Contents of the Program	Press PGM. The flashing number indicates the track now playing. The display disappears after 3 seconds.


* If 0 or track numbers greater than 21 are entered, the total play time is not displayed
** The player does not go back to previous tracks if the Shuttle Ring is rotated to the left, although, it does advance to forward tracks if rotated to the right. To go back to preceding tracks hold down the ACS/AMS (◀▶) button.

To Play Any Disc (Advanced Functions for LD, CD, or CDV Play)

This section explains advanced functions apply to any one of the three types of discs.

How to Scan the Beginning of Each Chapter/Track—Intro Scan


When you want to find a particular track/chapter, use the INTRO button to make the player play the first 8 seconds (approximately) of each chapter or track on the CD, LD, or CDV.

Press INTRO


The player plays only the first 8 seconds (introduction) of each chapter or track on the disc. After the player introduces the last chapter, the player pauses. On CDVs, intro-scanning begins again from the video section of the disc.

To Resume Normal Play


Press the **PLAY (▶)** button. Play resumes from the selection just introduced.

To Stop Play


Press the **STOP (■)** button on the player.

Understanding Displays and Messages When Playing CDVs or VSDs

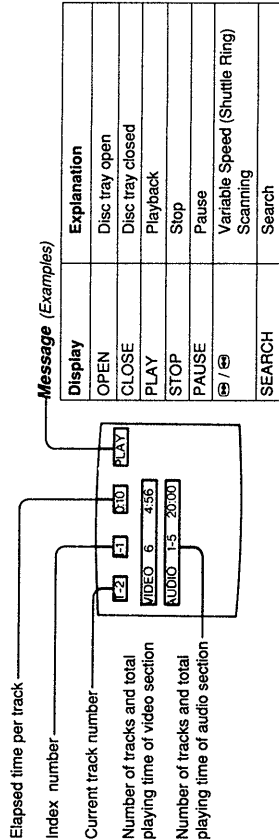
You can determine player operating status or CDV information in one of two ways: (1) by displaying the information on the TV screen, or (2) by looking at the front panel display. Locate the INDEX button on the Remote.

To View On-Screen Information


Press INDEX.
 To turn off the display, press INDEX again.

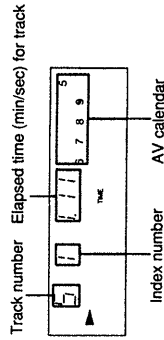
Reading the On-Screen Messages

The screen below is an example of what is displayed. The table below is a key to the messages that appear on the screen.



Reading the Front Panel Display

The illustration below is an example of what is displayed on the front panel of the player.



Finding Out Play Status

When playing a CDV, the AV Calendar on the front panel display shows information on the total number of selections. As selections are played, the corresponding numbers on the display disappear.

Additional Information

This section contains information that will help you if you have problems with your player. It also contains maintenance information and a glossary.

Troubleshooting

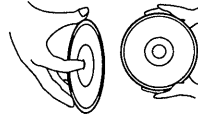
Check the following before requesting service.

Symptom	Point to check
No power PLAY (▶) button does not produce playback.	<ul style="list-style-type: none"> Power cord properly plugged into AC outlet? Disc inserted? Disc properly seated? Recorded side facing upward?
▶ indicator lights, but there is no picture or sound.	<ul style="list-style-type: none"> TV or monitor switched on? TV properly connected to player? Input selector of TV, TV tuner, or monitor set to required position? TV without audio/video inputs Channel selectors on RFU adaptor and TV set to the same number? TV channel properly adjusted?
Poor picture or sound quality	<ul style="list-style-type: none"> TV properly connected? Any source of noise nearby? Disc dirty or scratched? Any condensation on player objective lens? TV without audio/video inputs Channel selectors on RFU adaptor and TV set to the same number?
No TV programs	<ul style="list-style-type: none"> TV properly connected RFU adaptor?
No sound	<ul style="list-style-type: none"> TV properly connected to player? Volume control on TV, monitor, or amplifier high enough? Playback at normal speed? (The player produces sound only during normal speed playback.)
Remote Commander does not operate.	<ul style="list-style-type: none"> Batteries correctly inserted? Batteries weak? Any obstacles between the Remote Commander and the Sensor on the player? The Remote Commander is pointed at the sensor on the player?
Remote Commander, Player and optional Barcode Scanner (or Barcode Remote Commander) do not operate.	<p>The player linked with an external computer</p> <p>The EXT CPU indicator lit and the player in the Remote mode (The LOCAL indicator is unlit.)</p>
Picture distorted during scan.	<ul style="list-style-type: none"> Some distortion in the lower part of the picture is normal – even for CAV discs.

Optical Disc Maintenance

Holding CDs or CDVs

Hold CDs and CDVs by putting your index finger through the center hole and grasping the edges of the disc with the thumb and other fingers as pictured in the illustration.



Holding LDs

Hold LDs by grasping the outside edge in both hands as illustrated.

Light Exposure

Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave the disc in a car parked in direct sunlight where there can be a considerable rise in temperature.

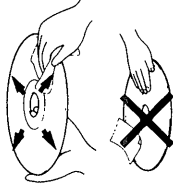
Cracked or Damaged Discs

Do not play cracked or damaged discs, or try to play discs that have been repaired with adhesive glues.

Keeping the Disc Surface Clean

Clean the surface of the disc before playing using a soft, dry cleaning cloth. Wipe the disc from the center out. Do not use solvents such as benzine, paint thinner, commercially available cleaners, or anti-static spray intended for LP record discs.


To prevent marring, after playing, remove the disc and put it back into its jacket. Putting your fingers on, or adhering anything to the surface of the disc such as sticky note pad paper or adhesive tape will deteriorate the quality of the playing surface, and thus the output quality.

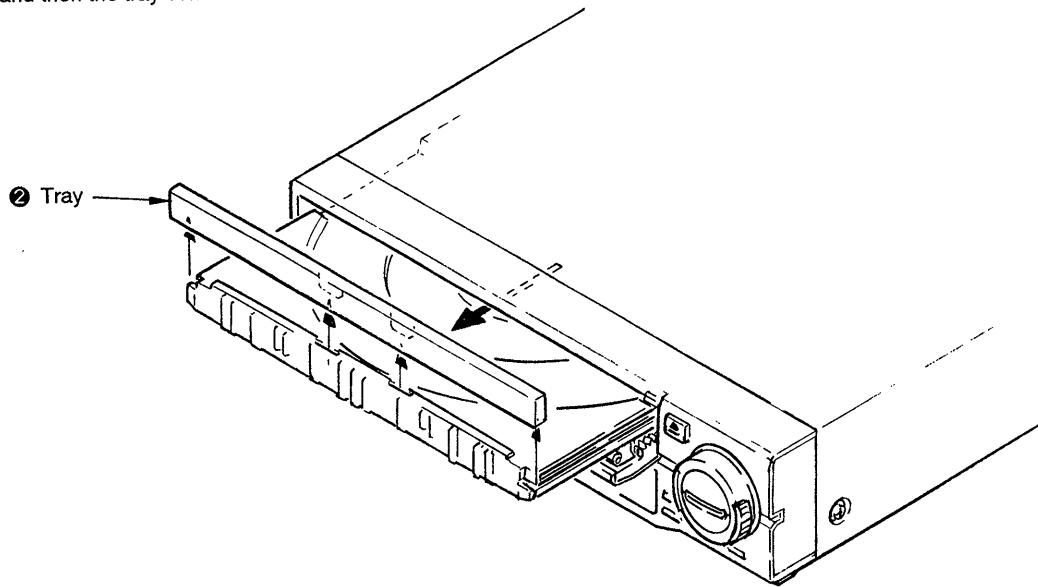


SECTION 2 DISASSEMBLY

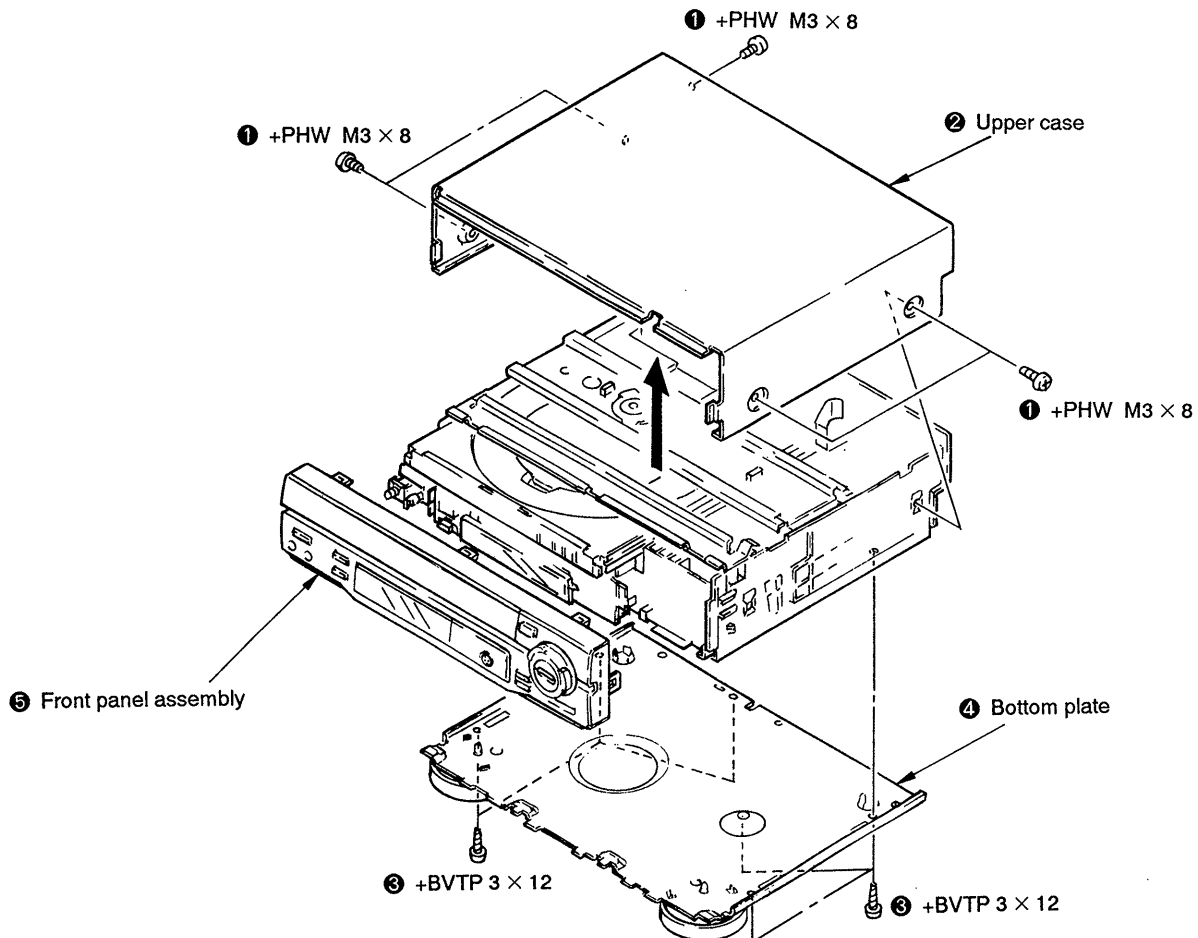
Note: Follow the disassembly procedure in the numerical order given.

2-1. TRAY COVER

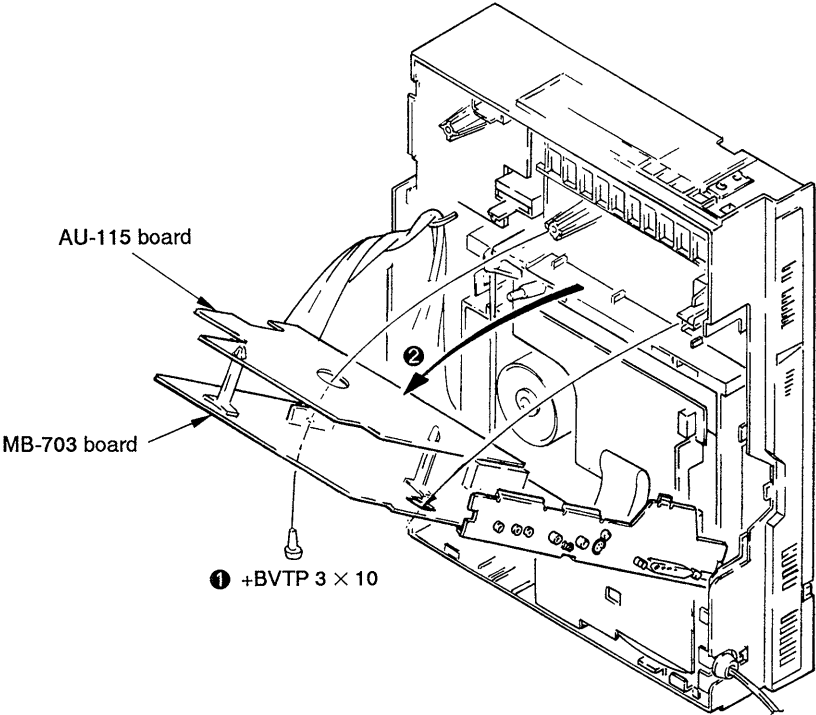
- 1 Turn power on, push  (OPEN/CLOSE) button and then the tray comes out.



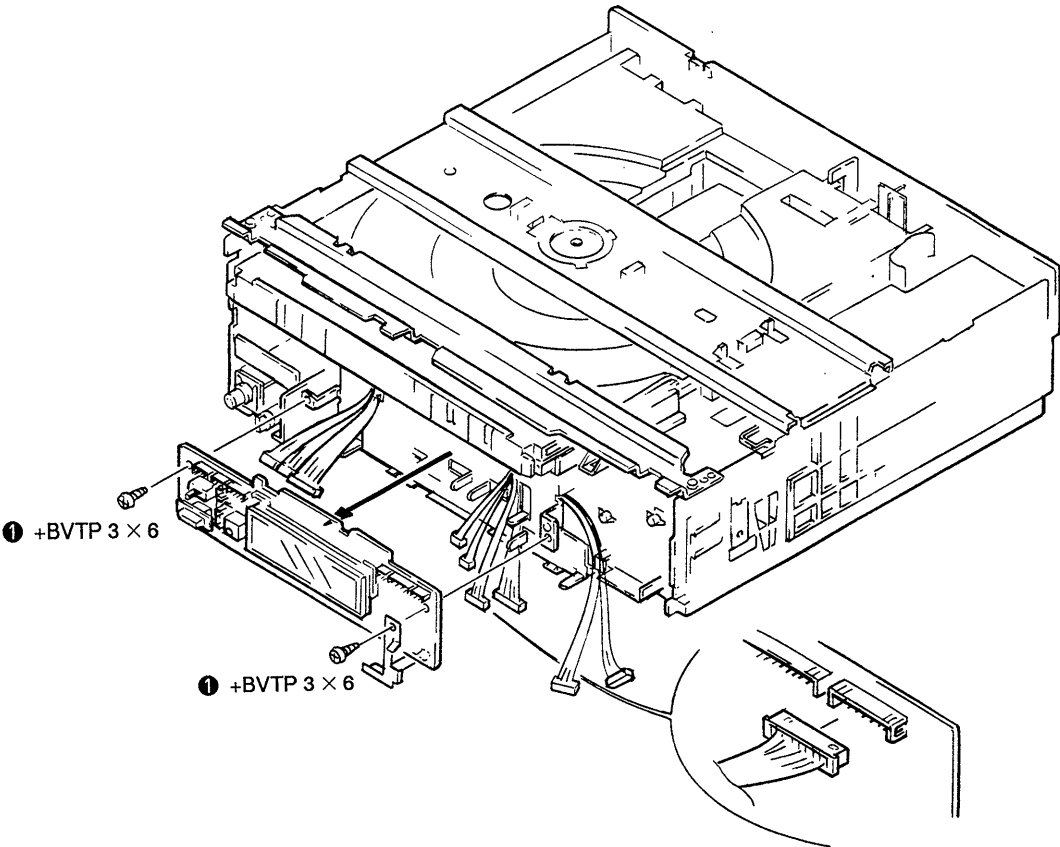
2-2. CASE, FRONT PANEL ASSEMBLY



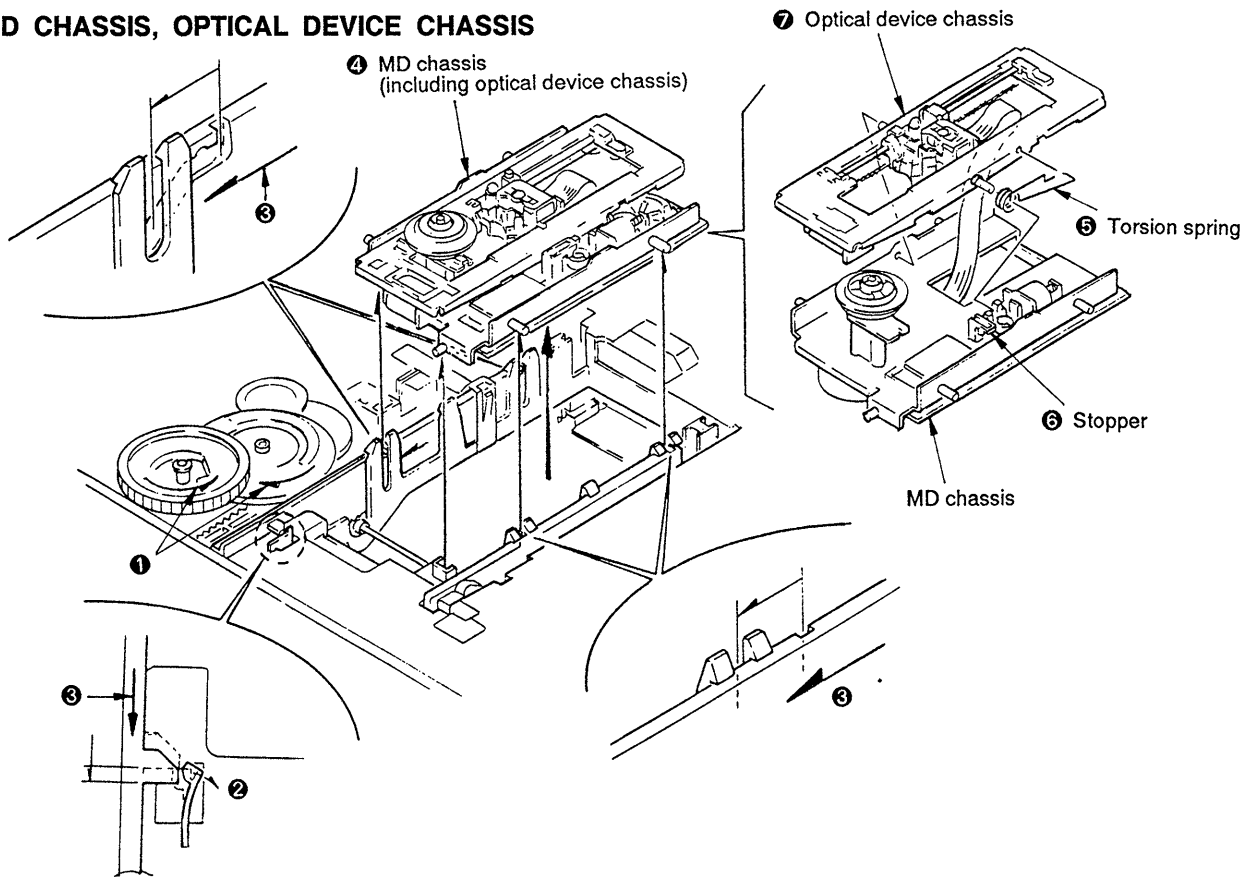
2-3. MB-703, AU-115 BOARDS



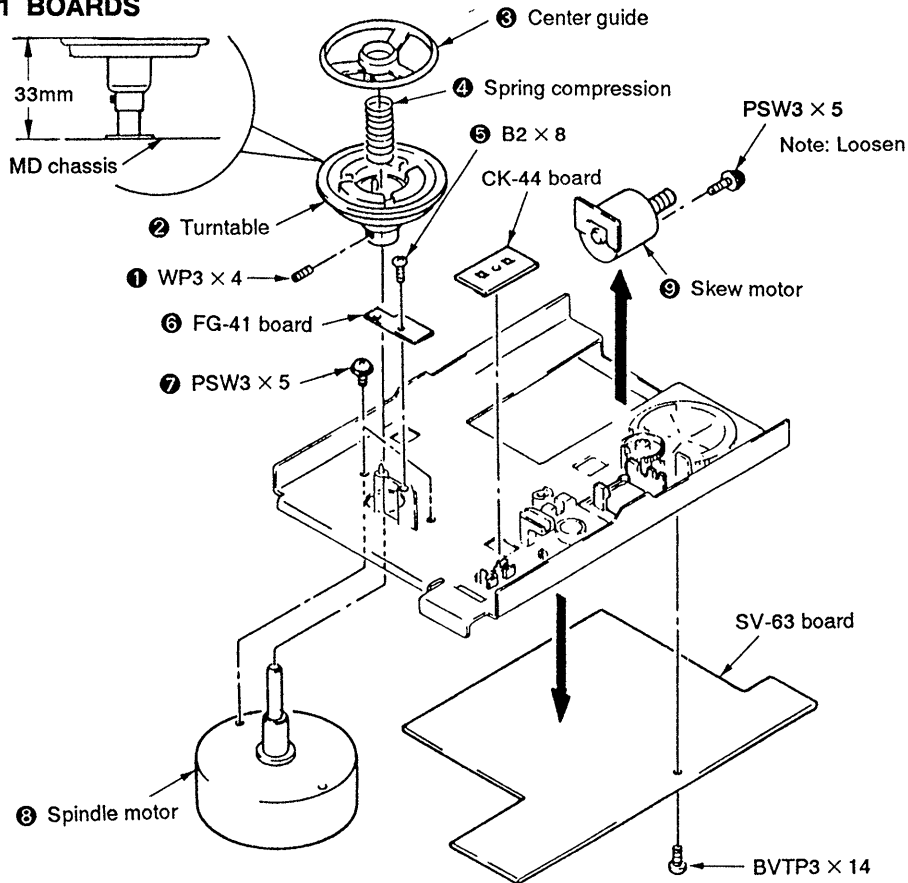
2-4. FP-711 BOARD



2-5. MD CHASSIS, OPTICAL DEVICE CHASSIS

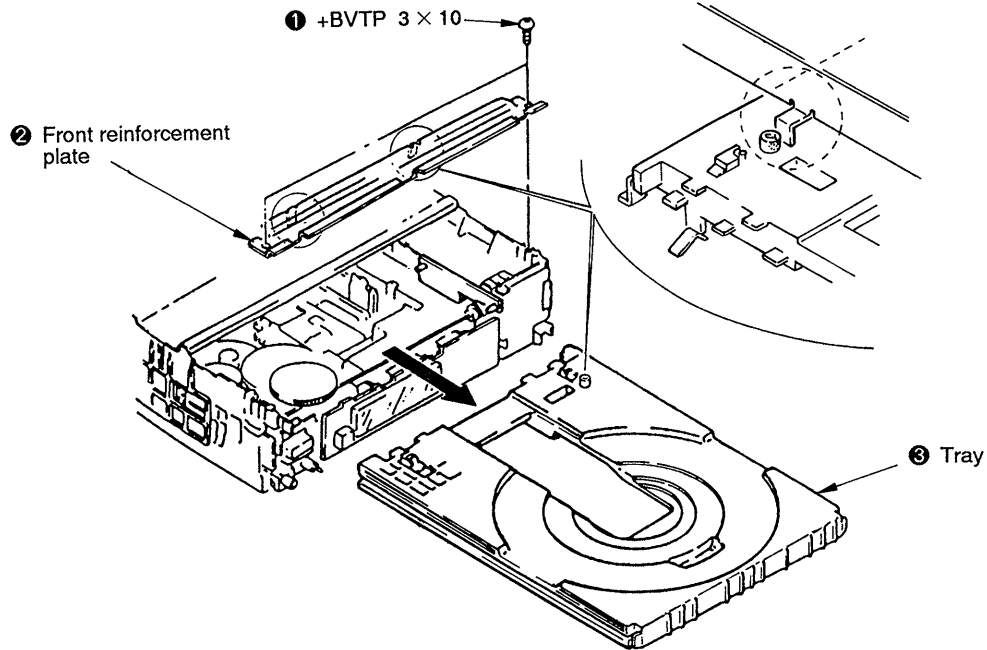


2-6. TURNTABLE, SPINDLE MOTOR, SKEW MOTOR, SV-63, FG-41 BOARDS



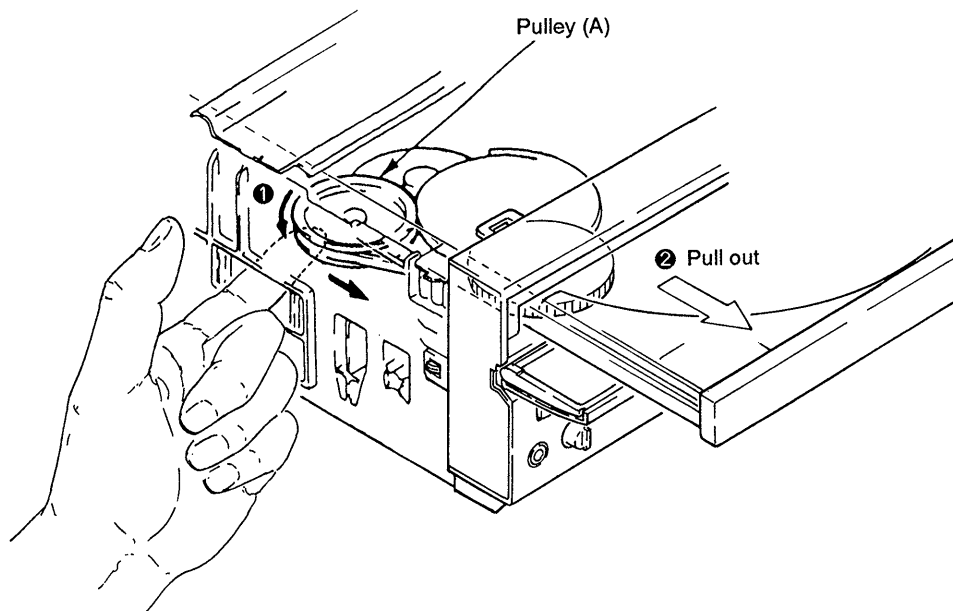
2-7. REMOVAL OF THE TRAY

Note: Make sure to remove the tray after having removed the front panel and the front reinforcement plate.



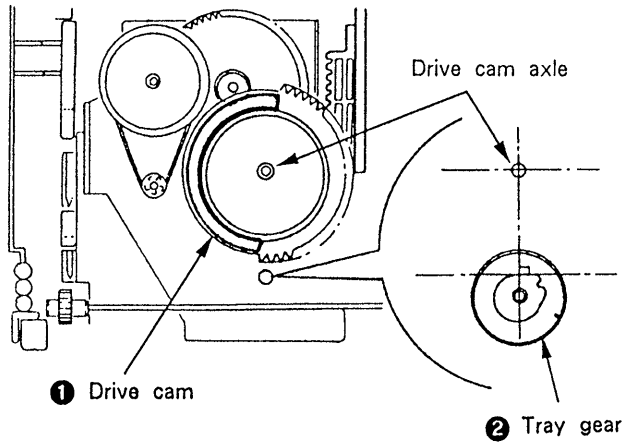
2-8. REMOVAL OF THE DISC WHEN A PROBLEM HAS OCCURRED WITH THE DISC LOADED

- 1) Turn the pulley (A) in counter-clockwise direction until the tray starts moving.
- 2) Pull out the tray.



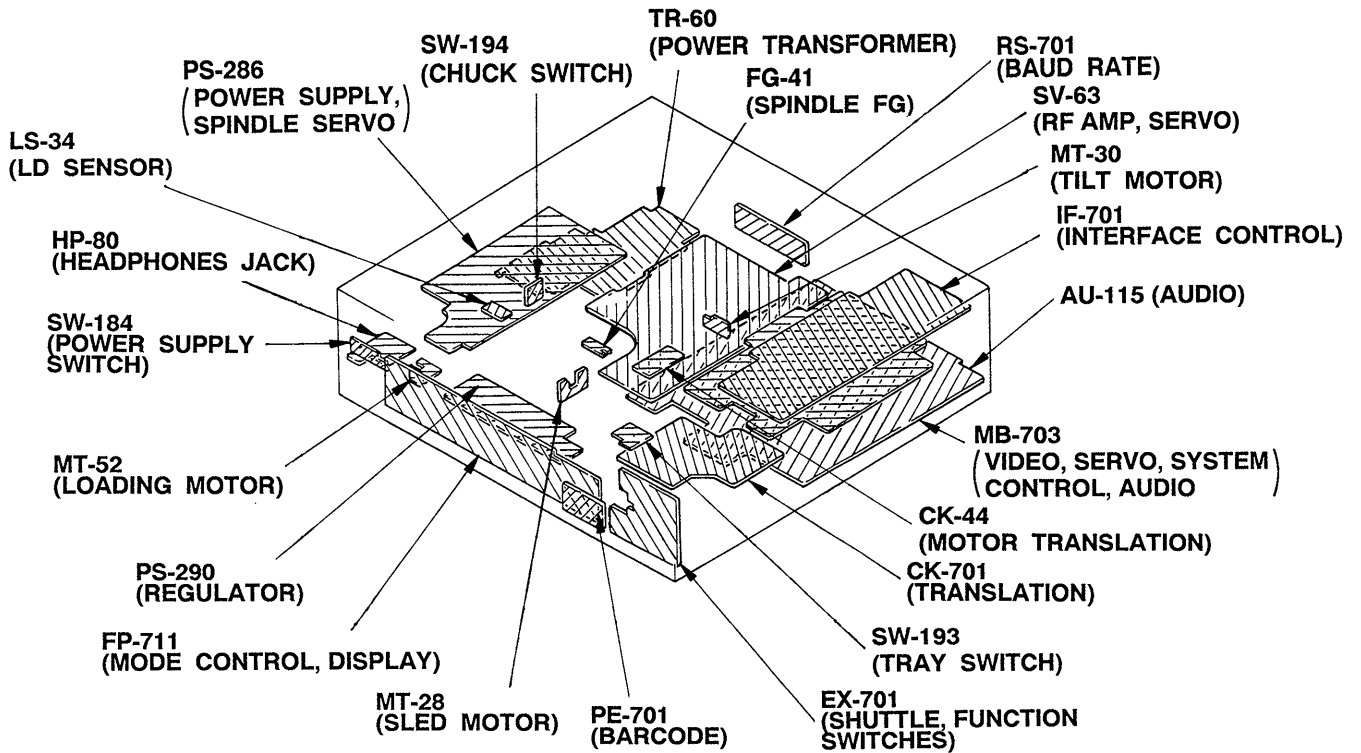
2-9. ALIGNMENT OF THE LOADING GEAR PHASE

- 1) Install the drive cam as shown in the illustration. At this time, make sure that the last tooth of gear is aligned with the line from the center of the tray gear axle and the drive gear axle.
- 2) Install the tray gear as shown in the illustration. At this time, make sure the flat surface of the cam is at a right angle with the drive cam.

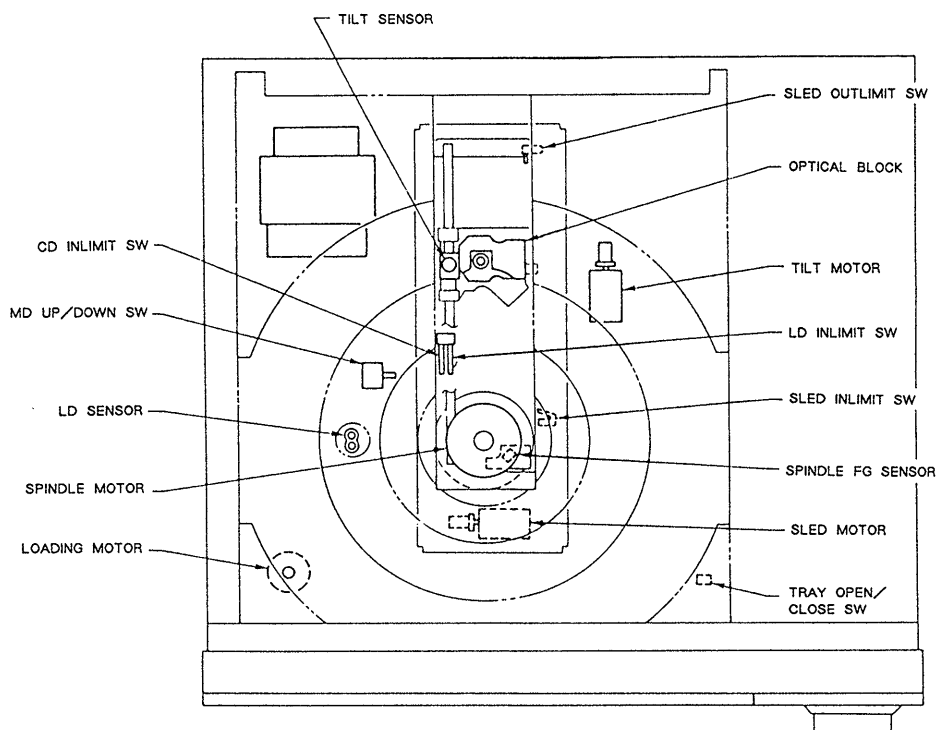


SECTION 3 DIAGRAMS

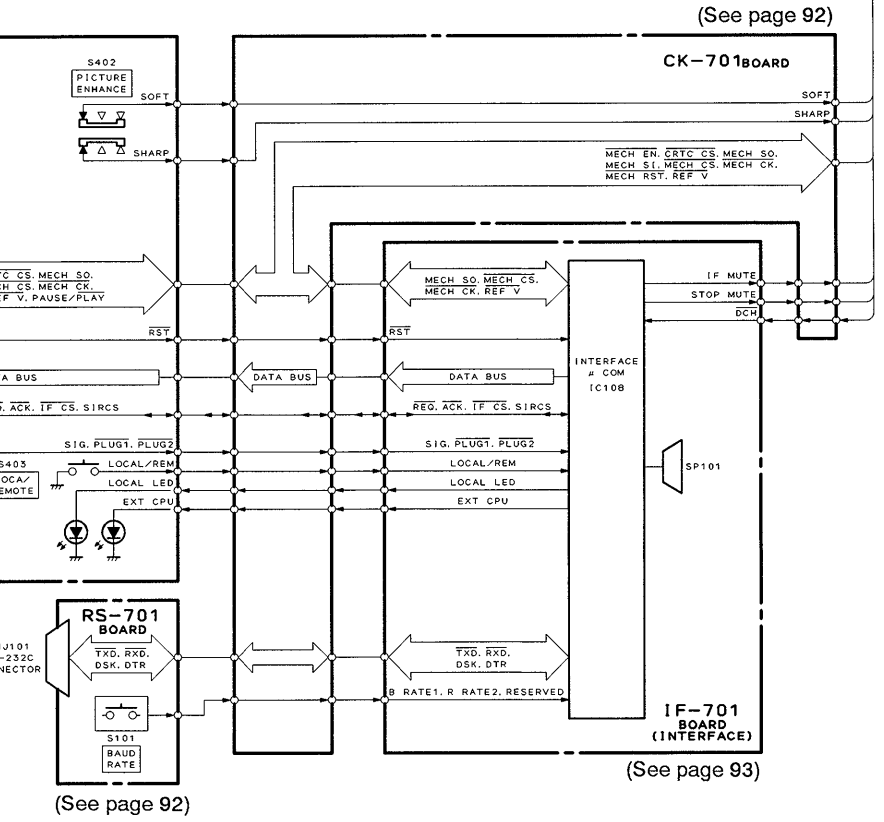
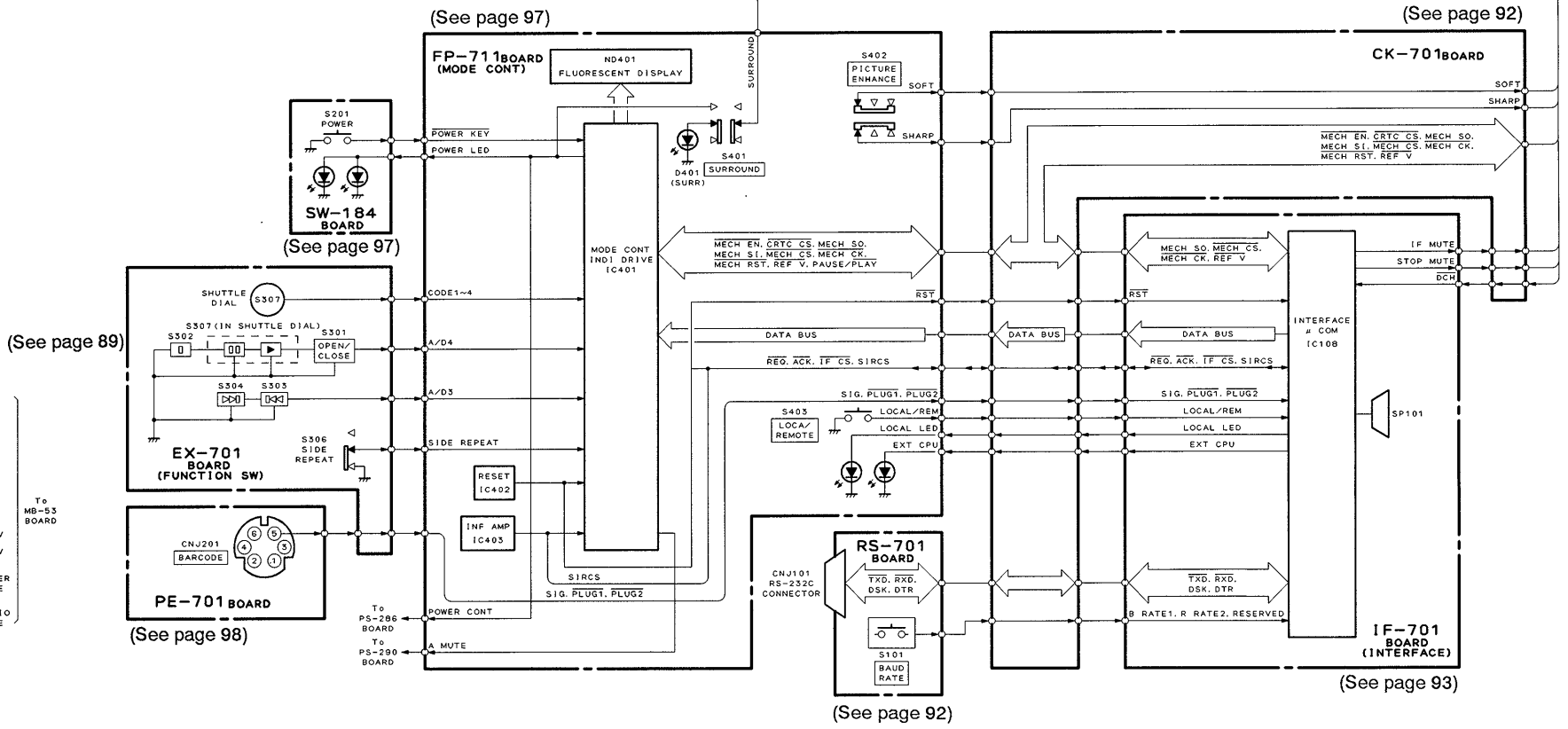
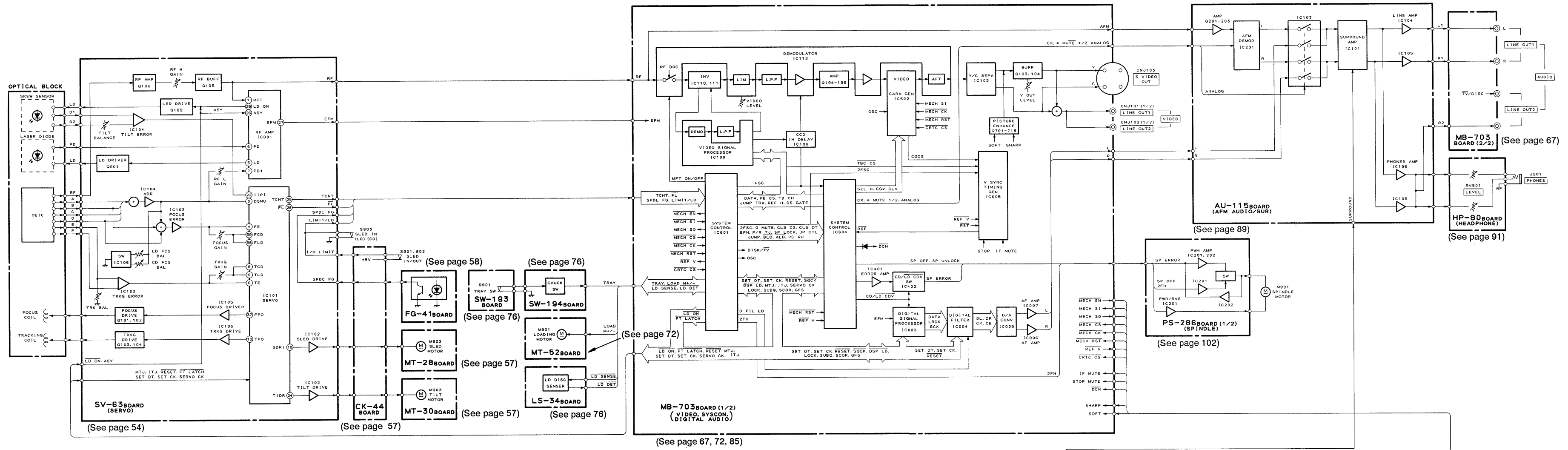
3-1. CIRCUIT BOARDS LOCATION



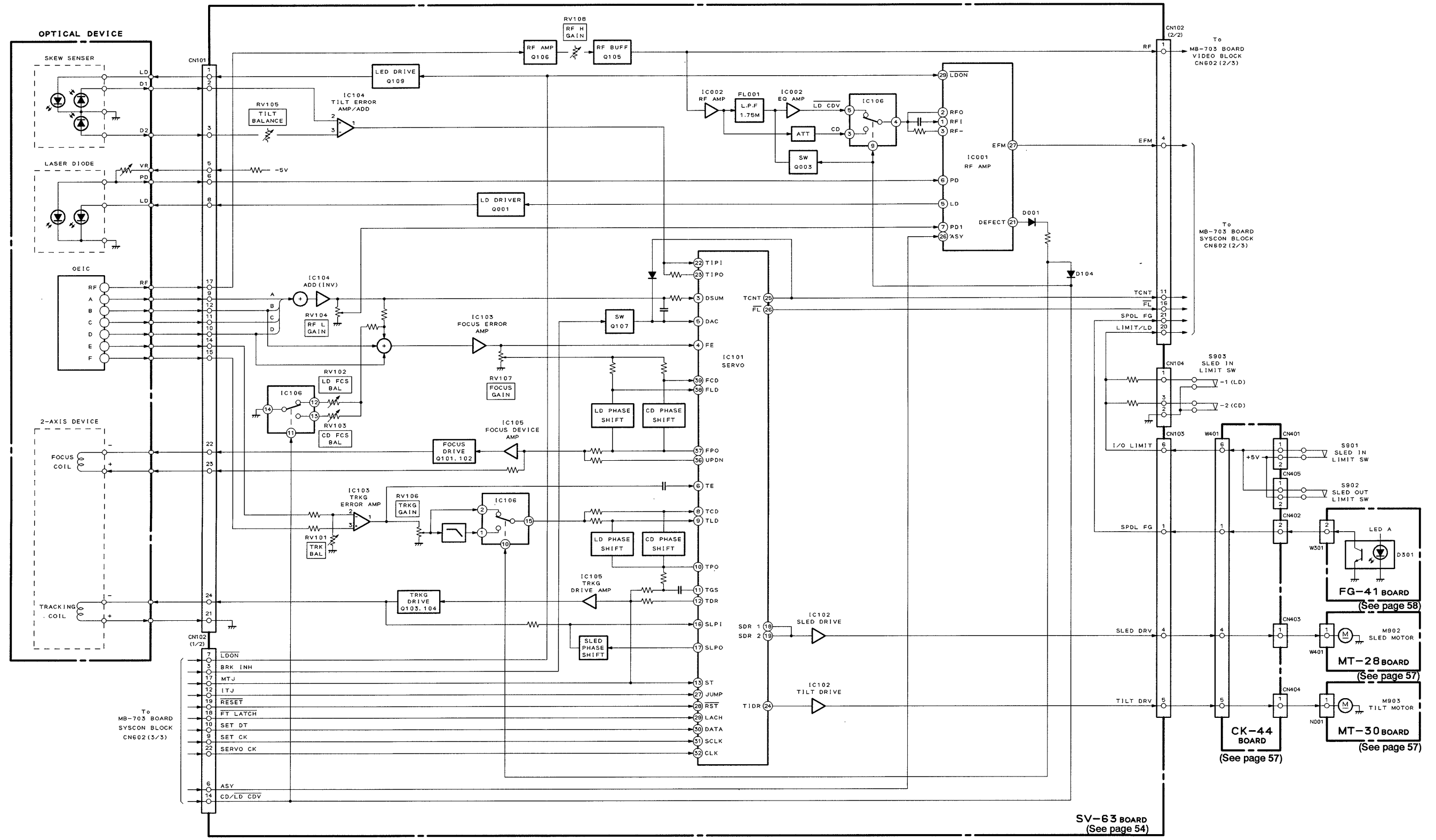
• MAIN PARTS LOCATION



3-2. OVERALL BLOCK DIAGRAM

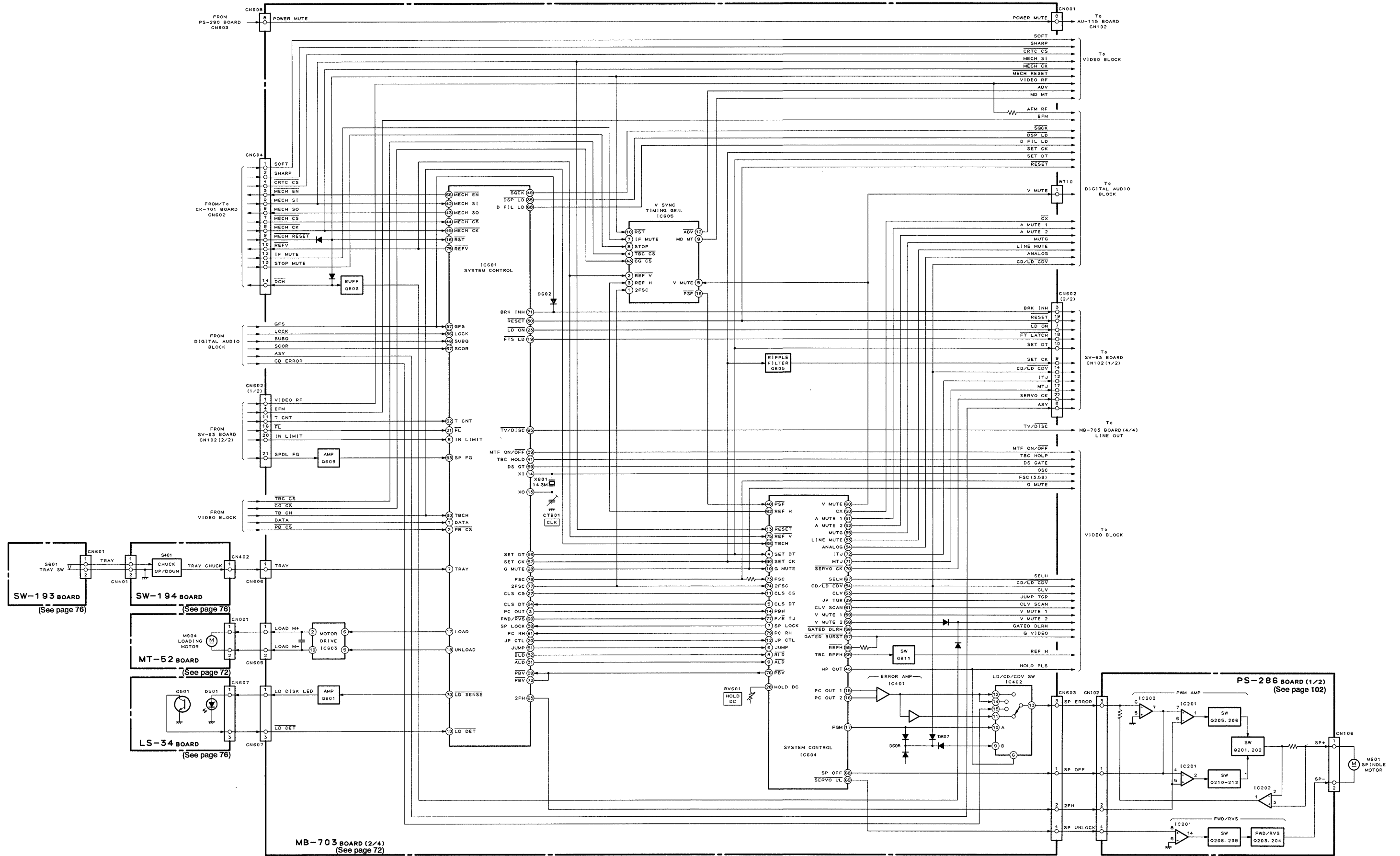


3-3. RF AMP, SERVO BLOCK DIAGRAM



05

3-4. SYSTEM CONTROL BLOCK DIAGRAM

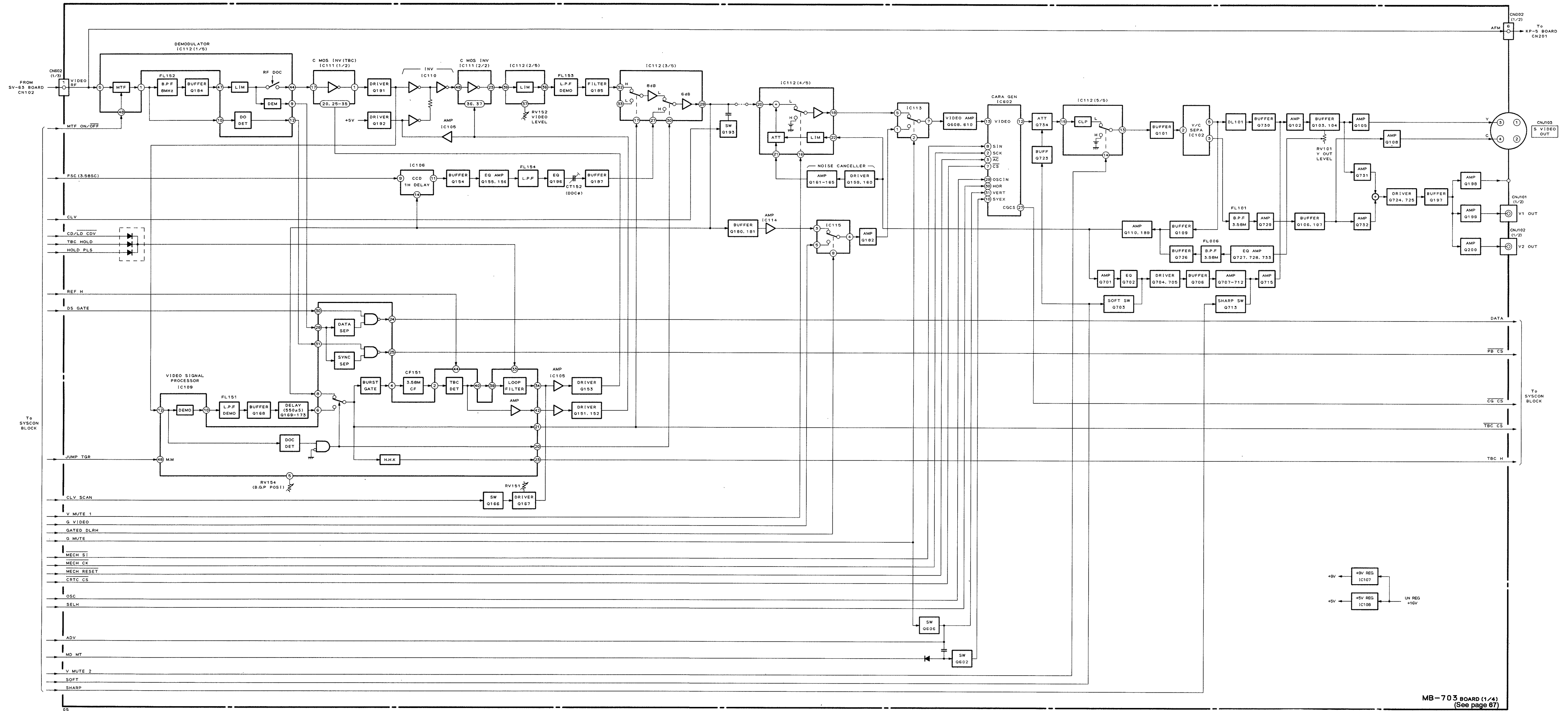


3-5. SYSTEM CONTROL MICRO COMPUTER PIN FUNCTION (MB-703 BOARD IC601)

Pin No.	Pin Name	I/O	Description
1	DATA	I	Data (philips code) input
2	PBCS	I	PB composit sync signal input
3	PC OUT	O	PB H sync signal output
4	AVCC	—	A/D converter power
5	AVR	—	A/D converter reference voltage
6	AVSS	—	A/D converter ground
7	TRAY	I	Tray and loading switch detect
8	IN LIMIT	I	Sled position switch detect
9	MIRR	I	Not used
10	LD DET	I	LD disk detect
11	—	—	Not used
12	MOD	I	Micro computer internal ROM/external ROM detect
13	XO	O	Clock 14.31818 MHz
14	XI	I	Clock 14.31818 MHz
15	VSS	—	Digital ground
16	RST	I	Reset
17	LOAD	O	Loading motor control (IC603)
18	UNLOAD	O	
19	FTSLD	O	Data loading signal to servo IC (SV-63 board IC101)
20	JPCTL	O	Track jump control (ITJ/MTJ)
21	FL	I	Focus servo lock signal
22	LD/CD CDV	O	Disc discrimination signal
23	LD ON	O	Laser diode in optical pick-up power control
24	WRQ	—	Not used
25	MEMO		
26	FLO		
27	CLS CS	O	Enable signal of CLS CS (IC604 ⑩)
28	G MUTE	O	Gray picture muting control of clear scan
29	SOLA 2	—	Not used
30	RESET	O	Reset control
31	ALD	O	Data loading signal of IC604 output port (resister A, B)
32	BLD	O	
33	—	—	Not used
34	HS	O	
35	DSPLD	O	Data loading signal to DSP
36	LOCK	I	Lock signal of RF PLL
37	GFS	I	Lock signal of RF PLL
38	SP LOCK	I	Spindle servo lock signal
39	MFT ON	O	MTF control signal
40	PSF	O	PSF input

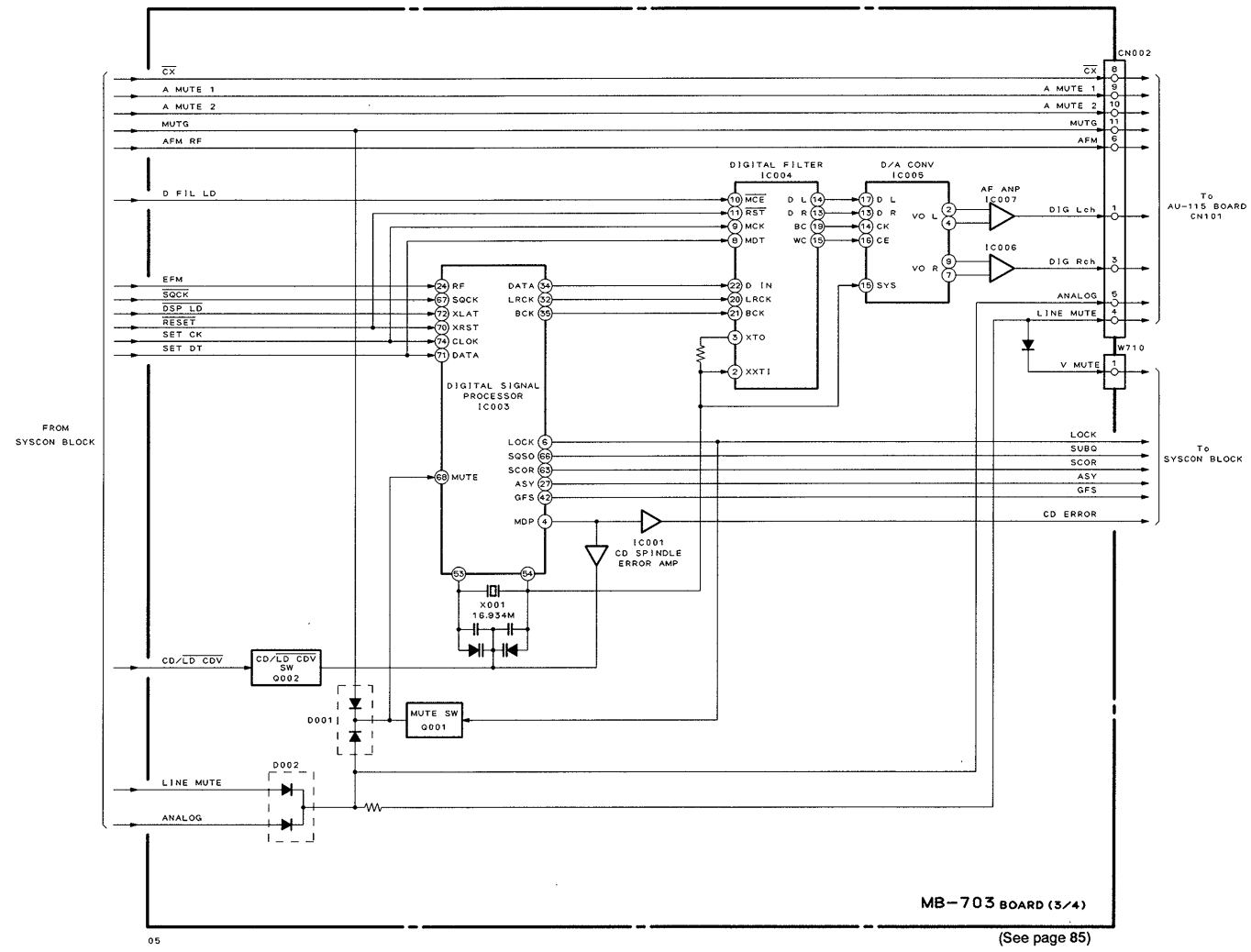
Pin No.	Pin Name	I/O	Description
41	TBC HOLD	O	TBC HOLD control signal
42	MECH SI	I	Data from mode controller (FP-711 BOARD IC401)
43	MECH SO	O	Data to mode controller
44	MECH CS	O	Chip select signal from mode controller
45	MECH CK	I	Clock from mode controller
46	SUB Q	I	SUB Q data from DSP
47	--	--	Not used
48	--	--	
49	SQCK	O	Serial data clock to DSP
50	--	O	Not used
51	JMP	O	Track jump trigger signal
52	TCNT	I	Pulse for trverse count
53	SP FG	I	Spindle FG pulse
54	CLS DT	I	V sync counter data of CLV clear scan
55	VCC	--	Power supply (+5 V)
56	SET DT	O	Information data to external IC
57	SET CK	O	Information clock to external IC
58	PB V	I	PB V sync signal
59	DS GT	O	Philips code reading control signal
60	--	--	Not used
61	PCRH	I	Reference H sync signal for spindle servo
62	REFH	O	Not used
63	2FH	O	PWM carrier of spindle motor driver
64	TEST	I	Test mode control
65	TV/DISC	O	TV/DISC select of RF modulator
66	MECH EN	I	Enable signal from mode controller (FP-711 BOARD IC401)
67	SCOR	I	Sub code sync signal
68	DFIL LD	O	Data load signal to digital filter
69	FWD/RVS	O	Direction control of multi track jump
70	LD SENSE	O	LD disc sensor control pulse
71	BRK INH	O	Track jump control of servo IC (SV-63 board IC101)
72	PB V	O	PV V sync signal
73	--	--	Not used
74	--	--	
75	REF V	O	Reference V sync signal
76	--	--	Not used
77	FSC2	O	2fsc (7.519 MHz) output
78	DOCI	O	Not used
79	FSC	O	fsc (3.579545 MHz \pm 10 Hz) output
80	TBCH	I	H sync signal for TBC output

3-6. VIDEO BLOCK DIAGRAM

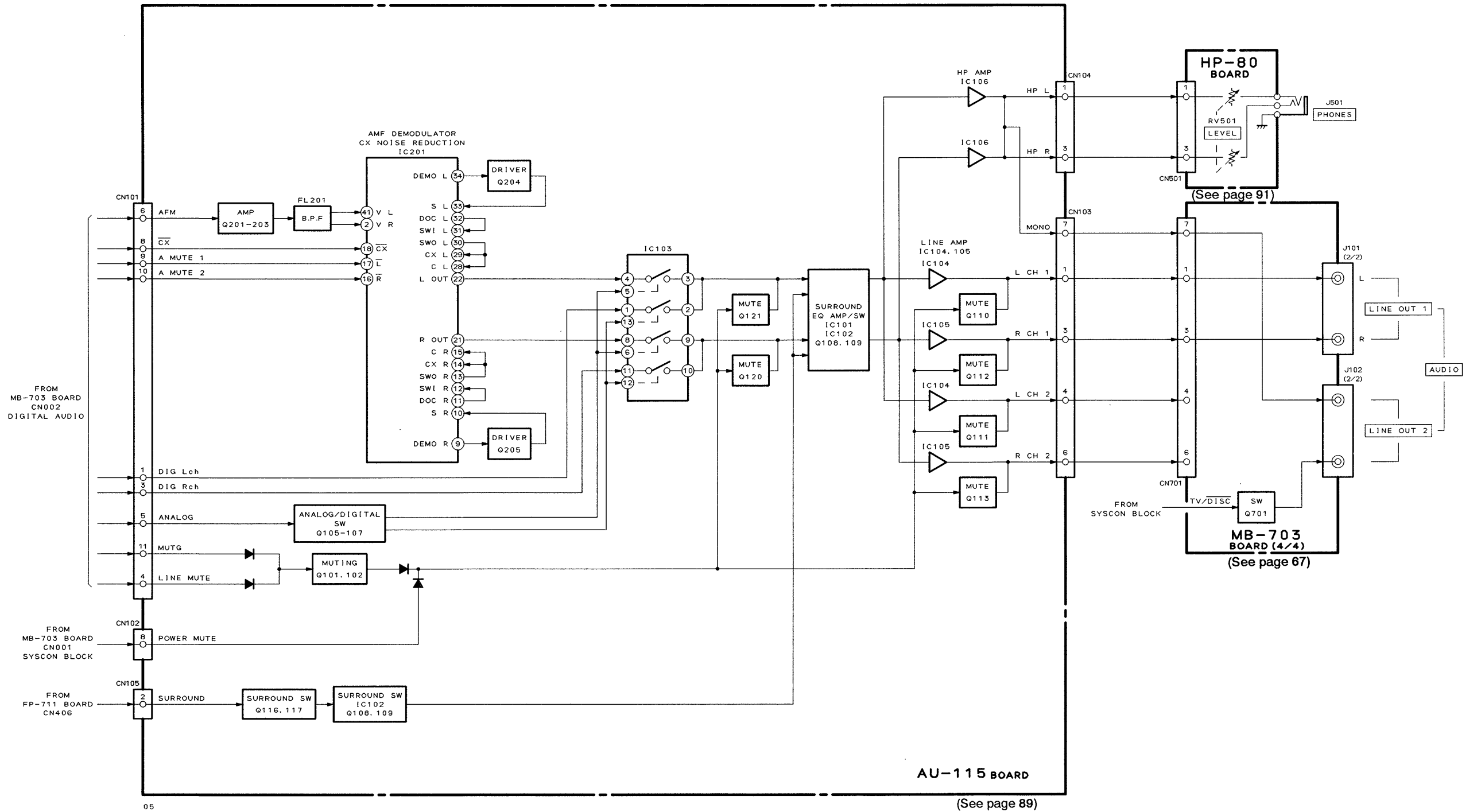


MB-703 BOARD (1/4)
(See page 67)

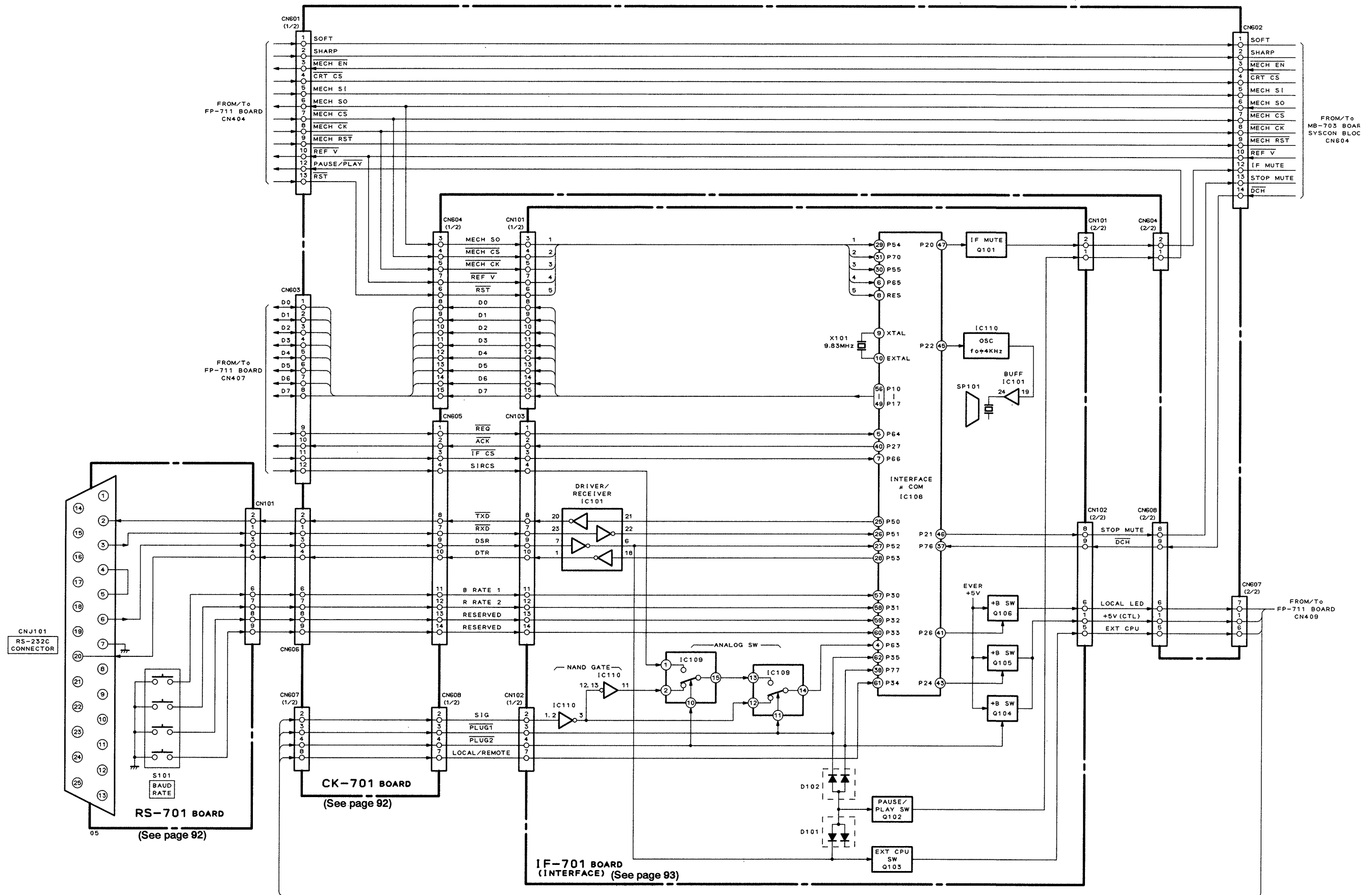
3-7. DIGITAL AUDIO BLOCK DIAGRAM



3-8. ANALOG AUDIO BLOCK DIAGRAM



3-9. INTERFACE MODE CONTROL BLOCK DIAGRAM



**3-10. INTERFACE CONTROL MICRO COMPUTER PIN FUNCTION
(IF-701 BOARD IC108)**

Pin No.	Pin Name	I/O	Description
1	P60	I	Not used
2	P61	I	
3	P62	I	
4	P63	I	Barcode/SIRCS serial signal "L" active
5	P64	I	REQ signal from mode controller "L" active
6	P65	I	Reference V-sync "L" active
7	P66	I	Chip serect from mode controller "L" active
8	RES	I	Reset "L" active
9	XTAL	—	Clock 5 MHz
10	EXTAL	—	
11	MD1	I	Mode control "H" singl chip mode
12	MD0	I	
13	NMI	—	Non maskable interrrupt
14	VCC	—	5 V
15	STBY	—	Stand by mode
16	VSS	—	Ground
17	P40	O	Test pin
18	P41	O	
19	P42	O	
20	P43	O	
21	P44	O	
22	P45	O	
23	P46	O	
24	P47	O	
25	P50	O	Transmitted signal of SCI to RS-232C
26	P51	I	Received signal of SCI from RS-232C "L" active
27	P52	I	DSR of SCI from RS-232C "L" active
28	P53	O	DTR of SCI to RS-232C "L" : ON/ "H" : OFF
29	P54	I	Data from mechanism controller "L" active
30	P55	I	Clock from mechanism controller "L" active
31	P70	I	Chip select from mechanism controller "L" active.
32	P71	I	Not used
33	P72	I	
34	P73	I	
35	P74	I	
36	P75	I	
37	P76	I	Disc change "L" active
38	P77	I	Plug 2 (wired SIRCS) "L" : connect/ "H" : non connect
39	VCC	—	5 V
40	P27	O	ACK signal to mode controller "L" active

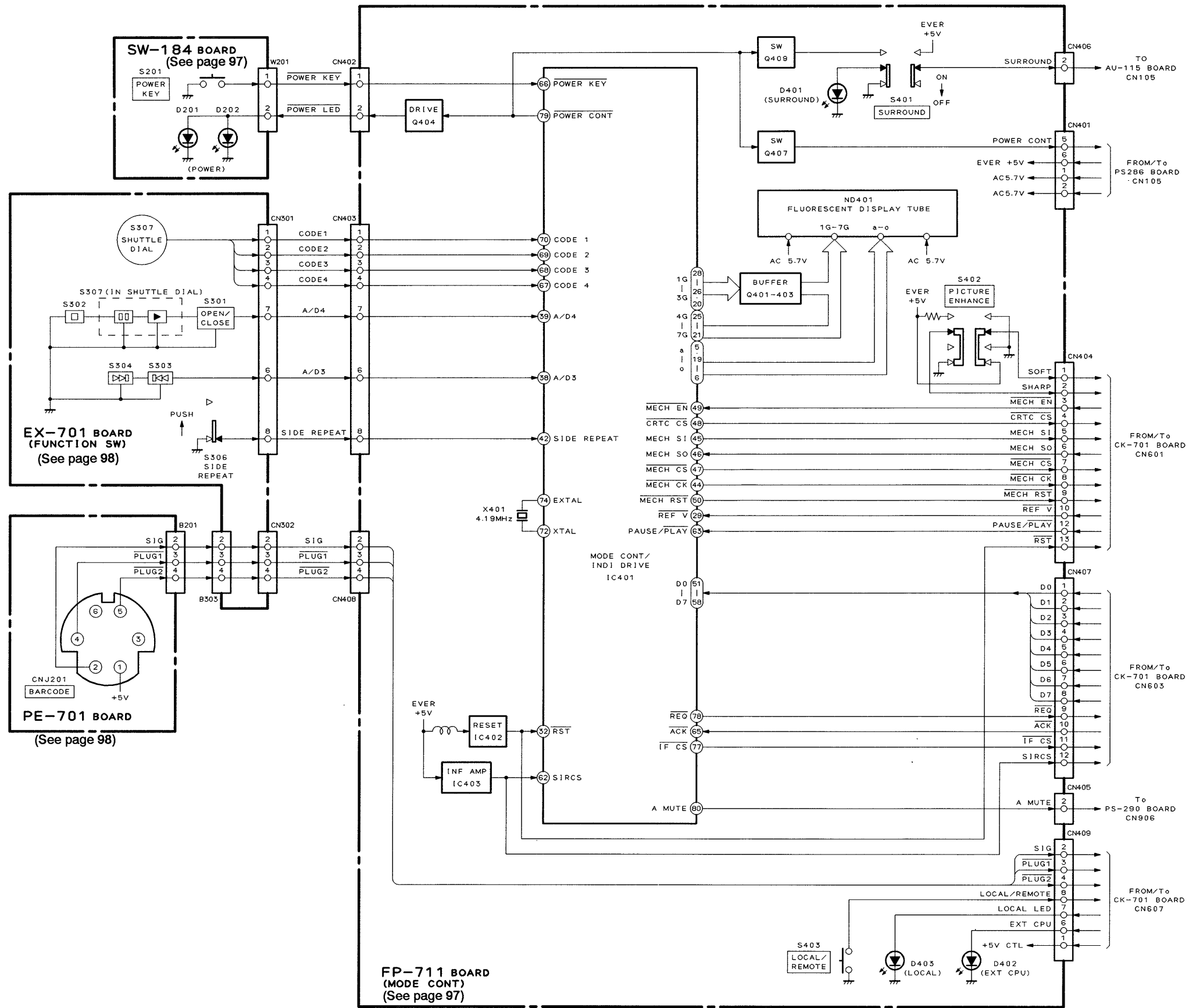
Pin No.	Pin Name	I/O	Description
41	P26	O	LED of Visca front key "L" : off/ "H" : on
42	P25	O	CAV/CLV signal "L" : CAV/ "H" : CLV
43	P24	O	Barcode scanner power "L" : off/ "H" : on
44	P23	O	Barcode/SIRCS select "L" : SIRCS/ "H" : scanner
45	P22	O	Beep signal "L" : off/ "H" : on
46	P21	O	Stop muting "L" : off/ "H" : on
47	P20	O	Video muting "L" : muting/ "H" : normal
48	VSS	—	Ground
49	P17	O	Data bit 7 to mode controller
50	P16	O	Data bit 6 to mode controller
51	P15	O	Data bit 5 to mode controller
52	P14	O	Data bit 4 to mode controller
53	P13	O	Data bit 3 to mode controller
54	P12	O	Data bit 2 to mode controller
55	P11	O	Data bit 1 to mode controller
56	P10	O	Data bit 0 to mode controller
57	P30	I	Baudrate control
58	P31	I	
59	P32	I	Barcode audio control "L" : enable/ "H" : disable
60	P33	I	Reserved
61	P34	I	Visca front key "L" : push/ "H" : no push
62	P35	I	Plug 1 (Barcode scanner) "L" : connect/ "H" : no connect
63	P36	I	Visca connect "L" : connect/ "H" : no connect
64	P37	I	Model select "L" : Barcode/ "H" : Visca

**3-11. MODE CONTROL MICRO COMPUTER PIN FUNCTION
(FP-711 BOARD IC401)**

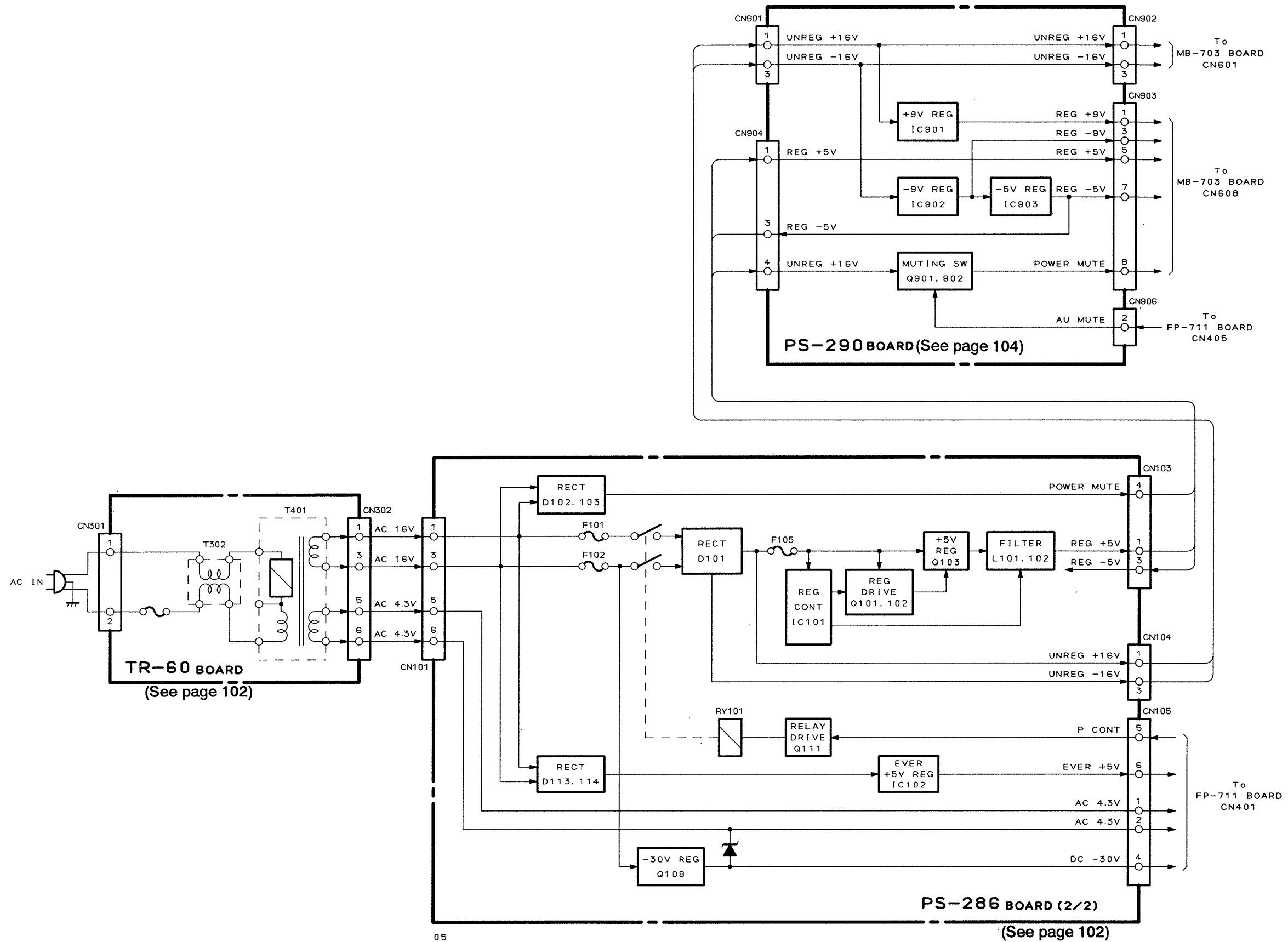
Pin No.	Pin Name	I/O	Description
1		—	Not used
2		—	
3		—	
4		—	
5	a	O	FDP segment signal
6	o	O	
7	n	O	
8	m	O	
9	l	O	
10	k	O	
11	j	O	
12	i	O	
13	h	O	
14	g	O	
15	f	O	
16	e	O	
17	d	O	
18	c	O	
19	b	O	FDP timing signal
20	3G	O	
21	6G	O	
22	7G	O	
23	6G	O	
24	5G	O	
25	4G	O	
26	3G	O	
27	2G	O	
28	1G	O	
29	REF-V	I	Video sync signal
30		O	Not used
31		I	
32	RST	—	Reset
33		—	Not used
34		I	VDD
35	AD0	I	Key input
36	AD1	I	
37	AD2	I	
38	AD3	I	
39	AD4	I	
40		I	Not used
41		I	
42	SIDE REPEAT	I	SIDE REPEAT switch input
43			Not used

Pin No.	Pin Name	I/O	Description
44	MECH CK	O	Clock to mechanism controller and character generator
45	MECH SI	O	Data to mechanism controller and character generator
46	MECH SO	I	Data from mechanism controller and character generator
47	MECH CS	O	Chip select signal to mechanism controller
48	CRTC CS	O	Chip select signal to character generator
49	MECH EN	I	Enable signal from mechanism controller
50	MECH RST	O	Reset to mechanism controller and character generator
51	DATA0	I	Data bit 0 from interface controller
52	DATA1	I	Data bit 1 from interface controller
53	DATA2	I	Data bit 2 from interface controller
54	DATA3	I	Data bit 3 from interface controller
55	DATA4	I	Data bit 4 from interface controller
56	DATA5	I	Data bit 5 from interface controller
57	DATA6	I	Data bit 6 from interface controller
58	DATA7	I	Data bit 7 from interface controller
59		O	Not used
60		O	
61	WP	I	
62	SIRCS	I	SIRCS input
63	PAUSE/PLAY	I	PAUSE/PLAY select
64	TEST	I	Test pin
65	ACK	I	ACK signal from interface controller
66	POWER KEY	I	POWER switch input
67	CODE 4	I	Shuttle switch input
68	CORD 3	I	
69	CORD 2	I	
70	CORD 1	I	
71	VSS	-	Ground
72	XTAL	O	Clock 4.19 MHz
73		-	Not used
74	EXTAL	I	Clock 4.19 MHz
75	VREF	I	Power supply
76	VFDP	I	Power supply for FDP (- 30 V)
77	IF CS	O	Chip select signal to interface controller
78	REQ	O	REQ signal to interface controller
79	POWER CONT	O	Power control
80	A MUTE	O	Audio muting

3-12. MODE CONTROL BLOCK DIAGRAM

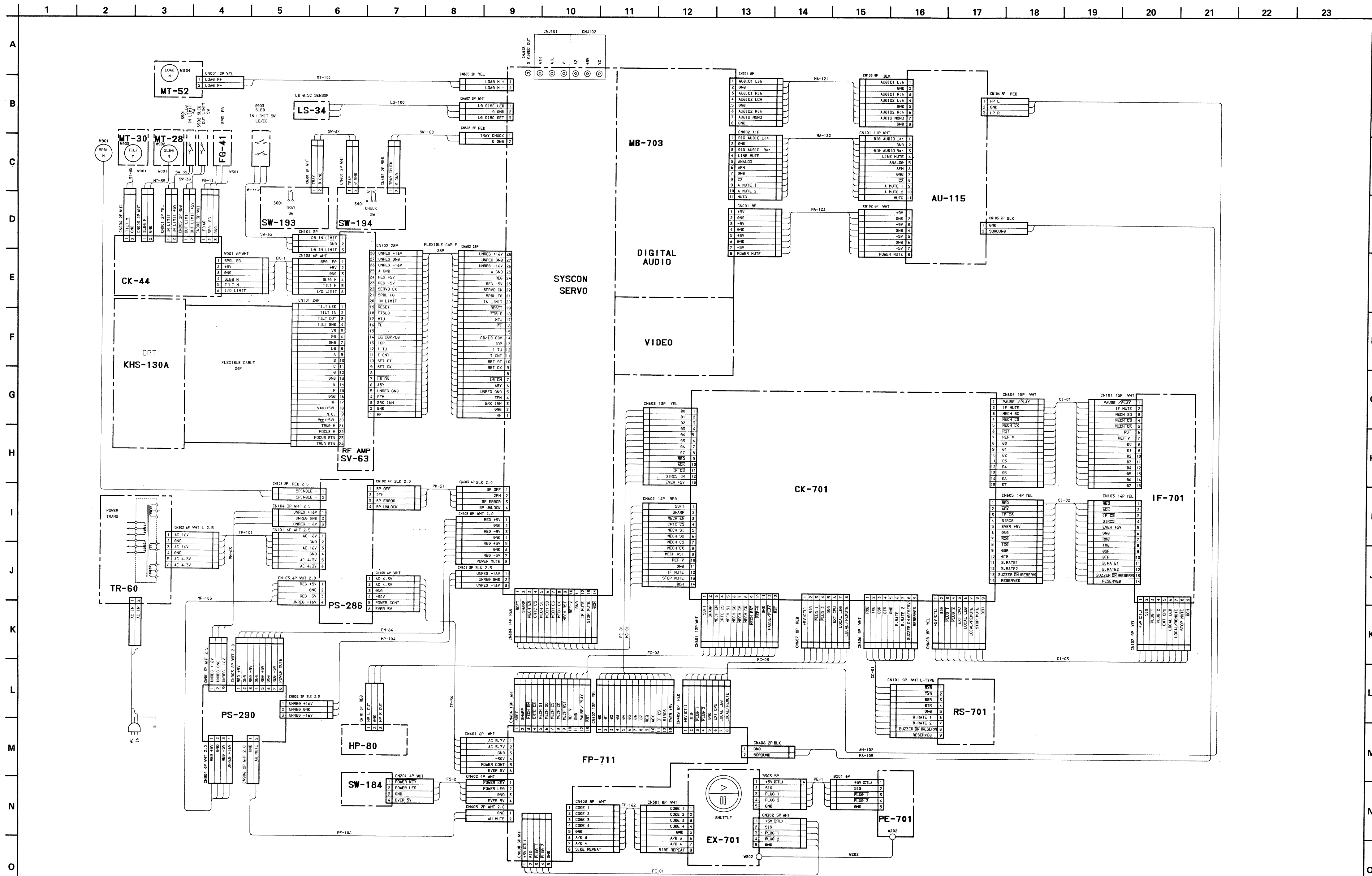


3-13. POWER BLOCK DIAGRAM



SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS
THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring boards:
○ — indicates a lead wire mounted on the component side.
● — indicates a lead wire mounted on the printed side.
● — Through hole.
● — Pattern from the side which enables seeing.
● — Pattern of the rear side.*

Caution:
Pattern face side: Parts on the pattern face side seen from the (Conductor Side) pattern face are indicated.
Parts face side: Parts on the parts face side seen from the (Component Side) parts face are indicated.

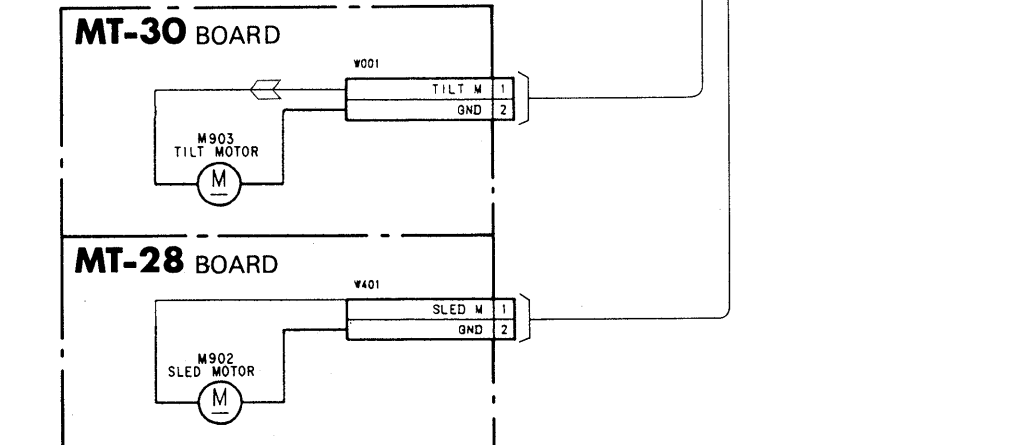
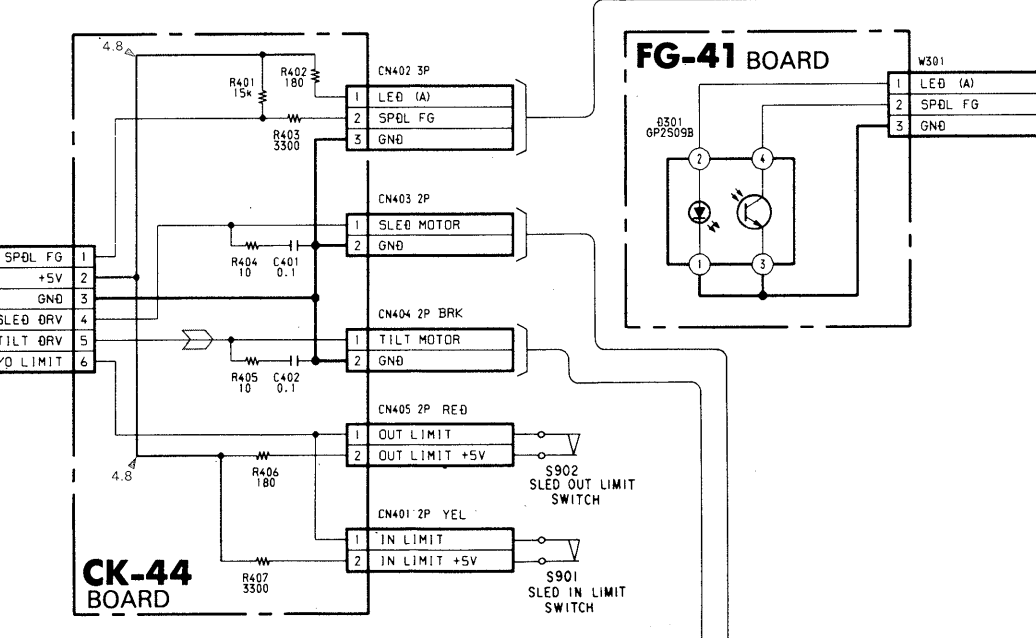
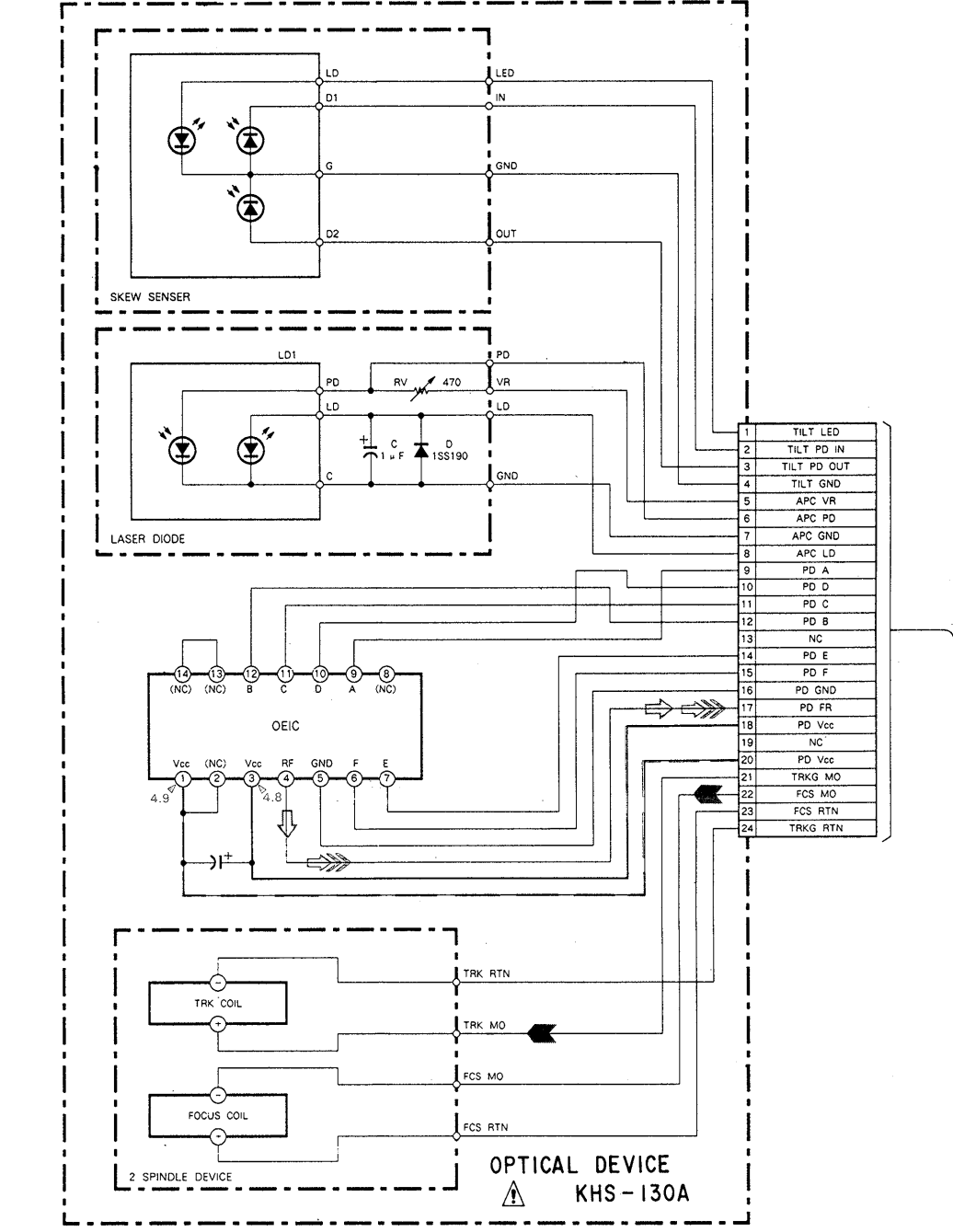
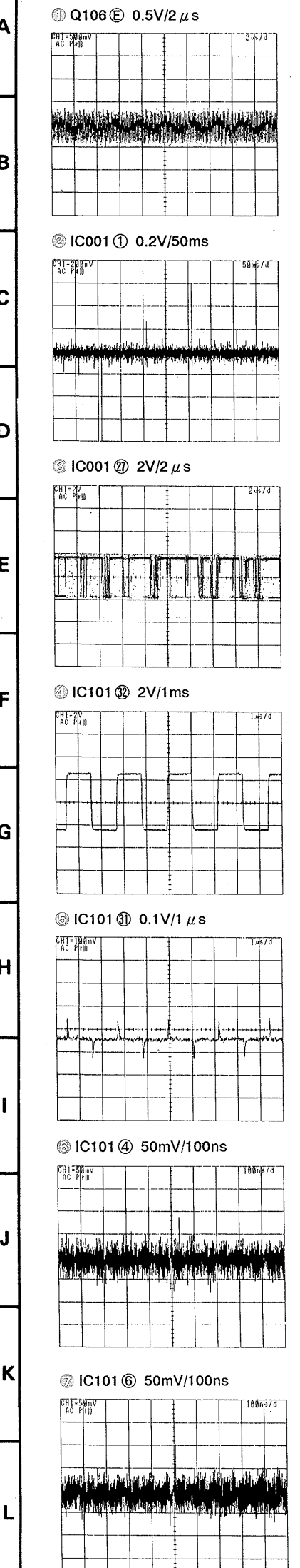
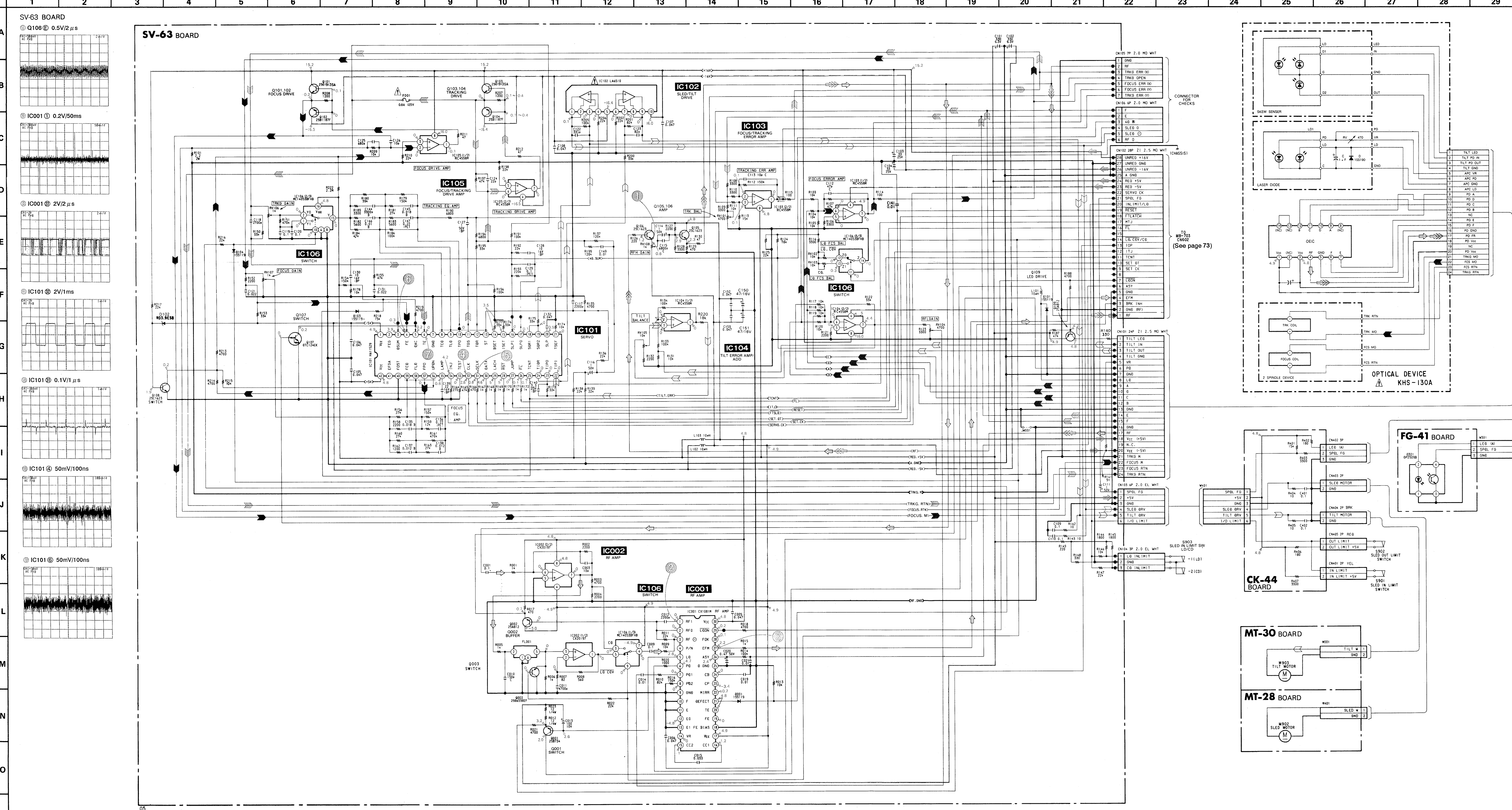
*For schematic diagram:
• Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
• All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted.
kΩ: 1000Ω, MΩ: 1000kΩ.
• All capacitors are in μF unless otherwise noted. pF: μF 50V or less are not indicated except for electrolytics and tantalums.
• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
• \square : nonflammable resistor.
• \square : fusible resistor.
• \square : panel designation.
• \triangle : internal component.
• \square : adjustment for repair.*
• \square : B + Line.*
• \square : B - Line.*
• Voltages are dc between measurement points and ground unless otherwise noted.*
• Readings are taken with a color-bar signal playback.*
• Readings are taken with a digital multimeter (DC10MΩ).*
• Voltage variations may be noted due to normal production tolerances.
• \rightarrow : IN/OUT direction of B line (+, -).*
• Circled numbers refer to waveforms.*

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

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

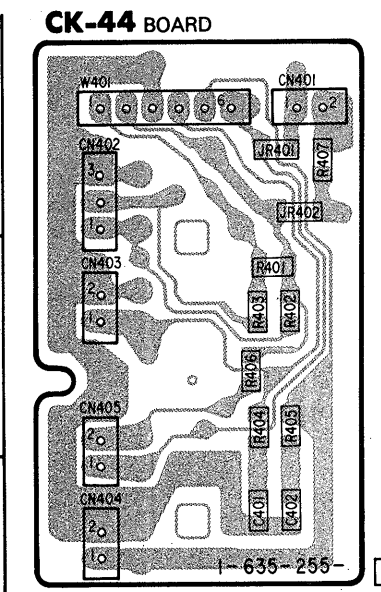
Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

* : indicated by the color red.

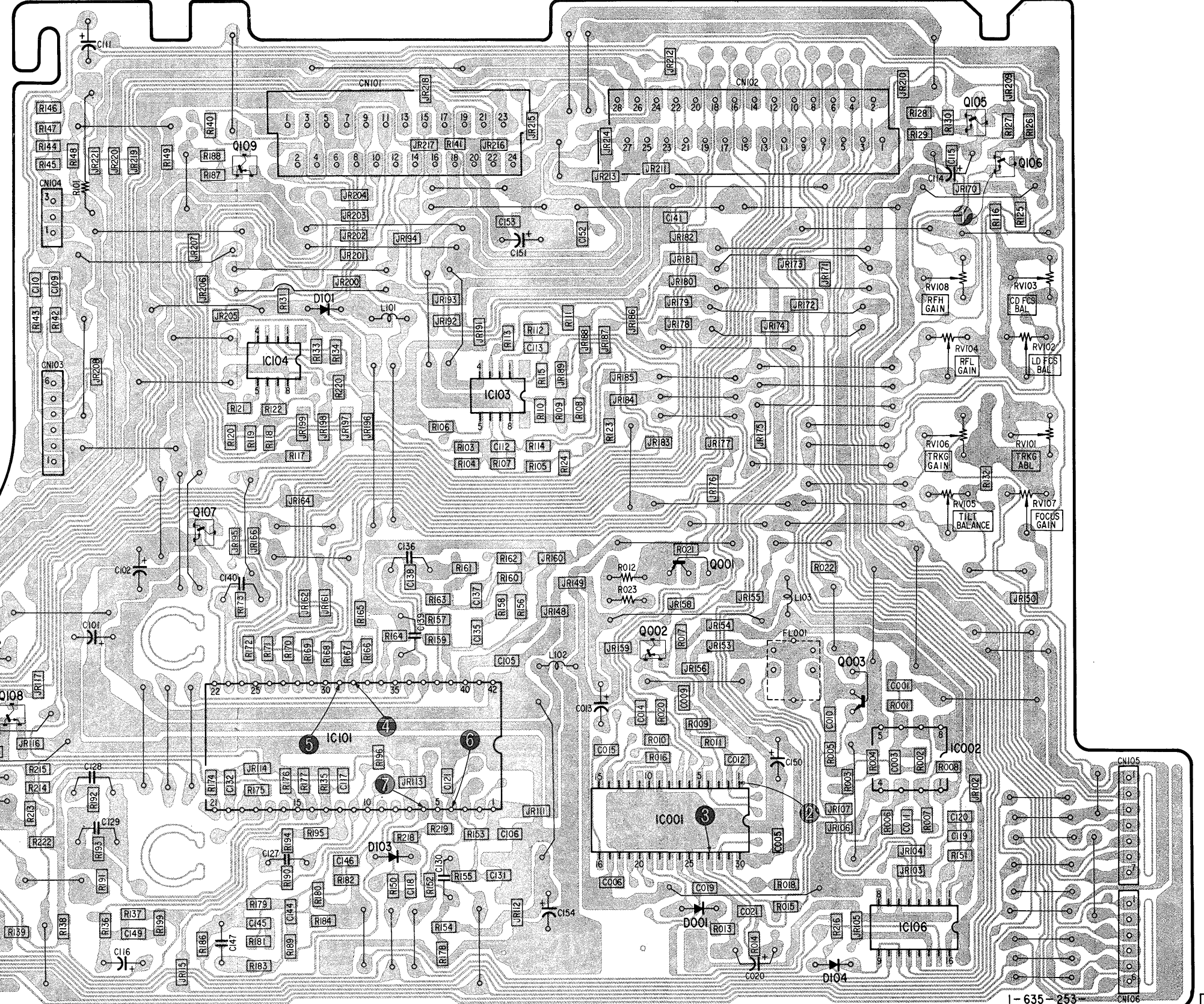


PB	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
	▶	▶▶	▶▶▶	▶▶▶▶
	▶	▶▶	▶▶▶	▶▶▶▶
	▶	▶▶	▶▶▶	▶▶▶▶
	▶	▶▶	▶▶▶	▶▶▶▶
	▶	▶▶	▶▶▶	▶▶▶▶
	▶	▶▶	▶▶▶	▶▶▶▶

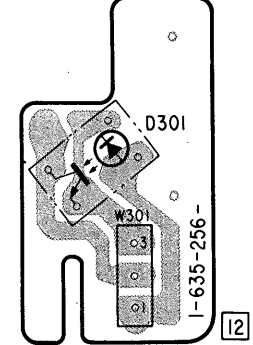
- SV-63 BOARD
- | | |
|-------|------|
| D001 | G-10 |
| D101 | E-7 |
| D102 | E-4 |
| D103 | G-7 |
| D104 | H-11 |
| | |
| IC001 | G-9 |
| IC002 | F-11 |
| IC101 | F-7 |
| IC102 | E-3 |
| IC103 | C-8 |
| IC104 | C-6 |
| IC105 | F-1 |
| IC106 | G-11 |
| | |
| Q001 | E-10 |
| Q002 | E-9 |
| Q003 | F-11 |
| Q101 | H-3 |
| Q102 | H-2 |
| Q103 | H-2 |
| Q104 | H-1 |
| Q105 | A-12 |
| Q106 | B-12 |
| Q107 | D-8 |
| Q108 | F-4 |
| Q109 | B-6 |



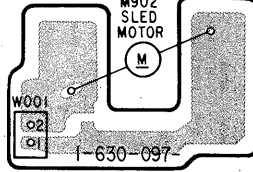
SV-63 BOARD



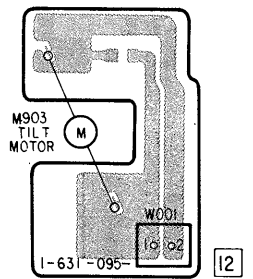
FG-41 BOARD



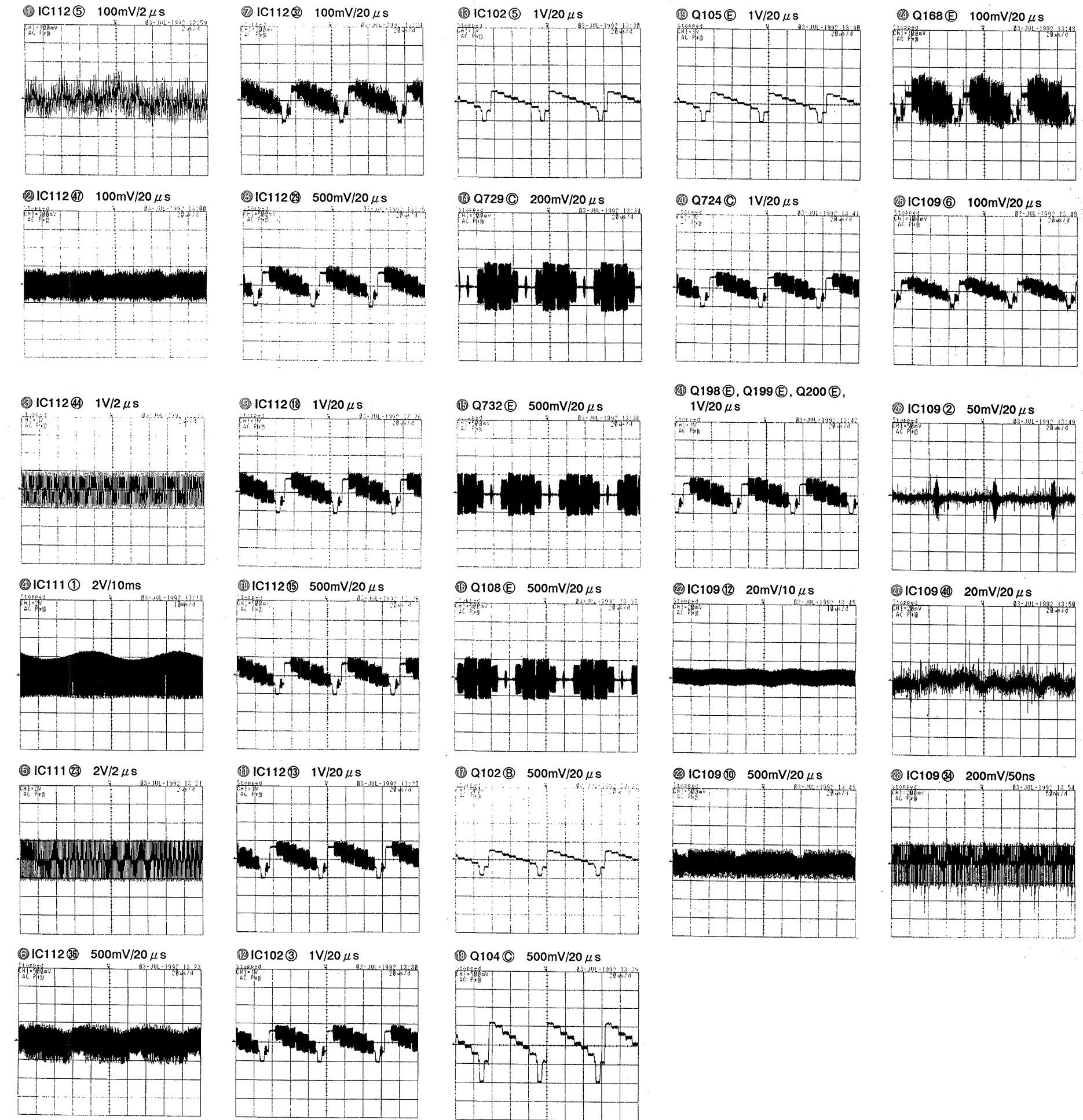
MT-28 BOARD



MT-30 BOARD



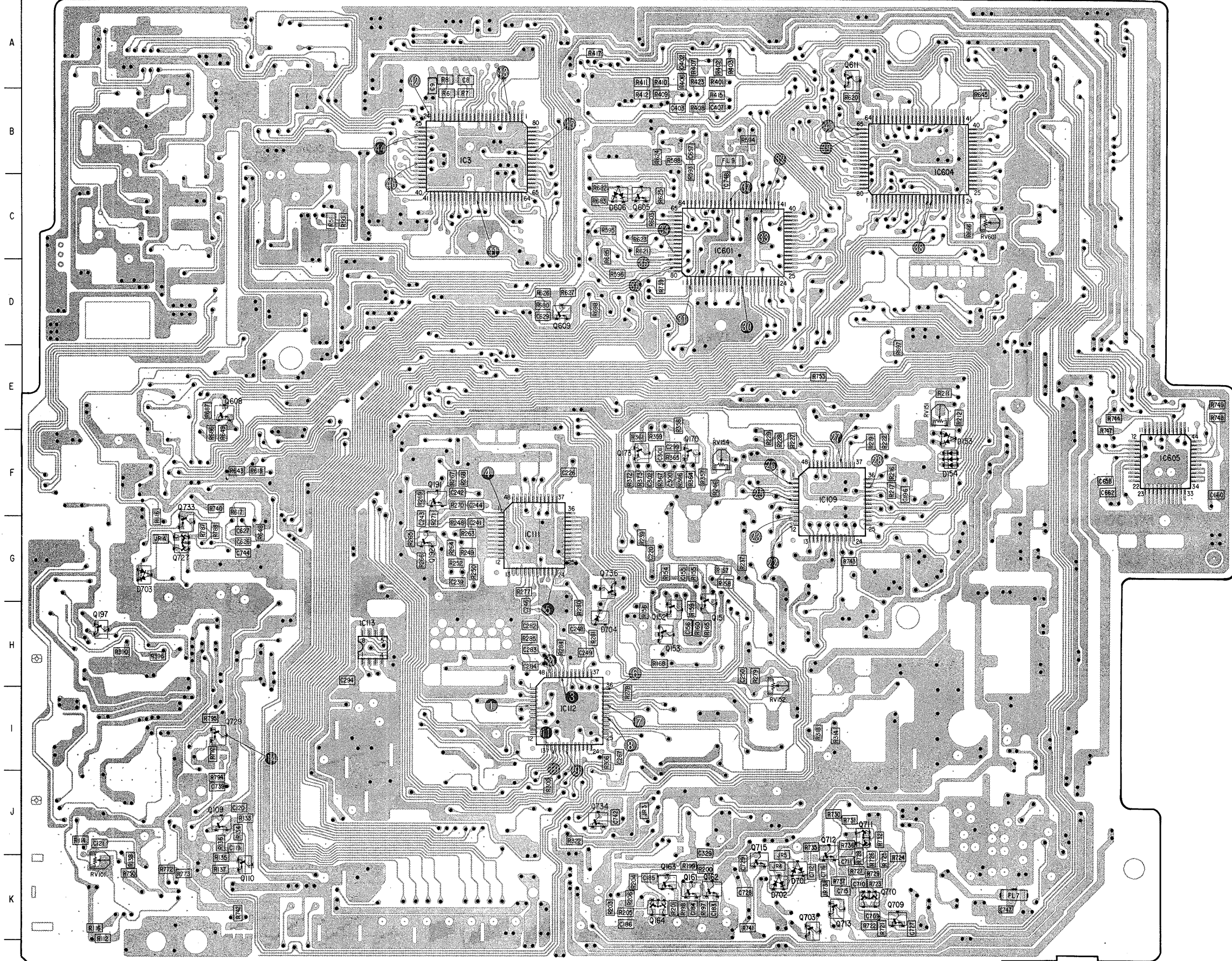
MB-703 BOARD (VIDEO)



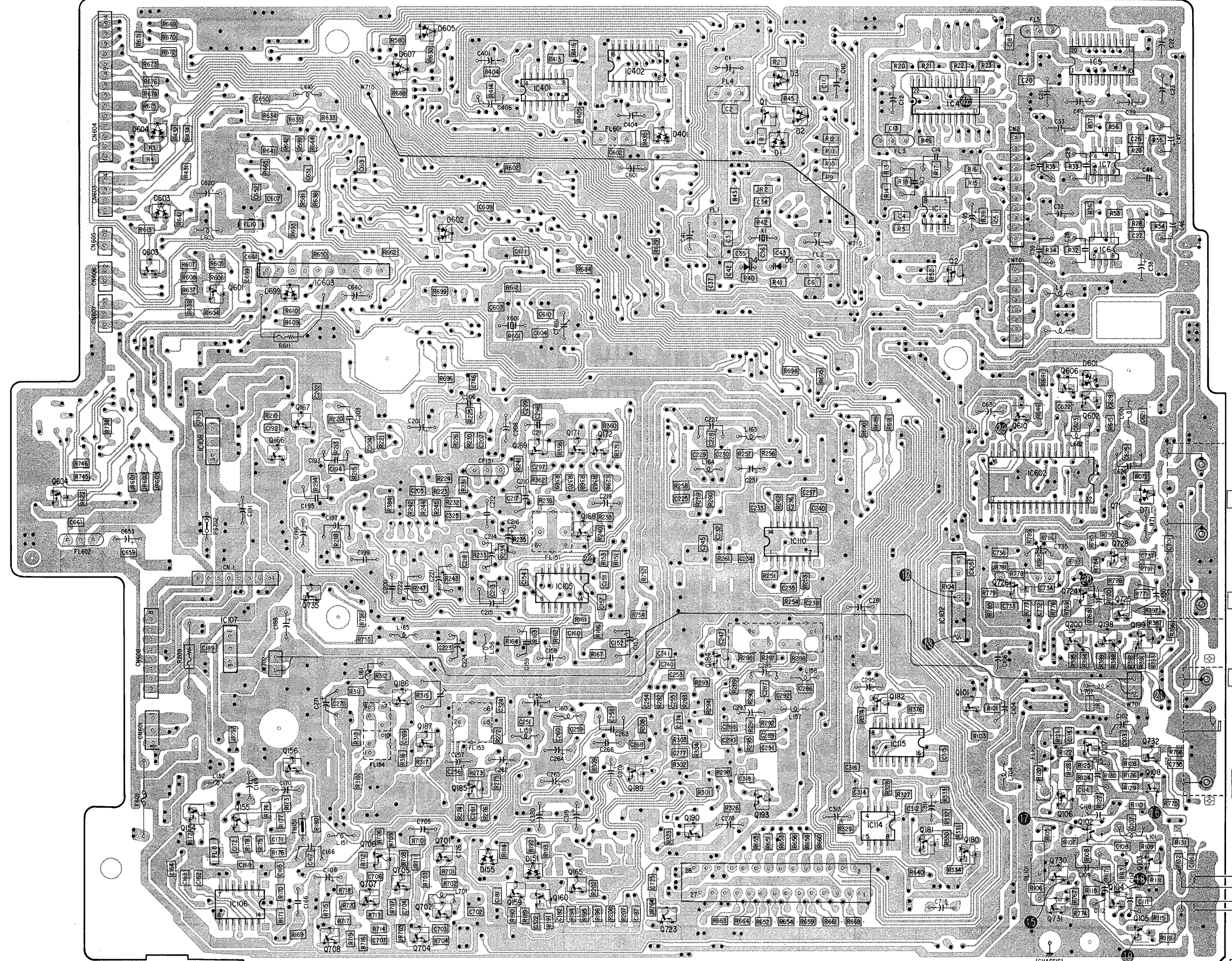
MB-703 BOARD

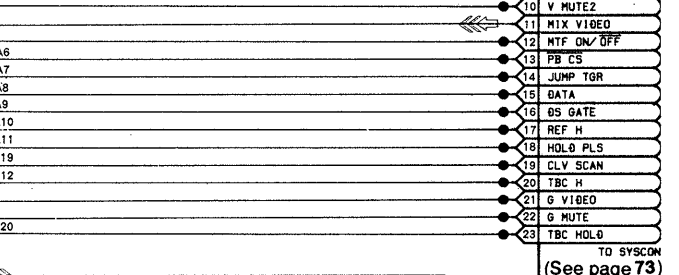
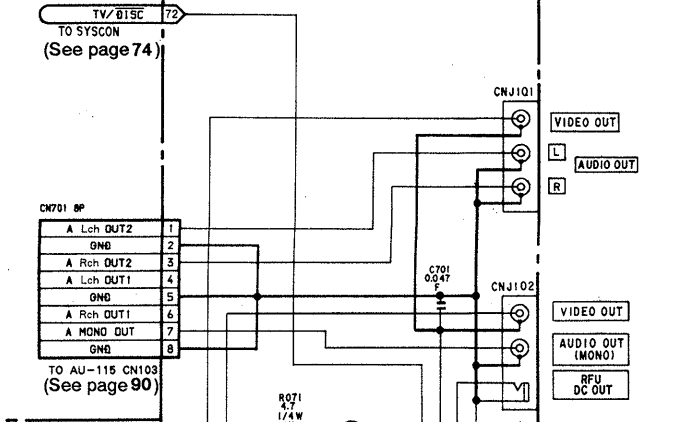
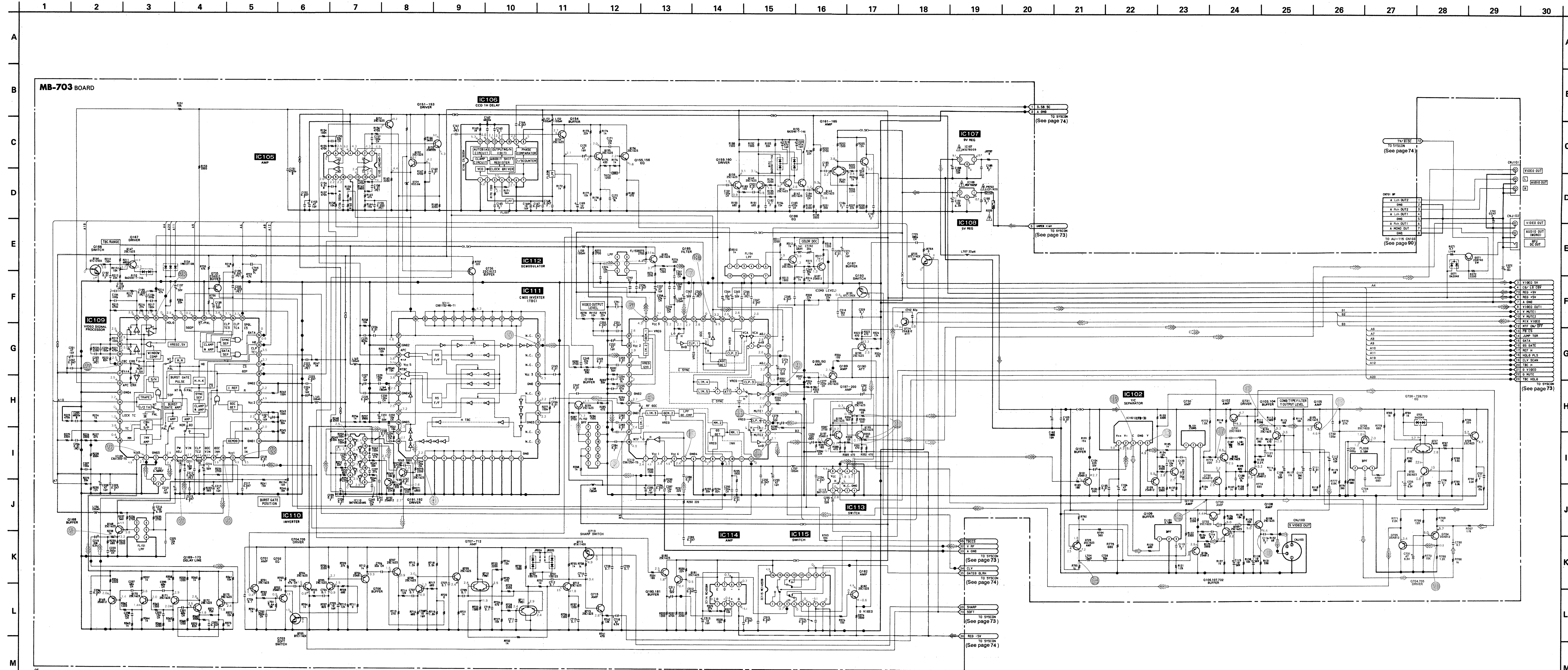
D001	B-24	Q181	F-5
D002	B-25	Q182	G-5
D003	A-24	Q183	J-24
D004	D-24	Q187	H-1
D005	D-24	Q198	H-28
D151	K-21	Q199	H-29
D153	F-11	Q200	H-28
D154	F-11	Q601	D-18
D155	K-21	Q602	E-28
D401	B-23	Q603	D-17
D601	E-28	Q604	F-16
D602	C-20	Q605	C-8
D603	C-17	Q606	E-28
D604	B-19	Q608	E-3
D605	A-20	Q609	D-7
D606	C-8	Q610	E-27
D607	A-20	Q611	A-10
D699	D-18	Q701	J-20
D701	K-10	Q702	K-20
D702	K-9	Q703	K-10
D703	G-2	Q704	K-20
D704	H-7	Q705	K-20
D711	F-29	Q706	K-20
		Q707	K-19
IC001	C-26	Q708	K-19
IC004	B-28	Q709	K-11
IC005	A-28	Q710	K-11
IC006	C-28	Q711	J-10
IC007	B-28	Q712	J-10
IC102	H-28	Q713	K-10
IC103	K-9	Q715	K-9
IC105	Q-22	Q723	K-23
IC106	K-18	Q724	G-28
IC107	H-18	Q725	H-28
IC108	F-18	Q726	G-27
IC109	F-10	Q727	G-2
IC110	Q-25	Q728	G-28
IC111	G-6	Q729	I-3
IC112	I-7	Q730	K-28
IC113	H-5	Q731	K-28
IC114	J-25	Q732	I-29
IC115	I-28	Q733	G-2
IC401	B-22	Q734	J-7
IC402	A-23	Q735	H-19
IC601	C-8	Q736	G-7
IC602	F-27		
IC604	B-11		
IC605	F-14		
IC901	D-19		
Q001	B-24		
Q002	D-26		
Q071	F-29		
Q101	I-27		
Q102	J-28		
Q103	K-29		
Q104	K-28		
Q105	K-29		
Q106	J-28		
Q107	I-28		
Q108	J-29		
Q109	J-3		
Q110	K-3		
Q151	H-9		
Q152	H-8		
Q153	H-8		
Q154	J-17		
Q155	J-18		
Q156	I-19		
Q159	K-21		
Q160	K-22		
Q161	K-8		
Q162	K-9		
Q163	K-8		
Q164	K-8		
Q165	K-22		
Q166	F-18		
Q167	E-19		
Q168	G-22		
Q169	F-21		
Q170	F-8		
Q171	F-22		
Q172	F-22		
Q173	F-8		
Q180	J-27		
Q181	I-26		
Q182	I-26		
Q184	H-24		
Q185	J-21		
Q186	I-20		
Q187	I-20		
Q189	J-23		
Q190	J-23		

MB-703 BOARD (COMPONENT SIDE)



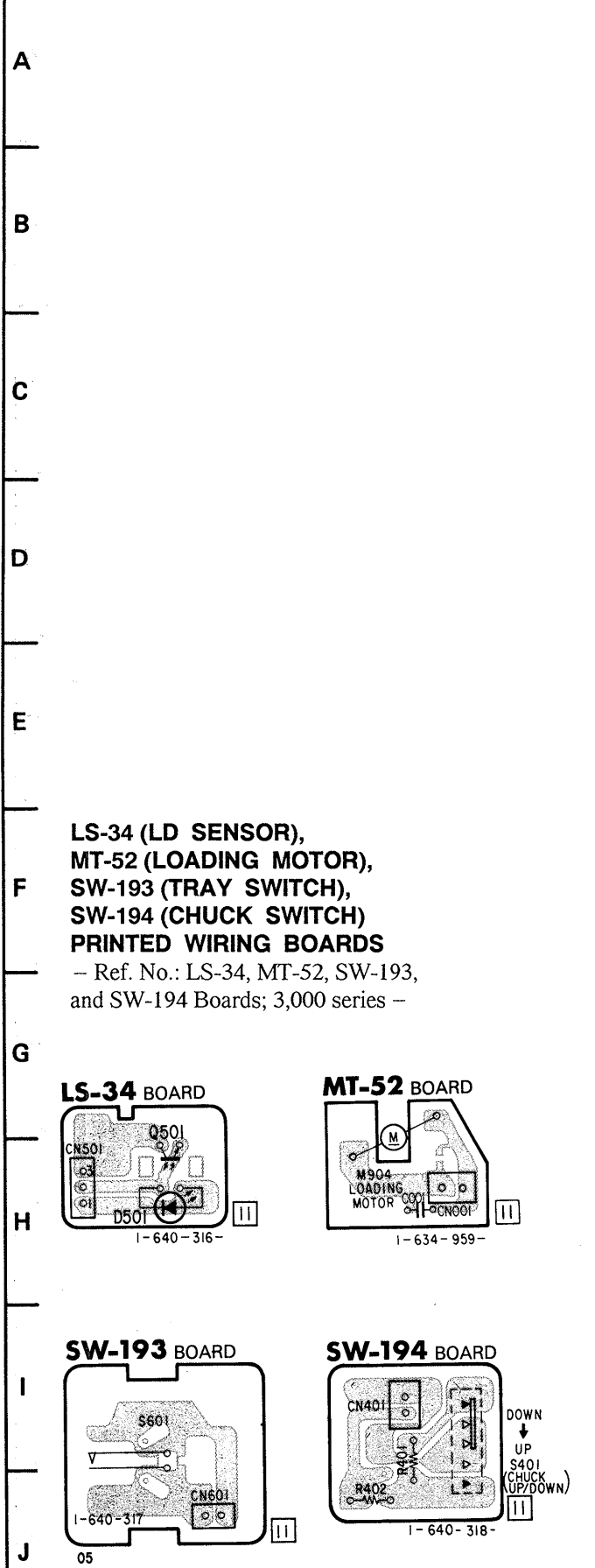
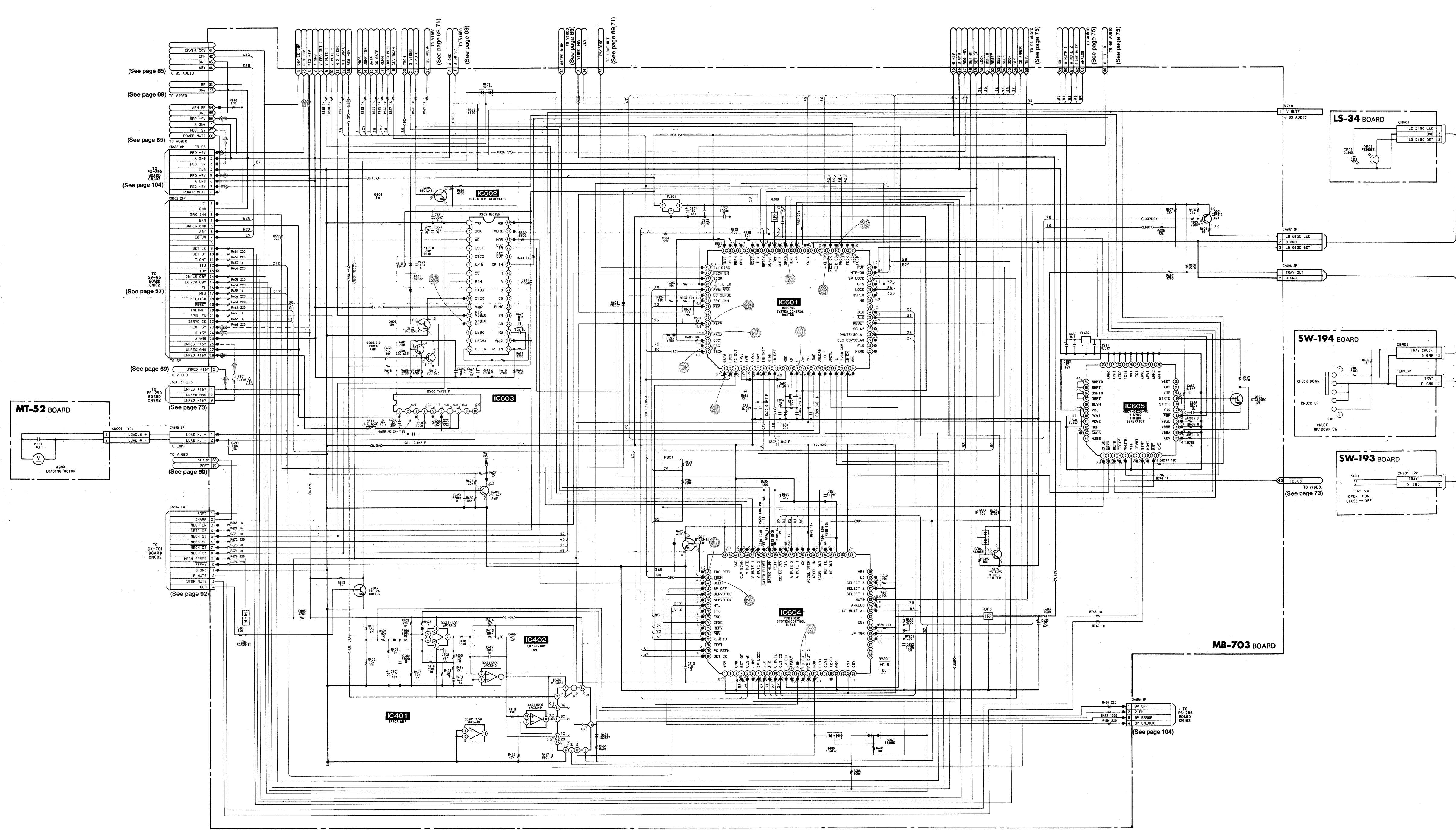
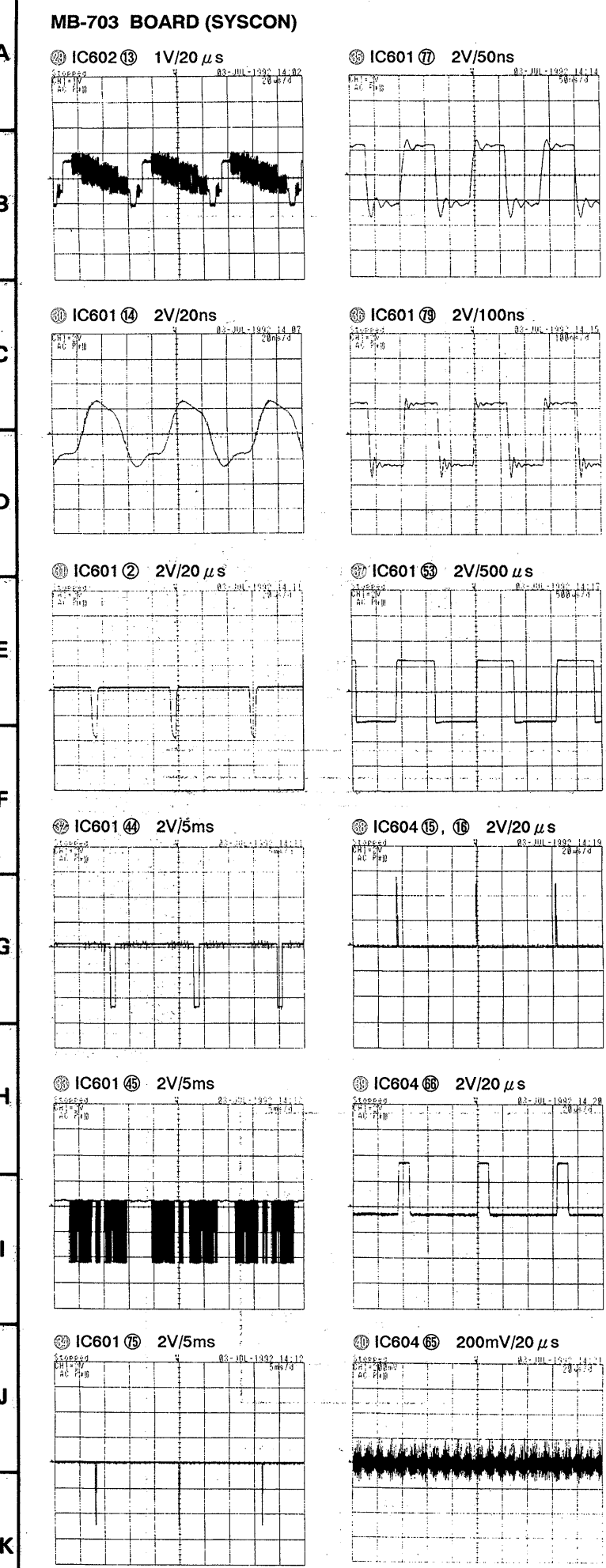
MB-703 BOARD (CONDUCTOR SIDE)





PB	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	YCHROMA	SIGNAL
SPINDLE PHASE SERVO	↔	↔	↔	↔
SPINDLE SERVO (SPEED AND PHASE)	↔	↔	↔	↔
TRACKING SERVO LD/CD/CDV	↔	↔	↔	↔
SLIDE SERVO LD/CD	↔	↔	↔	↔
FOCUS SERVO LD/CD	↔	↔	↔	↔
SKEW SERVO LD TILT	↔	↔	↔	↔

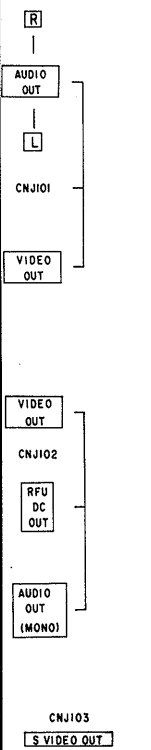
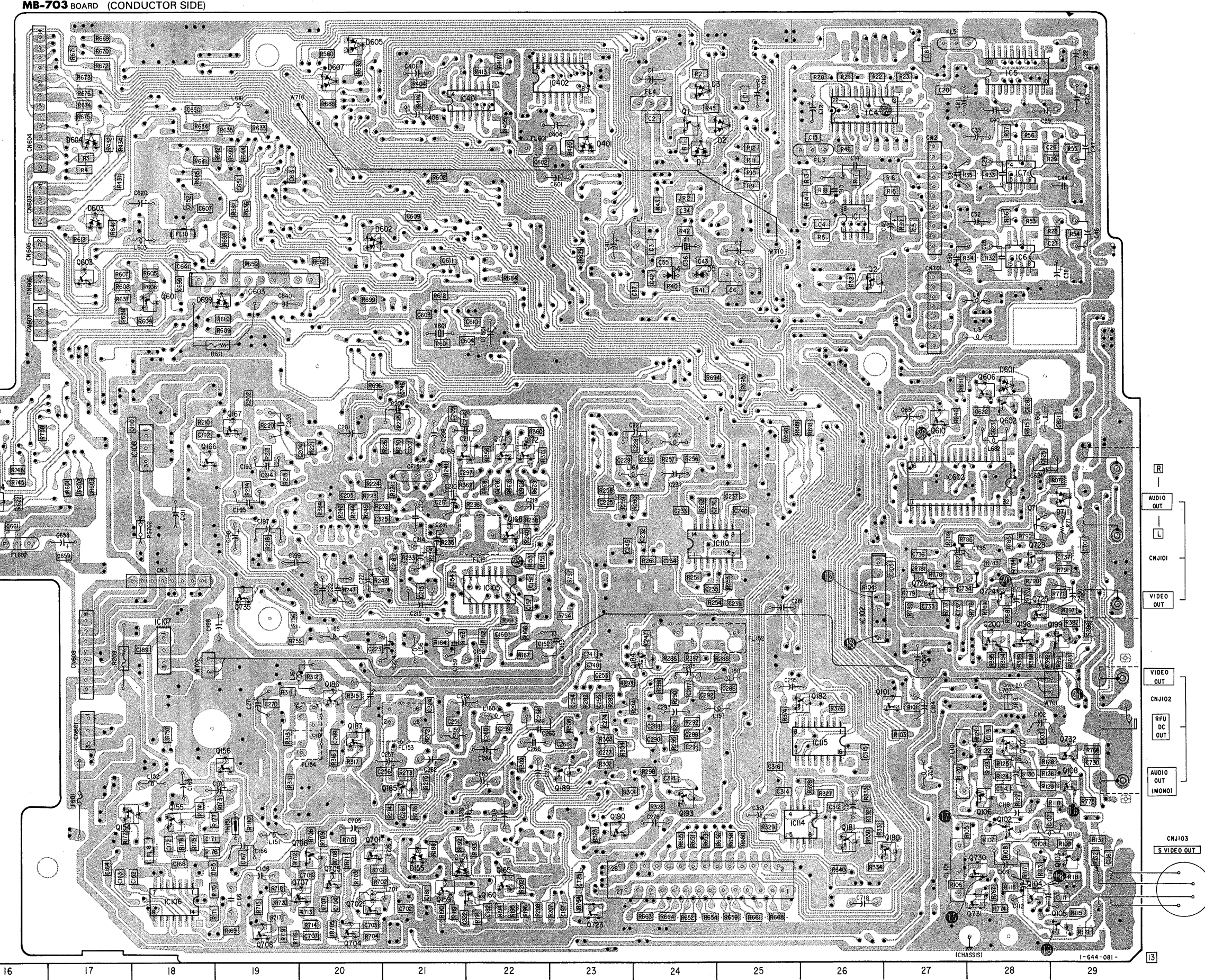
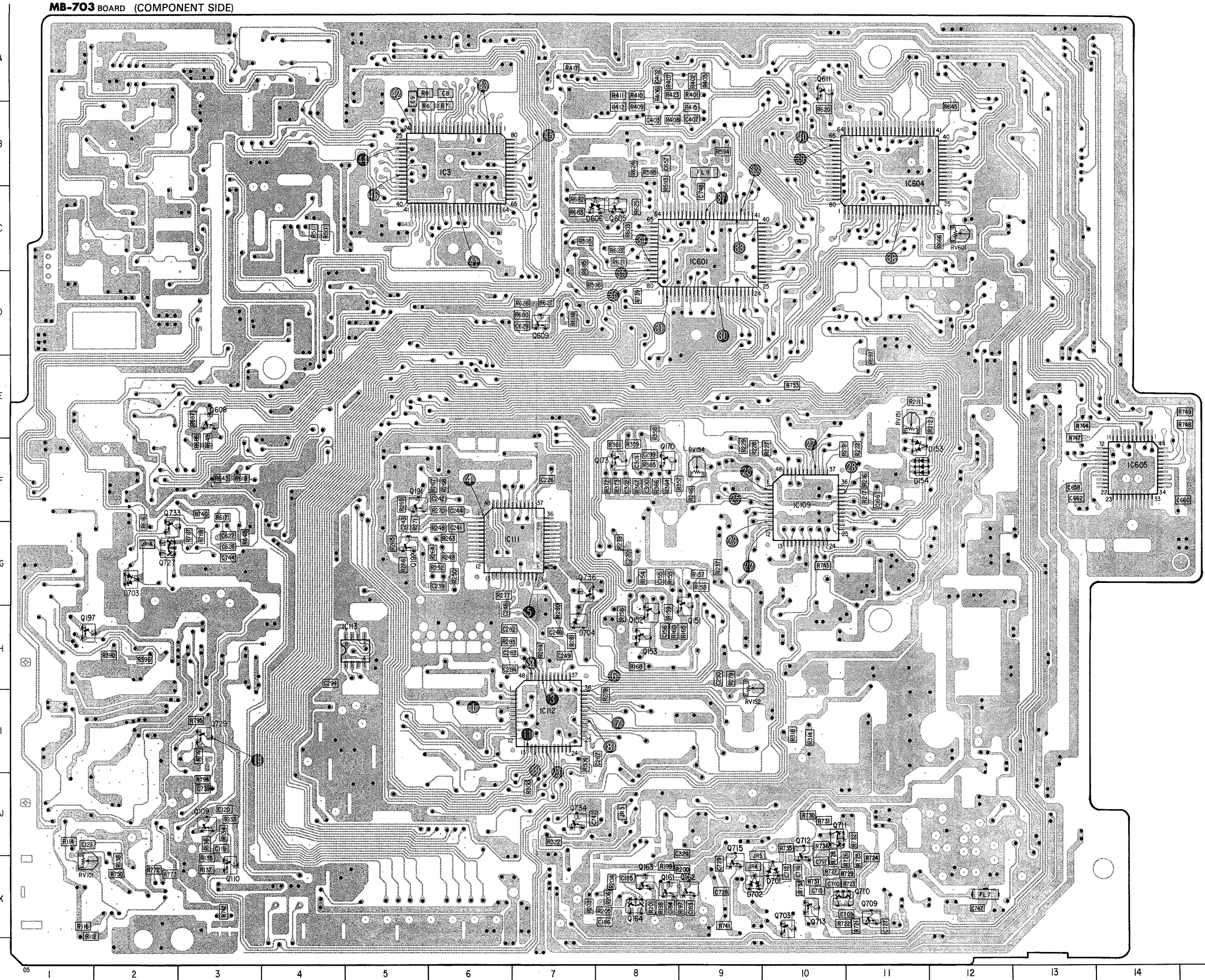
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇨	⇨	⇨
SPINDLE PHASE SERVO				⇨
SPINDLE SERVO (SPEED AND PHASE)				⇨
TRACKING SERVO LD/CD/CDV				⇨
SLIDE SERVO LD/CD				⇨
FOCUS SERVO LD/CD				⇨
SKREW SERVO LD TILT				⇨

MB-703 BOARD

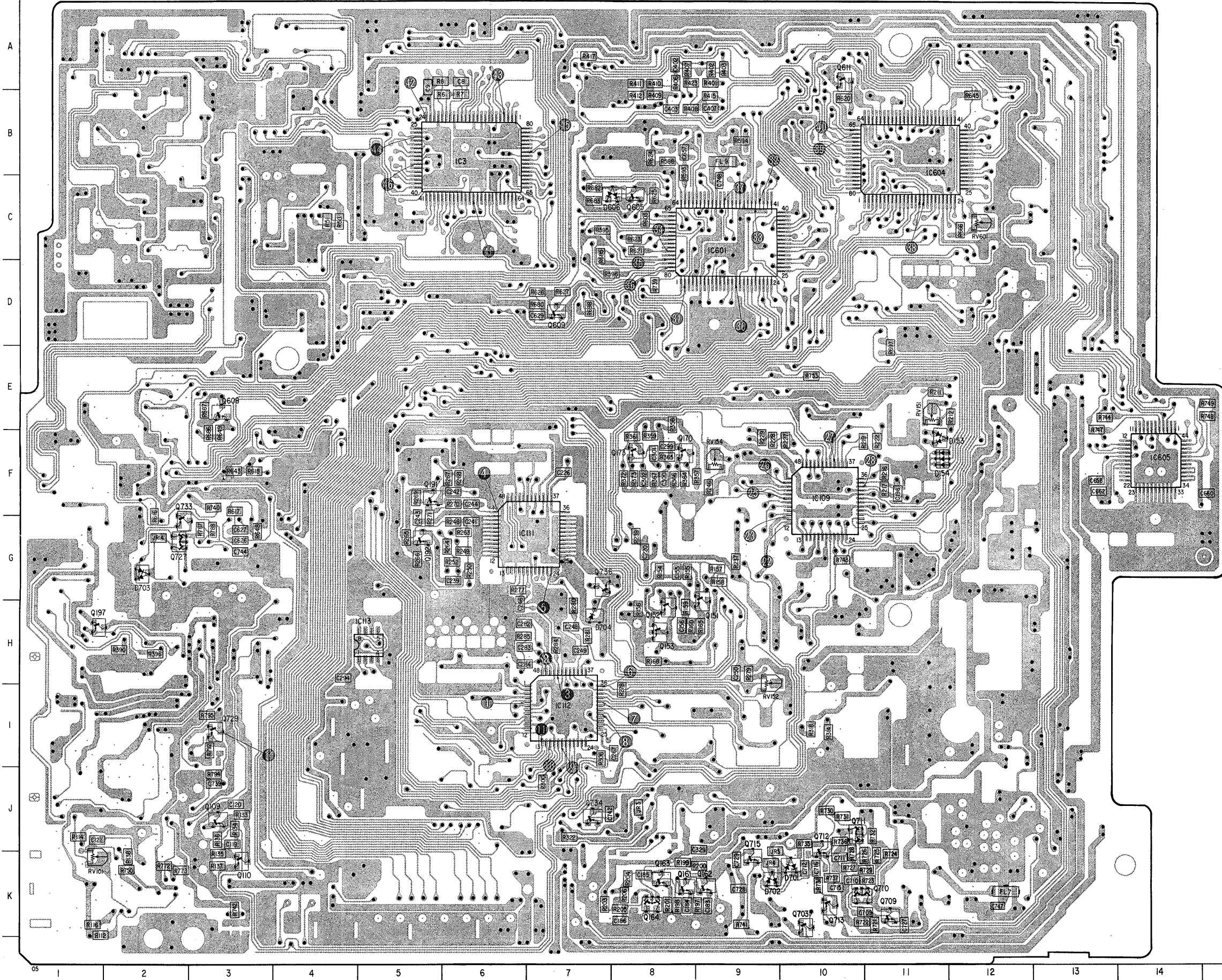
D001	B-24	Q191	F-5
D002	B-25	Q192	G-5
D003	A-24	Q193	J-24
D004	D-24	Q197	H-1
D005	D-24	Q198	H-2E
D151	K-21	Q199	H-2E
D153	F-11	Q200	H-2E
D154	F-11	Q601	D-1E
D155	K-21	Q602	E-2E
D401	B-23	Q603	D-11
D601	E-28	Q604	F-16
D602	C-20	Q605	C-8
D603	C-17	Q606	E-28
D604	B-17	Q608	E-3
D605	A-20	Q609	D-7
D606	C-8	Q610	E-27
D607	A-20	Q611	A-10
D699	D-18	Q701	J-20
D701	K-10	Q702	K-20
D702	K-9	Q703	K-10
D703	G-2	Q704	K-20
D704	H-7	Q705	K-20
D711	F-29	Q706	K-20
		Q707	K-19
		Q708	K-19
IC001	C-26	Q709	K-11
IC004	B-26	Q710	K-11
IC005	A-28	Q711	J-10
IC006	C-28	Q712	J-10
IC007	B-28	Q713	K-10
IC102	H-28	Q715	K-9
IC103	B-6	Q723	K-23
IC105	G-22	Q724	G-28
IC106	K-18	Q725	H-28
IC107	H-18	Q726	G-27
IC108	F-18	Q727	G-2
IC109	F-10	Q728	G-28
IC110	G-25	Q729	I-3
IC111	G-6	Q730	K-28
IC112	I-7	Q731	K-28
IC113	H-5	Q732	I-29
IC114	J-25	Q733	G-2
IC115	I-25	Q734	J-7
IC401	B-22	Q735	H-19
IC402	A-23	Q736	G-7
IC601	C-9		
IC802	F-27		
IC804	B-11		
IC805	F-14		
IC901	D-19		



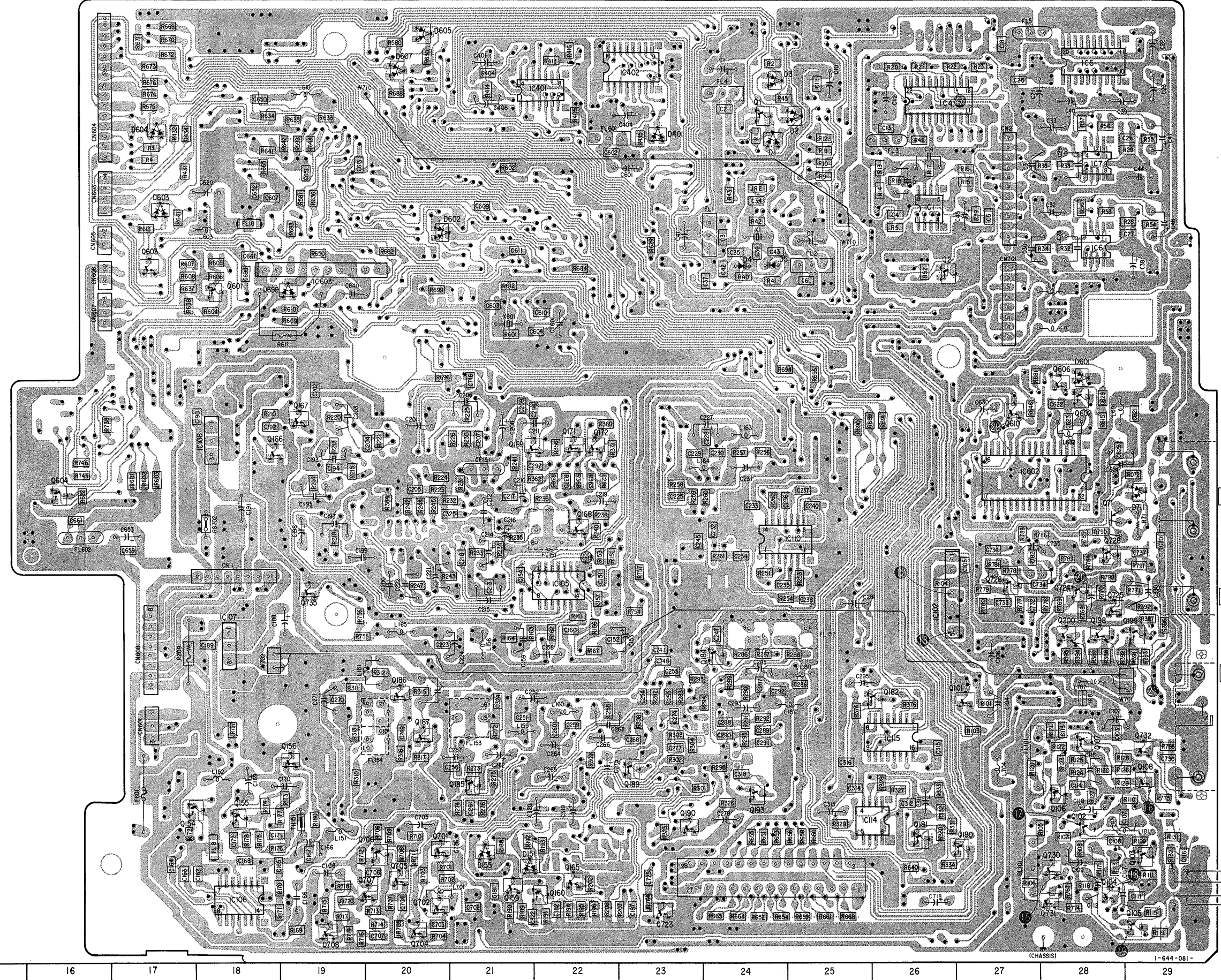
MB-703 BOARD

D001	B-24	Q191	F-5
D002	B-25	Q192	G-5
D003	A-24	Q193	J-24
D004	D-24	Q197	H-1
D005	D-24	Q198	H-28
D151	K-21	Q199	H-29
D153	F-11	Q200	H-29
D154	F-11	Q601	D-18
D155	K-21	Q602	E-28
D401	B-23	Q603	D-17
D601	E-28	Q604	F-16
D602	C-20	Q605	C-8
D603	C-17	Q606	E-28
D604	B-17	Q609	E-3
D605	A-20	Q609	D-7
D606	C-8	Q610	E-27
D607	A-20	Q611	A-10
D699	D-18	Q701	J-20
D701	K-10	Q702	K-20
D702	K-9	Q703	K-10
D703	G-2	Q704	K-20
D704	H-7	Q705	K-20
D711	F-29	Q706	K-20
		Q707	K-19
IC001	C-26	Q708	K-19
IC004	B-26	Q709	K-11
IC005	A-28	Q710	K-11
IC009	C-28	Q711	J-10
IC007	B-28	Q712	J-10
IC102	H-26	Q713	K-10
IC103	B-6	Q715	K-9
IC105	G-22	Q723	K-23
IC108	K-18	Q724	G-28
IC107	H-18	Q725	H-28
IC108	F-18	Q726	G-27
IC109	F-10	Q727	G-2
IC110	G-25	Q728	G-2
IC111	G-6	Q729	I-3
IC112	I-7	Q730	K-28
IC113	H-5	Q731	K-28
IC114	J-25	Q732	I-29
IC115	I-26	Q733	G-2
IC401	B-22	Q734	J-7
IC402	A-23	Q735	H-19
IC601	C-9	Q736	G-7
IC602	F-27		
IC604	B-11		
IC605	F-14		
IC901	D-19		
Q001	B-24		
Q002	D-26		
Q071	F-28		
Q101	I-27		
Q102	J-28		
Q103	K-29		
Q104	K-28		
Q105	K-29		
Q106	J-28		
Q107	I-28		
Q108	J-29		
Q109	J-3		
Q110	K-3		
Q151	H-9		
Q152	H-9		
Q153	H-8		
Q154	J-17		
Q155	J-18		
Q156	I-19		
Q159	K-21		
Q160	K-22		
Q161	K-8		
Q162	K-9		
Q163	K-8		
Q164	K-8		
Q165	K-22		
Q166	F-18		
Q167	E-19		
Q168	G-22		
Q169	F-21		
Q170	F-8		
Q171	F-22		
Q172	F-22		
Q173	F-8		
Q180	J-27		
Q181	I-26		
Q182	I-26		
Q184	H-24		
Q185	J-21		
Q186	J-20		
Q187	I-20		
Q189	J-23		
Q190	J-23		

MB-703 BOARD (COMPONENT SIDE)

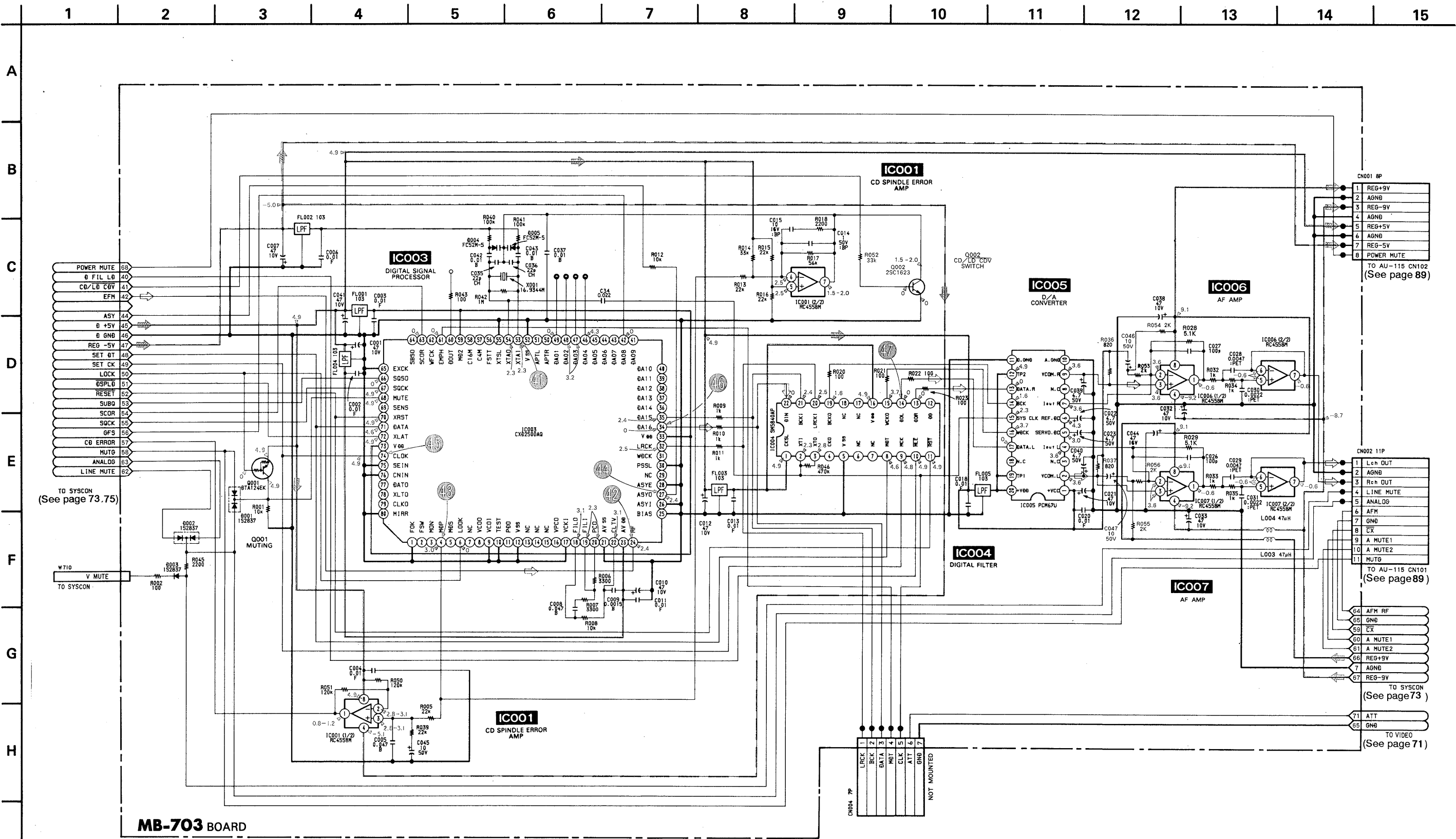


MB-703 BOARD (CONDUCTOR SIDE)



MB-703 (DIGITAL AUDIO) SCHEMATIC DIAGRAM

— Ref. No.: MB-703 Boards; 2,000 series —



MB-703 BOARD

05

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	→	⇒	⇒⇒	⇨

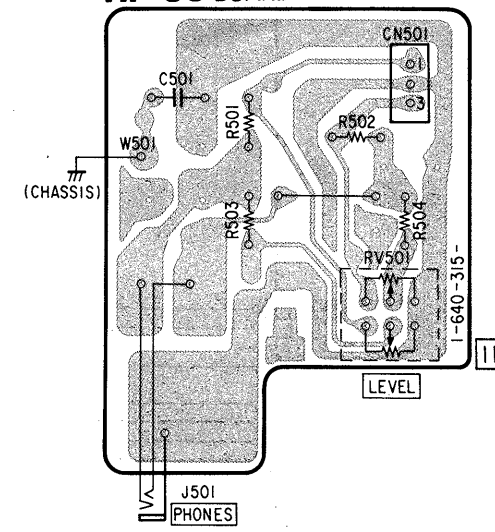
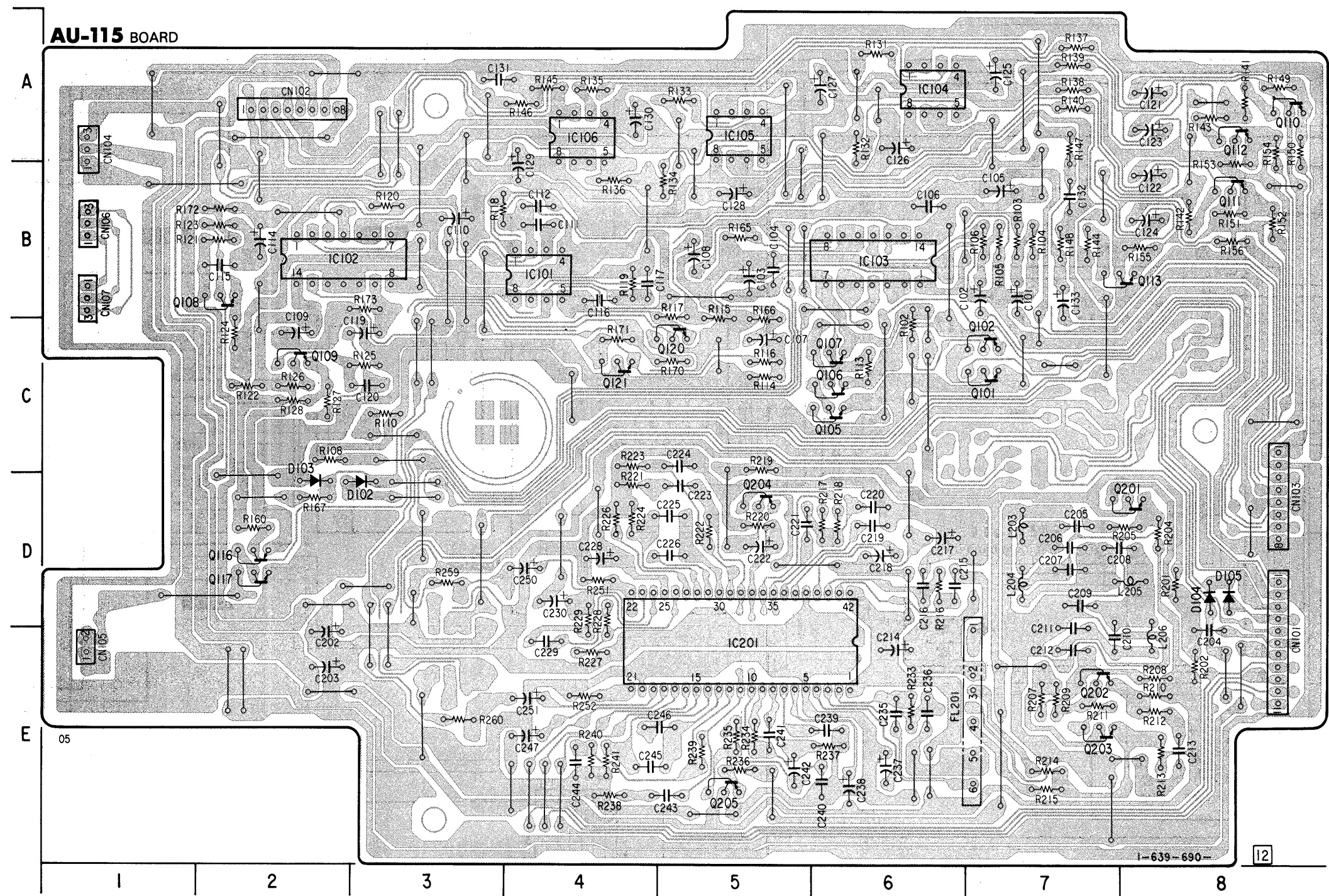
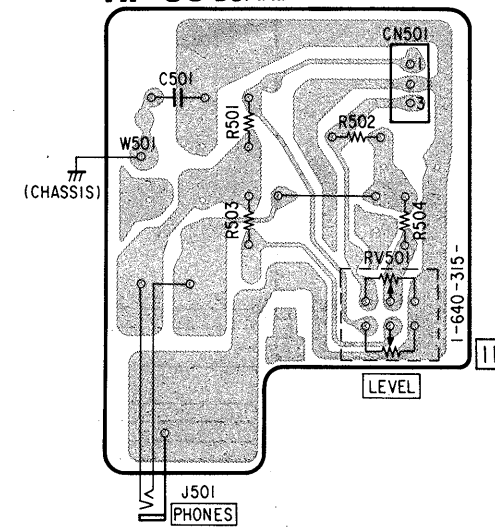
AU-115 (ANALOG AUDIO), HP-80 (HEADPHONES JACK) PRINTED WIRING BOARDS

— Ref. No.: AU-115 Board; 4,000 series, HP-80 Board; 5,000 series —

AU-115 BOARD

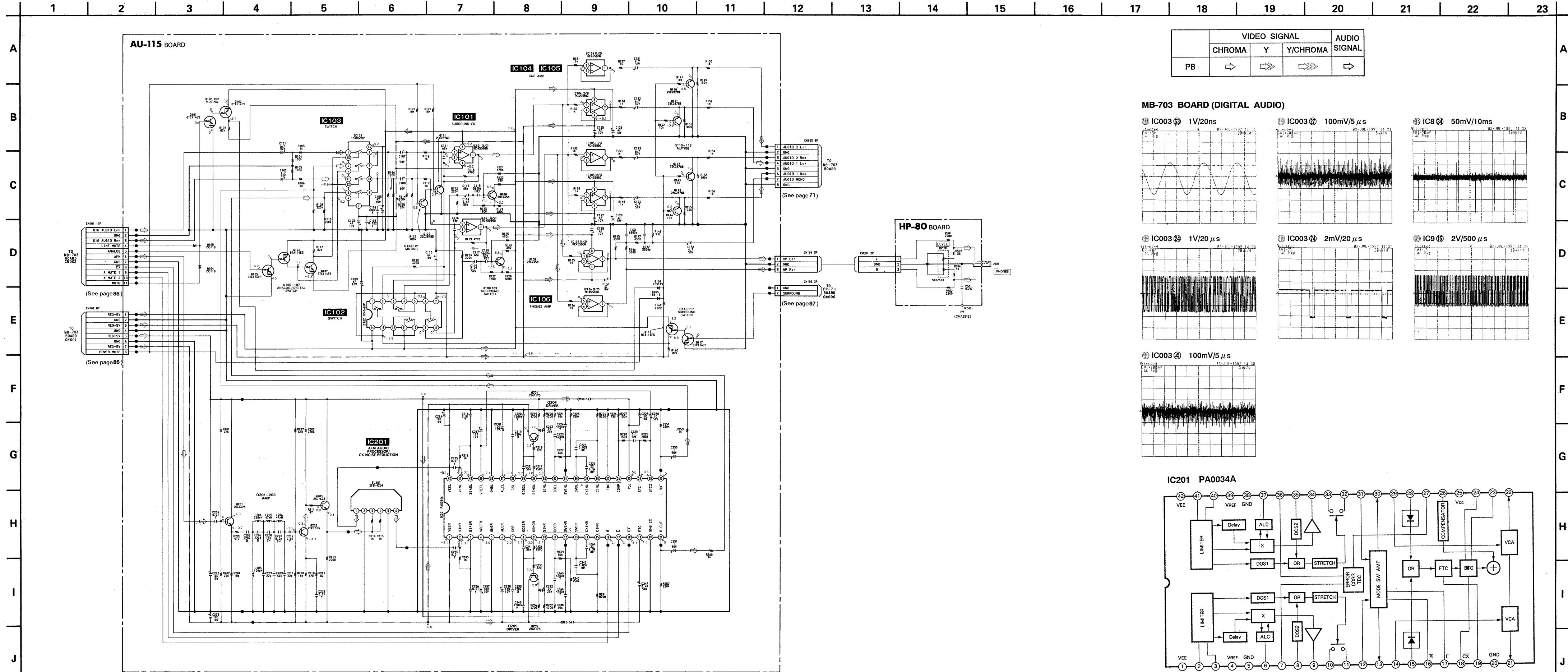
- | | |
|-------|-----|
| D102 | D-3 |
| D103 | D-2 |
| D104 | D-8 |
| D105 | D-8 |
| | |
| IC101 | B-4 |
| IC102 | B-2 |
| IC103 | B-6 |
| IC104 | A-6 |
| IC105 | A-5 |
| IC106 | A-4 |
| IC201 | E-5 |
| | |
| Q101 | C-7 |
| Q102 | C-7 |
| Q105 | C-6 |
| Q106 | C-6 |
| Q107 | C-6 |
| Q108 | B-2 |
| Q109 | C-2 |
| Q110 | A-8 |
| Q111 | B-8 |
| Q112 | A-8 |
| Q113 | B-8 |
| Q116 | D-2 |
| Q117 | D-2 |
| Q120 | C-5 |
| Q121 | C-4 |
| Q201 | D-8 |
| Q202 | E-7 |
| Q203 | E-7 |
| Q204 | D-5 |
| Q205 | E-5 |

HP-80 BOARD



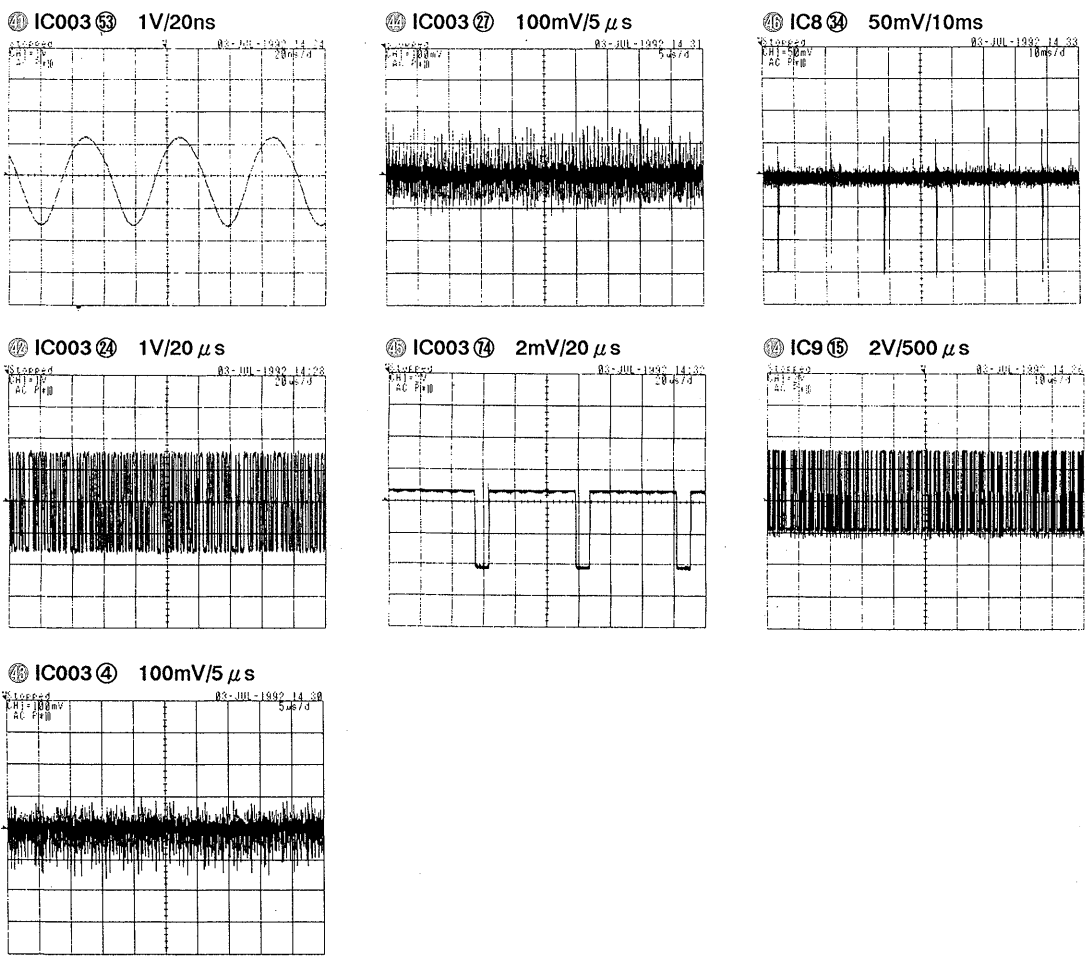
AU-115 (ANALOG AUDIO), HP-80 (HEADPHONES JACK) SCHEMATIC DIAGRAM

— Ref. No.: AU-115 Board; 4,000 series, HP-80 Board; 5,000 series —

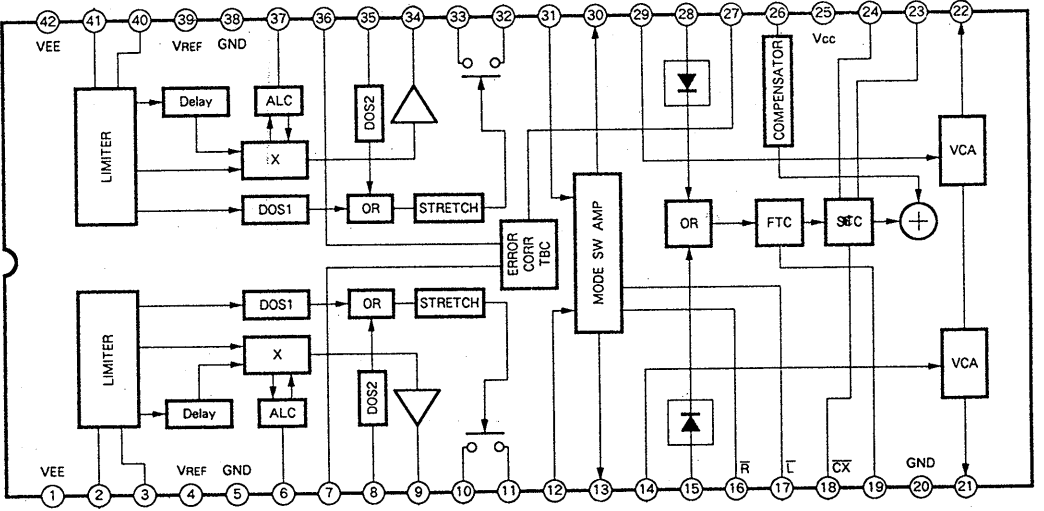


	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇨⇨	⇨⇨⇨	⇨

MB-703 BOARD (DIGITAL AUDIO)

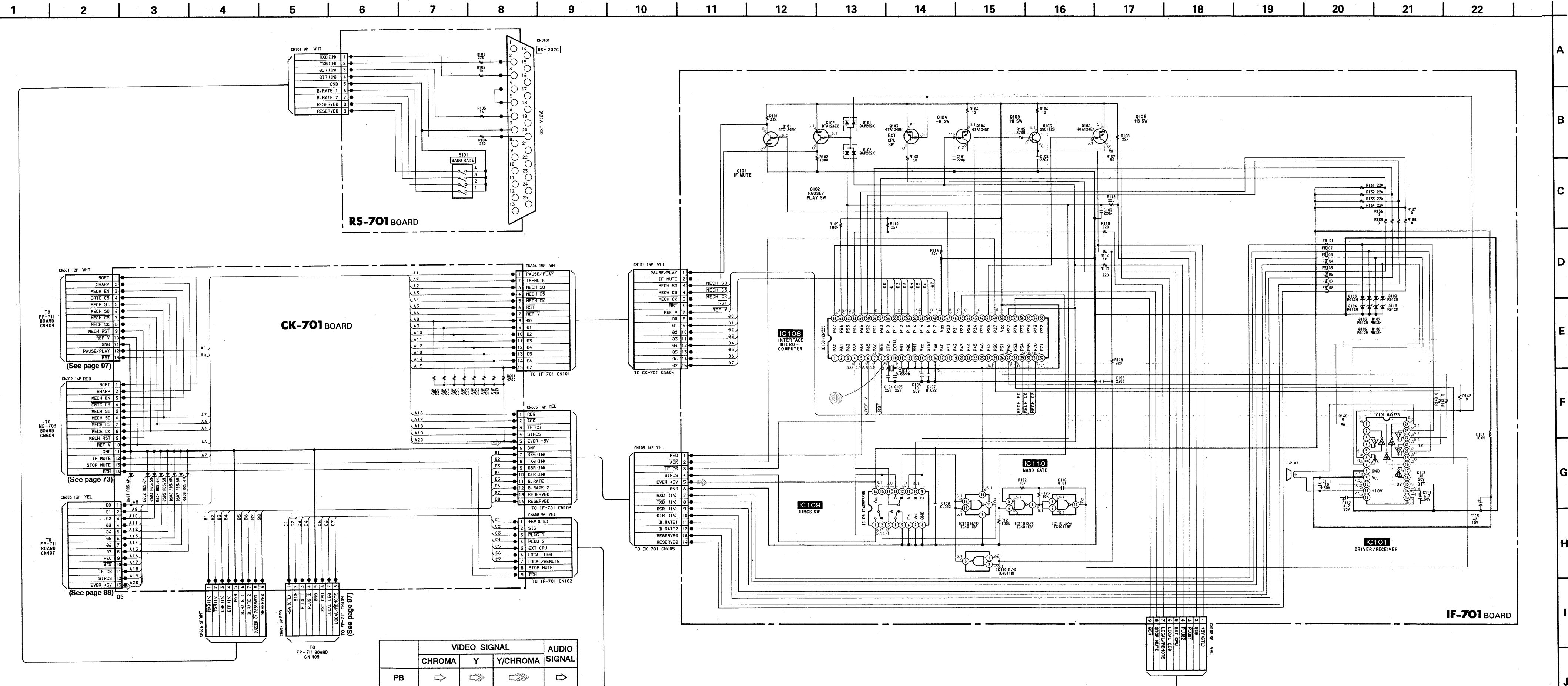


IC201 PA0034A



IF-701 (INTERFACE MODE CONTROL), RS-701 (BAUD RATE), CK-701 (TRANSLATION) SCHEMATIC DIAGRAM

- Ref. No.: IF-701, RS-701, and CK-701 Boards; 8,000 series -



PB	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
→	⇒	⇒⇒	⇒⇒⇒	⇨

IF-701 (INTERFACE MODE CONTROL), RS-701 (BAUD RATE), CK-701 (TRANSLATION) PRINTED WIRING BOARDS

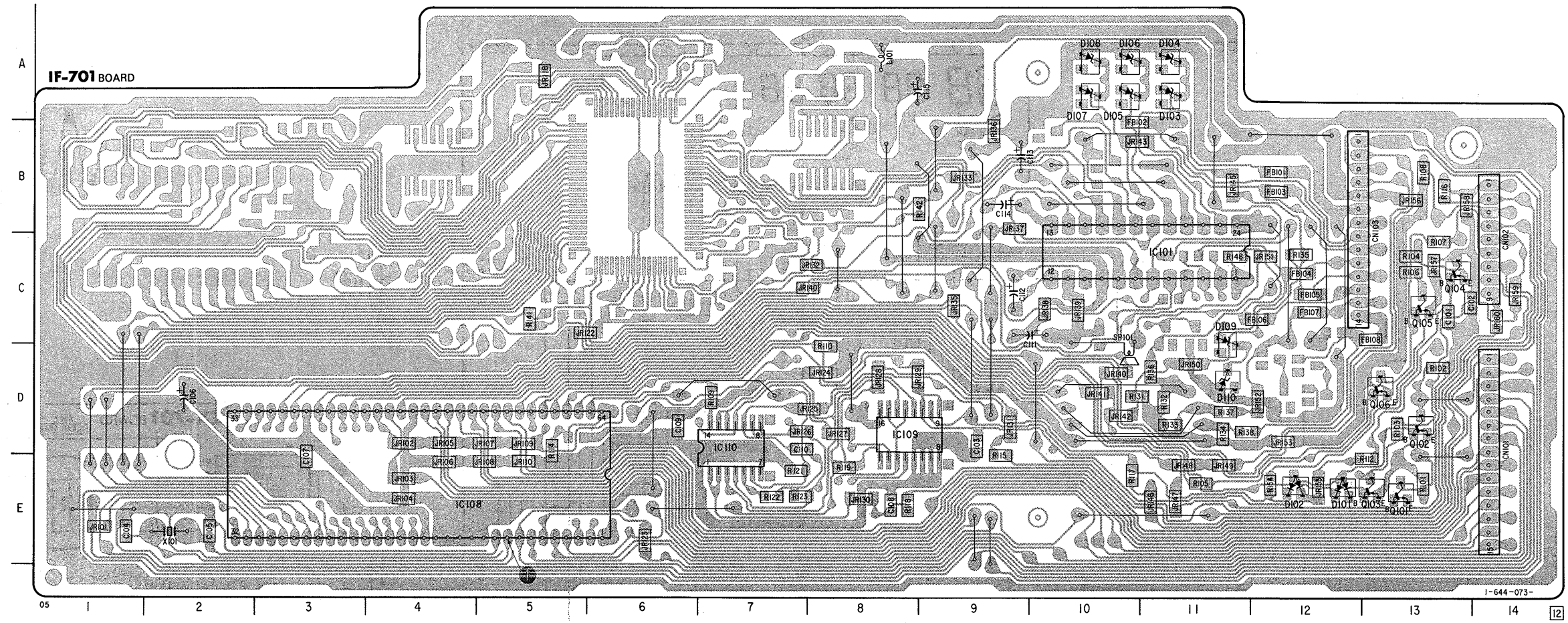
– Ref. No.: IF-701, RS-701, and CK-701 Boards; 8,000 series –

IF-701 BOARD

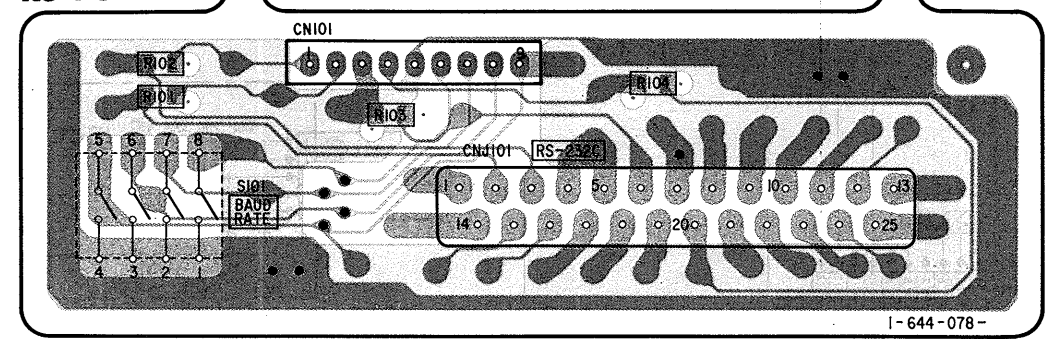
- D101 E-12
- D102 E-12
- D103 A-11
- D104 A-11
- D105 A-10
- D106 A-10
- D107 A-10
- D108 A-10
- D109 C-11
- D110 D-11

- IC101 C-11
- IC108 E-4
- IC109 D-8
- IC110 D-7

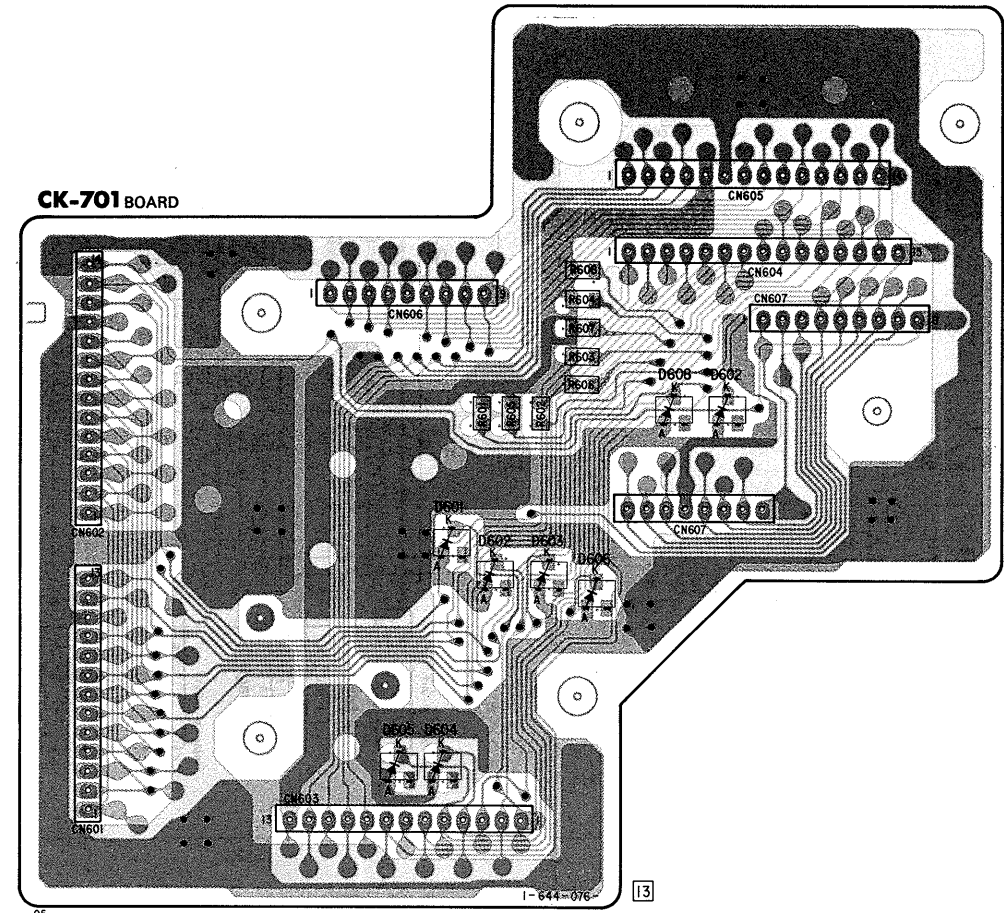
- Q101 E-13
- Q102 D-13
- Q103 E-13
- Q104 C-13
- Q105 C-13
- Q106 D-13



RS-701 BOARD

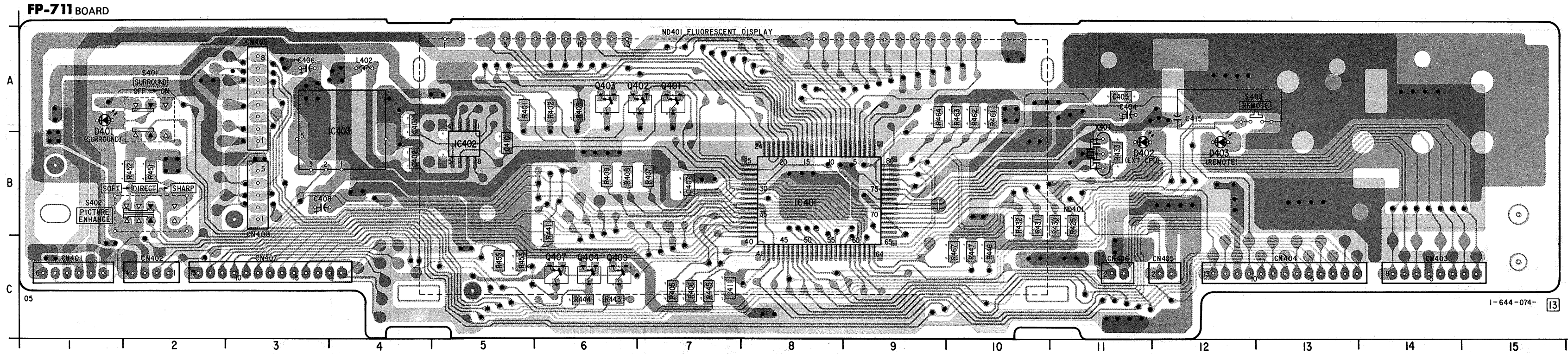


CK-701 BOARD

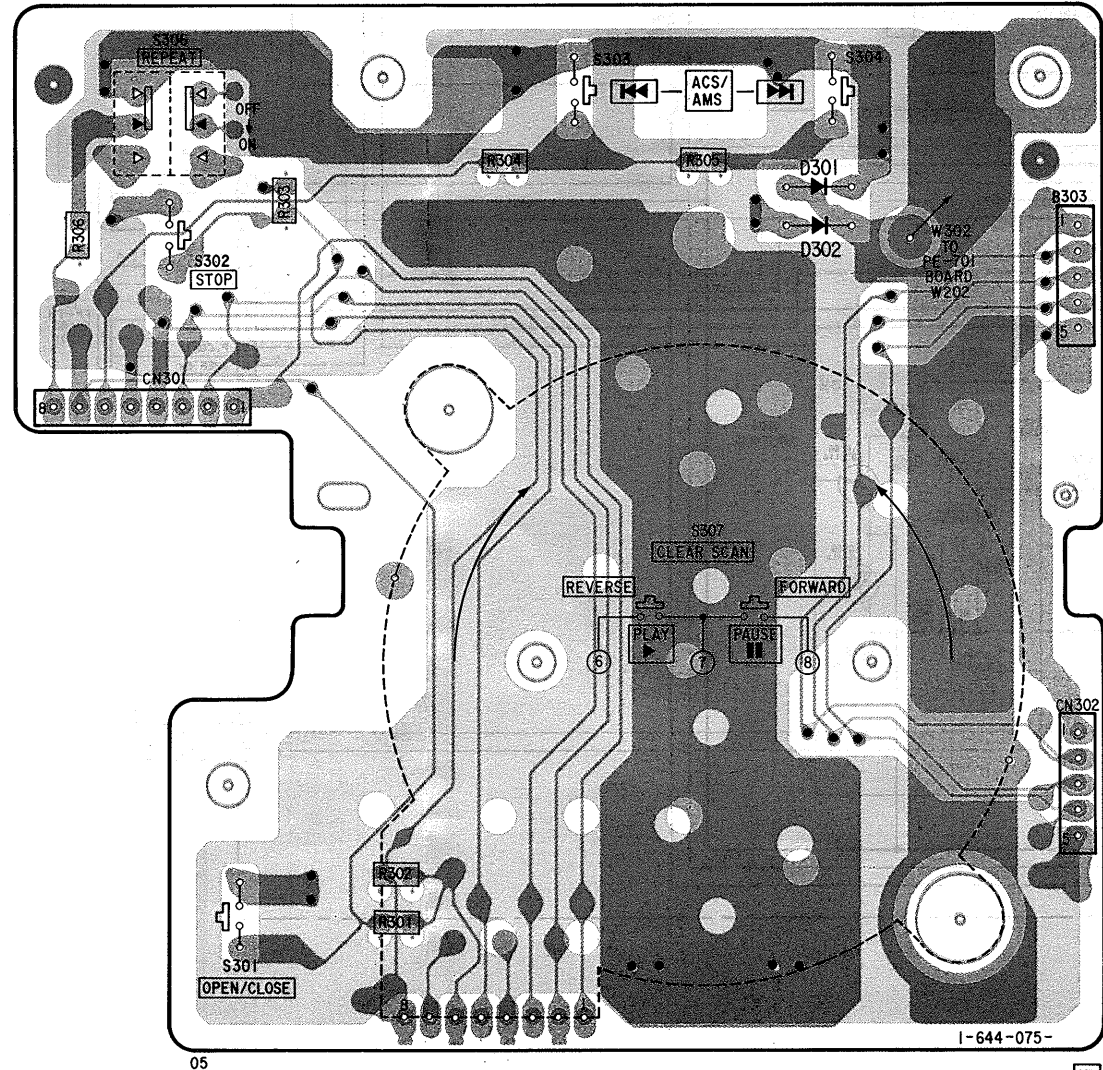


FP-711 BOARD

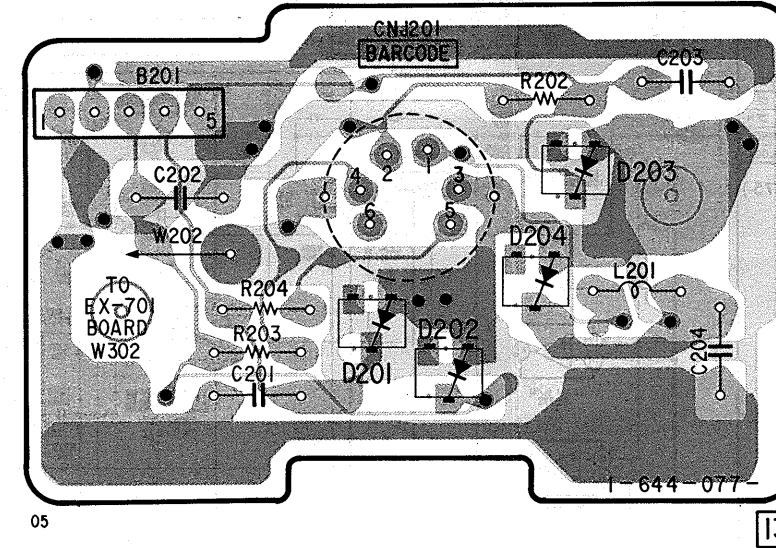
- D401 A-1
- D402 B-11
- D403 B-12
- IC401 B-8
- IC402 B-5
- IC403 B-4
- Q401 A-7
- Q402 A-7
- Q403 A-6
- Q404 C-6
- Q407 C-6
- Q409 C-6



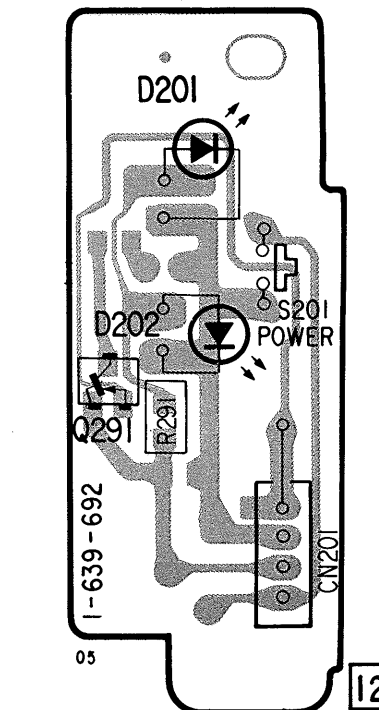
EX-701 BOARD

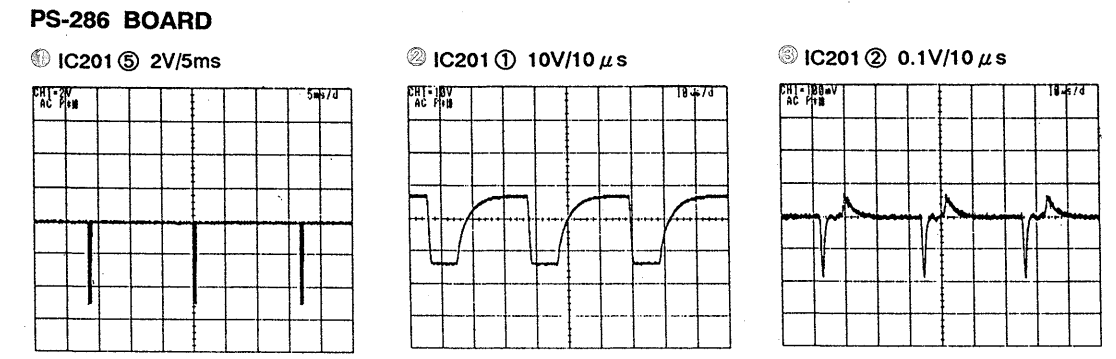
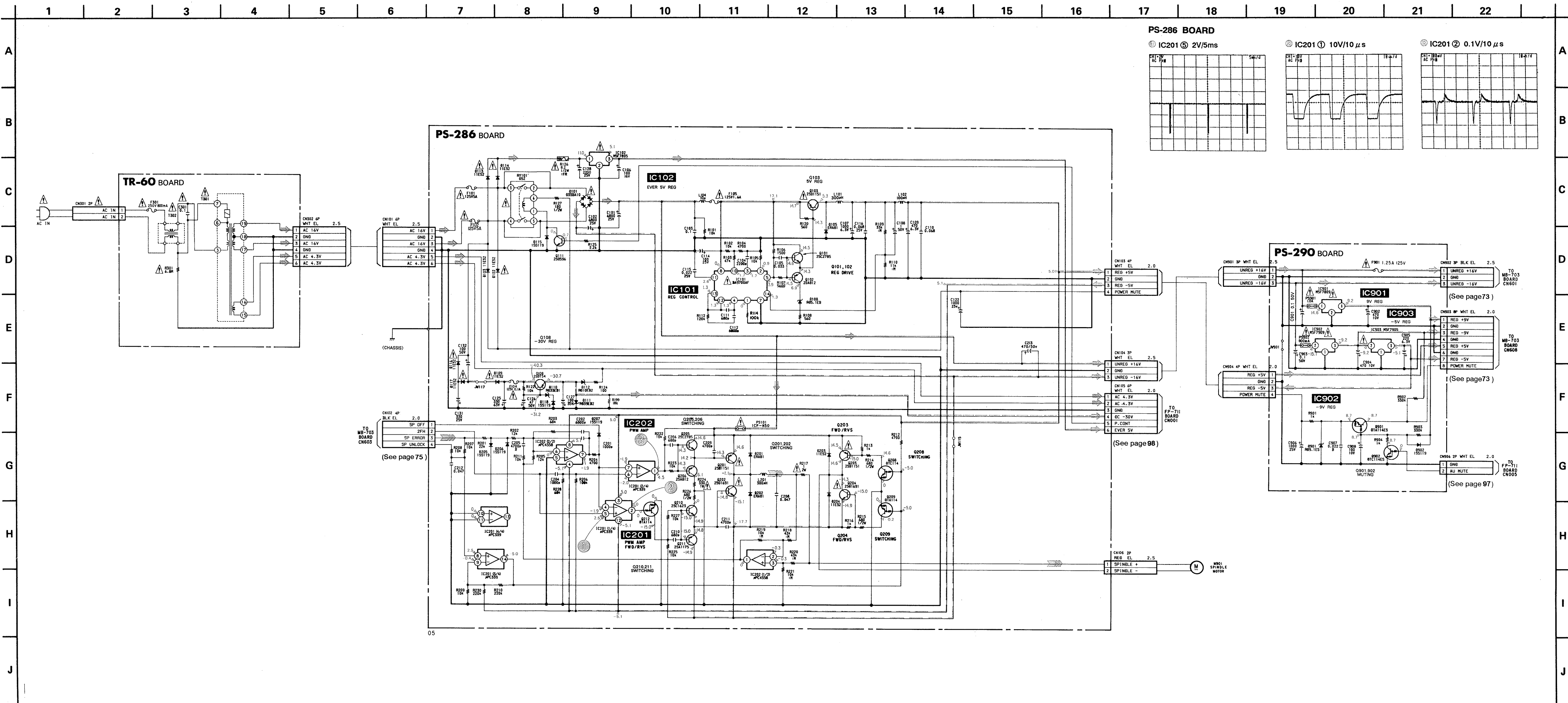


PE-701 BOARD



SW-184 BOARD





TO MB-703 BOARD CN603 (See page 75)

TO FP-711 BOARD CN001 (See page 98)

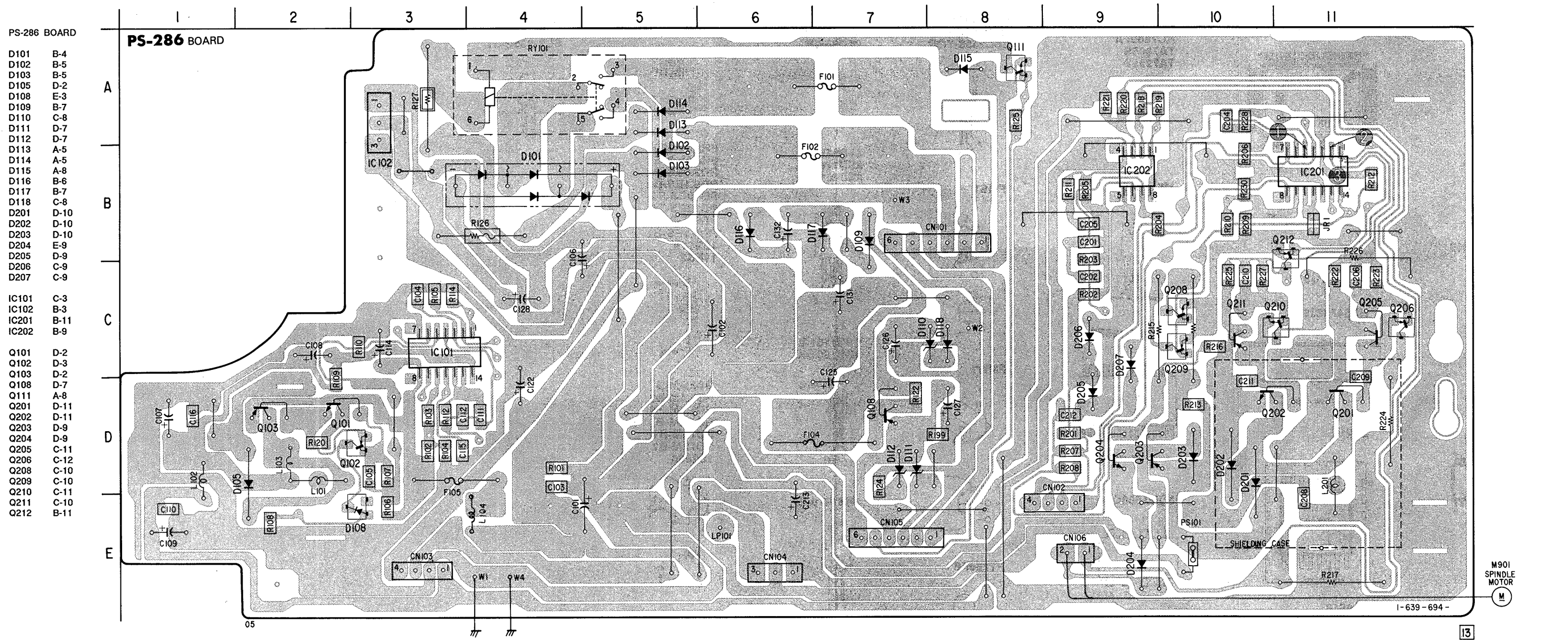
TO MB-703 BOARD CN601 (See page 73)

TO MB-703 BOARD CN608 (See page 73)

TO MB-703 BOARD CN605 (See page 97)

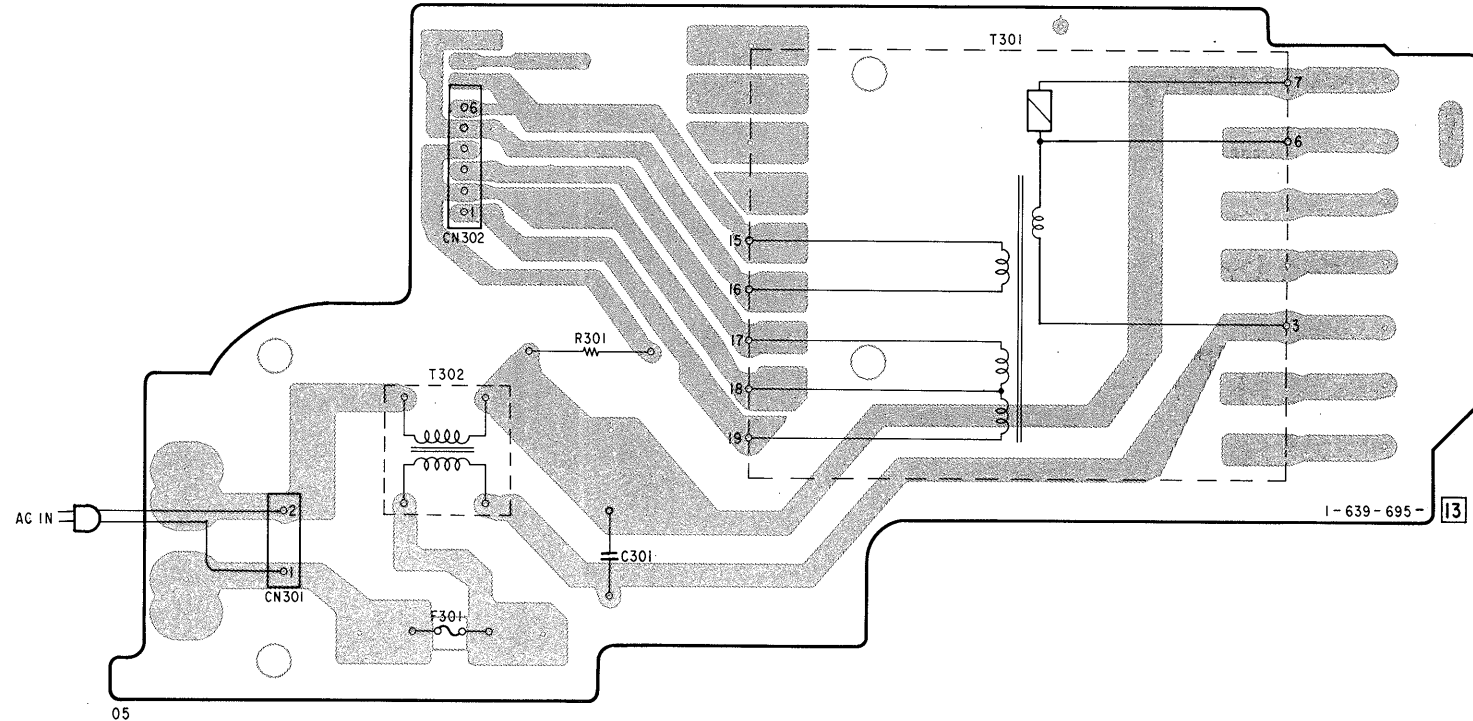
PS-286 (POWER SUPPLY, SPINDLE SERVO), TR-60 (POWER TRANSFORMER), PS-290 (REGULATOR) PRINTED WIRING BOARDS

- Ref. No.: PS-286, TR-60, and PS-290 Boards; 7,000 series -

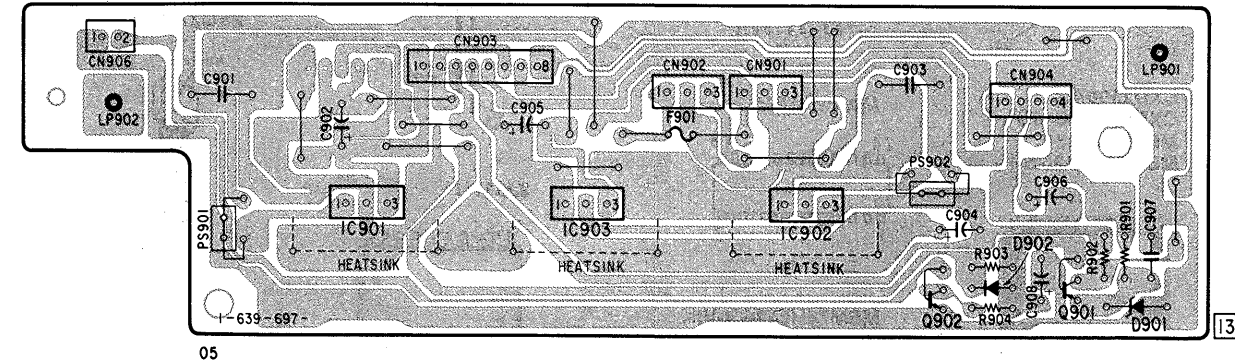


- PS-286 BOARD
- | | |
|-------|------|
| D101 | B-4 |
| D102 | B-5 |
| D103 | B-5 |
| D105 | D-2 |
| D108 | E-3 |
| D109 | B-7 |
| D110 | C-8 |
| D111 | D-7 |
| D112 | D-7 |
| D113 | A-5 |
| D114 | A-5 |
| D115 | A-8 |
| D116 | B-6 |
| D117 | B-7 |
| D118 | C-8 |
| D201 | D-10 |
| D202 | D-10 |
| D203 | D-10 |
| D204 | E-9 |
| D205 | D-9 |
| D206 | C-9 |
| D207 | C-9 |
| IC101 | C-3 |
| IC102 | B-3 |
| IC201 | B-11 |
| IC202 | B-9 |
| Q101 | D-2 |
| Q102 | D-3 |
| Q103 | D-2 |
| Q108 | D-7 |
| Q111 | A-8 |
| Q201 | D-11 |
| Q202 | D-11 |
| Q203 | D-9 |
| Q204 | D-9 |
| Q205 | C-11 |
| Q206 | C-12 |
| Q208 | C-10 |
| Q209 | C-10 |
| Q210 | C-11 |
| Q211 | C-10 |
| Q212 | B-11 |

TR-60 BOARD

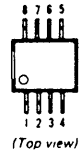


PS-290 BOARD

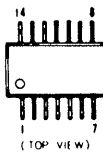


4-3. SEMICONDUCTOR LEAD LAYOUTS

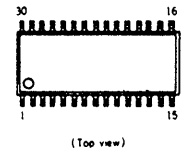
M51953AFP
RC4558M
μ PC4558G2



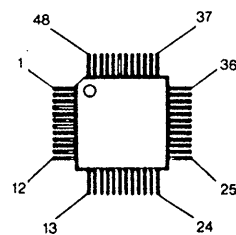
BA9700AF
CXL5005M
LM324N
MC14011BF
SN74HCU04ANS
μ PC324G2
μ PC339G2



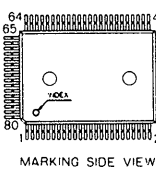
CXA1081M



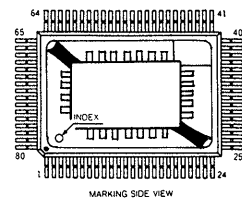
CXA1254Q
CXA1255Q
CXD1152-MS



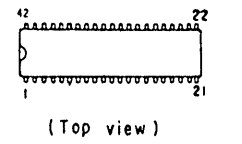
CXD2500AQ
CXP50116-048Q
MB89795-136
MSM72H032GS-K



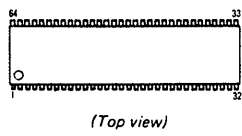
CXP5920-019Q



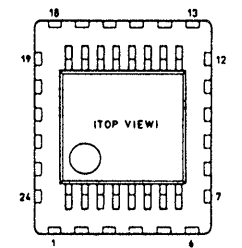
HA11529



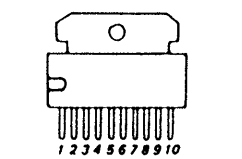
HD6473258P6



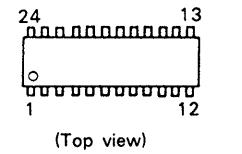
IMN10



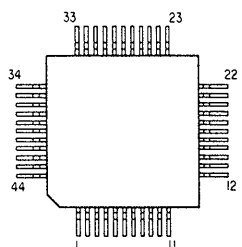
LA6510
TA7291P



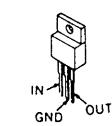
MAX238CNG



MSM74H042GS-VIK



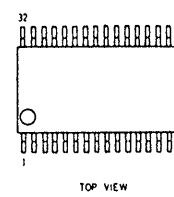
M5278009
RC7809FA
TA7805S
TA7905S



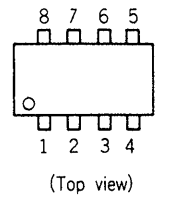
M5F7905L
M5F7909L



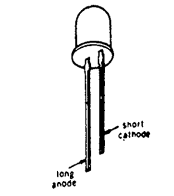
M50455-196FP



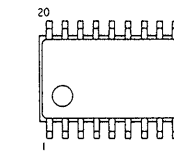
NJM4558D



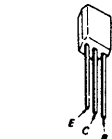
CXP50116-229Q



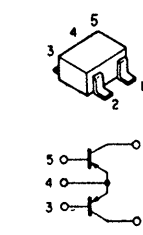
2J617U



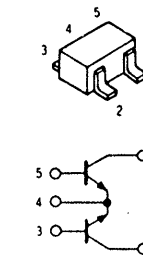
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DTC114ES
2SC2458-YGR



FMS1



FMW1



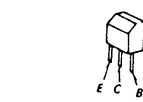
PT360FS



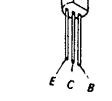
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2SC2785-HFE



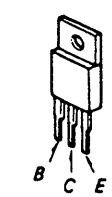
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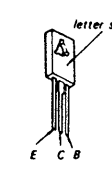
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2SC2878-B
2SD655-E



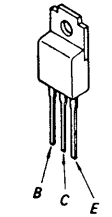
2SB1187-F
2SD1408
2SD2012



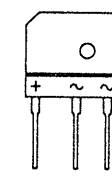
2SB1151-L
2SD1691-K



2SB1370-EF



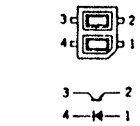
D3SBA10



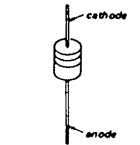
FC52M-5



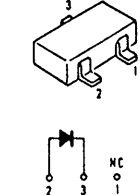
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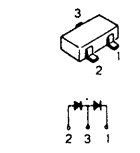
ERA81-066
ERA83-006
RD3.9ES-B2
RD5.1ES-B2
RD10ES-B2
RD33ES-B2
RD39ES-B2
RD9.1ES-B1
1SS119
11ES2



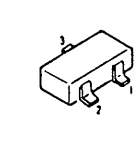
RD3.6M-B
RD5.1M-B2
RD5.6M-B3
RD6.2M-B
RD12M-B1
RD12M-B2
1S2836



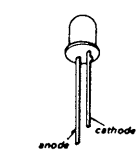
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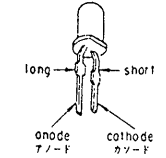
1S2836



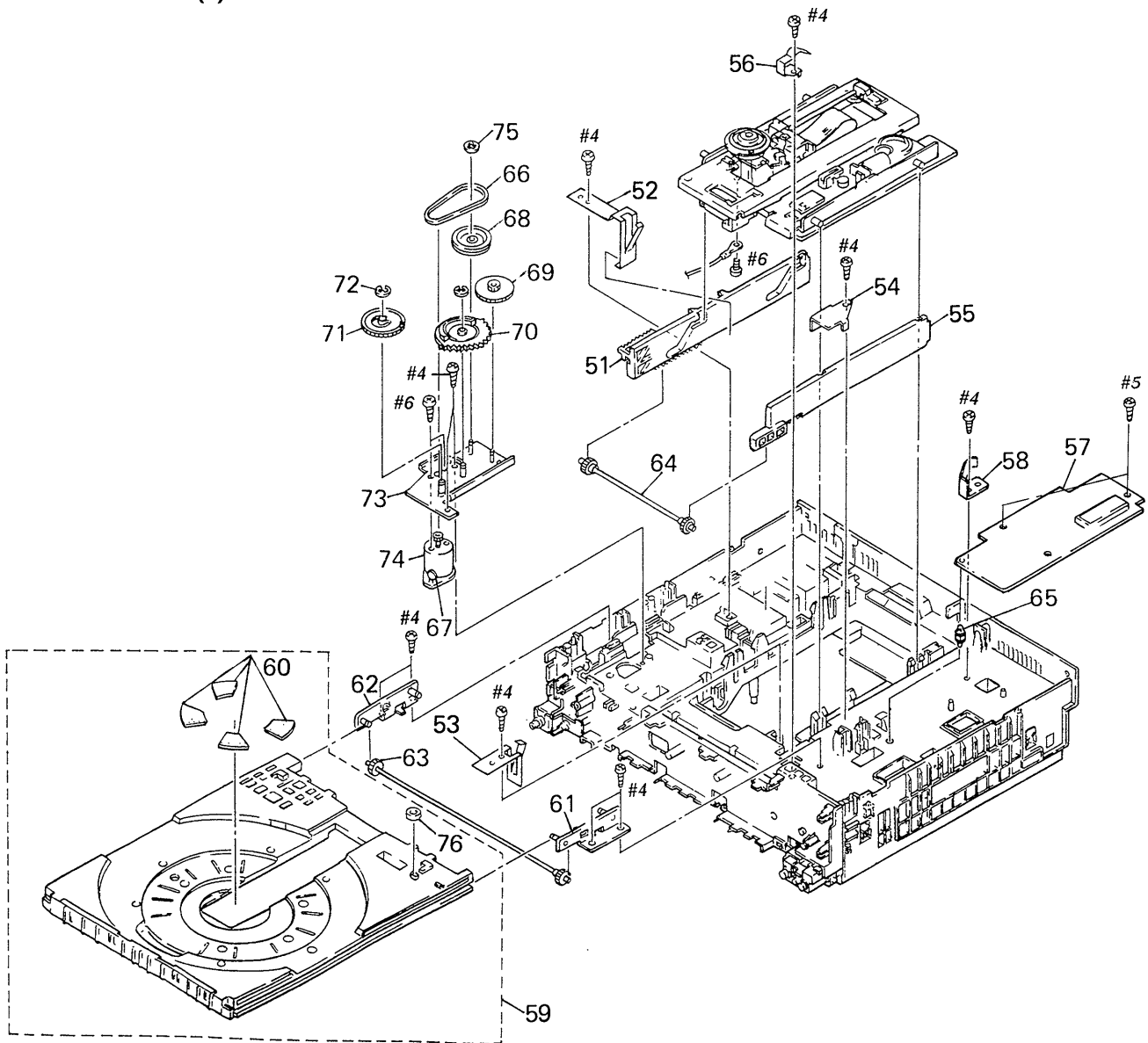
GL-360



SLP381S
SLP-681C
SLP-935B-51



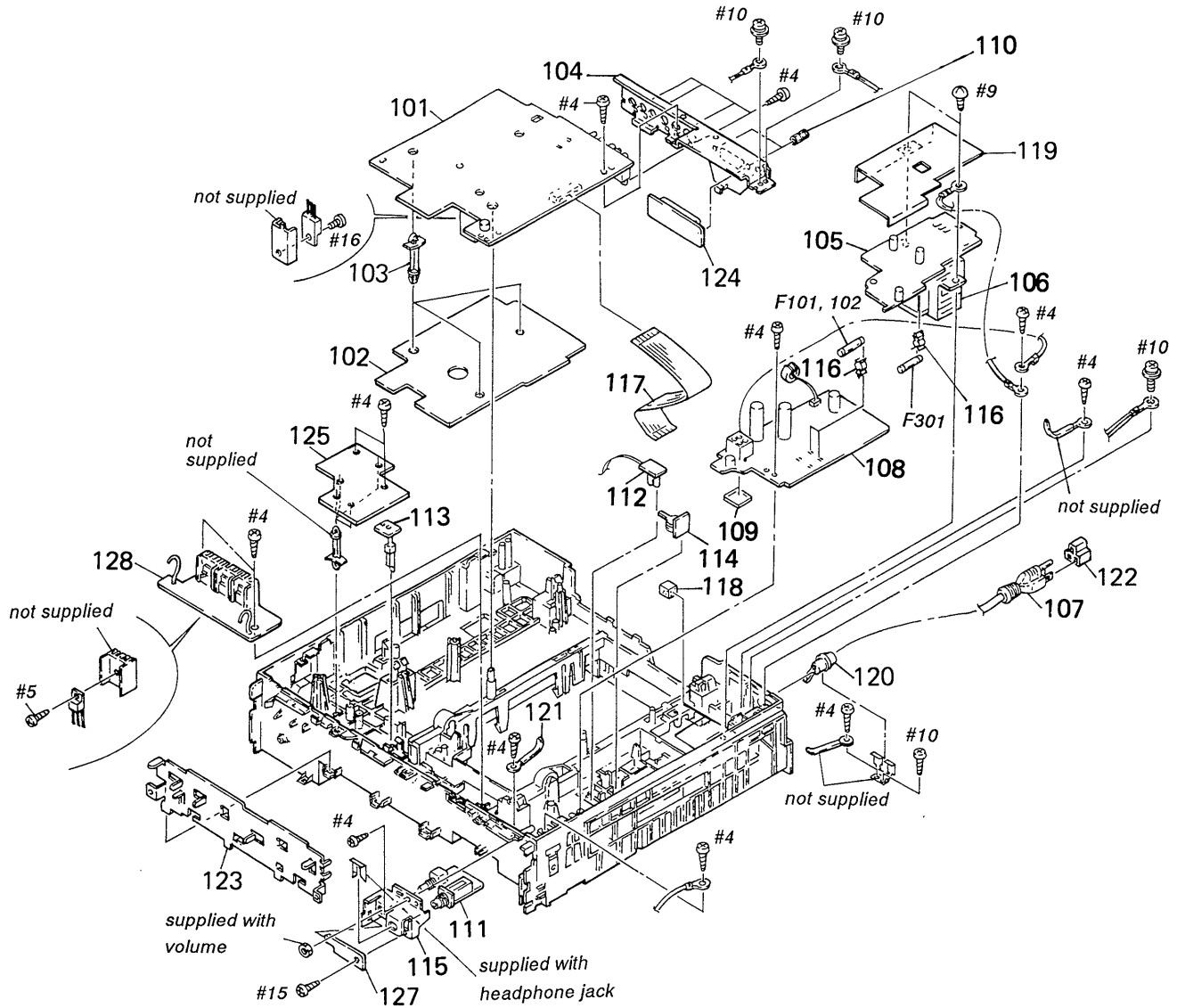
5-2. CHASSIS (1)



Ref. No.	Part No.	Description	Remark
51	3-735-053-01	RACK (LEFT)	
52	3-737-401-01	SPRING (1)	
53	3-737-402-01	SPRING (2)	
* 54	3-749-912-01	RETAINER (B), RACK	
55	3-735-052-01	RACK (RIGHT)	
56	3-737-448-01	SPRING, LEAF	
* 57	A-6421-804-A	IF-701 BOARD, COMPLETE	
58	3-746-525-01	SPRING, TRAY	
59	X-3749-040-2	TRAY ASSY	
60	3-749-626-01	SHEET, CD	
61	X-3735-070-1	GUIDE ASSY (R), TRAY	
62	X-3735-071-1	GUIDE ASSY (L), TRAY	
63	X-3735-069-1	GEAR ASSY, PHASE	

Ref. No.	Part No.	Description	Remark
64	X-3735-008-1	GEAR ASSY, MD PHASE	
65	3-682-057-11	SPACER (SMALL)	
66	3-949-030-01	BELT, DRIVING	
67	1-161-063-00	CERAMIC 0.1uF 10% 50V	
68	3-735-036-01	PULLEY (A)	
69	3-735-037-01	GEAR, MIDWAY	
70	3-735-056-01	CAM, DRIVING	
71	3-735-035-01	GEAR, TRAY	
72	3-669-595-00	WASHER (2), STOPPER	
* 73	X-3735-002-1	BASE ASSY, THREADING	
74	A-6415-359-A	MOTOR BLOCK ASSY (X), THREADING	
75	7-624-108-04	STOP RING 4.0, TYPE -E	
76	4-913-248-01	GUIDE, CHUCK PLATE	

5-3. CHASSIS (2)

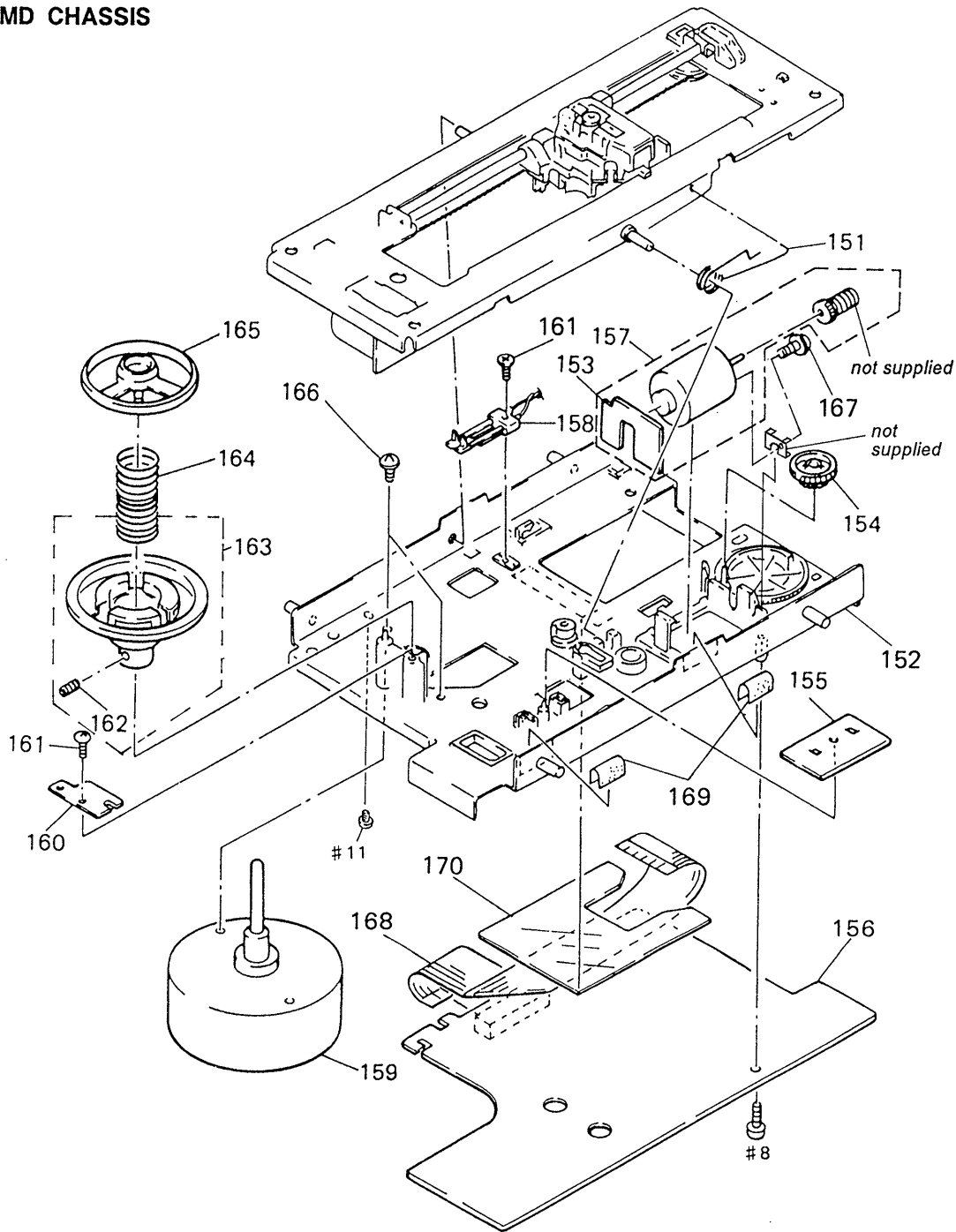


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-6421-801-A	MB-703 BOARD, COMPLETE		△116	1-533-189-11	HOLDER, FUSE	
* 102	A-6421-633-A	AU-115 (J53) BOARD, COMPLETE		* 117	1-575-813-11	CABLE, FLAT (FLEXIBLE) (28 CORE)	
* 103	3-703-353-12	SUPPORTER, PC BOARD		118	3-943-099-01	RUBBER, CORD CLAMP	
* 104	3-942-823-71	PLATE (B), JACK		* 119	3-947-962-01	COVER, TRANSFORMER	
* 105	A-6421-803-A	TR-60 (I) BOARD, COMPLETE		△120	2-045-063-00	STOPPER, CORD	
△106	1-450-936-11	TRANSFORMER, POWER		121	3-703-150-11	STOPPER, WIRING	
△107	1-590-043-21	CORD, POWER		122	3-654-748-00	SPACER	
* 108	A-6421-881-A	PS-286 (I) BOARD, COMPLETE		* 123	A-6415-365-A	HOLDER ASSY, PC BOARD	
* 109	X-3940-915-1	SHIELD ASSY (2), PS LID		* 124	A-6426-531-A	RS-701 BOARD, COMPLETE	
* 110	3-694-981-01	SCREW (INCH), D SUB		* 125	1-644-076-11	CK-701 BOARD	
* 111	A-6421-834-A	HP-80 (I) BOARD, COMPLETE		* 127	A-6420-639-A	SW-184 (E53) BOARD, COMPLETE	
* 112	A-6421-664-A	LS-34 BOARD, COMPLETE		* 128	A-6421-641-A	PS-290 (J53) BOARD, COMPLETE	
* 113	A-6421-665-A	SW-193 BOARD, COMPLETE		△F101	1-532-747-11	FUSE, GLASS TUBE (5A 125V)	
* 114	A-6421-666-A	SW-194 BOARD, COMPLETE		△F102	1-532-747-11	FUSE, GLASS TUBE (5A 125V)	
* 115	3-942-816-01	HOLDER (2), HP		△F301	1-532-742-11	FUSE, GLASS TUBE (1.6A 125V)	

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

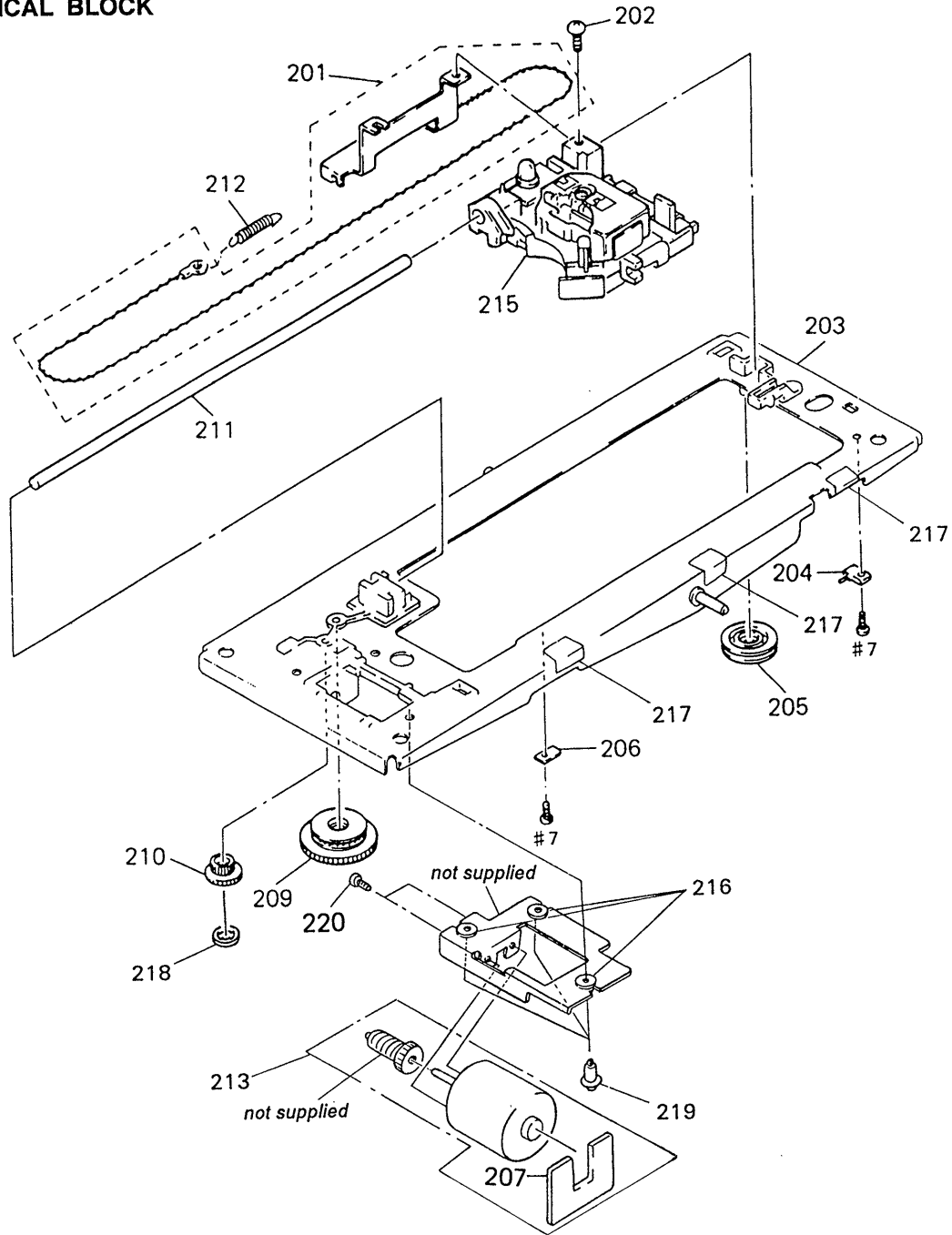
Note:
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-4. MD CHASSIS



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	151	3-735-021-01 SPRING, TORSION		161	3-719-845-11 SCREW (B2X8), TAPPING		
*	152	3-735-068-15 CHASSIS, MD		162	3-701-506-01 SET SCREW, DOUBLE POINT 3X4		
*	153	1-631-095-11 MT-30 BOARD		163	X-3735-003-1 TURNTABLE ASSY		
	154	3-735-025-01 GEAR, SKEW		*	164	3-735-026-01 SPRING, COMPRESSION	
*	155	1-635-255-11 CK-44 BOARD		165	X-2625-077-1 GUIDE ASSY, CENTER		
*	156	A-6421-465-A SV-63 BOARD, COMPLETE		166	4-606-833-01 SCREW (3X5), + PSW		
	157	A-6415-290-A MOTOR BLOCK ASSY, SKEW		167	3-899-248-01 SCREW (M3X6)		
	158	1-554-468-00 SWITCH, LEAF(SLED IN LIMIT LD/CD) (S903)		168	1-574-648-11 CABLE, FLEXIBLE FLAT (24 CORE)		
	159	1-541-776-21 MOTOR, LD SPINDLE (M901)		*	169	3-737-413-01 SHEET, TEFLON	
*	160	1-635-256-11 FG-41 BOARD		*	170	3-735-099-01 SHEET, FLEXIBLE RETAINER	

5-5. OPTICAL BLOCK



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	X-3735-001-1	WIRE ASSY		* 211	3-735-020-01	SHAFT, CARRIAGE	
202	3-899-248-01	SCREW (M3X6)		212	3-672-430-00	SPRING, TENSION	
* 203	X-3940-657-1	CHASSIS ASSY		213	A-6415-434-A	MOTOR BLOCK ASSY, SLED	
204	1-570-771-21	SWITCH (SLED OUT LIMIT) (S902)		△215	8-848-138-11	DEVICE, OPTICAL KHS-130A	
205	3-735-017-01	PULLEY, RETURN		216	3-846-312-00	SPACER E	
				217	3-846-312-00	SPACER	
206	1-571-435-11	SWITCH (SLED IN LIMIT) (S901)		218	7-624-190-81	STOP RING 2, TYPE-CS	
* 207	1-630-097-11	MT-28 BOARD		219	3-570-027-00	SCREW, MOTOR	
209	3-735-016-01	PULLEY, DRIVING		220	3-949-324-01	SCREW (3X4), +PSW	
210	3-735-015-01	GEAR, CARRIAGE					

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

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

**SECTION 6
ELECTRICAL PARTS LIST**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA . . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. . uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

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

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

Ref. No.	Part No.	Description	Remark		
*	A-6421-633-A	AU-115 (J53) BOARD, COMPLETE *****			
		< CAPACITOR >			
C101	1-124-927-11	ELECT	4.7uF	20%	100V
C102	1-124-927-11	ELECT	4.7uF	20%	100V
C103	1-124-126-00	ELECT	47uF	20%	10V
C104	1-161-494-00	CERAMIC	0.022uF		25V
C105	1-124-126-00	ELECT	47uF	20%	10V
C106	1-161-494-00	CERAMIC	0.022uF		25V
C107	1-124-903-11	ELECT	1uF	20%	50V
C108	1-124-903-11	ELECT	1uF	20%	50V
C109	1-124-126-00	ELECT	47uF	20%	10V
C110	1-124-126-00	ELECT	47uF	20%	10V
C111	1-162-219-31	CERAMIC	68PF	5%	50V
C112	1-162-219-31	CERAMIC	68PF	5%	50V
C114	1-124-902-00	ELECT	0.47uF	20%	50V
C115	1-130-480-00	MYLAR	0.0056uF	5%	50V
C116	1-162-219-31	CERAMIC	68PF	5%	50V
C117	1-162-219-31	CERAMIC	68PF	5%	50V
C119	1-124-902-00	ELECT	0.47uF	20%	50V
C120	1-130-480-00	MYLAR	0.0056uF	5%	50V
C121	1-124-927-11	ELECT	4.7uF	20%	100V
C122	1-124-927-11	ELECT	4.7uF	20%	100V
C123	1-124-927-11	ELECT	4.7uF	20%	100V
C124	1-124-927-11	ELECT	4.7uF	20%	100V
C125	1-124-126-00	ELECT	47uF	20%	10V
C126	1-124-126-00	ELECT	47uF	20%	10V
C127	1-124-126-00	ELECT	47uF	20%	10V
C128	1-124-126-00	ELECT	47uF	20%	10V
C129	1-124-126-00	ELECT	47uF	20%	10V
C130	1-124-126-00	ELECT	47uF	20%	10V
C131	1-161-329-00	CERAMIC	0.0068uF	20%	16V
C132	1-161-327-00	CERAMIC	3300PF	30%	16V
C133	1-124-927-11	ELECT	4.7uF	20%	100V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-124-443-00	ELECT	100uF	20%	10V
C204	1-161-379-00	CERAMIC	0.01uF	20%	25V
C205	1-162-286-31	CERAMIC	220PF	10%	50V

Ref. No.	Part No.	Description	Remark		
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C207	1-162-207-31	CERAMIC	22PF	5%	50V
C208	1-162-205-31	CERAMIC	18PF	5%	50V
C209	1-162-217-31	CERAMIC	56PF	5%	50V
C210	1-162-198-31	CERAMIC	8.2PF	10%	50V
C211	1-162-207-31	CERAMIC	22PF	5%	50V
C212	1-161-379-00	CERAMIC	0.01uF	20%	25V
C213	1-161-379-00	CERAMIC	0.01uF	20%	25V
C214	1-124-443-00	ELECT	100uF	20%	10V
C215	1-161-379-00	CERAMIC	0.01uF	20%	25V
C216	1-161-379-00	CERAMIC	0.01uF	20%	25V
C217	1-124-443-00	ELECT	100uF	20%	10V
C218	1-124-443-00	ELECT	100uF	20%	10V
C219	1-162-288-31	CERAMIC	330PF	10%	50V
C220	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C221	1-162-217-31	CERAMIC	56PF	5%	50V
C222	1-126-233-11	ELECT	22uF	20%	50V
C223	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C224	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C225	1-136-160-00	FILM	0.039uF	5%	50V
C226	1-124-288-00	ELECT	22uF	20%	6.3V
C228	1-124-443-00	ELECT	100uF	20%	10V
C229	1-136-165-00	FILM	0.1uF	5%	50V
C230	1-124-907-11	ELECT	10uF	20%	50V
C235	1-161-379-00	CERAMIC	0.01uF	20%	25V
C236	1-161-379-00	CERAMIC	0.01uF	20%	25V
C237	1-124-443-00	ELECT	100uF	20%	10V
C238	1-124-443-00	ELECT	100uF	20%	10V
C239	1-162-287-31	CERAMIC	270PF	10%	50V
C240	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C241	1-162-217-31	CERAMIC	56PF	5%	50V
C242	1-126-233-11	ELECT	22uF	20%	50V
C243	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C244	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C245	1-136-160-00	FILM	0.039uF	5%	50V
C246	1-124-288-00	ELECT	22uF	20%	6.3V
C247	1-124-902-00	ELECT	0.47uF	20%	50V
C250	1-124-903-11	ELECT	1uF	20%	50V
C251	1-124-903-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CN101	1-568-788-21	PIN, CONNECTOR 11P	
CN102	1-506-473-11	PIN, CONNECTOR 8P	
CN103	1-506-473-11	PIN, CONNECTOR 8P	
CN104	1-506-468-11	PIN, CONNECTOR 3P	
* CN105	1-568-779-11	PIN, CONNECTOR 2P	
CN106	1-506-468-11	PIN, CONNECTOR 3P	
CN107	1-506-468-11	PIN, CONNECTOR 3P	
< DIODE >			
D102	8-719-911-19	DIODE 1SS119	
D103	8-719-911-19	DIODE 1SS119	
D104	8-719-911-19	DIODE 1SS119	
D105	8-719-911-19	DIODE 1SS119	
< FILTER >			
FL201	1-236-840-11	FILTER, BAND PASS	
< IC >			
IC101	8-759-745-58	IC NJM4558D	
IC102	8-759-000-49	IC MC14066BCP	
IC103	8-759-000-49	IC MC14066BCP	
IC104	8-759-745-58	IC NJM4558D	
IC105	8-759-745-58	IC NJM4558D	
IC106	8-759-745-58	IC NJM4558D	
IC201	8-759-502-42	IC PA0034A	
< COIL >			
L203	1-408-421-00	INDUCTOR 100uH	
L204	1-408-425-00	INDUCTOR 220uH	
L205	1-408-417-00	INDUCTOR 47uH	
L206	1-408-417-00	INDUCTOR 47uH	
< TRANSISTOR >			
Q101	8-729-900-80	TRANSISTOR DTC114ES	
Q102	8-729-900-61	TRANSISTOR DTA114ES	
Q105	8-729-900-80	TRANSISTOR DTC114ES	
Q106	8-729-900-61	TRANSISTOR DTA114ES	
Q107	8-729-900-80	TRANSISTOR DTC114ES	
Q108	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q109	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q110	8-729-201-05	TRANSISTOR 2SC2878-B	
Q111	8-729-201-05	TRANSISTOR 2SC2878-B	
Q112	8-729-201-05	TRANSISTOR 2SC2878-B	
Q113	8-729-201-05	TRANSISTOR 2SC2878-B	
Q116	8-729-900-61	TRANSISTOR DTA114ES	
Q117	8-729-900-80	TRANSISTOR DTC114ES	
Q120	8-729-201-05	TRANSISTOR 2SC2878-B	

Ref. No.	Part No.	Description	Remark
Q121	8-729-201-05	TRANSISTOR 2SC2878-B	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q205	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R102	1-249-440-11	CARBON 82K 5% 1/4W	
R103	1-249-417-11	CARBON 1K 5% 1/4W	
R104	1-249-441-11	CARBON 100K 5% 1/4W	
R105	1-249-441-11	CARBON 100K 5% 1/4W	
R106	1-249-417-11	CARBON 1K 5% 1/4W	
R108	1-247-887-00	CARBON 220K 5% 1/4W	
R110	1-247-887-00	CARBON 220K 5% 1/4W	
R113	1-249-440-11	CARBON 82K 5% 1/4W	
R114	1-249-441-11	CARBON 100K 5% 1/4W	
R115	1-249-441-11	CARBON 100K 5% 1/4W	
R116	1-249-417-11	CARBON 1K 5% 1/4W	
R117	1-249-417-11	CARBON 1K 5% 1/4W	
R118	1-249-425-11	CARBON 4.7K 5% 1/4W	
R119	1-249-425-11	CARBON 4.7K 5% 1/4W	
R120	1-249-425-11	CARBON 4.7K 5% 1/4W	
R121	1-247-895-00	CARBON 470K 5% 1/4W	
R122	1-249-412-11	CARBON 390 5% 1/4W	
R123	1-249-420-11	CARBON 1.8K 5% 1/4W	
R124	1-249-427-11	CARBON 6.8K 5% 1/4W	
R125	1-247-895-00	CARBON 470K 5% 1/4W	
R126	1-249-412-11	CARBON 390 5% 1/4W	
R127	1-249-420-11	CARBON 1.8K 5% 1/4W	
R128	1-249-427-11	CARBON 6.8K 5% 1/4W	
R131	1-249-417-11	CARBON 1K 5% 1/4W	
R132	1-249-417-11	CARBON 1K 5% 1/4W	
R133	1-249-417-11	CARBON 1K 5% 1/4W	
R134	1-249-417-11	CARBON 1K 5% 1/4W	
R135	1-249-417-11	CARBON 1K 5% 1/4W	
R136	1-249-417-11	CARBON 1K 5% 1/4W	
R137	1-249-417-11	CARBON 1K 5% 1/4W	
R138	1-249-417-11	CARBON 1K 5% 1/4W	
R139	1-249-417-11	CARBON 1K 5% 1/4W	
R140	1-249-417-11	CARBON 1K 5% 1/4W	
R141	1-249-429-11	CARBON 10K 5% 1/4W	
R142	1-249-429-11	CARBON 10K 5% 1/4W	
R143	1-249-429-11	CARBON 10K 5% 1/4W	
R144	1-249-429-11	CARBON 10K 5% 1/4W	
R145	1-249-423-11	CARBON 3.3K 5% 1/4W	
R146	1-249-423-11	CARBON 3.3K 5% 1/4W	
R147	1-249-423-11	CARBON 3.3K 5% 1/4W	

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Ref. No.	Part No.	Description	Remark		
R148	1-249-424-11	CARBON	3.9K	5%	1/4W
R149	1-249-441-11	CARBON	100K	5%	1/4W
R150	1-249-417-11	CARBON	1K	5%	1/4W
R151	1-249-441-11	CARBON	100K	5%	1/4W
R152	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-441-11	CARBON	100K	5%	1/4W
R154	1-249-417-11	CARBON	1K	5%	1/4W
R155	1-249-441-11	CARBON	100K	5%	1/4W
R156	1-249-417-11	CARBON	1K	5%	1/4W
R160	1-249-440-11	CARBON	82K	5%	1/4W
R165	1-249-441-11	CARBON	100K	5%	1/4W
R166	1-249-441-11	CARBON	100K	5%	1/4W
R167	1-247-887-00	CARBON	220K	5%	1/4W
R170	1-249-429-11	CARBON	10K	5%	1/4W
R171	1-249-429-11	CARBON	10K	5%	1/4W
R172	1-247-887-00	CARBON	220K	5%	1/4W
R173	1-247-887-00	CARBON	220K	5%	1/4W
R201	1-249-433-11	CARBON	22K	5%	1/4W
R202	1-249-433-11	CARBON	22K	5%	1/4W
R204	1-249-429-11	CARBON	10K	5%	1/4W
R205	1-247-830-11	CARBON	910	5%	1/4W
R207	1-249-439-11	CARBON	68K	5%	1/4W
R208	1-247-858-11	CARBON	13K	5%	1/4W
R209	1-249-421-11	CARBON	2.2K	5%	1/4W
R210	1-249-413-11	CARBON	470	5%	1/4W
R211	1-249-401-11	CARBON	47	5%	1/4W
R212	1-249-404-00	CARBON	82	5%	1/4W
R213	1-249-421-11	CARBON	2.2K	5%	1/4W
R214	1-249-417-11	CARBON	1K	5%	1/4W
R215	1-249-417-11	CARBON	1K	5%	1/4W
R216	1-249-417-11	CARBON	1K	5%	1/4W
R217	1-249-419-11	CARBON	1.5K	5%	1/4W
R218	1-249-409-11	CARBON	220	5%	1/4W
R219	1-249-425-11	CARBON	4.7K	5%	1/4W
R220	1-249-425-11	CARBON	4.7K	5%	1/4W
R221	1-249-429-11	CARBON	10K	5%	1/4W
R222	1-247-860-11	CARBON	16K	5%	1/4W
R223	1-247-900-11	CARBON	750K	5%	1/4W
R224	1-249-428-11	CARBON	8.2K	5%	1/4W
R226	1-247-828-11	CARBON	750	5%	1/4W
R227	1-247-883-00	CARBON	150K	5%	1/4W
R228	1-247-883-00	CARBON	150K	5%	1/4W
R229	1-247-886-11	CARBON	200K	5%	1/4W
R233	1-249-417-11	CARBON	1K	5%	1/4W
R234	1-249-419-11	CARBON	1.5K	5%	1/4W
R235	1-249-409-11	CARBON	220	5%	1/4W
R236	1-249-425-11	CARBON	4.7K	5%	1/4W
R237	1-249-425-11	CARBON	4.7K	5%	1/4W
R238	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R239	1-247-860-11	CARBON	16K	5%	1/4W
R240	1-247-900-11	CARBON	750K	5%	1/4W
R241	1-249-428-11	CARBON	8.2K	5%	1/4W
R251	1-247-887-00	CARBON	220K	5%	1/4W
R252	1-247-887-00	CARBON	220K	5%	1/4W
R259	1-249-417-11	CARBON	1K	5%	1/4W
R260	1-249-417-11	CARBON	1K	5%	1/4W

*	1-635-255-11	CK-44 BOARD	*****		
< CAPACITOR >					
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
< CONNECTOR >					
CN401	1-506-467-11	PIN, CONNECTOR	2P		
CN402	1-506-468-11	PIN, CONNECTOR	3P		
CN403	1-506-467-11	PIN, CONNECTOR	2P		
CN404	1-506-467-11	PIN, CONNECTOR	2P		
CN405	1-506-467-11	PIN, CONNECTOR	2P		
< JUMPER RESISTOR >					
JR401	1-216-295-00	METAL CHIP	0	5%	1/10W
JR402	1-216-296-00	METAL CHIP	0	5%	1/8W
< RESISTOR >					
R401	1-216-077-00	METAL CHIP	15K	5%	1/10W
R402	1-216-031-00	METAL CHIP	180	5%	1/10W
R403	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R404	1-216-001-00	METAL CHIP	10	5%	1/10W
R405	1-216-001-00	METAL CHIP	10	5%	1/10W
R406	1-216-031-00	METAL CHIP	180	5%	1/10W
R407	1-216-061-00	METAL CHIP	3.3K	5%	1/10W

*	1-644-076-11	CK-701 BOARD	*****		
< CONNECTOR >					
CN601	1-506-478-11	PIN, CONNECTOR	13P		
* CN602	1-564-069-31	PIN, CONNECTOR	14P		
CN603	1-506-478-11	PIN, CONNECTOR	13P		
CN604	1-506-480-11	PIN, CONNECTOR	15P		
* CN605	1-564-069-41	PIN, CONNECTOR	14P		
* CN606	1-568-786-11	PIN, CONNECTOR	9P		
CN607	1-506-473-11	PIN, CONNECTOR	8P		
* CN608	1-568-786-11	PIN, CONNECTOR	9P		

Ref. No.	Part No.	Description	Remark
< DIODE >			
D601	8-719-105-92	DIODE RD5. 6M-B3	
D602	8-719-105-92	DIODE RD5. 6M-B3	
D603	8-719-105-92	DIODE RD5. 6M-B3	
D604	8-719-105-92	DIODE RD5. 6M-B3	
D605	8-719-105-92	DIODE RD5. 6M-B3	
D606	8-719-105-92	DIODE RD5. 6M-B3	
D607	8-719-105-92	DIODE RD5. 6M-B3	
D608	8-719-105-92	DIODE RD5. 6M-B3	
< RESISTOR >			
R601	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R602	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R603	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R604	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R605	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R606	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R607	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R608	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	

*	1-644-075-11	EX-701 BOARD	*****
< CONNECTOR >			
* CN301	1-569-750-11	PIN, CONNECTOR (PC BOARD) 8P	
CN302	1-569-748-11	PIN, CONNECTOR (PC BOARD) 5P	
< DIODE >			
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
< COATING PIN >			
LP301	4-352-844-01	PIN, LEAD, COATING	
LP302	4-352-844-01	PIN, LEAD, COATING	
< RESISTOR >			
R301	1-216-059-00	METAL CHIP 2. 7K 5% 1/10W	
R302	1-216-063-00	METAL CHIP 3. 9K 5% 1/10W	
R303	1-216-069-00	METAL CHIP 6. 8K 5% 1/10W	
R304	1-216-059-00	METAL CHIP 2. 7K 5% 1/10W	
R305	1-216-063-00	METAL CHIP 3. 9K 5% 1/10W	
R306	1-216-049-00	METAL CHIP 1K 5% 1/10W	
< SWITCH >			
S301	1-571-977-11	SWITCH, TACTIL (OPEN/CLOSE ☐)	
S302	1-571-977-11	SWITCH, TACTIL (■ STOP)	
S303	1-571-977-11	SWITCH, TACTIL (ACS/AMS ◀)	

Ref. No.	Part No.	Description	Remark
S304	1-571-977-11	SWITCH, TACTIL (ACS/AMS ▶▶)	
S306	1-571-758-11	SWITCH, PUSH (1 KEY) (⌚ REPEAT)	
S307	1-572-662-41	SWITCH, ROTARY (SCAN/ ▶ / ◻)	

*	1-635-256-11	FG-41 BOARD	*****
< DIODE >			
D301	8-719-939-11	DIODE GP2S09-B	

*	A-6421-802-A	FP-711 BOARD, COMPLETE	*****
	2-355-254-01	SPACER (A), LCD	
*	3-942-824-11	HOLDER (A), FLD	
< CAPACITOR >			
C401	1-164-222-11	CERAMIC CHIP 0. 22uF	25V
C402	1-164-232-11	CERAMIC CHIP 0. 01uF	50V
C404	1-126-157-11	ELECT 10uF	20% 16V
C405	1-164-232-11	CERAMIC CHIP 0. 01uF	50V
C406	1-126-157-11	ELECT 10uF	20% 16V
C407	1-164-232-11	CERAMIC CHIP 0. 01uF	50V
C408	1-126-157-11	ELECT 10uF	20% 16V
C410	1-164-232-11	CERAMIC CHIP 0. 01uF	50V
C411	1-163-213-00	CERAMIC CHIP 0. 0022uF	5% 50V
C415	1-126-160-11	ELECT 1uF	20% 50V
< CONNECTOR >			
* CN401	1-568-783-11	PIN, CONNECTOR 6P	
CN402	1-506-469-11	PIN, CONNECTOR 4P	
CN403	1-506-473-11	PIN, CONNECTOR 8P	
* CN404	1-568-790-11	PIN, CONNECTOR 13P	
* CN405	1-568-779-11	PIN, CONNECTOR 2P	
* CN406	1-568-779-11	PIN, CONNECTOR 2P	
* CN407	1-568-790-41	PIN, CONNECTOR 13P	
CN408	1-506-470-11	PIN, CONNECTOR 5P	
CN409	1-506-473-11	PIN, CONNECTOR 8P	
< DIODE >			
D401	8-719-980-46	DIODE SLP681C (SURROUND)	
D402	8-719-028-69	DIODE SLP-935B-51 (EXT CPU)	
D403	8-719-028-69	DIODE SLP-935B-51 (REMOTE)	
< IC >			
IC401	8-752-836-07	IC CXP50120-019Q	
IC402	8-759-605-21	IC M51953AFP	
IC403	8-741-100-47	IC SBX1610-09	

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Ref. No.	Part No.	Description	Remark
		< COIL >	
L402	1-407-169-XX	INDUCTOR 100uH	
		< FLUORESCENT INDICATOR >	
ND401	1-519-475-11	INDICATOR TUBE, FLUORESCENT	
		< TRANSISTOR >	
Q401	8-729-900-53	TRANSISTOR DTC114EK	
Q402	8-729-900-53	TRANSISTOR DTC114EK	
Q403	8-729-900-53	TRANSISTOR DTC114EK	
Q404	8-729-901-04	TRANSISTOR DTA114EK	
Q407	8-729-901-01	TRANSISTOR DTC144EK	
Q409	8-729-901-04	TRANSISTOR DTA114EK	
		< RESISTOR >	
R401	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R402	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R403	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R405	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R406	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R407	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R408	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R409	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R425	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R430	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R431	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R432	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R433	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R441	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R443	1-216-027-00	METAL CHIP 120 5% 1/10W	
R444	1-216-295-00	METAL CHIP 0 5% 1/10W	
R445	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R446	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R447	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R451	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R452	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R453	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R454	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R455	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R461	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R462	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R463	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R464	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
		< SWITCH >	
S401	1-571-758-11	SWITCH, PUSH (1 KEY) (SURROUND)	
S402	1-570-338-31	SWITCH, SLIDE (PICTURE ENHANCE)	

Ref. No.	Part No.	Description	Remark
S403	1-571-977-11	SWITCH, TACTIL (REMOTE)	
		< VIBRATOR >	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

*	A-6421-834-A	HP-80 (I) BOARD, COMPLETE	

		< CAPACITOR >	
C501	1-101-006-00	CERAMIC 0.047uF 50V	
		< CONNECTOR >	
CN501	1-506-468-11	PIN, CONNECTOR 3P	
		< JACK >	
J501	1-507-796-71	JACK (PHONES)	
		< RESISTOR >	
R501	1-249-421-11	CARBON 2.2K 5% 1/4W	
R502	1-249-421-11	CARBON 2.2K 5% 1/4W	
R503	1-249-399-11	CARBON 33 5% 1/4W	
R504	1-249-399-11	CARBON 33 5% 1/4W	
		< VARIABLE RESISTOR >	
RV501	1-241-139-11	RES, VAR, CARBON 500/500 (LEVEL)	

*	A-6421-804-A	IF-701 BOARD, COMPLETE	

		< CAPACITOR >	
C101	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C102	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C103	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C104	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C105	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C106	1-124-907-11	ELECT 10uF 20% 50V	
C107	1-163-033-00	CERAMIC CHIP 0.022uF 50V	
C108	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C109	1-163-033-00	CERAMIC CHIP 0.022uF 50V	
C110	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C111	1-124-907-11	ELECT 10uF 20% 50V	
C112	1-124-927-11	ELECT 4.7uF 20% 100V	
C113	1-124-907-11	ELECT 10uF 20% 50V	
C114	1-124-927-11	ELECT 4.7uF 20% 100V	
C115	1-124-126-00	ELECT 47uF 20% 10V	

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
CN101	1-506-480-11	PIN, CONNECTOR 15P	
CN102	1-506-474-11	PIN, CONNECTOR 9P	
* CN103	1-564-069-41	PIN, CONNECTOR 14P	
< DIODE >			
D101	8-719-104-34	DIODE 1S2836	
D102	8-719-104-34	DIODE 1S2836	
D103	8-719-106-70	DIODE RD12M-B1	
D104	8-719-106-70	DIODE RD12M-B1	
D105	8-719-106-70	DIODE RD12M-B1	
D106	8-719-106-70	DIODE RD12M-B1	
D107	8-719-106-70	DIODE RD12M-B1	
D108	8-719-106-70	DIODE RD12M-B1	
D109	8-719-106-70	DIODE RD12M-B1	
D110	8-719-106-70	DIODE RD12M-B1	
< FERRITE BEAD >			
FB101	1-543-775-11	FILTER, EMI	
FB102	1-543-775-11	FILTER, EMI	
FB103	1-543-775-11	FILTER, EMI	
FB104	1-543-775-11	FILTER, EMI	
FB105	1-543-775-11	FILTER, EMI	
FB106	1-543-775-11	FILTER, EMI	
FB107	1-543-775-11	FILTER, EMI	
FB108	1-543-775-11	FILTER, EMI	
< IC >			
IC101	8-759-972-58	IC MAX238CNG	
IC108	8-759-073-37	IC HD6433258R20P	
IC109	8-759-300-71	IC HD14053BFP	
IC110	8-759-008-79	IC MC14011BF	
ICS108	1-540-044-11	SOCKET, IC 64P	
< JUMPER RESISTOR >			
JR101	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR102	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR103	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR104	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR105	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR106	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR107	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR108	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR109	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR110	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR118	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR122	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR123	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR124	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref. No.	Part No.	Description	Remark
JR125	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR126	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR127	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR128	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR129	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR130	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR131	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR132	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR133	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR135	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR136	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR137	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR138	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR139	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR140	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR141	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR142	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR143	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR145	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR146	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR147	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR148	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR149	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR150	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR151	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR152	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR153	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR154	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR155	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR156	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR157	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR158	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR159	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR160	1-216-295-00	METAL CHIP 0 5% 1/10W	
< COIL >			
L101	1-410-509-11	INDUCTOR 10uH	
< TRANSISTOR >			
Q101	8-729-901-00	TRANSISTOR DTC124EK	
Q102	8-729-901-05	TRANSISTOR DTA124EK	
Q103	8-729-901-05	TRANSISTOR DTA124EK	
Q104	8-729-901-05	TRANSISTOR DTA124EK	
Q105	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q106	8-729-901-05	TRANSISTOR DTA124EK	
< RESISTOR >			
R101	1-216-081-00	METAL CHIP 22K 5% 1/10W	

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Ref. No.	Part No.	Description	Remark
R102	1-216-097-00	METAL CHIP 100K 5%	1/10W
R103	1-216-029-00	METAL CHIP 150 5%	1/10W
R104	1-216-003-11	METAL GLAZE 12 5%	1/10W
R105	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R106	1-216-003-11	METAL GLAZE 12 5%	1/10W
R107	1-216-029-00	METAL CHIP 150 5%	1/10W
R108	1-216-081-00	METAL CHIP 22K 5%	1/10W
R109	1-216-097-00	METAL CHIP 100K 5%	1/10W
R110	1-216-081-00	METAL CHIP 22K 5%	1/10W
R112	1-216-033-00	METAL CHIP 220 5%	1/10W
R114	1-216-081-00	METAL CHIP 22K 5%	1/10W
R115	1-216-033-00	METAL CHIP 220 5%	1/10W
R116	1-216-049-00	METAL CHIP 1K 5%	1/10W
R117	1-216-033-00	METAL CHIP 220 5%	1/10W
R118	1-216-033-00	METAL CHIP 220 5%	1/10W
R121	1-216-097-00	METAL CHIP 100K 5%	1/10W
R122	1-216-073-00	METAL CHIP 10K 5%	1/10W
R123	1-216-073-00	METAL CHIP 10K 5%	1/10W
R131	1-216-081-00	METAL CHIP 22K 5%	1/10W
R132	1-216-081-00	METAL CHIP 22K 5%	1/10W
R133	1-216-081-00	METAL CHIP 22K 5%	1/10W
R134	1-216-081-00	METAL CHIP 22K 5%	1/10W
R135	1-216-295-00	METAL CHIP 0 5%	1/10W
R136	1-216-295-00	METAL CHIP 0 5%	1/10W
R137	1-216-295-00	METAL CHIP 0 5%	1/10W
R138	1-216-295-00	METAL CHIP 0 5%	1/10W
R140	1-216-295-00	METAL CHIP 0 5%	1/10W
R141	1-216-295-00	METAL CHIP 0 5%	1/10W
R142	1-216-295-00	METAL CHIP 0 5%	1/10W
R148	1-216-295-00	METAL CHIP 0 5%	1/10W
< SPEAKER >			
SP101	1-529-080-11	BUZZER, PIEZOELECTRIC	
< VIBRATOR >			
X101	1-577-510-11	VIBRATOR, CRYSTAL (9.83MHz)	

*	A-6421-664-A	LS-34 BOARD, COMPLETE	

	3-735-054-01	HOLDER, SENSOR	
< CONNECTOR >			
CN501	1-506-468-11	PIN, CONNECTOR 3P	
< DIODE >			
D501	8-719-941-81	DIODE GL360	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q501	8-729-904-10	TRANSISTOR PT360FS	

*	A-6421-801-A	MB-703 BOARD, COMPLETE	

	3-948-695-01	PLATE, GROUND, JACK	
	7-682-547-04	SCREW +BVTT 3X6 (S)	
< CAPACITOR >			
C001	1-124-126-00	ELECT 47uF	20% 10V
C002	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C003	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C004	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C005	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C006	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C007	1-124-126-00	ELECT 47uF	20% 10V
C008	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C009	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V
C010	1-124-126-00	ELECT 47uF	20% 10V
C011	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C012	1-124-126-00	ELECT 47uF	20% 10V
C013	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C014	1-124-499-11	ELECT, NONPOLAR R 1uF	20% 50V
C015	1-126-320-11	ELECT, NONPOLAR R 10uF	20% 16V
C018	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C020	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C021	1-124-126-00	ELECT 47uF	20% 10V
C022	1-124-927-11	ELECT 4.7uF	20% 100V
C023	1-124-927-11	ELECT 4.7uF	20% 100V
C026	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C027	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C028	1-130-479-00	MYLAR 0.0047uF	5% 50V
C029	1-130-479-00	MYLAR 0.0047uF	5% 50V
C030	1-130-475-00	MYLAR 0.0022uF	5% 50V
C031	1-130-475-00	MYLAR 0.0022uF	5% 50V
C032	1-124-126-00	ELECT 47uF	20% 10V
C033	1-124-126-00	ELECT 47uF	20% 10V
C034	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C035	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C036	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C037	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C038	1-124-126-00	ELECT 47uF	20% 10V
C039	1-124-927-11	ELECT 4.7uF	20% 100V
C040	1-124-927-11	ELECT 4.7uF	20% 100V
C041	1-124-126-00	ELECT 47uF	20% 10V
C042	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C043	1-164-232-11	CERAMIC CHIP 0.01uF	50V

Ref. No.	Part No.	Description			Remark
C044	1-124-631-11	ELECT	47uF	20%	16V
C045	1-124-907-11	ELECT	10uF	20%	50V
C046	1-124-907-11	ELECT	10uF	20%	50V
C047	1-124-907-11	ELECT	10uF	20%	50V
C072	1-124-477-11	ELECT	47uF	20%	25V
C102	1-124-473-11	ELECT	1000uF	20%	10V
C103	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C104	1-126-176-11	ELECT	220uF	20%	10V
C105	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C106	1-124-477-11	ELECT	47uF	20%	25V
C107	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C108	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C109	1-124-907-11	ELECT	10uF	20%	50V
C111	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C112	1-124-472-11	ELECT	470uF	20%	10V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C115	1-124-907-11	ELECT	10uF	20%	50V
C116	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C117	1-126-385-11	ELECT	390uF	20%	16V
C118	1-124-907-11	ELECT	10uF	20%	50V
C119	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C120	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C121	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C151	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C152	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C153	1-124-477-11	ELECT	47uF	20%	25V
C154	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C155	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C156	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C157	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C158	1-136-153-00	FILM	0.01uF	5%	50V
C159	1-136-159-00	MYLAR	0.033uF	10%	50V
C160	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C161	1-136-165-00	FILM	0.1uF	5%	50V
C162	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C163	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C164	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C165	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C166	1-126-157-11	ELECT	10uF	20%	16V
C167	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C168	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C169	1-126-157-11	ELECT	10uF	20%	16V
C170	1-124-589-11	ELECT	47uF	20%	16V
C171	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C172	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C181	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C182	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C183	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C184	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C185	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C186	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C187	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C188	1-126-176-11	ELECT	220uF	20%	10V
C189	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C190	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C191	1-124-443-00	ELECT	100uF	20%	10V
C192	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C193	1-130-486-00	MYLAR	0.018uF	10%	50V
C194	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C195	1-136-159-00	MYLAR	0.033uF	10%	50V
C196	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C197	1-124-903-11	ELECT	1uF	20%	50V
C198	1-124-925-11	ELECT	2.2uF	20%	100V
C199	1-136-161-00	MYLAR	0.047uF	10%	50V
C200	1-136-159-00	MYLAR	0.033uF	10%	50V
C201	1-124-589-11	ELECT	47uF	20%	16V
C202	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C203	1-136-153-00	FILM	0.01uF	5%	50V
C204	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C205	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C206	1-136-153-00	FILM	0.01uF	5%	50V
C207	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C208	1-124-477-11	ELECT	47uF	20%	25V
C209	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C210	1-124-477-11	ELECT	47uF	20%	25V
C211	1-124-499-11	ELECT, NONPOLAR R	1uF	20%	50V
C212	1-136-161-00	MYLAR	0.047uF	10%	50V
C213	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C214	1-124-903-11	ELECT	1uF	20%	50V
C215	1-124-477-11	ELECT	47uF	20%	25V
C216	1-124-443-00	ELECT	100uF	20%	10V
C217	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C218	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C219	1-124-443-00	ELECT	100uF	20%	10V
C220	1-163-126-00	CERAMIC CHIP	240PF	5%	50V
C221	1-124-477-11	ELECT	47uF	20%	25V
C222	1-136-161-00	MYLAR	0.047uF	10%	50V
C223	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C224	1-124-477-11	ELECT	47uF	20%	25V
C225	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C226	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C227	1-124-477-11	ELECT	47uF	20%	25V
C228	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C229	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C230	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C231	1-124-903-11	ELECT	1uF	20%	50V

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C232	1-163-227-11	CERAMIC CHIP 10PF	5% 50V	C286	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C233	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C287	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C234	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	C288	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C235	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	C289	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C236	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C290	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C237	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C291	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C238	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C292	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C239	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C293	1-124-477-11	ELECT 47uF	20% 25V
C240	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	C294	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C241	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C295	1-124-257-00	ELECT 2.2uF	20% 50V
C242	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C296	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C243	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C297	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C244	1-163-253-11	CERAMIC CHIP 120PF	5% 50V	C298	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C245	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C299	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C246	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C300	1-163-227-11	CERAMIC CHIP 10PF	5% 50V
C247	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C301	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C248	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	C302	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C249	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C311	1-124-257-00	ELECT 2.2uF	20% 50V
C250	1-163-035-00	CERAMIC CHIP 0.047uF	50V	C312	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C251	1-163-035-00	CERAMIC CHIP 0.047uF	50V	C313	1-126-157-11	ELECT 10uF	20% 16V
C252	1-124-477-11	ELECT 47uF	20% 25V	C314	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C253	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C315	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C254	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C316	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C255	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C318	1-163-106-00	CERAMIC CHIP 36PF	5% 50V
C256	1-163-035-00	CERAMIC CHIP 0.047uF	50V	C319	1-124-589-11	ELECT 47uF	20% 16V
C257	1-124-589-11	ELECT 47uF	20% 16V	C320	1-124-589-11	ELECT 47uF	20% 16V
C258	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	C322	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C259	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	C324	1-163-227-11	CERAMIC CHIP 10PF	5% 50V
C260	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C325	1-163-227-11	CERAMIC CHIP 10PF	5% 50V
C261	1-163-257-11	CERAMIC CHIP 180PF	5% 50V	C329	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C262	1-126-160-11	ELECT 1uF	20% 50V	C330	1-126-176-11	ELECT 220uF	20% 10V
C263	1-136-157-00	MYLAR 0.022uF	10% 50V	C401	1-126-163-11	ELECT 4.7uF	20% 50V
C264	1-131-347-00	TANTALUM 1uF	10% 35V	C402	1-164-182-11	CERAMIC CHIP 0.0033uF	10% 50V
C265	1-126-160-11	ELECT 1uF	20% 50V	C403	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C266	1-136-153-00	FILM 0.01uF	5% 50V	C404	1-126-163-11	ELECT 4.7uF	20% 50V
C267	1-163-035-00	CERAMIC CHIP 0.047uF	50V	C406	1-124-589-11	ELECT 47uF	20% 16V
C268	1-163-035-00	CERAMIC CHIP 0.047uF	50V	C407	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C269	1-163-107-00	CERAMIC CHIP 39PF	5% 50V	C601	1-124-589-11	ELECT 47uF	20% 16V
C270	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C602	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C271	1-124-589-11	ELECT 47uF	20% 16V	C603	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C274	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C604	1-163-222-11	CERAMIC CHIP 5PF	0.25PF50V
C275	1-124-257-00	ELECT 2.2uF	20% 50V	C607	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C277	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C609	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C278	1-124-257-00	ELECT 2.2uF	20% 50V	C610	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C281	1-124-257-00	ELECT 2.2uF	20% 50V	C611	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C282	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C613	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C283	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C620	1-124-589-11	ELECT 47uF	20% 16V
C284	1-163-031-11	CERAMIC CHIP 0.01uF	50V	C621	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C285	1-124-477-11	ELECT 47uF	20% 25V	C622	1-163-103-00	CERAMIC CHIP 27PF	5% 50V

Ref. No.	Part No.	Description	Remark
C623	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C624	1-124-589-11	ELECT 47uF	20% 16V
C625	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C626	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C627	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C628	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C629	1-164-182-11	CERAMIC CHIP 0.0033uF	10% 50V
C630	1-124-257-00	ELECT 2.2uF	20% 50V
C640	1-124-248-00	ELECT 22uF	20% 35V
C641	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C650	1-163-257-11	CERAMIC CHIP 180PF	5% 50V
C651	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C652	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C653	1-124-589-11	ELECT 47uF	20% 16V
C657	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C658	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C659	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C660	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C661	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C662	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C699	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C701	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C702	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C703	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C704	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C705	1-126-157-11	ELECT 10uF	20% 16V
C706	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C707	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C708	1-126-157-11	ELECT 10uF	20% 16V
C709	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C710	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C711	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C712	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C715	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C716	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C718	1-126-154-11	ELECT 47uF	20% 6.3V
C725	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C726	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C727	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C728	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C729	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C730	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C731	1-126-154-11	ELECT 47uF	20% 6.3V
C732	1-163-253-11	CERAMIC CHIP 120PF	5% 50V
C733	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C734	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C735	1-126-154-11	ELECT 47uF	20% 6.3V
C736	1-163-038-00	CERAMIC CHIP 0.1uF	25V

Ref. No.	Part No.	Description	Remark
C737	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C739	1-163-245-11	CERAMIC CHIP 56PF	5% 50V
C740	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C741	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C742	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C746	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C747	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C748	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
< FILTER >			
CF151	1-527-831-00	FILTER, CERAMIC	
< CONNECTOR >			
* CN601	1-564-028-00	PIN, CONNECTOR 3P	
CN602	1-563-493-11	CONNECTOR, F. P. C 28P	
CN603	1-506-483-21	PIN, CONNECTOR 4P	
CN604	1-506-493-11	PIN, CONNECTOR 14P	
CN605	1-506-481-11	PIN, CONNECTOR 2P	
CN606	1-506-481-11	PIN, CONNECTOR 2P	
CN607	1-506-482-11	PIN, CONNECTOR 3P	
CN608	1-506-487-11	PIN, CONNECTOR 8P	
< JACK >			
CNJ101	1-565-351-41	JACK, PIN 3P (AUDIO OUT/VIDEO OUT)	
CNJ102	1-537-431-11	TERMINAL BOARD (AUDIO OUT(MONO)/RFU DC OUT/VIDEO OUT)	
CNJ103	1-566-847-31	CONNECTOR, (S) TERMINAL 4P (S VIDEO OUT)	
< TRIMMER >			
CT601	1-141-227-00	CAP, TRIMMER 20PF	
< VARIABLE CAPACITOR >			
CV152	1-141-227-00	CAP, TRIMMER 20PF	
< DIODE >			
D001	8-719-400-18	DIODE MA152WK	
D002	8-719-400-18	DIODE MA152WK	
D003	8-719-400-18	DIODE MA152WK	
D004	8-719-907-19	DIODE FC52M-5	
D005	8-719-907-19	DIODE FC52M-5	
D071	8-719-800-76	DIODE 1SS226	
D151	8-719-800-76	DIODE 1SS226	
D153	8-719-800-76	DIODE 1SS226	
D154	8-719-951-22	IC IMN10	
D155	8-719-800-76	DIODE 1SS226	
D401	8-719-400-18	DIODE MA152WK	
D601	8-719-400-18	DIODE MA152WK	
D602	8-719-400-18	DIODE MA152WK	

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Ref. No.	Part No.	Description	Remark
D603	8-719-400-18	DIODE MA152WK	
D604	8-719-104-34	DIODE 1S2836	
D605	8-719-400-18	DIODE MA152WK	
D606	8-719-104-34	DIODE 1S2836	
D607	8-719-400-18	DIODE MA152WK	
D699	8-719-106-71	DIODE RD12M-B2	
D701	8-719-800-76	DIODE 1SS226	
D702	8-719-800-76	DIODE 1SS226	
D703	8-719-800-76	DIODE 1SS226	
D704	8-719-105-52	DIODE RD3.6M-B2	
< DELAY LINE >			
DL101	1-415-694-11	DELAY LINE, LC	
< FUSE >			
△F601	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A 125V)	
< FILTER >			
FLO01	1-424-031-11	FILTER, NOISE	
FLO02	1-424-031-11	FILTER, NOISE	
FLO03	1-424-031-11	FILTER, NOISE	
FLO04	1-424-031-11	FILTER, NOISE	
FLO05	1-424-031-11	FILTER, NOISE	
FLO06	1-235-896-11	FILTER, BAND PASS	
FLO07	1-236-744-21	FILTER, EMI	
FLO08	1-236-744-21	FILTER, EMI	
FLO09	1-236-744-21	FILTER, EMI	
FLO10	1-236-744-21	FILTER, EMI	
FL101	1-235-896-11	FILTER, BAND PASS	
FL151	1-236-478-11	FILTER, LOW PASS	
FL152	1-236-843-11	FILTER, BAND PASS	
FL153	1-236-478-11	FILTER, LOW PASS	
FL154	1-235-901-11	FILTER, LOW PASS	
FL601	1-424-031-11	FILTER, NOISE	
FL602	1-236-728-11	ENCAPSULATED COMPONENT	
< IC >			
IC001	8-759-981-92	IC RC4558M	
IC003	8-752-337-26	IC CXD2500AQ	
IC004	8-759-502-48	IC SM5840AS	
IC005	8-759-518-47	IC 2J617U-K	
IC006	8-759-981-92	IC RC4558M	
IC007	8-759-981-92	IC RC4558M	
△IC102	1-809-157-11	IC FILTER BLOCK, COM	
IC105	8-759-983-74	IC LM324NS	
IC106	8-752-322-35	IC CXL5005M	
△IC107	8-759-634-65	IC M5278D09	
△IC108	8-759-231-53	IC TA7805S	

Ref. No.	Part No.	Description	Remark
IC109	8-752-036-24	IC CXA1255Q	
IC110	8-759-927-29	IC SN74HCU04ANS	
IC111	8-759-502-69	IC CXD1152-MS	
IC112	8-752-036-23	IC CXA1254Q	
IC113	8-759-941-68	IC BA7131F	
IC114	8-759-981-92	IC RC4558M	
IC115	8-759-300-71	IC TC4053BF	
IC401	8-759-100-95	IC uPC324G2	
IC402	8-759-009-06	IC MC14052BF	
IC601	8-759-073-36	IC MB89795-136	
IC602	8-759-634-74	IC M50455-196FP	
IC603	8-759-231-92	IC TA7291P	
IC604	8-759-987-71	IC MSM72H032GS-K	
IC605	8-759-073-38	IC MSM74H042GS-V1K	
< JUMPER RESISTOR >			
JR002	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR003	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR004	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR005	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR008	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR014	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR601	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR602	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR603	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR705	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR711	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR720	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR738	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR764	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR781	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR797	1-216-295-00	METAL CHIP 0 5% 1/10W	
< COIL >			
L003	1-408-417-00	INDUCTOR 47uH	
L004	1-408-417-00	INDUCTOR 47uH	
L101	1-408-411-00	INDUCTOR 15uH	
L151	1-408-421-00	INDUCTOR 100uH	
L152	1-408-421-00	INDUCTOR 100uH	
L156	1-408-421-00	INDUCTOR 100uH	
L157	1-408-421-00	INDUCTOR 100uH	
L158	1-408-421-00	INDUCTOR 100uH	
L159	1-408-421-00	INDUCTOR 100uH	
L160	1-408-422-00	INDUCTOR 120uH	
L161	1-408-419-00	INDUCTOR 68uH	
L163	1-408-421-00	INDUCTOR 100uH	
L164	1-408-424-00	INDUCTOR 180uH	
L165	1-408-421-00	INDUCTOR 100uH	
L601	1-408-421-00	INDUCTOR 100uH	

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Ref. No.	Part No.	Description	Remark
L602	1-408-411-00	INDUCTOR 15uH	
L603	1-408-409-00	INDUCTOR 10uH	
L610	1-408-409-00	INDUCTOR 10uH	
L701	1-408-406-00	INDUCTOR 5.6uH	
L704	1-408-411-00	INDUCTOR 15uH	
L707	1-408-609-41	INDUCTOR 33uH	
< IC LINK >			
△PS702	1-532-685-00	LINK, IC (800mA)	
< TRANSISTOR >			
Q001	8-729-901-05	TRANSISTOR DTA124EK	
Q002	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q071	8-729-374-02	TRANSISTOR 2SB740-3	
Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
Q102	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q103	8-729-216-22	TRANSISTOR 2SA1162-G	
Q104	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q105	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q106	8-729-216-22	TRANSISTOR 2SA1162-G	
Q107	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q108	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q151	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q152	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q153	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q154	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q155	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q156	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q159	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q160	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q161	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q162	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q163	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q164	8-729-902-96	TRANSISTOR FMS1	
Q165	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q166	8-729-901-00	TRANSISTOR DTC124EK	
Q167	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q168	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q169	8-729-216-22	TRANSISTOR 2SA1162-G	
Q170	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q171	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q172	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q173	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q180	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q181	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q182	8-729-100-66	TRANSISTOR 2SC1623-L6	

Ref. No.	Part No.	Description	Remark
Q184	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q185	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q186	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q187	8-729-216-22	TRANSISTOR 2SA1162-G	
Q189	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q190	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q191	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q192	8-729-216-22	TRANSISTOR 2SA1162-G	
Q193	8-729-901-00	TRANSISTOR DTC124EK	
Q197	8-729-216-22	TRANSISTOR 2SA1162-G	
Q198	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q199	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q200	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q601	8-729-216-22	TRANSISTOR 2SA1162-G	
Q602	8-729-901-00	TRANSISTOR DTC124EK	
Q603	8-729-901-00	TRANSISTOR DTC124EK	
Q604	8-729-901-00	TRANSISTOR DTC124EK	
Q605	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q606	8-729-901-00	TRANSISTOR DTC124EK	
Q608	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q609	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q610	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q611	8-729-901-00	TRANSISTOR DTC124EK	
Q701	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q702	8-729-216-22	TRANSISTOR 2SA1162-G	
Q703	8-729-900-53	TRANSISTOR DTC114EK	
Q704	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q705	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q706	8-729-216-22	TRANSISTOR 2SA1162-G	
Q707	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q708	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q709	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q710	8-729-903-10	TRANSISTOR FMW1	
Q711	8-729-902-96	TRANSISTOR FMS1	
Q712	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q713	8-729-901-04	TRANSISTOR DTA114EK	
Q715	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q723	8-729-900-53	TRANSISTOR DTC114EK	
Q724	8-729-216-22	TRANSISTOR 2SA1162-G	
Q725	8-729-216-22	TRANSISTOR 2SA1162-G	
Q726	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q727	8-729-903-10	TRANSISTOR FMW1	
Q728	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q729	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q730	8-729-216-22	TRANSISTOR 2SA1162-G	
Q731	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q732	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q733	8-729-100-66	TRANSISTOR 2SC1623-L6	

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q734	8-729-216-22	TRANSISTOR	2SA1162-G	R071	1-249-389-11	CARBON	4.7 5% 1/4W
Q735	8-729-216-22	TRANSISTOR	2SA1162-G	R072	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q736	8-729-100-66	TRANSISTOR	2SC1623-L6	R101	1-216-077-00	METAL CHIP	15K 5% 1/10W
< RESISTOR >				R103	1-216-031-00	METAL CHIP	180 5% 1/10W
R001	1-216-073-00	METAL CHIP	10K 5% 1/10W	R104	1-216-091-00	METAL CHIP	56K 5% 1/10W
R002	1-216-025-00	METAL CHIP	100 5% 1/10W	R105	1-216-049-00	METAL CHIP	1K 5% 1/10W
R003	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R106	1-216-049-00	METAL CHIP	1K 5% 1/10W
R004	1-216-033-00	METAL CHIP	220 5% 1/10W	R107	1-216-049-00	METAL CHIP	1K 5% 1/10W
R005	1-216-081-00	METAL CHIP	22K 5% 1/10W	R108	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R006	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R109	1-216-047-00	METAL CHIP	820 5% 1/10W
R007	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R110	1-216-049-00	METAL CHIP	1K 5% 1/10W
R008	1-216-073-00	METAL CHIP	10K 5% 1/10W	R111	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R009	1-216-049-00	METAL CHIP	1K 5% 1/10W	R112	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R010	1-216-049-00	METAL CHIP	1K 5% 1/10W	R113	1-216-039-00	METAL CHIP	390 5% 1/10W
R011	1-216-049-00	METAL CHIP	1K 5% 1/10W	R114	1-216-049-00	METAL CHIP	1K 5% 1/10W
R012	1-216-073-00	METAL CHIP	10K 5% 1/10W	R115	1-216-031-00	METAL CHIP	180 5% 1/10W
R013	1-216-081-00	METAL CHIP	22K 5% 1/10W	R116	1-216-079-00	METAL CHIP	18K 5% 1/10W
R014	1-216-085-00	METAL CHIP	33K 5% 1/10W	R117	1-216-074-00	METAL CHIP	11K 5% 1/10W
R015	1-216-081-00	METAL CHIP	22K 5% 1/10W	R118	1-216-039-00	METAL CHIP	390 5% 1/10W
R016	1-216-081-00	METAL CHIP	22K 5% 1/10W	R119	1-216-021-00	METAL CHIP	68 5% 1/10W
R017	1-216-091-00	METAL CHIP	56K 5% 1/10W	R120	1-216-045-00	METAL CHIP	680 5% 1/10W
R018	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R121	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R020	1-216-025-00	METAL CHIP	100 5% 1/10W	R122	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R021	1-216-025-00	METAL CHIP	100 5% 1/10W	R123	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R022	1-216-025-00	METAL CHIP	100 5% 1/10W	R124	1-216-043-00	METAL CHIP	560 5% 1/10W
R023	1-216-025-00	METAL CHIP	100 5% 1/10W	R125	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R028	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	R126	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R029	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	R127	1-216-049-00	METAL CHIP	1K 5% 1/10W
R032	1-216-049-00	METAL CHIP	1K 5% 1/10W	R128	1-216-079-00	METAL CHIP	18K 5% 1/10W
R033	1-216-049-00	METAL CHIP	1K 5% 1/10W	R129	1-216-031-00	METAL CHIP	180 5% 1/10W
R034	1-216-049-00	METAL CHIP	1K 5% 1/10W	R130	1-216-073-00	METAL CHIP	10K 5% 1/10W
R035	1-216-049-00	METAL CHIP	1K 5% 1/10W	R131	1-216-037-00	METAL CHIP	330 5% 1/10W
R036	1-216-047-00	METAL CHIP	820 5% 1/10W	R132	1-216-021-00	METAL CHIP	68 5% 1/10W
R037	1-216-047-00	METAL CHIP	820 5% 1/10W	R133	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R039	1-216-081-00	METAL CHIP	22K 5% 1/10W	R134	1-216-073-00	METAL CHIP	10K 5% 1/10W
R040	1-216-097-00	METAL CHIP	100K 5% 1/10W	R135	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R041	1-216-097-00	METAL CHIP	100K 5% 1/10W	R136	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R042	1-216-121-00	METAL CHIP	1M 5% 1/10W	R137	1-216-049-00	METAL CHIP	1K 5% 1/10W
R043	1-216-025-00	METAL CHIP	100 5% 1/10W	R138	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R045	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R151	1-216-077-00	METAL CHIP	15K 5% 1/10W
R046	1-216-113-00	METAL CHIP	470K 5% 1/10W	R153	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R050	1-216-099-00	METAL CHIP	120K 5% 1/10W	R154	1-216-097-00	METAL CHIP	100K 5% 1/10W
R051	1-216-099-00	METAL CHIP	120K 5% 1/10W	R155	1-216-113-00	METAL CHIP	470K 5% 1/10W
R052	1-216-085-00	METAL CHIP	33K 5% 1/10W	R156	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R053	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R157	1-216-113-00	METAL CHIP	470K 5% 1/10W
R054	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R158	1-216-073-00	METAL CHIP	10K 5% 1/10W
R055	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R159	1-216-079-00	METAL CHIP	18K 5% 1/10W
R056	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R160	1-216-079-00	METAL CHIP	18K 5% 1/10W
				R161	1-216-113-00	METAL CHIP	470K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R162	1-216-063-00	METAL CHIP	3. 9K 5% 1/10W
R163	1-216-089-00	METAL CHIP	47K 5% 1/10W
R164	1-216-077-00	METAL CHIP	15K 5% 1/10W
R165	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R166	1-216-067-00	METAL CHIP	5. 6K 5% 1/10W
R167	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R168	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R169	1-216-121-00	METAL CHIP	1M 5% 1/10W
R170	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R171	1-216-091-00	METAL CHIP	56K 5% 1/10W
R172	1-216-049-00	METAL CHIP	1K 5% 1/10W
R173	1-216-081-00	METAL CHIP	22K 5% 1/10W
R174	1-216-049-00	METAL CHIP	1K 5% 1/10W
R175	1-216-040-00	METAL GLAZE	430 5% 1/10W
R176	1-216-049-00	METAL CHIP	1K 5% 1/10W
R177	1-216-073-00	METAL CHIP	10K 5% 1/10W
R178	1-216-049-00	METAL CHIP	1K 5% 1/10W
R180	1-216-041-00	METAL CHIP	470 5% 1/10W
R188	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R189	1-216-025-00	METAL CHIP	100 5% 1/10W
R190	1-216-045-00	METAL CHIP	680 5% 1/10W
R191	1-216-045-00	METAL CHIP	680 5% 1/10W
R192	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R193	1-216-085-00	METAL CHIP	33K 5% 1/10W
R194	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R195	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R196	1-216-077-00	METAL CHIP	15K 5% 1/10W
R197	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R198	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R199	1-216-081-00	METAL CHIP	22K 5% 1/10W
R200	1-216-059-00	METAL CHIP	2. 7K 5% 1/10W
R201	1-216-039-00	METAL CHIP	390 5% 1/10W
R202	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R203	1-216-075-00	METAL CHIP	12K 5% 1/10W
R204	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R205	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R206	1-216-049-00	METAL CHIP	1K 5% 1/10W
R207	1-216-081-00	METAL CHIP	22K 5% 1/10W
R208	1-216-055-00	METAL CHIP	1. 8K 5% 1/10W
△R209	1-212-934-00	FUSIBLE	1 5% 1/2W F
R210	1-216-101-00	METAL CHIP	150K 5% 1/10W
R211	1-216-069-00	METAL CHIP	6. 8K 5% 1/10W
R212	1-216-081-00	METAL CHIP	22K 5% 1/10W
R213	1-216-083-00	METAL CHIP	27K 5% 1/10W
R214	1-216-089-00	METAL CHIP	47K 5% 1/10W
R215	1-216-113-00	METAL CHIP	470K 5% 1/10W
R216	1-216-083-00	METAL CHIP	27K 5% 1/10W
R217	1-216-097-00	METAL CHIP	100K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R218	1-216-121-00	METAL CHIP	1M 5% 1/10W
R219	1-216-097-00	METAL CHIP	100K 5% 1/10W
R220	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R221	1-216-113-00	METAL CHIP	470K 5% 1/10W
R222	1-216-095-00	METAL CHIP	82K 5% 1/10W
R223	1-216-113-00	METAL CHIP	470K 5% 1/10W
R224	1-216-049-00	METAL CHIP	1K 5% 1/10W
R225	1-216-109-00	METAL CHIP	330K 5% 1/10W
R226	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R227	1-216-089-00	METAL CHIP	47K 5% 1/10W
R228	1-216-109-00	METAL CHIP	330K 5% 1/10W
R229	1-216-689-11	METAL CHIP	39K 0. 5% 1/10W
R230	1-216-075-00	METAL CHIP	12K 5% 1/10W
R231	1-216-121-00	METAL CHIP	1M 5% 1/10W
R232	1-216-121-00	METAL CHIP	1M 5% 1/10W
R233	1-216-043-00	METAL CHIP	560 5% 1/10W
R234	1-216-059-00	METAL CHIP	2. 7K 5% 1/10W
R235	1-216-059-00	METAL CHIP	2. 7K 5% 1/10W
R236	1-216-059-00	METAL CHIP	2. 7K 5% 1/10W
R237	1-216-043-00	METAL CHIP	560 5% 1/10W
R238	1-216-049-00	METAL CHIP	1K 5% 1/10W
R239	1-216-045-00	METAL CHIP	680 5% 1/10W
R240	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R241	1-216-077-00	METAL CHIP	15K 5% 1/10W
R242	1-216-097-00	METAL CHIP	100K 5% 1/10W
R243	1-216-097-00	METAL CHIP	100K 5% 1/10W
R244	1-216-689-11	METAL CHIP	39K 0. 5% 1/10W
R245	1-216-079-00	METAL CHIP	18K 5% 1/10W
R246	1-216-079-00	METAL CHIP	18K 5% 1/10W
R247	1-216-121-00	METAL CHIP	1M 5% 1/10W
R248	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R249	1-216-085-00	METAL CHIP	33K 5% 1/10W
R250	1-216-097-00	METAL CHIP	100K 5% 1/10W
R251	1-216-097-00	METAL CHIP	100K 5% 1/10W
R252	1-216-085-00	METAL CHIP	33K 5% 1/10W
R253	1-216-047-00	METAL CHIP	820 5% 1/10W
R254	1-216-057-00	METAL CHIP	2. 2K 5% 1/10W
R256	1-216-049-00	METAL CHIP	1K 5% 1/10W
R257	1-216-063-00	METAL CHIP	3. 9K 5% 1/10W
R258	1-216-073-00	METAL CHIP	10K 5% 1/10W
R259	1-216-073-00	METAL CHIP	10K 5% 1/10W
R260	1-216-073-00	METAL CHIP	10K 5% 1/10W
R261	1-216-073-00	METAL CHIP	10K 5% 1/10W
R262	1-216-097-00	METAL CHIP	100K 5% 1/10W
R263	1-216-085-00	METAL CHIP	33K 5% 1/10W
R264	1-216-085-00	METAL CHIP	33K 5% 1/10W
R265	1-216-079-00	METAL CHIP	18K 5% 1/10W
R266	1-216-081-00	METAL CHIP	22K 5% 1/10W
R267	1-216-037-00	METAL CHIP	330 5% 1/10W

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.
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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R268	1-216-033-00	METAL CHIP	220	5%	1/10W	R327	1-216-073-00	METAL CHIP	10K	5%	1/10W
R269	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R328	1-216-073-00	METAL CHIP	10K	5%	1/10W
R270	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R329	1-216-083-00	METAL CHIP	27K	5%	1/10W
R271	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	R330	1-216-081-00	METAL CHIP	22K	5%	1/10W
R272	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R331	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R273	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R332	1-216-113-00	METAL CHIP	470K	5%	1/10W
R274	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R333	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R275	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	R334	1-216-031-00	METAL CHIP	180	5%	1/10W
R276	1-216-045-00	METAL CHIP	680	5%	1/10W	R356	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R277	1-216-097-00	METAL CHIP	100K	5%	1/10W	R357	1-216-049-00	METAL CHIP	1K	5%	1/10W
R278	1-216-081-00	METAL CHIP	22K	5%	1/10W	R358	1-216-049-00	METAL CHIP	1K	5%	1/10W
R279	1-216-081-00	METAL CHIP	22K	5%	1/10W	R359	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R280	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R360	1-216-049-00	METAL CHIP	1K	5%	1/10W
R281	1-216-039-00	METAL CHIP	390	5%	1/10W	R361	1-216-073-00	METAL CHIP	10K	5%	1/10W
R282	1-216-091-00	METAL CHIP	56K	5%	1/10W	R362	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R283	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	R363	1-216-049-00	METAL CHIP	1K	5%	1/10W
R284	1-216-043-00	METAL CHIP	560	5%	1/10W	R364	1-216-049-00	METAL CHIP	1K	5%	1/10W
R285	1-216-041-00	METAL CHIP	470	5%	1/10W	R365	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R286	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	R366	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R287	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R367	1-216-049-00	METAL CHIP	1K	5%	1/10W
R288	1-216-049-00	METAL CHIP	1K	5%	1/10W	R368	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R289	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	R369	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R290	1-216-041-00	METAL CHIP	470	5%	1/10W	R370	1-216-047-00	METAL CHIP	820	5%	1/10W
R291	1-216-033-00	METAL CHIP	220	5%	1/10W	R371	1-216-046-00	METAL CHIP	750	5%	1/10W
R292	1-216-033-00	METAL CHIP	220	5%	1/10W	R372	1-216-073-00	METAL CHIP	10K	5%	1/10W
R293	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	R373	1-216-049-00	METAL CHIP	1K	5%	1/10W
R294	1-216-095-00	METAL CHIP	82K	5%	1/10W	R374	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R295	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	R376	1-216-025-00	METAL CHIP	100	5%	1/10W
R298	1-216-115-00	METAL CHIP	560K	5%	1/10W	R384	1-216-085-00	METAL CHIP	33K	5%	1/10W
R300	1-216-097-00	METAL CHIP	100K	5%	1/10W	R386	1-216-081-00	METAL CHIP	22K	5%	1/10W
R301	1-216-117-00	METAL CHIP	680K	5%	1/10W	R387	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R302	1-216-049-00	METAL CHIP	1K	5%	1/10W	R388	1-216-041-00	METAL CHIP	470	5%	1/10W
R303	1-216-041-00	METAL CHIP	470	5%	1/10W	R389	1-216-041-00	METAL CHIP	470	5%	1/10W
R304	1-216-041-00	METAL CHIP	470	5%	1/10W	R390	1-216-021-00	METAL CHIP	68	5%	1/10W
R306	1-216-025-00	METAL CHIP	100	5%	1/10W	R391	1-216-041-00	METAL CHIP	470	5%	1/10W
R308	1-216-081-00	METAL CHIP	22K	5%	1/10W	R392	1-216-041-00	METAL CHIP	470	5%	1/10W
R309	1-216-081-00	METAL CHIP	22K	5%	1/10W	R393	1-216-021-00	METAL CHIP	68	5%	1/10W
R310	1-216-049-00	METAL CHIP	1K	5%	1/10W	R394	1-216-043-00	METAL CHIP	560	5%	1/10W
R311	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R395	1-216-043-00	METAL CHIP	560	5%	1/10W
R312	1-216-049-00	METAL CHIP	1K	5%	1/10W	R396	1-216-021-00	METAL CHIP	68	5%	1/10W
R313	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	R397	1-216-031-00	METAL CHIP	180	5%	1/10W
R314	1-216-049-00	METAL CHIP	1K	5%	1/10W	R401	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R315	1-216-049-00	METAL CHIP	1K	5%	1/10W	R402	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R316	1-216-049-00	METAL CHIP	1K	5%	1/10W	R403	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R317	1-216-049-00	METAL CHIP	1K	5%	1/10W	R404	1-216-077-00	METAL CHIP	15K	5%	1/10W
R318	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	R405	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R322	1-216-041-00	METAL CHIP	470	5%	1/10W	R406	1-218-165-11	METAL GLAZE	220K	1%	1/10W
R323	1-216-041-00	METAL CHIP	470	5%	1/10W	R407	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R326	1-216-041-00	METAL CHIP	470	5%	1/10W	R408	1-216-117-00	METAL CHIP	680K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R409	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R410	1-216-530-00	METAL GLAZE	390K	1%	1/10W
R411	1-216-679-11	METAL CHIP	15K	0.5%	1/10W
R412	1-216-035-00	METAL CHIP	270	5%	1/10W
R413	1-216-089-00	METAL CHIP	47K	5%	1/10W
R414	1-216-089-00	METAL CHIP	47K	5%	1/10W
R415	1-216-111-00	METAL CHIP	390K	5%	1/10W
R416	1-216-089-00	METAL CHIP	47K	5%	1/10W
R417	1-216-111-00	METAL CHIP	390K	5%	1/10W
R423	1-216-049-00	METAL CHIP	1K	5%	1/10W
R431	1-216-033-00	METAL CHIP	220	5%	1/10W
R432	1-216-049-00	METAL CHIP	1K	5%	1/10W
R434	1-216-033-00	METAL CHIP	220	5%	1/10W
R435	1-216-115-00	METAL CHIP	560K	5%	1/10W
R580	1-216-049-00	METAL CHIP	1K	5%	1/10W
R581	1-216-049-00	METAL CHIP	1K	5%	1/10W
R588	1-216-073-00	METAL CHIP	10K	5%	1/10W
R593	1-216-073-00	METAL CHIP	10K	5%	1/10W
R594	1-216-037-00	METAL CHIP	330	5%	1/10W
R595	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R596	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R599	1-216-073-00	METAL CHIP	10K	5%	1/10W
R601	1-216-121-00	METAL CHIP	1M	5%	1/10W
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W
R603	1-216-073-00	METAL CHIP	10K	5%	1/10W
R604	1-216-021-00	METAL CHIP	68	5%	1/10W
R605	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W
R607	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R608	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R609	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R610	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
△R611	1-212-950-00	FUSIBLE	4.7	5%	1/2W F
R612	1-216-033-00	METAL CHIP	220	5%	1/10W
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W
R614	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R615	1-216-091-00	METAL CHIP	56K	5%	1/10W
R616	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R617	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R618	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R620	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R621	1-216-049-00	METAL CHIP	1K	5%	1/10W
R622	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R623	1-216-073-00	METAL CHIP	10K	5%	1/10W
R624	1-216-073-00	METAL CHIP	10K	5%	1/10W
R625	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R626	1-216-099-00	METAL CHIP	120K	5%	1/10W
R627	1-216-075-00	METAL CHIP	12K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R629	1-216-089-00	METAL CHIP	47K	5%	1/10W
R630	1-216-073-00	METAL CHIP	10K	5%	1/10W
R633	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R634	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R635	1-216-035-00	METAL CHIP	270	5%	1/10W
R636	1-216-049-00	METAL CHIP	1K	5%	1/10W
R637	1-216-081-00	METAL CHIP	22K	5%	1/10W
R638	1-216-081-00	METAL CHIP	22K	5%	1/10W
R640	1-216-025-00	METAL CHIP	100	5%	1/10W
R641	1-216-073-00	METAL CHIP	10K	5%	1/10W
R642	1-216-073-00	METAL CHIP	10K	5%	1/10W
R643	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R644	1-216-105-00	METAL CHIP	220K	5%	1/10W
R645	1-216-073-00	METAL CHIP	10K	5%	1/10W
R646	1-216-049-00	METAL CHIP	1K	5%	1/10W
R648	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R649	1-216-113-00	METAL CHIP	470K	5%	1/10W
R650	1-216-049-00	METAL CHIP	1K	5%	1/10W
R651	1-216-033-00	METAL CHIP	220	5%	1/10W
R652	1-216-033-00	METAL CHIP	220	5%	1/10W
R653	1-216-049-00	METAL CHIP	1K	5%	1/10W
R654	1-216-033-00	METAL CHIP	220	5%	1/10W
R655	1-216-049-00	METAL CHIP	1K	5%	1/10W
R656	1-216-033-00	METAL CHIP	220	5%	1/10W
R658	1-216-033-00	METAL CHIP	220	5%	1/10W
R659	1-216-049-00	METAL CHIP	1K	5%	1/10W
R660	1-216-033-00	METAL CHIP	220	5%	1/10W
R661	1-216-033-00	METAL CHIP	220	5%	1/10W
R662	1-216-033-00	METAL CHIP	220	5%	1/10W
R663	1-216-049-00	METAL CHIP	1K	5%	1/10W
R664	1-216-033-00	METAL CHIP	220	5%	1/10W
R665	1-216-073-00	METAL CHIP	10K	5%	1/10W
R666	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R668	1-216-033-00	METAL CHIP	220	5%	1/10W
R669	1-216-049-00	METAL CHIP	1K	5%	1/10W
R670	1-216-049-00	METAL CHIP	1K	5%	1/10W
R671	1-216-049-00	METAL CHIP	1K	5%	1/10W
R672	1-216-033-00	METAL CHIP	220	5%	1/10W
R673	1-216-049-00	METAL CHIP	1K	5%	1/10W
R674	1-216-049-00	METAL CHIP	1K	5%	1/10W
R675	1-216-033-00	METAL CHIP	220	5%	1/10W
R676	1-216-033-00	METAL CHIP	220	5%	1/10W
R680	1-216-085-00	METAL CHIP	33K	5%	1/10W
R681	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R682	1-216-073-00	METAL CHIP	10K	5%	1/10W
R683	1-216-073-00	METAL CHIP	10K	5%	1/10W
R684	1-216-073-00	METAL CHIP	10K	5%	1/10W
R685	1-216-073-00	METAL CHIP	10K	5%	1/10W
R686	1-216-059-00	METAL CHIP	2.7K	5%	1/10W

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.

MB-703

Ref. No.	Part No.	Description	Remark		
R687	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R688	1-216-097-00	METAL CHIP	100K	5%	1/10W
R689	1-216-049-00	METAL CHIP	1K	5%	1/10W
R690	1-216-049-00	METAL CHIP	1K	5%	1/10W
R691	1-216-049-00	METAL CHIP	1K	5%	1/10W
R693	1-216-049-00	METAL CHIP	1K	5%	1/10W
R694	1-216-049-00	METAL CHIP	1K	5%	1/10W
R695	1-216-049-00	METAL CHIP	1K	5%	1/10W
R696	1-216-049-00	METAL CHIP	1K	5%	1/10W
R697	1-216-049-00	METAL CHIP	1K	5%	1/10W
R698	1-216-049-00	METAL CHIP	1K	5%	1/10W
R699	1-216-049-00	METAL CHIP	1K	5%	1/10W
R701	1-216-049-00	METAL CHIP	1K	5%	1/10W
R702	1-216-033-00	METAL CHIP	220	5%	1/10W
R703	1-216-049-00	METAL CHIP	1K	5%	1/10W
R704	1-216-049-00	METAL CHIP	1K	5%	1/10W
R706	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R707	1-216-047-00	METAL CHIP	820	5%	1/10W
R708	1-216-045-00	METAL CHIP	680	5%	1/10W
R709	1-216-083-00	METAL CHIP	27K	5%	1/10W
R710	1-216-075-00	METAL CHIP	12K	5%	1/10W
R712	1-216-049-00	METAL CHIP	1K	5%	1/10W
R713	1-216-035-00	METAL CHIP	270	5%	1/10W
R714	1-216-027-00	METAL CHIP	120	5%	1/10W
R715	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R716	1-216-045-00	METAL CHIP	680	5%	1/10W
R717	1-216-045-00	METAL CHIP	680	5%	1/10W
R718	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R719	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R721	1-216-049-00	METAL CHIP	1K	5%	1/10W
R722	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R723	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R724	1-216-077-00	METAL CHIP	15K	5%	1/10W
R725	1-216-041-00	METAL CHIP	470	5%	1/10W
R726	1-216-041-00	METAL CHIP	470	5%	1/10W
R727	1-216-077-00	METAL CHIP	15K	5%	1/10W
R728	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R729	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R730	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R731	1-216-049-00	METAL CHIP	1K	5%	1/10W
R732	1-216-049-00	METAL CHIP	1K	5%	1/10W
R735	1-216-049-00	METAL CHIP	1K	5%	1/10W
R736	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R737	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R738	1-216-049-00	METAL CHIP	1K	5%	1/10W
R739	1-216-073-00	METAL CHIP	10K	5%	1/10W
R740	1-216-049-00	METAL CHIP	1K	5%	1/10W
R741	1-216-041-00	METAL CHIP	470	5%	1/10W
R742	1-216-053-00	METAL CHIP	1.5K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R743	1-216-073-00	METAL CHIP	10K	5%	1/10W
R744	1-216-049-00	METAL CHIP	1K	5%	1/10W
R745	1-216-049-00	METAL CHIP	1K	5%	1/10W
R746	1-216-049-00	METAL CHIP	1K	5%	1/10W
R747	1-216-031-00	METAL CHIP	180	5%	1/10W
R748	1-216-295-00	METAL CHIP	0	5%	1/10W
R749	1-216-295-00	METAL CHIP	0	5%	1/10W
R750	1-216-039-00	METAL CHIP	390	5%	1/10W
R753	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R754	1-216-049-00	METAL CHIP	1K	5%	1/10W
R755	1-216-089-00	METAL CHIP	47K	5%	1/10W
R756	1-216-077-00	METAL CHIP	15K	5%	1/10W
R757	1-216-009-00	METAL CHIP	22	5%	1/10W
R766	1-216-049-00	METAL CHIP	1K	5%	1/10W
R767	1-216-652-11	METAL CHIP	1.1K	0.5%	1/10W
R768	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R769	1-216-049-00	METAL CHIP	1K	5%	1/10W
R770	1-216-077-00	METAL CHIP	15K	5%	1/10W
R771	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R772	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R773	1-216-033-00	METAL CHIP	220	5%	1/10W
R774	1-216-045-00	METAL CHIP	680	5%	1/10W
R775	1-216-045-00	METAL CHIP	680	5%	1/10W
R776	1-216-083-00	METAL CHIP	27K	5%	1/10W
R777	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R778	1-216-045-00	METAL CHIP	680	5%	1/10W
R779	1-216-039-00	METAL CHIP	390	5%	1/10W
R780	1-216-045-00	METAL CHIP	680	5%	1/10W
R782	1-216-045-00	METAL CHIP	680	5%	1/10W
R783	1-216-049-00	METAL CHIP	1K	5%	1/10W
R784	1-216-049-00	METAL CHIP	1K	5%	1/10W
R785	1-216-027-00	METAL CHIP	120	5%	1/10W
R786	1-216-081-00	METAL CHIP	22K	5%	1/10W
R787	1-216-045-00	METAL CHIP	680	5%	1/10W
R788	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R789	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R790	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R791	1-216-077-00	METAL CHIP	15K	5%	1/10W
R792	1-216-049-00	METAL CHIP	1K	5%	1/10W
R794	1-216-043-00	METAL CHIP	560	5%	1/10W
R795	1-216-049-00	METAL CHIP	1K	5%	1/10W
R798	1-216-075-00	METAL CHIP	12K	5%	1/10W

< VARIABLE RESISTOR >

RV101	1-230-866-11	RES, ADJ, METAL	470
RV151	1-230-870-11	RES, ADJ, METAL	10K
RV152	1-230-870-11	RES, ADJ, METAL	10K
RV154	1-230-870-11	RES, ADJ, METAL	10K
RV601	1-230-873-11	RES, ADJ, METAL	47K

MB-703

MT-52

PF-701

PS-286

Ref. No.	Part No.	Description	Remark
		< THERMISTOR >	
TH151	1-800-199-00	THERMISTOR	
		< VIBRATOR >	
X001	1-567-515-11	VIBRATOR, VARIABLE CRYSTAL (16.9344MHz)	
X601	1-567-900-11	OSCILLATOR, CRYSTAL (14.31818MHz)	

		MT-52 BOARD	

		< CAPACITOR >	
C001	1-161-063-00	CERAMIC CHIP 0.01uF 10% 50V	
		< CONNECTOR >	
CN001	1-506-481-11	PIN, CONNECTOR 2P, MALE	

*	1-644-077-11	PE-701 BOARD	

		< CAPACITOR >	
C201	1-162-290-31	CERAMIC 470PF 10% 50V	
C202	1-162-290-31	CERAMIC 470PF 10% 50V	
C203	1-162-290-31	CERAMIC 470PF 10% 50V	
C204	1-162-290-31	CERAMIC 470PF 10% 50V	
		< JACK >	
CNJ201	1-573-695-11	CONNECTOR (ROUND TYPE) 6P (BARCODE)	
		< DIODE >	
D201	8-719-105-92	DIODE RD5.6M-B3	
D202	8-719-105-92	DIODE RD5.6M-B3	
D203	8-719-105-92	DIODE RD5.6M-B3	
D204	8-719-105-92	DIODE RD5.6M-B3	
		< COIL >	
L201	1-410-521-11	INDUCTOR 100uH	
		< RESISTOR >	
R202	1-249-409-11	CARBON 220 5% 1/4W	
R203	1-249-417-11	CARBON 1K 5% 1/4W	
R204	1-249-417-11	CARBON 1K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
*	A-6421-881-A	PS-286 (I) BOARD, COMPLETE	

△	1-533-189-11	HOLDER, FUSE	
*	3-711-196-02	HEAT SINK, TR	
	7-682-548-04	SCREW +P 3X8	
		< CAPACITOR >	
C101	1-126-946-11	ELECT 6800uF 20% 25V	
C102	1-126-946-11	ELECT 6800uF 20% 25V	
C103	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C104	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C105	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	
C106	1-126-101-11	ELECT 100uF 20% 16V	
C107	1-124-471-00	ELECT 1000uF 20% 6.3V	
C108	1-124-903-11	ELECT 1uF 20% 50V	
C109	1-124-472-11	ELECT 470uF 20% 10V	
C110	1-163-833-00	CERAMIC CHIP 0.068uF 25V	
C111	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	
C112	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C114	1-124-478-11	ELECT 100uF 20% 25V	
C115	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C116	1-163-833-00	CERAMIC CHIP 0.068uF 25V	
C122	1-124-557-11	ELECT 1000uF 20% 25V	
C125	1-124-920-11	ELECT 330uF 20% 63V	
C126	1-124-910-11	ELECT 47uF 20% 50V	
C127	1-124-122-11	ELECT 100uF 20% 50V	
C128	1-126-943-11	ELECT 2200uF 20% 25V	
C131	1-124-479-11	ELECT 330uF 20% 25V	
C132	1-124-122-11	ELECT 100uF 20% 50V	
C201	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C202	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C204	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C205	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C206	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	
C208	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C209	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C210	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	
C211	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C212	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C213	1-124-913-11	ELECT 470uF 20% 50V	
		< CONNECTOR >	
*	CN101	1-560-894-00 PIN, CONNECTOR 6P	
	CN102	1-506-469-11 PIN, CONNECTOR 4P	
	CN103	1-506-469-11 PIN, CONNECTOR 4P	
*	CN104	1-560-891-00 PIN, CONNECTOR 3P	
	CN105	1-506-471-11 PIN, CONNECTOR 6P	
*	CN106	1-560-890-00 PIN, CONNECTOR 2P	

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Ref. No.	Part No.	Description	Remark
< DIODE >			
△D101	8-719-500-55	DIODE D3SBA10	
△D102	8-719-200-82	DIODE 11ES2	
△D103	8-719-200-82	DIODE 11ES2	
D105	8-719-980-78	DIODE ERA83-006	
D108	8-719-105-82	DIODE RD5.1M-B2	
D109	8-719-200-82	DIODE 11ES2	
D110	8-719-110-78	DIODE RD33ESB2	
D111	8-719-110-88	DIODE RD39ESB2	
D112	8-719-110-17	DIODE RD10ESB2	
△D113	8-719-200-82	DIODE 11ES2	
△D114	8-719-200-82	DIODE 11ES2	
D115	8-719-911-19	DIODE 1SS119	
D116	8-719-200-82	DIODE 11ES2	
D117	8-719-200-82	DIODE 11ES2	
D118	8-719-911-19	DIODE 1SS119	
D201	8-719-980-78	DIODE ERA81006	
D202	8-719-980-78	DIODE ERA81006	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
< FUSE >			
△F101	1-532-747-11	FUSE, GLASS TUBE (5A 125V)	
△F102	1-532-747-11	FUSE, GLASS TUBE (5A 125V)	
△F104	1-532-766-21	FUSE, MICRO (SECONDARY) (0.1A 125V)	
△F105	1-532-778-21	FUSE, MICRO (1.6A 125V)	
< IC >			
△IC101	8-759-971-39	IC BA9700AF	
△IC102	8-759-231-53	IC TA7805S	
IC201	8-759-100-97	IC uPC339G2	
IC202	8-759-100-96	IC uPC4558G2	
< JUMPER RESISTOR >			
JR001	1-216-295-00	METAL CHIP 0 5% 1/10W	
< COIL >			
L101	1-424-219-11	COIL, CHOKE 300uH	
L102	1-412-012-11	INDUCTOR 100uH	
L104	1-410-339-11	COIL, CHOKE 10uH	
L201	1-424-219-11	COIL, CHOKE 300uH	
< IC LINK >			
△PS101	1-532-984-11	LINK, IC 2.0A	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
△Q103	8-729-117-11	TRANSISTOR 2SB1151-L	
Q108	8-729-140-93	TRANSISTOR 2SB733-34	
Q111	8-729-141-75	TRANSISTOR 2SD596DV345	
△Q201	8-729-117-11	TRANSISTOR 2SB1151-L	
△Q202	8-729-143-30	TRANSISTOR 2SD1691-K	
△Q203	8-729-117-11	TRANSISTOR 2SB1151-L	
△Q204	8-729-143-30	TRANSISTOR 2SD1691-K	
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q208	8-729-900-53	TRANSISTOR DTC114EK	
Q209	8-729-901-04	TRANSISTOR DTA114EK	
Q210	8-729-100-67	TRANSISTOR 2SC1623-L6-L7	
Q211	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q212	8-729-901-04	TRANSISTOR DTA114EK	
< RESISTOR >			
R101	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R102	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R103	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R104	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R107	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R108	1-216-043-00	METAL CHIP 560 5% 1/10W	
R109	1-216-687-11	METAL CHIP 33K 0.5% 1/10W	
R110	1-216-676-11	METAL CHIP 11K 0.5% 1/10W	
R112	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R114	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R120	1-216-043-00	METAL CHIP 560 5% 1/10W	
R122	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R124	1-216-025-00	METAL CHIP 100 5% 1/10W	
R125	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
△R126	1-212-956-00	FUSIBLE 8.2 5% 1/2W F	
R127	1-247-742-11	CARBON 180 5% 1/2W	
R199	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R201	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R202	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R203	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R204	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R205	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R206	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-105-00	METAL CHIP 220K 5% 1/10W	

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Ref. No.	Part No.	Description	Remark		
R211	1-216-073-00	METAL CHIP	10K	5%	1/10W
R212	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R213	1-216-049-00	METAL CHIP	1K	5%	1/10W
R214	1-247-750-11	CARBON	680	5%	1/2W
R215	1-247-750-11	CARBON	680	5%	1/2W
R216	1-216-049-00	METAL CHIP	1K	5%	1/10W
△R217	1-216-369-00	METAL OXIDE	1	5%	2W F
R218	1-216-690-11	METAL CHIP	43K	0.5%	1/10W
R219	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R220	1-216-690-11	METAL CHIP	43K	0.5%	1/10W
R221	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R222	1-216-073-00	METAL CHIP	10K	5%	1/10W
R223	1-216-073-00	METAL CHIP	10K	5%	1/10W
△R224	1-215-866-11	METAL OXIDE	330	5%	1W F
R225	1-216-073-00	METAL CHIP	10K	5%	1/10W
R226	1-247-750-11	CARBON	680	5%	1/2W
R227	1-216-073-00	METAL CHIP	10K	5%	1/10W
R228	1-216-093-00	METAL CHIP	68K	5%	1/10W
R230	1-216-105-00	METAL CHIP	220K	5%	1/10W
< RELAY >					
△RY101	1-515-833-11	RELAY			

*	A-6421-641-A PS-290 (J53) BOARD, COMPLETE				

	7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3				
< CAPACITOR >					
C901	1-130-495-00	MYLAR	0.1uF	5%	50V
C902	1-124-472-11	ELECT	470uF	20%	10V
C903	1-130-495-00	MYLAR	0.1uF	5%	50V
C904	1-124-472-11	ELECT	470uF	20%	10V
C905	1-126-176-11	ELECT	220uF	20%	10V
C906	1-124-557-11	ELECT	1000uF	20%	25V
C907	1-161-055-00	CERAMIC	0.022uF	10%	50V
C908	1-124-443-00	ELECT	100uF	20%	10V
< CONNECTOR >					
* CN901	1-560-891-00 PIN, CONNECTOR 3P				
* CN902	1-560-891-00 PIN, CONNECTOR 3P				
CN903	1-506-473-11 PIN, CONNECTOR 8P				
CN904	1-506-469-11 PIN, CONNECTOR 4P				
CN906	1-506-467-11 PIN, CONNECTOR 2P				
< DIODE >					
D901	8-719-110-12 DIODE RD9.1ESB1				
D902	8-719-911-19 DIODE 1SS119				

Ref. No.	Part No.	Description	Remark		
< FUSE >					
△F901	1-532-777-21	FUSE, MICRO (SECONDARY)	(1.25A 125V)		
< IC >					
△IC901	8-759-982-10	IC	RC7809FA		
△IC902	8-759-604-49	IC	M5F7909L		
△IC903	8-759-245-79	IC	TA7905S		
< IC LINK >					
△PS901	1-532-637-00	LINK, IC	(1.0A)		
△PS902	1-532-685-00	LINK, IC	(800mA)		
< TRANSISTOR >					
Q901	8-729-900-61	TRANSISTOR	DTA114ES		
Q902	8-729-900-80	TRANSISTOR	DTC114ES		
< RESISTOR >					
R901	1-249-417-11	CARBON	1K	5%	1/4W
R902	1-247-891-00	CARBON	330K	5%	1/4W
R903	1-247-891-00	CARBON	330K	5%	1/4W
R904	1-249-417-11	CARBON	1K	5%	1/4W

*	A-6426-531-A RS-701 BOARD, COMPLETE				

< CONNECTOR >					
CN101	1-506-488-11 PIN, CONNECTOR 9P				
< JACK >					
CNJ101	1-563-228-11 CONNECTOR, D-SUB 25P (RS-232C)				
< RESISTOR >					
R101	1-216-033-00	METAL CHIP	220	5%	1/10W
R102	1-216-049-00	METAL CHIP	1K	5%	1/10W
R103	1-216-049-00	METAL CHIP	1K	5%	1/10W
R104	1-216-033-00	METAL CHIP	220	5%	1/10W
< SWITCH >					
S101	1-570-727-11 SWITCH, DIP (BAUD RATE)				

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SV-63

Ref. No.	Part No.	Description	Remark
*	A-6421-832-A	SV-63 (I) BOARD, COMPLETE *****	
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
		< CAPACITOR >	
C001	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C003	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C005	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C006	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C009	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C010	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C011	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C012	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C013	1-124-584-00	ELECT 100uF	20% 10V
C014	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C015	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C019	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C020	1-124-465-00	ELECT 0.47uF	20% 50V
C021	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C101	1-128-057-11	ELECT 330uF	20% 6.3V
C102	1-128-057-11	ELECT 330uF	20% 6.3V
C103	1-124-242-00	ELECT 33uF	20% 25V
C104	1-124-242-00	ELECT 33uF	20% 25V
C105	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C106	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C107	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C108	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C109	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C110	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C111	1-126-160-11	ELECT 1uF	20% 50V
C112	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C113	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C114	1-126-160-11	ELECT 1uF	20% 50V
C115	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C116	1-126-160-11	ELECT 1uF	20% 50V
C117	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C118	1-163-014-00	CERAMIC CHIP 0.0027uF	10% 50V
C119	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C120	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C121	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C122	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C123	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C124	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C125	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C126	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C127	1-124-499-11	ELECT, NONPOLAR R 1uF	20% 50V
C128	1-126-320-11	ELECT, NONPOLAR R 10uF	20% 16V
C129	1-136-165-00	FILM 0.1uF	5% 50V

Ref. No.	Part No.	Description	Remark
C130	1-126-320-11	ELECT, NONPOLAR R 10uF	20% 16V
C131	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C132	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C135	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C136	1-136-169-00	FILM 0.22uF	5% 50V
C137	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V
C138	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V
C139	1-124-282-00	ELECT 22uF	20% 16V
C140	1-124-279-11	ELECT 3.3uF	20% 25V
C141	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C144	1-163-016-00	CERAMIC CHIP 0.0039uF	10% 50V
C145	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C146	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C147	1-136-169-00	FILM 0.22uF	5% 50V
C149	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C150	1-124-589-11	ELECT 47uF	20% 16V
C151	1-124-589-11	ELECT 47uF	20% 16V
C152	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C153	1-163-035-00	CERAMIC CHIP 0.047uF	50V
		< CONNECTOR >	
CN101	1-566-939-11	CONNECTOR, F. P. C 24P	
CN102	1-563-493-11	CONNECTOR, F. P. C 28P	
CN103	1-506-485-11	PIN, CONNECTOR 6P	
CN104	1-506-482-11	PIN, CONNECTOR 3P	
* CN105	1-566-969-11	HOUSING, CONNECTOR (PC BOARD)	7P
* CN106	1-566-968-11	HOUSING, CONNECTOR (PC BOARD)	6P
		< DIODE >	
D001	8-719-911-19	DIODE 1SS119	
D101	8-719-911-19	DIODE 1SS119	
D102	8-719-109-72	DIODE RD3.9ESB2	
D103	8-719-911-19	DIODE 1SS119	
D104	8-719-911-19	DIODE 1SS119	
		< FUSE >	
△F001	1-532-775-11	FUSE, MICRO (SECONDARY) (0.8A 125V)	
		< FILTER >	
FLO01	1-235-922-11	FILTER, LOW PASS (1.7MHz)	
		< IC >	
IC001	8-752-050-19	IC CXA1081M	
IC002	8-759-603-24	IC CX20197	
IC101	8-759-321-40	IC HA11529	
IC102	8-759-822-38	IC LA6510	
IC103	8-759-981-92	IC RC4558M	
IC104	8-759-981-92	IC RC4558M	

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC105	8-759-981-92	IC RC4558M		JR154	1-216-296-00	METAL CHIP	0 5% 1/8W
IC106	8-759-300-71	IC HD14053BFP		JR155	1-216-296-00	METAL CHIP	0 5% 1/8W
< JUMPER RESISTOR >				JR156	1-216-296-00	METAL CHIP	0 5% 1/8W
JR102	1-216-295-00	METAL CHIP	0 5% 1/10W	JR158	1-216-295-00	METAL CHIP	0 5% 1/10W
JR103	1-216-296-00	METAL CHIP	0 5% 1/8W	JR159	1-216-296-00	METAL CHIP	0 5% 1/8W
JR104	1-216-296-00	METAL CHIP	0 5% 1/8W	JR160	1-216-296-00	METAL CHIP	0 5% 1/8W
JR105	1-216-295-00	METAL CHIP	0 5% 1/10W	JR161	1-216-296-00	METAL CHIP	0 5% 1/8W
JR106	1-216-296-00	METAL CHIP	0 5% 1/8W	JR162	1-216-296-00	METAL CHIP	0 5% 1/8W
JR107	1-216-295-00	METAL CHIP	0 5% 1/10W	JR164	1-216-296-00	METAL CHIP	0 5% 1/8W
JR111	1-216-296-00	METAL CHIP	0 5% 1/8W	JR166	1-216-295-00	METAL CHIP	0 5% 1/10W
JR112	1-216-296-00	METAL CHIP	0 5% 1/8W	JR170	1-216-296-00	METAL CHIP	0 5% 1/8W
JR113	1-216-296-00	METAL CHIP	0 5% 1/8W	JR171	1-216-295-00	METAL CHIP	0 5% 1/10W
JR114	1-216-295-00	METAL CHIP	0 5% 1/10W	JR172	1-216-296-00	METAL CHIP	0 5% 1/8W
JR115	1-216-296-00	METAL CHIP	0 5% 1/8W	JR173	1-216-296-00	METAL CHIP	0 5% 1/8W
JR116	1-216-295-00	METAL CHIP	0 5% 1/10W	JR174	1-216-296-00	METAL CHIP	0 5% 1/8W
JR117	1-216-295-00	METAL CHIP	0 5% 1/10W	JR175	1-216-295-00	METAL CHIP	0 5% 1/10W
JR118	1-216-296-00	METAL CHIP	0 5% 1/8W	JR176	1-216-296-00	METAL CHIP	0 5% 1/8W
JR119	1-216-296-00	METAL CHIP	0 5% 1/8W	JR177	1-216-296-00	METAL CHIP	0 5% 1/8W
JR121	1-216-296-00	METAL CHIP	0 5% 1/8W	JR178	1-216-296-00	METAL CHIP	0 5% 1/8W
JR122	1-216-296-00	METAL CHIP	0 5% 1/8W	JR179	1-216-296-00	METAL CHIP	0 5% 1/8W
JR123	1-216-296-00	METAL CHIP	0 5% 1/8W	JR180	1-216-296-00	METAL CHIP	0 5% 1/8W
JR124	1-216-296-00	METAL CHIP	0 5% 1/8W	JR181	1-216-296-00	METAL CHIP	0 5% 1/8W
JR125	1-216-296-00	METAL CHIP	0 5% 1/8W	JR182	1-216-296-00	METAL CHIP	0 5% 1/8W
JR126	1-216-296-00	METAL CHIP	0 5% 1/8W	JR183	1-216-295-00	METAL CHIP	0 5% 1/10W
JR127	1-216-295-00	METAL CHIP	0 5% 1/10W	JR184	1-216-296-00	METAL CHIP	0 5% 1/8W
JR128	1-216-296-00	METAL CHIP	0 5% 1/8W	JR185	1-216-296-00	METAL CHIP	0 5% 1/8W
JR129	1-216-296-00	METAL CHIP	0 5% 1/8W	JR186	1-216-296-00	METAL CHIP	0 5% 1/8W
JR130	1-216-296-00	METAL CHIP	0 5% 1/8W	JR187	1-216-296-00	METAL CHIP	0 5% 1/8W
JR132	1-216-296-00	METAL CHIP	0 5% 1/8W	JR188	1-216-296-00	METAL CHIP	0 5% 1/8W
JR133	1-216-296-00	METAL CHIP	0 5% 1/8W	JR189	1-216-295-00	METAL CHIP	0 5% 1/10W
JR134	1-216-296-00	METAL CHIP	0 5% 1/8W	JR191	1-216-296-00	METAL CHIP	0 5% 1/8W
JR135	1-216-296-00	METAL CHIP	0 5% 1/8W	JR192	1-216-296-00	METAL CHIP	0 5% 1/8W
JR136	1-216-296-00	METAL CHIP	0 5% 1/8W	JR193	1-216-296-00	METAL CHIP	0 5% 1/8W
JR137	1-216-296-00	METAL CHIP	0 5% 1/8W	JR194	1-216-296-00	METAL CHIP	0 5% 1/8W
JR138	1-216-296-00	METAL CHIP	0 5% 1/8W	JR195	1-216-295-00	METAL CHIP	0 5% 1/10W
JR139	1-216-296-00	METAL CHIP	0 5% 1/8W	JR196	1-216-296-00	METAL CHIP	0 5% 1/8W
JR140	1-216-296-00	METAL CHIP	0 5% 1/8W	JR197	1-216-296-00	METAL CHIP	0 5% 1/8W
JR141	1-216-296-00	METAL CHIP	0 5% 1/8W	JR198	1-216-296-00	METAL CHIP	0 5% 1/8W
JR142	1-216-296-00	METAL CHIP	0 5% 1/8W	JR199	1-216-296-00	METAL CHIP	0 5% 1/8W
JR143	1-216-296-00	METAL CHIP	0 5% 1/8W	JR200	1-216-296-00	METAL CHIP	0 5% 1/8W
JR144	1-216-296-00	METAL CHIP	0 5% 1/8W	JR201	1-216-296-00	METAL CHIP	0 5% 1/8W
JR145	1-216-296-00	METAL CHIP	0 5% 1/8W	JR202	1-216-296-00	METAL CHIP	0 5% 1/8W
JR146	1-216-296-00	METAL CHIP	0 5% 1/8W	JR203	1-216-296-00	METAL CHIP	0 5% 1/8W
JR147	1-216-296-00	METAL CHIP	0 5% 1/8W	JR204	1-216-296-00	METAL CHIP	0 5% 1/8W
JR148	1-216-296-00	METAL CHIP	0 5% 1/8W	JR205	1-216-295-00	METAL CHIP	0 5% 1/10W
JR149	1-216-296-00	METAL CHIP	0 5% 1/8W	JR206	1-216-295-00	METAL CHIP	0 5% 1/10W
JR150	1-216-296-00	METAL CHIP	0 5% 1/8W	JR207	1-216-296-00	METAL CHIP	0 5% 1/8W
JR153	1-216-296-00	METAL CHIP	0 5% 1/8W	JR208	1-216-296-00	METAL CHIP	0 5% 1/8W
				JR209	1-216-295-00	METAL CHIP	0 5% 1/10W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
JR210	1-216-295-00	METAL CHIP	0	5%	1/10W	R016	1-216-101-00	METAL CHIP	150K	5%	1/10W
JR211	1-216-296-00	METAL CHIP	0	5%	1/8W	R017	1-216-041-00	METAL CHIP	470	5%	1/10W
JR212	1-216-296-00	METAL CHIP	0	5%	1/8W	R018	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
JR213	1-216-296-00	METAL CHIP	0	5%	1/8W	R020	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR214	1-216-296-00	METAL CHIP	0	5%	1/8W	R021	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
JR215	1-216-295-00	METAL CHIP	0	5%	1/10W	R022	1-216-081-00	METAL CHIP	22K	5%	1/10W
JR216	1-216-295-00	METAL CHIP	0	5%	1/10W	R023	1-249-394-11	CARBON	12	5%	1/6W
JR217	1-216-295-00	METAL CHIP	0	5%	1/10W	R101	1-216-373-11	METAL OXIDE	2.2	5%	2W F
JR218	1-216-296-00	METAL CHIP	0	5%	1/8W	R103	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR219	1-216-295-00	METAL CHIP	0	5%	1/10W	R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR220	1-216-296-00	METAL CHIP	0	5%	1/8W	R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR221	1-216-296-00	METAL CHIP	0	5%	1/8W	R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
< COIL >						R107	1-216-089-00	METAL CHIP	47K	5%	1/10W
L101	1-410-509-11	INDUCTOR 10uH				R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
L102	1-410-509-11	INDUCTOR 10uH				R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
L103	1-410-509-11	INDUCTOR 10uH				R110	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
< TRANSISTOR >						R111	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q001	8-729-140-97	TRANSISTOR	KSA708			R112	1-216-101-00	METAL CHIP	150K	5%	1/10W
Q002	8-729-216-22	TRANSISTOR	2SA1162-G			R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
Q003	8-729-303-37	TRANSISTOR	2SD655-E			R114	1-216-025-00	METAL CHIP	100	5%	1/10W
Q101	8-729-209-15	TRANSISTOR	2SD2012			R115	1-216-025-00	METAL CHIP	100	5%	1/10W
Q102	8-729-924-90	TRANSISTOR	2SB1370-EF			R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
Q103	8-729-209-15	TRANSISTOR	2SD2012			R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q104	8-729-924-90	TRANSISTOR	2SB1370-EF			R118	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q105	8-729-100-66	TRANSISTOR	2SC1623-L6			R119	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q106	8-729-100-66	TRANSISTOR	2SC1623-L6			R120	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q107	8-729-901-00	TRANSISTOR	DTC124EK			R121	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
Q108	8-729-100-66	TRANSISTOR	2SC1623-L6			R122	1-216-085-00	METAL CHIP	33K	5%	1/10W
Q109	8-729-216-22	TRANSISTOR	2SA1162-G			R123	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
< RESISTOR >						R124	1-216-079-00	METAL CHIP	18K	5%	1/10W
R001	1-216-049-00	METAL CHIP	1K	5%	1/10W	R125	1-216-081-00	METAL CHIP	22K	5%	1/10W
R002	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R126	1-216-033-00	METAL CHIP	220	5%	1/10W
R003	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R127	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R004	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R128	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R005	1-216-049-00	METAL CHIP	1K	5%	1/10W	R129	1-216-041-00	METAL CHIP	470	5%	1/10W
R006	1-216-049-00	METAL CHIP	1K	5%	1/10W	R130	1-216-017-00	METAL CHIP	47	5%	1/10W
R007	1-216-023-00	METAL CHIP	82	5%	1/10W	R131	1-216-073-00	METAL CHIP	10K	5%	1/10W
R008	1-216-043-00	METAL CHIP	560	5%	1/10W	R132	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R009	1-216-073-00	METAL CHIP	10K	5%	1/10W	R133	1-216-097-00	METAL CHIP	100K	5%	1/10W
R010	1-216-095-00	METAL CHIP	82K	5%	1/10W	R134	1-216-097-00	METAL CHIP	100K	5%	1/10W
R011	1-216-081-00	METAL CHIP	22K	5%	1/10W	R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R012	1-249-394-11	CARBON	12	5%	1/6W	R136	1-216-081-00	METAL CHIP	22K	5%	1/10W
R013	1-216-073-00	METAL CHIP	10K	5%	1/10W	R137	1-216-099-00	METAL CHIP	120K	5%	1/10W
R014	1-216-097-00	METAL CHIP	100K	5%	1/10W	R138	1-216-081-00	METAL CHIP	22K	5%	1/10W
R015	1-216-049-00	METAL CHIP	1K	5%	1/10W	R139	1-216-081-00	METAL CHIP	22K	5%	1/10W
						R140	1-216-037-00	METAL CHIP	330	5%	1/10W
						R141	1-216-024-00	METAL GLAZE	91	5%	1/10W
						R142	1-216-001-00	METAL CHIP	10	5%	1/10W
						R143	1-216-001-00	METAL CHIP	10	5%	1/10W

Ref. No.	Part No.	Description	Remark
R144	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R145	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R146	1-216-073-00	METAL CHIP	10K 5% 1/10W
R147	1-216-081-00	METAL CHIP	22K 5% 1/10W
R148	1-216-037-00	METAL CHIP	330 5% 1/10W
R149	1-216-033-00	METAL CHIP	220 5% 1/10W
R150	1-216-085-00	METAL CHIP	33K 5% 1/10W
R151	1-216-113-00	METAL CHIP	470K 5% 1/10W
R152	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R153	1-216-085-00	METAL CHIP	33K 5% 1/10W
R154	1-216-101-00	METAL CHIP	150K 5% 1/10W
R155	1-216-089-00	METAL CHIP	47K 5% 1/10W
R156	1-216-083-00	METAL CHIP	27K 5% 1/10W
R157	1-216-101-00	METAL CHIP	150K 5% 1/10W
R158	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R159	1-216-075-00	METAL CHIP	12K 5% 1/10W
R160	1-216-083-00	METAL CHIP	27K 5% 1/10W
R161	1-216-113-00	METAL CHIP	470K 5% 1/10W
R162	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R163	1-216-083-00	METAL CHIP	27K 5% 1/10W
R164	1-216-035-00	METAL CHIP	270 5% 1/10W
R165	1-216-089-00	METAL CHIP	47K 5% 1/10W
R166	1-216-041-00	METAL CHIP	470 5% 1/10W
R167	1-216-049-00	METAL CHIP	1K 5% 1/10W
R168	1-216-049-00	METAL CHIP	1K 5% 1/10W
R169	1-216-049-00	METAL CHIP	1K 5% 1/10W
R170	1-216-049-00	METAL CHIP	1K 5% 1/10W
R171	1-216-049-00	METAL CHIP	1K 5% 1/10W
R172	1-216-049-00	METAL CHIP	1K 5% 1/10W
R173	1-216-085-00	METAL CHIP	33K 5% 1/10W
R174	1-216-073-00	METAL CHIP	10K 5% 1/10W
R175	1-216-085-00	METAL CHIP	33K 5% 1/10W
R176	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R177	1-216-085-00	METAL CHIP	33K 5% 1/10W
R178	1-216-073-00	METAL CHIP	10K 5% 1/10W
R179	1-216-101-00	METAL CHIP	150K 5% 1/10W
R180	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R181	1-216-083-00	METAL CHIP	27K 5% 1/10W
R182	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R183	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R184	1-216-089-00	METAL CHIP	47K 5% 1/10W
R186	1-216-097-00	METAL CHIP	100K 5% 1/10W
R187	1-216-089-00	METAL CHIP	47K 5% 1/10W
R188	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R189	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R190	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R191	1-216-097-00	METAL CHIP	100K 5% 1/10W
R192	1-216-081-00	METAL CHIP	22K 5% 1/10W
R193	1-216-105-00	METAL CHIP	220K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R194	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R195	1-216-085-00	METAL CHIP	33K 5% 1/10W
R196	1-216-097-00	METAL CHIP	100K 5% 1/10W
R197	1-216-089-00	METAL CHIP	47K 5% 1/10W
R198	1-216-081-00	METAL CHIP	22K 5% 1/10W
R199	1-216-099-00	METAL CHIP	120K 5% 1/10W
R200	1-216-085-00	METAL CHIP	33K 5% 1/10W
R201	1-216-095-00	METAL CHIP	82K 5% 1/10W
R202	1-216-081-00	METAL CHIP	22K 5% 1/10W
R205	1-216-097-00	METAL CHIP	100K 5% 1/10W
R206	1-216-081-00	METAL CHIP	22K 5% 1/10W
R207	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R208	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R209	1-216-073-00	METAL CHIP	10K 5% 1/10W
R210	1-216-081-00	METAL CHIP	22K 5% 1/10W
R211	1-216-017-00	METAL CHIP	47 5% 1/10W
R212	1-216-017-00	METAL CHIP	47 5% 1/10W
R213	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R214	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R215	1-216-073-00	METAL CHIP	10K 5% 1/10W
R216	1-216-081-00	METAL CHIP	22K 5% 1/10W
R217	1-216-081-00	METAL CHIP	22K 5% 1/10W
R218	1-216-077-00	METAL CHIP	15K 5% 1/10W
R219	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R220	1-216-079-00	METAL CHIP	18K 5% 1/10W
R222	1-216-129-00	METAL CHIP	2.2M 5% 1/10W
< VARIABLE RESISTOR >			
RV101	1-228-993-00	RES, ADJ, METAL 4.7K	
RV102	1-228-994-00	RES, ADJ, METAL 10K	
RV103	1-228-994-00	RES, ADJ, METAL 10K	
RV104	1-228-993-00	RES, ADJ, METAL 4.7K	
RV105	1-228-994-00	RES, ADJ, METAL 10K	
RV106	1-228-990-00	RES, ADJ, METAL 1K	
RV107	1-228-990-00	RES, ADJ, METAL 1K	
RV108	1-228-990-00	RES, ADJ, METAL 1K	

*	A-6421-665-A	SW-193 BOARD, COMPLETE	*****
< CONNECTOR >			
CN601	1-506-467-11	PIN, CONNECTOR 2P	
< SWITCH >			
S601	1-554-655-00	SWITCH, LEAF (TRAY SWITCH)	

SW-194

TR-60

Ref. No.	Part No.	Description	Remark
*	A-6421-666-A	SW-194 BOARD, COMPLETE *****	
		< CONNECTOR >	
CN401	1-506-481-11	PIN, CONNECTOR 2P	
CN402	1-506-481-11	PIN, CONNECTOR 2P	
		< RESISTOR >	
R401	1-249-423-11	CARBON 3.3K 5% 1/4W	
R402	1-249-417-11	CARBON 1K 5% 1/4W	
		< SWITCH >	
S401	1-571-300-21	SWITCH, ROTARY (CHUCK SWITCH)	

*	A-6421-803-A	TR-60 (I) BOARD, COMPLETE *****	
△	1-533-189-11	HOLDER, FUSE	
		< CAPACITOR >	
△C301	1-136-345-21	FILM 0.1uF 20% 125V	
		< CONNECTOR >	
△CN301	1-564-419-11	HEADER, SPRING (POWER) 2P	
* CN302	1-564-031-00	PIN, CONNECTOR 6P	
		< FUSE >	
△F301	1-532-742-11	FUSE, GLASS TUBE (1.6A 125V)	
		< RESISTOR >	
△R301	1-202-729-00	SOLID 6.8M 10% 1/2W	
		< TRANSFORMER >	
△T302	1-424-535-11	FILTER, LINE	

		MISCELLANEOUS *****	
△106	1-450-936-11	TRANSFORMER, POWER	
△107	1-590-043-21	CORD, POWER	
* 117	1-575-813-11	CABLE, FLAT (FLEXIBLE) (28 CORE)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
		1-506-481-11 PIN, CONNECTOR 2P	
		1-551-086-31 CORD, CONNECTION	
		1-559-533-11 CORD, CONNECTION	
		1-693-111-11 REMOTE COMMANDER (RMT-1050)	
*	3-749-940-22	INDIVIDUAL CARTON	
		3-755-213-21 MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
*	3-795-581-21	SAFEGUARD (SONY), IMPORTANT	
		3-948-311-21 MANUAL, INTERFACE	

		HARDWARE LIST *****	
#1	7-687-233-11	SCREW (+ PTPWH) (2.6X6)	
#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
#3	7-685-645-79	SCREW +P 3X6 TYPE2 NON-SLIT	
#4	7-685-647-79	SCREW +BTP 3X10 TYPE2 N-S	
#5	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
#6	7-682-645-01	SCREW +PS 3X4	
#7	7-621-255-55	SCREW +P 2X8	
#8	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3	
#9	7-685-661-79	SCREW +BVTP 4X12 TYPE2 SLIT	
#10	7-682-661-09	SCREW +PSW 4X8	
#11	7-682-545-04	SCREW (3X4) (G), TAPPING, (+) P	
#15	7-621-770-XX	SCREW (+ BV 2.6X8)	

The components identified by mark △ or dotted line with △ 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.
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SECTION 7

ELECTRICAL ADJUSTMENTS

During these adjustment, see the parts arrangement diagram for adjustments on page from 150.

7-1. LIST OF SERVICING JIGS

- Oscilloscope
- Color monitor TV
- Digital voltmeter
- Audio level meter
- Frequency counter
- Remote commander (RMT-1050)
- LD alignment disc REF7C-8AL (8-597-901-03)
- CD alignment disc YEDS-18 (3-702-101-01)
- MD adjustment cable (J-6082-059-B)
- Audio oscillator

7-2. CAUTIONS ON ADJUSTMENT

- Disc load/unload operation must not be performed when servicing with the unit laying down sideways. (Never press the OPEN and CLOSE buttons.)
- When laying the unit down sideways, perform adjustment with the left side down and turn the power on.
- When adjusting the servo system, be sure to set up the unit horizontally.

7-3. MD ADJUSTMENT CABLE (J-6087-059-B)

MD adjustment cable is used to adjust the servo system with connecting to the SV-63 board. Remove it except when adjusting the servo system.

7-4. POWER SUPPLY CHECK (PS-286, 290 BOARDS)

PS-286 Board

Mode	Stop
Measuring Equipment	Digital Voltmeter
AC 4.3 V check	
Measurement Point	Pin ①, ② of CN105
Specified Value	AC 4.3 V
DC -30 V check	
Measurement Point	Pin ④ of CN105 (Pin ③, GND)
Specified Value	-32 ± 2 V

PS-290 Board

Mode	Stop
Measuring Equipment	Digital Voltmeter
UNREG +16 V check	
Measurement Point	Pin ① of CN902 (Pin ②, GND)
Specified Value	16 ± 0.1 V
UNREG -16 V check	
Measurement Point	Pin ③ of CN902 (Pin ②, GND)
Specified Value	-16 ± 0.1 V
REG +9 V check	
Measurement Point	Pin ① of CN903 (Pin ②, GND)
Specified Value	9 ± 0.3V
REG -9 V check	
Measurement Point	Pin ③ of CN903 (Pin ②, GND)
Specified Value	-9 ± 0.3 V
REG +5 V check	
Measurement Point	Pin ⑤ of CN903 (Pin ⑥, GND)
Specified Value	5 ± 0.3 V
REG -5 V check	
Measurement Point	Pin ⑦ of CN903 (Pin ⑥, GND)
Specified Value	-5 ± 0.3 V

- Confirm that the power supply voltages satisfy the respective specified values.

7-5. SYSTEM CONTROL SYSTEM ADJUSTMENT

7-5-1. Microprocessor Clock Adjustment (MB-703 Board)

Mode	Stop
Measurement Point	Pin ⑦ of IC601
Measuring Equipment	Frequency counter
Adjusting Element	CT601
Specified Value	3,579,545 ± 10Hz

Adjustment method :

- 1) Adjust CT601 to 3,579,545 ± 10Hz.

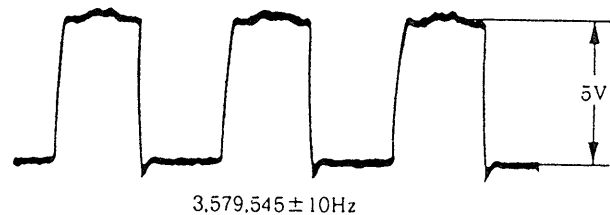


Fig. 7-1.

7-6. SERVO SYSTEM ADJUSTMENT

When adjusting the servo system, look out for the following items :

- Use the MD adjustment cable (J-6082-059-B).
- Adjust the CD servo system after the digital audio system adjustment is completed.
- When setting the tracking servo to the open state, set to the STOP state once and proceed to the next step.
- When the optical block is replaced, perform the adjustment in the following order.

Note : Start adjustment at maximum RF H level (RV108 fully counterclockwise direction).

1. LD Tracking Balance Adjustment
 - 1) Focus balance adjustment
 - 2) Tracking balance adjustment
2. LD Focus Gain Adjustment
3. LD Cross Talk Balance Adjustment
 - 1) TAN cam adjustment
 - 2) RAD-TILT adjustment
 - 3) Focus balance adjustment
4. LD Tracking Gain Adjustment
5. RD Adjustment
6. CD Focus Balance Adjustment
7. CD RF H Level Adjustment
8. CD RF L Level Adjustment

7-6-1. LD Servo System Adjustment

1. LD Tracking Balance Adjustment (SV-63 Board)

1) Focus balance adjustment

Note : Perform successively 1) and 2) adjustment in this order.

Mode	Still
Signal	Frame 2201 (GRAY)
Measurement Point	MD adjustment cable [TRKG ERR (X)] (Pin ③ of CN105)
Measuring Equipment	Oscilloscope
Adjusting Element	RV102
Specified Value	Maximum amplitude

Adjustment method :

- 1) Select STILL (M) mode.
- 2) Search the frame 2201 (GRAY).
- 3) Turn the thread servo off. (MD adjustment cable SLED SW OFF)
- 4) Turn the tracking servo off. (MD adjustment cable TRKG SW OFF)
- 5) Adjust RV102 so as to maximize the signal level.

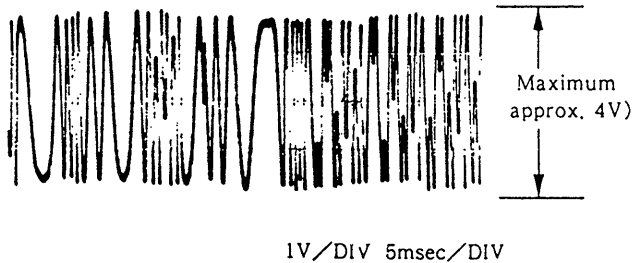


Fig. 7-2.

2) Tracking balance adjustment

Mode	Still
Signal	Frame 2201 (GRAY)
Measurement Point	MD adjustment cable [TRKG ERR (X)] (Pin ③ of CN105)
Measuring Equipment	Oscilloscope
Adjusting Element	RV101
Specified Value	$A - B = 0 \pm 0.1V$

Adjustment method :

Note : Perform successively this adjustment after "1) Focus balance adjustment" is completed.

- 6) Adjust RV101 so that the center voltage of the tracking error signal becomes $0 \pm 0.1Vdc$.
- 7) Select STOP mode.
- 8) Turn the tracking servo on.
- 9) Turn the thread servo on.

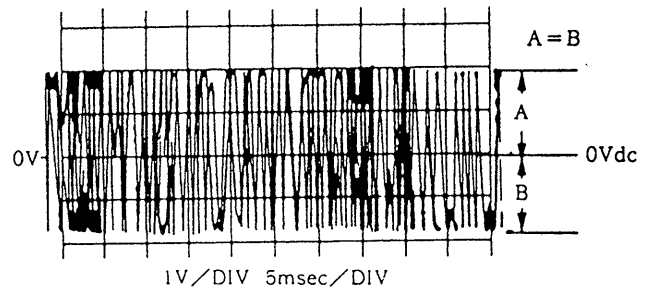


Fig. 7-3.

2. LD Focus Gain Adjustment (SV-63 Board)

Mode	Playback
Signal	Frame 2201 (GRAY)
Measurement Point	MD adjustment cable CH1 : [FOCUS ERR (Y)] (Pin ⑥ of CN105) CH2 : [FOCUS ERR (X)] (Pin ⑤ of CN105)
Measuring Equipment	Oscilloscope (X-Y mode)
Adjusting Element	RV107
Specified Value	See figure below

Adjustment method :

- 1) Search the frame 2201.
- 2) Adjust the waveform as shown in the figure below with RV107.

Connections :

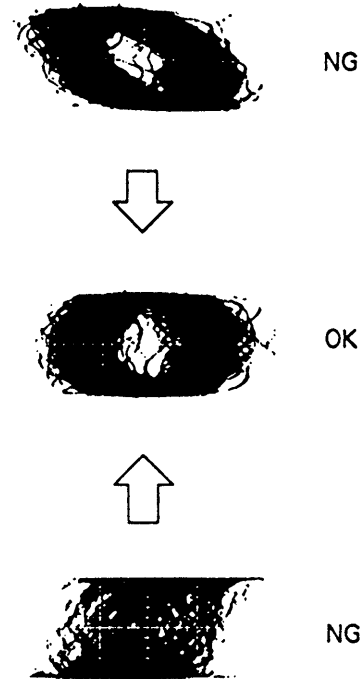
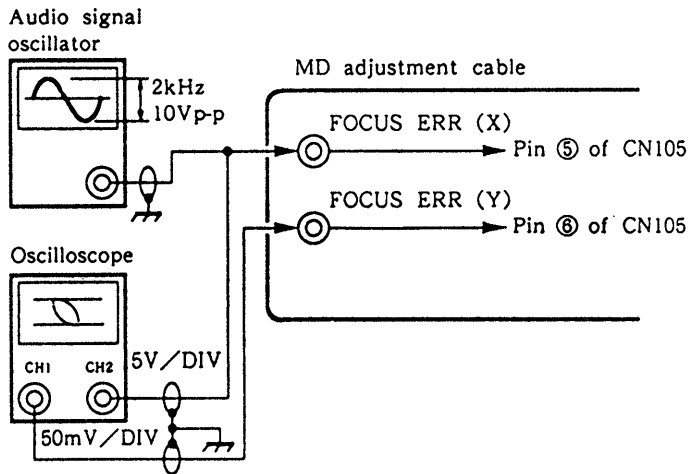


Fig. 7-4.

3. LD Cross Talk Balance Adjustment

1) TAN cam adjustment (MD)

The cam is always set to the initial position. When replacing the optical block and so on, set the cam to the mechanical center.

*Mechanical center :

Marked with the notch of the cam located at the opposite side of the optical block chassis shaft.

Adjustment method :

- 1) Turn the TAN cam on the bottom (See Fig. 7-10.) with a hexagonal wrench.

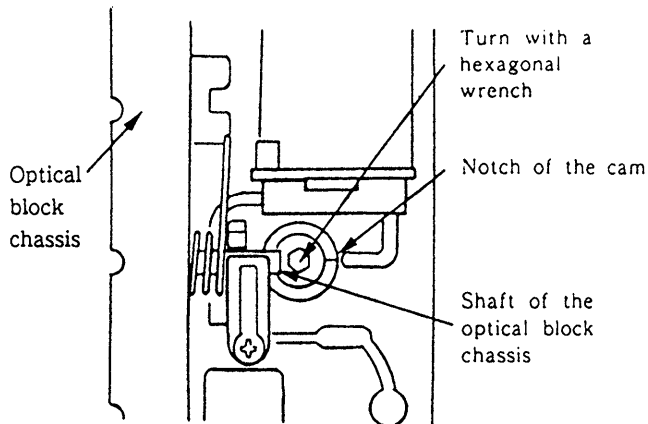


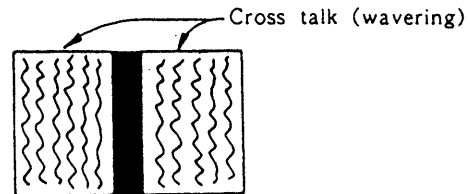
Fig. 7-5.

2) RAD TILT adjustment (SV-63 board)

Mode	Still
Signal	Frame 770 (V BAR)
Measurement Point	Monitor TV
Measuring Equipment	Monitor TV
Adjusting Element	RV105
Specified Value	Cross talk (wavering) with minimum as well as the same level.

Adjustment method :

- 1) Select STILL (M) mode.
- 2) Search the frame 770 and apply a vertical bar signal.
- 3) Adjust RV105 so that the right and left cross talks (wavering) become minimum as well as the same level.



Adjust so that cross talks appeared on the both sides on the monitor display become minimum as well as the same level.

Fig. 7-6.

3) Focus balance adjustment (SV-63 board)

Mode	Still
Signal	Frame 770 (V BAR)
Measurement Point	Monitor TV
Measuring Equipment	Monitor TV
Adjusting Element	RV102
Specified Value	Cross talk (wavering) with minimum as well as the same level.

Adjustment method :

- 1) Select STILL (M) mode.
- 2) Search the frame 770 and apply a vertical bar signal.
- 3) Adjust RV102 to minimize the right and left cross talks (wavering) level.

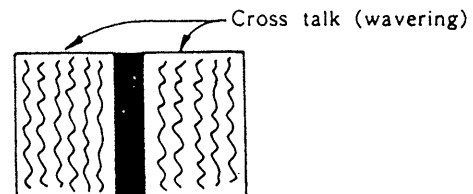
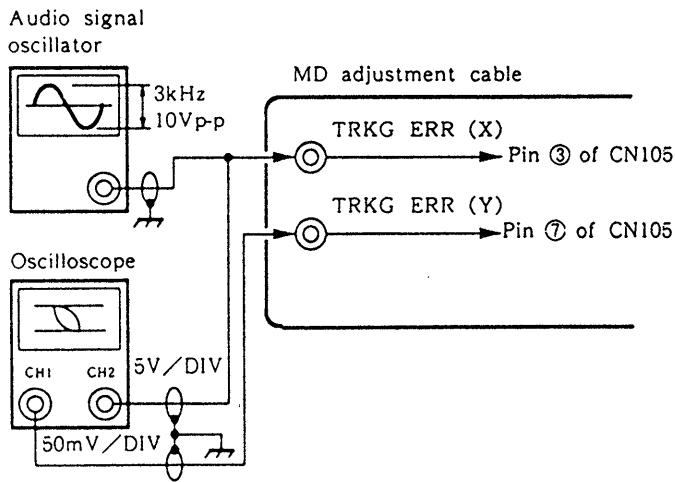


Fig. 7-7.

4. LD Tracing Gain Adjustment (SV-63 board)

Mode	Still
Signal	Frame 2201 (GRAY)
Measurement Point	MD adjustment cable CH1 : [TRKG (Y)] (Pin ⑦ of CN105) CH2 : [TRKG (X)] (Pin ③ of CN105)
Measuring Equipment	Oscilloscope (X-Y mode)
Adjusting Element	RV106 (TR GAIN)
Specified Value	See figure below

Connections :



Adjustment method :

- 1) Search the frame 2201.
- 2) Adjust the waveform as shown in the figure below with RV106.

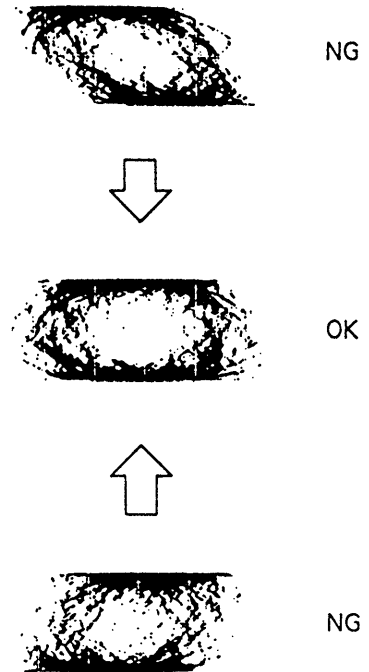


Fig. 7-8.

7-6-2. CD Servo System Adjustment

1. RD Adjustment

Mode	Pause
Signal	Track No. 1, YEDS-18
Measurement Point	MD adjustment cable CH1 : [E terminal] CH2 : [F terminal]
Measuring Equipment	Oscilloscope
Adjusting Element	RD Cam (MD)
Specified Value	A : B ≤ 10 : 1

Note : 1) Turn off the monitor TV switch to prevent a noise.

Note : 2) Long continuation of the TRKG servo off state causes the spindle motor to stop.

Adjustment method :

- 1) Play back the track No. 1 and select PAUSE mode.
- 2) Turn the thread servo off. (MD adjustment cable SLED SW OFF)
- 3) Turn the tracking servo off. (MD adjustment cable TRKG SW OFF)
- 4) Turn RD cam on the MD and adjust so that it becomes as a straight line as possible.

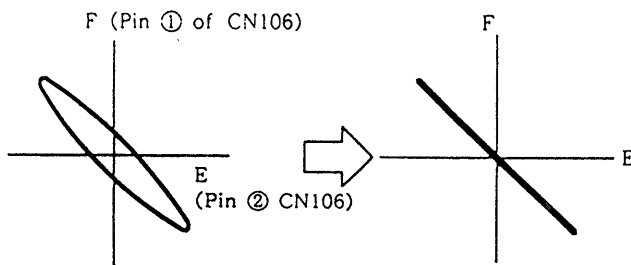


Fig. 7-9.

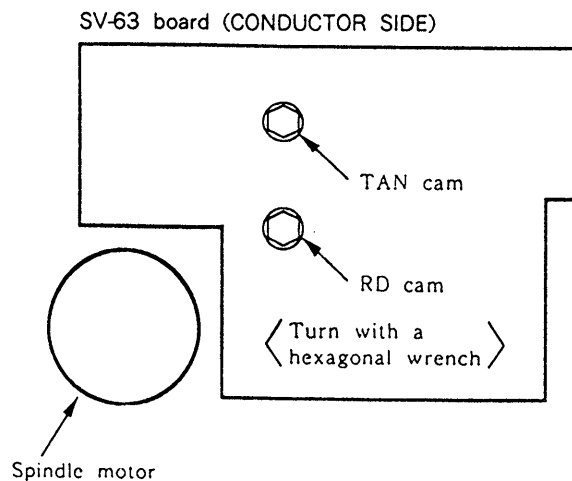


Fig. 7-10.

2. CD Focus Balance Adjustment (SV-63 Board)

Mode	Playback
Signal	Track No. 1, YEDS-18
Measurement Point	MD adjustment cable [RF (CD) OUT] (Pin 6 of CN106)
Measuring Equipment	Oscilloscope
Adjusting Element	RV103
Specified Value	Maximum amplitude

Adjustment method :

- 1) Play back the track No. 1.
- 2) Adjust RV103 for maximum level.

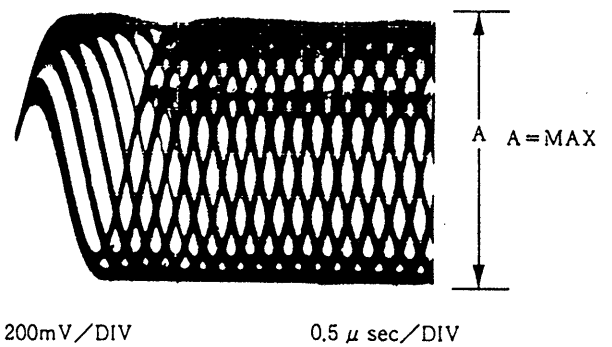


Fig. 7-11.

3. CD RF H Level Adjustment (SV-63 Board)

Mode	Playback
Signal	Track No. 1, YEDS-18
Measurement Point	MD adjustment cable [RF (CD) OUT] (Pin ⑥ of CN106)
Measuring Equipment	Oscilloscope
Adjusting Element	RV108
Specified Value	$1.2 \pm 0.1V_{p-p}$

Adjustment method :

- 1) Play back the track No. 1.
- 2) Adjust RV108 for $1.2 \pm 0.1V_{p-p}$.

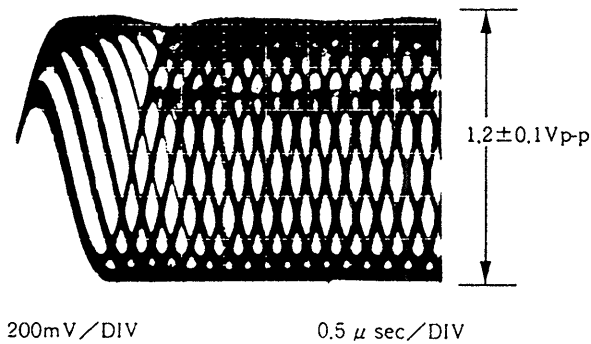


Fig. 7-12.

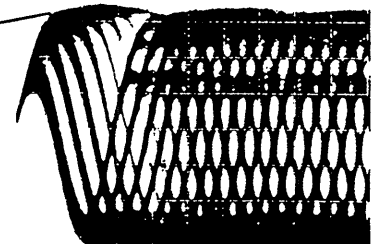
4. CD RF L Level Adjustment (SV-63 Board)

Mode	Playback
Signal	Track No. 1, YEDS-18
Measurement Point	MD adjustment cable [RF (CD) OUT] (Pin ⑥ of CN106)
Measuring Equipment	Oscilloscope
Adjusting Element	RV104
Specified Value	Clear-cut waveform

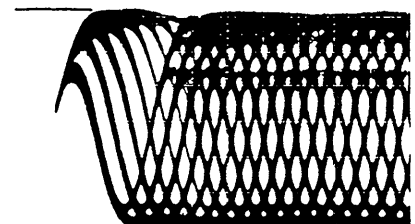
Adjustment method :

- 1) Play back the track No. 1.
- 2) Adjust RV104 so that the waveform of lozenge-shaped portions becomes clear-cut and the waveform slant disappear from the rising edge portion.

- Waveform slant at the rising edge.
 - Waveform of lozenge-shaped portions are not clear.
- (RV104 : Excessively rotated in clockwise direction (C) .)



OK
200mV/DIV
0.5 μ sec/DIV



- Waveform slant at the rising edge.
 - Waveform of lozenge-shaped portions are not clear.
- (RV104 : Excessively rotated in counterclockwise direction (C) .)

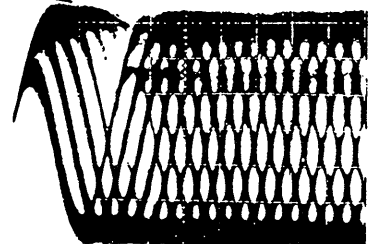


Fig. 7-13.

7-7. VIDEO SYSTEM ADJUSTMENT

7-7-1. Video Output Level Adjustment (MB-703 Board)

Mode	Still
Signal	Frame 4100 (color bar)
Measurement Point	CNJ101 (VIDEO OUT terminal) (Terminated to 75 Ω)
Measuring Equipment	Oscilloscope
Adjusting Element	RV152
Specified Value	1.00 ± 0.03 Vp-p

Adjustment method :

- 1) Select STILL (▶◀) mode.
- 2) Search the frame 4100 and apply a color bar signal.
- 3) Adjust RV152 for 1.00 ± 0.03 Vp-p.



Fig. 7-14.

7-7-2. Comb Type Filter Y Output Level Adjustment (MB-703 Board)

Mode	Still
Signal	Frame 4100 (Color bar)
Measurement Point	CNJ102 pin ③ (Y OUT) 75 Ω terminated
Measuring Equipment	Oscilloscope
Adjusting Element	RV101
Specified Value	1.00 ± 0.03 Vp-p

Adjustment method :

- 1) Select STILL (▶◀) mode.
- 2) Search the frame 4100.
- 3) Adjust RV101 for 1.00 ± 0.03 Vp-p.

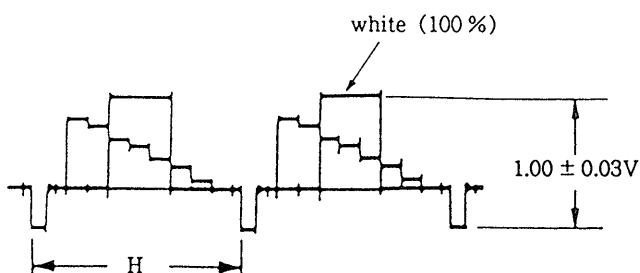


Fig. 7-15.

7-7-3. Burst Gate Position Adjustment (MB-703 Board)

Mode	Still
Signal	Frame 4100 (color bar)
Measurement Point	Pin ② of IC107
Adjusting Element	RV154
Specified Value	8.6 ± 0.3 μsec

Adjustment method :

- 1) Select STILL (▶◀) mode.
- 2) Search the frame 4100.
- 3) Adjust RV154 so that t_w becomes 8.6 ± 0.3 μsec.

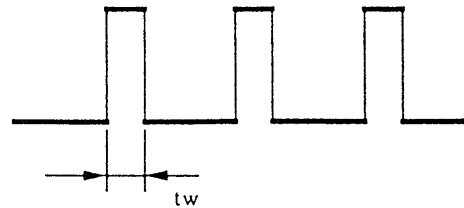


Fig. 7-16.

7-7-4. REF H Adjustment (1) (MB-703 Board)

Mode	Still
Signal	Frame 4100 (Color bar)
Measuring Equipment	Oscilloscope
Adjusting Element	RV601
Measurement Point	Pin ⑳-㉑ of IC111.
Specified Value	4.2 ± 0.1 V

Note : Perform 7-7-5 REF H Adjustment (2) Adjustment continuously.

Adjustment method :

- 1) Adjust with RV601 so that the voltage values at Pin ⑳-㉑ become 4.2 ± 0.1 V.

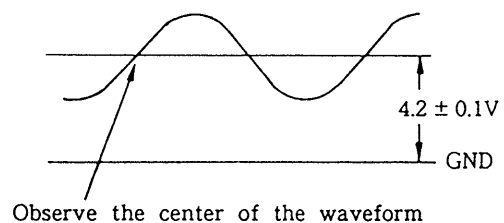


Fig. 7-17.

7-7-5. REF H Adjustment (2) (MB-703 Board)

Mode	Still
Signal	Frame 4100 (Color bar)
Measuring Equipment	Oscilloscope
Adjusting Element	RV601
Measurement Point	CH1 : PIN ⑳ of IC604 CH2 : PIN ㉔ of IC604
Specified Value	Adjust the timing of the falling edges of waveforms.

Adjustment method :

- 1) Adjust timing in the nearest portion between the falling edge of Pin ㉔ of IC604 and the falling edge of Pin ⑳ of IC604.

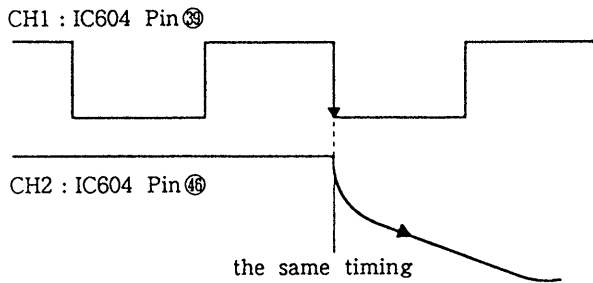


Fig. 7-18.

7-7-6. TBC Range Adjustment (MB-703 Board)

Mode	Still
Signal	Frame 4100 (Color bar)
Measuring Equipment	Oscilloscope
Adjusting Element	RV151
Measurement Point	CH1 : PIN ㉒ of IC109 External trigger : PIN ㉓ of IC109
Specified Value	$22 \pm 1 \mu \text{sec}$

Connection :

- Apply 5.0Vdc to Pin ㉔ of IC109.

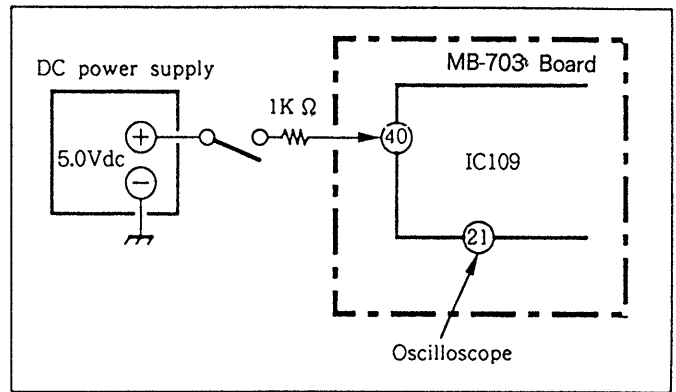


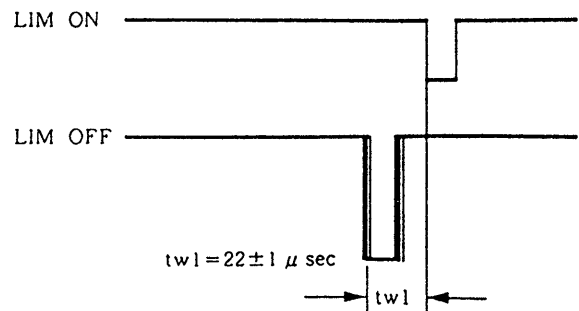
Fig. 7-19.

Adjustment method :

- 1) Select STILL (M) mode.
- 2) Search the frame 4100.
- 3) Connect the DC power supply (5.0Vdc) to Pin ㉔ of IC109.
- 4) Adjust so that rising time difference between when the power (5.0Vdc) is on (LIM ON) and when the power off (LIM OFF) is $22 \pm 1 \mu \text{sec}$.

Note : Since the waveform of LIM OFF is wavering, adjust at fits center position.

- Pin ㉒ of IC109 (CH1)



- Pin ㉓ of IC109 (Trigger pulse)



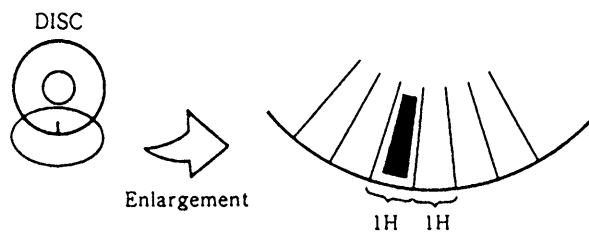
Fig. 7-20.

7-7-7. Color DOC Adjustment (MB-703 Board)

Mode	Still
Signal	Frame 23500 (Yellow Green)
Measuring Equipment	Monitor display
Adjusting Element	CV152
Specified Value	Drop out portion and its peripherals are the same color

Preparations :

Stick a black adhesive tape (approx. 10mm length) on the outer track 1H period of the alignment disc (REF7C-8AL).



Adjustment method :

- 1) Select STILL (M) mode.
- 2) Search the frame 23500.
- 3) Adjust CV152 so that the drop out portion and its peripherals on the monitor picture are the same color.

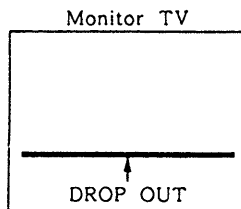
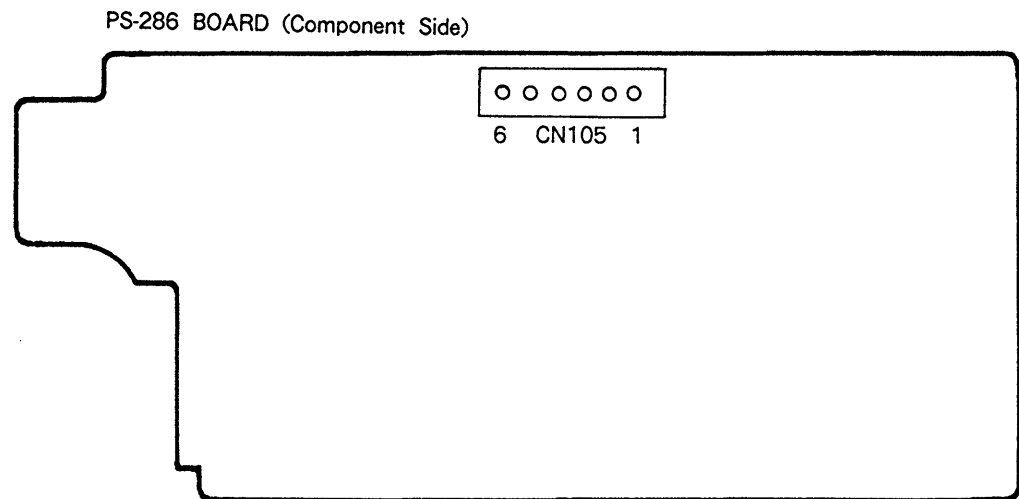
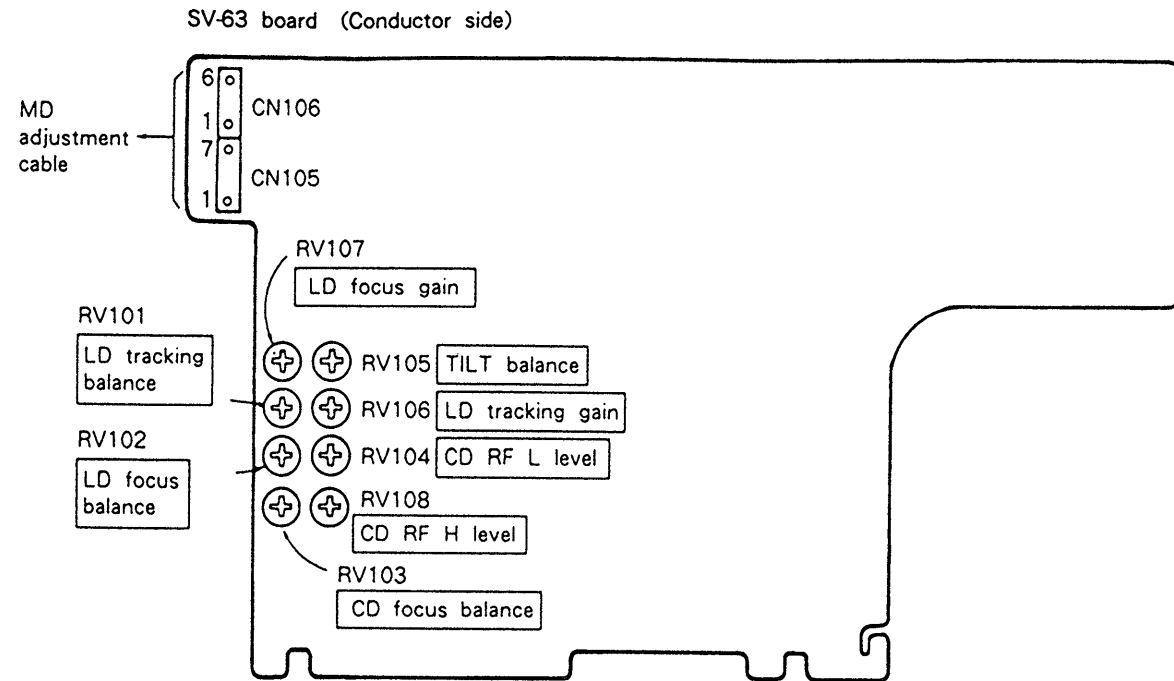
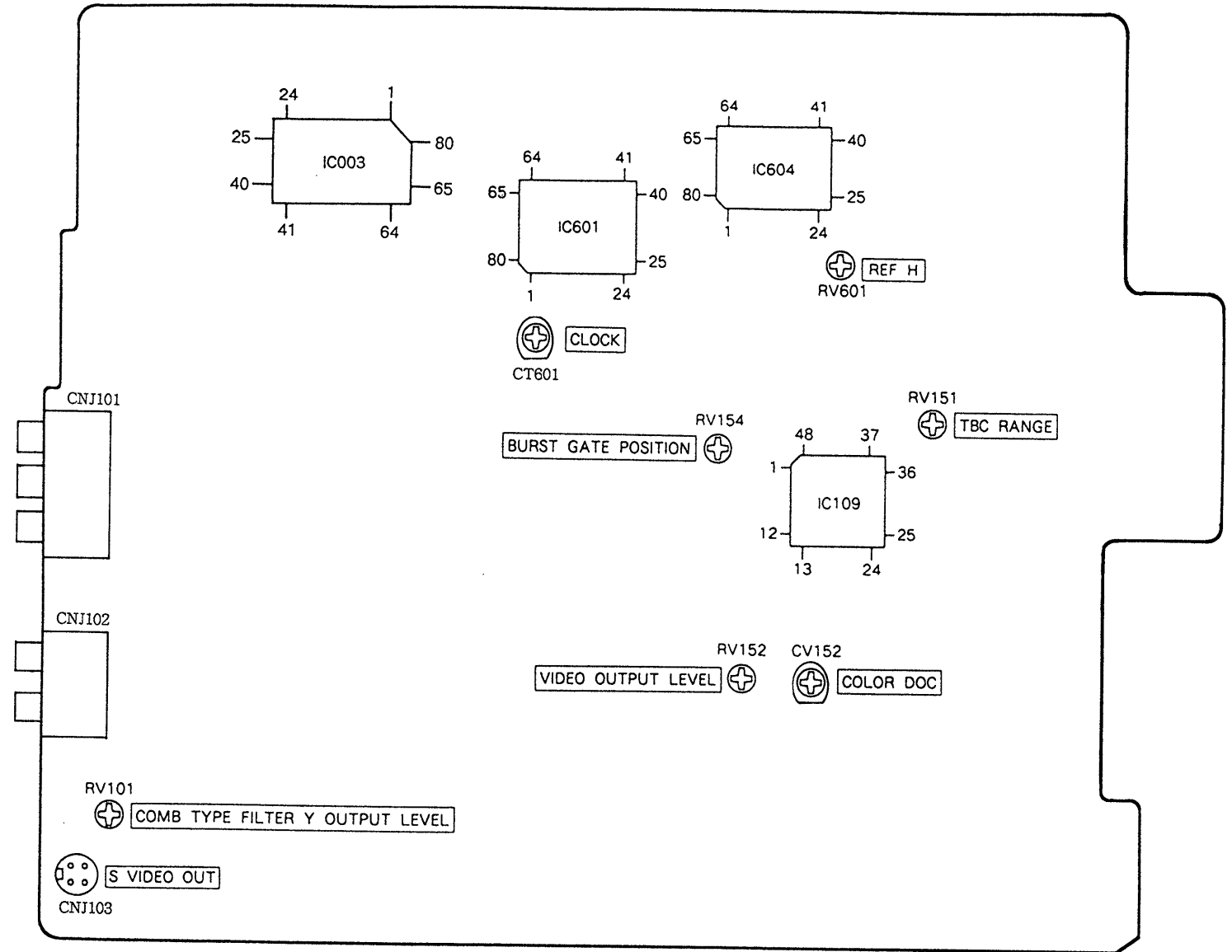


Fig. 7-21.

7-8. PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENTS



MB-703 board (Component Side)



PS-290 BOARD (Component Side)

