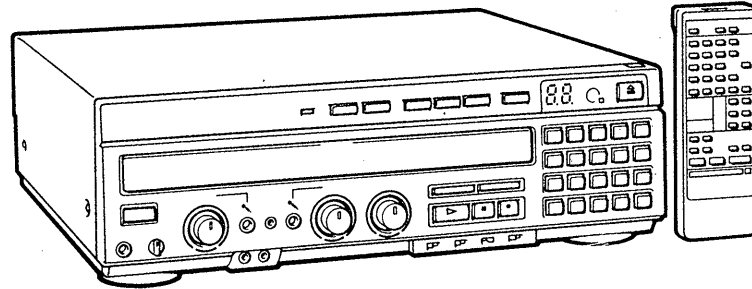


SERVICE MANUAL

US Model



SPECIFICATIONS

Type
Signal readout
Signal format
Playing time

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

LD	CAV	30 cm (12 in) double-sided	60
		20 cm (8 in) double-sided	28
		20 cm (8 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	

(minutes)

Horizontal video resolution
Signal-to-noise ratio

425 lines
More than 46 dB

Input/output

MIC 1/MIC 2 jack Standard jack
1 mV (Impedance below 1 k Ω)
Applicable to Karaoke microphone (F-KM1, etc.,).
MIC control jack
Video output 1.0 Vp-p. 75 ohms, unbalanced, synchronous negative
Audio input 200 mVrms
Audio output Analog: 200 mVrms (1 kHz 40% modulation)
Digital: 200 mVrms (1 kHz -20 dB)
Headphone output 28 mW (32 ohms), impedance = 8 ohms
VHF input/output 75 ohms, unbalanced LD output, NTSC channel 3 or 4 (switchable)

Power requirements

Power AC 120 V AC, 60 Hz
Power consumption 45 W
Weight 8.7 kg
Dimensions 430 × 135 × 413 mm (w/h/d)
Operating temperature +5°C - +35°C
Ambient humidity 5 to 90%

Remote commander RMT-K1A is available as a unit. But as individual parts the battery case lid of commander is only available.



CD/CDV/LD PLAYER

SONY®

Remote Commander RMT-K1A

Principle of operation	Infrared pulse
Power requirements	3 V DC, (2 size AA batteries)
Dimensions	Approx. 62 × 20 × 175 mm (w/h/d) (2 7/16 × 3/4 × 7 inches)
Weight	Approx. 130 g (including batteries), (4 1/2 oz)

Supplied accessories

Remote Commander RMT-K1A (1)
Size AA (R6) batteries (2)
Coaxial cable with F type connector (1)
Video connecting cord
(phono plug 1 ↔ phono plug Yellow 1) (1)
Audio connecting cord
(phono plug 2 ↔ phono plug Red/white 2) (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ 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.

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.

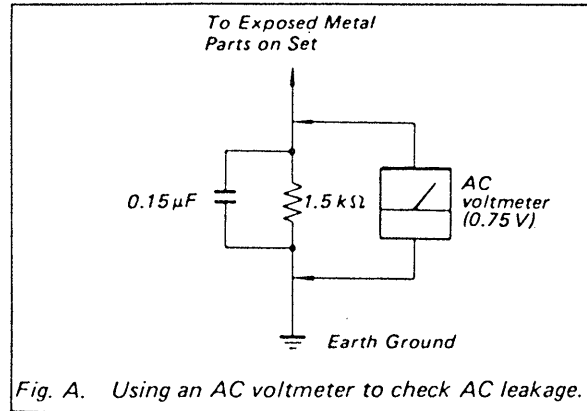


Fig. A. Using an AC voltmeter to check AC leakage.

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)

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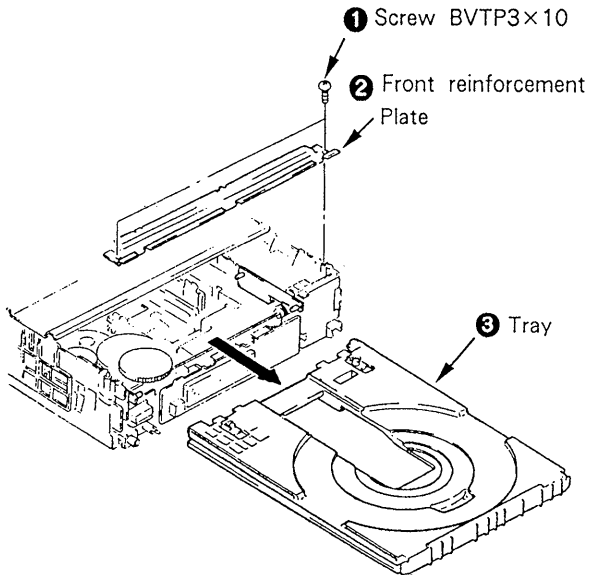
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SECTION 1 SERVICE NOTE

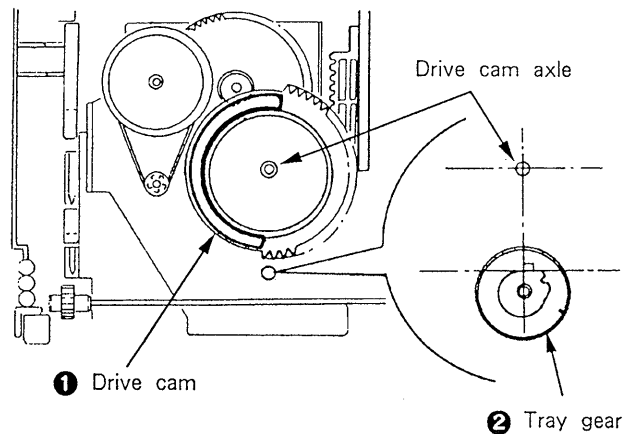
1-1. REMOVAL OF THE TRAY

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



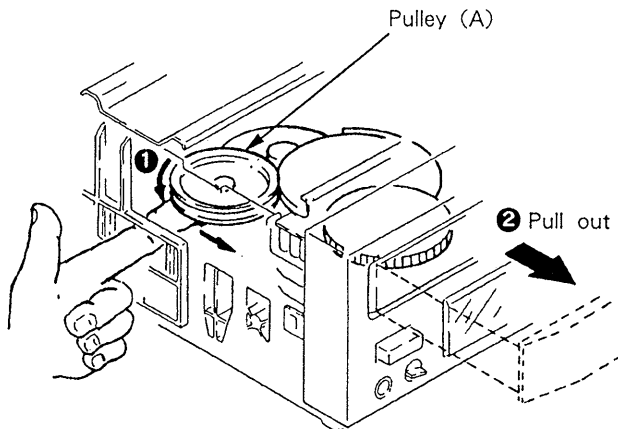
1-3. ALIGNMENT OF THE LOADING GEAR PHASE

- 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.



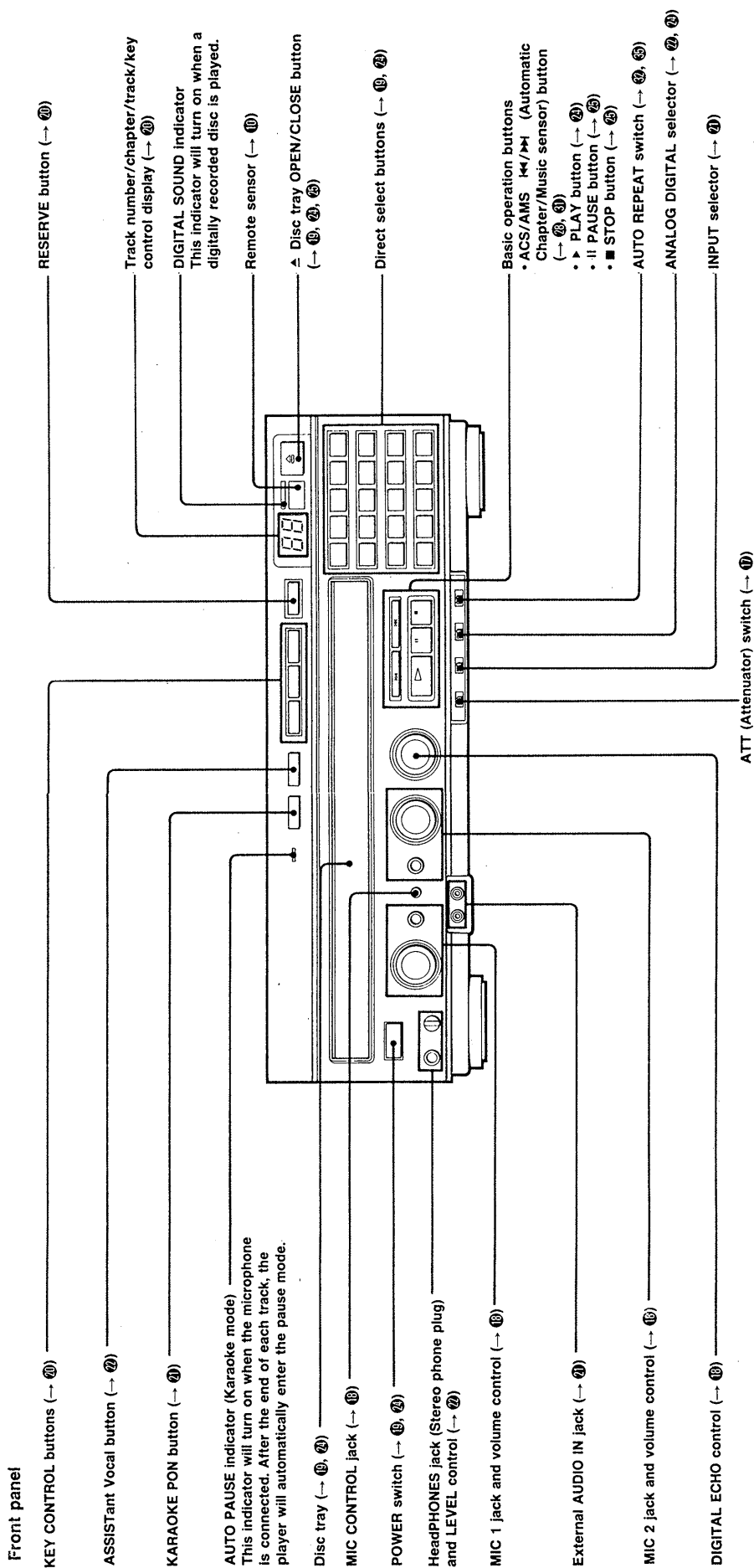
1-2. REMOVAL OF THE DISC WHEN A PROBLEM HAS OCCURRED WITH THE DISC LOADED

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



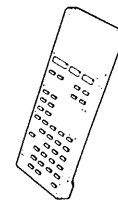
Location and Function of Controls Continued overleaf

Refer to the page indicated in the black circle for details.



Accessories The shipping box should contain the following accessories.

RMT-K1A Remote Commander



Coaxial cable with F-type connector



Video connecting cord (phone plug 1 → phone plug 1 Yellow)



Audio connecting cord (phone plug 2 → phone plug 2 Red/white)



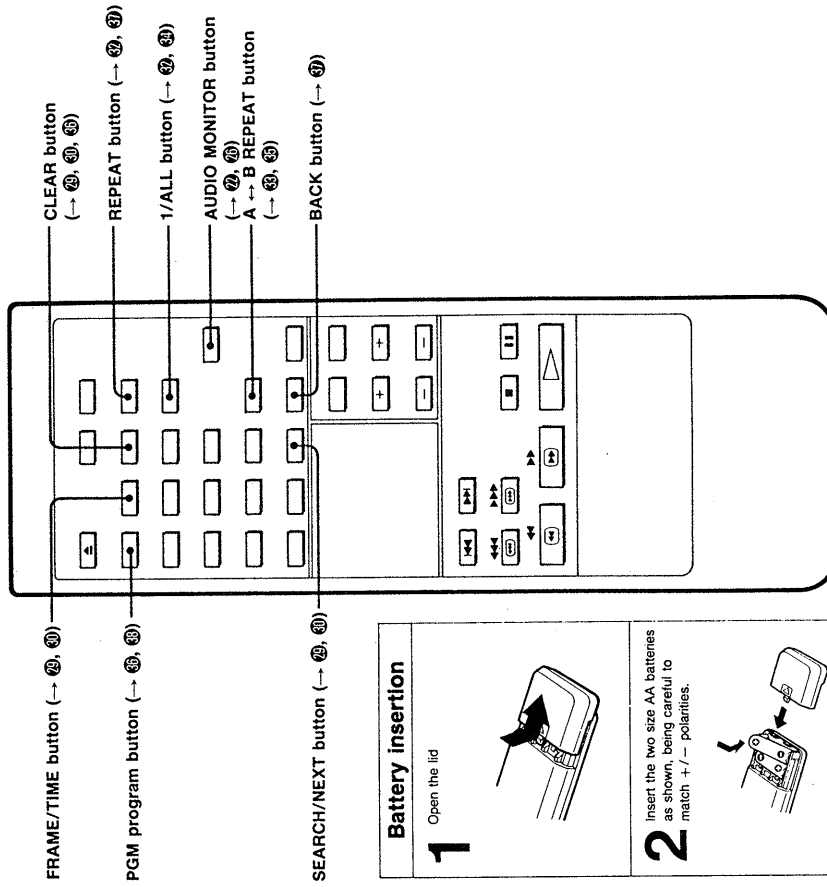
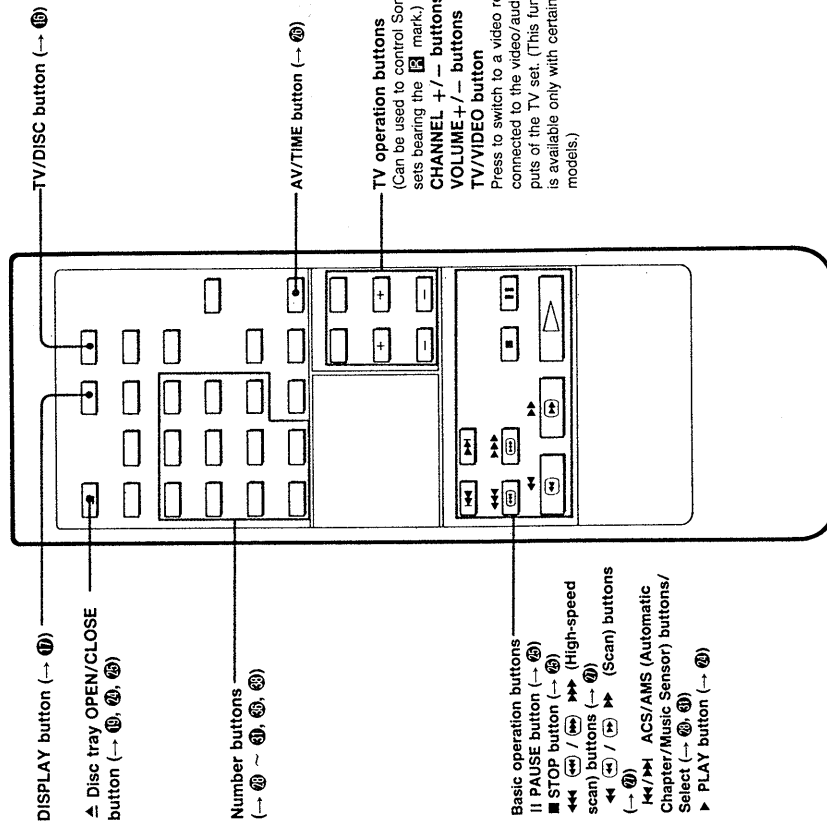
Two size AA (R6) batteries



Location and Function of Controls

Refer to the page indicated in the black circle for details.

Remote Commander



Remote Commander Precautions

- Do not let sunlight or light from a powerful artificial light source fall directly on the Remote Commander sensor on the front panel as it may interfere with operation or damage the sensor.

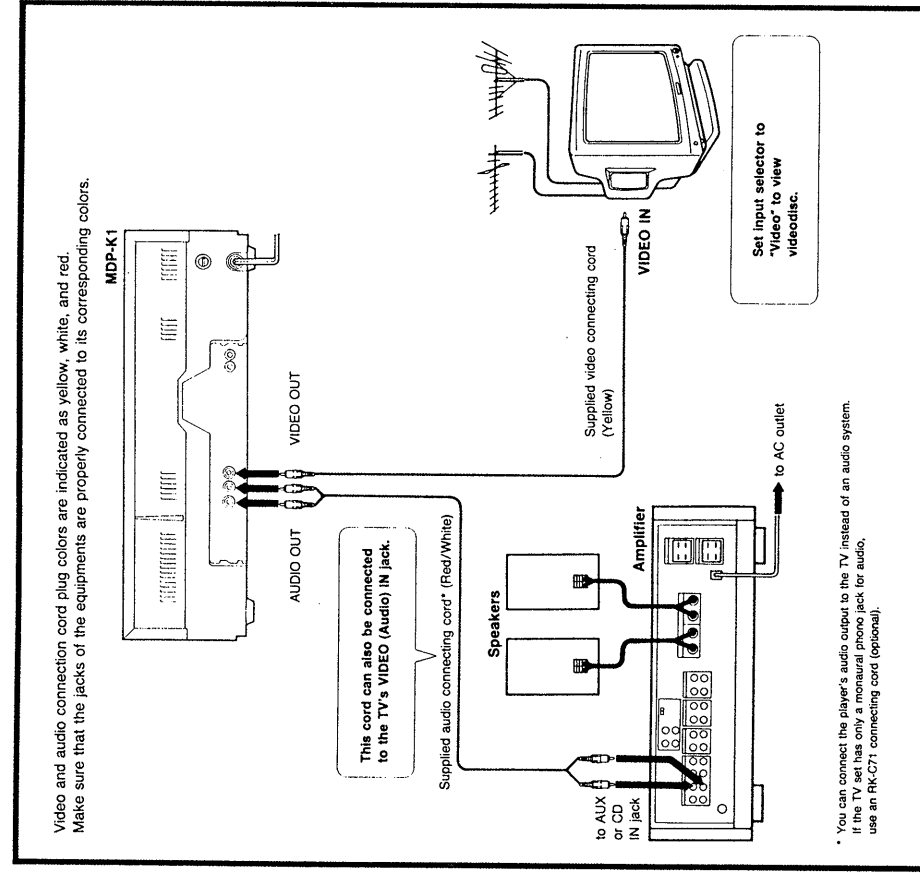
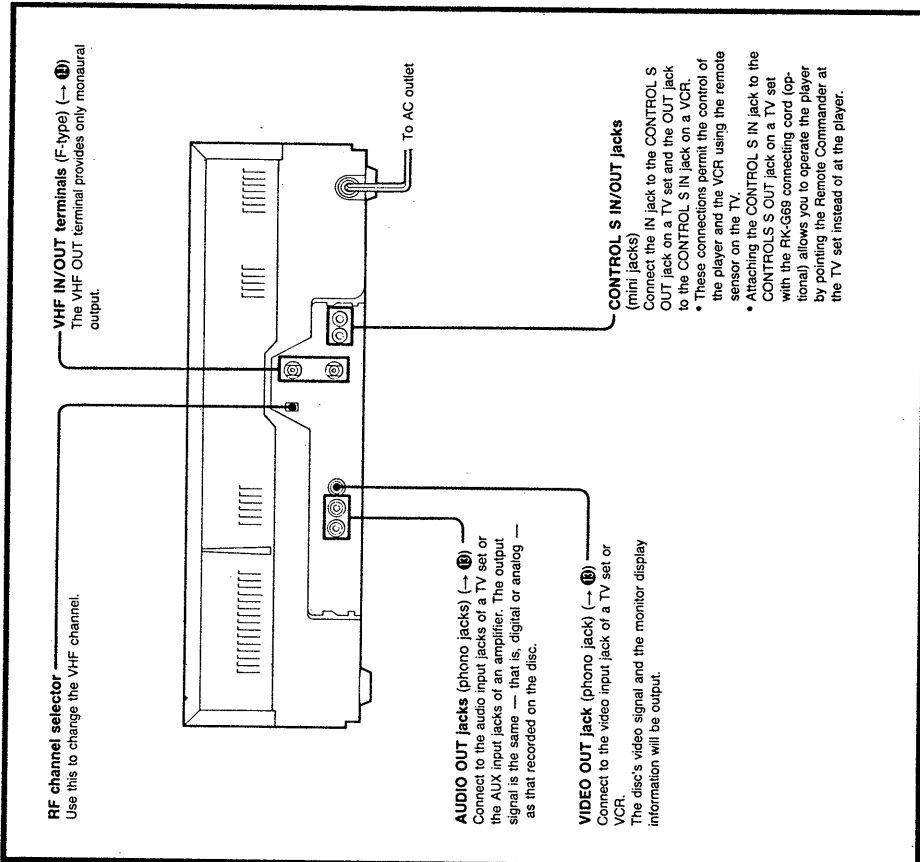
- Connecting the Control S input jack on the rear of the unit to the Control S output jack on a TV set or other piece of equipment deactivates the sensor on the front and shifts operation to the sensor on the other equipment. In this case, point the Remote Commander at the latter equipment's sensor and not at the disc player.

Battery life

In normal operation, batteries will last for about six months. If the operating range of the Remote Commander becomes noticeably short, replace the batteries with new ones.

If the Remote Commander is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

To Connect to Audio System and to TV with Video Inputs



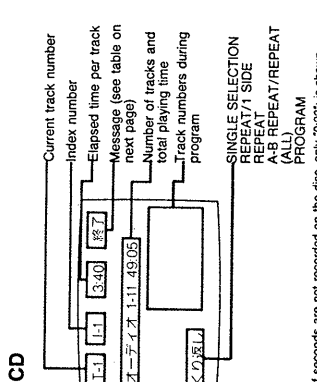
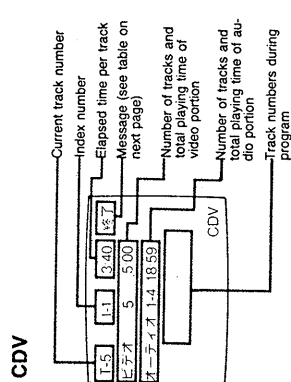
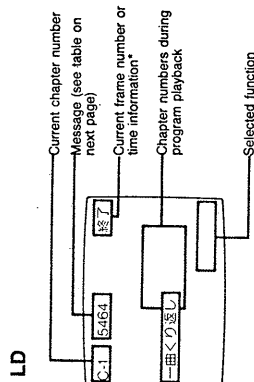
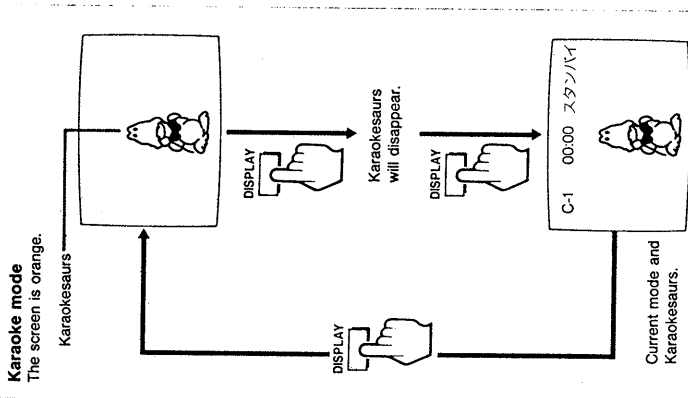
Connection Precautions

- Make sure that all equipment is OFF before connecting or disconnecting any cables.
- Check the color of the plugs: yellow indicates video; white, left audio channel; red, right audio channel.
- Firmly insert the plugs into the jacks. A loose connection can lead to noise.
- When unplugging a cable, grasp the plug. Never pull on the cable.
- To prevent interference, turn off all equipment that is connected, but not currently in use.
- If there is noise in the audio or video output, try moving the equipment further apart.
- Connection methods differ. When in doubt, consult the manufacturer's manual.

During FM or AM reception
Turn off the power to the player to prevent the possibility of noise interference.

Screen Messages

Information on the operating condition of the unit and chapter or track numbers can be superimposed on the TV or monitor screen. While no image is displayed, such as when the disc is in the stop mode, information for LD and CDV is shown on a blue background and information for CD is shown on a green background. In addition, when the microphone is connected, information for the Karaoke mode will be shown on an orange background.



* If seconds are not recorded on the disc, only "0:22" is shown.

Message 2 (Examples)

Display	Explanation
1 / 5	Main soundtrack/left channel
2 / 5	Second soundtrack/right channel

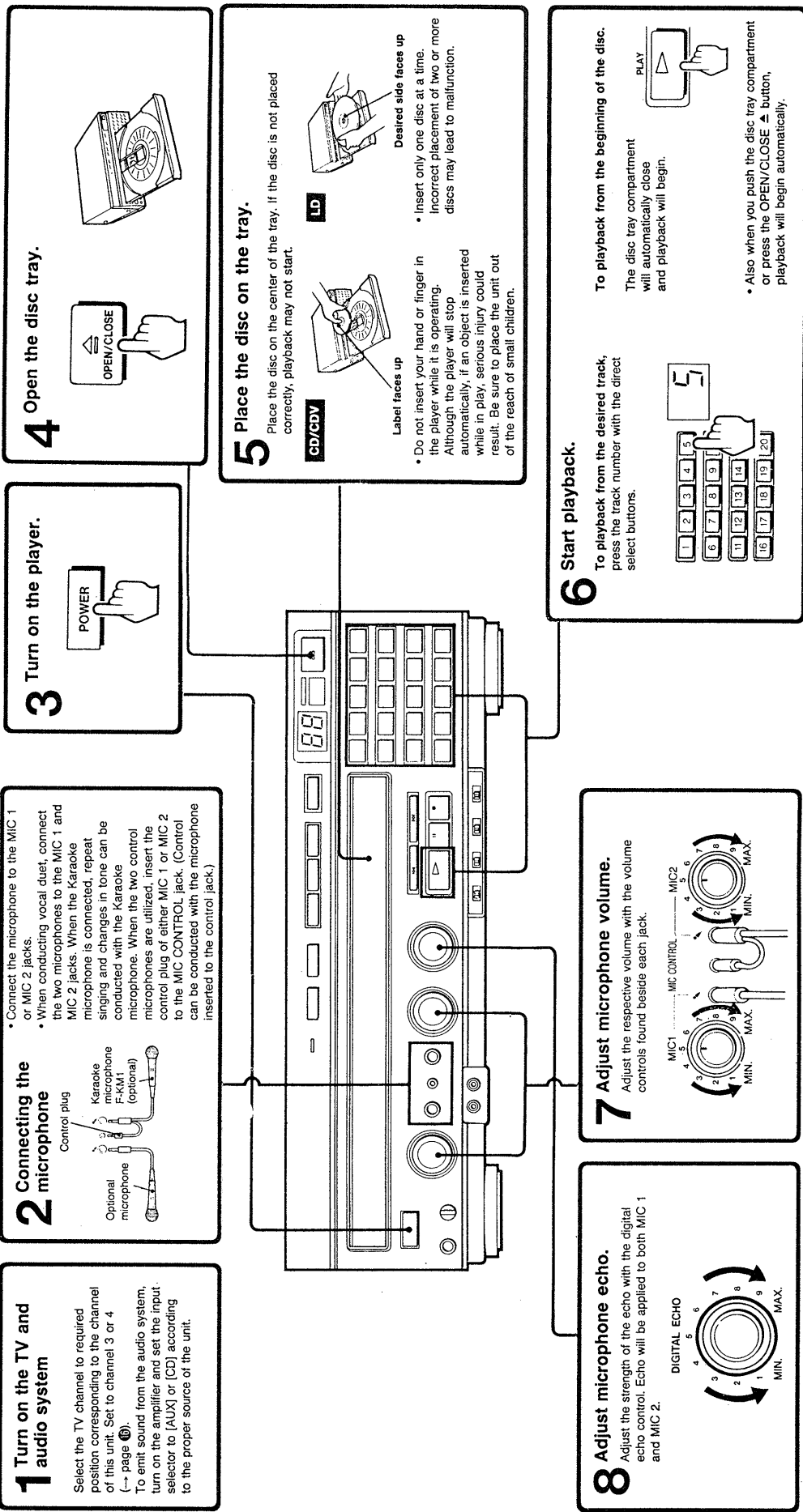
LD pre-attention

Some discs do not contain the side A or B identification code. In this case, the disc side indication may not be correct.

Message 1 (Examples)

Display	Explanation
取り出し	Eject
再生	Playback
終了	STOP
スタンバイ	PAUSE
▶	Forward speed scan
◀	Reverse speed scan
サーチ	Search

To Karaoke play



1 Turn on the TV and audio system
 Select the TV channel to required position corresponding to the channel of this unit. Set to channel 3 or 4 (→ page 6).
 To emit sound from the audio system, turn on the amplifier and set the input selector to [AUX] or [CD] according to the proper source of the unit.

2 Connecting the microphone
 • Connect the microphone to the MIC 1 or MIC 2 jacks.
 • When conducting vocal duet, connect the two microphones to the MIC 1 and MIC 2 jacks. When the Karaoke microphone is connected, repeat singing and changes in tone can be conducted with the Karaoke microphone. When the two control microphones are utilized, insert the control plug of either MIC 1 or MIC 2 to the MIC CONTROL jack. (Control can be conducted with the microphone inserted to the control jack.)

3 Turn on the player.

4 Open the disc tray.

5 Place the disc on the tray.
 Place the disc on the center of the tray. If the disc is not placed correctly, playback may not start.

LD
 • Do not insert your hand or finger in the player while it is operating. Although the player will stop automatically, if an object is inserted while in play, serious injury could result. Be sure to place the unit out of the reach of small children.

CD/CDV
 • Insert only one disc at a time. Incorrect placement of two or more discs may lead to malfunction.

Desired side faces up

8 Adjust microphone echo.
 Adjust the strength of the echo with the digital echo control. Echo will be applied to both MIC 1 and MIC 2.

7 Adjust microphone volume.
 Adjust the respective volume with the volume controls found beside each jack.

6 Start playback.
 To playback from the desired track, press the track number with the direct select buttons.

To playback from the beginning of the disc. The disc tray compartment will automatically close and playback will begin.

• Also when you push the disc tray compartment or press the OPEN/CLOSE button, playback will begin automatically.

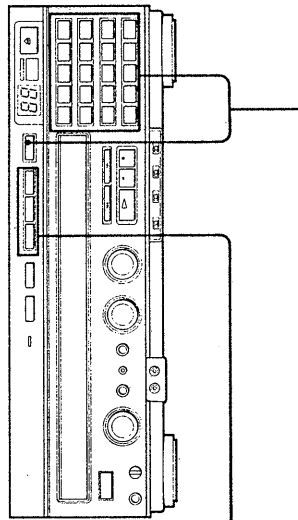
When howling occurs
 Proceed with the following measures.
 • Keep the microphone away from the speakers.
 • Lower the volume of the microphone.
 • Lower the volume of the speakers.

When the microphone is not in use
 Disconnect the microphone from the MIC jack. If the microphone is left connected, the player will automatically enter the pause condition after the end of each track.

When the sound is distorted
 Sound distortion may occur when listening with the TV speakers. Set the attenuator switch to [ON] to reduce the distortion. (The volume may be reduced, therefore adjust the TV volume accordingly.)

When the TV monitor flickers
 The TV monitor may flicker while listening with the TV speakers when the volume of the microphone is too high. To avoid this, set the attenuator switch to [ON] or reduce the volume of the microphone.

Useful Karaoke functions



To change tone for easy singing (Key control)

To change playback tone to a lower tone, press the **b** DOWN button. To change playback tone to a higher tone, press the **#** UP button.



When the KEY CONTROL buttons are pressed, the track number/chapter/track display will be replaced with the key control level (-8 ~ 8) display. After approximately 5 seconds, the display will return back to the track number/chapter/track display.

- Change tone for easy singing. Lower and higher tones can be applied through 8 stages. (total: 17 stages)
- To return to normal tone, press the NORMAL button.

To reserve the next track (Single Reserve)

While conducting vocal, the next track can be reserved.

1 Press the RESERVE button.

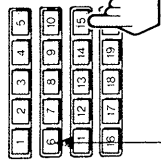


The current track is lit.



The RESERVE indicator will flash.

2 Enter the next track with the direct select buttons.



The selected track indicator will turn on.

- When the current track playback (indicator currently light) is over, the reserved track will start.

To sing with non-Karaoke discs (KARAOKE PON)

Applicable to non-Karaoke discs.



KARAOKE PON indicator will turn on.

- The singer's voice may not completely be erased depending on the discs.

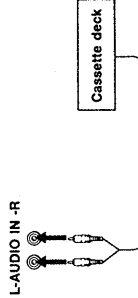
Notes on the usage of KARAOKE PON buttons

- When using the KARAOKE PON button, make sure to always utilize stereo recorded tracks. Not only would pre-recorded singer's voice be erased, but instrumentals may also be erased when utilizing monaural recorded tracks.
- The singer's voice may not be erased completely for the following, stereo recorded tracks containing only few instruments; duet tracks; tracks with strong echoes and chorus; tracks with singer's voice deviating from the center; and dubbed tapes.
- When the KARAOKE PON button is used, the playback sound will be monaural.

To sing with Karaoke tapes. (External AUDIO IN)

Karaoke play can be conducted also with a cassette deck and the Karaoke tapes.

1 Connect the cassette deck to the external AUDIO IN jacks.



2 Set the External Input selector on the main unit to [ON].



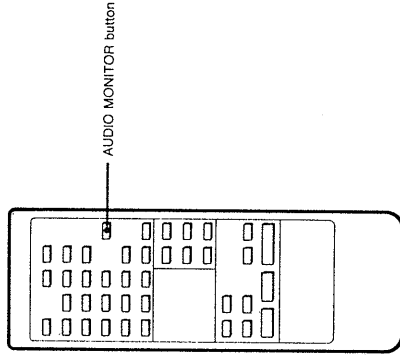
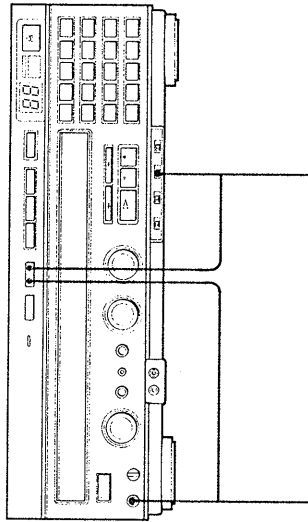
- To return to disc playback mode, set the External Input selector to [OFF].

Note:
When the KARAOKE PON feature is utilized, do not press the ASSISTANT Vocal button.

Useful Karaoke functions

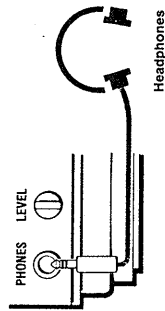
To sing along and practice with the singer

When using multiplex discs, the pre-recorded singing can be heard. This is a convenient feature for practicing.

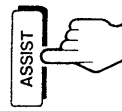


Listening with the headphone (Assistant Vocal)
Listening to the singer's voice through the headphones only.

1 Connect the headphones.



2 Press the ASSISTant Vocal button.



The ASSISTant Vocal indicator will turn on.

Listening with the speakers
Listening to the singer's voice with the connected TV or audio system speakers.

1 Press the ASSISTant Vocal button.

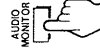


The ASSISTant Vocal indicator will turn out.

2 Set the ANALOG DIGITAL selector on the main unit to ANALOG.



3 Press the AUDIO MONITOR button on the remote commander to listen to the singer's voice.



* Step 2 is not necessary when using discs containing only analog audio or disc containing multiplex digital audio.

When listening with headphones
Plug stereo headphones into the PHONES jack and adjust the listening volume with the LEVEL control.

Note:
Pressing the KARAOKE PON button will not produce the desired effect when the ASSISTant Vocal feature is being utilized.

Using the Karaoke microphone

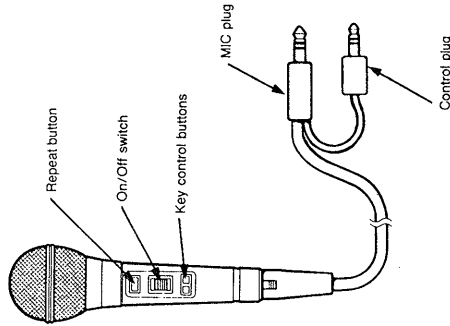
When using the optional Karaoke microphone (F-KM1), the following convenient operations can be conducted.

Repeat singing operation

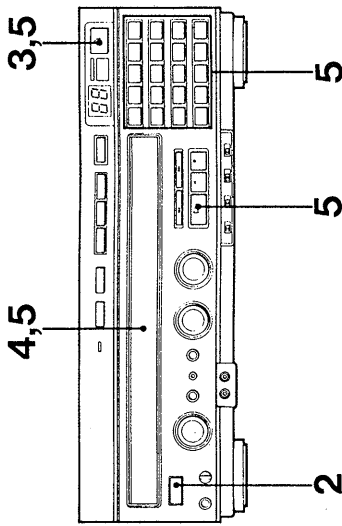
You can conduct repeat singing operations from the microphone at your finger tip if you make mistakes at the beginning of the song. Keep the Repeat button pressed and release at the desired point.

Key control

You can conduct key control operations from the microphone at your finger tip. (Key control operation identical to the player can be conducted from the microphone.)



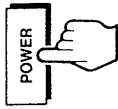
To Play a Disc



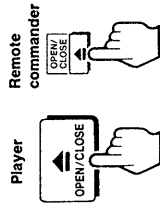
1 Turn on the TV and stereo system.

TV: Select the channel used for videodisc playback or video input. (See p.66)
Stereo system:
Turn on the amplifier or receiver and select the proper audio input.

2 Turn on the player.

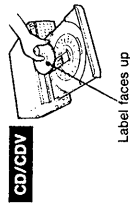


3 Open the disc tray.

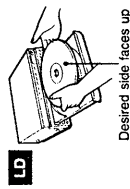


4 Place the disc on the tray.

Place the disc in the center of the tray. If the disc is not placed correctly, playback may not start.



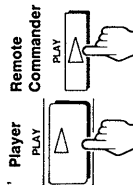
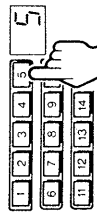
Label faces up



Desired side faces up

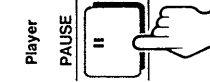
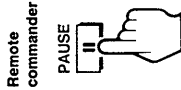
5 Start playback.

To playback from the desired track, press the track number with the direct select buttons.



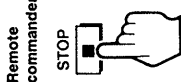
- The disc tray compartment will automatically close and playback will begin.
- Push the disc tray compartment or press the OPEN/CLOSE button, and playback will also begin.
- LD and CD playback will start from the first track. CDV playback starts from the video portion.

To temporarily interrupt playback



- When playing CAV discs, the sound is cut off and a still picture is shown.
- When playing other discs, the unit will enter the pause condition and no image will be displayed, and information will be shown on a blue, green or orange background.
- There is no sound output.
- To resume play from the same point, press the II button.

To stop playback



Press the ► button to restart playback from the beginning of the disc.

To stop playback and remove disc



Remove disc and press the ► button to restart playback from the beginning of the disc.

Using an optional timer

To automatically start playback with an optional timer, leave the POWER switch of the disc player in the depressed position. When the timer supplies power at the preset time, the unit turns on and playback begins.

To pause at the beginning of a disc

Press the II button on the player or the Remote Commander. The tray closes, and the player pauses at the beginning of the disc.

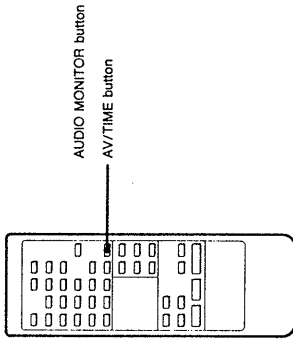
Discs with CX Label

Discs bearing the CX label are recorded with the CX noise reduction system which improves the signal-noise ratio and enlarges the dynamic range of audio signals recorded on the video discs.

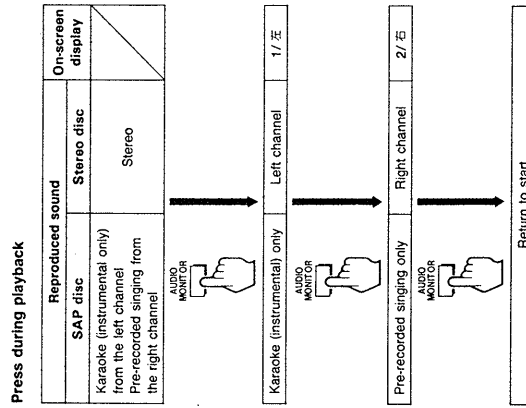
However, some CX discs do not include the necessary code to automatically activate the player's CX noise reduction system. In this case, the CX noise reduction system is not activated.

- When DIGITAL SOUND is selected, the CX noise reduction system is not affected.
- CX is a trademark of CBS. This unit is developed to accommodate discs bearing the CX label specifications.

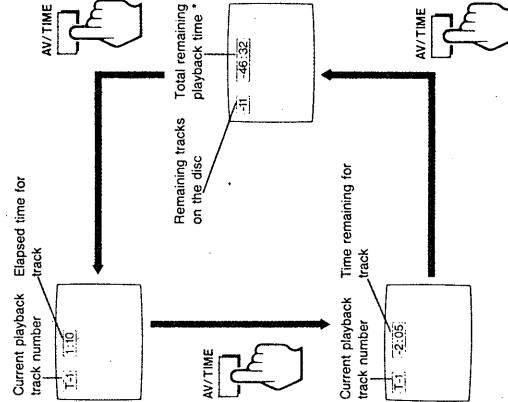
To Play a Disc



To play a stereo LD or a second audio program (SAP) LD



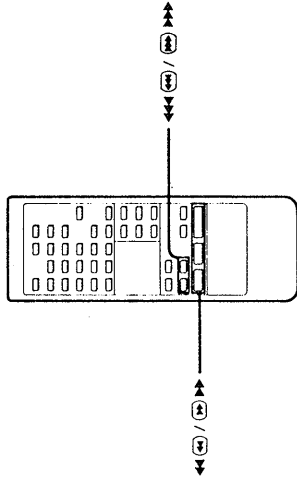
To change time play (CD/CDV)



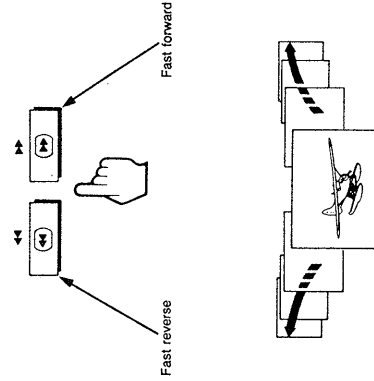
For CDV only
The AUDIO PART (audio) display will turn on during audio part playback. The VIDEO PART (video + audio) display will turn on during video part playback.

Note on LD discs
The time display function is available only with an LD containing TOC data. First, the elapsed time or the number of frames is displayed. Pressing the AV/TIME button then changes the time display as shown above.

To Search for a Particular Scene — Scanning

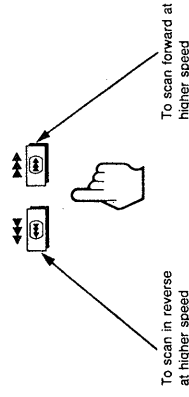


To scan at fast speed



Scanning continues until the button is released.

To scan at higher speed

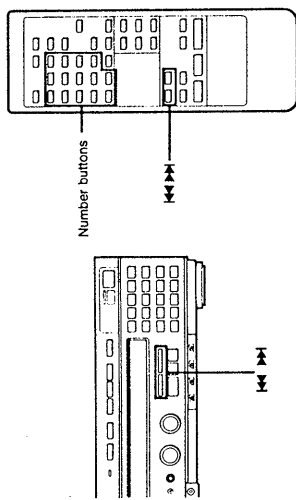


While scanning in either direction

- There is no sound output.
- The image during scanning with a CLV disc will be in black and white with some instability.
- Scanning speed varies according to the position on the CLV disc.
- A certain amount of noise is inevitable with all scanning operations.

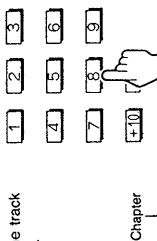
To Search for a Particular Scene (LD/CDV) — Searching by Chapter/Track Number

Chapters and tracks are contained in a disc. LDs are divided into sections called chapters. CD/CDVs are divided into track numbers which are assigned to each selection. Such discs usually have a list of chapters or tracks on the jacket or label.



Direct chapter or track search

Enter the track number.



Playback will start from the beginning of the selected track.

- If you've pressed the wrong number, simply press the correct one.

- To enter a number greater than 10, use the '+10' and '0' buttons.

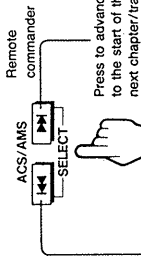
Examples: 14: $+10 \rightarrow 4$
20: $+10 \rightarrow +10 \rightarrow 0$

- If the +10 button was pressed by mistake, press the button repeatedly to revert to 0- or 1-.

- If a track number not contained in a disc with TOC (Table of Contents) or CDV is entered, the entry will be ignored. If a track number not contained in a LD without TOC is entered, the last picture will be played and the player will stop.

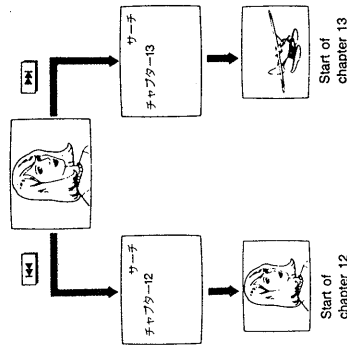
- For standard-play (CAV) discs, the player will resume to the playback mode prior to the entry of the button. (Eg. When the track number is entered during the freeze-frame mode, it will return to the freeze-frame mode.)

Skip chapter or track search



Press once to return to the start of the current chapter/track. Press a second time — before the picture appears — to return to the start of the previous chapter/track.

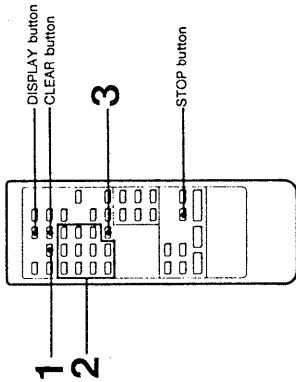
Example Current chapter = 12



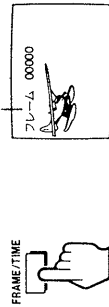
To Search for a Particular Scene (LD) — Searching by Frame Number

For CAV (standard-play) discs only

Enter the frame number to search for a particular scene. Each picture on a standard-play disc is called a frame.

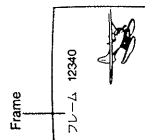
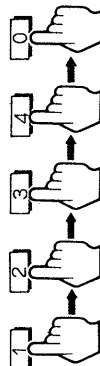


1 Press the FRAME/TIME button.



2 Enter the frame number.

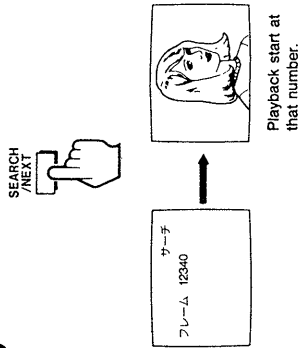
Example Locate frame number 12340.



If you make a mistake

- Press the FRAME/TIME button once more to return the display indication to zero, and then enter the correct number.
- If a number not contained on a disc is entered, the last scene will be played and playback will stop.

3 Press SEARCH/NEXT button.



Search can be performed while in the freeze-frame, pause, and speed play modes as well as the normal playback mode. When the desired frame appears after the search, playback continues in the same mode.

Frame search

To check the current chapter and frame numbers These numbers appear in the display window on the player. Press the DISPLAY button on the Remote Commander to display them on the screen.

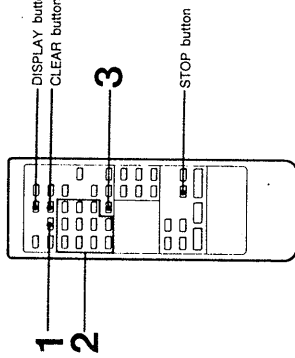
To cancel frame search

Before SEARCH/NEXT button was pressed: Press the CLEAR button.
After SEARCH/NEXT button was pressed: Press the ■ button.

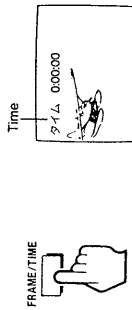
To Search for a Particular Scene (LD) — Searching by Time

For CLV (extended-play) only

Enter the time to search for particular scenes. Extended-play discs keep track of position as elapsed time from the beginning of the disc.

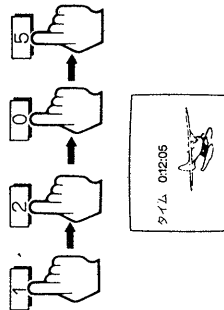


1 Press FRAME/TIME button.



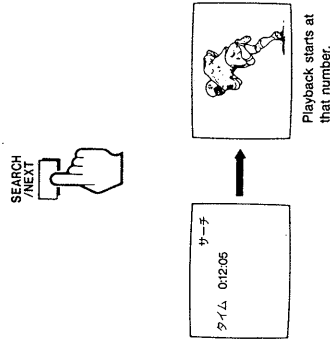
2 Enter the time.

Example Locate the 12 min 05 sec point.

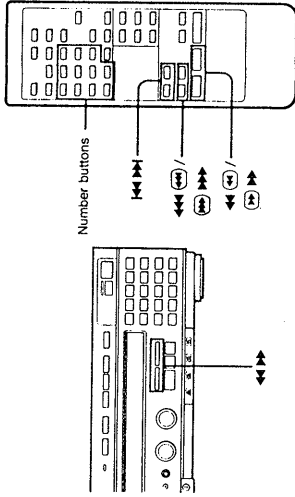


- If the disc does not include time data in seconds, enter the time in minutes only.
- If you make a mistake, press the FRAME/TIME button once more to return the display indication to zero, and then enter the correct number.
- If the number selected is greater than the total time of the disc, playback stops then resumes from the beginning of the disc.

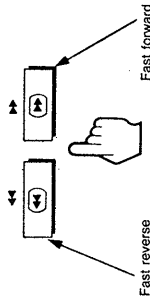
3 Press the SEARCH/NEXT button.



To Search for a Particular Track (CD/CDV)

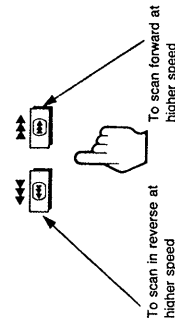


To scan at fast speed



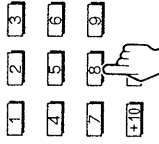
Release the button to resume normal playback.

To scan at higher speed



To search by track number

Enter the track number



Playback will start from the beginning of the selected track.

When a wrong number was entered

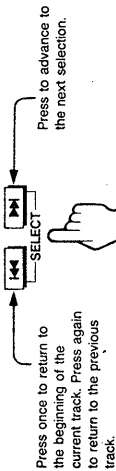
Press the button for the correct number. To enter chapter numbers over 10 Use the +10 and "0" buttons.

Examples: To enter 14: +10 → 4
To enter 20: +10 → +10 → 0
If the +10 button was pressed by mistake Press the button repeatedly to revert to — or 1.

- If a track number not contained in a disc is entered, the entry will be ignored.

- The player will resume to the playback mode prior to the entry of the button. (Eg. When the track number is entered during the pause mode, the player will return to the pause mode.)

To skip tracks



Time search

To cancel time search Before SEARCH/NEXT button was pressed: Press the CLEAR button.

After SEARCH/NEXT button was pressed: Press the ■ button.

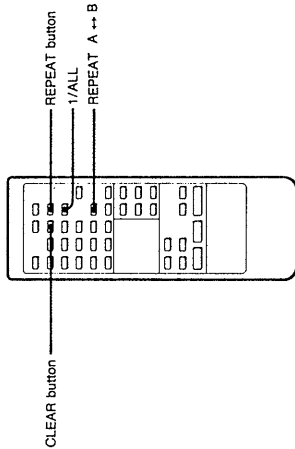
Sound during search

When scan is started from the playback mode, the sound can be heard at a low level. When scan was started from the pause mode, the sound is muted.

Note:

Fast forward and fast reverse can not be conducted from the stop mode. When fast forward and fast reverse are conducted from the pause mode, the sound will be muted.

To Play Repeatedly (LD/CDV)



To repeat the current chapter or track (Single Repeat)

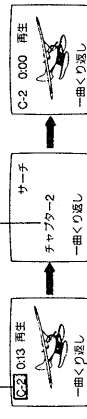
1 Press the REPEAT button.



2 Press the 1/ALL button.



Shown on TV screen when DISPLAY button is pressed
Current chapter/track



When the player reaches the end of the current chapter/track, it automatically repeats from the beginning of the current chapter/track.

To cancel SINGLE Repeat

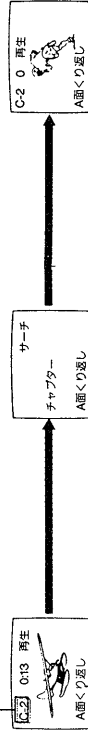
- Press the 1/ALL repeat button again and then press the REPEAT button.

To repeat the entire side of the disc (ALL Repeat)

Press the Repeat button.



Shown on TV screen when DISPLAY button is pressed
Current chapter/track



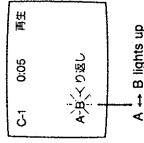
When the player reaches the end of the side, it automatically repeats the side.

- To cancel ALL Repeat Press the REPEAT button again.
- When "ON" is selected with the AUTO REPEAT switch on the main unit, the repeat mode will be conducted at all times. To cancel the repeat mode, select "OFF" with the AUTO REPEAT switch on the main unit.

To repeat a specific section of a disc (A ↔ B Repeat)

1 Press the A ↔ B Repeat button at start of desired section (A point).

Shown on TV screen when DISPLAY button is pressed



2 Press the A ↔ B Repeat button at end of desired section (B point).

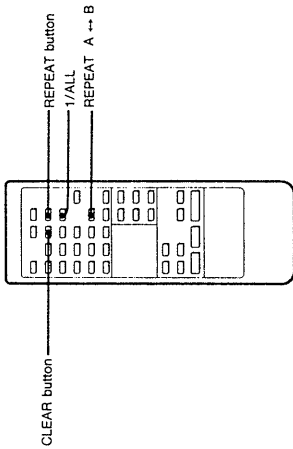
End of desired section B



Unit returns to start of specified section and resumes playback.

- To cancel A ↔ B repeat Press the CLEAR button.

To Play Repeatedly (CD/CDV)



To repeat the current track — Single Repeat

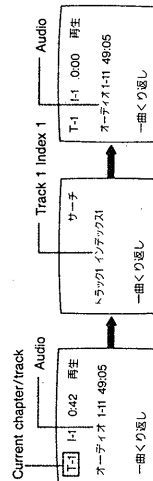
1 Press the Repeat button.



2 Press the 1/ALL button.



Shown on TV screen when DISPLAY button is pressed



When the player reaches the end of the current track, the player will automatically repeat from the beginning of the current track.

To cancel SINGLE Repeat
 • Press the 1/ALL repeat button again and then press the REPEAT button.

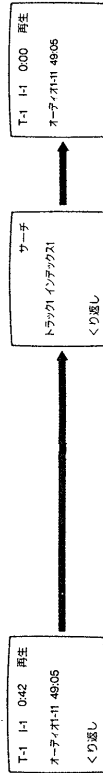
To repeat all tracks — All Repeat

Press the Repeat button.



Shown on TV screen when DISPLAY button is pressed

Current chapter/track

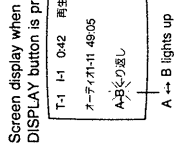
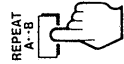


When the player reaches the end of the side, it automatically repeats the side.

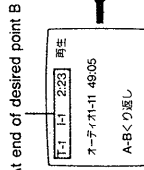
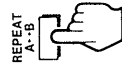
- To cancel ALL Repeat
 Press the REPEAT button again.
- When "ON" is selected with the AUTO REPEAT switch on the main unit, the repeat mode will be conducted at all times. To cancel the repeat mode, select "OFF" with the AUTO REPEAT switch on the main unit.

To repeat a specific section of a disc — A ↔ B Repeat

1 Press the A ↔ B Repeat button at start of desired A point.



2 Press the A ↔ B Repeat button at end of desired B point.

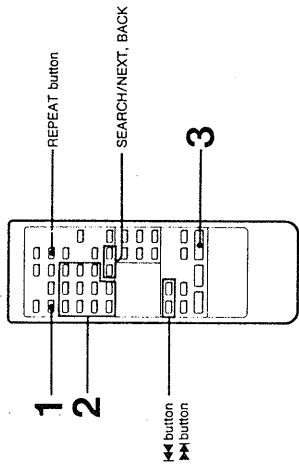


Unit returns to start of specified section and resumes playback.

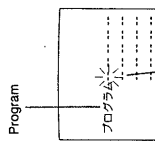
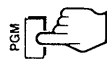
- To cancel A ↔ B repeat
 Press the CLEAR button.

To Play Only Certain Chapters/Tracks (LD/CDV) — Program Playback

This function plays up to 20 chapters or tracks in a specified order.



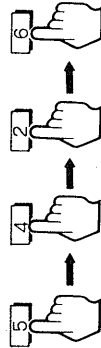
1 Press the PGM button.



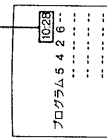
The "—" at the upper left-hand corner will flash.

2 Enter the chapter numbers.

Example Play LD chapters 5, 4, 2, and 6 — in that order.



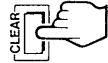
For LDs containing TOC (Table of Contents) data, the total playback time of programmed chapters is shown.



- To enter chapter numbers over 10 Use the +10 and "0" buttons.
Examples: To enter 14: [+10] → [4]
To enter 20: [+10] → [+10] → [0]
- If the +10 button was pressed by mistake, press the +10 button repeatedly to revert to 0- or 1-.
- If a track number not contained in a disc is entered, the entry will be ignored.

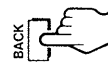
If you make a mistake

To start over



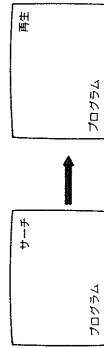
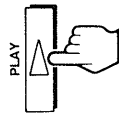
Press the CLEAR and PGM button and enter the correct numbers.

To change a number



Press the NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.
Enter a new number.

3 Press the ► button.



The player searches for and then plays the first chapter/track specified — chapter 5 here. After playing all programmed chapters, playback stops.

To release or cancel program playback
Press the CLEAR button or the 1/ALL button. The unit reverts to normal playback.

To repeat program playback
Use the REPEAT button to call up the REPEAT display.

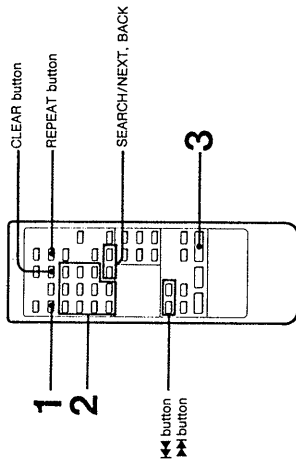
To move to preceding or following programmed track.
Press the ⏮ or ⏭ button.

To check the program contents
Press the PROGRAM button. The program is displayed for about 3 seconds.
The currently playing program number is flashing.

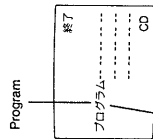
The contents of a program are stored until the disc is removed or the player is turned off.

To Play Only Certain Tracks (CD/CDV) — Program Playback

This function plays up to 20 tracks in a specified order.



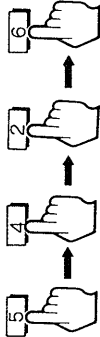
1 Press the PGM button.



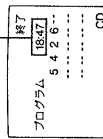
The "—" at the upper left-hand corner will flash.

2 Enter the track numbers.

Example Play tracks 5, 4, 2, and 6 — in that order.



The total program time will be displayed if the track numbers are below 20.



• To enter chapter numbers over 10

Use the +10 and "0" buttons.

Examples: To enter 14; [+10] → [4]

To enter 20; [+10] → [+10] → [0]

• If the +10 button was pressed by mistake, press the +10

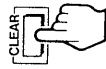
button repeatedly to revert to - or 1.

• If a track number not contained in a disc is entered, the

entry will be ignored.

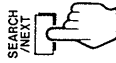
If you make a mistake

To start over



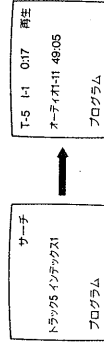
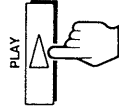
Press the CLEAR and PGM button and enter the correct numbers.

To change a number



Press the NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes. Enter a new number.

3 Press the ► button.



The player searches for and then plays the first track specified — track 5 here. After playing all programmed tracks, playback stops.

• To release or cancel program playback
Press the CLEAR button or the 1/ALL button. The unit reverts to normal playback.

• To repeat program playback
Use the repeat button to call up the REPEAT display.

To move to a preceding or following programmed track.
Press the ◀ or ▶ button.

To check the program contents
Press the PROGRAM button. The program is displayed for about 3 seconds.
The currently playing program number is flashing.

The contents of a program are stored until the disc is removed or the player is turned off.

SECTION 3 DISASSEMBLY

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

3-1. REMOVAL OF UPPER CASE AND FRONT PANEL ASSEMBLY

• Follow the disassembly procedure in the numerical order given.

Note: Make sure to remove the front cover after having pull out tray.

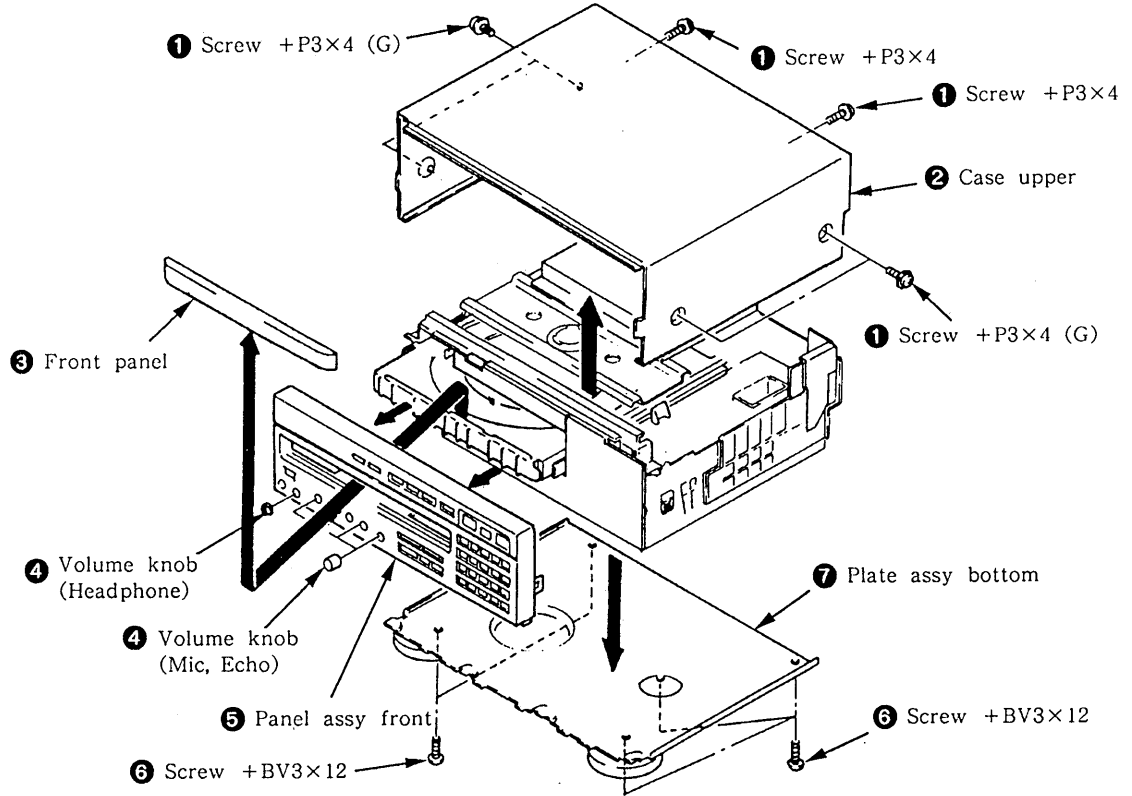


Fig. 3-1.

3-2. OPENING OF THE MB-18 BOARD AND DS-32 BOARD

Note: Pulling out claws **A** from fram.

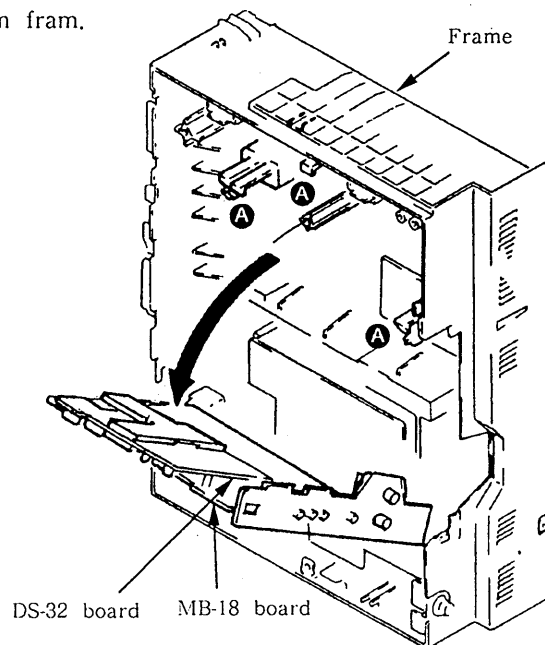


Fig. 3-2.

3-3. REMOVAL OF MD CHASSIS AND OPTICAL CHASSIS

- 1) Remove of MD chassis.
- 2) Remove of torsion spring from MD chassis.
- 3) Stopper ③ in the turn of arrow.
- 4) Remove of chassis assy.
- 5) Remove of torsion spring.

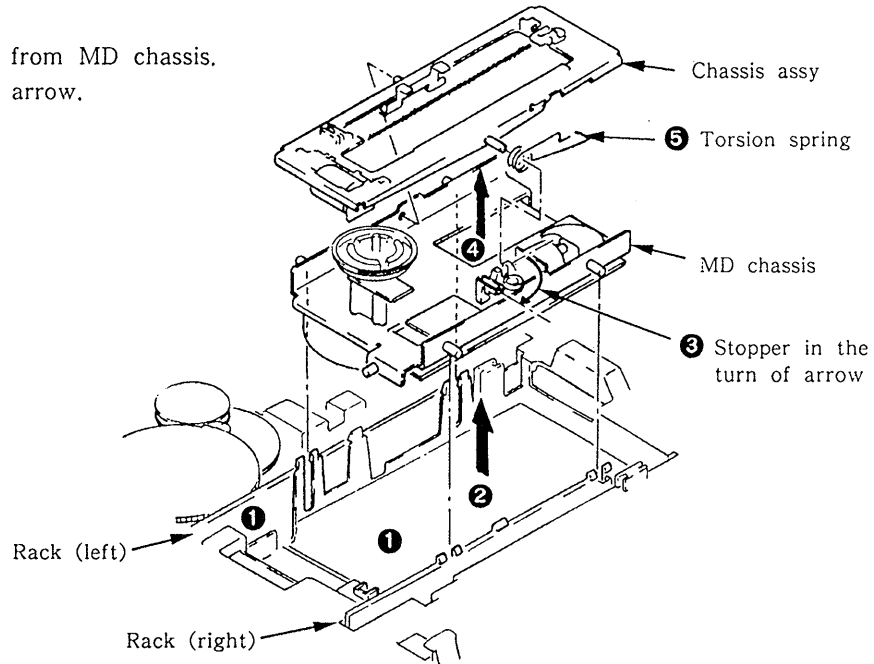


Fig. 3-3.

3-4. REMOVAL OF THE TURNTABLE SPINDLE MOTOR TILT MOTOR, SV-33 BOARD, FG-13 BOARD

Note : Turntable fix 33mm from MD chassis. (Fig. 5)

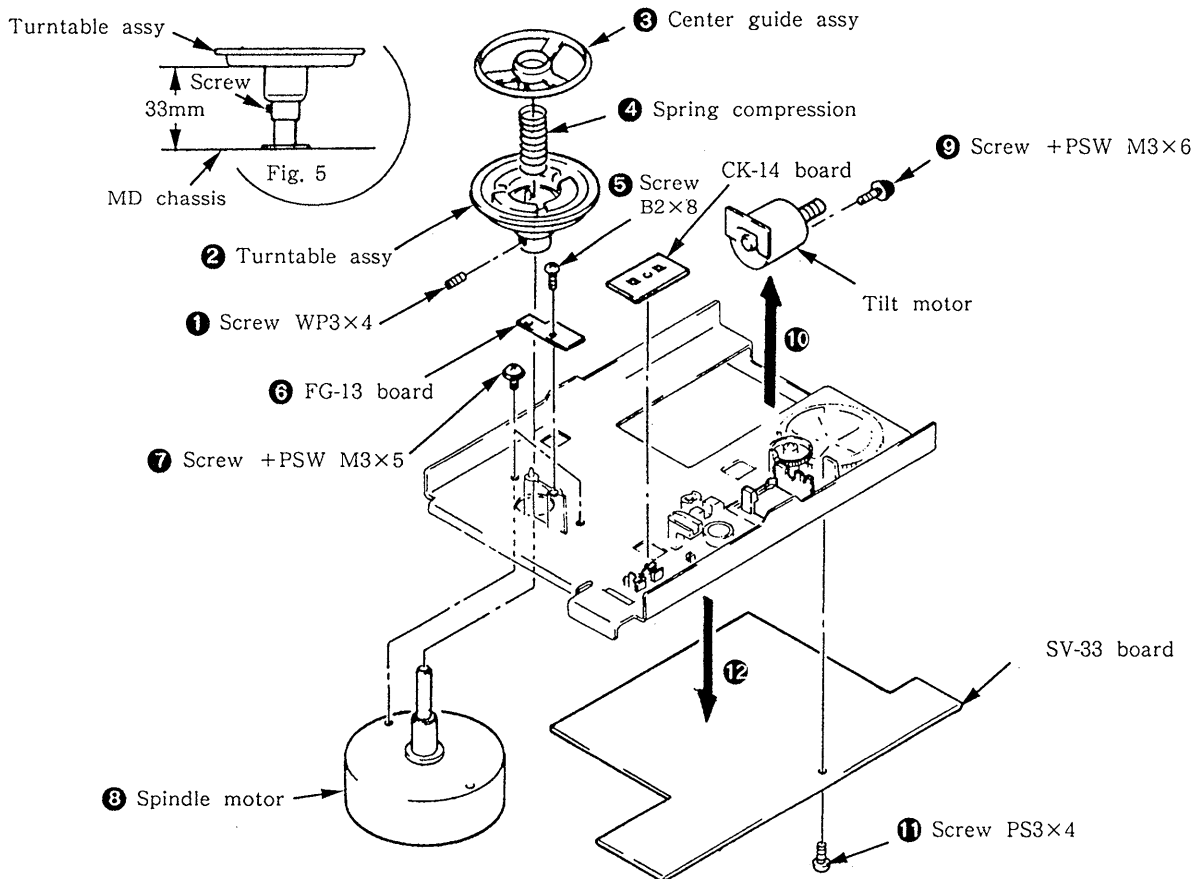


Fig. 3-4.

3.5. REMOVAL OF THE OPTICAL BLOCK ASSEMBLY

- 1) Remove of screw M3×6.
- 2) Direction of arrow ③ .

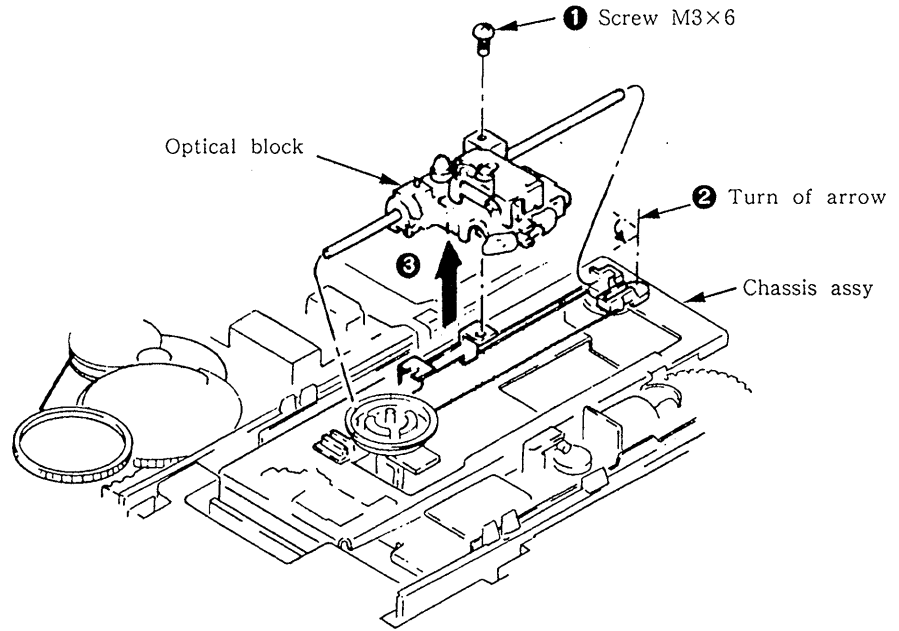
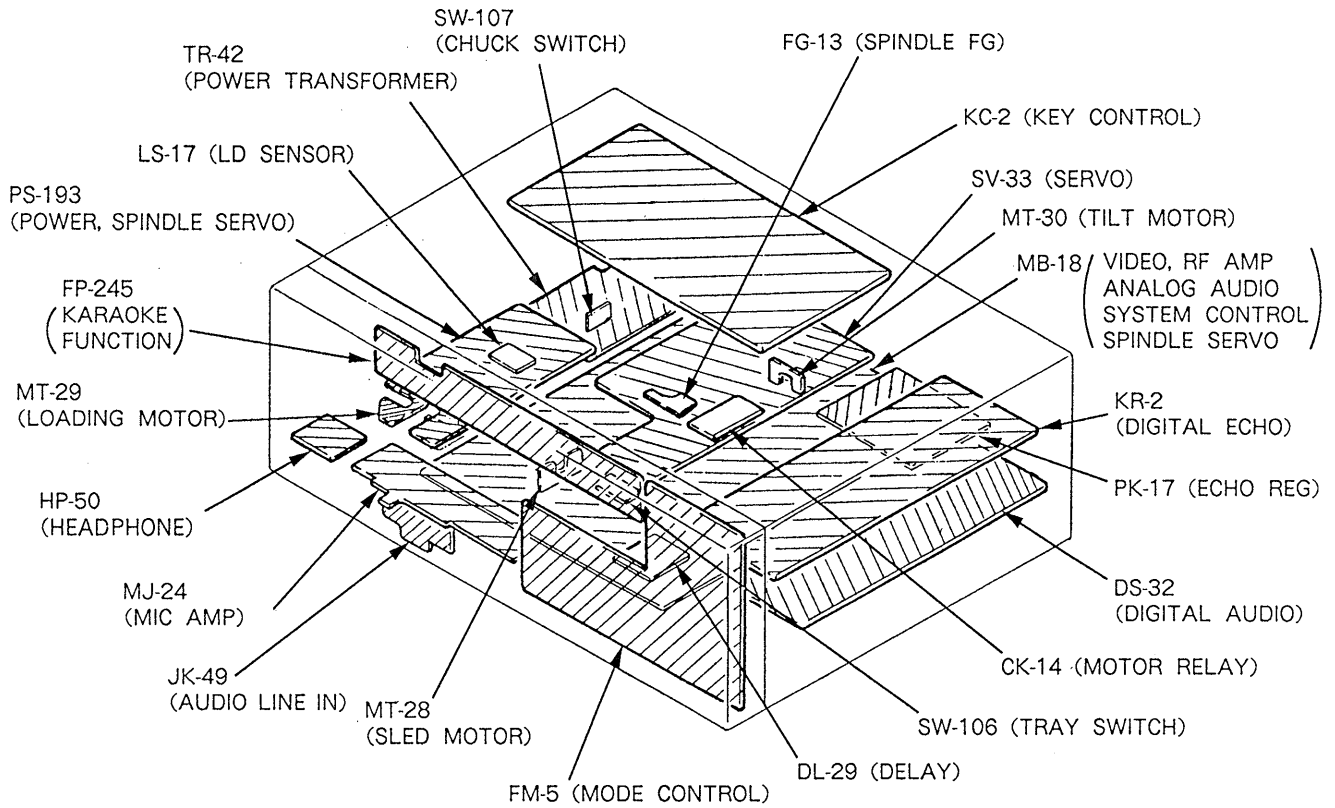


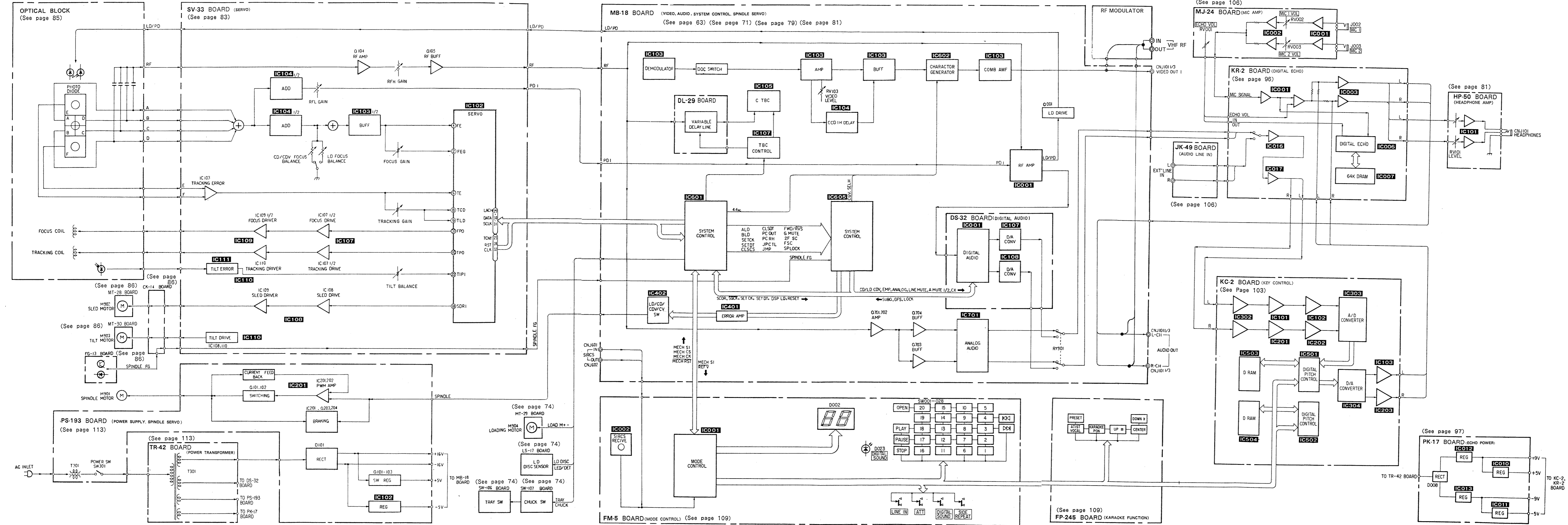
Fig. 3-5.

SECTION 4 DIAGRAMS

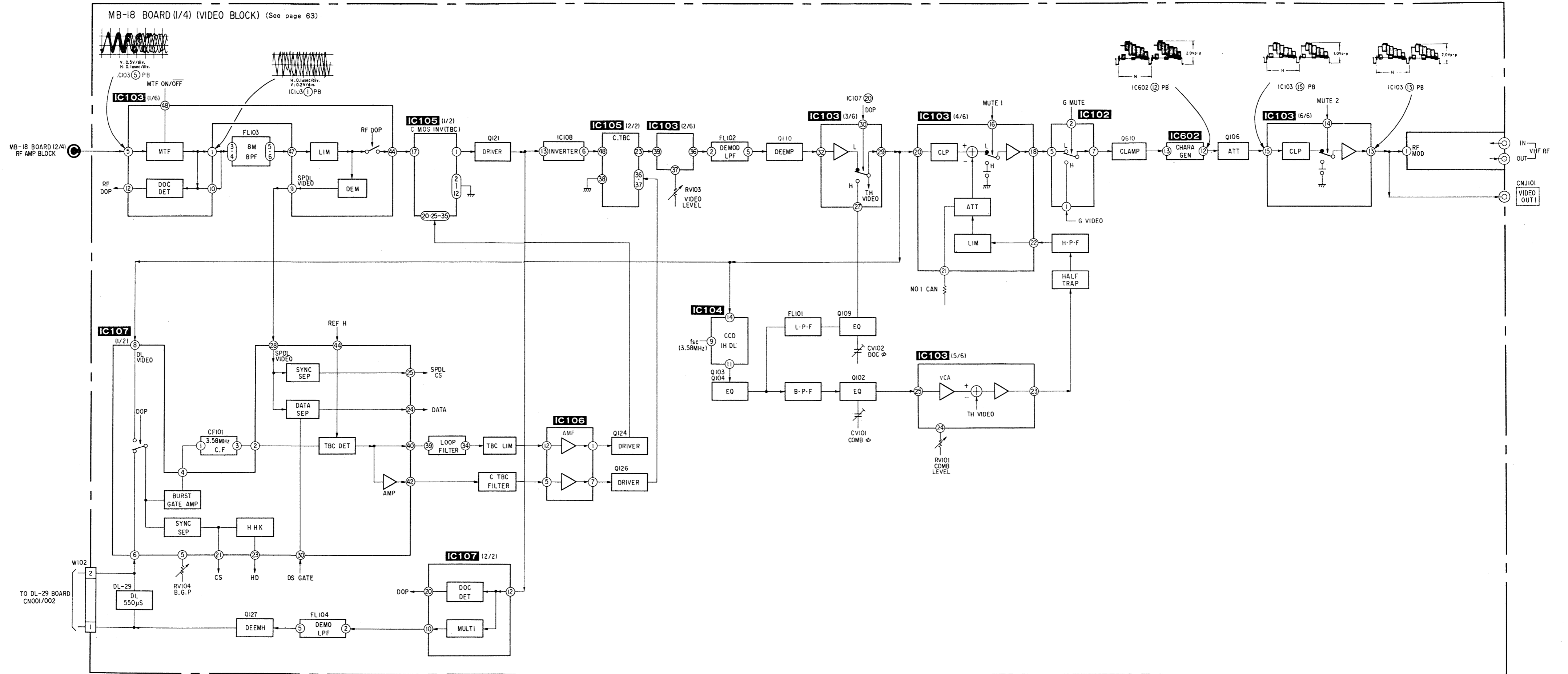
4-1. CIRCUIT BOARDS LOCATION



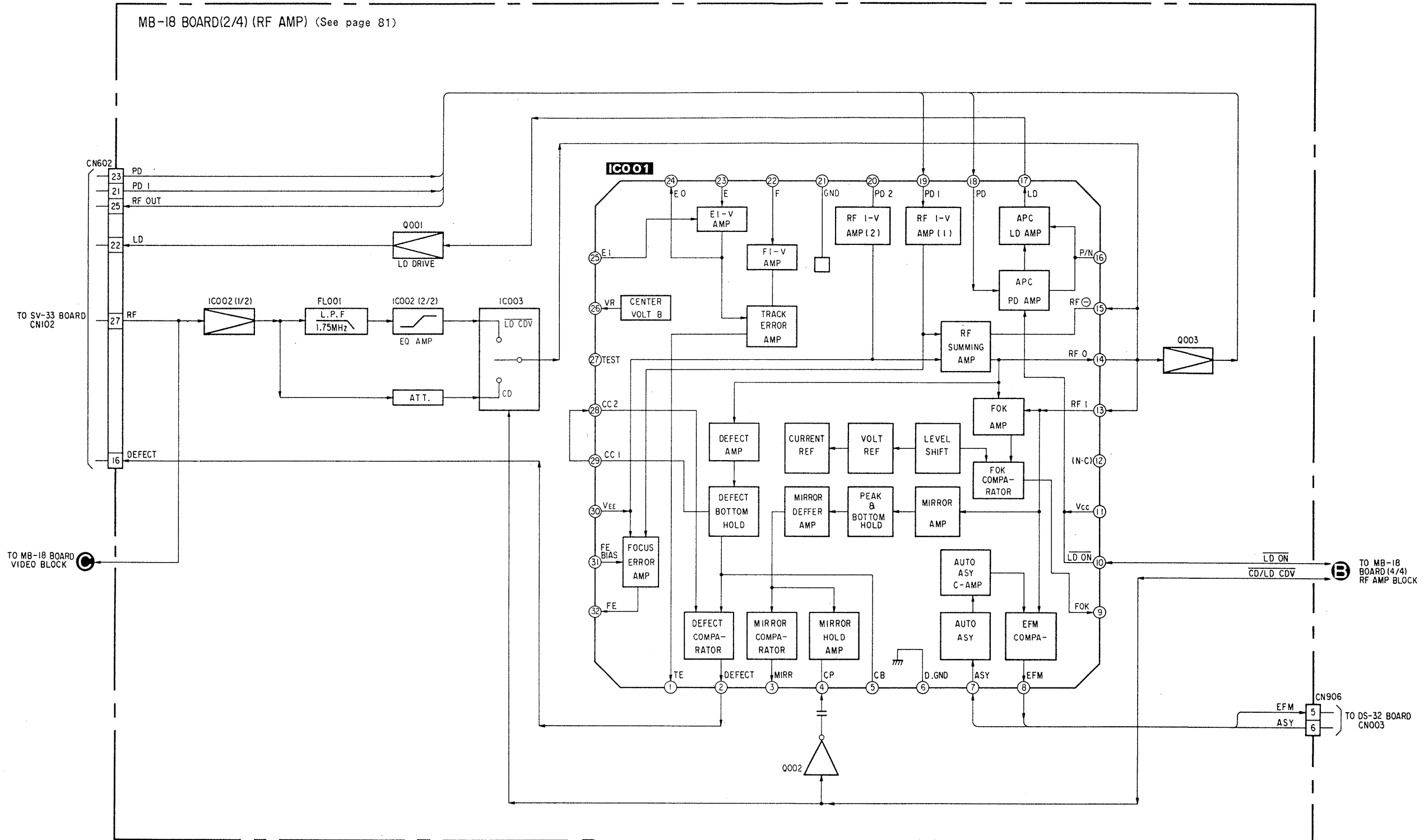
4-2. OVERALL BLOCK DIAGRAM



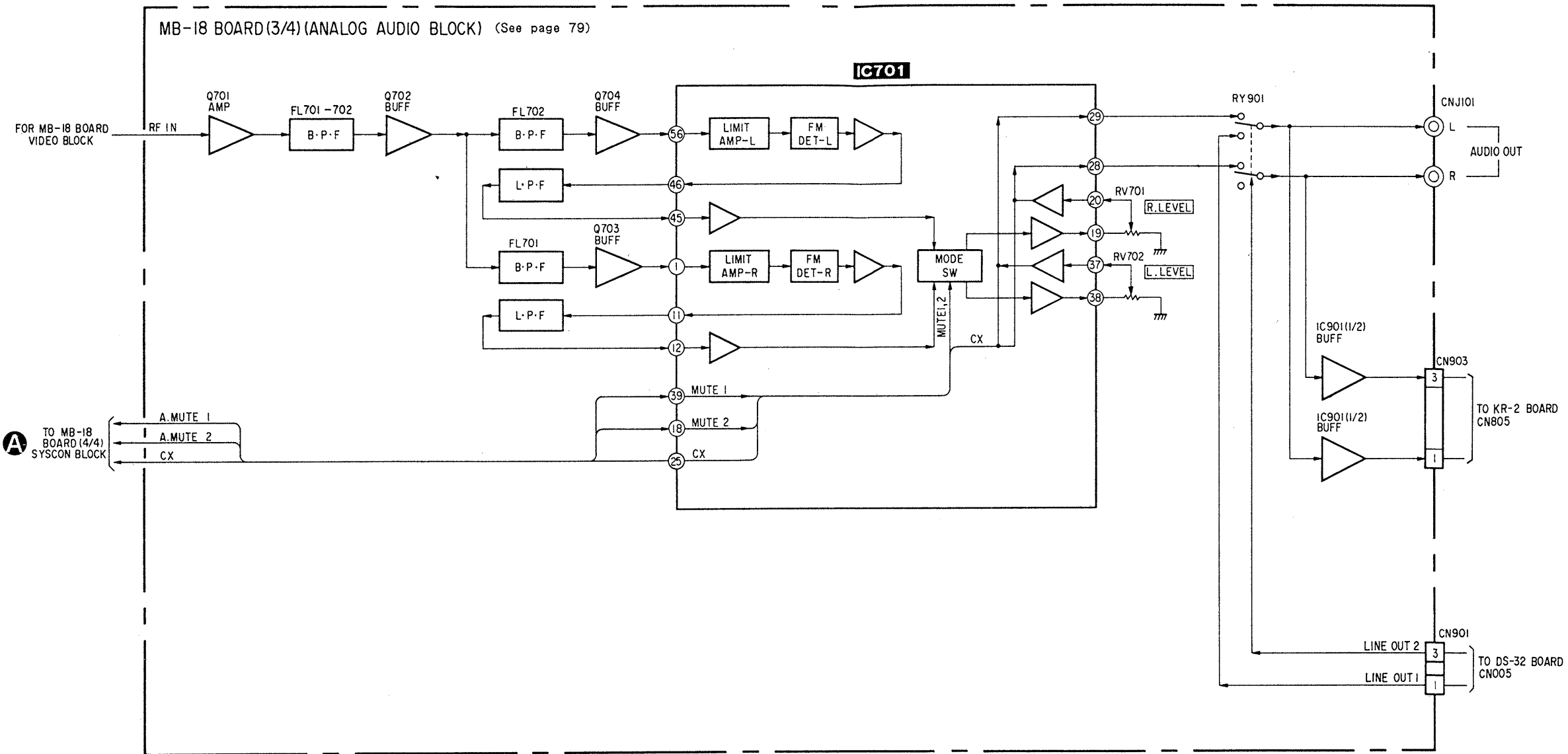
4.3. VIDEO BLOCK DIAGRAM



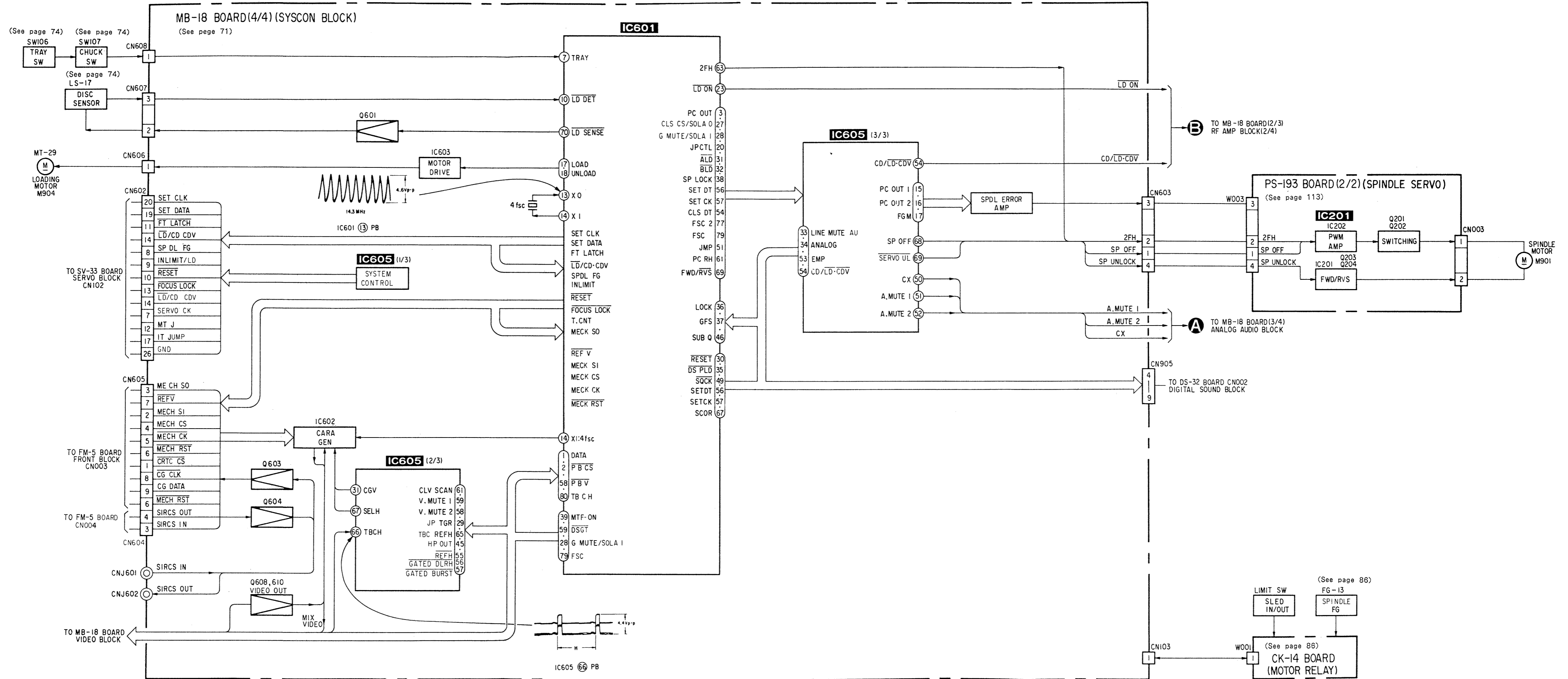
4.4. RF AMP BLOCK DIAGRAM



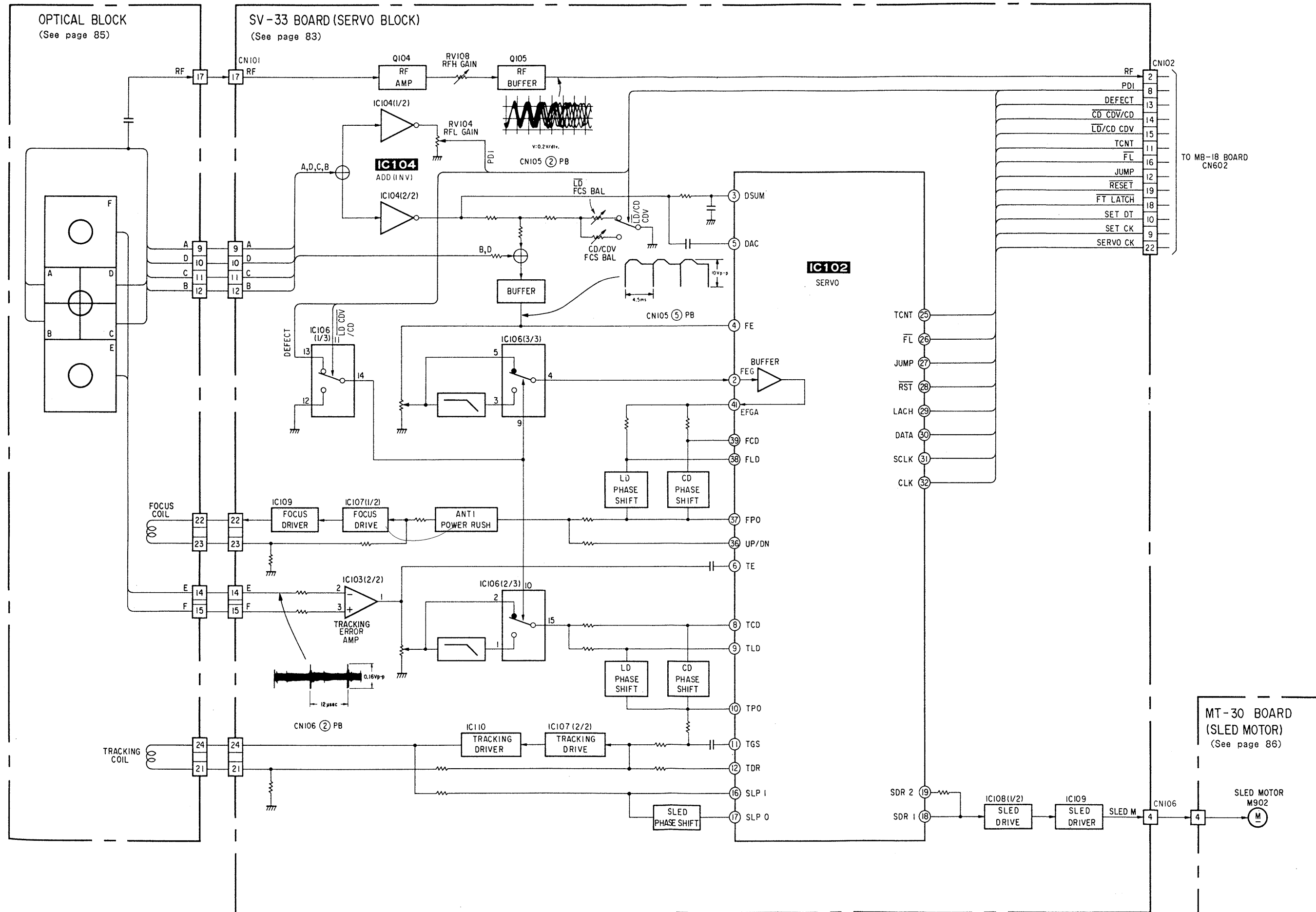
4.5. ANALOG AUDIO BLOCK DIAGRAM



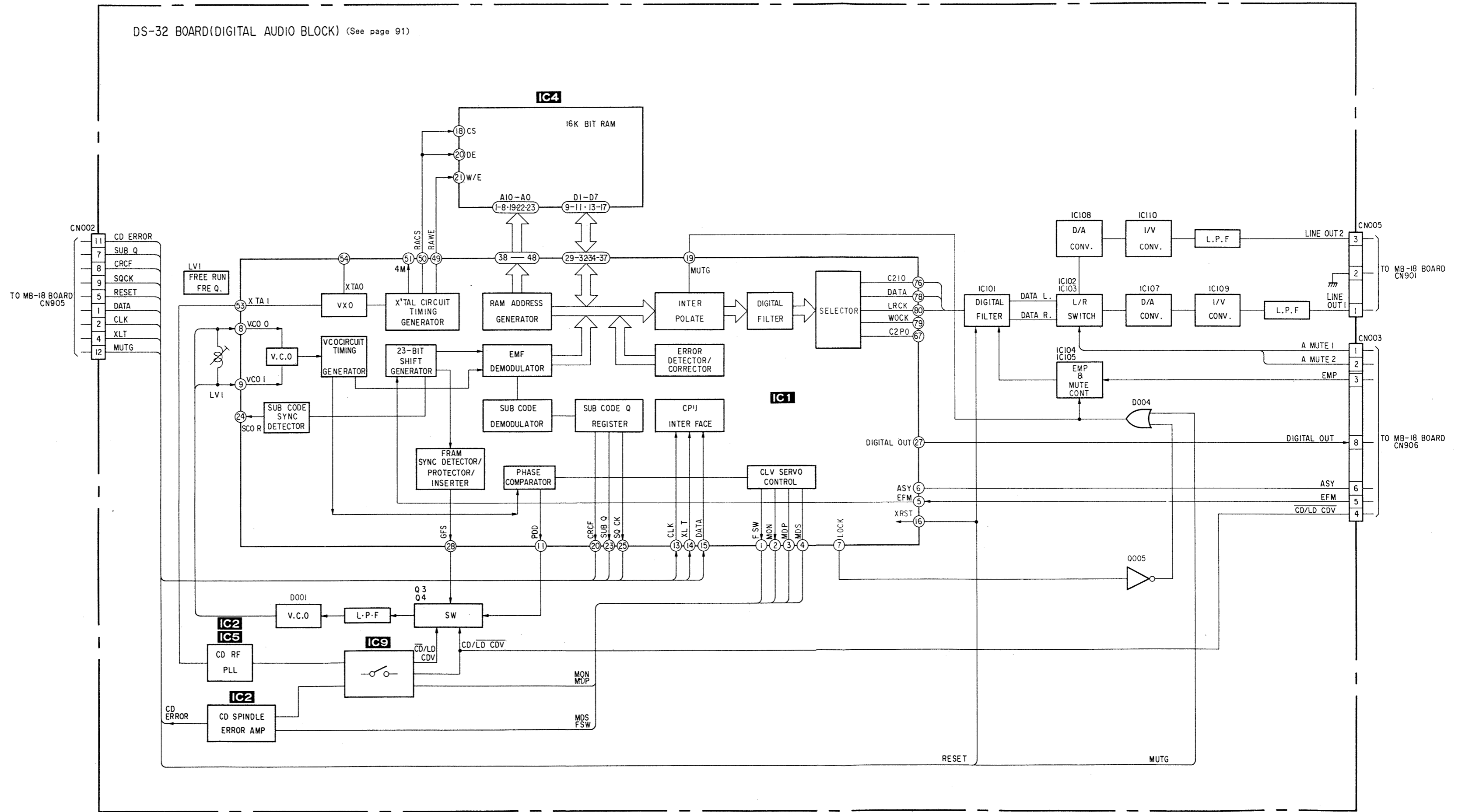
4.6. SYSTEM CONTROL BLOCK DIAGRAM



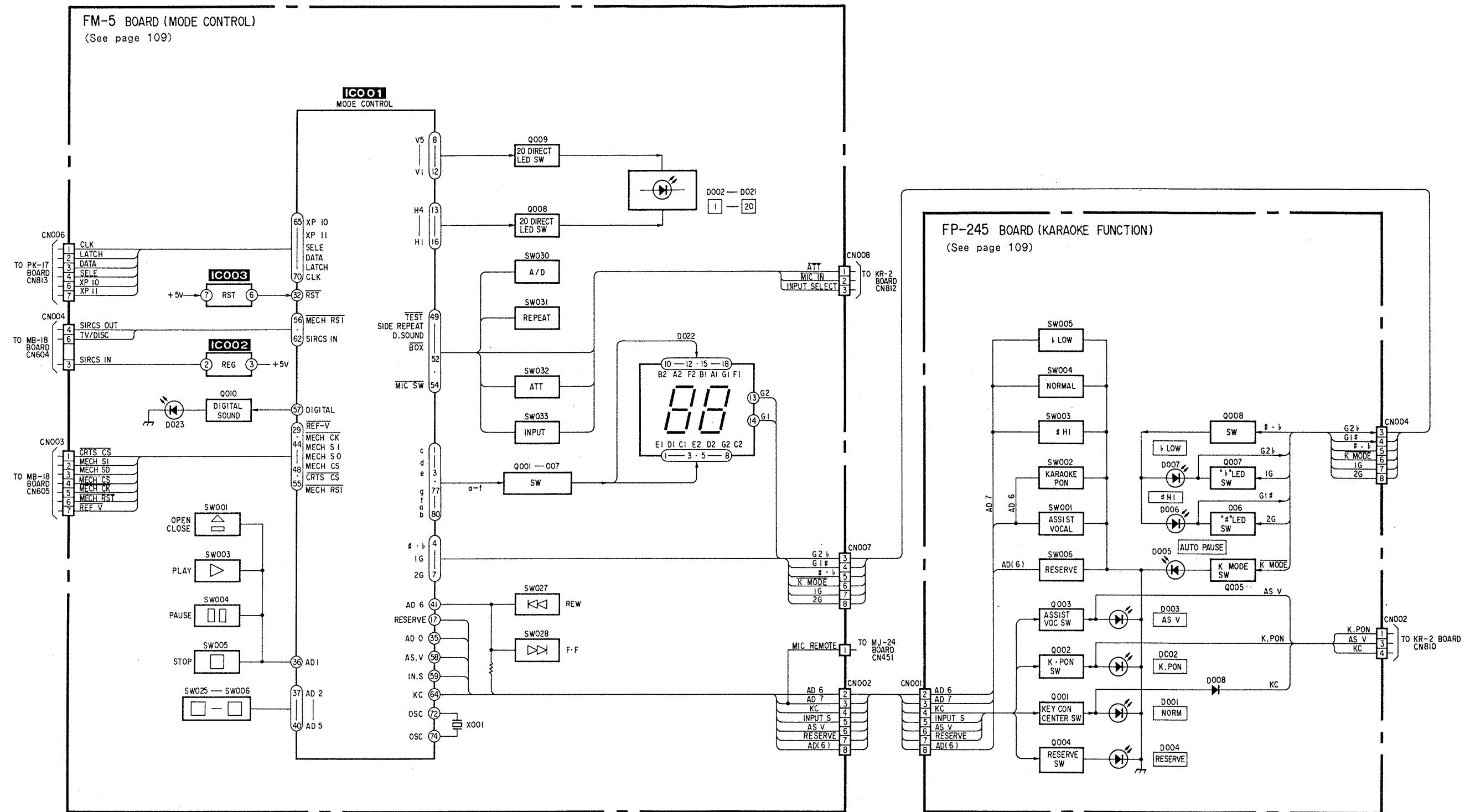
4.7. SERVO BLOCK DIAGRAM



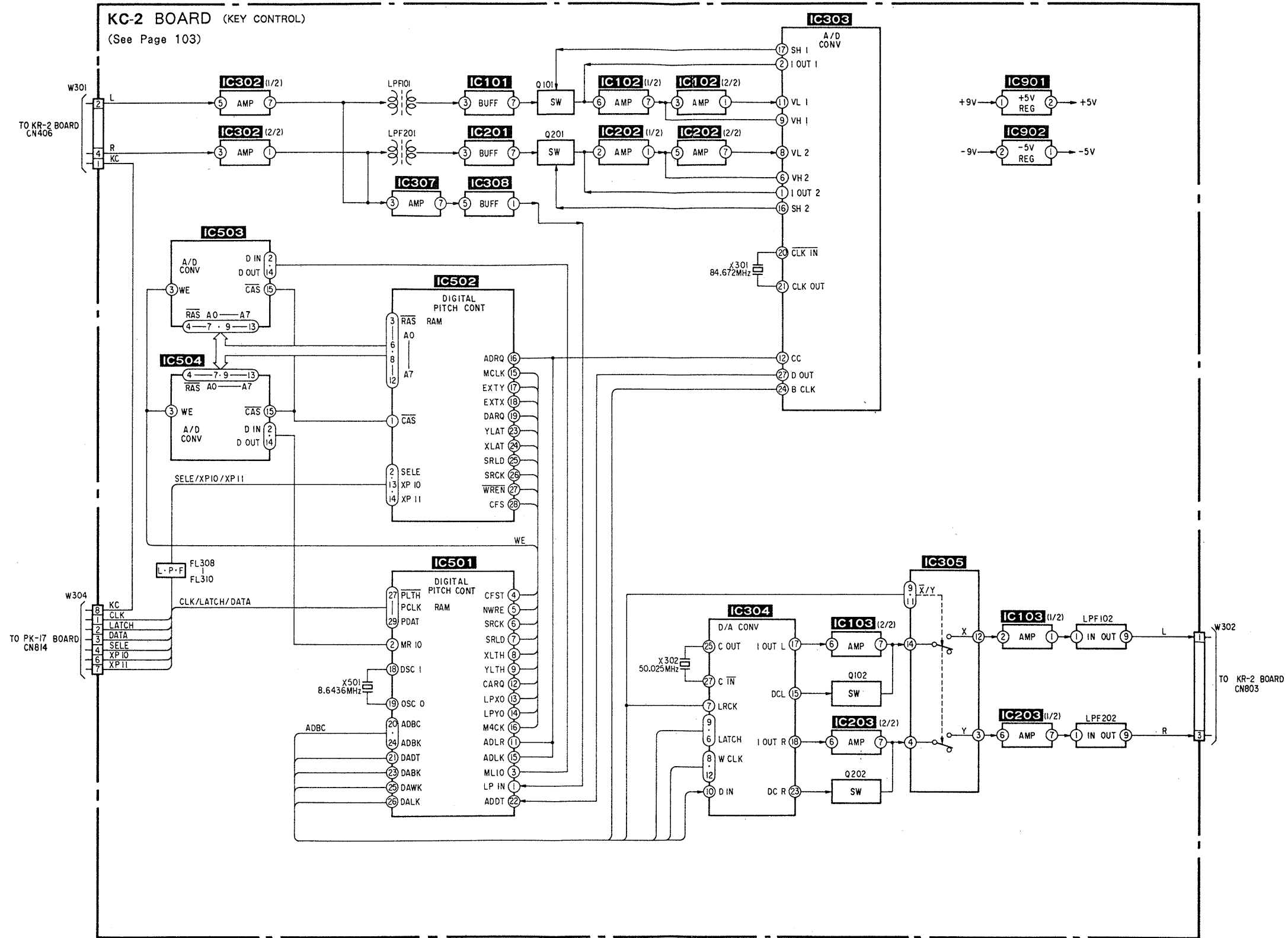
4.8. DIGITAL AUDIO BLOCK DIAGRAM



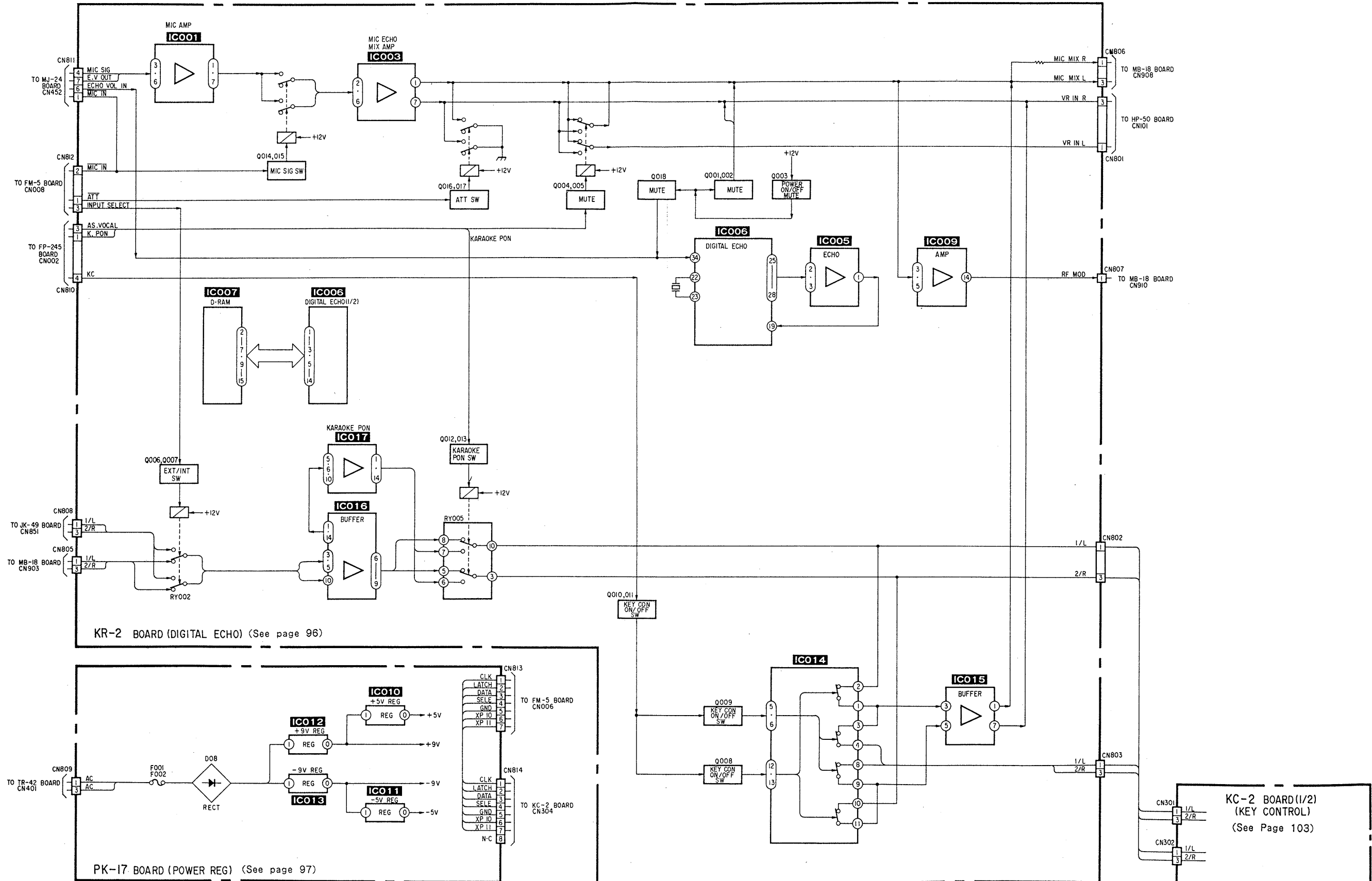
49. MODE CONTROL/KARAOKE FUNCTION SWITCH BLOCK DIAGRAM



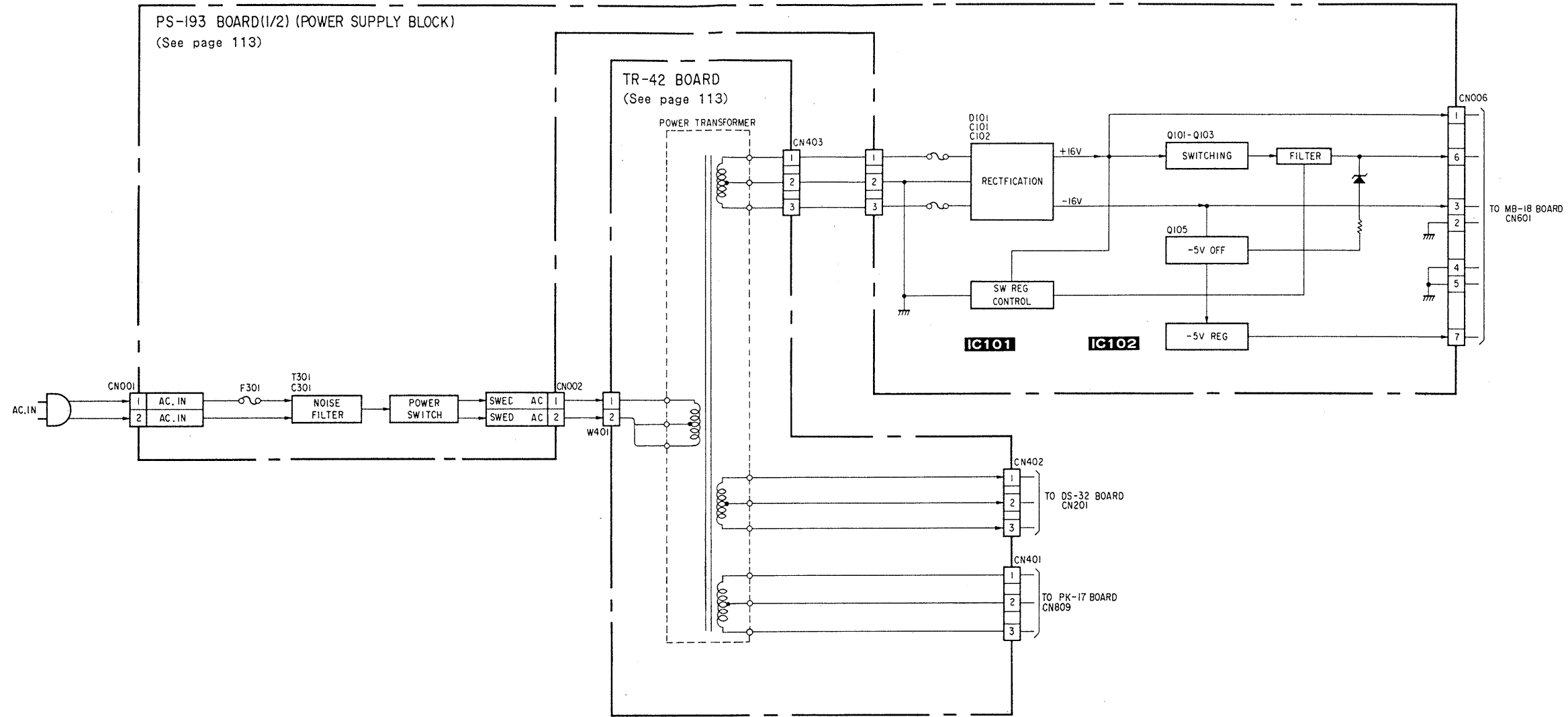
4-10. KEY CONTROL BLOCK DIAGRAM



4.9. 4-11. DIGITAL ECHO/POWER REG BLOCK DIAGRAM

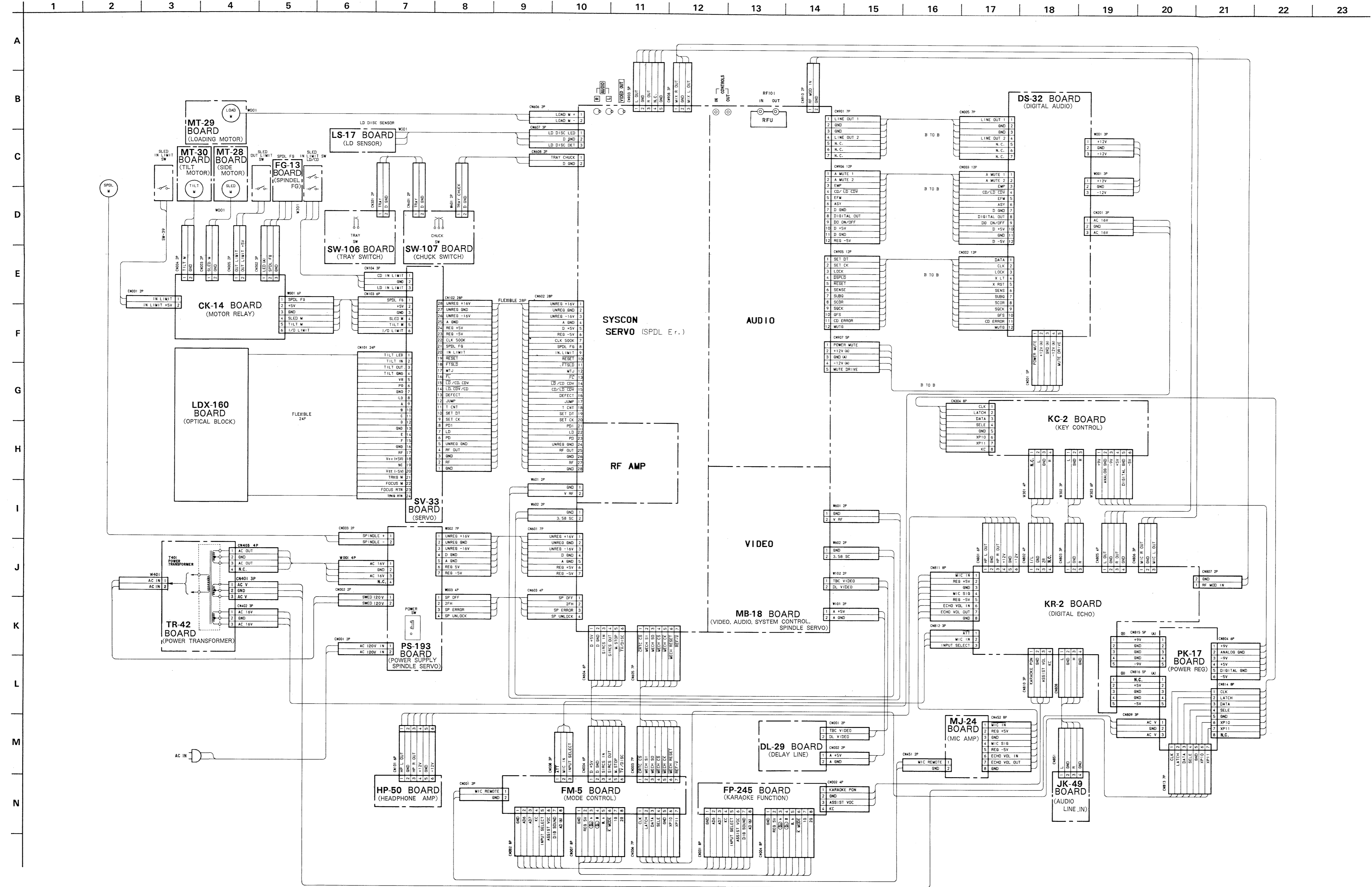


4-12. POWER BLOCK DIAGRAM



SECTION 5
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

5-1. FRAME SCHEMATIC DIAGRAM



MB-18 Board

D001	E-14	Q103	J-3
D110	B-4	Q104	J-3
D601	E-7	Q105	J-2
D602	K-15	Q106	E-5
D603	J-15	Q108	I-3
D604	K-15	Q109	I-2
D605	F-12	Q110	E-4
D606	L-12	Q112	G-4
D607	E-12	Q117	F-3
D608	D-11	Q121	D-3
D609	J-13	Q122	C-2
D905	B-14	Q123	B-4
D907	B-12	Q124	F-1
D908	B-13	Q125	E-1
IC001	E-14	Q126	E-1
IC002	H-14	Q128	B-4
IC003	F-14	Q130	A-12
IC101	B-5	Q601	H-12
IC102	K-3	Q602	F-6
IC103	G-3	Q603	K-15
IC104	J-2	Q604	J-15
IC105	E-3	Q605	L-12
IC106	E-1	Q606	F-6
IC107	B-3	Q608	F-7
IC108	D-3	Q609	J-13
IC109	B-6	Q610	F-7
IC401	K-14	Q611	G-10
IC402	L-15	Q612	J-13
IC601	I-11	Q701	C-7
IC602	F-6	Q702	C-7
IC603	K-6	Q703	C-7
IC605	F-11	Q704	B-7
IC701	B-9	Q705	B-7
IC901	B-13	Q706	A-7
Q001	I-14	Q902	B-14
Q002	F-14	Q903	B-11
Q003	F-15	Q904	C-15
Q101	J-3	Q907	B-14
Q102	J-3	Q911	B-14

MB-18 (VIDEO, RF AMP, ANALOG AUDIO, SYSTEM CONTROL, SPINDLE SERVO) PRINTED WIRING BOARD
-Ref. No. MB-18 BOARD : 1,000 Series-

5.2. 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.
- : Through hole.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.
- : Circled numbers refer to waveforms.
- : Jumper wire connected to the pattern on the component side.
- : Jumper wire connected to the ground pattern on the component side.

Note :

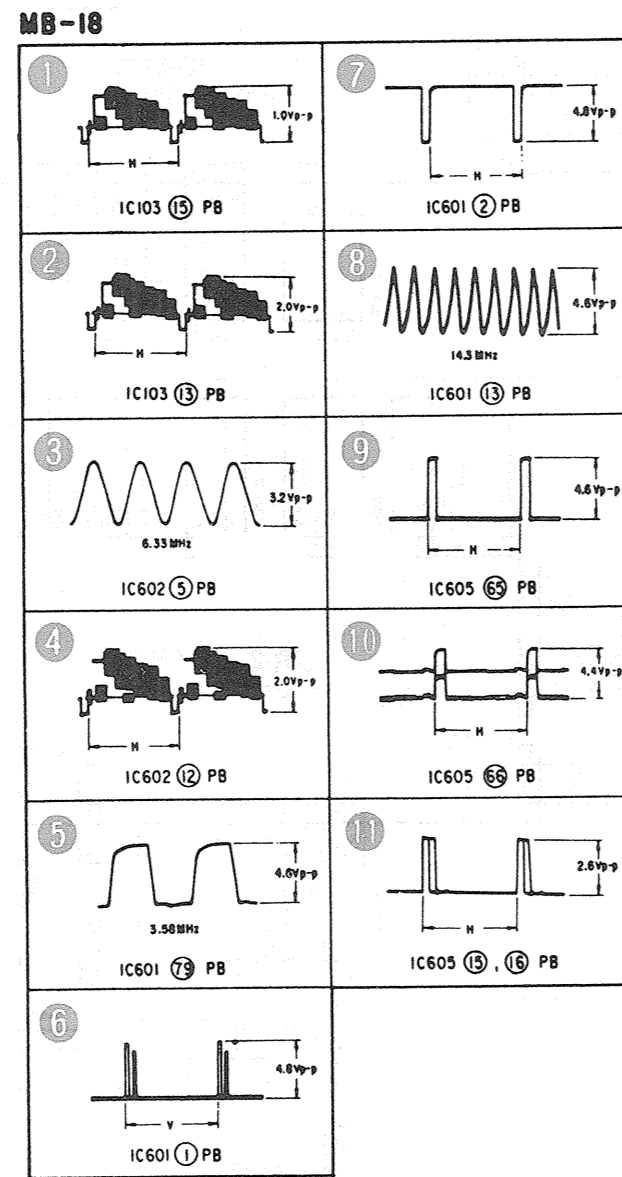
Conductor side : Parts on the conductor side being seen from the conductor are stated.
Component side : Parts on the component side being seen from the component are stated.

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, chip resistors are 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.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- △ : internal component.
- : adjustment for repair.
- : B+ line.
- : B- line.
- ↔ : IN/OUT direction of B line (+, -).
- : Circled numbers refer to waveforms.

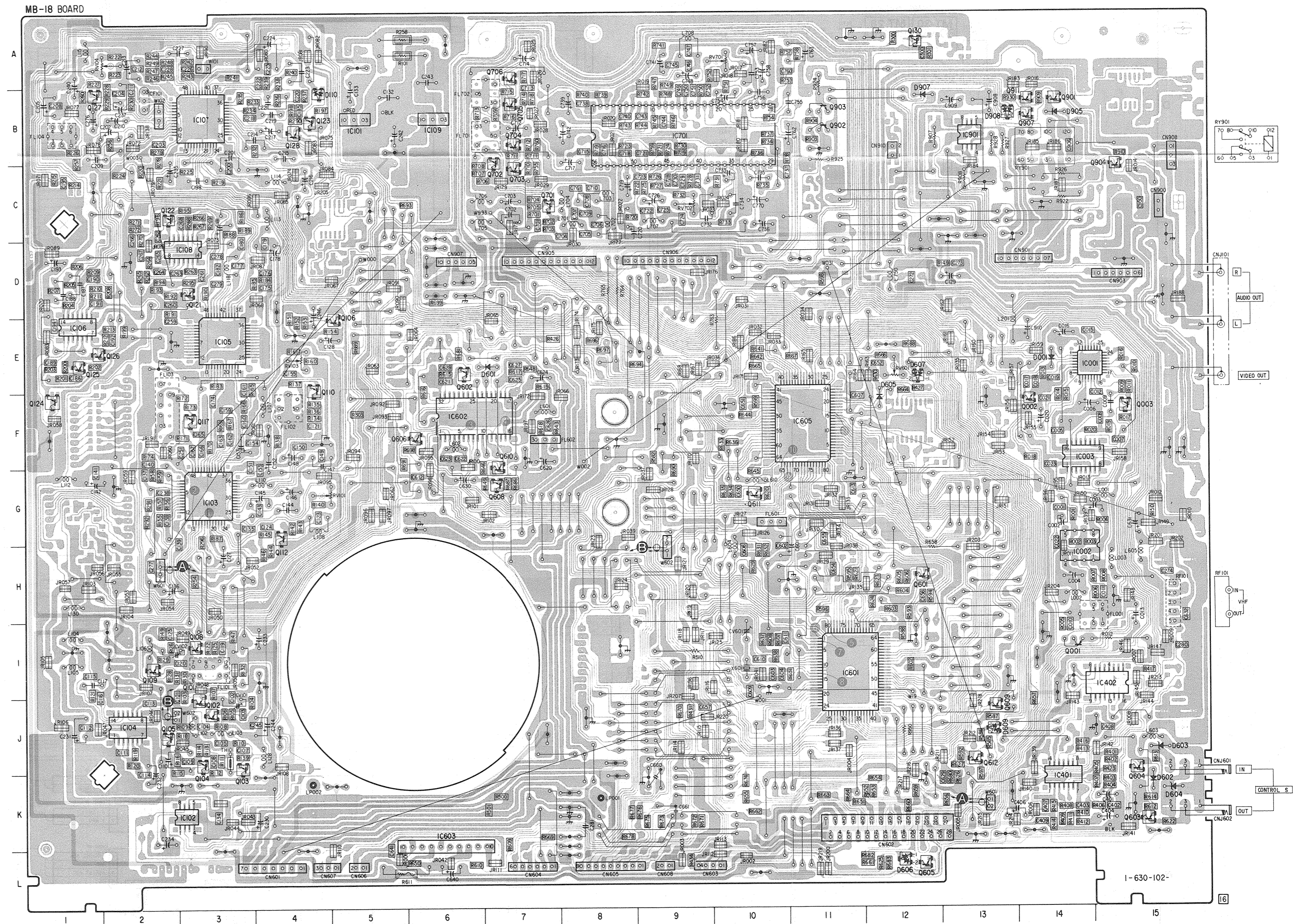
When indicating parts by reference number, please include the board name.

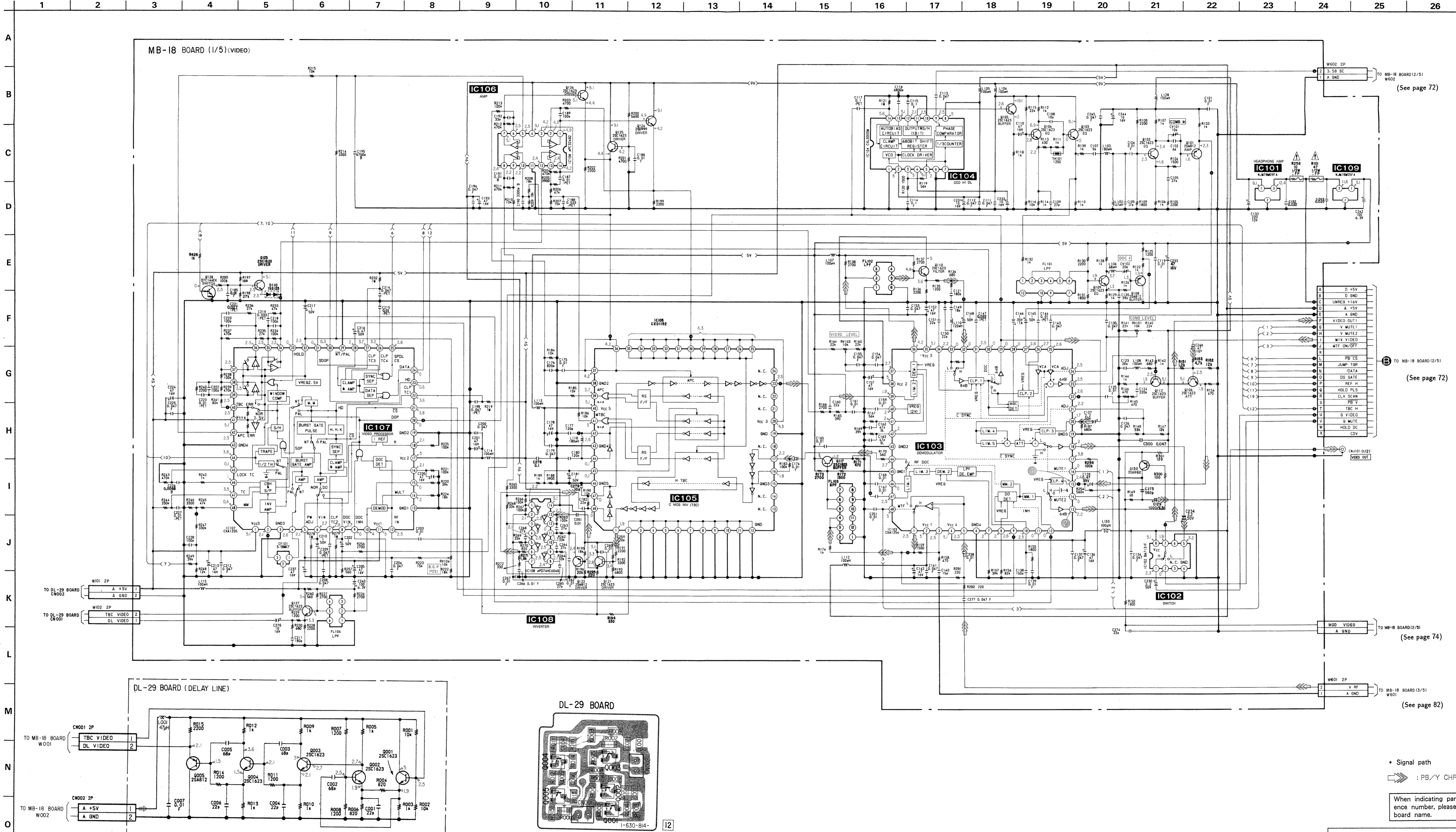
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.



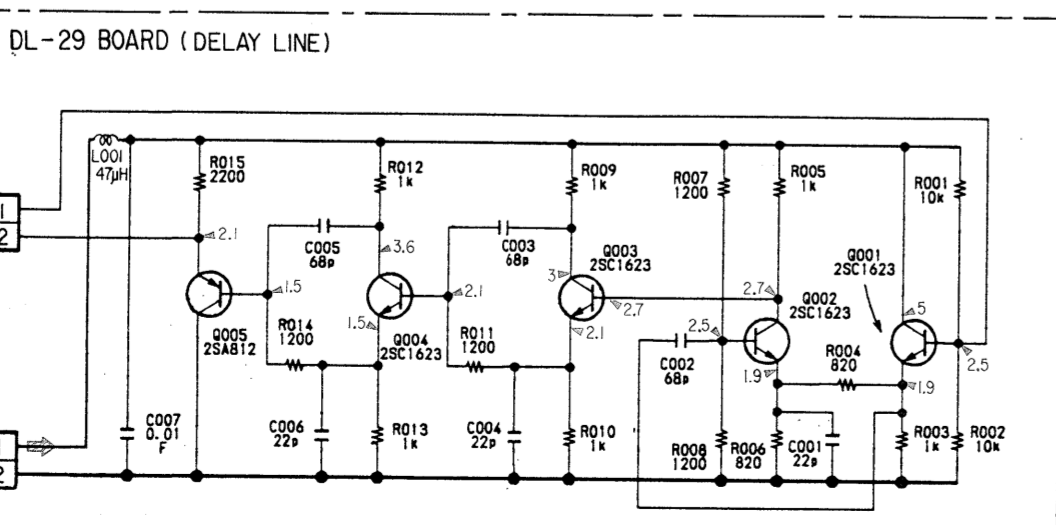
For printed wiring boards :

- : indicates a lead wire mounted on the component side.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.
- : Jumper wire connected to the pattern on the component side.
- : Jumper wire connected to the ground pattern on the component side.

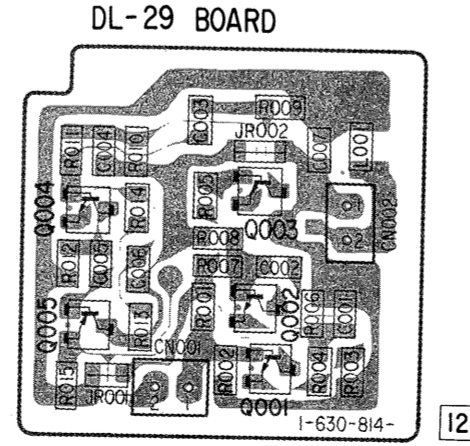




MB-18 BOARD (1/5) (VIDEO)



DL-29 BOARD (DELAY LINE)



DL-29 BOARD

(See page 72)

(See page 72)

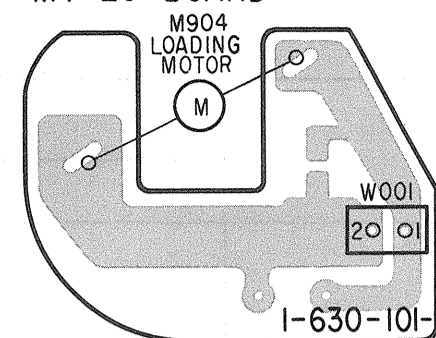
(See page 74)

(See page 82)

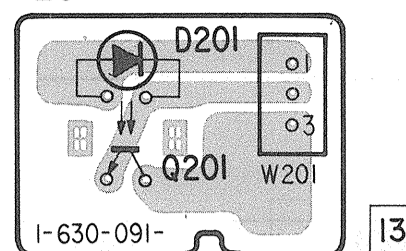
• Signal path
 ⇨ : PB/Y CHROMA Signal

When indicating parts by reference number, please include the board name.
 Replace only with part number specified.

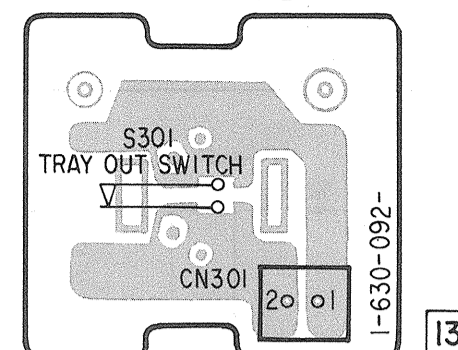
MT-29 BOARD



LS-17 BOARD

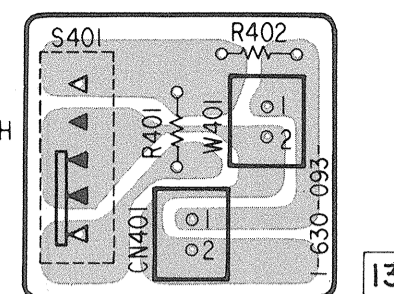


SW-106 BOARD

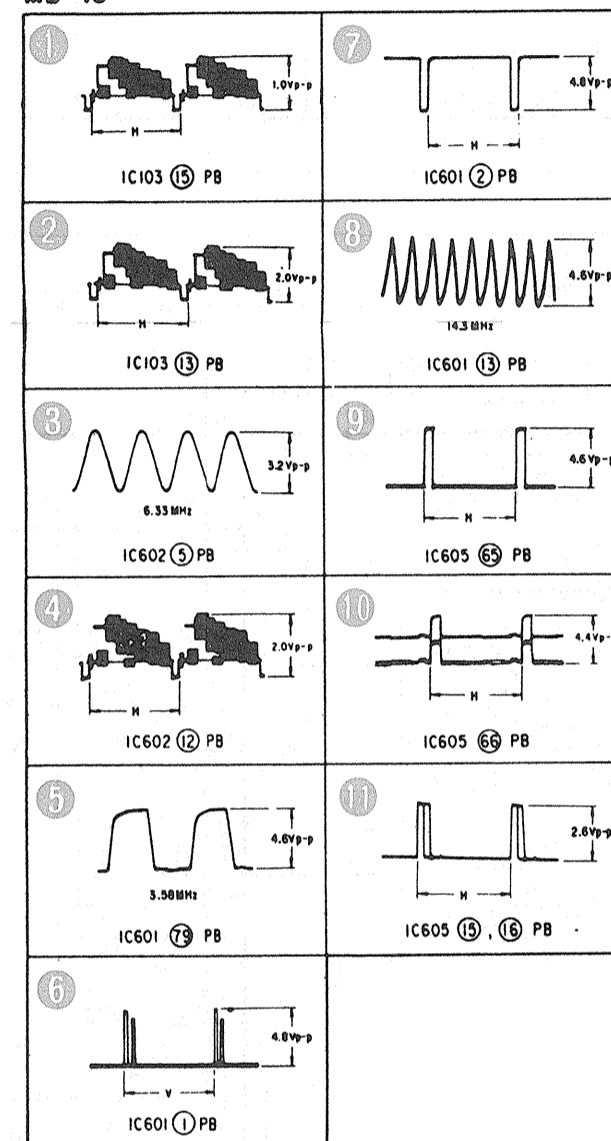


SW-107 BOARD

S401 CHUCK UP/DOWN SWITCH
 UP/DOWN SWITCH
 CHUCK UP
 CHUCK DOWN



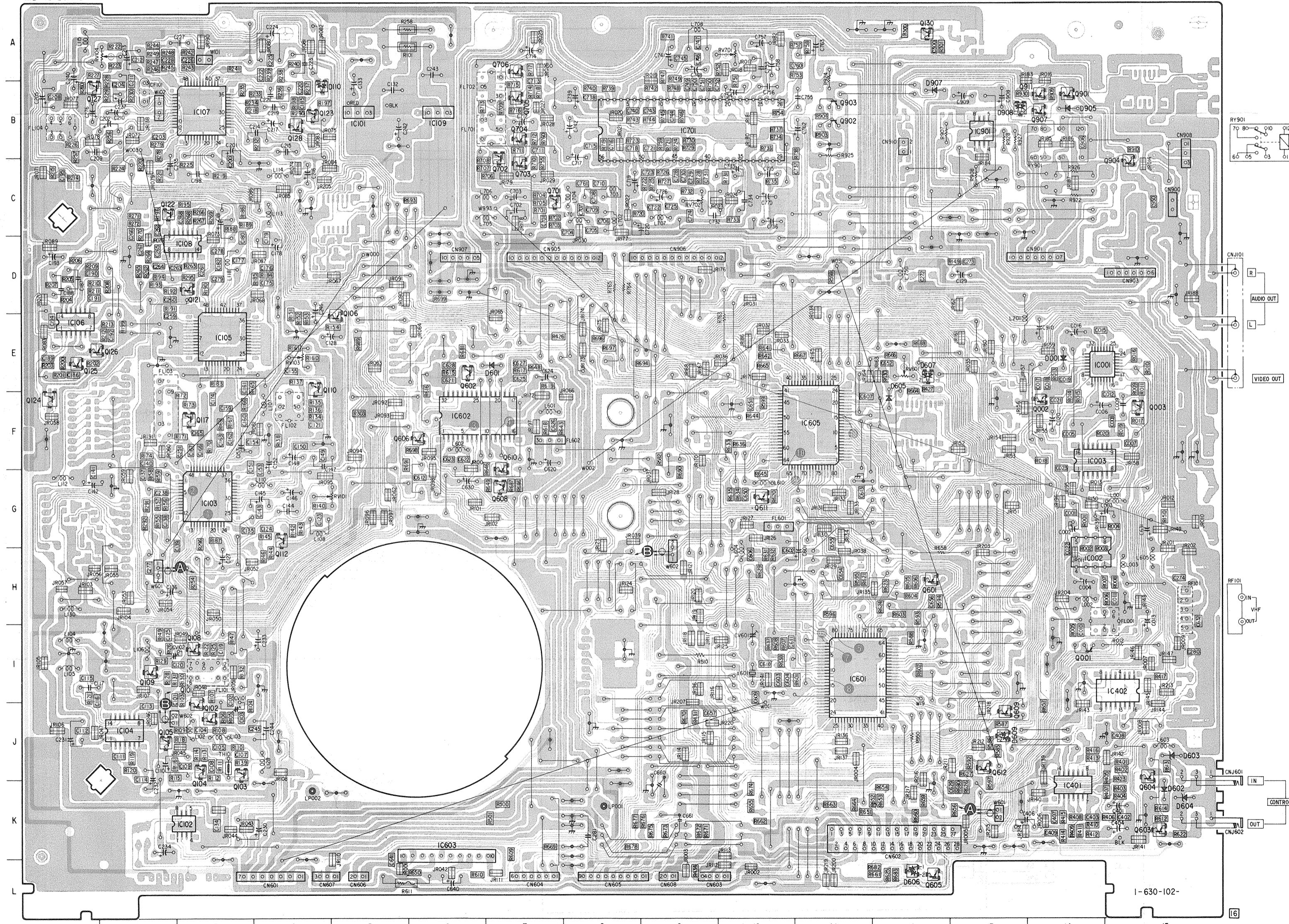
MB-18



MB-18 Board

D001	E-14	Q103	J-3
D110	B-4	Q104	J-3
D601	E-7	Q105	J-2
D602	K-15	Q106	E-5
D603	J-15	Q108	I-3
D604	K-15	Q109	I-2
D605	F-12	Q110	E-4
D606	L-12	Q112	G-4
D607	E-12	Q117	F-3
D608	D-11	Q121	D-3
D609	J-13	Q122	C-2
D905	B-14	Q123	B-4
D907	B-12	Q124	F-1
D908	B-13	Q125	E-1
		Q126	E-1
IC001	E-14	Q127	B-1
IC002	H-14	Q128	B-4
IC003	F-14	Q130	A-12
IC101	B-5	Q601	H-12
IC102	K-3	Q602	F-6
IC103	G-3	Q603	K-15
IC104	J-2	Q604	J-15
IC105	E-3	Q605	L-12
IC106	E-1	Q606	F-6
IC107	B-3	Q608	F-7
IC108	D-3	Q609	J-13
IC109	B-6	Q610	F-7
IC401	K-14	Q611	G-10
IC402	I-15	Q612	J-13
IC601	I-11	Q701	C-7
IC602	F-6	Q702	C-7
IC603	K-6	Q703	C-7
IC605	F-11	Q704	B-7
IC701	B-9	Q705	B-7
IC901	B-13	Q706	A-7
		Q901	B-14
Q001	I-14	Q902	B-11
Q002	F-14	Q903	B-11
Q003	F-15	Q904	C-15
Q101	J-3	Q907	B-14
Q102	J-3	Q911	B-14

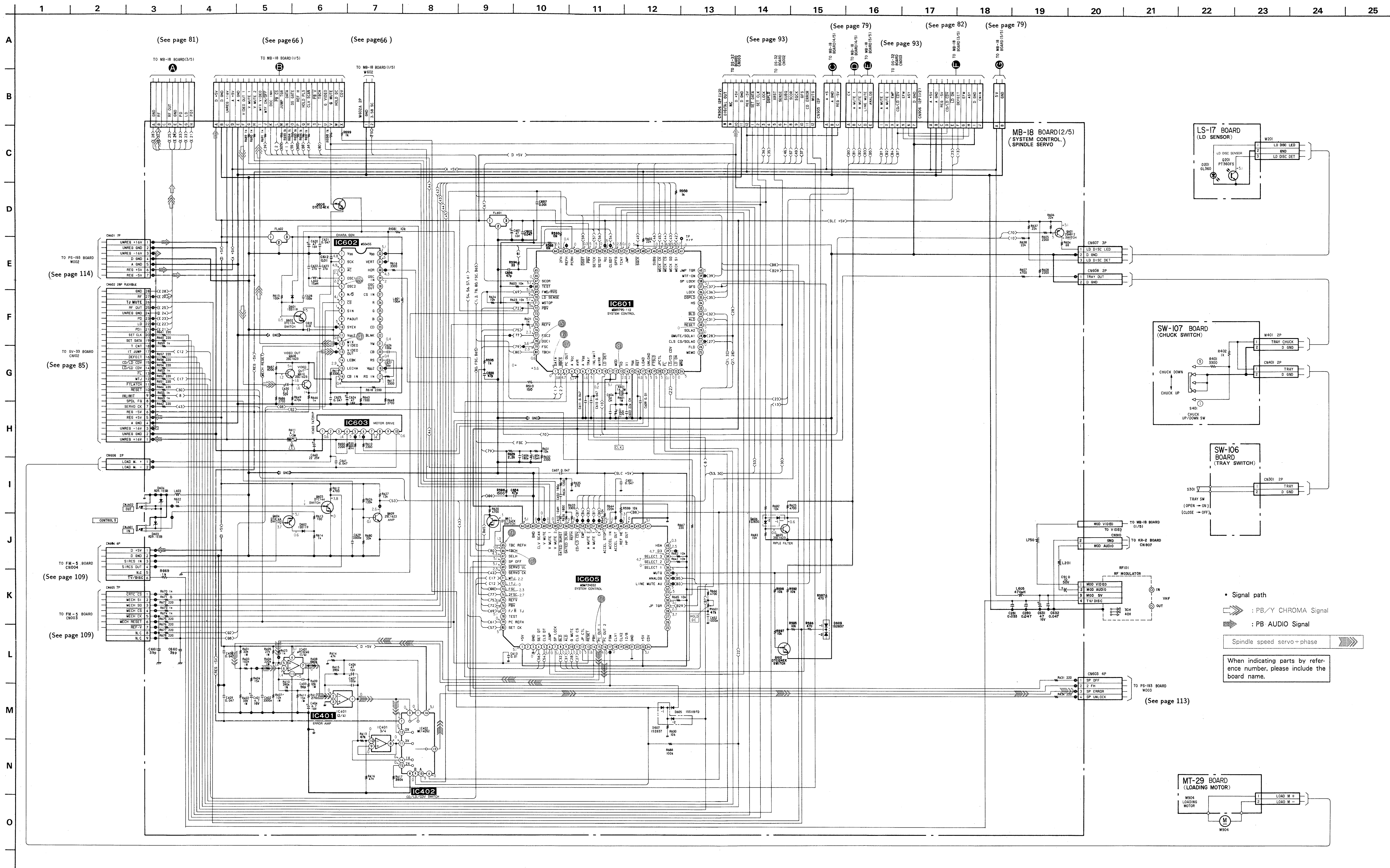
MB-18 BOARD



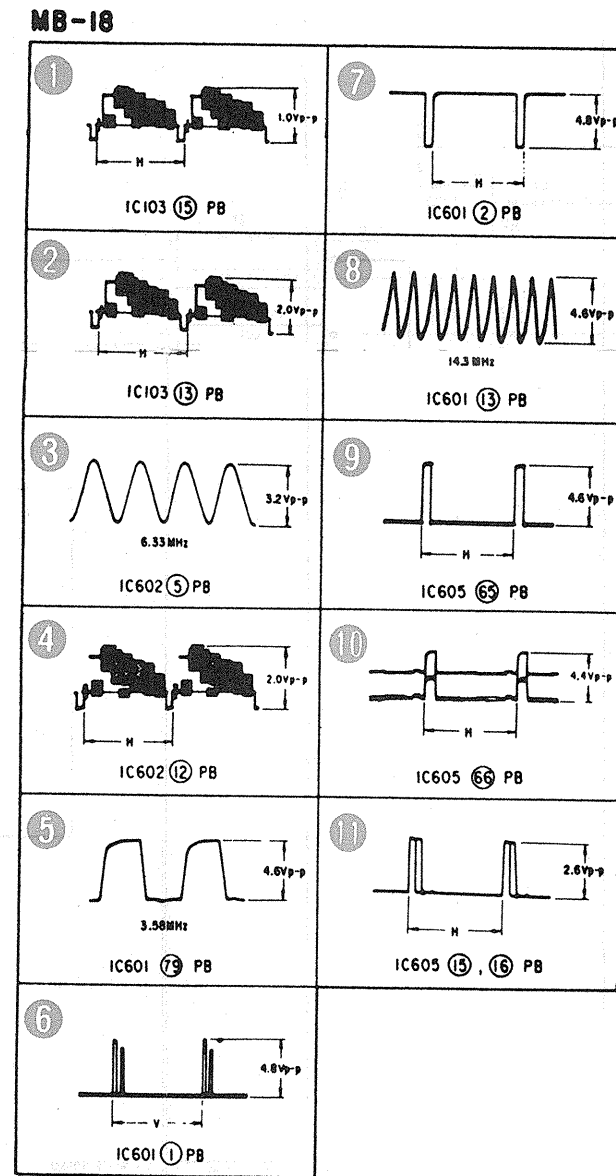
For printed wiring boards:

- : indicates a lead wire mounted on the component side.
- : Pattern of the side which enables seeing.
- : Pattern of the rear side.
- : Jumper wire connected to the pattern on the component side.
- : Jumper wire connected to the ground pattern on the component side.

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

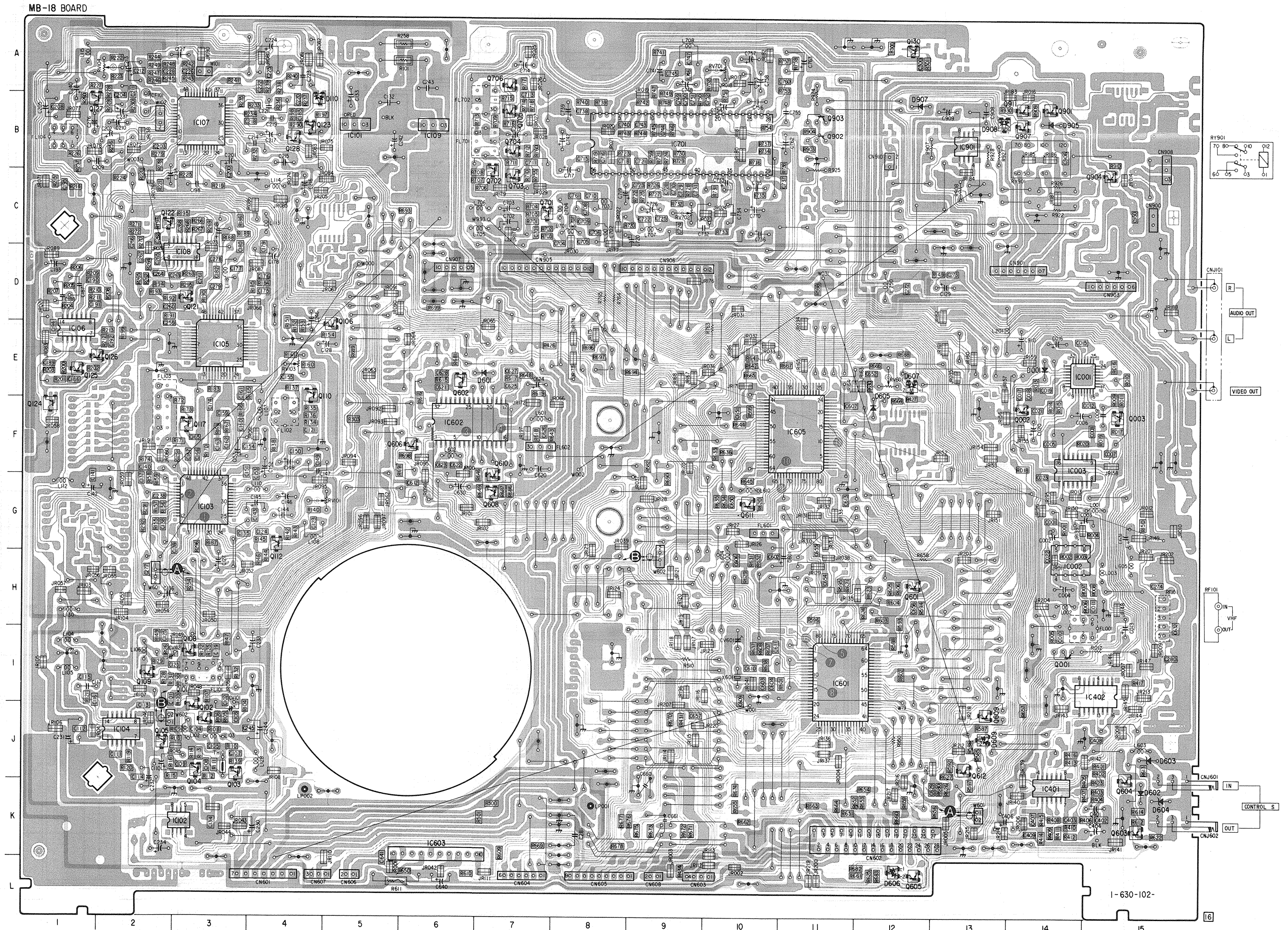


MB-18 (VIDEO, RF AMP, ANALOG AUDIO, SYSTEM CONTROL, SPINDLE SERVO) PRINTED WIRING BOARD
 -Ref. No. MB-18 BOARD : 1,000 Series-



MB-18 Board

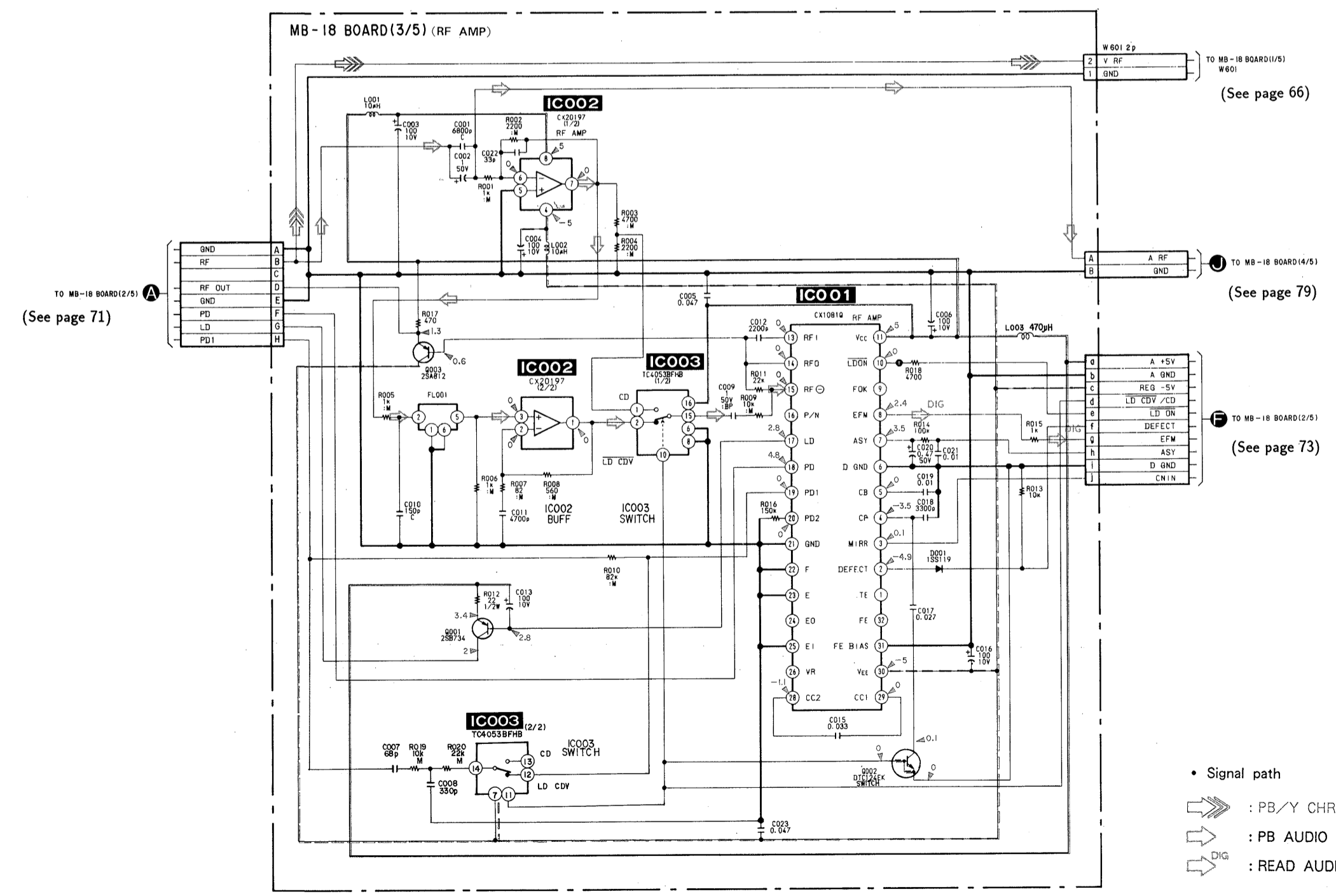
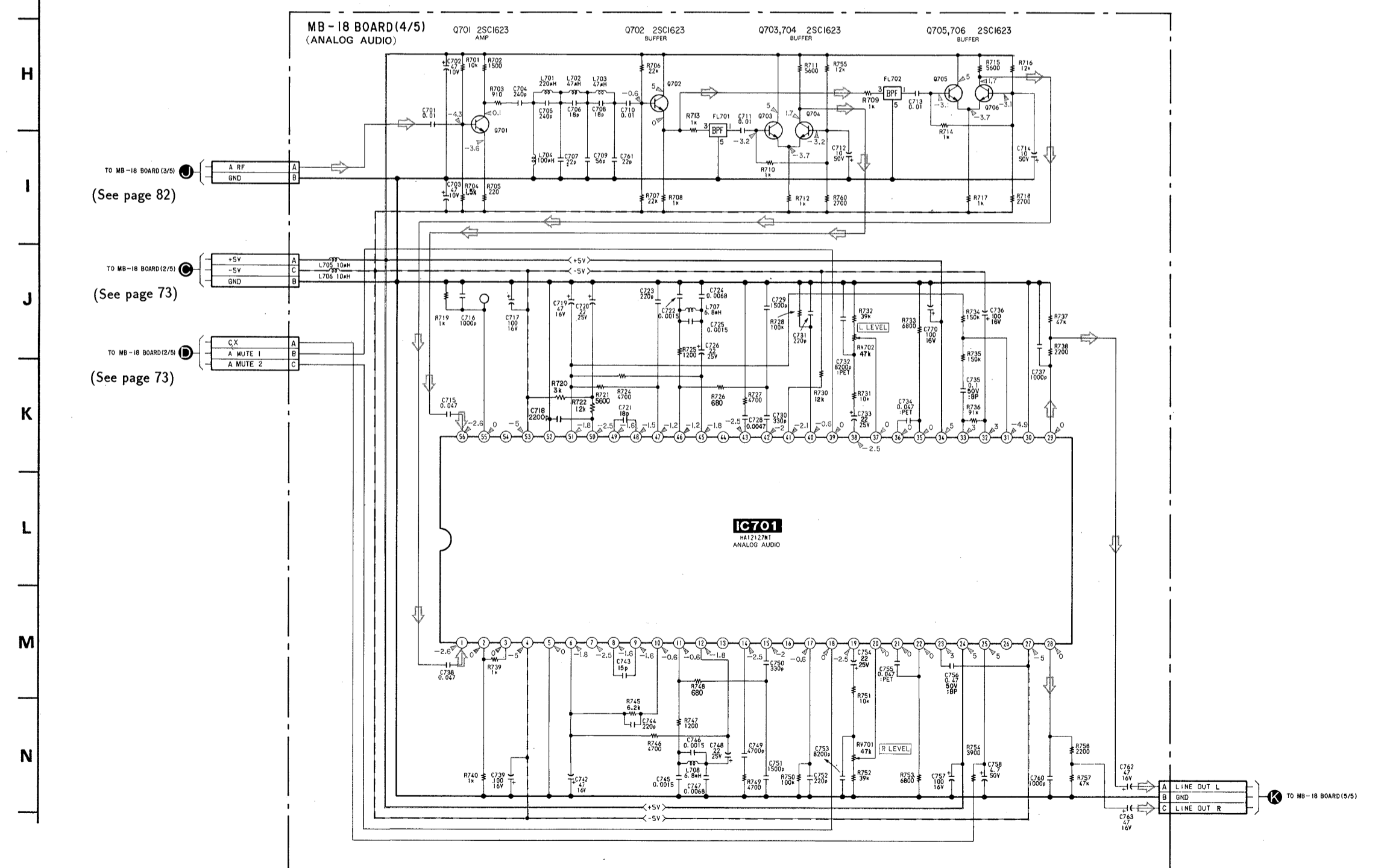
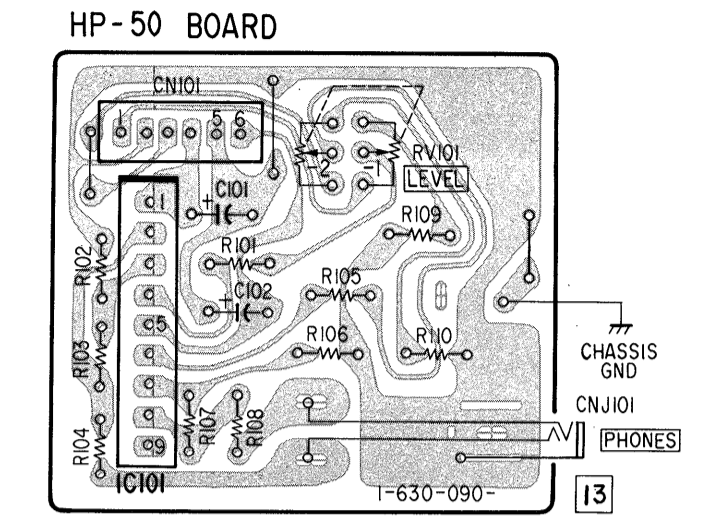
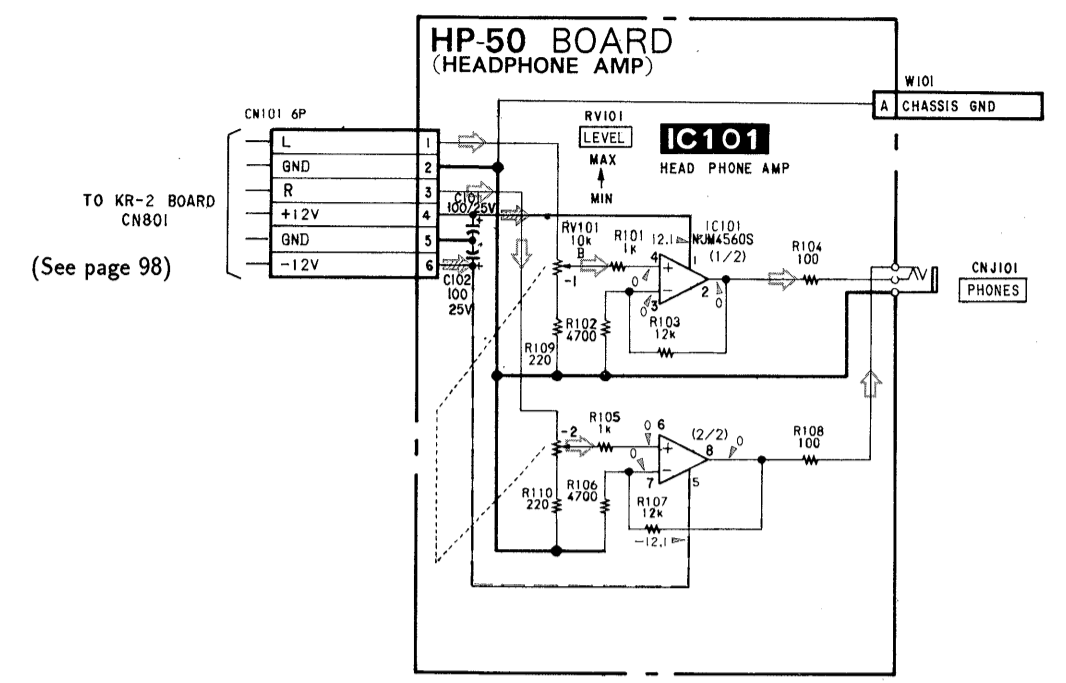
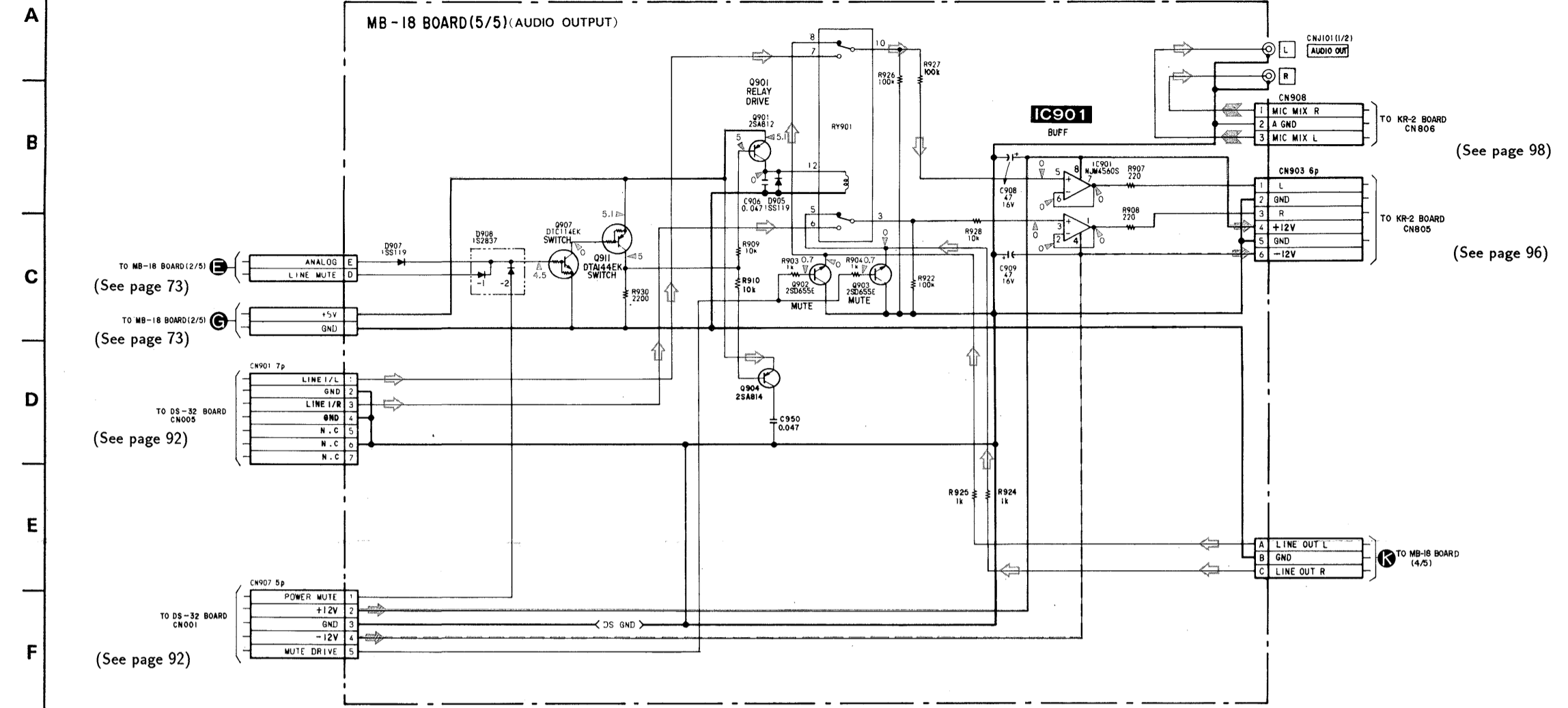
D001	E-14	Q103	J-3
D110	B-4	Q104	J-3
D601	E-7	Q105	J-2
D602	K-15	Q106	E-5
D603	J-15	Q108	I-3
D604	K-15	Q109	I-2
D605	F-12	Q110	E-4
D606	L-12	Q112	G-4
D607	E-12	Q117	F-3
D608	D-11	Q121	D-3
D609	J-13	Q122	C-2
D905	B-14	Q123	B-4
D907	B-12	Q124	F-1
D908	B-13	Q125	E-1
		Q126	E-1
IC001	E-14	Q127	B-1
IC002	H-14	Q128	B-4
IC003	F-14	Q130	A-12
IC101	B-5	Q601	H-12
IC102	K-3	Q602	F-6
IC103	G-3	Q603	K-15
IC104	J-2	Q604	J-15
IC105	E-3	Q605	L-12
IC106	E-1	Q606	F-6
IC107	B-3	Q608	F-7
IC108	D-3	Q609	J-13
IC109	B-6	Q610	F-7
IC401	K-14	Q611	G-10
IC402	I-15	Q612	J-13
IC601	I-11	Q701	C-7
IC602	F-6	Q702	C-7
IC603	K-6	Q703	C-7
IC605	F-11	Q704	B-7
IC701	B-9	Q705	B-7
IC901	B-13	Q706	A-7
Q901		Q902	B-14
Q001	I-14	Q902	B-11
Q002	F-14	Q903	B-11
Q003	F-15	Q904	C-15
Q101	J-3	Q907	B-14
Q102	J-3	Q911	B-14



- For printed wiring boards:
- : indicates a lead wire mounted on the component side.
 - : Pattern from the side which enables seeing.
 - : Pattern of the rear side.
 - : Jumper wire connected to the pattern on the component side.
 - : Jumper wire connected to the ground pattern on the component side.

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

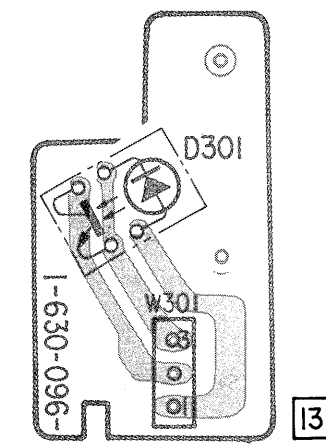
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26



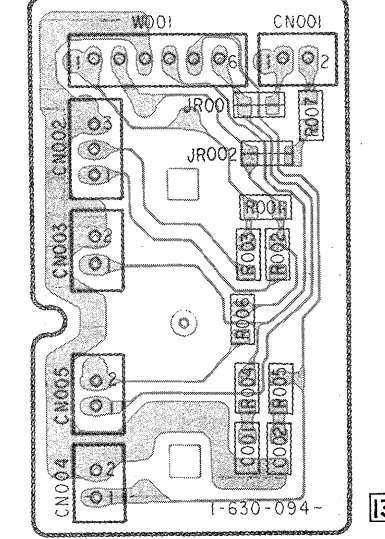
• Signal path
 ⇨ : PB/Y CHROMA Signal
 ⇨ : PB AUDIO Signal
 ⇨ : READ AUDIO Signal

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

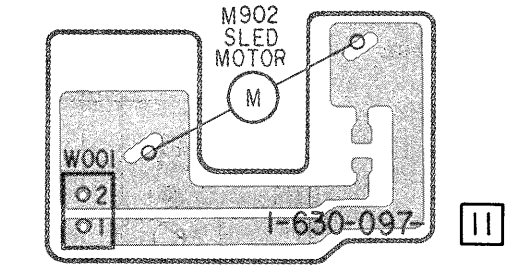
FG-13 BOARD



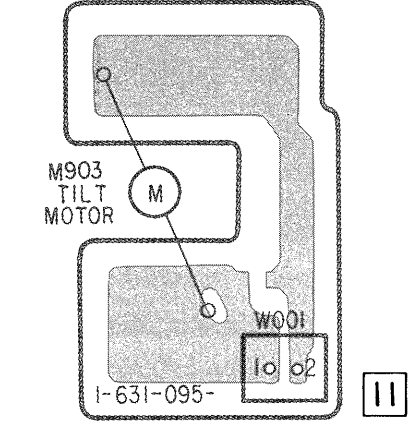
CK-14 BOARD



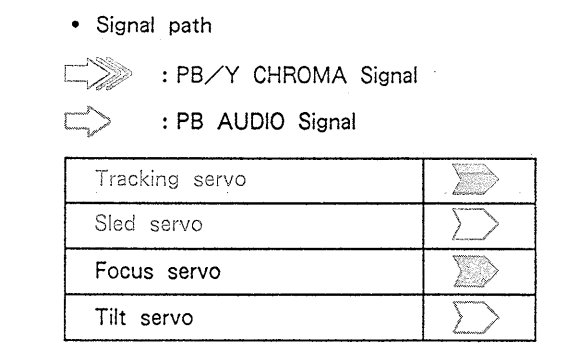
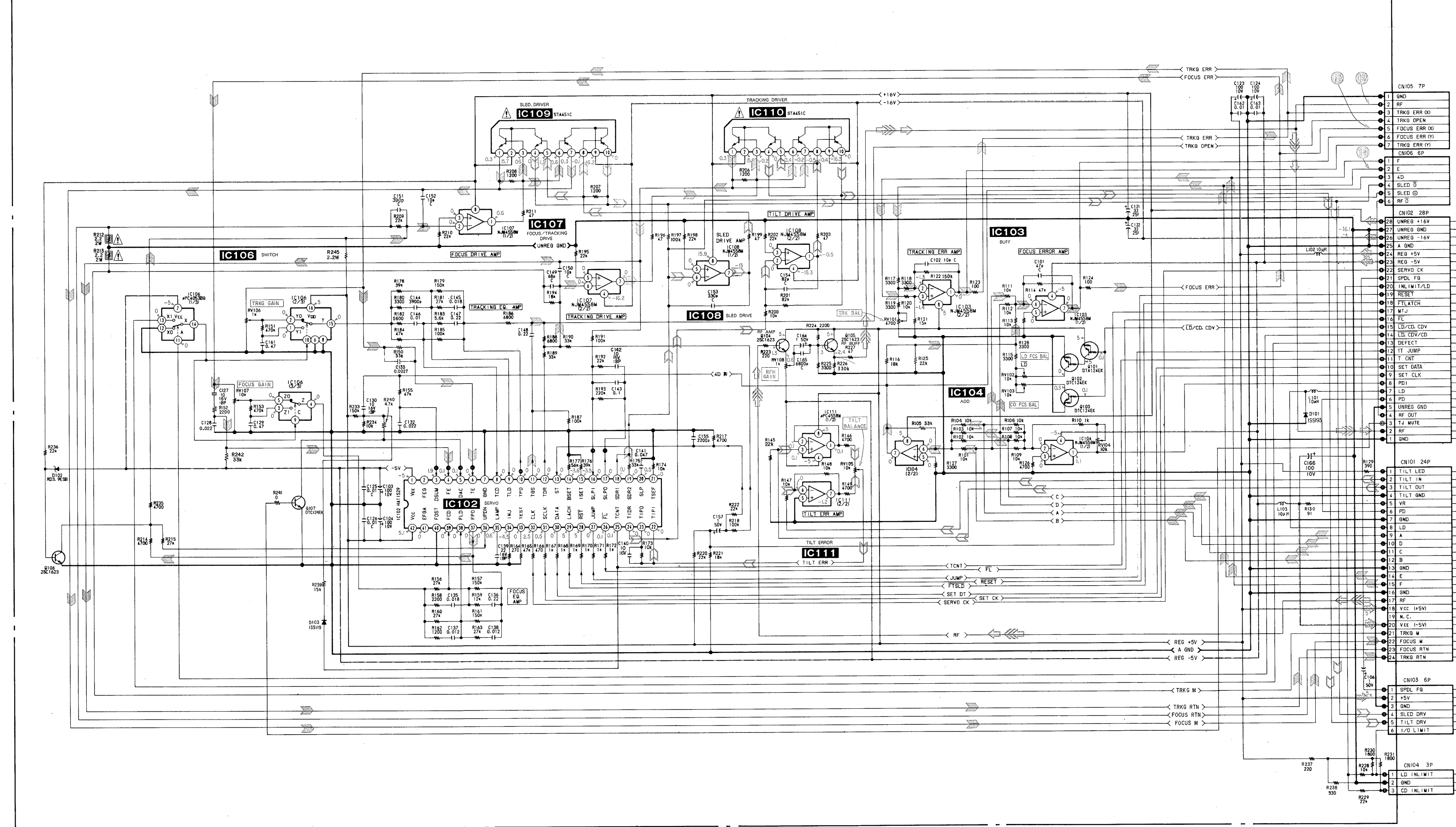
MT-28 BOARD



MT-30 BOARD



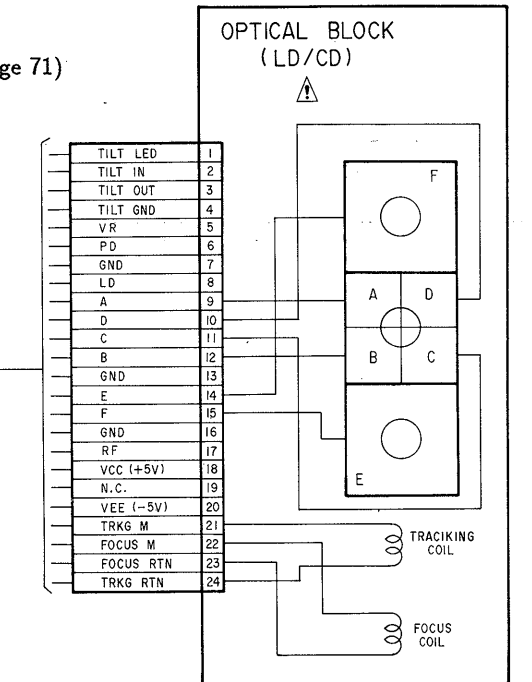
SV-33 BOARD (SERVO)



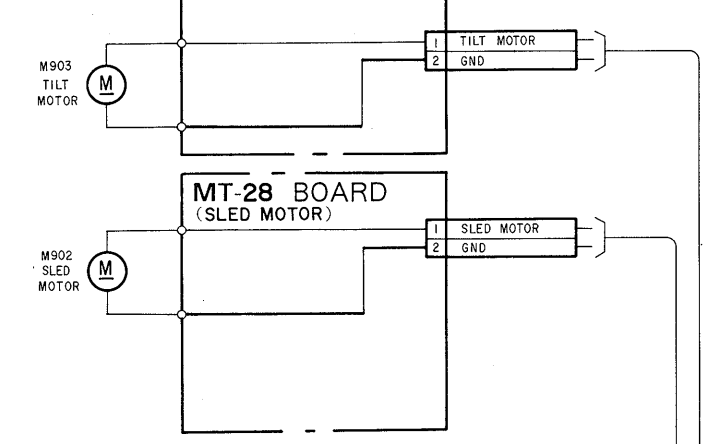
When indicating parts by reference number, please include the board name.

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

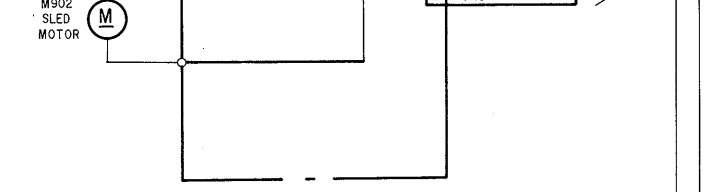
(See page 71)



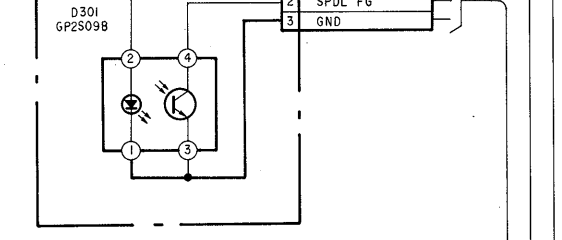
MT-30 BOARD (TILT MOTOR)



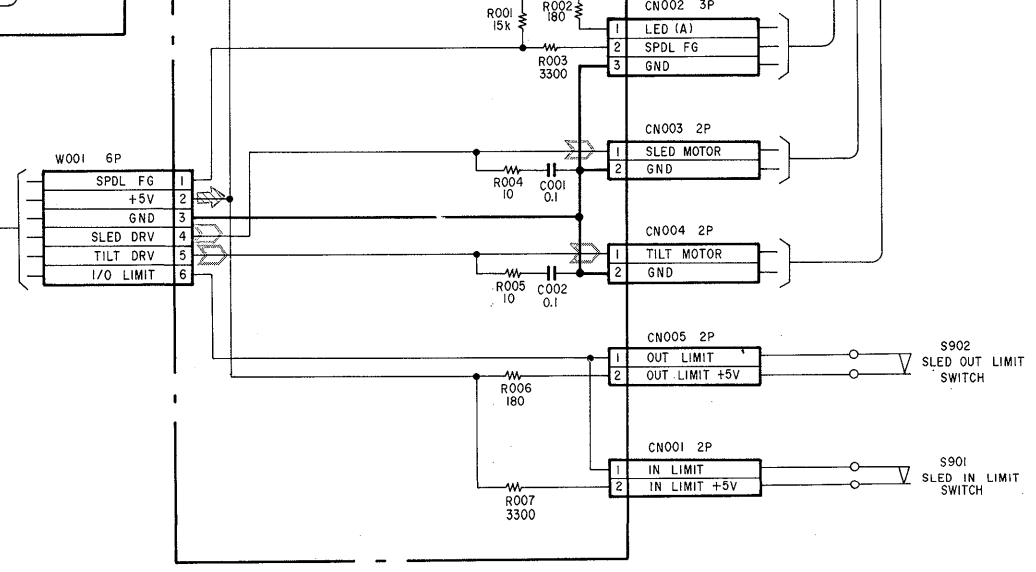
MT-28 BOARD (SLED MOTOR)



FG-13 BOARD (SPINDLE FG)



CK-14 BOARD (MOTOR RELAY)

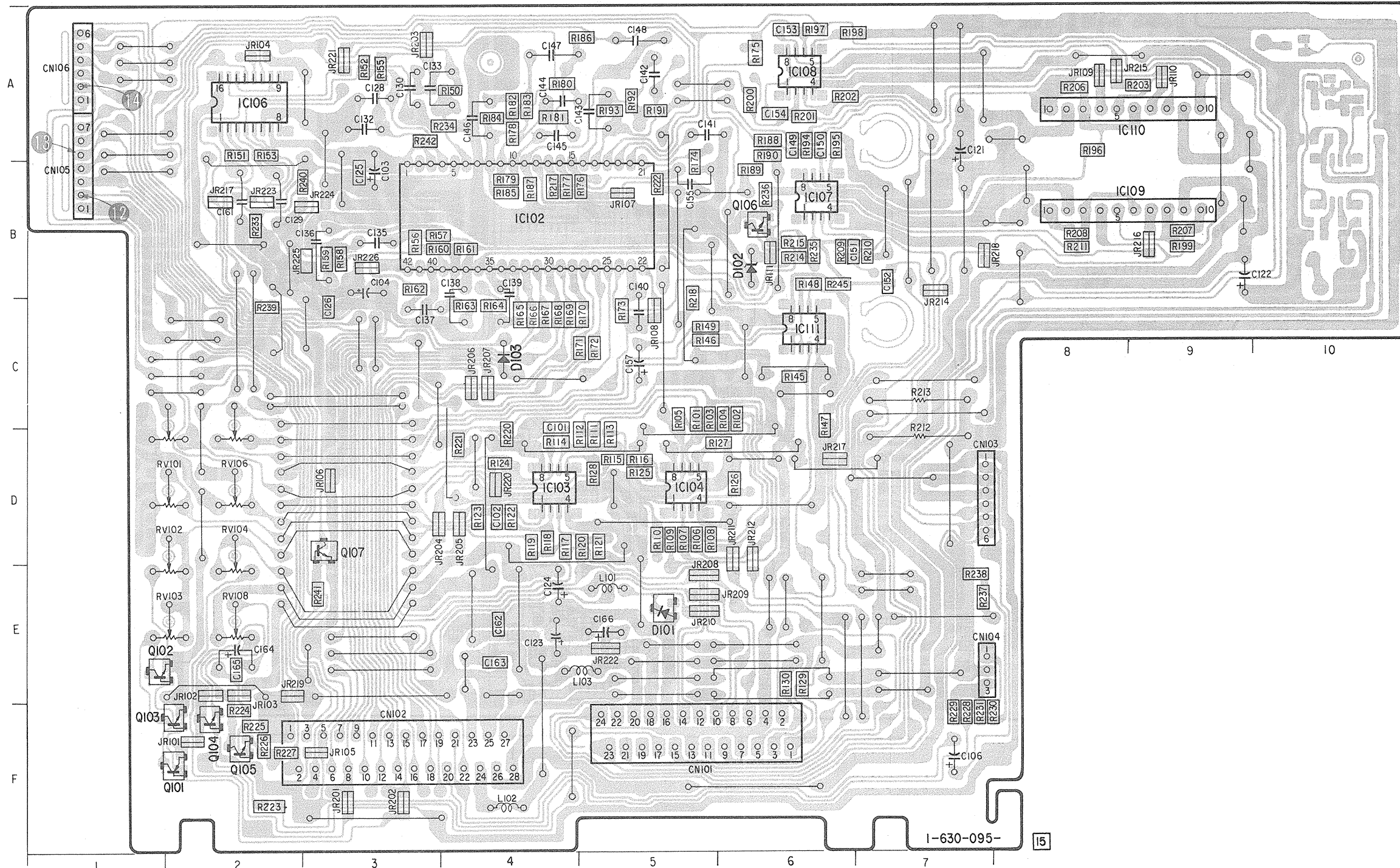


SV-33 (SERVO) PRINTED WIRING BOARD

-Ref. No. SV-33 BOARD : 5,000 Series-

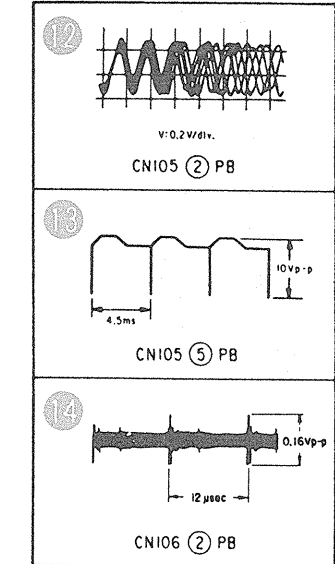
SV-33 Board

SV-33 BOARD



D101	E-5
D102	B-6
D103	C-4
IC102	B-4
IC103	D-4
IC104	D-5
IC106	A-2
IC107	B-6
IC108	A-6
IC109	B-9
IC110	A-9
IC111	C-6
Q101	F-2
Q102	E-1
Q103	F-2
Q104	F-2
Q105	F-2
Q106	B-6
Q107	D-3

SV-33 BOARD (SERVO)



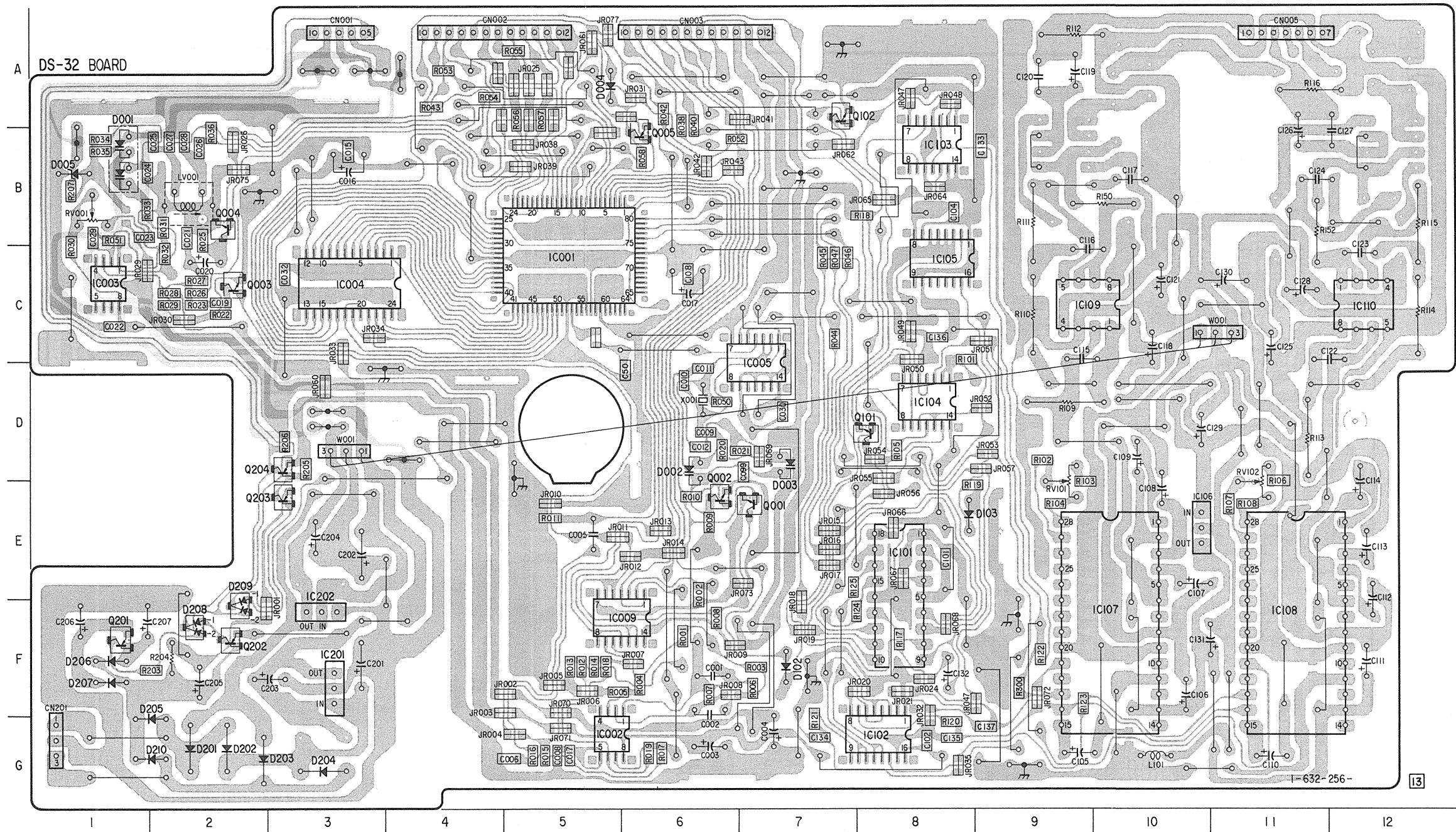
When indicating parts by reference number, please include the board name.

DS-32 (DIGITAL AUDIO) PRINTED WIRING BOARD

-Ref. No. DS-32 BOARD : 6,000 Series-

DS-32 Board

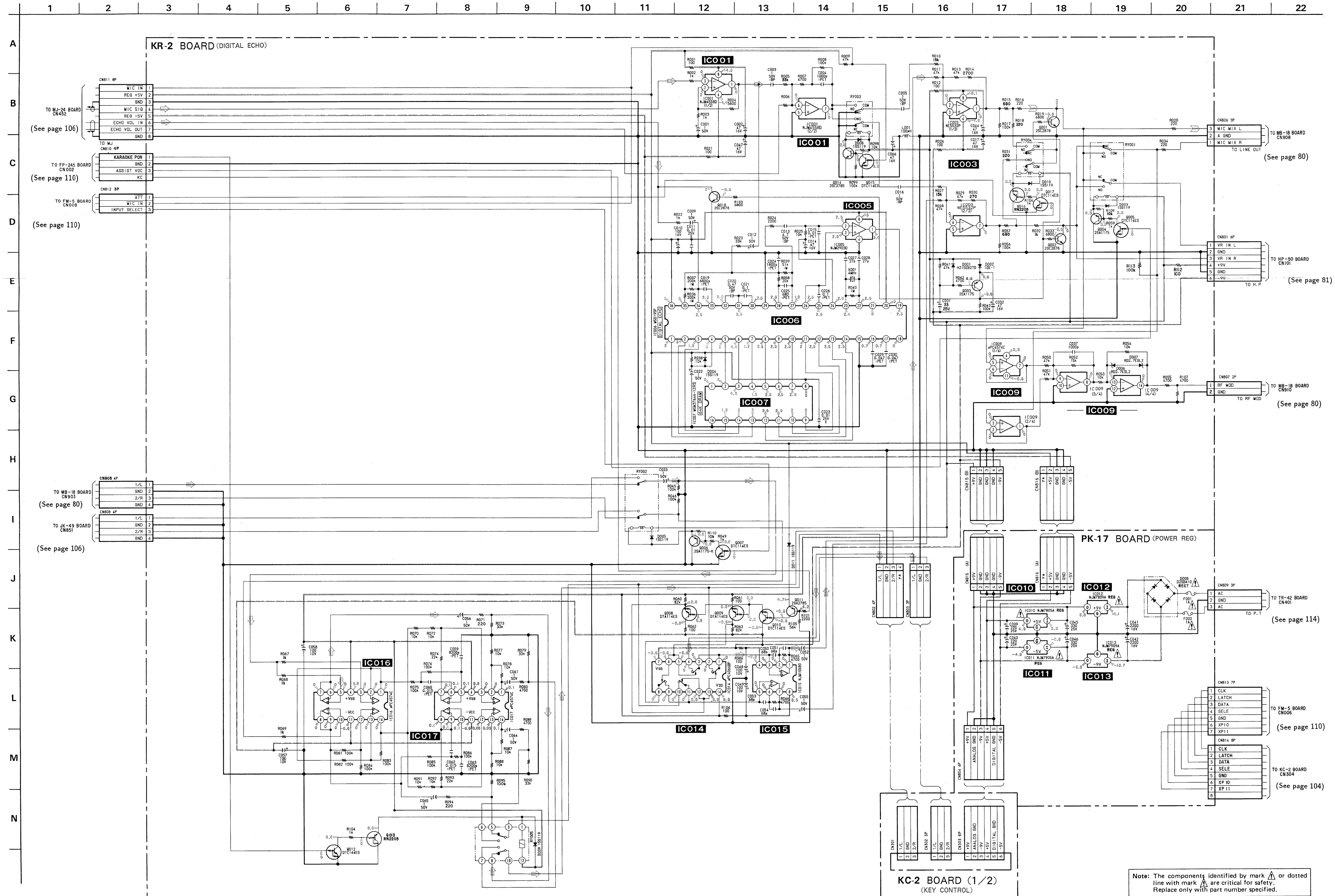
D001	B-1
D002	D-6
D003	D-7
D004	A-5
D005	B-1
D102	F-6
D103	D-8
D201	F-2
D202	F-2
D203	F-2
D204	F-3
D205	F-1
D206	F-1
D207	F-1
D208	E-2
D209	E-2
D210	F-1
IC001	B-5
IC002	F-5
IC003	C-1
IC004	C-3
IC005	C-6
IC009	E-5
IC101	E-8
IC102	F-7
IC103	B-8
IC104	D-8
IC105	B-8
IC106	D-10
IC107	E-9
IC108	E-11
IC109	C-9
IC110	C-11
IC201	F-3
IC202	E-3
Q001	D-6
Q002	D-6
Q003	C-2
Q004	B-2
Q005	A-5
Q101	D-7
Q102	A-7
Q201	E-1
Q202	E-2
Q203	D-2
Q204	D-2



For printed wiring boards :

- ○ — : indicates a lead wire mounted on the component side.
- ■ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.
- ○ — ○ : Jumper wire connected to the pattern on the component side.
- ○ — ○ — ⊥ : Jumper wire connected to the ground pattern on the component side.

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

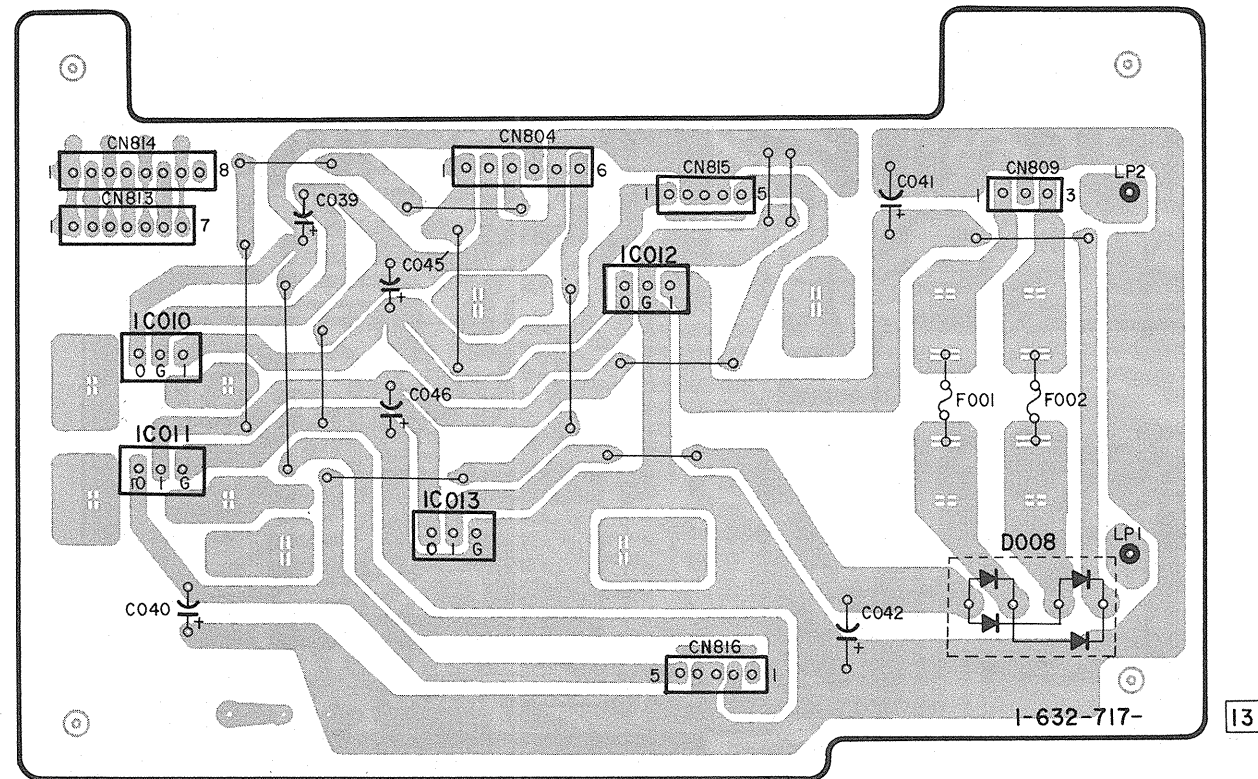


Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

KR-2 (DIGITAL ECHO), PK-17 (POWER REG) PRINTED WIRING BOARDS

-Ref. No. KR-2 BOARD : 4,000 Series, PK-17 BOARD : 5,000 Series -

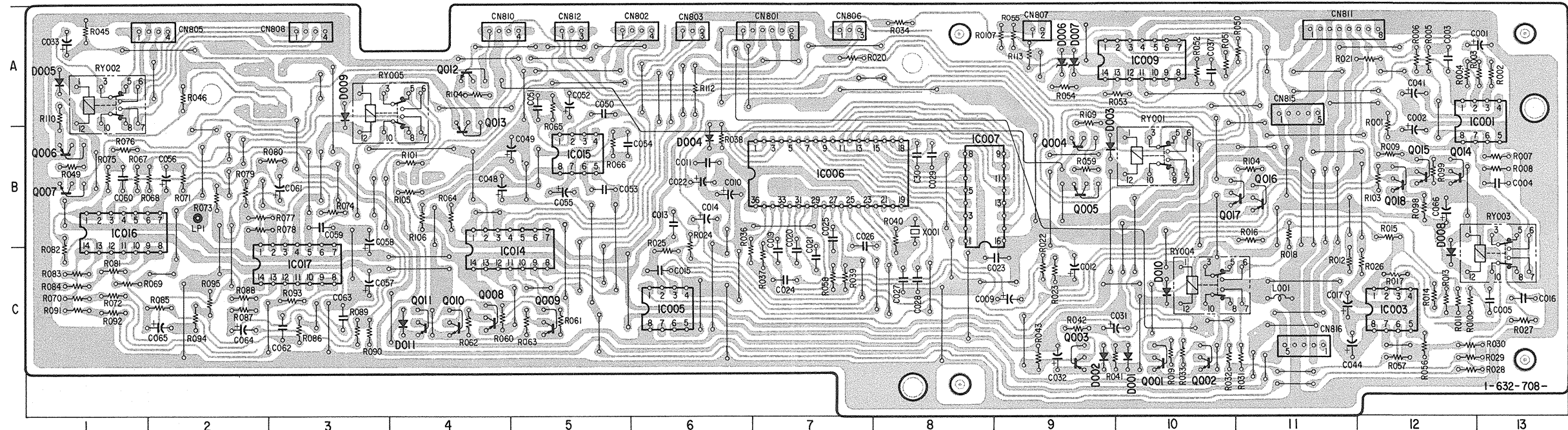
PK-17 BOARD



KR-2 Board

- D001 C-10
- D002 C-9
- D003 B-9
- D004 B-6
- D005 A-1
- D006 A-9
- D007 A-9
- D008 C-12
- D009 A-3
- D010 C-10
- D011 C-4

KR-2 BOARD



- IC001 A-13
- IC003 C-12
- IC005 C-6
- IC006 B-7
- IC007 B-8
- IC009 A-10
- IC014 B-4
- IC015 B-5
- IC016 B-1
- IC017 C-3
- Q001 C-10
- Q002 C-10
- Q003 C-9
- Q004 B-9
- Q005 B-9
- Q006 B-1
- Q007 B-1
- Q008 C-4
- Q009 C-5
- Q010 C-4
- Q011 C-4
- Q012 A-4
- Q013 A-4
- Q014 B-12
- Q015 B-12
- Q016 B-11
- Q017 B-10
- Q018 B-12

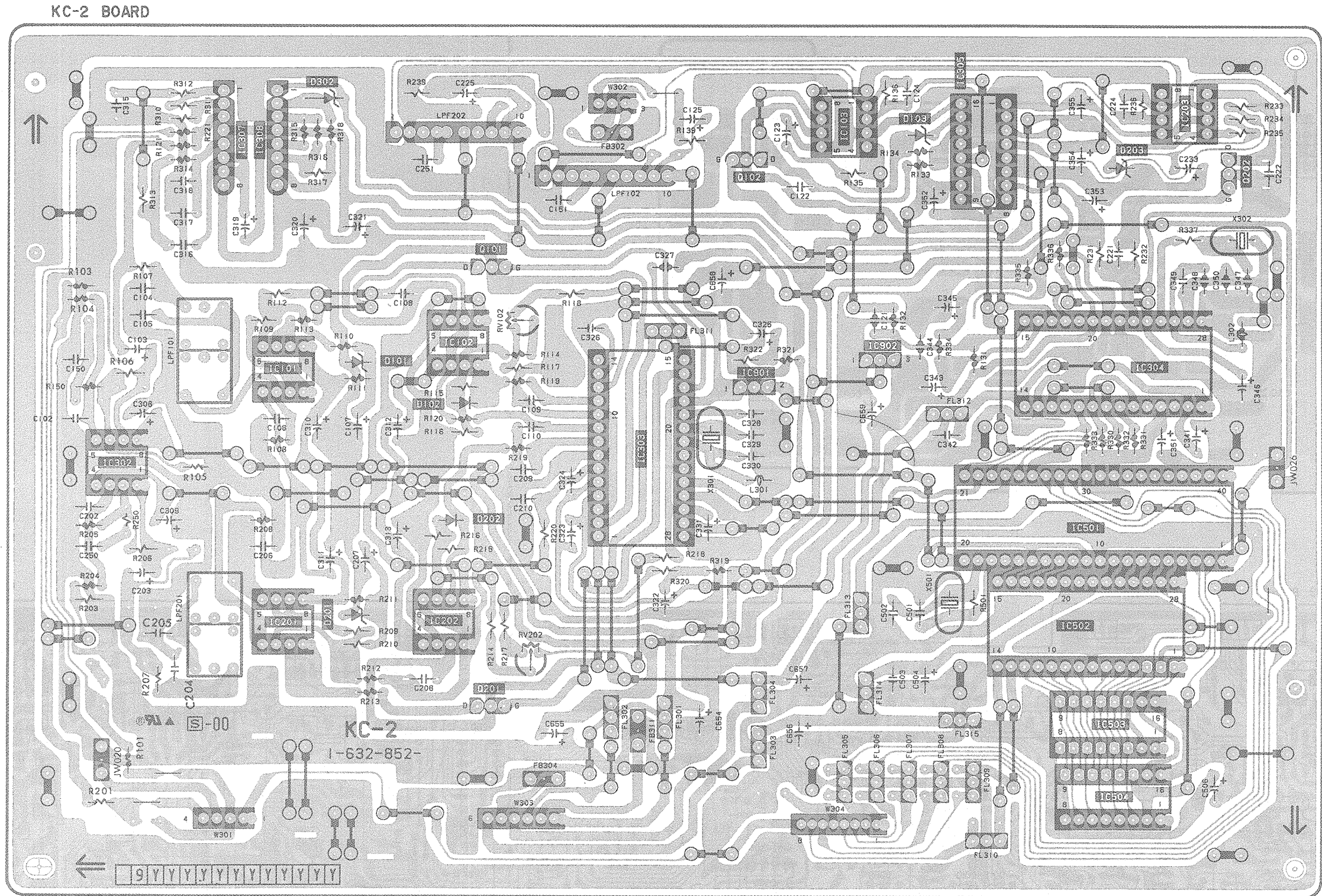
When indicating parts by reference number, please include the board name.

KC-2 (KEY CONTROL) PRINTED WIRING BOARD

-Ref. No. KC-2 BOARD : 2,000 Series -

KC-2 Board

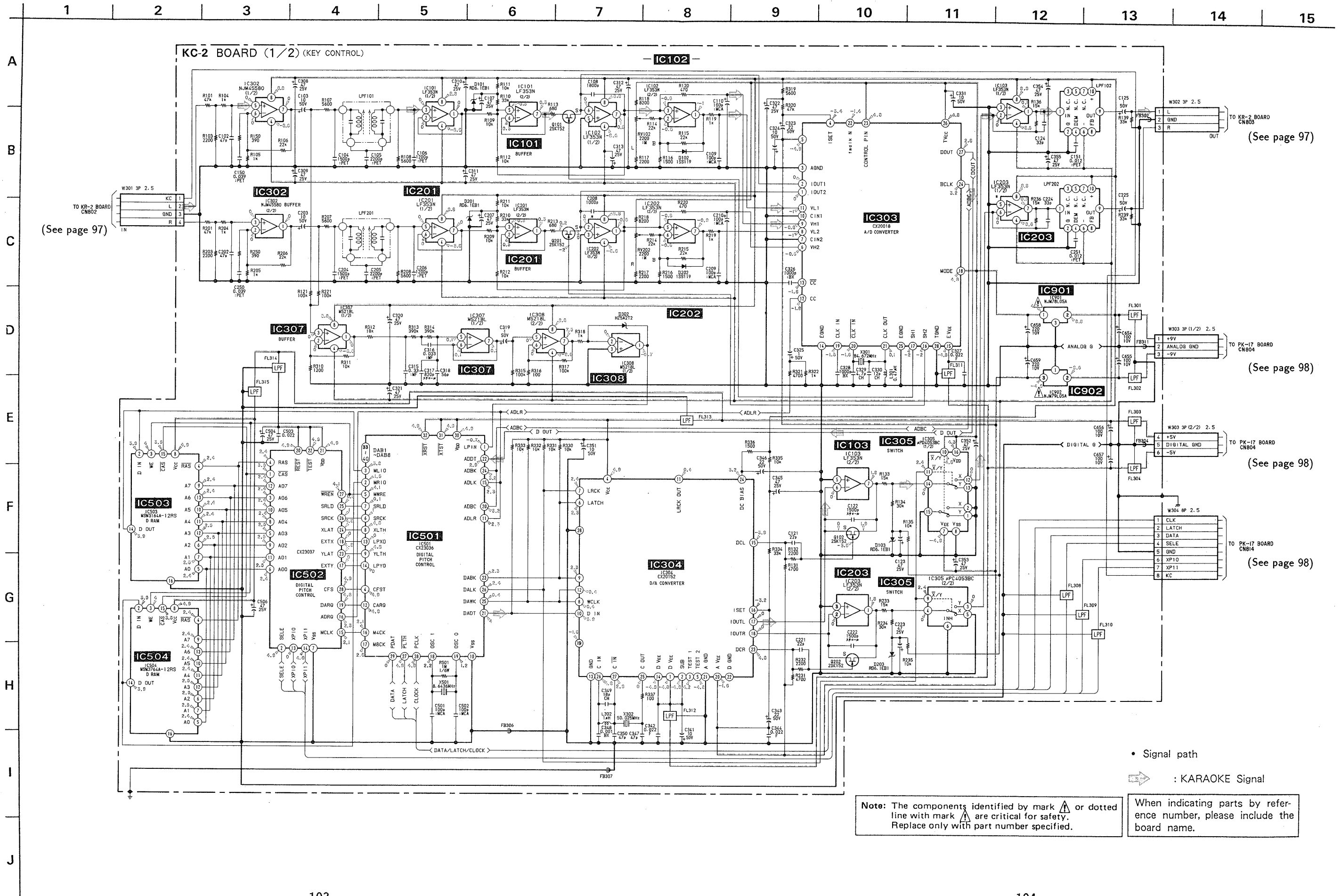
D101	C-3
D102	C-4
D103	A-7
D201	E-3
D202	D-4
D203	B-9
D302	A-3
IC101	C-2
IC102	C-4
IC103	A-7
IC201	E-2
IC202	E-4
IC203	A-9
IC302	D-1
IC303	C-5
IC304	C-8
IC305	A-8
IC307	A-2
IC308	A-2
IC501	D-8
IC502	E-8
IC503	F-8
IC504	C-6
IC901	C-6
IC902	C-7
Q101	B-4
Q102	A-6
Q201	F-4
Q202	B-10



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

KC-2 (KEY CONTROL) SCHEMATIC DIAGRAM

-Ref. No. KC-2 BOARD : 2,000 Series-



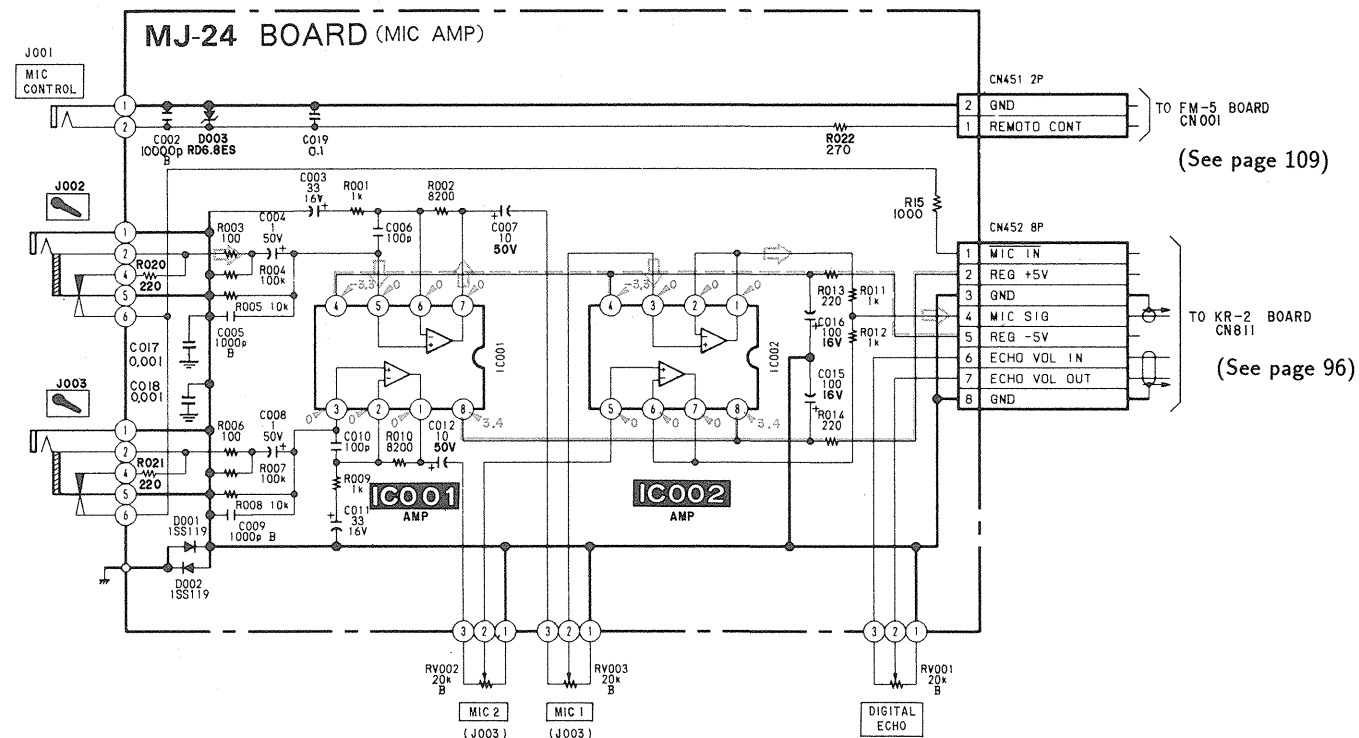
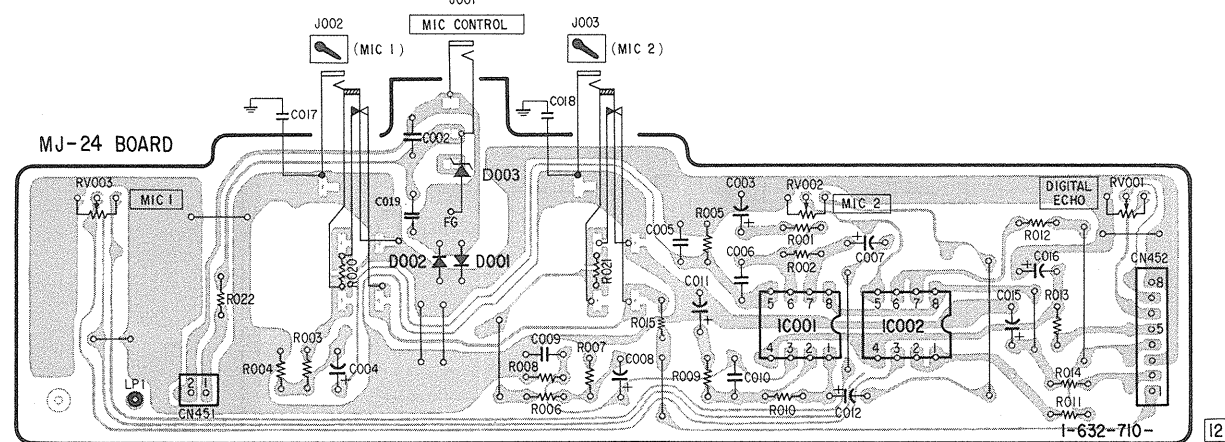
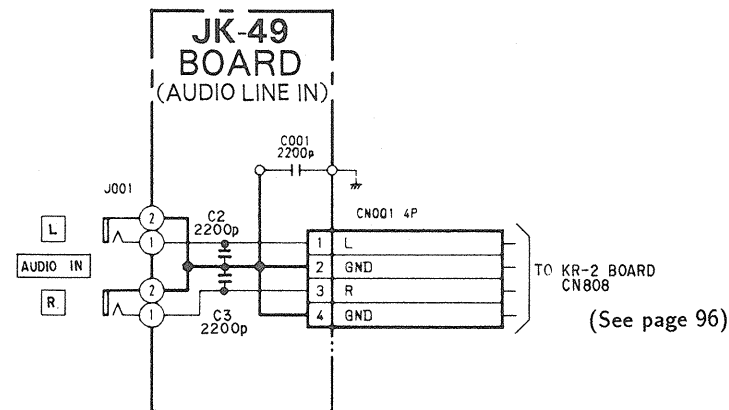
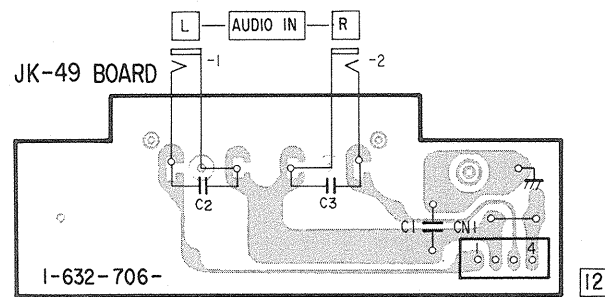
• Signal path
 - - - - - : KARAOKE Signal

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

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14

A
B
C
D
E
F
G
H
I
J



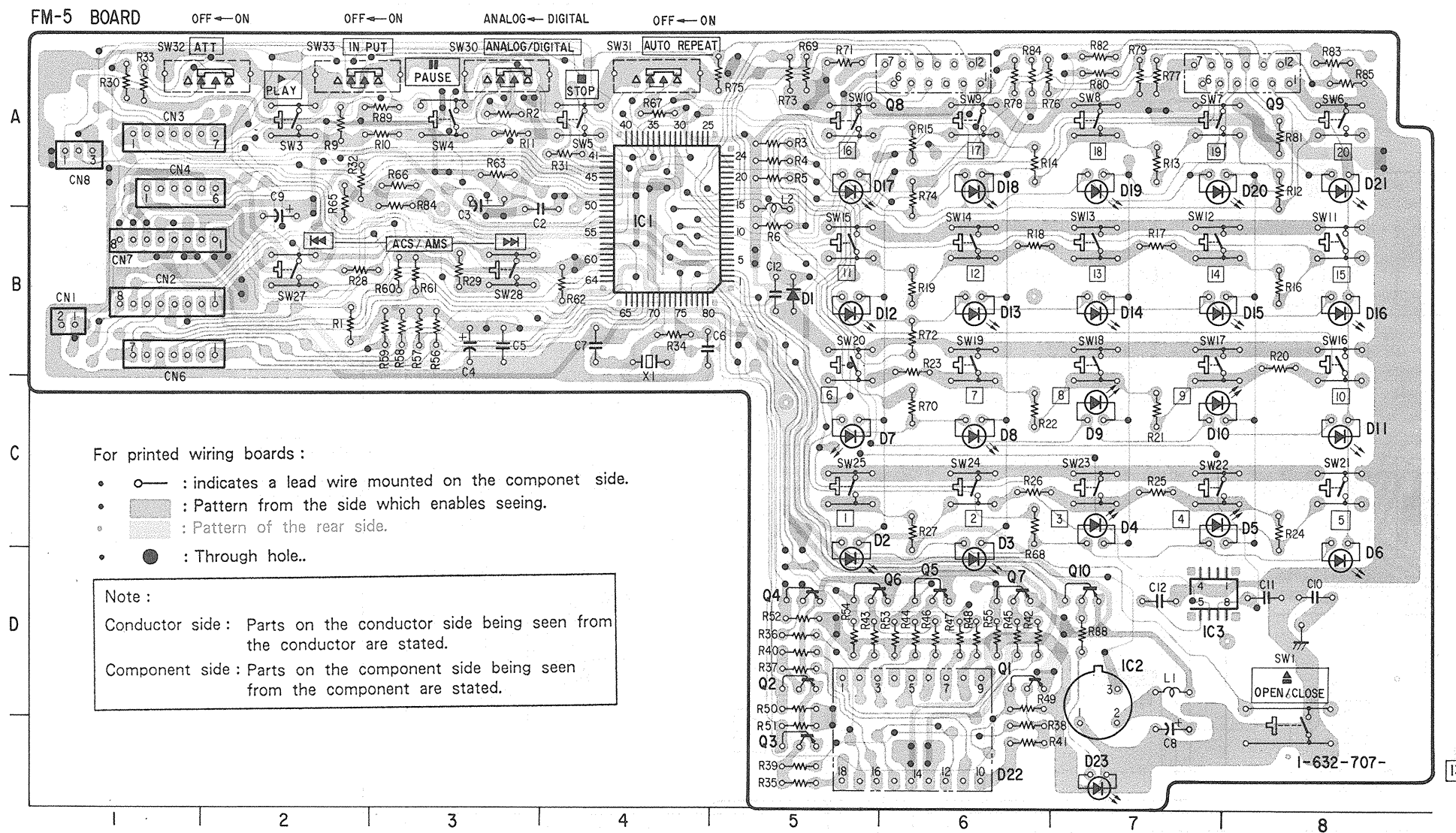
• Signal path
➔ : MIC Signal

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

FM-5 (MODE CONTROL), FP-245 (KARAOKE FUNCTION) SCHEMATIC DIAGRAMS

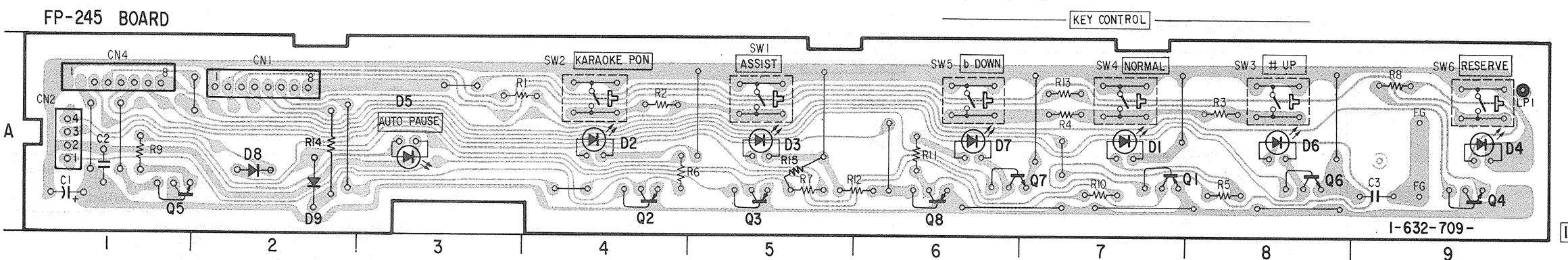
FM-5 (MODE CONTROL), FP-245 (KARAOKE FUNCTION) PRINTED WIRING BOARDS

-Ref. No. FM-5 BOARD : 7,000 Series, FP-245 BOARD : 8,000 Series-

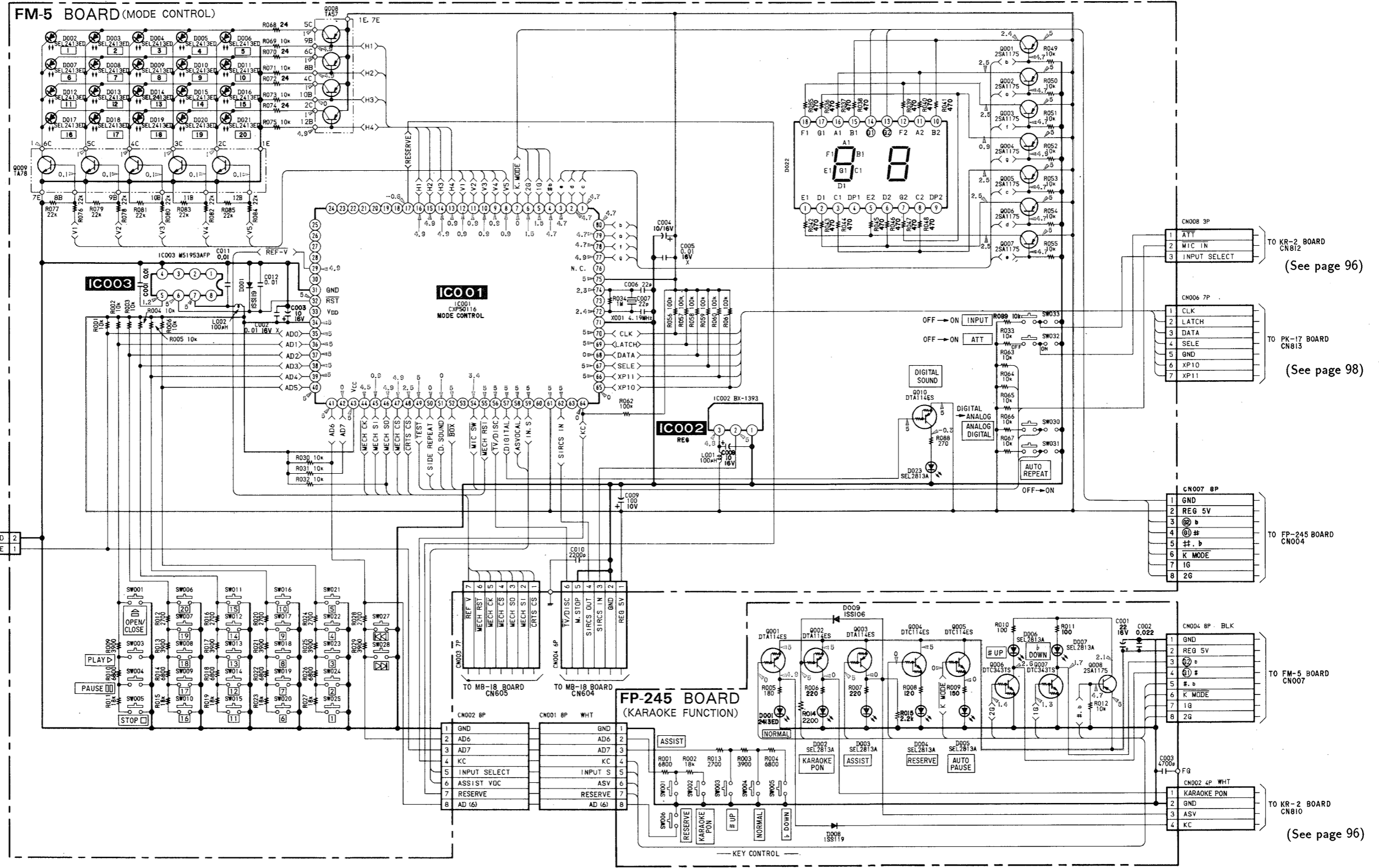


FM-5 Board

D001	B-5
D002	D-5
D003	D-6
D004	C-7
D005	C-7
D006	C-8
D007	C-5
D008	C-6
D009	C-7
D010	C-7
D011	C-8
D012	B-5
D013	B-6
D014	B-7
D015	B-7
D016	B-8
D017	A-5
D018	A-6
D019	A-7
D020	A-7
D021	A-8
D022	D-6
D023	D-7
IC001	A-4
IC002	D-7
IC003	D-7
Q001	D-6
Q002	D-5
Q003	D-5
Q004	D-5
Q005	D-6
Q006	D-5
Q007	D-6
Q008	A-6
Q009	A-8
Q010	D-7



A
B
C
D
E
F
G
H

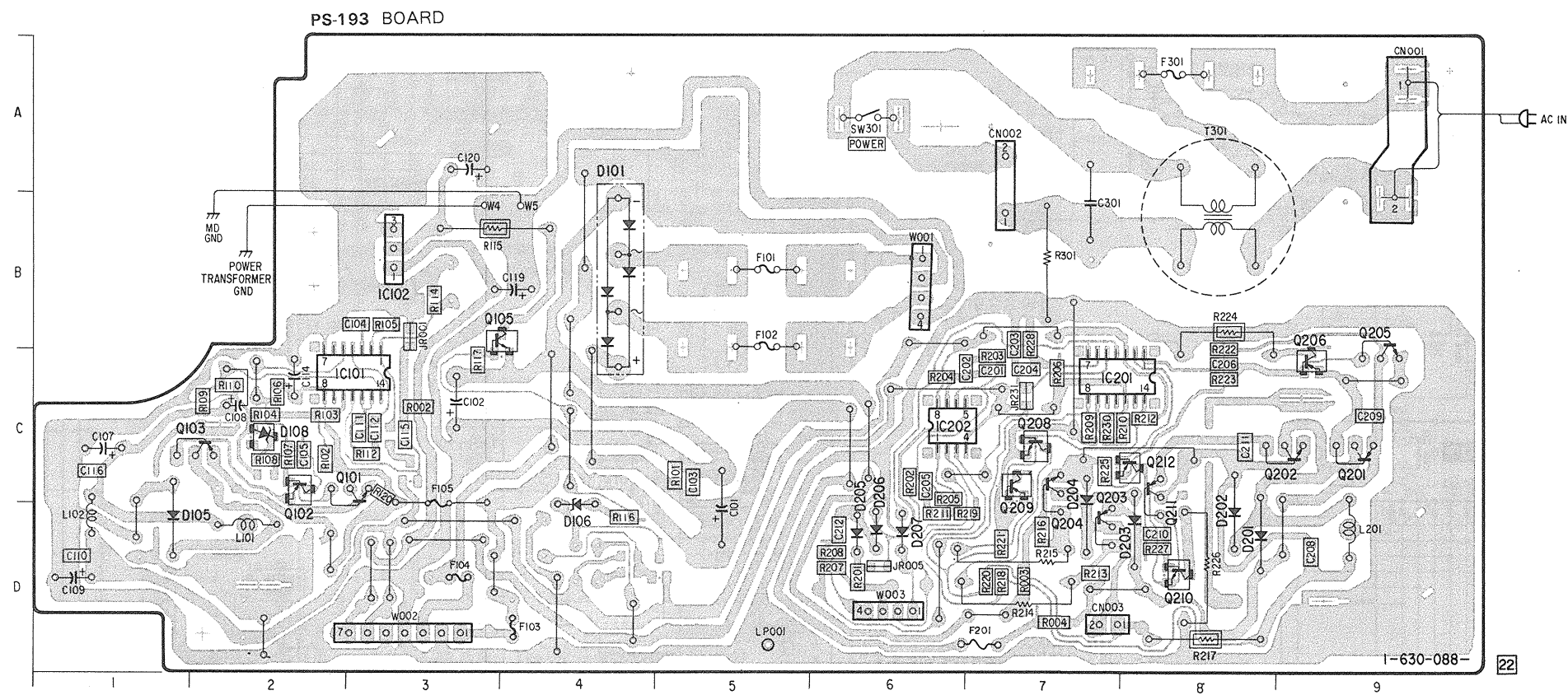


When indicating parts by reference number, please include the board name.

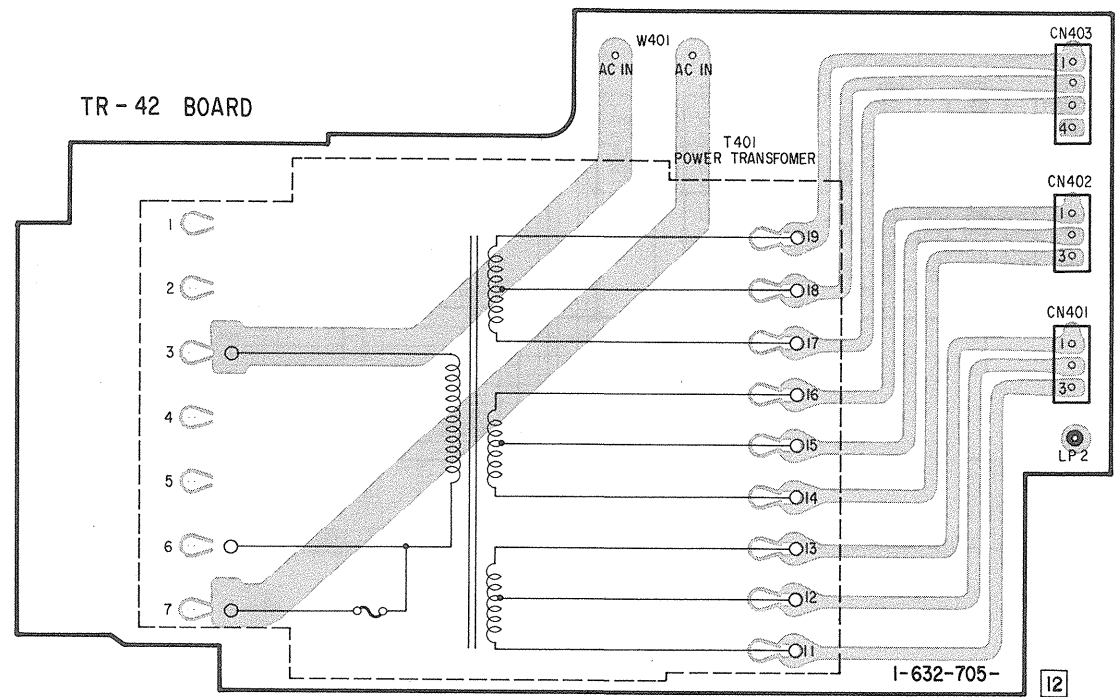
PS-193 (POWER SUPPLY, SPINDLE SERVO), TR-42 (POWER TRANSFORMER) SCHEMATIC DIAGRAMS
 PS-193 (POWER SUPPLY, SPINDLE SERVO), TR-42 (POWER TRANSFORMER) PRINTED WIRING BOARDS
 -Ref. No. PS-193 BOARD : 3,000 Series, TR-42 BOARD : 2,000 Series -

PS-193 Board

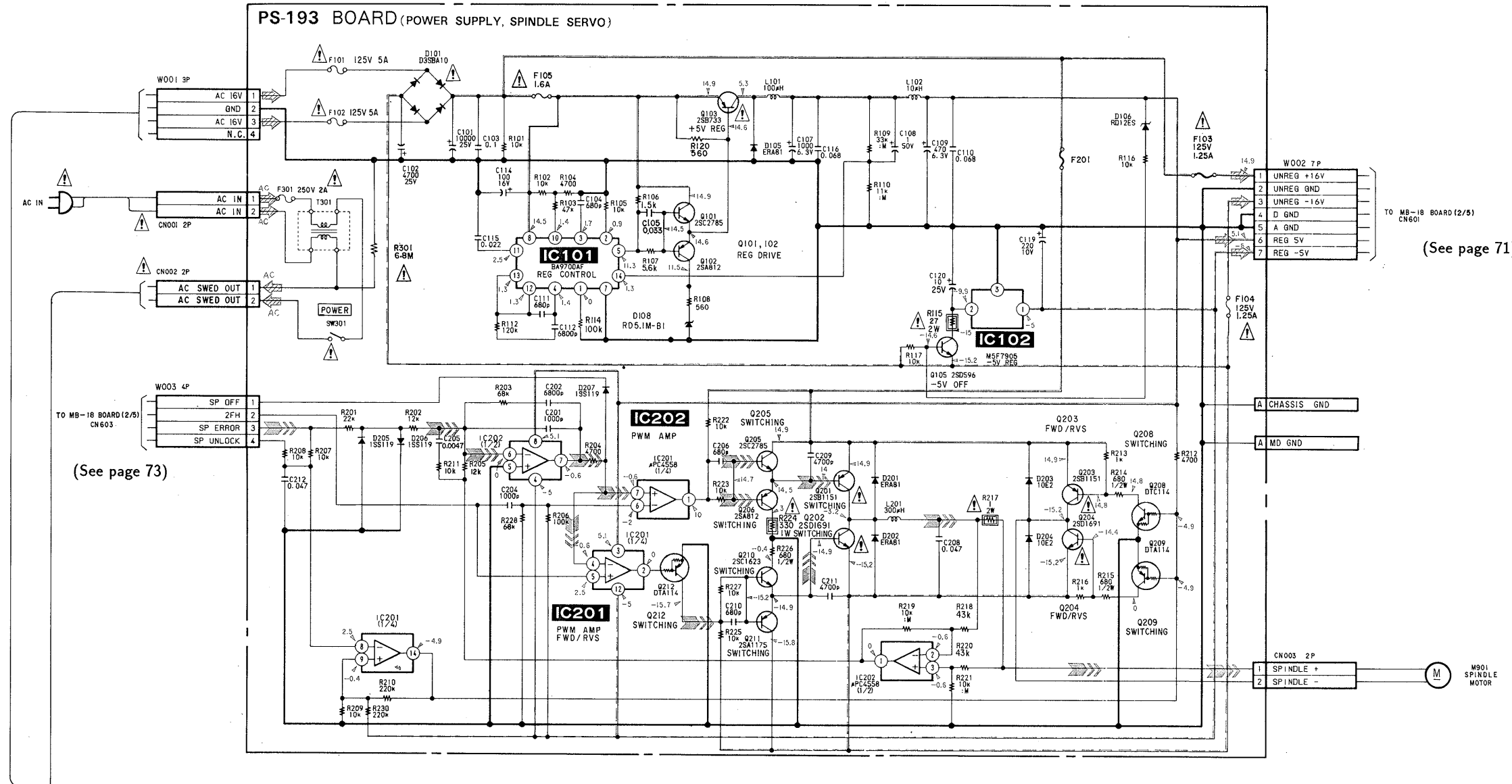
D101	B-4
D105	D-1
D106	C-4
D108	C-2
D201	D-8
D202	C-8
D203	D-8
D204	C-7
D205	D-6
D206	D-6
D207	D-6
IC101	C-3
IC102	B-3
IC201	C-7
IC202	C-6
Q101	C-3
Q102	C-2
Q103	C-2
Q105	B-4
Q201	C-9
Q202	C-9
Q203	C-7
Q204	D-7
Q205	B-9
Q206	C-9
Q208	C-7
Q209	C-7
Q210	D-8
Q211	C-8
Q212	C-8



TR-42 BOARD



A
B
C
D
E
F
G
H
I
J

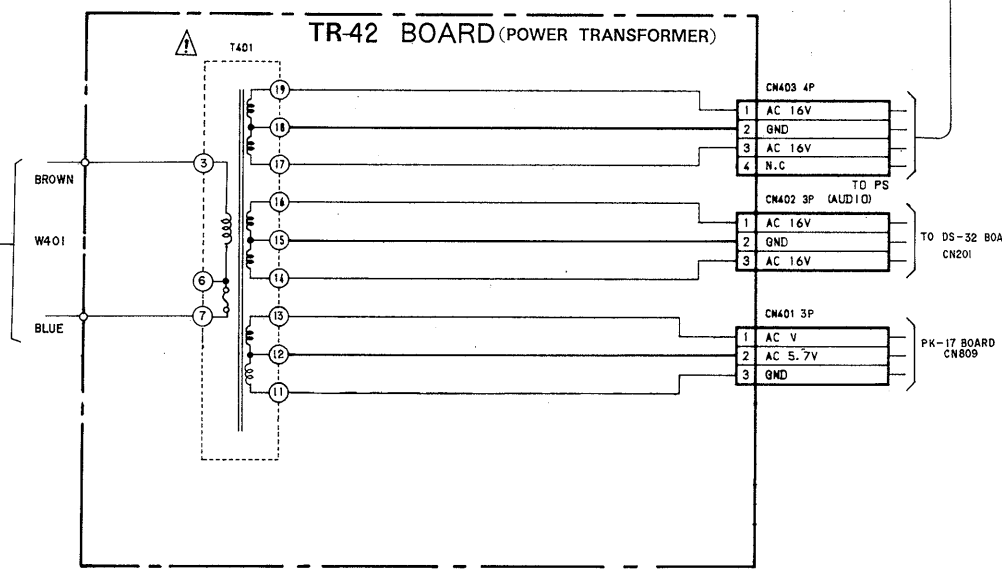


AC IN
CN001 2P
CN002 2P
AC SWED OUT
AC SWED OUT
W003 4P
SP OFF
2FH
SP ERROR
SP UNLOCK
CN603
(See page 73)

W002 7P
UNREG +1.6V
UNREG GND
UNREG -1.6V
D GND
A GND
REG 5V
REG -5V
F103 125V 1.25A
F104 125V 1.25A
A CHASSIS GND
A MD GND

TO MB-18 BOARD (2/5) CN601
(See page 71)

CN003 2P
SPINDLE +
SPINDLE -
M901 SPINDLE MOTOR



(See page 91)

(See page 98)

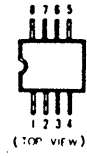
• Signal path
Spindle speed servo+phase

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

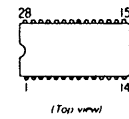
When indicating parts by reference number, please include the board name.

5-3. SEMICONDUCTORS

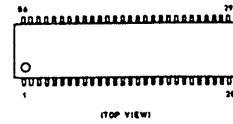
BA7131F
NJM4558M
NJM4560M
RC4558DC
TL082CPS
μ PC393G2
μ PC4558G2



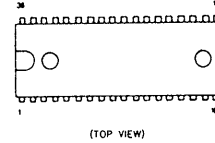
CX20152
CX20018
CX23037
PCM58P



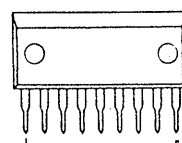
HA12127NT



M50195P



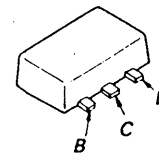
STA-451C



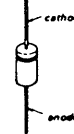
PT-360FS



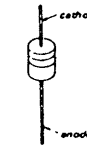
2SD999



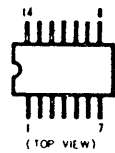
ERA81-004
ERA83-006
RD6.2ES-B2
10E2
31DF2-FER
1SS106
10E1



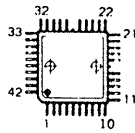
HZ5A2
RD2.7ES-L1
RD3.9ES-B2
RD5.1ES-B2
RD6.8ES-B3
RD12ES-B2
1SS119
RD11ES-B2



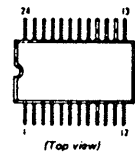
BA9700AF
BA10324F
CXL5005M
SN74HC00NS
SN74HCU04NS
TC74HCT04F
μ PC324G2
MC14066BF



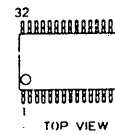
CXA1081Q



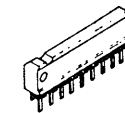
LC3517BML-15



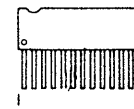
M50455-157FP



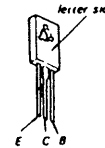
RC4558P



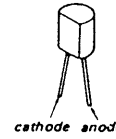
TA-57
TA-78



2SB1151
2SD1691K



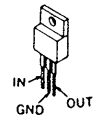
FC52M-5



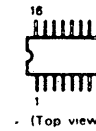
RD5.1M-B2



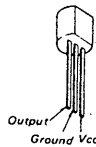
M5F7805
M5F7812
RC78M05FA
RC7809FA
NJM7805A



MC14052BF
MC14053BF
MSM72H032GS-K
SN74HC161NS
TC4053BFHB



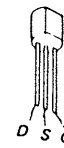
RC78L05A



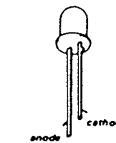
2SB733-2
2SB734



2SK152-2



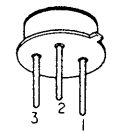
GL-360



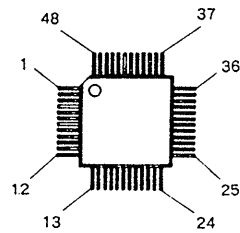
GL6D220
SEL2413E
SEL2413E-D
SEL2813A



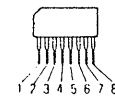
BX-1393



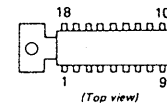
CXA1254Q
CXA1255Q
CXD1152Q
M51953AFP



M5218L



MSM3764A-12RS

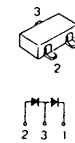


RC79L05A

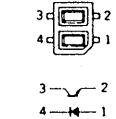


DTA114ES
DTC114ES
DTC144ES
RN2205
2SC2878B
2SD655-E

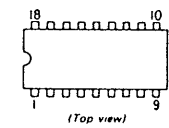
1SS226



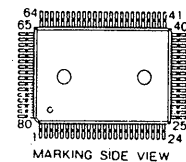
GP-2S09-B



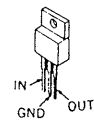
CXD2550P



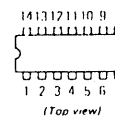
CXD1125Q
CXP50116-023Q
MB89795-117



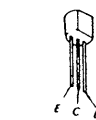
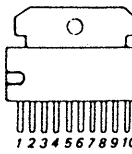
M5F78M09



SN74HC74NS
UPC4574C
TC4066BPHB

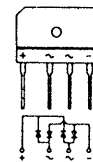


TA7291P

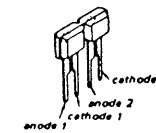


DTC343TS
2SA1175-HFE
2SA1175TP-HFE
2SC2785-HFE

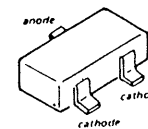
D3SBA10
D2SB10



KV1236-D



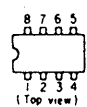
1S2836



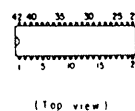
NJM4560S-D



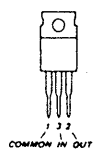
CX20197
NJM5532D-D
NE5532P
NJM4558D
LF353N/GLEA312
LM2903DQ



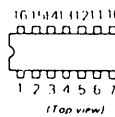
HA11529



M5F7905
NJM7909A
NJM7905A



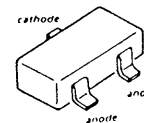
MC14053BCP
SN74HC153NS



DTA114EK
DTA124EK
DTC114EK
DTC124EK
DTC144EK
2SA1162
2SC1623
2SC1623-L7
2SD596
2SA1162G



MA152WK
1S2837





SECTION 6 EXPLODED VIEWS

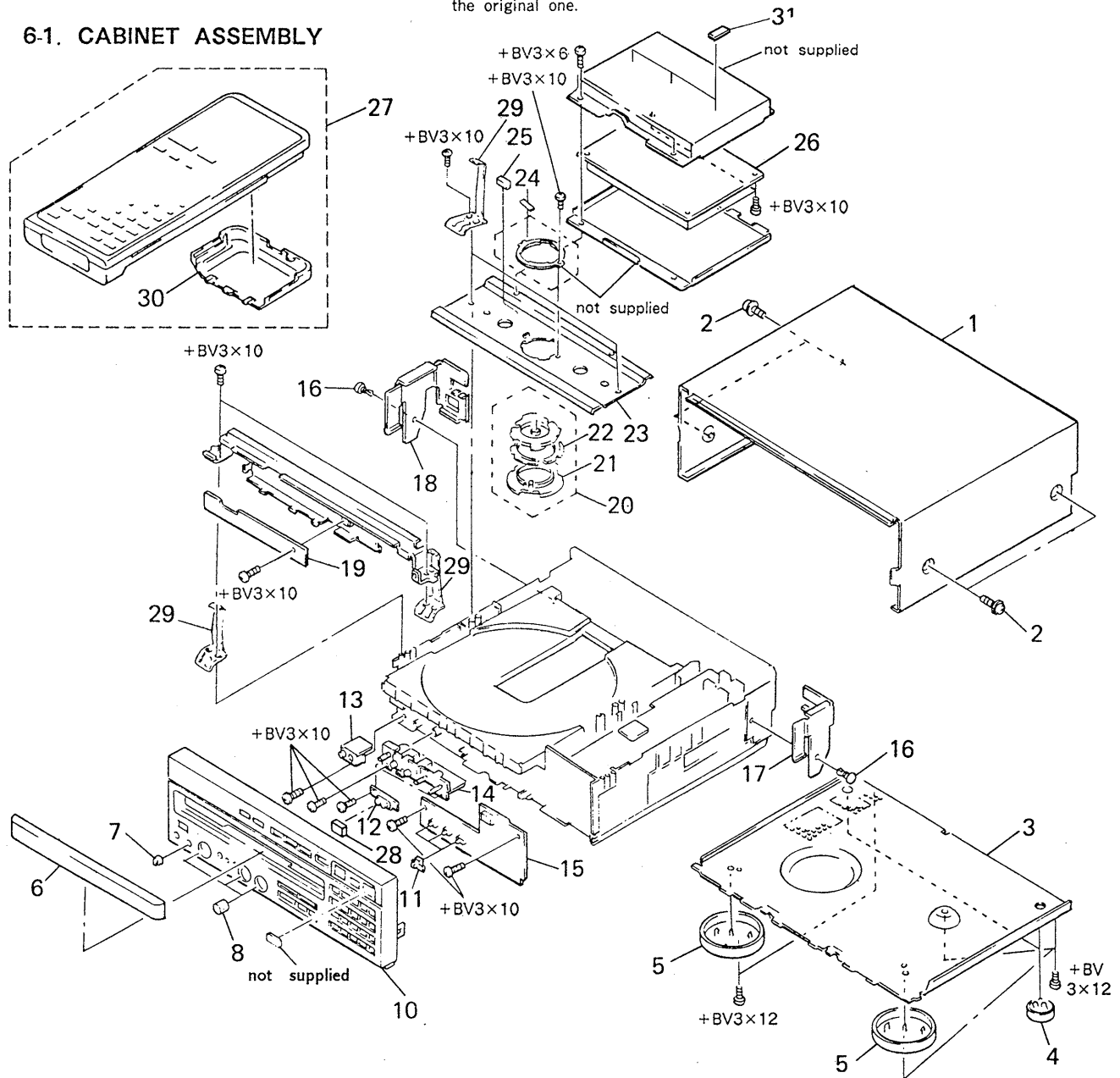
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

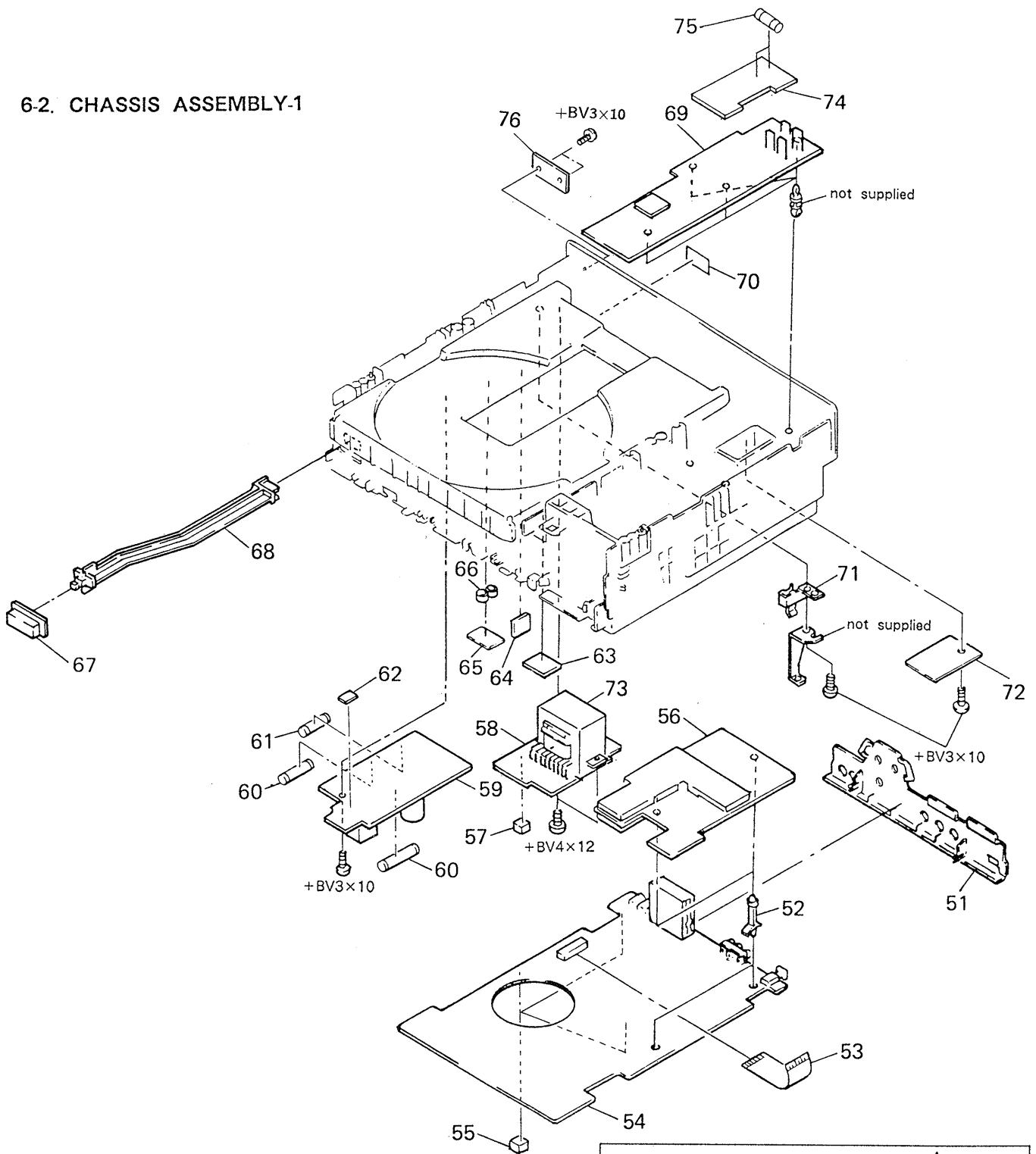
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

6-1. CABINET ASSEMBLY



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	3-740-723-01	CASE, UPPER		16	4-812-134-11	RIVET NYLON, 3.5	
2	7-682-545-04	SCREW (3X4) (R), TAPPING, (+) P		17	3-740-710-01	REINFORCEMENT (RIGHT), REAR	
3	*3-735-075-01	PLATE, BOTTOM		18	3-740-709-01	REINFORCEMENT (LEFT), REAR	
4	X-3318-954-1	FOOT ASSY		19	*A-6421-385-A	FP-245 BOARD, COMPLETE	
5	X-3735-007-1	FOOT ASSY		20	X-3735-006-1	PLATE ASSY, PRESS	
6	3-740-719-01	COVER, FRONT		21	3-735-010-01	PLATE (1), PRESS	
7	4-922-531-01	KNOB (A TYPE), LOV		22	3-735-011-01	SPRING	
8	3-740-714-01	KNOB (INNER), VOLUME		23	3-735-062-02	ARM, CHUCK	
10	X-3735-055-1	PANEL ASSY, FRONT		24	*3-737-454-01	SHEET, HOLDER	
11	3-740-716-01	KNOB, SLIDE		25	3-846-312-00	SPACER	
12	*1-632-706-11	JK-49 BOARD		26	*A-6421-462-A	KC-2 (B) BOARD, COMPLETE	
13	*1-630-090-11	HR-50 BOARD		27	1-465-335-31	REMOTE COMMANDER (RMT-K1A)	
14	*A-6421-461-A	MJ-24 (KU) BOARD, COMPLETE		28	3-740-731-01	COVER, OUTER INPUT	
15	*A-6421-386-A	FM-5 BOARD, COMPLETE		29	3-740-735-01	SPRING	
				30	3-707-584-01	LID BATTERY CASE	
				31	9-911-840-XX	CUSHION, CRT	

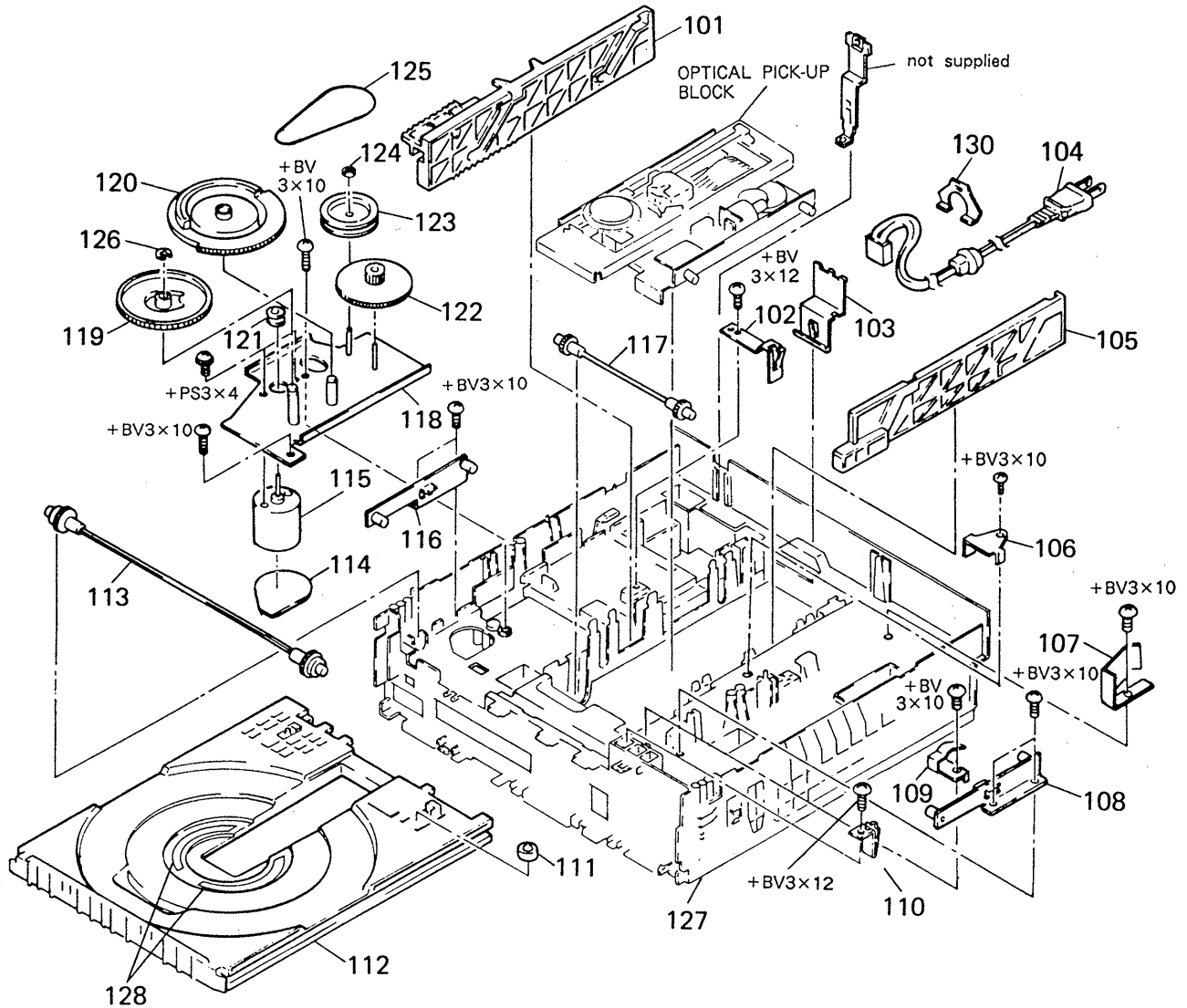
6-2. CHASSIS ASSEMBLY-1



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

No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	*X-3735-045-1	PLATE, JACK ASSY		64	*1-630-093-11	SW-107 BOARD	
52	*3-703-353-08	SUPPORTER, PC BOARD		65	*1-630-091-11	LS-17 BOARD	
53	*1-574-755-11	WIRE, FLAT TYPE 28P		66	3-735-054-01	HOLDER, SENSOR	
54	*A-6421-460-A	MB-18 (KU) BOARD, COMPLETE		67	3-740-720-11	BUTTON, POWER	
55	4-604-358-01	CUSHION (H9), RUBBER		68	3-735-050-01	LEVER, POWER SW	
56	*A-6421-390-A	DS-32 (A) BOARD, COMPLETE		69	*A-6421-380-A	KR-2 BOARD, COMPLETE	
57	9-911-843-XX	CUSHION		70	*3-741-879-01	LABEL, MODEL NUMBER (NO.4)	
58	*1-632-705-11	TR-42 BOARD		71	3-735-091-01	SPRING	
59	*A-6421-341-A	PS-193 (U) BOARD, COMPLETE		72	*1-630-814-12	DL-29 BOARD	
60	Δ .1-532-747-11	FUSE, GLASS TUBE (F101, 102) (125V 5A)		73	Δ .1-450-123-11	TRANSFORMER, POWER (T401)	
61	Δ .1-532-825-11	FUSE, GLASS TUBE (F301) (250V 2A)		74	*A-6421-388-A	PK-17 BOARD, COMPLETE	
62	X-3735-019-1	SHIELD ASSY, PS LID		75	Δ .1-532-740-11	FUSE, GLASS TUBE (F001, 002) (125V 1A)	
63	*1-630-092-11	SW-106 BOARD		76	3-741-882-01	COVER, VOLT SELECTOR	

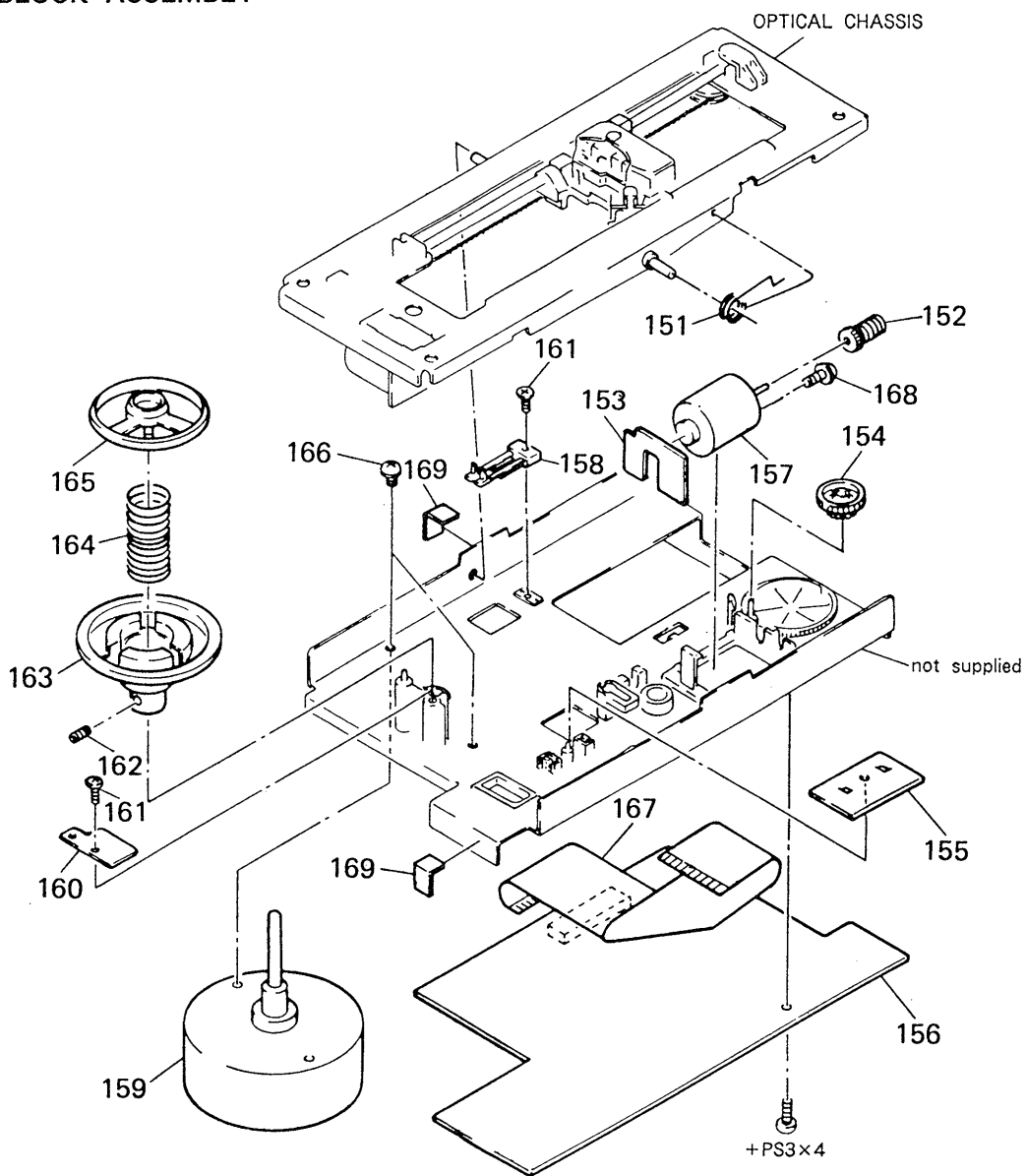
6.3. CHASSIS ASSEMBLY-2



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

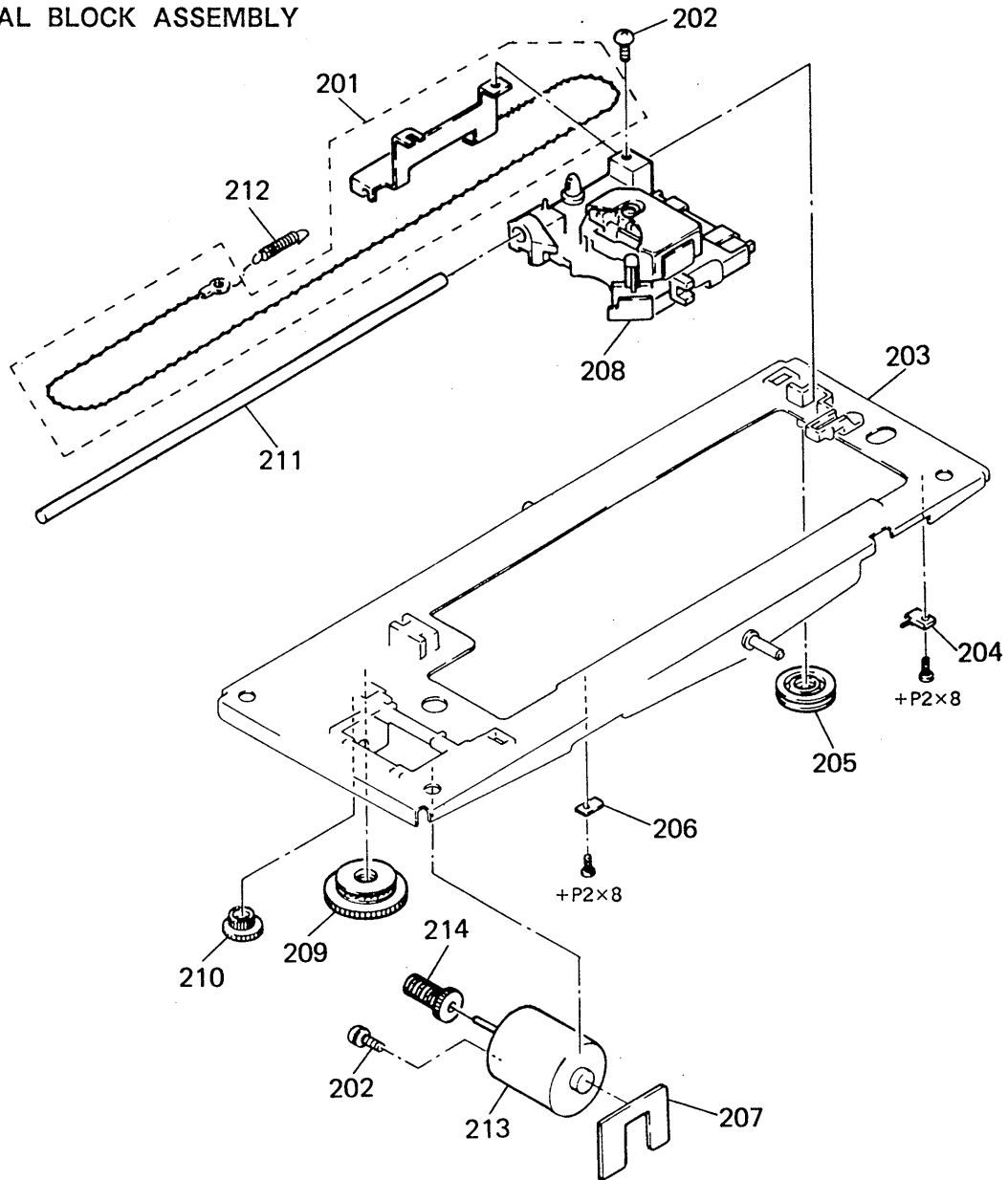
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	3-735-053-01	RACK (LEFT)		116	X-3735-021-1	GUIDE ASSY (LEFT), TRAY	
102	3-737-401-01	SPRING (1)		117	X-3735-008-1	GEAR ASSY, MD PHASE	
103	*3-737-414-01	PLATE, GROUND, RF		118	*X-3735-002-1	BASE ASSY, THREADING	
104	\triangle 1-559-129-51	CORD, POWER		119	3-735-035-01	GEAR, TRAY	
105	3-735-052-01	RACK (RIGHT)		120	3-735-056-01	CAM, DRIVING	
106	*3-737-415-01	RETAINER, RACK		121	3-713-318-01	PULLEY, MOTOR	
107	3-737-412-01	SPRING, LEAF		122	3-735-037-01	GEAR, MIDWAY	
108	X-3735-022-1	GUIDE ASSY (RIGHT), TRAY		123	3-735-036-01	PULLEY (A)	
109	3-737-448-01	SPRING, LEAF		124	3-669-595-00	WASHER (2), STOPPER	
110	3-737-402-01	SPRING (2)		125	3-513-066-XX	BELT, FAST FORWARD	
111	*4-914-248-01	STOPPER, RUBBER		126	7-624-108-04	STOP RING 4.0, TYPE -E	
112	X-3735-032-2	TRAY ASSY		127	3-735-071-91	FRAME	
113	X-3735-009-1	GEAR ASSY, PHASE		128	3-735-039-03	SHEET, CD	
114	*1-630-101-11	MT-29 BOARD		130	*3-737-438-01	BRACKET, AC CORD	
115	A-6415-288-B	MOTOR BLOCK ASSY, LOADING (M904)					

6.4. MD BLOCK ASSEMBLY



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
151	3-735-021-01	SPRING, TORSION		161	3-719-845-11	SCREW (B2X8), TAPPING	
152	3-735-038-01	GEAR, WORM		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	*1-630-094-11	CK-14 BOARD		165	X-3735-004-1	GUIDE ASSY, CENTER	
156	*A-6421-311-A	SV-33 BOARD, COMPLETE		166	4-606-833-01	SCREW (3X5), + PSW	
157	A-6415-290-A	MOTOR BLOCK ASSY, TILT (M903)		167	1-574-648-11	CABLE, FLEXIBLE FLAT (24 CORE)	
158	1-554-468-00	SWITCH, LEAF (SLED IN LIMIT LD/CD)(S903)		168	3-899-248-01	SCREW (M3X6)	
159	1-541-665-11	MOTOR, SPINDLE (M901)		169	*3-737-413-01	SHEET, TEFLON	
160	*1-630-096-11	FG-13 BOARD					

6.5. OPTICAL BLOCK ASSEMBLY



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

No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
201	X-3735-001-1	WIRE ASSY		208	\triangle 8-848-138-11	DEVICE, OPTICAL KHS-130A	
202	3-899-248-01	SCREW (M3X6)		209	3-735-016-01	PULLEY, DRIVING	
203	*X-3735-014-1	CHASSIS ASSY		210	3-735-015-01	GEAR, CARRIAGE	
204	1-570-771-21	SWITCH (SLED OUT LIMIT) (S902)		211	*3-735-020-01	SHAFT, CARRIAGE	
205	3-735-017-01	PULLEY, RETURN		212	3-672-430-00	SPRING, TENSION	
206	1-571-435-11	SWITCH (SLED IN LIMIT) (S901)		213	1-541-659-11	MOTOR, DC (SLED) (M902)	
207	*1-630-097-11	MT-28 BOARD		214	3-735-038-01	GEAR, WORM	

SECTION 7 ELECTRICAL PARTS LIST

NOTE:

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

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

- 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.
- 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.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- SEMICONDUCTORS
In each case, U: μ , for example:
UA.....: μ A....., UPA.....: μ PA.....,
UPB.....: μ PB....., UPC.....: μ PC.....,
UPD.....: μ PD.....
- CAPACITORS
MF: μ F, PF: μ MF
- COILS
MMH: mH, UH: μ H

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
*A-6421-311-A SV-33 BOARD, COMPLETE ***** (Ref. No. 5,000 Series)				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			
<u>CAPACITOR</u>				<u>DIODE</u>			
C101	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	D101	8-719-400-18	DIODE MA152WK	
C102	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	D102	8-719-109-72	DIODE RD3.9ESB	
C103	1-124-584-00	ELECT 100MF	20% 10V	D103	8-719-911-19	DIODE 1SS119	
C104	1-124-584-00	ELECT 100MF	20% 10V	<u>IC</u>			
C106	1-126-160-11	ELECT 1MF	20% 50V	IC102	8-759-321-40	IC HA11529	
C121	1-124-242-00	ELECT 33MF	20% 25V	IC103	8-759-700-43	IC NJM4558M	
C122	1-124-242-00	ELECT 33MF	20% 25V	IC104	8-759-700-43	IC NJM4558M	
C123	1-124-584-00	ELECT 100MF	20% 10V	IC106	8-759-208-11	IC TC4053BFHB	
C124	1-124-584-00	ELECT 100MF	20% 10V	IC107	8-759-700-43	IC NJM4558M	
C125	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC108	8-759-700-43	IC NJM4558M	
C126	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC109▲	8-749-920-86	IC STA-451C	
C128	1-161-494-00	CERAMIC 0.022MF	25V	IC110▲	8-749-920-86	IC STA-451C	
C129	1-136-173-00	FILM 0.47MF	5% 50V	IC111	8-759-700-43	IC NJM4558M	
C130	1-126-320-11	ELECT 10MF	20% 16V	<u>JUMPER RESISTOR</u>			
C132	1-130-487-00	MYLAR 0.022MF	5% 50V	JR201	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C133	1-130-476-00	MYLAR 0.0027MF	5% 50V	JR202	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C135	1-130-486-00	MYLAR 0.018MF	5% 50V	JR203	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C136	1-136-169-00	FILM 0.22MF	5% 50V	JR204	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C137	1-130-484-00	MYLAR 0.012MF	5% 50V	JR205	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C138	1-130-484-00	MYLAR 0.012MF	5% 50V	JR206	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C139	1-124-282-00	ELECT 22MF	20% 16V	JR207	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C140	1-126-320-11	ELECT 10MF	20% 16V	JR208	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C141	1-130-491-00	MYLAR 0.047MF	5% 50V	JR209	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C142	1-126-320-11	ELECT 10MF	20% 16V	JR210	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C143	1-136-165-00	FILM 0.1MF	5% 50V	JR211	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C144	1-130-478-00	MYLAR 0.0039MF	5% 50V	JR212	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C145	1-130-486-00	MYLAR 0.018MF	5% 50V	JR214	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C146	1-130-483-00	MYLAR 0.01MF	5% 50V	JR215	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C147	1-136-169-00	FILM 0.22MF	5% 50V	JR216	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C148	1-136-169-00	FILM 0.22MF	5% 50V	JR217	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C149	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	JR223	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C150	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	JR224	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C151	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	JR225	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C152	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	JR226	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C153	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	<u>COIL</u>			
C154	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	L101	1-408-409-00	INDUCTOR 10UH	
C155	1-130-475-00	MYLAR 0.0022MF	5% 50V	L102	1-410-328-11	INDUCTOR 10UH	
C157	1-126-160-11	ELECT 1MF	20% 50V	L103	1-410-509-11	INDUCTOR 10UH	
C161	1-136-173-00	FILM 0.47MF	5% 50V	<u>TRANSISTOR</u>			
C162	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q101	8-729-901-05	TRANSISTOR DTA124EK	
C163	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q102	8-729-901-00	TRANSISTOR DTC124EK	
C164	1-126-160-11	ELECT 1MF	20% 50V	Q103	8-729-901-00	TRANSISTOR DTC124EK	
C165	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V				
C166	1-124-443-00	ELECT 100MF	20% 10V				
<u>CONNECTOR</u>							
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					

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q104	8-729-100-66	TRANSISTOR 2SC1623		R163	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q105	8-729-100-66	TRANSISTOR 2SC1623		R164	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q106	8-729-100-66	TRANSISTOR 2SC1623		R165	1-216-089-00	METAL GLAZE 47K 5%	1/10W
Q107	8-729-901-00	TRANSISTOR DTC124EK		R166	1-216-041-00	METAL GLAZE 470 5%	1/10W
				R167	1-216-049-00	METAL GLAZE 1K 5%	1/10W
		RESISTOR					
R101	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R168	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R102	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R169	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R103	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R170	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R104	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R171	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R105	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R172	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R106	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R173	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R107	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R174	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R108	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R175	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R109	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R176	1-216-748-11	METAL GLAZE 39K 5%	1/10W
R110	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R177	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R111	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R178	1-216-748-11	METAL GLAZE 39K 5%	1/10W
R112	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R179	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R113	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R180	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R114	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R181	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R115	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R182	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R116	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R183	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R117	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R184	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R118	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R185	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R119	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R186	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R120	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R187	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R121	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R188	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R122	1-216-101-00	METAL GLAZE 150K 5%	1/10W	R189	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R123	1-216-025-00	METAL GLAZE 100 5%	1/10W	R190	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R124	1-216-025-00	METAL GLAZE 100 5%	1/10W	R191	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R125	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R192	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R126	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R193	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R127	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R194	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R128	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R195	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R129	1-216-039-00	METAL GLAZE 390 5%	1/10W	R196	1-216-017-00	METAL GLAZE 47 5%	1/10W
R130	1-216-024-00	METAL GLAZE 91 5%	1/10W	R197	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R145	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R198	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R146	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R199	1-216-017-00	METAL GLAZE 47 5%	1/10W
R147	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R200	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R148	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R201	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R149	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R202	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R150	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R203	1-216-017-00	METAL GLAZE 47 5%	1/10W
R151	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R206	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R152	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R207	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R153	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R208	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R155	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R209	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R156	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R210	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R157	1-216-101-00	METAL GLAZE 150K 5%	1/10W	R211	1-216-017-00	METAL GLAZE 47 5%	1/10W
R158	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R212 Δ	1-216-373-11	METAL OXIDE 2.2 5%	2W F
R159	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R213 Δ	1-216-373-11	METAL OXIDE 2.2 5%	2W F
R160	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R214	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R161	1-216-101-00	METAL GLAZE 150K 5%	1/10W	R215	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R162	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R217	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R218	1-216-097-00	METAL GLAZE 100K 5%	1/10W

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.

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PS-193

Ref.No	Part No.	Description	Remark
R220	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R221	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R222	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R223	1-216-033-00	METAL GLAZE 220 5%	1/10W
R224	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R225	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R226	1-216-037-00	METAL GLAZE 330 5%	1/10W
R227	1-216-017-00	METAL GLAZE 47 5%	1/10W
R228	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R229	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R230	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R231	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R233	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R234	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R235	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R236	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R237	1-216-033-00	METAL GLAZE 220 5%	1/10W
R238	1-216-037-00	METAL GLAZE 330 5%	1/10W
R239	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R240	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R241	1-216-295-00	METAL GLAZE 0 5%	1/10W
R242	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R245	1-216-129-00	METAL GLAZE 2.2M 5%	1/10W
<u>JUMPER RESISTOR</u>			
RJ101	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ102	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ103	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ104	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ105	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ106	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ107	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ108	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ109	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ110	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ111	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ218	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ219	1-216-295-00	METAL GLAZE 0 5%	1/10W
RJ220	1-216-295-00	METAL GLAZE 0 5%	1/10W
<u>VARIABLE RESISTOR</u>			
RV101	1-228-993-00	RES, ADJ, CARBON 4.7K	
RV102	1-228-994-00	RES, ADJ, CARBON 10K	
RV103	1-228-994-00	RES, ADJ, CARBON 10K	
RV104	1-228-994-00	RES, ADJ, CARBON 10K	
RV105	1-228-994-00	RES, ADJ, CARBON 10K	
RV106	1-228-990-00	RES, ADJ, CARBON 1K	
RV107	1-228-994-00	RES, ADJ, CARBON 10K	
RV108	1-228-990-00	RES, ADJ, CARBON 1K	

Ref.No	Part No.	Description	Remark
*A-6421-341-A		PS-193 (U) BOARD, COMPLETE ***** (Ref. No. 3,000 Series)	
*1-533-189-11		HOLDER, FUSE	
*3-309-144-21		HEAT SINK	
7-685-646-79		SCREW +BVTP 3X8 TYPE2 IT-3	
<u>CAPACITOR</u>			
C101	1-125-298-00	ELECT(BLOCK) 10000MF	20% 25V
C102	1-124-314-00	ELECT 4700MF	20% 25V
C103	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C104	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C106	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C107	1-124-471-00	ELECT 1000MF	20% 6.3V
C108	1-124-791-11	ELECT 1MF	20% 50V
C109	1-124-472-11	ELECT 470MF	20% 6.3V
C110	1-163-833-00	CERAMIC CHIP 0.068MF	25V
C111	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C112	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C114	1-126-101-11	ELECT 100MF	20% 16V
C115	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C116	1-163-833-00	CERAMIC CHIP 0.068MF	25V
C119	1-126-176-11	ELECT 220MF	20% 10V
C120	1-126-096-11	ELECT 10MF	20% 25V
C201	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C202	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C204	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C205	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C206	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C208	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C209	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C210	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C211	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C212	1-163-035-00	CERAMIC CHIP 0.047MF	50V
<u>CONNECTOR</u>			
CN001	*1-564-419-11	HEADER, SPRING (POWER) 2P	
CN002	*1-564-419-11	HEADER, SPRING (POWER) 2P	
CN003	*1-560-890-00	PIN, CONNECTOR 2P	
<u>DIODE</u>			
D101	Δ 8-719-500-55	DIODE D3SBA10	
D105	8-719-908-06	DIODE ERA83-006	
D106	8-719-110-31	DIODE RD12ES-B2	
D108	8-719-105-82	DIODE RD5.1M-B2	
D201	8-719-908-06	DIODE ERA83-006	
D202	8-719-908-06	DIODE ERA83-006	
D203	8-719-200-02	DIODE 10E2	
D204	8-719-200-02	DIODE 10E2	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	

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

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Ref.No	Part No.	Description	Remark
<u>FUSE</u>			
F101	△.1-532-747-11	FUSE, GLASS TURE (125V 5A)	
F102	△.1-532-747-11	FUSE, GLASS TURE (125V 5A)	
F103	△.1-532-960-11	FUSE, MICRO (125V 1.25A)	
F104	△.1-532-960-11	FUSE, MICRO (125V 1.25A)	
F105	△.1-532-960-11	FUSE, MICRO (125V 1.25A)	
F201	1-532-675-00	LINK, IC	
F301	△.1-532-825-11	FUSE, GLASS TURE (250V 2A)	
<u>IC</u>			
IC101	8-759-971-39	IC BA9700AF	
IC102	8-759-604-47	IC M5F7905	
IC201	8-759-100-93	IC UPC393G2	
IC202	8-759-100-96	IC UPC4558G2	
<u>JUMPER RESISTOR</u>			
JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR231	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>COIL</u>			
L101	1-412-012-11	INDUCTOR 100UH	
L102	1-410-339-11	COIL, CHOKE 10UH	
L201	1-424-219-11	COIL, CHOKE 300UH	
<u>TRANSISTOR</u>			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-216-22	TRANSISTOR 2SA1162	
Q103	△.8-729-113-31	TRANSISTOR 2SB733-2	
Q105	8-729-159-64	TRANSISTOR 2SD596	
Q201	△.8-729-117-11	TRANSISTOR 2SB1151	
Q202	△.8-729-143-30	TRANSISTOR 2SD1691-K	
Q203	△.8-729-117-11	TRANSISTOR 2SB1151	
Q204	△.8-729-143-30	TRANSISTOR 2SD1691-K	
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q206	8-729-216-22	TRANSISTOR 2SA1162	
Q208	8-729-900-53	TRANSISTOR DTC114EK	
Q209	8-729-901-04	TRANSISTOR DTA114EK	
Q210	8-729-100-66	TRANSISTOR 2SC1623	
Q211	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q212	8-729-901-04	TRANSISTOR DTA114EK	
<u>RESISTOR</u>			
R002	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R003	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R004	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R102	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R103	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R104	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R105	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R106	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R107	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R108	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R109	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R110	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R112	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R114	1-216-097-00	METAL GLAZE 100K 5% 1/10W	

Ref.No	Part No.	Description	Remark
R115	△.1-216-447-00	METAL OXIDE 27 5% 2W F	
R116	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R117	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R120	1-216-053-00	METAL GLAZE 560 5% 1/10W	
R201	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R202	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R203	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R204	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R205	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R206	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R207	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R209	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R210	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R211	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R212	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R213	1-216-049-00	METAL GLAZE 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 GLAZE 1K 5% 1/10W	
R217	△.1-216-369-00	METAL OXIDE 1 5% 2W F	
R218	1-216-690-11	METAL CHIP 43K 0.50% 1/10W	
R219	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
R220	1-216-690-11	METAL CHIP 43K 0.50% 1/10W	
R221	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
R222	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R223	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R224	△.1-215-866-11	METAL OXIDE 330 5% 1W F	
R225	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R226	1-247-750-11	CARBON 680 5% 1/2W	
R227	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R228	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R230	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R301	1-202-729-00	SOLID 6.8M 10% 1/2W	

SWITCH

SW301△.1-570-156-11 SWITCH, PUSH (AC POWER) (1 KEY)

TRANSFORMER

T301 △.1-421-771-11 FILTER, LINE

*A-6421-461-A MJ-24 (KU) BOARD, COMPLETE

 (Ref. No. 2,000 Series)

*3-740-711-01 BRACKET, MJ
 3-741-883-01 PLATE
 3-741-884-01 SPRING (1)
 3-741-885-01 SPRING (2)

CAPACITOR

C002	1-161-772-11	CERAMIC	0.1	25V
C003	1-124-963-11	ELECT	33MF	20% 16V
C004	1-124-791-11	ELECT	1MF	20% 50V
C005	1-162-294-31	CERAMIC	0.001MF	10% 50V

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

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

MJ-24

KR-2

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C006	1-162-282-31	CERAMIC	100PF 10% 50V	*A-6421-380-A	KR-2 BOARD, COMPLETE		
C007	1-123-875-11	ELECT	10MF 20% 50V		*****		
C008	1-124-791-11	ELECT	1MF 20% 50V		(Ref. No. 4,000 Series)		
C009	1-162-294-31	CERAMIC	0.001MF 10% 50V	3-659-619-01	HOLDER, PC BOARD		
C010	1-162-282-31	CERAMIC	100PF 10% 50V				
<u>CAPACITOR</u>							
C011	1-124-963-11	ELECT	33MF 20% 16V	C001	1-126-160-11	ELECT	1MF 20% 50V
C012	1-123-875-11	ELECT	10MF 20% 50V	C003	1-124-499-11	ELECT	1MF 20% 50V
C015	1-126-101-11	ELECT	100MF 20% 16V	C004	1-130-471-00	MYLAR	0.001MF 5% 50V
C016	1-126-101-11	ELECT	100MF 20% 16V	C005	1-124-499-11	ELECT	1MF 20% 50V
C017	1-161-039-00	CERAMIC	0.001 10% 25V	C009	1-126-160-11	ELECT	1MF 20% 50V
C018	1-161-039-00	CERAMIC	0.001 10% 25V	C010	1-124-443-00	ELECT	100MF 20% 10V
C019	1-161-772-11	CERAMIC	0.1 25V	C011	1-161-051-00	CERAMIC	0.01MF 10% 25V
<u>CONNECTOR</u>							
CN451	1-506-481-11	PIN, CONNECTOR 2P		C012	1-126-160-11	ELECT	1MF 20% 50V
CN452	1-506-473-11	PIN, CONNECTOR 8P		C013	1-124-768-11	ELECT	4.7MF 20% 50V
<u>DIODE</u>							
D001	8-719-911-19	DIODE 1SS119		C014	1-124-589-11	ELECT	47MF 20% 16V
D002	8-719-911-19	DIODE 1SS119		C015	1-130-483-00	MYLAR	0.01MF 5% 50V
D003	8-719-109-98	DIODE RD6.8ES-R3		C016	1-124-499-11	ELECT	1MF 20% 50V
<u>IC</u>							
IC001	8-759-745-58	IC NJM4558D		C017	1-124-589-11	ELECT	47MF 20% 16V
IC002	8-759-745-58	IC NJM4558D		C019	1-130-481-00	MYLAR	0.0068MF 5% 50V
<u>JACK</u>							
J001	1-507-678-00	JACK (MIC CONTROL)		C020	1-126-529-11	ELECT	0.47MF 20% 50V
J002	1-507-805-21	JACK, LARGE TYPE (MIC 1)		C021	1-130-495-00	MYLAR	0.1MF 5% 50V
J003	1-507-805-21	JACK, LARGE TYPE (MIC 2)		C022	1-124-791-11	ELECT	1MF 20% 50V
<u>RESISTOR</u>							
R001	1-249-417-11	CARBON	1K 5% 1/4W	C023	1-161-051-00	CERAMIC	0.01MF 10% 25V
R002	1-249-428-11	CARBON	8.2K 5% 1/4W	C024	1-130-474-00	MYLAR	0.0018MF 5% 50V
R003	1-249-405-11	CARBON	100 5% 1/4W	C025	1-130-469-00	MYLAR	680PF 5% 50V
R004	1-249-441-11	CARBON	100K 5% 1/4W	C026	1-130-495-00	MYLAR	0.1MF 5% 50V
R005	1-249-429-11	CARBON	10K 5% 1/4W	C027	1-162-209-31	CERAMIC	27PF 5% 50V
R006	1-249-405-11	CARBON	100 5% 1/4W	C028	1-162-209-31	CERAMIC	27PF 5% 50V
R007	1-249-441-11	CARBON	100K 5% 1/4W	C029	1-130-491-00	MYLAR	0.047MF 5% 50V
R008	1-249-429-11	CARBON	10K 5% 1/4W	C030	1-130-491-00	MYLAR	0.047MF 5% 50V
R009	1-249-417-11	CARBON	1K 5% 1/4W	C031	1-124-242-00	ELECT	33MF 20% 25V
R010	1-249-428-11	CARBON	8.2K 5% 1/4W	C032	1-124-477-11	ELECT	47MF 20% 25V
R011	1-249-417-11	CARBON	1K 5% 1/4W	C033	1-124-499-11	ELECT	1MF 20% 50V
R012	1-249-417-11	CARBON	1K 5% 1/4W	C037	1-162-294-31	CERAMIC	0.001MF 10% 50V
R013	1-249-409-11	CARBON	220 5% 1/4W	C044	1-124-589-11	ELECT	47MF 20% 16V
R014	1-249-409-11	CARBON	220 5% 1/4W	C047	1-124-589-11	ELECT	47MF 20% 16V
R015	1-249-417-11	CARBON	1K 5% 1/4W	C048	1-124-443-00	ELECT	100MF 20% 10V
R020	1-249-409-11	CARBON	220 5% 1/4W	C049	1-124-443-00	ELECT	100MF 20% 10V
R021	1-249-409-11	CARBON	220 5% 1/4W	C050	1-162-219-31	CERAMIC	68PF 5% 50V
R022	1-249-410-11	CARBON	270 5% 1/6W	C051	1-162-219-31	CERAMIC	68PF 5% 50V
<u>VARIABLE RESISTOR</u>							
RV001	1-238-827-11	RES, VAR, CARBON 20K (DIGITAL ECHO)		C052	1-124-791-11	ELECT	1MF 20% 50V
RV002	1-238-827-11	RES, VAR, CARBON 20K (MIC 2)		C053	1-162-219-31	CERAMIC	68PF 5% 50V
RV003	1-238-827-11	RES, VAR, CARBON 20K (MIC 1)		C054	1-162-219-31	CERAMIC	68PF 5% 50V
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>When indicating parts by reference number, please include the board name.</p> </div>							

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C062	1-130-485-00	MYLAR 0.015MF	5% 50V	Q005	8-729-900-80	TRANSISTOR DTC114ES	
C063	1-130-482-00	MYLAR 0.0082MF	5% 50V	Q006	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C064	1-124-791-11	ELECT 1MF	20% 50V	Q007	8-729-900-80	TRANSISTOR DTC114ES	
C065	1-124-791-11	ELECT 1MF	20% 50V	Q008	8-729-900-61	TRANSISTOR DTA114ES	
C066	1-124-589-11	ELECT 47MF	20% 16V	Q009	8-729-900-61	TRANSISTOR DTA114ES	
<u>CONNECTOR</u>				Q010	8-729-900-80	TRANSISTOR DTC114ES	
CN801	1-506-471-11	PIN, CONNECTOR 6P		Q011	8-729-119-76	TRANSISTOR 2SA1175-HFE	
CN802	1-506-469-11	PIN, CONNECTOR 4P		Q012	8-729-900-89	TRANSISTOR DTC144ES	
CN803	1-506-468-11	PIN, CONNECTOR 3P		Q013	8-729-206-34	TRANSISTOR RN2205	
CN805	1-506-469-11	PIN, CONNECTOR 4P		Q014	8-729-119-78	TRANSISTOR 2SC2785-HFE	
CN806	1-506-468-11	PIN, CONNECTOR 3P		Q015	8-729-900-80	TRANSISTOR DTC114ES	
CH807	1-506-467-11	PIN, CONNECTOR 2P		Q016	8-729-206-34	TRANSISTOR RN2205	
CN808	1-506-469-11	PIN, CONNECTOR 4P		Q017	8-729-900-80	TRANSISTOR DTC114ES	
CN810	1-506-469-11	PIN, CONNECTOR 4P		Q018	8-729-119-78	TRANSISTOR 2SC2785-HFE	
CN811	1-506-473-11	PIN, CONNECTOR 8P		<u>RESISTOR</u>			
CN812	1-506-468-11	PIN, CONNECTOR 3P		R001	1-249-405-11	CARBON 100 5% 1/4W	
CN815	*1-569-172-11	PIN, CONNECTOR 5P		R002	1-249-417-11	CARBON 1K 5% 1/4W	
CN816	*1-569-172-11	PIN, CONNECTOR 5P		R003	1-249-417-11	CARBON 1K 5% 1/4W	
<u>DIODE</u>				R004	1-249-426-11	CARBON 5.6K 5% 1/4W	
D001	8-719-981-01	DIODE ERA81-004		R005	1-249-435-11	CARBON 33K 5% 1/4W	
D002	8-719-200-02	DIODE 10E-1		R006	1-249-438-11	CARBON 56K 5% 1/4W	
D003	8-719-911-19	DIODE 1SS119		R007	1-249-425-11	CARBON 4.7K 5% 1/4W	
D004	8-719-911-19	DIODE 1SS119		R008	1-249-441-11	CARBON 100K 5% 1/4W	
D005	8-719-911-19	DIODE 1SS119		R009	1-249-431-11	CARBON 15K 5% 1/4W	
D006	8-719-119-70	DIODE RD2.7ES-L1		R010	1-249-431-11	CARBON 15K 5% 1/4W	
D007	8-719-119-70	DIODE RD2.7ES-L1		R011	1-249-437-11	CARBON 47K 5% 1/4W	
D008	8-719-911-19	DIODE 1SS119		R012	1-249-405-11	CARBON 100 5% 1/4W	
D009	8-719-911-19	DIODE 1SS119		R013	1-249-437-11	CARBON 47K 5% 1/4W	
D010	8-719-911-19	DIODE 1SS119		R014	1-249-422-11	CARBON 2.7K 5% 1/4W	
D011	8-719-911-19	DIODE 1SS119		R015	1-249-415-11	CARBON 680 5% 1/4W	
<u>IC</u>				R016	1-249-409-11	CARBON 220 5% 1/4W	
IC001	8-759-981-91	IC RC4558DC		R017	1-249-441-11	CARBON 100K 5% 1/4W	
IC003	8-759-900-72	IC NE5532P		R018	1-249-409-11	CARBON 220 5% 1/4W	
IC005	8-759-981-64	IC LM2903DQ		R019	1-249-427-11	CARBON 6.8K 5% 1/4W	
IC006	8-759-604-81	IC M50195P		R020	1-249-409-11	CARBON 220 5% 1/4W	
IC007	8-759-978-11	IC MSM3764A-12RS		R021	1-249-405-11	CARBON 100 5% 1/4W	
IC009	8-759-113-18	IC UPC4574C		R022	1-249-417-11	CARBON 1K 5% 1/4W	
IC014	8-759-208-14	IC TC4066BPHB		R023	1-249-435-11	CARBON 33K 5% 1/4W	
IC015	8-759-981-91	IC NJM4558D		R024	1-249-421-11	CARBON 2.2K 5% 1/4W	
IC016	8-759-113-18	IC UPC4574C		R025	1-249-429-11	CARBON 10K 5% 1/4W	
IC017	8-759-113-18	IC UPC4574C		R026	1-249-405-11	CARBON 100 5% 1/4W	
<u>COIL</u>				R027	1-249-431-11	CARBON 15K 5% 1/4W	
L001	1-410-521-11	INDUCTOR 100UH		R028	1-249-437-11	CARBON 47K 5% 1/4W	
<u>TRANSISTOR</u>				R029	1-249-437-11	CARBON 47K 5% 1/4W	
Q001	8-729-201-05	TRANSISTOR 2SC2878B		R030	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q002	8-729-201-05	TRANSISTOR 2SC2878B		R031	1-249-409-11	CARBON 220 5% 1/4W	
Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE		R032	1-249-409-11	CARBON 220 5% 1/4W	
Q004	8-729-119-76	TRANSISTOR 2SA1175-HFE		R033	1-249-427-11	CARBON 6.8K 5% 1/4W	
				R034	1-249-409-11	CARBON 220 5% 1/4W	
				R035	1-249-409-11	CARBON 220 5% 1/4W	
				R036	1-215-476-00	METAL 200K 1% 1/6W	
				R037	1-215-476-00	METAL 200K 1% 1/6W	

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

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C207	1-124-477-11	ELECT	47MF 20%	25V	C506	1-124-477-11	ELECT 47MF 20% 25V
C208	1-104-255-11	POLYSTYRENE	0.0018MF 5%	125V	C654	1-124-443-00	ELECT 100MF 20% 10V
C209	1-107-085-00	MICA	100PF 5%	50V	C655	1-124-443-00	ELECT 100MF 20% 10V
C210	1-107-085-00	MICA	100PF 5%	50V	C656	1-124-443-00	ELECT 100MF 20% 10V
C221	1-162-207-31	CERAMIC	22PF 5%	50V	C657	1-124-443-00	ELECT 100MF 20% 10V
C222	1-104-228-00	POLYSTYRENE	0.0015MF 5%	125V	C658	1-126-176-11	ELECT 220MF 20% 10V
C224	1-162-211-31	CERAMIC	33PF 5%	50V	C659	1-126-176-11	ELECT 220MF 20% 10V
C225	1-124-791-11	ELECT	1MF 20%	50V	<u>DIODE</u>		
C233	1-124-477-11	ELECT	47MF 20%	25V	D101	8-719-921-47	DIODE MTZJ-5.6B
C250	1-130-490-11	MYLAR	0.039MF 5%	50V	D102	8-719-911-19	DIODE 1SS119
C251	1-130-484-00	MYLAR	0.012MF 5%	50V	D103	8-719-921-47	DIODE MTZJ-5.6B
C308	1-124-477-11	ELECT	47MF 20%	25V	D201	8-719-921-47	DIODE MTZJ-5.6B
C309	1-124-477-11	ELECT	47MF 20%	25V	D202	8-719-911-19	DIODE 1SS119
C310	1-124-477-11	ELECT	47MF 20%	25V	D203	8-719-921-47	DIODE MTZJ-5.6B
C311	1-124-477-11	ELECT	47MF 20%	25V	D302	8-719-991-52	DIODE HZ5A2
C312	1-124-477-11	ELECT	47MF 20%	25V	<u>INDUCTOR</u>		
C313	1-124-477-11	ELECT	47MF 20%	25V	FB302	1-408-421-00	INDUCTOR 100UH
C315	1-136-171-00	FILM	0.33MF 5%	50V	FB304	1-424-090-11	COIL, LINE FILTER
C316	1-136-159-00	FILM	0.033MF 5%	50V	FB311	1-424-090-11	COIL, LINE FILTER
C317	1-104-235-00	POLYSTYRENE	820PF 5%	125V	<u>FILTER</u>		
C318	1-162-217-31	CERAMIC	56PF 5%	50V	FL301	1-424-031-11	FILTER, NOISE
C319	1-124-791-11	ELECT	1MF 20%	50V	FL302	1-424-031-11	FILTER, NOISE
C320	1-124-477-11	ELECT	47MF 20%	25V	FL303	1-424-031-11	FILTER, NOISE
C321	1-124-477-11	ELECT	47MF 20%	25V	FL304	1-424-031-11	FILTER, NOISE
C322	1-124-477-11	ELECT	47MF 20%	25V	FL305	1-424-031-11	FILTER, NOISE
C323	1-126-233-11	ELECT	22MF 20%	50V	FL306	1-424-031-11	FILTER, NOISE
C324	1-123-875-11	ELECT	10MF 20%	50V	FL307	1-424-031-11	FILTER, NOISE
C325	1-124-791-11	ELECT	1MF 20%	50V	FL309	1-424-031-11	FILTER, NOISE
C326	1-162-294-31	CERAMIC	0.001MF 10%	50V	FL311	1-424-031-11	FILTER, NOISE
C327	1-161-494-00	CERAMIC	0.022MF	25V	FL312	1-424-031-11	FILTER, NOISE
C329	1-162-195-31	CERAMIC	4.7PF 10%	50V	FL313	1-424-031-11	FILTER, NOISE
C330	1-162-201-31	CERAMIC	12PF 5%	50V	FL314	1-424-031-11	FILTER, NOISE
C331	1-123-875-11	ELECT	10MF 20%	50V	FL315	1-424-031-11	FILTER, NOISE
C341	1-123-875-11	ELECT	10MF 20%	50V	<u>IC</u>		
C342	1-161-494-00	CERAMIC	0.022MF	25V	IC101	8-759-910-77	IC LF353N/GLEA312
C343	1-126-233-11	ELECT	22MF 20%	50V	IC102	8-759-910-77	IC LF353N/GLEA312
C344	1-161-494-00	CERAMIC	0.022MF	25V	IC103	8-759-910-77	IC LF353N/GLEA312
C345	1-124-477-11	ELECT	47MF 20%	25V	IC201	8-759-910-77	IC LF353N/GLEA312
C346	1-126-233-11	ELECT	22MF 20%	50V	IC202	8-759-910-77	IC LF353N/GLEA312
C347	1-162-215-31	CERAMIC	47PF 5%	50V	IC203	8-759-910-77	IC LF353N/GLEA312
C348	1-162-294-31	CERAMIC	0.001MF 10%	50V	IC302	8-759-995-08	IC RC4558P
C349	1-162-205-31	CERAMIC	18PF 5%	50V	IC303	8-752-001-80	IC CX20018
C350	1-162-215-31	CERAMIC	47PF 5%	50V	IC304	8-752-015-20	IC CX20152
C351	1-123-875-11	ELECT	10MF 20%	50V	IC305	8-759-040-53	IC MC14053RCP
C352	1-124-477-11	ELECT	47MF 20%	25V	IC307	8-759-600-02	IC M5218L
C353	1-124-477-11	ELECT	47MF 20%	25V	IC308	8-759-600-02	IC M5218L
C354	1-124-477-11	ELECT	47MF 20%	25V	IC501	8-759-910-80	IC CX23036
C355	1-124-477-11	ELECT	47MF 20%	25V	IC502	8-759-910-81	IC CX23037
C501	1-107-085-00	MICA	100PF 5%	50V	IC503	8-759-978-11	IC MSM3764A-12RS
C502	1-107-085-00	MICA	100PF 5%	50V	IC504	8-759-978-11	IC MSM3764A-12RS
C503	1-161-494-00	CERAMIC	0.022MF	25V			
C504	1-124-477-11	ELECT	47MF 20%	25V			

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

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
IC901A	8-759-982-21	IC RC78L05A		R207	1-249-426-11	CARBON 5.6K 5% 1/4W	
IC902A	8-759-982-44	IC RC79L05A		R208	1-249-426-11	CARBON 5.6K 5% 1/4W	
<u>COIL</u>				R209	1-249-429-11	CARBON 10K 5% 1/4W	
L301	1-410-314-11	INDUCTOR 0.47UH		R210	1-249-435-11	CARBON 33K 5% 1/4W	
L302	1-410-316-11	INDUCTOR 1UH		R211	1-249-429-11	CARBON 10K 5% 1/4W	
<u>LOW PASS FILTER</u>				R212	1-249-429-11	CARBON 10K 5% 1/4W	
LPF101	1-464-366-11	FILTER UNIT, LOW PASS		R213	1-249-415-11	CARBON 680 5% 1/4W	
LPF102	1-466-055-11	FILTER UNIT, LOW PASS		R214	1-249-433-11	CARBON 22K 5% 1/4W	
LPF201	1-464-366-11	FILTER UNIT, LOW PASS		R215	1-249-433-11	CARBON 22K 5% 1/4W	
LPF202	1-466-055-11	FILTER UNIT, LOW PASS		R216	1-249-419-11	CARBON 1.5K 5% 1/4W	
<u>TRANSISTOR</u>				R217	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q101	8-729-800-42	TRANSISTOR 2SK152-2		R218	1-249-428-11	CARBON 8.2K 5% 1/4W	
Q102	8-729-800-42	TRANSISTOR 2SK152-2		R219	1-249-417-11	CARBON 1K 5% 1/4W	
Q201	8-729-800-42	TRANSISTOR 2SK152-2		R220	1-249-413-11	CARBON 470 5% 1/4W	
Q202	8-729-800-42	TRANSISTOR 2SK152-2		R221	1-249-441-11	CARBON 100K 5% 1/4W	
<u>RESISTOR</u>				R231	1-249-425-11	CARBON 4.7K 5% 1/4W	
R101	1-249-437-11	CARBON 47K 5% 1/4W		R232	1-249-421-11	CARBON 2.2K 5% 1/4W	
R103	1-249-421-11	CARBON 2.2K 5% 1/4W		R233	1-249-431-11	CARBON 15K 5% 1/4W	
R104	1-249-417-11	CARBON 1K 5% 1/4W		R234	1-247-866-11	CARBON 30K 5% 1/4W	
R105	1-249-417-11	CARBON 1K 5% 1/4W		R235	1-249-429-11	CARBON 10K 5% 1/4W	
R106	1-249-433-11	CARBON 22K 5% 1/4W		R236	1-249-431-11	CARBON 15K 5% 1/4W	
R107	1-249-426-11	CARBON 5.6K 5% 1/4W		R239	1-249-435-11	CARBON 33K 5% 1/4W	
R108	1-249-426-11	CARBON 5.6K 5% 1/4W		R250	1-249-412-11	CARBON 390 5% 1/4W	
R109	1-249-429-11	CARBON 10K 5% 1/4W		R310	1-249-418-11	CARBON 1.2K 5% 1/4W	
R110	1-249-435-11	CARBON 33K 5% 1/4W		R311	1-249-429-11	CARBON 10K 5% 1/4W	
R111	1-249-429-11	CARBON 10K 5% 1/4W		R312	1-249-432-11	CARBON 18K 5% 1/4W	
R112	1-249-429-11	CARBON 10K 5% 1/4W		R313	1-247-893-11	CARBON 390K 5% 1/4W	
R113	1-249-415-11	CARBON 680 5% 1/4W		R314	1-247-893-11	CARBON 390K 5% 1/4W	
R114	1-249-433-11	CARBON 22K 5% 1/4W		R315	1-249-441-11	CARBON 100K 5% 1/4W	
R115	1-249-433-11	CARBON 22K 5% 1/4W		R316	1-249-405-11	CARBON 100 5% 1/4W	
R116	1-249-419-11	CARBON 1.5K 5% 1/4W		R317	1-249-441-11	CARBON 100K 5% 1/4W	
R117	1-249-421-11	CARBON 2.2K 5% 1/4W		R318	1-249-417-11	CARBON 1K 5% 1/4W	
R118	1-249-428-11	CARBON 8.2K 5% 1/4W		R319	1-249-426-11	CARBON 5.6K 5% 1/4W	
R119	1-249-417-11	CARBON 1K 5% 1/4W		R320	1-249-437-11	CARBON 47K 5% 1/4W	
R120	1-249-413-11	CARBON 470 5% 1/4W		R321	1-249-425-11	CARBON 4.7K 5% 1/4W	
R121	1-249-441-11	CARBON 100K 5% 1/4W		R322	1-249-417-11	CARBON 1K 5% 1/4W	
R131	1-249-425-11	CARBON 4.7K 5% 1/4W		R330	1-249-429-11	CARBON 10K 5% 1/4W	
R132	1-249-421-11	CARBON 2.2K 5% 1/4W		R331	1-249-429-11	CARBON 10K 5% 1/4W	
R133	1-249-431-11	CARBON 15K 5% 1/4W		R332	1-249-429-11	CARBON 10K 5% 1/4W	
R134	1-247-866-11	CARBON 30K 5% 1/4W		R333	1-249-429-11	CARBON 10K 5% 1/4W	
R135	1-249-429-11	CARBON 10K 5% 1/4W		R334	1-249-435-11	CARBON 33K 5% 1/4W	
R136	1-249-431-11	CARBON 15K 5% 1/4W		R335	1-249-429-11	CARBON 10K 5% 1/4W	
R139	1-249-435-11	CARBON 33K 5% 1/4W		R336	1-249-419-11	CARBON 1.5K 5% 1/4W	
R150	1-249-412-11	CARBON 390 5% 1/4W		R337	1-249-405-11	CARBON 100 5% 1/4W	
R201	1-249-437-11	CARBON 47K 5% 1/4W		R501	1-247-903-00	CARBON 1M 5% 1/4W	
R203	1-249-421-11	CARBON 2.2K 5% 1/4W		<u>VARIABLE RESISTOR</u>			
R204	1-249-417-11	CARBON 1K 5% 1/4W		RV102	1-226-702-00	RES, ADJ, METAL GLAZE 2.2K	
R205	1-249-417-11	CARBON 1K 5% 1/4W		RV202	1-226-702-00	RES, ADJ, METAL GLAZE 2.2K	
R206	1-249-433-11	CARBON 22K 5% 1/4W		<u>CRYSTAL</u>			
				X301	1-567-280-11	VIBRATOR, CRYSTAL (84.672MHz)	
				X302	1-527-952-00	VIBRATOR, CRYSTAL (50.025MHz)	
				X501	1-527-999-00	OSCILLATOR, CRYSTAL (8.6436MHz)	

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

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

Ref.No	Part No.	Description	Remark
	*A-6421-385-A	FP-245 BOARD, COMPLETE ***** (Ref. No. 8,000 Series)	
		<u>CAPACITOR</u>	
C001	1-124-234-00	ELECT 22MF 20%	16V
C002	1-161-494-00	CERAMIC 0.022MF	25V
C003	1-161-375-00	CERAMIC 0.0022MF	30% 16V
		<u>CONNECTOR</u>	
CN001	1-506-473-11	PIN, CONNECTOR 8P	
CN002	1-506-469-11	PIN, CONNECTOR 4P	
CN004	1-506-473-11	PIN, CONNECTOR 8P	
		<u>DIODE</u>	
D001	8-719-301-46	DIODE SEL2413E	
D002	8-719-301-54	DIODE SEL2813A	
D003	8-719-301-54	DIODE SEL2813A	
D004	8-719-301-54	DIODE SEL2813A	
D005	8-719-301-54	DIODE SEL2813A	
D006	8-719-301-54	DIODE SEL2813A	
D007	8-719-301-54	DIODE SEL2813A	
D008	8-719-911-19	DIODE 1SS119	
D009	8-719-911-06	DIODE 1SS106	
		<u>TRANSISTOR</u>	
Q001	8-729-900-61	TRANSISTOR DTA114ES	
Q002	8-729-900-61	TRANSISTOR DTA114ES	
Q003	8-729-900-61	TRANSISTOR DTA114ES	
Q004	8-729-900-80	TRANSISTOR DTC114ES	
Q005	8-729-900-80	TRANSISTOR DTC114ES	
Q006	8-729-905-50	TRANSISTOR DTC343TS	
Q007	8-729-905-50	TRANSISTOR DTC343TS	
Q008	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<u>RESISTOR</u>	
R001	1-249-427-11	CARBON 6.8K 5%	1/4W
R002	1-249-432-11	CARBON 18K 5%	1/4W
R003	1-249-424-11	CARBON 3.9K 5%	1/4W
R004	1-249-427-11	CARBON 6.8K 5%	1/4W
R005	1-249-408-11	CARBON 180 5%	1/4W
R006	1-249-409-11	CARBON 220 5%	1/4W
R007	1-249-409-11	CARBON 220 5%	1/4W
R008	1-249-406-11	CARBON 120 5%	1/4W
R009	1-249-407-11	CARBON 150 5%	1/4W
R010	1-249-405-11	CARBON 100 5%	1/4W
R011	1-249-405-11	CARBON 100 5%	1/4W
R012	1-249-429-11	CARBON 10K 5%	1/4W
R013	1-249-422-11	CARBON 2.7K 5%	1/4W
R014	1-249-421-11	CARBON 2.2K 5%	1/4W
R015	1-249-421-11	CARBON 2.2K 5%	1/4W

Ref.No	Part No.	Description	Remark
		<u>SWITCH</u>	
SW001	1-553-856-00	SWITCH, KEY BOARD (ASSIST)	
SW002	1-553-856-00	SWITCH, KEY BOARD (KARAOKE PON)	
SW003	1-553-856-00	SWITCH, KEY BOARD (# UP)	
SW004	1-553-856-00	SWITCH, KEY BOARD (NORMAL)	
SW005	1-553-856-00	SWITCH, KEY BOARD (b DOWN)	
SW006	1-553-856-00	SWITCH, KEY BOARD (RESERVE)	

	*A-6421-386-A	FM-5 BOARD, COMPLETE ***** (Ref. No. 7,000 Series)	
	4-812-134-11	RIVET NYLON, 3.5	
		<u>CAPACITOR</u>	
C001	1-162-306-11	CERAMIC 0.01MF	20% 16V
C002	1-162-306-11	CERAMIC 0.01MF	20% 16V
C003	1-126-157-11	ELECT 10MF	20% 16V
C004	1-126-157-11	ELECT 10MF	20% 16V
C005	1-162-306-11	CERAMIC 0.01MF	20% 16V
C006	1-162-207-31	CERAMIC 22PF	5% 50V
C007	1-162-207-31	CERAMIC 22PF	5% 50V
C008	1-126-157-11	ELECT 10MF	20% 16V
C009	1-124-584-00	ELECT 100MF	20% 10V
C010	1-161-494-00	CERAMIC 0.022MF	25V
C011	1-162-306-11	CERAMIC 0.01MF	20% 16V
C012	1-161-772-11	CERAMIC 0.1MF	10% 25V
		<u>CONNECTOR</u>	
CN001	1-506-467-11	PIN, CONNECTOR 2P	
CN002	1-506-473-11	PIN, CONNECTOR 8P	
CN003	1-506-472-11	PIN, CONNECTOR 7P	
CN004	1-506-471-11	PIN, CONNECTOR 6P	
CN006	*1-506-472-11	PIN, CONNECTOR 7P	
CN007	1-506-473-11	PIN, CONNECTOR 8P	
CN008	1-506-468-11	PIN, CONNECTOR 3P	
		<u>DIODE</u>	
D001	8-719-911-19	DIODE 1SS119	
D002	8-719-301-46	DIODE SEL2413E-D	
D003	8-719-301-46	DIODE SEL2413E-D	
D004	8-719-301-46	DIODE SEL2413E-D	
D005	8-719-301-46	DIODE SEL2413E-D	
D006	8-719-301-46	DIODE SEL2413E-D	
D007	8-719-301-46	DIODE SEL2413E-D	
D008	8-719-301-46	DIODE SEL2413E-D	
D009	8-719-301-46	DIODE SEL2413E-D	
D010	8-719-301-46	DIODE SEL2413E-D	
D011	8-719-301-46	DIODE SEL2413E-D	
D012	8-719-301-46	DIODE SEL2413E-D	
D013	8-719-301-46	DIODE SEL2413E-D	
D014	8-719-301-46	DIODE SEL2413E-D	

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

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
D015	8-719-301-46	DIODE SEL2413E-D		R024	1-249-422-11	CARBON 2.7K 5%	1/4W
D016	8-719-301-46	DIODE SEL2413E-D		R025	1-249-424-11	CARBON 3.9K 5%	1/4W
D017	8-719-301-46	DIODE SEL2413E-D		R026	1-249-427-11	CARBON 6.8K 5%	1/4W
D018	8-719-301-46	DIODE SEL2413E-D		R027	1-249-432-11	CARBON 18K 5%	1/4W
D019	8-719-301-46	DIODE SEL2413E-D		R028	1-249-422-11	CARBON 2.7K 5%	1/4W
D020	8-719-301-46	DIODE SEL2413E-D		R029	1-249-424-11	CARBON 3.9K 5%	1/4W
D021	8-719-301-46	DIODE SEL2413E-D		R030	1-249-429-11	CARBON 10K 5%	1/4W
D022	8-719-980-76	DIODE GL6D220		R031	1-249-429-11	CARBON 10K 5%	1/4W
D023	8-719-301-54	DIODE SEL2813A		R032	1-249-429-11	CARBON 10K 5%	1/4W
				R033	1-249-429-11	CARBON 10K 5%	1/4W
		<u>IC</u>					
IC001	8-752-811-98	IC CXP50116-023Q		R034	1-247-903-00	CARBON 1M 5%	1/4W
IC002	8-749-900-36	IC BX-1393		R035	1-249-413-11	CARBON 470 5%	1/4W
IC003	8-759-605-21	IC M51953AFP		R036	1-249-413-11	CARBON 470 5%	1/4W
				R037	1-249-413-11	CARBON 470 5%	1/4W
				R038	1-249-413-11	CARBON 470 5%	1/4W
		<u>COIL</u>					
L001	1-410-521-11	INDUCTOR 100UH		R039	1-249-413-11	CARBON 470 5%	1/4W
L002	1-410-521-11	INDUCTOR 100UH		R040	1-249-413-11	CARBON 470 5%	1/4W
				R041	1-249-413-11	CARBON 470 5%	1/4W
				R042	1-249-413-11	CARBON 470 5%	1/4W
				R043	1-249-413-11	CARBON 470 5%	1/4W
		<u>TRANSISTOR</u>					
Q001	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R044	1-249-413-11	CARBON 470 5%	1/4W
Q002	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R045	1-249-413-11	CARBON 470 5%	1/4W
Q003	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R046	1-249-413-11	CARBON 470 5%	1/4W
Q004	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R047	1-249-413-11	CARBON 470 5%	1/4W
Q005	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R048	1-249-413-11	CARBON 470 5%	1/4W
Q006	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R049	1-249-429-11	CARBON 10K 5%	1/4W
Q007	8-729-119-76	TRANSISTOR 2SA1175TP-HFE		R050	1-249-429-11	CARBON 10K 5%	1/4W
Q008	8-729-924-95	TRANSISTOR TA-57		R051	1-249-429-11	CARBON 10K 5%	1/4W
Q009	8-729-924-94	TRANSISTOR TA-78		R052	1-249-429-11	CARBON 10K 5%	1/4W
Q010	8-729-900-61	TRANSISTOR DTA114ES		R053	1-249-429-11	CARBON 10K 5%	1/4W
		<u>RESISTOR</u>					
R001	1-249-429-11	CARBON 10K 5%	1/4W	R054	1-249-429-11	CARBON 10K 5%	1/4W
R002	1-249-429-11	CARBON 10K 5%	1/4W	R055	1-249-429-11	CARBON 10K 5%	1/4W
R003	1-249-429-11	CARBON 10K 5%	1/4W	R056	1-249-441-11	CARBON 100K 5%	1/4W
R004	1-249-429-11	CARBON 10K 5%	1/4W	R057	1-249-441-11	CARBON 100K 5%	1/4W
R005	1-249-429-11	CARBON 10K 5%	1/4W	R058	1-249-441-11	CARBON 100K 5%	1/4W
R006	1-249-429-11	CARBON 10K 5%	1/4W	R059	1-249-441-11	CARBON 100K 5%	1/4W
R009	1-249-427-11	CARBON 6.8K 5%	1/4W	R060	1-249-441-11	CARBON 100K 5%	1/4W
R010	1-249-427-11	CARBON 6.8K 5%	1/4W	R061	1-249-441-11	CARBON 100K 5%	1/4W
R011	1-249-432-11	CARBON 18K 5%	1/4W	R062	1-249-441-11	CARBON 100K 5%	1/4W
R012	1-249-422-11	CARBON 2.7K 5%	1/4W	R063	1-249-429-11	CARBON 10K 5%	1/4W
R013	1-249-424-11	CARBON 3.9K 5%	1/4W	R064	1-249-429-11	CARBON 10K 5%	1/4W
R014	1-249-427-11	CARBON 6.8K 5%	1/4W	R065	1-249-429-11	CARBON 10K 5%	1/4W
R015	1-249-432-11	CARBON 18K 5%	1/4W	R066	1-249-429-11	CARBON 10K 5%	1/4W
R016	1-249-422-11	CARBON 2.7K 5%	1/4W	R067	1-249-429-11	CARBON 10K 5%	1/4W
R017	1-249-424-11	CARBON 3.9K 5%	1/4W	R068	1-247-792-11	CARBON 24 5%	1/4W
R018	1-249-427-11	CARBON 6.8K 5%	1/4W	R069	1-249-429-11	CARBON 10K 5%	1/4W
R019	1-249-432-11	CARBON 18K 5%	1/4W	R070	1-247-792-11	CARBON 24 5%	1/4W
R020	1-249-422-11	CARBON 2.7K 5%	1/4W	R071	1-249-429-11	CARBON 10K 5%	1/4W
R021	1-249-424-11	CARBON 3.9K 5%	1/4W	R072	1-247-792-11	CARBON 24 5%	1/4W
R022	1-249-427-11	CARBON 6.8K 5%	1/4W	R073	1-249-429-11	CARBON 10K 5%	1/4W
R023	1-249-432-11	CARBON 18K 5%	1/4W	R074	1-247-792 11	CARBON 24 5%	1/4W
				R075	1-249-429-11	CARBON 10K 5%	1/4W
				R076	1-249-433-11	CARBON 22K 5%	1/4W

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

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HP-50

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Ref.No	Part No.	Description	Remark
R077	1-249-433-11	CARBON 22K 5% 1/4W	
R078	1-249-433-11	CARBON 22K 5% 1/4W	
R079	1-249-433-11	CARBON 22K 5% 1/4W	
R080	1-249-433-11	CARBON 22K 5% 1/4W	
R081	1-249-433-11	CARBON 22K 5% 1/4W	
R082	1-249-433-11	CARBON 22K 5% 1/4W	
R083	1-249-433-11	CARBON 22K 5% 1/4W	
R084	1-249-433-11	CARBON 22K 5% 1/4W	
R085	1-249-433-11	CARBON 22K 5% 1/4W	
R088	1-249-410-11	CARBON 270 5% 1/4W	
R089	1-249-429-11	CARBON 10K 5% 1/4W	
<u>SWITCH</u>			
SW001	1-552-539-00	SWITCH, KEY BOARD (\triangle OPEN/CLOSE)	
SW003	1-553-856-00	SWITCH, KEY BOARD (\triangleright PLAY)	
SW004	1-553-856-00	SWITCH, KEY BOARD (\parallel PAUSE)	
SW005	1-553-856-00	SWITCH, KEY BOARD (\blacksquare STOP)	
SW006	1-553-856-00	SWITCH, KEY BOARD (20)	
SW007	1-553-856-00	SWITCH, KEY BOARD (19)	
SW008	1-553-856-00	SWITCH, KEY BOARD (18)	
SW009	1-553-856-00	SWITCH, KEY BOARD (17)	
SW010	1-553-856-00	SWITCH, KEY BOARD (16)	
SW011	1-553-856-00	SWITCH, KEY BOARD (15)	
SW012	1-553-856-00	SWITCH, KEY BOARD (14)	
SW013	1-553-856-00	SWITCH, KEY BOARD (13)	
SW014	1-553-856-00	SWITCH, KEY BOARD (12)	
SW015	1-553-856-00	SWITCH, KEY BOARD (11)	
SW016	1-553-856-00	SWITCH, KEY BOARD (10)	
SW017	1-553-856-00	SWITCH, KEY BOARD (9)	
SW018	1-553-856-00	SWITCH, KEY BOARD (8)	
SW019	1-553-856-00	SWITCH, KEY BOARD (7)	
SW020	1-553-856-00	SWITCH, KEY BOARD (6)	
SW021	1-553-856-00	SWITCH, KEY BOARD (5)	
SW022	1-553-856-00	SWITCH, KEY BOARD (4)	
SW023	1-553-856-00	SWITCH, KEY BOARD (3)	
SW024	1-553-856-00	SWITCH, KEY BOARD (2)	
SW025	1-553-856-00	SWITCH, KEY BOARD (1)	
SW027	1-553-856-00	SWITCH, KEY BOARD (\llcorner)	
SW028	1-553-856-00	SWITCH, KEY BOARD (\blacktriangleright)	
SW030	1-554-377-00	SWITCH, SLIDE (ANALOG DIGITAL)	
SW031	1-554-377-00	SWITCH, SLIDE (AUTO REPEAT)	
SW032	1-554-377-00	SWITCH, SLIDE (ATT)	
SW033	1-554-377-00	SWITCH, SLIDE (INPUT)	
<u>CRYSTAL</u>			
X001	1-567-160-21	OSCILLATOR, CERAMIC (4.19MHz)	

Ref.No	Part No.	Description	Remark
*1-630-090-13 HP-50 BOARD (Ref. No. 7,000 Series) *****			
<u>CAPACITOR</u>			
C101	1-124-478-11	ELECT 100MF 20% 25V	
C102	1-124-478-11	ELECT 100MF 20% 25V	
<u>CONNECTOR</u>			
CN101	1-506-471-11	PIN, CONNECTOR 6P	
<u>JACK</u>			
CNJ101	1-507-796-71	JACK (PHONES)	
<u>IC</u>			
IC101	8-759-701-45	IC NJM4560S-D	
<u>RESISTOR</u>			
R101	1-249-417-11	CARBON 1K 5% 1/4W	
R102	1-249-425-11	CARBON 4.7K 5% 1/4W	
R103	1-249-430-11	CARBON 12K 5% 1/4W	
R104	1-249-405-11	CARBON 100 5% 1/4W	
R105	1-249-417-11	CARBON 1K 5% 1/4W	
R106	1-249-425-11	CARBON 4.7K 5% 1/4W	
R107	1-249-430-11	CARBON 12K 5% 1/4W	
R108	1-249-405-11	CARBON 100 5% 1/4W	
R109	1-249-409-11	CARBON 220 5% 1/4W	
R110	1-249-409-11	CARBON 220 5% 1/4W	
<u>VARIABLE RESISTOR</u>			
RV101	1-238-612-11	RES, VAR, CARBON 20K/20K (LEVEL)	

*A-6421-388-A PK-17 BOARD, COMPLETE ***** (Ref. No. 5,000 Series)			
*1-533-189-11		HOLDER, FUSE	
*3-309-144-21		HEAT SINK	
*4-340-905-00		HEAT SINK V OUT	
<u>CAPACITOR</u>			
C039	1-124-120-11	ELECT 220MF 20% 25V	
C040	1-124-120-11	ELECT 220MF 20% 25V	
C041	1-124-563-11	ELECT 2200MF 20% 25V	
C042	1-124-563-11	ELECT 2200MF 20% 25V	
C045	1-124-893-11	ELECT 2200MF 20% 10V	
C046	1-124-585-11	ELECT 3300MF 20% 10V	
<u>CONNECTOR</u>			
CN804	*1-560-894-00	PIN, CONNECTOR 6P	
CN809	*1-560-891-00	PIN, CONNECTOR 3P	
CN813	*1-506-472-11	PIN, CONNECTOR 7P	
CN814	*1-506-473-11	PIN, CONNECTOR 8P	

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

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DS-32

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>DIODE</u>							
D008	△.8-719-500-36	DIODE D2SR10		C101	1-163-035-00	CERAMIC CHIP 0.047MF	50V
<u>FUSE</u>							
F001	△.1-532-740-11	FUSE, GLASS TUBE 1A		C102	1-163-035-00	CERAMIC CHIP 0.047MF	50V
F002	△.1-532-740-11	FUSE, GLASS TUBE 1A		C104	1-163-035-00	CERAMIC CHIP 0.047MF	50V
<u>IC</u>							
IC010	△.8-759-604-29	IC NJM7805A		C105	1-126-301-11	ELECT 1MF	20% 50V
IC011	△.8-759-604-47	IC NJM7905A		C106	1-126-049-11	ELECT 22MF	20% 25V
IC012	△.8-759-982-10	IC RC7809FA		C107	1-126-162-11	ELECT 3.3MF	20% 50V
IC013	△.8-759-701-87	IC NJM7909A		C108	1-126-049-11	ELECT 22MF	20% 25V

*A-6421-390-A	DS-32 (A) BOARD, COMPLETE			C109	1-126-162-11	ELECT 3.3MF	20% 50V
	*****			C110	1-126-301-11	ELECT 1MF	20% 50V
	(Ref. No. 6,000 Series)			C111	1-126-049-11	ELECT 22MF	20% 25V
*1-566-708-11	CONNECTOR, BOARD TO BOARD 7P			C112	1-126-162-11	ELECT 3.3MF	20% 50V
*1-566-709-11	CONNECTOR, BOARD TO BOARD 12P			C113	1-126-049-11	ELECT 22MF	20% 25V
<u>CAPACITOR</u>							
C001	1-124-768-11	FLECT 4.7MF	20% 50V	C114	1-126-162-11	ELECT 3.3MF	20% 50V
C002	1-124-767-00	ELECT 2.2MF	20% 50V	C115	1-136-250-11	FILM 0.001MF	3% 100V
C003	1-124-446-11	ELECT 47MF	20% 10V	C116	1-136-232-11	FILM 0.0043MF	3% 100V
C004	1-124-446-11	ELECT 47MF	20% 10V	C117	1-136-250-11	FILM 0.001MF	3% 100V
C005	1-126-320-11	ELECT 10MF	20% 16V	C118	1-126-024-11	ELECT 220MF	20% 25V
C006	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C119	1-126-023-11	ELECT 100MF	20% 16V
C007	1-163-058-00	CERAMIC CHIP 0.0082MF	10% 50V	C120	1-136-250-11	FILM 0.001MF	3% 100V
C008	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C121	1-126-024-11	ELECT 220MF	20% 25V
C009	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C122	1-136-250-11	FILM 0.001MF	3% 100V
C010	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C123	1-136-232-11	FILM 0.0043MF	3% 100V
C011	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C124	1-136-250-11	FILM 0.001MF	3% 100V
C012	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C125	1-126-024-11	ELECT 220MF	20% 25V
C015	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C126	1-126-023-11	ELECT 100MF	20% 16V
C016	1-124-589-11	ELECT 47MF	20% 10V	C127	1-136-250-11	FILM 0.001MF	3% 100V
C017	1-124-589-11	ELECT 47MF	20% 10V	C128	1-126-024-11	ELECT 220MF	20% 25V
C018	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C129	1-126-376-11	ELECT 470MF	20% 25V
C019	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V	C130	1-126-029-11	ELECT 3300MF	20% 25V
C020	1-124-261-00	FLECT 10MF	20% 50V	C131	1-124-997-11	ELECT 470MF	20% 10V
C021	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C132	1-126-160-11	ELECT 1MF	20% 50V
C022	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C133	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C023	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C134	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C024	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C135	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C025	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C136	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C026	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C137	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C027	1-163-106-00	CERAMIC CHIP 36PF	5% 50V	C201	1-126-029-11	ELECT 3300MF	20% 25V
C028	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C202	1-126-029-11	ELECT 3300MF	20% 25V
C029	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C203	1-126-027-11	ELECT 1000MF	20% 25V
C030	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C204	1-126-027-11	ELECT 1000MF	20% 25V
C032	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C205	1-124-477-11	ELECT 47MF	20% 25V
C050	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C206	1-124-478-11	ELECT 100MF	20% 25V
C099	1-614-232-11	CERAMIC CHIP 0.01	10% 50V	C207	1-124-791-11	ELECT 1MF	20% 50V
				C300	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C302	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C303	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				<u>CONNECTOR</u>			
				CN001	1-568-316-11	CONNECTOR, BOARD TO BOARD 5P	
				CN201	*1-560-891-00	PIN, CONNECTOR 3P	

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

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

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>DIODE</u>				Q203	8-729-901-00	TRANSISTOR DTC124EK	
D001	8-719-923-64	DIODE KV1236D		Q204	8-729-901-05	TRANSISTOR DTA124EK	
D002	8-719-907-19	DIODE FC52M-5		<u>RESISTOR</u>			
D003	8-719-907-19	DIODE FC52M-5		R001	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D004	8-719-911-19	DIODE 1SS119		R002	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D005	8-719-109-85	DIODE RD5.1ES-B2		R003	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
D102	8-719-911-19	DIODE 1SS119		R004	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D103	8-719-911-19	DIODE 1SS119		R005	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D201	▲.8-719-210-18	DIODE 31DF2-FER		R006	1-216-099-00	METAL GLAZE 120K 5%	1/10W
D202	▲.8-719-210-18	DIODE 31DF2-FER		R007	1-216-101-00	METAL GLAZE 150K 5%	1/10W
D203	▲.8-719-210-18	DIODE 31DF2-FER		R008	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
D204	▲.8-719-210-18	DIODE 31DF2-FER		R009	1-216-049-00	METAL GLAZE 1K 5%	1/10W
D205	8-719-911-19	DIODE 1SS119		R010	1-216-093-00	METAL GLAZE 68K 5%	1/10W
D206	8-719-911-19	DIODE 1SS119		R011	1-216-121-00	METAL GLAZE 1M 5%	1/10W
D207	8-719-911-19	DIODE 1SS119		R012	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
D208	8-719-400-18	DIODE 1S2837		R013	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D209	8-719-400-18	DIODE 1S2837		R014	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D210	8-719-911-19	DIODE 1SS119		R015	1-216-093-00	METAL GLAZE 68K 5%	1/10W
<u>IC</u>				R016	1-216-062-00	METAL GLAZE 3.6K 5%	1/10W
IC001	8-752-328-62	IC CXD1125Q		R017	1-216-093-00	METAL GLAZE 68K 5%	1/10W
IC002	8-759-908-17	IC TLO82CPS		R018	1-216-099-00	METAL GLAZE 120K 5%	1/10W
IC003	8-759-908-17	IC TLO82CPS		R019	1-216-099-00	METAL GLAZE 120K 5%	1/10W
IC004	8-759-804-88	IC LC3517BML-15		R020	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC005	8-759-927-29	IC SN74HC04NS		R021	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC009	8-759-932-54	IC MC14066RF		R022	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC101	8-752-334-06	IC CXD2550P		R023	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
IC102	8-759-926-17	IC SN74HC153NS		R025	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC103	8-759-925-90	IC SN74HC74NS		R026	1-216-073-00	METAL GLAZE 10K 5%	1/10W
IC104	8-759-927-46	IC SN74HC00NS		R027	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
IC105	8-759-926-21	IC SN74HC161NS		R028	1-216-334-11	METAL GLAZE 22K 1%	1/10W
IC106	8-759-604-29	IC M5F7805		R029	1-216-334-11	METAL GLAZE 22K 1%	1/10W
IC107	8-759-979-09	IC PCM58P		R030	1-216-073-00	METAL GLAZE 10K 5%	1/10W
IC108	8-759-979-09	IC PCM58P		R031	1-216-075-00	METAL GLAZE 12K 5%	1/10W
IC109	8-759-701-21	IC NJM5532D-D		R032	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC110	8-759-701-21	IC NJM5532D-D		R033	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC201	8-759-604-33	IC M5F7812		R034	1-216-097-00	METAL GLAZE 100K 5%	1/10W
IC202	8-759-604-51	IC M5F7912		R035	1-216-097-00	METAL GLAZE 100K 5%	1/10W
<u>VARIABLE COIL</u>				R036	1-216-097-00	METAL GLAZE 100K 5%	1/10W
LVO01	1-426-212-11	COIL (RF)		R038	1-216-033-00	METAL GLAZE 220 5%	1/10W
<u>TRANSISTOR</u>				R040	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q001	8-729-900-53	TRANSISTOR DTC114EK		R043	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q002	8-729-100-67	TRANSISTOR 2SC1623-L7		R044	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q003	8-729-900-53	TRANSISTOR DTC114EK		R045	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q004	8-729-900-53	TRANSISTOR DTC114EK		R046	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q005	8-729-901-05	TRANSISTOR DTA124EK		R047	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q101	8-729-900-53	TRANSISTOR DTC114EK		R050	1-216-121-00	METAL GLAZE 1M 5%	1/10W
Q102	8-729-901-00	TRANSISTOR DTC124EK		R051	1-216-099-00	METAL GLAZE 120K 5%	1/10W
Q201	8-729-901-05	TRANSISTOR DTA124EK		R052	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q202	8-729-901-05	TRANSISTOR DTA124EK		R053	1-216-033-00	METAL GLAZE 220 5%	1/10W
				R054	1-216-033-00	METAL GLAZE 220 5%	1/10W
				R055	1-216-033-00	METAL GLAZE 220 5%	1/10W

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

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

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Ref.No	Part No.	Description	Remark
R056	1-216-033-00	METAL GLAZE 220 5%	1/10W
R057	1-216-033-00	METAL GLAZE 220 5%	1/10W
R058	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R101	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R102	1-216-103-00	METAL GLAZE 180K 5%	1/10W
R103	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R104	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R105	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R106	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R107	1-216-103-00	METAL GLAZE 180K 5%	1/10W
R108	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R109	1-249-934-11	CARBON 3K 5%	1/2W
R110	1-249-677-11	CARBON 1.5K 5%	1/2W
R111	1-249-677-11	CARBON 1.5K 5%	1/2W
R112	1-247-887-00	CARBON 220K 5%	1/4W
R113	1-249-934-11	CARBON 3K 5%	1/2W
R114	1-249-677-11	CARBON 1.5K 5%	1/2W
R115	1-249-677-11	CARBON 1.5K 5%	1/2W
R116	1-247-887-00	CARBON 220K 5%	1/4W
R117	1-216-025-00	METAL GLAZE 100 5%	1/10W
R118	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R119	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R120	1-216-025-00	METAL GLAZE 100 5%	1/10W
R121	1-216-025-00	METAL GLAZE 100 5%	1/10W
R122	1-216-025-00	METAL GLAZE 100 5%	1/10W
R123	1-216-025-00	METAL GLAZE 100 5%	1/10W
R124	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R125	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R203	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R204	1-249-429-11	CARBON 10K 5%	1/4W
R205	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R206	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R207	1-218-152-11	METAL GLAZE 1.5K 1%	1/10W
R300	1-216-025-00	METAL GLAZE 100 5%	1/10W
<u>VARIABLE RESISTOR</u>			
RV001	1-228-993-00	RES, ADJ, CARBON 4.7K	
RV101	1-228-997-00	RES, ADJ, CARBON 100K	
RV102	1-228-997-00	RES, ADJ, CARBON 100K	
<u>CRYSTAL</u>			
X001	1-567-515-11	VIRRATOR, VARIABLE CRYSTAL (16.9MHz)	

*A-6421-460-A	MB-18 (KU) BOARD, COMPLETE ***** (Ref. No. 1,000 Series)		
1-466-174-11	MODULATOR, RF (RFU-1017)		
3-325-988-11	SPACER, BUTTON		
*3-710-578-01	COVER, VOLUME, 6 MOLD		
*3-738-616-01	PLATE, GROUND, SIRCS		
<u>CAPACITOR</u>			
C001	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C002	1-126-160-11	ELECT 1MF	20% 50V
C003	1-124-584-00	ELECT 100MF	20% 10V

Ref.No	Part No.	Description	Remark
C004	1-124-584-00	ELECT 100MF	20% 10V
C005	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C006	1-124-584-00	ELECT 100MF	20% 10V
C007	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C008	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C009	1-124-499-11	ELECT 1MF	20% 50V
C010	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C011	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C012	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C013	1-124-584-00	ELECT 100MF	20% 10V
C015	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C016	1-124-584-00	ELECT 100MF	20% 10V
C017	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V
C018	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C019	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C020	1-124-465-00	ELECT 0.47MF	20% 50V
C021	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C022	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C023	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C101	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C102	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V
C103	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C104	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C105	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C107	1-163-092-00	CERAMIC CHIP 9PF	0.25PF 50V
C108	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C109	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C110	1-124-589-11	ELECT 47MF	20% 16V
C111	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C112	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C113	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C114	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C115	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C116	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C117	1-130-495-00	MYLAR 0.1MF	5% 50V
C119	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C120	1-163-241-11	CERAMIC CHIP 39PF	5% 50V
C121	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C123	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C124	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C125	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C126	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C127	1-124-257-00	ELECT 2.2MF	20% 50V
C128	1-131-345-00	TANTALUM 0.47MF	10% 35V
C129	1-124-471-00	ELECT 1000MF	20% 6.3V
C132	1-101-005-00	CERAMIC 0.022MF	50V
C133	1-126-176-11	ELECT 220MF	20% 10V
C134	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C135	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C136	1-124-589-11	ELECT 47MF	20% 16V
C137	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C138	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C139	1-164-232-11	CERAMIC CHIP 0.01MF	50V

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

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C140	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C208	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C141	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C209	1-130-491-00	MYLAR 0.047MF	5% 50V
C142	1-124-589-11	ELECT 47MF	20% 16V	C210	1-124-499-11	ELECT 1MF	20% 50V
C143	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C211	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C144	1-130-483-00	MYLAR 0.01MF	5% 50V	C212	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C145	1-126-160-11	ELECT 1MF	20% 50V	C213	1-124-589-11	ELECT 47MF	20% 16V
C146	1-131-347-00	TANTALUM 1MF	10% 35V	C214	1-130-491-00	MYLAR 0.047MF	5% 50V
C147	1-130-487-00	MYLAR 0.022MF	5% 50V	C215	1-130-483-00	MYLAR 0.01MF	5% 50V
C148	1-126-160-11	ELECT 1MF	20% 50V	C216	1-124-465-00	ELECT 0.47MF	20% 50V
C149	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C217	1-126-160-11	ELECT 1MF	20% 50V
C150	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C218	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C151	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C219	1-130-489-00	MYLAR 0.033MF	5% 50V
C152	1-124-589-11	ELECT 47MF	20% 16V	C220	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C153	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C221	1-130-476-00	MYLAR 0.027MF	5% 50V
C154	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C222	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C155	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C223	1-130-483-00	MYLAR 0.01MF	5% 50V
C157	1-124-589-11	ELECT 47MF	20% 16V	C224	1-124-589-11	ELECT 47MF	20% 16V
C159	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C225	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C160	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C226	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C161	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C227	1-130-483-00	MYLAR 0.01MF	5% 50V
C162	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C228	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C163	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C230	1-124-257-00	ELECT 2.2MF	20% 50V
C165	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C231	1-126-157-11	ELECT 10MF	20% 16V
C166	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C232	1-126-157-11	ELECT 10MF	20% 16V
C167	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C233	1-124-589-11	ELECT 47MF	20% 16V
C172	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C234	1-124-257-00	ELECT 2.2MF	20% 50V
C174	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C235	1-124-589-11	ELECT 47MF	20% 16V
C175	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C237	1-124-589-11	ELECT 47MF	20% 16V
C176	1-163-139-00	CERAMIC CHIP 820PF	5% 50V	C238	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C177	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C240	1-124-225-00	ELECT 100MF	20% 6.3V
C178	1-124-589-11	ELECT 47MF	20% 16V	C242	1-126-177-11	ELECT 100MF	20% 6.3V
C179	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C243	1-101-005-00	CERAMIC 0.022MF	50V
C180	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C244	1-126-157-11	ELECT 10MF	20% 16V
C181	1-126-160-11	ELECT 1MF	20% 50V	C245	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C182	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C246	1-124-589-11	ELECT 47MF	20% 16V
C185	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C251	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C186	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C259	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C187	1-130-483-00	MYLAR 0.01MF	5% 50V	C260	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C188	1-130-489-00	MYLAR 0.033MF	5% 50V	C261	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C189	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C262	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C190	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C263	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C191	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C264	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C192	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C265	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C193	1-124-589-11	ELECT 47MF	20% 16V	C266	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C194	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C267	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C195	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C268	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C198	1-130-491-00	MYLAR 0.047MF	5% 50V	C273	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C200	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C274	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C201	1-124-589-11	ELECT 47MF	20% 16V	C276	1-126-157-11	ELECT 10MF	20% 16V
C202	1-126-160-11	ELECT 1MF	20% 50V	C277	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C203	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C278	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C204	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C279	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C205	1-124-589-11	ELECT 47MF	20% 16V	C280	1-163-035-00	CERAMIC CHIP 0.047MF	50V
				C281	1-161-057-00	CERAMIC 0.033MF	25V
				C300	1-163-035-00	CERAMIC CHIP 0.047MF	50V
				C301	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
				C401	1-126-094-11	ELECT 4.7MF	20% 16V

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

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C402	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C712	1-123-875-11	ELECT 10MF	20% 50V
C403	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C713	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C404	1-126-094-11	ELECT 4.7MF	20% 16V	C714	1-123-875-11	ELECT 10MF	20% 50V
C406	1-124-589-11	ELECT 47MF	20% 16V	C715	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C407	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C716	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C408	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C717	1-126-023-11	ELECT 100MF	20% 16V
C409	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C718		CERAMIC CHIP 2200PF	
C601	1-124-589-11	ELECT 47MF	20% 16V	C719	1-126-022-11	ELECT 47MF	20% 16V
C602	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C720	1-124-248-00	ELECT 22MF	20% 25V
C603	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C721	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C604	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C722	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C606	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C723	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C607	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C724	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C609	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C725	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C610	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C726	1-124-248-00	ELECT 22MF	20% 25V
C611	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C728	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C612	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C729	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C613	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C730	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C620	1-124-589-11	ELECT 47MF	20% 16V	C731	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C621	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C732	1-130-482-00	MYLAR 0.0082MF	5% 50V
C622	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C733	1-126-049-11	ELECT 22MF	20% 25V
C623	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C734	1-130-491-00	MYLAR 0.047MF	5% 50V
C624	1-124-589-11	ELECT 47MF	20% 16V	C735	1-124-766-00	ELECT 0.1MF	20% 50V
C625	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C736	1-126-049-11	ELECT 22MF	20% 25V
C626	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C737	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C627	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C738	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C628	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C739	1-126-023-11	ELECT 100MF	20% 16V
C629	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C741	1-124-248-00	ELECT 22MF	20% 25V
C630	1-124-257-00	ELECT 2.2MF	20% 50V	C742	1-126-022-11	ELECT 47MF	20% 16V
C631	1-124-589-11	ELECT 47MF	20% 16V	C743	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C632	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C744	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C640	1-124-248-00	ELECT 22MF	20% 25V	C745	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C641	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C746	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C650	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C747	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C651	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C748	1-124-248-00	ELECT 22MF	20% 25V
C652	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C749	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C654	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C750	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C655	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C751	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C656	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C752	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C657	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C753	1-130-482-00	MYLAR 0.0082MF	5% 50V
C660	1-162-213-21	CERAMIC 39PF	5% 50V	C754	1-126-049-11	ELECT 22MF	20% 25V
C661	1-162-213-21	CERAMIC 39PF	5% 50V	C755	1-130-491-00	MYLAR 0.047MF	5% 50V
C701	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C756	1-126-529-11	ELECT 0.47MF	20% 50V
C702	1-124-446-11	ELECT 47MF	20% 10V	C757	1-126-023-11	ELECT 100MF	20% 16V
C703	1-124-446-11	ELECT 47MF	20% 10V	C758	1-124-927-11	ELECT 4.7MF	20% 50V
C704	1-163-126-00	CERAMIC CHIP 240PF	5% 50V	C760	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C705	1-163-126-00	CERAMIC CHIP 240PF	5% 50V	C761	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C706	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C762	1-126-022-11	ELECT 47MF	20% 16V
C707	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C763	1-126-022-11	ELECT 47MF	20% 16V
C708	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C770	1-126-023-11	ELECT 100MF	20% 16V
C709	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C906	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C710	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C908	1-124-589-11	ELECT 47MF	20% 16V
C711	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C909	1-124-589-11	ELECT 47MF	20% 16V
				C910	1-123-875-11	ELECT 10MF	20% 50V
				C950	1-163-035-00	CERAMIC CHIP 0.047MF	50V

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>FILTER</u>				<u>FILTER</u>			
CF101	1-527-831-00	FILTER, CERAMIC		FL001	1-235-922-11	FILTER, LOW PASS (1.7MHZ)	
<u>CONNECTOR</u>				<u>IC</u>			
CN001	1-568-683-11	PIN, CONNECTOR (PC BAORD) 2P		IC001	8-752-033-14	IC CXA1081Q	
CN002	1-568-683-11	PIN, CONNECTOR (PC BAORD) 2P		IC002	8-759-603-24	IC CX20197	
CN601	*1-564-032-00	PIN, CONNECTOR 7P		IC003	8-759-009-07	IC MC14053BF	
CN602	1-563-493-11	CONNECTOR, F.P.C 28P		IC101	8-759-701-59	IC M5F78M09	
CN603	1-506-483-21	PIN, CONNECTOR 4P		IC102	8-759-941-68	IC BA7131F	
CN604	1-506-485-11	PIN, CONNECTOR 6P		IC103	8-752-036-23	IC CXA1254Q	
CN605	1-564-017-11	PIN, CONNECTOR 7P		IC104	8-752-322-35	IC CXL5005M	
CN606	1-506-481-11	PIN, CONNECTOR 2P		IC105	8-759-983-48	IC CXD1152Q	
CN607	1-506-482-11	PIN, CONNECTOR 3P		IC106	8-759-978-27	IC BA10324F	
CN608	1-506-481-11	PIN, CONNECTOR 2P		IC107	8-752-036-24	IC CXA1255Q	
CN900	*1-560-890-00	PIN, CONNECTOR 2P		IC108	8-759-208-53	IC TC74HCT04F	
CN901	*1-566-705-11	CONNECTOR, BOARD TO BOARD 7P		IC109	8-759-982-31	IC RC78M05FA	
CN903	1-5640004-11	PIN, CONNECTOR 5P		IC401	8-759-100-95	IC UPC324G2	
CN905	*1-566-706-11	CONNECTOR, BOARD TO BOARD 12P		IC402	8-759-009-06	IC MC14052BF	
CN906	*1-566-706-11	CONNECTOR, BOARD TO BOARD 12P		IC601	8-759-994-96	IC MB89795-117	
CN907	1-568-315-11	CONNECTOR, BOARD TO BOARD 5P		IC602	8-759-634-08	IC M50455-157FP	
CN908	*1-560-891-00	PIN, CONNECTOR 3P		IC603	8-759-231-92	IC TA7291P	
CN910	*1-564-027-00	PIN, CONNECTOR 2P		IC605	8-759-987-71	IC MSM724032GS-K	
<u>JACK</u>				<u>JUMPER RESISTOR</u>			
CNJ101	1-565-351-51	JACK, PIN 3P (LINE OUT)		JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNJ601	1-507-678-00	JACK (CONTROL S IN)		JR002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNJ602	1-507-678-00	JACK (CONTROL S OUT)		JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>TRIMMER</u>				JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CV101	1-141-304-21	TRIMAR, CERAMIC		JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CV102	1-141-227-00	CAP, CERAMIC TRIMMER		JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CV601	1-141-227-00	CAP, CERAMIC TRIMMER		JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<u>DIODE</u>				JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D001	8-719-911-19	DIODE 1SS119		JR009	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D110	8-719-800-76	DIODE 1SS226		JR010	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D601	8-719-911-19	DIODE 1SS119		JR011	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D602	8-719-911-19	DIODE 1SS119		JR012	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D603	8-719-110-13	DIODE RD9.1ES-B2		JR013	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D604	8-719-110-13	DIODE RD9.1ES-B2		JR014	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D605	8-719-911-19	DIODE 1SS119		JR016	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D606	8-719-104-34	DIODE 1S2836		JR017	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D607	8-719-400-18	DIODE 1S2837		JR018	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D609	8-719-911-19	DIODE 1SS119					
D905	8-719-911-19	DIODE 1SS119					
D907	8-719-911-19	DIODE 1SS119					
D908	8-719-400-18	DIODE MA152-WK					

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

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
JR128	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR182	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR129	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR183	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR130	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR184	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR131	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR185	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR132	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR186	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR133	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR187	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR134	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR188	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR135	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR190	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR136	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR191	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR137	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR192	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR138	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR195	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR139	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR196	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR140	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR197	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR141	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR198	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR142	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR199	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR143	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR200	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR144	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR201	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR145	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR202	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR146	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR203	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR147	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR204	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR148	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR206	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR149	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR207	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR150	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR211	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR151	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR212	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR152	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR213	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR153	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR214	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR154	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR215	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR155	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR216	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR156	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR217	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR157	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR218	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR158	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR219	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR159	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR220	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR160	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR221	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR161	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR222	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR162	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR223	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR163	1-216-295-00	METAL GLAZE	0 5% 1/10W	<u>COIL</u>			
JR164	1-216-295-00	METAL GLAZE	0 5% 1/10W	L001	1-410-509-11	INDUCTOR	10UH
JR165	1-216-296-00	METAL GLAZE	0 5% 1/8W	L002	1-410-509-11	INDUCTOR	10UH
JR166	1-216-296-00	METAL GLAZE	0 5% 1/8W	L003	1-408-429-00	INDUCTOR	470UH
JR167	1-216-296-00	METAL GLAZE	0 5% 1/8W	L102	1-408-417-00	INDUCTOR	47UH
JR168	1-216-296-00	METAL GLAZE	0 5% 1/8W	L103	1-408-424-00	INDUCTOR	180UH
JR170	1-216-296-00	METAL GLAZE	0 5% 1/8W	L104	1-408-421-00	INDUCTOR	100UH
JR171	1-216-296-00	METAL GLAZE	0 5% 1/8W	L105	1-408-421-00	INDUCTOR	100UH
JR172	1-216-296-00	METAL GLAZE	0 5% 1/8W	L106	1-408-419-00	INDUCTOR	68UH
JR173	1-216-296-00	METAL GLAZE	0 5% 1/8W	L107	1-408-421-00	INDUCTOR	100UH
JR174	1-216-296-00	METAL GLAZE	0 5% 1/8W	L108	1-408-421-00	INDUCTOR	100UH
JR175	1-216-296-00	METAL GLAZE	0 5% 1/8W	L110	1-408-422-00	INDUCTOR	120UH
JR176	1-216-296-00	METAL GLAZE	0 5% 1/8W	L112	1-408-421-00	INDUCTOR	100UH
JR177	1-216-296-00	METAL GLAZE	0 5% 1/8W	L113	1-408-421-00	INDUCTOR	100UH
JR178	1-216-296-00	METAL GLAZE	0 5% 1/8W	L114	1-410-521-11	INDUCTOR	100UH
JR179	1-216-296-00	METAL GLAZE	0 5% 1/8W	L115	1-408-421-00	INDUCTOR	100UH
JR180	1-216-296-00	METAL GLAZE	0 5% 1/8W	L118	1-408-424-00	INDUCTOR	180UH
JR181	1-216-296-00	METAL GLAZE	0 5% 1/8W	L128	1-408-421-00	INDUCTOR	100UH
				L130	1-408-421-00	INDUCTOR	100UH
				L201	1-424-033-21	FILTER, NOISE	
				L601	1-410-521-11	INDUCTOR	100UH
				L602	1-410-511-11	INDUCTOR	15UH
				L603	1-424-033-21	FILTER, NOISE	
				L604	1-410-509-11	INDUCTOR	10UH
				L605	1-408-429-00	INDUCTOR	470UH
				L610	1-410-509-11	INDUCTOR	10UH
				L701	1-408-425-00	INDUCTOR	220UH
				L702	1-408-417-00	INDUCTOR	47UH
				L703	1-408-417-00	INDUCTOR	47UH

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
L704	1-408-421-00	INDUCTOR 100UH					
L705	1-408-409-00	INDUCTOR 10UH					
L706	1-408-409-00	INDUCTOR 10UH					
L707	1-410-069-11	INDUCTOR 6.8MH					
L708	1-410-069-11	INDUCTOR 6.8MH					
L750	1-424-033-21	FILTER, NOISE					
<u>TRANSISTOR</u>				<u>RESISTOR</u>			
Q001	8-729-140-97	TRANSISTOR 2SB734		R001	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
Q002	8-729-901-00	TRANSISTOR DTC124EK		R002	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
Q003	8-729-216-22	TRANSISTOR 2SA1162G		R003	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q101	8-729-216-22	TRANSISTOR 2SA1162G		R004	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
Q102	8-729-100-66	TRANSISTOR 2SC1623		R005	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q103	8-729-100-66	TRANSISTOR 2SC1623		R006	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
Q104	8-729-100-66	TRANSISTOR 2SC1623		R007	1-216-625-11	METAL CHIP 82 0.50% 1/10W	
Q105	8-729-100-66	TRANSISTOR 2SC1623		R008	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
Q106	8-729-100-66	TRANSISTOR 2SC1623		R009	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
Q108	8-729-216-22	TRANSISTOR 2SA1162G		R010	1-216-697-11	METAL CHIP 82K 0.50% 1/10W	
Q109	8-729-100-66	TRANSISTOR 2SC1623		R011	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q110	8-729-100-66	TRANSISTOR 2SC1623		R012	1-247-731-11	CARBON 22 5% 1/2W	
Q112	8-729-100-66	TRANSISTOR 2SC1623		R013	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q117	8-729-100-66	TRANSISTOR 2SC1623		R014	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q121	8-729-100-66	TRANSISTOR 2SC1623		R015	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q122	8-729-216-22	TRANSISTOR 2SA1162G		R016	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
Q123	8-729-100-66	TRANSISTOR 2SC1623		R017	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q124	8-729-140-75	TRANSISTOR 2SD999		R018	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q125	8-729-100-66	TRANSISTOR 2SC1623		R019	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
Q126	8-729-100-66	TRANSISTOR 2SC1623		R020	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
Q127	8-729-100-66	TRANSISTOR 2SC1623		R101	1-212-974-00	FUSIBLE 47 5% 1/2W F	
Q128	8-729-901-01	TRANSISTOR DTC144EK		R103	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q130	8-729-216-22	TRANSISTOR 2SA1162G		R104	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
Q601	8-729-216-22	TRANSISTOR 2SA1162G		R105	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q602	8-729-901-00	TRANSISTOR DTC124EK		R106	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q603	8-729-901-01	TRANSISTOR DTC144EK		R107	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q604	8-729-901-06	TRANSISTOR DTA144EK		R108	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q605	8-729-100-66	TRANSISTOR 2SC1623		R109	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
Q606	8-729-901-00	TRANSISTOR DTC124EK		R110	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q608	8-729-100-66	TRANSISTOR 2SC1623		R111	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q609	8-729-100-66	TRANSISTOR 2SC1623		R112	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q610	8-729-100-66	TRANSISTOR 2SC1623		R113	1-216-040-00	METAL GLAZE 430 5% 1/10W	
Q611	8-729-901-00	TRANSISTOR DTC124EK		R114	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q612	8-729-901-00	TRANSISTOR DTC124EK		R115	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q701	8-729-100-66	TRANSISTOR 2SC1623		R116	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q702	8-729-100-66	TRANSISTOR 2SC1623		R118	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q703	8-729-100-66	TRANSISTOR 2SC1623		R119	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
Q704	8-729-100-66	TRANSISTOR 2SC1623		R120	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
Q705	8-729-100-66	TRANSISTOR 2SC1623		R121	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
Q706	8-729-100-66	TRANSISTOR 2SC1623		R122	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q901	8-729-216-22	TRANSISTOR 2SA1162G		R125	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q902	8-729-303-37	TRANSISTOR 2SD655-E		R126	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q903	8-729-303-37	TRANSISTOR 2SD655-E		R128	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q904	8-729-216-22	TRANSISTOR 2SA1162G		R129	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q907	8-729-900-53	TRANSISTOR DTC114EK		R130	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q911	8-729-901-06	TRANSISTOR DTA144EK		R131	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
				R132	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R134	1-216-045-00	METAL GLAZE 680 5% 1/10W	
				R135	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
				R136	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R137	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	

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

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R138	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R202	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R139	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R203	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R140	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R204	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R141	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R205	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R142	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R206	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R143	1-216-045-00	METAL GLAZE	680 5% 1/10W	R207	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R144	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R208	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R145	1-216-041-00	METAL GLAZE	470 5% 1/10W	R209	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R146	1-216-041-00	METAL GLAZE	470 5% 1/10W	R210	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R147	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R211	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R148	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R212	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R149	1-216-021-00	METAL GLAZE	68 5% 1/10W	R213	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R150	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R214	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R151	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R215	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R152	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R219	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R153	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R220	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R154	1-216-041-00	METAL GLAZE	470 5% 1/10W	R221	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R155	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R222	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R156	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R223	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R157	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R224	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R158	1-216-041-00	METAL GLAZE	470 5% 1/10W	R225	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R159	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R226	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R160	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R227	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R161	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R228	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R165	1-216-039-00	METAL GLAZE	390 5% 1/10W	R229	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R166	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R230	1-216-045-00	METAL GLAZE	680 5% 1/10W
R167	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R232	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R169	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R233	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R170	1-216-043-00	METAL GLAZE	560 5% 1/10W	R234	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R171	1-216-041-00	METAL GLAZE	470 5% 1/10W	R235	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R172	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R236	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R173	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R237	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R174	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R238	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R183	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R239	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R184	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R240	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R185	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R241	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R186	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R242	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R187	1-216-117-00	METAL GLAZE	680K 5% 1/10W	R243	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R188	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R244	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R189	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R245	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R190	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R246	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R191	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R247	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R192	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R248	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R193	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R249	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R194	1-216-037-00	METAL GLAZE	330 5% 1/10W	R254	1-216-115-00	METAL GLAZE	560K 5% 1/10W
R195	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R255	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R196	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R257	1-216-043-00	METAL GLAZE	560 5% 1/10W
R197	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R258 Δ	1-212-958-00	FUSIBLE	10 5% 1/2W F
R198	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R260	1-216-043-00	METAL GLAZE	560 5% 1/10W
R199	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R262	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R200	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R263	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R201	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R264	1-216-085-00	METAL GLAZE	33K 5% 1/10W
				R265	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R266	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R612	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R267	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R613	1-216-025-00	METAL GLAZE	100 5% 1/10W
R268	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R614	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R269	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R615	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R270	1-216-047-00	METAL GLAZE	820 5% 1/10W	R616	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R271	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R617	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R272	1-216-037-00	METAL GLAZE	330 5% 1/10W	R618	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R278	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R619	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R279	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R620	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R290	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R621	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R291	1-216-033-00	METAL GLAZE	220 5% 1/10W	R622	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R292	1-216-033-00	METAL GLAZE	220 5% 1/10W	R623	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R295	1-216-033-00	METAL GLAZE	220 5% 1/10W	R624	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R296	1-249-441-11	CARBON	100K 5% 1/4W	R625	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R300	1-216-025-00	METAL CHIP	100 5% 1/10W	R626	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R301	1-216-027-00	METAL CHIP	120 5% 1/10W	R627	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R401	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	R629	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R402	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	R630	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R403	1-216-699-11	METAL CHIP	100K 0.50% 1/10W	R631	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R404	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R632	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R405	1-216-685-11	METAL CHIP	27K 0.50% 1/10W	R633	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R406	1-216-165-11	METAL GLAZE	220K 1% 1/10W	R634	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R407	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R635	1-216-035-00	METAL GLAZE	270 5% 1/10W
R408	1-216-117-00	METAL GLAZE	680K 5% 1/10W	R636	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R409	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R637	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R410	1-216-530-00	METAL GLAZE	390K 1% 1/10W	R638	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R411	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R641	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R412	1-216-035-00	METAL GLAZE	270 5% 1/10W	R642	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R413	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R643	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R414	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R644	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R415	1-216-111-00	METAL GLAZE	390K 5% 1/10W	R645	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R416	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R646	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R417	1-216-111-00	METAL GLAZE	390K 5% 1/10W	R648	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R423	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R649	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R426	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R650	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R431	1-216-033-00	METAL GLAZE	220 5% 1/10W	R651	1-216-033-00	METAL GLAZE	220 5% 1/10W
R434	1-216-033-00	METAL GLAZE	220 5% 1/10W	R652	1-216-033-00	METAL GLAZE	220 5% 1/10W
R500	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R653	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R501	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R654	1-216-033-00	METAL GLAZE	220 5% 1/10W
R510	1-249-409-11	CARBON	150 5% 1/4W	R655	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R585	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R656	1-216-033-00	METAL GLAZE	220 5% 1/10W
R586	1-216-041-00	METAL GLAZE	470 5% 1/10W	R657	1-216-033-00	METAL GLAZE	220 5% 1/10W
R587	1-216-041-00	METAL GLAZE	470 5% 1/10W	R659	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R588	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R660	1-216-033-00	METAL GLAZE	220 5% 1/10W
R592	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R661	1-216-033-00	METAL GLAZE	220 5% 1/10W
R593	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R662	1-216-033-00	METAL GLAZE	220 5% 1/10W
R594	1-216-013-00	METAL GLAZE	33 5% 1/10W	R663	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R595	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R664	1-216-033-00	METAL GLAZE	220 5% 1/10W
R596	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R665	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R597	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R666	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R598	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R667	1-216-033-00	METAL GLAZE	220 5% 1/10W
R599	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R669	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R601	1-216-121-00	METAL GLAZE	1M 5% 1/10W				
R602	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R603	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R604	1-216-021-00	METAL GLAZE	68 5% 1/10W				
R605	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R606	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R607	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R608	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R609	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R610	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R611	△ 1-212-950-00	FUSIBLE	4.7 5% 1/2W F				

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R670	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R730	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R671	1-216-295-00	METAL GLAZE	0 5% 1/10W	R731	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R672	1-216-033-00	METAL GLAZE	220 5% 1/10W	R732	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R673	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R733	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R674	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R734	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R675	1-216-033-00	METAL GLAZE	220 5% 1/10W	R735	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R676	1-216-033-00	METAL GLAZE	220 5% 1/10W	R736	1-216-096-00	METAL GLAZE	91K 5% 1/10W
R677	1-216-033-00	METAL GLAZE	220 5% 1/10W	R737	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R678	1-216-033-00	METAL GLAZE	220 5% 1/10W	R738	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R680	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R739	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R681	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R740	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R682	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R745	1-216-670-11	METAL CHIP	6.2K 0.50% 1/10W
R683	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R746	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R686	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R747	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R687	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R748	1-216-045-00	METAL GLAZE	680 5% 1/10W
R688	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R749	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R689	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R750	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R690	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R751	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R691	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R752	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R693	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R753	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R694	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R754	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R695	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R755	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R696	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R757	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R697	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R758	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R698	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R760	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R699	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R761	1-249-421-11	CARBON	2.2K 5% 1/4W
R701	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R762	1-249-421-11	CARBON	2.2K 5% 1/4W
R702	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R763	1-249-421-11	CARBON	2.2K 5% 1/4W
R703	1-216-048-00	METAL GLAZE	910 5% 1/10W	R764	1-249-421-11	CARBON	2.2K 5% 1/4W
R704	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R765	1-249-421-11	CARBON	2.2K 5% 1/4W
R705	1-216-033-00	METAL GLAZE	220 5% 1/10W	R903	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R706	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R904	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R707	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R907	1-247-815-00	CARBON	220 5% 1/6W
R708	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R908	1-247-815-00	CARBON	220 5% 1/6W
R709	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R909	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R710	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R910	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R711	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R922	1-249-469-11	CARBON	100K 5% 1/4W
R712	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R924	1-249-417-11	CARBON	1K 5% 1/4W
R713	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R925	1-249-417-11	CARBON	1K 5% 1/4W
R714	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R926	1-249-469-11	CARBON	100K 5% 1/4W
R715	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R927	1-249-429-11	CARBON	10K 5% 1/4W
R716	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R928	1-249-429-11	CARBON	10K 5% 1/4W
R717	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R930	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R718	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R950	1-249-471-11	CARBON	1K 5% 1/4W
R719	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<u>VARIABLE RESISTOR</u>			
R720		METAL GLAZE	3K 5% 1/10W	RV101	1-228-994-00	RES, ADJ, CARBON	10K
R721	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	RV103	1-228-994-00	RES, ADJ, CARBON	10K
R722	1-216-075-00	METAL GLAZE	12K 5% 1/10W	RV104	1-228-994-00	RES, ADJ, CARBON	10K
R724	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	When indicating parts by reference number, please include the board name.			
R725	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W				
R726	1-216-045-00	METAL GLAZE	680 5% 1/10W				
R727	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R728	1-216-097-00	METAL GLAZE	100K 5% 1/10W				

MB-18

DL-29

TR-42

JK-49

LS-17

Ref.No	Part No.	Description	Remark
RV601	1-228-996-00	RES, ADJ, CARBON 47K	
RV701	1-228-996-00	RES, ADJ, CARBON 47K	
RV702	1-228-996-00	RES, ADJ, CARBON 47K	
<u>RELAY</u>			
RY901	1-515-622-11	RELAY	
<u>THERMISTOR</u>			
TH101	1-800-199-00	THERMISTOR	
<u>CRYSTAL</u>			
X601	1-567-900-11	VIBRATOR, CRYSTAL (14.3MHz)	

	*1-630-814-12	DL-29 BOARD (Ref. No. 8,100 Series)	

<u>CAPACITOR</u>			
C001	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C002	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C003	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C004	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C005	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C006	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C007	1-164-232-11	CERAMIC CHIP 0.01MF	50V
<u>CONNECTOR</u>			
CN001	1-568-683-11	PIN, CONNECTOR (PC BAORD) 2P	
CN002	1-568-683-11	PIN, CONNECTOR (PC BAORD) 2P	
<u>COIL</u>			
L001	1-408-785-21	INDUCTOR CHIP 47UH	
<u>TRANSISTOR</u>			
Q001	8-729-100-66	TRANSISTOR 2SC1623	
Q002	8-729-100-66	TRANSISTOR 2SC1623	
Q003	8-729-100-66	TRANSISTOR 2SC1623	
Q004	8-729-100-66	TRANSISTOR 2SC1623	
Q005	8-729-216-22	TRANSISTOR 2SA1162	
<u>RESISTOR</u>			
R001	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R002	1-216-073-00	METAL GLAZE 10K	5% 1/10W
R003	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R004	1-216-047-00	METAL GLAZE 820	5% 1/10W
R005	1-216-651-11	METAL CHIP 1K	0.50% 1/10W
R006	1-216-047-00	METAL GLAZE 820	5% 1/10W
R007	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R008	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R009	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R010	1-216-049-00	METAL GLAZE 1K	5% 1/10W

Ref.No	Part No.	Description	Remark
R011	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R012	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R013	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R014	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R015	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W

	*1-632-705-12	TR-42 BOARD (Ref. No. 2,000 Series)	

<u>CONNECTOR</u>			
CN401	*1-564-028-00	PIN, CONNECTOR 3P	
CN402	*1-564-028-00	PIN, CONNECTOR 3P	
CN403	*1-564-029-00	PIN, CONNECTOR 4P	
T401	△.1-449-913-11	TRANSFORMER, POWER	

	*1-632-706-12	JK-49 BOARD (Ref. No. 8,200 Series)	

<u>CAPACITOR</u>			
C001	1-161-494-00	CERAMIC 0.022MF	25V
C002	1-161-494-00	CERAMIC 0.022MF	25V
C003	1-161-494-00	CERAMIC 0.022MF	25V
<u>CONNECTOR</u>			
CN001	1-506-469-11	PIN, CONNECTOR 4P	
<u>JACK</u>			
J001	1-568-956-11	JACK, PIN 2P (AUDIO IN L/R)	

	*1-630-091-13	LS-17 BOARD (Ref. No. 4,000 Series)	

	3-735-054-01	HOLDER, SENSOR	
<u>DIODE</u>			
D201	8-719-941-81	DIODE GL360	
<u>TRANSISTOR</u>			
Q201	8-729-904-10	TRANSISTOR PT360FS	

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

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

SW-106

SW-107

CK-14

FG-13

MT-28

MT-29

MT-30

Ref.No	Part No.	Description	Remark
	*1-630-092-13	SW-106 BOARD (Ref. No. 4,000 Series) *****	
		<u>CONNECTOR</u>	
CN301	1-506-467-11	PIN, CONNECTOR 2P	
		<u>SWITCH</u>	
S301	1-554-655-00	SWITCH, LEAF (TRAY OUT)	

	*1-630-093-13	SW-107 BOARD (Ref. No. 3,000 Series) *****	
		<u>CONNECTOR</u>	
CN401	1-506-481-11	PIN, CONNECTOR 2P	
		<u>RESISTOR</u>	
R401	1-249-423-11	CARBON 3.3K 5% 1/4W	
R402	1-249-417-11	CARBON 1K 5% 1/4W	
		<u>SWITCH</u>	
S401	1-571-300-11	SWITCH, ROTARY (CHUCK UP/DOWN)	

	*1-630-094-13	CK-14 BOARD (Ref. No. 8,300 Series) *****	
		<u>CAPACITOR</u>	
C001	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C002	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
		<u>CONNECTOR</u>	
CN001	*1-506-467-11	PIN, CONNECTOR 2P	
CN002	1-506-468-11	PIN, CONNECTOR 3P	
CN003	1-506-467-11	PIN, CONNECTOR 2P	
CN004	*1-506-467-11	PIN, CONNECTOR 2P	
CN005	*1-506-467-11	PIN, CONNECTOR 2P	
		<u>JUMPER RESISTOR</u>	
JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR002	1-216-296-00	METAL GLAZE 0 5% 1/8W	
		<u>RESISTOR</u>	
R001	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R002	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R003	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R004	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R005	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R006	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R007	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	

Ref.No	Part No.	Description	Remark
	*1-630-096-13	FG-13 BOARD (Ref. No. 5,000 Series) *****	
		<u>DIODE</u>	
D301	8-719-939-11	DIODE GP2S09-B	

	*1-630-097-11	MT-28 BOARD (Ref. No. 3,000 Series) *****	
		<u>MOTOR</u>	
M902	1-541-659-11	MOTOR, DC (SLED)	

	*1-630-101-11	MT-29 BOARD (Ref. No. 3,000 Series) *****	
		<u>MOTOR</u>	
M904	1-541-309-11	MOTOR, LOADING (RF-370C)	

	*1-630-095-11	MT-30 BOARD (Ref. No. 3,000 Series) *****	
		<u>MOTOR</u>	
M903	1-541-659-11	MOTOR, DC (TILT)	

		<u>MISCELLANEOUS</u> *****	
F001	△.8-848-138-11	DEVICE, OPTICAL KHS-130A	
F002	△.1-532-740-11	FUSE, GLASS TUBE (125V 1A)	
F101	△.1-532-740-11	FUSE, GLASS TUBE (125V 1A)	
F102	△.1-532-747-11	FUSE, GLASS TUBE (125V 5A)	
F301	△.1-532-825-11	FUSE, GLASS TUBE (250V 2A)	
M901	1-541-665-11	MOTOR, SPINDLE	
M902	1-541-659-11	MOTOR, DC (SLED)	
M903	A-6415-290-A	MOTOR BLOCK ASSY SKEW	
M904	A-6415-288-B	MOTOR BLOCK ASSY LOADING	
S901	1-571-435-11	SWITCH (SLED IN LIMIT)	
S902	1-570-771-21	SWITCH (SLED OUT LIMIT)	
S903	1-554-468-00	SWITCH, LEAF (SLED IN LIMIT LD/CD)	
T401	△.1-450-123-11	TRANSFORMER, POWER	

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

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

ACCESSORIES AND PACKING MATERIALS

Part No.	Description	Remark
1-465-335-31	REMOTE COMMANDER (RMT-K1A)	
1-558-076-41	CORD, CONNECTION	
1-551-086-31	CORD, CONNECTION (VIDEO 1P)	
1-559-533-11	CORD, CONNECTION (AUDIO 2P)	
*3-710-964-01	SHEET, PROTECTION	
*3-740-742-01	INDIVIDUAL CARTON	
*3-740-745-01	CUSHION (UPPER)	
*3-740-746-01	CUSHION (LOWER)	
3-751-690-01	MANUAL, INSTRUCTION	

HARDWARE LIST



STOP RING

7-624-108-04 STOP RING 4.0, TYPE -E

SCREW

7-621-255-55 SCREW +P 2X8
 7-628-254-20 +PSW, 2.6X8
 7-682-645-01 SCREW +PS 3X4
 7-685-645-79 SCREW +BVTP 3X6 TYPE2 IT-3
 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3
 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3
 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
 7-685-649-79 SCREW +BVTP 3X14 TYPE2 IT-3
 7-685-661-79 SCREW +BVTP 4X12 TYPE2 SLIT

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

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

SECTION 8 ELECTRICAL ADJUSTMENTS

During these adjustment, see the parts arrangement diagram relevant to the adjustment on page from 162.

- 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.

8-1. LIST OF SERVICING JIGS

- Oscilloscope
- Color monitor TV
- Digital voltmeter
- Audio level meter
- Frequency counter
- Distortion meter
- Remote commander (RMT-K1A)
- LD alignment disc REF7C-8AL (8-597-901-03)
- CD alignment disc YEDS-18 (3-702-101-01)
- MD adjustment cable (J-6082-059-A)
- DS board extension cable (Fig. 8-1-1.)
- Audio signal oscillator

8-3. ADJUSTMENT CABLE

8-3-1. DS Board Adjustment Cable

DS board adjustment cable is used extension cable between the board to board connector of DS-32 board (CN001-003, 005) and MB-18 board (CN901, 905-907). It used 8-10-3. RF PLL Free-Run Adjustment.

8-3-2. MD Adjustment Cable (J-6082-059-A)

MD adjustment cable is used to adjust the servo system with connecting to the SV-33 board. Remove it except when adjusting the servo system.(Fig. 8-1-2.)

8-2. 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.)

	MB-18 BOARD CONNECTOR	DS-32 BOARD CONNECTOR
12P CABLE (J-6082-089-A) 2pcs	CN005	CN002
	CN006	CN003
7P CABLE (J-6082-088-A) 1pcs	CN901	CN005
5P CABLE (J-6082-087-A) 1pcs	CN907	CN001

Fig. 8-1-1.

MD adjustment cable

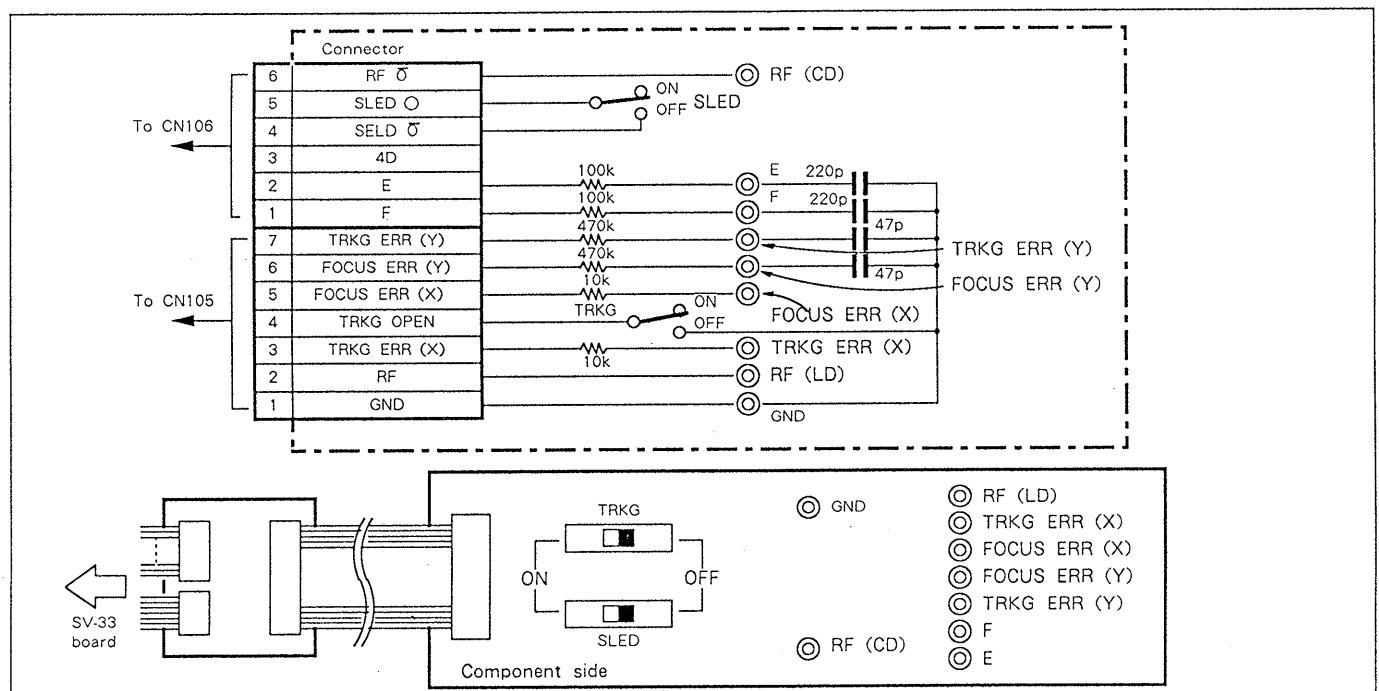


Fig. 8-1-2.

8-4. POWER SUPPLY CHECK (PS-193 BOARD)

Mode	Stop
Measuring Equipment	Digital voltmeter
UN REG +16V check	
Measurement Point	Pin ① of W002 (Pin ②, GND)
Specified Value	14.5±1V
UN REG -16V check	
Measurement Point	Pin ③ of W002 (Pin ②, GND)
Specified Value	-14.5±1V
REG +5V check	
Measurement Point	Pin ⑥ of W002 (Pin ⑤, GND)
Specified Value	5.1±0.2V
REG -5V check	
Measurement Point	Pin ⑦ of W002 (Pin ⑤, GND)
Specified Value	-5±0.5V

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

8-5. SYSTEM CONTROL SYSTEM ADJUSTMENT

8-5-1. Microprocessor Clock Adjustment (MB-18 Board)

Mode	Stop
Measurement Point	Pin ⑨ of IC601
Measuring Equipment	Frequency counter
Adjusting Element	CV601
Specified Value	3,579,545±10Hz

Adjustment method :

- 1) Adjust CV601 to 3,579,545±10Hz.

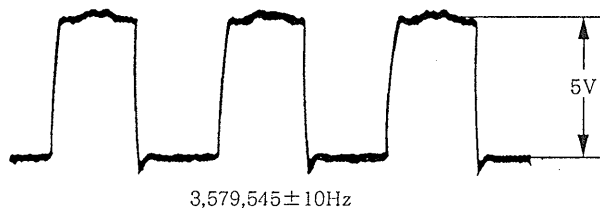


Fig. 8-2.

8-6. SERVO SYSTEM ADJUSTMENT

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

- Use the MD adjustment cable (J-6082-059-A).
- 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 CD 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

8-6-1. LD Servo System Adjustment

1. LD Tracking Balance Adjustment (SV-33 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 (Ⓜ) 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. 8-3.

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.

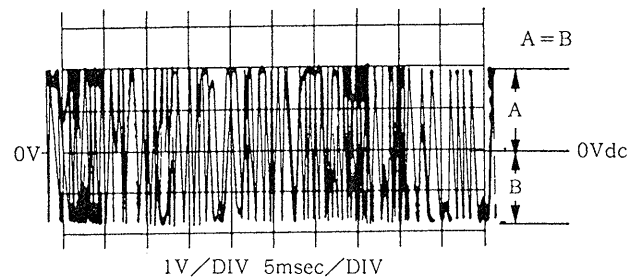


Fig. 8-4.

2. LD Focus Gain Adjustment (SV-33 Board)

Mode	Playback
Signal	Frame 2201 (GRAY)
Measurement Point	MD adjustment cable CH1 : [FOCUS ERR (Y)] (Pin ⑤ of CN105) CH2 : [FOCUS ERR (X)] (Pin ⑥ 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.

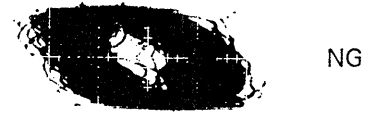
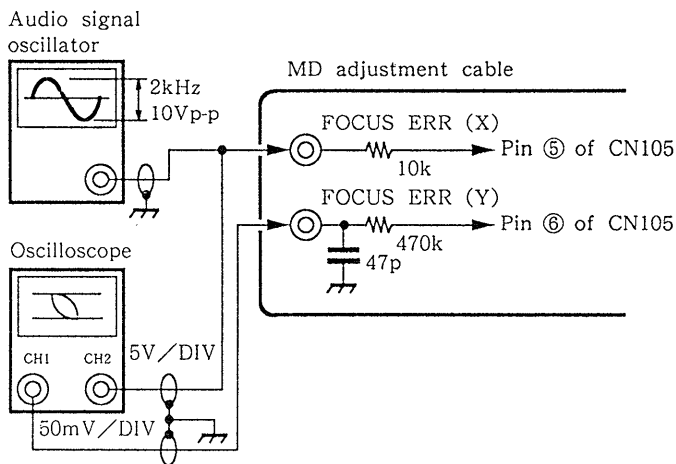


Fig. 8-5.

Connections :



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. 8-11.) with a hexagonal wrench.

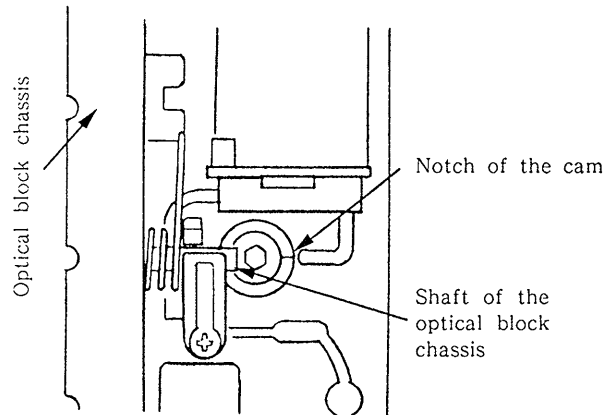


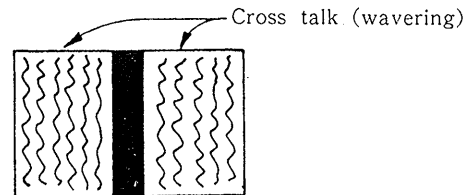
Fig. 8-6.

2) RAD TILT adjustment (SV-33 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 (⏸) 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. 8-7.

3) Focus balance adjustment (SV-33 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 (⏸) 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.

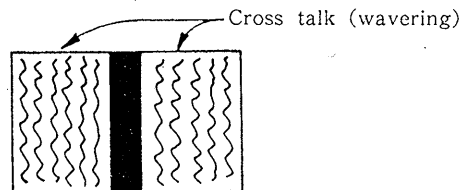


Fig. 8-8.

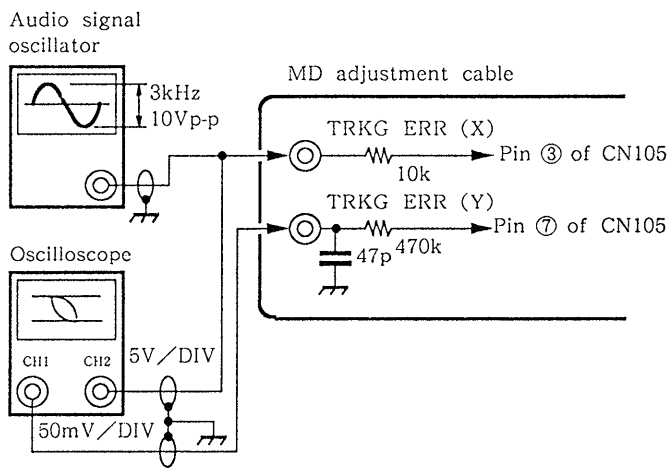
4. LD Tracking Gain Adjustment (SV-33 Board)

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

Adjustment method :

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

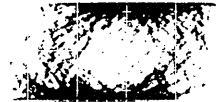
Connections :



NG



OK



NG

Fig. 8-9.

8-6-2. 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.

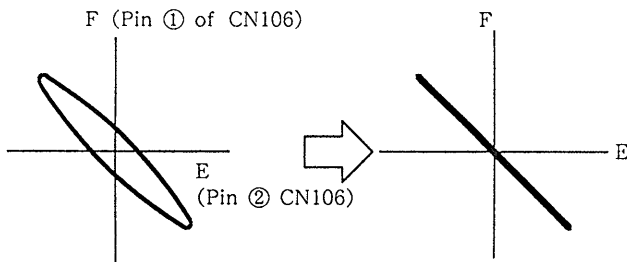


Fig. 8-10.

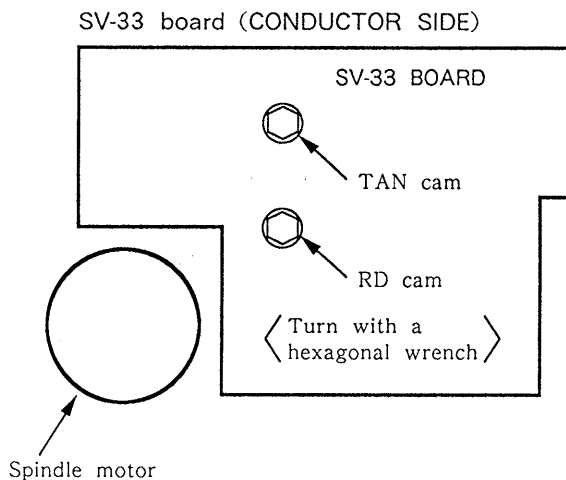


Fig. 8-11.

2. CD Focus Balance Adjustment (SV-33 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.

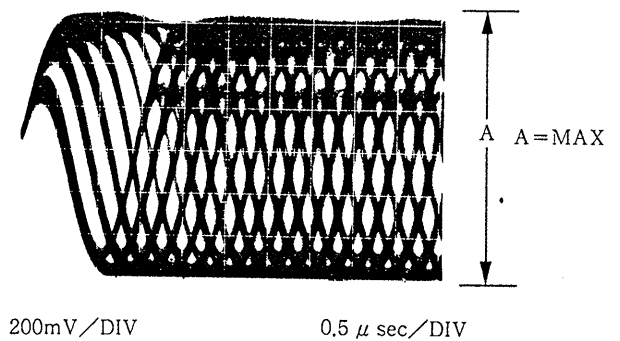


Fig. 8-12.

3. CD RF H Level Adjustment (SV-33 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	$1.2 \pm 0.1 V_{p-p}$

Adjustment method :

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

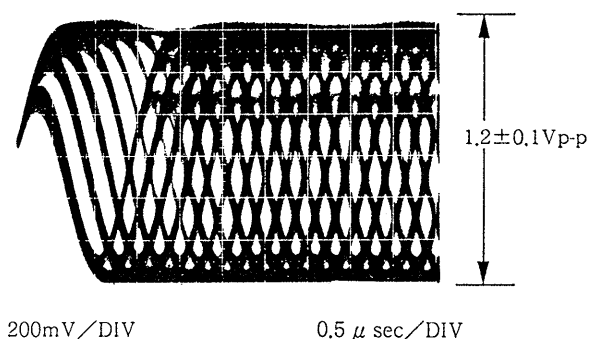


Fig. 8-13.

4. CD RF L Level Adjustment (SV-33 Board)

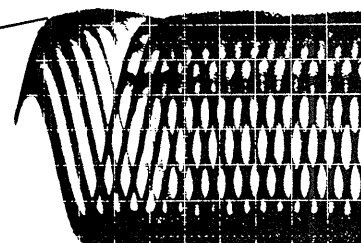
Mode	Playback
Signal	Track No. 1, YEDS-18
Measurement Point	MD adjustment cable [RF (CD) OUT] (Pin ⑥ of CN106)
Measuring Equipment	Oscilloscope
Adjusting Element	RV104
Specified Value	Clear-cut waveform

Adjustment method :

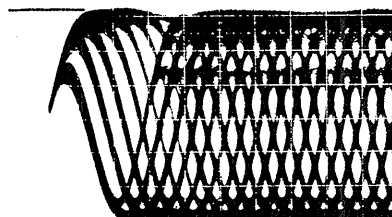
- 1) Play back the track No. 1.
- 2) Adjust RV104 so that the waveform of lozenge-shaped portions becomes clear-cut and the waveform slant disappear from the rising edge portion.

- Waveform slant at the rising edge.
- Waveform of lozenge-shaped portions are not clear.

(RV104 : Excessively rotated in clockwise direction (C) .



OK
200mV/DIV
0.5msec/DIV



- Waveform slant at the rising edge.
- Waveform of lozenge-shaped portions are not clear.

(RV104 : Excessively rotated in counterclockwise direction (C) .

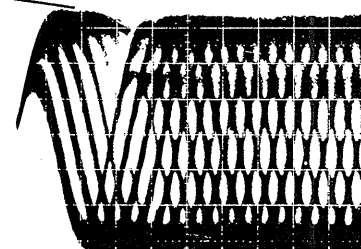


Fig. 8-14.

8.8. VIDEO SYSTEM ADJUSTMENT

8-8-1. Video Output Level Adjustment (MB-18 Board)

Mode	Still
Signal	Frame 4100 (color bar)
Measurement Point	CNJ101 (VIDEO OUT terminal) (Terminated to 75 Ω)
Measuring Equipment	Oscilloscope
Adjusting Element	RV103
Specified Value	$1.05 \pm 0.03 V_{p-p}$

Adjustment method :

- 1) Select STILL (⏸) mode.
- 2) Search the frame 4100 and apply a color bar signal.
- 3) Adjust RV103 for $1.05 \pm 0.05 V_{p-p}$.

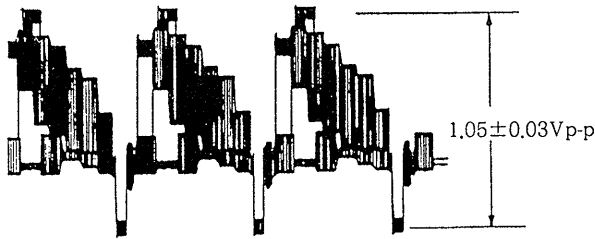


Fig. 8-15.

8-8-2. Burst Gate Position Adjustment (MB-18 Board)

Mode	Still
Signal	Frame 4100 (color bar)
Measurement Point	Pin ② of CN107
Adjusting Element	RV104
Specified Value	$8.5 \pm 0.3 \mu\text{sec}$

Adjustment method :

- 1) Select STILL (⏸) mode.
- 2) Search the frame 4100.
- 3) Adjust RV104 so that t_w becomes $8.5 \pm 0.3 \mu\text{sec}$.

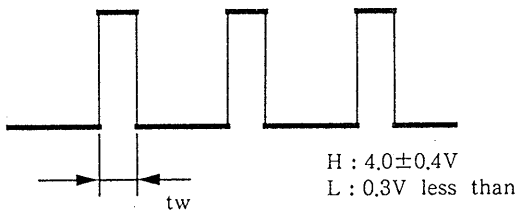


Fig. 8-16.

8-8-3. Comb Type Filter Adjustment (MB-18 Board)

Mode	Still
Signal	Frame 4100 (color bar)
Measurement Point	Q112 base (Pin ② of IC103)
Measuring Equipment	Oscilloscope
Adjusting Element	CV101 and RV101
Specified Value	Minimum residual chroma component (less than 50mV)

Adjustment method :

- 1) Select STILL (⏸) mode.
- 2) Search the frame 4100 and apply a color bar signal.
- 3) Adjust RV101 and CV101 alternately so that the residual chroma component (especially cyan portion) become minimum.

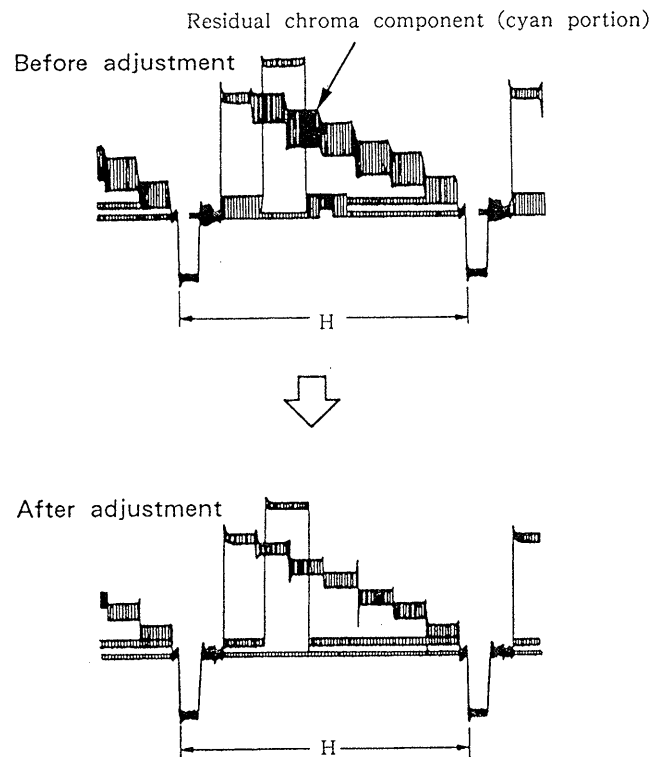


Fig. 8-17.

8-8-4. REF H Adjustment

Note : Perform [Adjustment 1] and [Adjustment 2] in this order.

Mode	Still
Signal	Frame 4100 (Color bar)
Measuring Equipment	Oscilloscope
Adjusting Element	RV601
Measurement Point	[Adjustment 1] CH1 : Pin ⑳ of IC107 External trigger : Pin ㉕ of IC107 [Adjustment 2] CH1 : Pin ㉓ of IC605 CH2 : Pin ㉔ of IC605
Specified Value	[Adjustment 1] $21 \pm 1 \mu\text{sec}$ [Adjustment 2] $0 \pm 100 \mu\text{sec}$

Connection :

- Apply 5.0Vdc to Pin ④ of IC107.

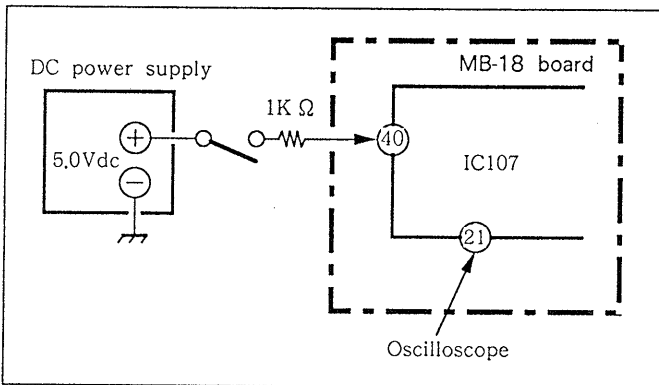


Fig. 8-18.

Adjustment method :

[Adjustment 1]

- 1) Select STILL (⏸) mode.
- 2) Search the frame 4100.
- 3) Connect the DC power supply (5.0Vdc) to Pin ④ of IC107.
- 4) Adjust so that falling time difference between when the power (5.0Vdc) is on (LIM ON) and when the power off (LIM OFF) is $21 \pm 1 \mu\text{sec}$.

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

- Pin ㉑ of IC107 (CH1)

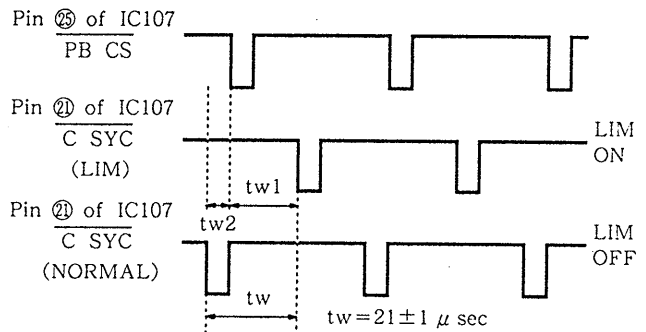


Fig. 8-19.

[Adjustment 2]

- 5) Set to LIM OFF (5.0Vdc off) states.
- 6) Adjust so that the phase difference in the nearest portion between the falling edge of Pin ㉔ of IC605 and the rising edge of Pin ㉓ of IC605 is $0 \pm 100 \mu\text{sec}$.

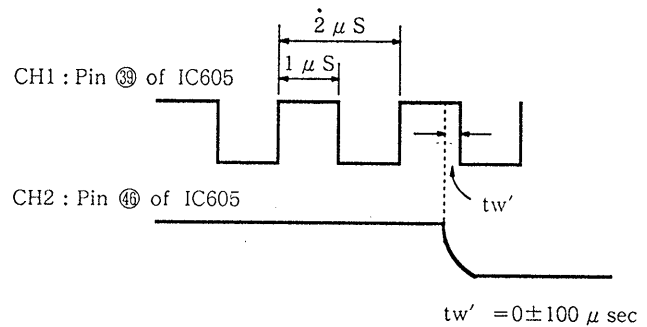


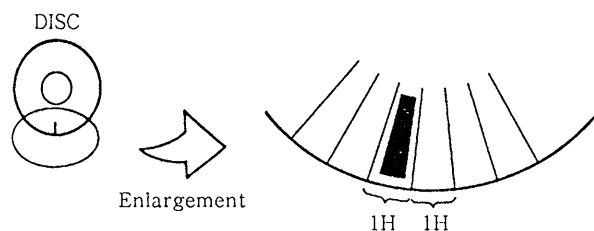
Fig. 8-20.

8-8.5. Color DOC Adjustment (MB-18 Board)

Mode	Still
Signal	Frame 23500 (Yellow Green)
Measuring Equipment	Monitor display
Adjusting Element	CV102
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 CV102 so that the drop out portion and its peripherals on the monitor picture are the same color.

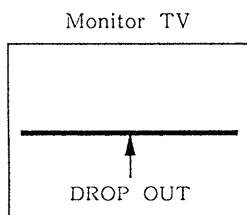


Fig. 8-21.

8-9. AUDIO SYSTEM ADJUSTMENT

8-9-1. Analog Audio System Adjustment (MB-18 Board)

1. Audio output level adjustment

Note: Adjusting element of the 2/R channel is indicated in brackets [].

Mode	Playback
Signal	Chapter 6 (RAMP/1kHz)
Measurement Point	Audio output 1/L [2/R] terminal
Measuring Equipment	Audio level meter or oscilloscope
Adjusting Element	RV701 [RV702]
Specified Value	Audio level meter : 500 ± 25mVrms Oscilloscope : 1.4 ± 0.07Vp-p

Adjustment method :

- 1) Set the chapter 6 to the search mode.
- 2) Turn off the [CX] with remote commander. (Confirm that the indications on the front panel of the main unit are disappeared.)
- 3) Adjust RV701 [RV702] for 500 ± 25mVrms or 1.4 ± 0.07Vp-p.

8-9-2. Digital Audio System Adjustment

1. RF PLL offset adjustment (DS-32 board)

Mode	Stop
Measurement Point	Pin ① of IC003
Measuring Equipment	Digital voltmeter
Adjusting Element	RV001
Specified Value	0 ± 0.2Vdc

Connections :

Connect the chemical capacitor (1 μF or more) in between Pin ⑤ of IC001 (EFM) and GND.

Adjustment method :

- 1) Adjust RV001 so that the voltage at Pin ① of IC003 becomes 0 ± 0.2Vdc.

8-9-3. RF PLL Free-Run Adjustment (DS-32 Board)

Mode	Stop
Measurement Point	Pin ⑩ of IC001
Measuring Equipment	Frequency counter
Adjusting Element	LV001 (used : DS board extension cable)
Specified Value	$4.61 \pm 0.005\text{MHz}$

Connections :

Used DC board extension cable, take DS-32 board off MB-18 board.

DS-board extension cable

J-6082-087-A

J-6082-088-A

J-6082-089-A

Connect the chemical capacitor ($1\ \mu\text{F}$ or more) in between Pin ⑤ (EFM) of IC001 and GND.

Adjustment method :

- 1) Adjust LV001 for the specified value.

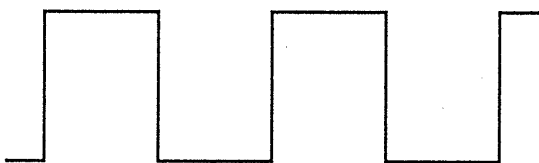


Fig. 8-22.

Note : If adjusting with a metallic screwdriver, a reading value may be altered. So use a ceramic screwdriver.

8-9-4. D Range Adjustment (DS-32 Board)

Note : Adjusting element of R-CH is indicated in brackets [].

Mode	Playback
Signal	Track No.17, YEDS-18
Measurement Point	AUDIO OUT 1/L [2/R]
Measuring Equipment	Distortion meter
Adjusting Element	RV101 [RV102]
Specified Value	Minimum distortion

Adjustment method :

- 1) Play back the track No.17 (1kHz, -60dB).
- 2) Adjust RV101 [RV102] for minimum distortion.

Note : Adjustment is also possible by an oscilloscope as well as a distortion meter. When using an oscilloscope, eliminate a distortion of the waveform on the display. At this time, adjust carefully since the level is small.

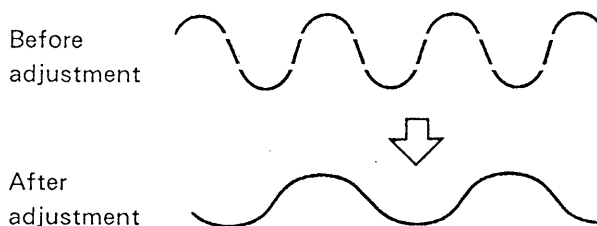


Fig. 8-23.

8-9-5. Key Control Distortion Adjustment (KC-2 (B) Board)

Mode	Playback
Signal	YEDS-18 Track 2
Measurement Point	Pin ① of W302 (Pin ③ of W302)
Measuring Equipment	Distortion meter
Adjusting Element	RV102 [RV202]
Specified Value	Less than 0.003%

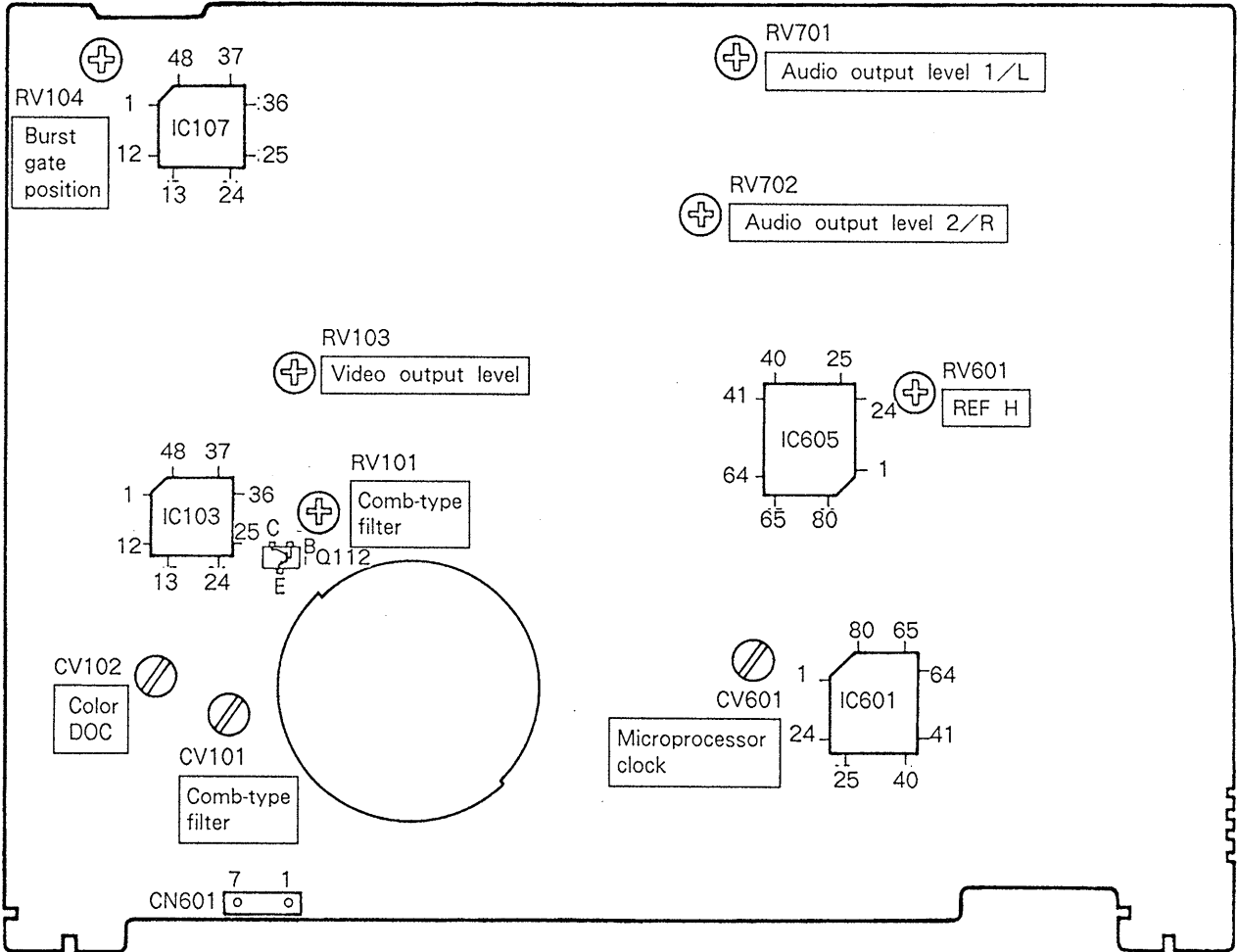
() : R-CH

Adjustment method :

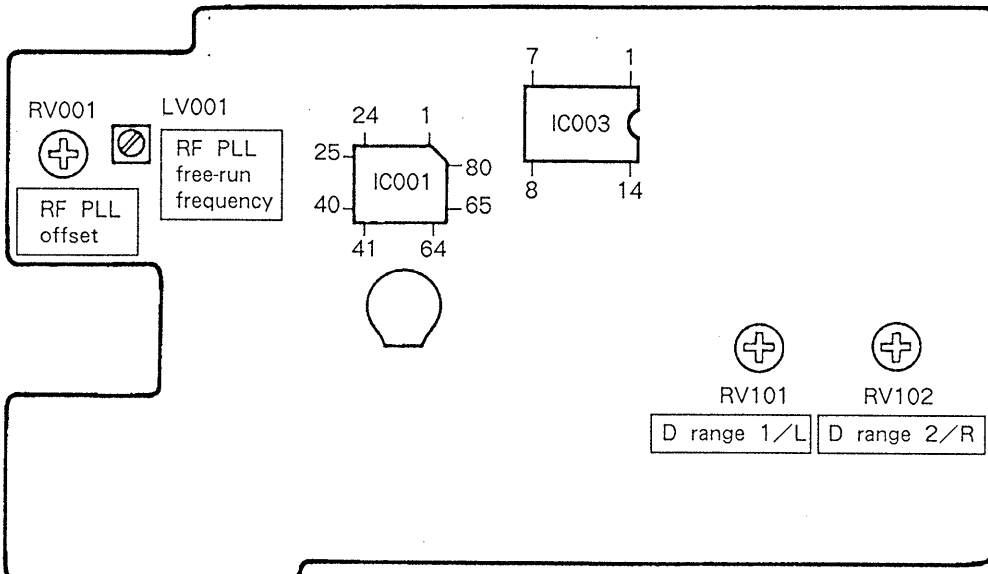
- 1) Adjust RV102 (RV202) for minimum distortion.

8-10. ADJUSTMENT RELATED PARTS LOCATION

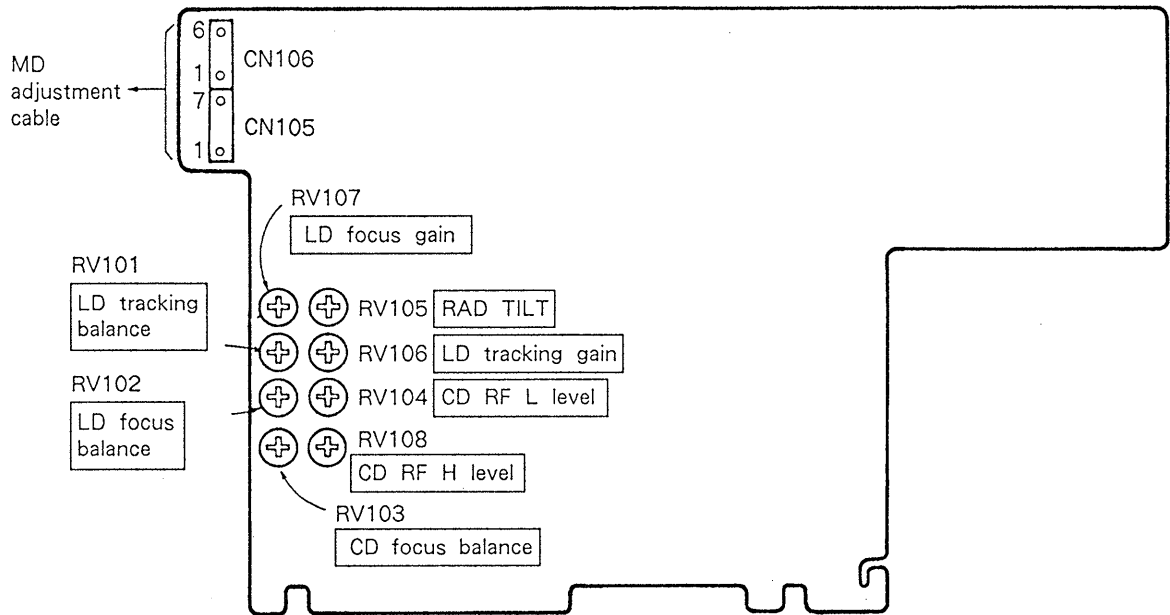
MB-18 board (Component side)



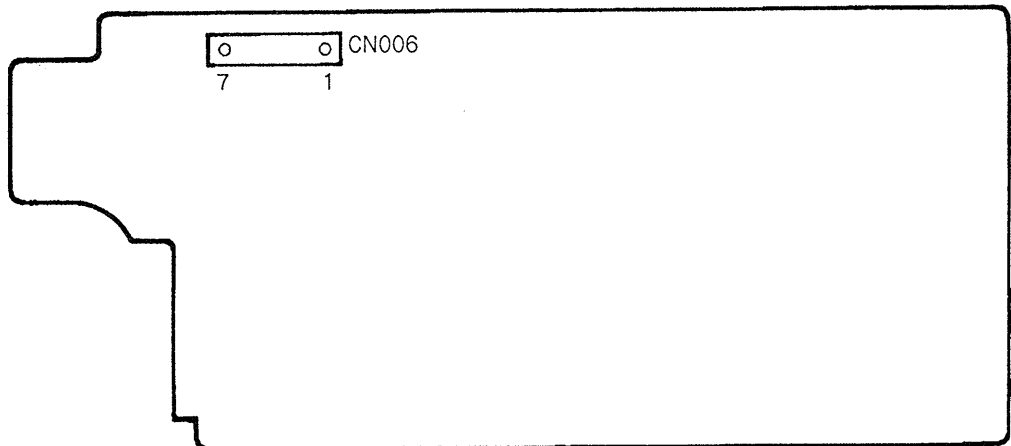
DS-32 board (Conductor side)



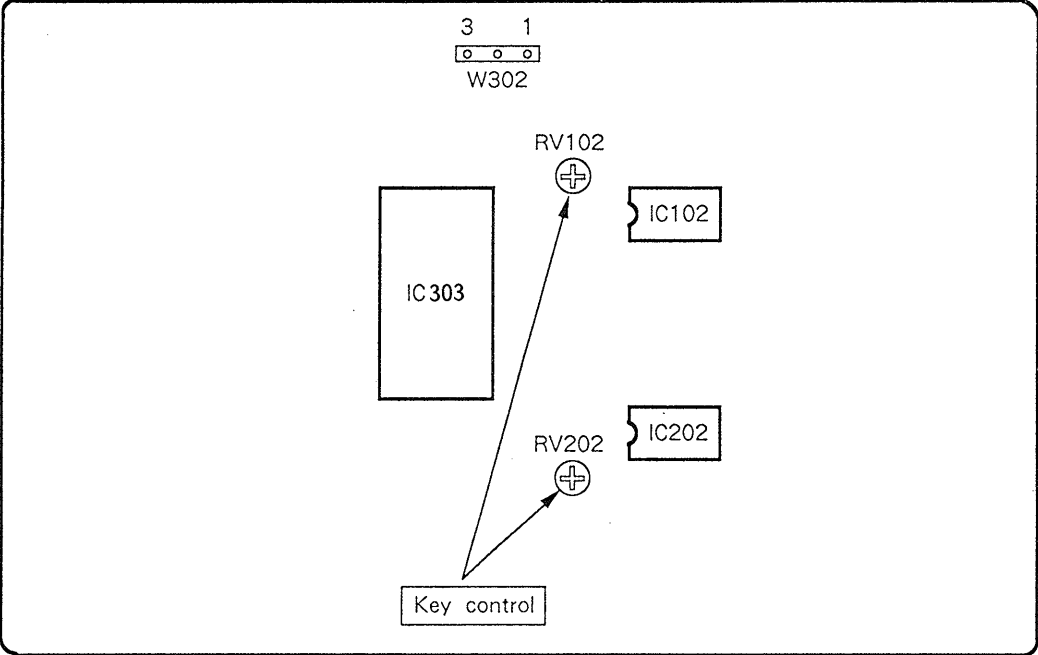
SV-33 board (Conductor side)



PS-193 board (Component side)



KC-2 (B) BOARD (COMPONENT SIDE)



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