SLV-775HF/775HFPX/776HF/795HF/975HF/ 975HFCS/975HFMX/975HFPX

RMT-V201/V202/V202A

SERVICE MANUAL

US Model

SLV-775HF/776HF/795HF/975HF

Canadian Model

SLV-775HF/795HF/975HF

Chielean Model

SLV-975HFCS

Mexican Model

SLV-975HFMX

PX Model

SLV-775HFPX/975HFPX

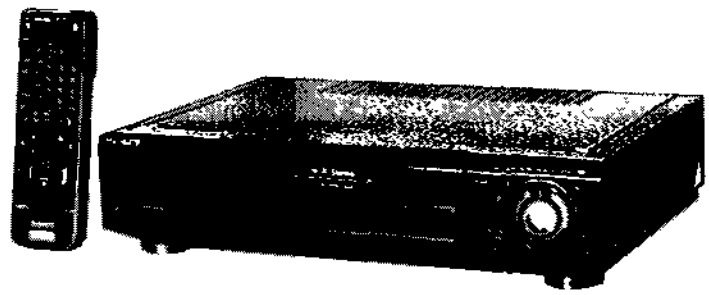


Photo: SLV-975HF

H MECHANISM

Hi-Fi

VCRplus+

- **Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENTS IV for MECHANICAL ADJUSTMENTS. (9-973-623-11)**

* The abbreviations of 775HF, 776HF, 795HF and 975HF contained in this service manual are indicated when these models are common to all their corresponding models as given below.

Abbreviated model name	775HF	776HF	795HF	975HF
All model names SLV-	775HF (US) 775HF (Canadian) 775HFPX	776HF (US)	795HF (US) 795HF (Canadian)	975HF (US) 975HF (Canadian) 975HFCS 975HFMX 975HFPX

SPECIFICATIONS

System

Format
- VHS NTSC standard

Video recording system
- Rotary head helical scanning FM system

Video heads
- Double azimuth four heads

Video signal
- NTSC color, EIA standards

Tape Speed
- SP: 33.35 mm/s (1 3/8 inches/s)
- EP 11.11 mm/s (7/16 inches/s)
- LP 16.67 mm/s (11/16 inches/s), playback only

Maximum recording/playback time
- 8 hrs. in EP mode (with T-160 tape)

Fast-forword and rewind time
- Approx. 3 min (with T-120 tape)

Tuner section

Channel coverage
- VHF 2 to 13
- UHF 14 to 69
- CATV A-8 to A-1, A to W, W+1 to W+84

Antenna
- 75-ohm antenna terminal for VHF/UHF

Inputs and outputs

LINE-1 IN and -2 IN
- VIDEO IN, phono jack (1 each)
- Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
- AUDIO IN, phono jack (2 each)
- Input level: 327 mVrms
- Input Impedance: more than 47 kilohms

LINE OUT
- VIDEO OUT, phono jack (1)
- Output signal. 1 Vp-p, 75 ohms, unbalanced, sync negative
- AUDIO OUT, phonojack (2)
- Standard output: 327 mVrms
- Load impedance 47 kilohms
- Output impedance: less than 10 kilohms

S-LINK (CONTROL S IN)
- Mini jack (1)

CABLE BOX CONTROL (CONTROL S OUT)
- stereo mini jack (plug in power) (1)

– Continued on next page –

VHS VIDEO CASSETTE RECORDER

MICROFILM

992162512

SONY®

Timer section

Clock
  Quarts locked
Timer indication
  12-hour cycle
Timer setting
  8 programs per month (max.)
Power back-up
  Built-in self-charging capacitor
  Back-up duration. up to 1 hours at a time

General

Power requirements
  120 V AC, 60 Hz (SLV-775HF/776HF/795HF/975HF (US)/975HF (Canadian)/975HFMX)
  110 V AC to 240 V AC, 50/60 Hz (SLV-775HFPX/975HFCS/975HFPX)

Power consumption
  24 W (max.) (SLV-775HF/776HF/795HF/975HF (US)/975HF (Canadian))
  20 W (max.) (SLV-775HFPX/975HFCS/975HFMX/975HFPX)
Operating temperature
  5 °C to 40 °C (41 °F to 104 °F)
Storage temperature
  –20 °C to –60 °C (–4 °F to 140 °F)
Dimensions
  Approx. 430×109×308 mm (w/h/d) (SLV-775HF/776HF/795HF)
  Approx. 430×109×321 mm (w/h/d) (SLV-975HF)
  Approx. (17×4³/₈×12³/₄ inches) including projecting parts and controls
Mass
  Approx 4.5 kg (8 lb 13 oz) (SLV-775HF/776HF/795HF)
  Approx. 4.7 kg (10 lb 6 oz) (SLV-975HF)

Supplied accessories

Remote commander (1)
Size AA (R6) batteries (2)
75-ohm coaxial cable with F-type connectors (1)
Audio/video cable (3 phono, 1 mini to 3 phono, 1 mini) (1)
Cable Mouse (cable box controller) (1)
Plug adaptor (1) (SLV-775HFPX/975HFCS/975HFPX)

Design and specifications are subject to change without notice

- **Feature Difference**

SLV- / FEATURE	775HF, 776HF	795HF	975HF
HEAD/CH	4HD/6CH	4HD/6CH	4HD/7CH
F.E.HEAD	×	×	O
X2	×	O FWD/RVS	O FWD/RVS
PSO (DSF)/APSO	×	DSF	DSF
INDEX SEARCH	×	O	O
SKIP	O (CM skip)	O (skip/scrol)	O (skip/scrol)
DIMMER	×	O (MENU)	O (MENU)
A/V INSERT	×/×	×/×	O/O
AUDIO-DUB	×/×	×	O
EDIT SWITCH	×	×	O
CLICK/JOG SHUTTLE (REMOTE COMMANDER)	×	×	O/O
VTR MODE (REMOTE COMMANDER)	3	3	1/2/3
OSD type	Blue/White	Intelligente	Intelligente
VTR MODE (TERMINALS)	3	3	OFF/1/2/3
FRONT DOOR	×	×	O (with switch)
FUNCTION SWITCH	Direct Function	New DMSw/Jog	New DMSw/Jog
V-Set (Auto Guide Channel Set)	×	O	O

SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

SAFETY CHECK-OUT

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

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the 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.

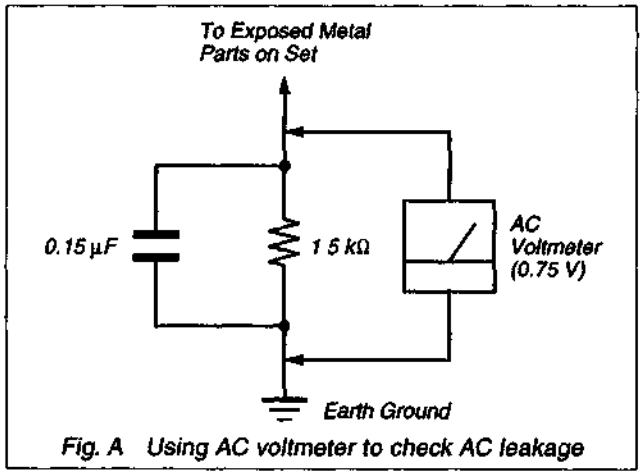


Fig. A Using AC voltmeter to check AC leakage

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 0.75V, 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)

TABLE OF CONTENTS

Section	*Title*	*Page*

7. REPAIR PARTS LIST

SERVICE NOTE

1. UPPER DRUM REPLACEMENT

1-1. Removal of Upper Drum

1) Remove the screw ① (BV3 × 8) and take out the ground shaft assembly ②. (See Fig. 1.)
2) Completely remove the rotary upper drum board and desolder the soldering indicated by the arrows.
3) Remove two screw ③ (PSW3 × 8) and take out the rotary upper drum in the arrow direction ⓐ. (See Fig. 2.)
If it difficult, remove by shaking the rotary upper drum gradually.

Note: If the drum can not be removed, check whether the solders have been removed or not again.

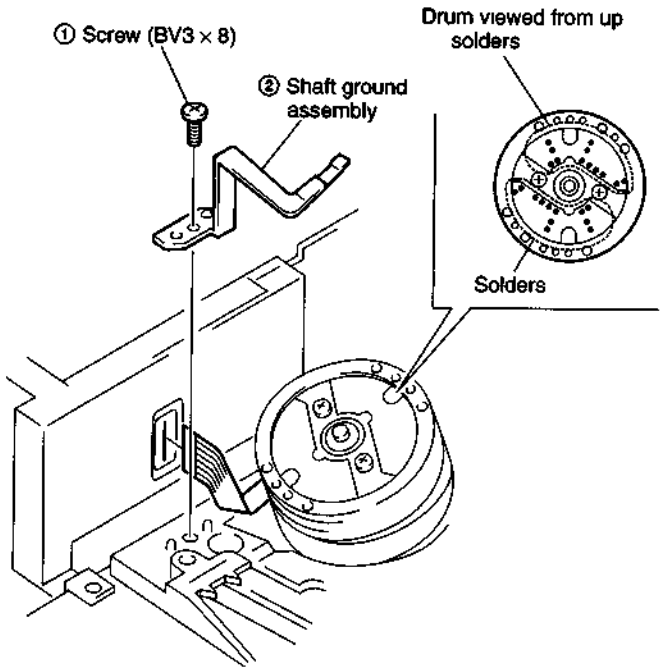


Fig. 1

1-2. Mounting Upper Drum

1) When inserting the rotary drum into the lower drum, be careful not to blur the contacting surface with fingerprint or the like.
2) Mount the rotary upper drum board so that the screw holes of both upper and lower drums match. (See Fig. 2.)
3) If it is difficult, mount the upper drum by shaking it gradually.
Note: Be careful not to damage the head. Make sure that the upper drum is tightly inserted.
4) Tighten two screws ③ (PSW3 × 8). (See Fig. 2.)
Note: Temporary tighten two screws. After making sure that upper drum is tightly inserted, tighten the screws.
5) Solder points on the board of the rotary upper drum.
6) Fix the ground shaft assembly ② using the screw ① (BV3 × 8) so that the protrusion of ground shaft assembly end contacts the center of the drum shaft.
Note: When attaching the ground shaft assembly 2, be careful not to apply force to the spring section of it.

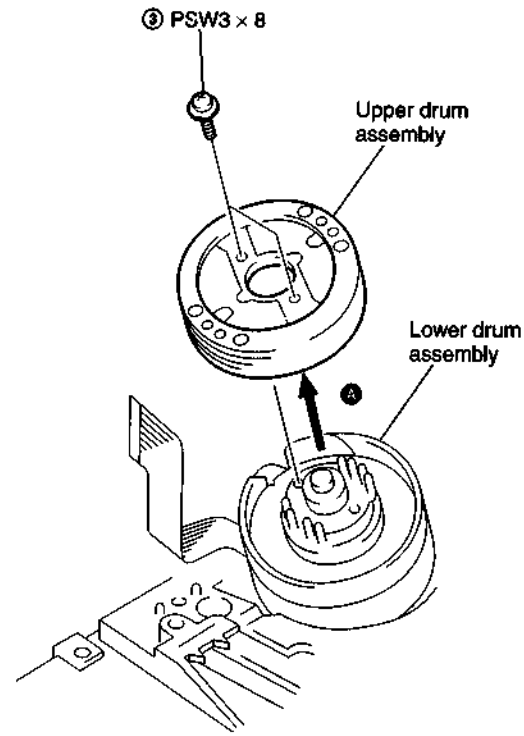


Fig. 2

9-921-625-12

Sony Corporation
Home A&V Products Company

97E05025-1
Printed in Japan
Published by General Engineering Dept.
(Osaki East)

SECTION 1
GENERAL

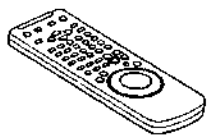
This section is extracted from SLV-975HF/975HFCS/975HFMX instruction manual.

Step 1

Unpacking

Check that you have received the following items with the VCR

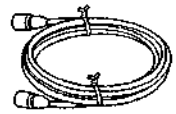
- Remote commander



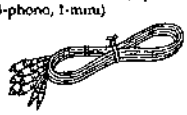
- Cable Mouse (cable box controller)

- Size AA (R6) batteries

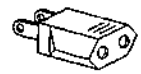
- 75-ohm coaxial cable with F-type connectors



- Audio/video cable (3-phono, 1 mini to 3-phono, 1-mini)



- Plug adaptor (SLV-775HF PX/975HF PX/975HF CS only)

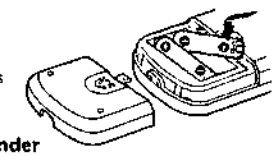


Step 2

Setting up the remote commander

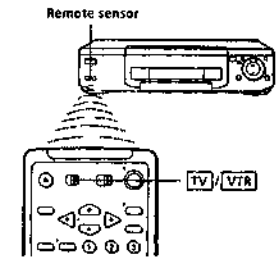
Inserting the batteries

Insert two size AA (R6) batteries by matching the + and – on the batteries to the diagram inside the battery compartment



Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. The buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV.



To operate	Set TV/VTR to
the VCR	VTR and point at the remote sensor on the VCR
a Sony TV	TV and point at the remote sensor on the TV

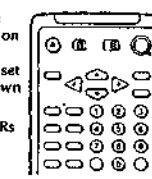
Notes

- With normal use, the batteries should last for approximately three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use different types of batteries.

Setting the COMMAND MODE switch

To remotely control the VCR with the commander, set COMMAND MODE on the remote commander to the same position as that on the VCR. Usually set to VTR 3. Change the position as shown below to control other Sony VCRs.

VTR 1: For Sony Betamax format VCRs
VTR 2: For Sony 8mm format VCRs
VTR 3: For Sony VHS format VCRs



continued

Step 2: Setting up the remote commander (continued)

Controlling other TVs with the remote commander

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the table below, set the appropriate manufacturer's code number.

1. Set TV/VTR at the top of the remote commander to TV.
2. Hold down POWER, and enter your TV's code number(s) using the number buttons. Then release POWER.

Now you can use the POWER, VOL +/–, CH +/–, and TV/VTR buttons to control your TV. You can also use the buttons marked with a dot (•) to control a Sony TV. To control the VCR, reset TV/VTR to VTR.

Tip

- If you set your TV's code number correctly while the TV is turned on, the TV turns off automatically.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number
Sony	01
Akai	04
AOC	04
Centurion	12
Coronado	03
Curtis Mathes	12
Daytron	12
Emerson	03, 04, 14
Fisher	11
General Electric	06,10
Gold Star	03, 04, 17
Hitachi	02,03
J C Penny	04,12
JVC	09
KMC	03
Magnavox	03,08 12
Marantz	04,13
MGA/Mitsubishi	04,12,13,17
NEC	04,12
Panasonic	06 19
Philco	03,04
Philips	08
Pioneer	16
Portland	03
Quasar	06,18
Radio Shack	05,14
RCA	04,10
Sampo	12
Sanyo	11
Scott	12
Sears	07,10,11
Sharp	03,05,18
Sylvania	08,12
Teknika	03,08,14
Toshiba	07
Wards	03,04,12
Yorx	12
Zenith	15

Notes

- If the TV uses a different remote control system from the one programmed to work with the VCR, you cannot control your TV with the remote commander.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote commander, the code number automatically resets to 01 (Sony). Reset the appropriate code number.

Step 3

Hookups

Selecting the best hookup option

There are many ways in which your VCR can be hooked up. To hook up your VCR so that it works best for you, first scan through the table below. Then use the accompanying diagrams and procedures on the following pages to set up your VCR.

If you have	Use	Refer to
TV that has audio/video inputs	Audio/video (A/V) hookup, then follow one of the hookups below	Pages 8 to 9
Cable box that is compatible with the VCR's cable box control feature	Hookup 1	Pages 10 to 12
No cable box or incompatible cable box with only a few scrambled channels	Hookup 2	Pages 13 to 15
Antenna only, no cable TV	Hookup 3	Pages 16 to 18
Incompatible cable box with many scrambled channels	Hookup 4	Pages 19 to 22
DSS* receiver	Hookup 5	Pages 23 to 25
Incompatible cable box with only a few scrambled channels, using an A/B switch	Hookup 6	Pages 26 to 30

After you've completed the connections, follow the instructions for setup. During setup, if you need more details on the procedure described, page numbers are provided where you can find complete, step-by-step instructions.

After you've completed the setup, you're ready to use your VCR. Procedures differ depending on the hookup you used. For an overview, refer to "Quick reference to using the VCR" on the back cover.

Before you get started

- Turn off the power to all equipment.
- Do not connect the AC power cords until all of the connections are completed.
- Be sure you make connections firmly. Loose connections may cause picture distortion.
- If your TV doesn't match any of the examples provided, see your nearest Sony dealer or qualified technician.

* DSS® is a registered trademark of DIRECTV, Inc., a unit of Hughes Electronics Corporation.

continued

Audio/video (A/V) hookup

Pages 8 to 9

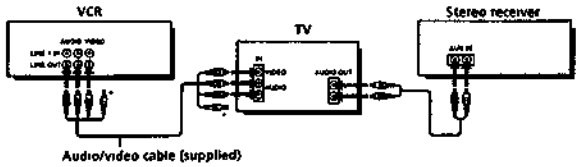
If your TV has audio/video (A/V) input jacks, you will get a better picture and sound if you hook up your VCR using these connections. In addition, for a true "home theater" experience, you should connect the audio outputs of your VCR or TV to your stereo system. If your TV doesn't have A/V inputs, see the following pages for antenna or cable hookups.

If your TV has the S-Link™* (A/V bus control) function, hook up your VCR using the connection shown on page 9. Your TV will automatically switch to the A/V inputs for your VCR when you play back or operate menu on the VCR.

If you're not planning to use your VCR to record programs, you're finished setting up the VCR after you've made the connections shown on pages 8 and 9. If you want to record off-air or off your cable TV system, complete these connections first, and then go to the following pages for antenna or cable hookups.

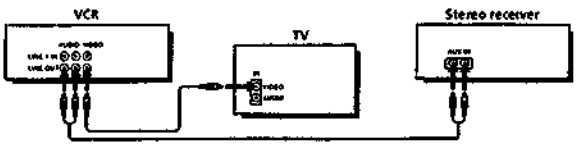
* S-Link™ is a trademark of Sony Corporation.

A Use this hookup if your TV has stereo jacks



* Do not connect the miniplugs for this hookup.

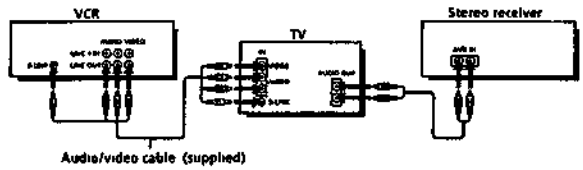
B Use this hookup if your TV doesn't have stereo jacks



Note

- To play a tape in stereo, you must use the A/V connection.

C Use this hookup if your TV has the S-Link™ function

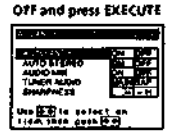


A/V hookup: VCR setup

After you've connected your TV and completed antenna or cable hookup, use the following procedure to set up the VCR.

Press MENU and select ADVANCED OPTIONS

Set AUTO ANT SEL to OFF and press EXECUTE



For details, see page 72.

Caution

Connections between the VCR's VHF/UHF connector and the antenna terminals of the TV receiver should be made only as shown in the following instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of RF devices. Never connect the output of the VCR to an antenna or make simultaneous (parallel) antenna and VCR connections at the antenna terminals of your receiver.

Note to CATV system installer (in USA)

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

continued

Hookup 1

Pages 10 to 12

Using cable box control

Recommended use

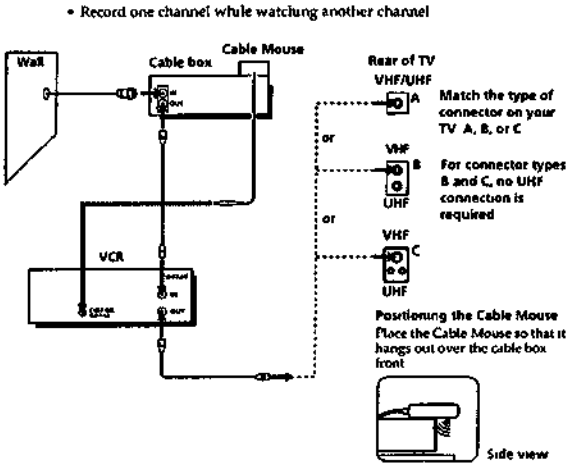
You should use this hookup if you have a cable box, especially if your cable system scrambles all or most channels. This hookup allows the VCR's cable box control feature to control the channel on the cable box, simplifying the recording process. A list of compatible cable boxes is on page 39.

What you can do with this hookup

- Record any channel using the VCR's cable box control feature to select channels on the cable box.

What you can't do

- Record with the cable box turned off.
- Record one channel while watching another channel.



Positioning the Cable Mouse

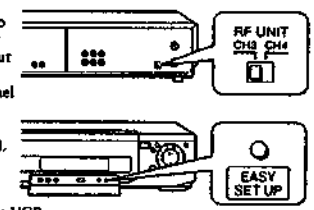
Place the Cable Mouse so that it hangs out over the cable box front.

Side view

Hookup 1: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel. For details, see page 78.

If you made A/V connections (from page 8), you can skip this step.



2 Turn on your cable box.

3 Press EASY SET UP on the VCR.

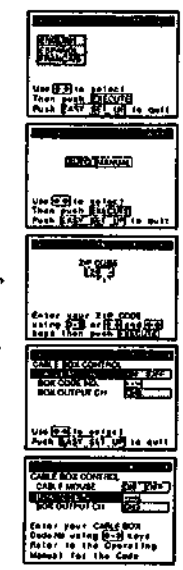
❶ The LANGUAGE menu appears. Change the on-screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE. For details, see page 31.

❷ The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 32.

❸ The SMART CH MAPPING menu appears. Press CURSOR ↑/↓/←/→ to enter the ZIP CODE in your area and press EXECUTE. (You can also use the number buttons to enter the ZIP CODE.)

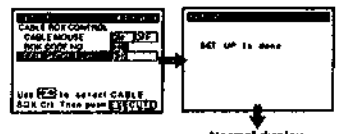
❹ The CABLE BOX menu appears. Select ON. For details, see page 36.

❺ Enter your cable box code number and press CURSOR ↓.



continued

❺ Select your cable box output channel and press EXECUTE



Normal display

Hookup 1: VCR Plus+ channel setup

1 Press MENU and select SET VCR Plus+ CHANNELS

2 Press CURSOR ⇐/⇒ to select AUTO and press EXECUTE

3 Press POWER to turn off the VCR.

The VCR receives the program information signal from 0:00 am to 5:00 am while the VCR is turned off, and set up the channel for VCR Plus+ recording. After channel setup is finished, you can record TV programs using VCR Plus+. For details, see page 48.

Notes

- To use auto VCR Plus+ channel setup feature, leave the cable box on.
- It takes about 1 hour to complete channel setup.
- The VCR can receive the program information signal only while the VCR is turned off and no timer recordings are set.
- If the channels in your area don't carry the program information signals, set the program guide channels manually. For details, see page 50.
- If the Choose your Cable CH MAP menu appears the first time you turn on the VCR after finishing channel setup, select the MAP number. For details, see page 49.

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 36 to 37.

Note

- To use the automatic clock setting feature, leave the cable box on.

Hookup 2 Pages 13 to 15

No cable box, or incompatible cable box with only a few scrambled channels

Recommended use

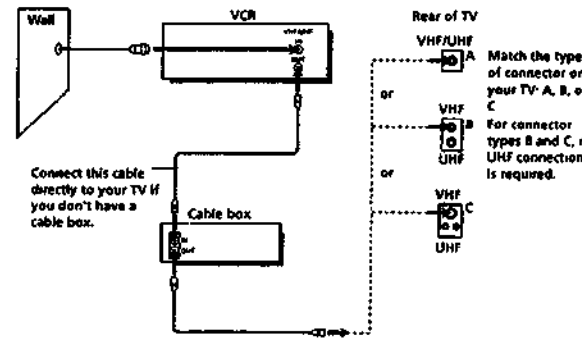
Use this hookup if you do not have a cable box. Also use this hookup if your cable company cannot supply a cable box that is compatible with the VCR's cable box control feature, and your cable system scrambles only a few channels.

What you can do with this hookup

- Record any unscrambled channel by selecting the channel on the VCR.

What you can't do

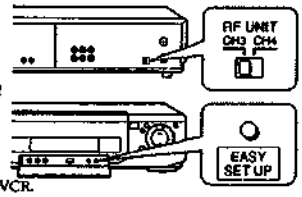
- Record scrambled channels that require a cable box.



continued

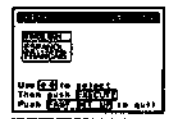
Hookup 2: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel. For details, see page 78.
If you made A/V connections (from page 8), you can skip this step.

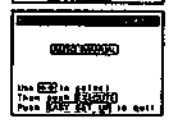


2 Press EASY SET UP on the VCR.

❶ The LANGUAGE menu appears. Change the on-screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE. For details, see page 31.

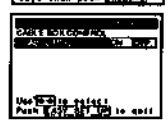


❷ The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 32.

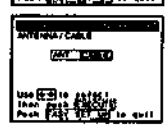


❸ The SMART CH MAPPING menu appears. Press CURSOR ↑/↓/⇐/⇒ to enter the ZIP CODE in your area and press EXECUTE. (You can also use the number buttons to enter the ZIP CODE.)

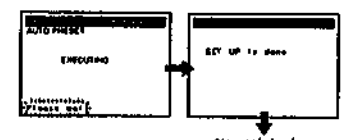
❹ The CABLE BOX menu appears. Select OFF and press EXECUTE. For details, see page 38.



❺ The TUNER PRESET menu appears. Set ANTENNA/CABLE to CABLE and press EXECUTE. For details, see page 43.



❻ The AUTO PRESET starts



Normal display

Hookup 2: VCR Plus+ channel setup

1 Press MENU and select SET VCR Plus+ CHANNELS

2 Press CURSOR ⇐/⇒ to select AUTO and press EXECUTE

3 Press POWER to turn off the VCR

The VCR receives the program information signal from 0:00 am to 5:00 am while the VCR is turned off, and set up the channel for VCR Plus+ recording. After channel setup is finished, you can record TV programs using VCR Plus+. For details, see page 48.

Notes

- It takes about 1 hour to complete channel setup.
- The VCR can receive the program information signal only while the VCR is turned off and no timer recordings are set.
- If the channels in your area don't carry the program information signals, set the program guide channels manually. For details, see page 50.
- If the Choose your Cable CH MAP menu appears the first time you turn on the VCR after finishing channel setup, select the MAP number. For details, see page 49.

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 36 to 37.

continued

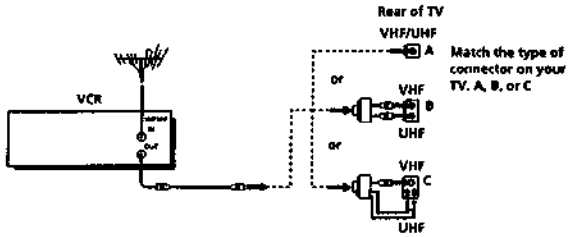
Hookup 3 Pages 16 to 18

Antenna hookup

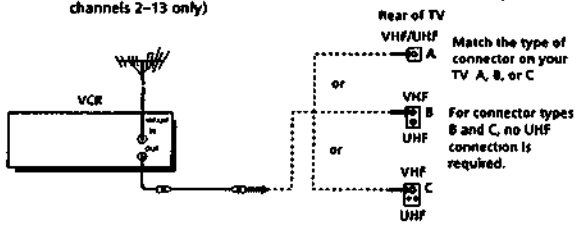
Make the following connections if you're using an antenna (if you don't have cable TV)

A Use this hookup if you're using:

- VHF/UHF antenna (you get channels 2–13 and channels 14 and higher)
- UHF-only antenna (you get channels 14 and higher)
- Separate VHF and UHF antennas



B Use this hookup if you're using a VHF-only antenna (you get channels 2–13 only)

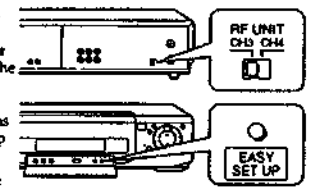


If you cannot connect your antenna cable to the VCR directly

If your antenna cable is a flat cable (300-ohm twin lead cable), attach an external antenna connector (not supplied) so you can connect the cable to the VHF/UHF IN connector. If you have separate cables for VHF and UHF antennas, you should use a U/V band mixer (not supplied). For details, see page 79.

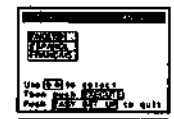
Hookup 3: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel. For details, see page 78. If you made A/V connections (from page 8), you can skip this step.



2 Press EASY SET UP on the VCR.

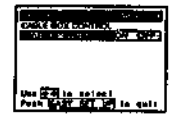
❶ The LANGUAGE menu appears. Change the on-screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE. For details, see page 31.



❷ The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 32.

❸ The SMART CH MAPPING menu appears. Press CURSOR ↑/↓/←/→ to enter the ZIP CODE in your area and press EXECUTE. (You can also use the number buttons to enter the ZIP CODE.)

❹ The CABLE BOX menu appears. Select OFF and press EXECUTE. For details, see page 38.



❺ The TUNER PRESET menu appears. Set ANTENNA/CABLE to ANT and press EXECUTE. For details, see page 43.

continued

❻ The AUTO PRESET starts.

Normal display

Hookup 3: VCR Plus+ channel setup

1 Press MENU and select SET VCR Plus+ CHANNELS.

2 Press CURSOR ←/→ to select AUTO and press EXECUTE.

3 Press POWER to turn off the VCR.

The VCR receives the program information signal from 0:00 am to 5:00 am while the VCR is turned off, and set up the channel for VCR Plus+ recording. After channel setup is finished, you can record TV programs using VCR Plus+. For details, see page 48.

Notes

- It takes about 1 hour to complete channel setup.
- The VCR can receive the program information signal only while the VCR is turned off and no timer recordings are set.
- If the channels in your area don't carry the program information signals, set the program guide channels manually. For details, see page 50.
- If the Choose your Cable CH MAP menu appears the first time you turn on the VCR after finishing channel setup, select the MAP number. For details, see page 49.

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 36 to 37.

Hookup 4 Pages 19 to 22

Incompatible cable box with many scrambled channels

Recommended use

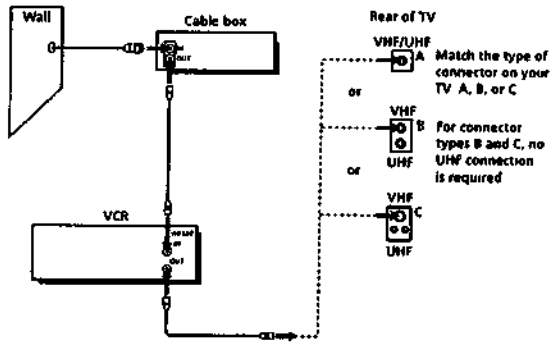
Use this hookup if your cable company cannot supply a cable box that is compatible with the VCR's cable box control feature, and your cable system scrambles all or most channels.

What you can do with this hookup

- Record any channel by selecting the channel on the cable box.

What you can't do

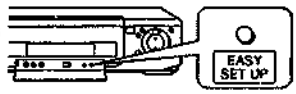
- Record with the cable box turned off
- Record one channel while watching another channel
- Select channels directly on the VCR



continued

Hookup 4: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area If both are used, set the switch to either channel
For details, see page 78 If you made A/V connections (from page 8), you can skip this step



2 Turn on your cable box

3 Press EASY SET UP on the VCR.

❶ The LANGUAGE menu appears Change the on screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE For details, see page 31

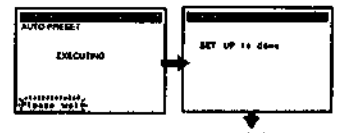
❷ The CLOCK SET menu appears Select MANUAL and press EXECUTE For details, see page 32

❸ The SMART CH MAPPING menu appears Press CURSOR ↑/↓/←/→ to enter the ZIP CODE in your area and press EXECUTE (You can also use the number buttons to enter the ZIP CODE)

❹ The CABLE BOX menu appears Select OFF and press EXECUTE For details, see page 38

❺ The TUNER PRESET menu appears Set ANTENNA/CABLE to ANT and press EXECUTE For details, see page 43

❻ The AUTO PRESET starts



Normal display

Hookup 4: VCR Plus+ channel setup

1 Find the VCR Plus+ Channel Listing in your program guide For details, see page 47

2 Enter all the channels you want to record and the cable box output channel (usually 2, 3, or 4). For details, see page 50

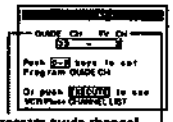
❶ Press MENU and select SET VCR Plus+ CHANNELS

❷ Press CURSOR ←/→ to select MANUAL

❸ Enter the program guide channel, then the cable box output channel

❹ Press EXECUTE

❺ Press MENU



Program guide channel

Cable box output channel

continued

Automatic clock setting

To use the Auto Clock Set feature with this hookup, you need to manually select a channel that carries a time signal

1 Tune the cable box to a channel that carries a time signal

2 Select AUTO in the CLOCK SET menu to turn on the Auto Clock Set feature

3 Turn off the VCR It automatically sets the clock and adjusts for Daylight Saving Time by picking up the time signal

If you want to use the tuner to record right away, or if the channels in your area do not carry time signals, set the clock manually For details, see pages 36 to 37

Note

- To use the automatic clock setting feature, leave the cable box on

Hookup 5 Pages 23 to 25

DSS (Digital Satellite System) receiver

Recommended use

Use this hookup if you have a DSS receiver It allows the VCR's cable box control feature to control the channel on the DSS receiver, simplifying the recording process A list of compatible DSS receivers is on page 40

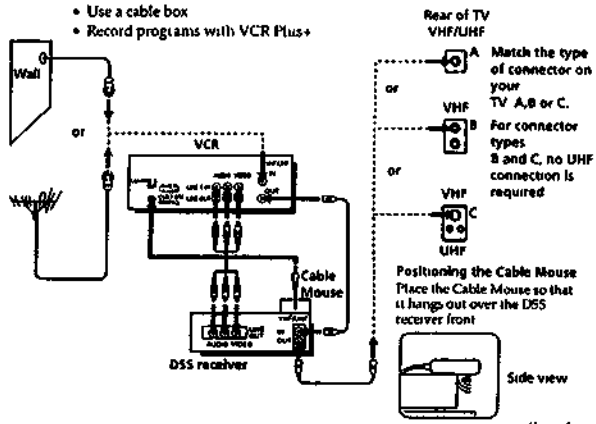
DSS (Digital Satellite System) is a satellite broadcast that provides superior digital-quality video and crisp digital-quality audio A variety of program packages are available through your program providers It also has program guides that are sorted by program categories

What you can do with this hookup

- Record any channels using the VCR's cable box control feature to select channels on the DSS receiver

What you can't do

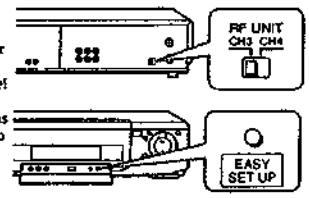
- Record with the DSS receiver turned off
- Record any channels from cable or an antenna
  (To record channels from cable or an antenna, turn off the cable box control feature)
- Use a cable box
- Record programs with VCR Plus+



continued

Hookup 5: VCR setup

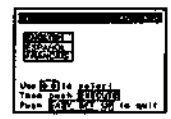
1 Set the RF UNIT switch to CH 3 or CH4, whichever channel is not used in your area If both are used, set the switch to either channel For details, see page 78 If you made A/V connections (from page 8), you can skip this step



2 Turn on your DSS receiver

3 Press EASY SET UP on the VCR

❶ The LANGUAGE menu appears Change the on-screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE For details, see page 31



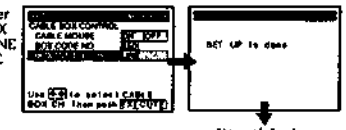
❷ The CLOCK SET menu appears Select AUTO and press EXECUTE For details, see page 32

❸ The SMART CH MAPPING menu appears Press CURSOR ↑/↓/←/→ to enter the ZIP CODE in your area and press EXECUTE (You can also use the number buttons to enter the ZIP CODE)

❹ The CABLE BOX menu appears Select ON For details, see page 38

❺ Enter your DSS receiver code number and press CURSOR↓ For details, see page 38

❻ Set your DSS receiver output channel (BOX OUTPUT CH) to LINE and press EXECUTE



Normal display

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time The VCR sets the clock by picking up a time signal provided by some TV channels

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually For details, see pages 36 to 37

Note

- To successfully record a program from the DSS receiver, proceed as follows
  - Leave the DSS receiver on all the time
  - Turn off the display (menu screen, channel number, etc.) of the DSS receiver
  - To record or receive locked channels, unlock the channel before the VCR starts recording
  - To set pay-per-view programs in the timer setting, order the pay-per-view program before the VCR starts recording
  - Some programs are copy protected You cannot record these programs

continued

Hookup 6 Pages 26 to 30

Incompatible cable box with only a few scrambled channels, using an A/B switch

Recommended use

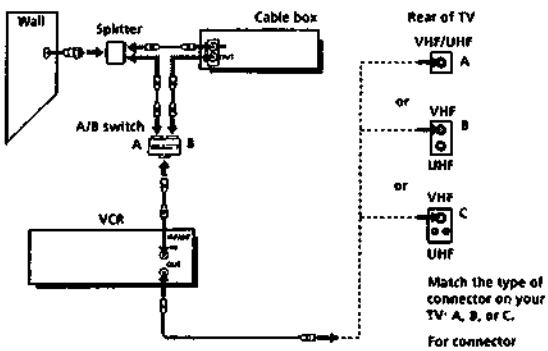
By using an A/B switch (not supplied), this hookup allows you to record both scrambled and unscrambled channels conveniently

What you can do with this hookup

- Record any unscrambled channel by selecting the channel directly on the VCR (the A/B switch is set to A)
- Record any scrambled channel by selecting the channel on the cable box (the A/B switch is set to B)

What you can't do

- Record one scrambled channel while watching another channel (the A/B switch is set to B)

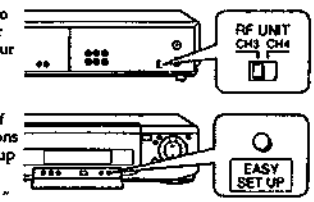


Match the type of connector on your TV: A, B, or C.

For connector types B and C, no UHF connection is required

Hookup 6: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area If both are used, set the switch to either channel
For details, see page 78 If you made A/V connections (from page 8), you can skip this step

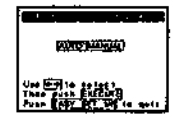


2 Set the A/B switch to "A"

3 Press EASY SET UP on the VCR

❶ The LANGUAGE menu appears Change the on-screen display language to Spanish (ESPAÑOL) or French (FRANÇAIS) if desired, and press EXECUTE For details, see page 31

❷ The CLOCK SET menu appears Select AUTO and press EXECUTE For details, see page 32



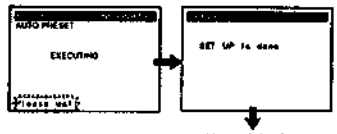
❸ The SMART CH MAPPING menu appears Press CURSOR ↑/↓/←/→ to enter the ZIP CODE in your area and press EXECUTE (You can also use the number buttons to enter the ZIP CODE)

❹ The CABLE BOX menu appears Select OFF and press EXECUTE For details, see page 38

continued

❸ The TUNER PRESET menu appears Set ANTENNA/CABLE to CABLE and press EXECUTE For details, see page 43

❹ The AUTO PRESET starts



Normal display

4 Preset the cable box output channel (usually 2, 3, or 4) For details, see page 38

❶ Press MENU and select TUNER PRESET

❷ Enter the cable box output channel Set MANUAL SET to ADD and press EXECUTE

Hookup 6: VCR Plus+ channel setup

1 Press MENU and select SET VCR Plus+ CHANNELS

2 Press CURSOR ⇐/⇒ to select AUTO and press EXECUTE

3 Press POWER to turn off the VCR

The VCR receives the program information signal from 0:00 am to 5:00 am while the VCR is turned off, and set up the channel for VCR Plus+ recording After channel setup is finished, you can record TV programs using VCR Plus+ For details, see page 48

Notes

- To use the smart channel mapping feature, set the A/B switch to A
- It takes about 1 hour to complete channel setup
- The VCR can receive the program information signal only while the VCR is turned off and no timer recordings are set
- If the channels in your area don't carry the program information signals, set the program guide channels manually For details, see page 50
- If the Choose your Cable CH MAP menu appears the first time you turn on the VCR after finishing channel setup, select the MAP number For details, see page 49

VCR Plus+ channel setup for scrambled channels

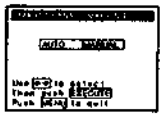
To set the program guide channels for scrambled channels, enter all the scrambled channels you want to record and the cable box output channel (usually 2, 3, or 4) after finishing smart channel mapping For details, see page 50

❶ Find the VCR Plus+ Channel Listing in your program guide For details, see page 47

❷ Press MENU and select SET VCR Plus+ CHANNELS, then press EXECUTE

continued

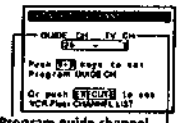
❶ Press CURSOR ⇐/⇒ to select MANUAL



❷ Enter the program guide channel, then the cable box output channel

❸ Press EXECUTE

❹ Press MENU



Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time The VCR sets the clock by picking up a time signal provided by some TV channels

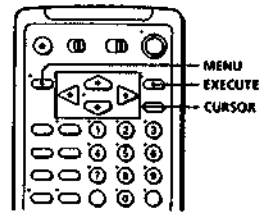
If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually For details, see pages 36 to 37

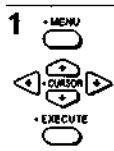
Note

- To use the automatic clock setting feature, set the A/B switch to A

Selecting a language

You can change the on-screen display language



1 

Press MENU, then press CURSOR ↑/↓ to move the cursor to LANGUAGE and press EXECUTE

When using the EASY SET UP procedure, skip this step

2 

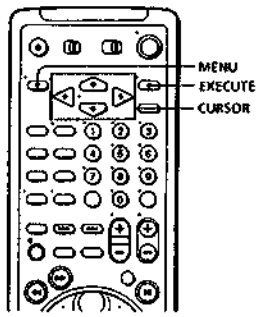
Press CURSOR ↑/↓ to select ENGLISH, ESPAÑOL, or FRANÇAIS, then press EXECUTE

Setting the clock

Using the Auto Clock Set feature

Some TV and cable channels transmit time signals with their broadcasts. Your VCR can pick up this time signal to automatically set the clock.

The Auto Clock Set feature works only if a channel in your area is broadcasting a time signal. If broadcasters in your area are not yet sending time signals, set the time manually (page 36).



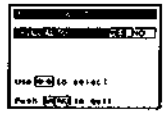
1 MENU, CURSOR, EXECUTE

Press MENU, then press CURSOR ↑/↓ to move the cursor to CLOCK SET and press EXECUTE.

When using the EASY SET UP procedure, skip this step.

2 CURSOR, EXECUTE

Press CURSOR ←/→ to select AUTO, then press EXECUTE.



3 CURSOR, EXECUTE

Press CURSOR ←/→ to select YES, then press EXECUTE.

4

To activate the Auto Clock Set function, turn off the VCR.

The VCR automatically sets the clock by searching for a channel that carries a time signal and sets your time zone and Daylight Saving Time (if applicable).

If your clock is set to the wrong time zone or Daylight Saving Time, you can adjust these settings without turning off the Auto Clock Set feature (page 34).

Notes

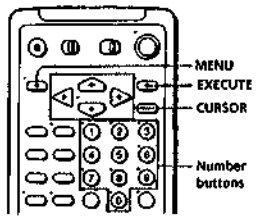
- The clock cannot be set automatically if you don't receive a channel that carries a time signal in your area. If so, set the clock manually.
- If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 30 minutes. If nothing happens even after you wait about 30 minutes, set the clock manually.
- If you use Hookup 1 or Hookup 4, make sure you leave the cable box on.

Getting Started

continued

Setting the clock (continued)

If the clock is not activated



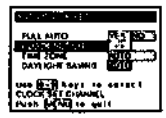
1

Follow steps 1 and 2 in "Using the Auto Clock Set feature."

The AUTO CLOCK SET menu is displayed.

2 CURSOR

Press CURSOR ←/→ to select NO for FULL AUTO.



3 CURSOR, Number buttons

Press CURSOR ↑/↓ to highlight the item you want to set, then press CURSOR ←/→ to make the setting.

- For CLOCK SET CH

  Leave the setting to "– –" to have the VCR automatically search for a channel that carries a time signal.

  Press the number buttons to select a channel that carries a time signal.

  Use this option if you know of a channel that carries a time signal. Most PBS member stations broadcast a time signal. For the fastest response, select your local PBS station.

- For TIME ZONE

  Select the time zone of your area, or select AUTO to have the VCR automatically set your time zone.

  The options are AUTO → ATLANTIC → EASTERN → CENTRAL → MOUNTAIN → PACIFIC → ALASKA → HAWAII → AUTO.

- For DAYLIGHT SAVING

  Select ON or OFF (standard time), or AUTO to have the VCR automatically set the daylight saving time.

4 EXECUTE

Press EXECUTE.

5

To activate the Auto Clock Set function, turn off the VCR.

Note

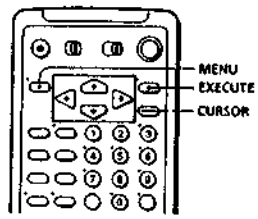
- If you use both the cable box control feature and the Auto Clock Set feature, the VCR automatically changes channels on the cable box until a channel that carries a time signal is found, whenever you turn off the VCR.

  If you want to stop the search, change the channel on the cable box with the channel buttons either on the VCR or on the remote commander.

Getting Started

continued

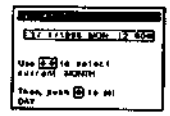
Using Manual Clock Set



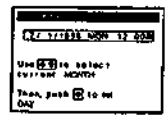
1 Press MENU, then press CURSOR ↑/↓ to move the cursor to CLOCK SET and press EXECUTE

When using the EASY SET UP procedure, skip this step

2 Press CURSOR ←/→ to select MANUAL, then press EXECUTE

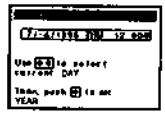


3 Press CURSOR ↑/↓ to set the month



4 Press CURSOR → to highlight the day and press CURSOR ↑/↓ to set the day

The day of the week is set automatically

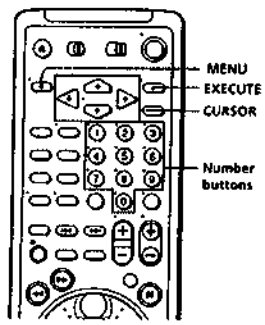


5 Set the year, hour and minutes in the same way as the day

6 Press EXECUTE to start the clock

Setting up cable box control

(Skip this section if you are using Hookup 2, 3, 4, or 6.)

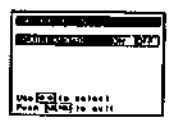


Your VCR includes a cable box control feature that allows the VCR to control most brands of cable boxes/DSS receivers via the Cable Mouse. With cable box control, the VCR controls channels on the cable box/DSS receiver for tuner recording. You can also use the VCR's remote commander to change channels on the cable box/DSS receiver whenever the cable box/DSS receiver is turned on even if the VCR is turned off. To use cable box control, you need to connect the Cable Mouse (pages 10 and 23) and set the code number and output channel.

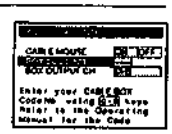
This VCR is programmed with codes necessary to control channel selection on most brands of cable boxes at the time this VCR was manufactured. It is possible that new cable boxes may be introduced that cannot be controlled with this VCR's Cable Mouse. If you have a cable box that is incompatible with this VCR, contact your cable operator — they may be able to provide you with a compatible cable box.

1 Press MENU, then press CURSOR ↑/↓ to move the cursor to CABLE BOX CONTROL and press EXECUTE

When using the EASY SET UP procedure, skip this step



2 Press CURSOR ←/→ to select ON, then press CURSOR ↓



3 Press the number buttons to enter the cable box/DSS receiver code number, then press CURSOR ↓

Find your cable box/DSS receiver code number from the chart below

4 If you want to control a cable box, press CURSOR ←/→ to select the output channel for the cable box, then press EXECUTE

If you want to control a DSS receiver, select LINE, then press EXECUTE

Cable box and DSS receiver brand and the corresponding code numbers

If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.

Cable box brand	Code numbers
ABC	018, 022, 024, 028, 217
Antronix	218
Archer	003, 050, 164, 218
DBT	278
Cable Star	067
Cabletenna	033
Cable time	172, 282, 388, 459
Century	164
Citizen	164, 326, 327
Clyde Cablevision	097
Colour Voice	036, 042
Comband	243, 244
Comtronics	051, 071
Decsat	434
Diamond	046
Eagle Comtronics	051

Cable box brand	Code numbers
Eastern	013, 285
Electricord	089
Electus	055
Fahnnot	454
Focus	411
Garrard	164
GC Electronics	027, 067, 341
GE	243, 244
GDC	097
Gemini	026, 068, 081, 253
General Instrument	022, 287, 487
Hamlin	020, 031, 045, 270, 284
Hitachi	022
Jasco	164, 326
Jerrold	014, 022, 025, 026, 035, 037, 058, 109, 287, 487

continued

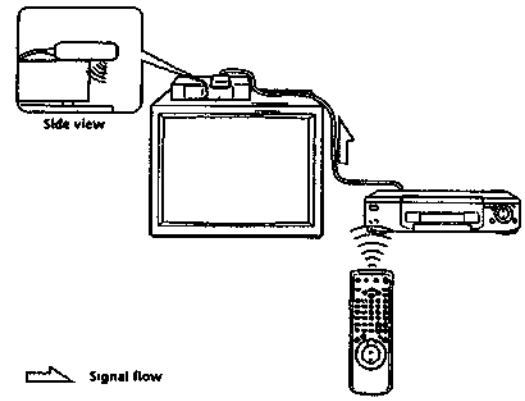
Cable box brand	Code numbers
Emsay	451
Macom	044
Magnavox	008, 043, 080, 345
Memorex	011
Movie Time	089, 167, 214
Northcoast	325
Novaplex	629
NSC	074, 081, 167, 214
Oak	018, 030, 259
Omniview	382
Panasonic	032, 118
Paragon	011
Philips	036, 038 039, 040, 041, 042, 071, 301, 345
Philips ECG	253
Pioneer	034, 155, 271, 544, 695
Popular Mechanics	411
Pulsar	011
RCA	032
Realistic	218
Recoton	411
Regal	031, 270, 284, 290
Regency	013
Rembrandt	081
RK	315, 317, 490
Samsung	051, 155
Satbox	386
Scientific Atlanta	017, 019, 028, 288, 338
Seam	521
Sharp	324
Signal	052
Signature	022
SL Marx	051
Spectravision	069
Sprucer	032, 318
Standard Components	107, 166
Starcom	014, 026, 056, 109

Cable box brand	Code numbers
Stargate	026, 051
STS	167
Sylvania	012
T Cable Teletext	116
Tandy	269
Tatung	108
Teknica	157
Tele +1	454
TeleCaption	232
Teleservice	292
Texscan	012, 107
TFC	321
Timeless	429
Tocom	025, 026, 070
Toshiba	011
Tudi	297
TVB6	074
TV COM	018, 030, 259
Uniden	236
Unika	033, 164, 218
United Artists	018
United Cable	014
Universal	033, 050, 067, 088, 089, 164, 202, 218, 333
Videoway	261
Vidtech	255
Viewstar	038, 071, 074, 122 222, 269, 300
Westminster cable	116
Zenith	011, 065, 536
Zentek	411
Wave Master	576

DSS receiver brand	Code numbers
Sony	650
RCA	577

To ensure correct operation

- Place the Cable Mouse so that it hangs out over the cable box/DSS receiver front
- Do not place the cable box/DSS receiver on top of the VCR
- Position the cable box/DSS receiver away from the VCR
- Point the remote commander at the VCR, not at the cable box/DSS receiver



To check the cable box control setting

1 Press CH +/– on the remote commander Does the channel indicator on the cable box/DSS receiver change? (Point the remote commander at the VCR, not at the cable box/DSS receiver)

2 Press all 10 number buttons (0 to 9) on the remote commander Does the channel indicator on the cable box/DSS receiver change?

If the answer to both 1 and 2 is "yes," you have made the correct setting

continued

If you cannot get your VCR to control the cable box/DSS receiver

- Check that the Cable Mouse is connected to the CABLE BOX CONTROL jack on the VCR.
- Check the position of the Cable Mouse
- Place the cable box/DSS receiver and VCR away from each other Do not place the cable box/DSS receiver on top of the VCR
- Try the setup again making sure to use the correct control code If the cable box still does not respond, try the other codes that are listed

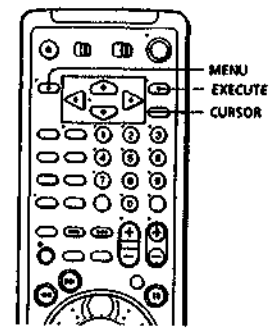
If your cable box still does not operate with the Cable Mouse, contact your cable company to see if they can provide you with a compatible cable box

Note

- Make sure you turn off the VCR when you plug in or unplug the Cable Mouse If you unplug the Cable Mouse and plug it in again, turn on the VCR before you use the cable box/DSS receiver control feature

Presetting channels

(Skip this section if you are using cable box/DSS receiver control.)

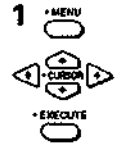


This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69 and unscrambled CATV channels 1 to 125 First, we recommend that you preset the receivable channels in your area using automatic presetting Then, if there are any unwanted channels, disable them manually If you have decided which channels you wish to preset, set them directly using manual presetting

Before you start...

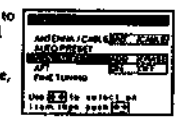
- Turn on the VCR and the TV
- Set the TV to the VCR channel (channel 3 or 4) If your TV is connected to the VCR using A/V connections, set the TV to video input
- Press TV/VTR to display the VTR indicator in the VCR's display window
- Press INPUT SELECT so that a channel number appears in the VCR's display window

Presetting all receivable channels automatically

1 

Press MENU, then press CURSOR ↑/↓ to move the cursor to TUNER PRESET and press EXECUTE

When using the EASY SET UP procedure, skip this step



continued

2

• To preset cable TV channels

Press CURSOR ⇐/⇒ to set ANTENNA/CABLE to CABLE

• To preset VHF and UHF channels

Press CURSOR ⇐/⇒ to set ANTENNA/CABLE to ANT

3

Press CURSOR ⇑/⇓ to select AUTO PRESET then press EXECUTE

All receivable channels are preset in numerical sequence. When no more receivable channels can be found, presetting stops and the picture from the lowest numbered channel is displayed on the TV screen.

Tip

• When receiving a VHF, UHF or CATV channel, the display changes as follows each time you press DISPLAY

Channel number, program name, and station's call letters (if the broadcaster sends those services)

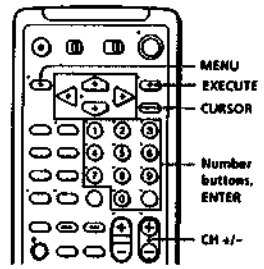
↓

Remaining tape length, and time counter

↓

No display

Presetting/disabling channels manually



1

Press MENU and select TUNER PRESET, then press EXECUTE

2

•To preset a channel

1 Press the number buttons to enter the channel number, then press ENTER

2 Press CURSOR ⇐/⇒ to set MANUAL SET to ADD

•To disable a channel

1 Press CH +/– to select the channel number

2 Press CURSOR ⇐/⇒ to set MANUAL SET to ERASE

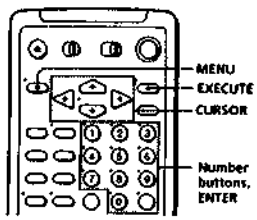
3

Repeat step 2 to preset or disable channels as required, then press EXECUTE

continued

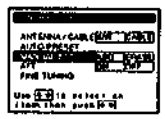
If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. If, however, the picture of a channel is not clear, you can also use the manual tuning function.



1

Press MENU and select TUNER PRESET, then press EXECUTE



2

Press the number buttons to select the channel you want to fine-tune, then press ENTER

3

Press CURSOR ⇑/⇓ to select FINE TUNING

The fine tuning meter appears.

4

Press CURSOR ⇐/⇒ to adjust to a clearer picture

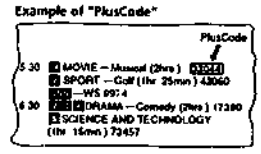
Note that the AFT setting switches to OFF.

Setting up VCR Plus+

How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is look up the program's "PlusCode," a number assigned to each program published in the TV section of most newspapers, cable TV listings, and even *TV GUIDE* magazine. Then, just enter the PlusCode of the program you want and the VCR is automatically programmed to record that show. It's that simple.

Example of "PlusCode"



How to set up your VCR

Setting up your VCR involves coordinating the TV channel number (the number you turn to on your TV or VCR to watch a program) with the guide channel (the number that's assigned to that channel in your program guide).

The VCR can set the guide channels automatically (see page 48), but you may have to set the guide channels manually depending on your area or the way you hooked up your VCR (see page 50).

To find the guide channel numbers, look at the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example to the right.

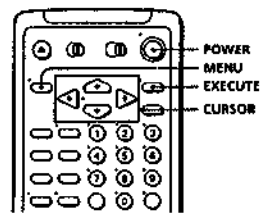
Example of "Channel Line-up Chart"

CABLE CH	CABLE TV	VCR Plus+ GUIDE CH
16	American Movie Classics	35
17	Bravo (program guid only)	54
20	Cable News Network	42
21	C SPAN	28
22	The Disney Channel	53
25	The Discovery Channel	37
34	ESPN	34
35	The Family Channel	47
5	Home Box Office	33
37	Lifetime	46
29	Cinemax	45
38	Music Television	48
54	Nickelodeon	38
28	Sports Channel	69
26	Sports Channel America	70
45	Showtime	41
17	TBS SuperStation	43
44	The Movie Channel	58
49	The Nashville Network	40
50	Turner Network Television	57
51	USA Network	44

continued

Setting up VCR Plus+ automatically (Smart Channel Mapping)

The VCR can automatically set the guide channels in your area from ZIP CODE you entered in EASY SET UP The VCR receives the program information signal and renews the data everyday after you complete the following procedure



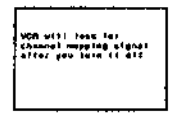
1 Set up the VCR using the EASY SET UP function

2 MENU, CURSOR, EXECUTE

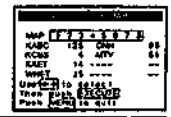
Press MENU, then press CURSOR ↑/↓ to move the cursor to SET VCR Plus+ CHANNELS and press EXECUTE The SMART CHANNEL MAPPING menu appears

3 CURSOR, EXECUTE

Press CURSOR ←/→ to select AUTO and press EXECUTE The instruction shown on the right appears on the TV screen for few seconds, then the screen returns to the normal display



If the program information signal in your area has several channel map patterns, the Choose your Cable CH MAP menu appears, and you must select the channel map See "To select the channel map" on the next page



4 POWER

Press POWER to turn off the VCR

The VCR sets the program guide channels from 0 00 am to 5 00 am while the VCR is turned off (It takes about 1 hour to complete channel mapping)

To select the channel map

If the program information signal in your area has several channel map patterns (up to 8), the Choose your Cable CH MAP menu appears

- the first time you turn on the VCR after completing channel mapping
- after selecting AUTO and pressing EXECUTE on the SMART CHANNEL MAPPING menu

In this case, you have to select the channel map on the Choose your Cable CH MAP menu

1 Find the VCR Plus+ Channel Listing in your program guide For details, see page 47

2 Press CURSOR ←/→ to select the channel map number you want by checking the guide channel number in the program guide

3 Press EXECUTE

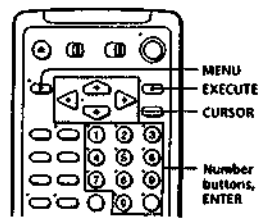
Notes

- It takes about 1 hour to complete channel mapping
- The VCR can receive the program information signal only while the VCR is turned off and no timer recordings are set
- The VCR cannot set the guide channels correctly unless you enter the ZIP CODE in your area
- When you move to a different area, you must set up the VCR again and enter your new ZIP CODE in the EASY SET UP procedure

continued

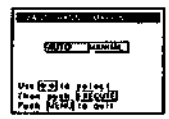
Setting up VCR Plus+ manually

To set the guide channels manually, use the Channel Line-up Chart to check that the guide channel numbers match the TV channel your VCR receives For example, if HBO is listed in the Channel Line-up Chart on channel 33, and your VCR receives HBO on channel 5, you need to coordinate these numbers using the following procedure If the guide and TV channel numbers are the same, you can skip this procedure



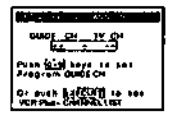
1 MENU, CURSOR, EXECUTE

Press MENU, then press CURSOR ↑/↓ to move the cursor to SET VCR Plus+ CHANNELS and press EXECUTE



2 CURSOR, EXECUTE

Press CURSOR ←/→ to select MANUAL and press EXECUTE

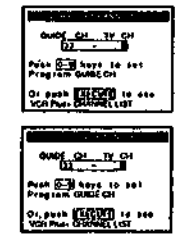


3 0–9, ENTER

Enter the guide channel number assigned in the program guide and press ENTER

4 ENTER

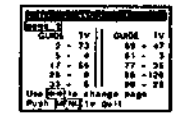
- If you made Hookup 1, 2, or 3 Enter the actual number on your TV (and VCR) and press ENTER
- If you made Hookup 4 Enter the cable output channel (usually 2, 3, or 4) and press ENTER
- If you made Hookup 6 Enter the actual number on your TV (and VCR) for an unscrambled channel and press ENTER For a scrambled channel, enter the cable box output channel (usually 2, 3, or 4) and press ENTER



5 Repeat steps 3 and 4 for each guide channel number that doesn't match

6 EXECUTE

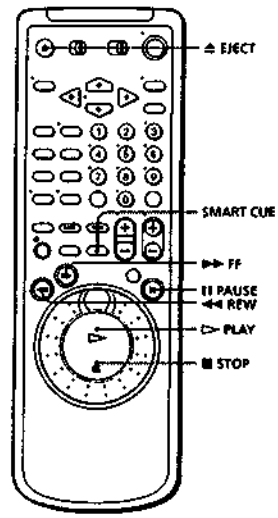
When you have set all channels, press EXECUTE to confirm your channel settings



7 MENU

After all settings are complete, press MENU to exit

Playing a tape



1 Turn on your TV and set it to the video channel

2 Open the drop down panel and insert a tape

The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed

3 PLAY ▷ Press ▷ PLAY

When the tape reaches the end, it will rewind automatically

Additional tasks

To	Press
Stop play	■ STOP
Pause play	II PAUSE
Resume play after pause	II PAUSE or ▷ PLAY
Search forward	▶▶ FF during playback
Search backward	◀◀ RLW during playback
Fast forward the tape	▶▶ FF during stop
Rewind the tape	◀◀ REW during stop
Eject the tape	⏏ EJECT

To skip playback

You can skip a portion of playback you don't want to watch such as a commercial and restart playback by pressing a single button

1 Press SMART CUE during playback of the scene you want to skip The VCR starts searching

2 Press SMART CUE again when you find the scene you want to watch The VCR stops searching, rewinds a few seconds, then resumes normal playback

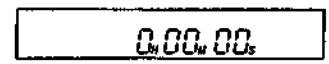
If you press and hold SMART CUE while the VCR is skip searching, the VCR will stop searching, and continue rewinding until you release SMART CUE

Tip

- You can change the length of rewinding time on the ADVANCED OPTION menu See page 72

To use the time counter

At the point on the tape that you want to find later, press COUNTER RESET The counter in the display window resets to "0H00M00S " Search for the point afterwards by referring to the counter

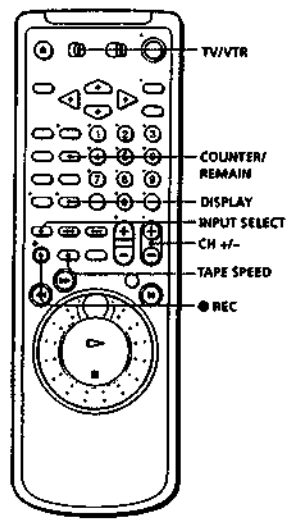


To display the counter on the TV screen, press DISPLAY

Notes

- Tapes recorded in the LP mode on other VCRs can be played back on this VCR but the picture quality cannot be guaranteed
- The counter resets to "0H00M00S" whenever a tape is reinserted
- The counter stops counting when it comes to a portion with no recording

Recording TV programs

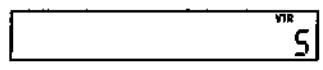


1 Turn on your TV and set it to the video channel

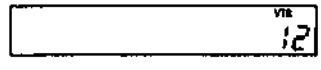
To record from a cable box, turn it on

2 Insert a tape with its safety tab in place

3 INPUT SELECT Press INPUT SELECT until a channel number appears in the display window

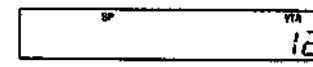


4 +CH Press CH +/– to select the channel you want to record



5 TAPE SPEED Press TAPE SPEED to select the tape speed, SP or EP

EP provides recording time three times as long as SP, however, SP produces better picture quality



6 ●REC Press ● REC to start recording

To stop recording

Press ■ STOP

To check the remaining tape length

Press DISPLAY The white bar indicates the approximate length of tape remaining With the display on, press COUNTER/REMAIN to check the remaining time Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately The remaining time also appears in the display window

To check the remaining time of a tape more than two hours long, set TAPE SELECT in the ADVANCED OPTIONS menu to "~160 " (For details, see page 72)

To watch another TV program while recording

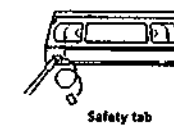
1 Press TV/VTR to turn off the VTR indicator in the display window

2 If the TV is connected to the VCR's LINE OUT jacks, set the TV to TV input, if not, skip this step

3 Select another channel on the TV

To save a recording

To prevent accidental erasure, break off the safety tab as illustrated To record on a tape again, cover the tab hole with adhesive tape



Safety tab

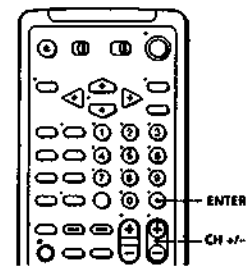
continued

Tips
- To select a channel, you can use the number buttons on the remote commander Enter the channel number, then press ENTER
- You can select a video source form the LINE-1 IN or LINE-2 IN jacks using INPUT SELECT
- The display appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape
- If you don't want to watch TV while recording, you can turn off the TV When using a cable box, make sure to leave it on

Notes
- The remaining time may not be indicated accurately for short tapes such as T-20 or T-30 or tapes recorded in the LP mode
- The display does not appear during still (pause) mode or slow-motion playback
- It may take up to one minute for the VCR to calculate and display the remaining time after you press DISPLAY

Locating a channel by station ID

You can select the TV program from station ID



1 Turn on your TV and set it to the video channel
To record from a cable box, turn it on

2 ENTER
Press ENTER
The station ID appears on the TV screen

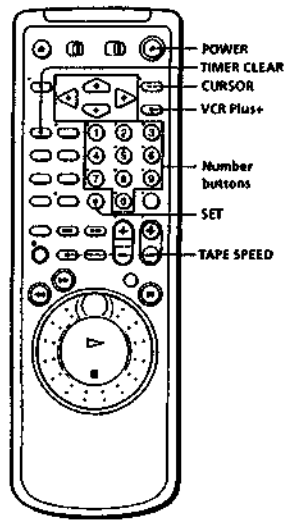
The selected station ID

3 +CH
Press CH +/– to select the station ID you want

4 ENTER
Press ENTER

Note
- If the TV channel has no station ID, the channel number appears on the TV screen

Recording TV programs using VCR Plus+

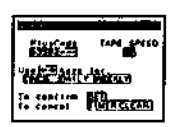


Just enter the program's PlusCode listed in the TV program guide The date, times and channel number of that program are set automatically You can preset up to eight programs at a time

Before you start...
- Check that the VCR clock is set to the correct time
- Turn on your TV and set it to the video channel When using a cable box, turn it on
- Insert a tape with its safety tab in place Make sure the tape is longer than the total recording time

1 +VCR Plus+
Press VCR Plus+

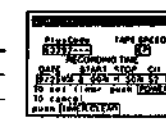
2 0 1 2 3 4 5 6 7 8 9 0
Press the number buttons to enter the program's PlusCode
If you make a mistake, press TIMER CLEAR and re-enter the correct number



3 TAPE SPEED
Press TAPE SPEED to select SP or EP

4 CURSOR ←/→, SET
Select ONCE, DAILY, or WEEKLY by using CURSOR ←/→, then press SET

To record	Select
Only once	ONCE
Everyday Monday to Friday	DAILY
Once a week	WEEKLY



TIMER CLEAR
The date, start and stop times, channel number and tape speed appear on the TV screen If the information is not correct, press TIMER CLEAR to cancel the setting

5 To enter another setting, repeat steps 1 to 4

6 POWER
Press POWER to turn off the VCR
The TIMER indicator on the VCR lights up and the VCR stands by for recording When using a cable box, leave it on

To stop recording
To stop the VCR while recording, press ■ STOP

To use the VCR after setting the timer
To use the VCR before a timer recording begins, just press POWER The "TIMER" indicator turns off and the VCR switches on Remember to press POWER to reset the VCR to timer recording standby after using the VCR

You can also do the following tasks while the VCR is recording
- Reset the counter
- Display tape information on the TV screen
- Check the timer settings
- Watch another TV program

continued

To lock the VCR after setting the timer (Child Lock)

Hold down POWER on the VCR until the VCR beeps. The VCR turns off and the "LOC" appears in the display window. The VCR will not work except for timer recording.

To unlock the VCR, hold down POWER on the VCR until the VCR beeps.

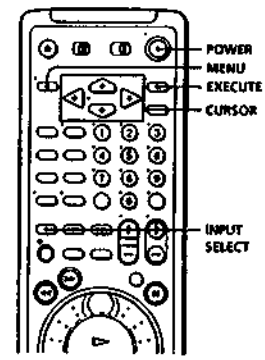
Tips

- To cancel the procedure, press VCR Plus+ before pressing SET.
- When you are recording a program in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the EP mode. Note that some noises will appear on the picture when the tape speed is changed. If you want to keep the tape speed, set AUTO TAPE SPEED to OFF in the ADVANCED OPTIONS menu (page 72).

Notes

- If the VCR beeps, this means that
  - the PlusCode is incorrect.
  - ONCE, DAILY, or WEEKLY was selected incorrectly. You cannot select DAILY or WEEKLY for a program that airs more than seven days ahead.
- The VCR will be unlocked when
  - you stop timer recording by pressing ■ STOP.
  - you insert a tape.
  - the AC power cord is disconnected or power supply stops.

Setting the timer manually



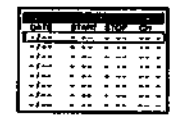
If VCR Plus+ is not available in your area, follow the instructions below to set the timer to record programs.

Before you start ..

- Check that the VCR clock is set to the correct time.
- Turn on your TV and set it to the video channel. When using a cable box, turn it on.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.

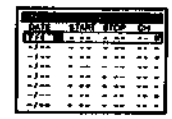
1 • MENU

Press MENU and select TIMER SET/CHECK.



2

Set the date, start and stop times, channel number and tape speed.



1 Press CURSOR ➡ to highlight each item in turn.
2 Press CURSOR ↓/↑ to set each item.

To correct a setting, press CURSOR ⬅ to return to that setting and reset.

To record the same program every day or the same day every week, press CURSOR ↓ while the date is highlighting. For details, see "Daily/weekly recording" on the next page.

• INPUT SELECT

To record from a source connected to the LINE-1 IN or LINE-2 IN jacks, press INPUT SELECT to display "L1" or "L2" in the "CH" position.

continued

3 • CURSOR

Press CURSOR ➡ to confirm the setting.

The cursor appears at the beginning of the line. To enter another setting, move the cursor to the next line and repeat step 2.

4 • EXECUTE

Press EXECUTE.

5 • POWER

Press POWER to turn off the VCR.

The TIMER indicator on the VCR lights up and the VCR stands by for recording.

When using a cable box, leave it on.

Daily/weekly recording

In step 2 above, press CURSOR ↓ to select the recording pattern. Each time you press CURSOR ↓, the indication changes as shown below. Press CURSOR ↑ to change the indication in reverse order.

the current date → SUN-SAT → MON-SAT → MON-FRI → EVERY SAT → EVERY MON → EVERY SUN → 1 month later → (cycles backward) → the current date

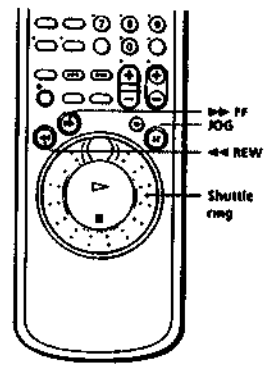
Tips

- To set the channel, you can also use the CH +/– or number buttons.
- To set the tape speed, you can also use TAPE SPEED.
- When you are recording a program in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some noises will appear on the picture when the tape speed is changed. If you want to keep the tape speed, set AUTO TAPE SPEED to OFF in the ADVANCED OPTIONS menu (page 72).
- To lock the VCR after setting the timer, see page 60.

Note

- If you are using cable box control, you cannot select "L1" or "L2."

Playing/searching at various speeds



Using the remote commander

Playback options	Operation
Fast-forward/rewind	During stop, press ▶▶ FF or ◀◀ REW.
View the picture during fast-forward or rewind	During fast forward, hold ▶▶ FF down. During rewind, hold ◀◀ REW down.
Rewind and start play	During stop, hold ◀◀ REW on the VCR, and press ▷ PLAY on the VCR.

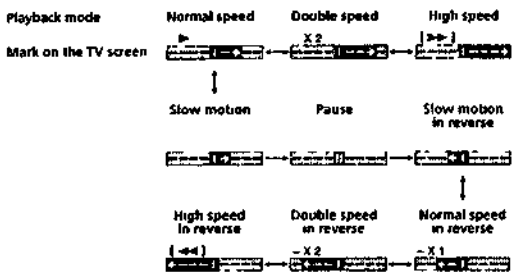
continued

Using the Shuttle ring

With the Shuttle ring, you can operate a variety of playback options. There are two ways for using the Shuttle ring, normal mode and jog mode.

To use the Shuttle ring in normal mode

During playback or pause, turn the Shuttle ring clockwise or counterclockwise. Each change in the Shuttle ring position changes the playback mode, and the corresponding mark appears on the TV screen for a few seconds in the following way if the on-screen display function is on.



To use the Shuttle ring in jog mode

Use this mode for fram-by-fram playback.

Press JOG to enter the jog mode. The JOG button lights up. If you change to the jog mode during any playback mode, the playback pauses so you can see a still picture. Each change in the Shuttle ring position shifts the picture one frame. To shift frames in reverse, turn the Shuttle ring counterclockwise. The frame shift speed depends on the speed you turn the Shuttle ring. To resume normal playback, press JOG again. The JOG indicator goes off.

To resume normal playback

Press ▷ PLAY.

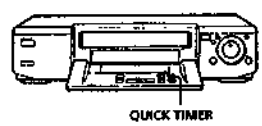
Tip

- Adjust the picture using the TRACKING +/– buttons if
  - Streaks appear while playing in slow motion.
  - Bands appear at the top or bottom while pausing.
  - The picture shakes while pausing.

Notes

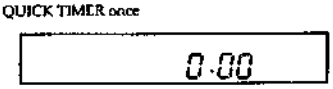
- The sound is muted during these operations.
- Tapes recorded in the LP mode on other VCRs can be played back on this VCR but the picture quality cannot be guaranteed.
- If the playback mode mark doesn't appear on the TV screen, press DISPLAY.

Recording TV programs using the quick timer



After starting recording in the normal way, you can have the VCR stop recording automatically after a specified duration.

1 While recording, press QUICK TIMER once.



2 Press QUICK TIMER repeatedly to set the duration.

Each press advances the time in increments of 30 minutes.

0:00 → 0:30 → 1:00 ·····→ 10:30 → 11:00

The duration decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

To check or extend the duration

Press QUICK TIMER once. The duration is displayed for 10 seconds. If you want to extend the time, press QUICK TIMER within 10 seconds to set to the new duration.

To stop while recording

Press ■ STOP.

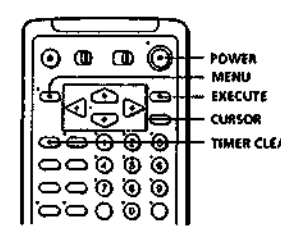
Using the quick timer during stop mode

1 Press QUICK TIMER.

2 Press CH +/– or INPUT SELECT to select the channel you want to record.

3 Press QUICK TIMER repeatedly to set the recording duration. The recording starts.

Checking/ changing/ cancelling timer settings

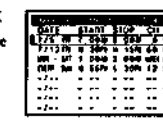


Before you start ..

- Turn on your TV and set it to the video channel.

1 Press POWER to turn on the VCR.

2 Press MENU and select TIMER SET/CHECK.



- If you want to change a setting, go on to the next step.
- If you do not need to change the settings, press EXECUTE, then turn off the VCR to return to recording standby.

3 Press CURSOR ↓/↑ to select the setting you want to change.

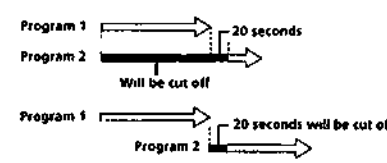
- To change the setting, press CURSOR ←/→ to highlight the item you want to change, and press CURSOR ↓/↑ to reset it. Then, press CURSOR → repeatedly until the cursor appears at the beginning of the line.
- To cancel the setting, press TIMER CLEAR.

4 Press EXECUTE.

If any timer settings remain, turn off the VCR to return to recording standby.

When the timer settings overlap

The program that starts first has priority and the second program starts recording only after the first program has finished. If the programs start at the same time, the program listed first in the menu has priority.



Recording stereo and bilingual programs

Recording stereo programs

This VCR automatically receives and records stereo programs When a stereo program is received, the STEREO indicator lights up If there is noise in the stereo program, set AUTO STEREO in the ADVANCED OPTIONS menu to OFF The sound will be recorded in monaural (on both hi-fi and normal audio tracks) but with less noise For details, see page 72

Recording bilingual programs

Normally, this VCR records only the main sound When a SAP (Second Audio Program) is received, the SAP indicator lights up To record only SAP sound, set TUNER AUDIO in the ADVANCED OPTIONS menu to SAP For details, see page 72

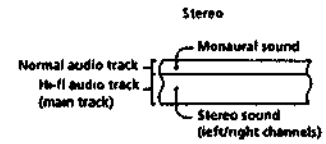
Selecting the sound during playback

Press AUDIO MONITOR to select the sound you want

To listen to	On-screen display	Display window
Stereo/main (left and right channels)	STEREO	STEREO
Left channel only	LEFT CH	STEREO
Right channel only	RIGHT CH	STEREO
Monaural	No indicator	No indicator

How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture Monaural sound is recorded onto the normal audio track along the edge of the tape

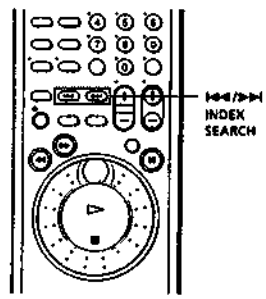


Notes

- To play a tape in stereo, you must use the A/V connections
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting
- If the AUDIO MONITOR button does not function, check that AUDIO MIX in the ADVANCED OPTIONS menu is set to OFF

Searching using the index function

The VCR marks the tape with an index signal at the point where each recording begins Use these signals as references to find a specific recording The VCR can search up to 99 index signals ahead of or behind the current position



1 Insert an indexed tape into the VCR

2 Press ⏮ /⏭ INDEX SEARCH repeatedly to specify how many index signals ahead or behind you want to search

- To search ahead, press ⏭ INDEX SEARCH
- To search backwards, press ⏮ INDEX SEARCH

The VCR starts searching and the index number on the TV screen counts down to zero Playback starts automatically from that point

To stop searching

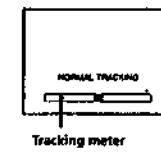
Press ■ STOP

Adjusting the picture

Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the tracking indicator flashes in the display window, then goes off), distortion may occur if the tape was recorded in poor condition In this case, manually adjust the tracking

Press the TRACKING +/– buttons to display the tracking meter The distortion should disappear as you press one of the two buttons (the indicator lights up) To resume automatic tracking adjustment, eject the tape and reinsert it



Tracking meter

About Adaptive Picture Control (APC)

Adaptive Picture Control (APC) automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape To maintain better picture quality, we recommend that you set APC to ON in the ADVANCED OPTIONS menu (with the APC indicator in the display window lit) For details, see page 72

APC playback

The APC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with APC

APC recording

Whenever you insert a tape and first start recording, the VCR adjusts to the tape using the APC function (the APC indicator flashes rapidly) This adjustment is retained until the tape is ejected

Notes

- Auto tracking adjustment cannot be used on tapes recorded in the LP mode on other VCRs
- The APC function does not work if the tape speed is automatically changed from the SP to EP mode during a timer recording, unless the tape has been recorded in the EP mode with the APC function
- There is a delay of a few seconds before the VCR actually starts recording while the VCR analyzes the tape To avoid the delay, first set the VCR to recording pause (the APC indicator flashes slowly) and press ● REC to have the VCR analyze the tape (the APC indicator flashes rapidly) After the APC indicator stops flashing, press II PAUSE to start recording immediately.

  If you want to start recording quickly without using the APC function, first set the VCR to recording pause (the APC indicator flashes slowly) and press II PAUSE to start recording

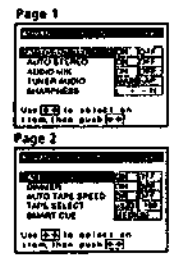
Changing menu options

1 Press MENU and select ADVANCED OPTIONS

2 Press CURSOR ↑/↓ to select the option to change, then press CURSOR ←/→ to change the setting

The ADVANCED OPTION menu has 2 pages. To select page 2, press CURSOR ↓ repeatedly until page 2 appears. To select page 1, press CURSOR ↑ repeatedly until page 1 appears.

3 Press EXECUTE to return to the original screen.



Menu choices

Initial settings are indicated in bold print.

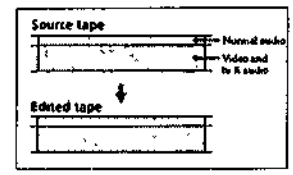
Menu option	Set this option to
AUTO ANT S&L	**ON** if your TV is connected only to VHF/UHF OUT on the VCR. To play a tape, set the TV to the VCR channel (channel 3 or 4). **OFF** if your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR. To play a tape, set the TV to the VCR input.
AUTO STEREO	**ON** to receive stereo programs, OFF to reduce noise. The sound changes to monaural.
AUDIO MIX	**ON** to listen to the sound recorded on hi-fi and normal audio tracks at the same time. The AUDIO MONITOR button will not function. **OFF** to listen to hi-fi and normal audio tracks separately. Select the sound using the AUDIO MONITOR button.
TUNER AUDIO	**MAIN** to record the main sound on both hi-fi and normal audio tracks. SAP to record the SAP (Second Audio Program) sound on both hi-fi and normal audio tracks.
SHARPNESS	L (Low) through H (High) to adjust the sharpness of the picture. L to turn off the sharpness control.
APC	**ON** to switch on the APC (Adaptive Picture Control) function and improve picture quality, OFF to switch off APC.
DIMMER	**ON** to make the display window dim, OFF to make it brighter.
AUTO TAPE SPEED	**ON** to change the timer recording tape speed automatically to the EP mode when the remaining tape becomes shorter than the recording time, OFF to keep the tape speed.
TAPE SELECT	"~120" or "~160" to select the tape length and display the remaining time correctly.
SMART CUE	**MEDIUM** to set the automatic rewinding time on skip playback to a medium length, SHORT to set to short, LONG to set to long.

Editing methods

This section introduces you to various ways to edit tape recordings.

Basic editing

You can make a copy of a tape.



Insert editing

You can replace an existing scene with material from another recording. There are three kinds of insert editing.

Video insert

Replaces the original video and hi-fi audio. The monaural sound on the normal audio track is retained.

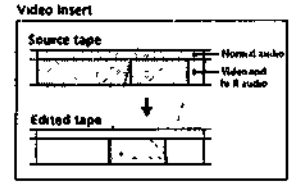
Audio insert

Replaces the original monaural sound on the normal audio track. The video and hi-fi sound are left intact. For example, you can use this feature to add commentary to a tape recorded on a camcorder.

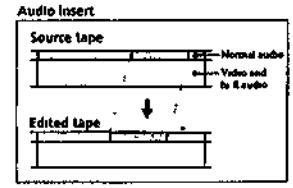
A/V insert

Replaces the original video and both hi-fi and monaural sound.

Video Insert

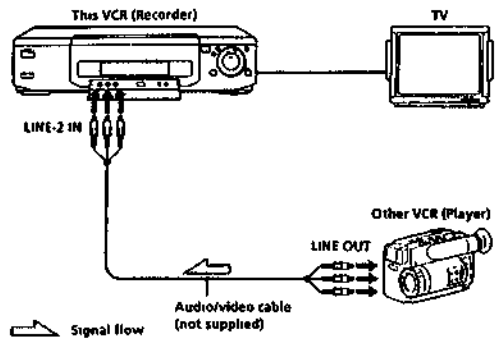


Audio Insert



Hooking up to a VCR or stereo system

How to hook up to record on this VCR



How to hook up to a stereo system

Connect LINE-2 IN AUDIO on this VCR to the audio output jacks on the stereo system, using the RK-C510KS audio cable (not supplied).

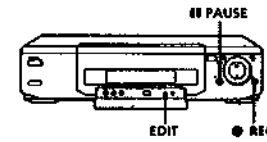
If the other VCR has a CONTROL S OUT jack for synchronized editing

Hook up to record on the other VCR, then connect the VCRs via the CONTROL S jacks. The CONTROL S connection lets you control (pause and release pause) both VCRs from the recording VCR.

Notes

- Make sure you connect the plugs to jacks of the same color.
- If the other VCR is a monaural type, leave the red plugs unconnected.
- If you connected this VCR to both the LINE IN and LINE OUT jacks of the other VCR, select the input correctly to prevent a humming noise.
- If the CONTROL S IN jack is used for S-Link™ (A/V bus control) with a TV, the CONTROL S connection cannot be used for editing.

Basic editing
(when recording on this VCR)



Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display "L2" in the display window.
- Press TAPE SPEED on the remote commander to select the tape speed, SP or EP.
- On this VCR, press EDIT to display "EDIT" in the display window. If the other VCR has a similar button, press it to activate edit function.

1 Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.

2 Insert a tape into this (recording) VCR. Search for the point to start recording and press II PAUSE.

3 Press ● REC on this VCR and set it to recording pause.

4 To start editing, press the II PAUSE buttons on both VCRs at the same time.

To stop editing

Press the ■ STOP buttons on both VCRs.

Tips

- To edit more precisely, press the II PAUSE buttons on the VCRs to release pause.
- To cut out unwanted scenes while editing, press II PAUSE on this VCR when an unwanted scene begins. When it ends, press II PAUSE again to resume recording (Assemble Editing).

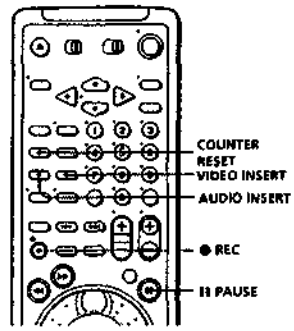
Note

- If you start recording following the procedure above, the VCR won't start recording with the APC function. To record a tape with the APC function, press ● REC again during recording pause in step 3 so that the VCR analyzes the tape. Then when you start recording in step 4, press II PAUSE immediately after the APC indicator stops flashing. If you press II PAUSE before the APC indicator stops flashing, the APC function is canceled.

Insert editing

Before you start editing

- Turn on your TV and set it to the video channel
- Press INPUT SELECT to display "L2" in the display window
- Press TAPE SPEED on the remote commander to select the tape speed, SP or EP
- On this VCR, press EDIT to display "EDIT" in the display window If the other VCR has a similar switch, set it to ON as well



1 Insert a source tape into the playback VCR or the stereo system Search for the point to start playback and set it to playback pause

2 Insert a prerecorded tape into this (recording) VCR Search for the end of the scene to be replaced and press II PAUSE

3 Press COUNTER RESET on this VCR to reset the counter to "0H00M00S"

4 Rewind the prerecorded tape to the beginning of the scene to be replaced

The VCR pauses.

5 Press the INSERT buttons

To replace	Press
Picture and hi-fi sound	VIDEO INSERT "VID INS II" appears on the TV screen and "V INSERT" appears in the display window
Monaural sound only	AUDIO INSERT "A INSERT" appears in the display window
Picture, hi-fi and monaural sound	AUDIO INSERT, then VIDEO INSERT "A/V INS II" appears on the TV screen and "AV INSERT" appears in the display window

6 To start editing, press the II PAUSE buttons on this VCR and the other VCR (or stereo system) at the same time

To stop editing

Press the ■ STOP buttons on this VCR and the other VCR (or stereo system)

To listen to both the hi-fi and normal audio

Set AUDIO MIX to ON in the ADVANCED OPTIONS menu (page 72) Use this feature to listen to inserted audio together with the original hi-fi audio When AUDIO MIX is set to ON, the AUDIO MONITOR button does not function Remember to reset AUDIO MIX to OFF after playing the tape

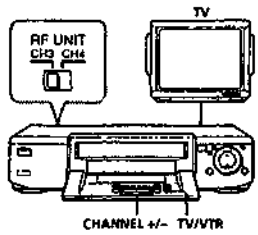
Note

- To use the INSERT function, this VCR must be set to playback pause, not recording pause

General setup information

Setting the RF unit

When connecting the VCR to the TV using only the antenna cable, you must set the RF UNIT switch on the rear of the VCR so that the TV can receive the correct signal from the VCR



1 Set the RF UNIT switch on the rear of the VCR to CH3 or CH4, whichever channel is not used in your area If both are used, set the switch to either channel

2 Press POWER to turn on the VCR

3 Press TV/VTR to turn on the VTR indicator in the VCR's display window

4 Press CHANNEL +/– to display a channel number in the display window Select an active channel number in your area

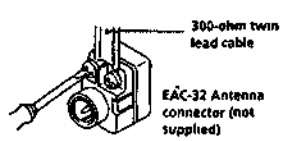
5 Turn on your TV and set it to the channel you selected in step 1 (channel 3 or 4)

The selected TV channel broadcast appears on the TV screen If the channels change when you press CHANNEL +/– on the VCR, you have made the correct setting

Whenever you use the VCR, set the TV to the channel selected in step 1

Attaching the external antenna connector

When using a 300-ohm twin lead cable for VHF/UHF antenna, use the EAC-32 antenna connector (not supplied) to connect the antenna to the VCR



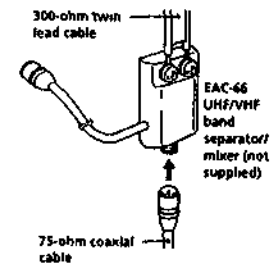
1 Loosen the screws on the antenna connector

2 Wind the twin leads around the screws on the antenna connector

3 Retighten the screws

Attaching a UHF/VHF band mixer

When using both 75-ohm coaxial cable and 300-ohm twin lead cable for VHF / UHF antenna, use the EAC-66 UHF/VHF band separator/mixer (not supplied) to connect the antenna to the VCR



1 Loosen the screws on the mixer

2 Wind the twin leads around the screws on the mixer

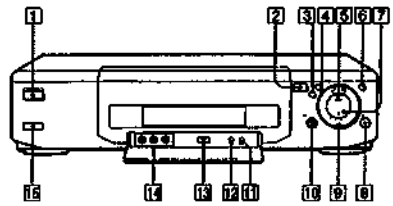
3 Retighten the screws

4 Connect the 75-ohm coaxial cable to the mixer

Index to parts and controls

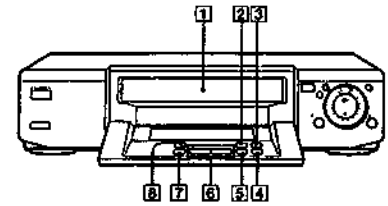
Refer to the pages indicated in parentheses ( ) for details

Front panel



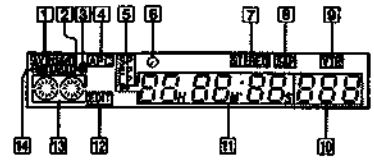
1 POWER switch/indicator
2 ⏏ EJECT button (53)
3 ◀◀ REW button (53)
4 ▶▶ FF button (53)
5 ▷ PLAY button (52)
6 JOG button/indicator (64)
7 ■ STOP button (53)
8 ● REC button (55)
9 Shuttle ring (63)
10 ❚❚ PAUSE button (53)
11 EASY SET UP button (11, 14, 17, 20, 24, 27)
12 EDIT button (75)
13 COMMAND MODE switch (5)
14 LINE-2 IN VIDEO/AUDIO L/R jacks (74)
15 Remote sensor

Front panel, with cover opened



1 Tape compartment
2 AUDIO MONITOR button (68)
3 QUICK TIMER button (66)
4 TV/VTR button (55)
5 TAPE SPEED button (55)
6 CHANNEL TRACKING +/− buttons (54, 71)
7 COUNTER RESET button (53, 76)
8 INPUT SELECT button (54, 75)

Display window

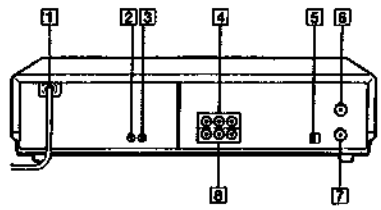


1 AV INSERT indicator (76)
2 REC indicator
3 ▮ (tracking) indicator (71)
4 APC indicator (71)
5 TAPE SPEED indicator (55)
6 Remaining time indicator
7 STEREO indicator (68)
8 SAP indicator (68)
9 VTR indicator (55)
10 Line/channel indicator (54, 75)
11 Time counter/clock indicator
12 EDIT indicator (75)
13 Tape indicator
14 TIMER indicator

continued

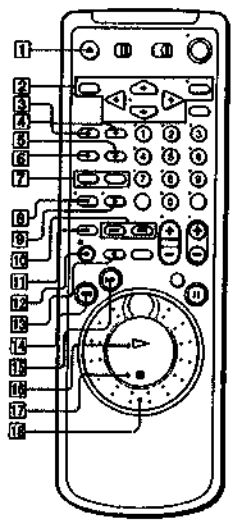
Index to parts and controls (continued)

Rear panel



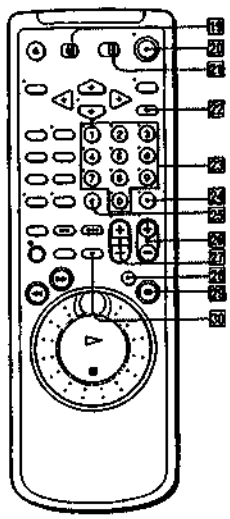
1 AC Power cord
2 S-LINK (CONTROL S IN) jack (9, 74)
3 CABLE BOX CONTROL (CONTROL S OUT) jack (10, 23)
4 LINE-1 IN AUDIO L/R/VIDEO jacks (74)
5 RF UNIT switch (78)
6 VHF/UHF IN connector (10, 13, 16, 19, 23, 26)
7 VHF/UHF OUT connector (10, 13, 16, 19, 23, 26)
8 LINE OUT AUDIO L/R/VIDEO jacks (8)

Remote commander



1 ⏏ EJECT button (53)
2 Menu operation buttons (31)
MENU button
CURSOR ↑/↓/←/→ buttons
EXECUTE button
3 AUDIO MONITOR button (68)
4 TIMER CLEAR button (59)
5 COUNTER/REMAIN button (55)
6 COUNTER RESET button (53, 76)
7 AUDIO/VIDEO INSERT buttons (76)
8 TV/VTR button (55)
9 DISPLAY button (55)
10 ⏮/⏭ INDEX SEARCH buttons (70)
11 INPUT SELECT button (54, 75)
12 ● REC button (55)
13 TAPE SPEED button (55)
14 ◀◀ REW button (53)
15 ▶▶ FF button (53)
16 ▷ PLAY button (52)
17 ■ STOP button (53)
18 Shuttle ring (63)

continued

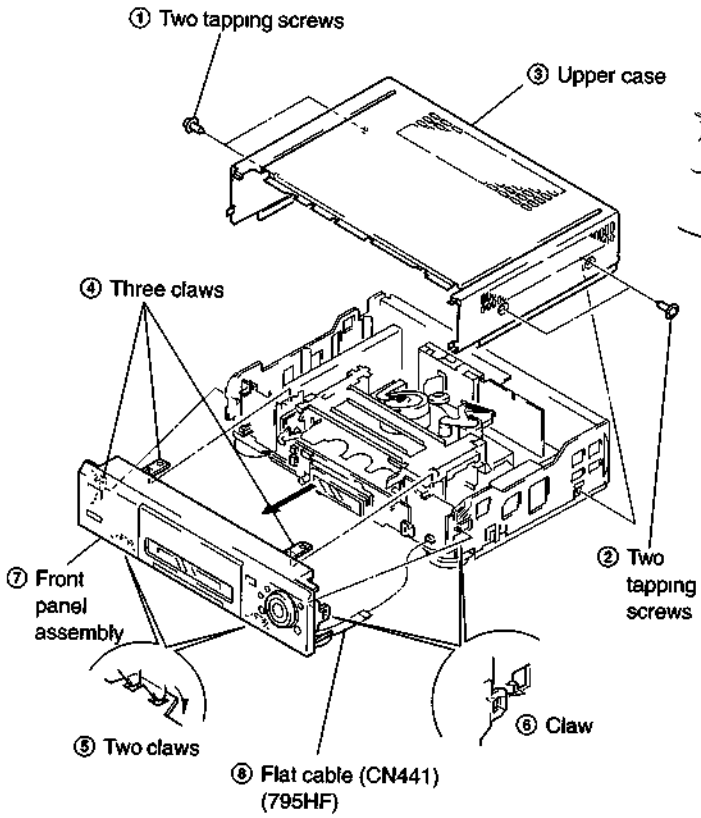


19 TV/VTR switch (5)
20 POWER button (59, 62)
21 COMMAND MODE switch (5)
22 VCR Plus+ button (58)
23 Number buttons (45, 50)
24 ENTER button (45, 50)
25 SET button (59)
26 CH +/– buttons (54)
27 VOL +/– buttons (6)
28 JOG button/indicator (64)
29 II PAUSE button (53)
30 SMART CUE button (53)

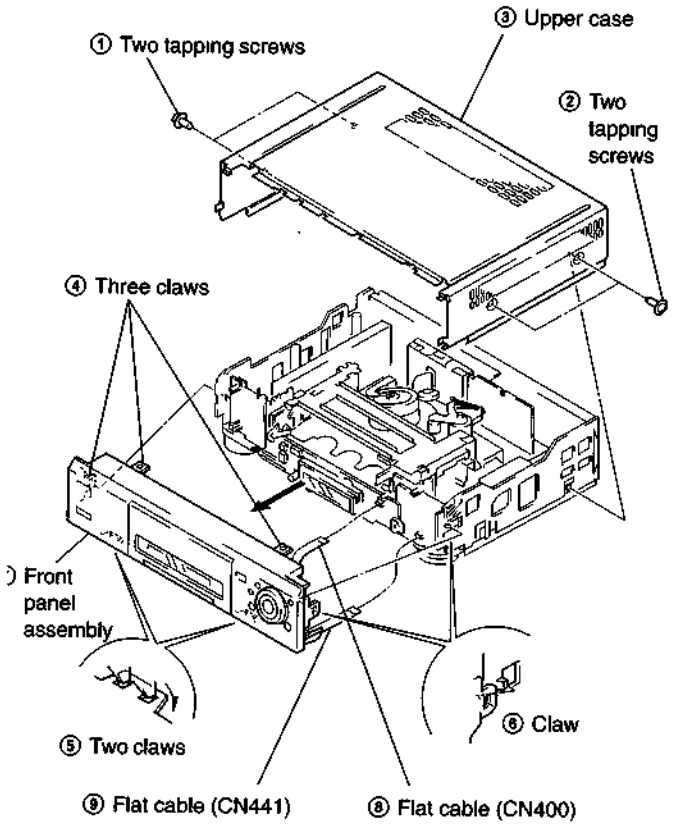
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given

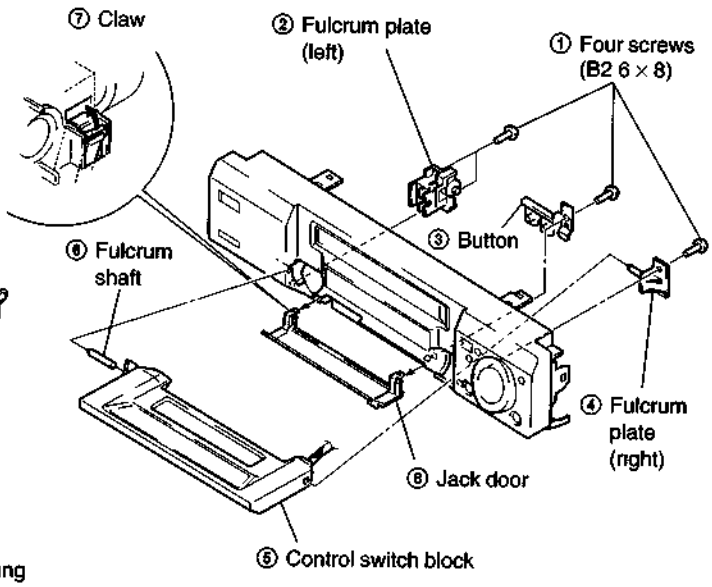
2-1. FRONT PANEL ASSEMBLY AND CASE REMOVAL (775HF/776HF/795HF)



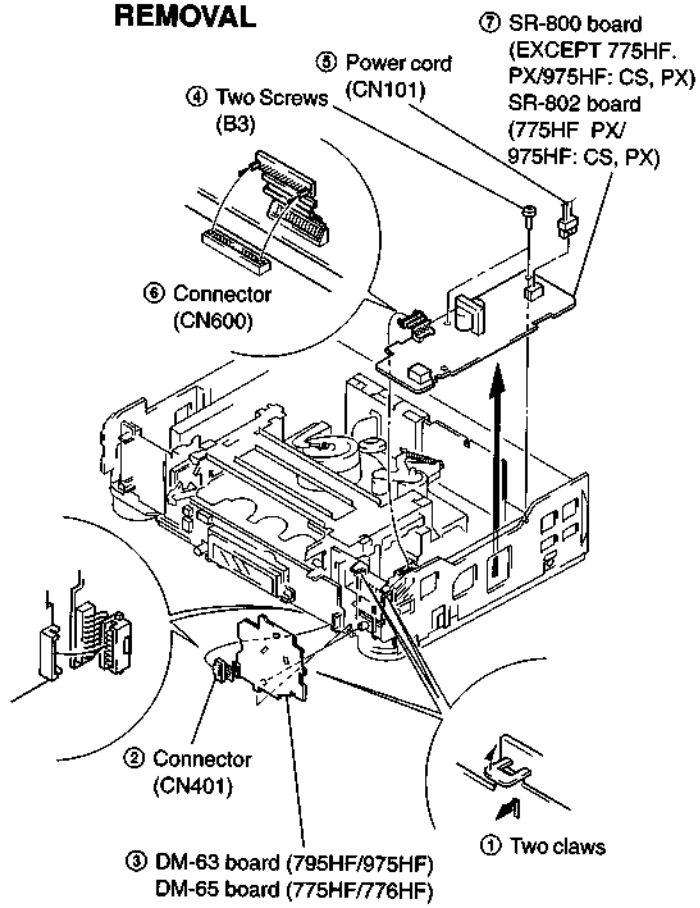
2-2. FRONT PANEL ASSEMBLY AND CASE REMOVAL (975HF)



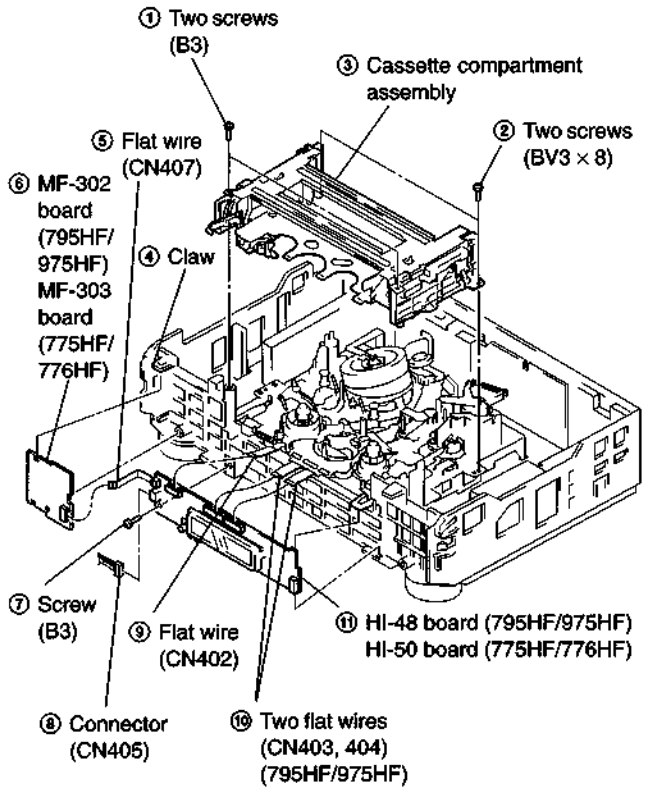
2-3. CONTROL SWITCH BLOCK REMOVAL (975HF)



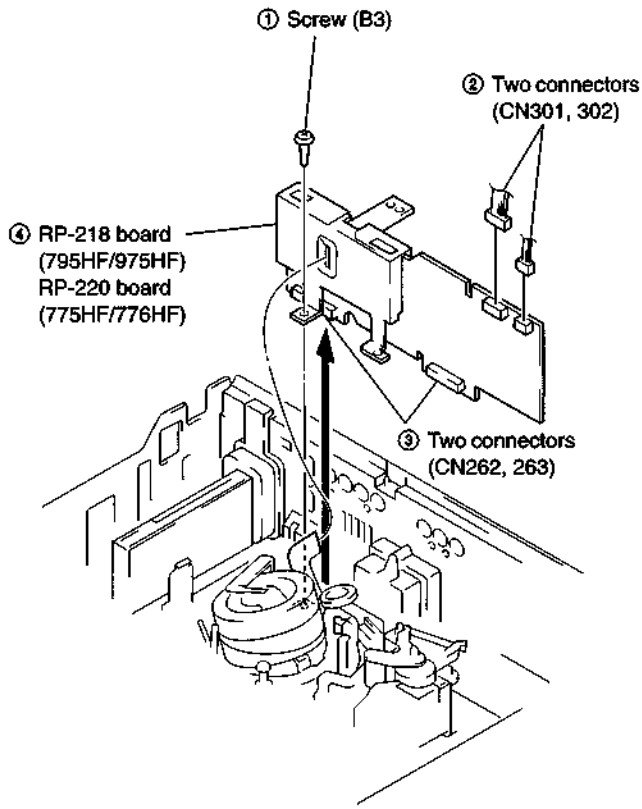
2-4. SR-800/SR-802 DM-63/DM-65 BOARD REMOVAL



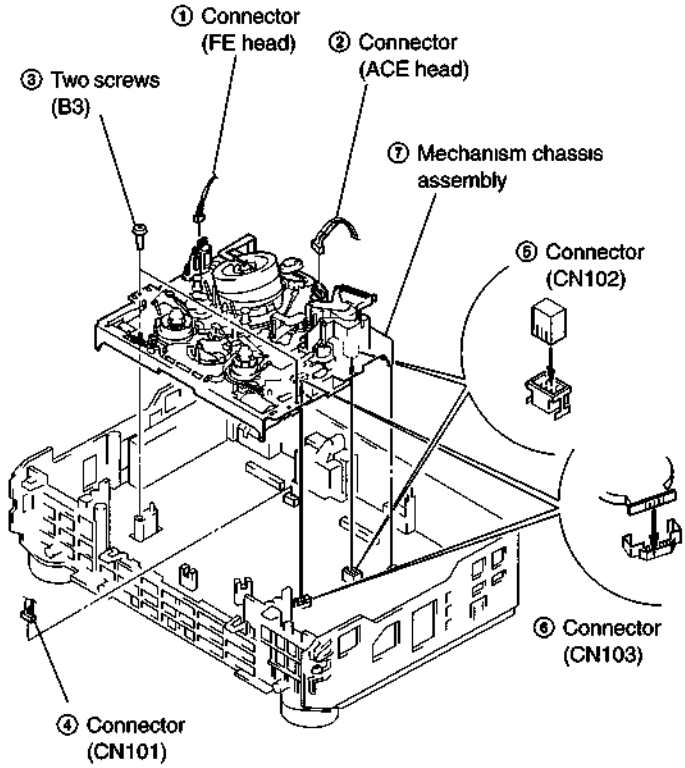
2-5. CASSETTE COMPARTMENT ASSEMBLY AND HI-48/HI-50/MF-302/MF-303 BOARD



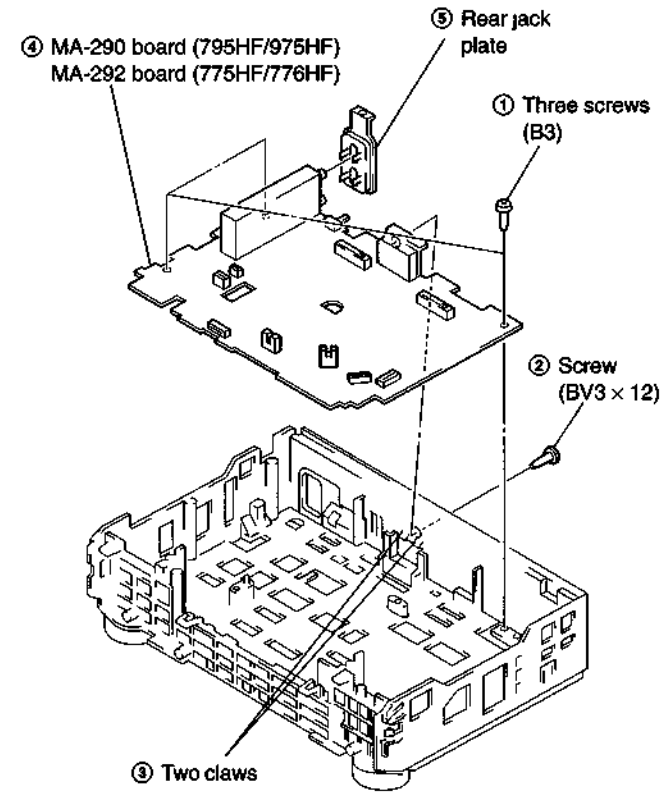
2-6. RP-218/RP-220 BOARD REMOVAL



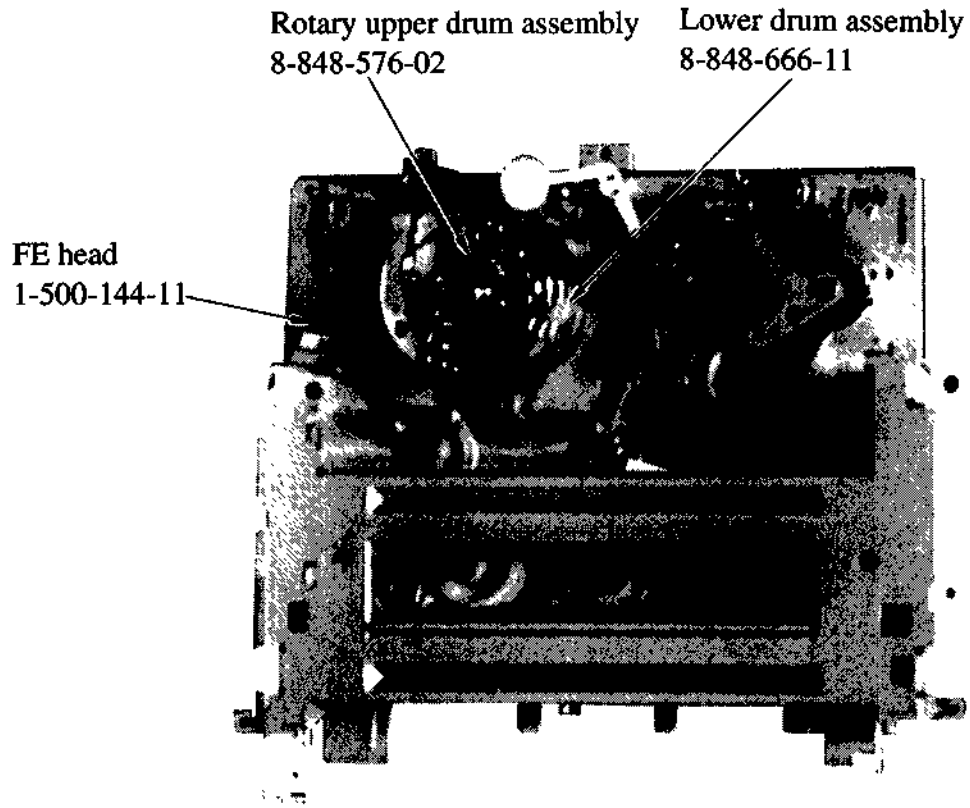
2-7. MECHANISM CHASSIS ASSEMBLY REMOVAL

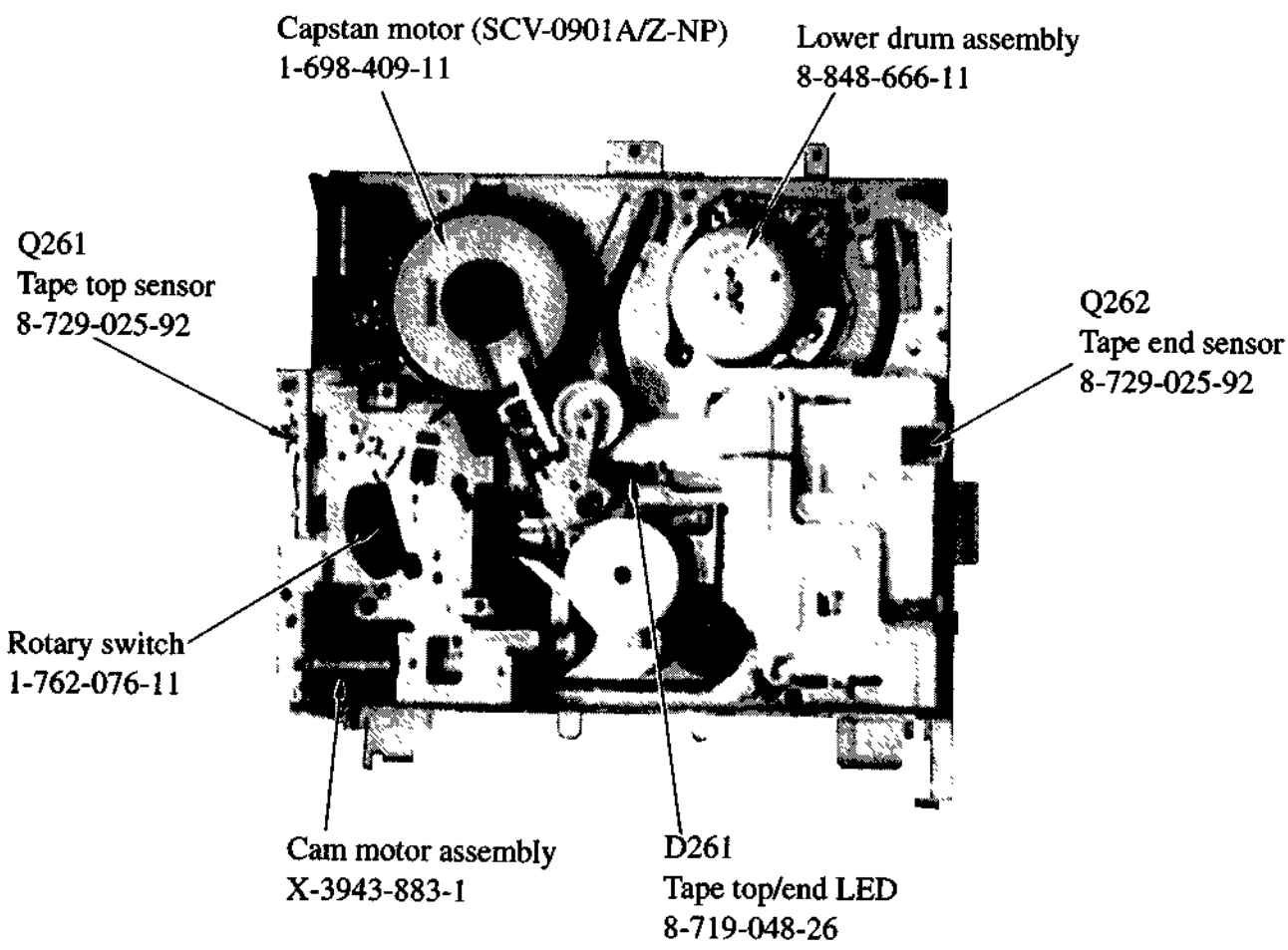


2-8. MA-290/MA-292 BOARD REMOVAL

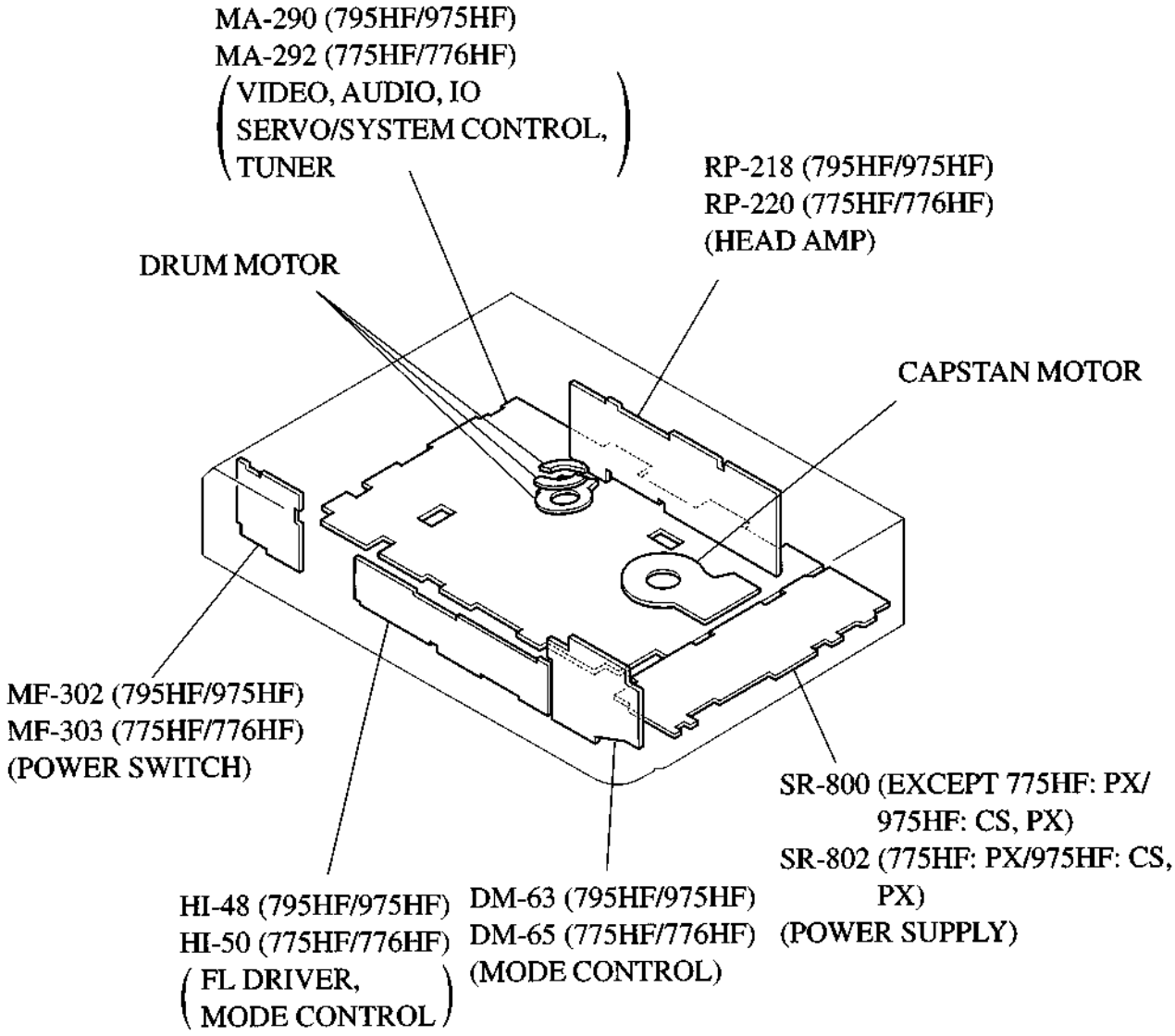


2-9. INTERNAL VIEWS



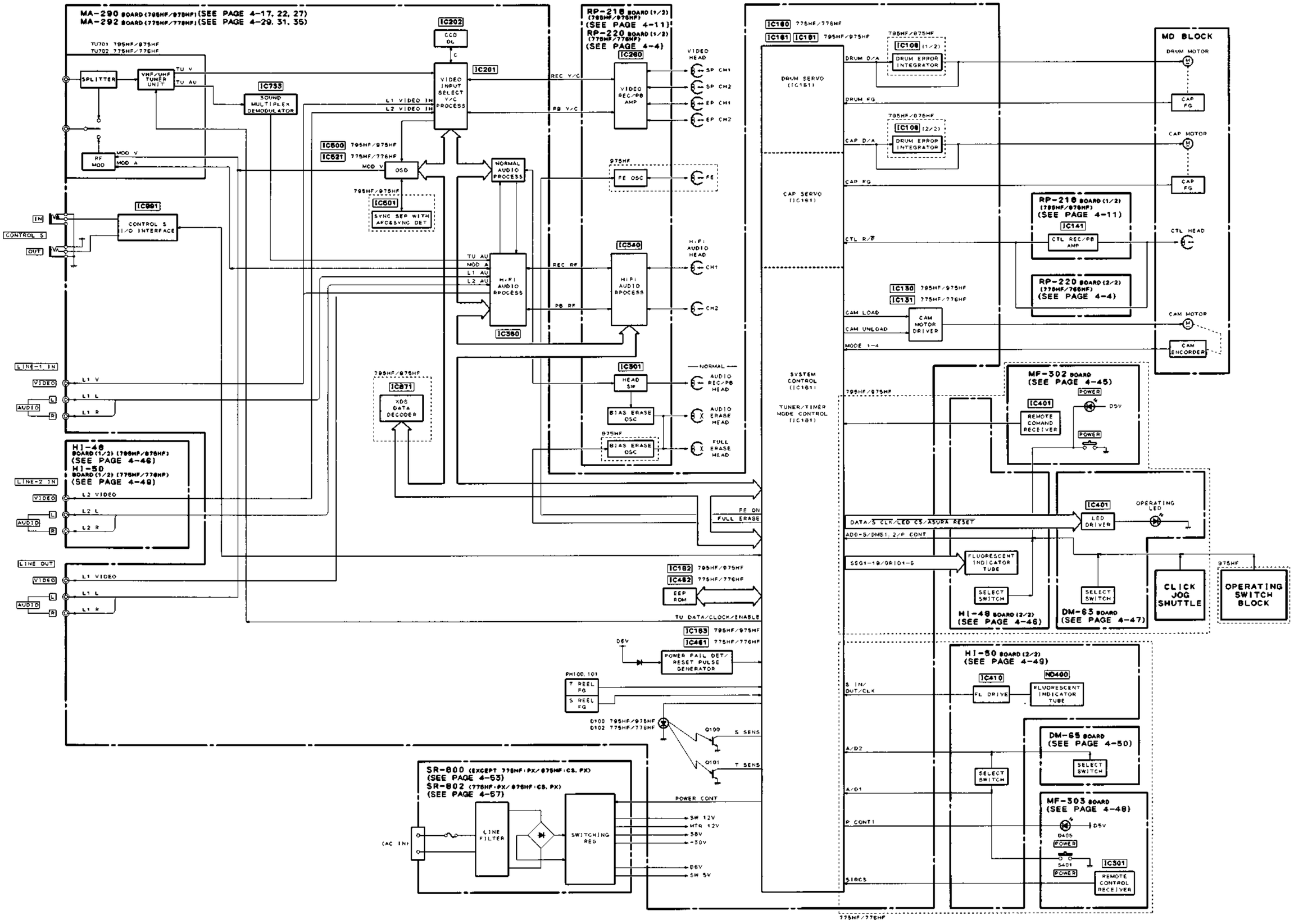


2-10. CIRSUIT BOARDS LOCATION

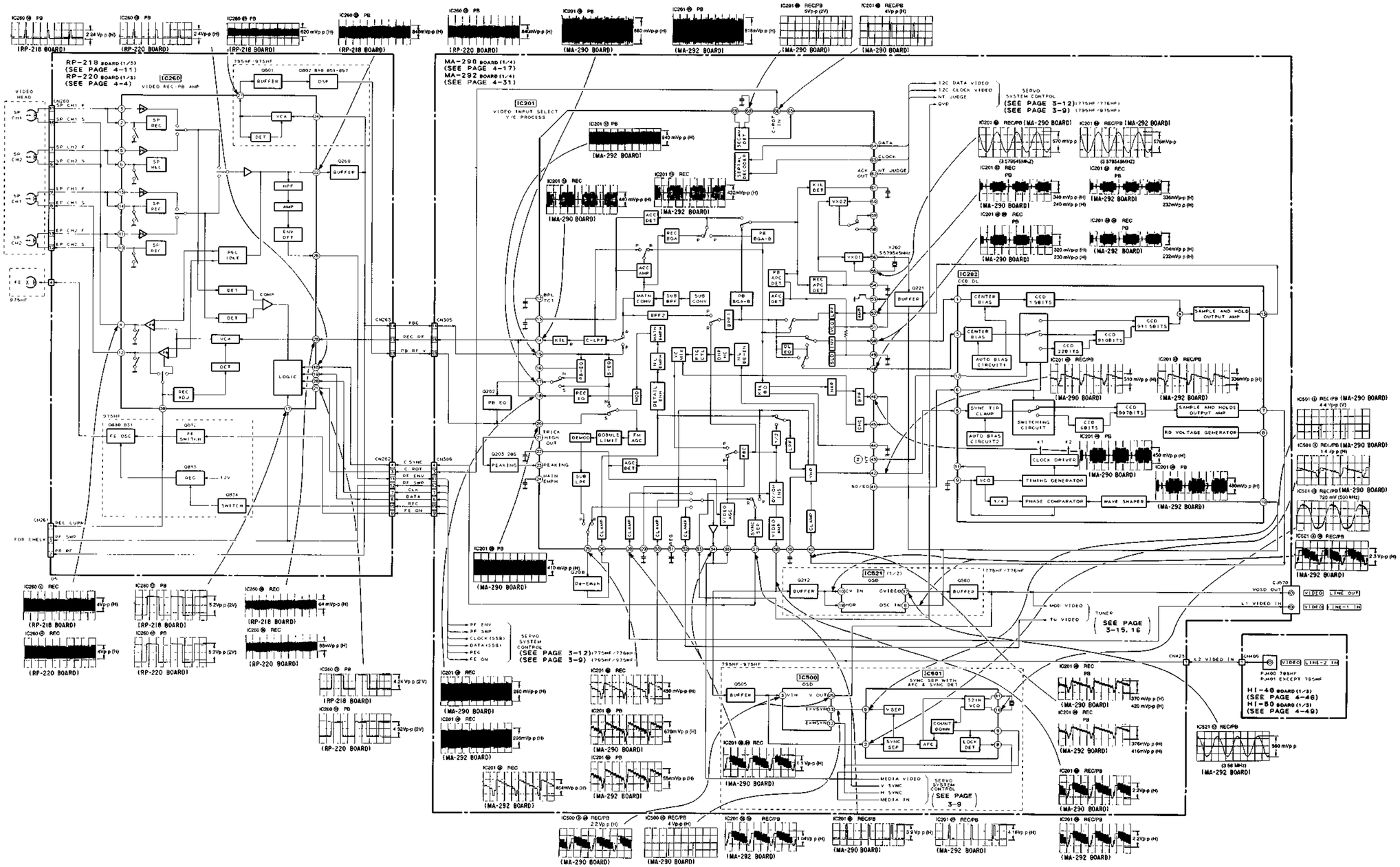


SECTION 3
BLOCK DIAGRAMS

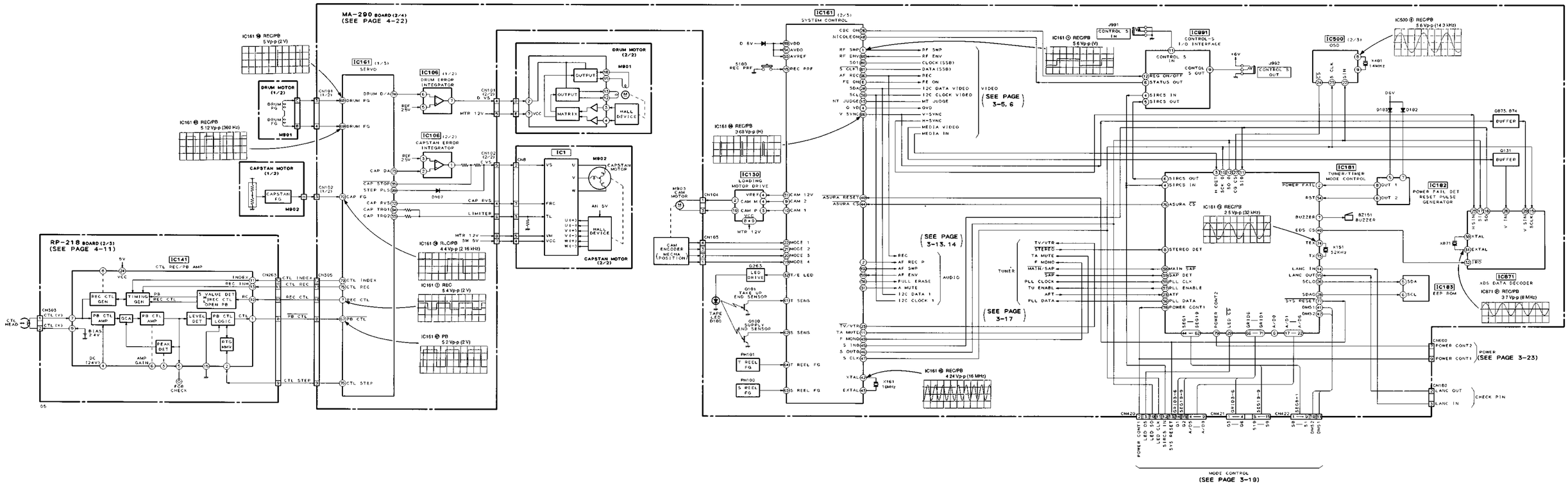
3-1. OVERALL BLOCK DIAGRAM



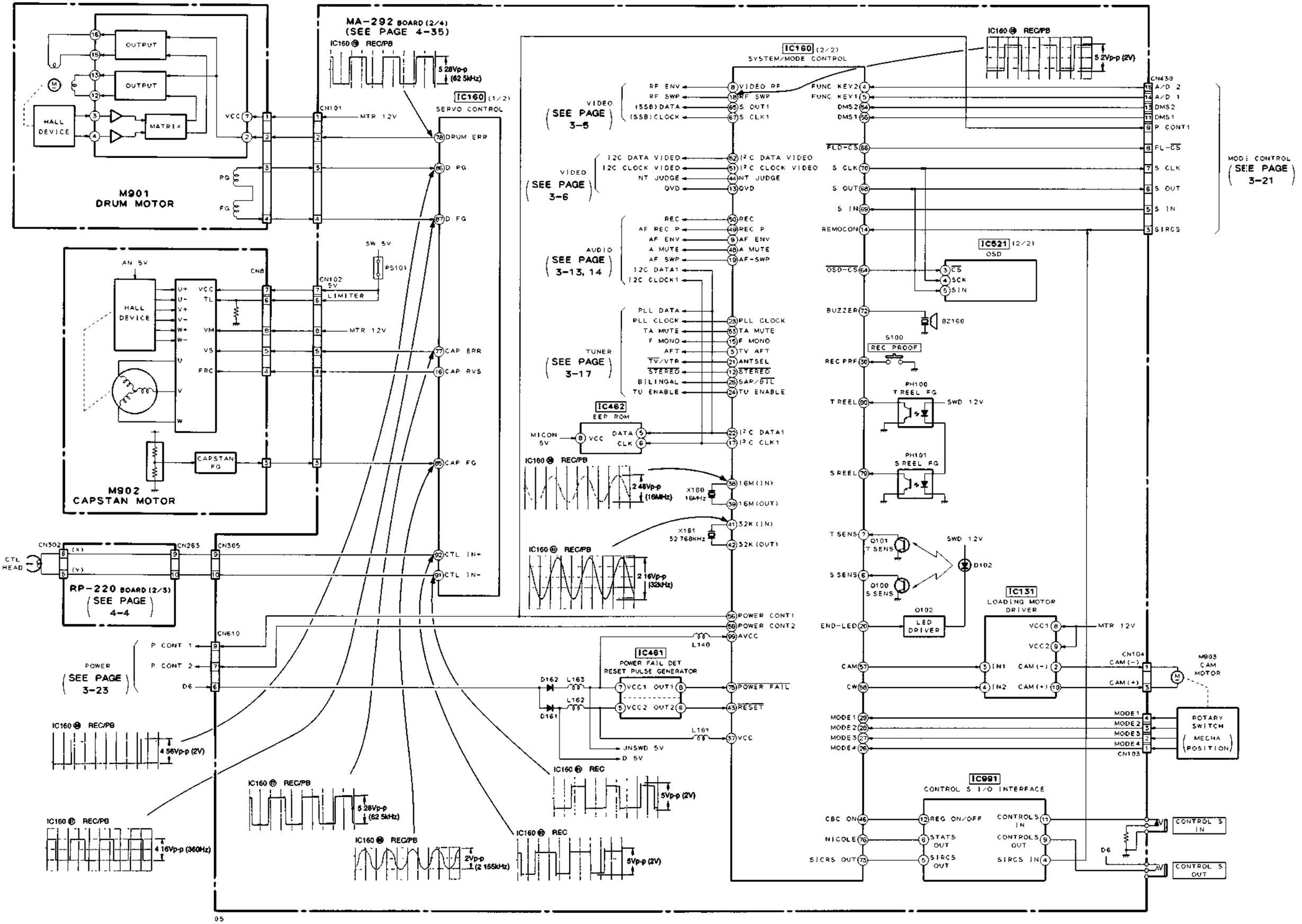
3-2. VIDEO BLOCK DIAGRAM



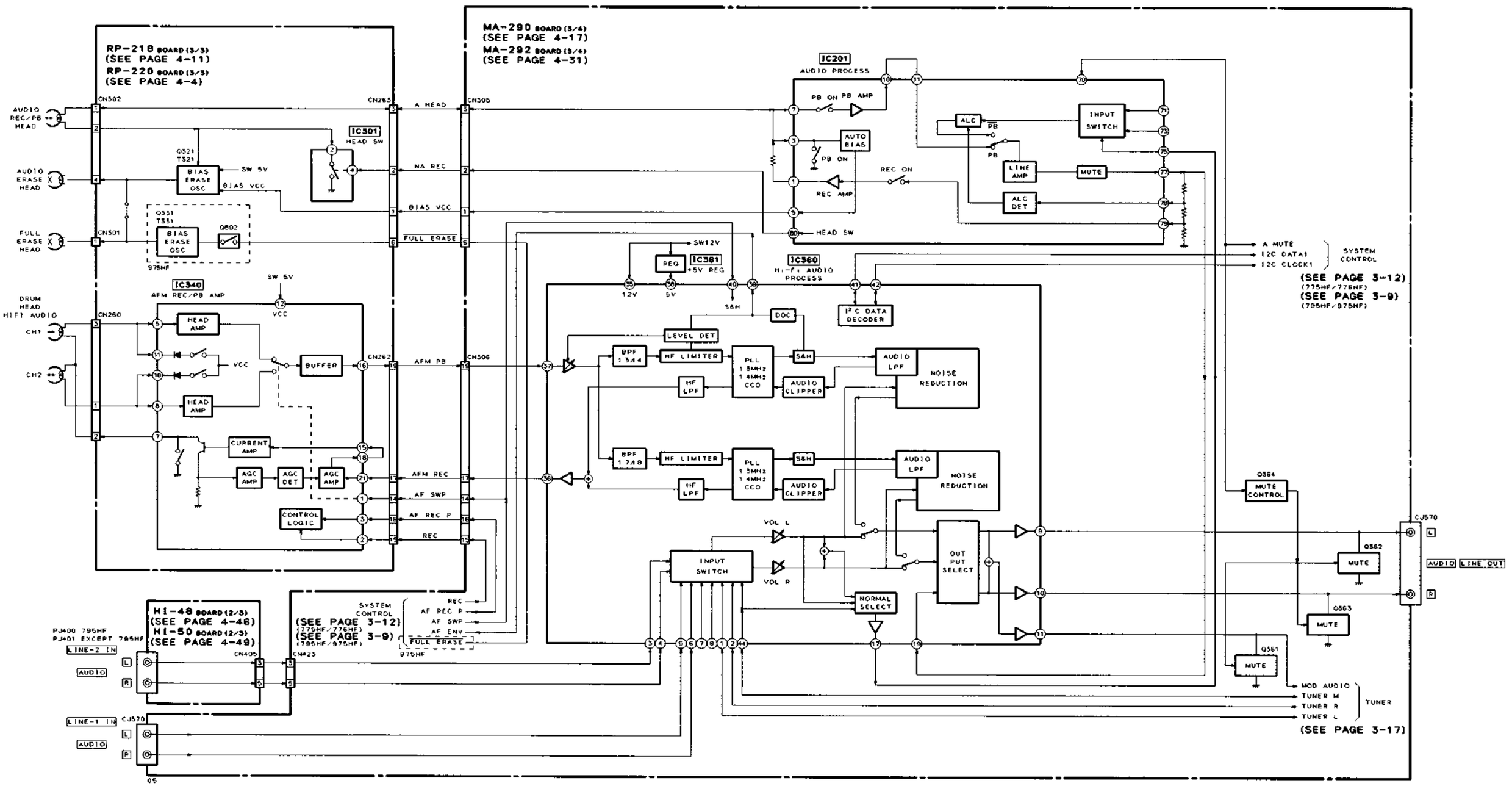
3-3. SERVO/SYSTEM CONTROL BLOCK DIAGRAM (795HF/975HF)



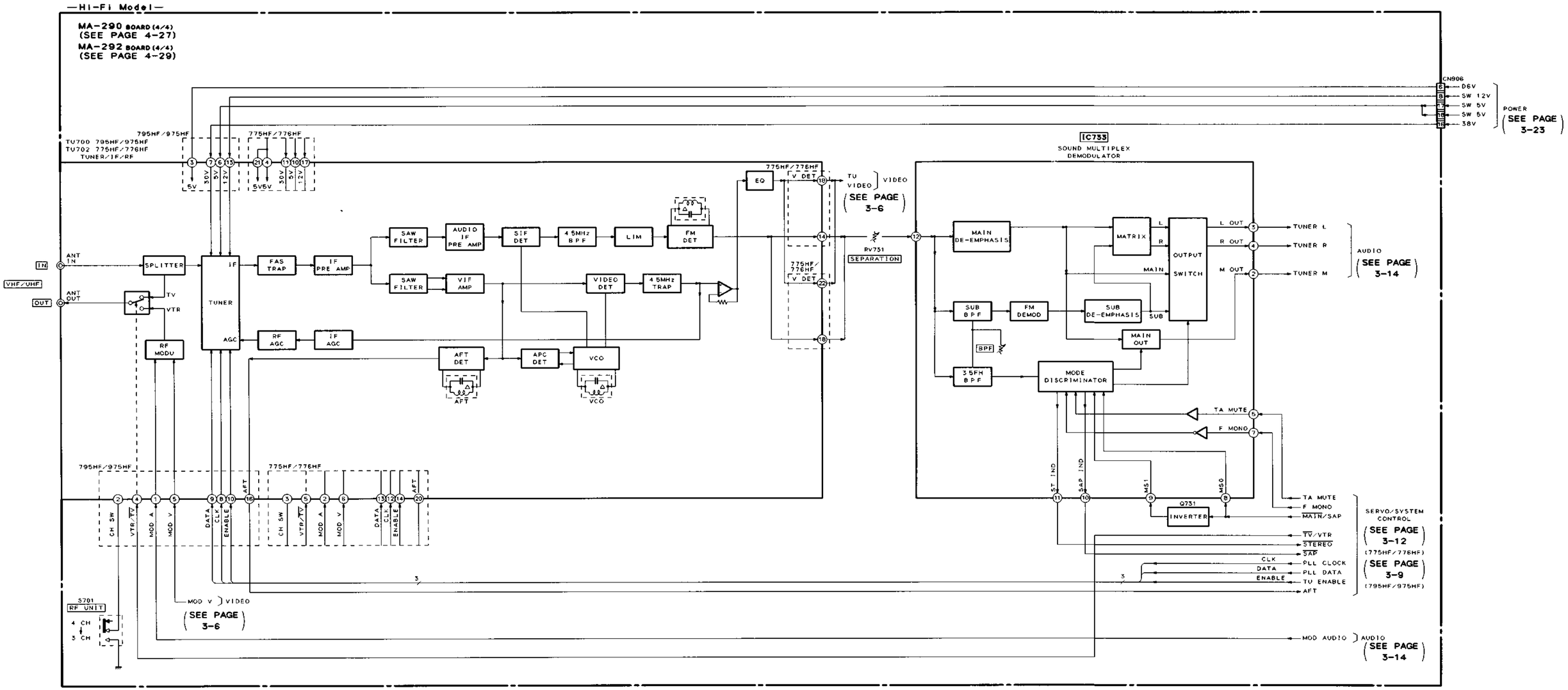
3-4. SERVO/SYSTEM CONTROL BLOCK DIAGRAM (775HF/776HF)



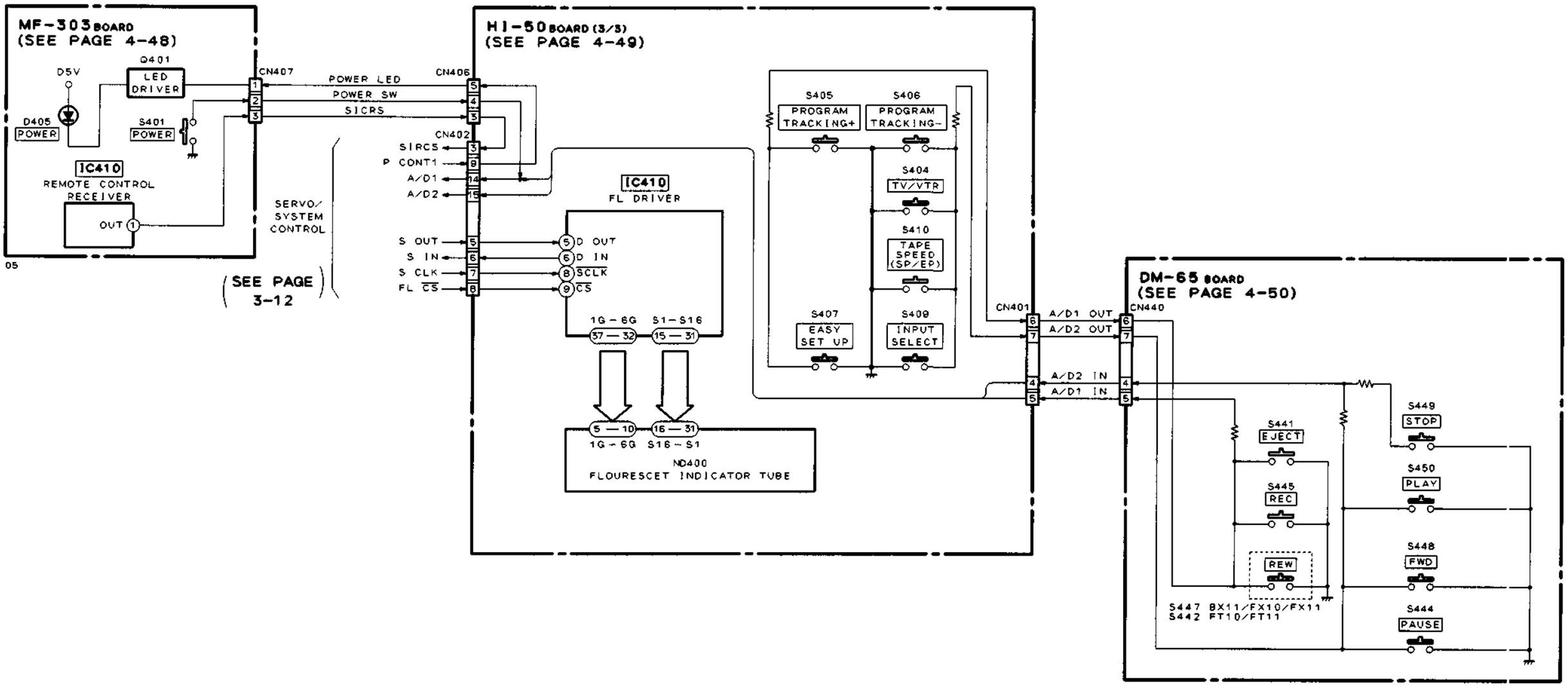
3-5. AUDIO BLOCK DIAGRAM



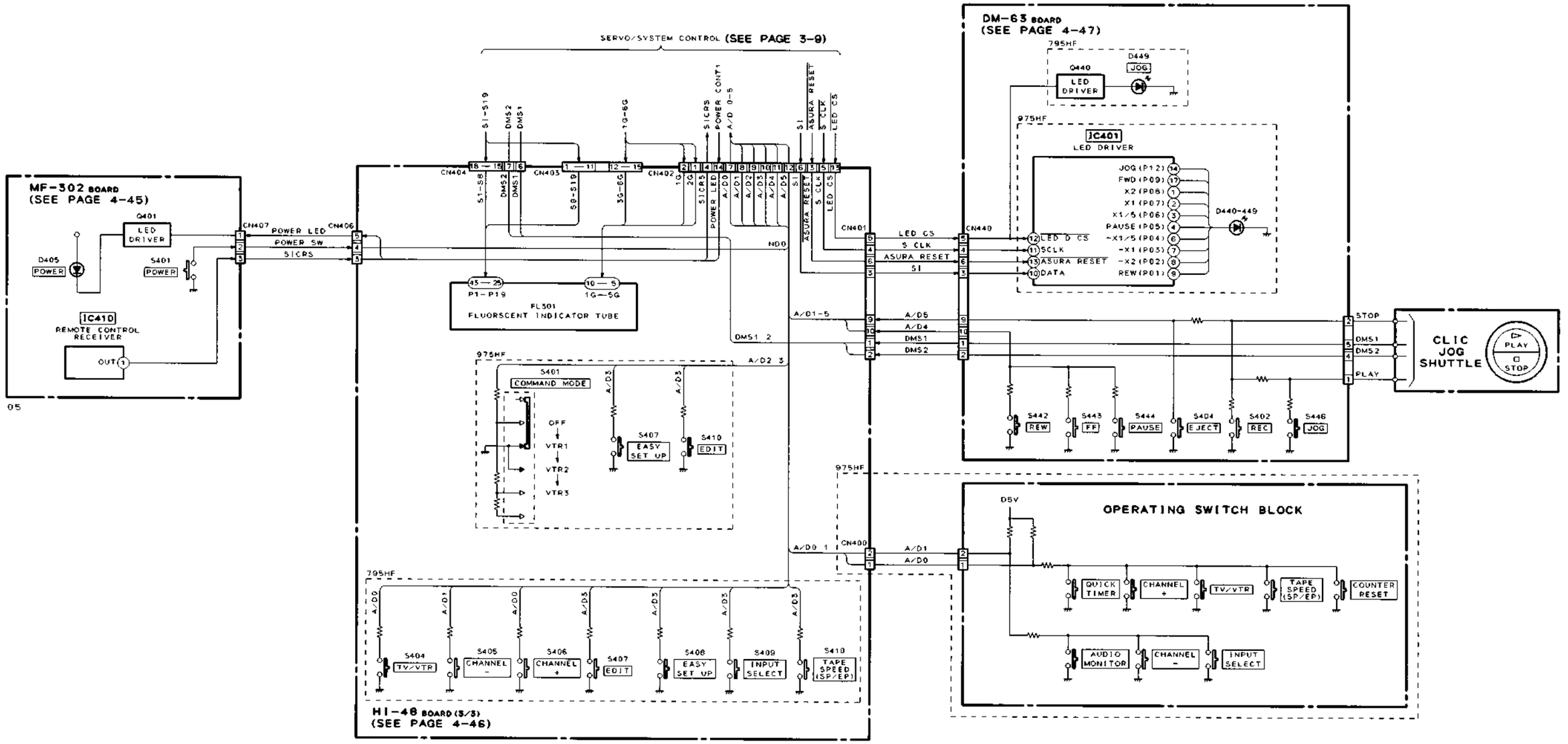
3-6. TUNER BLOCK DIAGRAM



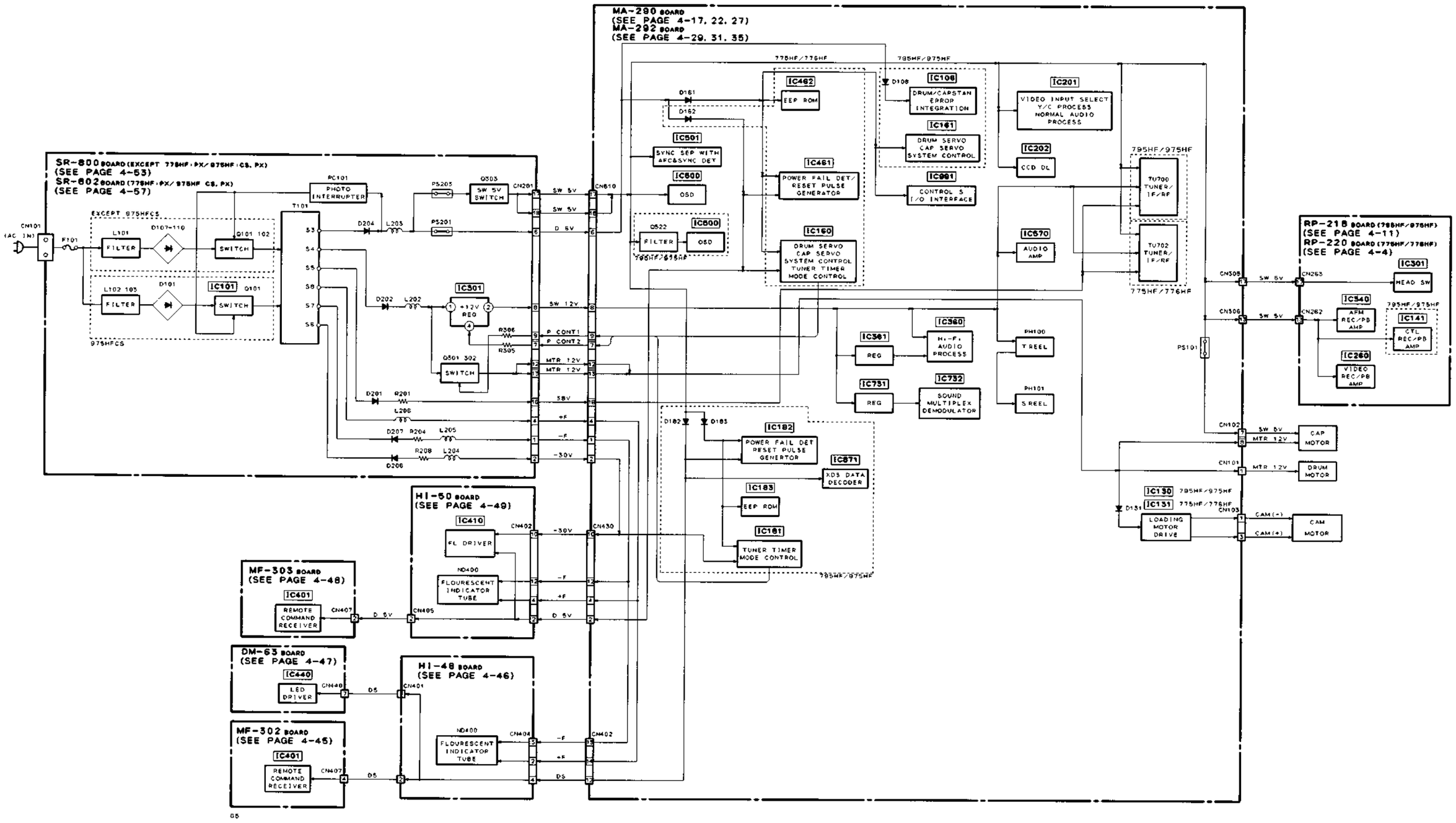
3-7. MODE CONTROL BLOCK DIAGRAM (795HF/975HF)



3-8. MODE CONTROL BLOCK DIAGRAM (775HF/776HF)



3-9. POWER SUPPLY BLOCK DIAGRAM



SECTIONN 4
PRINTED WIRNIG BOARDS AND SCHEMATIC DIAGRAMS

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

For printed wiring boards:

- ○——— : indicates a lead wire mounted on the component side.
- ●——— : indicates a lead wire mounted on the printed side.
- ○ : Through hole
- ■ : Parts mounted on the conductor side
- : Pattern from the side which enables seeing.
- : Pattern on the rear side.*
- Circled numbers refer to waveforms.

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

For schematic Diagram:

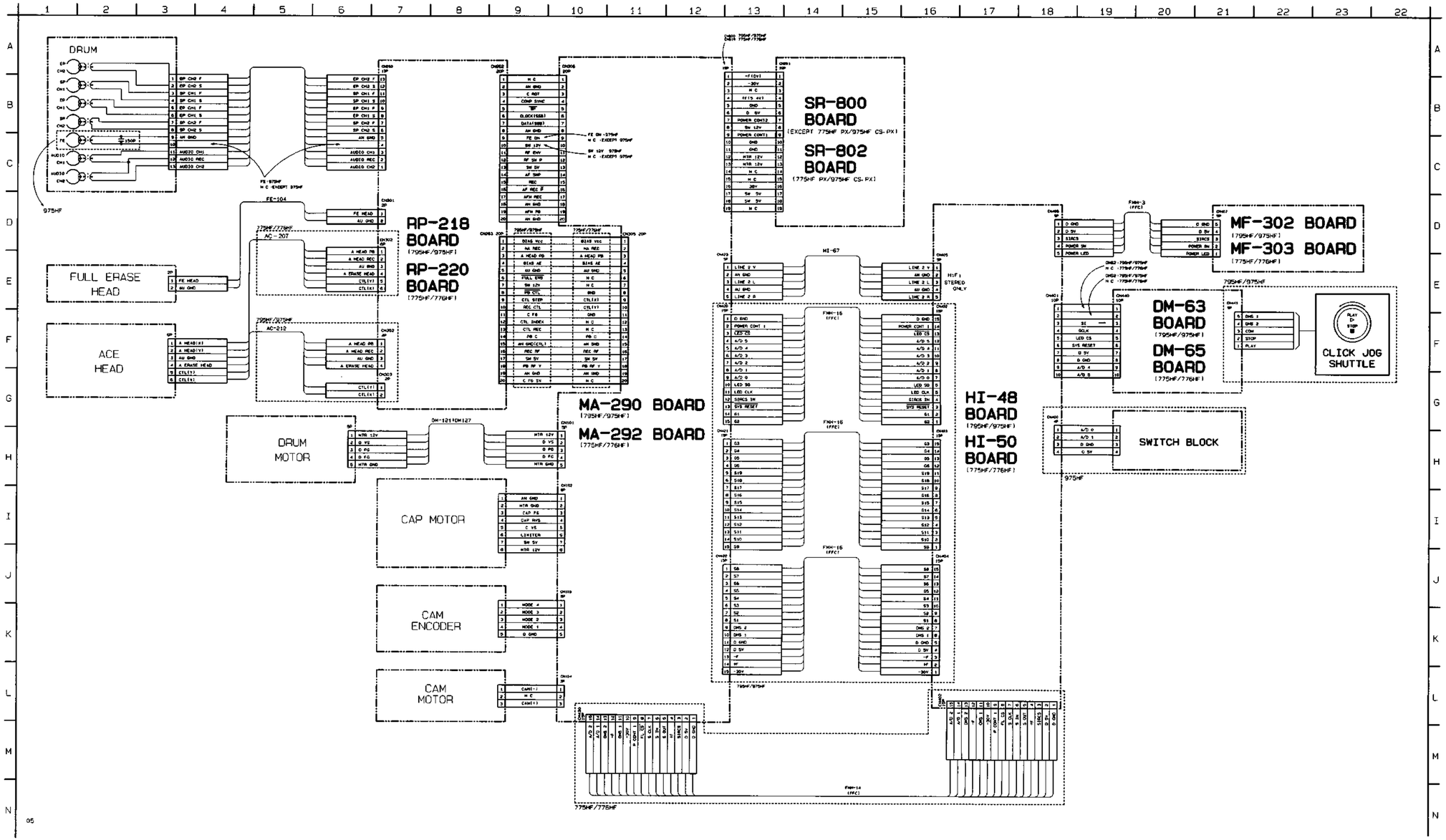
- Caution when replacing chip parts. New parts must be attached after removal of chip Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat
- All resistors are in ohms, ¼ W (Chip resistors : 1/10 W) unless otherwise specified. kΩ . 1000Ω, MΩ 1000kΩ
- All capacitors are in µF unless otherwise noted pF µµF 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 *
- Voltages are dc between measurement point.*
- Readings are taken with a color-bar signal input.*
- Readings are taken with a digital multimeter (DC 10MΩ).*
- Voltage variations may be noted due to normal production tolerances *

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

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

- * : indicated by the color red.

4-1. FRAME SCHEMATIC DIAGRAM



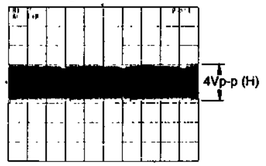
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

RP-220 (HEAD AMP) SCHEMATIC DIAGRAM (SLV-775HF/776HF)

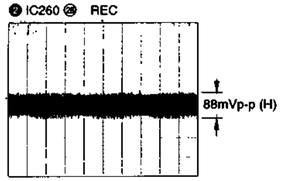
– Ref. No.: RP-220 board; 1,000 series –

• Waveforms

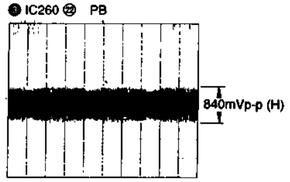
1 IC260 ④ REC



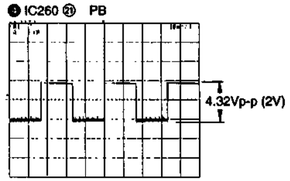
2 IC260 ㉘ REC



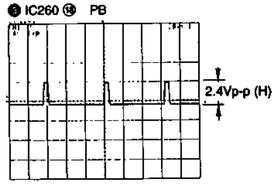
3 IC260 ㉒ PB



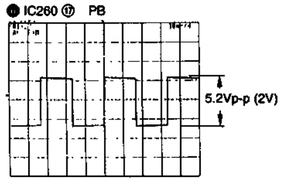
4 IC260 ㉑ PB

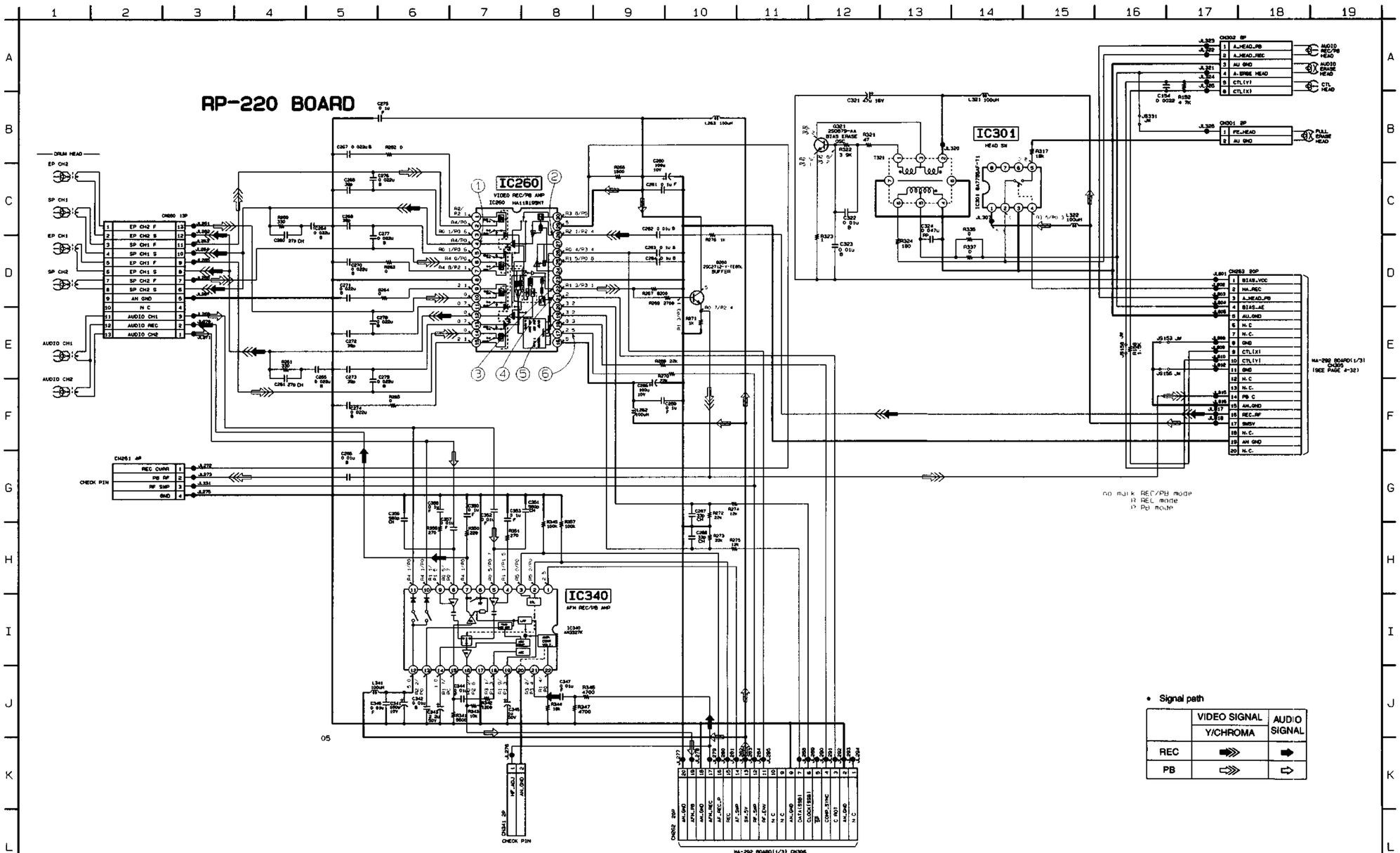


5 IC260 ⑭ PB



6 IC260 ⑰ PB





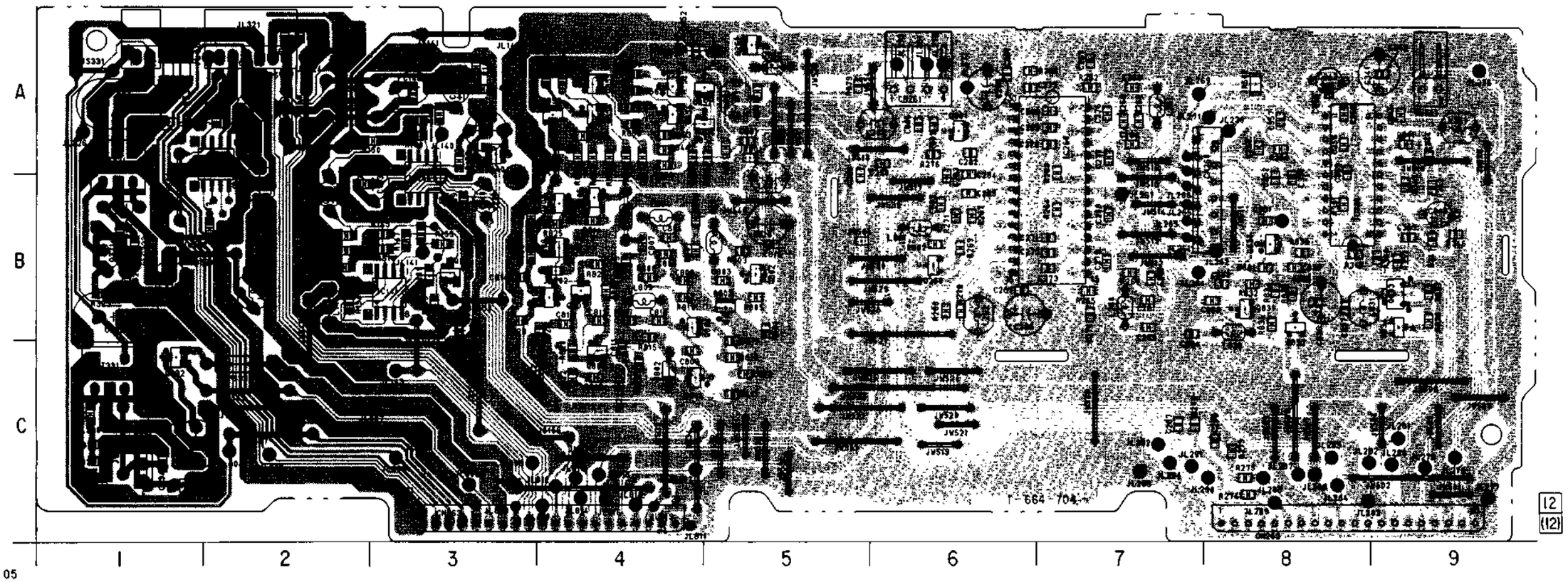
• Signal path

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

RP-220 (HEAD AMP) PRINTED WIRING BOARD (SLV-775HF/776HF)
– Ref. No.: RP-220 board; 1,000 series –

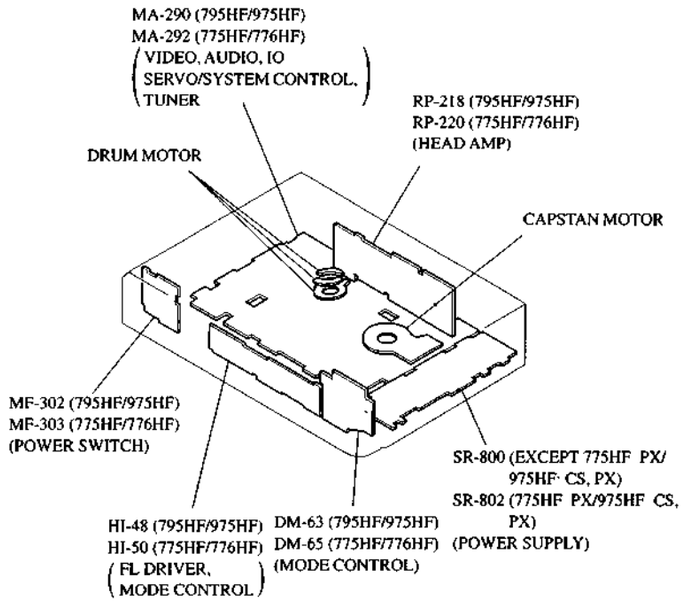
There are few cases that the part isn't mounted in this model is printed on this diagram.

RP-220 BOARD



RP-220 BOARD

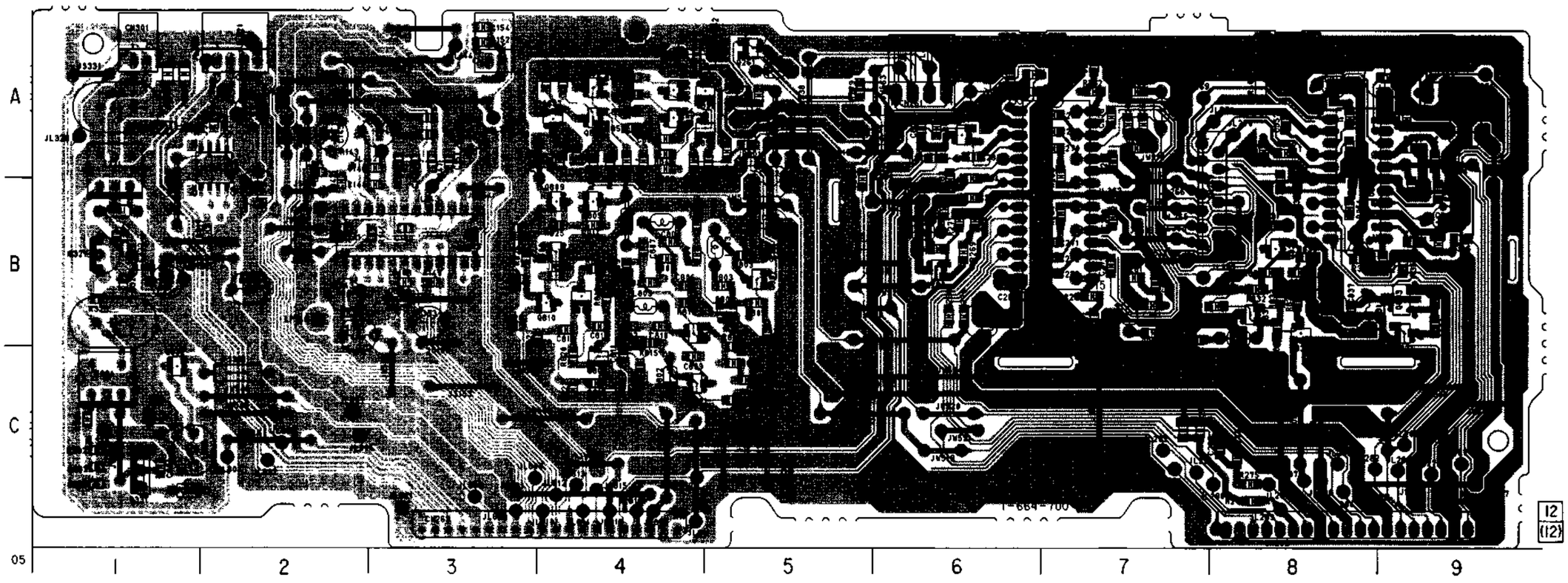
CN260	B-8
CN261	A-6
CN262	C-8
CN263	C-4
CN301	A-1
CN302	A-2
CN341	A-9
IC260	A-7
IC301	A-2
IC340	B-8
Q260	B-6
Q321	B-1



RP-218 (HEAD AMP) PRINTED WIRING BOARD (SLV-795HF/975HF)
– Ref. No.. RP-218 board; 3,000 series –

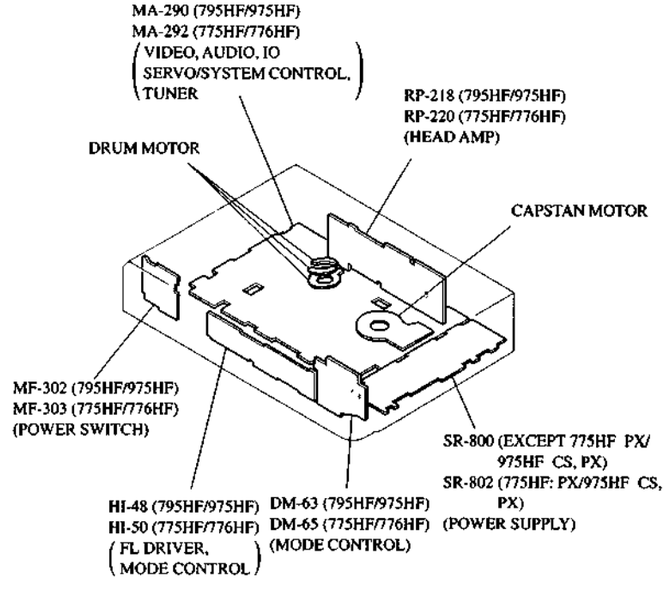
There are few cases that the part isn't mounted in this model is printed on this diagram.

RP-218 BOARD

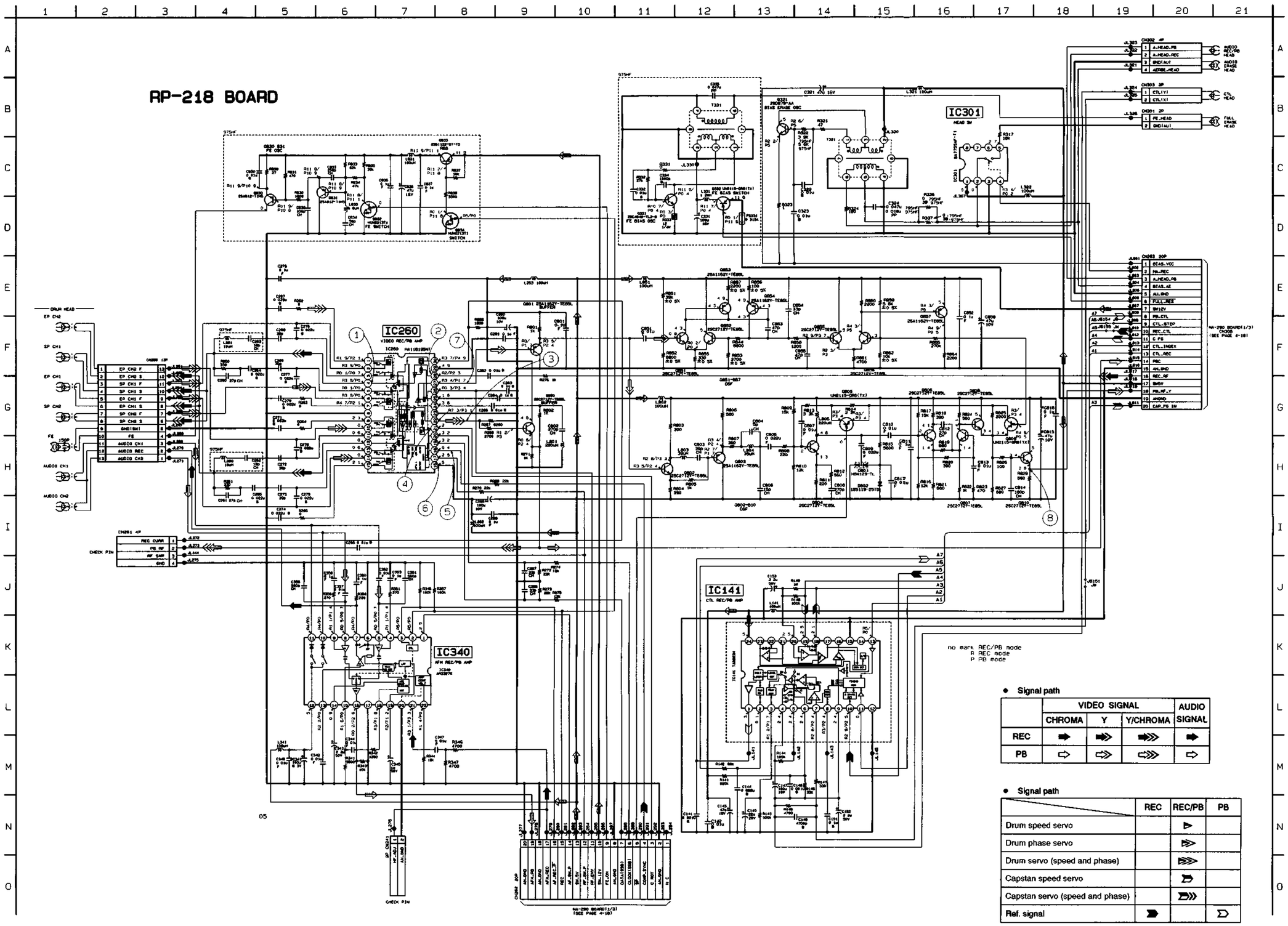


RP-218 BOARD

CN260	B-7
CN261	A-6
CN262	C-8
CN263	C-3
CN301	A-1
CN302	A-2
CN303	A-3
CN341	A-9
D801	C-4
D802	C-4
IC141	B-3
IC260	B-7
IC301	A-2
IC340	B-8
Q260	B-6
Q321	B-1
Q331	C-1
Q332	C-1
Q801	A-6
Q802	B-5
Q803	B-5
Q804	B-4
Q805	B-4
Q806	C-4
Q807	B-4
Q808	B-4
Q809	B-4
Q810	B-4
Q830	B-8
Q831	B-8
Q832	B-8
Q833	B-9
Q834	B-9
Q851	A-4
Q852	A-4
Q853	A-4
Q854	A-4
Q855	A-4
Q856	A-4
Q857	A-4



RP-218 (HEAD AMP) SCHEMATIC DIAGRAM (SLV-795HF/975HF)
– Ref. No.: RP-218 board; 3,000 series –



• **Signal path**

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

• **Signal path**

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷	
Drum servo (speed and phase)		▷	
Capstan speed servo		▷	
Capstan servo (speed and phase)		▷	
Ref. signal	▶		▷

• **Waveforms**

● IC260 ④ REC
4Vp-p (H)

● IC260 ㉖ REC
64 mVp-p (H)

● IC260 ㉒ PB
840mVp-p (H)

● IC260 ㉑ PB
4.24 Vp-p (2 V)

● IC260 ⑭ PB
2.24 Vp-p (H)

● IC260 ⑰ PB
5.2Vp-p (2V)

● IC260 ㉗ PB
620 mVp-p (H)

● Q810 ⑥ PB
400 mVp-p (H)

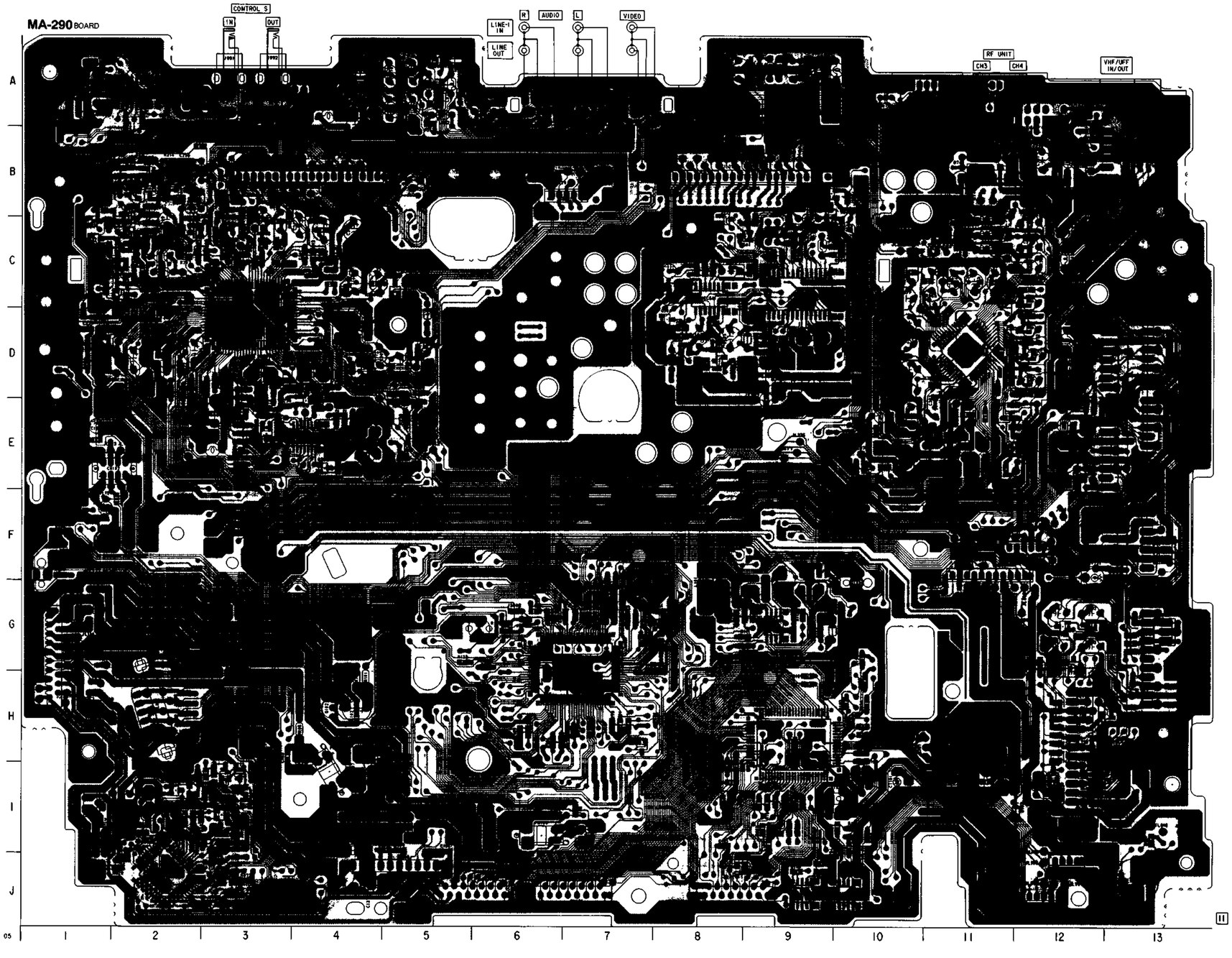
MA-290 (SERVO/SYSTEM CONTROL, VIDEO, AUDIO, IO, TUNER) PRINTED WIRING BOARD (SLV-795HF/975HF)

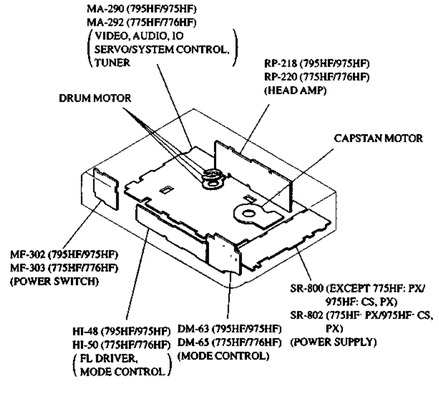
– Ref. No.: MA-290 board; 3,000 series –

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

MA-290 BOARD

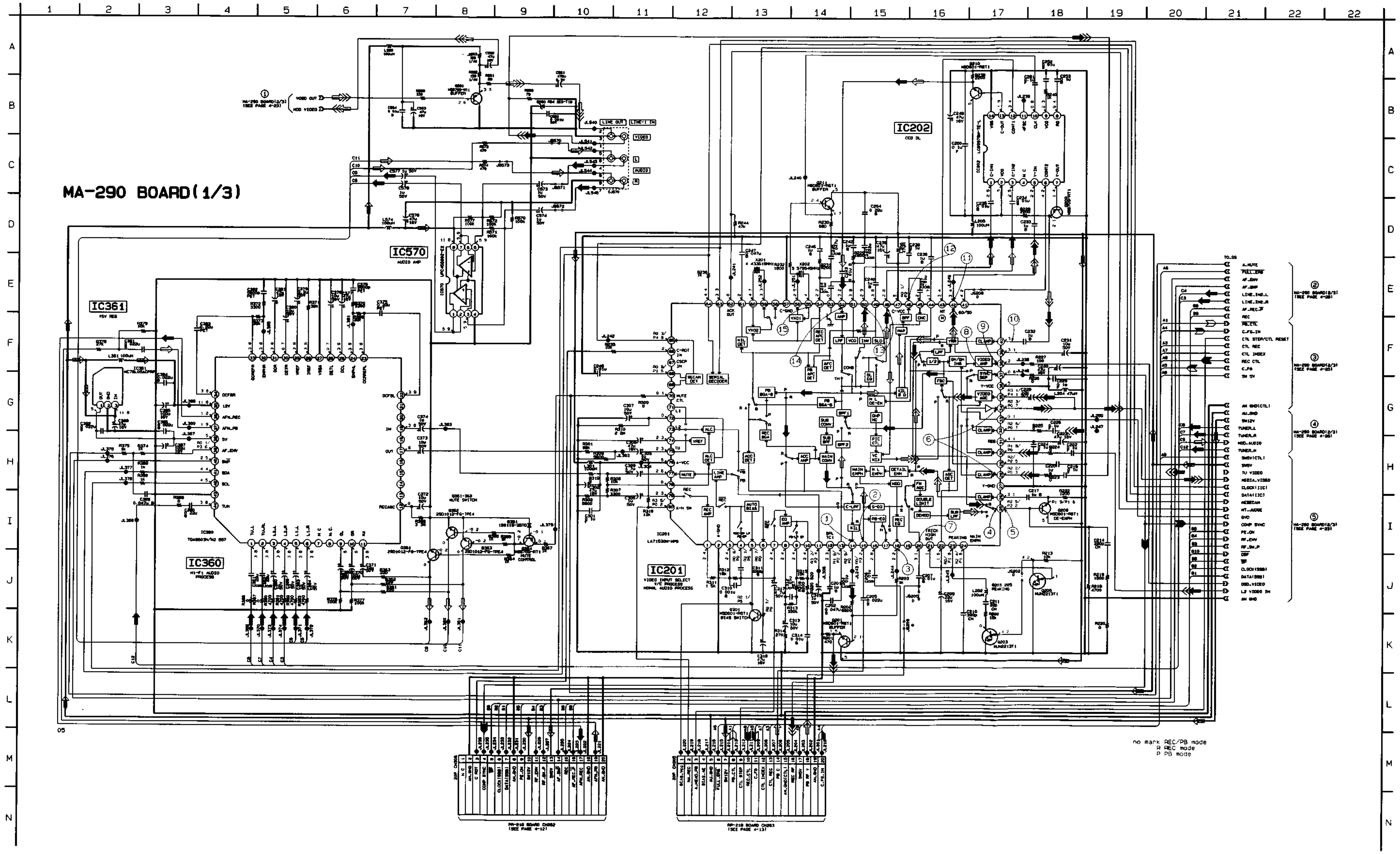
CN101	B-7
CN102	E-2
CN103	H-2
CN104	I-1
CN180	I-12
CN305	B-4
CN306	B-8
CN420	J-8
CN421	J-7
CN422	J-5
CN423	F-12
CN600	G-1
D100	G-8
D107	G-9
D108	H-1
D131	I-4
D161	G-1
D182	I-11
D183	I-12
D361	C-11
D501	D-8
D502	D-9
D503	C-9
D504	C-9
D560	A-8
D702	D-12
D991	A-2
D992	A-4
D993	A-4
D995	A-2
IC106	G-9
IC130	J-5
IC161	G-7
IC181	H-9
IC182	J-9
IC183	J-10
IC201	D-3
IC202	E-4
IC360	D-11
IC361	E-11
IC500	C-9
IC501	C-8
IC570	A-4
IC733	H-12
IC871	J-2
IC991	A-2
Q100	F-10
Q101	F-1
Q102	H-4
Q161	H-7
Q201	B-3
Q203	C-2
Q205	C-1
Q208	C-2
Q209	E-4
Q210	E-3
Q211	E-4
Q301	C-4
Q361	C-11
Q362	B-11
Q363	C-11
Q364	C-11
Q502	B-9
Q503	B-9
Q504	D-8
Q505	D-8
Q560	A-9
Q731	G-12
Q871	I-3
Q872	I-3
Q873	I-2
Q874	I-3
Q875	I-3



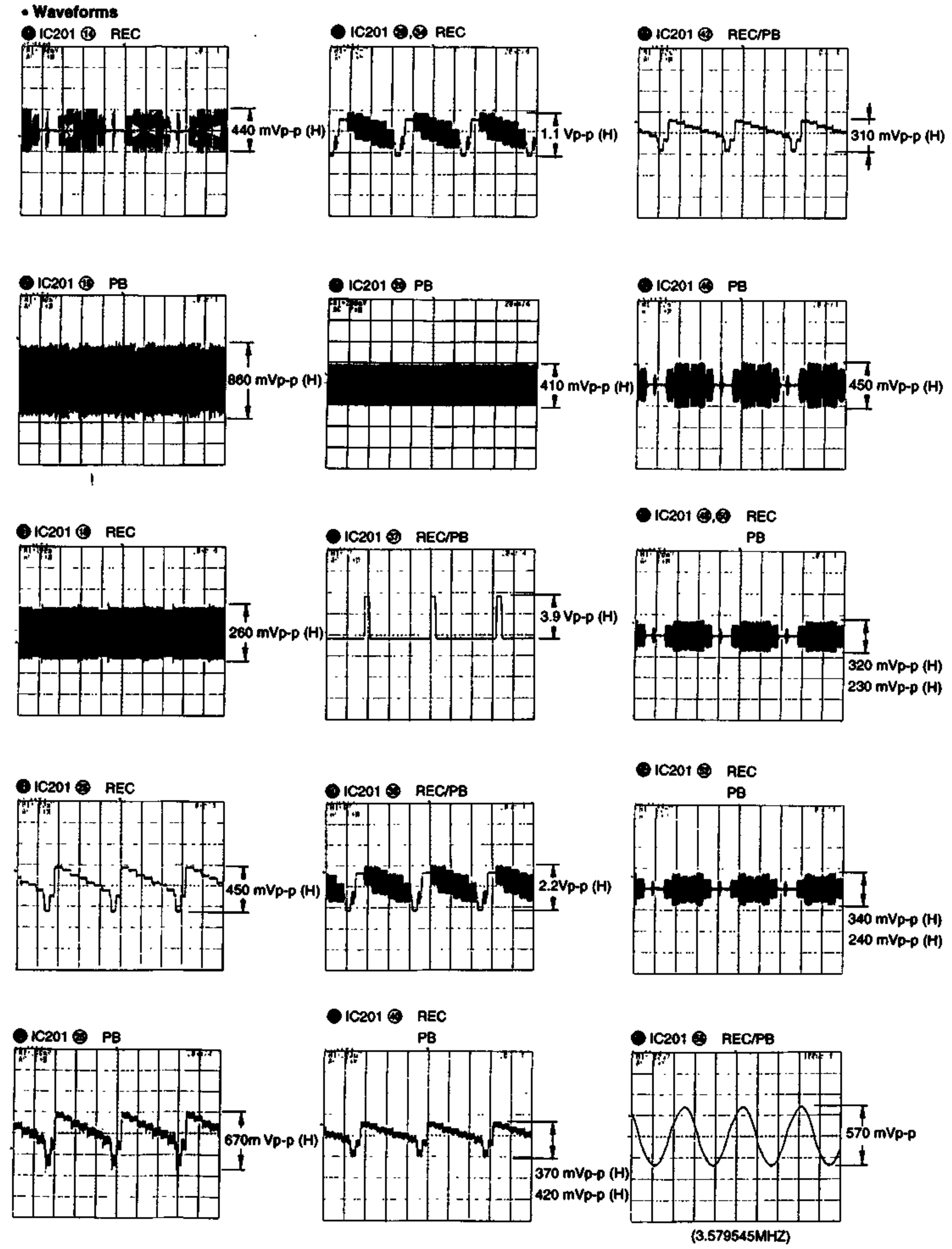


MA-290 (VIDEO, AUDIO, IO) SCHEMATIC DIAGRAM (SLV-795HF/975HF)

– Ref. No.: MA-290 board; 3,000 series –



• Waveforms

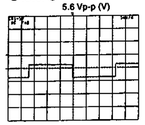


• Signal path

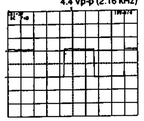
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡»	➡»»	➡
PB	⇨	⇨»	⇨»»	⇨

• Waveforms

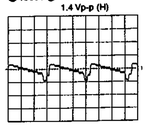
● IC161 ① REC/PB
5.6 Vp-p (V)



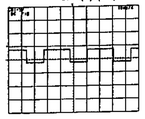
● IC161 ⑥ REC/PB
4.4 Vp-p (2.16 kHz)



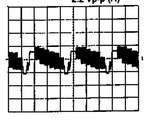
● IC501 ② REC/PB
1.4 Vp-p (H)



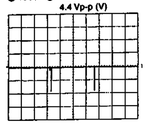
● IC161 ⑦ REC
5.4 Vp-p (2 V)



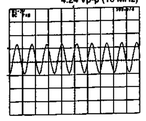
● IC500 ③,⑧ REC/PB
2.2 Vp-p (H)



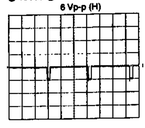
● IC501 ③ REC/PB
4.4 Vp-p (V)



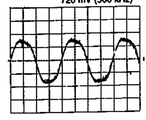
● IC161 ⑧ REC/PB
4.24 Vp-p (16 MHz)



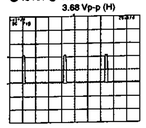
● IC500 ⑨ REC/PB
6 Vp-p (H)



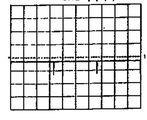
● IC501 ⑨ REC/PB
720 mV (500 kHz)



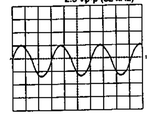
● IC161 ⑨ REC/PB
3.68 Vp-p (H)



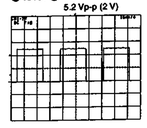
● IC500 ⑩ REC/PB
5.12 Vp-p (V)



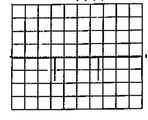
● IC181 ⑧ REC/PB
2.5 Vp-p (32 kHz)



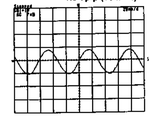
● IC161 ⑩ PB
5.2 Vp-p (2 V)



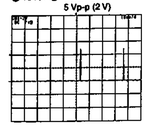
● IC500 ⑩ REC/PB
4 Vp-p (H)



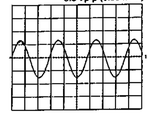
● IC181 ⑩ REC/PB
1.9 Vp-p (16 MHz)



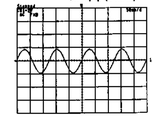
● IC161 ⑫ REC/PB
5 Vp-p (2 V)



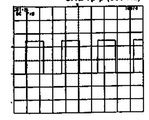
● IC500 ⑫ REC/PB
5.8 Vp-p (6.85 MHz)



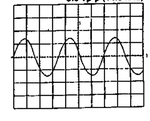
● IC871 ⑩ REC/PB
3.7 Vp-p (8 MHz)



● IC161 ⑬ REC/PB
5.12 Vp-p (360 Hz)

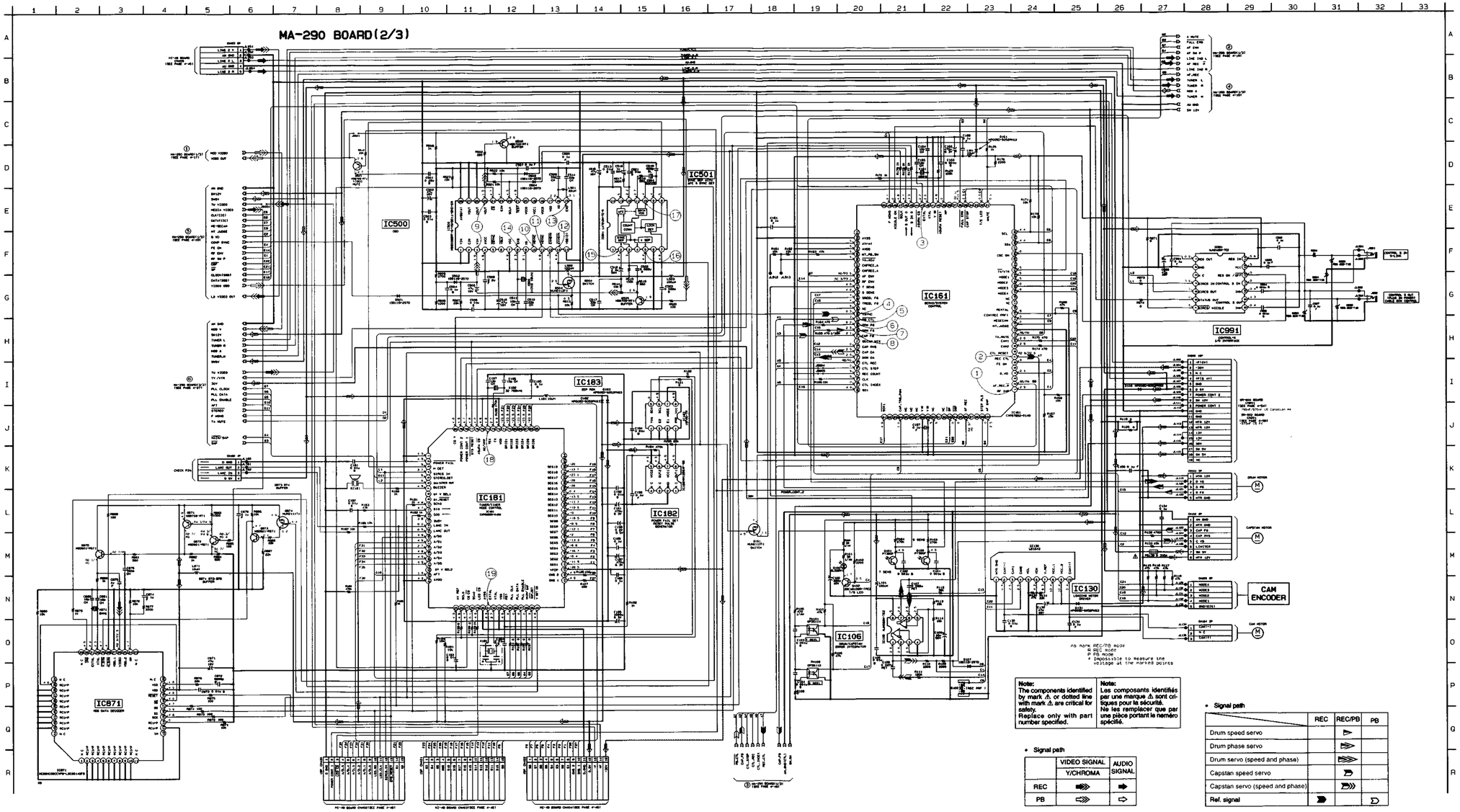


● IC500 ⑬ REC/PB
5.6 Vp-p (14.3 kHz)



MA-290 (SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM (SLV-795HF/975HF) • See page 4-14 to 4-16 for printed wiring board.

– Ref. No.: MA-290 board; 3,000 series –



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

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

• Signal path

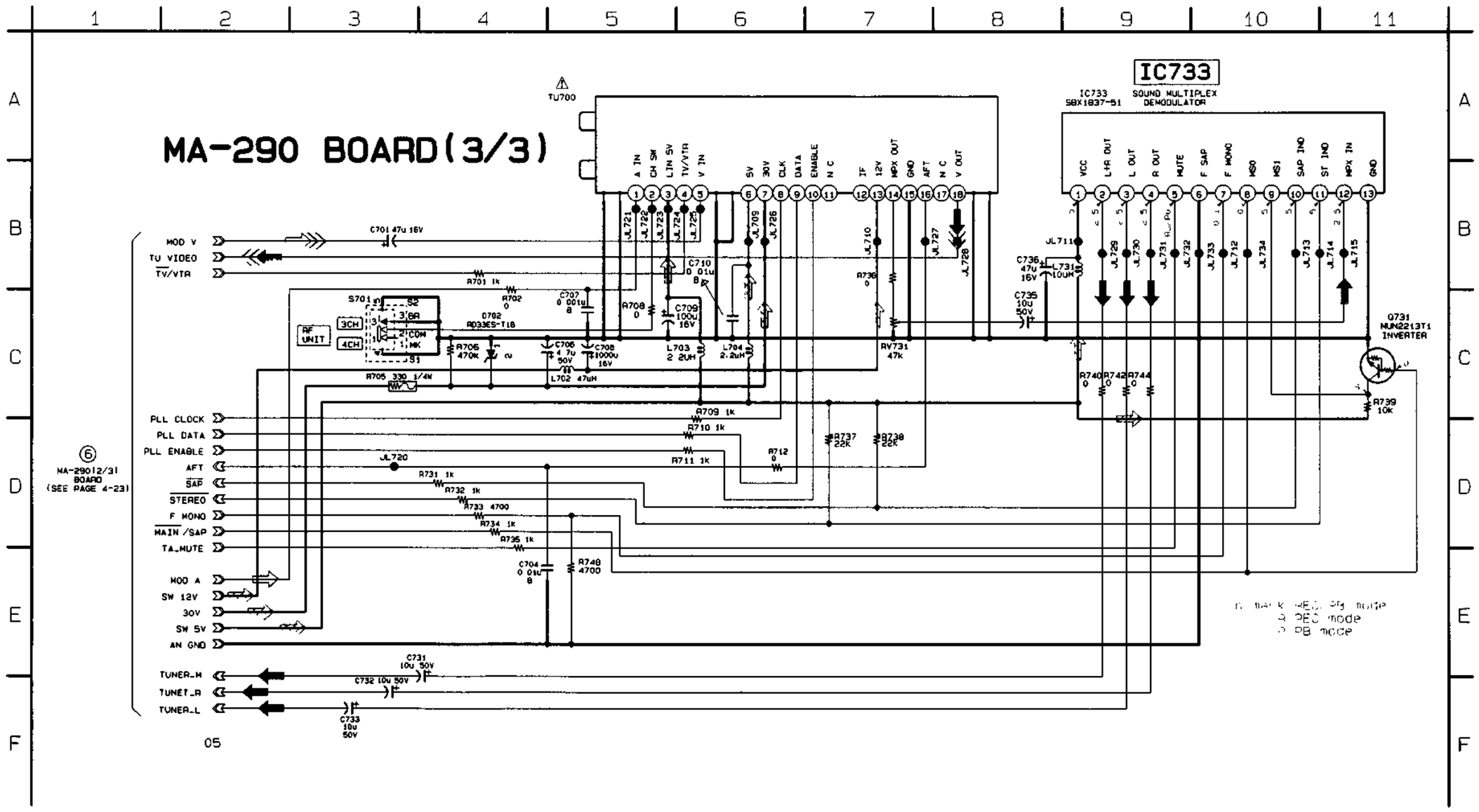
	VIDEO SIGNAL Y/CHROMA	AUDIO SIGNAL
REC	⇛	➡
PB	⇨	⇨

• Signal path

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷	
Drum servo (speed and phase)		▷	
Capstan speed servo		▷	
Capstan servo (speed and phase)		▷	
Ref. signal	▶		◁

MA-290 (TUNER) SCHEMATIC DIAGRAM (SLV-795HF/975HF) **• See page 4-14 to 4-16 for printed wiring board.**

– Ref. No.: MA-290 board; 3,000 series –



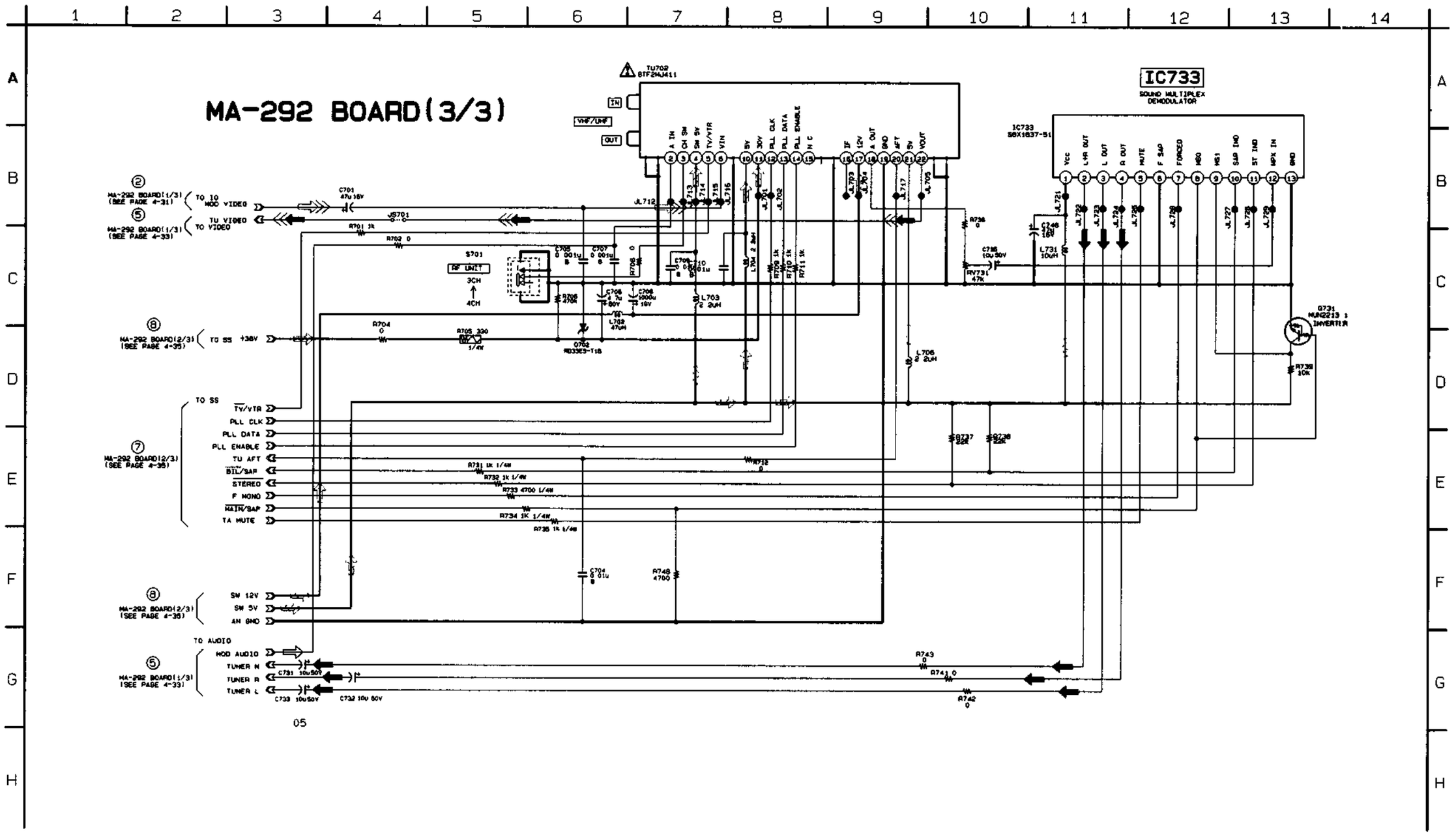
• Signal path

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

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

MA-292 (TUNER) SCHEMATIC DIAGRAM (SLV-775HF/776HF) • **See page 4-39 to 4-41 for printed wiring board.**

– Ref. No.: MA-292 board; 2,000 series –



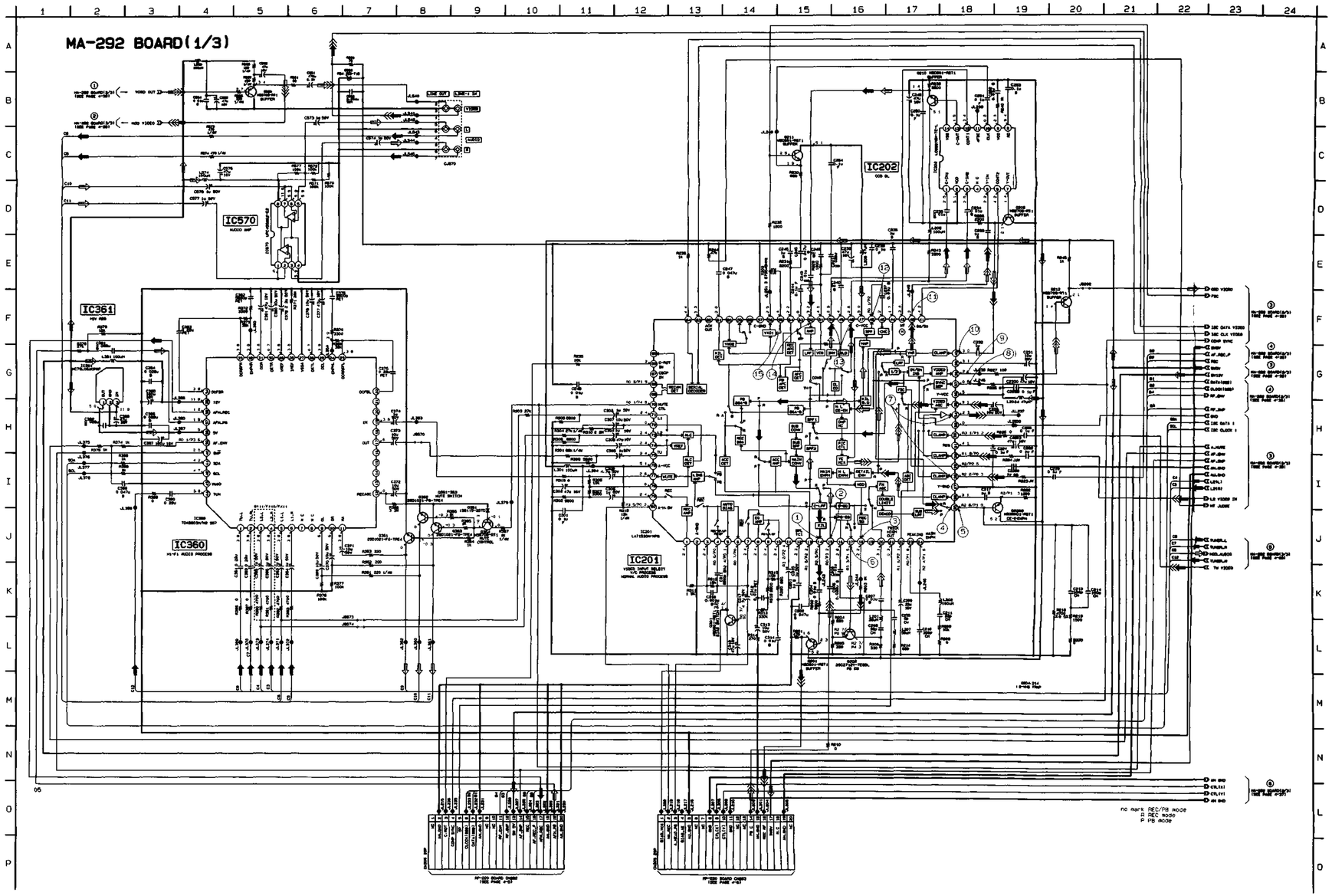
• Signal path

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

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

MA-292 (VIDEO, AUDIO, IO) SCHEMATIC DIAGRAM (SLV-775HF/776HF) • See page 4-39 to 4-41 for printed wiring board.

– Ref. No.: MA-292 board; 2,000 series –



• Waveforms

IC201 ⑭ REC — 432mVp-p (H)

IC201 ⑪ PB — 940 mVp-p (H)

IC201 ⑩ REC/PB — 336mVp-p (H)

IC201 ⑭ PB — 816mVp-p (H)

IC201 ⑩,⑪ REC/PB — 1.04Vp-p (H)

IC201 ⑩ PB — 480mVp-p (H)

IC201 ⑯ REC — 296mVp-p (H)

IC201 ⑫ REC/PB — 4.16Vp-p (H)

IC201 ⑨,⑬ REC PB — 304mVp-p (H) 232mVp-p (H)

IC201 ⑮ REC — 464mVp-p (H)

IC201 ⑬ REC/PB — 2.2Vp-p (H)

IC201 ⑮ REC PB — 336mVp-p (H) 232mVp-p (H)

IC201 ⑮ PB — 584mVp-p (H)

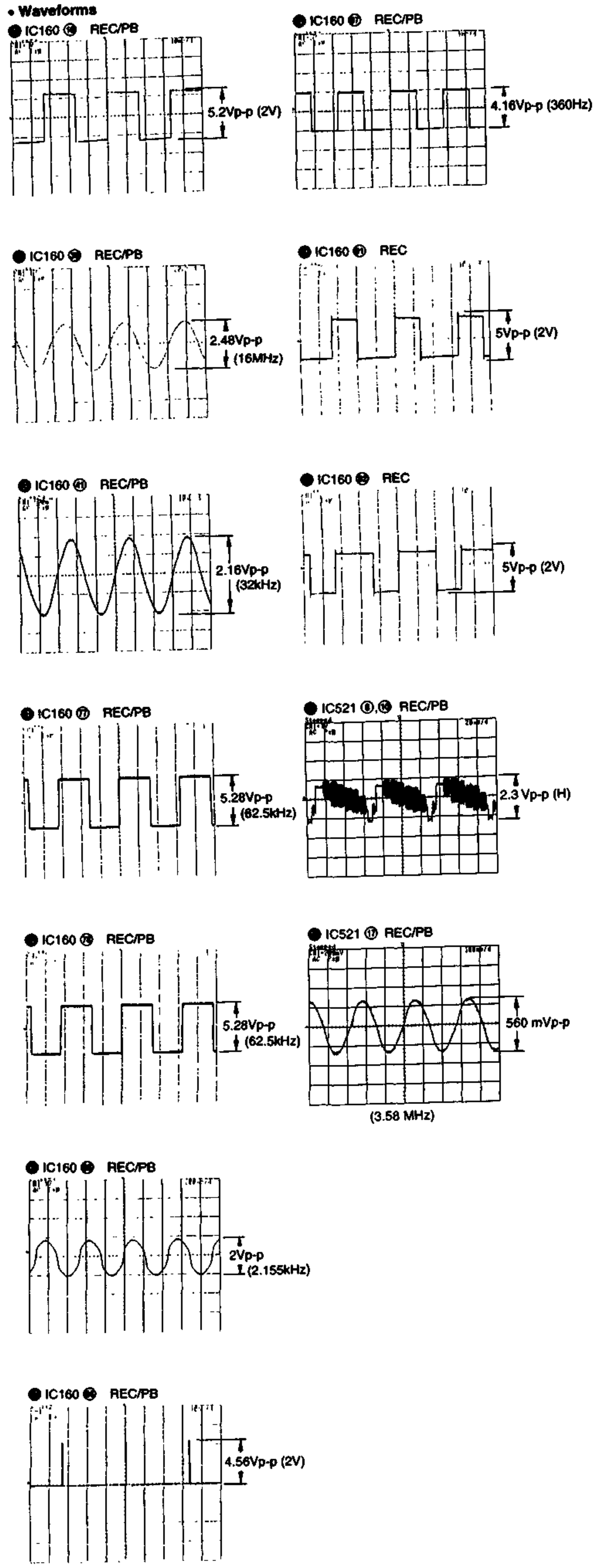
IC201 ⑭ REC PB — 376mVp-p (H) 416mVp-p (H)

IC201 ⑮ REC/PB — 576mVp-p (3.579545MHZ)

• Signal path

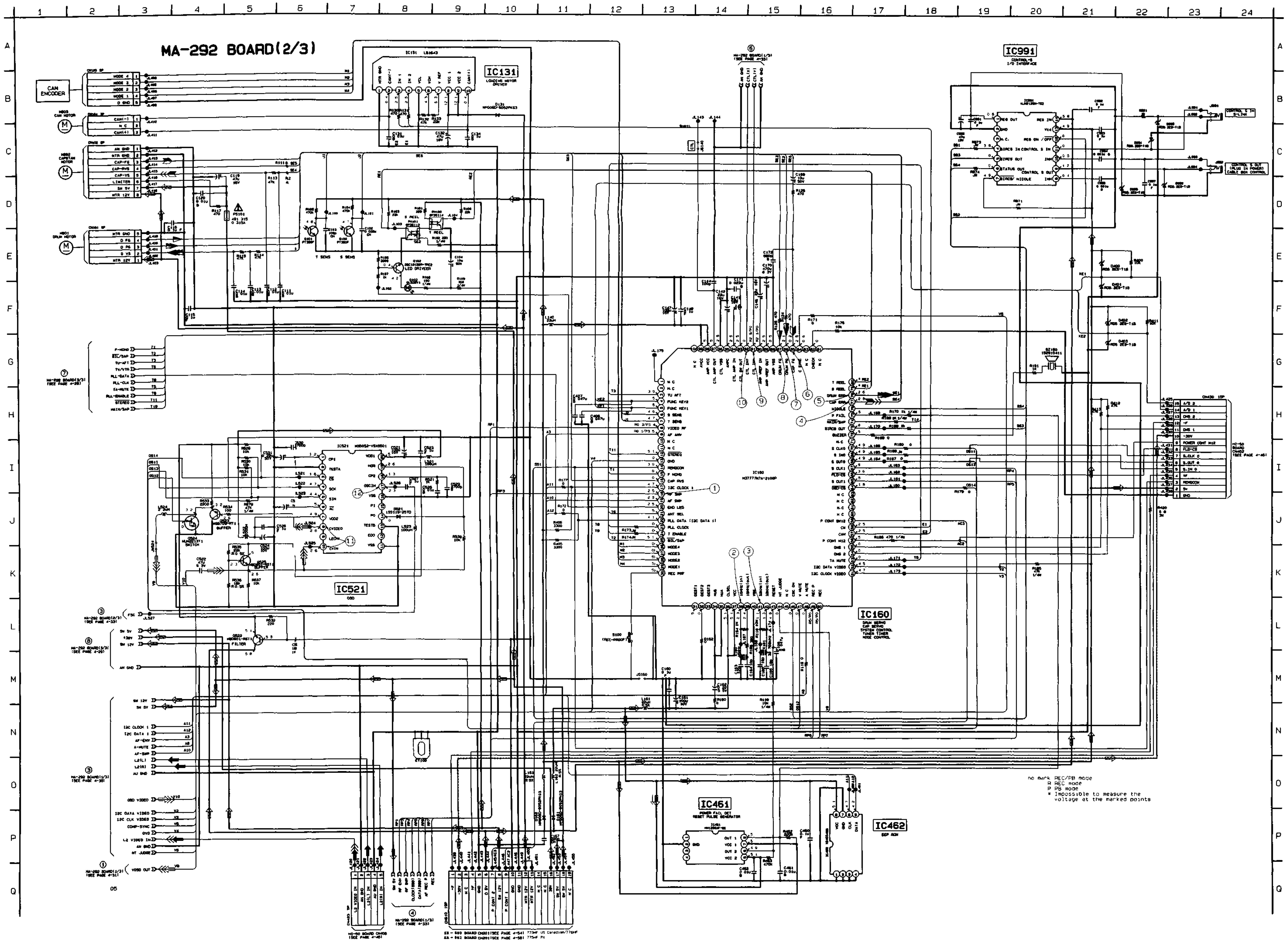
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	➡
PB	⇨	⇨	⇨	⇨

• Waveforms



MA-292 (SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM (SLV-775HF/776HF)

– Ref. No.: MA-292 board; 2,000 series –



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

• Signal path

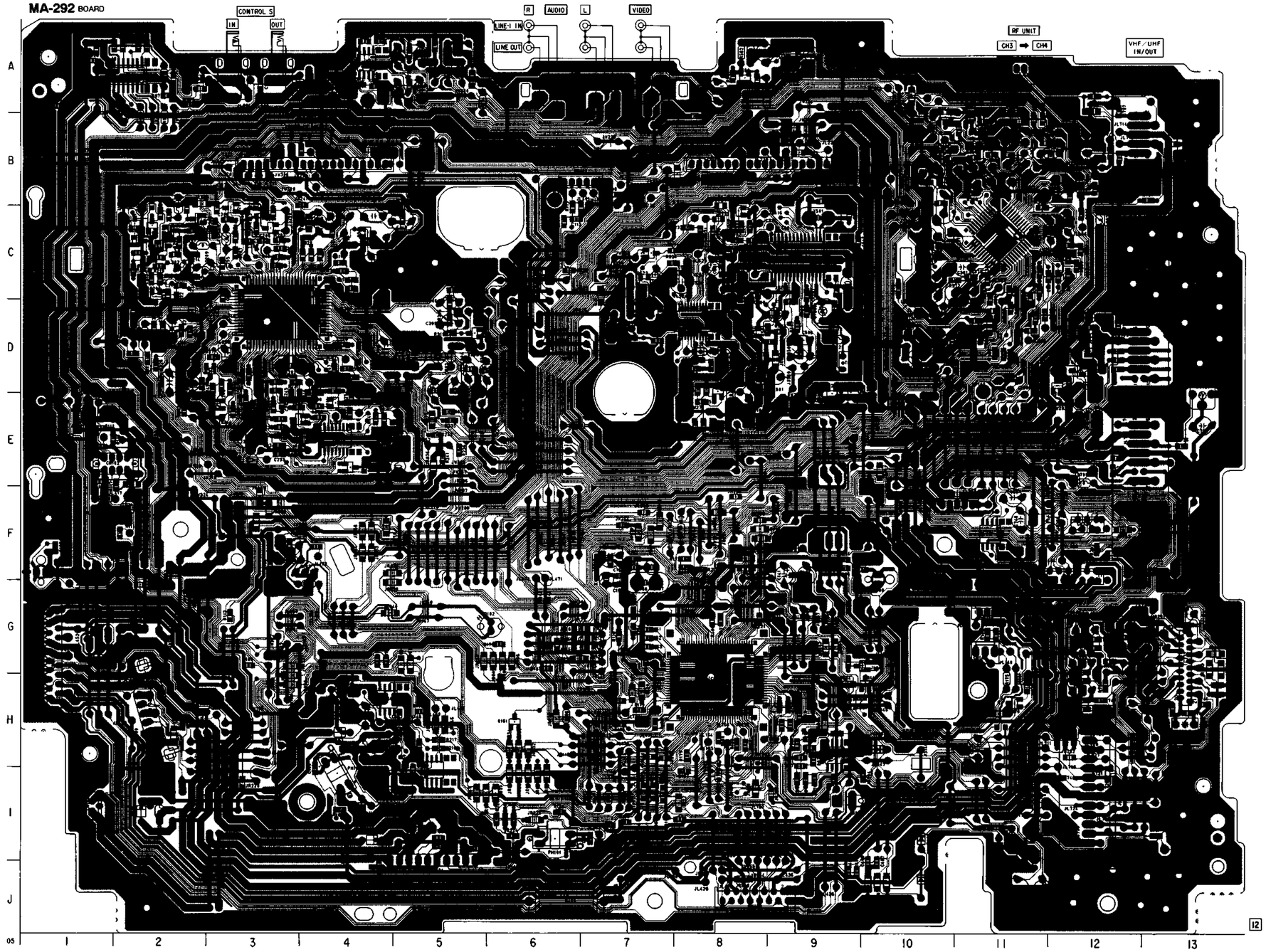
	VIDEO SIGNAL Y/CHROMA	AUDIO SIGNAL
REC		
PB		

• Signal path

	REC	REC/PB	PB
Drum speed servo			
Drum phase servo			
Drum servo (speed and phase)			
Capstan speed servo			
Capstan servo (speed and phase)			
Ref. signal			

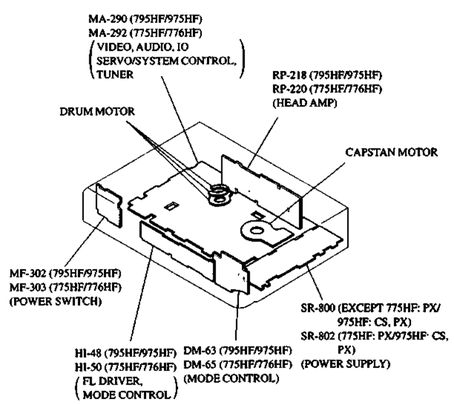
MA-292 (SERVO/SYSTEM CONTROL, VIDEO, AUDIO, IO, TUNER) PRINTED WIRING BOARD (SLV-775HF/776HF)
– Ref. No.: MA-292 board; 2,000 series –

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



MA-292 BOARD

CN101	B-7
CN102	E-2
CN103	H-2
CN104	I-1
CN305	B-4
CN306	B-8
CN423	F-11
CN430	J-8
CN610	G-1
D102	G-6
D131	I-4
D161	I-2
D162	H-4
D361	B-11
D400	I-10
D401	I-11
D402	J-10
D403	H-10
D521	D-8
D560	A-6
D702	D-12
D991	A-2
D992	A-3
D993	A-4
D995	A-2
IC131	J-5
IC160	H-8
IC201	D-3
IC202	E-4
IC360	C-11
IC361	D-10
IC461	H-4
IC462	I-5
IC521	D-8
IC570	A-4
IC733	I-12
IC991	A-2
Q100	F-10
Q101	F-1
Q102	F-4
Q201	C-3
Q202	C-3
Q208	C-2
Q209	E-4
Q210	E-4
Q211	E-4
Q212	D-3
Q301	C-4
Q361	B-11
Q362	B-11
Q363	B-11
Q364	B-10
Q522	D-9
Q523	C-7
Q524	C-7
Q525	D-8
Q560	A-6
Q731	G-12

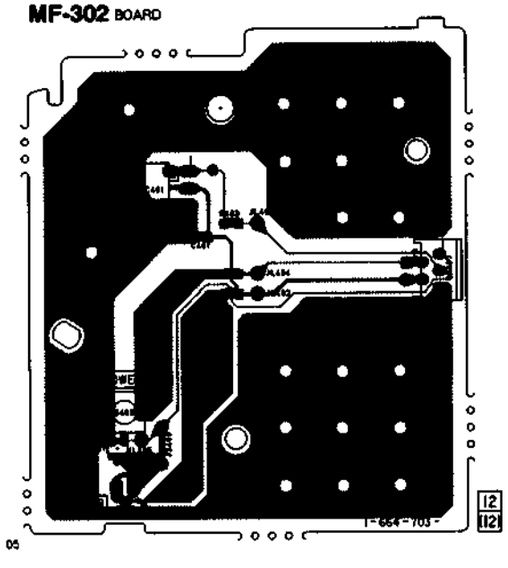


DM-63 (MODE CONTROL), HI-48(FL DRIVER), MF-302 (POWER SWITCH) PRINTED WIRING BOARDS (SLV-795HF/975HF)

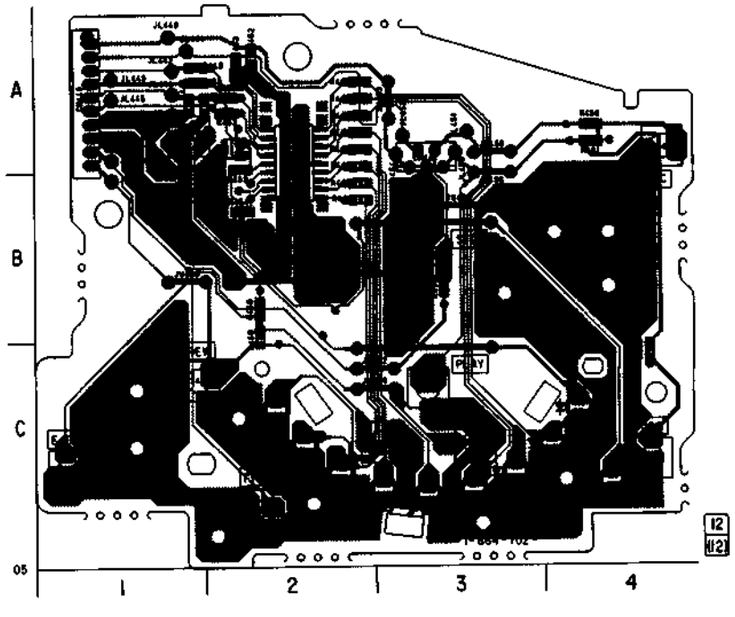
– Ref. No.: DM-63 board, HI-48 board, MF-302 board; 3,000 series –

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

MF-302 BOARD

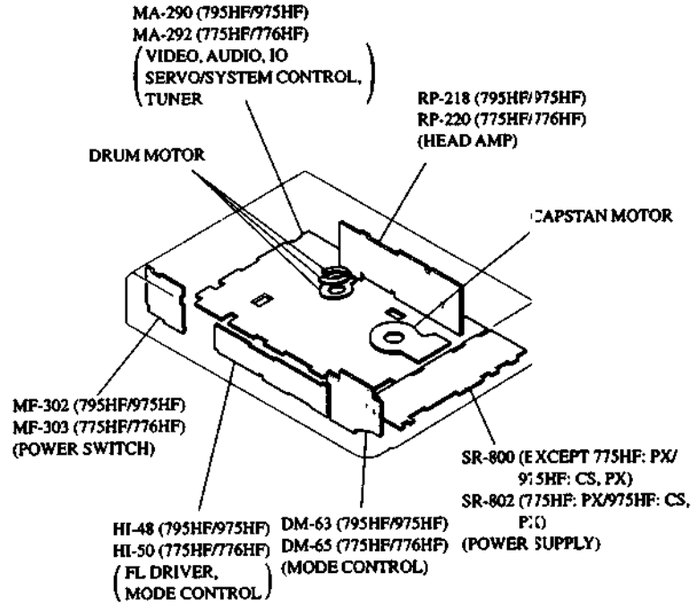


DM-63 BOARD

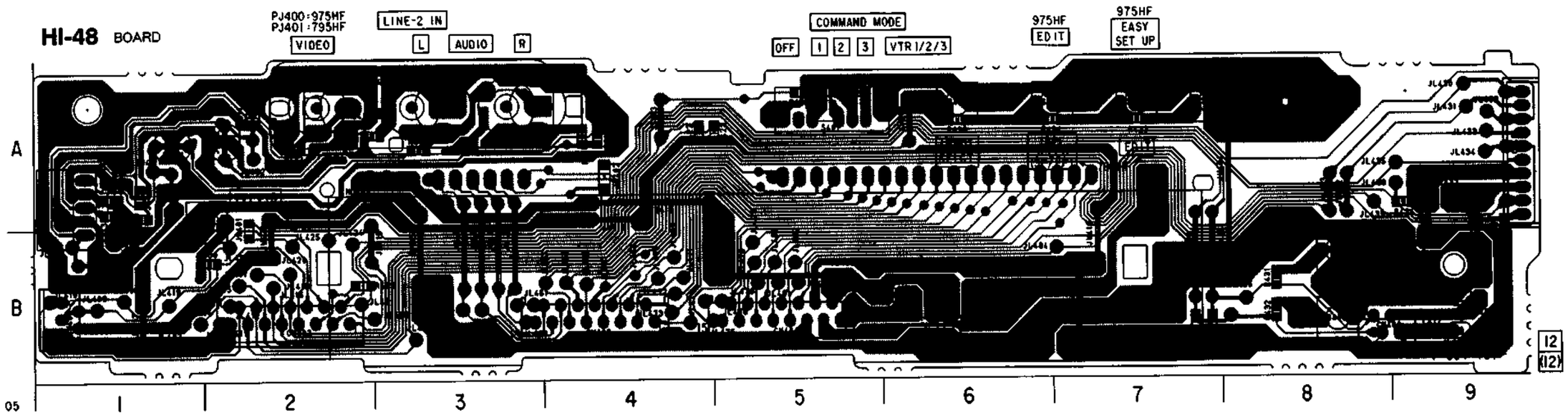


DM-63 BOARD

CN440	A-1
CN441	A-3
D440	C-2
D441	C-2
D442	C-2
D443	C-3
D444	C-3
D445	C-3
D446	C-3
D447	C-4
D448	C-4
D449	C-4
IC440	A-2
Q440	A-2



HI-48 BOARD

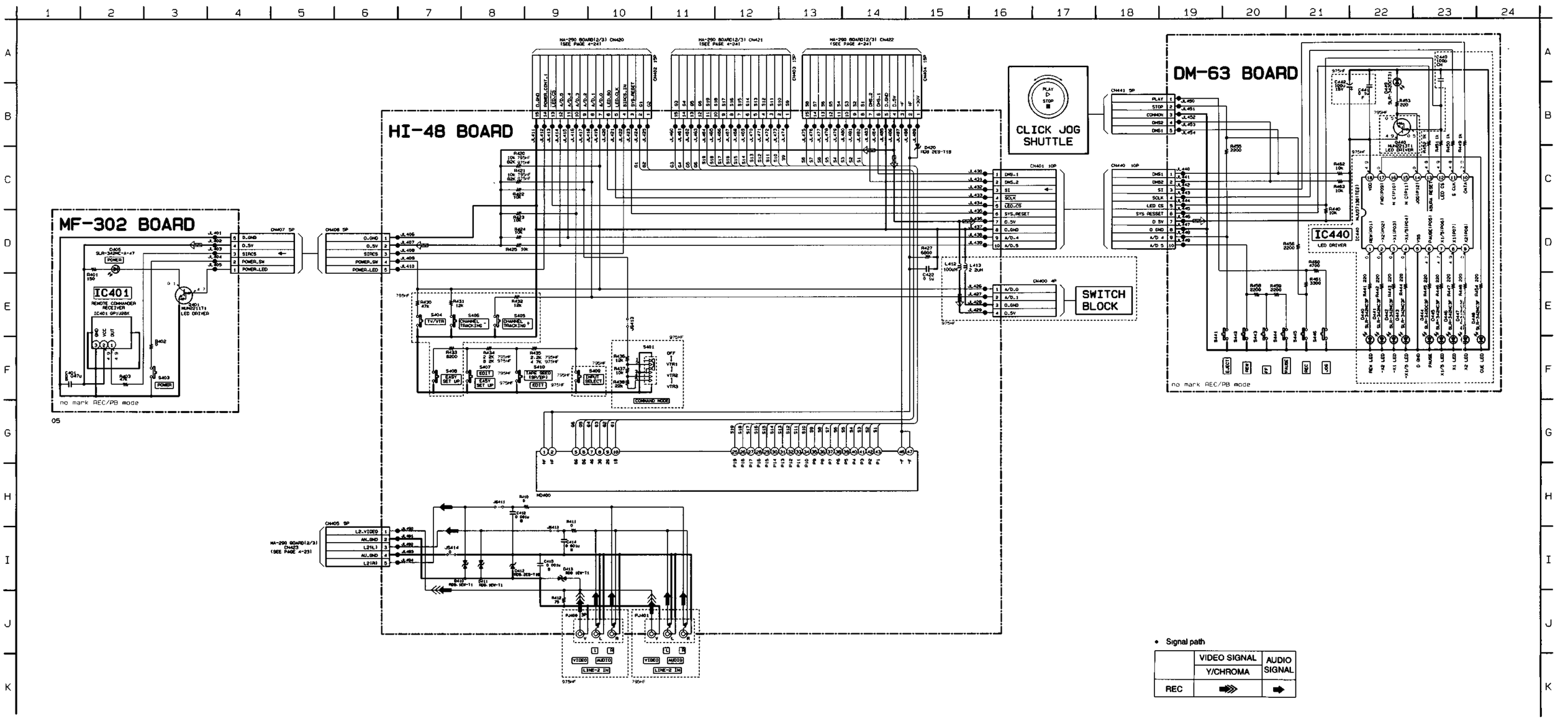


HI-48 BOARD

CN400	B-6
CN401	A-9
CN402	B-2
CN403	B-4
CN404	B-5
CN405	A-1
CN406	B-1
D410	A-1
D411	A-2
D412	A-1
D413	B-1
D420	B-6

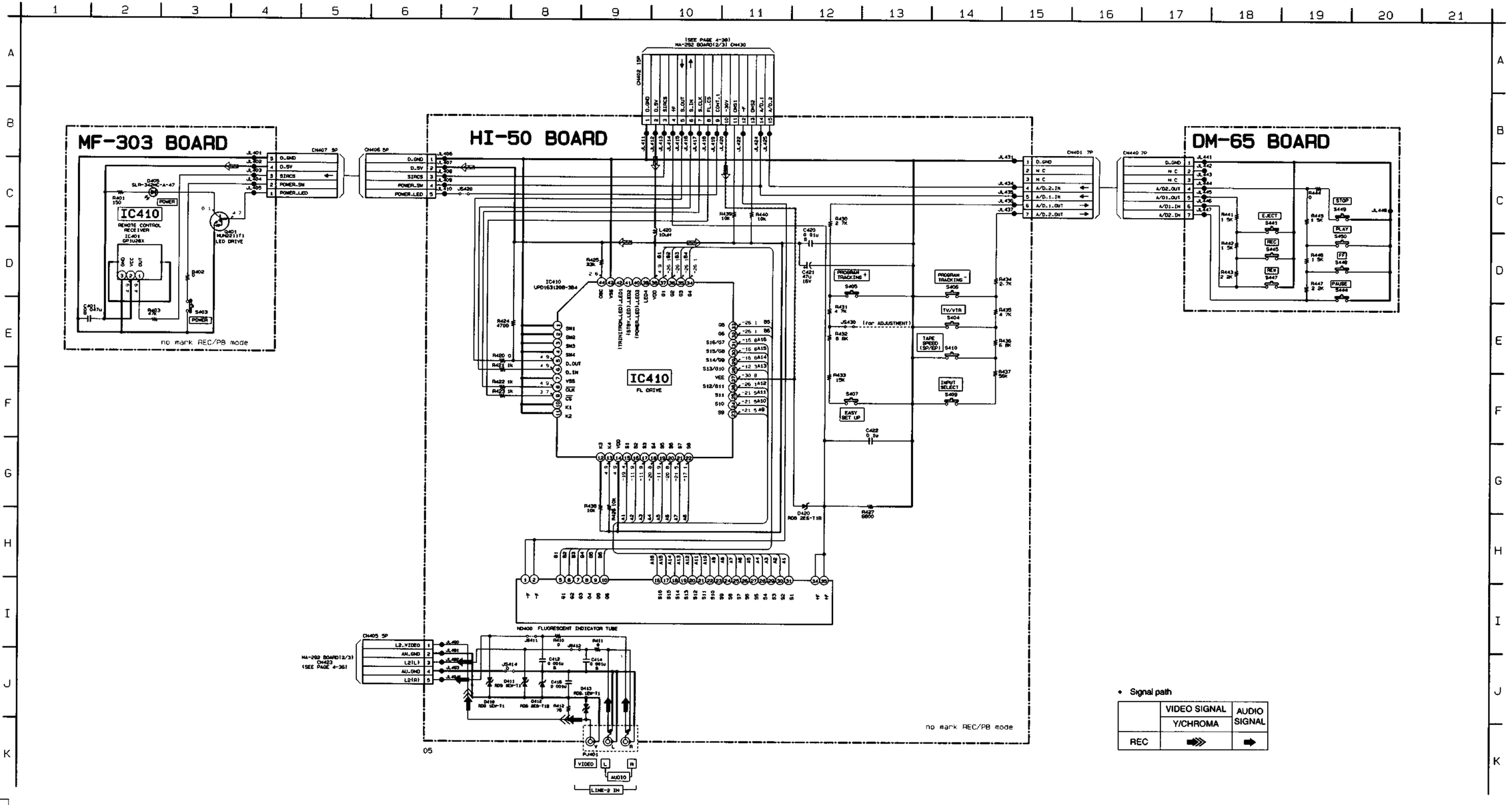
DM-63 (MODE CONTROL), HI-48(FL DRIVER), MF-302 (POWER SWITCH) SCHEMATIC DIAGRAM (SLV-795HF/975HF)

– Ref. No.: DM-63 board, HI-48 board, MF-302 board; 3,000 series –



DM-65 (MODE CONTROL), HI-50 (FL DRIVER), MF-303 (POWER SWITCH) SCHEMATIC DIAGRAM (SLV-775HF/776HF)

– Ref. No.: DM-65 board, HI-50 board, MF-303 board; 1,000 series –



• Signal path

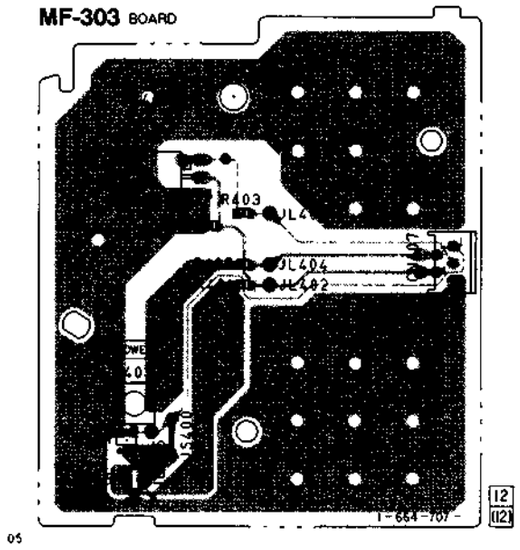
	VIDEO SIGNAL	AUDIO SIGNAL
	Y/CHROMA	
REC	⇛	➡

DM-65 (MODE CONTROL), HI-50 (FL DRIVER), MF-303 (POWER SWITCH) PRINTED WIRING BOARDS (SLV-775HF/776HF)

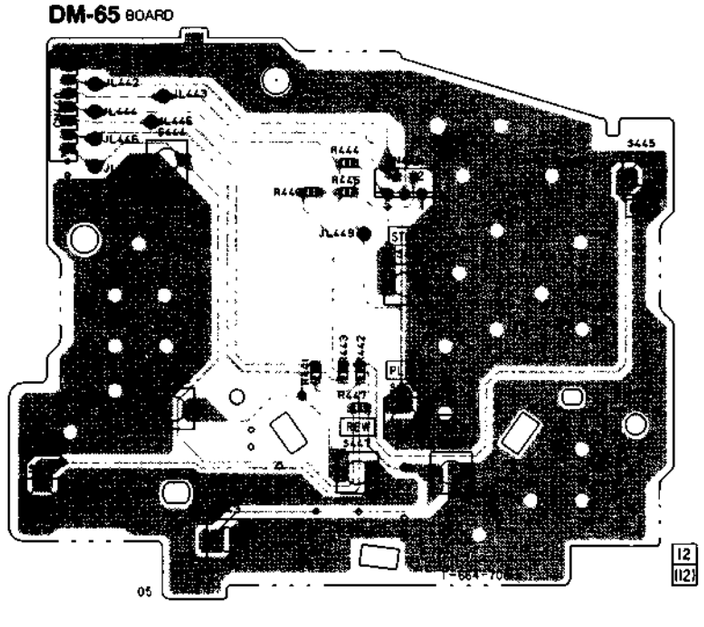
– Ref. No.: DM-65 board, HI-50 board, MF-303 board; 1,000 series –

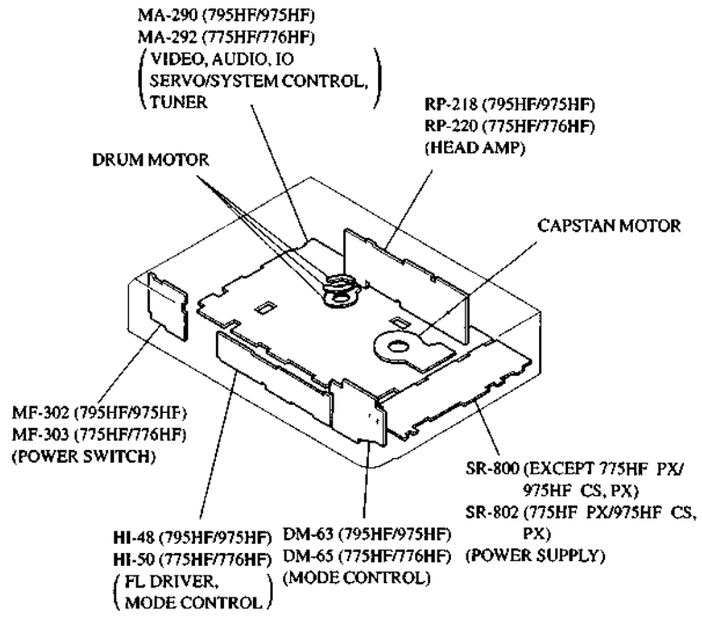
There are few cases that the part isn't mounted in this model is printed on this diagram.

MF-303 BOARD

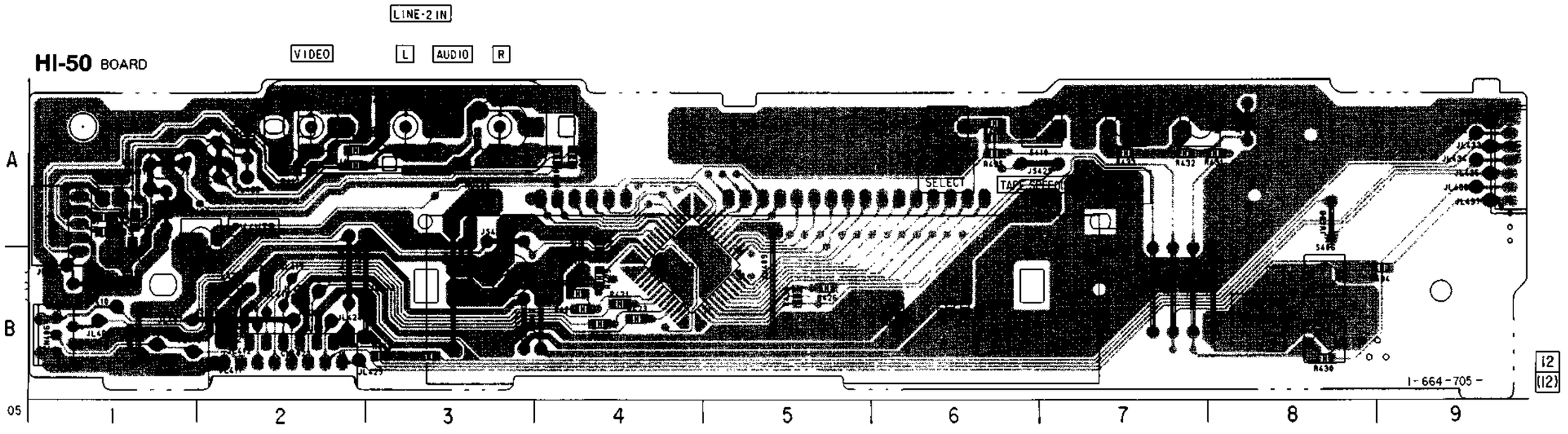


DM-65 BOARD





HI-50 BOARD

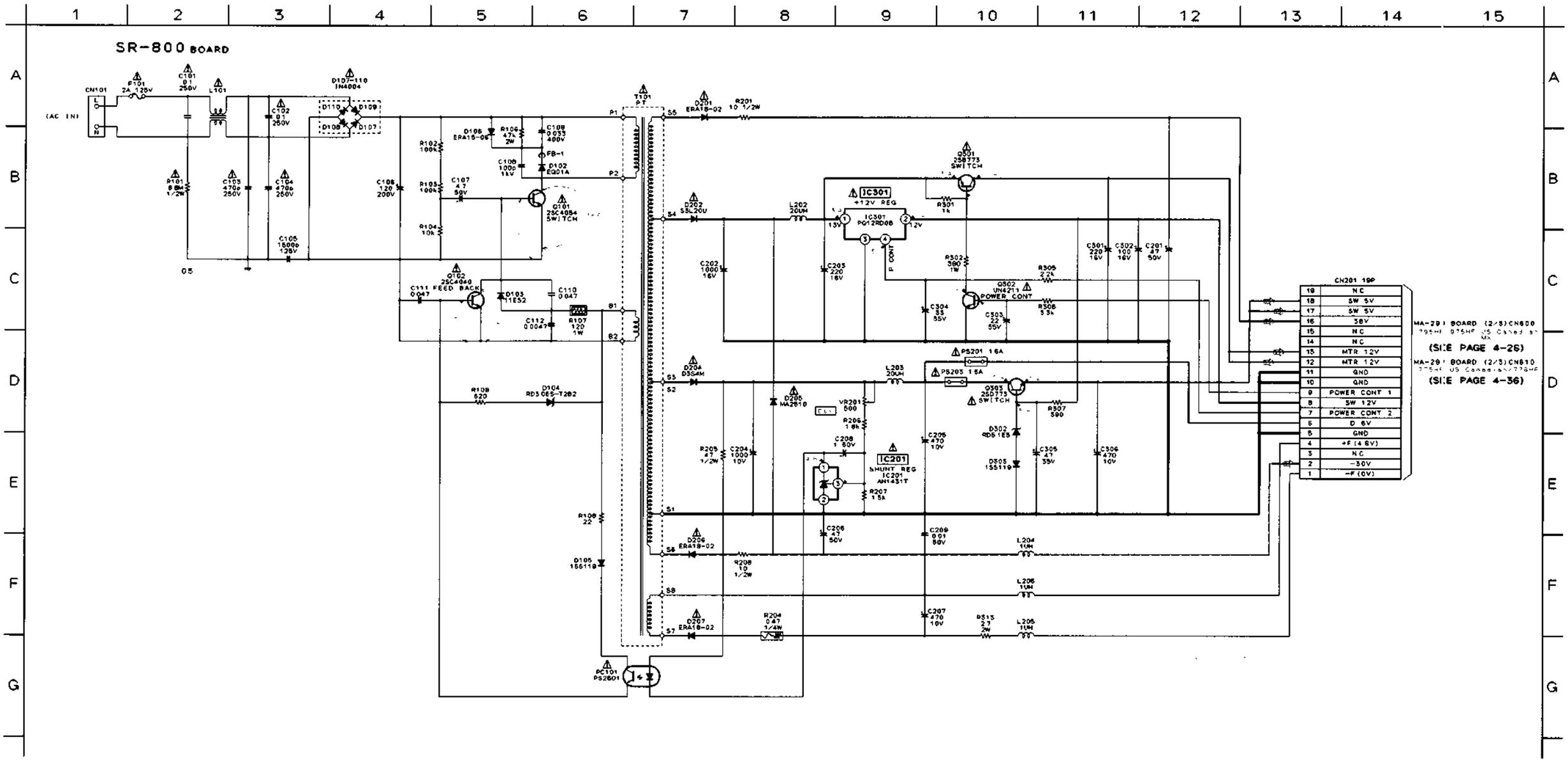


HI-50 BOARD

CN401	A-9
CN402	B-2
CN405	A-1
CN406	B-1
D410	A-1
D411	A-2
D412	A-1
D413	B-1
D420	B-6
IC410	B-4

SR-800 (POWER SUPPLY) SCHEMATIC DIAGRAM (EXCEPT SLV-775HF: PX/975HF: CS, PX)

– Ref. No.: SR-800 board; 4,000 series –



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

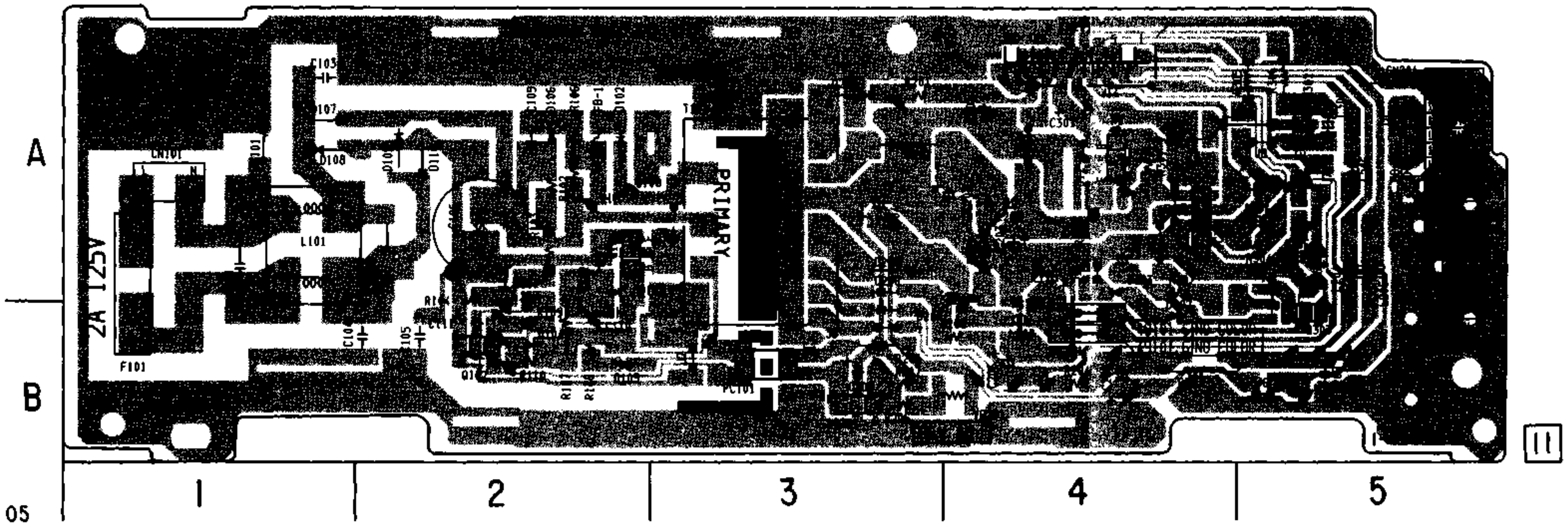
SR-800 (POWER SUPPLY), SR-802 (POWER SUPPLY) PRINTED WIRING BOARDS

– Ref. No.: SR-800 board; 4,000 series, SR-802 board; 5,000 series –

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

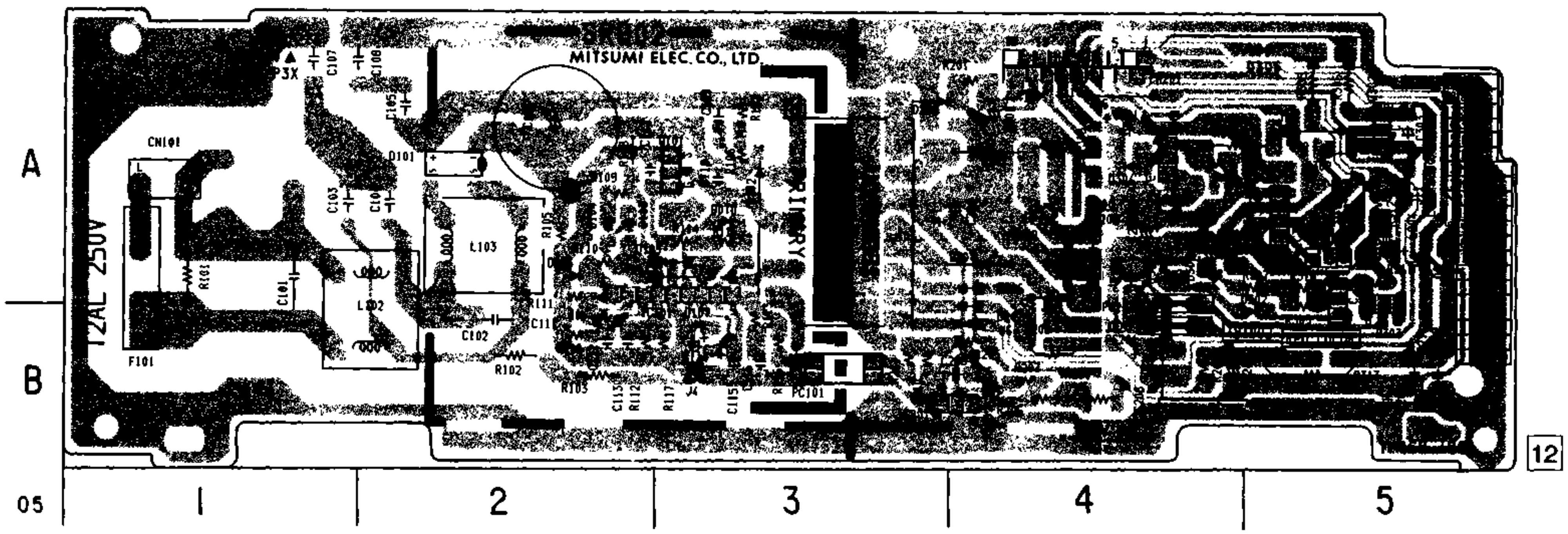
– EXCEPT SLV-775HF: PX/975HF: CS, PX –

SR-800 BOARD

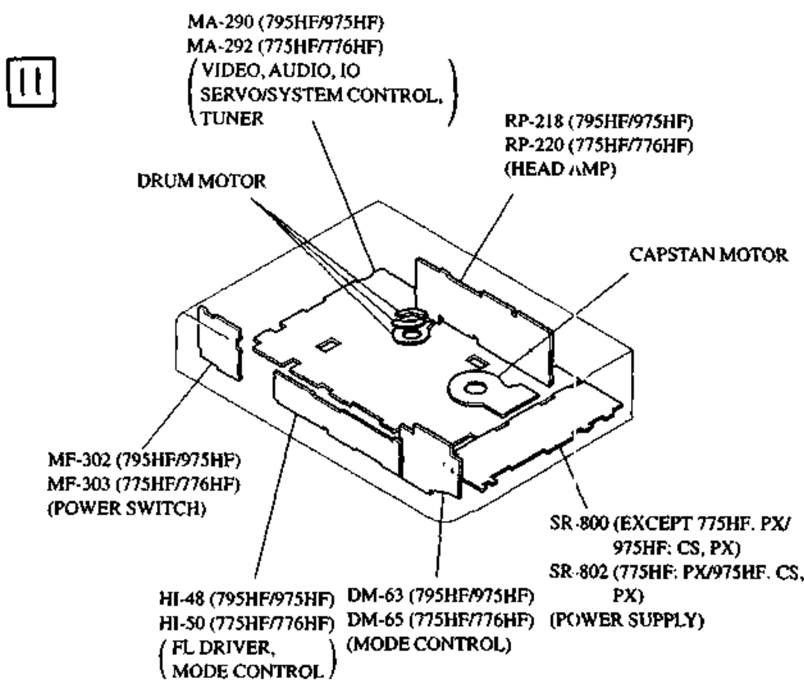


– SLV-775HF: PX/975HF: CS, PX –

SR-802 BOARD



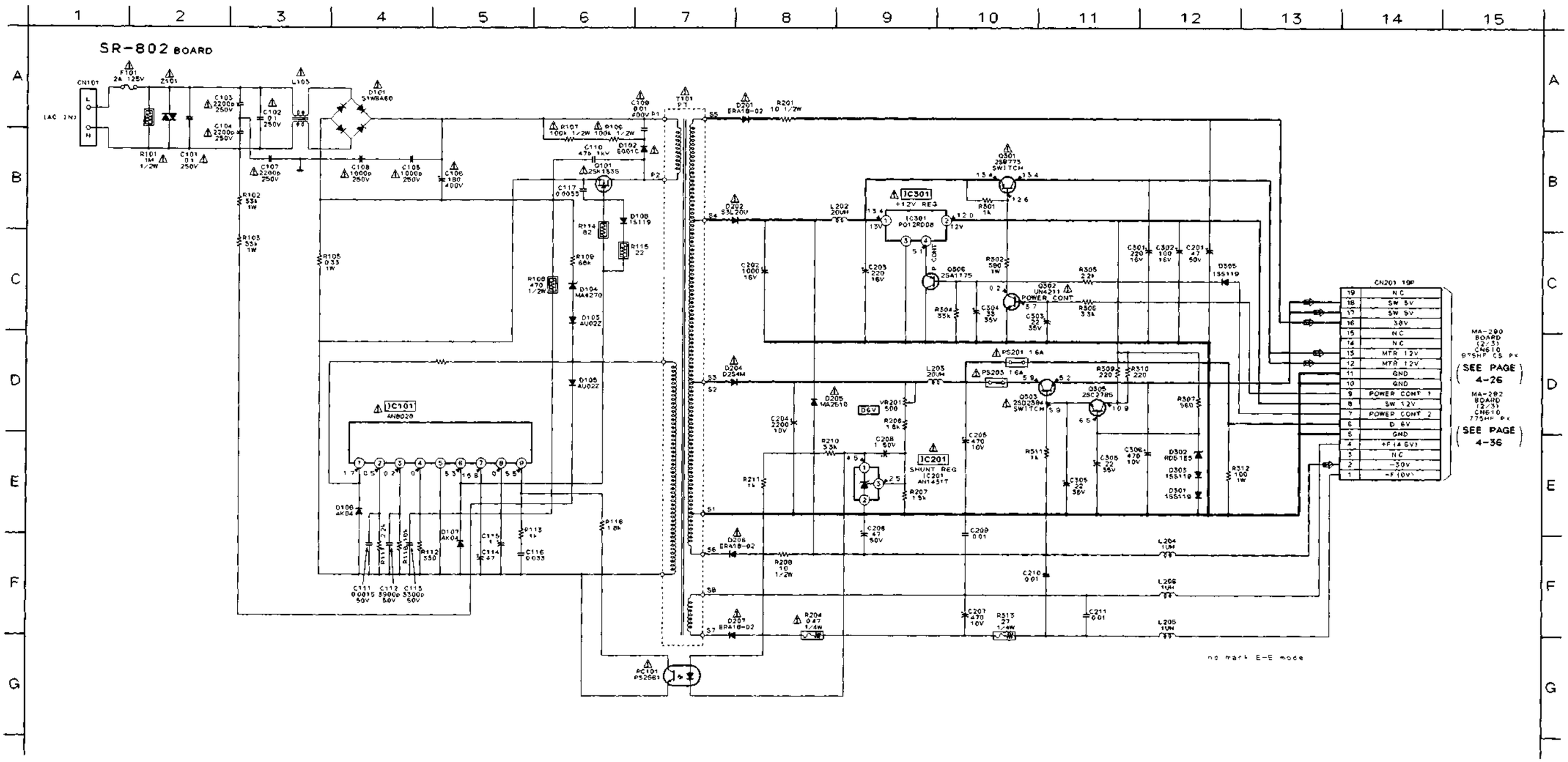
SR-800 BOARD	
CN101	A-1
CN201	A-4
D102	A-2
D103	A-2
D104	B-2
D105	B-2
D106	A-2
D107	A-1
D108	A-1
D109	A-2
D110	A-2
D201	A-3
D202	A-3
D204	A-3
D205	A-4
D206	A-3
D207	B-3
D302	B-4
D303	A-4
IC201	B-3
IC301	A-4
Q101	A-2
Q102	B-2
Q301	A-4
Q302	A-5
Q303	B-5



SR-802 BOARD	
CN101	A-1
CN201	A-4
D101	A-2
D102	A-3
D103	A-2
D104	A-2
D105	A-3
D106	A-2
D107	B-3
D108	A-3
D201	A-3
D202	A-4
D204	A-4
D205	A-4
D206	A-4
D207	B-4
D301	A-4
D302	A-5
D303	A-4
D304	A-4
D305	A-5
IC101	A-3
IC201	B-4
IC301	A-5
Q101	A-3
Q301	A-4
Q302	A-5
Q303	A-5
Q305	A-5
Q306	A-5

SR-802 (POWER SUPPLY) SCHEMATIC DIAGRAM (SLV-775HF: PX/975HF: CS, PX)

– Ref. No.: SR-802 board; 5,000 series –



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

5-1. SYSTEM CONTROL – VIDEO BLOCK INTERFACE (MA-290 BOARD IC161)

Signal	Pin No.	I/O	STOP FF/ REW	TAPE THREAD-ING	TAPE UNTHREAD-ING	PB	PB • PAUSE	SLOW	×2	CUE	REVIEW	REC	REC • PAUSE
AF REC $\overline{P}$	MA-290 IC161②	O	L	L	L	L	L	L	L	L	L	L	H
RF SWP (SW30)	MA-290 IC161①	O	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
QVD	MA-290 IC161④	O	L	L	L	*2	*3	*3	*3	*3	*3	L	L
$\overline{SP}$	MA-290 IC161⑮	O	*4	*4	*4	*5	*5	*5	*5	*5	*5	*4	*4
AF REC	MA-290 IC161⑯	O	L	L	L	L	L	L	L	L	L	H	H
V SYNC	MA-290 IC161⑰	I	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
CTL REC	MA-290 IC161⑲	O	L	L	L	L	L	L	L	L	L	H	L

*1 Synchronized with drum rotation 30 Hz 50% duty pulse
*2 Normally "L" "H" when CTL signal is not generated
*3 V period "H" pulse
*4 Selected by REC mode SP mode "L"
*5 Selected by tape recording mode
*6 Composite Sync signal (positive)

5-2. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (MA-290 BOARD IC161)

Signal	Pin No.	I/O	STOP	FF	REW	TAPE THREAD -ING	TAPE UNTHREAD -ING	PB	PB • PAUSE	SLOW	CUE	×2	REVIEW	REC	REC • PAUSE	PB INDEX WRT/ERS
REC CTL	MA-290 IC161⑦	O	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	
$\overline{\text{CAP STOP}}$	MA-290 IC161⑨	O (O D)	L	HI-Z (O D)	HI-Z (O D)	HI-Z (O D)	HI-Z (O D)	HI-Z (O D)	L	*3	HI-Z (O D)	HI-Z (O D)	HI-Z (O D)	HI-Z (O D)	HI-Z (O.D)	
STEP PLS	MA-290 IC161⑩	O	L	L	L	L	L	L	L	*2	L	L	L	L	L	
CTL REC	MA-290 IC161⑮	O	L	L	L	L	L	L	L	L	L	L	L	H	L	H
CTL-INDEX	MA-290 IC161⑯	O	L	L	L	L	L	L	L	L	L	L	L	L	L	H
$\overline{\text{PB CTL}}$	MA-290 IC161⑰	I	H	*6	*6			*1	H/L	*2	*6	*6	*6	*1	H	
DRM PG	MA-290 IC161⑱	I	*4	*7	*7	*5	*5	*7	*7	*7	*7	*7	*7	*7	*7	
DRM FG	MA-290 IC161⑲	I	*4	*8	*8	*5	*5	*8	*8	*8	*8	*8	*8	*8	*8	
CAP FG	MA-290 IC161⑳	I	H/L	*6	*6	*5	*5	*6	H/L	*9	*6	*6	*6	*6	H/L	
CAP DA	MA-290 IC161㉓	O	*10	*10	*10	*10	*10	*11	*10	*10	*11	*11	*11	*11	*10	
DRM DA	MA-290 IC161㉔	O	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	
CTL STEP	MA-290 IC161㉕	O	L	L	L	L	L	L	L	*13	L	L	L	L	L	

*1 30 Hz pulse
*2 Pulse at tape running
*3 Reverse logic pulse of STEP PLS
*4 "L" when drum rotation stop
*5 Unstable period pulse
*6 Pulse of period in proportion to tape speed
*7 30 Hz pulse
*8 360 Hz pulse
*9 Pulse at tape running
*10 Approx 2 msec period "H" or "L" pulse
*11 Approx 1 5 msec period "H" or "L" pulse
*12 Approx 3 msec period "H" or "L" pulse
*13 "H" when FWD direction STEP drive

5-3. SYSTEM CONTROL – MECHANISM INTERFACE (MA-290 BOARD IC161)

Signal	Pin No.	I/O	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE THREAD-ING	TAPE UNTHREAD-ING	STOP	FF	REW	PB	PB • PAUSE	SLOW	×2	CUE	REVIEW	REC	REC • PAUSE
MODE 1	MA-290 IC161㉒	I	H	L	L	*1	*1	H	H	H	H	H	H	H	H	L	H	H
MODE 2	MA-290 IC161㉑	I	L	L	L	*1	*1	L	L	L	H	H	H	H	H	H	H	H
MODE 3	MA-290 IC161⑳	I	L	L	L	*1	*1	H	H	H	L	H	H	L	L	H	L	H
MODE 4	MA-290 IC161⑲	I	L	H	H	*1	*1	H	L	L	L	L	L	L	L	L	L	L
REC PRF	MA-290 IC161⑱	I	L	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2
TREEL FG	MA-290 IC161㉔	I	H/L	H/L	H/L	H/L	H/L	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
SREEL FG	MA-290 IC161㉓	I	H/L	H/L	H/L	*3	*3	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
T/E LED	MA-290 IC161㉜	O (O D)	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
$\overline{\text{CAP STOP}}$	MA-290 IC161㉙	O (O D)	L	L	L	H	H	L	H	H	H	L	*5	H	H	H	H	L
CAP RVS	MA-290 IC161㉘	O	H			L	H	H/L	L	H	L	L	L/*5	L	L	H	L	L
CAP DA	MA-290 IC161㉗	O																
T SENS	MA-290 IC161㉑	I	*4	*4	*4	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
S SENS	MA-290 IC161㉒	I	*4	*4	*4	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6

*1 Uncertainty
*2 "L" when erasing protection tab is bent, "H" when not bent
*3 Pause of period in proportion to reel rotating speed
*4 Approx 2 msec period "H" pulse
*5 Pulse at tape running
*6 Normally "L" 2 msec period "H" pulse when tape top or tape end is detected

5-4. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-290 BOARD IC161)

Signal	Pin No.	I/O	I/O level
$\overline{\text{ASURA RESET}}$	MA-290 IC161㊾	I	Normally "H", "L" when service interruption is detected or restored
$\overline{\text{ASURA CS}}$	MA-290 IC161㊹	I	Chip select signal from timer microprocessor V period "L" pulse
S IN 0	MA-290 IC161㊺	I	Serial communication data from timer microprocessor V period "L" pulse
S OUT 0	MA-290 IC161㊻	O	Serial communication data to timer microprocessor V period "L" pulse
$\overline{\text{S CLK}}$	MA-290 IC161㊼	I	Serial communication clock with timer microprocessor V period "L" pulse

5-5. SYSTEM CONTROL – AUDIO BLOCK INTERFACE (MA-290 BOARD IC161)

Signal	Pin No.	I/O	STOP/ FF/ REW	TAPE LOADING	TAPE UNLOADING	PB	PB • PAUSE	SLOW	× 2	CUE	REVIEW	REC	REC • PAUSE
AF ENV	MA-290 IC161㊽	I	AF RF envelope signal input terminal for automatic tracking										
A MUTE	MA-290 IC161㊶	O (O D)	L	L	L	*1	H	H	H	H	H	L	L
$\overline{\text{SP}}$	MA-290 IC161㊸	O	*2	*2	*2	*3	*3	*3	*3	*3	*2	*2	*2
AF REC $\overline{\text{P}}$	MA-290 IC161②	O	L	L	L	L	L	L	L	L	L	H	L
AF SWP	MA-290 IC161⑩	O	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
$\overline{\text{FULL ERS}}$	MA-290 IC161㊷	O (O D)	H	H	H	H	H	H	H	H	H	L	H

*1 30 Hz 50% duty pulse approx 5 msec delayed from RF SW P
*2 Selected by REC mode selector SP mode "L"
*3 Selected by tape recording mode SP mode "L"

5-6. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTION (MA-290 BOARD IC161 CXP-87852-014Q)

Pin No.	Pin name	I/O	Function
1	RF SWP	O	RF switching pulse output
2	AF REC P	O	Hi-Fi record pulse output
3	N C	–	Not used
4	Q VD	O	Quasi VD pulse output
5	N C	–	Not used
6	FE ON	O	Flying erase ON/OFF
7	REC CTL	O	REC CTL signal output
8	N C	–	Not used
9	CAM1	O	CAM motor control 1
10	CAM2	O	CAM motor control 2
11	TA MUTE	O	Tuner audio mute output
12	N C	–	Not used (Low)
13	NT JUDGE	I	NTSC judgement input
14	MESECAM	I	MESECAM judgement input
15	REC PRF	I	Erasing protection tab, cassette IN detection input
16	RENTAL	I/O	YNR control
17	N C	O	Not used
18	N C	–	Not used
19	MODE 4	I	Mechanism section CAM encoder input
20	MODE 3	I	Mechanism section CAM encoder input
21	MODE 2	I	Mechanism section CAM encoder input
22	MODE 1	I	Mechanism section CAM encoder input
23	TV/VTR	O	"L" when VTR mode "H" when TV mode
24	N C	–	Not used
25	N C	–	Not used
26	CBC ON	O	Cable box control on
27	N C	I	Not used
28	SDA	I	IIC data line (VIDEO, Hi-Fi)
29	N C	I	Not used
30	SCL	I	IIC clock line (VIDEO, Hi-Fi)
31	A MUTE	O	AUDIO mute output
32	T/E LED	O	T/E LED output
33	N C	–	Not used
34	N C	–	Not used
35	CAP STOP	O	Capstan STOP signal output
36	FULL ERS	O	Full erase control
37	N C	O	Not used
38	N C	O	Not used
39	MP	I	Fixed to L
40	ASURA RESET	I	System reset input
41	VSS	–	GND
42	XTAL	–	System clock 16 MHz
43	EXTAL	–	System clock 16 MHz
44	ASURA CS	I	S/S microcomputer chip select signal
45	S IN 0	I	Serial communication signal
46	S OUT 0	O	Serial communication signal
47	SCLK	O	Serial communication signal
48	NICOL ON	O	S-LINK on
49	F MONO	O	Tuner Audio Select
50	N C	–	Not used

Pin No.	Pin name	I/O	Function
51	N C	–	Not used
52	AVSS	–	UNSW GND
53	AVREF	–	AD port reference input UNSW 5V
54	AVDD	–	UNSW 5V
55	NTPB SW	I	NTSC PB switch input
56	VA ADJ	I	Hi-Fi/RF switching adjustment mode
57	N C	I	Not used
58	N C	I	Not used
59	AF ENV	I	Hi-Fi audio playback signal envelope
60	RF ENV	I	Video playback signal envelope
61	T SENS	I	Take up end sensor input
62	S SENS	I	Supply end sensor input
63	S REEL FG	I	S side reel FG input
64	T REEL FG	I	T side reel FG input
65	N C	–	Not used
66	V SYNC	I	Composite sync input
67	PB CTL	I	Playback CTL input
68	DRM PG	I	Drum PG input
69	DRM FG	I	Drum FG input
70	CAP FG	I	Capstan FG input
71	N C	–	Not used
72	CAP RVS	O	Capstan reverse control H when Reverse
73	CAP DA	O	Capstan error D/A output
74	DRUM DA	O	Drum PG input
75	CTL REC	O	"H" CTL write
76	CTL STEP	O	CTL amp, STEP operation control
77	REC COUNT	I	5V Record count input (Hi)
78	CLK	I	Clock (HI)
79	CTL INDEX	O	CTL INDEX signal input
80	SO1	I/O	Signal for serial communication
81	SCLK1	I/O	Signal for serial communication
82	N C	–	Not used
83	N C	–	Not used
84	CAP TRQ PWM	O	Capstan TRQ PWM output
85	N C	–	Not used
86	N C	–	Not used
87	N C	–	Not used
88	VSS	–	GND
89	VDD	–	5V
90	N C		Not used
91	N C	–	Not used
92	N C	–	Not used
93	SP	O	Tape speed Select
94	DSF	O	Picture improvement control
95	N C	–	Not used
96	AF REC	O	"H" output when hi-fi audio REC
97	N C	–	Not used
98	N C	–	Not used
99	STEP PLS	O	Step pulse H when Capstan step driving
100	AF SWP	O	AF switching pulse output

5-7. TUNER/TIMER MODE CONTROL PIN FUNCTION (MA-290 BOARD IC181 CXP82960-016Q)

Pin. No.	Pin Name	I/O	Function
1	N C	–	Not used
2	POWER FAIL	I	Power failure detect signal input
3	H DET	I	Video signal detect signal input
4	SIRCS IN	I	SIRCS signal input
5	STEREO DET	I	STEREO detection
6	SIRCS OUT	O	SIRCS signal output
7	BUZZER	O	Buzzer output
8	N C	–	Not used
9	N C	–	Not used
10	SCK0	O	Clock for serial communication
11	SI0	I	Serial data input
12	SO0	O	Serial data output
13	N C	–	Not used
14	LANC IN	I	LANC input
15	LANCE OUT	O	LANC output
16	A/D0	I	Key reading A/D input
17	A/D1	I	Key reading A/D input
18	A/D2	I	Key reading A/D input
19	A/D3	I	Key reading A/D input
20	A/D4	I	Key reading A/D input
21	A/D5	I	Key reading A/D input
22	N C	–	Not used
23	AFT	I	AFT input
24	AVDD	–	UNSW 5V
25	AV REF	–	AD port reference input UNSW 5V
26	SCL0	O	I²C BUS (clock)
27	CG $\overline{CS}$	O	Character generator chip select signal
28	SDA0	O	I²C BUS (data)
29	LED $\overline{CS}$	O	LED driver chip select signal
30	AVSS	–	UNSW GND
31	EXTAL	–	System clock Not used
32	XTAL	–	
33	VSS	–	GND
34	$\overline{RST}$	I	Reset signal in
35	PLL CLK	O	Tuner clock signal
36	PLL DATA	O	Tuner data signal
37	PLL ENABLE	O	Tuner enable signal
38	MAIN/$\overline{SAP}$	O	Normal audio MAIN/SAP select control
39	SAP	I	MAIN/SAP judge input
40	V $\overline{SET}$ $\overline{CS}$	O	XDS data decoder chip select

Pin. No.	Pin Name	I/O	Function
41	DMS 1	I	DMS 1 input
42	DMS 2	I	DMS 2 input
43	VFDP	–	–30V
44-62	SEG 1-19	O	LCD segment output
63	N C	–	Not used
64	N C	–	Not used
65	N C	–	Not used
66-71	GRID 6-1	O	LCD grid output
72	VDD	–	UNSW 5V
73	TX	–	Connected to oscillator for clock
74	TEX	–	
75	NC/VPP	–	Connect to +5V
76	ASURA $\overline{CS}$	O	S/S microcomputer chip select
77	$\overline{SYS\ RESET}$	O	System reset signal output
78	POWER CONT 1	O	Power supply control signal output
79	POWER CONT 2	O	Power supply control signal output for EDS
80	CG V	I	Vertical sync signal input

5-8. SYSTEM CONTROL – VIDEO BLOCK INTERFACE (MA-292 BOARD IC160)

Signal	Pin No.	I/O	STOP/ FF/ REW	TAPE LOADING	TAPE UNLOADING	PB	REC	REC • PAUSE
RF SWP	MA-292 IC160⑯	O	*1	*1	*1	*1	*1	*1
QVD	MA-292 IC160⑬	O	L	L	L	*2	L	L
REC P	MA-292 IC160㉘	O	L	L	L	L	L	H
C SYNC	MA-292 IC160㉔	I	*3	*3	*3	*3	*3	*3

*1 Synchronized with drum rotation 30 Hz 50% duty pulse
*2 Normally "L" "H" when videl signal is not generated
*3 Composite sync signal (positive)

5-9. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (MA-292 BOARD IC160)

Signal	Pin No.	I/O	STOP	FF	REW	TAPE LOADING	TAPE UNLOADING	PB	REC
CTL IN+	MA-292 IC160㉒	O	*8	*8	*8	*8	*8	*8	*1
CTL IN–	MA-292 IC160㉑	I	H	*2	*2	–	–	*1	*1
DRM PG	MA-292 IC160㉙	I	*3	*3	*3	*3	*3	*3	*3
DRM FG	MA-292 IC160㉗	I	*4	*4	*4	*4	*4	*4	*4
CAP FG	MA-292 IC160㉕	I	H/L	*5	*5	*6	*6	*5	*5
CAP RVS	MA-292 IC160⑭	O	H/L	L	H	L	H	L	L
CAP ERR	MA-292 IC160⑰	O	L	*7	*7	*7	*7	*7	*7
DRM ERR	MA-292 IC160⑲	O	*7	*7	*7	*7	*7	*7	*7

*1 30 Hz pulse
*2 Pulse of period in proportion to tape speed
*3 30 Hz "H" pulse
*4 360 Hz pulse
*5 Pulse of period in proportion to tape speed
*6 Unstable period pulse
*7 DC voltage 1~5V
*8 Hi-Z (2.5V)

5-10. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (MA-292 BOARD IC160)

Signal	Pin No.	I/O	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE THREAD-ING	TAPE UNTHREAD-ING	STOP	FF	REW	PB	REC
CW	MA-292 IC160㉕	O	*5	H	L	H	L	*5	*5	*5	*5	*5
CAM	MA-292 IC160㉗	O	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5
MODE 1	MA-292 IC160㉘	I	–	–	–	–	–	H	H	H	H	H
MODE 2	MA-292 IC160㉙	I	–	–	–	–	–	L	L	L	H	H
MODE 3	MA-292 IC160㉗	I	–	–	–	–	–	H	H	H	L	L
MODE 4	MA-292 IC160㉙	I	–	–	–	–	–	H	L	L	L	L
REC PRF	MA-292 IC160㉚	I	L	*1	*1	*1	*1	*1	*1	*1	*1	*1
T REEL	MA-292 IC160㉜	I	H/L	H/L	H/L	H/L	H/L	H/L	*2	*2	*2	*2
S REEL	MA-292 IC160㉝	I	H/L	H/L	H/L	*2	*2	H/L	*2	*2	*2	*2
END LED	MA-292 IC160㉖	O	L	*3	*3	*3	*3	*3	*3	*3	*3	*3
T SENS	MA-292 IC160⑦	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4
S SENS	MA-292 IC160⑧	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4

*1 "H" when erasing protection tab is bent "L" when not bent
*2 Pulse of period in proportion to reel rotating speed
*3 Approx 2 msec period "H" pulse
*4 Normally "L" 2 msec period "H" pulse when tape top or tape end is detected
*5 Hi-Z

5-11. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-292 BOARD IC160)

Signal	Pin No.	I/O	I/O level
RESET	MA-292 IC160㊾	I	Normally "H", "L" when service interruption is detected or restored
I2C DATA VIDEO	MA-292 IC160㊿	O	IIC communication data to video microprocessor
I2C CLOCK VIDEO	MA-292 IC160(51)	O	IIC communication clock with video microprocessor.
I2C DATA	MA-292 IC160(52)	O	IIC communication data to audio microprocessor
I2C CLOCK	MA-292 IC160(17)	O	IIC communication clock with audio microprocessor.

5-12. SYSTEM CONTROL – AUDIO BLOCK INTERFACE (MA-292 BOARD IC160)

Signal	Pin No.	I/O	STOP/ FF/ REW	TAPE LOADING	TAPE UNLOADING	PB	REC	REC + PAUSE
A MUTE	MA-292 IC160㊽	O	L	L	L	L	L	L
REC P	MA-292 IC160㊾	O	L	L	L	L	L	H

5-13. SERVO/SYSTEM/TIMER/TUNER CONTROL MICROPROCESSOR PIN FUNCTION (MA-292 BOARD IC160)

Pin No.	Pin name	I/O	Function
1	N C	–	Not used
2	N C	–	Not used
3	TU AFT	I	Tuner analog auto fine tuning input
4	FUNK KEY 2	I	9 KEY input
5	FUNK KEY 1	I	9 KEY input
6	S SENS	I	Tape end sensor input
7	T SENS	I	Tape top sensor input
8	VIDEO RF	I	Video RF input
9	AF ANV	I	Hi-Fi envelope signal input
10	N C	–	Not used
11	N C	–	Not used
12	STEREO	I	Tuner stereo detection Stereo at "L"
13	QVD	O	Quasi VD pulse output
14	REMOCON	I	Remote control signal input
15	F MONO	O	Forced monaural signal output
16	CAP RVS	O	Capstan reverse signal output
17	I²C CLOK	O	I²C clock (EEPROM, Hi-Fi, PLL MOD)
18	RF SWP	O	RF switching pulse output
19	AF SWP	O	Hi-Fi switching pulse output
20	END LED	O	LED output to tape top and tape end sensor
21	ANT SEL	O	TV mode at "L", VTR mode at "H"
22	PLL DATA (I²C DATA 1)	I/O	Tuner PLL data/I²C data (EEPRM, Hi-Fi, PLL MOD)
23	PLL CLOCK	O	Tuner PLL clock output
24	T ENABLE	O	Tuner enable signal output
25	SAP	I	MAIN/SAP judge input
26	MODE 4	I	CAM encoder input 4
27	MODE 3	I	CAM encoder input 3
28	MODE 2	I	CAM encoder input 2
29	MODE 1	I	CAM encoder input 1
30	REC PRF	I	Cassette erasing protect tab detect switch input
31	DEST 1	I	Destination judgment 1
32	DEST 2	I	Destination judgment 2
33	DEST 3	I	Destination judgment 3
34	NUB	I	Fixed to GND
35	NUA	I	Fixed to GND
36	CLSEL	I	Fixed to 15V
37	VCC	–	5V
38	16MHz (in)	I	16MHz
39	16MHz (out)	O	16MHz
40	VSS	–	GND
41	32KHz (in)	I	32KHz
42	32KHz (out)	O	32KHz
43	RESET	I	RESET signal input
44	NT JUDGE	I	NTSC at "L"
45	N C	–	Not used
46	CBC ON	O	Cable box control
47	V MUTE	O	Video mute signal
48	A MUTE	O	Audio mute signal
49	REC P	O	Hi-Fi audio recording control signal input
50	REC	O	Play Back mode when audio recording control signal output is "L"

Pin No.	Pin name	I/O	Function
51	I²C CLOCK VIDEO	O	I²C clock (VIDEO)
52	I²C DATA VIDEO	O	I²C data (VIDEO)
53	TA MUTE	O	Tuner audio mute signal output
54	DMS 2	I	Dual mode shuttle control signal input
55	DMS 1	I	Dual mode shuttle control signal input
56	P CONT M12	O	MTR12V control signal output
57	CAM	I/O	CAM motor control 1
58	CW	I/O	CAM motor control 2
59	P CONT SW12	O	SW12V control signal output
60	N C	O	Not used
61	N C	O	Not used
62	N C	O	Not used
63	N C	O	Not used
64	OSD-CS	O	OSD chip select signal output
65	S OUT 1	O	Serial communication signal (RP)
66	FLD-CS	O	FL driver chip select signal output
67	S CLK 1	O	Serial communication (RP)
68	S OUT 0	O	Serial communication signal output (FLD, OSD)
69	S IN 0	I	Serial communication signal input (FLD, OSD)
70	S CLK 0	O	Serial communication clock output (FLD, OSD)
71	N C	–	Not used
72	BUZZER	O	Buzzer output
73	SIRCS OUT	O	SIRCS signal output
74	MAIN/SAP	O	Normal audio MAIN/SAP select input
75	P FAIL	I	Power failure detection input
76	NICOLE ON	O	S-LINK on
77	CAP ERR	O	Capstan error output
78	DURM ERR	O	Drum error output
79	S REEL	I	Supply reel sensor input
80	T REEL	I	Take-up reel sensor input
81	N C	–	Not used
82	CHECK	I	Check signal input
83	N C	–	Not used
84	C SYNC	I	Composite sync input
85	CAP FG	I	Capstan FG input
86	DURM PG	I	Drum PG input
87	DURM FG	I	Drum FG input
88	AMP VSS	–	CTL amplifier GND
89	AMP VREF OUT	O	CTL amplifier
90	AMP VPEF IN	I	CTL amplifier
91	CTL IN–	I/O	CTL singal (–) input/output
92	CTL IN+	I/O	CTL singal (+) input/output
93	CTL SW OUT	O	CTL switch output
94	CTL AMP IN	I	CTL amplifier input
95	AMPC	I	CTL amplifier
96	CTL VSS	–	CTL amplifier GND
97	CTL AMP OUT	O	CTL amplifier output
98	AMP VCC	–	CTL amplifier 5V
99	A VCC	–	Analog 5V
100	N C	–	Not used

SECTION 6
ADJUSTMENTS

During the adjustment, see the Parts Arrangement Diagram for Adjustment on page 6-8.

6-1. MECHANICAL ADJUSTMENTS

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT IV.

6-2. ELECTRICAL ADJUSTMENTS

2-1. PRE-ADJUSTMENT PREPARATIONS

Necessary items and indications for total adjustment of electric circuit of this machine will be described in this chapter

2-1-1. Instruments to be Used.

1) Color TV
2) Oscilloscope 1or 2 phenomena, band more than 30 MHz, deley mode, as provided.
3) Frequency counter (min 8 digits)
4) NTSC pattern generator
5) Digital voltmeter
6) Audio level meter
7) Audio generator
8) Modulation Analyzer
9) Distortion factor meter
10) Attenuator
11) Alignmeter tape
    Part Code. 8-192-605-32 (KRV-51N2)
13) Extension cable (13P)
    Part code J-6090-054-A
    RP-218/220 (CN260) ↔ DRUM

2-1-2. Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

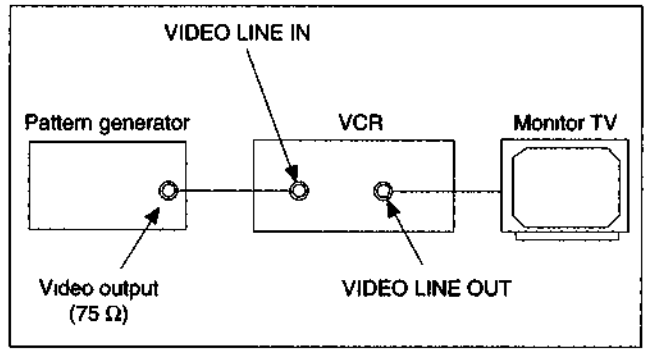


Fig. 6-2-1

2-1-3. Set-up of Adjutment

In this adjustment, NTSC pattern generator is connected with LINE input signal terminal. When check to tuner, connected AERIAL terminal. Check that the amplitudes of video signal NTSC signal, of picture portions, and of burst signals are flat at approximately 0.3, 0.7 and 0.3 V, respectively, and that the level ratio of the burst signal and "red" signal are 0.30: 0 66. Fig. 6-2-2. shows video signals (color bars) used in adjusting the video section.

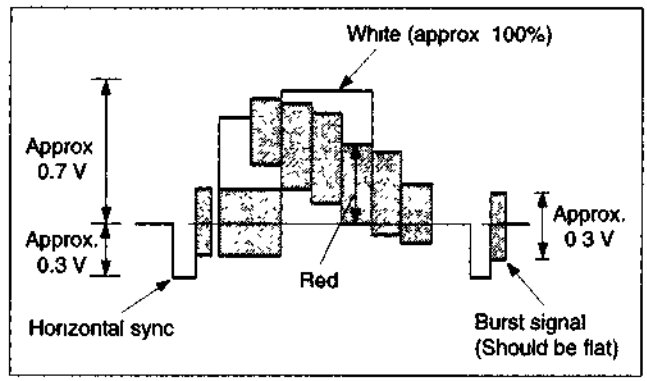


Fig. 6-2-2.

2-1-4. Alignment Tape
[Alignment Tape (KRV-51N2)]

	Mode	Time	Video signal	Audio signal (HiFi/Normal)
1	SP	Seven minutes	Color bar	400 Hz
2		Three minutes	Monoscope	400 Hz
3	EP	Seven minutes	Color bar	400 Hz
4		Three minutes	Monoscope	—

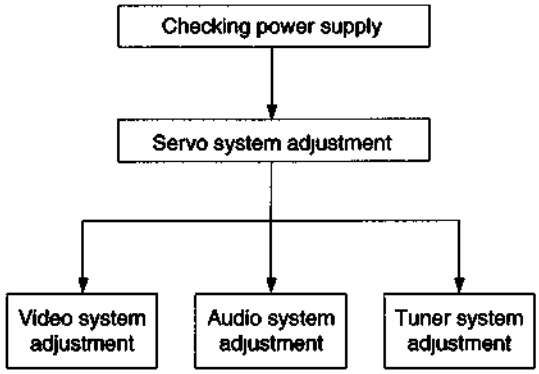
2-1-5. Specified I/O Level and Impedance

Input/output terminal

Video inputs	LINE IN : phono jack
	1 Vp-p, 75 Ω, unbalanced, sync negative
Audio inputs	LINE IN : phono jacks
	47 kΩ, –7.5 dBs (0 dBs = 0.775 Vrms)
	More than 10 kΩ, ± 4 dBs
Video outputs	LINE OUT : phono jack
	1 Vp-p, 75 Ω, unbalanced, sync negative
Audio outputs	LINE OUT : phono jacks
	–7.5 dBs at load impedance 47 kΩ
	Output impedance : less than 10 Ω

2-1-6. Adjusting Sequence

Make the electrical adjustment in the following sequence.



2-2. POWER SUPPLY ADJUSTMENT

2-2-1. Power Supply Check (SR-800/802 BOARD)

Mode	E-E
Measuring Instrument	Digital voltmeter
+F, –F check	
Measurement Point	Pin ④ (+), ①(–) of CN201
Specified Value	4 6 ± 1 Vdc
–30 V check	
Measurement Point	Pin ② of , CN201
Specified Value	–29 ± 3 Vdc
D6 V check	
Measurement Point	Pin ⑤ of CN201
Specified Value	5 9 ± 0 5 V
SW12 V	
Measurement Point	Pin ⑧ of CN201
Specified Value	12 ± 1 Vdc
MTR12 V check	
Measurement Point	Pin ⑫ of CN201
Specified Value	13.2 ± 1 Vdc
+38 V check	
Measurement Point	Pin ⑯ of CN201
Specified Value	38.0 ± 3 Vdc
SW5 V check	
Measurement Point	Pin ⑰ of CN201
Specified Value	5 ± 0.5 Vdc

Checking Method:

1) Confirm that each voltage meets its specified value.

2-2-2. D6V Adjustment (SR-800/802 BOARD)

Mode	REC or PB
Measuring Instrument	Digital voltmeter
Measurement Point	Pin ⑤ of CN201
Adjusting Element	RV201
Specified Value	5.9 ± 0.5 V

2-3. SERVO SYSTEM Adjustment

2-3-1. Switching Position Adjustment (MA-290/292, RP-218/220 Board)

Purpose:

Adjust the interval between A ch and B ch of tape playback output. Improve the interchangeability with other tapes and sets.
When it is out of order, the interval appears on the screen, the screen is disturbed.

Mode	PB
Signal	Alignment tape SP mode color bar
Measurement Point	CH1: VIDEO LINE OUT CH2: Pin ③ of CN261 (RP-218/220 board) (RF SWP)
Measuring Instrument	Oscilloscope
Specified Value	6.5 ± 0.5 H (410 ± 32μsec)

Adjusting Method:

1) Connect MA-290 board SWP ADJ TP to the GND for about 1 second to activate the RF switching position adjustment mode.: MA-290 Board
   Connect HI-50 board JS430 to the GND for about 1 secont to activate the RF switching position adjustment mode.. MA-292 Board
2) Check appear "Adj-rf" on FL display.: MA-290 Board
   Check appear "A" on FL display.. MA-292 Board
3) Using the channel + and – buttons, adjust to 410 ± 32 μsec (6.5 ± 0.5 H).

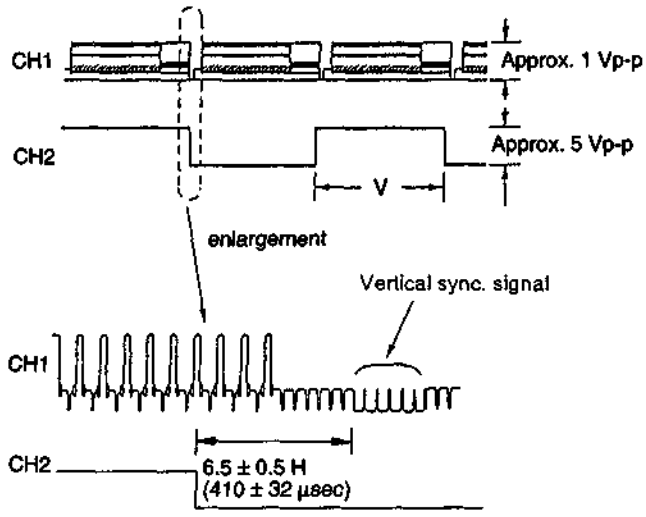


Fig. 6-2-3.

2-4. VIDEO SYSTEM ADJUSTMENT

Adjust the video system in the following sequence as a rule. The color video signal supplied from the pattern generator is used as a video input signal for video system adjustment in the recording mode.
Make sure that sync. and color burst signals meet requirements specified at set up of adjustment shown in Fig. 6-2-1.

[Adjustment Sequence]

2-4-1. Recording Y Signal Level Check
2-4-2. White Clip, Dark Clip Check
2-4-3. Playback Y Signal Level Check
2-4-4. Recording Chroma Level Check
2-4-5. Sync. AGC Check
2-4-6. X'tal Oscillation Frequency Check

2-4-1. Recording Y Signal Level Check (MA-290/292 Board)

Purpose:

Check the brightness signal level after passing through the V/C separating circuit.

Mode	E-E
Signal	Color bar
Measurement point	Pin ㊷ IC201
Measurement equipment	Oscilloscope
Specified value	320 ± 50 mVp-p

Confirmation Method:

1) Confirm that the record Y level is 320 ± 50 mVp-p.

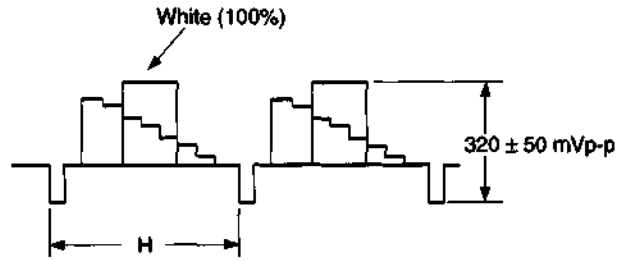


Fig. 6-2-4.

2-4-2. White Clip, Dark Clip Check (MA-290/292 Board)

Purpose:

Confirm that no overshoot is generated by the pre-emphasis circuit. If shifted, the signals are overmodulated, thus causing a noise in the images.

Mode	E-E
Signal	Color bar
Measurement point	Pin ㊲ of IC201
Measurement equipment	Oscilloscope
Specified value	White clip: 190 ± 15% Dark clip: 50 ± 10%

Confirmation Method:

1) Confirm that the white clip is 190 ± 15%, on condition that the level between white and sync. is 100%.
2) Confirm that the dark clip is 50 ± 10%, on condition that the level between white and sync. is 100%

Fig. 6-2-5.

2-4-3. Playback Y Signal Level Check (MA-290/292 Board)

Purpose:

Confirm that the playback Y signal level is correct.

Mode	PB
Signal	Alignment tape SP color bar
Measurement point	Pin ㊳ IC201
Measurement equipment	Oscilloscope
Specified value	2.10 ± 0.18 Vp-p

Note: Make this adjustment with the EDIT switch turned off. (MA-290 Board)

Confirmation Method:

1) Confirm that the play Y level is 2.10 ± 0.18 Vp-p.

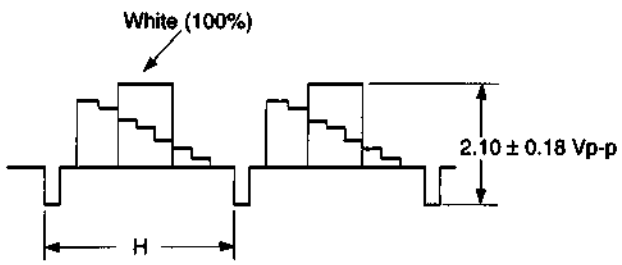


Fig. 6-2-6.

2-4-4. Recording Chroma Level Check (MA-290/292 Board)

Purpose:

Check the chroma signal level after passing through the Y/C separating circuit.

If shifted, the image is roughened and another color may appear on the edges.

Mode	E-E
Signal	Color bar
Measurement point	Pin ⑭ of IC201
Measurement equipment	Oscilloscope
Specified value	380 ± 40 mVp-p

Confirmation Method:

1) Confirm that the record chroma level is 380 ± 40 mVp-p.

Fig. 6-2-7.

2-4-5. Sync. AGC Check (MA-290/292 Board)

Purpose:

Confirm that the video level is correct.

Mode	E-E
Signal	Color bar
Measurement point	Pin ㊳ IC201
Measurement equipment	Oscilloscope
Specified value	2.10 ± 0.14 Vp-p

Note: Video output terminal must be terminated at 75 Ω.

Confirmation Method:

1) Confirm that the sync. AGC level is 2.10 ± 0 14 Vp-p.

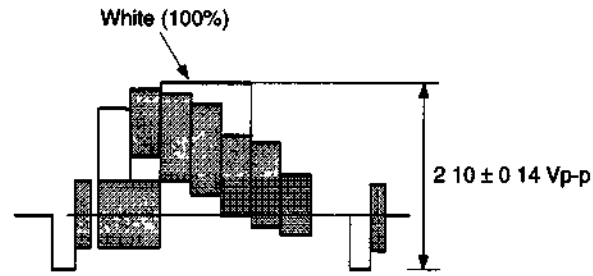


Fig. 6-2-8.

2-4-6. X'tal Oscillation Frequency Check (MA-290/292)

Purpose:

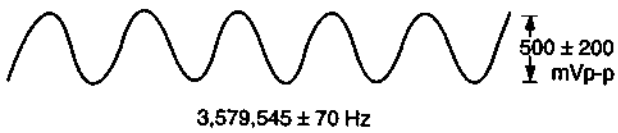
Confirm that the fsc is correct.

Mode	PB
Signal	Alignment tape SP color bar
Measurement point	Pin ⑯ of IC201
Measurement equipment	Frequency counter, Oscilloscope
Specified value	3,579,545 ± 70 Hz

Note: connect the frequency counter through a probe of high input impedance (about 10 MΩ) and low capacity (10 pF or less).

Confirmation Method:

1) Confirm that the frequency is 3,579,545 ± 70 Hz
2) Confirm that the amplitude is 500 ± 200 mVp-p.



3,579,545 ± 70 Hz

Fig. 6-2-9.

2-5. AUDIO SYSTEM ADJUSTMENTS

- Adjust both Lch and Rch.

[Connection]

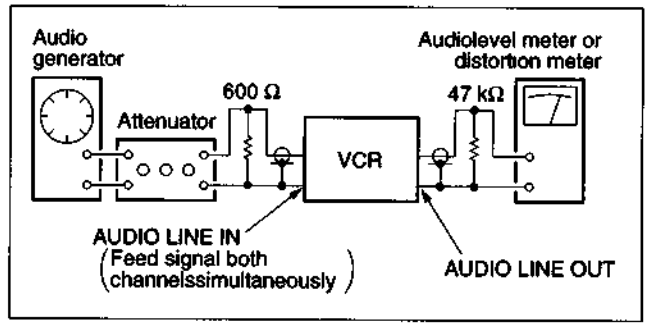


Fig. 6-2-10.

2-5-1. Hi-Fi Audio System Adjustment

- Set switches and knobs to the following positions to make adjustment unless otherwise specified
  INPUT SELECT switch ..... LINE
  AUDIO MONITOR ..... STEREO

1. AF Switching Position Adjustment (MA-290/292 Board)

Purpose:

Adjust the interval between A CH and B CH of tape playback output. Improve the interchangeability with other tapes and sets. When it is out of order, noisy sound is increased and big noise is heard.

Mode	PB
Signal	Alignment tape SP mode color bar
Measurement point	CH1. Pin ③ of CN261 (RP-218/220 Board) CH2: Pin ① of CN341 (RP-218/220 Board)
Measuring Instrument	Oscilloscope
Specified Value	Fig 6-2-11

Adjusting Method:

1) Connect MA-290 board SWP ADJ TP to the GND for about 1 second to activate the RF switching position adjustment mode..
   MA-290 Board
   Connect HI-50 board JS430 to the GND for about 1 secont to activate the RF switching position adjustment mode.: MA-292 Board
2) Press the record button to activate the AF switching position adjustment mode.
3) Check appear "Adj-HF" on FL display.: MA-290 Board
   Check appear "A" on FL display.: MA-292 Board
4) Using the channels + and – buttons, minimize a chipped portion. At this time, confirm that a noisy sound is not heard.

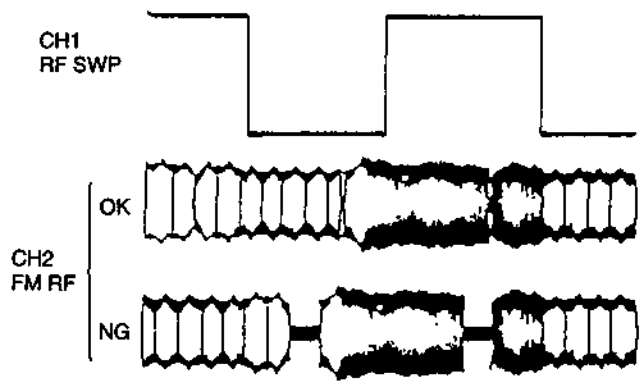


Fig. 6-2-11.

2-5-2. Normal Audio System Adjustment

- Make adjustment in the SP mode, unless otherwise specified. Use a normal VHS cassette for an adjustment tape.
- Set AUDIO MONITOR to normal.

[Adjustment Sequence]

1. **ACE Head Adjustment**
2. **E-E Output Level Check**
3. **Recording Bias Adjustment**
4. **Overall Level Characteristic and Distortion Factor Check**
5. **Overall S/N Check**

1. ACE Head Adjustment
Refer to the service manual of VHS MECHANICAL ADJUSTMENT IV.

2. E-E Output Level Check (MA-290/292 Board)
Purpose:
Confirm that the output level against the reference input is within the specification.

Mode	E-E
Signal	L, R: 400 Hz, –7.5 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	–7.5 ± 2 dBs

Confirmation Method:
1) Simultaneously input a signal of 400 Hz, –7.5 dBs to both L and R channels of Audio Line Input.
2) Confirm that the audio output level is –7.5 ± 2 dBs.

3. Recording Bias Check (MA-290/292 Board)
Purpose:
Confirm that the frequency characteristic is within the specification.

Mode	REC and PB (SP mode)
Signal	400 Hz, –27.5 dBs 7 kHz, –27.5 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	0 ± 3 dB

Note: Tape path adjustment must have been completed.

Confirmation Method:
1) Supply a signal of 400 Hz, –27.5 dBs to both L and R channels of Audio Line Input.
2) Connect the audio level meter to the Audio Line Output.
3) Adjust the attenuator so that the audio level meter will indicate –27.5 dBs.
4) Make recording in the SP mode.
5) Set an audio line input signal to 7 kHz and make recording.
6) Playback a recorded portion, and measure output levels at 400 Hz and 7 kHz.
7) Confirm that the 7 kHz playback output level within a range of the 400 Hz playback output level 0 ± 1 dB.

4. Overall Level Characteristic and Distortion Factor Check
Purpose:
Check the record level, play level, and distortion factor against the reference input.

Mode	REC and PB (SP mode)
Signal	400 Hz, –7.5 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter and distortion factor meter
Specified value	Playback level. –7.5 ± 3 dBs Distortion factor: 4% or less

Confirmation Method:
1) Supply an audio signal of 400 Hz, –7.5 dBs simultaneously to both L and R channels of Audio Line Input.
2) Make recording
3) Play back a recorded portion.
4) Confirm that a playback level is –7.5 ± 3 dBs.
5) Confirm that a distortion factor is within 4%.

5. Overall S/N Check
Purpose:
Confirm that the S/N is within the specification.

Mode	REC and PB (SP mode)
Signal	No signal
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	–46 dB or more

Confirmation Method:
1) Connect both L and R channels of audio line input to the GND.
2) Start recording.
3) Play the recorded part to confirm that the noise is below –46 dB.

2-6. TUNER SYSTEM ADJUSTMENTS

[Connection]

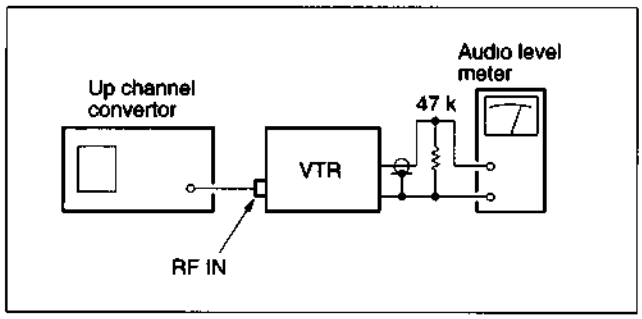


Fig. 6-2-12.

2-6-1. Separation Adjustment

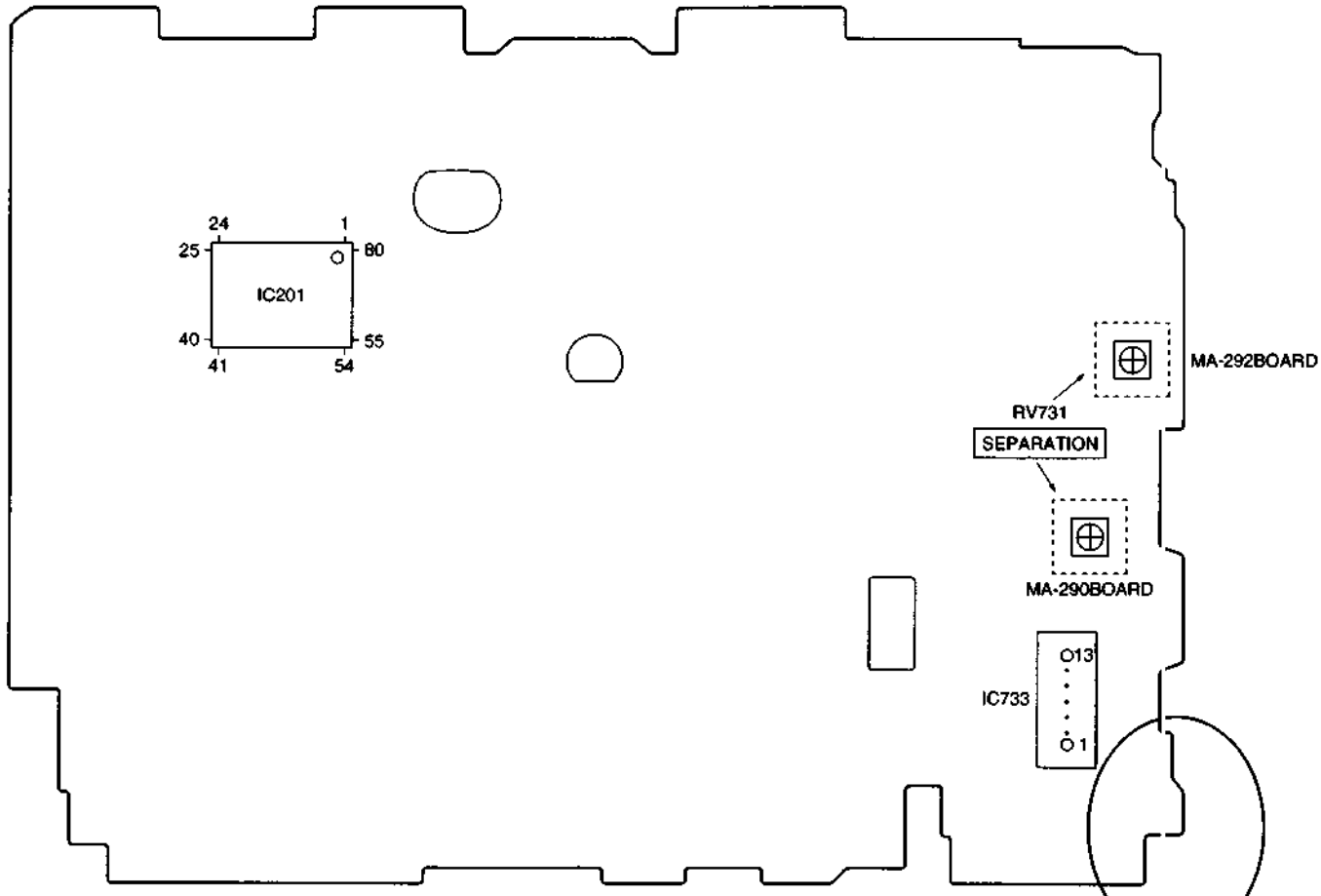
Purpose:

Mixed audio signal separate Lch and Rch

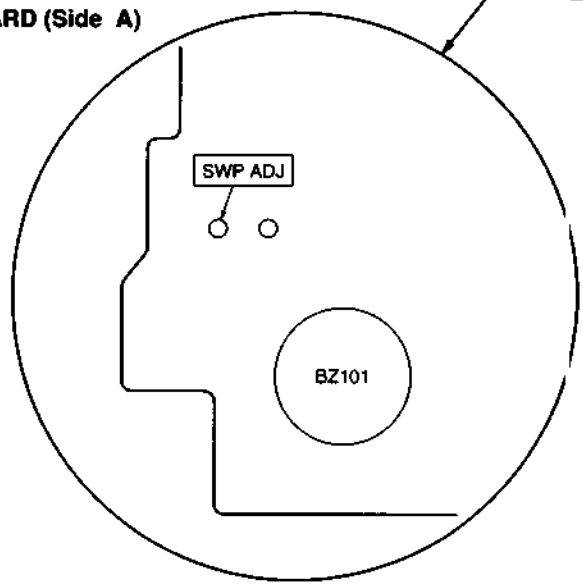
Mode	E-E
Signal	VIDEO color bar (87 5% modulation) AUDIO. L 1 kHz 100% modulation R no signal ELECTRIC FIELD 60–80 dBs/75 Ω Tem
Measurement point	Pin ⑫ of IC733
Measurement equipment	Audio level meter
Adjusting Element	RV731
Specified value	-9 9 ± 0 2 dBm (700 ± 14 mVp-p)

2-7. PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENTS

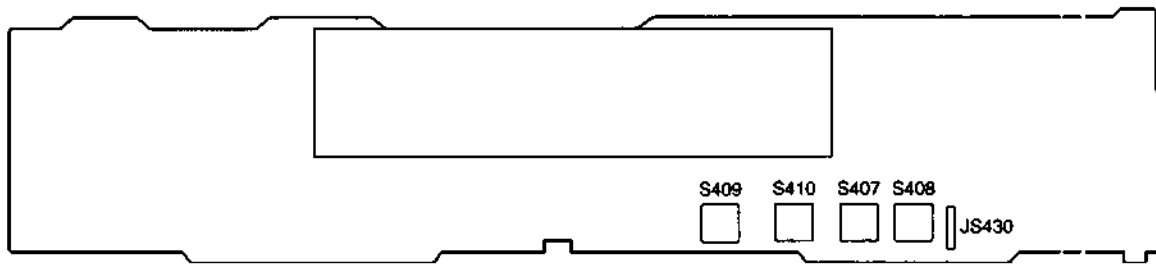
MA-290/292 BOARD (Side B)



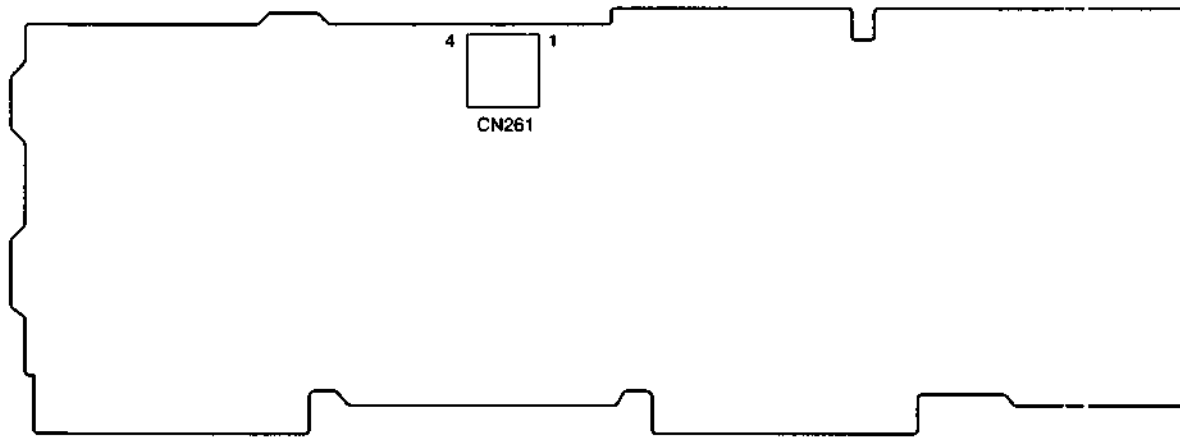
MA-290 BOARD (Side A)



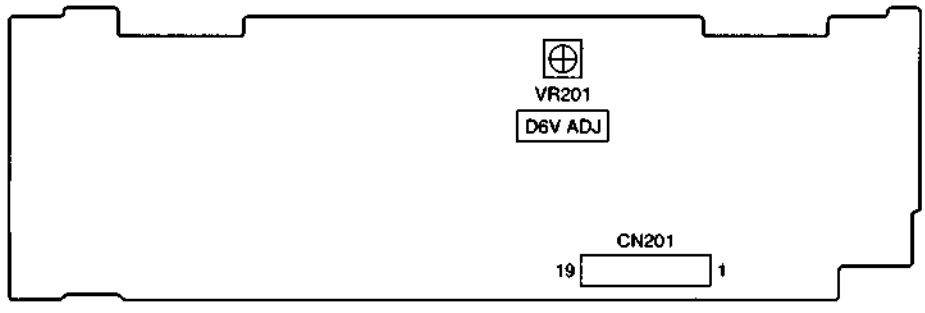
HI-50 BOARD (Side A)



RP-218/220 BOARD (Side A)



SR-800/802 BOARD (Side A)



SECTION 7
REPAIR PARTS LIST

7-1. EXPLODED VIEWS

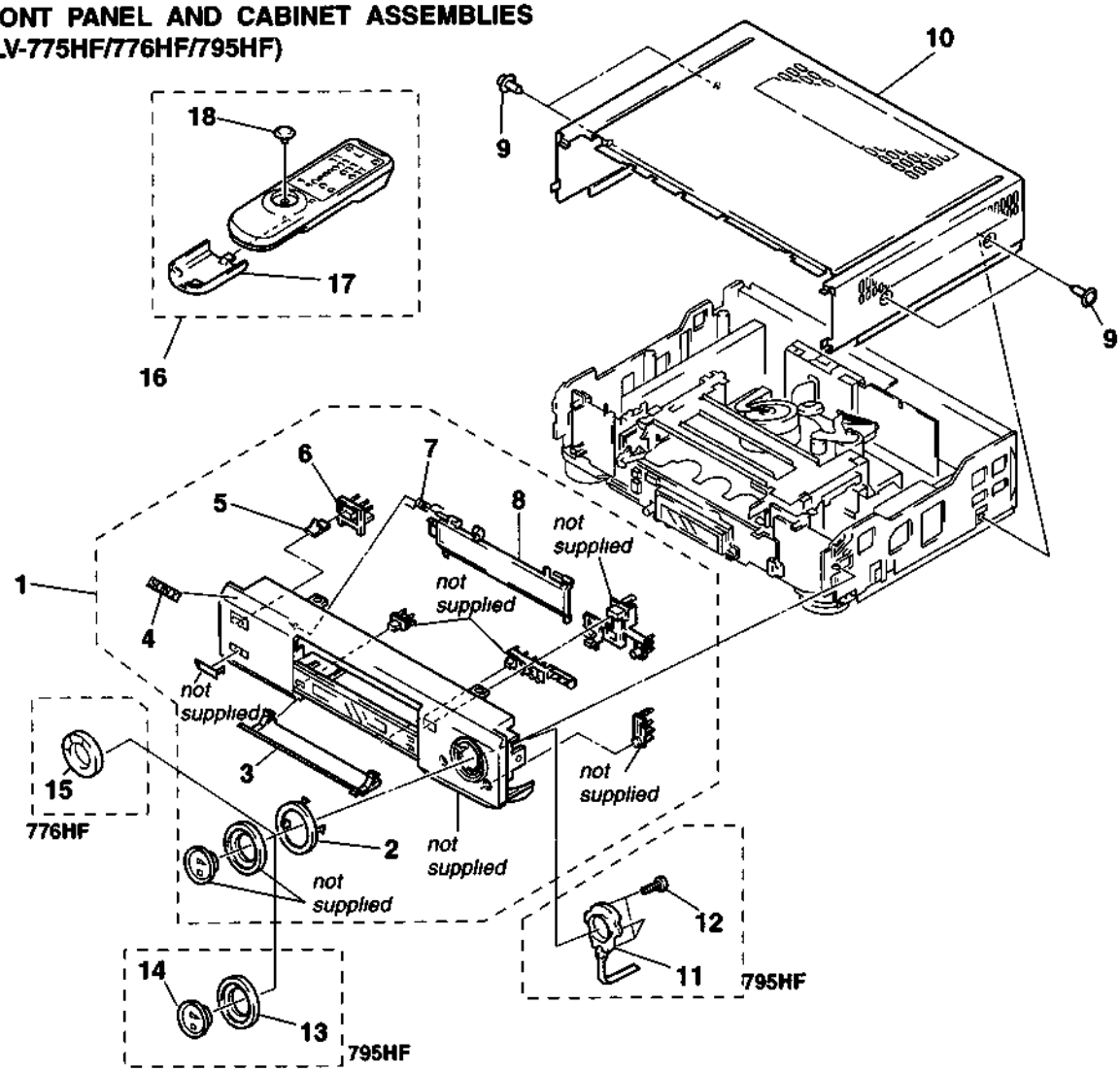
NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one
- Items marked "*" are not stocked since they are seldom required for routine service Some delay should be anticipated when ordering these items
- Color Indication of Appearance Parts Example

  KNOB, BALANCE (WHITE) (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- The mechanical parts with no reference number in the exploded views are not supplied
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list

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

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

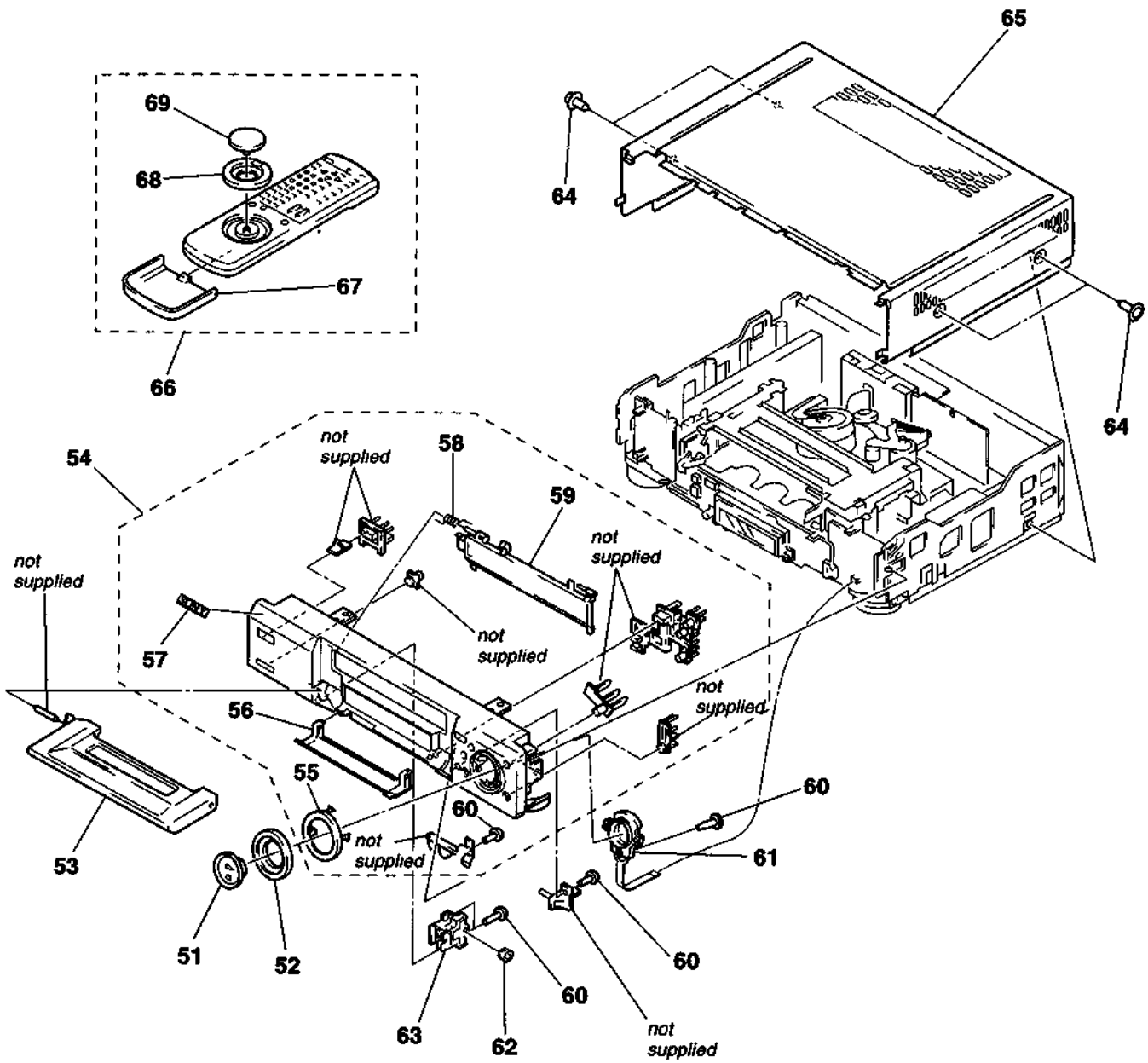
7-1-1. FRONT PANEL AND CABINET ASSEMBLIES (SLV-775HF/776HF/795HF)



Ref. No.	Part No	Description	Remark
1	X-3946-627-1	PANEL ASSY, FRONT (795HF)	
1	X-3946-632-1	PANEL ASSY, FRONT (775HF)	
1	X-3946-932-1	PANEL ASSY, FRONT (776HF)	
* 2	3-972-781-01	PLATE, RING ORNAMENTAL (795HF)	
* 2	3-972-781-11	PLATE, RING ORNAMENTAL (775HF/776HF)	
3	3-970-162-21	DOOR (A), JACK (775HF)	
3	3-970-162-61	DOOR (A), JACK (795HF)	
3	3-974-145-61	DOOR (A), JACK (776HF)	
4	3-943-995-01	EMBLEM (NO.5), SONY	
5	3-946-611-01	TIP, POWER BUTTON	
6	3-966-213-01	BUTTON, POWER (775HF/795HF)	
6	3-966-213-11	BUTTON, POWER (776HF)	
7	3-953-432-01	SPRING (GE), FL	
8	3-972-774-01	DOOR, CASSETTE (775HF/795HF)	
8	3-972-774-21	DOOR, CASSETTE (776HF)	

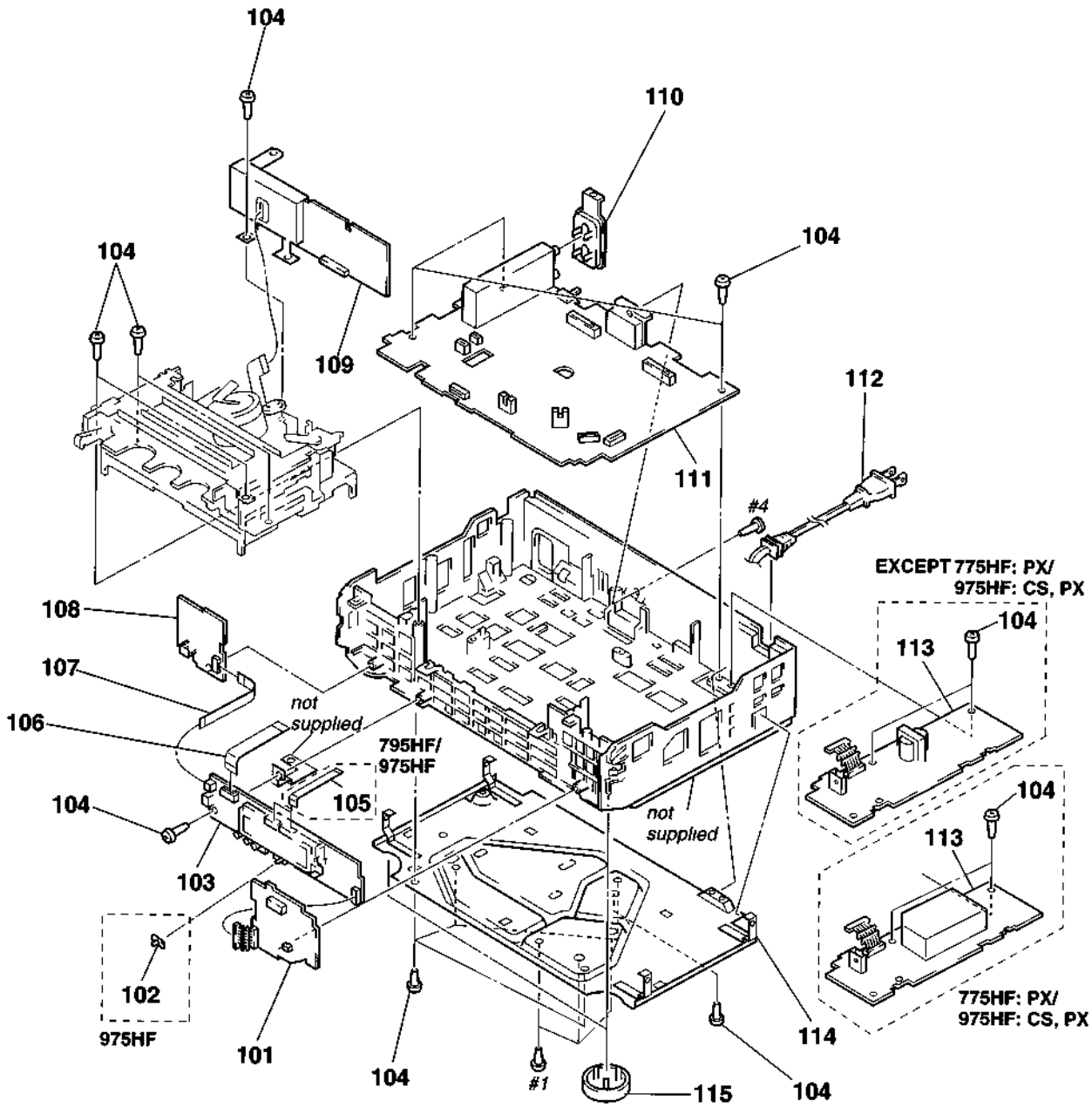
Ref No.	Part No.	Description	Remark
9	3-710-901-41	SCREW, TAPPING	
* 10	3-972-787-01	CASE (LS), UPPER (775HF/795HF)	
* 10	3-972-787-11	CASE (LS), UPPER (776HF)	
11	1-762-844-21	SWITCH, ROTARY (CLICK SHUTTLE) (795HF)	
12	4-921-277-41	SCREW (B2.6X8), TAPPING, BIND	
13	3-972-783-01	RING, JOG (795HF)	
14	3-972-782-01	BUTTON, CENTER (795HF)	
15	X-3946-598-1	BUTTON ASSY, FUNCTION (776HF)	
16	1-475-027-11	REMOTE COMMANDER (RMT-V202) (795HF)	
16	1-475-027-21	REMOTE COMMANDER (RMT-V202A) (775HF/776HF)	
17	3-709-129-01	COVER, BATTERY (for RMT-V202/V202A)	
18	3-709-131-01	HEAD (ENGLISH), JOY STICK (for RMT-V202/V202A)	

7-1-2. FRONT PANEL AND CABINET ASSEMBLIES (SLV-975HF)



Ref. No.	Part No.	Description	Remark
51	3-972-782-01	BUTTON, CENTER	
52	3-972-783-01	RING, JOG	
53	1-475-008-11	SWITCH BLOCK, CONTROL	
54	X-3946-630-1	PANEL ASSY, FRONT	
* 55	3-972-805-01	PLATE (LE), RING ORNAMENTAL	
56	3-966-244-51	DOOR (B), JACK	
57	3-943-995-01	EMBLEM (NO.5), SONY	
58	3-953-432-01	SPRING (GE), FL	
59	3-965-769-21	DOOR, CASSETTE	
60	4-921-277-41	SCREW (B2.6X8), TAPPING, BIND	
61	1-762-844-31	SWITCH, ROTARY (CLICK SHUTTLE)	
62	3-961-745-01	DAMPER, OIL	
* 63	3-960-076-01	PLATE (LEFT), FULCRUM, DOOR	
64	3-710-901-41	SCREW, TAPPING	
* 65	3-972-787-01	CASE (LS), UPPER	
66	1-475-031-11	REMOTE COMMANDER (RMT-V201)	
67	3-709-126-01	COVER, BATTERY (for RMT-V201)	
68	3-972-783-21	RING, JOG (for RMT-V201)	
69	3-972-850-01	BUTTON, FUNCTION (for RMT-V201)	

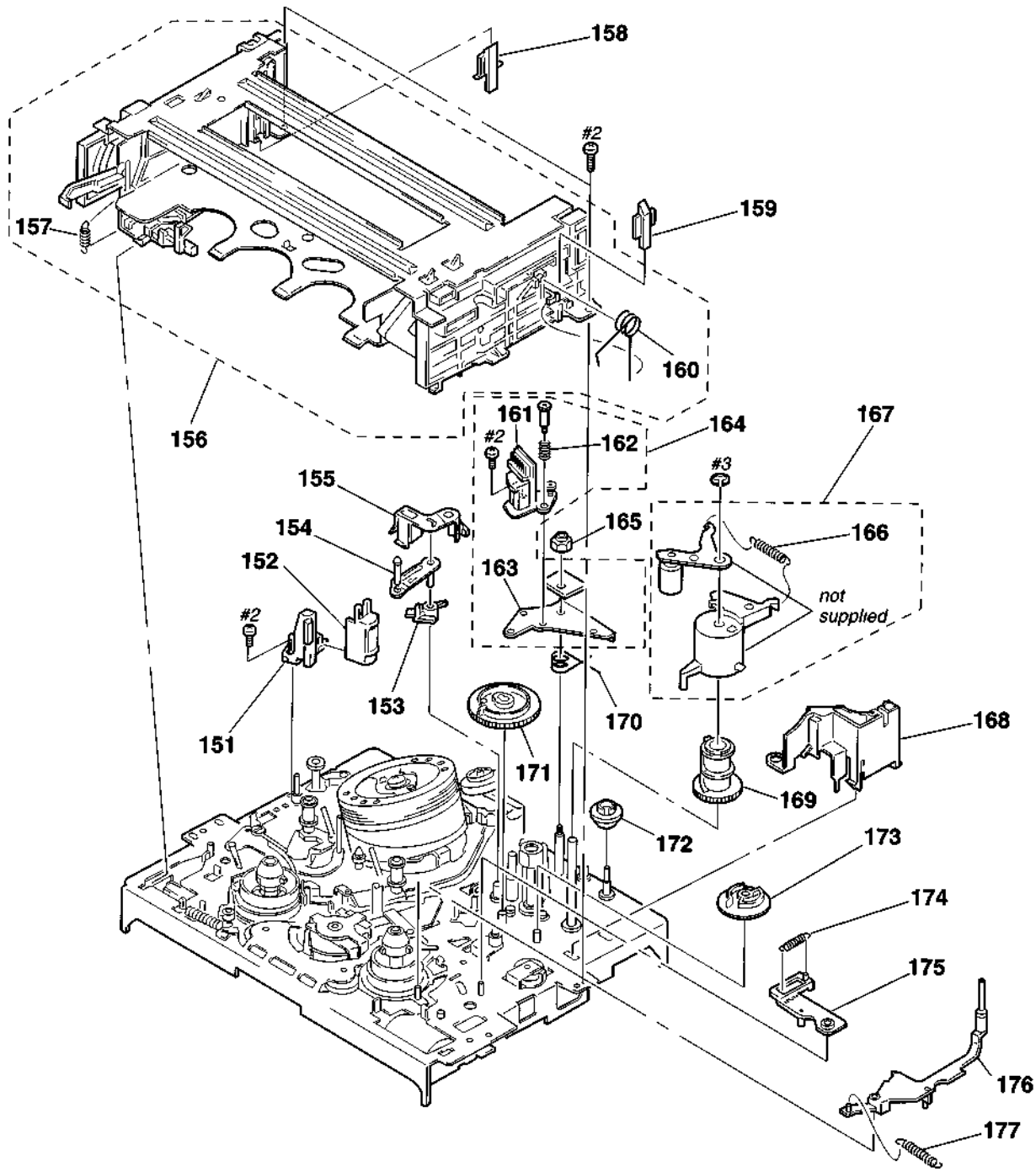
7-1-3. CHASSIS ASSEMBLY



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

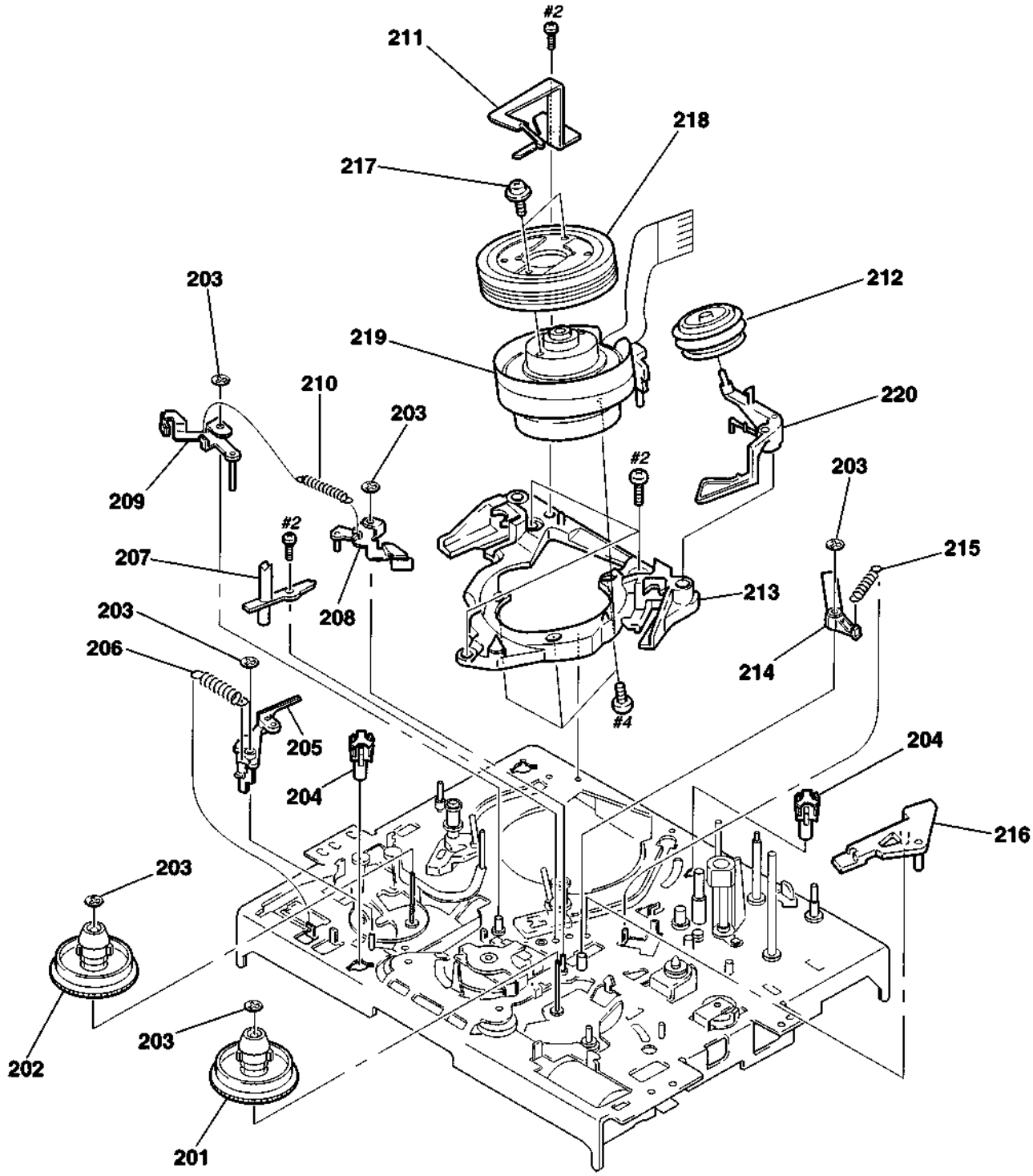
Ref No	Part No	Description	Remark
* 101	1-664-702-11	DM-63 BOARD (795HF/975HF)	
* 101	1-664-706-11	DM-65 BOARD (775HF/776HF)	
102	3-966-256-01	KNOB (4P), SLIDE (975HF)	
* 103	A-6791-138-A	HI-48 BOARD, COMPLETE (975HF)	
* 103	A-6791-141-A	HI-48 BOARD, COMPLETE (795HF)	
* 103	A-6791-146-A	HI-50 BOARD, COMPLETE (775HF/776HF)	
104	3-970-608-21	SUMITITE (B3), +BV	
105	1-777-966-11	CABLE, FLAT (FMH-16) 31P (795HF/975HF)	
106	1-777-962-12	CABLE, FLAT (FMH-14) 15P (775HF/776HF)	
106	1-777-966-11	CABLE, FLAT (FMH-16) 31P (795HF/975HF)	
107	1-777-963-11	CABLE, FLAT (FHM-3) 5P	
* 108	1-664-703-11	MF-302 BOARD (795HF/975HF)	
* 108	1-664-707-11	MF-303 BOARD (775HF/776HF)	
* 109	A-6791-139-A	RP-218 BOARD, COMPLETE (975HF)	
* 109	A-6791-142-A	RP-218 BOARD, COMPLETE (795HF)	
* 109	A-6791-147-A	RP-220 BOARD, COMPLETE (775HF/776HF)	
* 110	3-972-790-01	PLATE (TU), REAR JACK	
* 111	A-6791-144-A	MA-290 BOARD, COMPLETE (795HF)	
* 111	A-6791-149-A	MA-292 BOARD, COMPLETE (775HF/776HF)	
* 111	A-6796-431-A	MA-290 BOARD, COMPLETE (975HF)	
⚠112	1-777-851-41	CORD, POWER	
113	1-468-184-11	SR-800 BOARD (EXCEPT 775HF PX/975HF CS, PX)	
113	1-468-186-11	SR-802 BOARD (775HF PX/975HF CS, PX)	
* 114	3-972-786-01	PLATE (LS), BOTTOM	
115	3-966-229-01	INSULATOR (ST) (EXCEPT 776HF)	
115	3-966-229-31	INSULATOR (ST) (776HF)	

7-1-4. MECHANISM CHASSIS ASSEMBLY (1)



Ref No	Part No	Description	Remark
151	X-3945-348-2	FEH ASSY	
152	1-500-144-11	HEAD, FE	
153	3-958-421-01	HOLDER, TG8	
154	X-3944-797-1	TG8 ASSY	
155	3-962-298-01	BRACKET, TG7 TAPE	
156	A-6759-603-A	FL BLOCK ASSY	
157	3-958-467-01	SPRING, TENSION COIL	
158	3-960-215-01	PLATE, LIGHT GUIDE, END SENSOR	
159	3-970-473-01	PLATE, LIGHT GUIDE, TOP SENSOR	
160	3-970-471-01	SPRING (DECK OPEN), TORSION	
161	1-506-485-11	PIN, CONNECTOR 6P	
162	3-960-439-02	SPRING (ACE), COMPRESSION	
163	3-958-491-01	BASE, ACE	
164	A-6736-103-A	ACE BLOCK ASSY	
165	3-942-867-01	NUT, AC HEIGHT ADJUSTMENT	
166	3-958-455-01	SPRING (PINCH), TENSION	
167	A-6746-072-A	PRESS BLOCK ASSY, PINCH	
168	3-958-454-01	OPNER, LID	
169	3-958-151-01	GEAR, ELEVATOR	
170	3-958-487-01	SPRING, (AEC) TORSION COIL	
171	3-958-152-01	GEAR, TG8	
172	3-958-501-01	SCREW, ACE ADJUSTMENT	
173	3-958-153-01	GEAR, PRESS	
174	3-958-462-01	SPRING (RVS BRAKE), TENSION	
175	X-3943-885-1	ARM ASSY, RVS BRAKE	
176	X-3943-882-1	BRAKE (T) ASSY, SOFT	
177	3-958-505-01	SPRING (SOFT BRAKE T), TENSION	

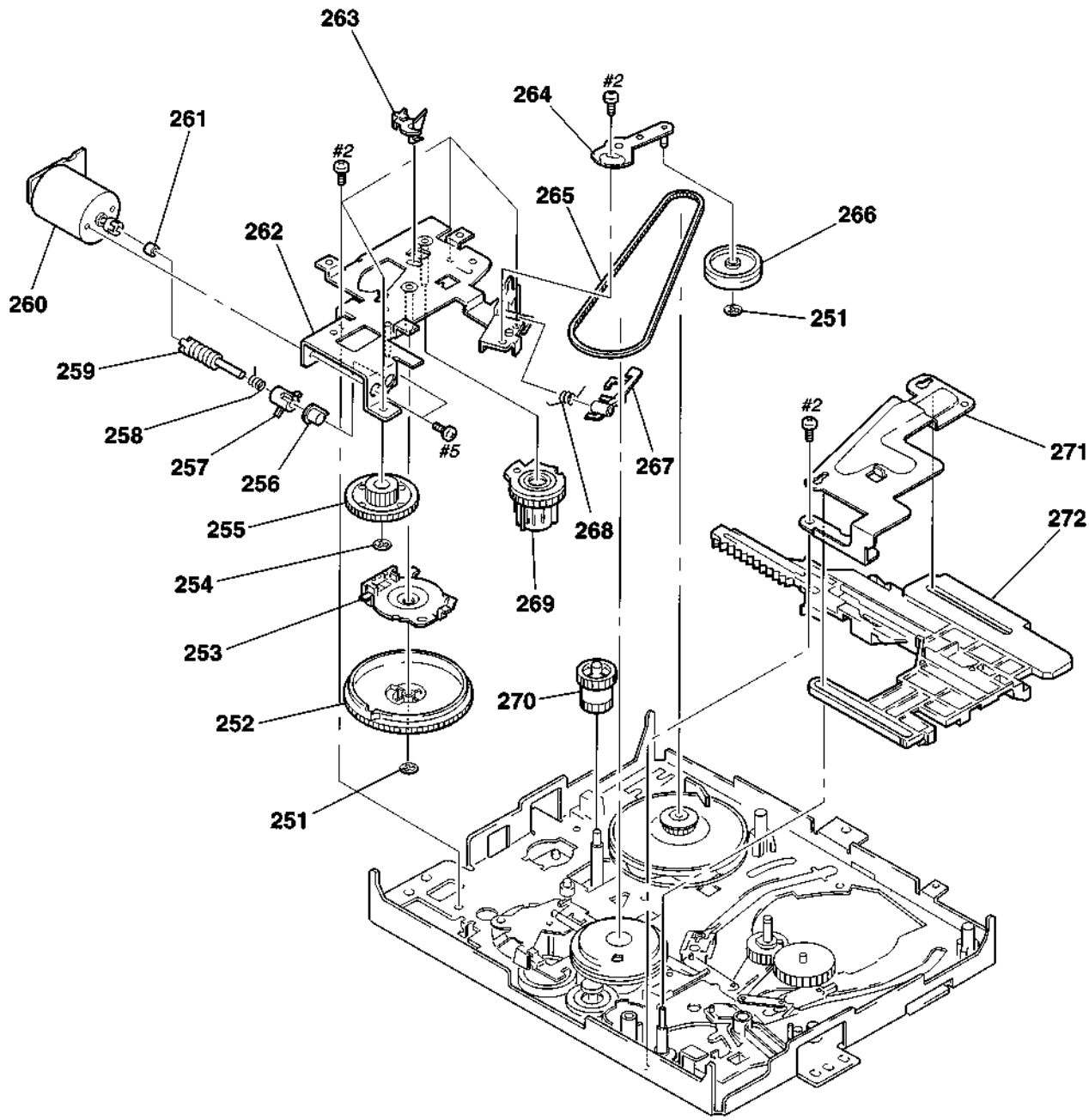
7-1-5. MECHANISM CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark
201	X-3943-903-1	TABLE, REEL (T) ASSY	
202	X-3943-902-1	TABLE, REEL (S) ASSY	
203	3-669-595-00	WASHER (2), STOPPER	
204	3-958-390-01	SHAFT, PC BOARD	
205	3-958-450-01	BRAKE (S), SOFT	
206	3-958-443-01	SPRING, STRETCH COIL SPRING	
207	3-958-391-01	PLATE, LIGHT GUIDE, LED	
208	X-3945-444-1	BRAKE (T) ASSY, MAIN	
209	X-3945-443-1	BRAKE (S) ASSY, MAIN	
210	3-958-517-01	SPRING, TENSIONCOIL	

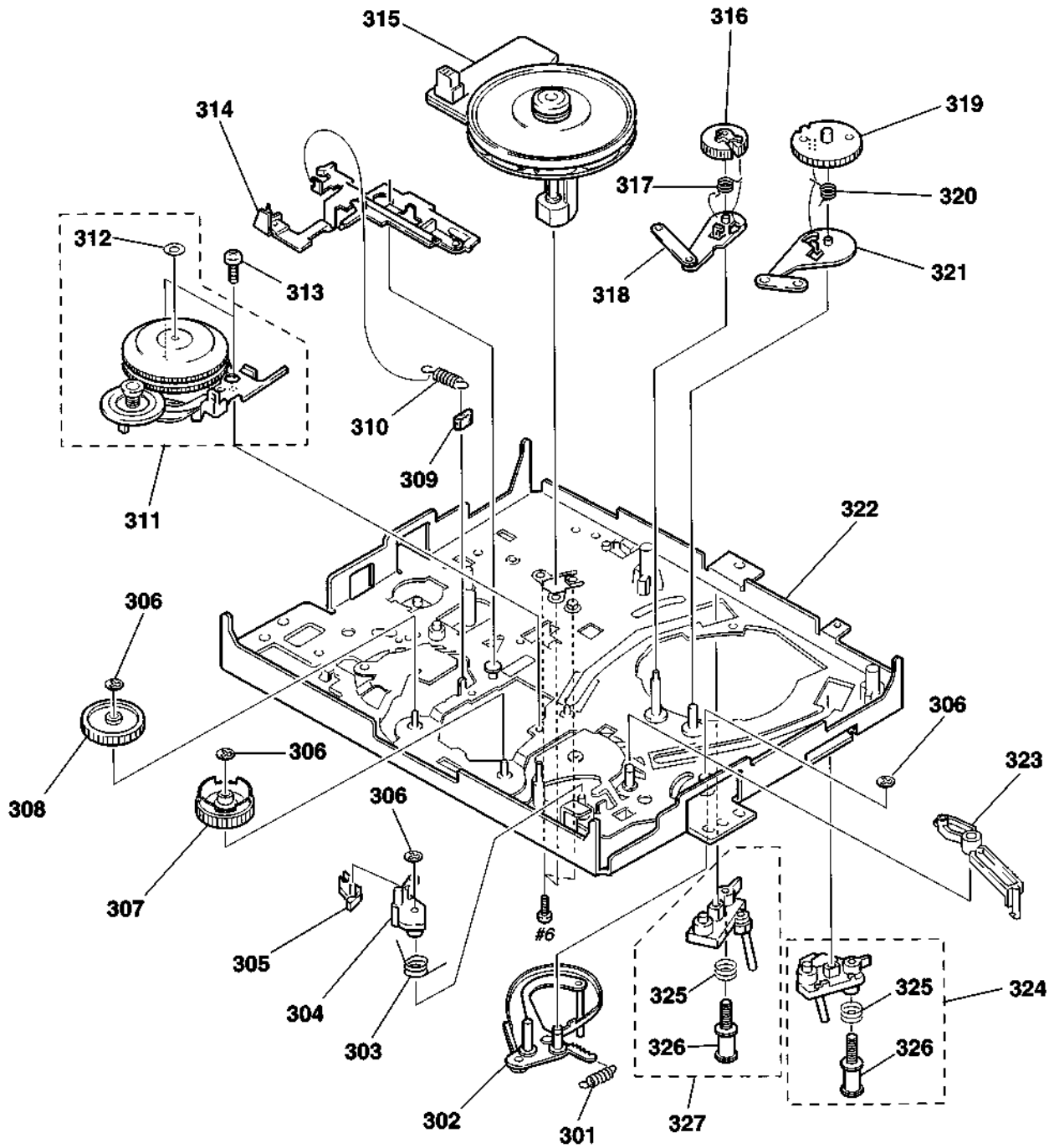
Ref. No.	Part No	Description	Remark
211	X-3943-899-8	GROUND ASSY, SHAFT	
212	X-3947-255-1	ROLLER ASSY, HC	
213	3-969-629-01	BASE, DRUM	
214	3-960-139-01	ARM, NEUTRALITY	
215	3-958-535-01	SPRING, TENSION	
216	3-960-138-01	ARM, PENDULUM COMPULSION	
217	2-643-205-01	SCREW, +PW 3X8	
218	8-848-576-02	DRUM ASSY, ROTARY UPPER (DZR-45-R)	
219	8-848-666-11	DRUM ASSY, LOWER (DZL-51B/J-RP)	
220	3-975-724-01	ARM, HC	

7-1-6. MECHANISM CHASSIS ASSEMBLY (3)



Ref No	Part No	Description	Remark
251	3-669-595-00	WASHER (2), STOPPER	
252	3-958-161-07	GEAR, CAM	
253	1-762-076-11	SWITCH, ROTARY	
254	3-966-092-01	RING, RETAINING, SLIT WASHER	
255	3-958-157-02	WHEEL, WORM	
256	3-958-155-01	BEARING, CAM MOTOR	
257	3-958-160-01	PROPELLOR	
258	3-958-460-01	SPRING, ONE-WAY	
259	3-958-159-01	WORM	
260	X-3943-883-1	MOTOR ASSY, CAM	
261	3-959-840-11	RUBBER, JOINT	
* 262	X-3943-884-1	CHASSIS ASSY, CAM MOTOR	
263	3-965-977-03	RETAINER, CAM GEAR	
264	X-3943-889-1	ARM ASSY, TENSION VEHICLE	
265	3-958-361-01	BELT, TIMING	
266	3-958-448-01	WHEEL, TENSION	
267	X-3943-888-1	BRAKE ASSY, CAP	
268	3-958-445-01	SPRING,TORSIONCOIL(CAP BRAKE)	
269	3-958-156-03	GEAR, FL DRIVING	
270	3-958-162-02	GEAR,UPPER/LOWER COMMUNICATION	
* 271	3-959-763-01	RETAINER	
272	3-958-163-04	SLIDER, MAIN	

7-1-7. MECHANISM CHASSIS ASSEMBLY (4)



Ref No	Part No	Description	Remark
301	3-958-492-01	SPRING (TG1), TENSION COIL	
302	X-3943-886-1	TG1 ASSY	
303	3-958-534-01	SPRING, TORSION	
304	3-958-532-01	ARM, S WINDING	
305	3-958-533-01	CLAW, S WINDING	
306	3-669-595-00	WASHER (2), STOPPER	
307	3-962-959-01	GEAR (S-K), IDLER	
308	3-962-960-01	GEAR (T-K), IDLER	
309	3-959-840-11	RUBBER, JOINT	
310	3-958-529-01	SPRING (MOMENT), TENSION	
311	A-6739-102-A	RKB BLOCK ASSY	
312	3-966-092-01	RING, RETAINING, SLIT WASHER	
313	3-961-441-01	SCREW (3X8)	
314	X-3943-897-1	LEVER ASSY, TRIGGER	

Ref No	Part No	Description	Remark
315	1-698-409-11	MOTOR, DC SCV-0801A/Z-NP (CAPSTAN)	
316	3-958-485-02	GEAR (T), LOADING	
317	3-960-449-01	SPRING (T), TORSION COIL	
318	X-3943-891-3	LEVER (T) ASSY, LOADING	
319	3-958-476-01	GEAR (S), LOADING	
320	3-960-448-01	SPRING (S), TORSION COIL	
321	X-3943-890-2	LEVER (S) ASSY, LOADING	
322	X-3945-485-4	CHASSIS ASSY, MECHANICAL	
323	3-958-504-01	ARM, FIXED RELEASE	
324	A-6750-324-A	SHUTTLE (S) BLOCK ASSY	
325	3-965-178-01	SPRING	
326	X-3944-378-1	ROLLER ASSY, GUIDE	
327	A-6750-325-A	T BLOCK ASSY, SHUTTLE	

7-2. ELECTRICAL PARTS LIST

NOTE:

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

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

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

When indicating parts by reference number, please include the board

Ref. No.	Part No.	Description			Remark
		DM-63 BOARD (795HF/975HF)			
		**********			
			(Ref.No. 3,000 Series)		
*	3-972-809-01	HOLDER, LED (975HF)			
		< CAPACITOR >			
C440	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	(975HF)
C441	1-163-038-00	CERAMIC CHIP 0 1uF		25V	(975HF)
C442	1-126-933-11	ELECT 100uF	20%	16V	(975HF)
		< CONNECTOR >			
CN440	1-695-947-11	CONNECTOR, BOARD TO BOARD 10P			
CN441	1-774-471-31	CONNECTOR, FFC/FPC 5P			
		< DIODE >			
D440	8-719-056-07	LED SLR-342MC3F (975HF)			
D441	8-719-056-07	LED SLR-342MC3F (975HF)			
D442	8-719-056-07	LED SLR-342MC3F (975HF)			
D443	8-719-056-07	LED SLR-342MC3F (975HF)			
D444	8-719-056-06	LED SLR-342DC3F (975HF)			
D445	8-719-056-07	LED SLR-342MC3F (975HF)			
D446	8-719-056-07	LED SLR-342MC3F (975HF)			
D447	8-719-056-07	LED SLR-342MC3F (975HF)			
D448	8-719-056-07	LED SLR-342MC3F (975HF)			
D449	8-719-056-06	LED SLR-342DCT31			
		< IC >			
IC440	8-759-366-45	IC NJU3713G(TE2) (975HF)			
		< TRANSISTOR >			
Q440	8-729-421-19	TRANSISTOR UN2213 (795HF)			
		< RESISTOR >			
R440	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R441	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R442	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R443	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R444	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R445	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R446	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R447	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R448	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R449	1-216-049-00	METAL CHIP 1K	5%	1/10W	(975HF)
R450	1-216-049-00	METAL CHIP 1K	5%	1/10W	(975HF)
R451	1-216-049-00	METAL CHIP 1K	5%	1/10W	(975HF)
R452	1-216-049-00	METAL CHIP 1K	5%	1/10W	(975HF)
R453	1-216-033-00	METAL CHIP 220	5%	1/10W	
R454	1-216-033-00	METAL CHIP 220	5%	1/10W	(975HF)
R455	1-216-057-00	METAL CHIP 2 2K	5%	1/10W	
R456	1-216-057-00	METAL CHIP 2 2K	5%	1/10W	
R458	1-216-057-00	METAL CHIP 2.2K	5%	1/10W	
R459	1-216-057-00	METAL CHIP 2.2K	5%	1/10W	
R460	1-216-065-00	METAL CHIP 4 7K	5%	1/10W	
R461	1-216-061-00	METAL CHIP 3 3K	5%	1/10W	
R462	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R463	1-216-073-00	METAL CHIP 10K	5%	1/10W	
		< SWITCH >			
S441	1-571-977-11	SWITCH, TACTIL (EJECT)			
S442	1-571-977-11	SWITCH, TACTIL (REW)			
S443	1-571-977-11	SWITCH, TACTIL (FF)			
S444	1-571-977-11	SWITCH, TACTIL (PAUSE)			
S445	1-571-977-11	SWITCH, TACTIL (REC)			
S446	1-571-977-11	SWITCH, TACTIL (JOG)			

Ref. No	Part No	Description			Remark
		DM-65 BOARD (775HF/776HF)			
		**********			
		(Ref.No. 1,000 Series)			
		< CONNECTOR >			
CN440	1-770-031-11	CONNECTOR, BOARD TO BOARD 7P			
		< RESISTOR >			
R441	1-216-053-00	METAL CHIP	1 5K	5%	1/10W
R442	1-216-053-00	METAL CHIP	1 5K	5%	1/10W
R443	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R444	1-216-295-00	METAL CHIP	0	5%	1/10W
R445	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R446	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R447	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
		< SWITCH >			
S441	1-571-977-11	SWITCH, TACTIL (EJECT)			
S444	1-571-977-11	SWITCH, TACTIL (PAUSE)			
S445	1-571-977-11	SWITCH, TACTIL (REC)			
S447	1-571-977-11	SWITCH, TACTIL (REW)			
S448	1-571-977-11	SWITCH, TACTIL (FF)			
S449	1-571-977-11	SWITCH, TACTIL (STOP)			
S450	1-571-977-11	SWITCH, TACTIL (PLAY)			
*	A-6791-141-A	HI-48 BOARD, COMPLETE (795HF)			
*	A-6791-138-A	HI-48 BOARD, COMPLETE (975HF)			
		**********			
		(Ref.No. 3,000 Series)			
*	3-972-792-01	HOLDER (129), FL (795HF)			
		< CAPACITOR >			
C412	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C414	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C415	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
* C422	1-165-319-11	CERAMIC CHIP	0.1uF		50V
		< CONNECTOR >			
CN400	1-691-036-21	PIN, CONNECTOR (PC BOARD) 4P (975HF)			
* CN401	1-691-407-11	CONNECTOR, BOARD TO BOARD 10P			
CN402	1-691-074-11	HOUSING, CONNECTOR 15P			
CN403	1-691-074-11	HOUSING, CONNECTOR 15P			
CN404	1-691-074-11	HOUSING, CONNECTOR 15P			
CN405	1-506-484-11	PIN, CONNECTOR 5P			
CN406	1-691-064-31	HOUSING, CONNECTOR 5P			
		< DIODE >			
D410	8-719-108-12	DIODE RD9.1E-W			
D411	8-719-108-12	DIODE RD9.1E-W			
D412	8-719-109-93	DIODE RD6 2ES-B2			
D413	8-719-108-12	DIODE RD9.1E-W			
D420	8-719-110-08	DIODE RD8.2ES-B2			
		< JUMPER RESISTOR >			
JR401	1-216-295-00	METAL CHIP	0	5%	1/10W
JR402	1-216-296-00	METAL CHIP	0	5%	1/8W
JR405	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref No	Part No	Description			Remark
		< JUMPER RESISTOR >			
JS414	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L412	1-410-521-11	INDUCTOR	100uH (975HF)		
L413	1-410-501-11	INDUCTOR	2.2uH (975HF)		
		< FLUORECENT INDICATOR >			
ND400	1-517-594-21	TUBE, FLUORESCENT INDICATOR (795HF)			
ND400	1-517-594-11	TUBE, FLUORESCENT INDICATOR (975HF)			
		< JACK >			
PJ400	1-766-861-11	JACK, PIN (3P)(975HF)(LINE-2 IN)			
PJ401	1-774-509-11	JACK, PIN (3P)(795HF)(LINE-2 IN)			
		< RESISTOR >			
R410	1-216-295-00	METAL CHIP	0	5%	1/10W
R411	1-216-295-00	METAL CHIP	0	5%	1/10W
R412	1-216-022-00	METAL CHIP	75	5%	1/10W
R420	1-216-073-00	METAL CHIP	10K	5%	1/10W (795HF)
R420	1-216-095-00	METAL CHIP	82K	5%	1/10W (975HF)
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W (795HF)
R421	1-216-095-00	METAL CHIP	82K	5%	1/10W (975HF)
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-073-00	METAL CHIP	10K	5%	1/10W
R425	1-216-073-00	METAL CHIP	10K	5%	1/10W
R427	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W (795HF)
R431	1-216-075-00	METAL CHIP	12K	5%	1/10W (795HF)
R432	1-216-075-00	METAL CHIP	12K	5%	1/10W (795HF)
R433	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (795HF)
R434	1-216-057-00	METAL CHIP	2 2K	5%	1/10W (795HF)
R434	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (975HF)
R435	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (795HF)
R435	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (975HF)
R436	1-216-075-00	METAL CHIP	12K	5%	1/10W (975HF)
R437	1-216-073-00	METAL CHIP	10K	5%	1/10W (975HF)
R438	1-216-081-00	METAL CHIP	22K	5%	1/10W (975HF)
		< SWITCH >			
S401	1-762-171-11	SWITCH, SLIDE (975HF)(COMMAND MODE)			
S404	1-571-977-11	SWITCH, TACTIL (795HF)(TV/VTR)			
S405	1-571-977-11	SWITCH, TACTIL (795HF) (CHANNEL, TRACKING +)			

Ref. No.	Part No.	Description	Remark
S406	1-571-977-11	SWITCH, TACTIL (795HF) (CHANNEL, TRACKING –)	
S407	1-571-977-11	SWITCH, TACTIL (795HF)(EDIT)	
S407	1-571-977-11	SWITCH, TACTIL (975HF)(EASY SET UP)	
S408	1-571-977-11	SWITCH, TACTIL (795HF)(EASY SET UP)	
S409	1-571-977-11	SWITCH, TACTIL (795HF)(INPUT SELECT)	
S410	1-571-977-11	SWITCH, TACTIL(795HF)(TAPE SPEED(SP/EP))	
S410	1-571-977-11	SWITCH, TACTIL (975HF)(EDIT)	
*	A-6791-146-A	HI-50 BOARD, COMPLETE (775HF/776HF) ********** (Ref.No. 1,000 Series)	
*	3-972-815-01	HOLDER (100), FL	
		< CAPACITOR >	
C412	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C414	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C415	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C420	1-164-232-11	CERAMIC CHIP 0 01uF	50V
C421	1-124-589-11	ELECT 47uF 20%	16V
* C422	1-165-319-11	CERAMIC CHIP 0.1uF	50V
		< CONNECTOR >	
* CN401	1-691-406-11	CONNECTOR, BOARD TO BOARD 7P	
CN402	1-691-648-11	SOCKET, CONNECTOR 15P	
CN405	1-506-484-11	PIN, CONNECTOR 5P	
CN406	1-691-064-31	HOUSING, CONNECTOR 5P	
		< DIODE >	
D410	8-719-108-12	DIODE RD9.1E-W	
D411	8-719-108-12	DIODE RD9.1E-W	
D412	8-719-109-93	DIODE RD6 2ES-B2	
D413	8-719-108-12	DIODE RD9.1E-W	
D420	8-719-110-08	DIODE RD8.2ES-B2	
		< IC >	
IC410	8-759-366-44	IC uPD16312GB-3B4	
		< JUMPER RESISTOR >	
JS414	1-216-295-00	METAL CHIP 0 5%	1/10W
		< COIL >	
L420	1-410-509-11	INDUCTOR 10uH	
		< FLUORESCENT INDICATOR >	
ND400	1-517-592-11	TUBE, FLUORESCENT INDICATOR	
		< JACK >	
PJ401	1-774-509-11	JACK, PIN 3P (LINE-2 IN)	
		< RESISTOR >	
R410	1-216-295-00	METAL CHIP 0 5%	1/10W
R411	1-216-295-00	METAL CHIP 0 5%	1/10W
R412	1-216-022-00	METAL CHIP 75 5%	1/10W
R420	1-216-295-00	METAL CHIP 0 5%	1/10W
R421	1-216-049-00	METAL CHIP 1K 5%	1/10W
R422	1-216-049-00	METAL CHIP 1K 5%	1/10W
R423	1-216-049-00	METAL CHIP 1K 5%	1/10W
R424	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R425	1-216-085-00	METAL CHIP 33K 5%	1/10W
R426	1-216-073-00	METAL CHIP 10K 5%	1/10W
R427	1-216-069-00	METAL CHIP 6 8K 5%	1/10W
R430	1-216-059-00	METAL CHIP 2 7K 5%	1/10W
R431	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R432	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R433	1-216-077-00	METAL CHIP 15K 5%	1/10W
R434	1-216-059-00	METAL CHIP 2 7K 5%	1/10W
R435	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R436	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R437	1-216-091-00	METAL CHIP 56K 5%	1/10W
R438	1-216-073-00	METAL CHIP 10K 5%	1/10W
R439	1-216-073-00	METAL CHIP 10K 5%	1/10W
R440	1-216-073-00	METAL CHIP 10K 5%	1/10W
		< SWITCH >	
S404	1-571-977-11	SWITCH, TACTIL (TV/VTR)	
S405	1-571-977-11	SWITCH, TACTIL (PROGRAM, TRACKING +)	
S406	1-571-977-11	SWITCH, TACTIL (PROGRAM, TRACKING –)	
S407	1-571-977-11	SWITCH, TACTIL (EASY SET UP)	
S409	1-571-977-11	SWITCH, TACTIL (INPUT SELECT)	
S410	1-571-977-11	SWITCH, TACTIL (TAPE SPEED(SP/EP))	
*	A-6791-144-A	MA-290 BOARD, COMPLETE (795HF)	
*	A-6796-431-A	MA-290 BOARD, COMPLETE (975HF) ********** (Ref.No. 3,000 Series)	
*	3-960-273-01	SPACER, TOP END	
*	3-960-274-01	SPACER, LED	
		< BUZZER >	
BZ181	1-529-104-11	BUZZER, PIEZOELECTRIC	
		< CAPACITOR >	
C100	1-126-176-11	ELECT 220uF 20%	10V
C101	1-163-009-11	CERAMIC CHIP 0 001uF 10%	50V
C102	1-163-009-11	CERAMIC CHIP 0 001uF 10%	50V
C103	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C104	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C105	1-164-232-11	CERAMIC CHIP 0 01uF	50V
C107	1-137-372-11	FILM 0 022uF 5%	50V
C108	1-137-441-11	FILM 0 027uF 5%	50V
C109	1-124-261-00	ELECT 10uF 20%	50V
C130	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C131	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C132	1-124-589-11	ELECT 47uF 20%	16V
C134	1-163-038-00	CERAMIC CHIP 0 1uF	25V
C161	1-163-038-00	CERAMIC CHIP 0 1uF	25V
C162	1-126-935-11	ELECT 470uF 20%	6 3V
C163	1-163-009-11	CERAMIC CHIP 0 001uF 10%	50V
C164	1-163-227-11	CERAMIC CHIP 10PF 0.5PF	50V
C165	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
C169	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C181	1-164-232-11	CERAMIC CHIP 0 01uF	50V

Ref. No.	Part No.	Description			Remark
C182	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C183	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C184	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C185	1-126-916-11	ELECT	1000uF	20%	6.3V
C186	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C187	1-126-935-11	ELECT	470uF	20%	6.3V
C189	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C190	1-104-905-11	CAPACITOR	0.22F		5.5V
C191	1-126-935-11	ELECT	470uF	20%	6.3V
C192	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C193	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C194	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C195	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C196	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C197	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C201	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C202	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C204	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C205	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C206	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C207	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C209	1-124-234-00	ELECT	22uF	20%	16V
C210	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C211	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C214	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C217	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C219	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C220	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C222	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C223	1-124-589-11	ELECT	47uF	20%	16V
C224	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C226	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C228	1-124-261-00	ELECT	10uF	20%	50V
C229	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C230	1-124-589-11	ELECT	47uF	20%	16V
C231	1-124-261-00	ELECT	10uF	20%	50V
C232	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C233	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C234	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C235	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C236	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C237	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C238	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C239	1-124-589-11	ELECT	47uF	20%	16V
C240	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C241	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C242	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C243	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C244	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C245	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C246	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C247	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C248	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C249	1-124-589-11	ELECT	47uF	20%	16V
C250	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C251	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C252	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C253	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C254	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No	Part No	Description			Remark
C301	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C302	1-124-589-11	ELECT	47uF	20%	16V
C305	1-126-160-11	ELECT	1uF	20%	50V
C306	1-126-160-11	ELECT	1uF	20%	50V
C307	1-124-261-00	ELECT	10uF	20%	50V
C308	1-124-589-11	ELECT	47uF	20%	16V
C309	1-126-963-11	ELECT	4.7uF	20%	50V
C310	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C312	1-137-370-11	FILM	0.01uF	5%	50V
C313	1-124-261-00	ELECT	10uF	20%	50V
C314	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C315	1-126-160-11	ELECT	1uF	20%	50V
C317	1-126-163-11	ELECT	4.7uF	20%	50V
C318	1-124-589-11	ELECT	47uF	20%	16V
C361	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C362	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C363	1-126-160-11	ELECT	1uF	20%	50V
C364	1-126-160-11	ELECT	1uF	20%	50V
C365	1-126-160-11	ELECT	1uF	20%	50V
C366	1-126-160-11	ELECT	1uF	20%	50V
C369	1-126-964-11	ELECT	10uF	20%	50V
C370	1-126-964-11	ELECT	10uF	20%	50V
C371	1-126-964-11	ELECT	10uF	20%	50V
C372	1-126-964-11	ELECT	10uF	20%	50V
C373	1-126-964-11	ELECT	10uF	20%	50V
C374	1-126-160-11	ELECT	1uF	20%	50V
C375	1-137-378-11	FILM	0.22uF	5%	50V
C376	1-137-437-11	FILM	0.0056uF	5%	50V
C377	1-124-589-11	ELECT	47uF	20%	16V
C378	1-126-964-11	ELECT	10uF	20%	50V
C379	1-124-257-00	ELECT	2.2uF	20%	50V
C380	1-126-964-11	ELECT	10uF	20%	50V
C381	1-126-967-11	ELECT	47uF	20%	16V
C382	1-137-437-11	FILM	0.0056uF	5%	50V
C383	1-137-378-11	FILM	0.22uF	5%	50V
C384	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C385	1-126-933-11	ELECT	100uF	20%	16V
C386	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C387	1-126-933-11	ELECT	100uF	20%	16V
C388	1-126-967-11	ELECT	47uF	20%	16V
C389	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C390	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C391	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C392	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C501	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C502	1-124-589-11	ELECT	47uF	20%	16V
C503	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-124-589-11	ELECT	47uF	20%	16V
C506	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C507	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C508	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C509	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C510	1-124-589-11	ELECT	47uF	20%	16V
C511	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C512	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C513	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No	Description			Remark
C514	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C515	1-124-589-11	ELECT	47uF	20%	16V
C516	1-126-160-11	ELECT	1uF	20%	50V
C517	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C518	1-124-257-00	ELECT	2.2uF	20%	50V
C519	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C520	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C521	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C522	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C523	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C560	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-126-935-11	ELECT	470uF	20%	6 3V
C562	1-126-967-11	ELECT	47uF	20%	16V
C563	1-126-967-11	ELECT	47uF	20%	16V
C564	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C573	1-126-160-11	ELECT	1uF	20%	50V
C574	1-126-160-11	ELECT	1uF	20%	50V
C576	1-126-967-11	ELECT	47uF	20%	16V
C577	1-126-160-11	ELECT	1uF	20%	50V
C578	1-126-160-11	ELECT	1uF	20%	50V
C701	1-126-967-11	ELECT	47uF	20%	16V
C704	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C706	1-126-963-11	ELECT	4 7uF	20%	50V
C707	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C708	1-126-767-11	ELECT	1000uF	20%	16V
C709	1-126-933-11	ELECT	100uF	20%	16V
C710	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C731	1-126-964-11	ELECT	10uF	20%	50V
C732	1-126-964-11	ELECT	10uF	20%	50V
C733	1-126-964-11	ELECT	10uF	20%	50V
C735	1-126-964-11	ELECT	10uF	20%	50V
C736	1-126-967-11	ELECT	47uF	20%	16V
C871	1-124-589-11	ELECT	47uF	20%	16V
C872	1-163-019-00	CERAMIC CHIP	0 0068uF	10%	50V
C873	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C874	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C875	1-164-346-11	CERAMIC CHIP	1uF		16V
C876	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C878	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C880	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C881	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C991	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C992	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C993	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C994	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C995	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C996	1-126-967-11	ELECT	47uF	20%	16V
C997	1-163-038-00	CERAMIC CHIP	0 1uF		25V
		< JACK >			
CJ570	1-779-062-11	JACK, PIN 6P (LINE-1 IN)			
		< CONNECTOR >			
CN101	1-506-470-11	PIN, CONNECTOR 5P			
* CN102	1-766-538-11	CONNECTOR, BOARD TO BOARD 8P			
* CN103	1-766-537-11	CONNECTOR (HMD) 5P			
* CN104	1-766-716-11	CONNECTOR, BOARD TO BOARD 3P			
CN180	1-506-469-11	PIN, CONNECTOR 4P			

Ref. No	Part No.	Description	Remark
CN305	1-573-852-11	CONNECTOR, BOARD TO BOARD 20P	
CN306	1-573-852-11	CONNECTOR, BOARD TO BOARD 20P	
CN420	1-691-074-11	HOUSING, CONNECTOR 15P	
CN421	1-691-074-11	HOUSING, CONNECTOR 15P	
CN422	1-691-074-11	HOUSING, CONNECTOR 15P	
CN423	1-506-470-11	PIN, CONNECTOR 5P	
CN600	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P	
		< DIODE >	
D100	8-719-048-26	LED GL528V1	
D107	8-719-911-19	DIODE 1SS119	
D108	8-719-200-82	DIODE 11ES2	
D131	8-719-200-82	DIODE 11ES2	
D161	8-719-200-82	DIODE 11ES2	
D182	8-719-200-82	DIODE 11ES2	
D183	8-719-200-82	DIODE 11ES2	
D361	8-719-911-19	DIODE 1SS119	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D560	8-719-109-74	DIODE RD4 3ES-B1	
D702	8-719-110-78	DIODE RD33ES-B2	
D991	8-719-110-08	DIODE RD8 2ES-B2	
D992	8-719-110-08	DIODE RD8.2ES-B2	
D993	8-719-110-08	DIODE RD8.2ES-B2	
D995	8-719-110-08	DIODE RD8 2ES-B2	
		< IC >	
IC106	8-759-702-02	IC NJM062M	
IC130	8-759-353-59	IC LB1643	
IC161	8-752-882-28	IC CXP87852-014Q	
IC181	8-752-876-52	IC CXP82960-016Q	
IC182	8-759-248-87	IC MM1256XF-BE	
IC183	8-759-378-26	IC ST24C16FM6-TR	
IC201	8-759-439-49	IC LA71530M-MPB	
IC202	8-759-439-51	IC LC89978M-TE-L	
IC360	8-759-445-22	IC TDA9603H/N2,557	
IC361	8-759-708-05	IC NJM78L05A	
IC500	8-759-443-82	IC MB90089PF-G-VSX9011-BND-ER	
IC501	8-759-164-09	IC LA7218M-TE-R	
IC570	8-759-454-62	IC uPC4558G2-E2	
IC733	8-742-037-00	HY B IC SBX1837-51	
IC871	8-759-430-84	IC MC68HC05CCVFB-VSX9011	
IC991	8-759-356-27	IC NJM2129M-TE2	
		< JACK >	
J991	1-563-330-11	JACK (CONTROL S IN)	
J992	1-566-822-21	JACK (CONTROL S OUT)	
		< JUMPER RESISTOR >	
JS001	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS202	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS205	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS208	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS209	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS501	1-216-295-00	METAL CHIP 0 5% 1/10W	
JS570	1-216-295-00	METAL CHIP 0 5% 1/10W	

Ref. No.	Part No.	Description				Remark
JS571	1-216-295-00	METAL CHIP	0	5%	1/10W	
JS572	1-216-295-00	METAL CHIP	0	5%	1/10W	
JS573	1-216-295-00	METAL CHIP	0	5%	1/10W	
JS804	1-216-295-00	METAL CHIP	0	5%	1/10W	
JS805	1-216-295-00	METAL CHIP	0	5%	1/10W	
		< COIL >				
L101	1-414-189-31	INDUCTOR	100uH			
L161	1-410-509-11	INDUCTOR	10uH			
L181	1-410-509-11	INDUCTOR	10uH			
L202	1-414-189-31	INDUCTOR	100uH			
L204	1-414-187-11	INDUCTOR	47uH			
L205	1-414-189-31	INDUCTOR	100uH			
L206	1-414-187-11	INDUCTOR	47uH			
L301	1-414-189-31	INDUCTOR	100uH			
L361	1-414-189-31	INDUCTOR	100uH			
L501	1-410-513-11	INDUCTOR	22uH			
L502	1-414-189-31	INDUCTOR	100uH			
L503	1-414-189-31	INDUCTOR	100uH			
L560	1-414-189-31	INDUCTOR	100uH			
L574	1-414-189-31	INDUCTOR	100uH			
L702	1-414-187-11	INDUCTOR	47uH			
L703	1-410-501-11	INDUCTOR	2 2uH			
L704	1-414-179-21	INDUCTOR	2.2uH			
L731	1-414-183-41	INDUCTOR	10uH			
L871	1-410-509-11	INDUCTOR	10uH			
		< PHOTO INTERRUPTER >				
PH100	8-749-010-19	PHOTO INTERRUPTER GP3S113				
PH101	8-749-010-20	PHOTO INTERRUPTER GP3S114				
		< IC LINK >				
⚠PS130	1-533-586-31	LINK, IC 491.315 (0.315A)				
		< TRANSISTOR >				
Q100	8-729-025-92	PHOTO TRANSISTOR PT380F				
Q101	8-729-025-92	PHOTO TRANSISTOR PT380F				
Q102	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q161	8-729-901-06	TRANSISTOR DTA144EK				
Q201	8-729-010-29	TRANSISTOR MSD601-RST1				
Q203	8-729-421-19	TRANSISTOR UN2213				
Q205	8-729-421-19	TRANSISTOR UN2213				
Q208	8-729-010-29	TRANSISTOR MSD601-RST1				
Q209	8-729-010-05	TRANSISTOR MSB709-RT1				
Q210	8-729-010-29	TRANSISTOR MSD601-RST1				
Q211	8-729-010-29	TRANSISTOR MSD601-RST1				
Q301	8-729-010-29	TRANSISTOR MSD601-RST1				
Q361	8-729-821-31	TRANSISTOR 2SD1012-FG-TPE4				
Q362	8-729-821-31	TRANSISTOR 2SD1012-FG-TPE4				
Q363	8-729-821-31	TRANSISTOR 2SD1012-FG-TPE4				
Q364	8-729-010-05	TRANSISTOR MSB709-RT1				
Q502	8-729-010-05	TRANSISTOR MSB709-RT1				
Q503	8-729-010-05	TRANSISTOR MSB709-RT1				
Q504	8-729-901-06	TRANSISTOR DTA144EK				

Ref No	Part No.	Description				Remark
Q505	8-729-010-05	TRANSISTOR MSB709-RT1				
Q560	8-729-010-05	TRANSISTOR MSB709-RT1				
Q731	8-729-421-19	TRANSISTOR UN2213				
Q871	8-729-010-05	TRANSISTOR MSB709-RT1				
Q872	8-729-010-29	TRANSISTOR MSD601-RST1				
Q873	8-729-010-29	TRANSISTOR MSD601-RST1				
Q874	8-729-424-08	TRANSISTOR UN2111				
Q875	8-729-010-29	TRANSISTOR MSD601-RST1				
		< RESISTOR >				
R100	1-249-400-11	CARBON	39	5%	1/4W	
R101	1-249-400-11	CARBON	39	5%	1/4W	
R102	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R103	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R104	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R105	1-249-413-11	CARBON	470	5%	1/4W	
R106	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R107	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R108	1-216-295-00	METAL CHIP	0	5%	1/10W	
R109	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R110	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R111	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R112	1-216-689-11	METAL CHIP	39K	0 5%	1/10W	
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R115	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R116	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R117	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R118	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R119	1-216-295-00	METAL CHIP	0	5%	1/10W	
R120	1-216-295-00	METAL CHIP	0	5%	1/10W	
R121	1-216-295-00	METAL CHIP	0	5%	1/10W	
R122	1-216-295-00	METAL CHIP	0	5%	1/10W	
R123	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R124	1-216-295-00	METAL CHIP	0	5%	1/10W	
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R126	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R127	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R128	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R130	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R132	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R133	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R159	1-216-295-00	METAL CHIP	0	5%	1/10W	
R160	1-216-295-00	METAL CHIP	0	5%	1/10W	
R161	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R163	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R164	1-216-041-00	METAL CHIP	470	5%	1/10W	
R165	1-216-041-00	METAL CHIP	470	5%	1/10W	
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R167	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R169	1-216-089-00	METAL CHIP	47K	5%	1/10W	

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

Ref. No.	Part No.	Description			Remark
R170	1-216-073-00	METAL CHIP	10K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-049-00	METAL CHIP	1K	5%	1/10W
R174	1-216-041-00	METAL CHIP	470	5%	1/10W
R175	1-216-041-00	METAL CHIP	470	5%	1/10W
R176	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R177	1-216-049-00	METAL CHIP	1K	5%	1/10W
R178	1-216-049-00	METAL CHIP	1K	5%	1/10W
R179	1-216-049-00	METAL CHIP	1K	5%	1/10W
R180	1-216-049-00	METAL CHIP	1K	5%	1/10W
R181	1-216-049-00	METAL CHIP	1K	5%	1/10W
R182	1-216-049-00	METAL CHIP	1K	5%	1/10W
R183	1-216-089-00	METAL CHIP	47K	5%	1/10W
R185	1-216-049-00	METAL CHIP	1K	5%	1/10W
R186	1-216-073-00	METAL CHIP	10K	5%	1/10W
R187	1-216-073-00	METAL CHIP	10K	5%	1/10W
R189	1-216-113-00	METAL CHIP	470K	5%	1/10W
R190	1-216-073-00	METAL CHIP	10K	5%	1/10W
R191	1-216-073-00	METAL CHIP	10K	5%	1/10W
R192	1-216-049-00	METAL CHIP	1K	5%	1/10W
R194	1-216-113-00	METAL CHIP	470K	5%	1/10W
R195	1-216-095-00	METAL CHIP	82K	5%	1/10W
R196	1-216-113-00	METAL CHIP	470K	5%	1/10W
R197	1-216-295-00	METAL CHIP	0	5%	1/10W
R198	1-216-295-00	METAL CHIP	0	5%	1/10W
R199	1-216-295-00	METAL CHIP	0	5%	1/10W
R201	1-216-041-00	METAL CHIP	470	5%	1/10W
R202	1-216-069-00	METAL CHIP	6 8K	5%	1/10W
R203	1-216-049-00	METAL CHIP	1K	5%	1/10W
R208	1-216-077-00	METAL CHIP	15K	5%	1/10W
R213	1-216-073-00	METAL CHIP	10K	5%	1/10W
R218	1-208-798-11	METAL GLAZE	4 7K	0 50%	1/10W
R219	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R220	1-216-295-00	METAL CHIP	0	5%	1/10W
R222	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R223	1-216-295-00	METAL CHIP	0	5%	1/10W
R224	1-216-295-00	METAL CHIP	0	5%	1/10W
R225	1-216-295-00	METAL CHIP	0	5%	1/10W
R226	1-216-295-00	METAL CHIP	0	5%	1/10W
R227	1-216-025-91	METAL GLAZE	100	5%	1/10W
R228	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R229	1-216-055-00	METAL CHIP	1 8K	5%	1/10W
R230	1-216-045-00	METAL CHIP	680	5%	1/10W
R231	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R232	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R235	1-216-073-00	METAL CHIP	10K	5%	1/10W
R236	1-216-049-00	METAL CHIP	1K	5%	1/10W
R239	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R240	1-216-049-00	METAL CHIP	1K	5%	1/10W
R244	1-216-089-00	METAL CHIP	47K	5%	1/10W
R300	1-216-295-00	METAL CHIP	0	5%	1/10W
R301	1-216-093-00	METAL CHIP	68K	5%	1/10W
R302	1-216-067-00	METAL CHIP	5 6K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R309	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R310	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R311	1-216-053-00	METAL CHIP	1 5K	5%	1/10W

Ref No.	Part No	Description			Remark
R312	1-216-079-00	METAL CHIP	18K	5%	1/10W
R313	1-216-109-00	METAL CHIP	330K	5%	1/10W
R314	1-216-035-00	METAL CHIP	270	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R316	1-216-071-00	METAL CHIP	8 2K	5%	1/10W
R318	1-216-075-00	METAL CHIP	12K	5%	1/10W
R319	1-216-295-00	METAL CHIP	0	5%	1/10W
R320	1-216-047-91	METAL GLAZE	820	5%	1/10W
R361	1-216-033-00	METAL CHIP	220	5%	1/10W
R362	1-216-033-00	METAL CHIP	220	5%	1/10W
R363	1-216-033-00	METAL CHIP	220	5%	1/10W
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W
R365	1-216-049-00	METAL CHIP	1K	5%	1/10W
R366	1-216-049-00	METAL CHIP	1K	5%	1/10W
R367	1-216-049-00	METAL CHIP	1K	5%	1/10W
R368	1-216-133-00	METAL CHIP	3 3M	5%	1/10W
R369	1-216-689-11	METAL CHIP	39K	0 5%	1/10W
R370	1-216-061-00	METAL CHIP	3 3K	5%	1/10W
R371	1-208-820-11	METAL GLAZE	39K	0.50%	1/10W
R372	1-216-061-00	METAL CHIP	3 3K	5%	1/10W
R373	1-216-689-11	METAL CHIP	39K	0 5%	1/10W
R374	1-216-049-00	METAL CHIP	1K	5%	1/10W
R375	1-216-049-00	METAL CHIP	1K	5%	1/10W
R376	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R377	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R378	1-216-083-00	METAL CHIP	27K	5%	1/10W
R379	1-216-073-00	METAL CHIP	10K	5%	1/10W
R380	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R381	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R382	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R383	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R386	1-216-295-00	METAL CHIP	0	5%	1/10W
R387	1-216-295-00	METAL CHIP	0	5%	1/10W
R388	1-216-295-00	METAL CHIP	0	5%	1/10W
R389	1-216-049-00	METAL CHIP	1K	5%	1/10W
R399	1-216-049-00	METAL CHIP	1K	5%	1/10W
R502	1-216-033-00	METAL CHIP	220	5%	1/10W
R505	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R506	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R507	1-216-081-00	METAL CHIP	22K	5%	1/10W
R508	1-216-049-00	METAL CHIP	1K	5%	1/10W
R510	1-216-081-00	METAL CHIP	22K	5%	1/10W
R513	1-216-073-00	METAL CHIP	10K	5%	1/10W
R514	1-216-073-00	METAL CHIP	10K	5%	1/10W
R515	1-216-101-00	METAL CHIP	150K	5%	1/10W
R517	1-216-063-91	METAL GLAZE	3 9K	5%	1/10W
R518	1-216-043-91	METAL GLAZE	560	5%	1/10W
R519	1-216-043-91	METAL GLAZE	560	5%	1/10W
R520	1-216-025-91	METAL GLAZE	100	5%	1/10W
R521	1-216-073-00	METAL CHIP	10K	5%	1/10W
R522	1-216-073-00	METAL CHIP	10K	5%	1/10W
R523	1-216-073-00	METAL CHIP	10K	5%	1/10W
R560	1-216-022-00	METAL CHIP	75	5%	1/10W
R561	1-216-021-00	METAL CHIP	68	5%	1/10W
R562	1-249-407-11	CARBON	150	5%	1/4W
R563	1-249-408-11	CARBON	180	5%	1/4W
R565	1-216-037-00	METAL CHIP	330	5%	1/10W
R570	1-216-097-91	METAL GLAZE	100K	5%	1/10W

Ref No	Part No.	Description			Remark
R571	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R572	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R573	1-216-041-00	METAL CHIP	470	5%	1/10W
R574	1-216-041-00	METAL CHIP	470	5%	1/10W
R577	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R701	1-216-049-00	METAL CHIP	1K	5%	1/10W
R702	1-216-295-00	METAL CHIP	0	5%	1/10W
R705	1-212-893-00	FUSIBLE	330	5%	1/4W F
R706	1-216-113-00	METAL CHIP	470K	5%	1/10W
R708	1-216-295-00	METAL CHIP	0	5%	1/10W
R709	1-216-049-00	METAL CHIP	1K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-049-00	METAL CHIP	1K	5%	1/10W
R712	1-216-295-00	METAL CHIP	0	5%	1/10W
R731	1-216-049-00	METAL CHIP	1K	5%	1/10W
R732	1-216-049-00	METAL CHIP	1K	5%	1/10W
R733	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R734	1-216-049-00	METAL CHIP	1K	5%	1/10W
R735	1-216-049-00	METAL CHIP	1K	5%	1/10W
R736	1-216-295-00	METAL CHIP	0	5%	1/10W
R737	1-216-081-00	METAL CHIP	22K	5%	1/10W
R738	1-216-081-00	METAL CHIP	22K	5%	1/10W
R739	1-216-073-00	METAL CHIP	10K	5%	1/10W
R740	1-216-295-00	METAL CHIP	0	5%	1/10W
R742	1-216-295-00	METAL CHIP	0	5%	1/10W
R744	1-216-295-00	METAL CHIP	0	5%	1/10W
R748	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R871	1-216-073-00	METAL CHIP	10K	5%	1/10W
R872	1-216-025-91	METAL GLAZE	100	5%	1/10W
R873	1-216-025-91	METAL GLAZE	100	5%	1/10W
R874	1-216-025-91	METAL GLAZE	100	5%	1/10W
R875	1-216-025-91	METAL GLAZE	100	5%	1/10W
R876	1-216-081-00	METAL CHIP	22K	5%	1/10W
R877	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R878	1-216-073-00	METAL CHIP	10K	5%	1/10W
R879	1-216-049-00	METAL CHIP	1K	5%	1/10W
R880	1-216-073-00	METAL CHIP	10K	5%	1/10W
R881	1-216-043-91	METAL GLAZE	560	5%	1/10W
R882	1-216-049-00	METAL CHIP	1K	5%	1/10W
R883	1-216-053-00	METAL CHIP	1 5K	5%	1/10W
R884	1-216-047-91	METAL GLAZE	820	5%	1/10W
R885	1-216-025-91	METAL GLAZE	100	5%	1/10W
R886	1-216-073-00	METAL CHIP	10K	5%	1/10W
R887	1-216-081-00	METAL CHIP	22K	5%	1/10W
R888	1-216-081-00	METAL CHIP	22K	5%	1/10W
R889	1-216-025-91	METAL GLAZE	100	5%	1/10W
R890	1-216-049-00	METAL CHIP	1K	5%	1/10W
R971	1-216-295-00	METAL CHIP	0	5%	1/10W
R973	1-216-295-00	METAL CHIP	0	5%	1/10W
R974	1-216-295-00	METAL CHIP	0	5%	1/10W
R991	1-216-049-00	METAL CHIP	1K	5%	1/10W
		< VARIABLE RESISTOR >			
RV731	1-241-766-11	RES, ADJ, CERMET 47K			

Ref No.	Part No	Description			Remark
		< SWITCH >			
S100	1-570-953-11	SWITCH, PUSH (1 KEY)(REC PRF)			
S701	1-571-588-11	SWITCH, SLIDE (RF UNIT CH3/CH4)			
		< TUNER >			
⚠TU700	1-693-370-11	TUNER, RF•IF			
		< VIBRATOR >			
X161	1-760-494-11	VIBRATOR, CRYSTAL (16MHz)			
X182	1-579-463-11	VIBRATOR, CRYSTAL (32 768kHz)			
X202	1-577-380-11	VIBRATOR, CRYSTAL (3.579545MHz)			
X500	1-577-381-11	VIBRATOR, CRYSTAL (14318 18kHz)			
X501	1-577-165-11	VIBLATOR, CERAMIC (500kHz)			
X871	1-577-133-21	VIBRATOR, CRYSTAL (8MHz)			
*	A-6791-149-A	MA-292 BOARD, COMPLETE (775HF/776HF)			
		**********			
		(Ref No 2,000 Series)			
*	3-960-273-01	SPACER, TOP END			
*	3-960-274-01	SPACER, LED			
		< BUZZER >			
BZ160	1-529-104-11	BUZZER, PIEZOELECTRIC			
		< CAPACITOR >			
C102	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C103	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C104	1-124-261-00	ELECT	10uF	20%	50V
C106	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C111	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C114	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C115	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C116	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C119	1-124-589-11	ELECT	47uF	20%	16V
C120	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C131	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C132	1-124-589-11	ELECT	47uF	20%	16V
C134	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C141	1-124-234-00	ELECT	22uF	20%	16V
C142	1-124-234-00	ELECT	22uF	20%	16V
C144	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C146	1-124-234-00	ELECT	22uF	20%	16V
C147	1-126-933-11	ELECT	100uF	20%	16V
C148	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C160	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C161	1-124-584-00	ELECT	100uF	20%	10V
C162	1-104-905-11	CAPACITOR	0 22F		5.5V
C163	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C164	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V

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

Ref No	Part No	Description			Remark
C165	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C166	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C167	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C168	1-124-261-00	ELECT	10uF	20%	50V
C170	1-126-935-11	ELECT	470uF	20%	6.3V
C171	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C172	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C201	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C202	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C204	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C205	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C206	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C207	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C208	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C209	1-124-234-00	ELECT	22uF	20%	16V
C210	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C211	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C213	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C214	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C217	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C219	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C220	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C222	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C223	1-124-589-11	ELECT	47uF	20%	16V
C224	1-164-159-21	CERAMIC	0.1uF		50V
C226	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C228	1-124-261-00	ELECT	10uF	20%	50V
C229	1-164-159-21	CERAMIC	0.1uF		50V
C230	1-124-589-11	ELECT	47uF	20%	16V
C231	1-124-261-00	ELECT	10uF	20%	50V
C232	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C233	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C234	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C235	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C236	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C237	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C238	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C239	1-124-589-11	ELECT	47uF	20%	16V
C240	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C241	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C242	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C243	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C244	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C245	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C246	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C247	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C248	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C249	1-124-589-11	ELECT	47uF	20%	16V
C250	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C251	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C252	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C253	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C254	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C255	1-163-091-00	CERAMIC CHIP	8PF		50V
C301	1-164-159-21	CERAMIC	0 1uF		50V
C302	1-124-589-11	ELECT	47uF	20%	16V
C303	1-126-160-11	ELECT	1uF	20%	50V
C304	1-126-160-11	ELECT	1uF	20%	50V
C305	1-126-160-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C306	1-126-160-11	ELECT	1uF	20%	50V
C307	1-124-261-00	ELECT	10uF	20%	50V
C308	1-124-589-11	ELECT	47uF	20%	16V
C309	1-126-963-11	ELECT	4 7uF	20%	50V
C310	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C311	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C312	1-137-370-11	FILM	0 01uF	5%	50V
C313	1-124-261-00	ELECT	10uF	20%	50V
C314	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C315	1-126-160-11	ELECT	1uF	20%	50V
C317	1-126-163-11	ELECT	4 7uF	20%	50V
C318	1-124-589-11	ELECT	47uF	20%	16V
C361	1-164-489-11	CERAMIC CHIP	0 22uF	10%	16V
C363	1-126-160-11	ELECT	1uF	20%	50V
C364	1-126-160-11	ELECT	1uF	20%	50V
C365	1-126-160-11	ELECT	1uF	20%	50V
C366	1-126-160-11	ELECT	1uF	20%	50V
C369	1-126-964-11	ELECT	10uF	20%	50V
C370	1-126-964-11	ELECT	10uF	20%	50V
C371	1-126-964-11	ELECT	10uF	20%	50V
C372	1-126-964-11	ELECT	10uF	20%	50V
C373	1-126-964-11	ELECT	10uF	20%	50V
C374	1-126-160-11	ELECT	1uF	20%	50V
C375	1-137-378-11	FILM	0 22uF	5%	50V
C376	1-137-437-11	FILM	0.0056uF	5%	50V
C377	1-124-589-11	ELECT	47uF	20%	16V
C378	1-126-964-11	ELECT	10uF	20%	50V
C379	1-124-257-00	ELECT	2.2uF	20%	50V
C380	1-124-261-00	ELECT	10uF	20%	50V
C381	1-126-967-11	ELECT	47uF	20%	16V
C382	1-137-437-11	FILM	0 0056uF	5%	50V
C383	1-137-378-11	FILM	0.22uF	5%	50V
C384	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C385	1-126-933-11	ELECT	100uF	20%	16V
C386	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C387	1-126-933-11	ELECT	100uF	20%	16V
C388	1-124-589-11	ELECT	47uF	20%	16V
C389	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C390	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C391	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C392	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C393	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C406	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C407	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C460	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C461	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C462	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C521	1-124-584-00	ELECT	100uF	20%	10V
C522	1-128-172-11	ELECT	47uF	20%	6 3V
C523	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C524	1-124-584-00	ELECT	100uF	20%	10V
C526	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C527	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C528	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C529	1-163-017-00	CERAMIC CHIP	0 0047uF	5%	50V
C530	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C531	1-124-464-11	ELECT	0.22uF	20%	50V
C532	1-126-160-11	ELECT	1uF	20%	50V
C536	1-124-584-00	ELECT	100uF	20%	10V

Ref No	Part No	Description			Remark
C560	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-126-935-11	ELECT	470uF	20%	6.3V
C562	1-126-967-11	ELECT	47uF	20%	16V
C563	1-126-967-11	ELECT	47uF	20%	16V
C564	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C573	1-126-160-11	ELECT	1uF	20%	50V
C574	1-126-160-11	ELECT	1uF	20%	50V
C576	1-126-967-11	ELECT	47uF	20%	16V
C577	1-126-160-11	ELECT	1uF	20%	50V
C578	1-126-160-11	ELECT	1uF	20%	50V
C701	1-126-967-11	ELECT	47uF	20%	16V
C704	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-126-963-11	ELECT	4.7uF	20%	50V
C707	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C708	1-126-767-11	ELECT	1000uF	20%	16V
C709	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C710	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C731	1-126-964-11	ELECT	10uF	20%	50V
C732	1-126-964-11	ELECT	10uF	20%	50V
C733	1-126-964-11	ELECT	10uF	20%	50V
C735	1-126-964-11	ELECT	10uF	20%	50V
C746	1-126-967-11	ELECT	47uF	20%	16V
C991	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C992	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C993	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C994	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C995	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C996	1-126-967-11	ELECT	47uF	20%	16V
C997	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< JACK >			
CJ570	1-779-062-11	JACK, PIN 6P (LINE-1 IN)			
		< CONNECTOR >			
CN101	1-506-470-11	PIN, CONNECTOR 5P			
* CN102	1-766-538-11	CONNECTOR, BOARD TO BOARD 8P			
* CN103	1-766-537-11	CONNECTOR (HMD) 5P			
* CN104	1-766-716-11	CONNECTOR, BOARD TO BOARD 3P			
CN305	1-573-852-11	CONNECTOR, BOARD TO BOARD 20P			
CN306	1-573-852-11	CONNECTOR, BOARD TO BOARD 20P			
CN423	1-506-470-11	PIN, CONNECTOR 5P			
CN430	1-691-074-11	HOUSING, CONNECTOR 15P			
CN610	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			
		< DIODE >			
D102	8-719-048-26	LED GL528V1			
D131	8-719-200-82	DIODE 11ES2			
D161	8-719-200-82	DIODE 11ES2			
D162	8-719-200-82	DIODE 11ES2			
D361	8-719-911-19	DIODE 1SS119			
D400	8-719-109-93	DIODE RD6.2ES-B2			
D401	8-719-109-93	DIODE RD6.2ES-B2			
D402	8-719-109-93	DIODE RD6.2ES-B2			
D403	8-719-109-93	DIODE RD6.2ES-B2			
D521	8-719-911-19	DIODE 1SS119			
D560	8-719-109-74	DIODE RD4.3ES-B1			
D702	8-719-110-78	DIODE RD33ES-B2			

Ref No	Part No	Description			Remark
D991	8-719-110-08	DIODE RD8.2ES-B2			
D992	8-719-110-08	DIODE RD8.2ES-B2			
D993	8-719-110-08	DIODE RD8.2ES-B2			
D995	8-719-110-08	DIODE RD8.2ES-B2			
		< TERMINAL BOARD >			
ET100	1-537-770-21	TERMINAL BOARD, GROUND			
		< IC >			
IC131	8-759-353-59	IC LB1643			
IC160	8-759-462-97	IC M37777M7A210GP			
IC201	8-759-439-49	IC LA71530M-MPB			
IC202	8-759-439-51	IC LC89978M-TE-L			
IC360	8-759-445-22	IC TDA9603H/N2,557			
IC361	8-759-708-05	IC NJM78L05A			
IC461	8-759-248-87	IC MM1256XF-BE			
IC462	8-759-518-23	IC X24C04S8			
IC521	8-759-431-55	IC M35052-VSX8501			
IC570	8-759-454-62	IC uPC4558G2-E2			
IC733	8-742-037-00	HYB IC SBX1837-51			
IC991	8-759-356-27	IC NJM2129M-TE2			
		< JACK >			
J991	1-563-330-11	JACK (CONTROL S IN)			
J992	1-566-822-21	JACK (CONTROL S OUT)			
		< JUMPER RESISTOR >			
JR001	1-216-296-00	METAL CHIP	0	5%	1/8W
JR002	1-216-296-00	METAL CHIP	0	5%	1/8W
JR003	1-216-296-00	METAL CHIP	0	5%	1/8W
JR004	1-216-296-00	METAL CHIP	0	5%	1/8W
JR005	1-216-296-00	METAL CHIP	0	5%	1/8W
JR006	1-216-296-00	METAL CHIP	0	5%	1/8W
JR007	1-216-296-00	METAL CHIP	0	5%	1/8W
JR008	1-216-296-00	METAL CHIP	0	5%	1/8W
JR009	1-216-296-00	METAL CHIP	0	5%	1/8W
JR010	1-216-296-00	METAL CHIP	0	5%	1/8W
JR011	1-216-296-00	METAL CHIP	0	5%	1/8W
JR012	1-216-296-00	METAL CHIP	0	5%	1/8W
JR013	1-216-296-00	METAL CHIP	0	5%	1/8W
JR014	1-216-296-00	METAL CHIP	0	5%	1/8W
JR015	1-216-296-00	METAL CHIP	0	5%	1/8W
JR016	1-216-296-00	METAL CHIP	0	5%	1/8W
JR017	1-216-296-00	METAL CHIP	0	5%	1/8W
JR018	1-216-296-00	METAL CHIP	0	5%	1/8W
JR019	1-216-296-00	METAL CHIP	0	5%	1/8W
JR020	1-216-296-00	METAL CHIP	0	5%	1/8W
JR021	1-216-296-00	METAL CHIP	0	5%	1/8W
JR022	1-216-296-00	METAL CHIP	0	5%	1/8W
JR023	1-216-296-00	METAL CHIP	0	5%	1/8W
JR024	1-216-296-00	METAL CHIP	0	5%	1/8W
JR025	1-216-296-00	METAL CHIP	0	5%	1/8W
JR026	1-216-296-00	METAL CHIP	0	5%	1/8W
JR027	1-216-296-00	METAL CHIP	0	5%	1/8W
JR028	1-216-296-00	METAL CHIP	0	5%	1/8W
JR029	1-216-296-00	METAL CHIP	0	5%	1/8W
JR030	1-216-296-00	METAL CHIP	0	5%	1/8W

Ref. No.	Part No.	Description			Remark
JR031	1-216-296-00	METAL CHIP	0	5%	1/8W
JR032	1-216-296-00	METAL CHIP	0	5%	1/8W
JR033	1-216-296-00	METAL CHIP	0	5%	1/8W
JR034	1-216-296-00	METAL CHIP	0	5%	1/8W
JR035	1-216-296-00	METAL CHIP	0	5%	1/8W
JR036	1-216-296-00	METAL CHIP	0	5%	1/8W
JR037	1-216-296-00	METAL CHIP	0	5%	1/8W
JR038	1-216-296-00	METAL CHIP	0	5%	1/8W
JR039	1-216-296-00	METAL CHIP	0	5%	1/8W
JR040	1-216-296-00	METAL CHIP	0	5%	1/8W
JR041	1-216-296-00	METAL CHIP	0	5%	1/8W
JR042	1-216-296-00	METAL CHIP	0	5%	1/8W
JR043	1-216-296-00	METAL CHIP	0	5%	1/8W
JR044	1-216-296-00	MFTAL CHIP	0	5%	1/8W
JR045	1-216-296-00	METAL CHIP	0	5%	1/8W
JR046	1-216-296-00	METAL CHIP	0	5%	1/8W
JR047	1-216-296-00	METAL CHIP	0	5%	1/8W
JR048	1-216-296-00	METAL CHIP	0	5%	1/8W
JR049	1-216-296-00	METAL CHIP	0	5%	1/8W
JR050	1-216-296-00	METAL CHIP	0	5%	1/8W
JR051	1-216-296-00	METAL CHIP	0	5%	1/8W
JR052	1-216-296-00	METAL CHIP	0	5%	1/8W
JR053	1-216-296-00	METAL CHIP	0	5%	1/8W
JR054	1-216-296-00	METAL CHIP	0	5%	1/8W
JR055	1-216-296-00	METAL CHIP	0	5%	1/8W
JR056	1-216-296-00	METAL CHIP	0	5%	1/8W
JR057	1-216-296-00	METAL CHIP	0	5%	1/8W
JR058	1-216-296-00	METAL CHIP	0	5%	1/8W
JR059	1-216-296-00	METAL CHIP	0	5%	1/8W
JR060	1-216-296-00	METAL CHIP	0	5%	1/8W
JR061	1-216-296-00	METAL CHIP	0	5%	1/8W
JR062	1-216-296-00	METAL CHIP	0	5%	1/8W
JR063	1-216-296-00	METAL CHIP	0	5%	1/8W
JR064	1-216-296-00	METAL CHIP	0	5%	1/8W
JR065	1-216-296-00	METAL CHIP	0	5%	1/8W
JR066	1-216-296-00	METAL CHIP	0	5%	1/8W
JR067	1-216-296-00	METAL CHIP	0	5%	1/8W
JR068	1-216-296-00	METAL CHIP	0	5%	1/8W
JR069	1-216-296-00	METAL CHIP	0	5%	1/8W
JR070	1-216-296-00	METAL CHIP	0	5%	1/8W
JR071	1-216-296-00	METAL CHIP	0	5%	1/8W
JR072	1-216-296-00	METAL CHIP	0	5%	1/8W
JR073	1-216-296-00	METAL CHIP	0	5%	1/8W
JR074	1-216-296-00	METAL CHIP	0	5%	1/8W
JR075	1-216-296-00	METAL CHIP	0	5%	1/8W
JR076	1-216-296-00	METAL CHIP	0	5%	1/8W
JR077	1-216-296-00	METAL CHIP	0	5%	1/8W
JR078	1-216-296-00	METAL CHIP	0	5%	1/8W
JR079	1-216-296-00	METAL CHIP	0	5%	1/8W
JR080	1-216-296-00	METAL CHIP	0	5%	1/8W
JR081	1-216-296-00	METAL CHIP	0	5%	1/8W
JR082	1-216-296-00	METAL CHIP	0	5%	1/8W
JR083	1-216-296-00	METAL CHIP	0	5%	1/8W
JR084	1-216-296-00	METAL CHIP	0	5%	1/8W
JR201	1-216-295-00	MFTAL CHIP	0	5%	1/10W
JR202	1-216-295-00	METAL CHIP	0	5%	1/10W
JR203	1-216-295-00	METAL CHIP	0	5%	1/10W
JR204	1-216-295-00	METAL CHIP	0	5%	1/10W
JR205	1-216-295-00	METAL CHIP	0	5%	1/10W
JR206	1-216-295-00	METAL CHIP	0	5%	1/10W
JR207	1-216-295-00	METAL CHIP	0	5%	1/10W
JR208	1-216-295-00	METAL CHIP	0	5%	1/10W
JR209	1-216-295-00	METAL CHIP	0	5%	1/10W
JR210	1-216-295-00	METAL CHIP	0	5%	1/10W
JR211	1-216-295-00	METAL CHIP	0	5%	1/10W
JR212	1-216-295-00	METAL CHIP	0	5%	1/10W
JR213	1-216-295-00	METAL CHIP	0	5%	1/10W
JR214	1-216-295-00	METAL CHIP	0	5%	1/10W
JR215	1-216-295-00	METAL CHIP	0	5%	1/10W
JR216	1-216-295-00	METAL CHIP	0	5%	1/10W
JR217	1-216-295-00	METAL CHIP	0	5%	1/10W
JR218	1-216-295-00	METAL CHIP	0	5%	1/10W
JR219	1-216-295-00	METAL CHIP	0	5%	1/10W
JR220	1-216-295-00	METAL CHIP	0	5%	1/10W
JR221	1-216-295-00	METAL CHIP	0	5%	1/10W
JR222	1-216-295-00	METAL CHIP	0	5%	1/10W
JR223	1-216-295-00	METAL CHIP	0	5%	1/10W
JR224	1-216-295-00	METAL CHIP	0	5%	1/10W
JR225	1-216-295-00	METAL CHIP	0	5%	1/10W
JR226	1-216-295-00	METAL CHIP	0	5%	1/10W
JR227	1-216-295-00	METAL CHIP	0	5%	1/10W
JR228	1-216-295-00	METAL CHIP	0	5%	1/10W
JR229	1-216-295-00	METAL CHIP	0	5%	1/10W
JR230	1-216-295-00	METAL CHIP	0	5%	1/10W
JR231	1-216-295-00	METAL CHIP	0	5%	1/10W
JR232	1-216-295-00	METAL CHIP	0	5%	1/10W
JR233	1-216-295-00	METAL CHIP	0	5%	1/10W
JR234	1-216-295-00	METAL CHIP	0	5%	1/10W
JR235	1-216-295-00	METAL CHIP	0	5%	1/10W
JR236	1-216-295-00	METAL CHIP	0	5%	1/10W
JR237	1-216-295-00	METAL CHIP	0	5%	1/10W
JR238	1-216-295-00	METAL CHIP	0	5%	1/10W
JR239	1-216-295-00	METAL CHIP	0	5%	1/10W
JR240	1-216-295-00	METAL CHIP	0	5%	1/10W
JR241	1-216-295-00	METAL CHIP	0	5%	1/10W
JR242	1-216-295-00	METAL CHIP	0	5%	1/10W
JR243	1-216-295-00	METAL CHIP	0	5%	1/10W

< JUMPER RESISTOR >

JS202	1-216-295-00	METAL CHIP	0	5%	1/10W
JS524	1-216-295-00	METAL CHIP	0	5%	1/10W

< COIL >

L140	1-410-513-11	INDUCTOR	22uH
L161	1-410-513-11	INDUCTOR	22uH
L162	1-410-513-11	INDUCTOR	22uH
L163	1-410-513-11	INDUCTOR	22uH
L201	1-410-516-11	INDUCTOR	9uH
L202	1-414-189-31	INDUCTOR	100uH
L204	1-414-187-11	INDUCTOR	47uH
L205	1-414-189-31	INDUCTOR	100uH
L206	1-414-187-11	INDUCTOR	47uH
L207	1-410-518-41	INDUCTOR	56uH
L301	1-414-189-31	INDUCTOR	100uH
L361	1-414-189-31	INDUCTOR	100uH
L521	1-410-521-11	INDUCTOR	100uH
L522	1-410-521-11	INDUCTOR	100uH

Ref No.	Part No.	Description			Remark
L523	1-410-521-11	INDUCTOR	100uH		
L524	1-410-501-11	INDUCTOR	2.2uH		
L560	1-414-189-31	INDUCTOR	100uH		
L574	1-414-189-31	INDUCTOR	100uH		
L702	1-414-187-11	INDUCTOR	47uH		
L703	1-410-501-11	INDUCTOR	2.2uH		
L704	1-410-501-11	INDUCTOR	2.2uH		
L706	1-410-501-11	INDUCTOR	2.2uH		
L731	1-414-183-41	INDUCTOR	10uH		
		< PHOTO INTERRUPTER >			
PH100	8-749-010-20	PHOTO INTERRUPTER GP3S114			
PH101	8-749-010-19	PHOTO INTERRUPTER GP3S113			
		< IC LINK >			
⚠PS101	1-533-586-31	LINK, IC 491.315 (0.315A)			
		< TRANSISTOR >			
Q100	8-729-025-92	PHOTO TRANSISTOR PT380F			
Q101	8-729-025-92	PHOTO TRANSISTOR PT380F			
Q102	8-729-281-53	TRANSISTOR	2SC1815-GR		
Q201	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q202	8-729-230-49	TRANSISTOR	2SC2712-G		
Q208	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q209	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q210	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q211	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q212	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q301	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q361	8-729-821-31	TRANSISTOR	2SD1012-FG-TPE4		
Q362	8-729-821-31	TRANSISTOR	2SD1012-FG-TPE4		
Q363	8-729-821-31	TRANSISTOR	2SD1012-FG-TPE4		
Q364	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q522	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q523	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q524	8-729-421-19	TRANSISTOR	UN2213		
Q525	8-729-010-29	TRANSISTOR	MSD601-RST1		
Q560	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q731	8-729-421-19	TRANSISTOR	UN2213		
		< RESISTOR >			
R100	1-216-081-00	METAL CHIP	22K	5%	1/10W
R101	1-216-033-00	METAL CHIP	220	5%	1/10W
R102	1-247-815-91	CARBON	220	5%	1/4W
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W
R104	1-216-113-00	METAL CHIP	470K	5%	1/10W
R105	1-216-113-00	METAL CHIP	470K	5%	1/10W
R106	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R107	1-216-049-00	METAL CHIP	1K	5%	1/10W
R108	1-247-807-31	CARBON	100	5%	1/4W
R109	1-247-807-31	CARBON	100	5%	1/4W
R110	1-249-429-11	CARBON	10K	5%	1/4W
R111	1-216-089-00	METAL CHIP	47K	5%	1/10W

Ref No.	Part No	Description			Remark
R112	1-216-089-00	METAL CHIP	47K	5%	1/10W
R113	1-216-089-00	METAL CHIP	47K	5%	1/10W
R114	1-216-089-00	METAL CHIP	47K	5%	1/10W
R115	1-216-089-00	METAL CHIP	47K	5%	1/10W
R117	1-216-041-00	METAL CHIP	470	5%	1/10W
R118	1-218-179-11	METAL GLAZE	10M	5%	1/10W
R119	1-216-295-00	METAL CHIP	0	5%	1/10W
R124	1-216-041-00	METAL CHIP	470	5%	1/10W
R125	1-216-041-00	METAL CHIP	470	5%	1/10W
R126	1-216-041-00	METAL CHIP	470	5%	1/10W
R130	1-216-041-00	METAL CHIP	470	5%	1/10W
R131	1-216-041-00	METAL CHIP	470	5%	1/10W
R132	1-216-089-00	METAL CHIP	47K	5%	1/10W
R133	1-216-081-00	METAL CHIP	22K	5%	1/10W
R160	1-216-295-00	METAL CHIP	0	5%	1/10W
R162	1-216-295-00	METAL CHIP	0	5%	1/10W
R164	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R165	1-216-039-00	METAL CHIP	390	5%	1/10W
R166	1-249-413-11	CARBON	470	5%	1/4W
R167	1-216-295-00	METAL CHIP	0	5%	1/10W
R169	1-216-049-00	METAL CHIP	1K	5%	1/10W
R170	1-249-417-11	CARBON	1K	5%	1/4W
R171	1-216-295-00	METAL CHIP	0	5%	1/10W
R172	1-216-295-00	METAL CHIP	0	5%	1/10W
R176	1-216-073-00	METAL CHIP	10K	5%	1/10W
R177	1-216-295-00	METAL CHIP	0	5%	1/10W
R179	1-216-295-00	METAL CHIP	0	5%	1/10W
R180	1-216-295-00	METAL CHIP	0	5%	1/10W
R185	1-249-437-11	CARBON	47K	5%	1/4W
R188	1-249-417-11	CARBON	1K	5%	1/4W
R189	1-216-295-00	METAL CHIP	0	5%	1/10W
R191	1-216-049-00	METAL CHIP	1K	5%	1/10W
R201	1-216-041-00	METAL CHIP	470	5%	1/10W
R202	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R203	1-216-049-00	METAL CHIP	1K	5%	1/10W
R204	1-216-047-91	METAL GLAZE	820	5%	1/10W
R205	1-216-037-00	METAL CHIP	330	5%	1/10W
R206	1-216-037-00	METAL CHIP	330	5%	1/10W
R208	1-216-073-00	METAL CHIP	10K	5%	1/10W
R209	1-216-295-00	METAL CHIP	0	5%	1/10W
R210	1-216-295-00	METAL CHIP	0	5%	1/10W
R214	1-216-045-00	METAL CHIP	680	5%	1/10W
R218	1-208-798-11	METAL GLAZE	4.7K	0.50%	1/10W
R219	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R220	1-216-295-00	METAL CHIP	0	5%	1/10W
R222	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R225	1-216-295-00	METAL CHIP	0	5%	1/10W
R226	1-216-295-00	METAL CHIP	0	5%	1/10W
R227	1-216-025-91	METAL GLAZE	100	5%	1/10W
R228	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R229	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R230	1-216-045-00	METAL CHIP	680	5%	1/10W
R231	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R232	1-216-055-00	METAL CHIP	1.8K	5%	1/10W

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

Ref No.	Part No.	Description			Remark
R235	1-216-073-00	METAL CHIP	10K	5%	1/10W
R236	1-216-049-00	METAL CHIP	1K	5%	1/10W
R239	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R240	1-216-049-00	METAL CHIP	1K	5%	1/10W
R243	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R244	1-216-089-00	METAL CHIP	47K	5%	1/10W
R245	1-216-049-00	METAL CHIP	1K	5%	1/10W
R301	1-249-439-11	CARBON	68K	5%	1/4W
R302	1-216-067-00	METAL CHIP	5 6K	5%	1/10W
R303	1-216-083-00	METAL CHIP	27K	5%	1/10W
R304	1-249-434-11	CARBON	27K	5%	1/4W
R305	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R308	1-216-069-00	METAL CHIP	6 8K	5%	1/10W
R309	1-216-067-00	METAL CHIP	5 6K	5%	1/10W
R310	1-216-129-00	METAL CHIP	2 2M	5%	1/10W
R311	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R312	1-216-079-00	METAL CHIP	18K	5%	1/10W
R313	1-216-109-00	METAL CHIP	330K	5%	1/10W
R314	1-216-035-00	METAL CHIP	270	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R316	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R318	1-249-430-11	CARBON	12K	5%	1/4W
R319	1-216-295-00	METAL CHIP	0	5%	1/10W
R320	1-216-047-91	METAL GLAZE	820	5%	1/10W
R361	1-247-815-91	CARBON	220	5%	1/4W
R362	1-216-033-00	METAL CHIP	220	5%	1/10W
R363	1-216-033-00	METAL CHIP	220	5%	1/10W
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W
R365	1-216-049-00	METAL CHIP	1K	5%	1/10W
R366	1-216-049-00	METAL CHIP	1K	5%	1/10W
R367	1-249-417-11	CARBON	1K	5%	1/4W
R368	1-216-133-00	METAL CHIP	3 3M	5%	1/10W
R369	1-216-689-11	METAL CHIP	39K	0 5%	1/10W
R370	1-216-061-00	METAL CHIP	3 3K	5%	1/10W
R371	1-208-820-11	METAL GLAZE	39K	0 50%	1/10W
R372	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R373	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R374	1-216-049-00	METAL CHIP	1K	5%	1/10W
R375	1-216-049-00	METAL CHIP	1K	5%	1/10W
R376	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R377	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R378	1-216-083-00	METAL CHIP	27K	5%	1/10W
R379	1-216-073-00	METAL CHIP	10K	5%	1/10W
R380	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R381	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R382	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R383	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R386	1-216-295-00	METAL CHIP	0	5%	1/10W
R387	1-216-295-00	METAL CHIP	0	5%	1/10W
R388	1-216-295-00	METAL CHIP	0	5%	1/10W
R389	1-216-049-00	METAL CHIP	1K	5%	1/10W
R399	1-216-049-00	METAL CHIP	1K	5%	1/10W
R400	1-216-073-00	METAL CHIP	10K	5%	1/10W
R405	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R406	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R411	1-216-073-00	METAL CHIP	10K	5%	1/10W
R412	1-216-089-00	METAL CHIP	47K	5%	1/10W
R413	1-216-089-00	METAL CHIP	47K	5%	1/10W
R420	1-216-399-00	METAL OXIDE	6 8	5%	3W
R462	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R463	1-216-113-00	METAL CHIP	470K	5%	1/10W
R521	1-216-049-00	METAL CHIP	1K	5%	1/10W
R522	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R526	1-216-073-00	METAL CHIP	10K	5%	1/10W
R528	1-249-437-11	CARBON	47K	5%	1/4W
R530	1-216-073-00	METAL CHIP	10K	5%	1/10W
R531	1-216-073-00	METAL CHIP	10K	5%	1/10W
R532	1-216-033-00	METAL CHIP	220	5%	1/10W
R533	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R534	1-216-025-91	METAL GLAZE	100	5%	1/10W
R535	1-208-814-11	METAL GLAZE	22K	0 50%	1/10W
R536	1-208-812-11	METAL GLAZE	18K	0.50%	1/10W
R537	1-216-073-00	METAL CHIP	10K	5%	1/10W
R539	1-216-073-00	METAL CHIP	10K	5%	1/10W
R560	1-216-022-00	METAL CHIP	75	5%	1/10W
R561	1-216-021-00	METAL CHIP	68	5%	1/10W
R562	1-249-407-11	CARBON	150	5%	1/4W
R563	1-249-408-11	CARBON	180	5%	1/4W
R565	1-249-411-11	CARBON	330	5%	1/4W
R570	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R571	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R572	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R573	1-249-413-11	CARBON	470	5%	1/4W
R574	1-249-413-11	CARBON	470	5%	1/4W
R577	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R701	1-216-049-00	METAL CHIP	1K	5%	1/10W
R702	1-216-295-00	METAL CHIP	0	5%	1/10W
R704	1-216-295-00	METAL CHIP	0	5%	1/10W
R705	1-212-893-00	FUSIBLE	330	5%	1/4W F
R706	1-216-113-00	METAL CHIP	470K	5%	1/10W
R708	1-216-295-00	METAL CHIP	0	5%	1/10W
R709	1-216-049-00	METAL CHIP	1K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-049-00	METAL CHIP	1K	5%	1/10W
R712	1-216-295-00	METAL CHIP	0	5%	1/10W
R731	1-249-417-11	CARBON	1K	5%	1/4W
R732	1-249-417-11	CARBON	1K	5%	1/4W
R733	1-249-425-11	CARBON	4.7K	5%	1/4W
R734	1-249-417-11	CARBON	1K	5%	1/4W
R735	1-249-417-11	CARBON	1K	5%	1/4W
R736	1-216-295-00	METAL CHIP	0	5%	1/10W
R737	1-216-081-00	METAL CHIP	22K	5%	1/10W
R738	1-216-081-00	METAL CHIP	22K	5%	1/10W
R739	1-216-073-00	METAL CHIP	10K	5%	1/10W
R741	1-216-295-00	METAL CHIP	0	5%	1/10W
R742	1-216-295-00	METAL CHIP	0	5%	1/10W
R743	1-216-295-00	METAL CHIP	0	5%	1/10W
R748	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R991	1-216-049-00	METAL CHIP	1K	5%	1/10W
		< VARIABLE RESISTOR >			
RV731	1-241-766-11	RES, ADJ, CERMET 47K			
		< SWITCH >			
S100	1-570-953-11	SWITCH, PUSH (1 KEY)(REC PRF)			

Ref. No.	Part No	Description	Remark
S701	1-571-588-11	SWITCH, SLIDE (RF UNIT 3CH/4CH)	
		< TUNER >	
⚠TU702	1-693-353-11	TUNER, (IF) SOLID TYPE	
		< VIBRATOR >	
X160	1-760-494-11	VIBRATOR, CRYSTAL (16MHz)	
X161	1-579-463-11	VIBRATOR, CRYSTAL (32 768kHz)	
X202	1-577-380-11	VIBRATOR, CRYSTAL (3.579545MHz)	
*	1-664-703-11	MF-302 BOARD (795HF/975HF)	
		**********	
		(Ref.No 3,000 Series)	
		< CAPACITOR >	
C401	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
		< CONNECTOR >	
CN407	1-691-064-31	HOUSING, CONNECTOR 5P	
		< DIODE >	
D405	8-719-056-07	LED SLR-342MC-A-47 (POWER)	
		< IC >	
IC401	8-749-011-05	IC GP1U28X	
		< TRANSISTOR >	
Q401	8-729-421-22	TRANSISTOR UN2211	
		< RESISTOR >	
R401	1-216-029-00	METAL CHIP 150 5%	1/10W
R402	1-216-295-00	METAL CHIP 0 5%	1/10W
R403	1-216-089-00	METAL CHIP 47K 5%	1/10W
		< SWITCH >	
S403	1-571-977-11	SWITCH, TACTIL (POWER)	
*	1-664-707-11	MF-303 BOARD (775HF/776HF)	
		**********	
		(Ref.No. 1,000 Series)	
		< CAPACITOR >	
C401	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
		< CONNECTOR >	
CN407	1-691-064-31	HOUSING, CONNECTOR 5P	
		< DIODE >	
D405	8-719-056-07	LED SLR-342MC-A-47 (POWER)	
		< IC >	
IC401	8-749-011-05	IC GP1U28X	
		< TRANSISTOR >	
Q401	8-729-421-22	TRANSISTOR UN2211	
		< RESISTOR >	
R401	1-216-029-00	METAL CHIP 150 5%	1/10W
R402	1-216-295-00	METAL CHIP 0 5%	1/10W
R403	1-216-089-00	METAL CHIP 47K 5%	1/10W
		< SWITCH >	
S403	1-571-977-11	SWITCH, TACTIL (POWER)	
*	A-6791-142-A	PR-218 BOARD, COMPLETE (795HF)	
*	A-6791-139-A	RP-218 BOARD, COMPLETE (975HF)	
		**********	
		(Ref.No. 3,000 Series)	
		< CAPACITOR >	
C141	1-163-009-11	CERAMIC CHIP 0 001uF 10%	50V
C142	1-164-232-11	CERAMIC CHIP 0 01uF	50V
C143	1-126-967-11	ELECT 47uF 20%	16V
C144	1-164-344-11	CERAMIC CHIP 0.068uF 10%	25V
C145	1-128-551-11	ELECT 22uF 20%	25V
C147	1-126-933-11	ELECT 100uF 20%	16V
C148	1-163-009-11	CERAMIC CHIP 0 001uF 10%	50V
C149	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C151	1-164-004-11	CERAMIC CHIP 0 1uF 10%	25V
C152	1-124-257-00	ELECT 2 2uF 20%	50V
C153	1-124-257-00	ELECT 2.2uF 20%	50V
C260	1-163-237-11	CERAMIC CHIP 27PF 5%	50V
C261	1-163-237-11	CERAMIC CHIP 27PF 5%	50V
C262	1-163-099-00	CERAMIC CHIP 18PF 5%	50V (975HF)
C263	1-163-099-00	CERAMIC CHIP 18PF 5%	50V (975HF)
C264	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C265	1-163-037-11	CERAMIC CHIP 0 022uF 10%	25V
C266	1-164-232-11	CERAMIC CHIP 0 01uF	50V
C267	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C268	1-163-241-11	CERAMIC CHIP 39PF 5%	50V
C269	1-163-241-11	CERAMIC CHIP 39PF 5%	50V
C270	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C271	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C272	1-163-241-11	CERAMIC CHIP 39PF 5%	50V
C273	1-163-241-11	CERAMIC CHIP 39PF 5%	50V
C274	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C275	1-163-038-00	CERAMIC CHIP 0 1uF	25V
C276	1-163-037-11	CERAMIC CHIP 0 022uF 10%	25V
C277	1-163-037-11	CERAMIC CHIP 0 022uF 10%	25V
C278	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C279	1-163-037-11	CERAMIC CHIP 0 022uF 10%	25V

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

Ref No.	Part No	Description			Remark
C280	1-124-584-00	ELECT	100uF	20%	10V
C281	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C282	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C283	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C284	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C285	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C286	1-124-584-00	ELECT	100uF	20%	10V
C287	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C288	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C289	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C321	1-126-967-11	ELECT	47uF	20%	16V
C322	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C323	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C324	1-104-697-11	FILM	0 047uF	5%	100V (795HF)
C324	1-137-462-11	FILM	0.018uF	5%	100V (975HF)
C331	1-126-933-11	ELECT	100uF	20%	16V (975HF)
C332	1-164-232-11	CERAMIC CHIP	0 01uF		50V (975HF)
C334	1-163-011-11	CERAMIC CHIP	0 0015uF	10%	50V (975HF)
C335	1-104-697-11	FILM	0.047uF	5%	100V (975HF)
C341	1-124-584-00	ELECT	100uF	20%	10V
C342	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C343	1-124-257-00	ELECT	2.2uF	20%	50V
C344	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C345	1-126-160-11	ELECT	1uF	20%	50V
C346	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C347	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C350	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C351	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C352	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C353	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C356	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C357	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C358	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C801	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C802	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C803	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C804	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C805	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C806	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C807	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C808	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C809	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C810	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C811	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C812	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C813	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C814	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C815	1-124-589-11	ELECT	47uF	20%	16V
C816	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C817	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C830	1-164-232-11	CERAMIC CHIP	0.01uF		50V (975HF)
C832	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (975HF)
C833	1-163-121-00	CERAMIC CHIP	150PF	5%	50V (975HF)
C834	1-163-245-11	CERAMIC CHIP	56PF	5%	50V (975HF)
C835	1-163-038-00	CERAMIC CHIP	0 1uF		25V (975HF)
C836	1-124-589-11	ELECT	47uF	20%	16V (975HF)
C837	1-163-038-00	CERAMIC CHIP	0.1uF		25V (975HF)
C851	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C852	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C853	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C854	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C855	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C859	1-124-589-11	ELECT	47uF	20%	16V
		< CONNECTOR >			
CN260	1-766-986-11	CONNECTOR, FFC/FPC 13P			
* CN261	1-564-029-00	PIN, CONNECTOR 4P			
CN262	1-573-834-11	CONNECTOR, BOARD TO BOARD 20P			
CN263	1-573-834-11	CONNECTOR, BOARD TO BOARD 20P			
CN301	1-573-729-11	PIN, CONNECTOR 2P			
CN302	1-506-483-21	PIN, CONNECTOR 4P			
CN303	1-573-729-31	PIN, CONNECTOR 2P			
* CN341	1-564-027-00	PIN, CONNECTOR 2P			
		< DIODE >			
D801	8-719-971-05	DIODE HSM123			
D802	8-719-911-19	DIODE 1SS119			
		< IC >			
IC141	8-759-246-14	IC TA8823N			
IC260	8-759-352-17	IC HA118195NT			
IC301	8-759-089-84	IC BA7755AF-T1			
IC340	8-759-055-49	IC AN3327K			
		< JUMPER RESISTOR >			
JR501	1-216-296-00	METAL CHIP	0	5%	1/8W
JR502	1-216-295-00	METAL CHIP	0	5%	1/10W
JR503	1-216-295-00	METAL CHIP	0	5%	1/10W
JR504	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L141	1-414-189-31	INDUCTOR	100uH		
L260	1-410-509-11	INDUCTOR	10uH (975HF)		
L261	1-410-509-11	INDUCTOR	10uH (975HF)		
L262	1-414-189-31	INDUCTOR	100uH		
L263	1-414-189-31	INDUCTOR	100uH		
L321	1-414-189-31	INDUCTOR	100uH		
L322	1-414-189-31	INDUCTOR	100uH		
L331	1-410-687-11	INDUCTOR	1 2mH (975HF)		
L341	1-414-189-31	INDUCTOR	100uH		
L801	1-410-525-11	INDUCTOR	220uH		
L802	1-414-189-31	INDUCTOR	100uH		

Ref No.	Part No	Description			Remark
L803	1-410-516-11	INDUCTOR	39uH		
L804	1-410-516-11	INDUCTOR	39uH		
L805	1-410-525-11	INDUCTOR	220uH		
L830	1-410-507-11	INDUCTOR	6.8uH (975HF)		
L831	1-414-189-31	INDUCTOR	100uH (975HF)		
L851	1-414-189-31	INDUCTOR	100uH		
		< IC LINK >			
⚠PS331	1-533-586-31	LINK, IC 491 315 (0 315A)(975HF)			
		< TRANSISTOR >			
Q260	8-729-230-49	TRANSISTOR	2SC2712-G		
Q321	8-729-802-91	TRANSISTOR	2SD879		
Q331	8-729-012-31	TRANSISTOR	2SC4040-TL2-Q (975HF)		
Q332	8-729-900-51	TRANSISTOR	DTA114TK (975HF)		
Q801	8-729-216-21	TRANSISTOR	2SA1162Y-TE85L		
Q802	8-729-230-49	TRANSISTOR	2SC2712-G		
Q803	8-729-216-21	TRANSISTOR	2SA1162Y-TE85L		
Q804	8-729-230-49	TRANSISTOR	2SC2712-G		
Q805	8-729-900-51	TRANSISTOR	DTA114TK		
Q806	8-729-230-49	TRANSISTOR	2SC2712-G		
Q807	8-729-230-49	TRANSISTOR	2SC2712-G		
Q808	8-729-230-49	TRANSISTOR	2SC2712-G		
Q809	8-729-900-51	TRANSISTOR	DTA114TK		
Q810	8-729-230-49	TRANSISTOR	2SC2712-G		
Q830	8-729-216-22	TRANSISTOR	2SA1162 (975HF)		
Q831	8-729-216-22	TRANSISTOR	2SA1162 (975HF)		
Q832	8-729-421-19	TRANSISTOR	UN2213 (975HF)		
Q833	8-729-804-41	TRANSISTOR	2SB1122-S (975HF)		
Q834	8-729-421-19	TRANSISTOR	UN2213 (975HF)		
Q851	8-729-230-49	TRANSISTOR	2SC2712-G		
Q852	8-729-230-49	TRANSISTOR	2SC2712-G		
Q853	8-729-216-21	TRANSISTOR	2SA1162Y-TE85L		
Q854	8-729-216-21	TRANSISTOR	2SA1162Y-TE85L		
Q855	8-729-230-49	TRANSISTOR	2SC2712-G		
Q856	8-729-230-49	TRANSISTOR	2SC2712-G		
Q857	8-729-216-21	TRANSISTOR	2SA1162Y-TE85L		
		< RESISTOR >			
R141	1-216-119-00	METAL CHIP	820K	5%	1/10W
R142	1-216-093-00	METAL CHIP	68K	5%	1/10W
R143	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R144	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R145	1-216-085-00	METAL CHIP	33K	5%	1/10W
R146	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R147	1-216-037-00	METAL CHIP	330	5%	1/10W
R148	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R149	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R260	1-216-037-00	METAL CHIP	330	5%	1/10W
R261	1-216-037-00	METAL CHIP	330	5%	1/10W
R262	1-216-295-00	METAL CHIP	0	5%	1/10W
R263	1-216-295-00	METAL CHIP	0	5%	1/10W
R264	1-216-295-00	METAL CHIP	0	5%	1/10W
R265	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref No.	Part No.	Description			Remark
R266	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R267	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R268	1-216-081-00	METAL CHIP	22K	5%	1/10W
R269	1-216-059-00	METAL CHIP	2 7K	5%	1/10W
R270	1-216-081-00	METAL CHIP	22K	5%	1/10W
R271	1-216-049-00	METAL CHIP	1K	5%	1/10W
R272	1-216-081-00	METAL CHIP	22K	5%	1/10W
R273	1-216-081-00	METAL CHIP	22K	5%	1/10W
R274	1-216-075-00	METAL CHIP	12K	5%	1/10W
R275	1-216-075-00	METAL CHIP	12K	5%	1/10W
R276	1-216-049-00	METAL CHIP	1K	5%	1/10W
R317	1-216-079-00	METAL CHIP	18K	5%	1/10W
R321	1-249-401-11	CARBON	47	5%	1/4W
R322	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W (795HF)
R322	1-216-067-00	METAL CHIP	5 6K	5%	1/10W (975HF)
R323	1-217-671-11	METAL CHIP	1	5%	1/10W
R324	1-249-408-11	CARBON	180	5%	1/4W
R331	1-216-295-00	METAL CHIP	0	5%	1/10W (975HF)
R332	1-216-083-00	METAL CHIP	27K	5%	1/10W (975HF)
R333	1-249-394-11	CARBON	12	5%	1/4W F (975HF)
R336	1-216-296-00	METAL CHIP	0	5%	1/8W (795HF)
R336	1-216-164-00	METAL GLAZE	39	5%	1/8W (975HF)
R337	1-216-296-00	METAL CHIP	0	5%	1/8W (795HF)
R337	1-216-164-00	METAL GLAZE	39	5%	1/8W (975HF)
R341	1-216-067-00	METAL CHIP	5 6K	5%	1/10W
R342	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R343	1-216-073-00	METAL CHIP	10K	5%	1/10W
R344	1-216-079-00	METAL CHIP	18K	5%	1/10W
R345	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R346	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R347	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R350	1-216-033-00	METAL CHIP	220	5%	1/10W
R351	1-216-035-00	METAL CHIP	270	5%	1/10W
R356	1-216-035-00	METAL CHIP	270	5%	1/10W
R357	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R801	1-216-049-00	METAL CHIP	1K	5%	1/10W
R802	1-216-049-00	METAL CHIP	1K	5%	1/10W
R803	1-216-039-00	METAL CHIP	390	5%	1/10W
R804	1-216-039-00	METAL CHIP	390	5%	1/10W
R805	1-216-049-00	METAL CHIP	1K	5%	1/10W
R806	1-216-043-91	METAL GLAZE	560	5%	1/10W
R807	1-216-039-00	METAL CHIP	390	5%	1/10W
R808	1-216-033-00	METAL CHIP	220	5%	1/10W
R809	1-216-077-00	METAL CHIP	15K	5%	1/10W
R810	1-216-075-00	METAL CHIP	12K	5%	1/10W
R811	1-216-033-00	METAL CHIP	220	5%	1/10W
R812	1-216-043-91	METAL GLAZE	560	5%	1/10W

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

Ref. No	Part No	Description			Remark
R813	1-247-843-11	CARBON	3 3K	5%	1/4W
R814	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R815	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R816	1-216-075-00	METAL CHIP	12K	5%	1/10W
R817	1-216-077-00	METAL CHIP	15K	5%	1/10W
R818	1-216-039-00	METAL CHIP	390	5%	1/10W
R819	1-216-045-00	METAL CHIP	680	5%	1/10W
R820	1-216-039-00	METAL CHIP	390	5%	1/10W
R821	1-216-045-00	METAL CHIP	680	5%	1/10W
R822	1-216-049-00	METAL CHIP	1K	5%	1/10W
R823	1-216-041-00	METAL CHIP	470	5%	1/10W
R824	1-216-043-91	METAL GLAZE	560	5%	1/10W
R825	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R826	1-216-025-91	METAL GLAZE	100	5%	1/10W
R827	1-216-045-00	METAL CHIP	680	5%	1/10W
R828	1-216-043-91	METAL GLAZE	560	5%	1/10W
R830	1-216-011-00	METAL CHIP	27	5%	1/10W (975HF)
R831	1-216-041-00	METAL CHIP	470	5%	1/10W (975HF)
R832	1-208-787-11	METAL GLAZE	1.6K	0 50%	1/10W (975HF)
R833	1-216-095-00	METAL CHIP	82K	5%	1/10W (975HF)
R834	1-216-089-00	METAL CHIP	47K	5%	1/10W (975HF)
R835	1-216-689-11	METAL CHIP	39K	0 5%	1/10W (975HF)
R836	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (975HF)
R837	1-216-073-00	METAL CHIP	10K	5%	1/10W (975HF)
R844	1-216-069-00	METAL CHIP	6 8K	5%	1/10W
R851	1-208-820-11	METAL GLAZE	39K	0.50%	1/10W
R852	1-208-802-11	METAL GLAZE	6 8K	0.50%	1/10W
R853	1-208-792-11	METAL GLAZE	2 7K	0.50%	1/10W
R855	1-208-770-11	METAL GLAZE	330	0.50%	1/10W
R856	1-208-758-11	METAL GLAZE	100	0 50%	1/10W
R857	1-208-790-11	METAL GLAZE	2 2K	0.50%	1/10W
R858	1-216-051-00	METAL CHIP	1 2K	5%	1/10W
R859	1-208-800-11	METAL GLAZE	5.6K	0 50%	1/10W
R860	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R861	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R862	1-208-806-11	METAL GLAZE	10K	0.50%	1/10W
R864	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R865	1-216-107-00	METAL CHIP	270K	5%	1/10W

< TRANSFORMER >

T321	1-431-097-11	TRANSFORMER, BIAS OSCILLATION (795HF)
T321	1-431-100-11	TRANSFORMER, BIAS OSCILLATION (975HF)
T331	1-423-415-11	TRANSFORMER, BIAS OSCILLATION (975HF)

* A-6791-147-A RP-220 BOARD, COMPLETE (775HF/776HF)
****
(Ref.No. 1,000 Series)

< CAPACITOR >

C154	1-164-161-11	CERAMIC CHIP	0 0022uF	10%	100V
C260	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C261	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C264	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C265	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C266	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C267	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C268	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C269	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C270	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C271	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C272	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C273	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C274	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C275	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C276	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C277	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C278	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C279	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C280	1-124-584-00	ELECT	100uF	20%	10V
C281	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C282	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C283	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C284	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C285	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C286	1-124-584-00	ELECT	100uF	20%	10V
C287	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C288	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C289	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C321	1-126-967-11	ELECT	47uF	20%	16V
C322	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C323	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C324	1-104-697-11	FILM	0.047uF	5%	100V
C341	1-124-584-00	ELECT	100uF	20%	10V
C342	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C343	1-124-257-00	ELECT	2.2uF	20%	50V
C344	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C345	1-126-160-11	ELECT	1uF	20%	50V
C346	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C347	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C350	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C351	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C352	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C353	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C356	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C357	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C358	1-163-038-00	CERAMIC CHIP	0 1uF		25V

< CONNECTOR >

CN260	1-766-986-11	CONNECTOR, FFC/FPC 13P
* CN261	1-564-029-00	PIN, CONNECTOR 4P
CN262	1-573-834-11	CONNECTOR, BOARD TO BOARD 20P
CN263	1-573-834-11	CONNECTOR, BOARD TO BOARD 20P
CN301	1-573-729-11	PIN, CONNECTOR 2P
CN302	1-573-733-11	PIN, CONNECTOR 6P
* CN341	1-564-027-00	PIN, CONNECTOR 2P

< IC >

IC260	8-759-352-17	IC HA118195NT
IC301	8-759-089-84	IC BA7755AF-T1
IC340	8-759-055-49	IC AN3327K

Ref No	Part No	Description			Remark
		< JUMPER RESISTOR >			
JR501	1-216-296-00	METAL CHIP	0	5%	1/8W
JR502	1-216-295-00	METAL CHIP	0	5%	1/10W
JR504	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L260	1-410-509-11	INDUCTOR	10uH		
L261	1-410-509-11	INDUCTOR	10uH		
L262	1-414-189-31	INDUCTOR	100uH		
L263	1-414-189-31	INDUCTOR	100uH		
L321	1-414-189-31	INDUCTOR	100uH		
L322	1-414-189-31	INDUCTOR	100uH		
L341	1-414-189-31	INDUCTOR	100uH		
		< TRANSISTOR >			
Q260	8-729-230-49	TRANSISTOR	2SC2712-G		
Q321	8-729-802-91	TRANSISTOR	2SD879		
		< RESISTOR >			
R152	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R158	1-249-419-11	CARBON	1.5K	5%	1/4W
R260	1-216-037 00	METAL CHIP	330	5%	1/10W
R261	1-216-037-00	METAL CHIP	330	5%	1/10W
R262	1-216-295-00	METAL CHIP	0	5%	1/10W
R263	1-216-295-00	METAL CHIP	0	5%	1/10W
R264	1-216-295-00	METAL CHIP	0	5%	1/10W
R265	1-216-295-00	METAL CHIP	0	5%	1/10W
R266	1-216-053-00	METAL CHIP	1 5K	5%	1/10W
R267	1-216-071-00	METAL CHIP	8 2K	5%	1/10W
R268	1-216-081-00	METAL CHIP	22K	5%	1/10W
R269	1-216-059-00	METAL CHIP	2 7K	5%	1/10W
R270	1-216-081-00	METAL CHIP	22K	5%	1/10W
R271	1-216-049-00	METAL CHIP	1K	5%	1/10W
R272	1-216-081-00	METAL CHIP	22K	5%	1/10W
R273	1-216-081-00	METAL CHIP	22K	5%	1/10W
R274	1-216-075-00	METAL CHIP	12K	5%	1/10W
R275	1-216-075-00	METAL CHIP	12K	5%	1/10W
R276	1-216-049-00	METAL CHIP	1K	5%	1/10W
R317	1-216-079-00	METAL CHIP	18K	5%	1/10W
R321	1-249-401-11	CARBON	47	5%	1/4W
R322	1-216-063-91	METAL GLAZE	3 9K	5%	1/10W
R323	1-217-671-11	METAL CHIP	1	5%	1/10W
R324	1-249-408-11	CARBON	180	5%	1/4W
R336	1-216-296-00	METAL CHIP	0	5%	1/8W
R337	1-216-296-00	METAL CHIP	0	5%	1/8W
R341	1-216-067-00	METAL CHIP	5 6K	5%	1/10W
R342	1-216-051-00	METAL CHIP	1 2K	5%	1/10W
R343	1-216-073-00	METAL CHIP	10K	5%	1/10W
R344	1-216-079-00	METAL CHIP	18K	5%	1/10W
R345	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R346	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R347	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R350	1-216-033-00	METAL CHIP	220	5%	1/10W
R351	1-216-035-00	METAL CHIP	270	5%	1/10W
R356	1-216-035-00	METAL CHIP	270	5%	1/10W
R357	1-216-097-91	METAL GLAZE	100K	5%	1/10W
		< TRANSFORMER >			
T321	1-431-097-11	TRANSFORMER, BIAS OSCILLATION			

1-468-184-11 SR-800 BOARD, COMPLETE
(EXCEPT 775HF PX/975HF CS, PX)
****
(Ref No 4,000 Series)

Ref No	Part No	Description			Remark
		< CAPACITOR >			
⚠C101	9-902-934-01	FILM	0 1uF		250V
⚠C102	9-902-934-01	FILM	0 1uF		250V
C106	9-980-075-01	ELECT	120uF		200V
C107	1-126-959-11	ELECT	4 7uF		50V
C110	1-130-491-51	FILM	0 047uF		50V
C111	1-130-491-51	FILM	0 047uF		50V
C201	1-126-967-11	ELECT	47uF		50V
C202	1-126-183-11	ELECT	1000uF		16V
C203	1-126-934-11	ELECT	220uF		16V
C204	1-126-797-11	ELECT	1000uF		10V
C205	1-126-925-11	ELECT	470uF		10V
C206	1-126-967-11	ELECT	47uF		50V
C207	1-126-925-11	ELECT	470uF		10V
C208	1-126-960-11	ELECT	1uF		50V
C301	1-126-934-11	ELECT	220uF		16V
C302	1-126-933-11	ELECT	100uF		16V
C303	1-104-667-11	ELECT	22uF		35V
C304	1-104-668-11	ELECT	33uF		35V
C305	1-126-947-11	ELECT	47uF		35V
C306	1-126-925-11	ELECT	470uF		10V
		< DIODE >			
D102	8-719-058-91	DIODEAG01A			
D103	8-719-920-32	DIODEERA15-02			
D104	9-902-050-01	DIODEMA4030			
D105	9-900-514-01	DIODEMA165			
D106	8-719-054-32	DIODEERA15-06			
⚠D107	8-719-047-70	DIODE1A4			
⚠D108	8-719-047-70	DIODE1A4			
⚠D109	8-719-047-70	DIODE1A4			
⚠D110	8-719-047-70	DIODE1A4			
⚠D201	9-900-535-01	DIODEAU02Z			
⚠D202	8-719-510-73	DIODES3L20U			
⚠D204	8-719-027-20	DIODED3S4M-F			
⚠D205	8-719-058-08	DIODERD51F			
⚠D206	9-900-535-01	DIODEAU02Z			
⚠D207	9-900-535-01	DIODEAU02Z			
D302	8-719-109-85	DIODERD5 1ES			
D303	8-719-911-19	DIODE1SS119			
		< FUSE >			
⚠F101	1-533-296-11	FUSE (2A/125V)			

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Ref No	Part No	Description		Remark
		< FERRITE BEAD >		
FB-1	9-902-053-01	BEAD, CORE		
		< PHOTO COUPIER >		
⚠PC101	8-719-018-29	COUPLER, PHOTOON3131		
		< IC LINK >		
⚠PS201	1-533-592-21	LINK, IC 49101 6 (1 6A)		
⚠PS203	1-533-592-21	LINK, IC 49101 6 (1 6A)		
		< TRANSISTOR >		
⚠Q101	8-729-904-98	TRANSISTOR	2SC4054	
⚠Q102	8-729-012-31	TRANSISTOR	2SC4040	
⚠Q301	8-729-113-32	TRANSISTOR	2SB733K4	
Q302	8-729-422-72	TRANSISTOR	UN4211	
Q303	8-729-177-32	TRANSISTOR	2SD773K4	
		< RESISTOR >		
R109	1-247-826-11	CORBON	620	1/4W
R204	9-980-233-01	FUSIBLE	0 47	1/4W
	1-468-186-12	SR802 BOARD, COMPLETE (775HF PX/975HF CS, PX)		
		********** (Ref No 5,000 Series)		
		< CAPACITOR >		
⚠C101	9-902-934-01	FILM	0 1uF	250V
⚠C102	9-902-934-01	FILM	0 1uF	250V
⚠C106	9-980-232-01	ELECT	180uF	400V
C114	1-126-967-11	ELECT	47uF	50V
C115	1-126-960-11	ELECT	1uF	50V
C201	1-126-967-11	ELECT	47uF	50V
C202	1-126-183-11	ELECT	1000uF	16V
C203	1-126-934-11	ELECT	220uF	16V
C204	1-126-927-11	ELECT	2200uF	10V
C205	1-126-925-11	ELECT	470uF	10V
C206	1-126-967-11	ELECT	47uF	50V
C207	1-126-925 11	ELECT	470uF	10V
C208	1-126-960-11	ELECT	1uF	50V
C301	1-126-934-11	ELECT	220uF	16V
C302	1-126-933-11	ELECT	100uF	16V
C303	1-104-667-11	ELECT	22uF	35V
C304	1-104-668-11	ELECT	33uF	35V
C305	1-104-667-11	ELECT	22uF	35V
C306	1-126-925-11	ELECT	470uF	10V
		< DIODE >		
⚠D101	9-900-511-01	DIODE S1WBA60		
⚠D102	8-719-030-24	DIODE EG01C		
D103	9-900-535-01	DIODE AU02Z		
D104	8-719-115-02	DIODE RD27JS		
D105	9-900-535-01	DIODE AU02Z		

Ref No	Part No	Description		Remark
D106	8-719-043-74	DIODE AK04		
D107	8-719-043-74	DIODE AK04		
D108	8-719-911-19	DIODE 1SS119		
⚠D201	8-719-030-24	DIODE EG01C		
⚠D202	8-719-510-73	DIODE S3L20U		
⚠D204	8-719-027-20	DIODE D3S4M		
⚠D205	8-719-058-08	DIODE RD51FB		
⚠D206	8-719-030-24	DIODE EG01C		
⚠D207	9-900-535-01	DIODE AU02Z		
D301	8-719-911-19	DIODE 1SS119		
D302	8-719-109-85	DIODE RD5 1ES		
D303	8-719-911-19	DIODE 1SS119		
D304	8-719-108-83	DIODE D2S4M		
D305	8-719-911-19	DIODE 1SS119		
		< FUSE >		
⚠F101	1-532-388-31	FUSE (2A/250V)		
		< IC >		
⚠IC101	9-980-235-01	IC AN8028		
		< PHOTO COUPLER >		
⚠PC101	8-749-924-80	COUPLER, PHOTO PS2561		
		< IC LINK >		
⚠PS201	1-533-592-21	49101 6 (1 6A)		
⚠PS203	1-533-593-21	491002 (2A)		
		< TRANSISTOR >		
⚠Q101	9-980-231-01	TRANSISTOR 2SK1535		
⚠Q301	8-729-113-32	TRANSISTOR 2SB733K4		
Q302	8-729-422-72	TRANSISTOR UN4211		
Q303	8-729-019-01	TRANSISTOR 2SD2394		
Q305	8-729-119-78	TRANSISTOR 2SC2785		
Q306	8-729-117-55	TRANSISTOR 2SA1175		
		< RESISTOR >		
⚠R106	1-244-921-11	CORBON	100k	1/2W
⚠R107	1-244-921-11	CORBON	100k	1/2W
R112	1-247-819-11	CORBON	330	1/4W
R116	1-247-837-11	CORBON	1 8k	1/4W
⚠R204	9-980-233-01	FUSIBLE	0 47	1/4W
R313	9-980-234-01	FUSIBLE	2 7	1/4W
		MISCELLANEOUS		
		**********		
11	1-762-844-21	SWITCH, ROTARY (CLICK SHUTTLE) (795HF)		
53	1-475-008-11	SWITCH BLOCK, CONTROL (975HF)		
61	1-762-844-31	SWITCH, ROTARY (CLICK SHUTTLE) (975HF)		
105	1-777-966-11	CABLE, FLAT (FMH-16) 31P (795HF/975HF)		
106	1-777-962-12	CABLE, FLAT (FMH-14) 15P (775HF/776HF)		

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Ref. No	Part No	Description	Remark
106	1-777-966-11	CABLE, FLAT (FMH-16) 31P (795HF/975HF)	
107	1-777-963-11	CABLE, FLAT (FHM-3) 5P	
⚠112	1-777-851-41	CORD, POWER	
152	1-500-144-11	HEAD, FE	
164	A-6736-103-A	ACE BLOCK ASSY	
218	8-848-576-02	DRUM ASSY, ROTARY UPPER (DZR-45-R)	
219	8-848-666-11	DRUM ASSY, LOWER (DZL-51B/J-RP)	
253	1-762-076-11	SWITCH, ROTARY	
260	X-3943-883-1	MOTOR ASSY, CAM	
315	1-698-409-11	MOTOR, DC SCV-0801A/Z-NP (CAPSTAN)	
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-027-11	REMOTE COMMANDER (RMT-V202) (795HF)	
	1-475-027-21	REMOTE COMMANDER (RMT-V202A) (775HF/776HF)	
	1-475-031-11	REMOTE COMMANDER (RMT-V201) (975HF)	
⚠	1-569-008-11	ADAPTOR, CONVERSION 2P	
	1-696-592-11	CORD, CONNECTION (NTSC) (75-OHM COAXIAL COAXIAL CABLE) 1.5m	
	1-769-181-41	MOUSE, INTERIJENT CABLE	
	1-776-258-11	CORD, AVC CONNECTION (AUDIO/VIDEO CABLE) 1 5m	
	3-709-126-01	COVER, BATTERY (for RMT-V201) (975HF)	
	3-709-129-01	COVER, BATTERY (for RMT-V202/V202A) (EXCEPT 975HF)	
	3-709-131-01	HEAD (ENGLISH), JOY STICK (for RMT-V202/V202A) (EXCEPT 975HF)	
	3-858-119-11	MANUAL, INSTRUCTION (ENGLISH) (795HF)	
	3-858-119-21	MANUAL, INSTRUCTION (FRENCH) (795HF Canadian)	
	3-858-120-11	MANUAL, INSTRUCTION (ENGLISH) (975HF: US, Canadian, PX)	
	3-858-120-21	MANUAL, INSTRUCTION (FRENCH) (975HF Canadian)	
	3-858-120-31	MANUAL, INSTRUCTION (SPANISH) (975HF. CS, MX)	
	3-858-121-11	MANUAL, INSTRUCTION (ENGLISH) (775HF/776HF)	
	3-858-121-21	MANUAL, INSTRUCTION (FRENCH) (775HF Canadian)	
	3-972-783-21	RING, JOG (for RMT-V201) (975HF)	
*	3-972-794-02	INDIVIDUAL CARTON (795HF)	
*	3-972-794-11	INDIVIDUAL CARTON (775HF)	
*	3-972-794-21	INDIVIDUAL CARTON (776HF)	
*	3-972-795-01	CUSHION (EXCEPT 975HF)	
*	3-972-811-01	INDIVIDUAL CARTON (975HF PX)	
*	3-972-811-02	INDIVIDUAL CARTON (975HF US, Canadian)	
*	3-972-811-23	INDIVIDUAL CARTON (975HF: CS, MX)	
*	3-972-812-01	CUSHION (975HF)	
	3-972-850-01	BUTTON, FUNCTION (for RMT-V201) (975HF)	
*	3-973-908-01	SPACER	

Ref. No	Part No	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-547-04	SCREW +P 3X6	
#2	7-685-646-79	SCREW (3X8)	
#3	7-624-106-01	STOP RING 3.0, TYPE-E	
#4	7-685-648-79	SCREW +BV 3X12, TYPE2, IT-3	
#5	7-682-645-01	SCREW +PS 3X4	
#6	7-628-254-10	SCREW +PS 2 6X6	

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