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Ersatzteilbestellungen auf
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Montag – Donnerstag ab 17 Uhr,
Freitag ab 15.30 Uhr
und samstags
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Service Manual

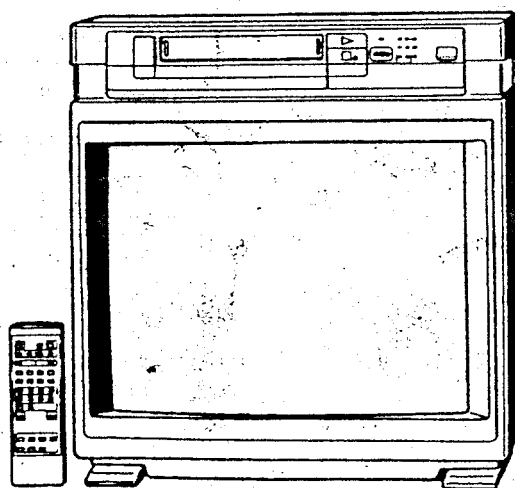
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ORION

COLOR TELEVISION/VIDEO CASSETTE RECORDER



COMBI 6000 R



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Bestell-Nr.

4081

CHASSIS CODE A

SPECIFICATIONS

TV SECTION

PICTURE SIZE 21 inch
 SYSTEM PAL/SECAM
 FREQUENCY RANGE: VHF(L) 2 - 4, X - S2 ch
 VHF(H) S3 - S10, 5-12,
 S11 - S20 ch
 UHF 21 - 69 ch
 MAXIMUM SENSITIVITY: VHF 20 dB
 UHF 25 dB
 INTERMEDIATE FREQUENCY:
 Picture IF Carrier Frequency .. 38.9 MHz
 Color Sub Carrier Frequency ... 34.47 MHz
 Sound IF Carrier Frequency 33.4 MHz
 SOUND INTERMEDIATE FREQUENCY ... 5.5 MHz
 MAXIMUM OUTPUT POWER 2.0 W
 10% THD OUTPUT POWER 1.8 W
 SPEAKER 8 ohm
 POWER SOURCE AC 220V

VCR SECTION

SYSTEM CCIR 625 Lines, 50 Fields
 PAL and OST color signal
 VIDEO PLAYBACK SYSTEM .. 2 rotary heads, Helical scanning
 system
 Luminance: FM azimuth
 Color Signal: Converted subcarrier
 phase shift
 AUDIO TRACK 1 track
 TAPE WIDTH 12.65 mm
 TAPE SPEED 23.39 mm/s
 FF/REW WINDING TIME Less than 5 minutes (E-180)
 HEADS Video: 2 Rotary Heads
 Audio/Control: 1 stationary Head
 INPUT LEVEL Video: VIDEO IN 1.0 Vp-p
 75 ohm Unbalanced
 Audio: AUDIO IN -8dB,
 50K ohm Unbalanced
 DIMENSIONS 508(W) x 541(H) x 485(D) mm
 WEIGHT 27 kg

IMPORTANT

*FOR SERVICE WORK ALWAYS USE MAINS ISOLATING TRANSFORMER, CHASSIS IS LIVE.
(IRRESPECTIVE OF POLARITY OF MAINS PLUG.)

*IN CASE OF REMOVING PCB OR SOMETHING, AFTER UNFASTENING THE WIRE OR
CHANGING THE WIRE POSITION, IT IS IMPORTANT TO PUT THE FASTENING OF
WIRE AND THE POSITION OF WIRE AS IT WAS.
BECAUSE, PICTURE DISTORTION OR SOMETHING MAY APPEAR ON THE DISPLAY.
SO, BE SURE TO CONFIRM THE FASTENING AND POSITION OF WIRE BEFOREHAND.
THEN START TO THE OPERATION.

*INFERIOR SILICON GREASE CAN DAMAGE IC's AND TRANSISTORS.
WHEN REPLACING AN IC OR TRANSISTOR, USE ONLY SPECIFIED SILICON
GREASE (YG6260).
REMOVE ALL THE OLD SILICON BEFORE APPLYING NEW SILICON.

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HQ FEATURE

This video cassette recorder marked "HQ" incorporates VHS high quality picture technology. A built-in detail enhancer is used to boost the recorded signal and provide maximum picture quality in playback. It is compatible with other VHS video cassette recorders.

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF BACK CABINET AND TV MAIN PCB

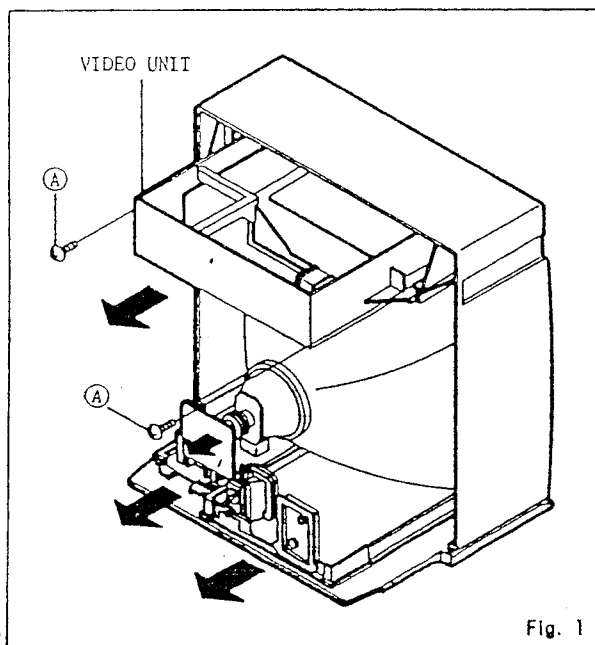
- Remove the 7 screws which are used for holding the BACK CABINET.
- Slide the TV MAIN PCB in the direction of the BACK CABINET, then remove it. Pull out the connectors, CP351(2 pin), CP353(2 pin), CP401(4 pin), CP511(3 pin), CP606(9 pin), CP006(1 pin), CP008(12 pin), CP4103(5 pin), and JACK and rug pin of TU002 on TV MAIN PCB. Then pull out the connectors, CP503(6 pin), CP510(3 pin) on the POWER PCB.
- Remove the CRT PCB. Pull out the 3 earth wires(1 pin), (2 soldered wires) from CRT.
- Remove the anode cap.

CAUTION: BEFORE REMOVING THE ANODE CAP, DISCHARGE ELECTRICITY BECAUSE IT HAS HIGH VOLTAGE.

- Pull out the Connector CP506(2 pin), then remove POWER PCB by sliding it.

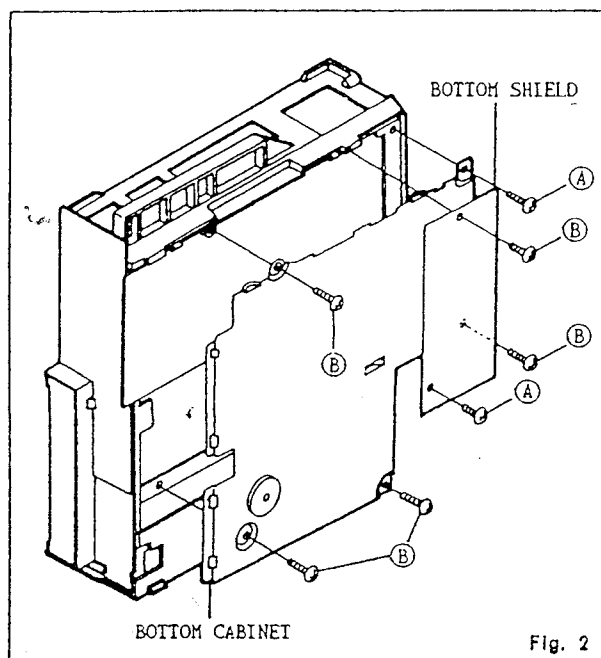
2. REMOVAL OF VIDEO UNIT(Fig. 1)

Remove the 2 screws (A) which are used for holding the VIDEO UNIT, then remove it in the direction shown by the arrow.



3. REMOVAL OF BOTTOM SHIELD AND BOTTOM CABINET(Fig. 2)

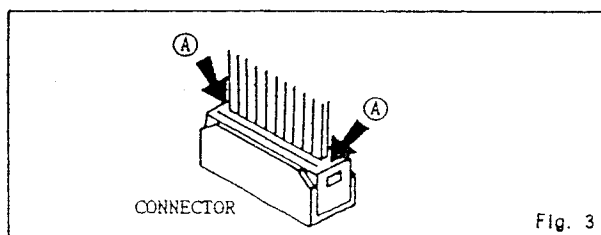
- Remove the 2 screws (A) which are used for holding the BOTTOM SHIELD.
- Remove the 5 screws (B) which are used for holding the BOTTOM CABINET.



4. CAUTION: BEFORE ATTEMPTING TO REMOVE OR REPAIR ANY PCB, UNPLUG THE POWER CORD FROM THE A.C SOURCE.

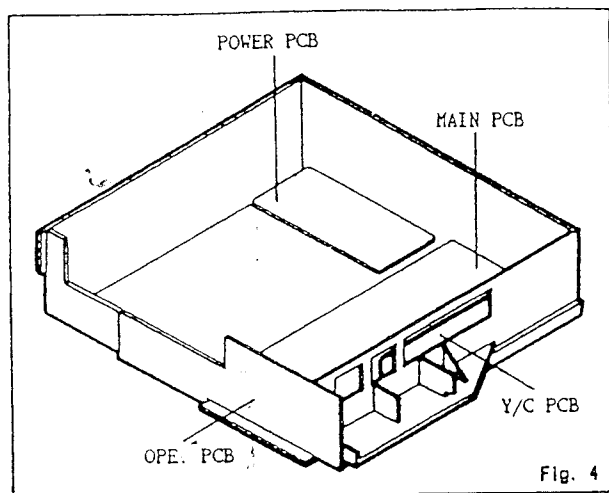
HOW TO REMOVE AND INSTALL RIBBON WIRE IN CASE OF DISCONNECTION.(Fig. 3)

- Press simultaneously both parts indicated by arrow (A) to remove the wire.
- do not press the parts indicated by arrow (A), but insert the wire into the connector to install the wire.

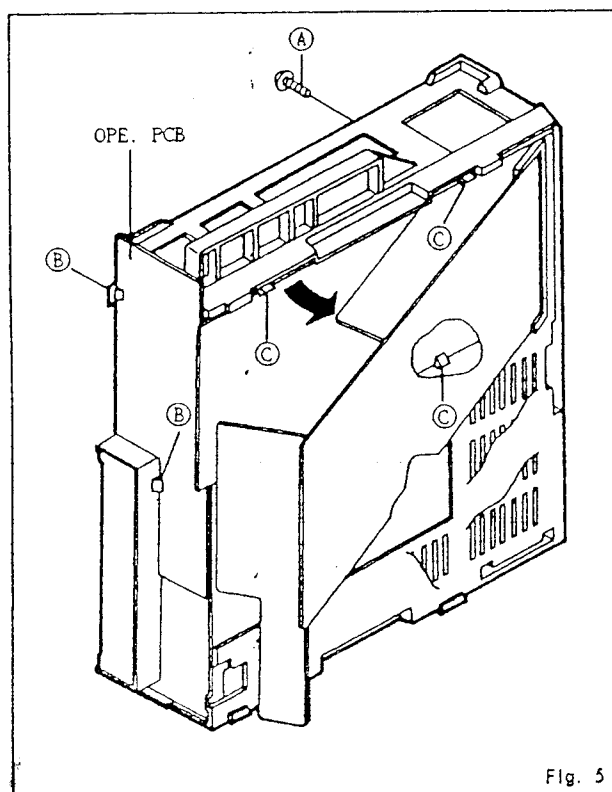


DISASSEMBLY INSTRUCTIONS

Location of Printed Circuit Boards(Fig. 4)



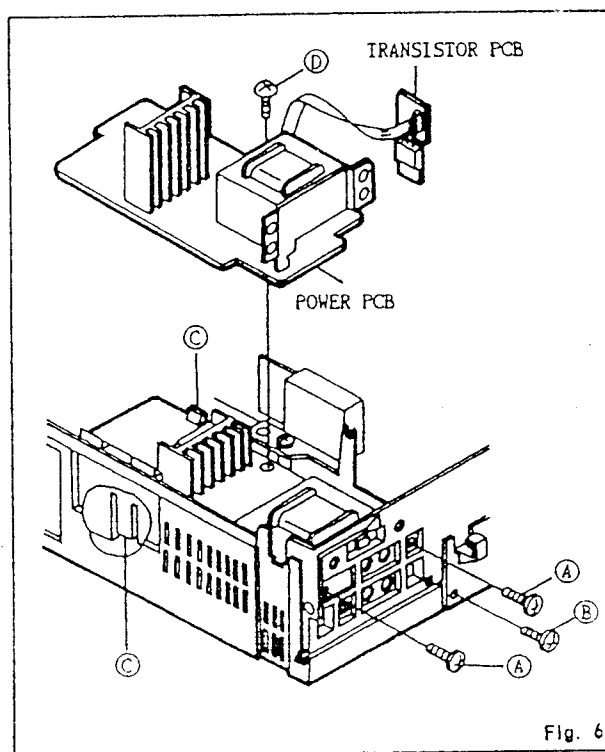
5.REMOVAL OF OPERATION / MAIN PCB(Fig. 5)



- Remove the screw (A) which is used for holding the Jack Plate.
- Pull out the following connectors:
CP1103(12 pin) of DECK BOTTOM PCB
CP1001(8 pin), CP2001(2 pin), CP5001
(5 pin) of MAIN PCB CP4101(8 pin) of
HEAD AMP PCB CP7001(8 pin), CP7002
(8 pin) of POWER PCB (9 pin) of
CAPSTAN DD UNIT PCB.
- Unlock the 2 PCB supports (B) which
are used for holding the OPERATION PCB.
Then,unlock the 3 PCB supports (C)
which are used for holding the MAIN PCB.
- Move the PCB in the direction shown by
the arrow.

6. REMOVAL OF POWER PCB AND TRANSISTOR PCB(Fig. 6)

- Remove the screw (B).
- Remove the 2 screws (A).
- Remove the screw (D).
- Unlock the 2 PCB supports (C) to
remove the POWER PCB.
- Next,remove the TRANSISTOR PCB.
(Refer to A-39 of METHODS OF ADJUSTMENT
AND REPLACEMENT.)



ELECTRICAL ADJUSTMENTS

1. BEFORE ELECTRICAL ADJUSTMENT

These are adjustments when you replace electric parts or PCB ass'y. When you repair the electric circuit, please read these adjustments.

1-1: Prepare the following measurement tools for the electrical adjustment.

1. Oscilloscope (2 Channel Type)
2. Digital Voltmeter
3. Color Bar Generator
4. Sweep-Marker Generator
5. VIF Unit

2. BASIC ADJUSTMENT

2-1: VIF AND AFT

NOTE

Connect input and output terminal of the Sweep-Marker Generator to circuit as shown in Fig. 2-1-a, then adjust it.

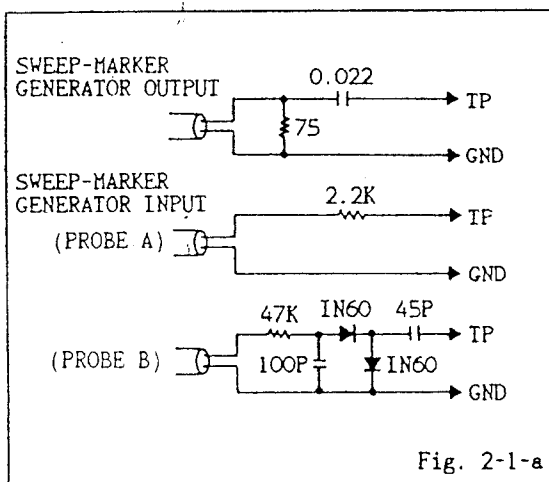
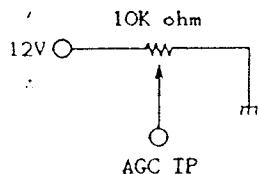


Fig. 2-1-a

1. Connect output terminal of the Sweep-Marker Generator to IP001.
2. Connect input terminal of the Sweep-Marker Generator to IP007.(PROBE A)
3. Connect the volume 10K ohm to IF AGC terminal (IP004), 12V line and ground, then adjust to make the waveform of the oscilloscope be easy to watch.



4. Adjust L204 until the waveform marker (38.9MHz) will become as shown in Fig. 2-1-b.

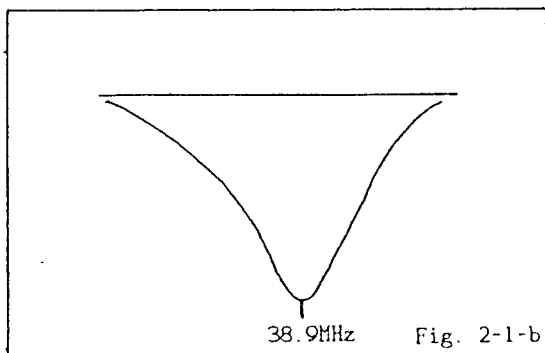


Fig. 2-1-b

5. Disconnect output terminal of the Sweep-Marker Generator from IP001, then connect it to TP of the Tuner Pack.
6. Disconnect input terminal of the Sweep-Marker Generator from IP007, then connect it to collector of Q201.(PROBE B)
7. Adjust L207 until the waveform markers (32.4MHz) will become as show in Fig. 2-1-c.

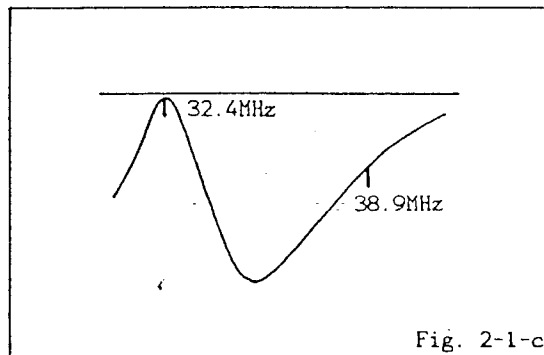


Fig. 2-1-c

8. Disconnect input terminal of the Sweep-Marker Generator from collector of Q201, then connect it to IP007.(PROBE A)
9. Connect the resistor 100 ohm between IP009 and IP010.
10. Adjust L206 until the waveform will become as shown in Fig. 2-1-d.

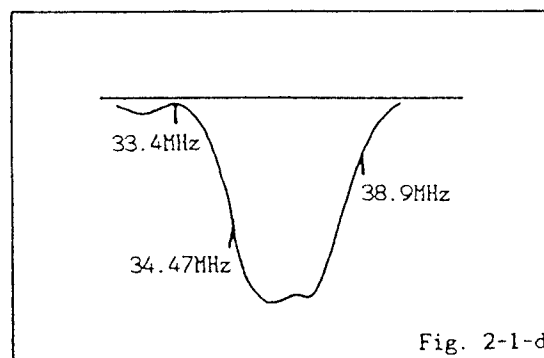


Fig. 2-1-d

11. Disconnect the volume 10K ohm and resistor 100 ohm.
12. Disconnect input terminal of the Sweep-Marker Generator from IP007, then connect it to IP006.(PROBE A)
13. Adjust L203 until the waveform will become as shown in Fig. 2-1-e.

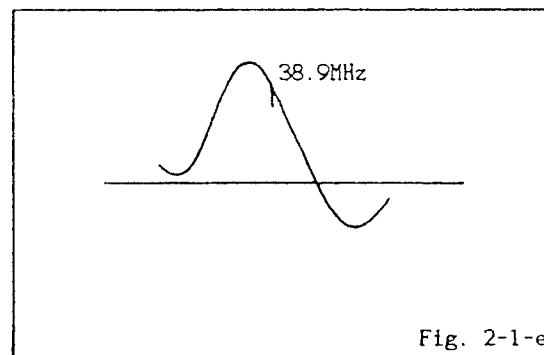


Fig. 2-1-e

ELECTRICAL ADJUSTMENTS

2-2: BELL FILTER

NOTE

Connect input and output terminal of the Sweep-Marker Generator to circuit as shown in Fig. 2-2-a, then adjust it.

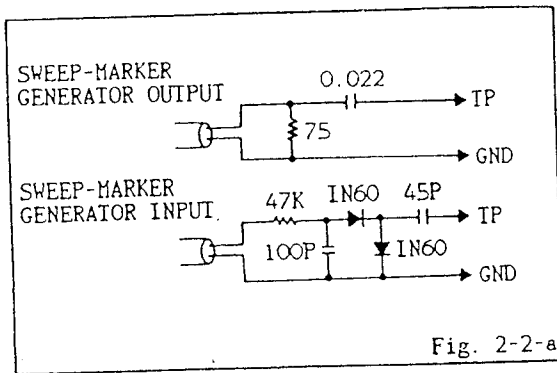


Fig. 2-2-a

1. Connect output terminal of the Sweep-Marker Generator to TP of the Tuner Pack.
2. Connect input terminal of the Sweep-Marker Generator to TP604.
3. Adjust L605 until the waveform will become as shown in Fig. 2-2-b.

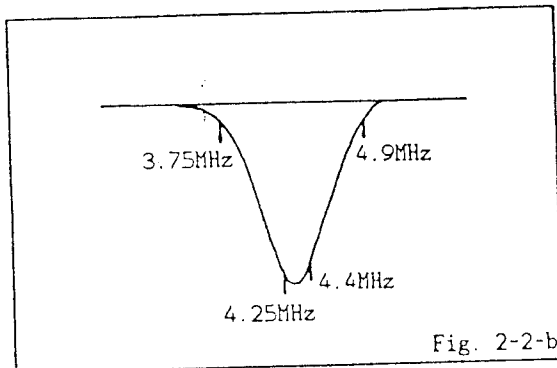


Fig. 2-2-b

2-3: SECAM IDENT

1. Receive the SECAM Color Bar Pattern.
2. Set the PAL/SECAM switch to SECAM position.
3. Set the AFI switch ON position.
4. Connect a digital voltmeter to TP603.
5. Adjust L606 until voltage will be maximum. (more then 8V)

2-4: SECAM PHASE

1. Receive the SECAM Color Bar Pattern.
2. Set the PAL/SECAM switch to SECAM position.
3. Adjust L601 and L602 until white part of the pattern is not changed even though you turn Color control from minimum to maximum.

2-5: RF AGC

NOTE

Adjust after adjusting 2-1.

2-5-A: Weak electric field case.

1. Receive the noisy channel.
2. Adjust VR201 until noise will be weak.
3. Change the channel, confirm other channels are normal.

2-5-B: Strong electric field case.
(When diagonal streaks, radio frequency interference appear.)

1. Adjust VR201 until diagonal streaks will be weak.
2. When it is not good condition after adjusting VR201, install the attenuator to the antenna terminals, then adjust step (1) again.
3. Confirm noise will appear.
4. Change the channel, confirm other channels are normal.

2-6: CUT OFF AND WHITE BALANCE

1. Receive the White 100% Pattern from Color Bar Generator.
2. Set the Cut off controls red (VR801) and blue (VR804) to minimum position.
3. Set the Drive controls red (VR802) and blue (VR805) to center position.
4. Set the Service switch to the service position.
5. Connect the oscilloscope to TP802.
6. Adjust the VR603 until the Cut off voltage will be DC150V.
7. Adjust the Screen control until horizontal line will light slightly.
8. Set the Service switch to normal position.
9. Adjust the Drive controls red (VR802) and blue (VR805) until the screen will be white.
10. Set the Bright and Contrast controls to minimum position.
11. Adjust the Cut off controls red (VR801) and blue (VR804) until the screen will be white.

2-7: FOCUS

1. Receive the broadcasting signal.
2. Adjust the Focus control until picture will be distinct.

2-8: VERTICAL SIZE

1. Receive the Crosshatch Pattern from the Color Bar Generator.
2. Adjust the Bright and Contrast controls until the crosshatch pattern is distinct.
3. Adjust VR401 until the center of crosshatch is square.
4. Receive broadcasting signal, then confirm picture is normal

2-9: HUE DELAY

1. Receive the DEM Pattern.
2. Connect the dual oscilloscope to TP601 and TP602.
3. Adjust L603 and VR601 until the waveform will be straight line. (Refer to Fig. 2-3)

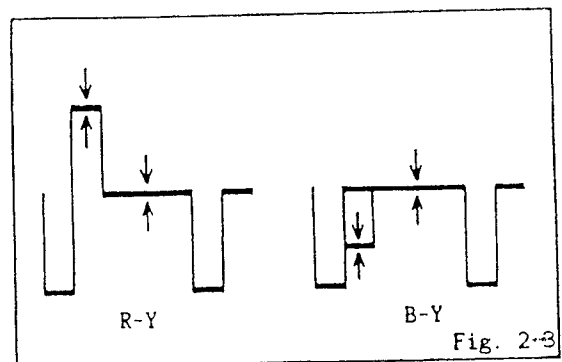


Fig. 2-3

ELECTRICAL ADJUSTMENTS

2-10: HORIZONTAL POSITION

1. Receive the Color Bar Pattern.
2. Set the Bright and Contrast controls to center position.
3. Adjust VR402 until the color width of both of screen edges will be equal.
4. Receive broadcasting signal, then confirm picture is normal

2-11: SUB BRIGHT

1. Receive the Monochrome Pattern.
2. Press the NORMAL button on the remote control unit.
3. Adjust VR603 until 0% of gray scale will be black.

2-12: SUB COLOR

1. Receive the Color Bar Pattern.
2. Press the NORMAL button on the remote control unit.
3. Connect the oscilloscope to TP801.
4. Adjust VR602 until red color level will be 75%.

2-13~2-18: NOT REQUIRED FOR THIS MODEL

2-19: VERTICAL POSITION

1. Receive the Color Bar Pattern.
2. Adjust SW401 until horizontal line of the color bar will come to around center of the CRT.

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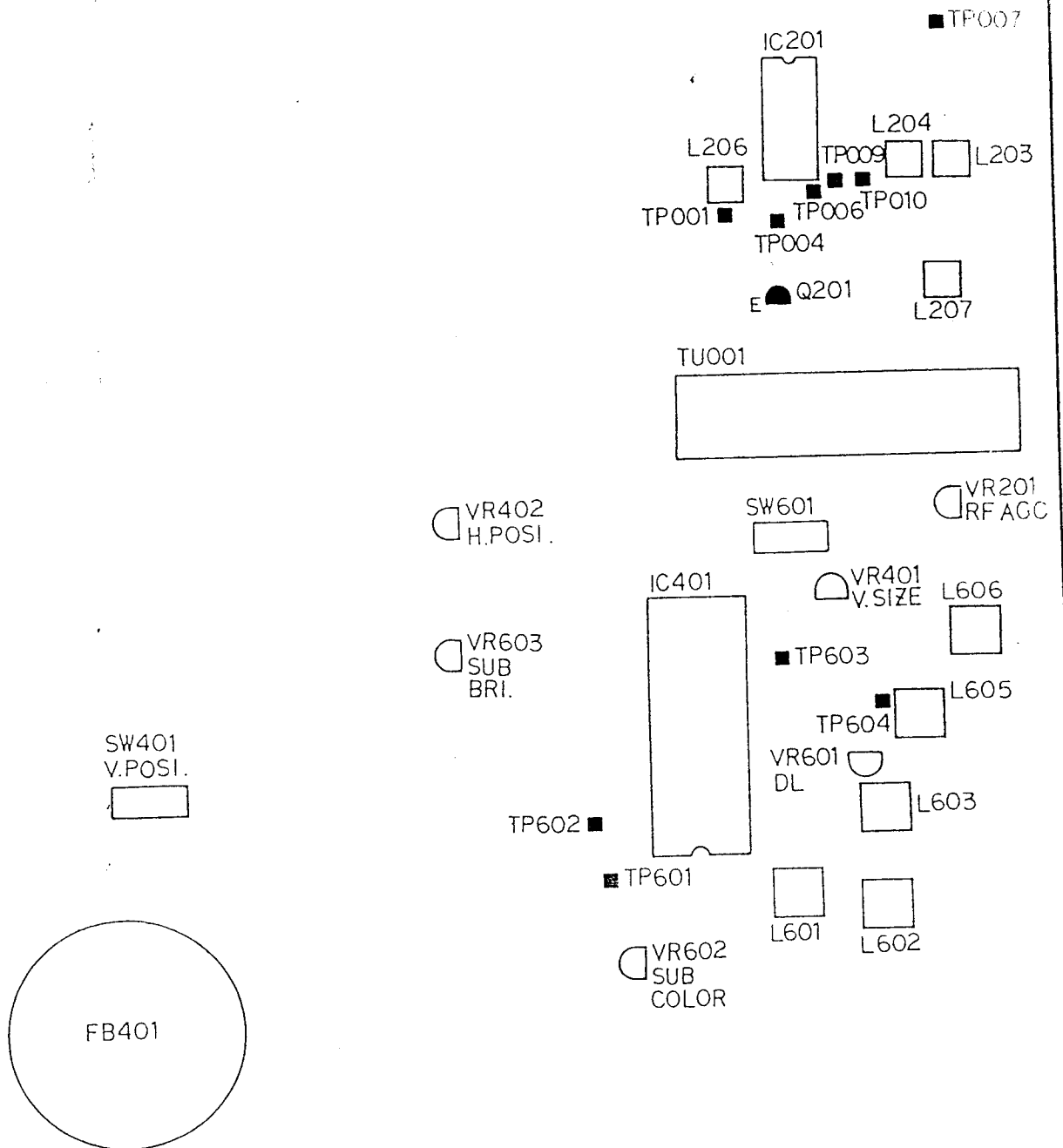
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MAJOR COMPONENTS LOCATION GUIDE



PREVENTIVE CHECKS AND SERVICE INTERVALS

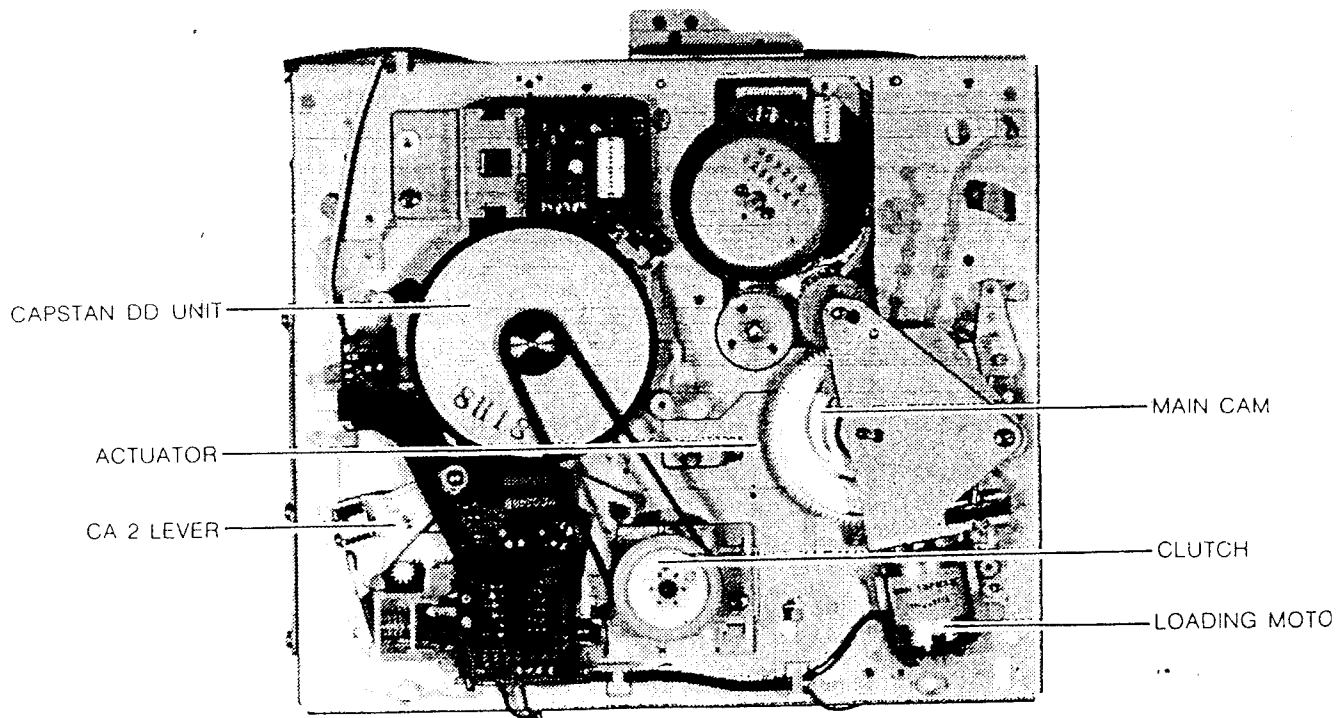
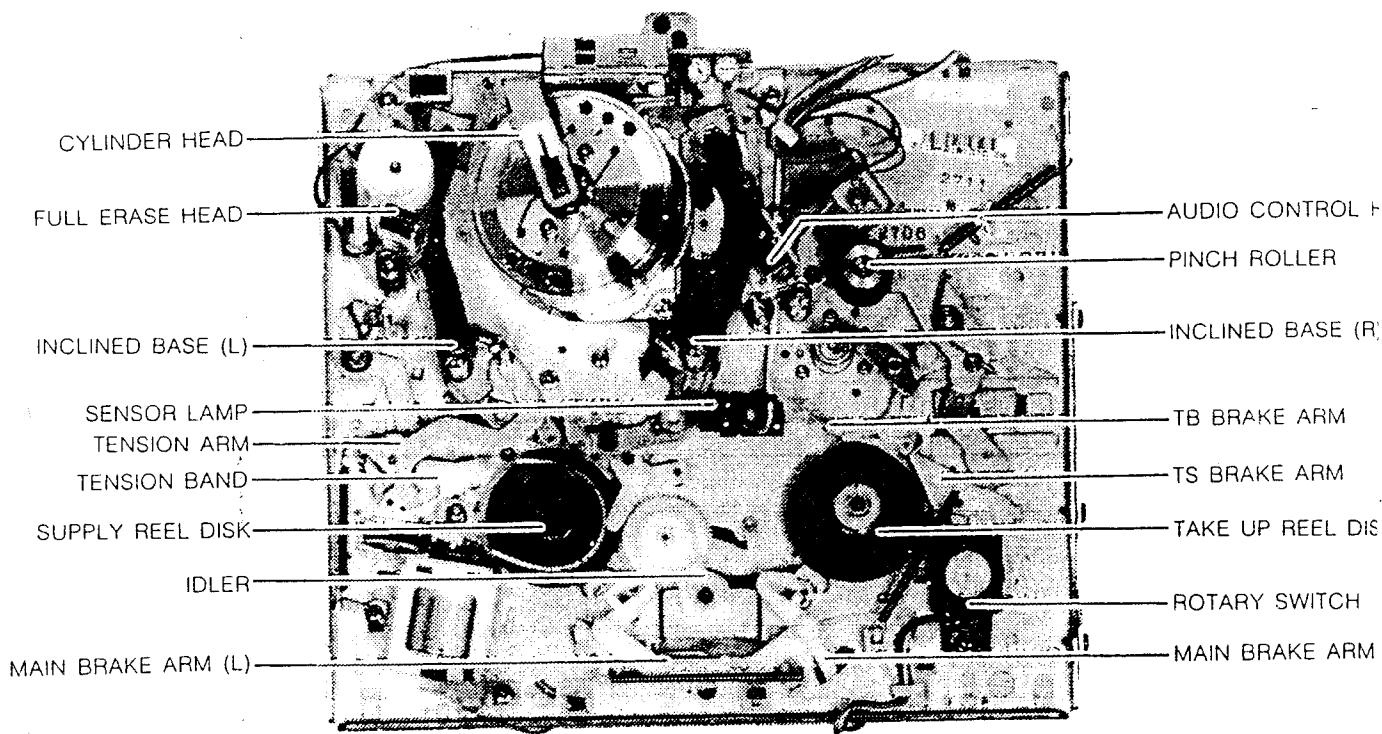
The following standard table depends on environmental conditions and usage. Unless maintenance is properly carried out, the following service intervals may be quite shortened as harmful effects may be had on other parts. Also, long term storage or disuse may cause transformation and aging of rubber parts.

Parts Name \ Time	500 hours	1,000 hours	1,500 hours	2,000 hours	3,000 hours	Notes
Head, Full Erase	☐	☐	☐	☐	☐	Clean those parts in contact with the tape.
Head, Audio Control	☐	☐	☐	☐	☐	
Belt, Loading		☐		☐		Clean the rubber, and parts which the rubber touches.
Belt, Reel		☐		☐		
Pinch Roller	☐	☐	☐	☐	☐	
Capstan DD Unit					☐	
Motor, Loading					☐	
Tension Band Ass'y					☐	
Capstan Shaft	☐	☐	☐	☐	☐	Replace when rolling becomes abnormal.
Impedance Roller	☐	☐	☐	☐	☐	
Tape Running Guide Post	☐	☐	☐	☐	☐	
Unit, Cylinder	☐	☐	☐	☐	☐	*

☐ : Replace
☐ : Clean

* Clean the upper drum (especially the video heads) in the direction of drum rotation using a thick, textured cloth with a high quality methyl alcohol. Avoid wiping vertically as this may cause damage to the video heads.

DECK PARTS LOCATION



METHODS OF ADJUSTMENT AND REPLACEMENT

CAUTION

Inferior silicon grease can damage IC's and transistors.
When replacing an IC or transistor, use only specified silicon grease (YG6260).
Remove all the old silicon before applying new silicon.

● PRECAUTION

- CONTROL + ○ Refer to DISASSEMBLY as to how to disassembly set.
- LER *
- BASE (R) *
- ARM *
- ARM *

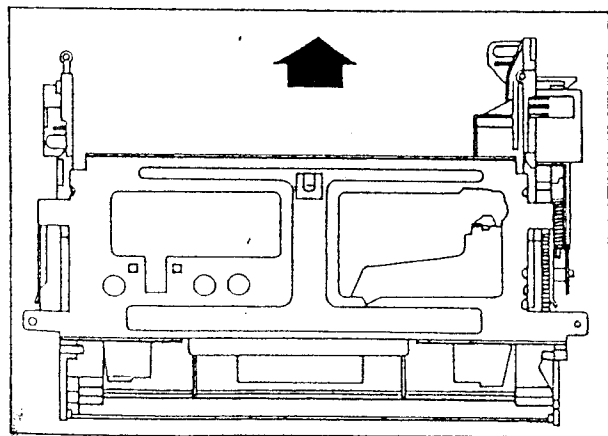
HOW TO REMOVE AND INSTALL STAGE

● REMOVAL

- 1. Disconnect the eight pin connector (CP1001), which has been connected to the main PCB, from the stage PCB.
- 2. Remove 2 screws held to inside panel
- 3. Remove 2 screws (Tapping (Bo) 3x10) in the EJECT mode.
- 4. Push the stage toward arrow mark, and lift up to remove the stage.

● NOTE

- 1. When you remove and install the stage, be careful not to touch the guide pin or cylinder head.
- 2. Be careful not to break connectors or cut leads.



● INSTALLATION

Install the stage in the reverse steps of REMOVAL.

● CONFIRMATION

- 1. The front loading operation works well when turning on the power and when inserting a Cassette Tape into the stage.
- 2. Each function works well when pressing the PLAY, EJECT and REC buttons.

■ A-1: REPLACEMENT OF REEL DISK AND CONFIRMATION OF ITS HEIGHT

● REMOVAL

(Supply Reel Disk)

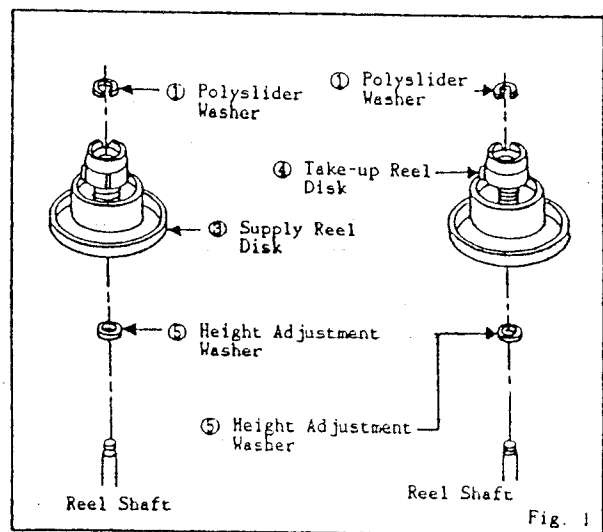
- 1. Remove the SS Brake Spring from the Loading Base.
- 2. Remove the SS Brake.
- 3. Remove the tension arm from the main chassis.
- 4. Remove the polyslider washer ①.
- 5. Pull the supply reel disk ③ upward and replace it.

(Take-up Reel Disk)

- 1. Remove the TB Brake.
- 2. Remove the polyslider washer ①.
- 3. Pull the take-up reel disk ④ upward and replace it.

● NOTE

The height adjustment washers ⑤ are sometimes attached to the back of the reel disk.



METHODS OF ADJUSTMENT AND REPLACEMENT

● INSTALLATION

(Supply Reel Disk)

1. Clean the reel disk shaft and put in height adjusting washer ⑤.
2. Install new supply reel disk.
3. Adjust the height of the reel disk.
(Refer to ■ A-2)
4. Pull out the new supply reel disk. After oiling (Cosmo Oil Hydro HV100) the reel disk shaft, install the new supply reel disk again.
5. Install the supply reel disk in the reverse steps of REMOVAL.

(Take-up Reel Disk)

1. Clean the reel disk shaft and put in height adjusting washer ⑤.
2. Install new take-up reel disk.
3. Adjust the height of the reel disk.
(Refer to ■ A-2)
4. Pull out the new reel take-up disk. After oiling (Cosmo Oil Hydro HV100) the reel disk shaft, install the new take-up reel support again.
5. Install the take-up reel disk in the reverse steps of REMOVAL.

● NOTE

1. Be careful not to deform the tension band at the time of removal and installation.
2. Be careful not to deform the TB Brake.
3. Be careful not to scratch the reel disk shaft with the polyslider washer or tool at the time of removal and installation.
4. After installation, adjust and confirm the tension pole position. (Refer to ■ A-12)

■ A-2: CONFIRMATION AND ADJUSTMENT OF REEL DISK HEIGHT

● ADJUSTMENT

1. Set the master plane (JG022) at mechanism framework, taking care not to scratch the drum, as shown in Fig. 2-a.
2. Confirm that the master plane sits between "A" and "B", as shown in Fig. 2-b, using the reel table height chip (JG024). In case it is beyond the range of set-up value, adjust the height adjusting washer so that it is less than 0.1~0.5mm.

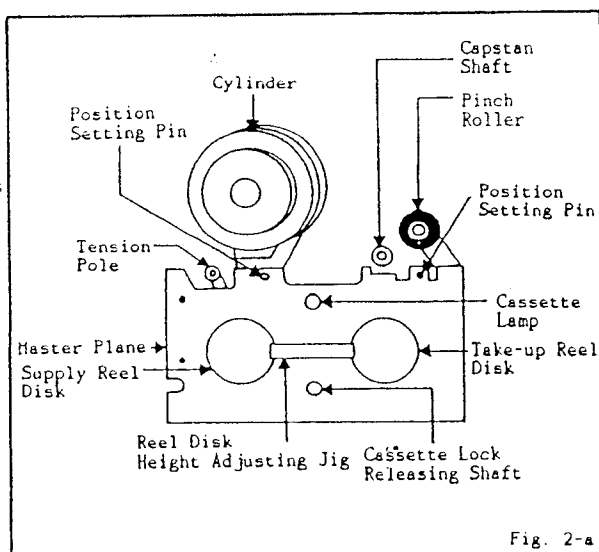


Fig. 2-a

AFTER ADJUSTMENT CONFIRM THE FOLLOWING ITEMS

- A-3: Confirmation of fast forward and its take-up torque.
- A-4: Confirmation of rewind and its take-up torque.
- A-5: Confirmation of playback take-up torque.
- A-6: Confirmation of fast forward back tension.
- A-7: Confirmation of rewind.
- A-8: Confirmation of search/cue back tension.
- A-15: Confirmation of reel brake torque.

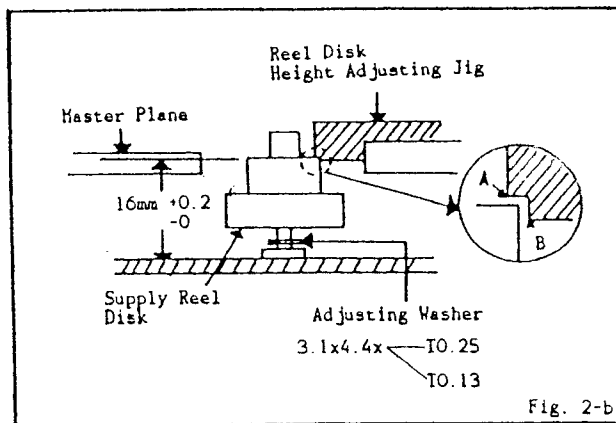


Fig. 2-b

■ A-3: CONFIRMATION OF FAST FORWARD AND ITS TAKE-UP TORQUE

● CONFIRMATION

1. Set torque gauge (JG0026) on take-up reel disk, and place unit in fast forward mode.
2. Confirm that torque is more than 800g/cm.

● NOTE

1. After setting the torque gauge on the reel disk, hold the gauge in place. Push the Fast Forward Button and the reel disk will begin to turn.
2. Carry out this confirmation and adjustment without using a video cassette tape.

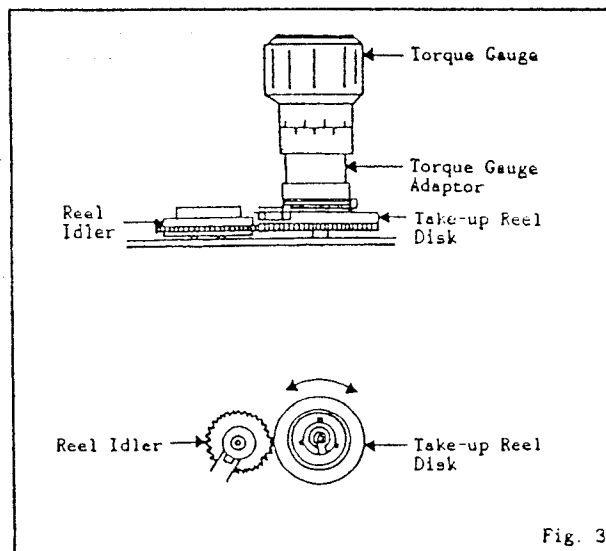


Fig. 3

METHODS OF ADJUSTMENT AND REPLACEMENT

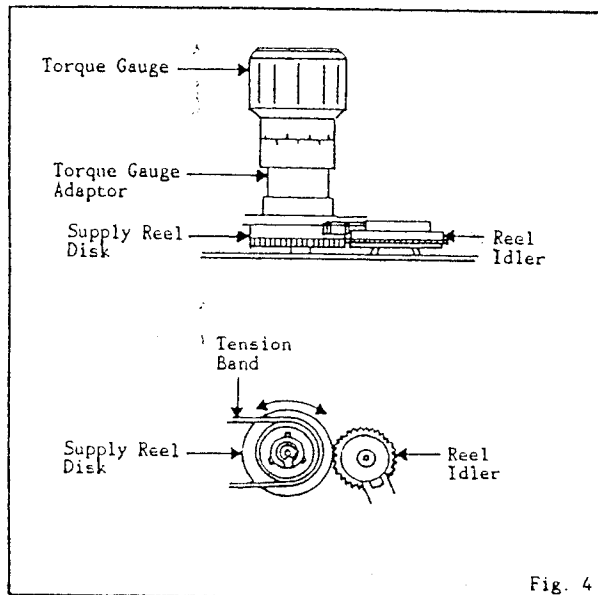
■ A-4: CONFIRMATION OF REWIND AND ITS TAKE-UP TORQUE

● CONFIRMATION

1. Operate within 4 or 5 seconds after the reel disk begins to turn.
2. Set the torque gauge (JG0026) on the supply reel disk, and place the unit in rewinding mode.
3. Confirm that torque is more than 800g/cm.

● NOTE

1. Hold the torque gauge in place when you push the Rewind Button. The reel disk will begin to turn, after setting the torque gauge on the reel disk.
2. Carry out this confirmation and adjustment without using a video cassette tape.



■ A-5: CONFIRMATION OF PLAYBACK TAKE-UP TORQUE

● CONFIRMATION

1. Set the torque gauge (JG027) on the rewind reel disk, then check PB mode.
2. Make sure that the torque covers the range, 130~210g/cm.

■ A-6: CONFIRMATION OF FAST FORWARD BACK TENSION

● CONFIRMATION

1. Set the unit in the fast forward mode by pushing the Fast Forward Button.
2. Put the torque gauge (JG002E) on the supply reel disk and make slow right turn (one turn in a few seconds) and confirm the torque is within set-up value (15~35g/cm).

● NOTE

1. Put the torque gauge on the reel disk steadily and measure.

■ A-7: CONFIRMATION OF REWIND

● CONFIRMATION

1. Set the unit in the rewind mode by pushing Rewind Button.
2. Put the torque gauge (JG002E) on the take-up reel disk and make a slow left turn (one turn in a few seconds) and confirm the torque is within set value (5~20g/cm).

● NOTE

Put the torque gauge on the reel disk steadily and measure.

■ A-8: CONFIRMATION OF SEARCH/CUE BACK TENSION

● CONFIRMATION

1. Set the unit in the play mode by pushing Play Button.
2. Put the torque gauge (JG002E) on the supply reel disk and make a slow right turn (one turn in a few seconds).
3. Confirm that it is more than 90g/cm at that time.

● NOTE

1. After positioning the tension arm, conduct confirmation and adjustment of visual search cue back tension.
2. Put the torque gauge on the reel disk steadily and measure.

■ A-9, 10, 11: NOT REQUIRED FOR THIS MODEL

■ A-12: CONFIRMATION AND ADJUSTMENT OF TENSION POLE POSITION

● CONFIRMATION

1. Load a E-60 tape, and press the PLAY button to set the playback mode.
2. As soon as the guide rollers, L, R begin to draw the tape from the cassette, the tension pole shall move to the left, thus loading will start. Confirm tension pole position at this stage.
3. When the tape (E-60) is near the beginning, confirm by eye that the center of the tension pole is positioned 3.5~5.5mm to the left from center of P1 post. (Fig. 12-a)
4. Confirm that the video tape is not curling at the flange of P1 post or is not running on flanges.

● POSITIONING

1. In case tension pole is positioned to the left of P1 post center by less than 3.5mm, move tension band adjustment angle ① in the direction of arrow "B" (Fig. 12-b), then the screw ② shall be tightened.
2. In case tension pole is positioned on the left of P1 post center by more than 5.5mm, move tension band adjustment angle ① in the direction of arrow "A" (Fig. 12-b), then the screw ② shall be tightened.

● NOTE

After completion of positioning, do not forget to fix the position with lock paint.

METHODS OF ADJUSTMENT AND REPLACEMENT

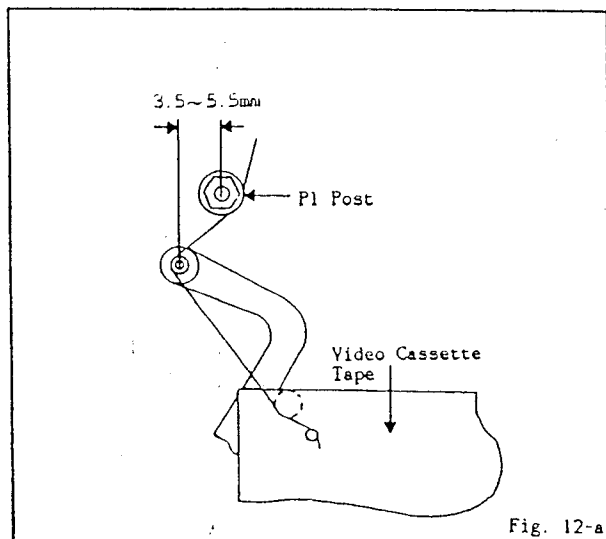


Fig. 12-a

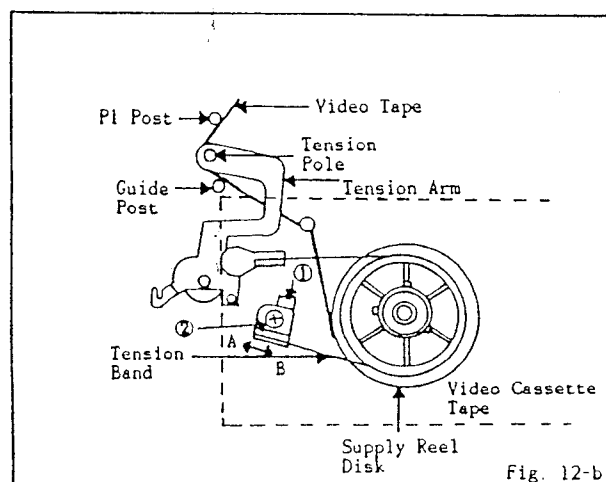


Fig. 12-b

■ A-13: NOT REQUIRED FOR THIS MODEL

■ A-14: CONFIRMATION AND ADJUSTMENT OF BACK TENSION ON RECORDING AND PLAYBACK

● CONFIRMATION

○ When you use a back tension measuring cassette.

1. Insert the measuring cassette tape.
2. Set the unit in the recording mode. At this time, confirm, by the pointer of the measuring cassette tape, that the back tension is within set-up points (20~50g/cm).
3. Confirm the video tape is tightly running on the fixed guide.
4. At the beginning and ending of the tape, confirm there is no sag or damage on edges of the tape.

○ When you use tentelometer.

1. Insert the Cassette Tape (E-60).
2. Set the unit in the recording mode.
3. Pull Impedance roller toward arrow "A" as in Fig. 14-a and set the tentelometer as in Fig. 14-a, 14-b confirming the tape tension is within set-up points (25~30g/cm).
4. Confirm the video tape is running tight on P1 post.
5. Confirm there is no sag or damage on edges of the tape both in the beginning and ending of the tape.
6. Adjust when it does not satisfy the above items Set the tension plate to "A" direction when the tentelometer indicates less than 25g/cm as shown in Fig. 14-C. Set the tension plate to "B" direction when it indicates more than 30g/cm. (Use Adjustment Screwdriver JG032)

● NOTE

1. The tentelometer should not touch F/E Head, drum or other components in the tape path.
2. Use lock paint after adjustment.

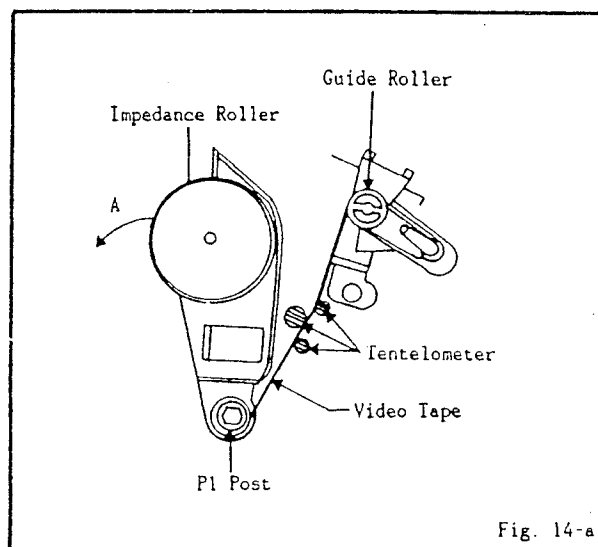


Fig. 14-a

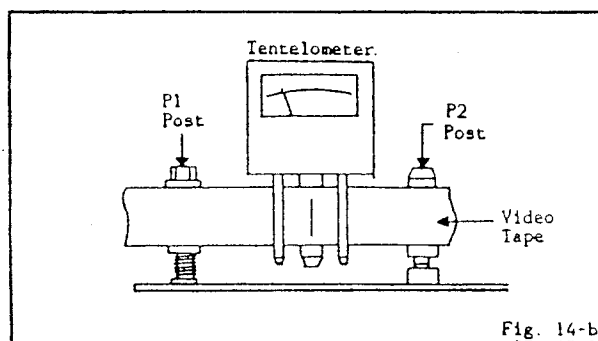


Fig. 14-b

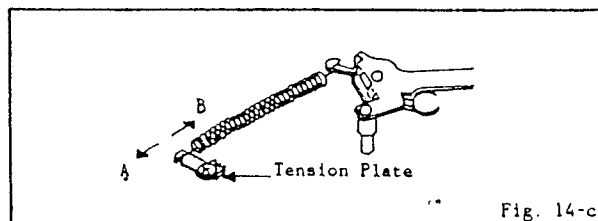


Fig. 14-c

METHODS OF ADJUSTMENT AND REPLACEMENT

■ A-15: CONFIRMATION OF REEL BRAKE TORQUE

■ A-15-1: Confirmation of take-up reel brake

● CONFIRMATION

1. Set the stop mode.
2. Set the torque gauge (JG002G) to the take-up reel and turn it counter-clockwise.
3. Confirm that it is more than 200g/cm at that time. Refer to Fig. 15-a.

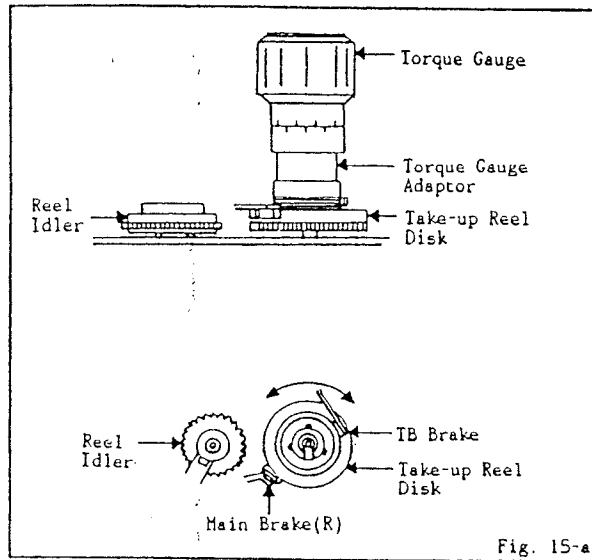


Fig. 15-a

■ A-15-2: Confirmation of supply reel brake

● CONFIRMATION

1. Set the stop mode.
2. Set the torque gauge (JG002G) to the supply reel and turn it clockwise.
3. Confirm that it is more than 200g/cm at that time. Refer to Fig. 15-b.

● NOTE

Separate the idler from the reel and confirm the brake torque.

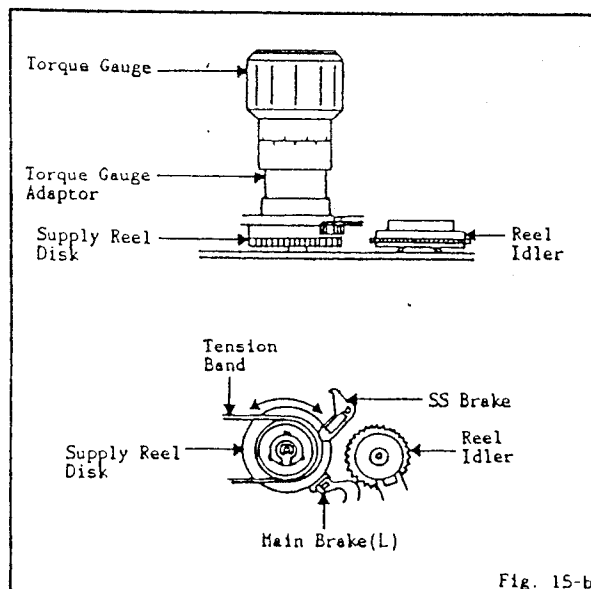


Fig. 15-b

AFTER ADJUSTMENT CONFIRM THE FOLLOWING ITEMS

- A-3: Confirmation of fast forward and its take-up torque.
- A-4: Confirmation of rewind and its take-up torque.
- A-5: Confirmation of playback take-up torque.
- A-6: Confirmation of fast forward back tension.
- A-7: Confirmation of rewind.
- A-8: Confirmation of search/cue back tension.
- A-15: Confirmation of reel brake torque.

NOTE: Refer to the table below for possible cause of problems when confirmation cannot be made for the indicated items.

CONFIRMATION ITEM	CHECK POINT (REPLACEMENT)
A-3 A-4 A-5 A-7	Capstan belt may be stretched. Clutch may be worn out (if so, change reel disk.) Idler ASS'Y may be worn out.
A-6 A-8	Tension band may be worn out.
A-15	Main brake belt may be worn out.

■ A-16: CONFIRMATION AND ADJUSTMENT FOR THE HEIGHT OF P1 POST, P4 POST, LIMITER POST

■ A-16-1: Confirmation and adjustment for the height of P1 post

● ADJUSTMENT

1. Set to the STOP mode. Install the master plane (JG022) to the main chassis.
2. Put the post adjustment chip (JG026) on the master plane, adjust the height by sliding the "A" part of post adjustment chip to the "a" direction of the master plane. Refer to Fig. 16-b, c.
3. Use the "A" side of the post adjustment chip.

■ A-16-2: Confirmation and adjustment for the height of P4 post.

● ADJUSTMENT

1. Set to the STOP mode. Install the master plane (JG022) to the main chassis.
2. Put the post adjustment chip (JG026) on the master plane, adjust the height by sliding the "A" part of post adjustment chip to the "b" direction of the master plane. Refer to Fig. 16-b, c.
3. Use the "A" side of the post adjustment chip.

■ A-16-3: Confirmation and adjustment for the height of limiter post

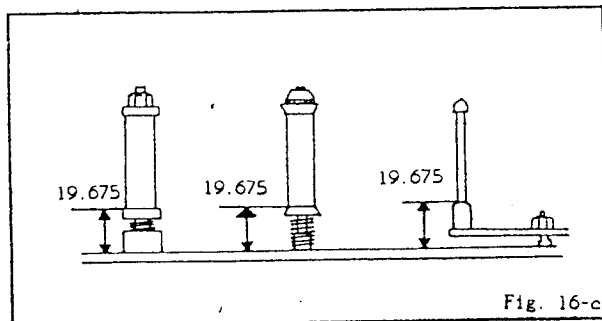
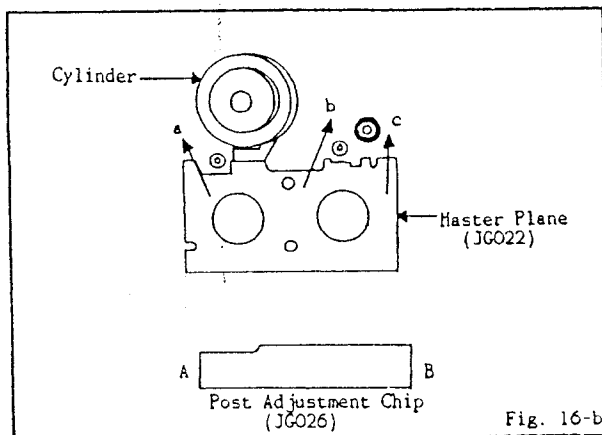
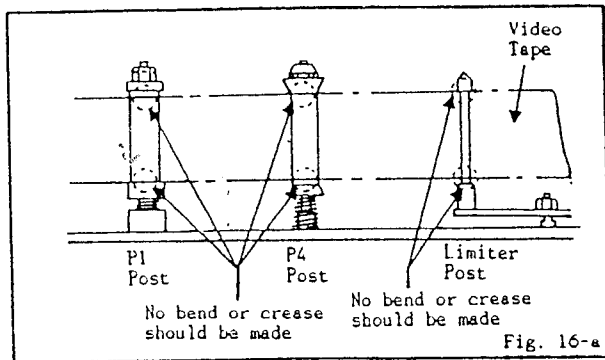
● ADJUSTMENT

1. Set to the PLAY mode. Install the master plane (JG022) to the main chassis.
2. Put the post adjustment chip (JG026) on the master plane, adjust the height by sliding the "A" part of post adjustment chip to the "c" direction of the master plane. Refer to Fig. 16-b, c.
3. Use the "A" side of the post adjustment chip.

METHODS OF ADJUSTMENT AND REPLACEMENT

NOTE

1. Adjust when you replace the parts.
2. After adjustment, adjust the guide roller. Confirm that there is no crease on the edge of the tape. Fig. 16-a.



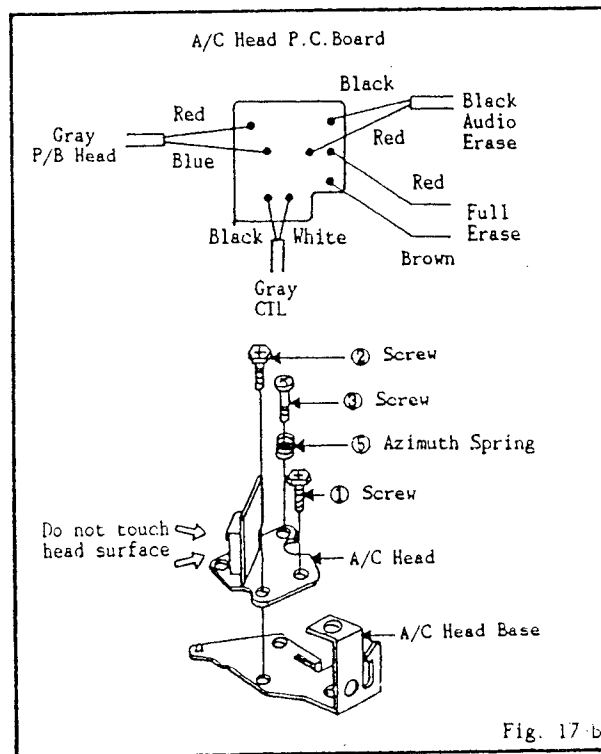
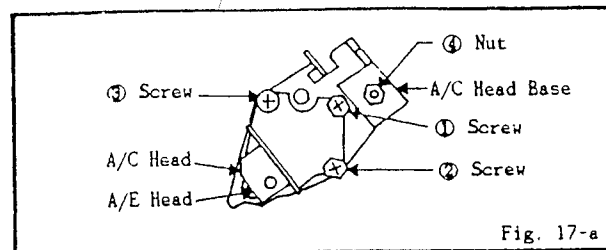
A-17: REPLACEMENT OF A/C HEAD

REPLACEMENT

1. Remove solder from the lead wires, place on A/C head PCB, and take the lead wires away from PCB.
2. Remove the screw ①.
3. Remove the screw ②.
4. Remove the screw ③ of the A/C head. (Fig. 17-a, b)

NOTE

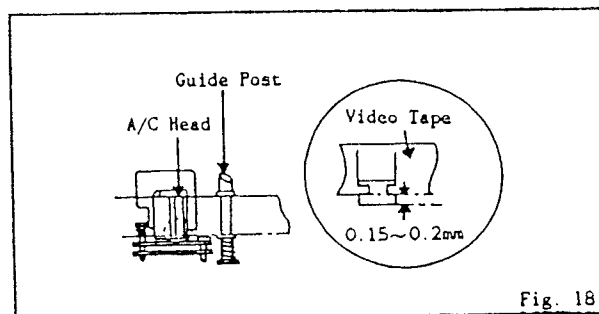
Do not touch the heads by any means when replacing the A/C head.



A-18: ADJUSTMENT OF A/C HEAD HEIGHT AND AZIMUTH

ADJUSTMENT

1. Playback a VHS adjustment tape (JG001) and observe the waveform at the audio output terminal.
2. Turn the screw ② slowly to change the height of the A/C head. Adjust the height so that the audio output becomes maximum. (Refer to Fig. 17-a, b)
3. Adjust the nut ④ (Refer to Fig. 17-a) until the height of the A/C head reaches the position against the tape as shown in Fig. 18.



METHODS OF ADJUSTMENT AND REPLACEMENT

■ A-19: CONFIRMATION AND ADJUSTMENT OF A/C HEAD TILT

● ADJUSTMENT

When the tape is running abnormally, perform the following adjustments.

1. Check the tape running condition with the unit in the play mode using the E-60 tape.
2. Confirm that there is no crease on the tape between the guide post and guide roller(R) and the tape is running smoothly. (It is absolutely impossible to get satisfactory sound if the tape is distorted between the A/C head and guide post.)
3. If the tape still does not run smoothly, turn the screw ① and adjust the tilt of the A/C head. Do not move the guide post.

■ A-20: REPLACEMENT OF UPPER DRUM

● REPLACEMENT

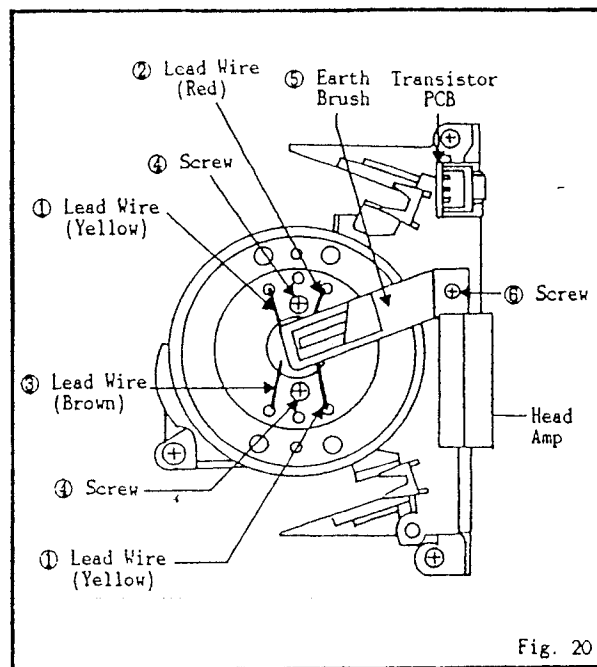
1. Remove the screw ⑥ which holds the EARTH BRUSH ⑤.
2. Desolder the lead wires ①, ② and ③ from the upper drum assembly. Hold down upper drum (Do not touch head) and remove screw ④ to avoid turning the drum around. Use the upper drum jig (JG031) to remove the upper drum (Refer to Fig. 20).

● INSTALLATION

Install new upper drum in the reverse steps of REMOVAL.

● NOTE

1. Do not touch the outside of drum directly.
2. Do not apply excessive pressure to screwdriver.
3. Before installing, confirm that there are no scratches or dust on the disk front and surface. Before installing, confirm that there are no scratches on the disk and upper drum assembly.
4. When setting, take care not to let any dust or dirt go into the clearance between disk and upper drum.
5. Re-check the adjustment of tape running. (Item ■ A-41)
6. Confirm the following adjustments.
 - a. ■ E-4: P.G. Shifter Adjustment
 - b. ■ E-6: Tracking Fix Adjustment
 - c. ■ E-18: Playback Luminance Level Adjustment
 - d. ■ A-21: Guide Roller Adjustment



■ A-21: ADJUSTMENT OF GUIDE ROLLER

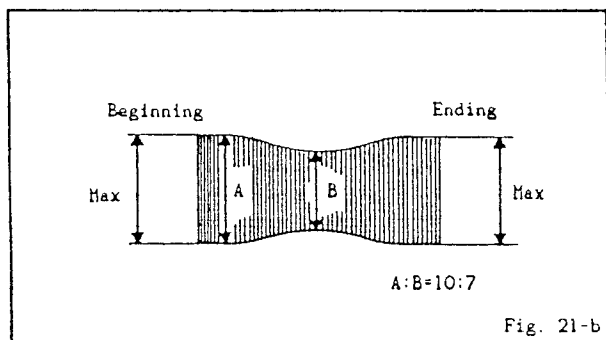
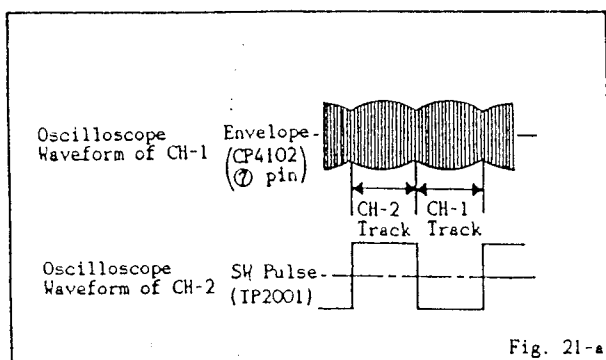
● ADJUSTMENT

1. Switch on main power and then connect monitor output cord and video input cord to proper positions.
2. Insert the VHS adjustment tape (JG001) into the unit.
3. Connect CH-1 and CH-2 of oscilloscope to envelope output and to the test point of switching pulse, respectively.
4. Carry out this adjustment in playback mode.
5. Trigger with SW pulse and observe the envelope. (Fig. 21-a)
6. Adjust the guide roller height while observing the envelope, and make the envelope flat. Adjust the envelope so that the flatness will not be affected even when the tracking control knob is turned. (Use the adjustment screw driver JG005).
7. When the tracking control knob is turned (the point that the envelope waveform starts to reduce), adjust the envelope so that its A:B ratio is better than 10:7. (Refer to 21-b)
8. Adjust the PG shifter in the PLAY mode.

● NOTE

After adjustment confirm and adjust the height, slant of the A/C head.

METHODS OF ADJUSTMENT AND REPLACEMENT



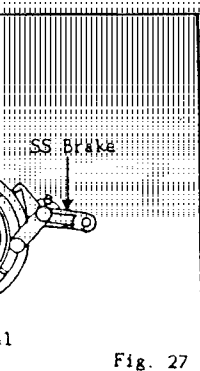
■ A-22~25: NOT REQUIRED FOR THIS MODEL

■ A-26: REPLACEMENT OF CYLINDER UNIT

● REMOVAL

1. Remove the screws ③ and ④, then disconnect the head amp from the cylinder unit.
2. Remove the transistor PCB according to item ■ A-39.

3. Remove the screws ① and ②, then disconnect



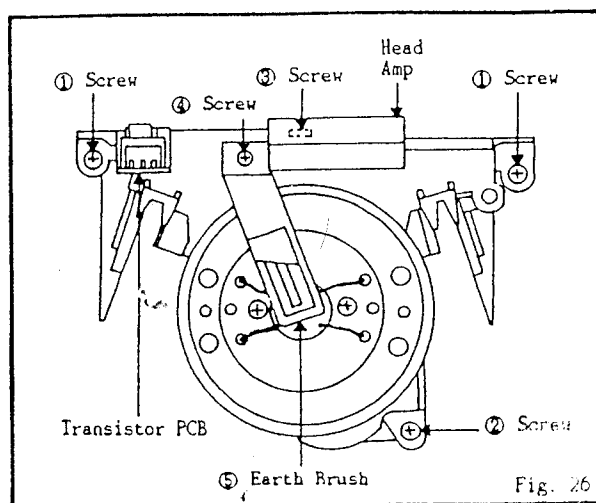
● INSTALLATION

Install new cylinder unit in reverse steps of REMOVAL.

● NOTE

1. Do not touch the surface of the cylinder head.
2. After replacement confirm the following adjustments.

- a. ■ E-4: P.G. Shifter Adjustment
- b. ■ E-6: Tracking Fix Adjustment
- c. ■ E-18: Playback Luminance Level Adjustment
- d. ■ A-21: Guide Roller Adjustment



■ A-27: REPLACEMENT OF TENSION BAND ASS'Y

● REMOVAL

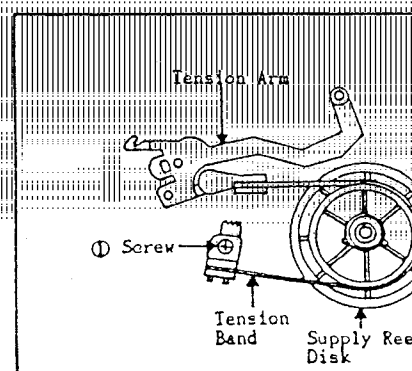
1. Remove the screw ① held to the tension band.
2. Release the SS brake from the tension band to remove it from the Supply Reel Disk. (Fig. 27)
3. Remove the tension band from the tension arm.

● INSTALLATION

Install new cylinder unit in reverse steps of REMOVAL.

● NOTE

1. The tension band should not be twisted during installation.
2. Adjust the placement of the tension post according to item ■ A-12.
3. Adjust and confirm the back tension during



METHODS OF ADJUSTMENT AND REPLACEMENT

■ A-28~33: NOT REQUIRED FOR THIS MODEL

■ A-34: REPLACEMENT OF LOADING BELT

● REMOVAL

1. Remove the screw ① held to the FS Gear Plate.
2. Remove the FS Gear Plate, the Polyslider Washer ② and the Fan Shaped Gear. (Fig. 34-a)
3. Remove the 2 pieces of stoppers ④, then pull the hook ③ in the direction of the arrow to remove the Loading Motor. (Fig. 34-b)
4. Remove the Loading Belt from the Loading Motor.
5. Move the Tension Lever 1 to the dotted line. (Fig. 34-a)
6. Remove the Main Cam.
7. Remove the Worm Ass'y and replace Loading Belt.

● INSTALLATION

Install a new loading belt in reverse steps of REMOVAL.

● NOTE

1. Clean the pulley when replacing Loading Belt.
2. Replace it while in the stop mode.
3. Avoid getting grease on the Loading Belt.
4. Align the points (A, B, E,) of the Main Cam, Tension Lever 1 and the Fan Shaped Gear. (Fig. 34-a, b, c)
5. Make sure that "A" point is within "B" range in holding of the Main Cam. (Fig. 34-c)
6. Make sure that "D" part is within "C" part in holding of the Tension Lever 1. (Fig. 34-a, c)
7. Make sure that "E" part is within "C" part in holding of the Fan Shaped Gear. (Fig. 34-a, c)

● CHECK AFTER INSTALLATION

1. Check if strange sound is heard in play mode.
2. Check if P2 post and P3 post are fitted to the post stopper.
3. Check if P2 post and P3 post are completely returned in stop mode.

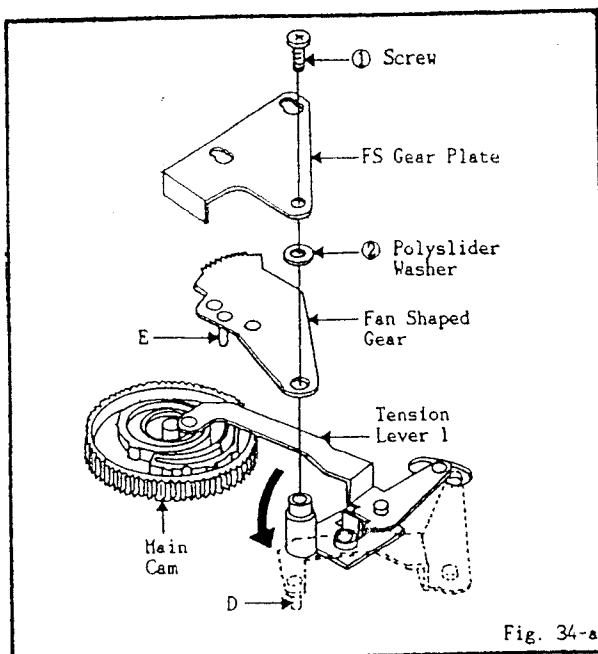


Fig. 34-a

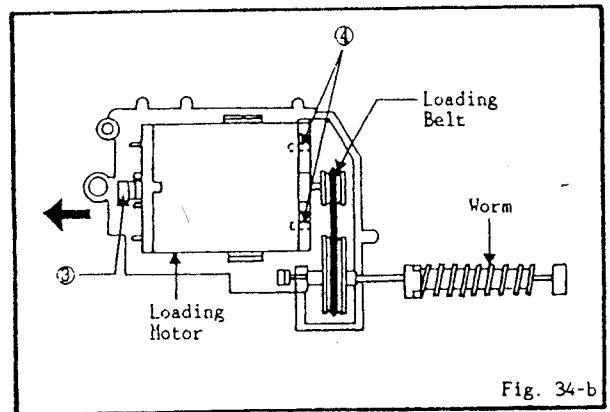


Fig. 34-b

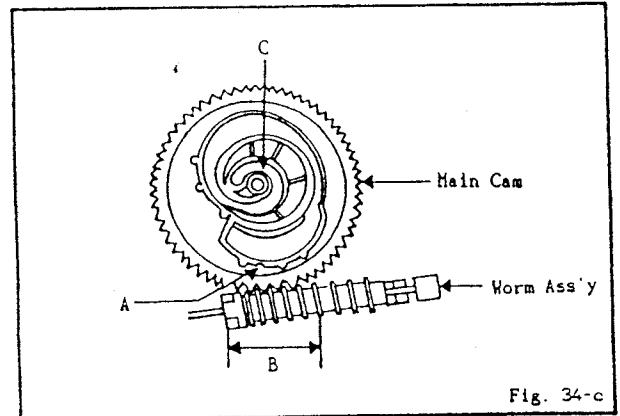


Fig. 34-c

■ A-35: NOT REQUIRED FOR THIS MODEL

■ A-36: REPLACEMENT OF PINCH ROLLER

● REMOVAL

1. Remove the screw ①. (Fig. 36)
2. Remove the Pinch Roller.

● INSTALLATION

Install new Pinch Roller in reverse steps of REMOVAL.

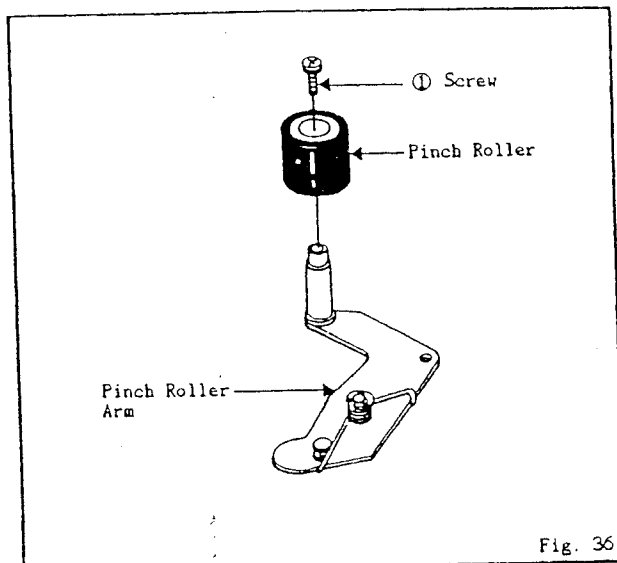
● NOTE

1. Be careful not to bend the Pinch Roller Arm in removal and installation.
2. Do not touch the Pinch Roller. (Use gloves.)

● CHECK AFTER INSTALLATION

Check if the tape is running normally in PLAY mode.

METHODS OF ADJUSTMENT AND REPLACEMENT



■ A-37: REPLACEMENT OF DD UNIT

● REMOVAL

1. Put the main chassis upside-down and remove the reel belt from the clutch pulley.
2. Remove the screw fixing the DD unit on rear of the main chassis.
3. Remove the 3 screws ① (SEMS A 2.6x6) held to DD unit on front of the Deck. (Fig. 37)
4. Remove the DD unit slowly from rear side of the Deck.

● INSTALLATION

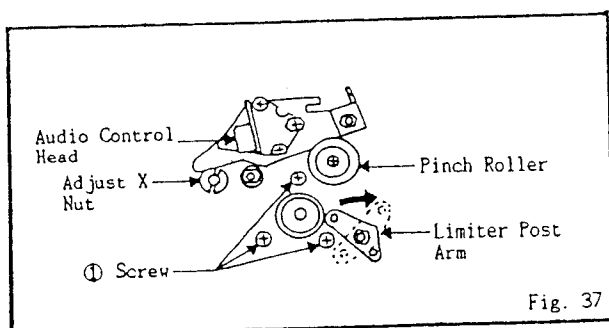
1. Return the Limiter Post to the dotted line, then fit new DD unit to the chassis without touching center of the shaft of the DD unit to the chassis. Return the Limiter Post to where it was. (Fig. 37)
2. Install the clutch pulley without twisting the Reel Belt.

● NOTE

1. Do not bend the Limiter Post.
2. Use the specified screw held to the DD unit.
3. Tighten the screws completely.

● CHECK AFTER INSTALLATION

1. Check if tape running is normal in PLAY mode.
2. Check if FF/REW mode works normally.



■ A-38: REPLACEMENT OF LOADING MOTOR

● REMOVAL

1. Remove the 2 stoppers ④, then pull the hook ③ in the direction of the arrow to take off the Loading Motor. (Fig. 34-b)
2. Remove the Loading Belt from the Loading Motor.

● INSTALLATION

Install new Loading Motor in reverse steps of REMOVAL.

■ A-39: REPLACEMENT OF TRANSISTOR PCB AND TRANSISTOR SPRING

● REMOVAL

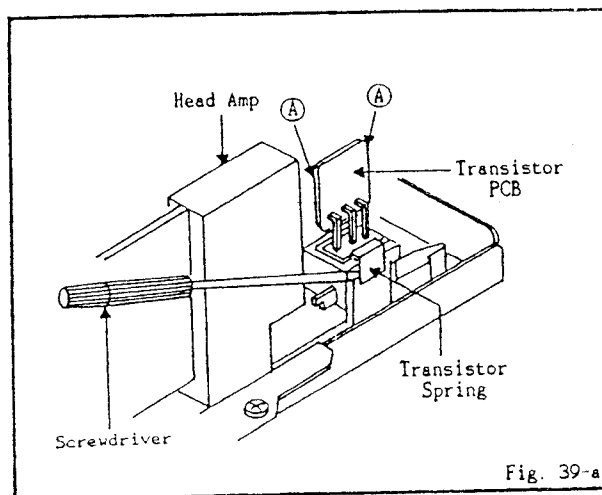
1. Insert a small flat-blade screwdriver into the transistor spring as shown in Fig. 39-a.
2. Hold both edges of the transistor PCB (A part) with your fingers and pull out the transistor PCB while turning the driver.

● INSTALLATION

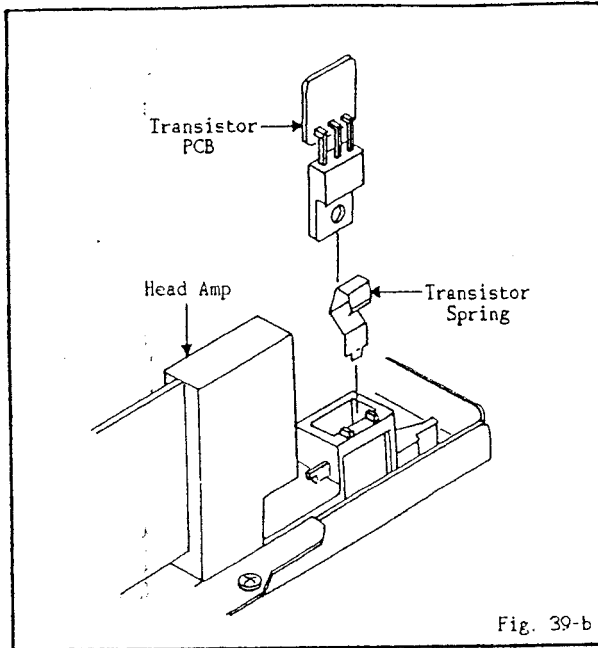
Install new Transistor PCB in reverse steps of REMOVAL.

● NOTE

1. The unit should be unplugged from the AC outlet.
2. Do not scratch or mar the cylinder.
3. Be careful not to split the transistor PCB.
4. If the transistor spring is broken when holding or removing the transistor PCB, replace with a new one.



METHODS OF ADJUSTMENT AND REPLACEMENT



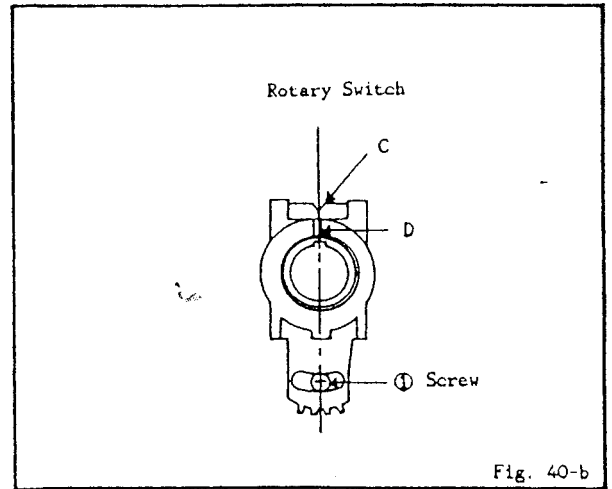
■ A-40: REPLACEMENT OF ROTARY SWITCH

● REMOVAL

1. Remove the screw ①.
2. Remove solder from 3 pieces of the lead wire.
3. Solder the lead wire.
4. When setting up the rotary switch, set it up in the STOP mode.
5. The STOP mode means the position of actuator "A" and main chassis "B" are equal. When they are not equal, turn the worm pulley to move the actuator.
6. Adjust the STOP position of the rotary switch as indicated in Fig. 40-b "C" and "D" are aligned.

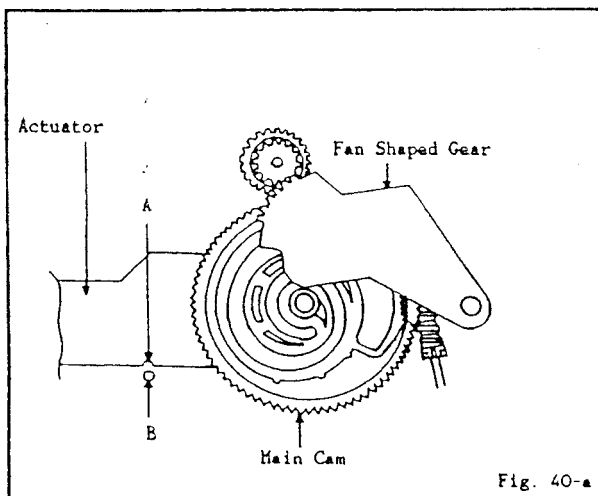
● INSTALLATION

Install new Rotary Switch in reverse steps of REMOVAL.



■ A-41: TAPE RUNNING ADJUSTMENT

1. Adjust the height of reel disk. (Item ■ A-2)
2. Adjust the P1 post, P4 post, limiter post. (Item ■ A-16)
3. Confirm and adjust tension pole position. (Item ■ A-12)
4. Adjust the guide roller. (Item ■ A-21)
5. Adjust the A/C head height and azimuth. (Item ■ A-18)
6. Adjust the A/C head tilt. (Item ■ A-19)
7. Set the tracking control to the center position. Turn X-nut adjustment screwdriver (JG021) to adjust until the envelope appears maximum.



ELECTRICAL ADJUSTMENTS

Prepare the following measurement tools for the electrical adjustment.

1. Oscilloscope (2 channel type)
2. AC Voltmeter
3. Quartz Timer
4. Sweep-Marker Generator
5. AFT Adjustment Oscillator
6. Synchro Scope
7. VIF Unit
8. Voltmeter
9. Frequency Counter
10. DC Voltmeter
11. Spectrum Analyzer

ADJUSTMENT PROCEDURE

■ E-1~3: NOT REQUIRED FOR THIS MODEL

■ E-4: PB. SWITCHING POSITION.

CONDITIONS

MODE - PLAYBACK

Input signal - Standard test tape

NOTE: Tracking control should be set at click point.

INSTRUCTIONS

- (1) Connect CH-1 on the oscilloscope to TP2001 and connect CH-2 on the oscilloscope to TP4201.
- (2) Adjust VR2001 so that the waveform of the oscilloscope measures $6.5 \pm 0.5(H)$ at both leading and trailing edges as shown in Fig. 4-a, b.

CHART/CHARACTERISTICS

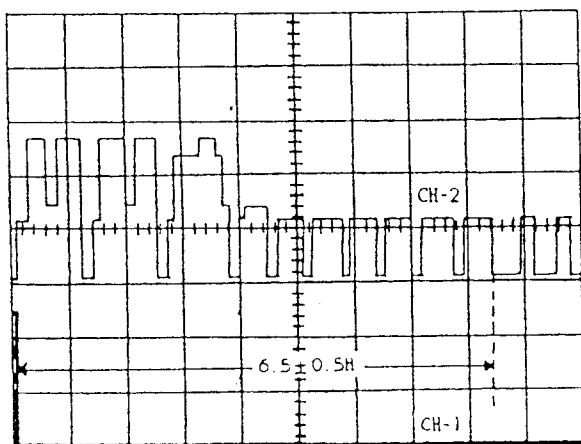
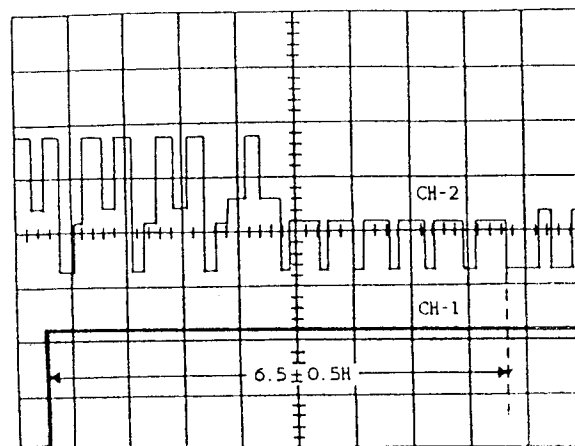


Fig. 4-a



CH-1 2V 0.1ms/div
CH-2 0.5V 0.1ms/div

Fig. 4-b

■ E-5: NOT REQUIRED FOR THIS MODEL

■ E-6: TRACKING FIX ADJUSTMENT

CONDITIONS

MODE - PLAYBACK

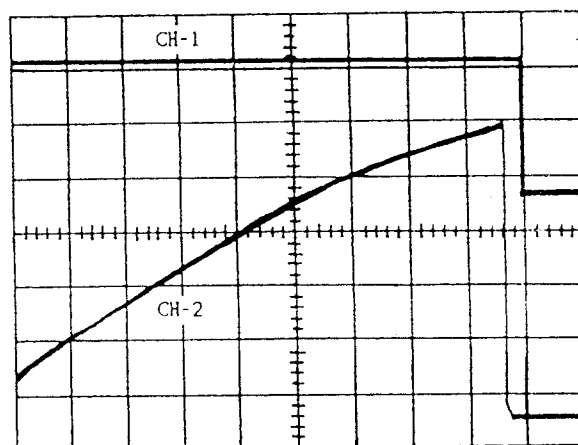
Input signal - Standard test tape

NOTE: Tracking control should be set at click point.

INSTRUCTIONS

- (1) Connect CH-1 on the oscilloscope to TP2001 and connect CH-2 on the oscilloscope to TP2003.
- (2) Adjust VR2002 so that the "T" portion measures $-1.0 \pm 0.3\text{msec}$ as shown in Fig. 6.

CHART/CHARACTERISTICS



CH-1 2V 2ms/div
CH-2 500mV 2ms/div

Fig. 6

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ELECTRICAL ADJUSTMENTS

■ E-7~11: NOT REQUIRED FOR THIS MODEL

■ E-12: E-E LEVEL ADJUSTMENT

CONDITIONS

MODE - STOP

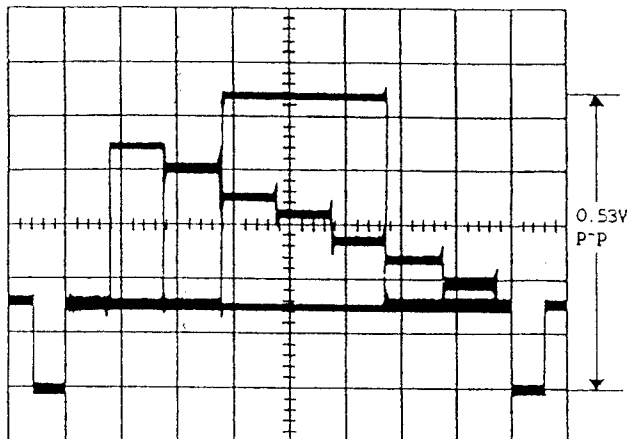
Input signal - Color bar

NOTE: Video out of the unit should be terminated with 75 ohm load.

INSTRUCTIONS

- (1) Input the color bar signal to the VIDEO IN.
- (2) Connect the oscilloscope to TP4005.
- (3) Adjust VR4004 so that the waveform measures $0.53 \pm 0.01V_{p-p}$ as shown in Fig. 12.

CHART/CHARACTERISTICS



10cmV/div

Fig. 12

■ E-13~15: NOT REQUIRED FOR THIS MODEL

■ E-16: SET CARRIER AND DEVIATION ADJUSTMENT

CONDITIONS

MODE - STOP

Input signal - Color bar

INSTRUCTIONS

- (1) Input the color bar signal to the VIDEO IN.
- (2) Connect TP4001 to the input terminal on the spectrum analyzer, then adjust 3.8MHz and 4.8MHz as shown in Fig. 16 with VR4001 and VR4002.

VR4001 (SET CARRIER)
VR4002 (DEVIATION)

CHART/CHARACTERISTICS

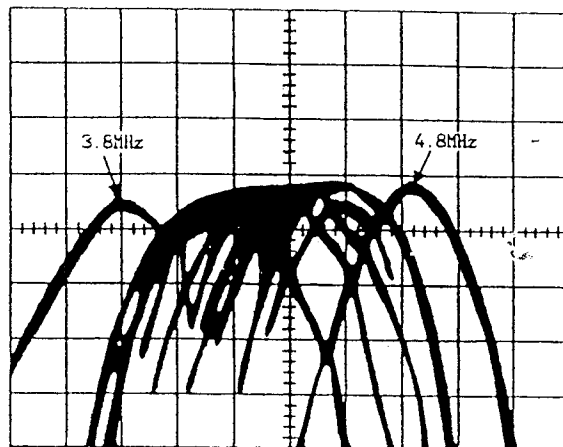


Fig. 16

■ E-17: RECORD CURRENT ADJUSTMENT

CONDITIONS

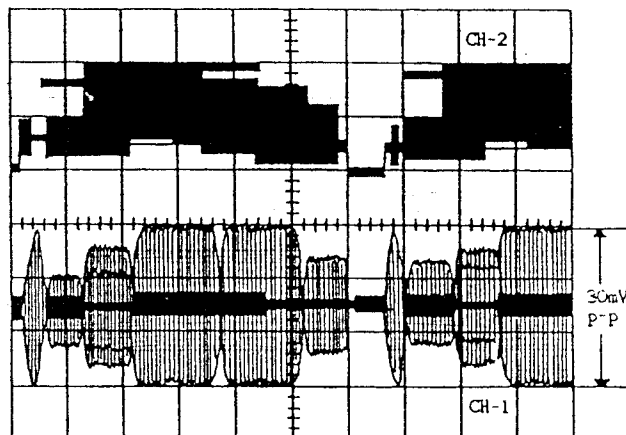
MODE - RECORD

Input signal - Color bar

INSTRUCTIONS

- (1) Input the color bar signal to the VIDEO IN.
- (2) Connect CH-1 on the oscilloscope to TP4101 and CH-2 to TP4201. Reduce Rec.-Luminance signal factors by turning VR4102 fully counter-clockwise.
- (3) Adjust VR4101 so that the cyan level becomes $30 \pm 2mV_{p-p}$ as shown in Fig. 17-a.
- (4) Adjust VR4102 so that the horizontal sync. level becomes $120 \pm 5mV_{p-p}$ as shown in Fig. 17-b.

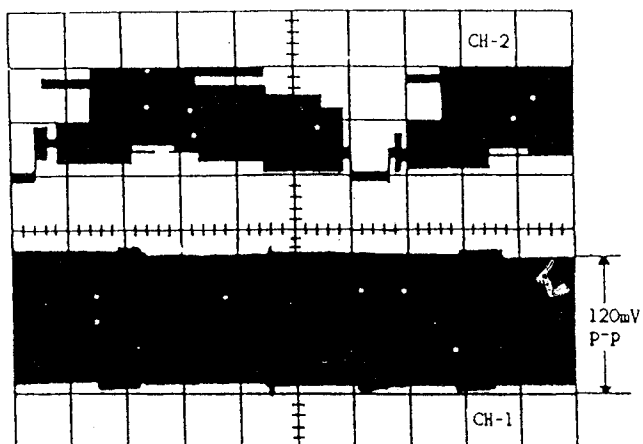
CHART/CHARACTERISTICS



10mV/div

Fig. 17-a

ELECTRICAL ADJUSTMENTS



50mV 5 μ s/div
Fig. 17-b

■ E-18: PLAYBACK LUMINANCE LEVEL ADJUSTMENT

CONDITIONS

MODE - PLAYBACK

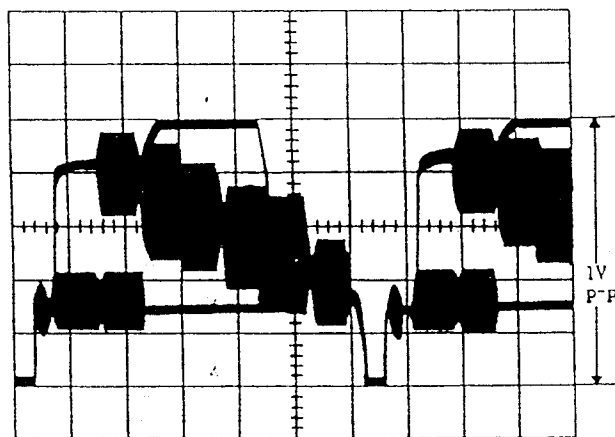
Input signal - Color bar test tape

NOTE: Video out of the unit should be terminated with 75 ohm load.

INSTRUCTIONS

- (1) Connect the oscilloscope to TP4201.
- (2) Adjust VR4003 so that the signal becomes $1.0 \pm 0.05V_{p-p}$ as shown in Fig. 18.

CHART/CHARACTERISTICS



200mV 10 μ s/div
Fig. 18

■ E-19: AUDIO BIAS CURRENT ADJUSTMENT

CONDITIONS

MODE - RECORD

Input signal - No signal

INSTRUCTIONS

Connect the AC voltmeter to the arrow point, then adjust the voltage to $3.0 \pm 0.1mV_{rms}$ with VR5002.

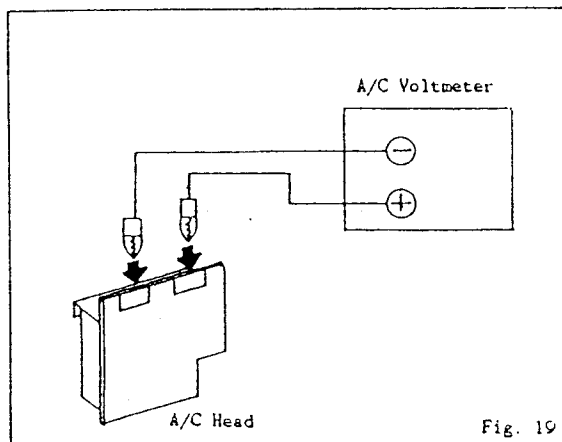


Fig. 19

■ E-20: AUDIO PLAYBACK LEVEL ADJUSTMENT

CONDITIONS

MODE - Self(RECORD and PLAYBACK)
SP MODE

Input signal - 1KHz 300mVrms, Audio signal
Video signal color bar

INSTRUCTIONS

- (1) Connect the AC voltmeter to AUDIO OUT, which is terminated with 47K ohm resistor.
- (2) Record and then playback the audio signal as specified.
- (3) Adjust VR5001 so that the playback output may become $390 \pm 10mV_{rms}$.

ELECTRICAL ADJUSTMENTS

■ E-21~27: NOT REQUIRED FOR THIS MODEL

■ E-28-1: SECAM IDENTIFICATION (1) ADJUSTMENT

CONDITIONS

MODE - RECORD

Input signal - SECAM RF signal

INSTRUCTIONS

- (1) Connect CH-1 of oscilloscope to TP4201 and CH-2 of oscilloscope to TP3702.
- (2) Adjust L3702 so that peak of waveform A and leading edge of video signal of waveform B may become same as shown in Fig. 28.

■ E-28-2: SECAM IDENTIFICATION (2) ADJUSTMENT

CONDITIONS

MODE - RECORD

Input signal - SECAM RF signal

INSTRUCTIONS

- (1) Connect the oscilloscope to TP3701.
- (2) Receive SECAM RF signal at 33dB.
- (3) At this time, adjust TP3701 to High Level with VR3701
- (4) Next, check that the TP3701 will indicate Low Level with adjusting the output level to 31dB.
- (5) Receiving the PAL signal, check that the TP3701 will indicate Low Level regardless of output strength.

CHART/CHARACTERISTICS

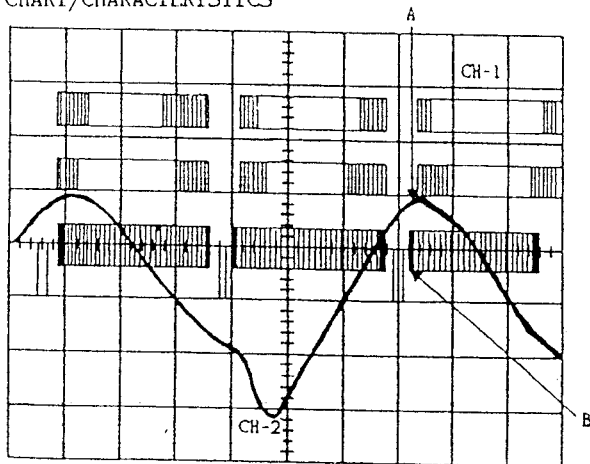


Fig. 28 CH-1 1V 20 μ s/div
CH-2 0.5V 20 μ s/div

■ E-29~57: NOT REQUIRED FOR THIS MODEL

■ E-58: NOISE CANCEL ADJUSTMENT

CONDITION

MODE - PLAYBACK

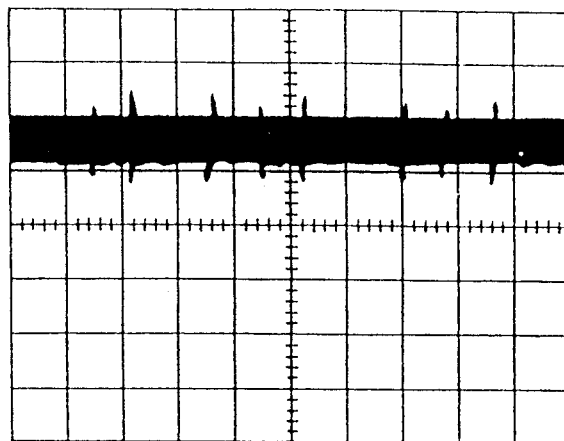
Input signal - Color bar test tape

NOTE: This adjustment must be done after adjustment ■ E-18.

INSTRUCTIONS

- (1) Connect CH-1 of the oscilloscope to TP4003 and CH-2 on the oscilloscope to TP4004.
- (2) Reverse the waveform for CH-2 with on inverter and put both the waveforms for CH-1 and CH-2 together by pressing the ADD SW on the oscilloscope.
- (3) Adjust the VR4005 so that the waveform of CH-1 is straight as shown in Fig. 58.

CHART/CHARACTERISTICS



50mV 10 μ s/div

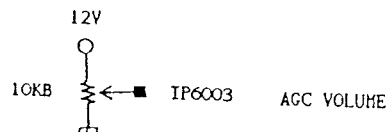
Fig. 58

■ E-59, 60: NOT REQUIRED FOR THIS MODEL

■ E-61-A: VIDEO IF ADJUSTMENT

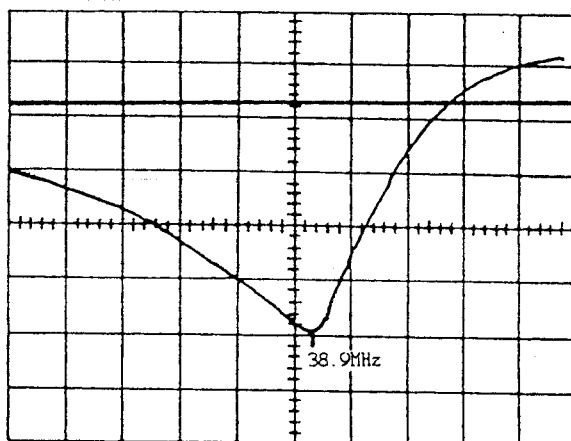
INSTRUCTIONS

- (1) Connect the output of Sweep-Marker Generator to TP6006.



- (2) Adjust L6004 so that output waveform of TP6007 may become as shown in Fig. 61-a.

CHART/CHARACTERISTICS



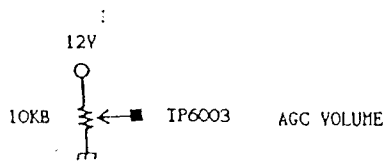
Single Peak Waveform

Fig. 61-a

ELECTRICAL ADJUSTMENTS

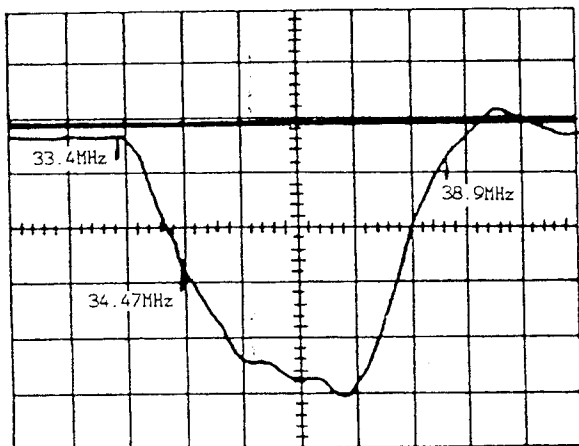
■ E-61-B: CHECKING VIDEO IF OVERALL

- (1) Connect the output of Sweep-Marker Generator to the Tuner Pack TP.



- (2) Terminate with a 100 ohm resistor between 13 pin and 14 pin on IC6001.
- (3) Make sure that the output of waveform of TP6007 is as shown in Fig. 61-b.

CHART/CHARACTERISTICS



Overall Waveform

Fig. 61-b

■ E-61-C: TRAP ADJUSTMENT

CONDITION

MODE - TUNER MODE

INSTRUCTIONS

1. Connect the 1 pin of connector CP6001 to the output of the sweep-marker generator.
2. Connect the saw filter (CF6001) side of the condenser, to the oscilloscope. (Use the detector as prob.) (Refer to Fig. 61-c)
3. Adjust L6014 until the marker of 32.4MHz will be same as shown in Fig. 61-d.

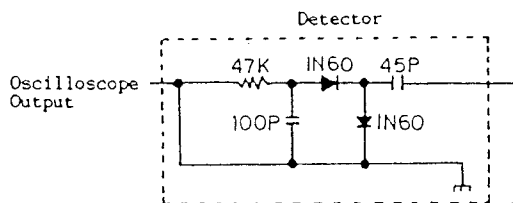


Fig. 61-c

CHART/CHARACTERISTICS

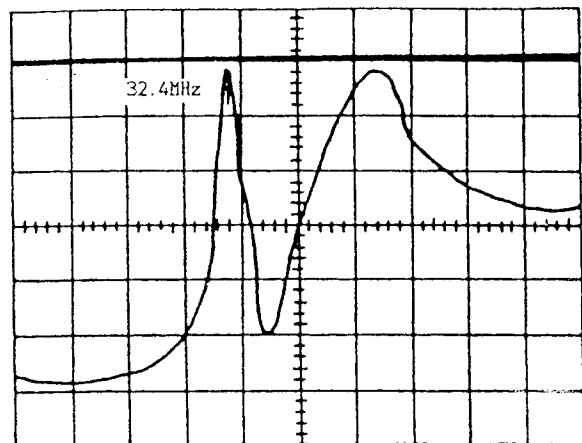


Fig. 61-d

■ E-62: AFT ADJUSTMENT

CONDITION

TV/VCR SELECT SW - VCR POSITION

INSTRUCTION

Connect output of the Sweep-Marker Generator to Tuner Pack TP and adjust L6005 so that output waveform for TP6002 is as shown in Fig. 62.

CHART/CHARACTERISTICS

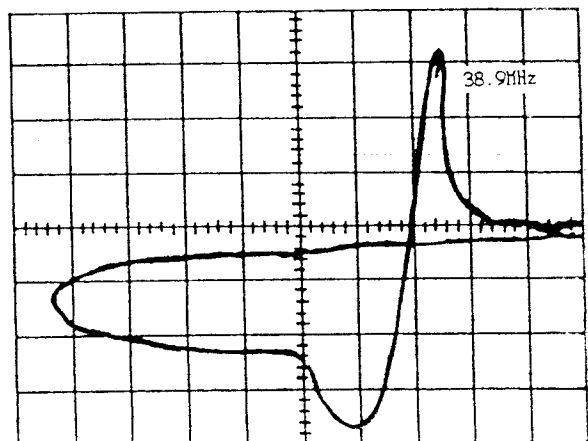


Fig. 62

■ E-63: NOT REQUIRED FOR THIS MODEL

■ E-64: RF AGC ADJUSTMENT

CONDITIONS

MODE - STOP

TV/VCR SW - VCR POSITION

NOTE: Make sure that this adjustment should be done with the VCR only.

INSTRUCTIONS

- (1) Receive the Monochrome Pattern signal. (Receive the E-11ch)
- (2) Connect the DC Voltmeter to TP6008.
- (3) Set input field strength to 80dB μ .
- (4) Adjust VR6001 so that the voltage is equal to $4.1 \pm 0.1V$.

ELECTRICAL ADJUSTMENTS

■ E-65: COLOR LEVEL ADJUSTMENT

CONDITIONS

MODE - STOP
TV/VCR SW - VCR POSITION

NOTE: Make sure that this adjustment should be done with the VCR only.

INSTRUCTIONS

- (1) Obtain a color bar signal. (Receive the E-48ch)
- (2) Connect the oscilloscope to TP4201.
- (3) Adjust VR6002 so that the magenta level is $48 \pm 5\%$ when Y-level is 100%.

CHART/CHARACTERISTICS

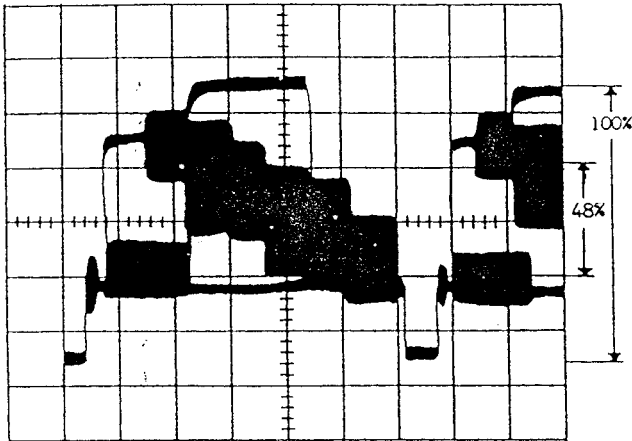


Fig. 65

■ E-66: CLOCK ADJUSTMENT

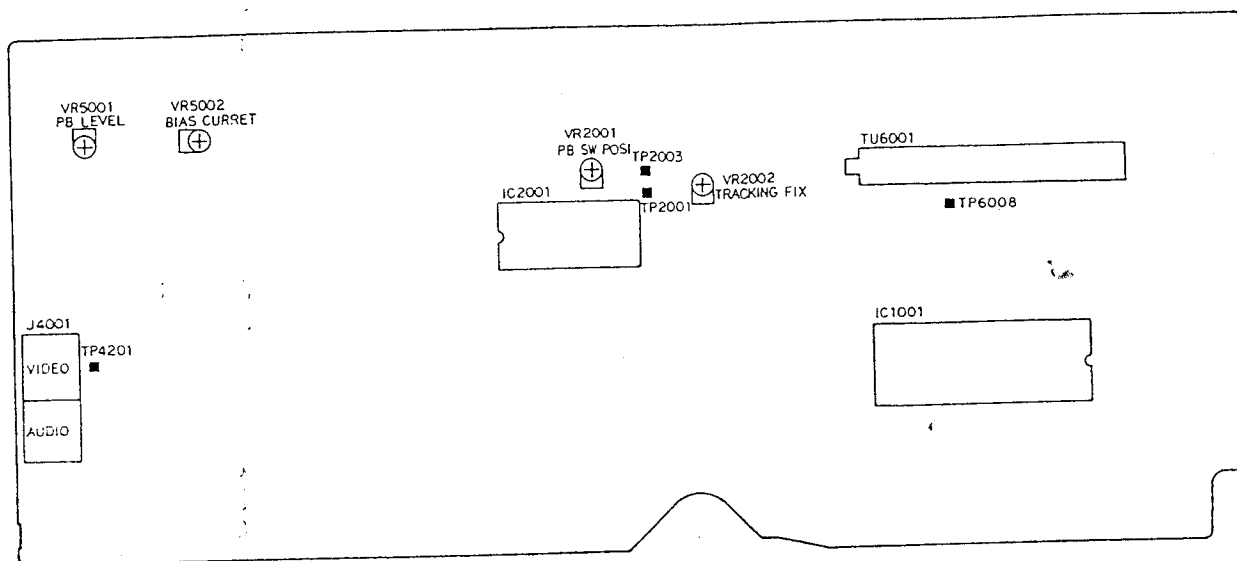
CONDITION

MODE - POWER ON

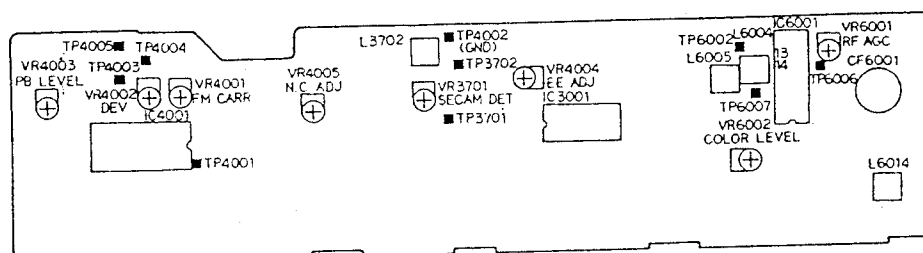
INSTRUCTIONS

1. Connect the frequency counter to TP8001.
2. Adjust TC8018 so that the value of frequency counter is $32768 \pm 0.05\text{Hz}$.

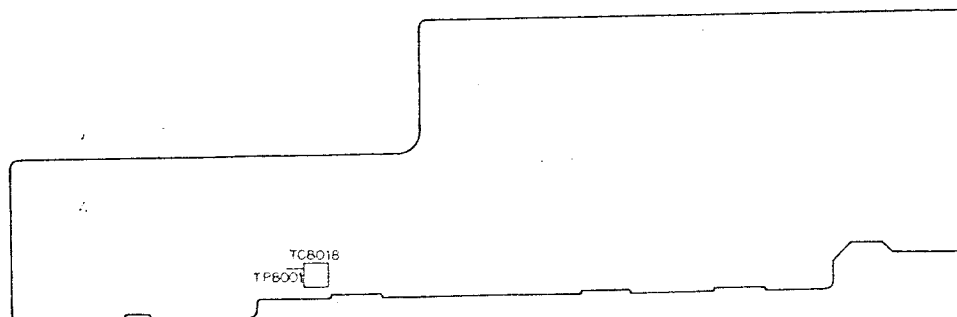
MAJOR COMPONENTS LOCATION GUIDE



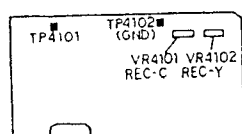
MAIN P. C. BOARD



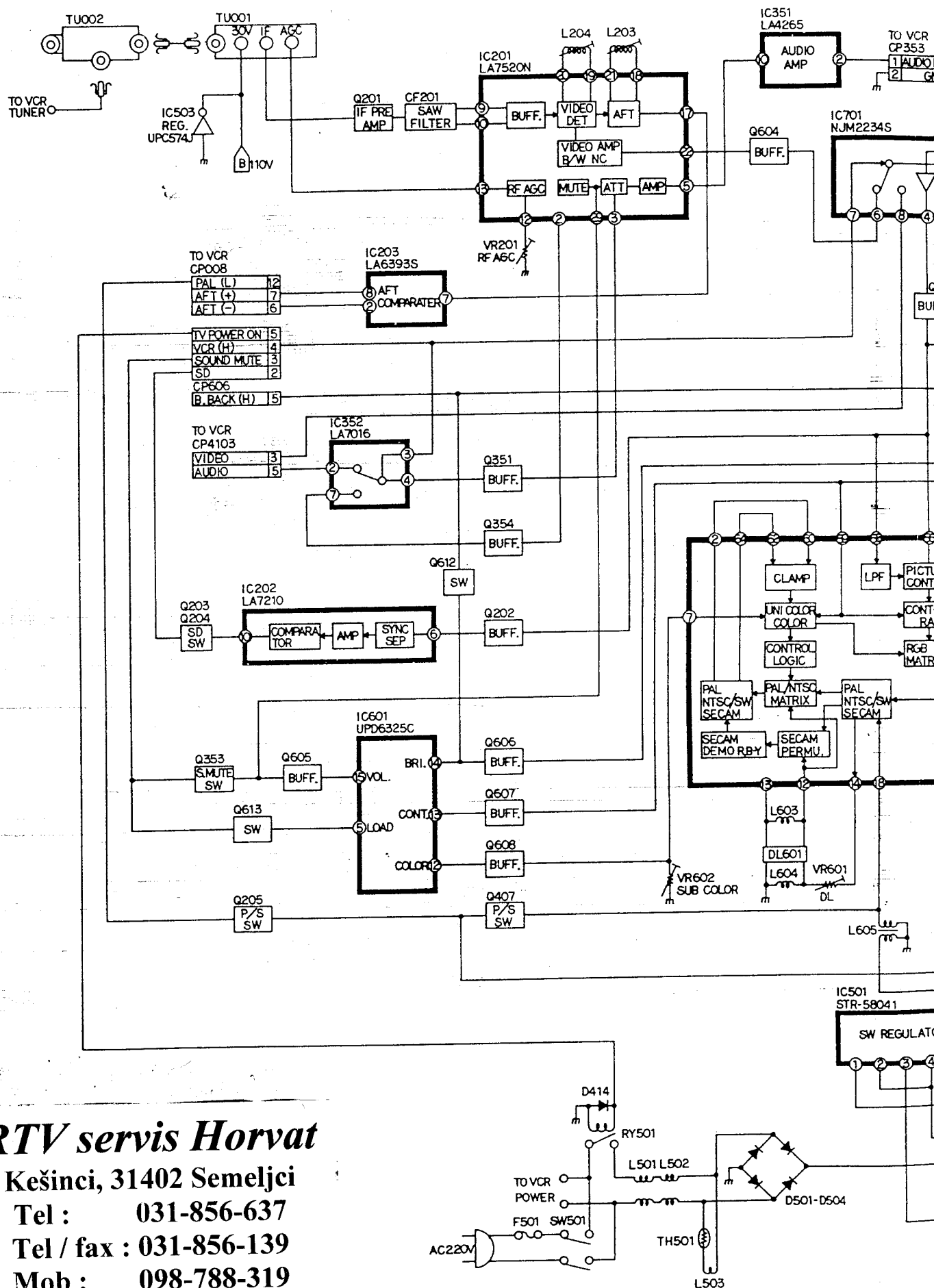
Y. C. P. C. BOARD



CONTROL P. C. BOARD



HEAD AMP P.C.BOARD



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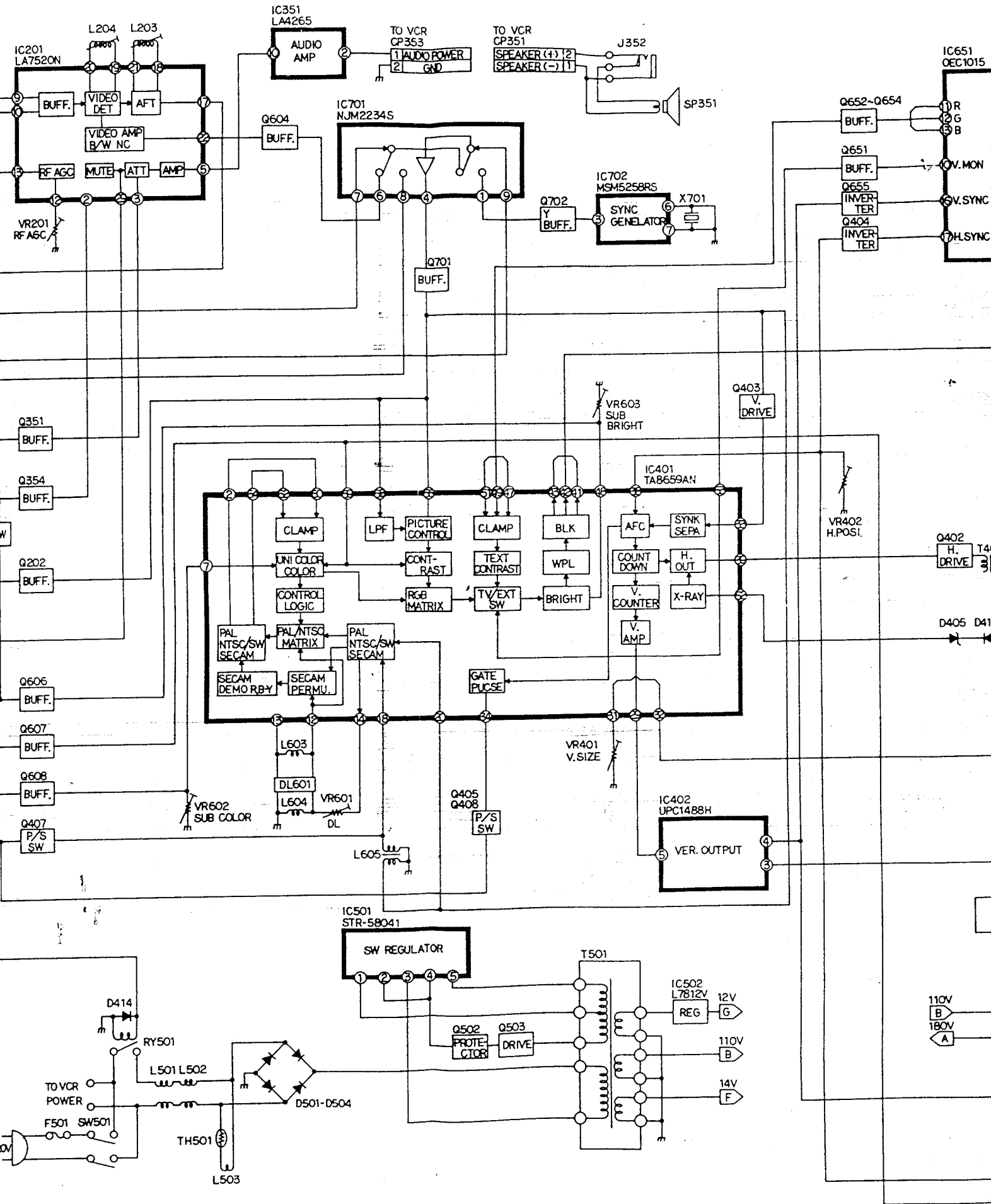
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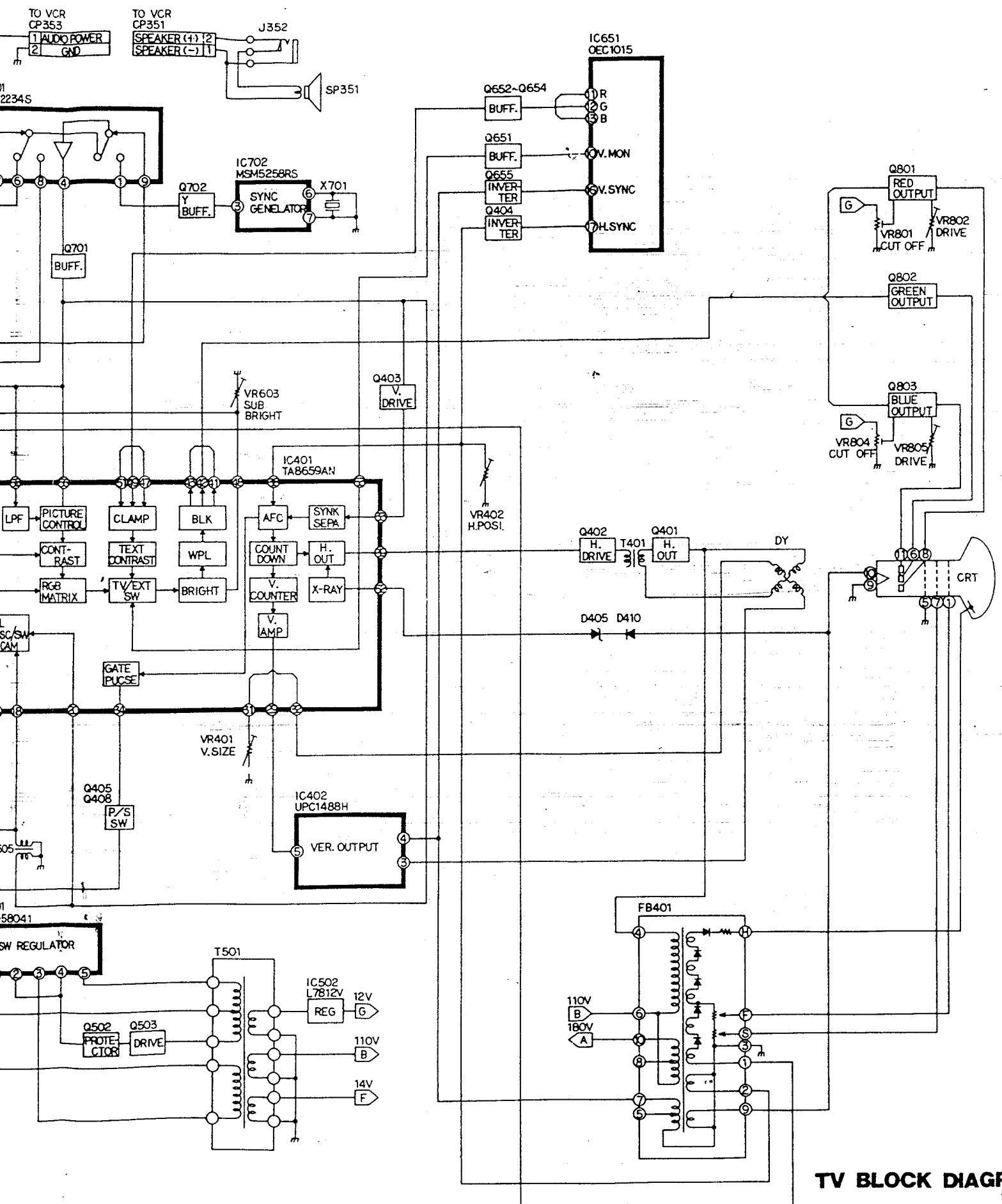
Mob : 098-788-319

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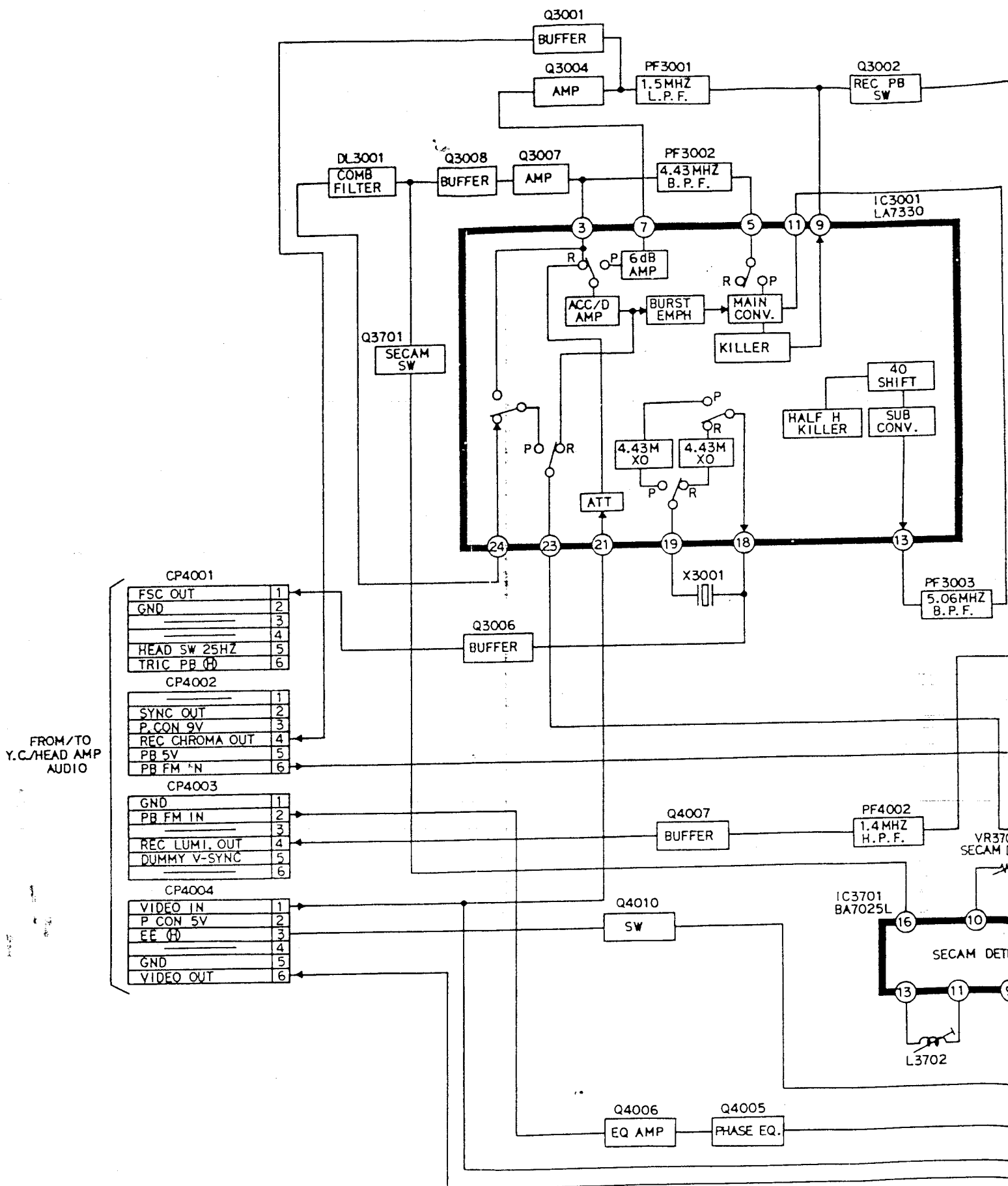
TV BLOCK DIAGRAM



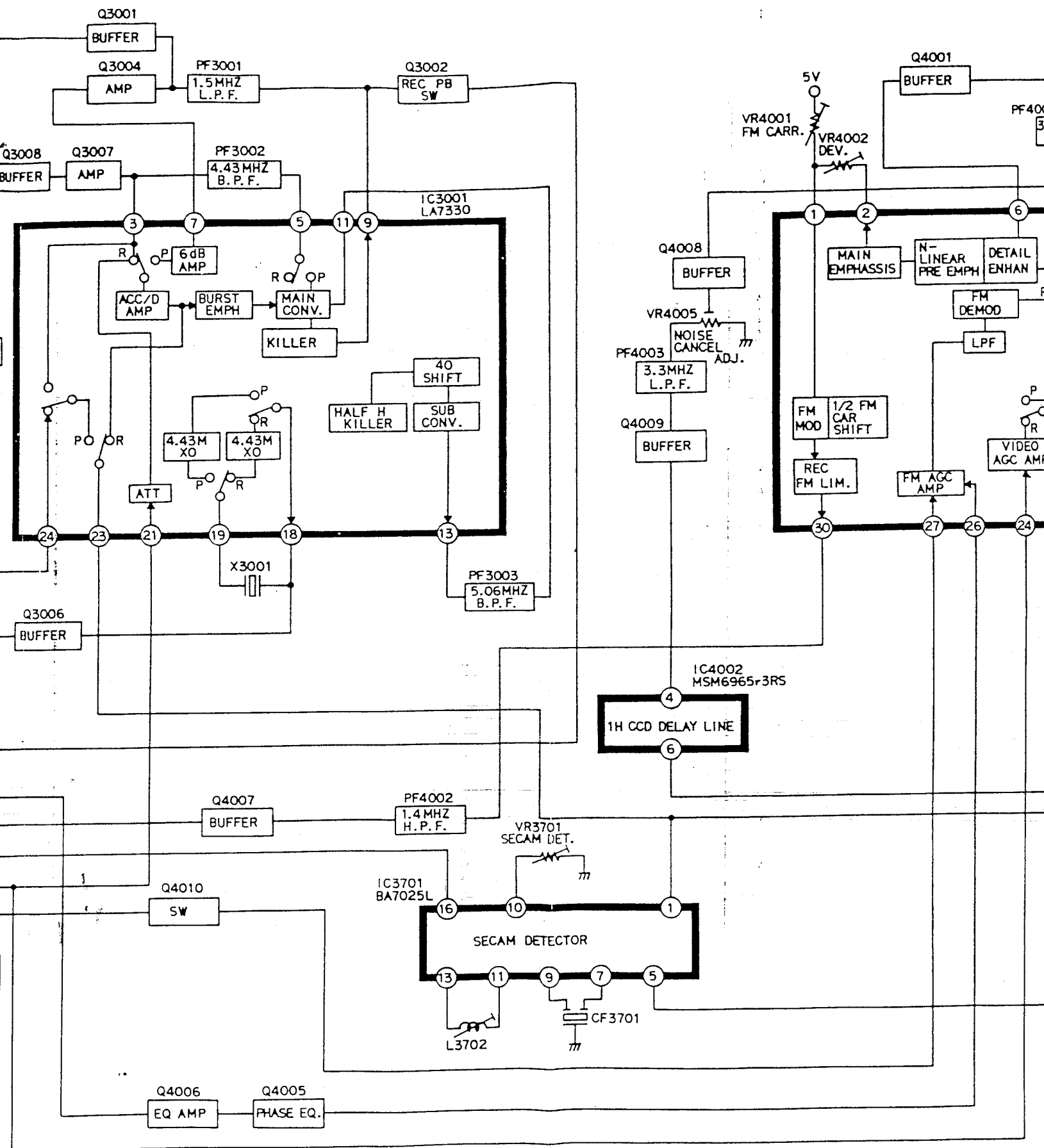
TV BLOCK DIAGRAM



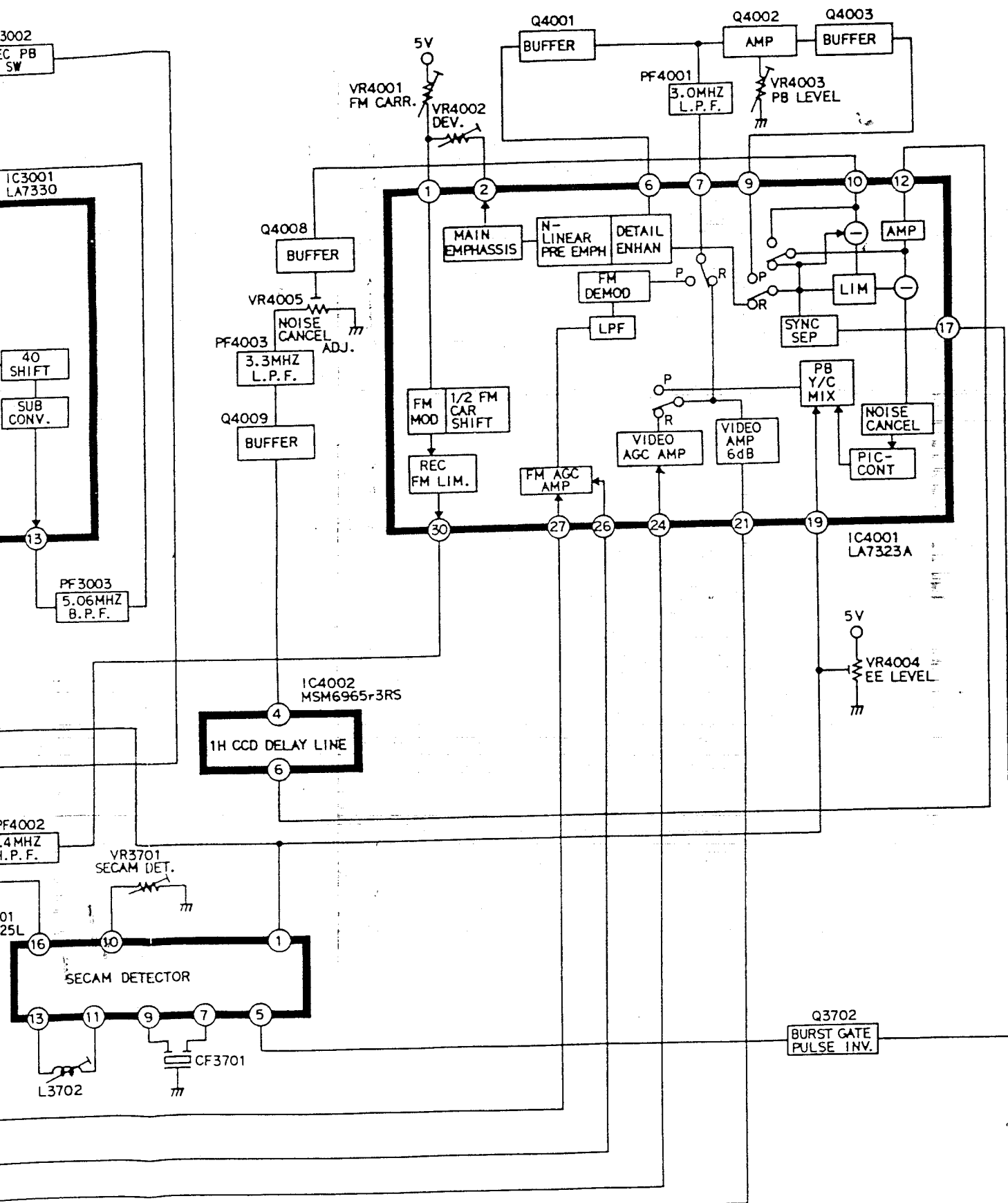
TV BLOCK DIAGRAM



Y.C. BLOCK DIAGRAM



C. BLOCK DIAGRAM



Y.C. BLOCK DIAGRAM

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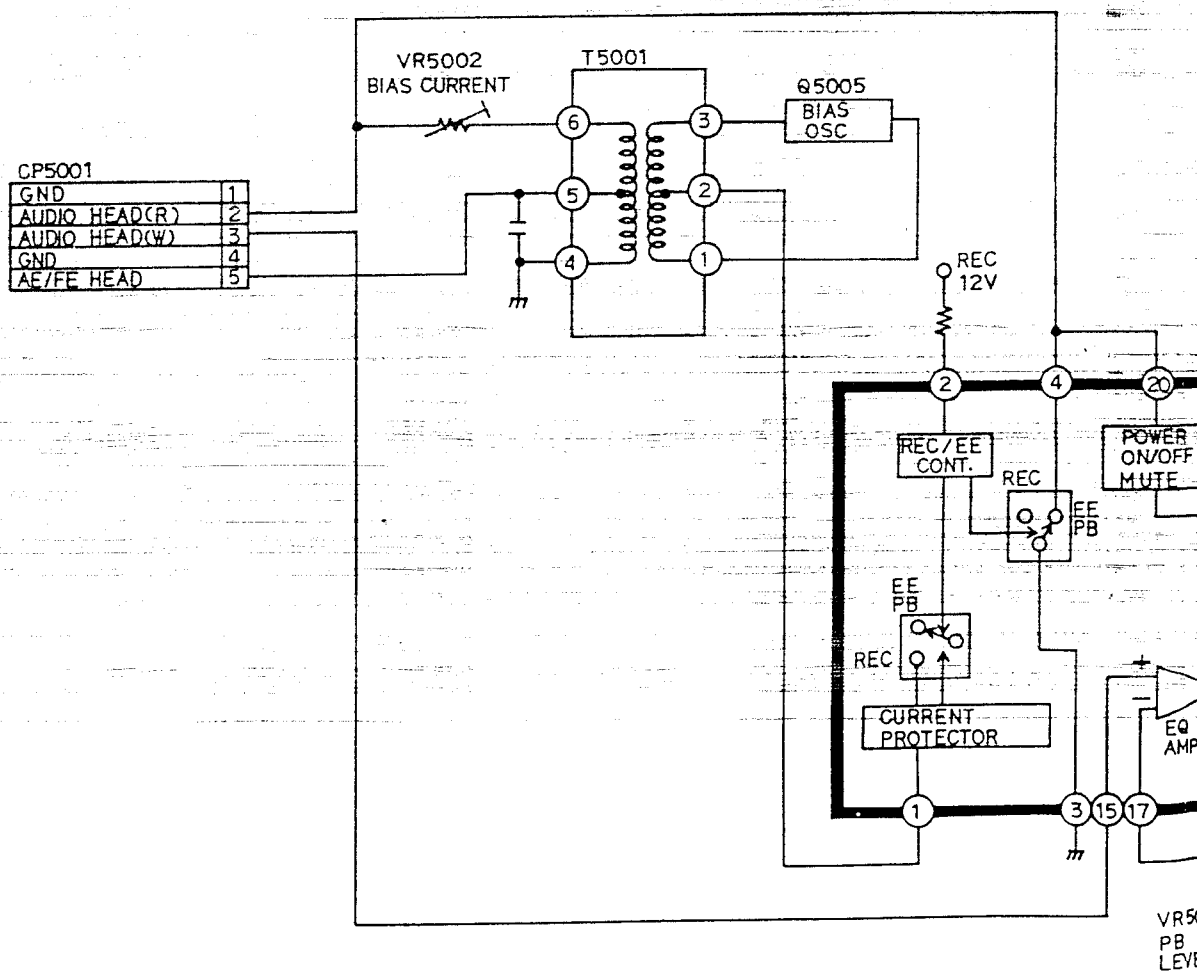
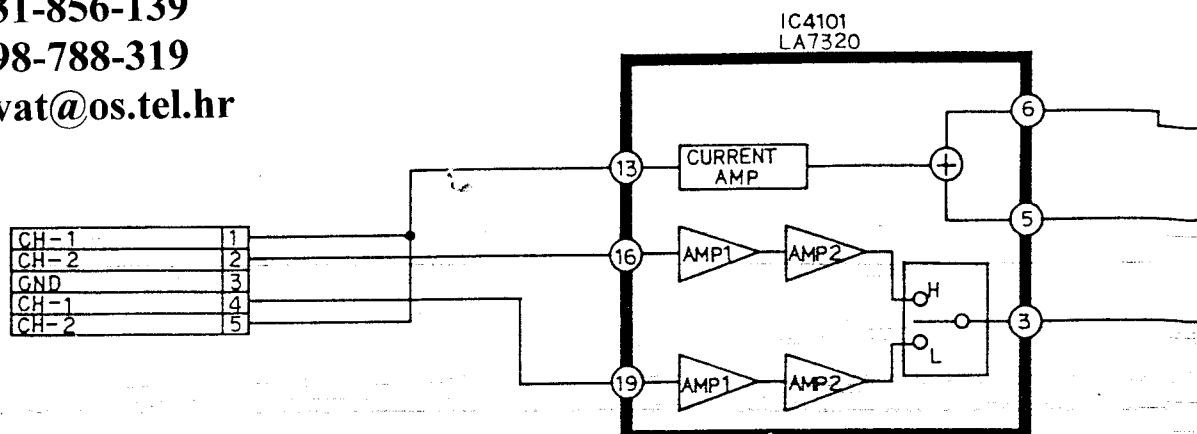
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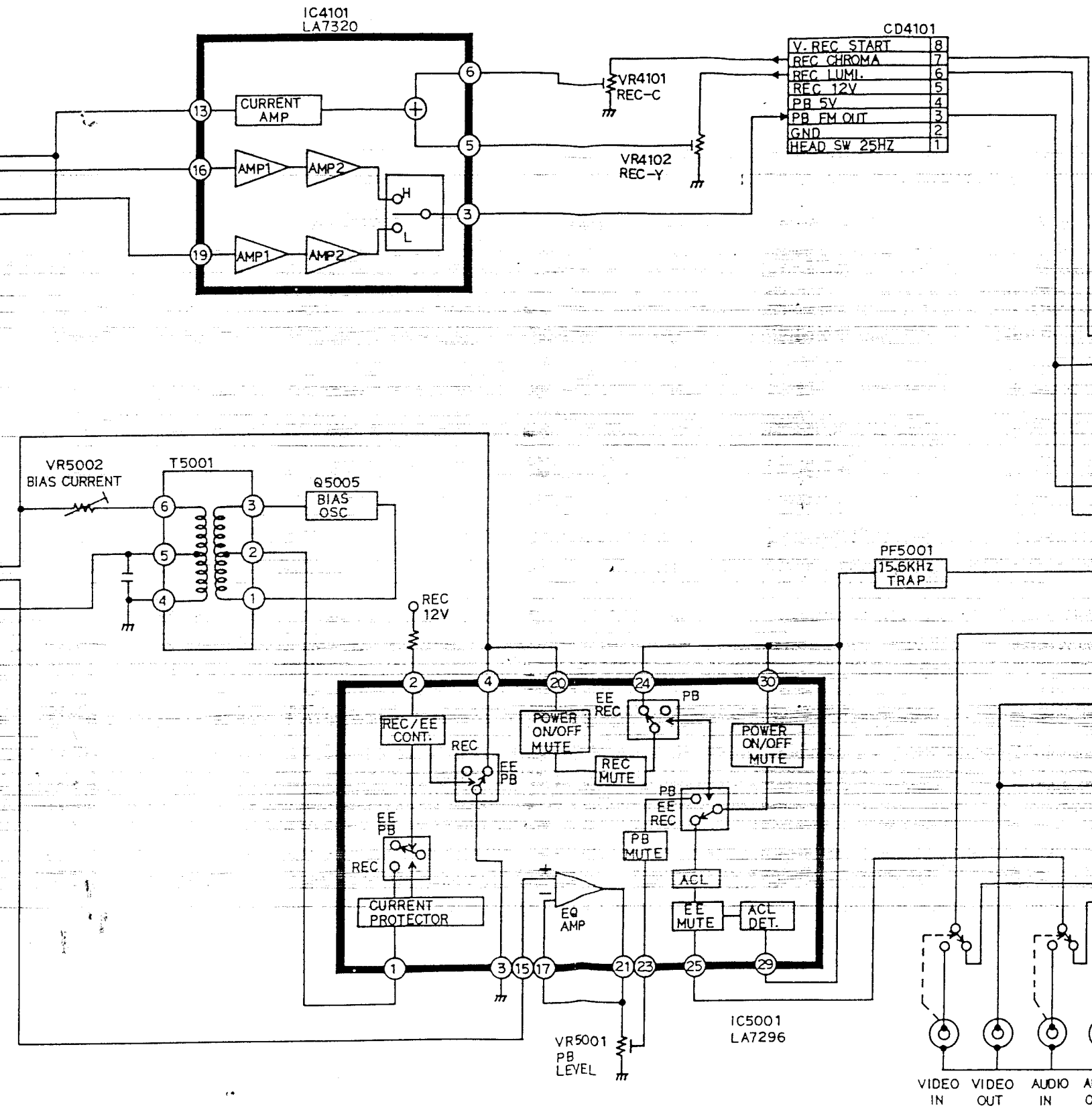
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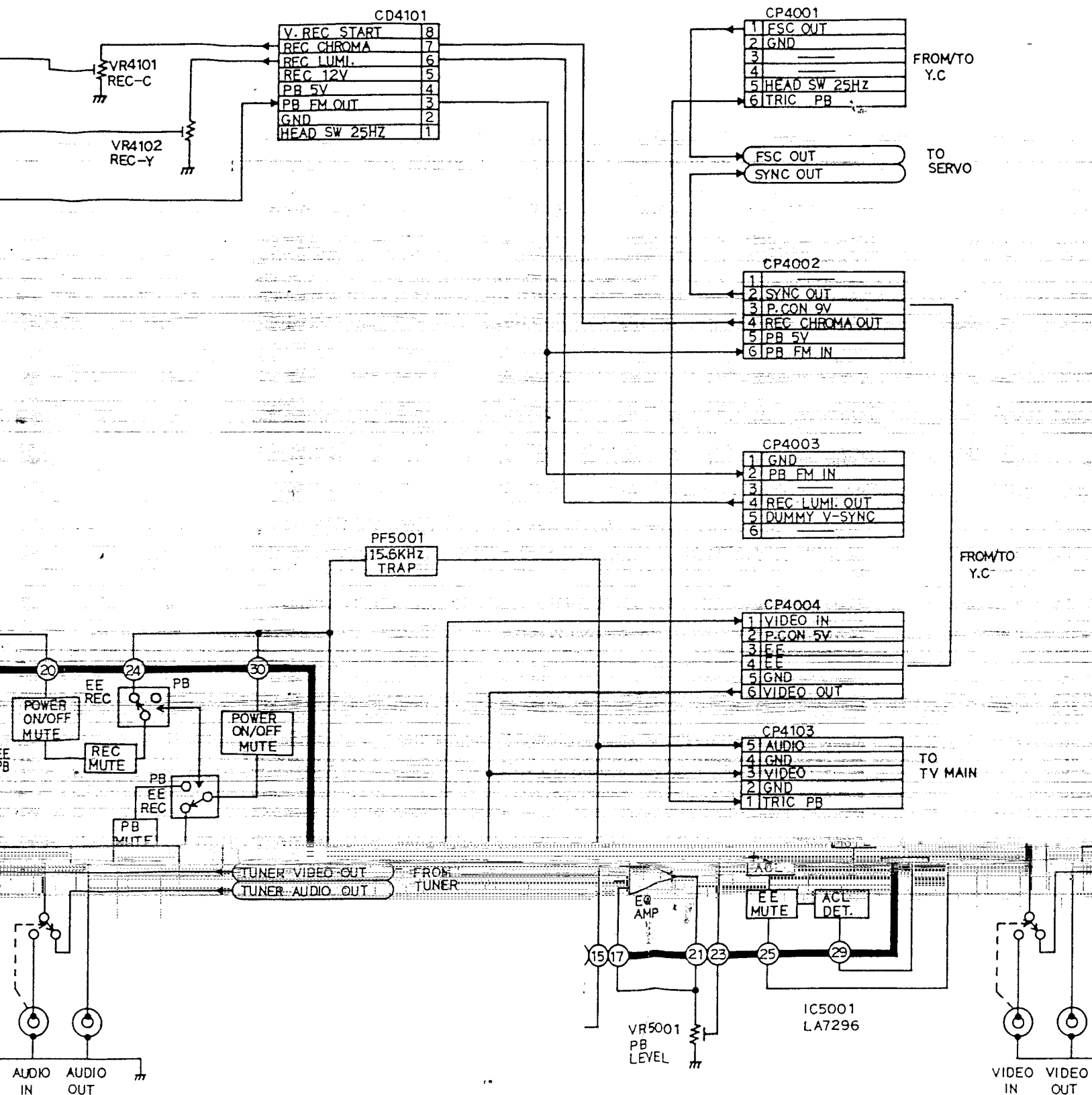
Y.C./HEAD AMP/AUD



Y.C./HEAD AMP/AUDIO BLOCK DIAGRAM



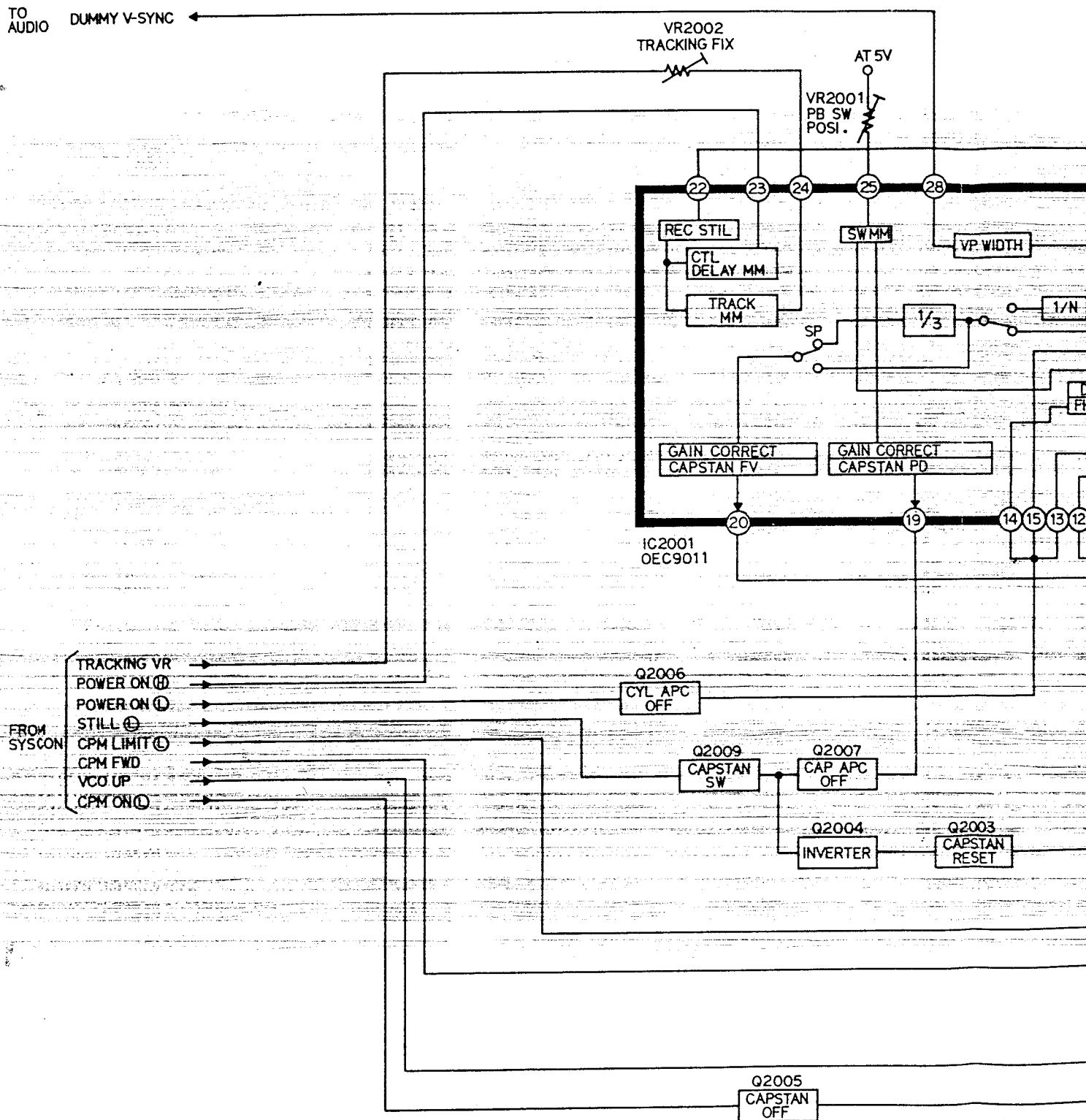
MP/AUDIO BLOCK DIAGRAM



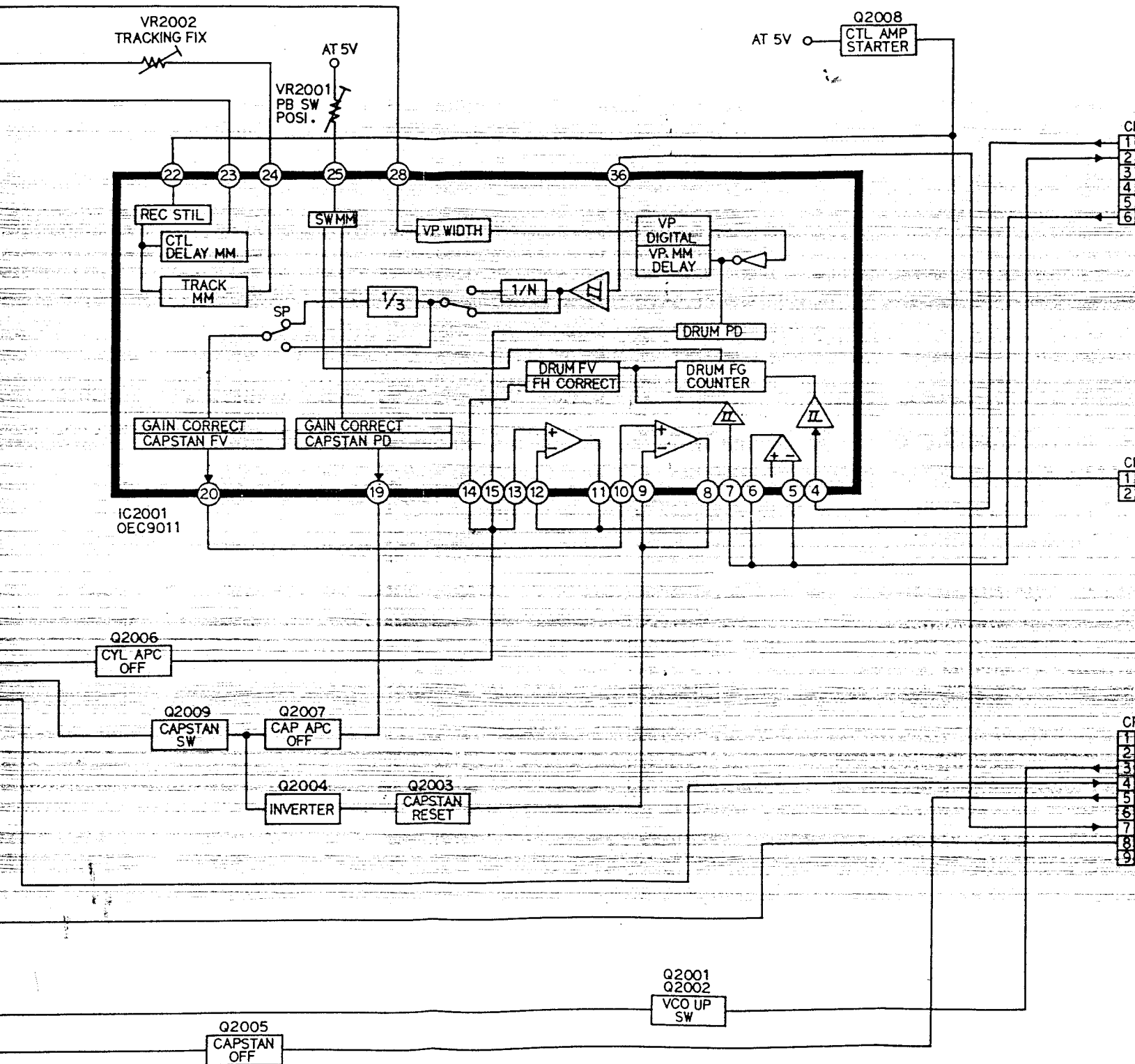
Y.C./HEAD AMP/AUDIO BLOCK DIAGRAM

2-3478

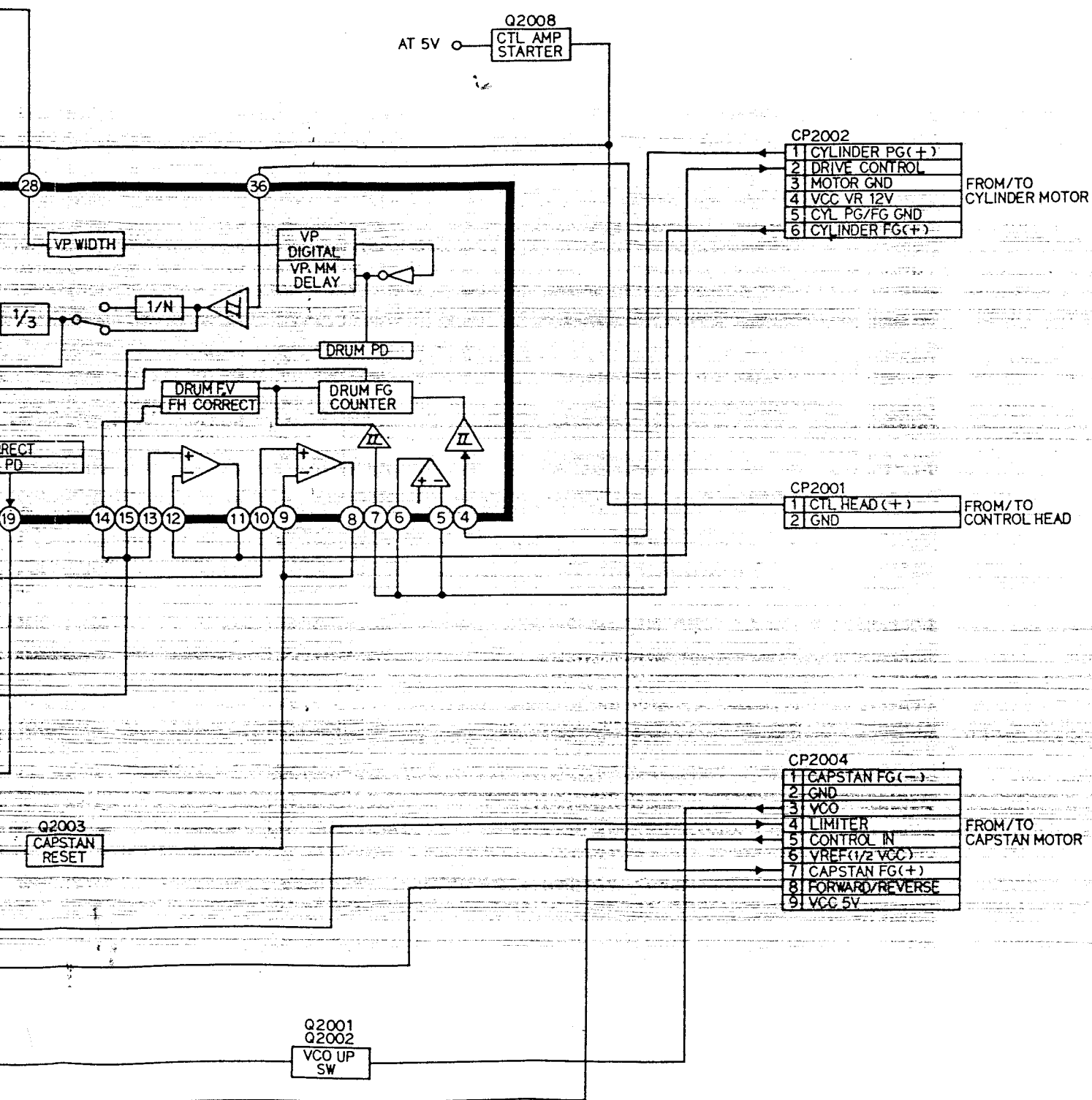
SERVO BLOCK DIAG



SERVO BLOCK DIAGRAM

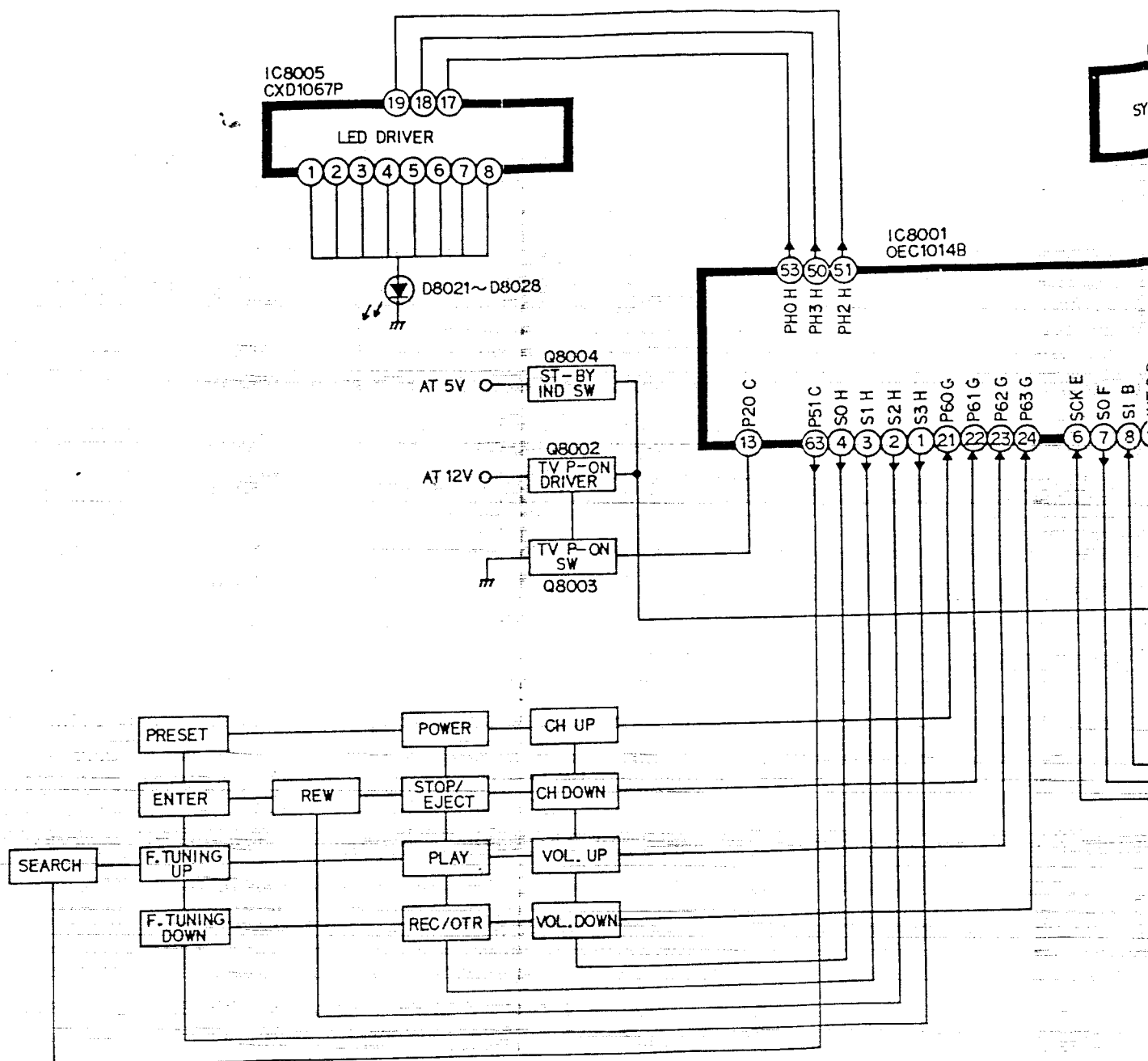


0 BLOCK DIAGRAM

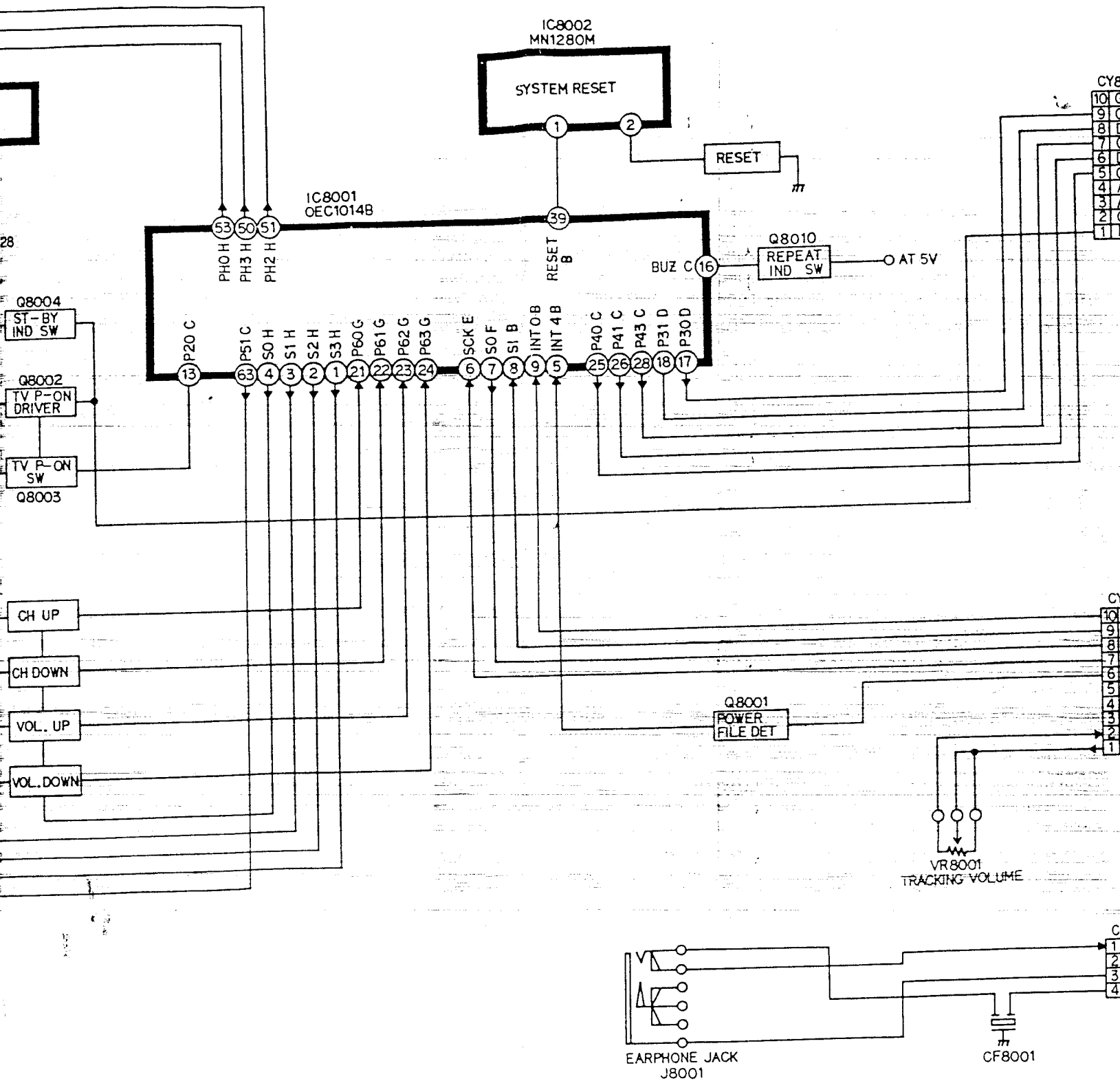


SERVO BLOCK DIAGRAM

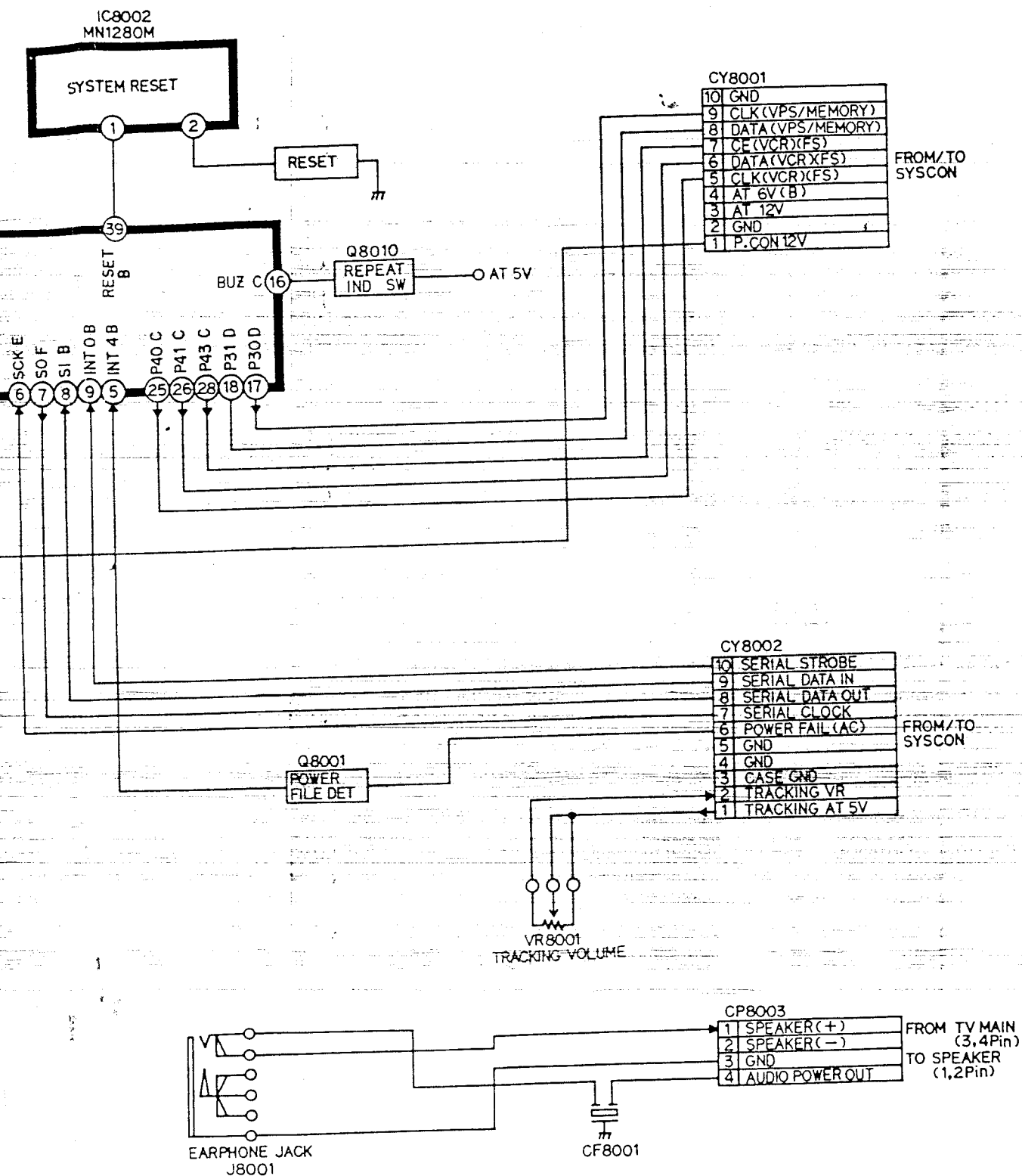
2-3426



OPERATION BLOCK DIAGRAM



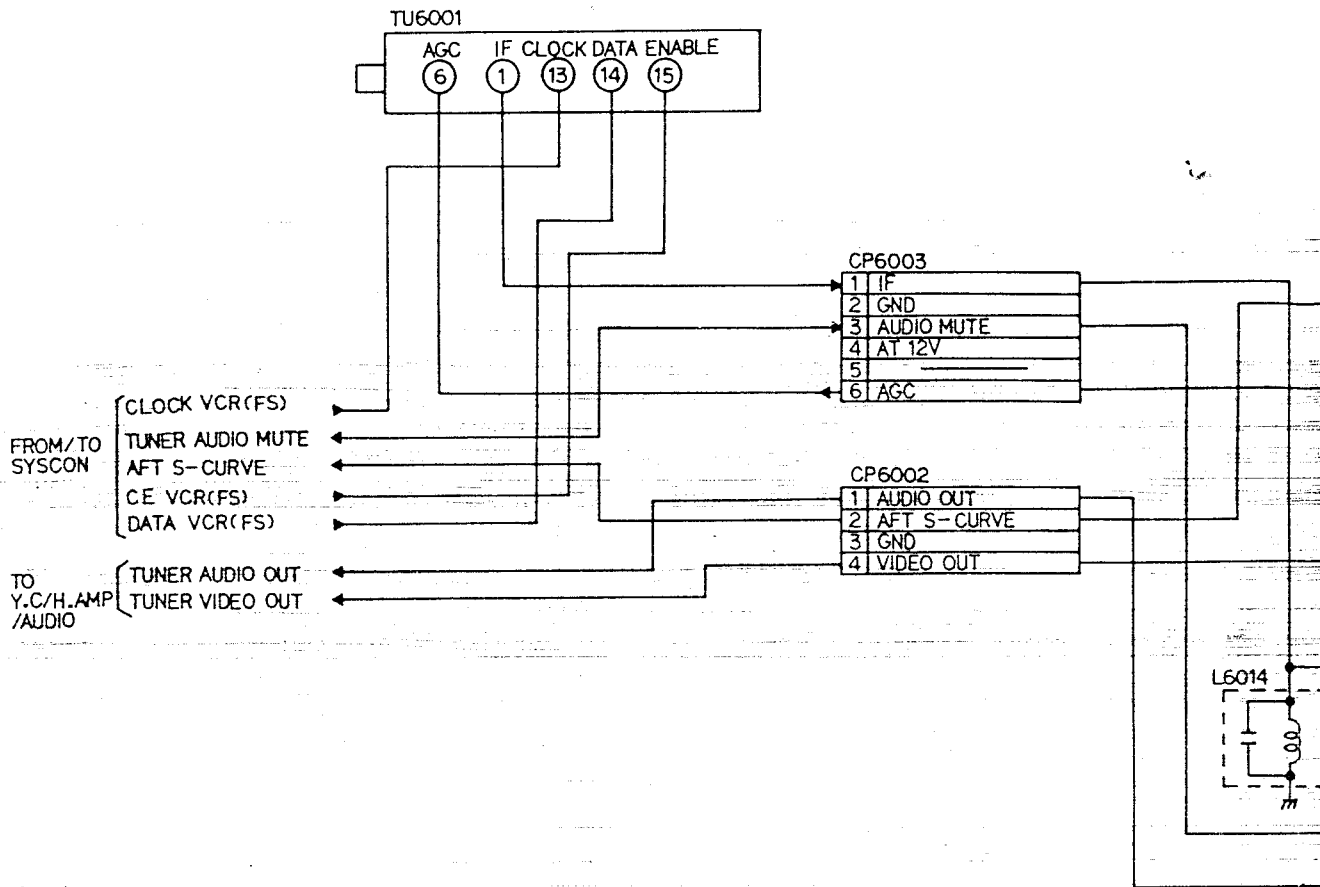
ION BLOCK DIAGRAM



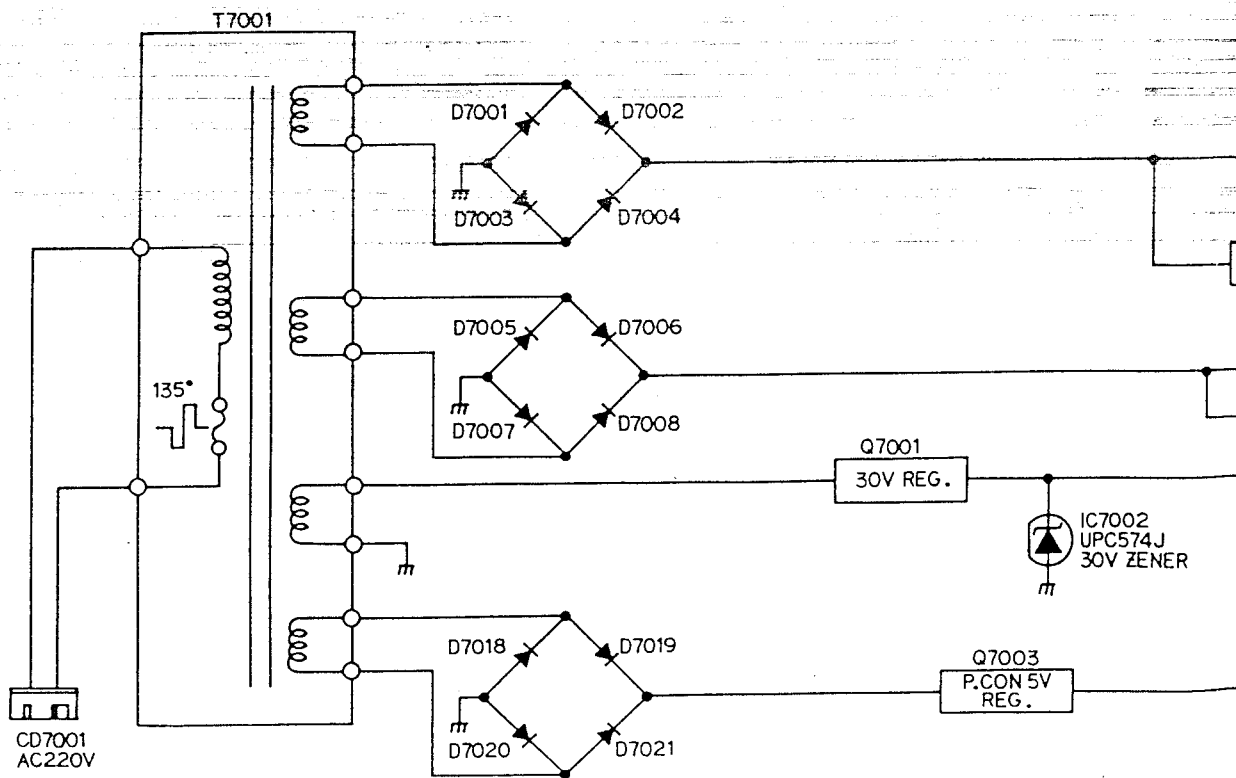
OPERATION BLOCK DIAGRAM

2-3477

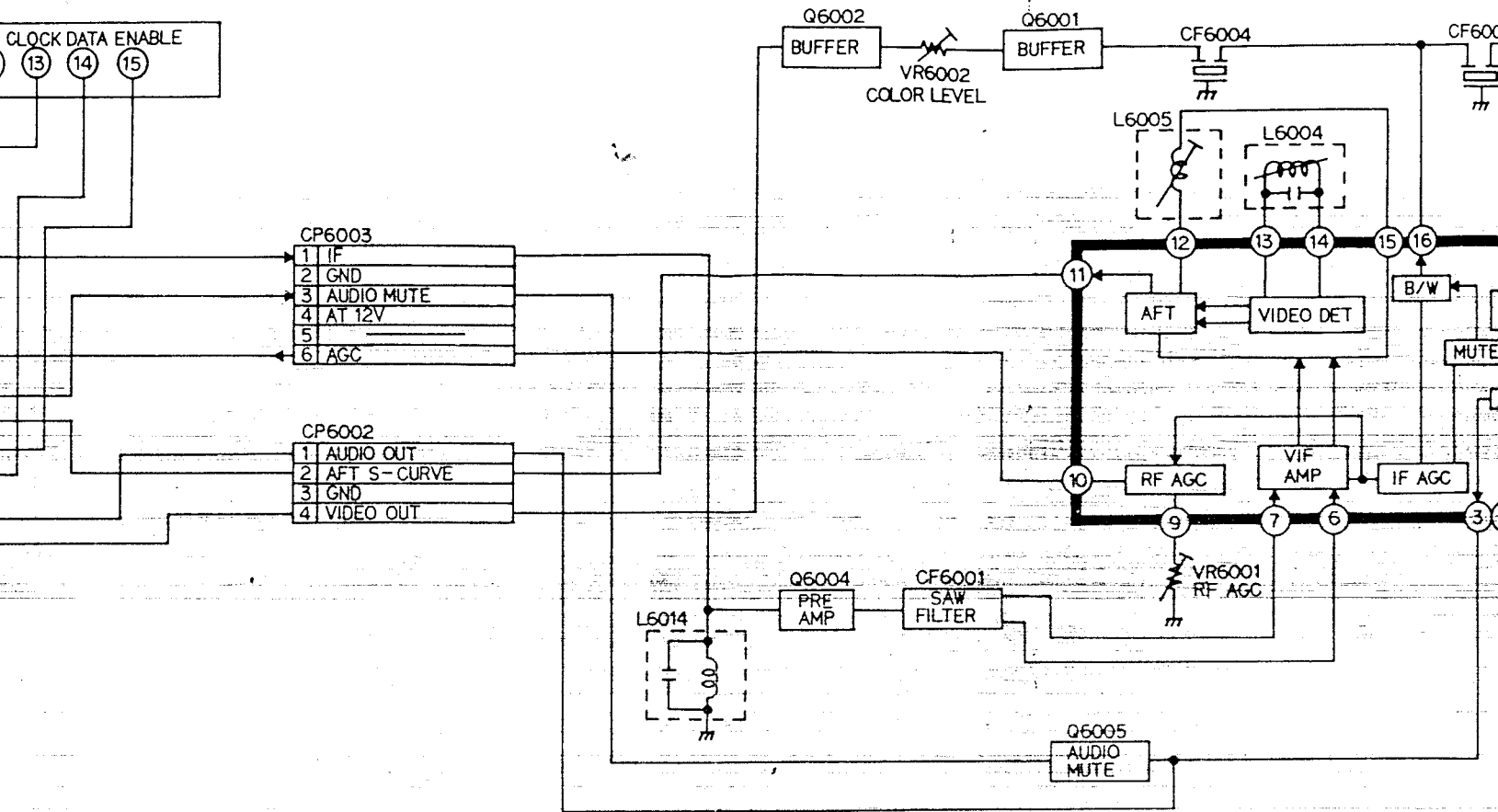
TUNER BLO



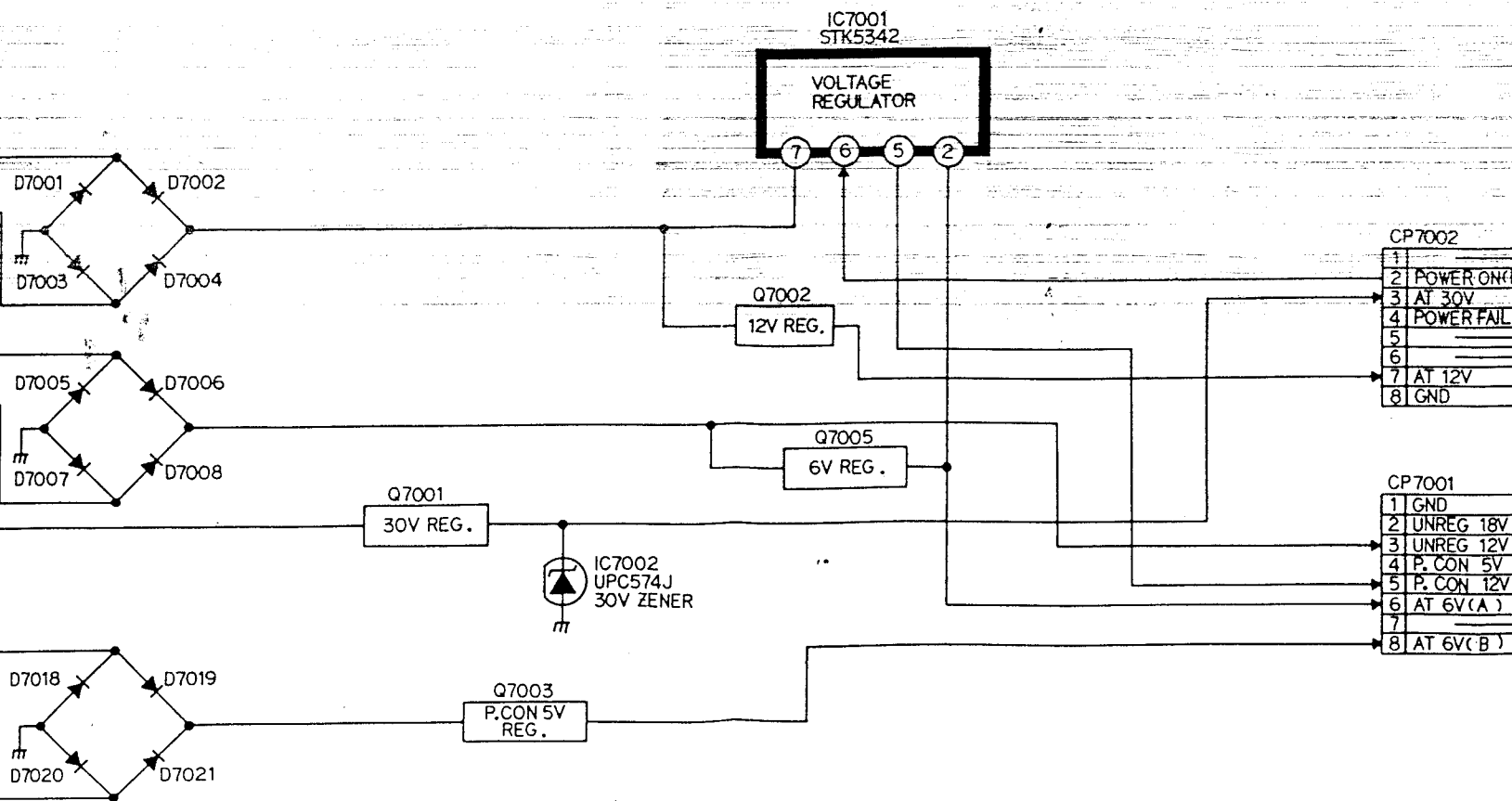
POWER SUPP



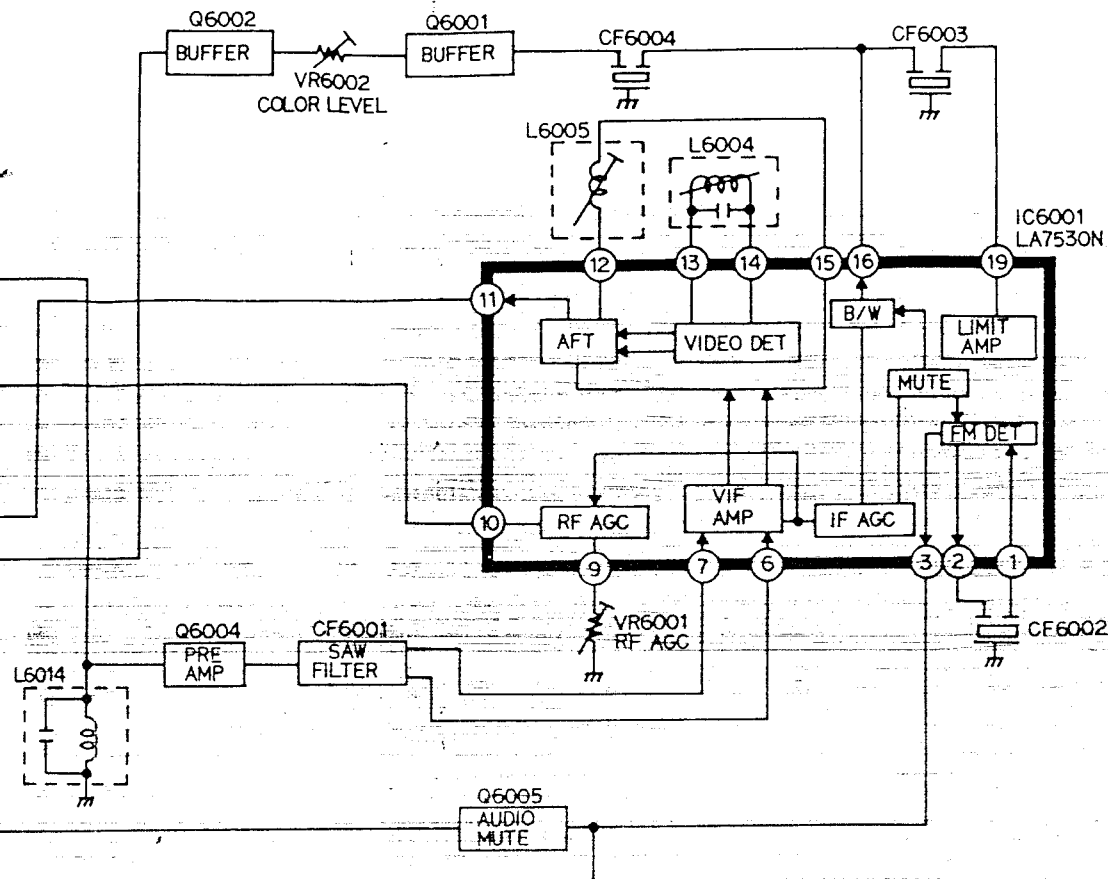
TUNER BLOCK DIAGRAM



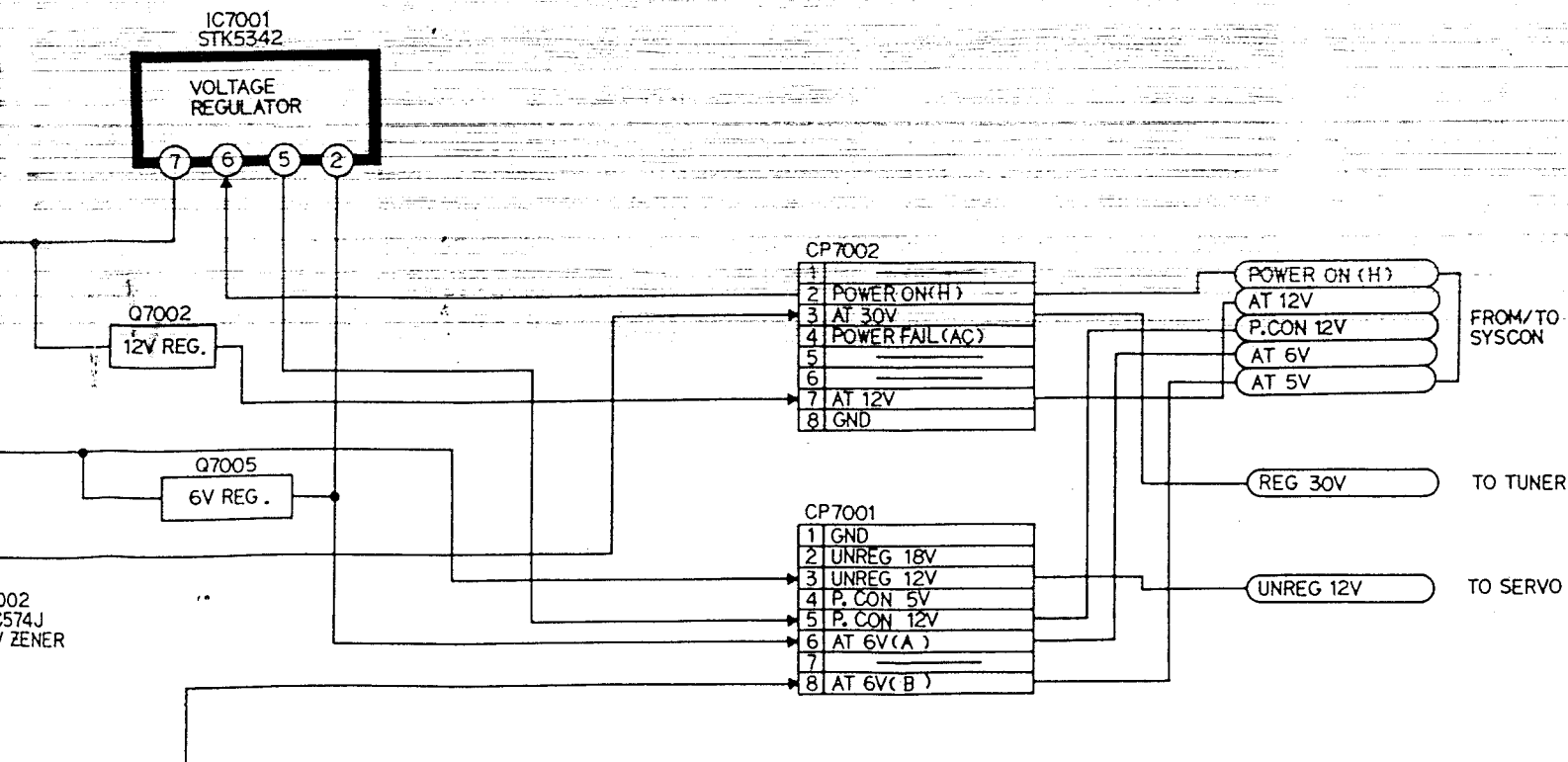
POWER SUPPLY BLOCK DIAGRAM



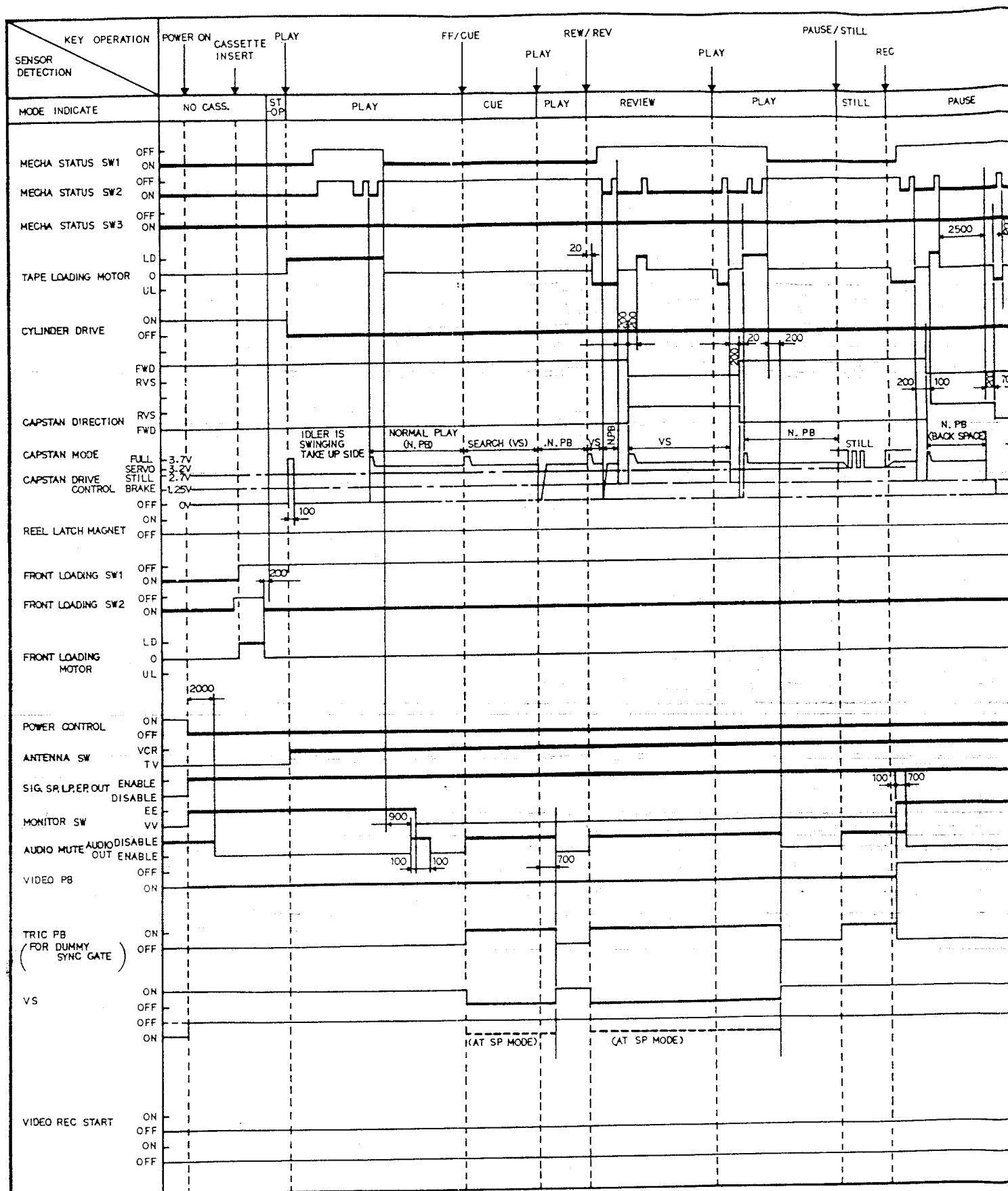
ER BLOCK DIAGRAM



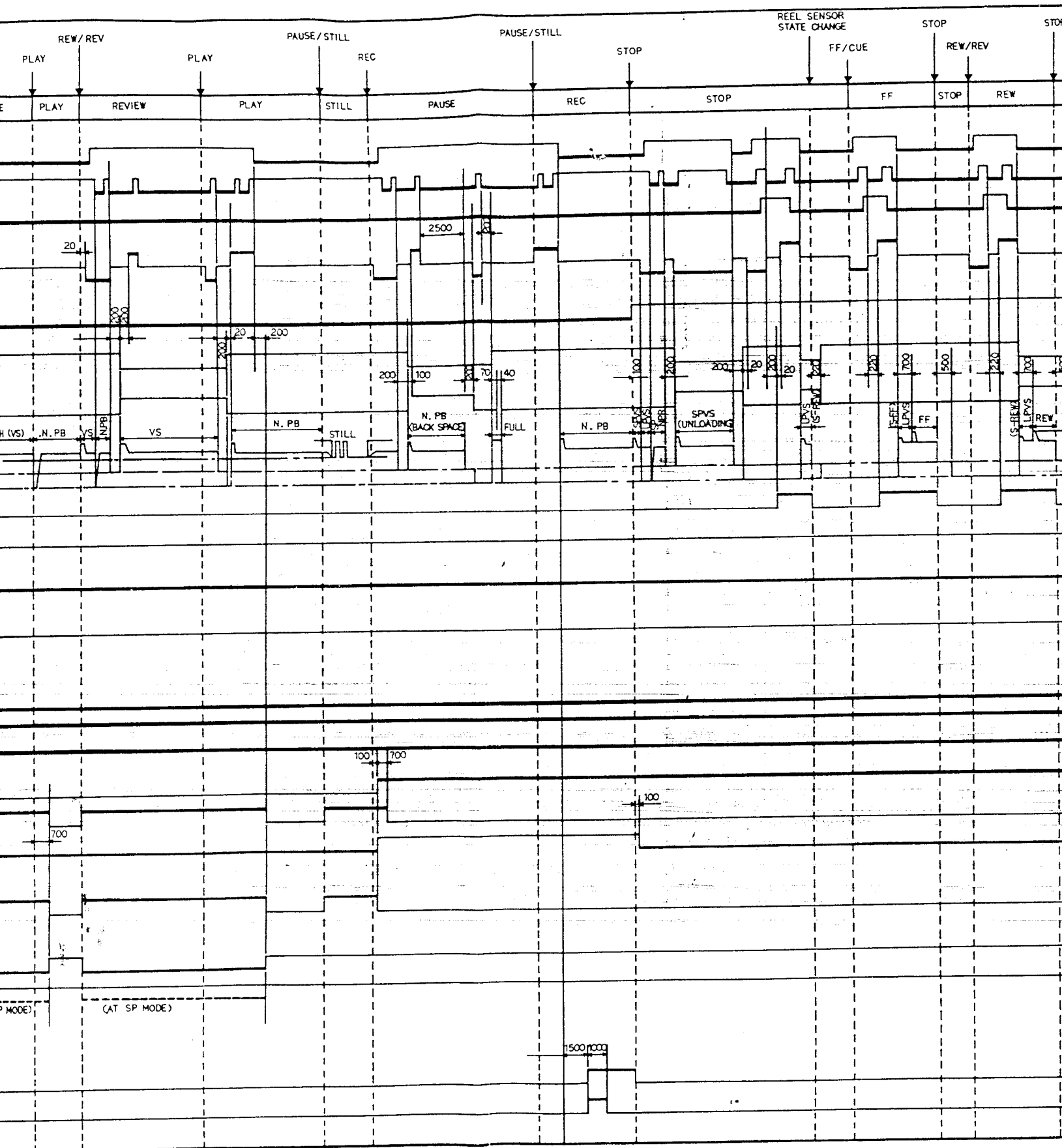
R SUPPLY BLOCK DIAGRAM



TIMING CHART



TIMING CHART



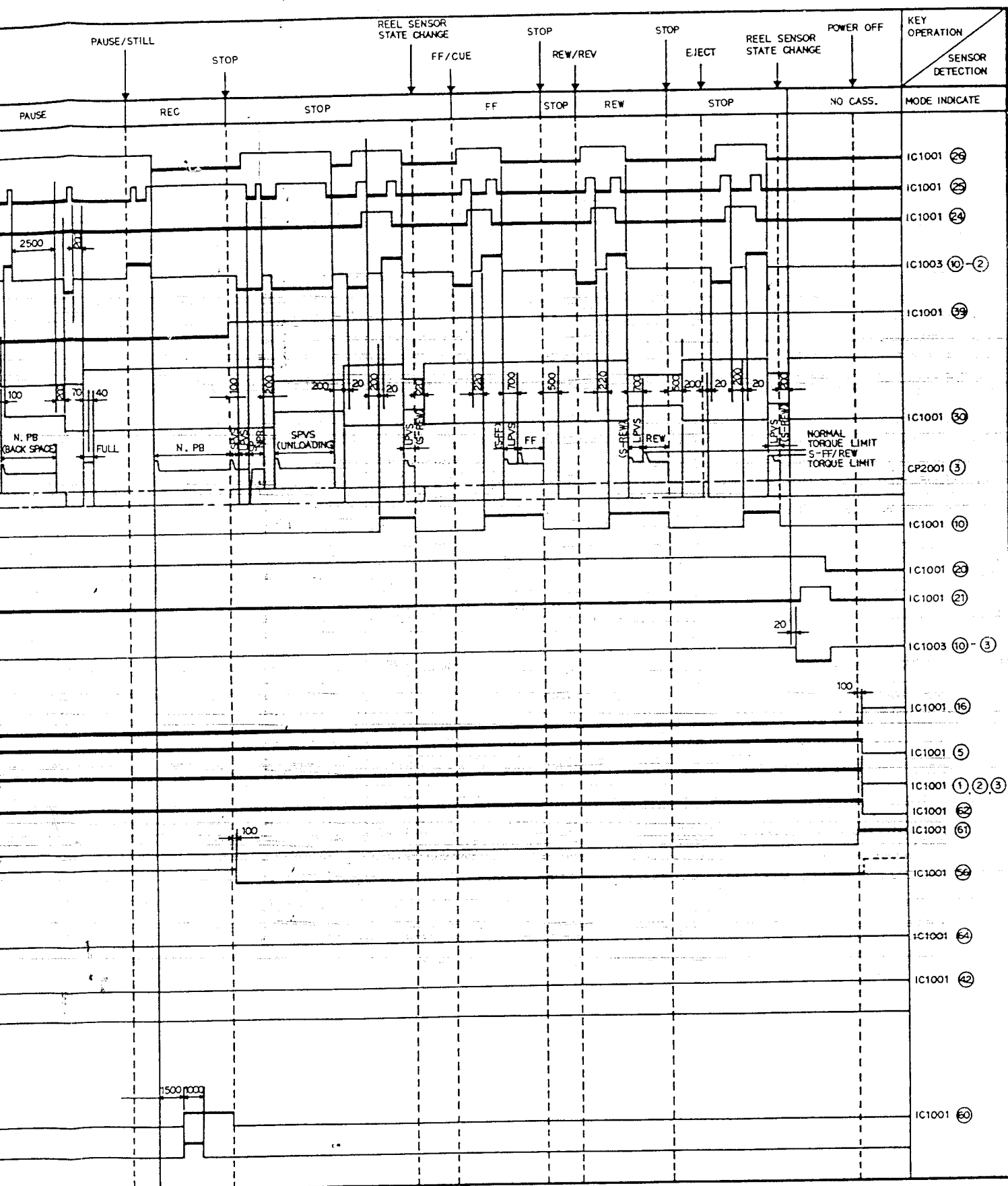
TIMING VALUES IN (ms)

TIMING VALUES IN
TIMING WAVEFORM:

INACTIVE SIDE

ACTIVE SIDE

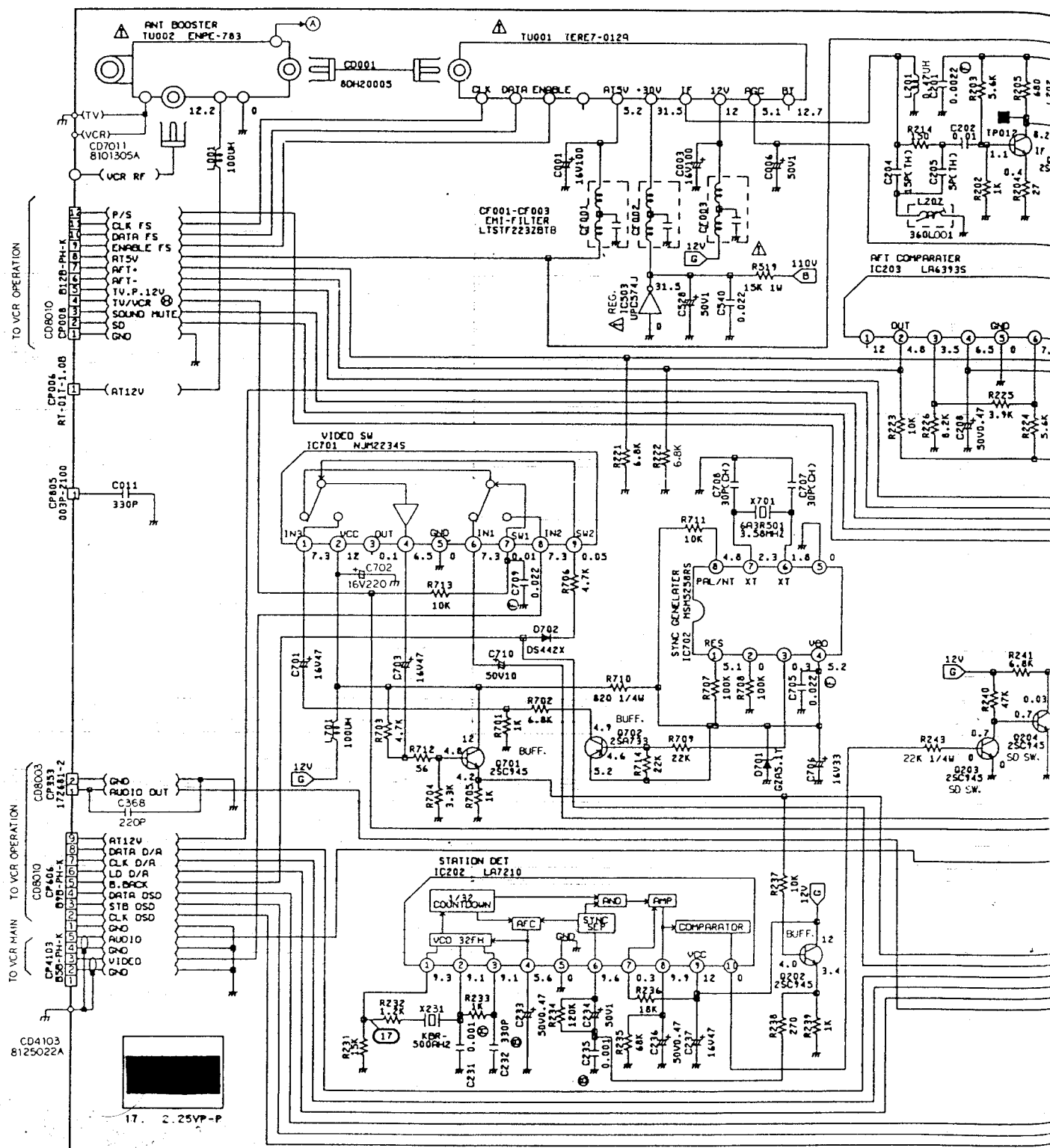
CHART



TIMING VALUES IN (ms) _____ INACTIVE SIDE
TIMING WAVEFORM: _____ ACTIVE SIDE

TIMING CHART

1-7009



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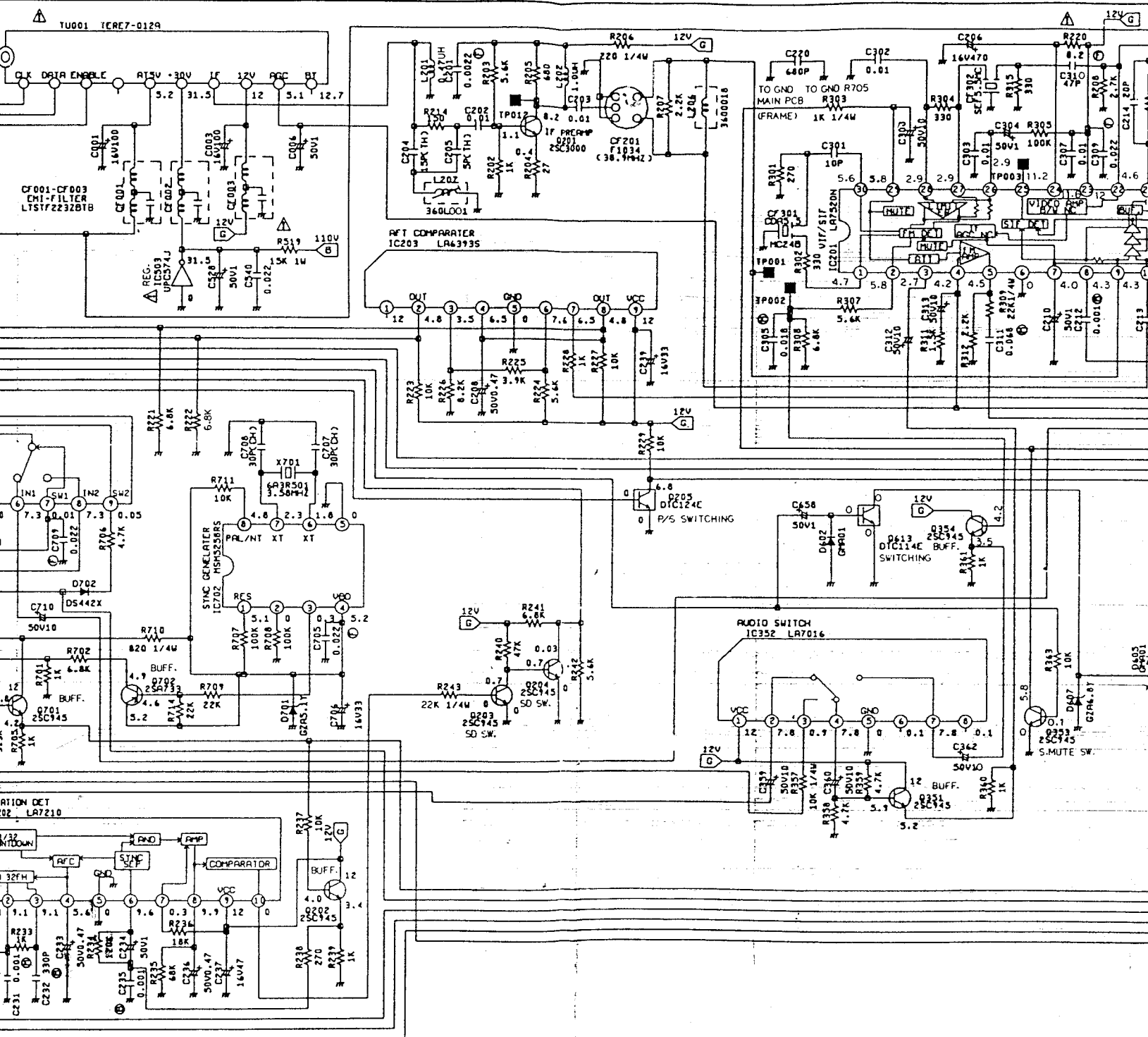
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CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION: LES PIÈCES REPARÉES PAR UN Δ ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMÉCLATURE DES PIÈCES.

TV MAIN SCHEMATIC DIAGRAM

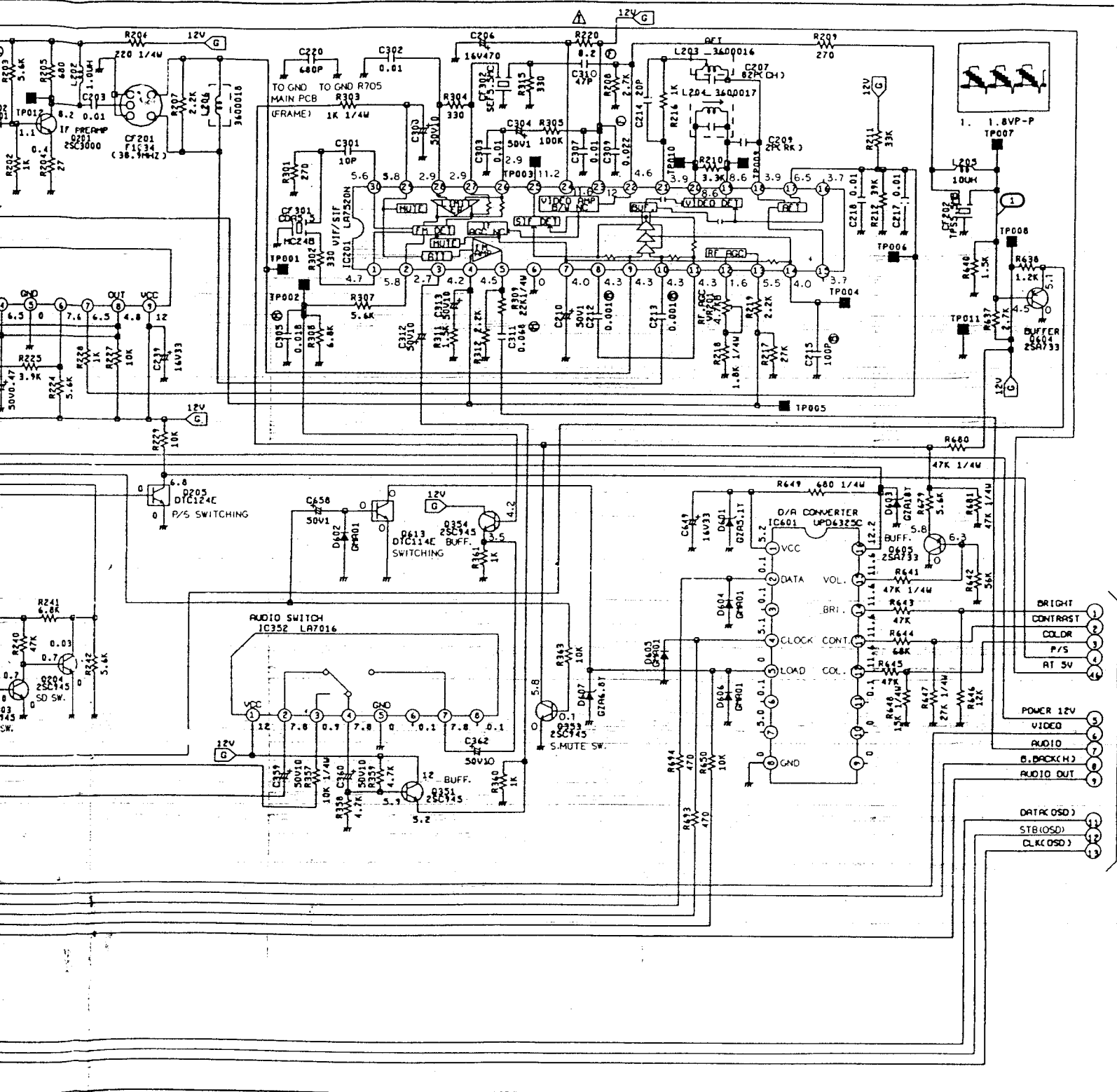


PARIS MARKED BY ARE
R SAFETY, USE ONES
N PARTS LIST ONLY.

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DANGEREUSES AU POINT DE VUE SÉCURITÉ
N'UTILISER QUE CELLES DÉCRITES
DANS LA NOMENCLATURE DES PIÉCES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

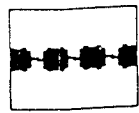
MAIN SCHEMATIC DIAGRAM



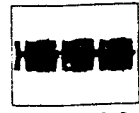
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

TV MAIN SCHEMATIC DIAGRAM

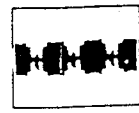
1-8592



2. 0.4VP-P



3. 0.15VP-P



4. 0.18VP-P



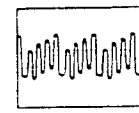
5. 0.76VP-P



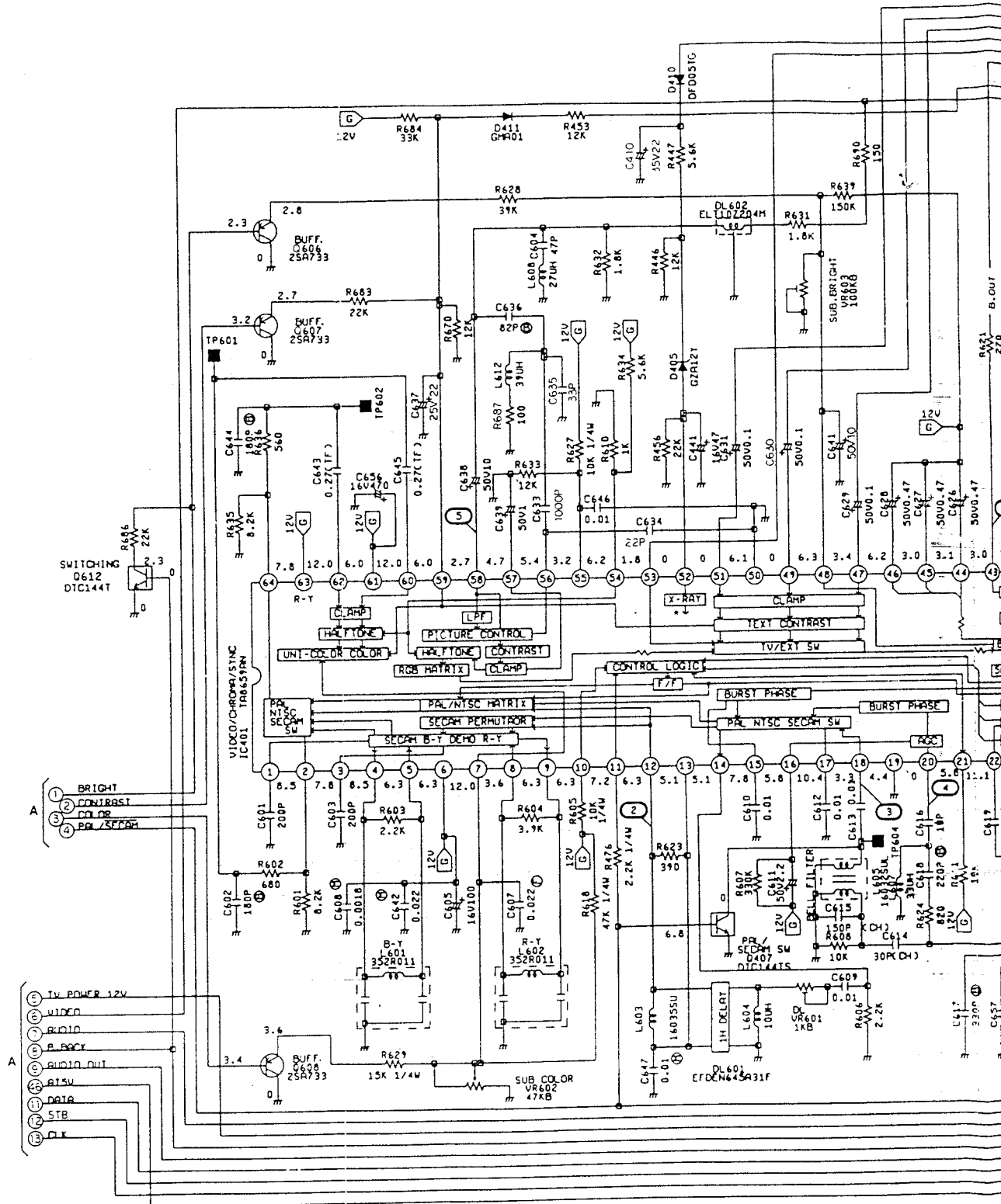
6. 3.3VP-P



7. 2.8VP-P



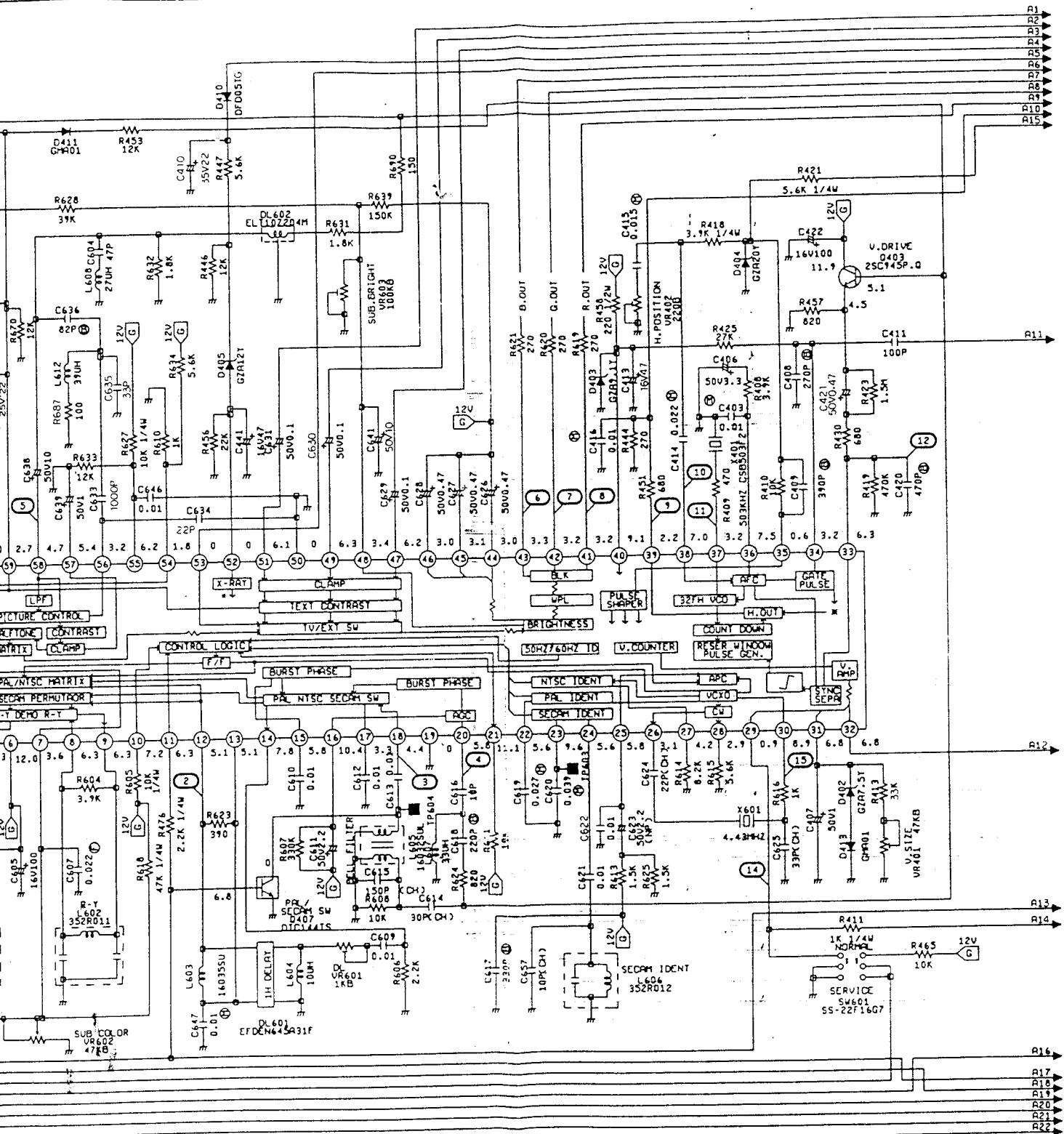
8. 3.8VP-P



CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

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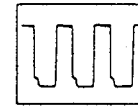
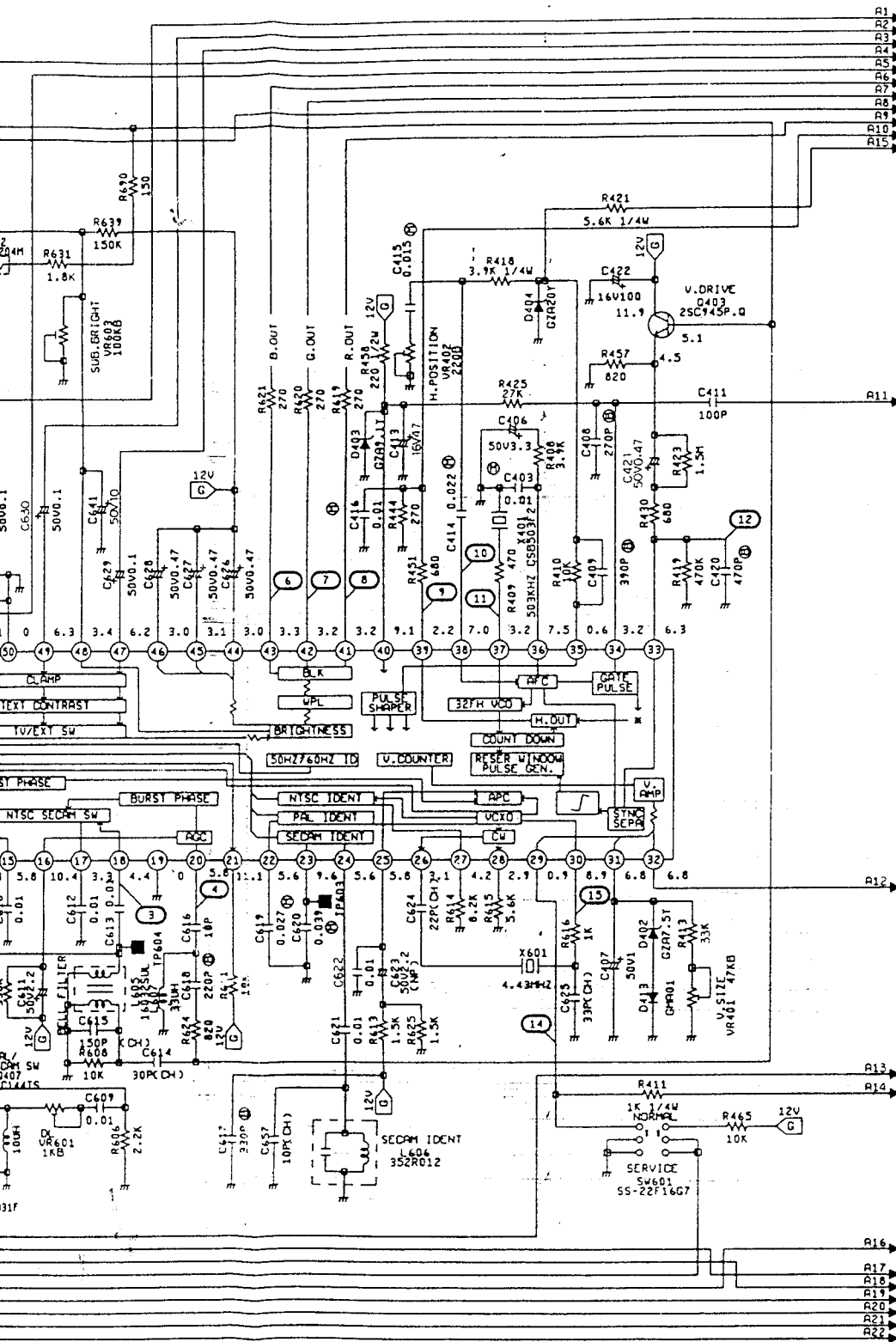
TV MAIN SCHEMATIC DIAGRAM



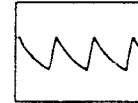
ATTENTION: LES PIÈCES RÉPARÉES PAR UN Δ ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMÉCLATURE DES PIÈCES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

TV MAIN SCHEMATIC DIAGRAM



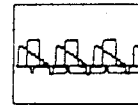
9. 5VP-P



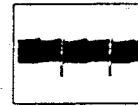
10. 2.9VP-P



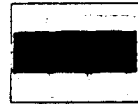
11. 0.44VP-P



12. 1.4VP-P



14. 1.6VP-P



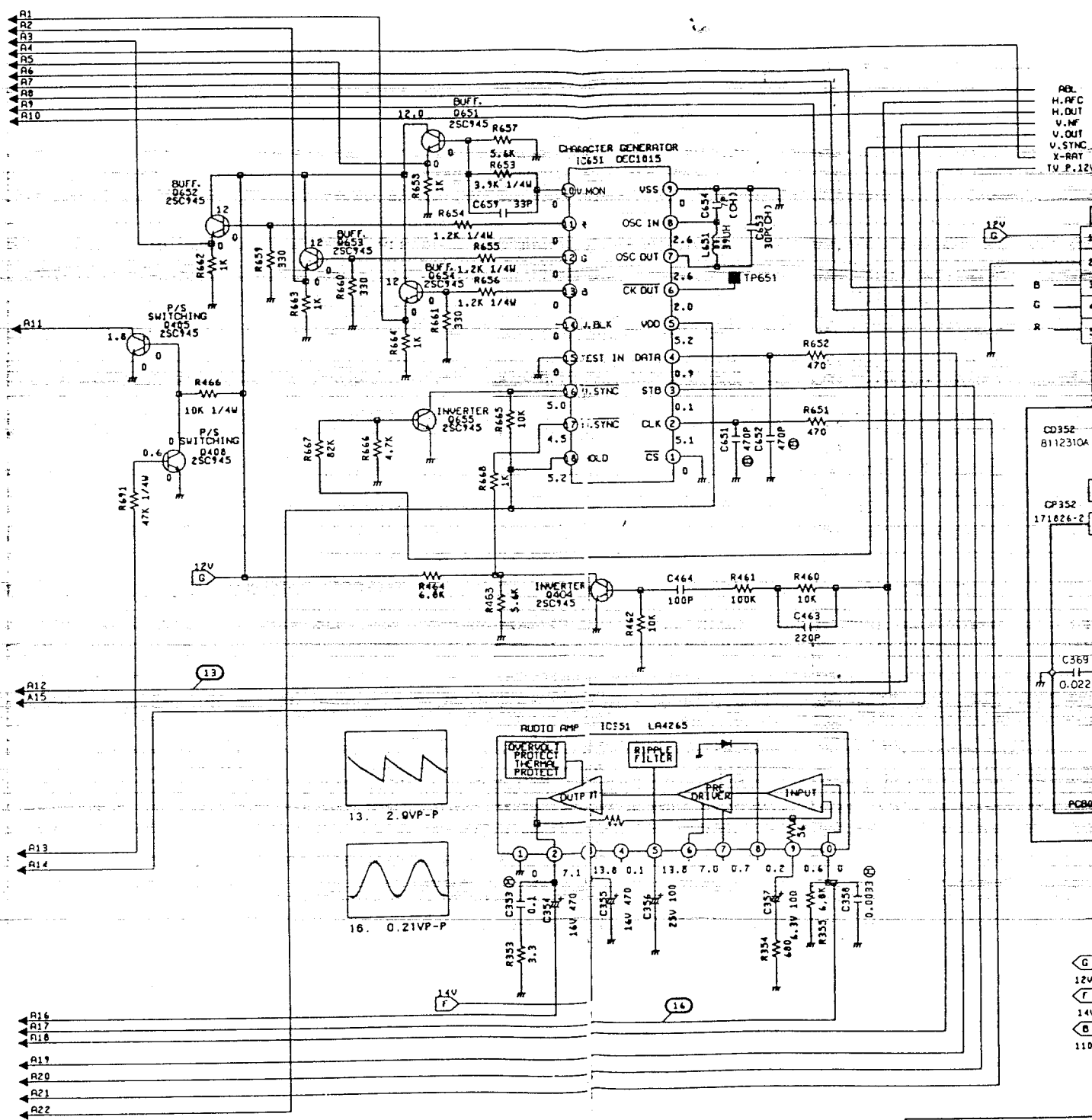
15. 2.3VP-P

REPARÉES PAR UN Δ ETANT
ES AN POINT DE VUE SECURITE
R QUE CELLS DECRITES
CHENLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

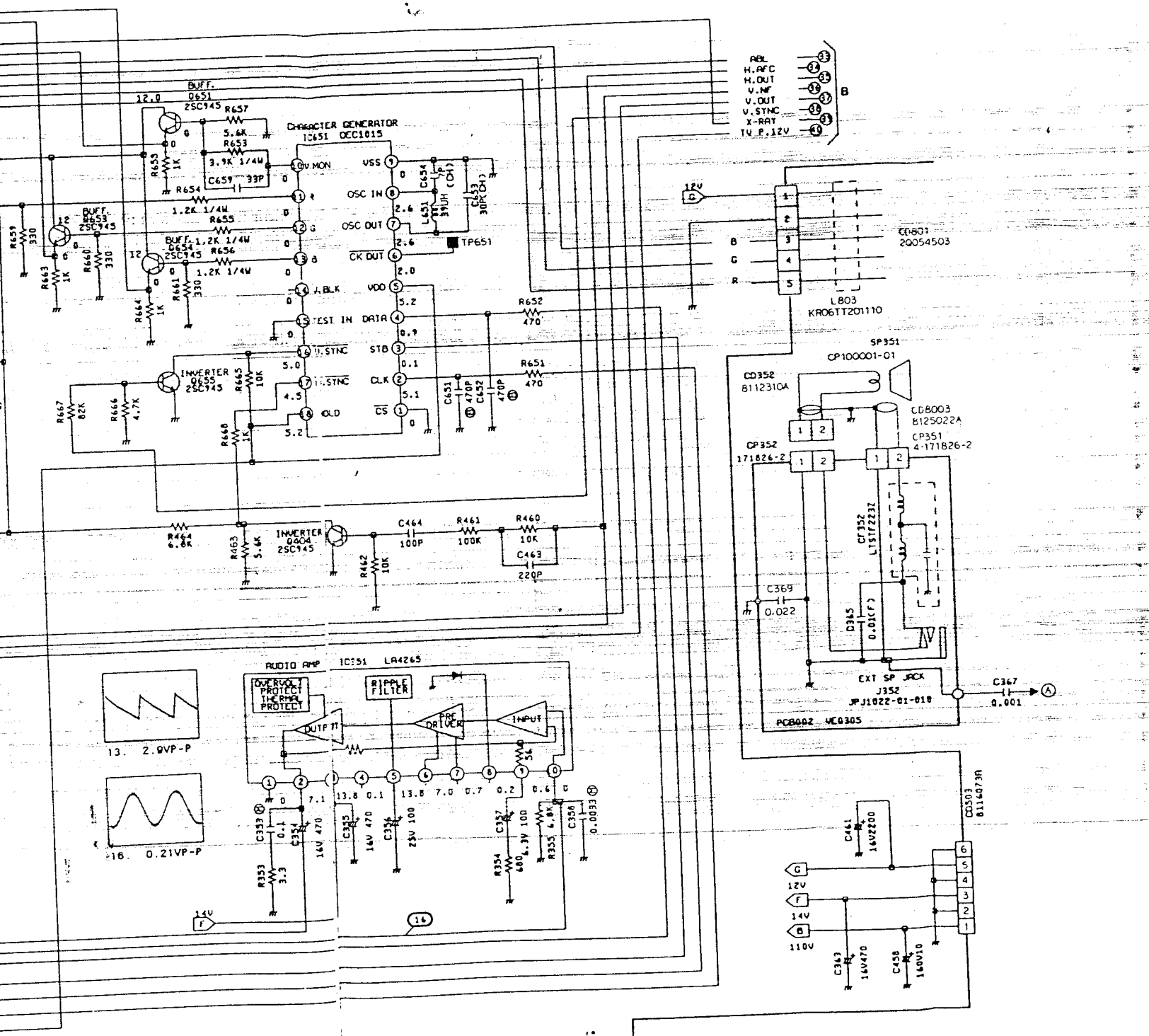
TV MAIN SCHEMATIC DIAGRAM

TV MAIN SCHEMATIC DIAGRAM



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TV MAIN SCHEMATIC DIAGRAM

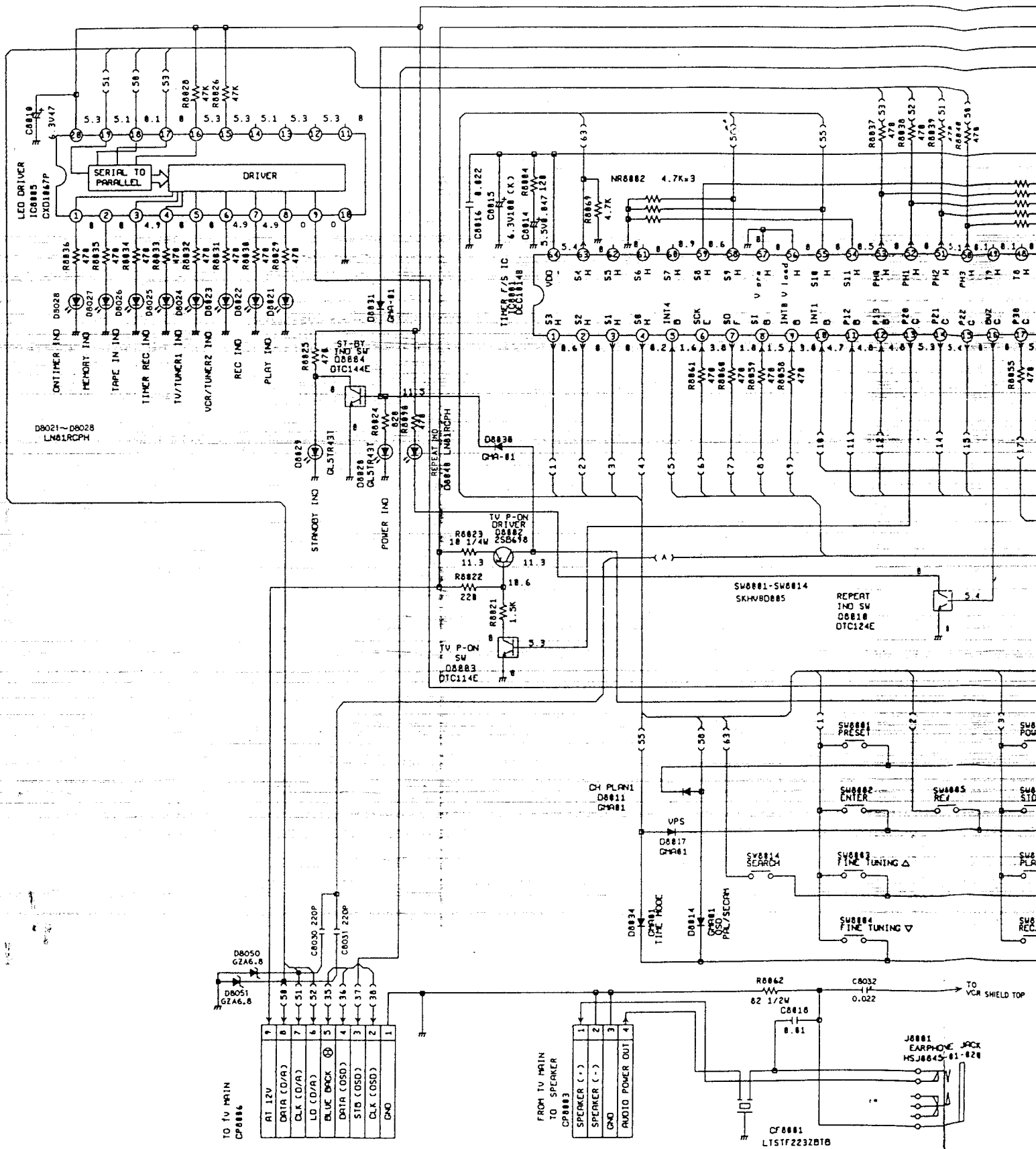


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

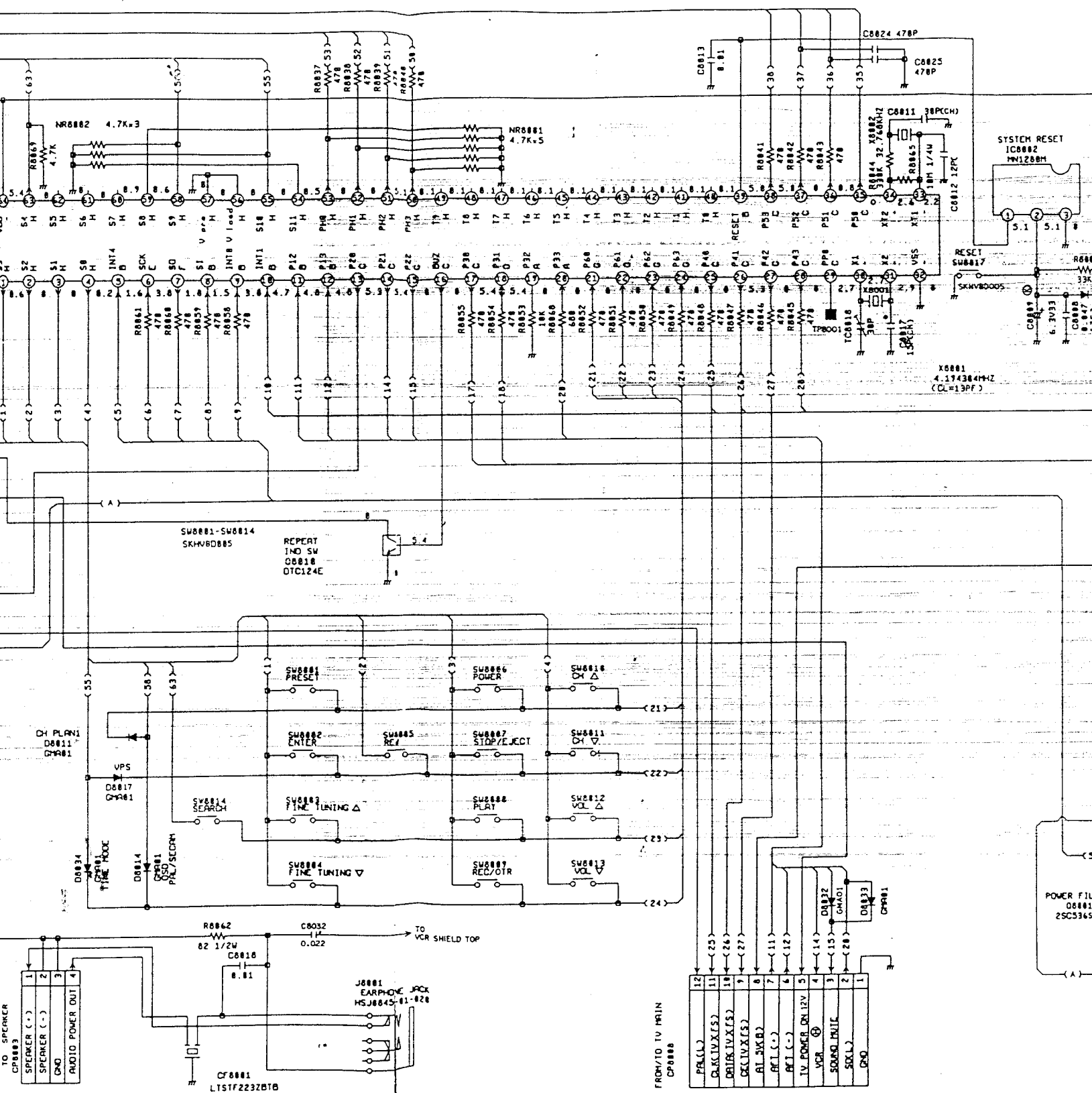
TV MAIN SCHEMATIC DIAG
1-8450

1-8450

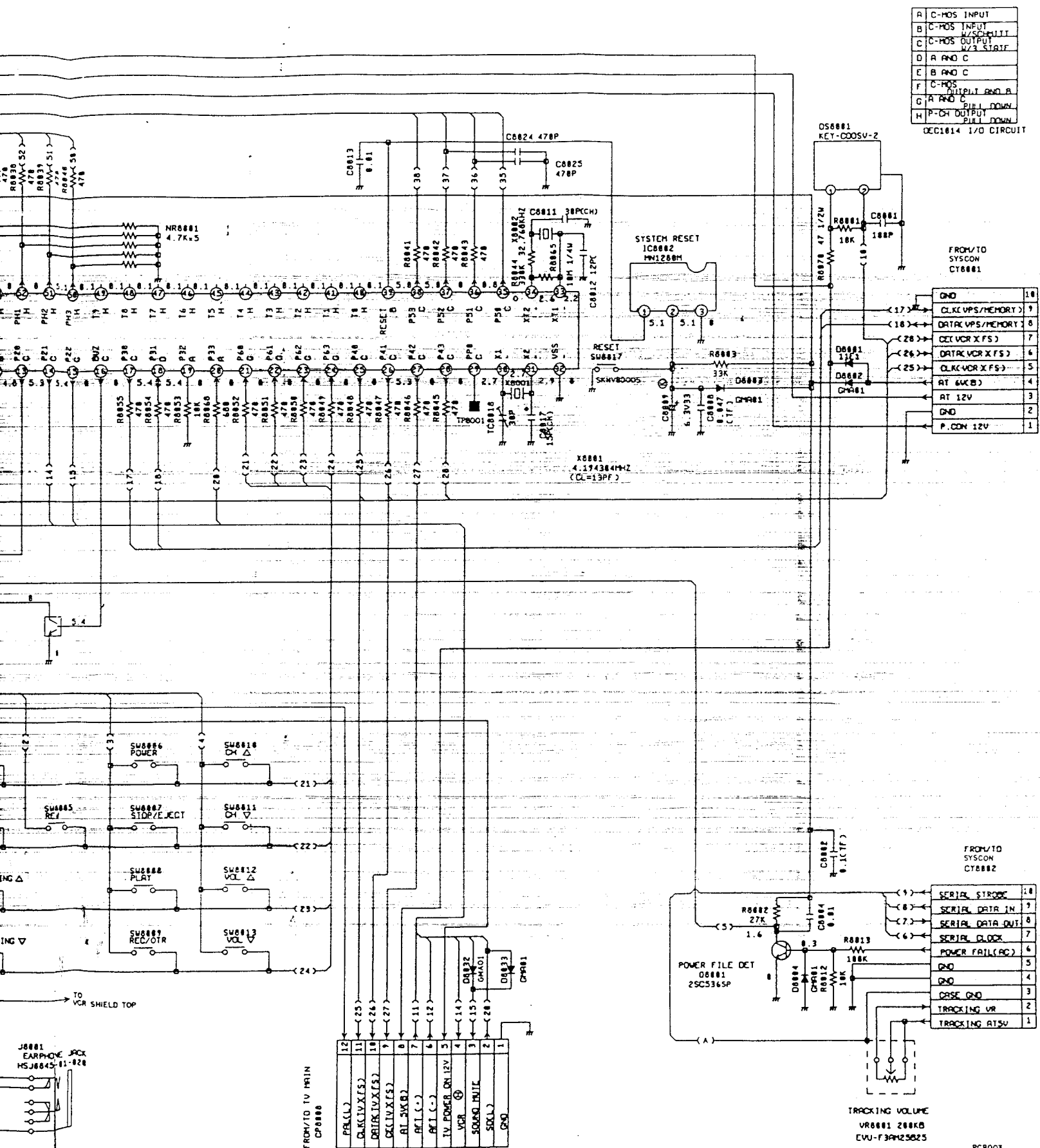
OPERATION SCHEMATIC



OPERATION SCHEMATIC DIAGRAM



N SCHEMATIC DIAGRAM

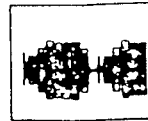


OPERATION SCHEMATIC DIAGRAM

1-8587



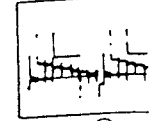
IC3001 (9) REC
0.84VP-P



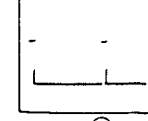
IC3001 (24)
0.025VP-P



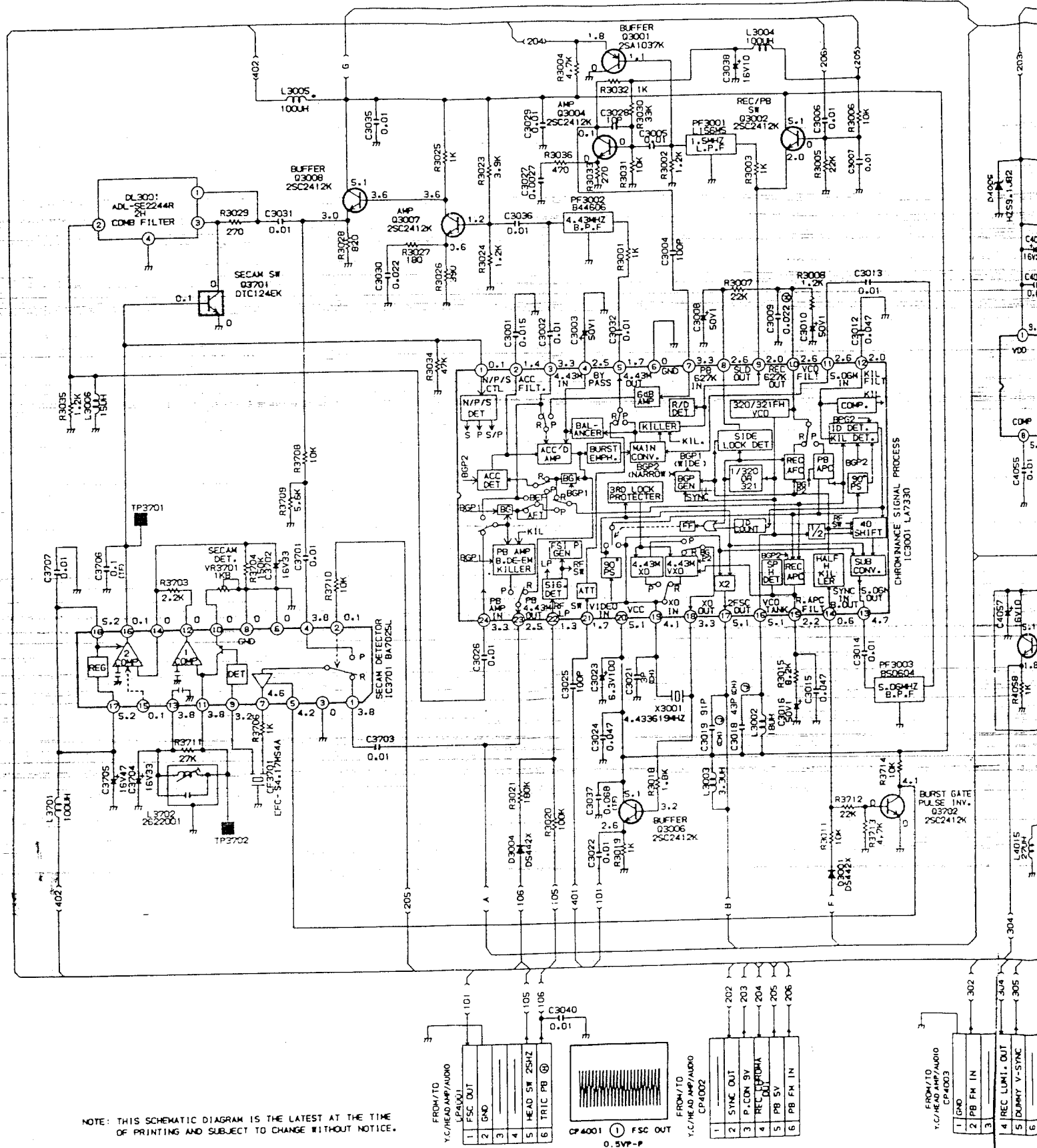
IC4002 (4) PLAY
1.5VP-P



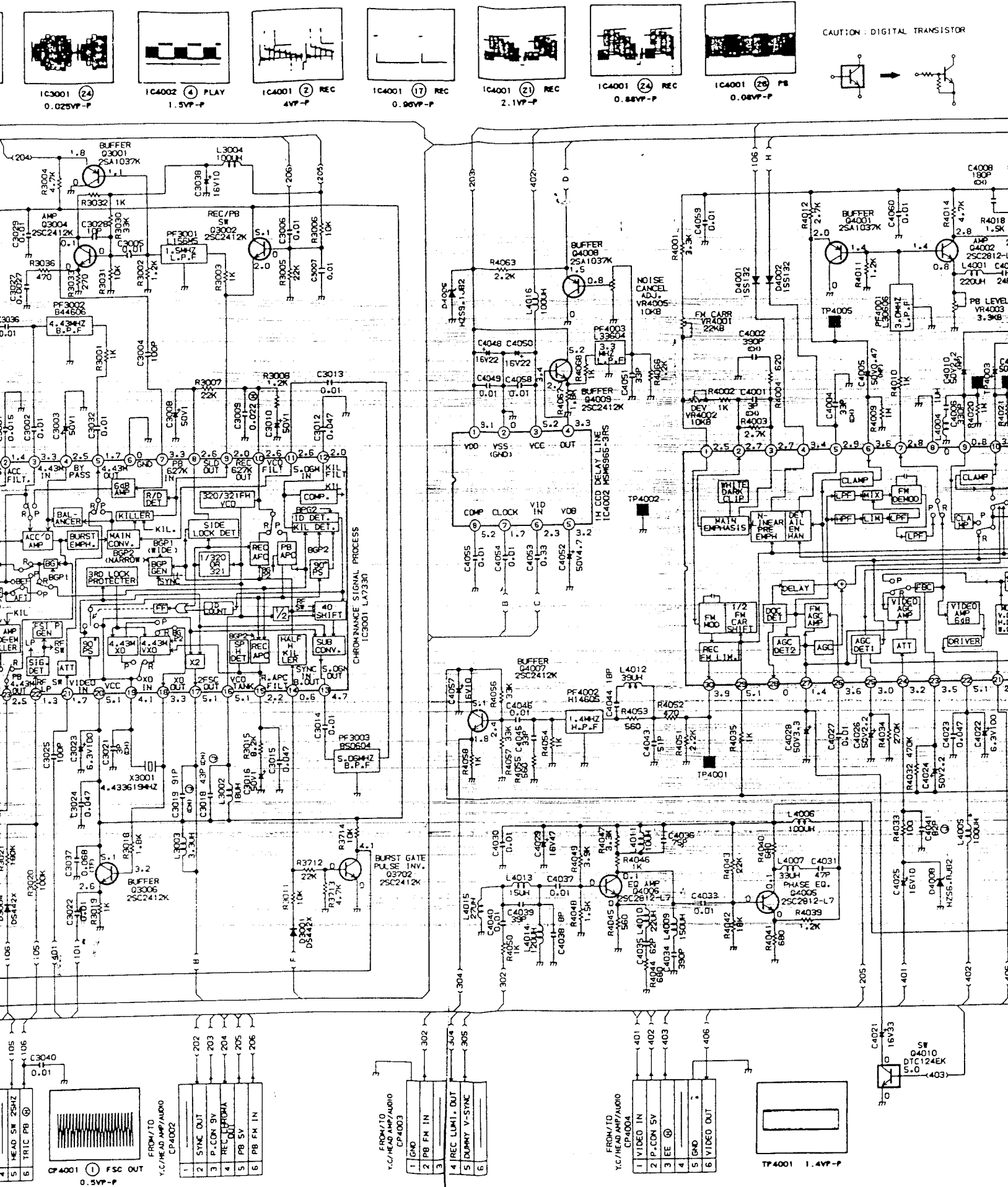
IC4001 (2) REC
4VP-P

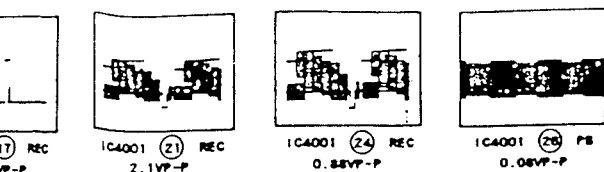


IC4001 (17) REC
0.96VP-P



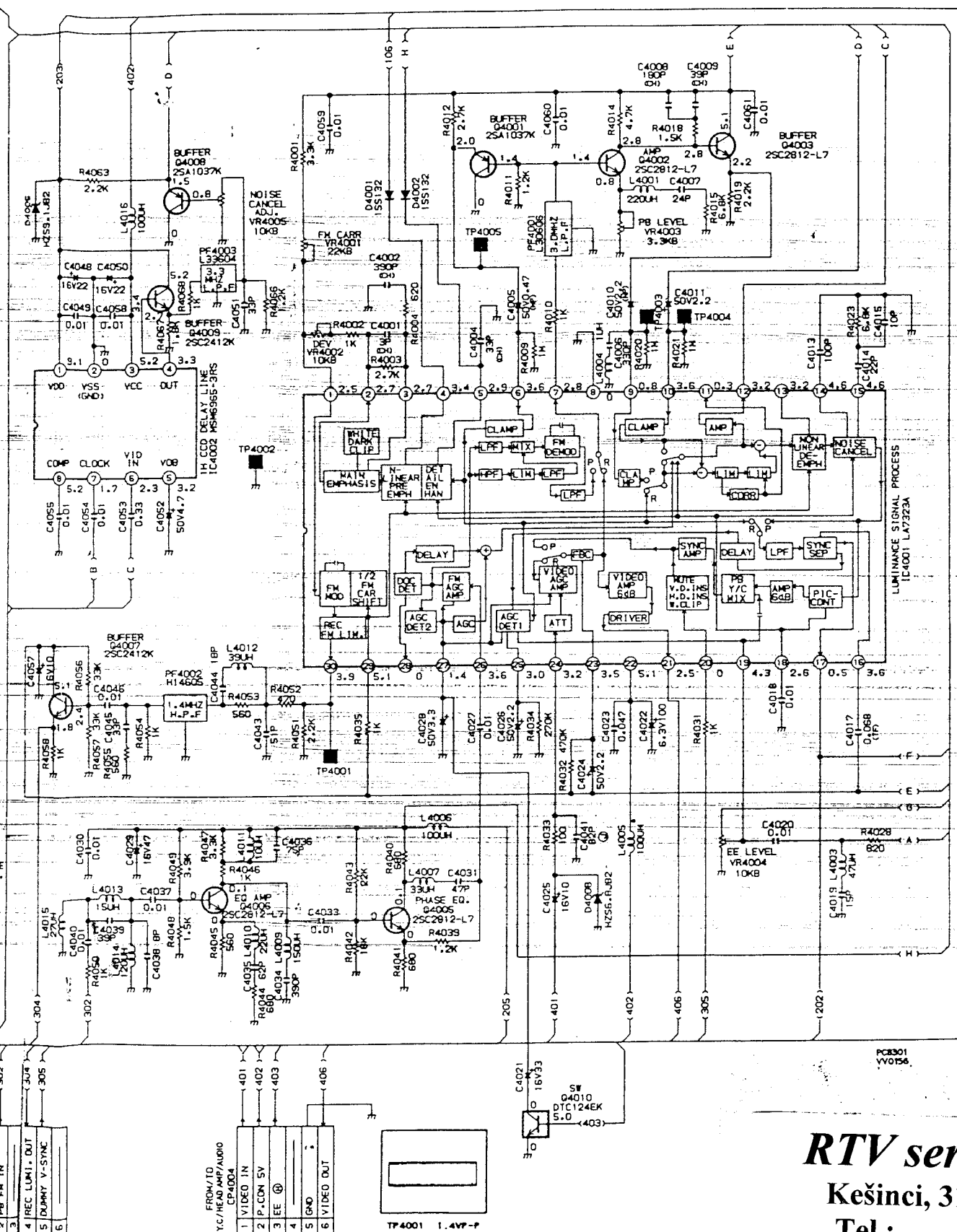
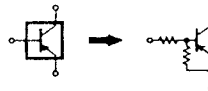
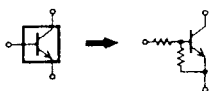
Y.C. SCHEMATIC DIAGRAM





CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR



RTV servis Horvat

Kešinci, 31402 Semeljci

Tel : 031-856-637

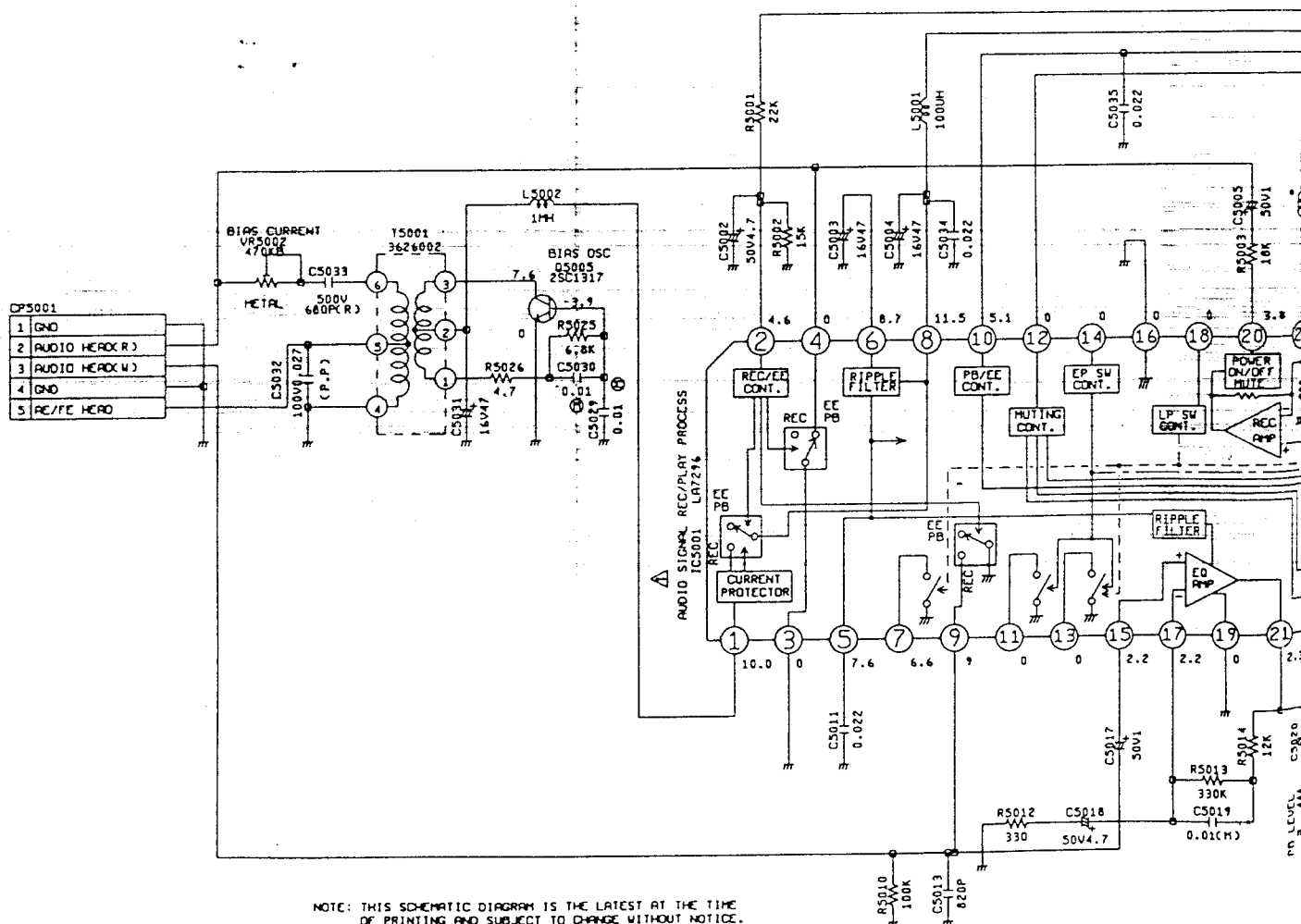
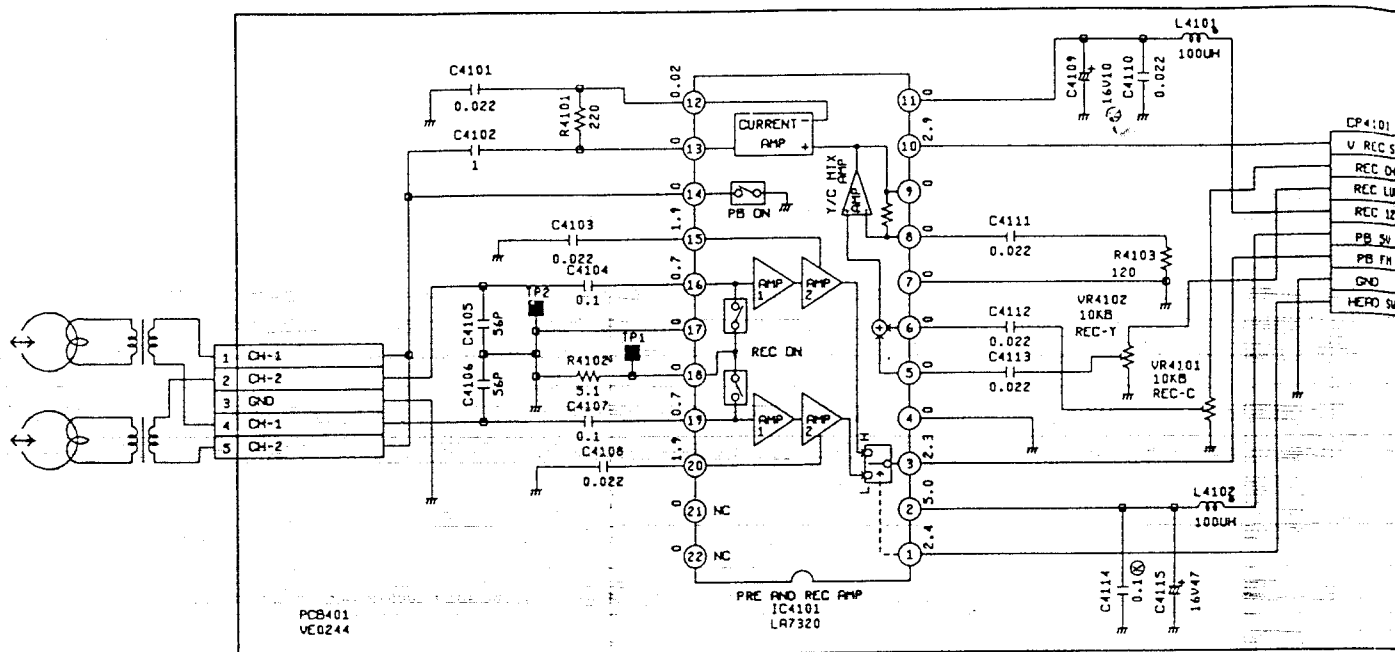
Tel / fax : 031-856-139

Mob : 098-788-319

rtv-servis-horvat@os.tel.hr

Y.C

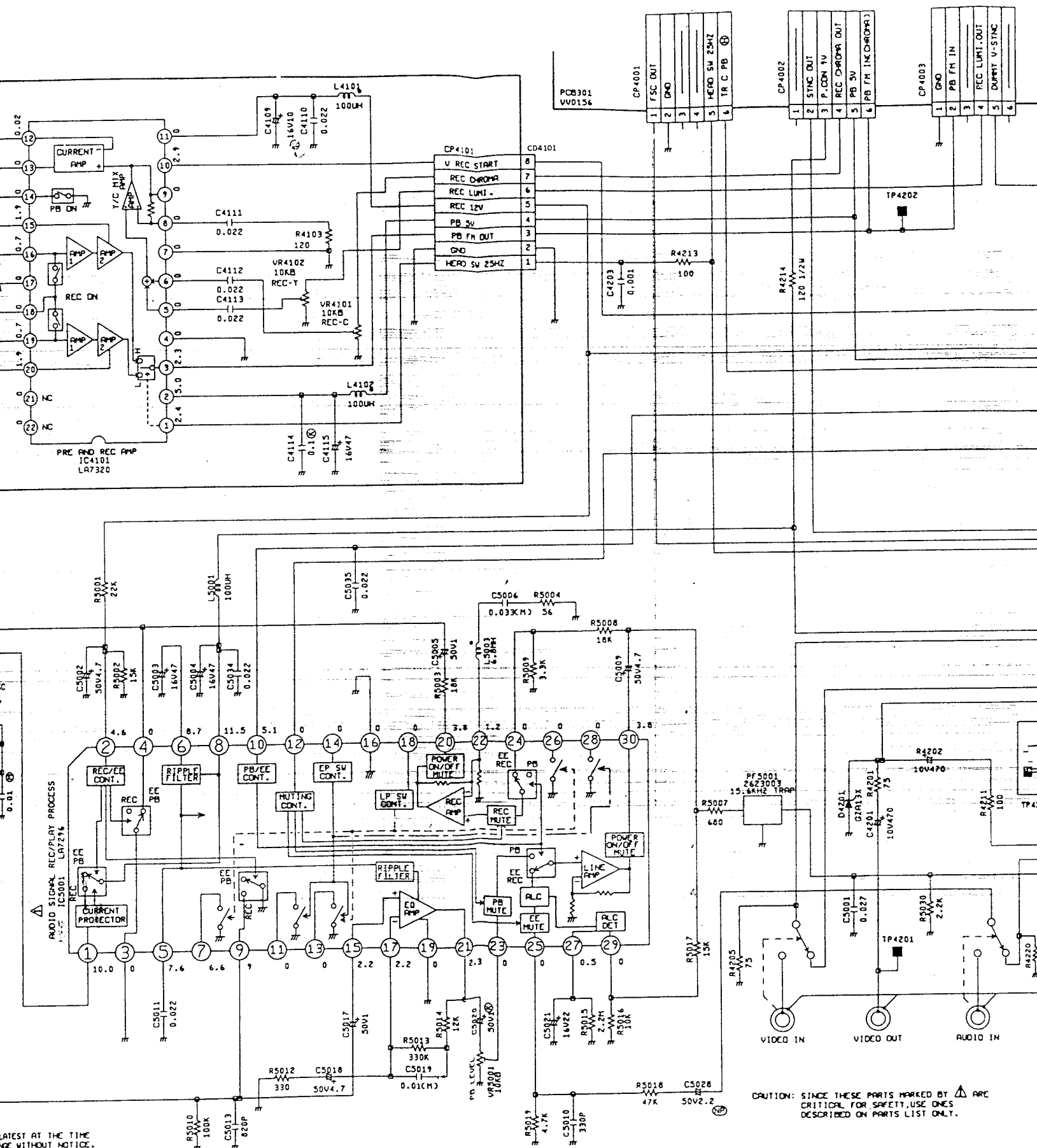
Y.C./HEAD AMP/AU



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SHORT-CIRCUIT CP4004'S PIN 3 WITH PIN 4 BY SOLDERING
ON MAIN PCB.

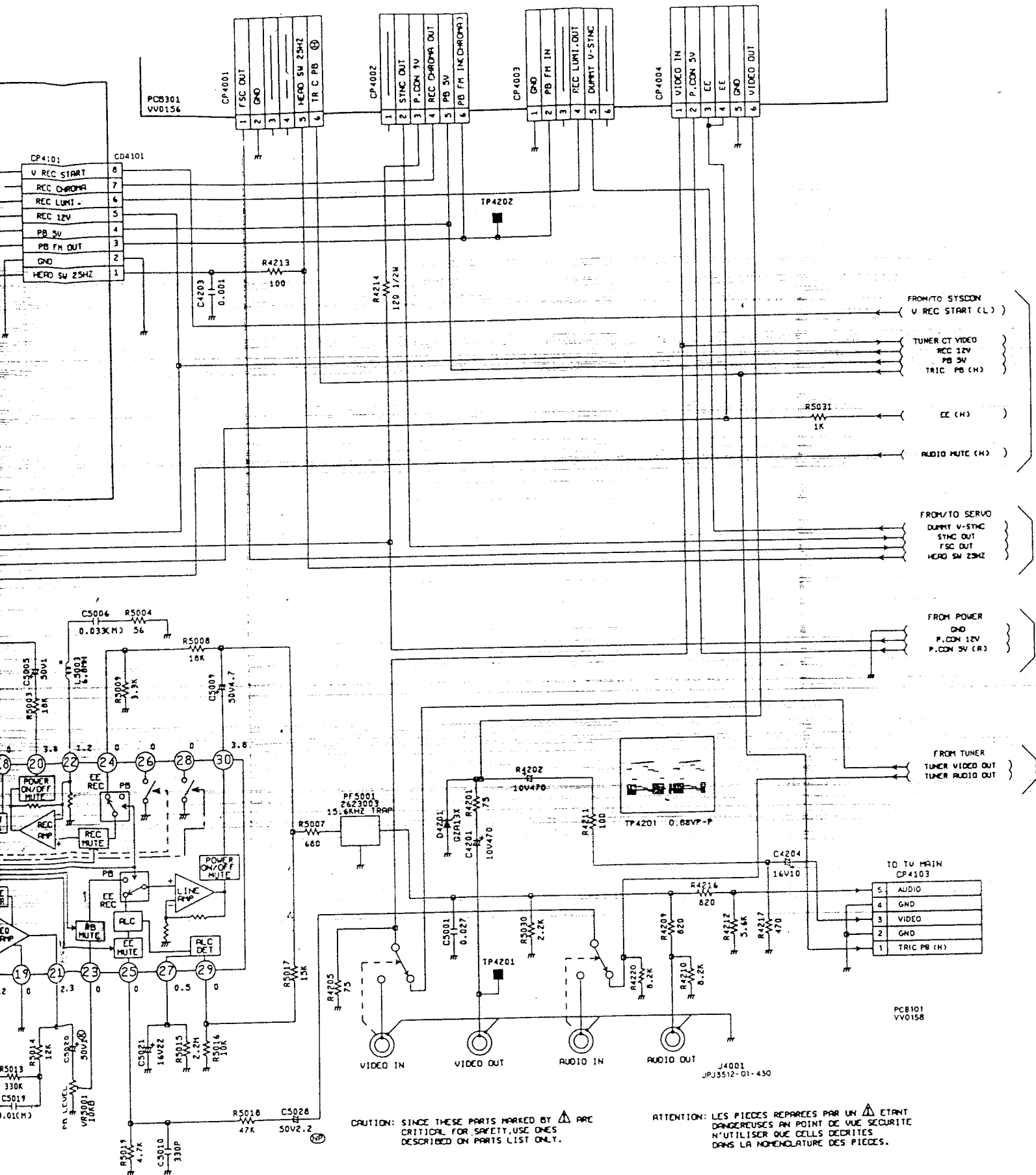
Y.C./HEAD AMP/AUDIO SCHEMATIC DIAGRAM



ATEST AT THE TIME
GE WITHOUT NOTICE.

IN 4 BY SOLDERING

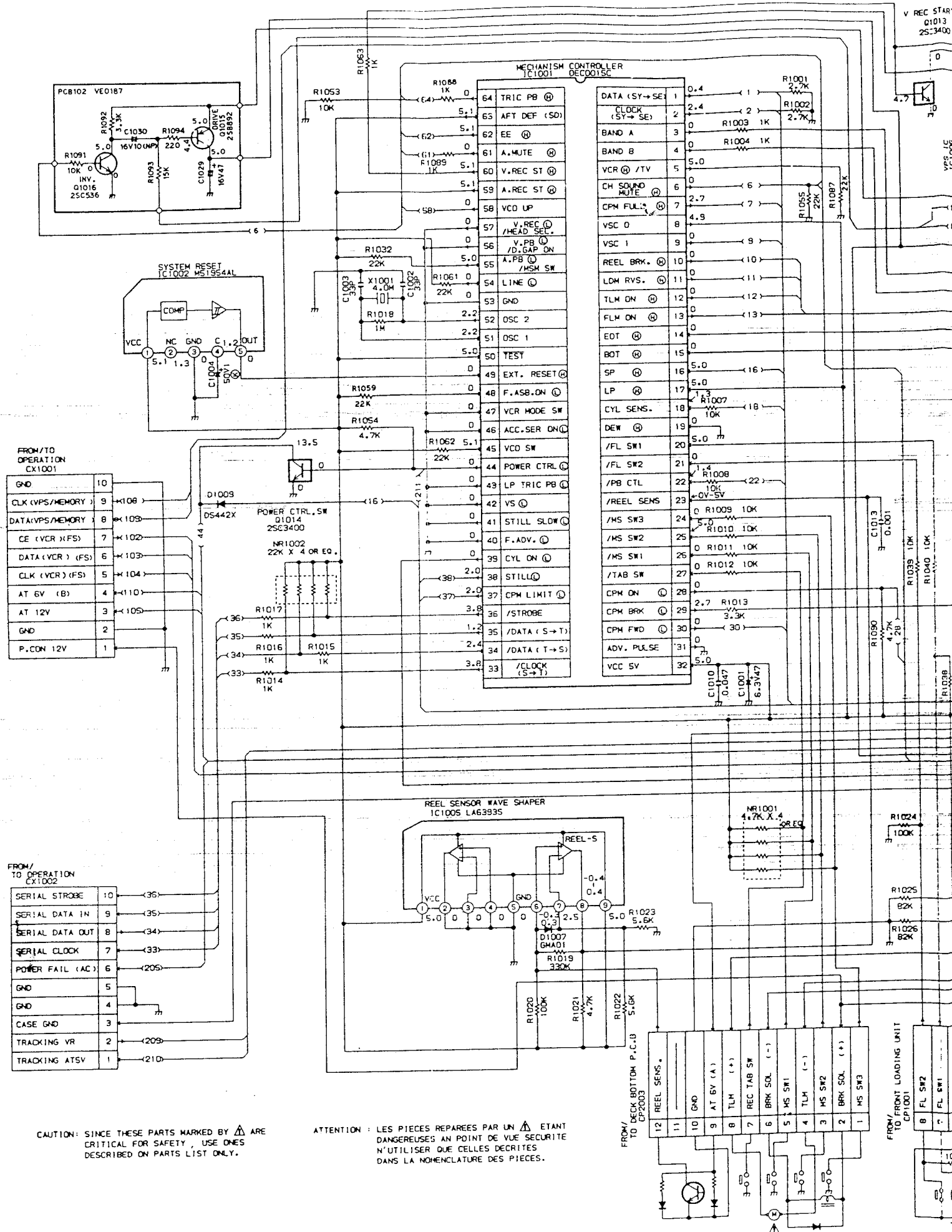
MP/AUDIO SCHEMATIC DIAGRAM



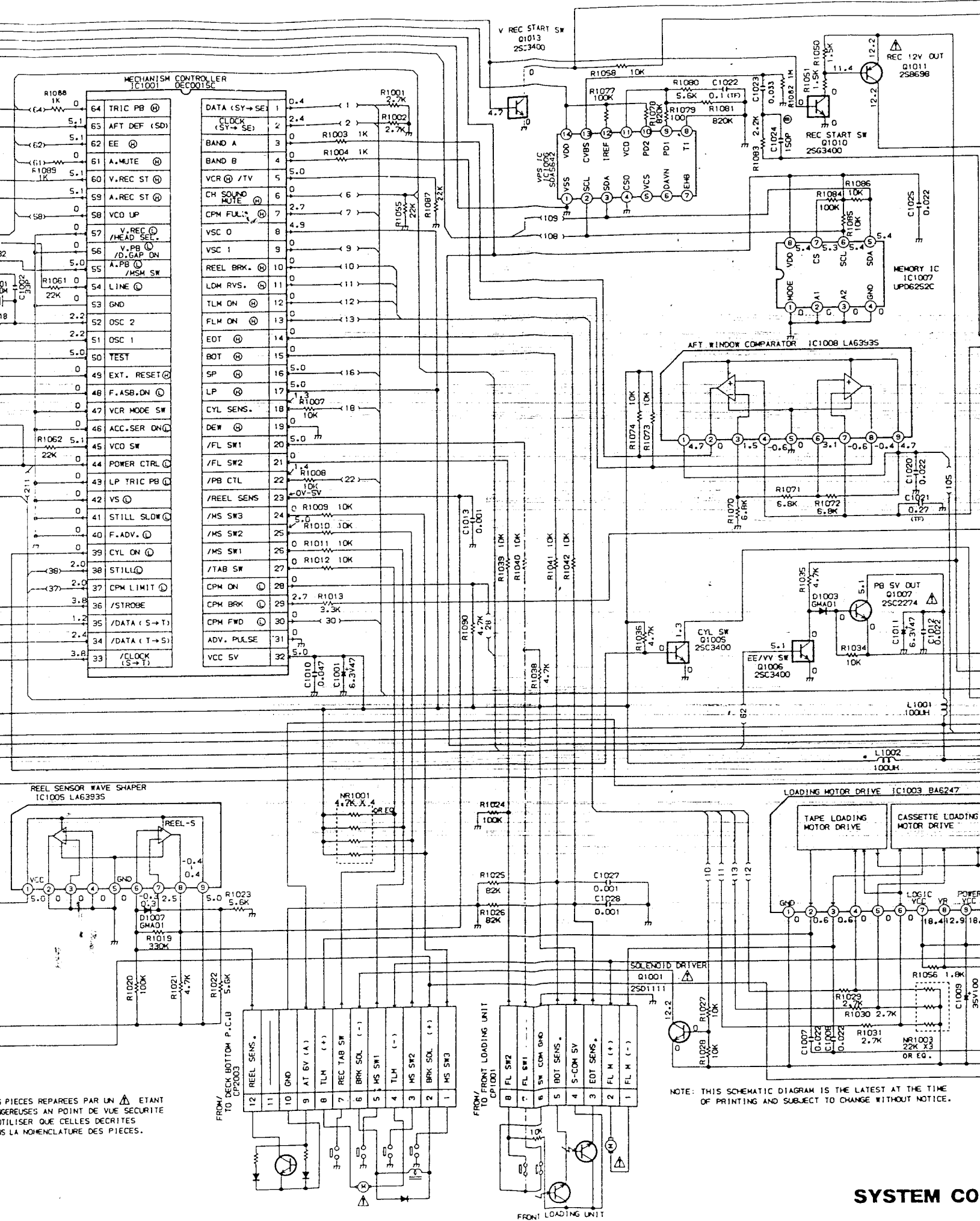
Y.C./HEAD AMP/AUDIO SCHEMATIC DIAGRAM

1-8589

SYSTEM CONTROL SCHEMATIC



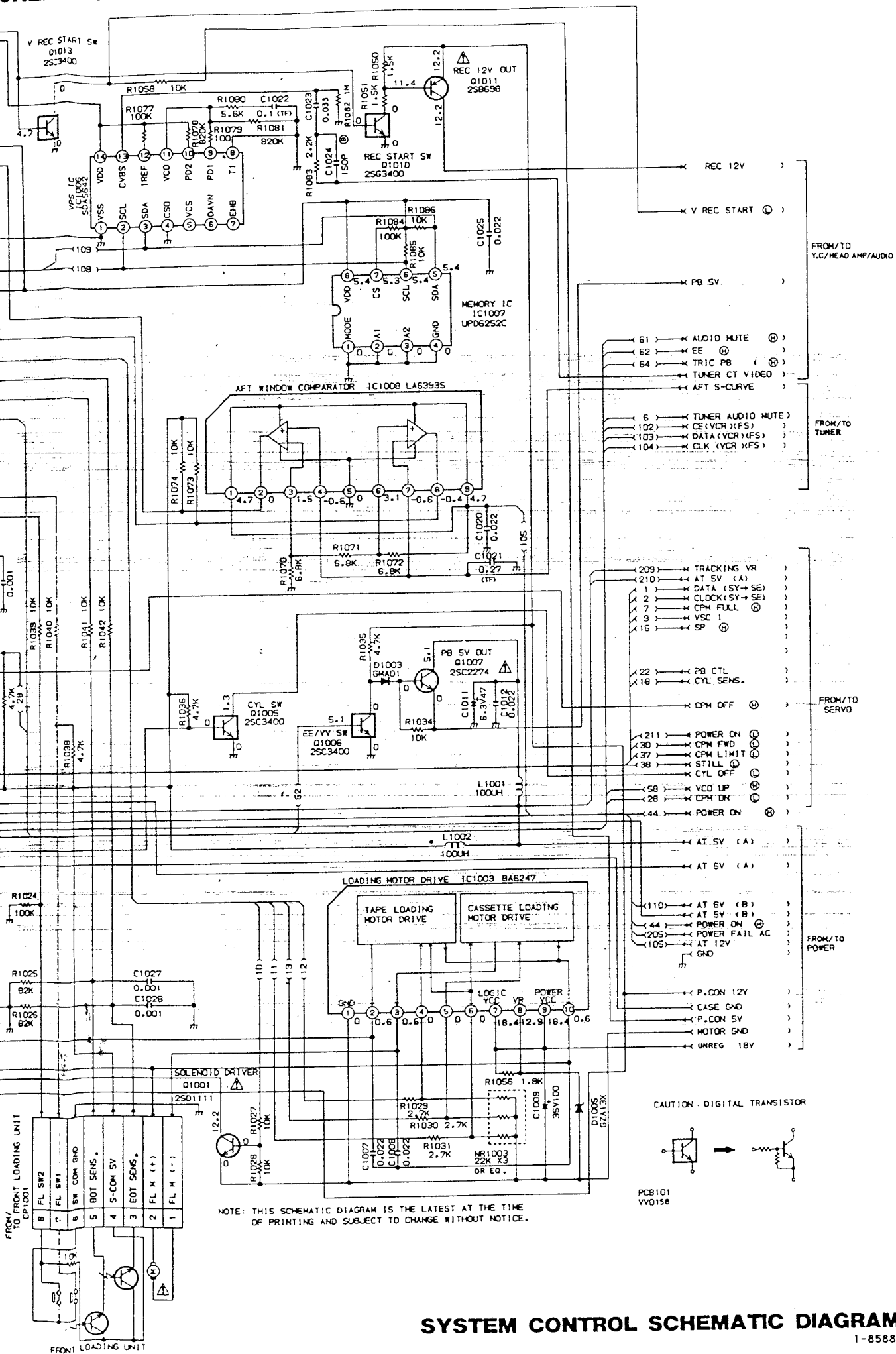
SYSTEM CONTROL SCHEMATIC DIAGRAM



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

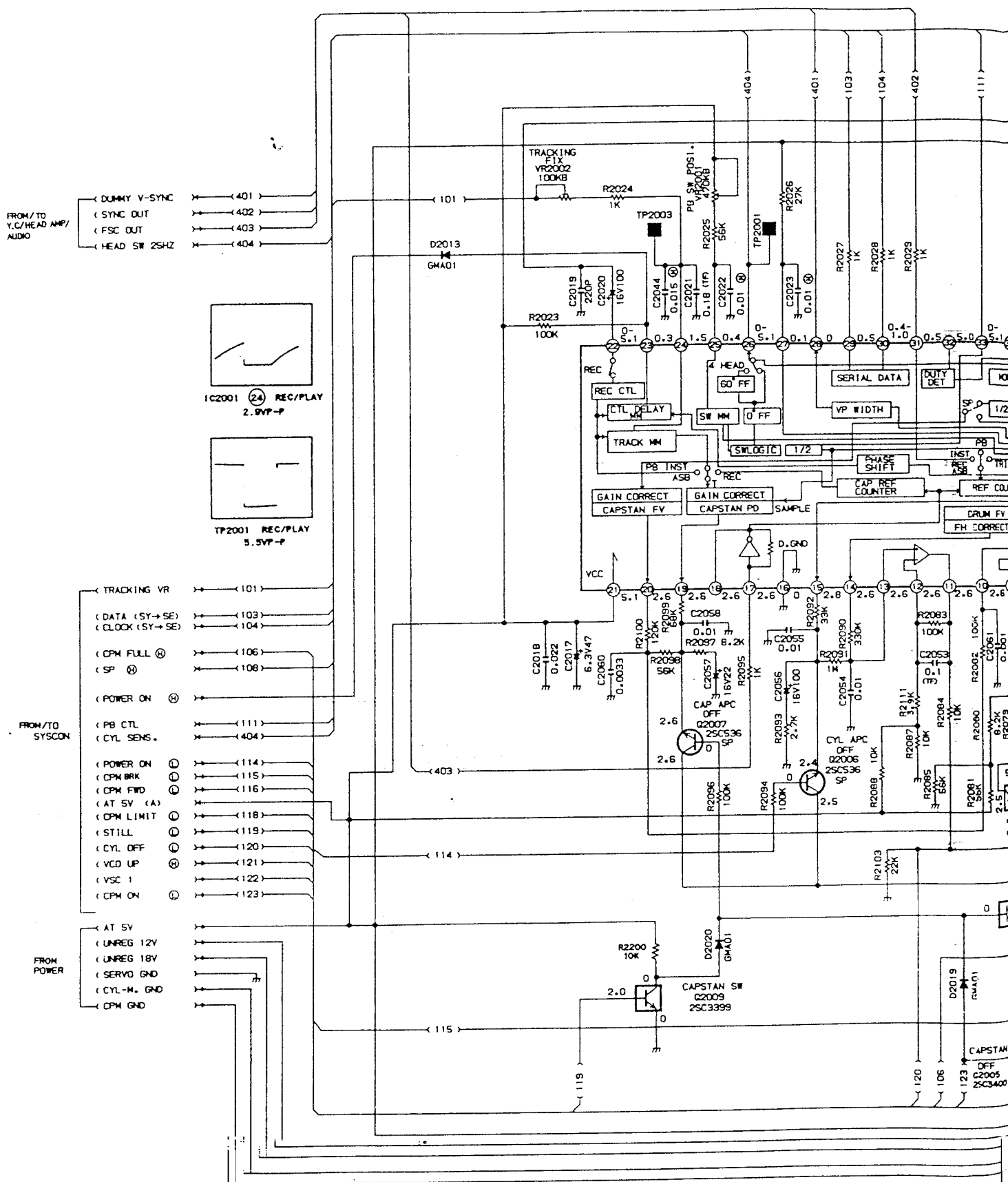
SYSTEM CO

SCHEMATIC DIAGRAM

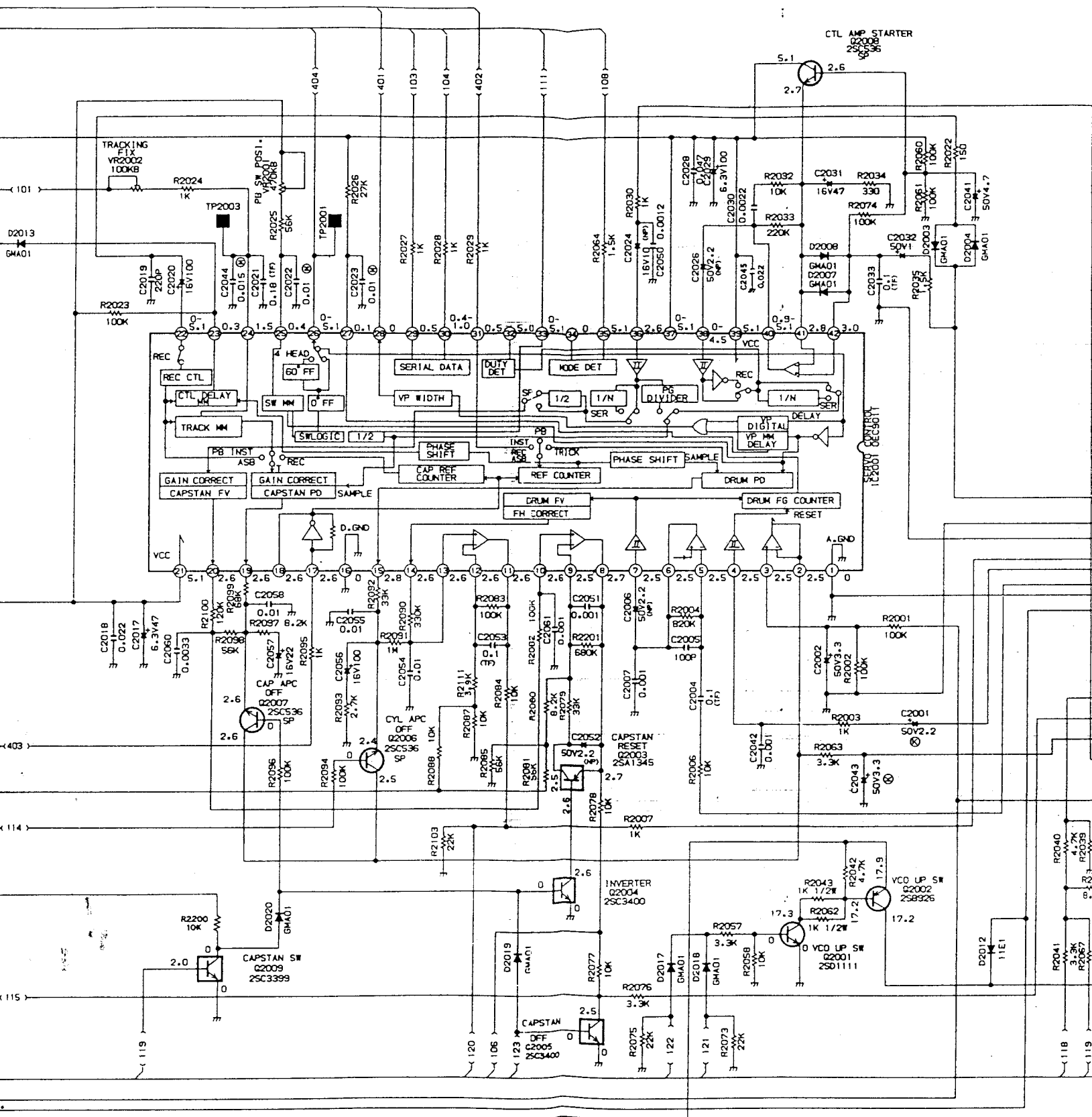


SYSTEM CONTROL SCHEMATIC DIAGRAM

SERVO SCHEMATIC

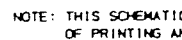


SERVO SCHEMATIC DIAGRAM

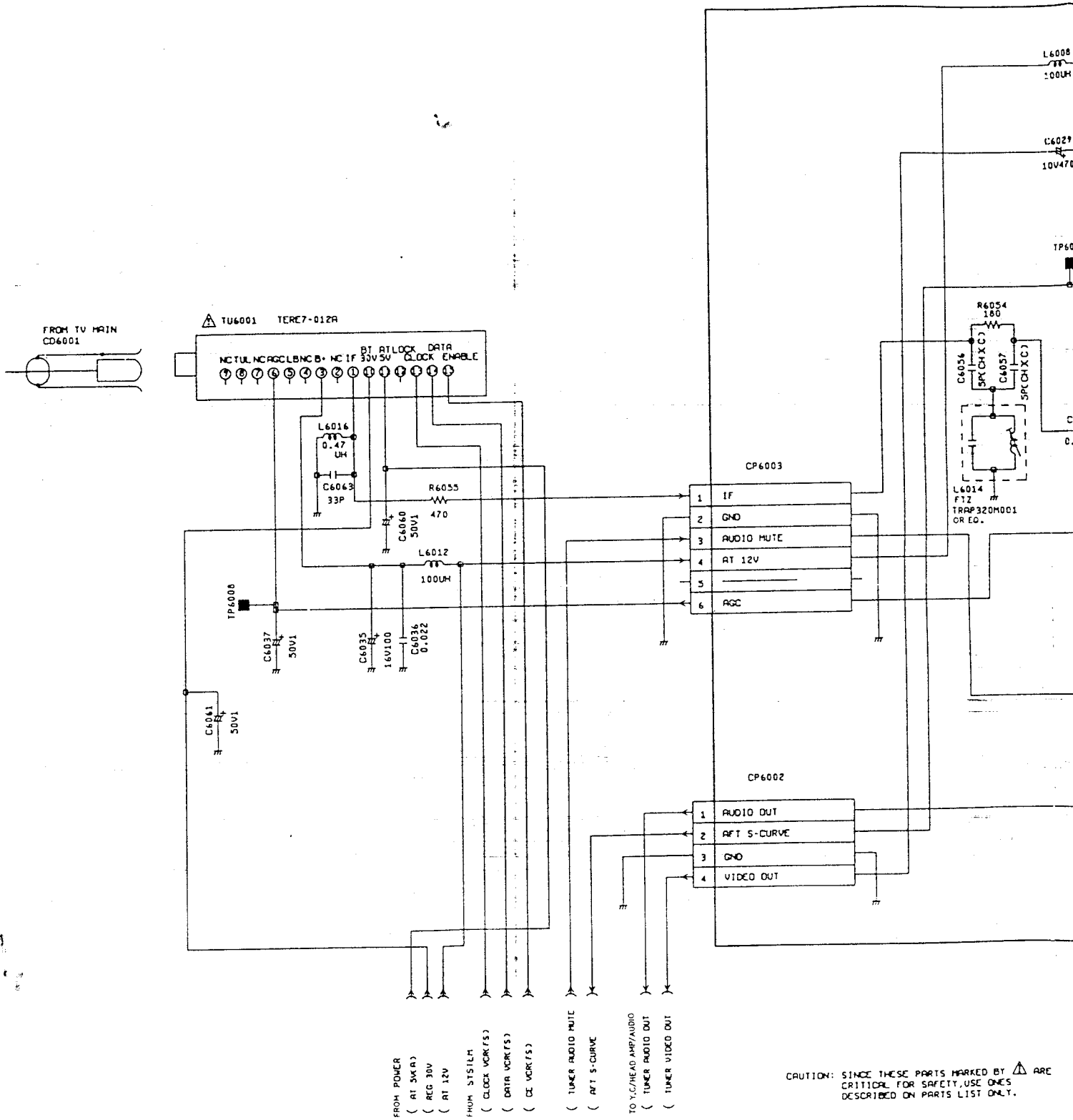


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT
OF PRINTING AND SUBJECT TO CHANGE WITHOUT

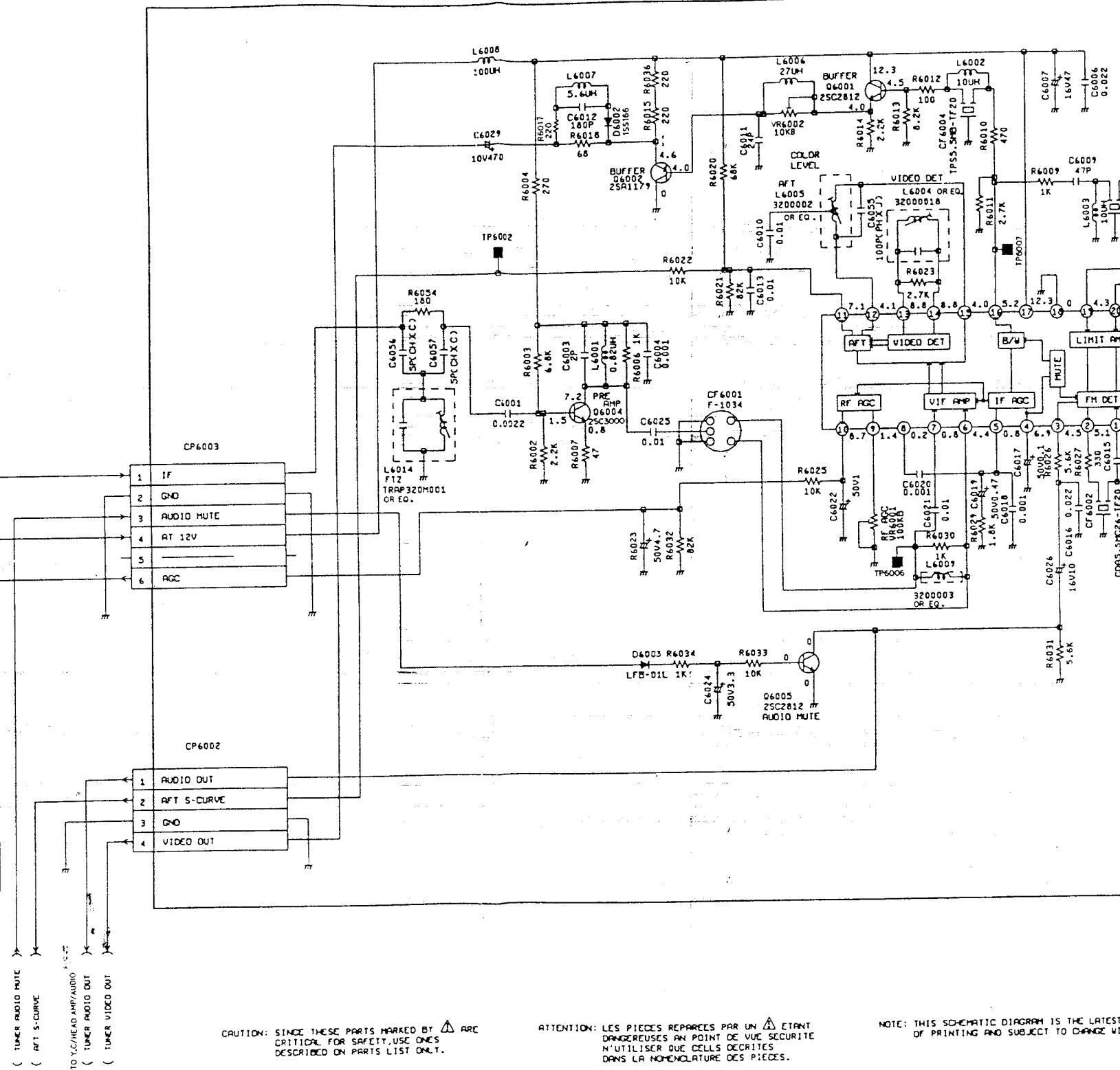
THIS DIAGRAM IS THE LATEST AT THE TIME
AND SUBJECT TO CHANGE WITHOUT NOTICE.



TUNER SCHEMATIC DIAGRAM

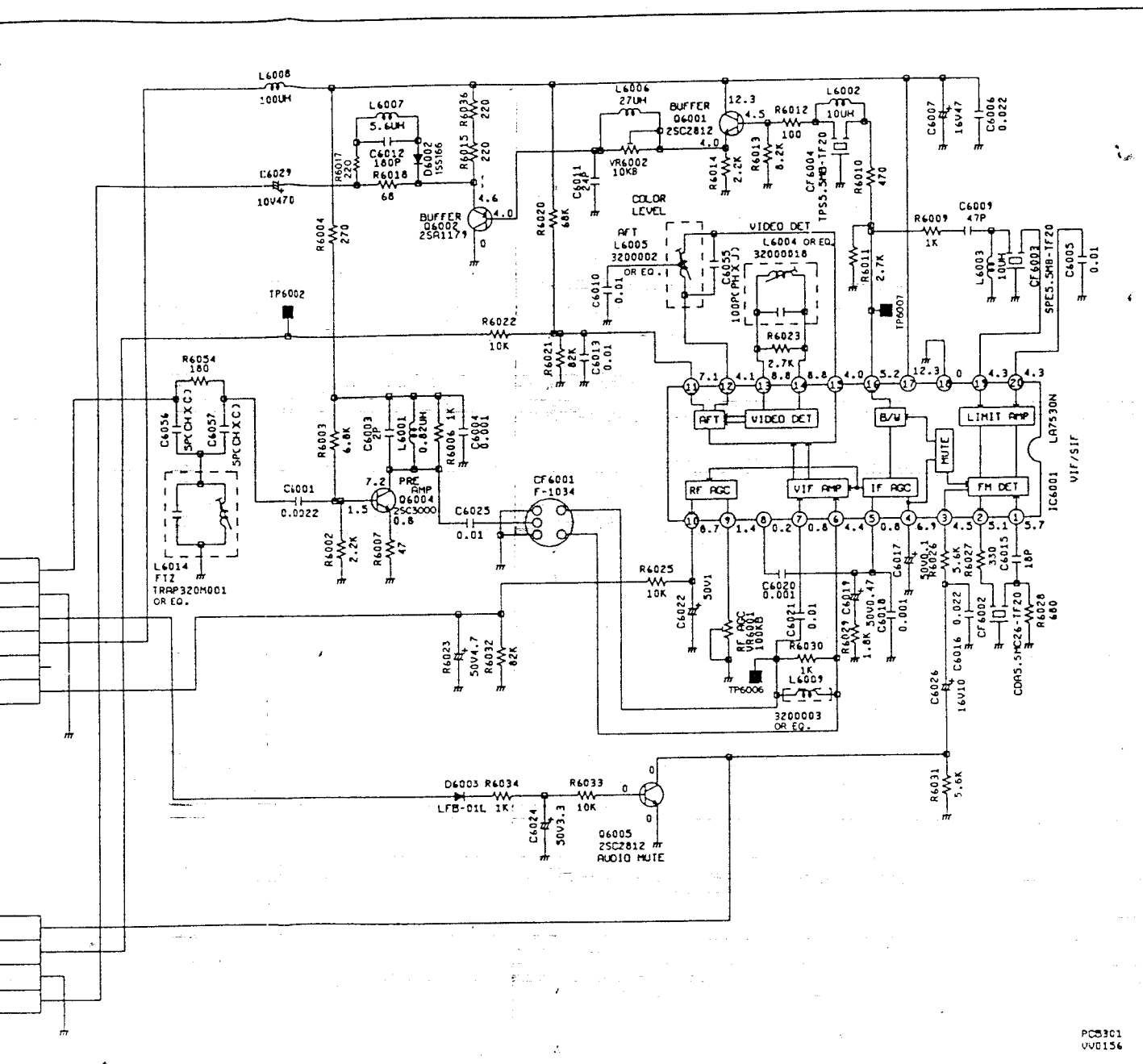


TUNER SCHEMATIC DIAGRAM



TUNER SCHEMATIC

ER SCHEMATIC DIAGRAM



PC5301
VV0156

ON: SINCE THESE PARTS MARKED BY Δ ARE
CRITICAL FOR SAFETY, USE ONES
DESCRIBED ON PARTS LIST ONLY.

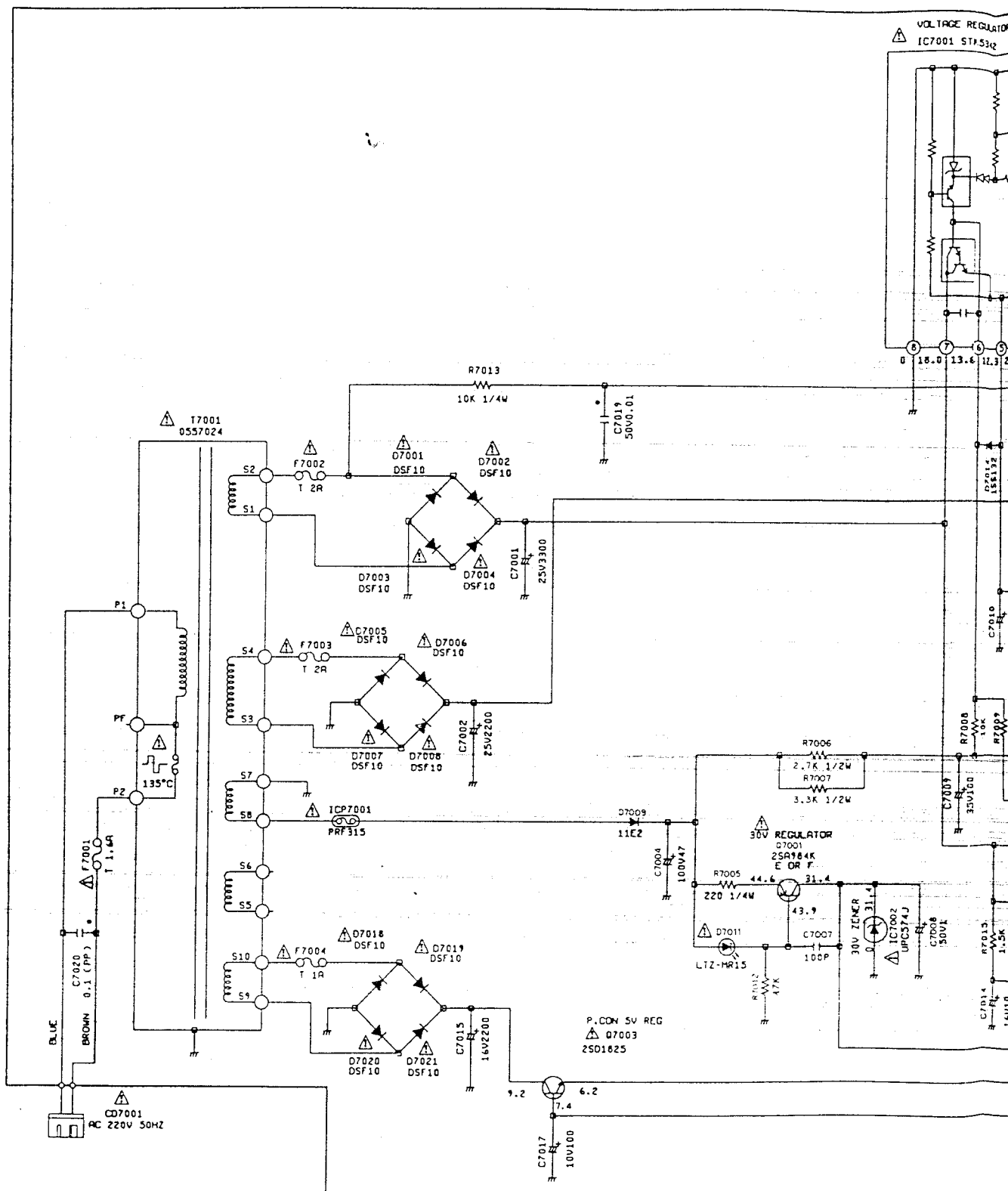
ATTENTION: LES PIÉCES REPAREES PAR UN Δ ETANT
DANGEREUSES AU POINT DE VUE SECURITE
N'UTILISER QUE CELLES DECRITES
DANS LA NOMENCLATURE DES PIÉCES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

TUNER SCHEMATIC DIAGRAM

1-8444

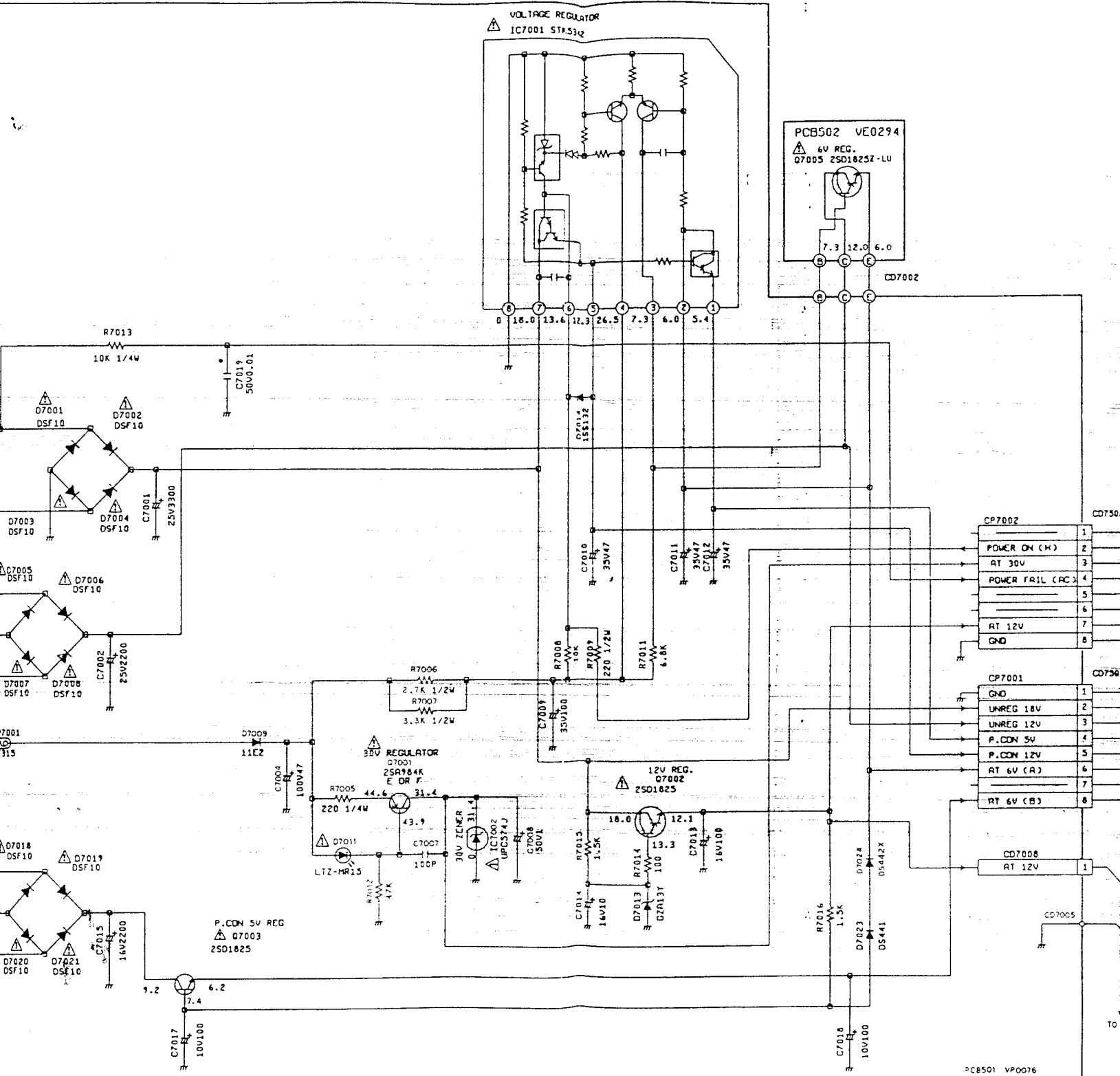
POWER SUPPLY SCHE



CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION: LES PIÈCES REPARÉES PAR UN DANGEREUSES EN POINT DE VU N'UTILISER QUE CELLS DECR DANS LA NOMENCLATURE DES P

POWER SUPPLY SCHEMATIC DIAGRAM

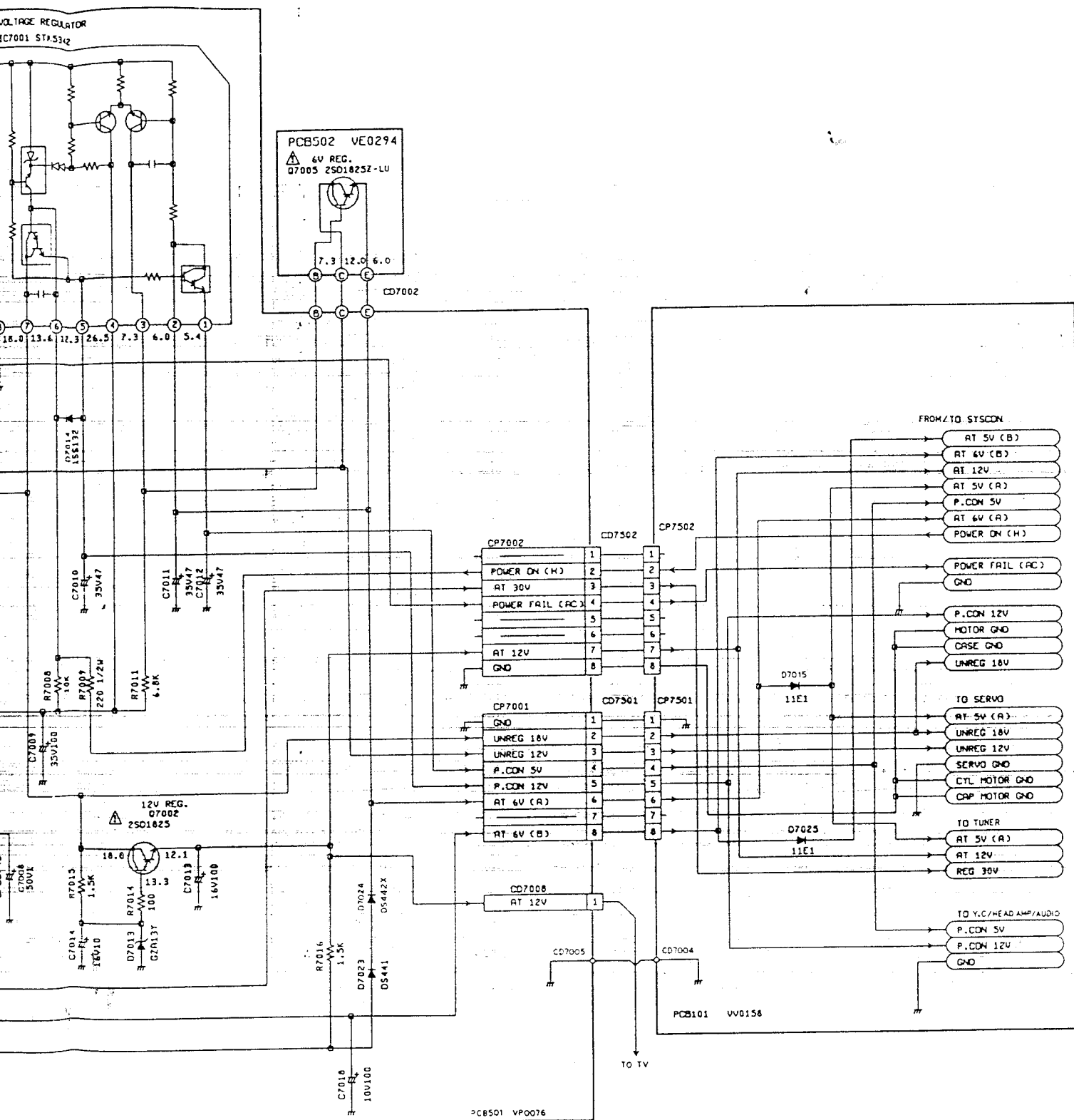


CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION: LES PIÈCES REPARÉES PAR UN Δ ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELES DÉCRITES DANS LA NOMÉCLATURE DES PIÈCES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

Y SCHEMATIC DIAGRAM

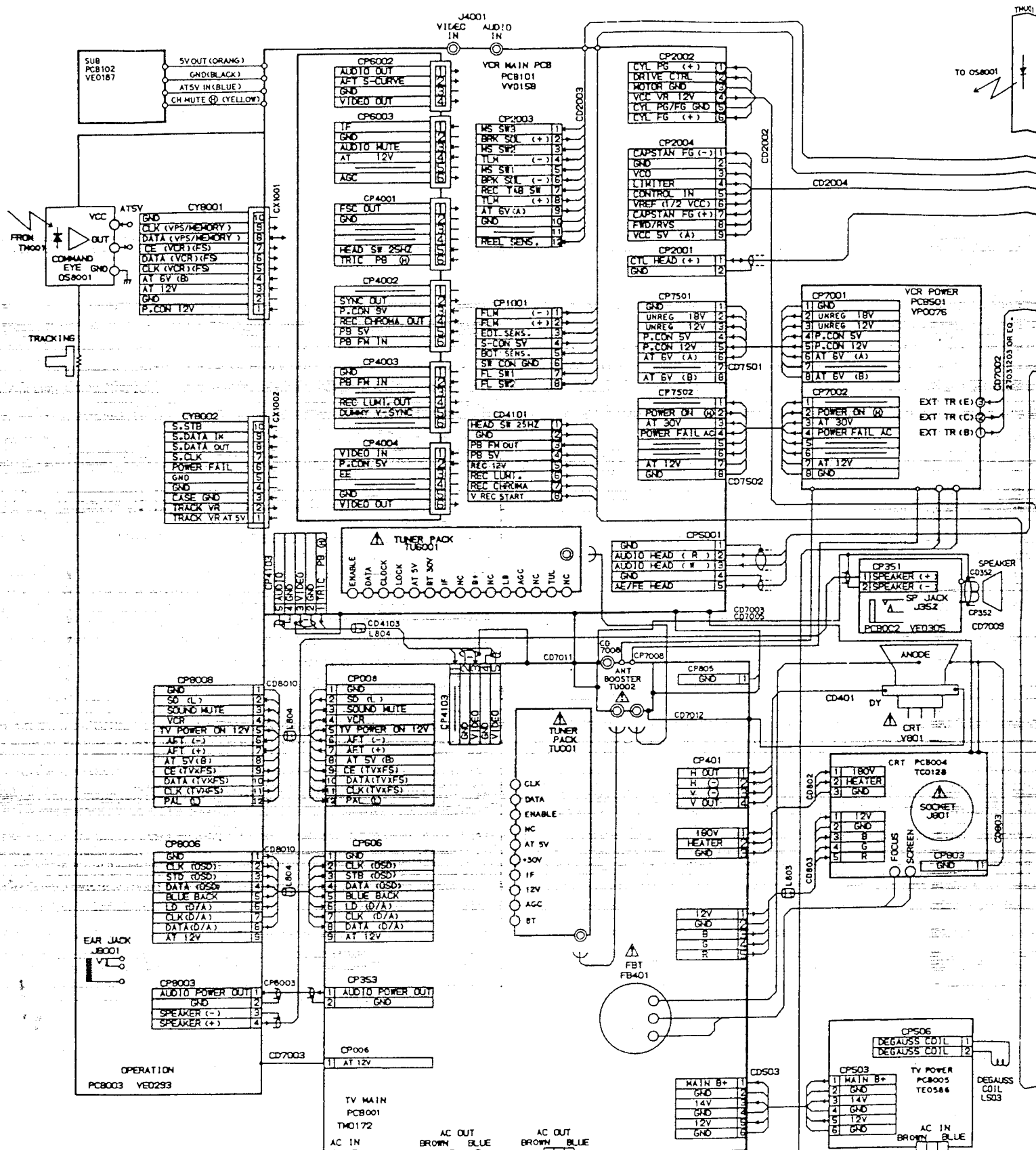


DES REPARÉS PAR UN Δ ETANT
 USES AN POINT DE VUE SECURITE
 SER QUE CE-LS DECRIRES
 NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
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POWER SUPPLY SCHEMATIC DIAGRAM

1-8443



WARNING: HIGH VOLTAGE PARTS MARKED BY A ARE CRITICAL FOR SAFETY. USE CARES DESCRIBED ON PARTS LIST ONLY.

ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMÉNCLATURE DES PIÈCES.



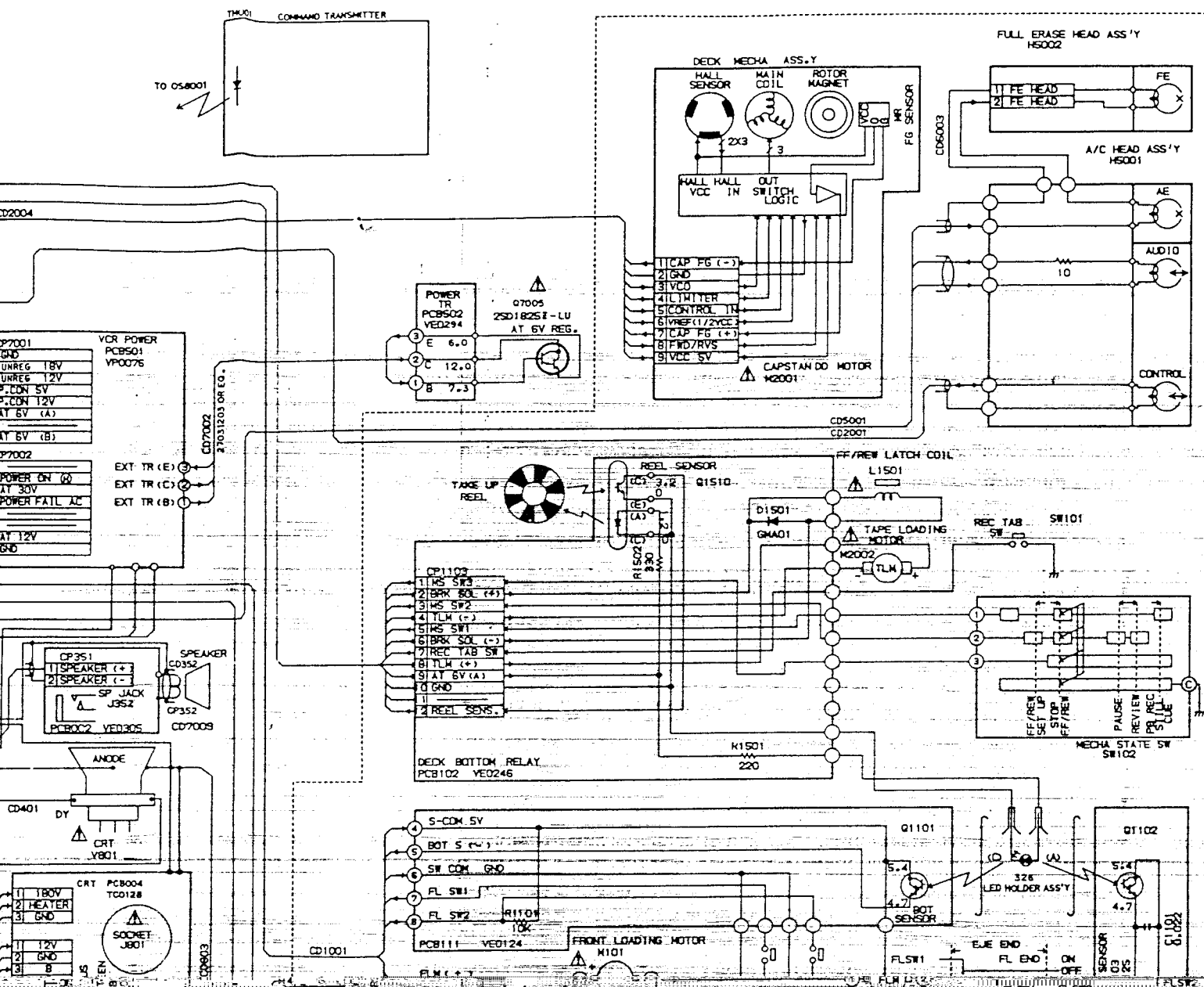
The schematic diagram illustrates the internal circuitry of a VCR, organized into several functional blocks:

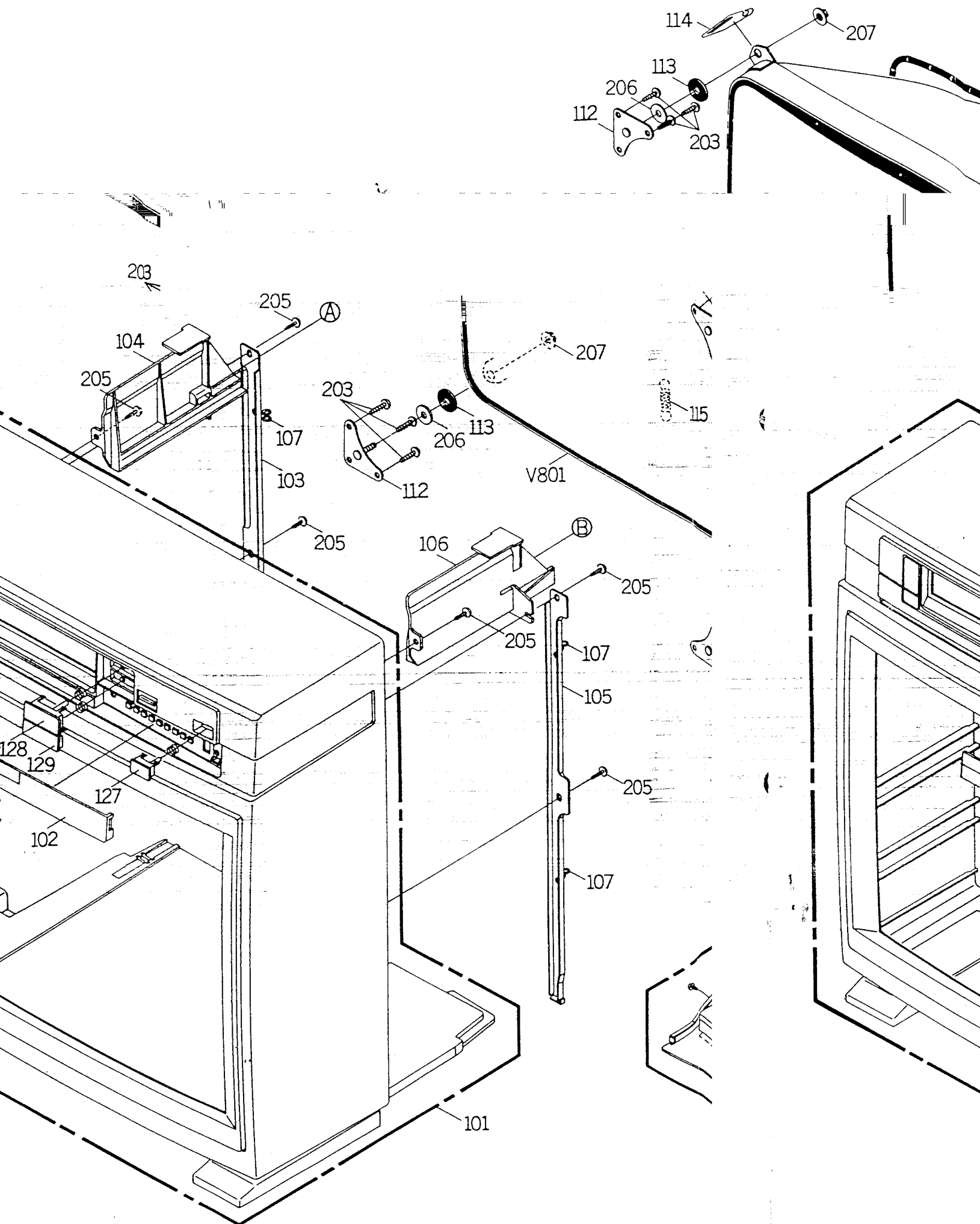
- Power Supply Section:** Includes VCR MAIN PCB (PCB101, VV0158) and VCR POWER (PCB501, VP0076). It features a power transformer (Q7005, 2SD1825Z-LU) with a 6.0V, 12.0V, and 7.3V secondary. A power switch (CP2003) and a power relay (CP2004) are also shown.
- Control and Timing Section:** Includes a command transmitter (TH001) and a control IC (CP2002). It also features a motor control IC (CP2004) and a motor (M2001).
- Video and Audio Section:** Includes a video IC (CP2001) and an audio IC (CP7501). It also features a video IC (CP7001) and an audio IC (CP7002).
- Relay and Motor Section:** Includes a deck bottom relay (PCB102, VE0246) and a front loading motor (M101).
- Head and Sensor Section:** Includes a head IC (CP401) and a reel sensor (Q1510).
- TV Power Section:** Includes a TV power IC (CP503) and a TV power IC (CP506).

The diagram shows the interconnections between these components, including power lines, signal lines, and ground connections. Key components like the reel sensor, motor, and magnet are also shown.

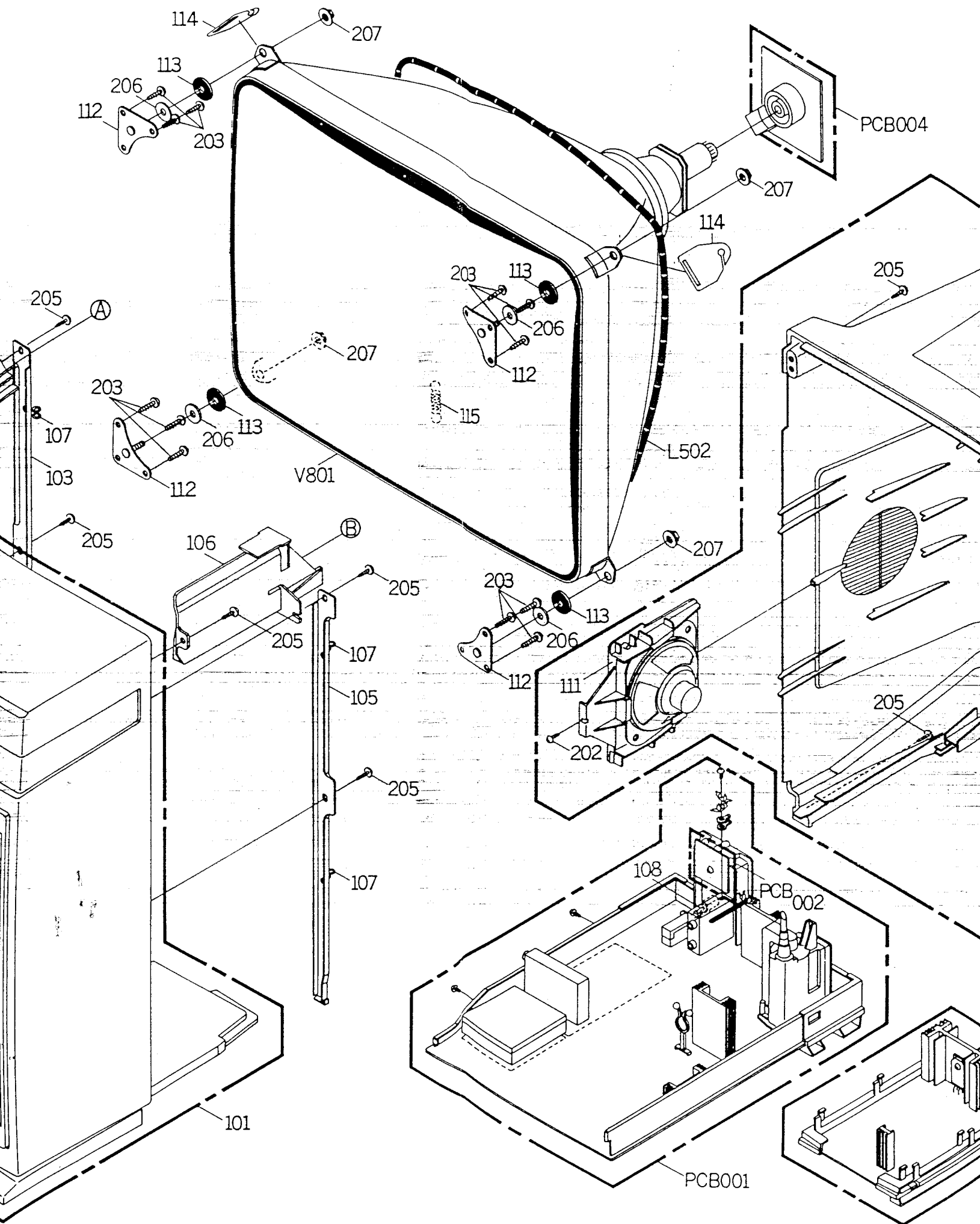
ATTENTION : LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMÉCLATURE DES PIÈCES.

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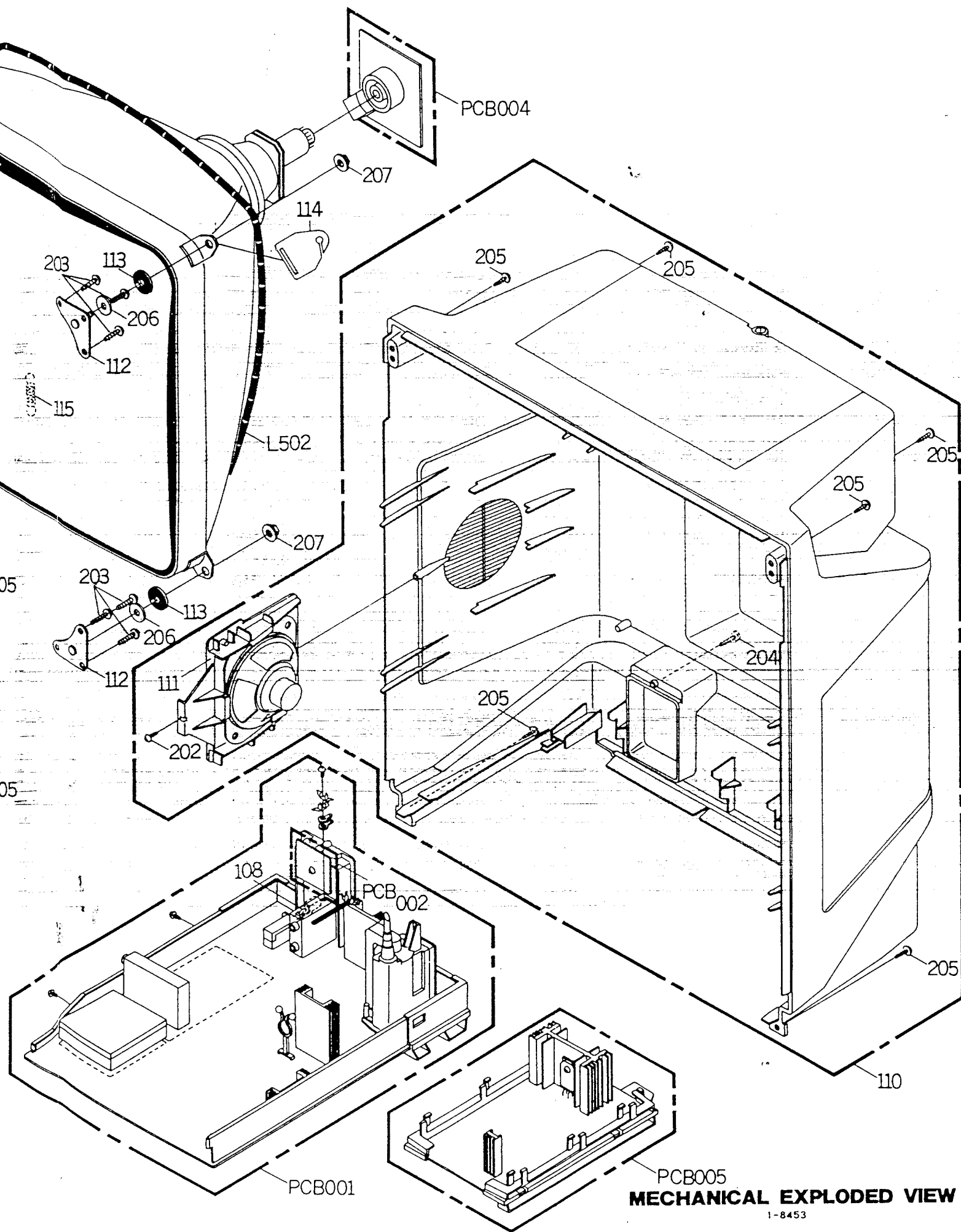




MECHANICAL EXPLODED VIEW

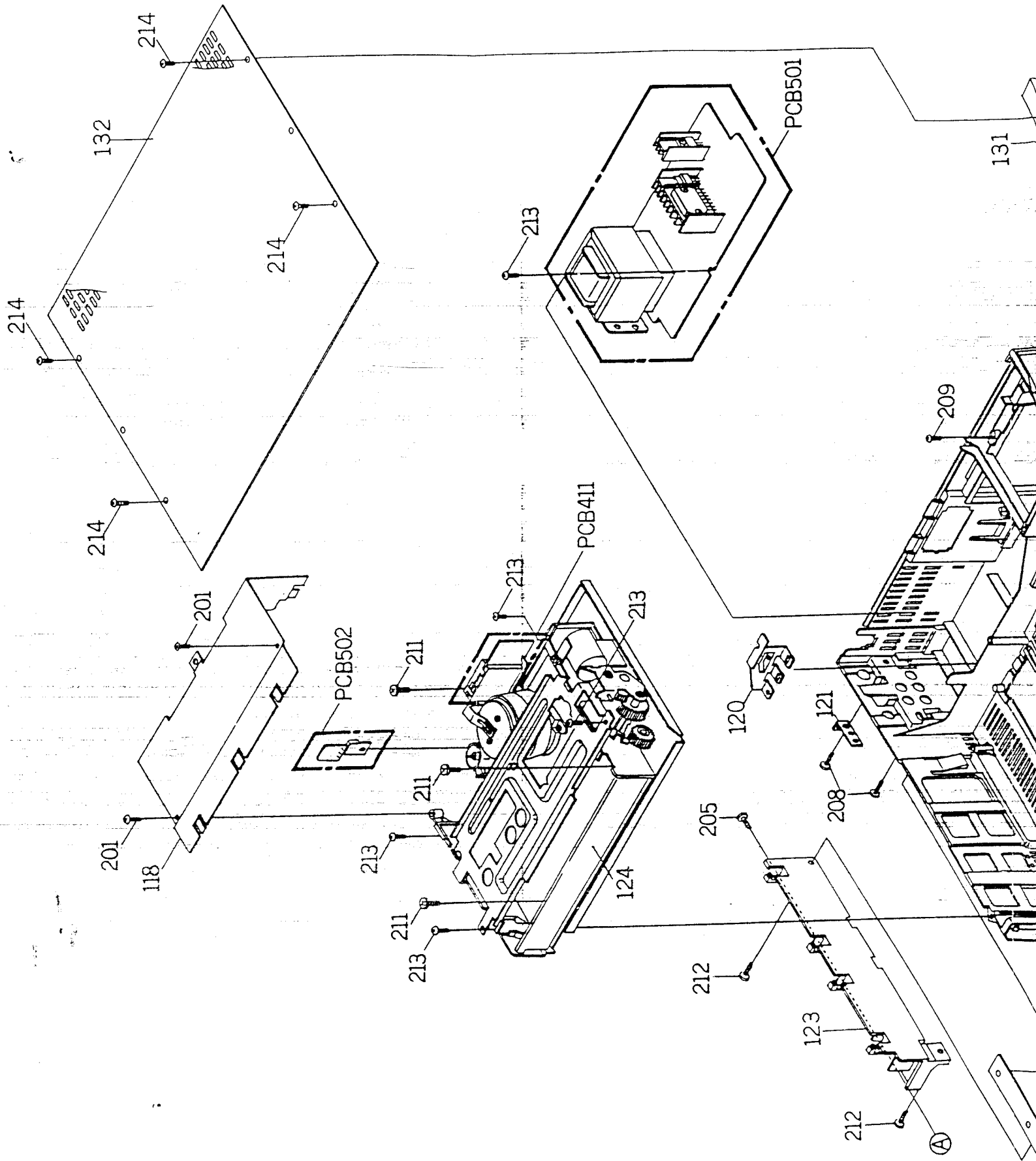


AL EXPLODED VIEW

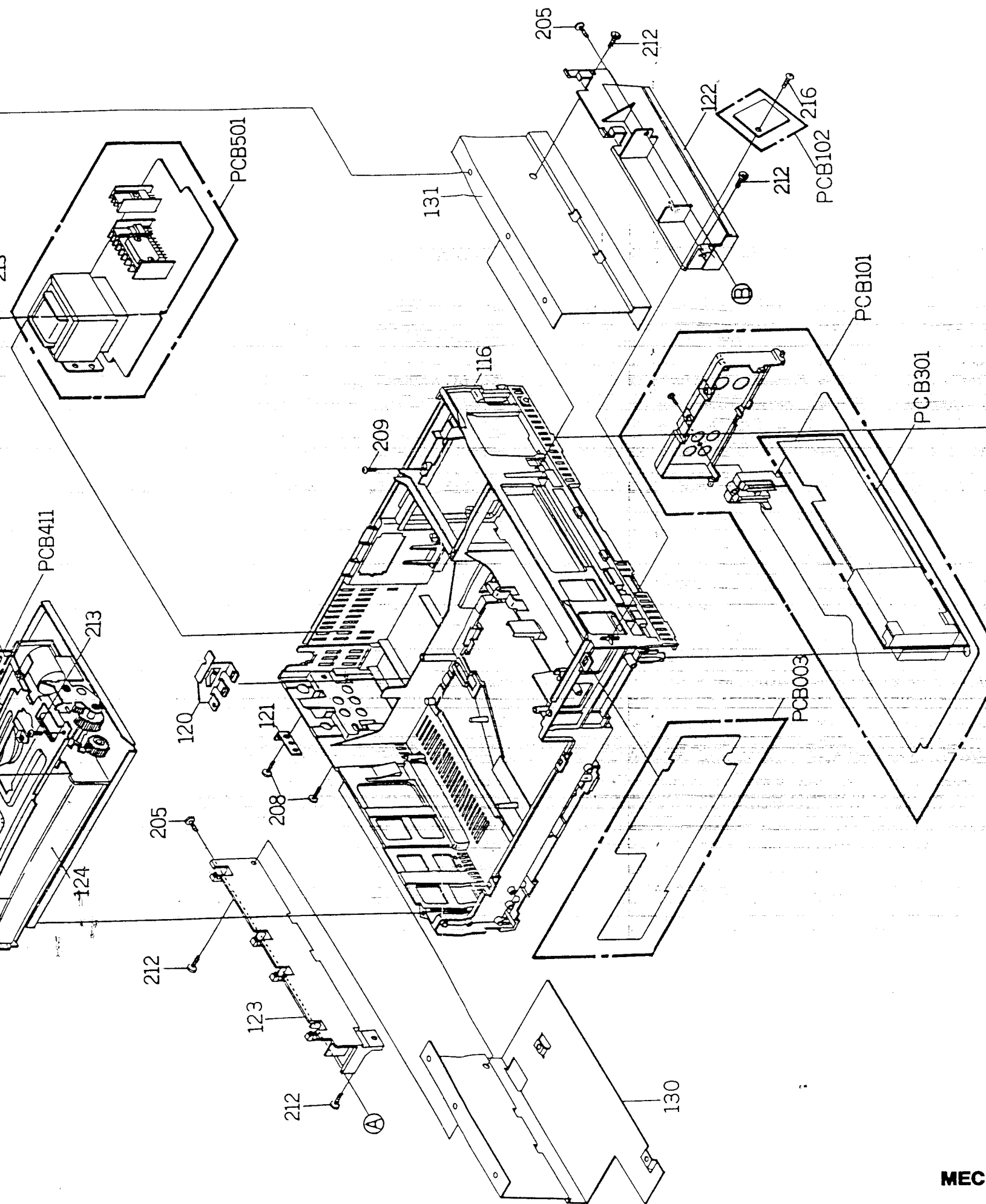


MECHANICAL EXPLODED VIEW

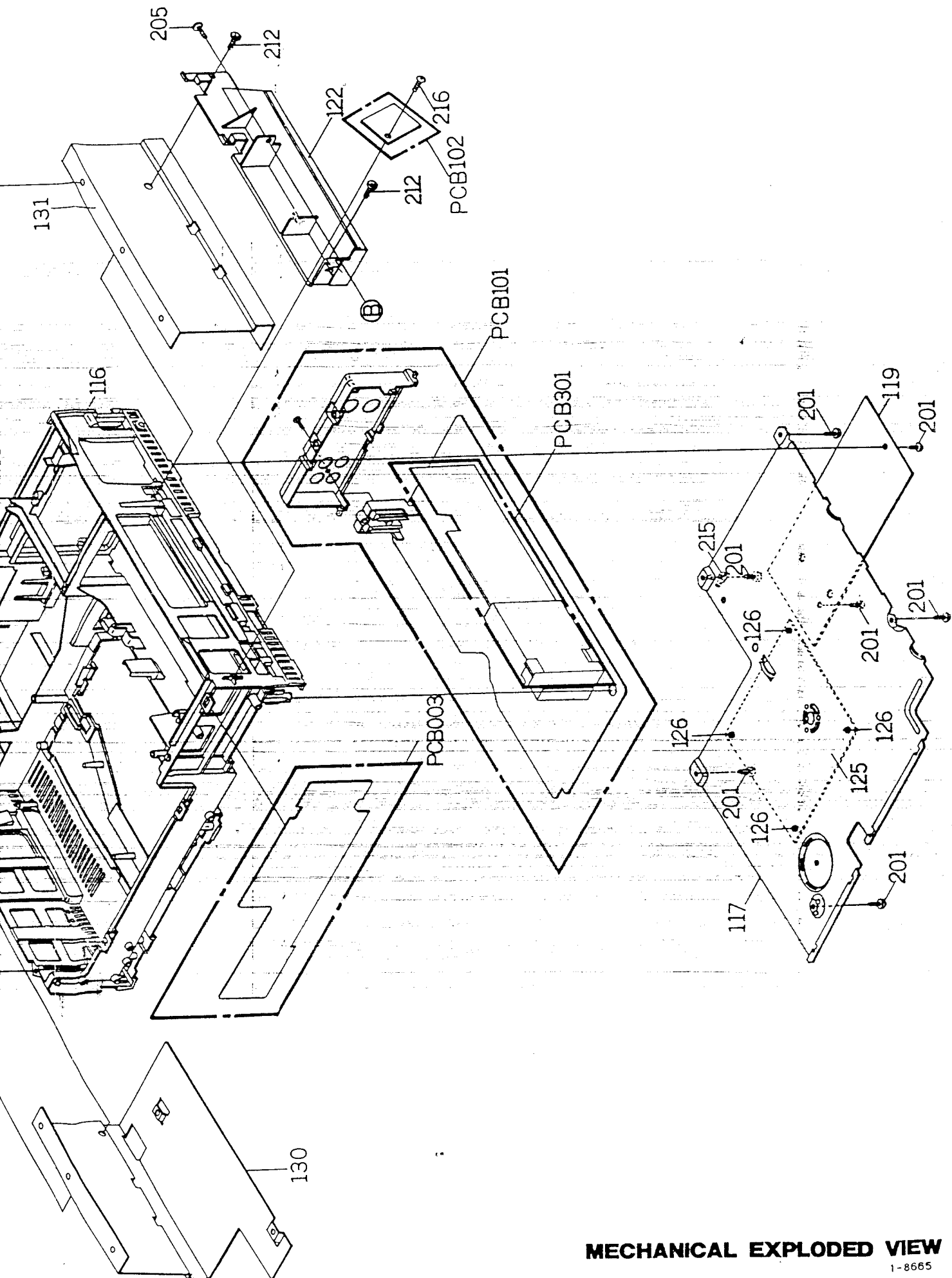
1-8453



MECHANICAL EXPLODED VIEW

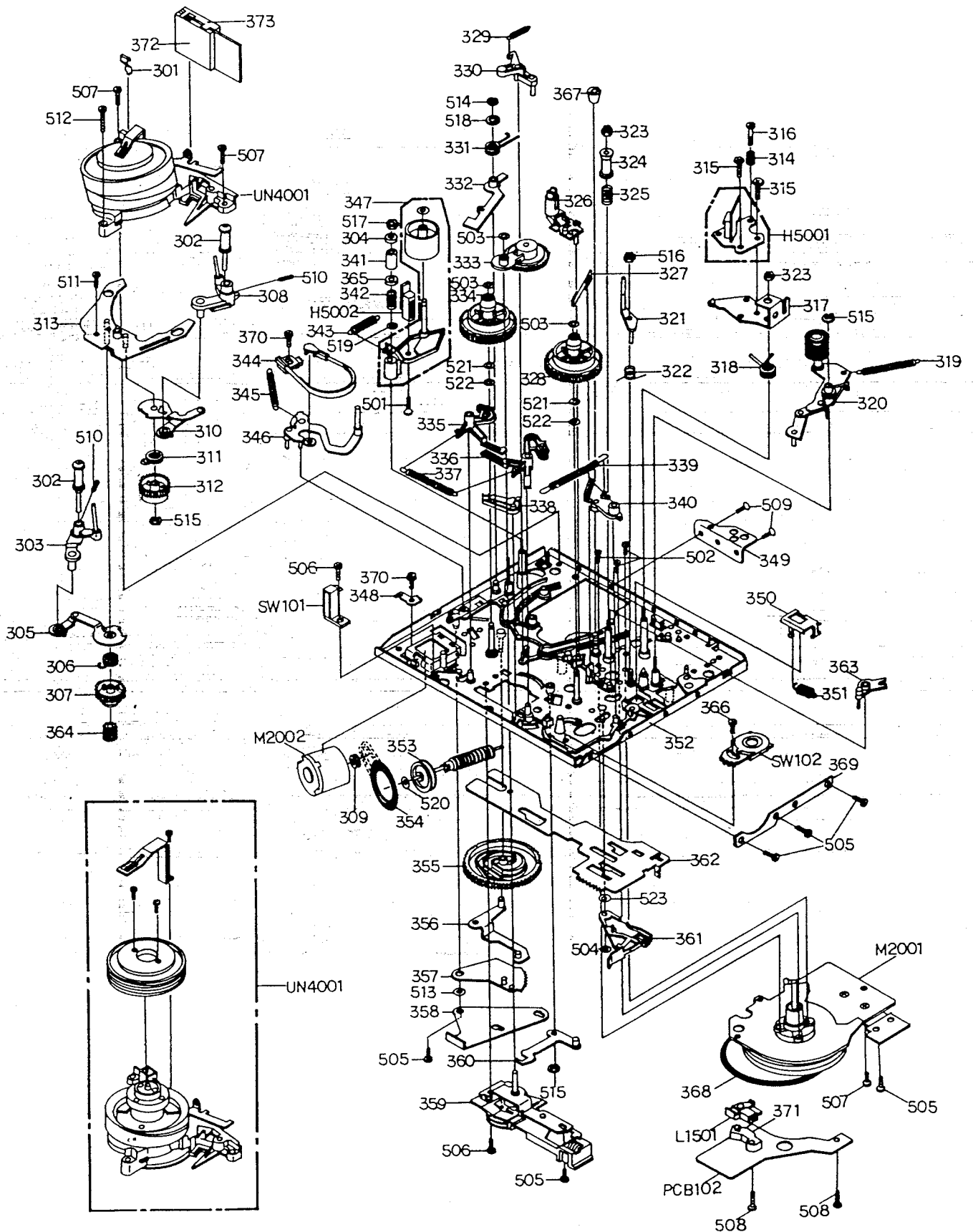


DED VIEW

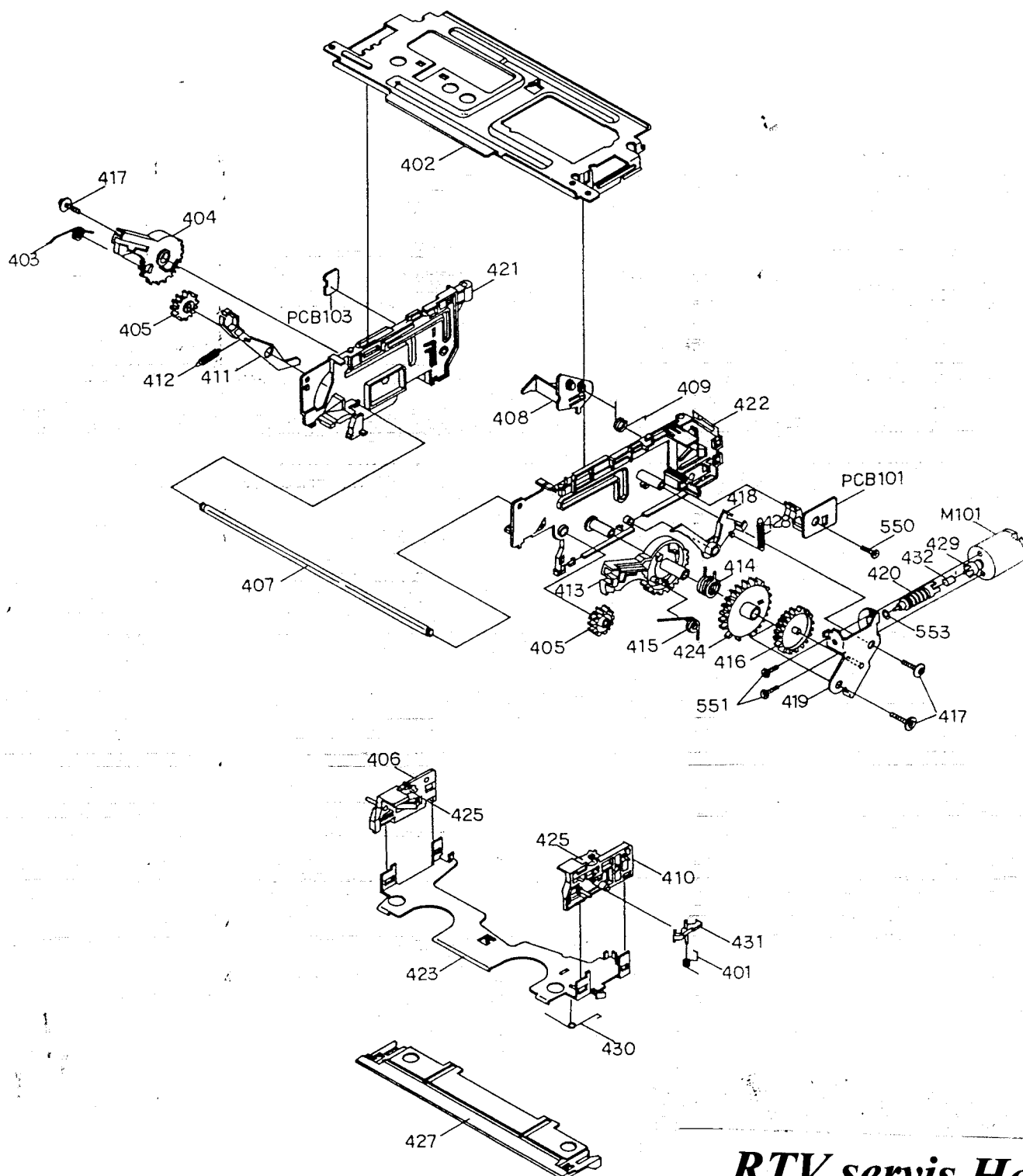


MECHANICAL EXPLODED VIEW

DECK EXPLODED VIEW



DECK EXPLODED VIEW (FL-5)(A43701A650)



RTV servis Horvat

Kešinci, 31402 Semeljci

Tel : 031-856-637

Tel / fax : 031-856-139

Mob : 098-788-319

rtv-servis-horvat@os.tel.hr

MECHANICAL REPLACEMENT PARTS LIST

REF. NO	PART NO	DESCRIPTION
101	A37905A720	CABINET, FRONT ASS'Y
102	712TPD0013	DOOR
103	761KSA0179	FRAME, CABINET (L)
104	761TPA0035	GUIDE RAIL (L)
105	761KSA0180	FRAME, CABINET (R)
106	761TPA0034	GUIDE RAIL (R)
107	899KLA0250	WIRE TIES
108	735KPA0073	BUTTON, PUSH
110	A37903A740	CABINET, BACK ASS'Y
		SHEET, RATING
		SHEET, JACK
111	761TPA0033	HOLDER, SPEAKER
112	762TSA0018	ANGLE, CRT
113	800TR00016	SHEET, CRT SUPPORT
114	751JNA0004	PLATE, EARTH WIRE
115	741TUA0003	SPRING, EARTH
116	702TPA0191	CABINET, INSIDE
117	702TSA0008	CABINET, BOTTOM
118	752TSA0019	PLATE, HEAD SHIELD
119	752TSA0050	SHIELD, BOTTOM
120	753TSA0008	PLATE, DECK EARTH
122	761TPA0031	HOLDER, INSIDE CABINET (R)
123	761TPA0032	HOLDER, INSIDE CABINET (L)
124	7230003108	FLAP
125	755TNA0016	COVER BOTTOM
126	8900P3035W	NYLON RIVETS
127	735TPA0129	BUTTON, POWER
128	735TPD0098	BUTTON, PLAY
129	735TPD0097	BUTTON, STOP
130	753TSA0023	ANGLE EARTH (L)
131	753TSA0022	ANGLE EARTH (R)
132	702TSA0011	SHIELD, TOP
201	8110630804	TAP TITE (P) BRAZIER 3*8 CH
202	8110630A24	TAP TITE (P) BRAZIER 3*12 CH
203	8110240804	TAP TITE (P) BIND 4*20 CH
204	8117230804	TAPPING (BO) BIND 3*20 CH
205	8117540A64	TAPPING (BO) TRUSS 4*16 CH
206	82A60A8164	PLAIN WASHER 6.3*18*T1.6
207	8300560004	SL NUT M6
208	8102240804	BIND M4*8 CH
209	8110630A44	TAP TITE (P) BRAZIER 3*14 CH
211	8117240A24	TAPPING (BO) BIND 4*12 CH
212	8117540A24	TAPPING (BO) TRUSS 4*12 CH
213	8117630A04	TAPPING (BO) BRAZIER 3*10 CH
214	8107630804	TAP TITE (S) BRAZIER 3*8 CH
215	901B040000	EARTH LUG (B4) 3.2
216	8110630604	TAP TITE (P) 3*6 CH
---	J3700102A	GUARANTEE CARD
---	J3790301B	INSTRUCTION BOOK
---	J3790307A	QUICK SET-UP SHEET
---	J3790320A	DEW CAUTION SHEET
---	J3790328B	WARNING SHEET
---	J3790339A	VPS CAUTION SHEET
---	792THA0121	PACKAGE, TOP
---	792THA0122	PACKAGE, BOTTOM
---	793TCD0706	GIFT BOX

DECK REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION	REF.NO	PART NO	DESCRIPTION
301	850P500023	SPRING,TR.	410	850A900055	CASS SIDE R ASS'Y
302	850A400056	GUIDE ROLLER ASS'Y	411	850P900241	FLAP OPENER
303	850A400038	INCLINED BASE S ASS'Y	412	850P900259	SPRING,FLAP OPENER
304	850P600128	FLANGE,P1(A)	413	850P900247	LINK GEAR R
305	850A300021	ARM,LOADING L ASS'Y	414	850P900260	SPRING,CLUTCH
306	850P800083	SPRING,LOADING GEAR L	415	850P900262	SPRING,LINK GEAR R
307	850P300055	GEAR,LOADING L	416	850P900243	WORM WHEEL
308	850A400047	BASE INCLINED T ASS'Y	417	788JKE0005	TAP TITE(P) PAN W7.5 2.6*10 UC
309	850P600313	PULLEY,LOADING MOTOR	418	850P900239	LEVER CAM
			419	850A900045	BRACKET,MOTOR ASS'Y
310	850A300022	ARM,LOADING R ASS'Y	420	850P900245	WORM
311	850P800084	SPRING,LOADING GEAR R	421	850P900251	BRACKET,SIDE L
312	850P300056	GEAR,LOADING R	422	850P900252	BRACKET,SIDE R
313	850A100006	LOADING BASE ASS'Y	423	850A900044	CASS,HOLDER SUB ASS'Y
314	850P800071	SPRING,AZIMUTH	424	850P900244	CLUTCH GEAR
315	868X0HH804	CONEHEAD SCREW M3*8 CH	425	850P900257	SPRING CASS,HOLDER
316	868512HA34	JOINT SCREW BIND M3*13 CH	427	850P900248	TAPE GUIDE PIECE
317	850P600155	BASE AC HEAD	428	850P900273	SPRING,LEVER CAM (A)
318	850P800070	SPRING,AC HEAD BASE	429	850P900217	WORM DRIVER
319	850P800077	SPRING,PINCH ROLLER			
320	850A400041	PINCH ROLLER ARM ASS'Y	430	850P900264	SPRING,LOCKER R
321	850A400064	LIMITER POST ARM 2 ASS'Y	431	850P900242	REMOVING
322	850P800092	SPRING,LIMITER POST 2	432	850P900229	BUSH RUBBER
323	850P500010	ADJUST NUT			
324	850A600085	POST SLEEVE 3 ASS'Y	501	868022D404	BIND M2*4 CH
325	850P800076	SPRING,P4	502	8680K10604	SEMS K M2.6*6 CH
326	850A700003	LED HOLDER ASS'Y	503	868WQ2647N	POLYSLIDER WASHER(CUT) 2.6*4.7*10.4
327	850A600049	TB BRAKE ARM ASS'Y	504	868WQ3154N	POLYSLIDER WASHER(CUT) 3.1*5.4*10.4
328	850A200007	REEL DISK T ASS'Y	505	868072H604	TAP TITE(S) BIND 3*6 CH
329	850P800079	SPRING,SS BRAKE	506	868072H804	TAP TITE(S) BIND 3*8 CH
			507	868072HA04	TAP TITE(S) BIND 3*10 CH
330	850A600037	SS BRAKE ARM ASS'Y	508	868072HA44	TAP TITE(S) BIND 3*14 CH
331	850P800081	SPRING,TENSION LEVER 2	509	868073H604	TAP TITE(S) FLAT 3*6 CH
332	850A600047	TENSION LEVER 2 ASS'Y			
333	850A200004	IDLER ASS'Y	510	8685DZD302	SET SCREW 6CUP POINT M2*3 BK
334	850A200006	REEL DISK S ASS'Y	511	868102H804	TAP TITE(P) BIND 3*8 CH
335	850A600041	MAIN BRAKE ARM L ASS'Y	512	868072HA64	TAP TITE(S) BIND 3*16 CH
336	850A600042	MAIN BRAKE ARM R ASS'Y	513	868WP6290U	POLYSLIDER WASHER 6.2*9.0*10.8
337	850P800074	SPRING,MAIN BRAKE	514	868NETW251	E-RING 2.5
338	850A600044	MB CONNECT ASS'Y	515	868NETW301	E-RING 3.0
339	850P800117	SPRING,TS BRAKE 3	516	868N008304	NYLON NUT M3
			517	868N007304	NYLON NUT M3
340	850A600056	TS BRAKE ARM 2 ASS'Y	518	868WA32A0U	WASHER 3.2*10*10.8
341	850P600130	POST,SLEEVE P1	519	868WA4380Q	WASHER 4.3*8.0*10.5
342	850P800075	SPRING,P1			
343	850P800072	SPRING,FE HEAD ARM	520	868WP2647E	POLYSLIDER WASHER 2.6*4.7*10.1
344	850A600057	TENSION BAND ASS'Y	521	868WP3144E	POLYSLIDER WASHER 3.1*4.4*10.1
345	850P800080	SPRING,TENSION ARM	522	868WP3147J	POLYSLIDER WASHER 3.1*4.7*10.2
346	850A400046	TENSION ARM ASS'Y	523	868WP4290Q	POLYSLIDER WASHER 4.2*9.0*10.5
347	850A500004	FE HEAD ARM ASS'Y			
348	850P600120	PLATE,ADJUST TENSION	550	868101G604	TAP TITE(P) PAN 2.6*6
349	850P000097	FRAME,DECK BACK 2	551	8680A1H404	SEMS A M3*4 CH
			553	868WP3254J	POLYSLIDER WASHER 3.2*5.4*10.2
350	850P600142	ACTUATOR,PINCH ROLLER			
351	850P800078	SPRING,PR ACTUATOR	C1101	CH4FF03H4Z	CC 22000 PF 25V
352	850A000007	MAIN CHASSIS ASS'Y			
353	850A600046	WORM ASS'Y	CD1001	068118057A	CORD EIS CONNECTOR 8118057A
354	850P600125	BELT,LOADING MOTOR	CD2001	068N12180A	CORD EIS CONNECTOR 8N12180A
355	850P600141	MAIN CAM	CD5001	068315091A	CORD EIS CONNECTOR 8315091A
356	850A600048	TENSION LEVER 1 ASS'Y	CD5003	068112156A	CORD EIS CONNECTOR 8112156A
357	850A300020	FAN SHAPED GEAR ASS'Y			
358	850P600196	PLATE,FS GEAR 2	CP1103	069R9C0051	CONNECTOR PCB SIDE 52196-1227
359	850A200005	CLUTCH ASS'Y			
			D1501	D130GMA010	DIODE,SILICON 0MA-01
360	850A600053	MB,LEVER 2 ASS'Y			
361	850A600050	CA 2 LEVER ASS'Y	H5001	1523D91008	HEAD AUDIO CONTROL HVMZA1013A
362	850A600036	ACTUATOR ASS'Y	H5002	1543D02002	HEAD FULL ERASE HVFMD0009
363	850A600039	LIMITER POST LEVER ASS'Y			
364	850P300059	GEAR,M	L1501	02BL000005	ELECTRO MAGNET JTM1002-01
365	850P600129	FLANGE,P1(B)			
366	868491H734	TAP TITE(S) PAN SPW+W7 3*7 CH	M101	1596978005	MOTOR,LOADING MXN-13FB11E
367	850P600122	NUT,ADJUST X	M2001	1510998006	CAPSTAN,DD UNIT DVX-7605RH
368	850P600124	BELT,REEL	M2002	1596958008	MOTOR,LOADING MXN-13FB12F
369	850P000098	FRAME,RIGHT SIDE 2			
			PCB102	A43701A550	PCB ASS'Y VE0246
370	868501H804	TAP TITE(S) PAN W6 3*8 CH	PCB103	A43701A680	PCB ASS'Y VE0125
371	850P600111	HOLDER,PHOTO COUPLER	PCB111	A43701A680	PCB ASS'Y VE0124
372	850PAA0079	SHIELD,LID			
373	850PAA0080	SHIELD,CASE	Q1101	0000800010	TRANSISTOR PHOTO PT361
			Q1102	0000800010	TRANSISTOR PHOTO PT361
401	850P900258	SPRING,REMOVING	Q1510	0002000020	PHOTO COUPLER OP2509AB
402	850P900256	BRACKET TOP			
403	850P900261	SPRING,LINK GEAR L	R1101	R01116103J	RC 10K OHM 1/6W
404	850P900246	LINK GEAR L	R1501	RC0106221J	RC 220 OHM 1/6W
405	850P900238	GEAR,SYNCHRO	R1502	R00106331J	RC 330 OHM 1/6W
406	850A900047	CASS,SIDE L ASS'Y			
407	850P900267	SHAFT,SYNCHRO	SW101	0550111013	SWITCH,LEAF LSA-1122-13
408	850P900240	OPENER	SW102	0520343002	SWITCH,ROTARY HWS0423-01-2
409	850P900263	SPRING,OPENER	SW103	0550A22003	SWITCH,LEAF MCV00010MPHO
			UN4001	1590100012	UNIT,CYLINDER 1590100012

THIS ELECTRICAL PARTS LIST IS STANDARD PART LIST, BUT
INTERCHANGEABLE PARTS MAY BE USED IN THE UNIT.
SEE THE INTERCHANGEABLE PARTS LIST AFTER THE STANDARD PARTS LIST

ELECTRICAL REPLACEMENT PARTS LIST

PART NO	DESCRIPTION
850A900055	CASS SIDE R ASS'Y
850P900241	FLAP OPENER
850P900259	SPRING, FLAP OPENER
850P900247	LINK GEAR R
850P900260	SPRING, CLUTCH
850P900262	SPRING, LINK GEAR R
850P900243	WORM WHEEL
788JKE0005	TAP TITE(P) PAN W7.5 2.6*10 UC
850P900239	LEVER CAM
850A900045	BRACKET, MOTOR ASS'Y
850P900245	WORM
850P900251	BRACKET, SIDE L
850P900252	BRACKET, SIDE R
850A900044	CASS, HOLDER SUB ASS'Y
850P900244	CLUTCH GEAR
850P900257	SPRING CASS, HOLDER
850P900248	TAPE GUIDE PIECE
850P900273	SPRING, LEVER CAM (A)
850P900217	WORM DRIVER
850P900264	SPRING, LOCKER R
850P900242	REMOVING
850P900229	BUSH RUBBER
868022D404	BIND M2*4 CH
8680K1G604	SEMS K M2.6*6 CH
868WQ2647N	POLYSLIDER WASHER(CUT) 2.6*4.7*TO.4
868WQ3154N	POLYSLIDER WASHER(CUT) 3.1*5.4*TO.4
868072H604	TAP TITE(S) BIND 3*6 CH
868072H604	TAP TITE(S) BIND 3*8 CH
868072H604	TAP TITE(S) BIND 3*10 CH
868072HA04	TAP TITE(S) BIND 3*14 CH
868072HA44	TAP TITE(S) BIND 3*6 CH
868073H604	TAP TITE(S) FLAT
8685DZD302	SET SCREW 6CUP POINT M2*3 BK
868102H604	TAP TITE(P) BIND 3*8 CH
868072HA64	TAP TITE(S) BIND 3*16 CH
868WP6290U	POLYSLIDER WASHER 6.2*9.0*TO.8
868NETW251	E-RING 2.5
868NETW301	E-RING 3.0
868N008304	NYLON NUT M3
868N007304	NYLON NUT M3
868WA32A0U	WASHER 3.2*10*TO.8
868WA4380Q	WASHER 4.3*8.0*TO.5
868WP2647E	POLYSLIDER WASHER 2.6*4.7*TO.1
868WP3144E	POLYSLIDER WASHER 3.1*4.4*TO.1
868WP3147J	POLYSLIDER WASHER 3.1*4.7*TO.2
868WP4290Q	POLYSLIDER WASHER 4.2*9.0*TO.5
868101G604	TAP TITE(P) PAN 2.6*6
8680A1H404	SEMS A M3*4 CH
868WP3254J	POLYSLIDER WASHER 3.2*5.4*TO.2
CH4FF03H4Z	CC 22000. PF 25V
068118057A	CORD EIS CONNECTOR 8118057A
068N12180A	CORD EIS CONNECTOR 8N12180A
0681315091A	CORD EIS CONNECTOR 8315091A
068112156A	CORD EIS CONNECTOR 8112156A
069R9C0051	CONNECTOR PCB SIDE 52196-1227
D130GMA010	DIODE, SILICON 0MA-01
1523D91008	HEAD AUDIO CONTROL HVMZA1013A
1543D02002	HEAD FULL ERASE HVFMD0009
02BL000005	ELECTRO MAGNET JTM1002-01
1596978005	MOTOR, LOADING MXN-13FB11E
1510998006	CAPSTAN, DD UNIT DVX-7605RH
1596958008	MOTOR, LOADING MXN-13FB12F
A43701A550	PCB ASS'Y VE0246
A43701A680	PCB ASS'Y VE0125
A43701A680	PCB ASS'Y VE0124
0000800010	TRANSISTOR PHOTO PT361
0000800010	TRANSISTOR PHOTO PT361
0002000020	PHOTO COUPLER GP2509AB
R0116103J	RC 10K OHM 1/6W
R0106221J	RC 220 OHM 1/6W
R00106331J	RC 330 OHM 1/6W
0550111013	SWITCH, LEAF LSA-1122-13
0520343002	SWITCH, ROTARY HMWQ423-01-2
0550A22003	SWITCH, LEAF MCV00010MPH0
1590100012	UNIT, CYLINDER 1590100012

REF. NO	PART NO	DESCRIPTION	REF. NO	PART NO	DESCRIPTION
RESISTORS					
R220	R615848R2J	R.FUSE 8.2 OHM 1/4W	D404	D93T02000Y	DIODE, ZENER
R431	R3B18A122J	R.METAL OXIDE 1.2K OHM 2W	D405	D93T01200Y	DIODE, ZENER
R432	R3B18A122J	R.METAL OXIDE 1.2K OHM 2W	D406	D23TFD05TG	DIODE, ZENER
R437	R61582680J	R.FUSE 68 OHM 1/2W	D407	D23TFD05TG	DIODE, ZENER
R439	R615814R7J	R.FUSE 4.7 OHM 1W	D409	D23TFH10TG	DIODE, ZENER
R441	R5A2CE6R8K	R.CEMENT 6.8 OHM 7W	D410	D23TFD05TG	DIODE, ZENER
R445	R615814R7J	R.FUSE 4.7 OHM 1W	D411	D13TGM0A10	DIODE, ZENER
R501	R5A2CE5R6K	R.CEMENT 5.6 OHM 7W	D413	D13TGM0A10	DIODE, ZENER
R502	R63584010J	R.FUSE 1 OHM 1/4W	D414	D25T556680	DIODE, ZENER
R505	R61584470J	R.FUSE 47 OHM 1/4W	D501	D28TRM11C0	DIODE, ZENER
R506	R3B18A820J	R.METAL OXIDE 82 OHM 2W	D502	D28TRM11C0	DIODE, ZENER
R507	R3B18A563J	R.METAL OXIDE 56K OHM 2W	D503	D28TRM11C0	DIODE, ZENER
R509	R3B181330J	R.METAL OXIDE 33 OHM 1W	D504	D28TRM11C0	DIODE, ZENER
R511	R61584330J	R.FUSE 33 OHM 1/4W	D505	D28T10ELS6	DIODE, ZENER
R512	R4B181R47J	R.METAL 0.47 OHM 1W	D506	D28T10ELS2	DIODE, ZENER
R514	R3128A150J	R.METAL OXIDE 15 OHM 2W	D507	D28T10ELS2	DIODE, ZENER
R516	R512AD1R2K	R.CEMENT 1.2 OHM 5W	D508	D28T10ELS2	DIODE, ZENER
R517	R614811R5J	R.FUSE 1.5 OHM 1W	D509	D28T10DF80	DIODE, ZENER
R518	R03101475J	RC 4.7 OHM 1W	D510	D28T10DF80	DIODE, ZENER
R519	R3B181153J	R.METAL OXIDE 15K OHM 1W	D511	D28T10ELS2	DIODE, ZENER
R602	R3B18A103J	R.METAL OXIDE 10K OHM 2W	D512	D28B000R2M0	DIODE, ZENER
R603	R3B18A103J	R.METAL OXIDE 10K OHM 2W	D513	D28F30DF20	DIODE, ZENER
R604	R3B18A103J	R.METAL OXIDE 10K OHM 2W	D514	D28115DF60	DIODE, ZENER
R1016	R00104102J	RC 1.0K OHM 1/4W	D515	D25T556680	DIODE, ZENER
R1017	R00104102J	RC 1.0K OHM 1/4W	D601	D93T05R10Y	DIODE, ZENER
R1091	R00106103J	RC 10K OHM 1/6W	D602	D13TGM0A10	DIODE, ZENER
R1092	R00106332J	RC 3.3K OHM 1/6W	D603	D93001800Y	DIODE, ZENER
R1093	R00106153J	RC 15K OHM 1/6W	D604	D13TGM0A10	DIODE, ZENER
R1094	R00106221J	RC 220 OHM 1/6W	D605	D13TGM0A10	DIODE, ZENER
R4211	R00106101J	RC 100 OHM 1/6W	D606	D130GMA010	DIODE, ZENER
R4220	R00106822J	RC 8.2K OHM 1/6W	D607	D93006R80Y	DIODE, ZENER
R6055	R00106471J	RC 470 OHM 1/6W	D701	D93T05R10Y	DIODE, ZENER
CAPACITORS					
C310	COA0SL4Q1J	CC 47 PF SL	D702	D13TDS442X	DIODE, ZENER
C365	COA0F0414Z	CC 0.01 UF F	D1003	D13TGM0A10	DIODE, ZENER
C367	COA0B0413K	CC 1000 PF B	D1005	D93T01300X	DIODE, ZENER
C428	P4A2F0123J	CMPP 0.012 UF 2KV	D1007	D13TGM0A10	DIODE, ZENER
C431	P4A1F2564J	CMPP 0.56 UF 200V	D1009	D13TDS442X	DIODE, ZENER
C436	E0B7F3222M	CE 2200 UF 25V	D2003	D13TGM0A10	DIODE, ZENER
C440	E0B7F4102M	CE 1000 UF 35V	D2004	D13TGM0A10	DIODE, ZENER
C448	C0D4BN7B3K	CC 1200 PF 2KV B	D2007	D13TGM0A10	DIODE, ZENER
C450	C0D4BN713K	CC 1000 PF 2KV B	D2008	D13TGM0A10	DIODE, ZENER
C451	C0D4BN7Q2K	CC 470 PF 2KV B	D2012	D28T011E10	DIODE, ZENER
C452	C0D4BN7Q2K	CC 470 PF 2KV B	D2013	D13TGM0A10	DIODE, ZENER
C459	P3A1F2104J	CPP 0.1 UF 200V	D2017	D13TGM0A10	DIODE, ZENER
C461	E0B7F2222M	CE 2200 UF 16V	D2018	D13TGM0A10	DIODE, ZENER
C466	COA8B07H3K	CC 2200 PF 2KV B	D2019	D13TGM0A10	DIODE, ZENER
C501	COA8B07H3K	CC 2200 PF 2KV B	D2020	D13TGM0A10	DIODE, ZENER
C502	COA8B07H3K	CC 2200 PF 2KV B	D3001	D13TDS442X	DIODE, ZENER
C503	COA8B07H3K	CC 2200 PF 2KV B	D3004	D13TDS442X	DIODE, ZENER
C506	C0D4BN7E3K	CC 1500 PF 2KV B	D4001	D17T001320	DIODE, ZENER
C507	E53C0H101M	EC 100 UF 400V	D4002	D17T001320	DIODE, ZENER
C508	E02QF6100M	CE 10 UF 63V	D4005	D94TA9R172	DIODE, ZENER
C511	E02QF5470M	CE 47 UF 50V	D4008	D84TA6R8J2	DIODE, ZENER
C512	P3A1F4473J	CPP 0.047 UF 400V	D4201	D93T01300X	DIODE, ZENER
C513	P61708474M	CMPL 0.47 UF 250V	D6002	D14U001660	DIODE, ZENER
C515	C0D4BN713K	CC 1000 PF 2KV B	D6003	D03RLE801L	DIODE, ZENER
C516	E03208151M	CE 150 UF 160V	D7001	D23TDSF10T	DIODE, ZENER
C518	CA1B30KH2M	CC 220 PF 400V	D7002	D23TDSF10T	DIODE, ZENER
C519	C0D4BN7B3K	CC 1200 PF 2KV B	D7003	D23TDSF10T	DIODE, ZENER
C520	C0D4BN7B3K	CC 1200 PF 2KV B	D7004	D23TDSF10T	DIODE, ZENER
C522	CA1B30KH3M	CC 2200 PF 400V	D7005	D23TDSF10T	DIODE, ZENER
C524	C0D4BN7Q2K	CC 470 PF 2KV B	D7006	D23TDSF10T	DIODE, ZENER
C531	E0B7F3222M	CE 2200 UF 25V	D7007	D23TDSF10T	DIODE, ZENER
C533	E0B7F3102M	CE 1000 UF 25V	D7008	D23TDSF10T	DIODE, ZENER
C535	CA1B30KQ2M	CC 470 PF 400V	D7009	D28T011E20	DIODE, ZENER
C605	E0B702101M	CE 100 UF 16V	D7011	D87T2MR150	DIODE, ZENER
C608	P1E400182J	CP 0.0018 UF 50V	D7013	D93T01300Y	DIODE, ZENER
C659	COA0SL4L1J	CC 33 PF SL	D7014	D17T001320	DIODE, ZENER
C801	COA8B07H3K	CC 2200 PF 2KV B	D7015	D28T011E10	DIODE, ZENER
C1029	E01101470M	CE 47 UF 16V	D7018	D23TDSF10T	DIODE, ZENER
C1030	E01E02100M	CE 10 UF 16V	D7019	D23TDSF10T	DIODE, ZENER
C4204	E0B1T2100M	CE 10 UF 16V	D7020	D23TDSF10T	DIODE, ZENER
C6063	CH40SL4L1J	CC 33 PF 50V	D7021	D23TDSF10T	DIODE, ZENER
C7001	E0D1F3332M	CE 3300 UF 25V	D7023	D13TDS4410	DIODE, ZENER
C7002	E0D1F3222M	CE 2200 UF 25V	D7024	D13TDS442X	DIODE, ZENER
C7015	E0F1G2222M	CE 2200 UF 16V	D7025	D28T011E10	DIODE, ZENER
C7020	P2160B104M	CPP 0.1 UF 250V	D8001	D28T011E10	DIODE, ZENER
C8014	E51B0P473Z	CE 0.047 UF 5.5V	D8002	D13TGM0A10	DIODE, ZENER
SEMI CONDUCTORS					
D402	D93T07R50Y	DIODE, ZENER GZA7.5Y 8T	D8011	D13TGM0A10	DIODE, ZENER
D403	D93T09R10Y	DIODE, ZENER GZA9.1Y 8T	D8014	D13TGM0A10	DIODE, ZENER
			D8017	D13TGM0A10	DIODE, ZENER
			D8020	0021G20180	LED
			D8021	0021120030	LED
			D8022	0021120030	LED

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SEE THE INTERCHANGEABLE PARTS LIST AFTER THE STANDARD PARTS LIST.

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO	PART NO	DESCRIPTION	REF. NO	PART NO	DESCRIPTION	
RESISTORS			SEMICONDUCTORS (CONT)			
△ R220	R615848R2J	R.FUSE	8.2 OHM 1/4W	D404	DIODE.ZENER	GZA20Y BT
△ R431	R3B18A122J	R.METAL OXIDE	1.2K OHM 2W	D405	DIODE.ZENER	GZA12Y BT
△ R432	R3B18A122J	R.METAL OXIDE	1.2K OHM 2W	D406	DIODE.RECTIFIER	DFD05TG-BT
△ R437	R61582680J	R.FUSE	68 OHM 1/2W	D407	DIODE.RECTIFIER	DFD05TG-BT
△ R439	R615814R7J	R.FUSE	4.7 OHM 1W	D409	DIODE.RECTIFIER	DFH10TG-AT1
△ R441	R5A2CE6R8K	R.CEMENT	6.8 OHM 7W	D410	DIODE.RECTIFIER	DFD05TG-BT
△ R445	R615814R7J	R.FUSE	4.7 OHM 1W	D411	DIODE.SILICON	GMA-01-BT
△ R501	R5A2CE5R6K	R.CEMENT	5.6 OHM 7W	D413	DIODE.SILICON	GMA-01-BT
△ R502	R63584010J	R.FUSE	1 OHM 1/4W	D414	DIODE.RECTIFIER	S5566B
△ R505	R61584470J	R.FUSE	47 OHM 1/4W	△ D501	DIODE.RECTIFIER	RM11C
△ R506	R3B18A820J	R.METAL OXIDE	82 OHM 2W	△ D502	DIODE.RECTIFIER	RM11C
△ R507	R3B18A563J	R.METAL OXIDE	56K OHM 2W	△ D503	DIODE.RECTIFIER	RM11C
△ R509	R3B181330J	R.METAL OXIDE	33 OHM 1W	△ D504	DIODE.RECTIFIER	RM11C
△ R511	R61584330J	R.FUSE	33 OHM 1/4W	D505	DIODE.RECTIFIER	10ELS6TA1
△ R512	R4B181R47J	R.METAL	0.47 OHM 1W	D506	DIODE.RECTIFIER	10ELS2TA1
△ R514	R3128A150J	R.METAL OXIDE	15 OHM 2W	D507	DIODE.RECTIFIER	10ELS2TA1
△ R516	R512AD1R2K	R.CEMENT	1.2 OHM 5W	D508	DIODE.RECTIFIER	10ELS2TA1
△ R517	R614811R5J	R.FUSE	1.5 OHM 1W	D509	DIODE.RECTIFIER	10ELS2TA1
△ R518	R03101475J	RC	4.7 OHM 1W	D510	DIODE.RECTIFIER	10DF8TA2
△ R519	R3B181153J	R.METAL OXIDE	15K OHM 1W	△ D511	DIODE.RECTIFIER	10ELS2TA1
△ R802	R3B18A103J	R.METAL OXIDE	10K OHM 2W	△ D512	DIODE.AVALANCHE	R2M
△ R803	R3B18A103J	R.METAL OXIDE	10K OHM 2W	△ D513	DIODE.SILICON	30DF2-FC
△ R804	R3B18A103J	R.METAL OXIDE	10K OHM 2W	△ D514	DIODE.SILICON	15DF6-FC
R1016	R00104102J	RC	1.0K OHM 1/4W	D515	DIODE.RECTIFIER	S5566B
R1017	R00104102J	RC	1.0K OHM 1/4W	D601	DIODE.ZENER	GZA5.1Y BT-T
R1091	R00106103J	RC	10K OHM 1/6W	D602	DIODE.SILICON	GMA-01-BT
R1092	R00106332J	RC	3.3K OHM 1/6W	D603	DIODE.ZENER	GZA18Y
R1093	R00106153J	RC	15K OHM 1/6W	D604	DIODE.SILICON	GMA-01-BT
R1094	R00106221J	RC	220 OHM 1/6W	D605	DIODE.SILICON	GMA-01-BT
R4211	R00106101J	RC	100 OHM 1/6W	D606	DIODE.SILICON	GMA-01
R4220	R00106822J	RC	8.2K OHM 1/6W	D607	DIODE.ZENER	GZA6.8Y
R6055	R00106471J	RC	470 OHM 1/6W	D701	DIODE.ZENER	GZA5.1Y BT-T
CAPACITORS			D702	DIODE.SILICON	DS442X-BT	
C310	COA0SL4Q1J	CC	47 PF SL	D1003	DIODE.SILICON	GMA-01-BT
C365	COA0F0414Z	CC	0.01 UF F	D1005	DIODE.ZENER	GZA13X BT
C367	COA0B0413K	CC	1000 PF B	D1007	DIODE.SILICON	GMA-01-BT
C428	P4A2F0123J	CMPP	0.012 UF 2KV	D1009	DIODE.SILICON	DS442X-BT
C431	P4A1F2564J	CMPP	0.56 UF 200V	D2003	DIODE.SILICON	GMA-01-BT
C436	E0B7F3222M	CE	2200 UF 25V	D2004	DIODE.SILICON	GMA-01-BT
C440	E0B7F4102M	CE	1000 UF 35V	D2007	DIODE.SILICON	GMA-01-BT
C448	C0D4BN7B3K	CC	1200 PF 2KV B	D2008	DIODE.SILICON	GMA-01-BT
C450	C0D4BN713K	CC	1000 PF 2KV B	D2012	DIODE.SILICON	11E1TA1
C451	C0D4BN7Q2K	CC	470 PF 2KV B	D2013	DIODE.SILICON	GMA-01-BT
C452	C0D4BN7Q2K	CC	470 PF 2KV B	D2017	DIODE.SILICON	GMA-01-BT
C459	P3A1F2104J	CPP	0.1 UF 200V	D2018	DIODE.SILICON	GMA-01-BT
C461	E0B7F2222M	CE	2200 UF 16V	D2019	DIODE.SILICON	GMA-01-BT
C466	COA8B07H3K	CC	2200 PF 2KV B	D2020	DIODE.SILICON	GMA-01-BT
C501	COA8B07H3K	CC	2200 PF 2KV B	D3001	DIODE.SILICON	DS442X-BT
C502	COA8B07H3K	CC	2200 PF 2KV B	D3004	DIODE.SILICON	DS442X-BT
C503	COA8B07H3K	CC	2200 PF 2KV B	D4001	DIODE.SILICON	DS442X-BT
C505	C0D4BN7E3K	CC	1500 PF 2KV B	D4002	DIODE.SILICON	1SS132T-77
C506	E53C0H101M	EC	100 UF 400V	D4005	DIODE.ZENER	HZS9R1J82-TE
C507	E02QF6100M	CE	10 UF 63V	D4008	DIODE.ZENER	HZS6R8J82-TE
C508	E02QF5470M	CE	47 UF 50V	D4201	DIODE.ZENER	GZA13X BT
C511	P3A1F4473J	CPP	0.047 UF 400V	D6002	DIODE.SILICON	1SS166-03TE
△ C512	P6170B474M	CMPL	0.47 UF 250V	D6003	DIODE.SILICON	LF8-01L
△ C513	P6170B474M	CMPL	0.47 UF 250V	△ D7001	DIODE.RECTIFIER	DSF10TB-BT-A
△ C515	C0D4BN713K	CC	1000 PF 2KV B	△ D7002	DIODE.RECTIFIER	DSF10TB-BT-A
△ C516	E0320B151M	CE	150 UF 160V	△ D7003	DIODE.RECTIFIER	DSF10TB-BT-A
△ C518	CA1B30K42M	CC	220 PF 400V	△ D7004	DIODE.RECTIFIER	DSF10TB-BT-A
△ C519	C0D4BN7B3K	CC	1200 PF 2KV B	△ D7005	DIODE.RECTIFIER	DSF10TB-BT-A
△ C520	C0D4BN7B3K	CC	1200 PF 2KV B	△ D7006	DIODE.RECTIFIER	DSF10TB-BT-A
△ C522	CA1B30KH3M	CC	2200 PF 400V	△ D7007	DIODE.RECTIFIER	DSF10TB-BT-A
C524	C0D4BN7Q2K	CC	470 PF 2KV B	△ D7008	DIODE.SILICON	11E2TA1
C531	E0B7F3222M	CE	2200 UF 25V	△ D7011	GLASS SEALED LED	LTZ-MR15-T77
C533	E0B7F3102M	CE	1000 UF 25V	△ D7013	DIODE.ZENER	GZA13Y BT
△ C535	CA1B30KQ2M	CC	470 PF 400V	△ D7014	DIODE.SILICON	1SS132T-77
C605	E0B702101M	CE	100 UF 16V	△ D7015	DIODE.SILICON	11E1TA1
C608	P1E400182J	CP	0.0018UF 50V	△ D7018	DIODE.RECTIFIER	DSF10TB-BT-A
C659	COA0SL4L1J	CC	33 PF SL	△ D7019	DIODE.RECTIFIER	DSF10TB-BT-A
C801	COA8B07H3K	CC	2200 PF 2KV B	△ D7020	DIODE.RECTIFIER	DSF10TB-BT-A
C1029	E01101470M	CE	47 UF 16V	△ D7021	DIODE.RECTIFIER	DSF10TB-BT-A
C1030	E01E02100M	CE	10 UF 16V	D7023	DIODE.SILICON	DS441
C4204	E0B1T2100M	CE	10 UF 16V	D7024	DIODE.SILICON	DS442X-BT
C6063	CH40SL4L1J	CC	33 PF 50V	D7025	DIODE.SILICON	11E1TA1
C7001	E0D1F3332M	CE	3300 UF 25V	D8001	DIODE.SILICON	11E1TA1
C7002	E0D1F3222M	CE	2200 UF 25V	D8002	DIODE.SILICON	GMA-01-BT
C7015	E0F1G2222M	CE	2200 UF 16V	D8003	DIODE.SILICON	GMA-01-BT
C7020	P2160B104M	CPP	0.1 UF 250V	D8004	DIODE.SILICON	GMA-01-BT
C8014	E51B0P473Z	CE	0.047 UF 5.5V	D8011	DIODE.SILICON	GMA-01-BT
SEMI CONDUCTORS			D8014	DIODE.SILICON	GMA-01-BT	
D402	D93T07R50Y	DIODE.ZENER	GZA7.5Y BT	D8017	DIODE.SILICON	GMA-01-BT
D403	D93T09R10Y	DIODE.ZENER	GZA9.1Y BT	D8020	LED	GL57R43T
				D8021	LED	LN81RCPH
				D8022	LED	LN81RCPH

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO	PART NO	DESCRIPTION		REF. NO	PART NO	DESCRIPTION	
SEMICONDUCTORS (CONT)				SEMICONDUCTORS (CONT)			
D8023	0021120030	LED	LN81RCPH	Q1007	TC3T022740	TRANSISTOR, SILICON	2SC2274
D8024	0021120030	LED	LN81RCPH	Q1010	TN30C03001	COMPOUND TRANSISTOR	2SC3400
D8025	0021120030	LED	LN81RCPH	Q1011	TB3T006980	TRANSISTOR, SILICON	2SB698-AA
D8026	0021120030	LED	LN81RCPH	Q1013	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T
D8028	0021120030	LED	LN81RCPH	Q1014	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T
D8029	0021G20180	LED	GL5TR43T	Q1015	TB3000892T	TRANSISTOR, SILICON	2SB892
D8030	D13TGMA010	DIODE, SILICON	GMA-01-BT	Q1016	TC3000536F	TRANSISTOR, SILICON	2SC536
D8031	D13TGMA010	DIODE, SILICON	GMA-01-BT	Q2001	TD3T011110	TRANSISTOR, SILICON	2SD1111-AA
D8032	D13TGMA010	DIODE, SILICON	GMA-01-BT	Q2002	TB3T009260	TRANSISTOR, SILICON	2SB926-T
D8033	D13TGMA010	DIODE, SILICON	GMA-01-BT	Q2003	TP3TD06001	COMPOUND TRANSISTOR	2SA1345
D8034	D13TGMA010	DIODE, SILICON	GMA-01-BT	Q2004	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T
D8040	0021120030	LED	LN81RCPH	Q2005	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T
D8050	D92006R880	DIODE, ZENER	RD6.8EB	Q2006	TC3T053650	TRANSISTOR, SILICON	2SC536SP-AC
D8051	D92006R880	DIODE, ZENER	RD6.8EB	Q2007	TC3T053650	TRANSISTOR, SILICON	2SC536SP-AC
IC201	103DE7520N	IC	LA7520N	Q2008	TC3T053650	TRANSISTOR, SILICON	2SC536SP-AC
IC202	103S072100	IC	LA7210	Q2009	TN3TD03001	COMPOUND TRANSISTOR	2SC3399-AC
IC203	103S063930	IC	LA6393S	Q3001	T67A1037K0	TRANSISTOR, SILICON	2SA1037KT97
IC351	103SP42650	IC	LA4265	Q3002	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC352	103S070160	IC	LA7016	Q3004	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC401	105DE86590	IC	TA8659AN	Q3006	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC402	102SD14880	IC	UPC1488H	Q3007	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC501	12B4980410	IC	STR-58041	Q3008	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC502	103B97812V	IC	L7812V-SA	Q3701	TN7TC05001	COMPOUND TRANSISTOR	DTC124EKT97
IC503	102190574J	IC	UPC574J-T	Q3702	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC601	152D06325C	IC	UPD6325C	Q4001	T67A1037K0	TRANSISTOR, SILICON	2SA1037KT97
IC651	152D010150	IC	OEC1015	Q4002	T83A028127	TRANSISTOR, SILICON	2SC2812-L7-TA
IC701	100S022340	IC	NJM2234S	Q4003	T83A028127	TRANSISTOR, SILICON	2SC2812-L7-TA
IC702	159D05258R	IC	MSM5258RS	Q4005	T83A028127	TRANSISTOR, SILICON	2SC2812-L7-TA
IC1001	154D50015C	IC	OEC0015C	Q4006	T83A028127	TRANSISTOR, SILICON	2SC2812-L7-TA
IC1002	106S51954A	IC	M51954AL	Q4007	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC1003	107S062470	IC	BA6247	Q4008	T67A1037K0	TRANSISTOR, SILICON	2SA1037KT97
IC1005	103S063930	IC	LA6393S	Q4009	T87A02412K	TRANSISTOR, SILICON	2SC2412K
IC1006	13ED656420	IC	SDA5642	Q4010	TN7TC05001	COMPOUND TRANSISTOR	DTC124EKT97
IC1007	152D06252C	IC	UPD6252C	Q5005	TC1T013170	TRANSISTOR, SILICON	2SC1317-T
IC1008	103S063930	IC	LA6393S	Q6001	T83A028126	TRANSISTOR, SILICON	2SC2812-L6-TA
IC2001	197D49011A	IC	OEC9011	Q6002	T63A011790	TRANSISTOR, SILICON	2SA1179-TA
IC3001	103D373300	IC	LA7330	Q6004	TC3T030000	TRANSISTOR, SILICON	2SC3000-AA
IC3701	107TC025L	IC	BA7025L	Q6005	T83A028126	TRANSISTOR, SILICON	2SC2812-L6-TA
IC4001	103D37323A	IC	LA7323A	Q7001	TA3T0984K0	TRANSISTOR, SILICON	2SA984K-T
IC4002	108D369653	IC	MSM6965-3RS	Q7002	TD30018250	TRANSISTOR, SILICON	2SD1825
IC4101	103D073200	IC	LA7320	Q7003	TD30018250	TRANSISTOR, SILICON	2SD1825
IC5001	103T772960	IC	LA7296	Q7005	TD3H018250	TRANSISTOR, SILICON	2SD1825Z-LU
IC6001	103DA7530N	IC	LA7530N	Q8001	TC3T053650	TRANSISTOR, SILICON	2SC536SP-AC
IC7001	123S953420	IC	STK5342	Q8002	TB3T006980	TRANSISTOR, SILICON	2SB698-AA
ICT002	102190574J	IC	UPC574J-T	Q8003	TN7TB03001	COMPOUND TRANSISTOR	DTC114E S-T
IC8001	152DT1014B	IC	OEC1014B	Q8004	TN7TD03001	COMPOUND TRANSISTOR	DTC144ESTP
IC8002	101901280M	IC	MN1280M	Q8010	TN7TC03001	COMPOUND TRANSISTOR	DTC124E S-T
IC8005	150D010670	IC	CXD1067P	COILS & TRANSFORMERS			
Q201	TC3T030000	TRANSISTOR, SILICON	2SC3000-AA	L001	021Z73101K	COIL	100 UH
Q202	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L201	021Z73R47M	COIL	0.47 UH
Q203	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L202	021Z731R0J	COIL	1.0 UH
Q204	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L203	033600016N	COIL, VIDEO IFT	3600016
Q205	TN7TC03001	COMPOUND TRANSISTOR	DTC124E S-T	L204	033600017N	COIL, VIDEO IFT	3600017
Q351	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L205	021JA6100K	COIL	10 UH
Q353	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L206	033600018N	COIL, VIDEO IFT	3600018
Q354	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L207	03360L001C	COIL, TRAP	360L001
Q401	TD3FD18780	TRANSISTOR, SILICON	2SD1878	L401	021679472K	COIL	4.7 MH
Q402	TC30026210	TRANSISTOR, SILICON	2SC2621	L402	022R000002	COIL, LINEARITY	1431
Q403	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L501	0290000001	COIL, LINE FILTER	RB-20871
Q404	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L502	0290000001	COIL, LINE FILTER	RB-20871
Q405	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L503	028J200008	COIL, DEGAUSS	8J200008
Q407	TN7TD03002	COMPOUND TRANSISTOR	DTC144T S	L504	02100B470K	COIL	47 UH
Q408	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L505	02AXA509C1	FILTER, LINE	ESD-R-16C
Q502	TD3T008639	TRANSISTOR, SILICON	2SD863-AE	L506	02AXA509C1	FILTER, LINE	ESD-R-16C
Q503	TD3T008630	TRANSISTOR, SILICON	2SD863-AE	L601	03352R011C	COIL, CHROMA	352R011
Q604	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L602	03352R011C	COIL, CHROMA	352R011
Q605	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L603	03352R007C	COIL, CHROMA	16035SU
Q606	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L604	021JA6100K	COIL	10 UH
Q607	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L605	03302R001C	COIL, CHROMA	16032SU
Q608	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L606	03352R012C	COIL, CHROMA	352R012
Q612	TN7TD03002	COMPOUND TRANSISTOR	DTC144T S	L607	021JA6330K	COIL	33 UH
Q613	TN7TB03001	COMPOUND TRANSISTOR	DTC114E S-T	L608	021JA6270K	COIL	27 UH
Q651	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L612	021JA6390K	COIL	39 UH
Q652	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L651	021Z73390J	COIL	39 UH
Q653	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L701	021Z73101K	COIL	100 UH
Q654	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L801	021JA2151K	COIL	150 UH
Q655	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L1001	021B73101K	COIL	100 UH
Q701	TCLT009450	TRANSISTOR, SILICON	2SC945A(C)-T	L1002	021B73101K	COIL	100 UH
Q702	TALT007330	TRANSISTOR, SILICON	2SA733(C)-T	L3002	021JA6180K	COIL	18 UH
Q801	TC3F042170	TRANSISTOR, SILICON	2SC4217-RAC	L3003	021JA63R3K	COIL	3.3 UH
Q802	TC3F042170	TRANSISTOR, SILICON	2SC4217-RAC	L3004	021JA6101K	COIL	100 UH
Q803	TC3F042170	TRANSISTOR, SILICON	2SC4217-RAC	L3005	021B73101K	COIL	100 UH
Q1001	TD3T011110	TRANSISTOR, SILICON	2SD1111-AA	L3006	021JA6150K	COIL	15 UH
Q1005	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T	L3701	021B73101K	COIL	100 UH
Q1006	TN3TC03001	COMPOUND TRANSISTOR	2SC3400-T	L3702	0326220011	COIL, TRAP	2622001

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO	PART NO	DESCRIPTION	REF. NO	PART NO	DESCRIPTION
COILS & TRANSFORMERS (CONT)			VARIABLE RESISTORS (CONT)		
L4001	021JA6221K	COIL 220 UH	VR6001	V126314BT5	VR, SEMIFIXED RH0636C14R07B
L4003	021JA6470K	COIL 47 UH	VR6002	V126314BT5	VR, SEMIFIXED RH0636C14R07B
L4004	021JA61R0M	COIL 1.0 UH	VR8001	V014025B04	VR, ROTARY EVU-F3AM25B25
L4005	021B73101K	COIL 100 UH	P.C. BOARDS ASS'Y.		
L4006	021B73101K	COIL 100 UH	PCB001	A37905A07AP	PCB ASS'Y TM01T2-P
L4007	021JA6330K	COIL 33 UH	PCB002	A37905A31A	PCB ASS'Y VE0305
L4009	021JA6151K	COIL 150 UH	PCB003	A37905A03A	PCB ASS'Y VE0293
L4010	021JA6220K	COIL 22 UH	PCB004	A37905A11A	PCB ASS'Y TC0128
L4011	021JA6100K	COIL 10 UH	PCB005	A37905A08A	PCB ASS'Y TE0586
L4012	021JA6390K	COIL 39 UH	PCB101	A37905A01A	PCB ASS'Y VV0158
L4013	021JA6150K	COIL 15 UH	PCB102	A37905A01A	PCB ASS'Y VE0187
L4014	021JA6121K	COIL 120 UH	PCB301	A37905A30A	PCB ASS'Y VV0156
L4015	021JA6270K	COIL 27 UH	PCB401	A43709A33A	PCB ASS'Y VE0244
L4016	021JA6101K	COIL 100 UH	PCB501	A37905A02A	PCB ASS'Y VP0076
L4101	021B73101K	COIL 100 UH	PCB502	A37905A02A	PCB ASS'Y VE0294
L4102	021B73101K	COIL 100 UH	MISCELLANEOUS		
L5001	021JA2101K	COIL 100 UH	B401	024JT03551	CORE, BEADS FBA04HA450AB-00
L5002	021B73102K	COIL 1000 UH	B402	024JT03551	CORE, BEADS FBA04HA450AB-00
L5003	021J74682J	COIL 6.8 MH	B502	024JT03551	CORE, BEADS FBA04HA450AB-00
L6001	021JA6R82M	COIL 0.82 UH	B503	024JT03551	CORE, BEADS FBA04HA450AB-00
L6002	021JA6100K	COIL 10 UH	B504	024JT03551	CORE, BEADS FBA04HA450AB-00
L6003	021JA6100K	COIL 10 UH	B505	024JT03551	CORE, BEADS FBA04HA450AB-00
L6004	033200001K	COIL, VIDEO IFT 3200001	B506	024JT03551	CORE, BEADS FBA04HA450AB-00
L6005	033200002K	COIL, VIDEO IFT 3200002	BT001	141T003004	BATTERY, MANGAN UM-3 1.5V
L6006	021JA6270K	COIL 27 UH	BT002	141T003004	BATTERY, MANGAN UM-3 1.5V
L6007	021JA65R6K	COIL 5.6 UH	CD001	068DH20005	CORD, COAXIAL 8DH20005
L6008	021B73101K	COIL 100 UH	CD352	068D12307B	CORD, CONNECTOR 8D12307B
L6009	033200003K	COIL, VIDEO IFT 3200003	CD401	068D34008A	CORD, EIS CONNECTOR 8D34008
L6012	021B73101K	COIL 100 UH	CD501	1201450033	CORD, AC 1201450033
L6014	03320M001K	COIL, VIDEO IFT 320M001	CD503	068116073A	CORD, CONNECTOR 8116073A
L6016	021J96R47M	COIL 0.47 UH	CD510	068D43015B	CORD, CONNECTOR 8D43015B
T401	03305Y002C	TRANS, HORIZONTAL DRIVE 305Y002	CD801	1220054503	CORD, JUMPER 20054503
T501	0481420205	CONVERTER, TRANS 8142020	CD802	1227033301	CORD, JUMPER 27033301
T5001	0336260028	COIL, BIAS OSC 3626002	CD803	068D01081B	CORD, CONNECTOR 8D01081B
T7001	040557024C	TRANSFORMER, POWER AC 0557024	CD805	068D01262B	CORD, CONNECTOR 8D01262B
JACKS			CF001	116F3TH4Z1	FILTER, EMI LTSTF223ZBTB
J352	0602041001	JACK, RCA 3.5 JPJ1022-01-010	CF002	116F3TH4Z1	FILTER, EMI LTSTF223ZBTB
J801	0662130007	SOCKET, CRT HPS0360-01-020	CF003	116F3TH4Z1	FILTER, EMI LTSTF223ZBTB
J4001	0632000024	JACK, PLATE HPJ3512-01-430	CF201	1027038R91	FILTER, SAW F1034
J8001	0602121011	JACK, RCA 3.5 HSJ0845-01-020	CF202	1012105R51	FILTER, CERAMIC TRAP TP55.5MB
SWITCHES			CF301	101225R501	FILTER, CERAMIC CDA5.5MC24B
SW401	0510B22001	SWITCH, SLIDE SS-22F1607	CF302	1012005R52	FILTER, CERAMIC SFE5.5MC2
SW501	0530105005	SWITCH, PUSH ESB-90217S	CF352	116F3TH4Z1	FILTER, EMI LTSTF223ZBTB
SW601	0510B22001	SWITCH, SLIDE SS-22F1607	CP006	069X01002A	CONNECTOR PCB SIDE RT-01T-1.0B
SW8001	0504201T22	SWITCH, TACT SKHVBDO05	CP008	069X2C0119	CONNECTOR PCB SIDE 812B-PH-K
SW8002	0504201T22	SWITCH, TACT SKHVBDO05	CP351	0694120056	CONNECTOR PCB SIDE 4-171826-2
SW8003	0504201T22	SWITCH, TACT SKHVBDO05	CP352	0694120059	CONNECTOR PCB SIDE 171826-2
SW8004	0504201T22	SWITCH, TACT SKHVBDO05	CP353	0694120060	CONNECTOR PCB SIDE 172681-2
SW8005	0504201T22	SWITCH, TACT SKHVBDO05	CP401	069D340018	CONNECTOR PCB SIDE TS-80P-04-V1
SW8006	0504201T22	SWITCH, TACT SKHVBDO05	CP503	0694160019	CONNECTOR PCB SIDE 171825-6
SW8007	0504201T22	SWITCH, TACT SKHVBDO05	CP506	069D420029	CONNECTOR PCB SIDE TV-50P-02-A1
SW8008	0504201T22	SWITCH, TACT SKHVBDO05	CP510	069D330018	CONNECTOR PCB SIDE TS-80P-03-V1
SW8009	0504201T22	SWITCH, TACT SKHVBDO05	CP511	069D330018	CONNECTOR PCB SIDE TS-80P-03-V1
SW8010	0504201T22	SWITCH, TACT SKHVBDO05	CP606	069X290119	CONNECTOR PCB SIDE 89B-PH-K
SW8011	0504201T22	SWITCH, TACT SKHVBDO05	CP803	069D010010	CONNECTOR PCB SIDE 005P-2100
SW8012	0504201T22	SWITCH, TACT SKHVBDO05	CP805	069D01001A	CONNECTOR PCB SIDE 003P-2100
SW8013	0504201T22	SWITCH, TACT SKHVBDO05	CD2002	1226062301	CORD, JUMPER 26062301
SW8014	0504201T22	SWITCH, TACT SKHVBDO05	CD2003	12260C1801	CORD, JUMPER 260C1801
SW8017	0504201T22	SWITCH, TACT SKHVBDO05	CD2004	1226091702	CORD, JUMPER 26091702
VARIABLE RESISTORS			CD4101	068128010A	CORD, EIS CONNECTOR 8128010A
VR201	V126303B01	VR, SEMIFIXED RH0615C3J0E	CD4103	068125016A	CORD, EIS CONNECTOR 8125016A
VR401	V116304B03	VR, SEMIFIXED EVM4LGA00BQ4	CD6001	068DHA0001	CORD, COAXIAL 8DHA0001
VR402	V1263H2B01	VR, SEMIFIXED RH0615C3J1D	CD7001	068132049A	CORD, EIS CONNECTOR 8132049A
VR601	V126313B01	VR, SEMIFIXED RH0615C13J0F	CD7002	1227031203	CORD, JUMPER 27031203
VR602	V1263Q4B01	VR, SEMIFIXED RH0615C34J0L	CD7005	068101298B	CORD, EIS CONNECTOR 8101298B
VR603	V126315B01	VR, SEMIFIXED RH0615C15J0K	CD7008	068101301B	CORD, EIS CONNECTOR 8101301B
VR801	V175C53B01	VR, SEMIFIXED RVA0911H304-1-502M	CD7501	1226081001	CORD, JUMPER 26081001
VR802	V175C52B01	VR, SEMIFIXED RVA0911H304-1-501M	CD7502	1226081001	CORD, JUMPER 26081001
VR804	V175C53B03	VR, SEMIFIXED RVA0911H304-3-502M	CD8003	068124017B	CORD, EIS CONNECTOR 8124017B
VR805	V175C52B03	VR, SEMIFIXED RVA0911H304-3-501M	CD8010	068B2L001A	CORD, EIS CONNECTOR 8B2L001A
VR2001	V126305BT5	VR, SEMIFIXED RH0636C55R07B	CF3701	10114R1703	FILTER, CERAMIC EFC54R17MS4A
VR2002	V126315BT5	VR, SEMIFIXED RH0636C15R07B	CF6001	1027038R91	FILTER, SAW F1034
VR3701	V126313BT5	VR, SEMIFIXED RH0636C13R07B	CF6002	1012T5R501	FILTER, CERAMIC CDA5.5MC26-TF20
VR4001	V1263H4BT5	VR, SEMIFIXED RH0636C4R07B	CF6003	1012T5R502	FILTER, CERAMIC FES.5MB-TF20
VR4002	V126314BT5	VR, SEMIFIXED RH0636C14R07B	CF6004	1012T5R503	FILTER, CERAMIC TRAP TP55.5MB-TF20
VR4003	V126313BT5	VR, SEMIFIXED RH0636C13R07B	CF8001	116F3TH4Z1	FILTER, EMI LTSTF223ZBTB
VR4004	V126314BT5	VR, SEMIFIXED RH0636C14R07B	CP1001	0694180060	CONNECTOR PCB SIDE 172681-8 UX-V
VR4005	V126314BT5	VR, SEMIFIXED RH0636C14R07B	CP2001	0694120060	CONNECTOR PCB SIDE 172681-2
VR4101	V126214BT1	VR, SEMIFIXED RH0632C14R01	CP2002	069R960029	CONNECTOR PCB SIDE 51016-0600
VR4102	V126214BT1	VR, SEMIFIXED RH0632C14R01	CP2003	069R9C0029	CONNECTOR PCB SIDE 51016-1200
VR5001	V126314BT5	VR, SEMIFIXED RH0636C14R07B	CP2004	069R990029	CONNECTOR PCB SIDE 51016-0900
VR5002	V126305B03	VR, SEMIFIXED RH0624C55J09	CP4001	0697160189	CONNECTOR PCB SIDE TXX-H06P-G1
			CP4002	0697160189	CONNECTOR PCB SIDE TXX-H06P-G1
			CP4003	0697160189	CONNECTOR PCB SIDE TXX-H06P-G1

ELECTRICAL REPLACEMENT PARTS LIST

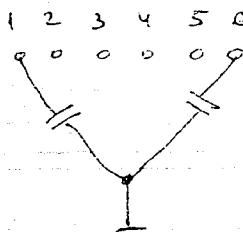
INTERCHANGEABLE PARTS LIST

REF. NO	PART NO	DESCRIPTION
MISCELLANEOUS (CONT)		
CP4004	069Q160179	CONNECTOR PCB SIDE
CP4101	0694240139	CONNECTOR PCB SIDE
CP4103	069X250119	CONNECTOR PCB SIDE
CP5001	0694150060	CONNECTOR PCB SIDE
CP6002	069R240319	CONNECTOR PCB SIDE
CP6003	069Q160179	CONNECTOR PCB SIDE
CP7001	069R980019	CONNECTOR PCB SIDE
CP7002	069R980019	CONNECTOR PCB SIDE
CP7009	1261000004	LUG PIN
CP7501	069R980029	CONNECTOR PCB SIDE
CP7502	069R980029	CONNECTOR PCB SIDE
CP8003	069X240119	CONNECTOR PCB SIDE
CP8006	069X290119	CONNECTOR PCB SIDE
CP8008	069X2C0119	CONNECTOR PCB SIDE
CK1001	06942A0070	CONNECTOR PCB SIDE
CK1002	06942A0070	CONNECTOR PCB SIDE
CY8001	06942A0060	CONNECTOR PCB SIDE
CR8002	06942A0060	CONNECTOR PCB SIDE
DL601	104114R436	DELAY LINE GLASS
DL602	103S000402	DELAY LINE
DL3001	104A24R436	DELAY LINE GLASS
EAR001	074N130007	EARPHONE
F501	080ET2R502	FUSE
FB401	0432200231	TRANSFORMER, FLYBACK
FH501	067M0T0004	HOLDER, FUSE
FH502	067M0T0005	HOLDER, FUSE
F7001	080ET1R601	FUSE
F7002	080ET02001	FUSE
F7003	080ET02001	FUSE
F7004	080ET01001	FUSE
FH7001	067M0T0004	HOLDER, FUSE
FH7002	067M0T0005	HOLDER, FUSE
ICP071	084EF0R301	IC PROTECTOR
MS501	128B000017	MICA, SHEET
NR1001	110E4472T2	R. NETWORK
NR1002	110E4223T4	R. NETWORK
NR1003	110E3223T2	R. NETWORK
NR8001	110E547202	R. NETWORK
NR8002	110E347202	R. NETWORK
OS8001	077P006004	REMOTE RECEIVER
PF3001	1147L156M5	FILTER, LOW PASS
PF3002	1147B44606	FILTER, BAND PASS
PF3003	1147B50604	FILTER, BAND PASS
PF4001	1147L30606	FILTER, LOW PASS
PF4002	1147H14605	FILTER, HIGH PASS
PF4003	1147L336M4	FILTER, LOW PASS
PF5001	0326230038	COIL, TRAP
RY501	0560T20102	RELAY
SP351	070R143004	SPEAKER
TH501	D810M180H0	DEGAUSS ELEMENT
TM001	076100Z002	TRANSMITTER
TU001	0145611007	TUNER UHF-VHF
TU002	0160101002	BOOSTER, ANTENNA
TC8018	0100614T08	C. CERAMIC TRIMMER
TU6001	0145611007	TUNER UHF-VHF
V801	09BE210403	TUBE, CATHODE RAY
X231	1003R50001	CERAMIC OSCILLATOR
X401	1002R50301	CERAMIC OSCILLATOR
X601	10064R43B2	CRYSTAL HC-49/U
X701	1006A3R501	CRYSTAL 7C-49/U
X1001	1002T4R001	CERAMIC OSCILLATOR
X3001	1006A4R302	CRYSTAL HC-49/U
X8001	1006A4R106	CRYSTAL DS-MAT
X8002	100D32R801	CRYSTAL DT-26S

NOTE: THE FOLLOWING PART(S) MAY BE SUBSTITUTED FOR PARTS INDICATED IN THE BASIC PART(S) LIST (WITH THE SAME REF. NO.). THESE PARTS SHARE THE SAME ELECTRICAL CHARACTERISTICS AND OTHER ELEMENTS FOR COMMON USAGE. EITHER PART NUMBER MAY BE USED IN THIS UNIT.

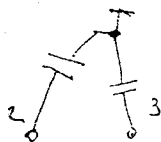
REF. NO	DESCRIPTION (PART NO)	DESCRIPTION (PART NO)
CDT002	27031203 (1227031203)	20031203 (1220031203)
L6004	3200001 (033200001K)	32000018 (0332000018)
L6005	3200002 (033200002K)	32000028 (0332000028)
L6009	3200003 (033200003K)	32000038 (0332000038)
L6014	320M001 (03320M001K)	320M0018 (03320M0018)
NR1001	RN5E5A472J01 (110E4472T2)	EXB-F5E472JYV (11014472T2)
NR1002	RN5E5A223J01 (110E4223T4)	EXB-F5E223JYV (11014223T4)
NR1003	RN5E4A223J01 (110E3223T2)	EXB-F4E223JYV (11013223T2)

1 - zelena
3 - plava
4 - crvena
6 - žuta



A51 EBD10X

C428 12u



1 - plava
2 - žuta
3 - zelena
4 - crvena

A51 JAR 43X01

C428 10u

RESISTOR

RC.....CARBON RESISTOR

CAPACITORS

CC.....CERAMIC CAPACITOR
CE.....ALUMI ELECTROLYTIC CAPACITOR
CP.....POLYESTER CAPACITOR
CPP.....POLYPROPYLENE CAPACITOR
CPL.....PLASTIC CAPACITOR
CMP.....METAL POLYESTER CAPACITOR
CML.....METAL PLASTIC CAPACITOR
CMPP.....METAL POLYPROPYLENE CAPACITOR
CST.....STYROL CAPACITOR

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