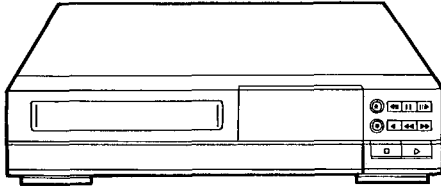


# HITACHI

## SERVICE MANUAL



TK

No.8709E

# VT-L3000SE

## AF MECHANISM

This model uses a AF MECHANISM.  
Refer to the following manual for the AF MECHANISM.

### Manuals related to the VT-L3000SE

Name of manual	Manual No.
AF Mechanism	4412E
VT-L1100E	8609E

### S VHS

This video desk is a S-VHS type video recorder. For proper operation, only the S-VHS or VHS type cassette must be used.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

## VIDEO CASSETTE RECORDER

November 1997 Image & Information Media Systems Division, Tokai

## PRODUCT SAFETY NOTICE

Many electrical and mechanical parts have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for a higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual. Electrical components having such features are identified by marking with a  $\triangle$  on the schematics and the parts list in this Service Manual. The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards. Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies for, HITACHI Service Manual may be obtained at a nominal charge from HITACHI SALES CORPORATION.

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The AF mechanism is used as the mechanical block of this VCR. Refer to the following manual when dismantling the mechanical section

- ◆ AFmechanism edition (No.4412E)
- "CHAPTER 1 DISASSEMBLY"

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### CHAPTER 3 MECHANICAL ADJUSTMENT

The AF mechanism is used as the mechanical block of this VCR. Refer to the following manual when dismantling the mechanical section

- ◆ AFmechanism edition (No.4412E)
- "CHAPTER 2 MECHANISM ADJUSTMENT"
- "CHAPTER 3 MAINTENANCE AND INSPECTION"
- ◆ VT-L1100E (No.8609E)
- "CHAPTER 3 MECHANISM ADJUSTMENT"

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**1. SPECIFICATIONS**

Video Cassette:	S-VHS or VHS type
Recording:	Rotary two-head helical scan azimuth recording
Tape Speed:	23.39 mm/sec. (03mode)
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system I) & CCIR monochrome signals (625 lines)
Recording Lengths:	3, 12, 24, 48, 72, 120, 168, 240, 360, 480, 600, 720, 960 hours and ONE SHOT (00 mode)
Video Input:	1 Vp-p 75 ohm unbalanced
Video Output:	1 Vp-p 75 ohm unbalanced
Y/C (S) Video Input:	Y+S: 1 Vp-p 75 ohm Unbalanced C: 0.286 Vp-p 75ohm Unbalanced
Y/C (S) Video Output:	Y+S: 1 Vp-p 75 ohm Unbalanced C: 0.286 Vp-p 75 ohm Unbalanced
S/N Ratio (Video):	More than 42 dB (S-VHS 03 mode) More than 42dB (03 mode)
S/N Ratio (Audio):	More than 40 dB (03 mode)
Horizontal Resolution:	Colour: 400 lines (S-VHS) Monochrome: 400 lines (S-VHS) Colour: 240 lines (03 mode) Monochrome: 240 lines (03 mode)
Audio Input:	-8dBm 50 Kohm unbalanced
Audio Output:	-10dBm 600 ohm unbalanced
Audio Frequency Range:	100 Hz to 3 kHz (03 mode)
Power:	AC 230V, 50Hz
Power Consumption:	25W
Cabinet Size:	435 mm (W) × 94 mm (H) × 366 mm(D)
Weight:	Approx. 6.5 kg

\* Design and specifications are subject to change without notice.

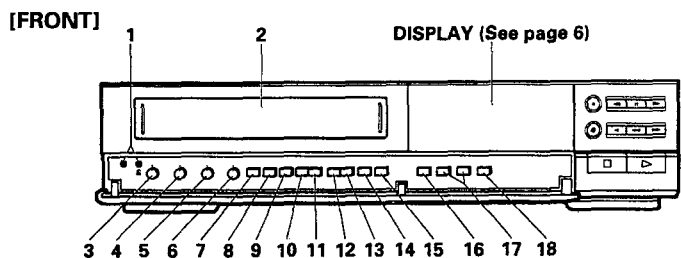


## 2. COMPARISON OF FEATURES

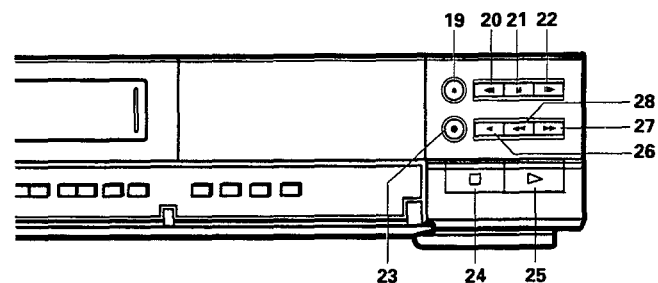
← : Same as left

	ITEM	VT-L3000SE	VT-L2500ER
FEATURE	Format	S-VHS/VHS	VHS
	OSD	Yes	←
	Video Rec Mode	03 / 12 / 24 / 48 / 72 / 120 / 168 / 240 / 360 / 480 / 600 / 720 / 960	←
	Video Play Mode	03 / A12 / A24 / 24 / 48 / 72 / 120 / 168 / 240 / 360 / 480 / 600 / 720 / 960	←
	Audio Rec Mode	03/12/24	←
	Audio Play Mode	03 / A12 / A24	←
	Reverse Play	Yes (1Min)	←
	F.Advance	Yes	←
	Reverse F.Advance	Yes	←
	Fine Still	Yes	←
	Rec Check	Yes	←
	Timer Rec Programm	7 Pro/Week, 2Pro/Day	←
	Alarm Rec Mode	03 / 12 / 24	←
	Alarm Rec Term	5Sec / 15Sec / 30Sec / 1Min / 3Min / Manual	←
	One Shot Rec	2 / 4 / 6 / 8 Fieldes	←
	Memory Back Up Tim	720 Hr	←
	Tape Speed Display	Yes	←
	Mode Lock	Yes	←
	Version Display	Yes	←
	Buzzer	No	←
Trouble Mode	Yes	←	
INPUT/OUTPUT TERMINAL	Video Input/Output	BNC 1 System / Y/C System	BNC 1 System
	Audio Input/Output	US 1 System	←
	Interface(RS-232C) Connector	Yes	←
	15 Pin Plug	1 Alarm In	←
		2 Alarm Out	←
		3 One Shot In	←
		4 Tape End Out	←
		5 Tape End Reset	←
		6 Warning Out	←
		7 NC	←
		8 Time Adjust	←
		9 Camera Sw Out	←
		10 Rec Start In	←
		11 Cheoma 25	←
		12 -	←
	13 Remote in	←	
	14 Rec Check In	←	
	15 Gnd	←	
CHASSIS	Basic	AF Chassis	←
	Video Heads	DA 4 Head SP : 57 / 57 $\mu$ m	←
	Auto Heads Cleaning	Yes	←
	Rewind Time	E-180 : 2.5 Min	←

## CONTROLS AND FUNCTIONS



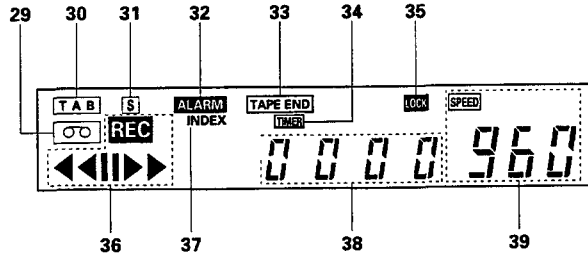
- 1. RESET BUTTONS**  
Press these buttons at the same time to clear all (microprocessor) functions. Press the "S" button to reset the system. (This does not erase the stored information.)
- 2. CASSETTE COMPARTMENT**  
Adjust the picture quality to hard or soft during playback.
- 3. SHARPNESS CONTROL**  
Adjust to optimize the picture quality during playback at the 03, A12 and A24 hour speeds.
- 4. TRACKING CONTROL**  
Adjust to optimize the picture quality in the SLOW PLAY mode, e.g. speeds over 24 hours.
- 5. SLOW TRACKING CONTROL**  
Adjust to optimize the picture quality in the SLOW PLAY mode, e.g. speeds over 24 hours.
- 6. V. LOCK CONTROL**  
Reduces vertical jitter in the still play mode.
- 7. PROGRAM BUTTON**  
Press to select one of the six programmable functions.
- 8. START/STOP BUTTON**  
Press to start or stop the programming of a programmable function. (Press once to start the programming sequence and a second time to stop (end) it.)
- 9. SET BUTTON**  
Press to select the specific value which is to be changed with the UP/DOWN buttons.
- 10. DOWN BUTTON**  
Press to decrement, change or reverse to the previous/lower value.
- 11. UP BUTTON**  
Press to increase, change or advance to the next higher value.
- 12. V-POS (VERTICAL POSITION) BUTTON**  
Press repeatedly to control the vertical position of the programmable display on the monitor.
- 13. H-POS (HORIZONTAL POSITION) BUTTON**  
Press repeatedly to control the horizontal position of the programmable display on the monitor.
- 14. ALARM INDEX BUTTON**  
Press this button to cause the INDEX indicator to light, and set the VCR to the visual search mode (press F.FWD or REWIND during playback mode) in this state; the start of the alarm recorded can be located.
- 15. ALARM RESET BUTTON**  
Press to clear POWER LOSS information. When this button is pressed when the Alarm Memory screen is being displayed, the alarm memory is cleared.
- 16. COUNTER RESET BUTTON**  
Press to clear the digital counter to "0000"
- 17. REC/PLAY HOURS BUTTONS**  
▲ (UP): Press to increase hours to the next higher value.  
▼ (DOWN): Press to decrease hours to the next lower value. The tape speed will be indicated as part of the monitor display.
- 18. TIMER BUTTON**  
Press after programming the TIMER for automatic TIMER recording. See page 13 for TIMER programming.



- 19. EJECT BUTTON**  
Press to remove the cassette. The EJECT button will not operate in the RECORD mode.
- 20. FIELD REVERSE BUTTON**  
Press to reverse the tape by one field in the STILL playback mode.
- 21. STILL BUTTON**  
Press to momentarily stop tape motion in the play mode. The STILL function allows close inspection of individual scenes. See the description of STILL playback on page 19.
- 22. FIELD ADVANCE BUTTON**  
Press to advance the tape one field in the STILL playback mode.
- 23. RECORD BUTTON**  
Press to start recording.
- 24. STOP BUTTON**  
Press to stop the tape. The STOP button must be pressed to end the RECORD and PLAY mode.
- 25. PLAY BUTTON**  
Press to play recorded material in the forward direction. Pressing this during recording makes it possible to check recordings.
- 26. REVERSE PLAY BUTTON**  
Press to play recorded material at the 03, 72, 120, 168, 240, 360, 480, 600, 720 or 960 speed in the reverse direction during the PLAY mode.
- 27. FAST FORWARD/VISUAL SEARCH BUTTON**  
Press to activate fast forward. Press this button during playback and a forward playback picture at high speed can be seen.
- 28. REWIND/VISUAL SEARCH BUTTON**  
Press to start rewind. Press this button during playback and a reverse playback picture at high speed can be seen.

**CONTROLS AND FUNCTIONS (Continued)**

**[DISPLAY]**



**29. TAPE-IN INDICATOR**

Lights when a cassette is in the compartment.

**30. TAB INDICATOR**

Lights when a cassette without its safety tab is loaded.

**31. S INDICATOR**

This is always lit, but goes out when a VHS tape is inserted and playback is done with "PLAY MODE: VHS" specified on the SELECTION MENU screen.

**32. ALARM INDICATOR**

ALARM appears during alarm recording. ALARM flashes when alarm recording ends.

**33. TAPE END INDICATOR**

Lights when the tape reaches the end during recording.

**Note:** "TAPE END" is not displayed when you have selected REW, RE-REC in the "RECYCLE FUNCTIONS" menu in the alarm display or you have selected REWIND, STOP IF ALARM but an alarm recording has not been made.

**34. TIMER INDICATOR**

This is lit during timer recording or TIMER stand-by mode.

The indicator flashes in the following cases.

- A cassette is not loaded.
- A cassette without its safety tab is loaded.
- The timer has not been programmed.

**35. LOCK INDICATOR**

LOCK appears when the recorder is in the security lock mode.

**36. VCR MODE INDICATORS**

- **REC** appears during recording.
  - **REW** appears during the rewind mode.
  - **FF** appears during the fast forward mode.
  - **VS** (or **FF**) flashes during visual search.
  - **PLAY** appears during the playback mode.
  - **REV** appears during the reverse play mode.
  - **STILL** appears when the STILL button is pressed during play mode and disappears when the STILL or PLAY button is pressed again.
  - **FIELD ADV** (or **REV**) appears while the FIELD REV (or FIELD ADV) is held depressed in the still playback mode.
- Note:** Still playback is restored when the FIELD REV (or FIELD ADV) button is released.

**37. INDEX INDICATOR**

INDEX appears when the ALARM INDEX button is pressed. INDEX disappears when the ALARM INDEX button is pressed again. INDEX flashes during alarm indexing.

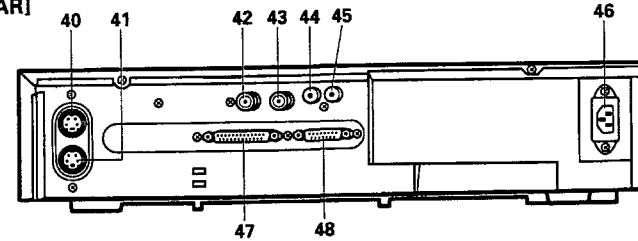
**38. DIGITAL COUNTER**

Shows the tape counter. The counter does not count during non-recorded sections of a tape.

**39. TAPE SPEED INDICATOR**

Shows the tape speed.

**[REAR]**



**40. Y/C (S) IN**

Receives Y/C (S) video signal from a video camera or another VCR.

**41. Y/C (S) OUT**

For connection to monitor.

**42. VIDEO IN**

Receives video signal from a video camera or another VCR.

**43. VIDEO OUT**

For connection to monitor.

**44. AUDIO IN**

Accepts an audio signal from a camera, external sound equipment or another recorder (Line: -8 dBm, 50 Kohm, unbalanced).

**45. AUDIO OUT**

Provides an audio output for a monitor or another recorder (-10 dBm, 600 ohm, unbalanced).

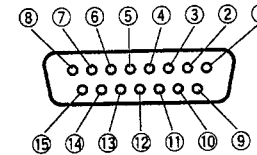
**46. AC INLET**

**47. RS-232C INTERFACE (D-SUB25) JACK**

Used to operate this VCR from a personal computer.

**48. EXTERNAL INTERFACE (15-PIN) JACK**

Connect an alarm switch, door sensor, etc. using the 15-pin adapter provided.



- ① ALARM IN
- ② ALARM OUT
- ③ ONE SHOT IN
- ④ TAPE END OUT
- ⑤ TAPE END RESET
- ⑥ WARNING OUT
- ⑦ NC
- ⑧ TIME ADJUST
- ⑨ CAMERA SW OUT
- ⑩ REC START IN
- ⑪ CHROMA 25
- ⑫ SPARE
- ⑬ REMOTE IN
- ⑭ REC CHECK IN
- ⑮ GND

## 1. CASES AND CIRCUIT BOARDS SECTION

### 1. BEFORE STARTING DISASSEMBLY

[Removal Procedure]

Dismantle each component in numerical order [(A),(B),(C),...].

[Reinstallation Procedure]

Reinstall each component in the reverse order to removal when otherwise not specified.

### Identifications and Locations of Circuit Boards

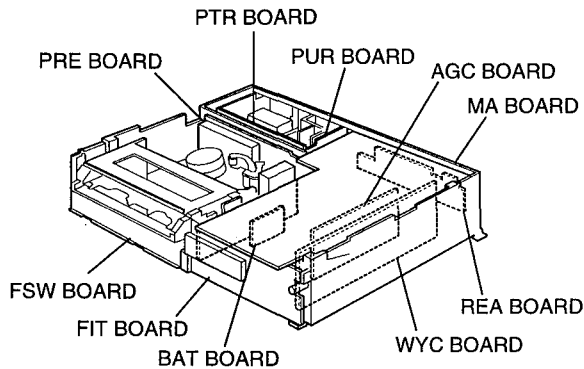


Fig. 1-1 Top View

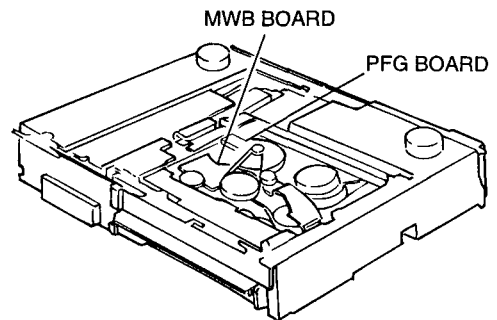


Fig. 1-2 Bottom View

### 2. DISASSEMBLY PROCEDURE

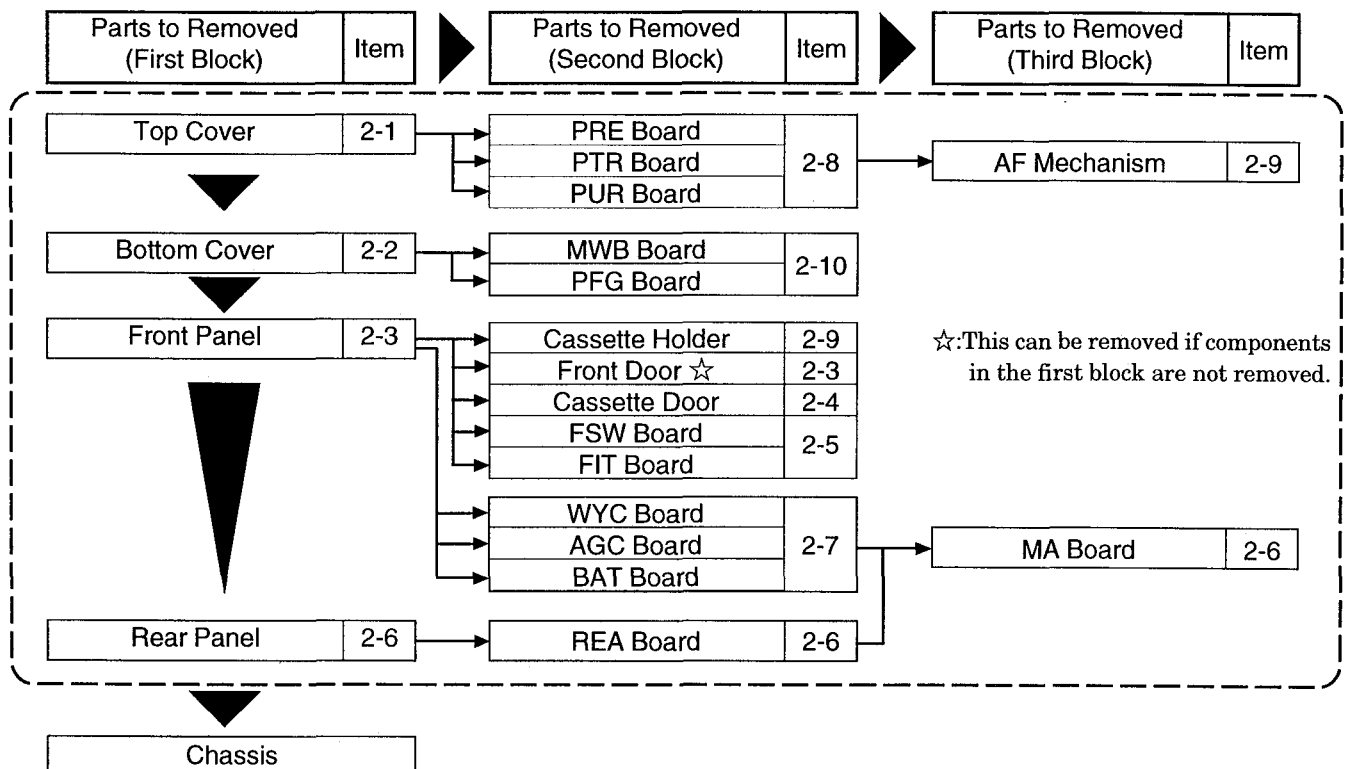
[How to use the parts hierarchy chart]

- 1) Locate the part to be replaced.
- 2) Check the parts in the ranks above the part to be replaced and start dismantling.
- 3) Replace the defective part and reinstall the parts in the reverse order to that show in the parts hierarchy chart.

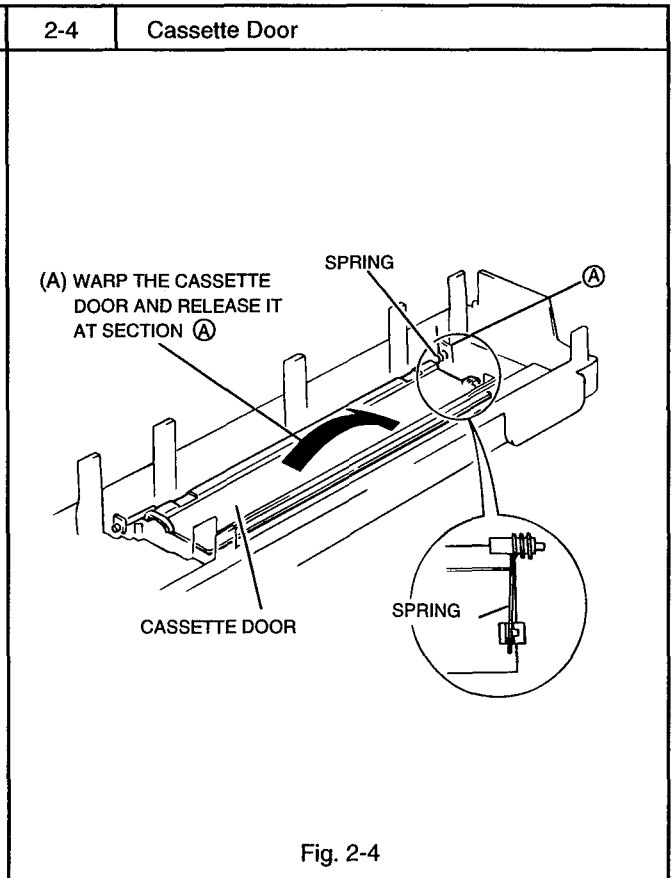
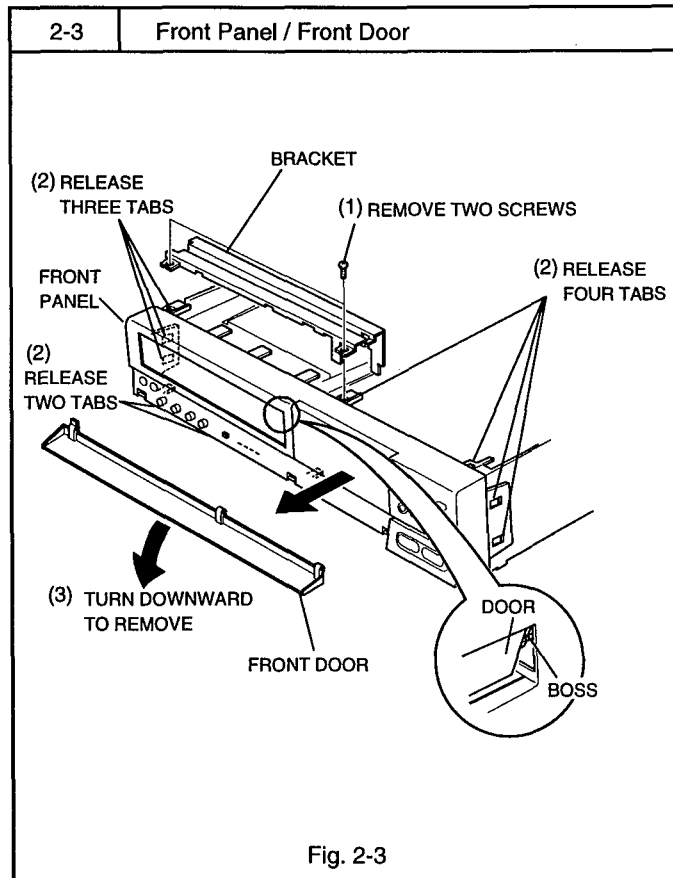
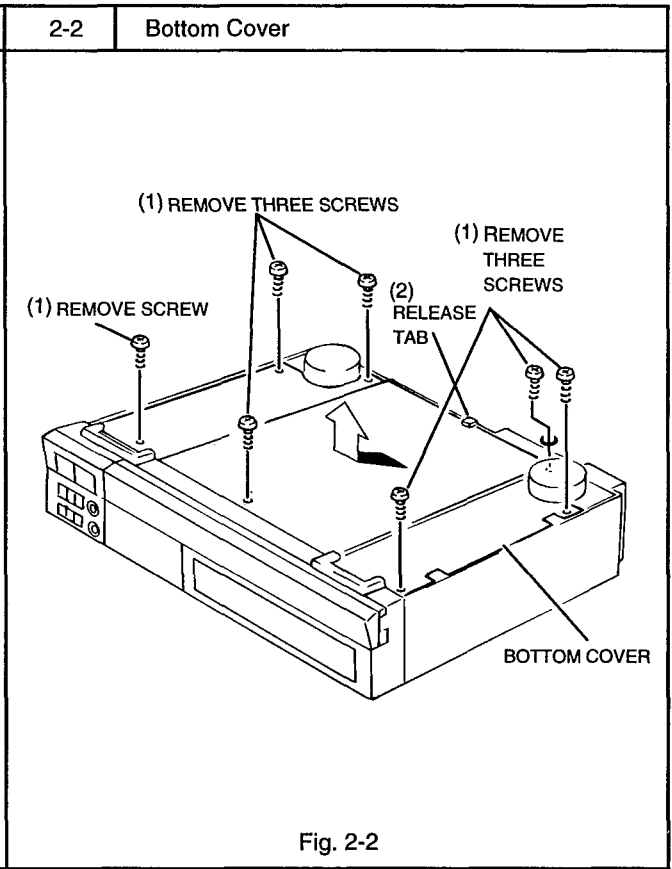
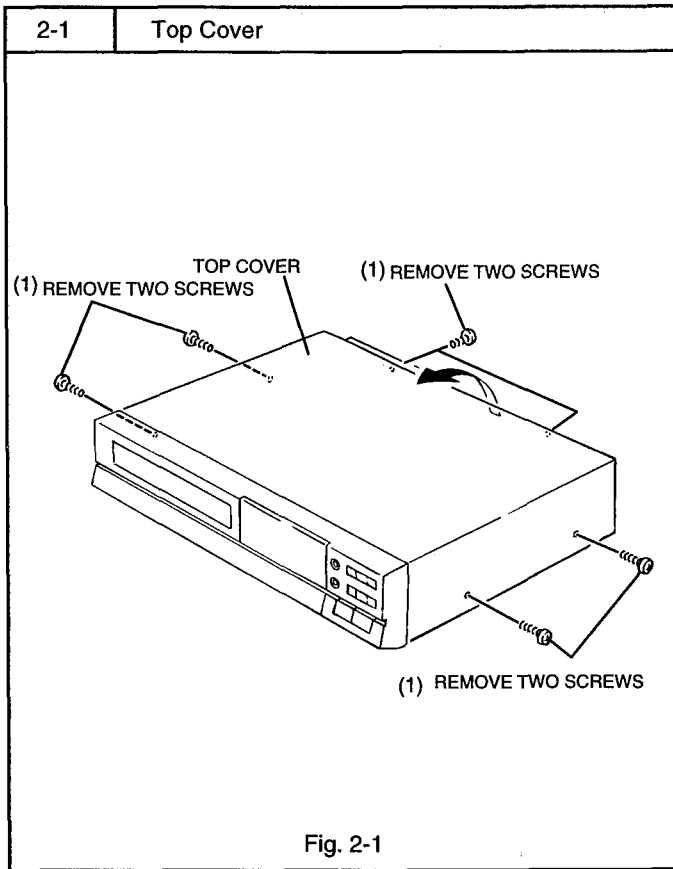
[Cautions]

- 1) Dismantle parts in the eject state.
- 2) Parts can be dismantled in a different way from that shown here.

#### Parts Hierarchy Chart



Disassembly Procedure Diagram



2-5

FSD Board / FIT Board

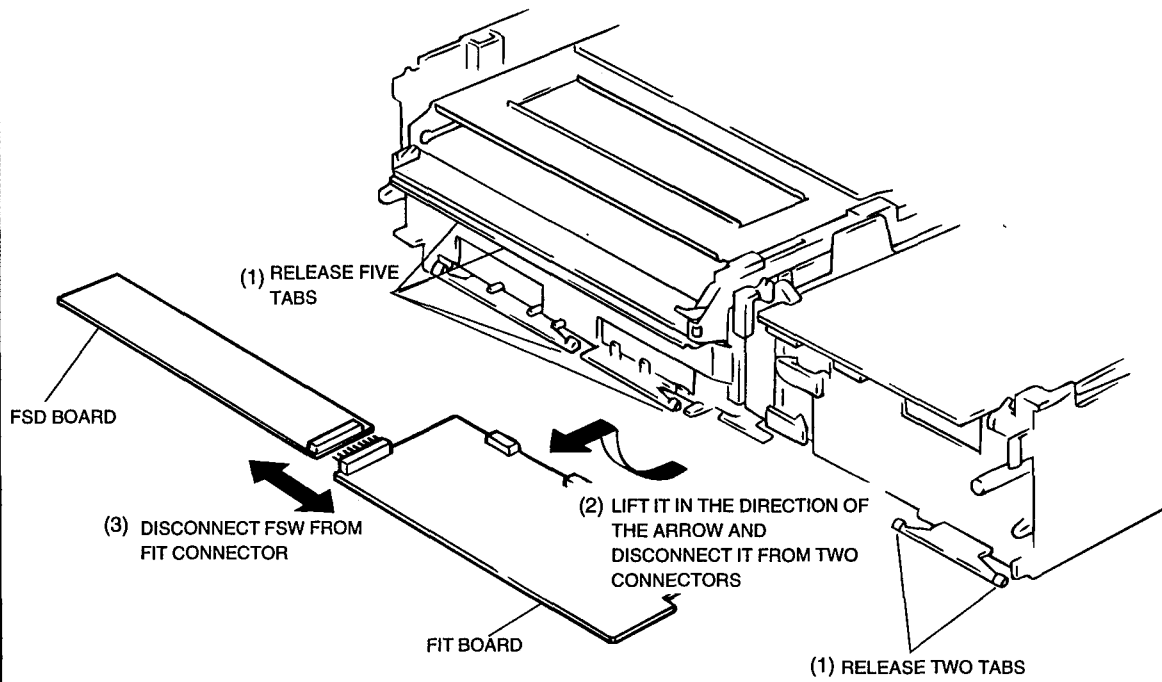


Fig. 2-5

2-6

Rear Panel / MA Board / REA Board

★ 1: This screw have a different shape from other screws.

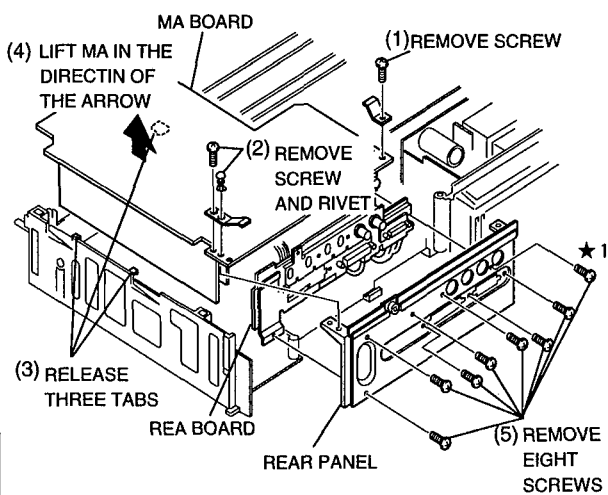


Fig. 2-6

2-7

WYC Board / AGC Board / BAT Board

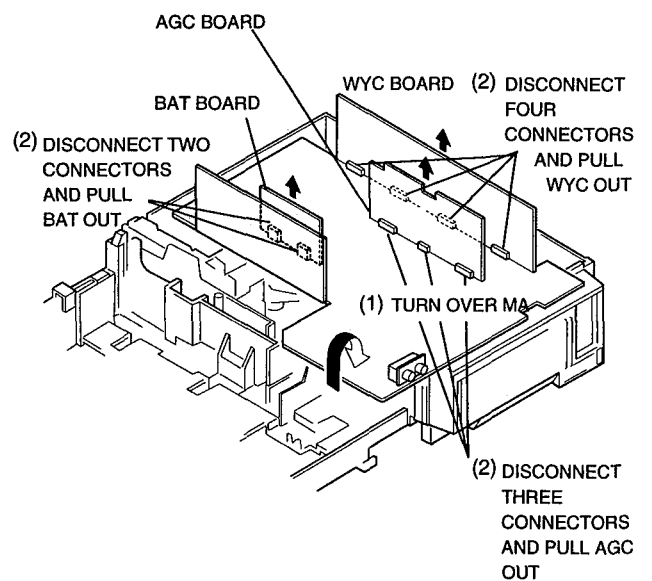
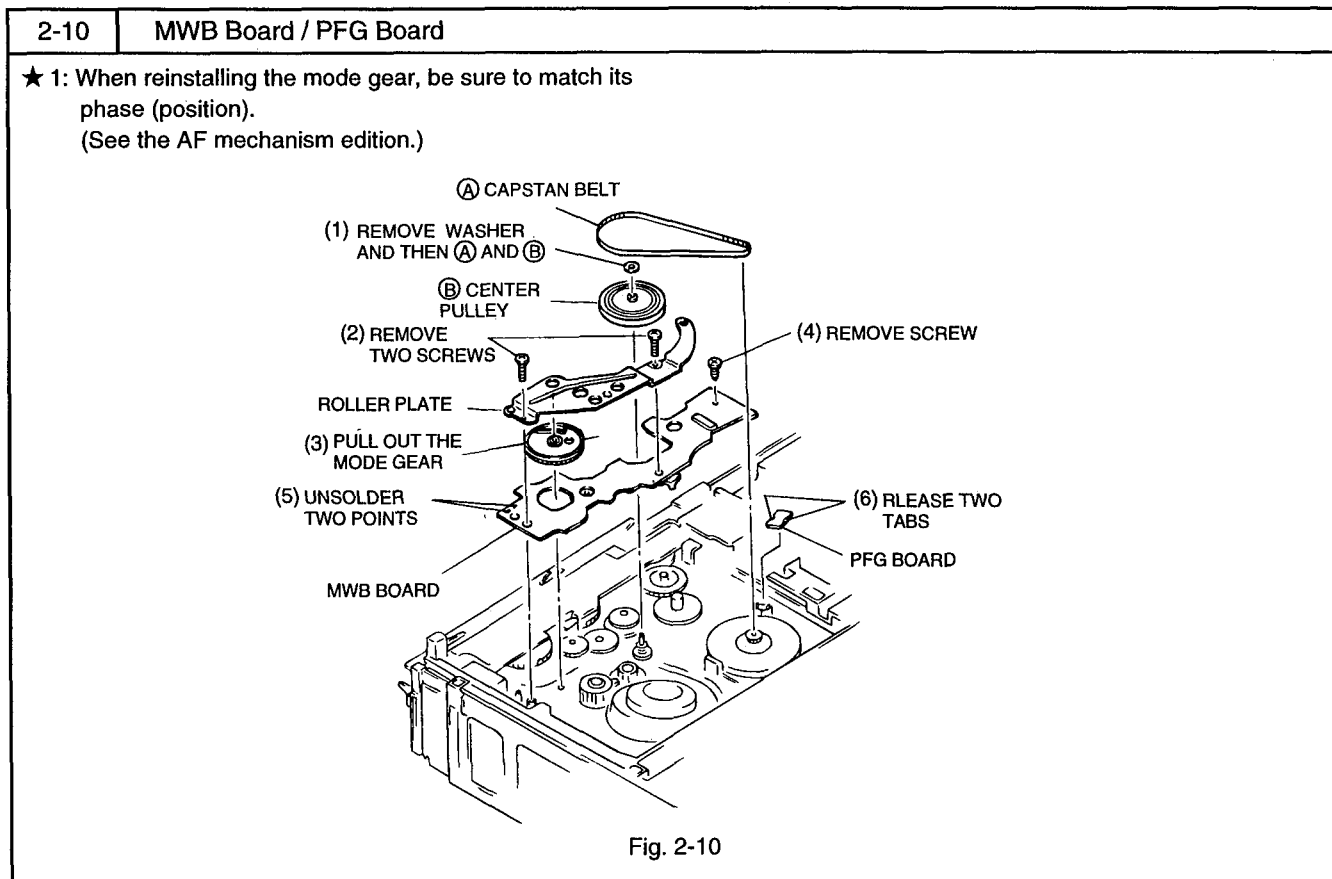
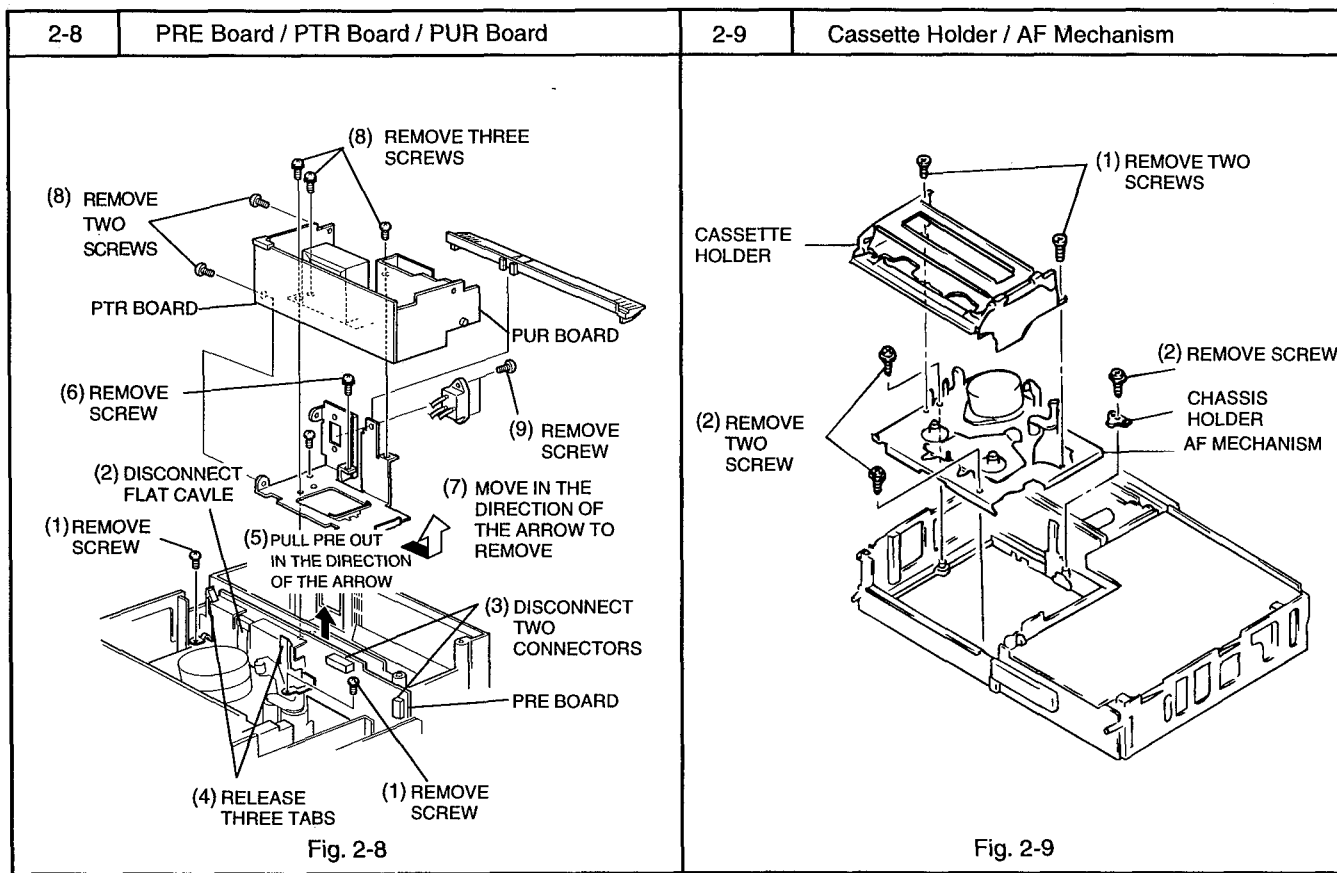


Fig. 2-7



## 2.MECHANISM SECTION

The AF mechanism is used as the mechanical section of this VCR. Refer to the following manual when dismantling the mechanical section.

◆ AF Mechanism edition (No.4412E) "CHAPTER 1 DISASSEMBLY"

### 1.PHOTOS OF MECHANISM (Refer to these photos when reinstalling)

#### 1) Top view of Mechanism

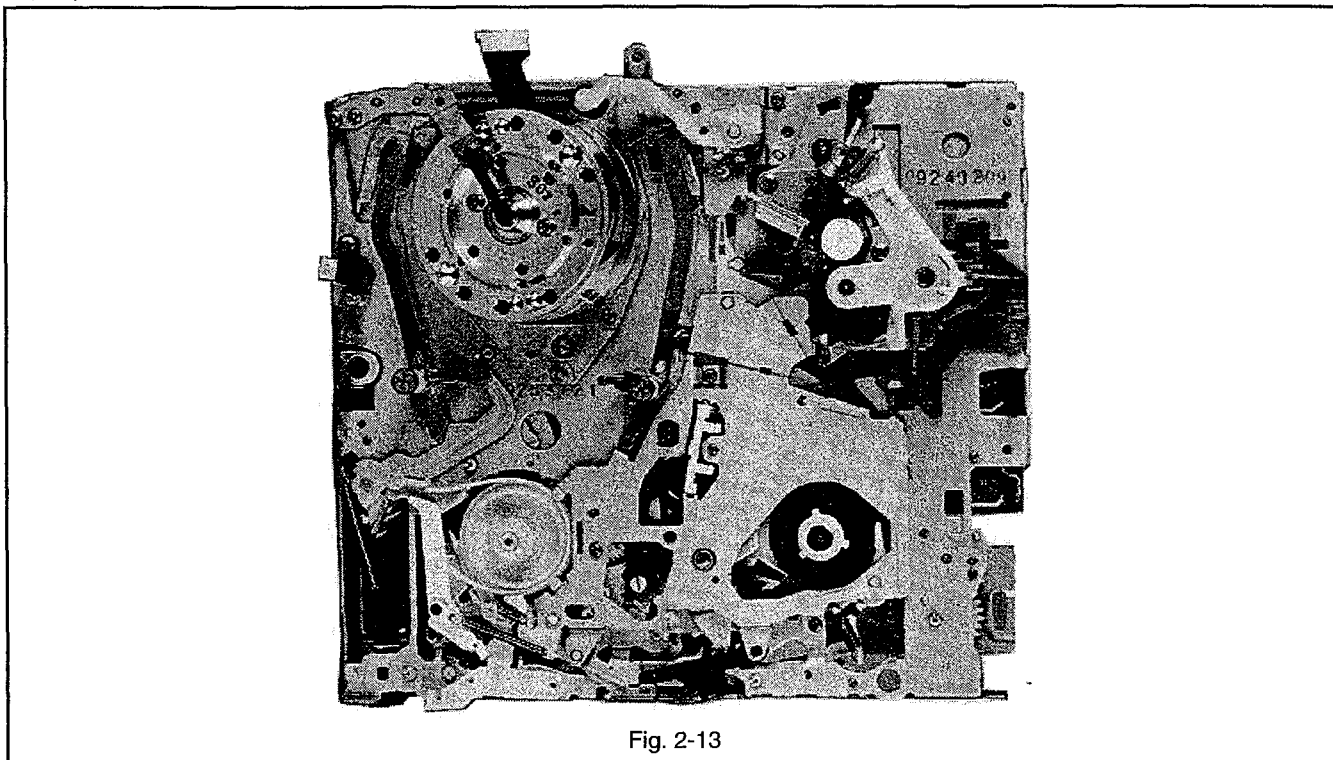


Fig. 2-13

#### 2) Bottom view of Mechanism

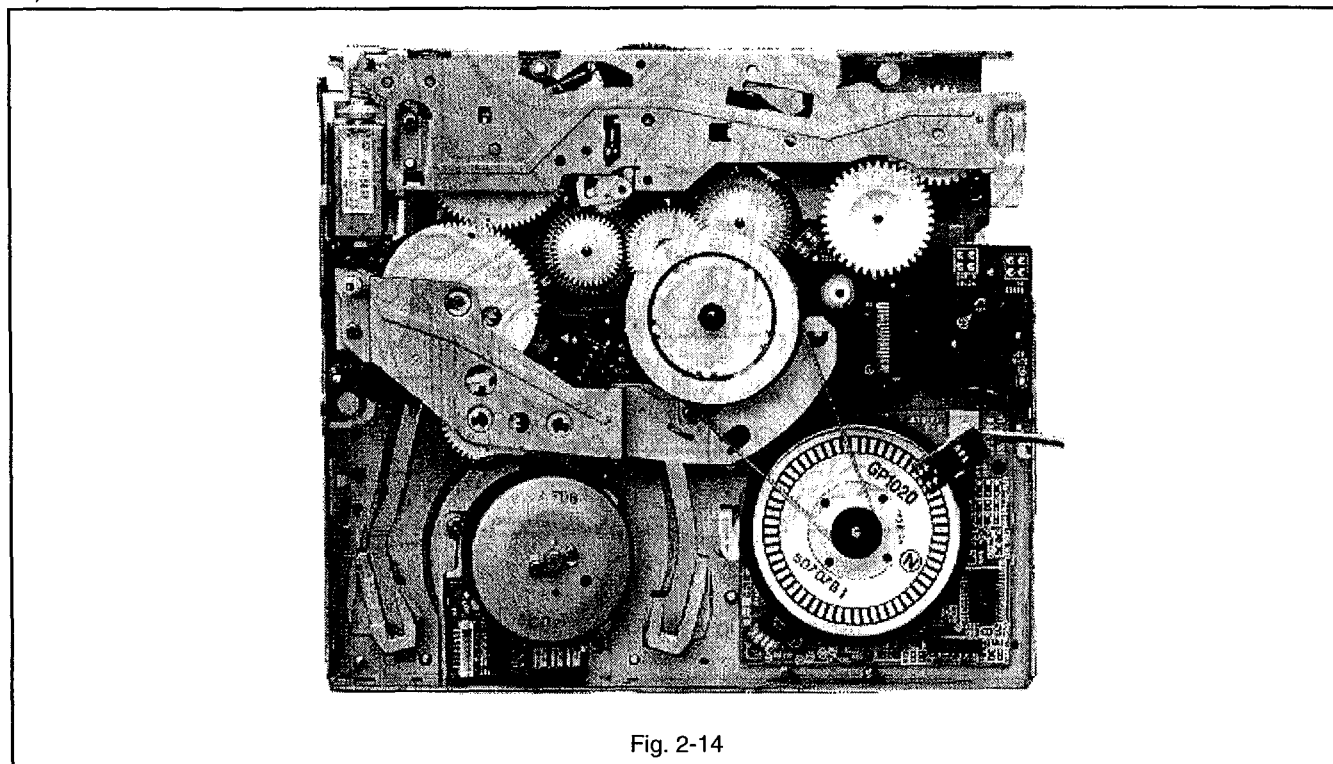


Fig. 2-14





## 1. Circuit Board Locations and Adjustment / Service Position

The electrical adjustments other than the 8.42MHz VCO adjustment can be done when only the top cover is removed.

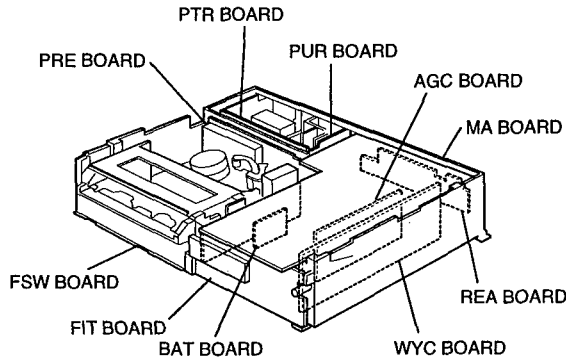


Fig. 4-1

## 2. Test Equipment and Tapes Necessary for Adjustments

- 1) Dual-trace oscilloscope
- 2) Colour bar generator
- 3) Colour monitor TV (with A/V jacks)
- 4) Digital voltmeter (DVM)
- 5) VTVM
- 6) Alignment tape (30HMPE-3)
- 7) Blank tape

## 3. Before Starting Adjustment

- 1) The following conditions apply when otherwise not specified.
  - Oscilloscope probe → 10:1
  - Oscilloscope synchronisation → Internal sync
  - Ground of test equipment → TP1527 (MA board)
- 2) When performing more than one adjustment, follow the order of times shown here.

## 4. Preset Position of Switches and Controls During Adjustment

- 1) Positions of controls
  - SHARPNESS CONTROL : Optimum position
  - TRACKING : Center
  - SLOW TRACKING : Center
  - V.LOCK : Optimum position
- 2) OSD Setting [SELECTION MENU]
  - SEARCH SPEED : × 5
  - ONE SHOT REC : 6 FILD
  - DISPLAY : WHITE
  - VIDEO INPUT : COMPOSITE
  - PLAY MODE : AUTO
  - BAUD RATE : 1200 BAUD
  - CAMMERA SW : 12 ~
  - FS MODE : OFF

※: The OSD positions are set at the factory above.

## 5. Procedure to Reset (Initialize) the VCR

This VCR can be reset to the state set at the factory by the following procedure.

Table. 4-1

IC	Procedure	Object to be reset
1 System control $\mu$ P (IC1901)	Press [S1303]	System control $\mu$ P
2 Main $\mu$ P (IC1701)	Press [S1303] and [S1311] simultaneously	· Timer · OSD settings
3 EEP ROM (IC1702)	Press [REV.PLAY] [SET] and [ALARM RESET] simultaneously	· Trouble memory · Cylinder use time (◆) · Total use time

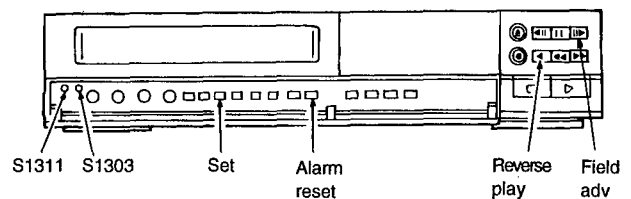


Fig. 4-2

### ◆: Cylinder time of use

This VCR has function which displays the accumulated time of cylinder rotation as a reference for cylinder replacement. Be careful as all data including the accumulated time is cleared when the EEP ROM is initialized.

The following shows the display of the cylinder time of use and how to reset it without resetting other values.

- Display method (the total use time is also displayed)  
Press [F.ADV] and [SET] simultaously (displayed in the OSD).
- Resetting the time of use only  
Short IC1701 (Main  $\mu$  P) pin 16 to ground.

## 6. Connecting Test Equipment

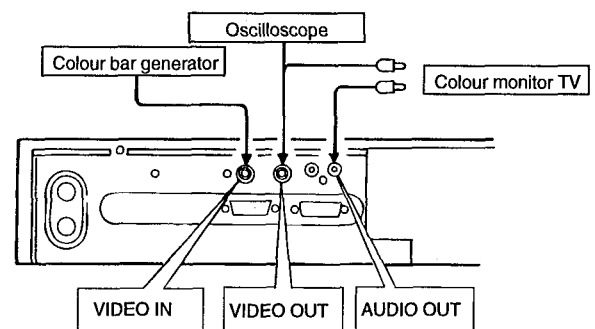


Fig. 4-3

**7. Location of Components on Circuit Boards**

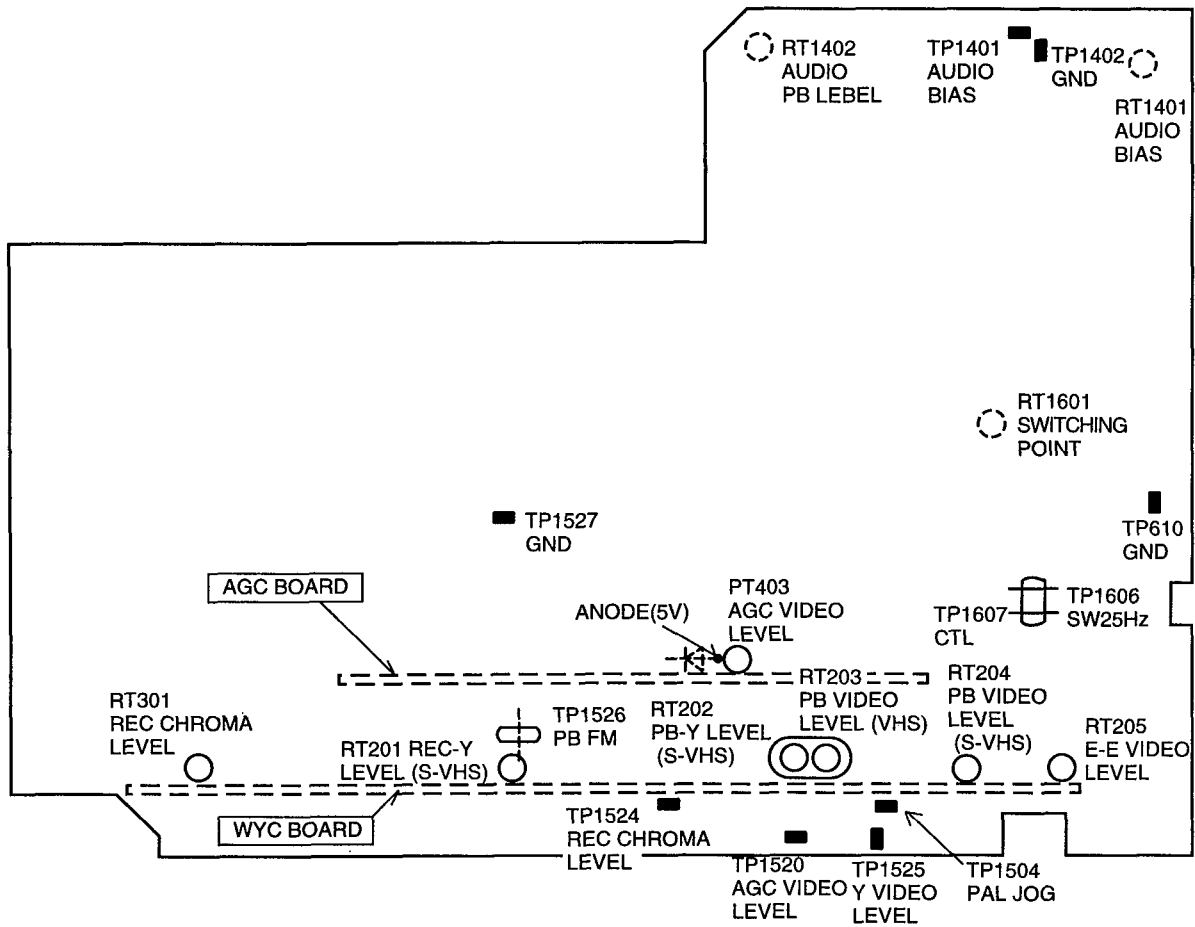


Fig. 4-4 Main (MA) Circuit Board [Side B]

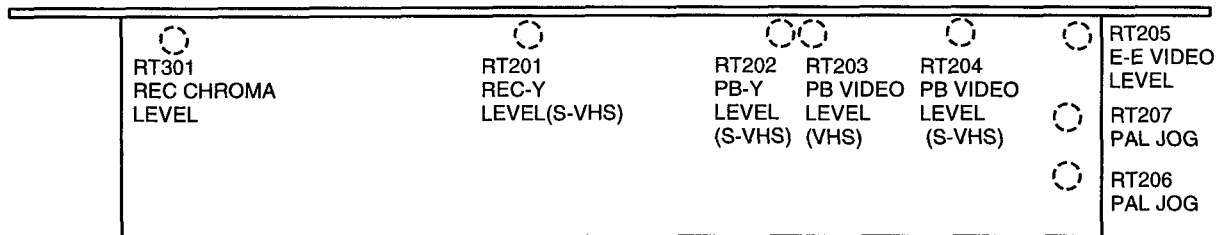


Fig. 4-5 Y/Chroma (WYC) Circuit Board [Side B]

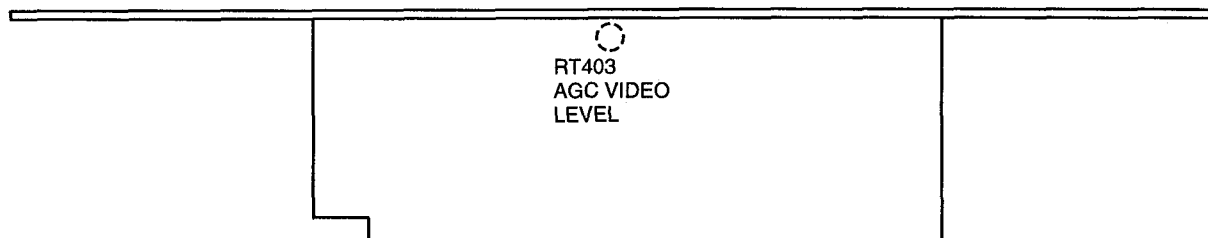


Fig. 4-6 AGC / OSD (AGC) Circuit Board [Side B]

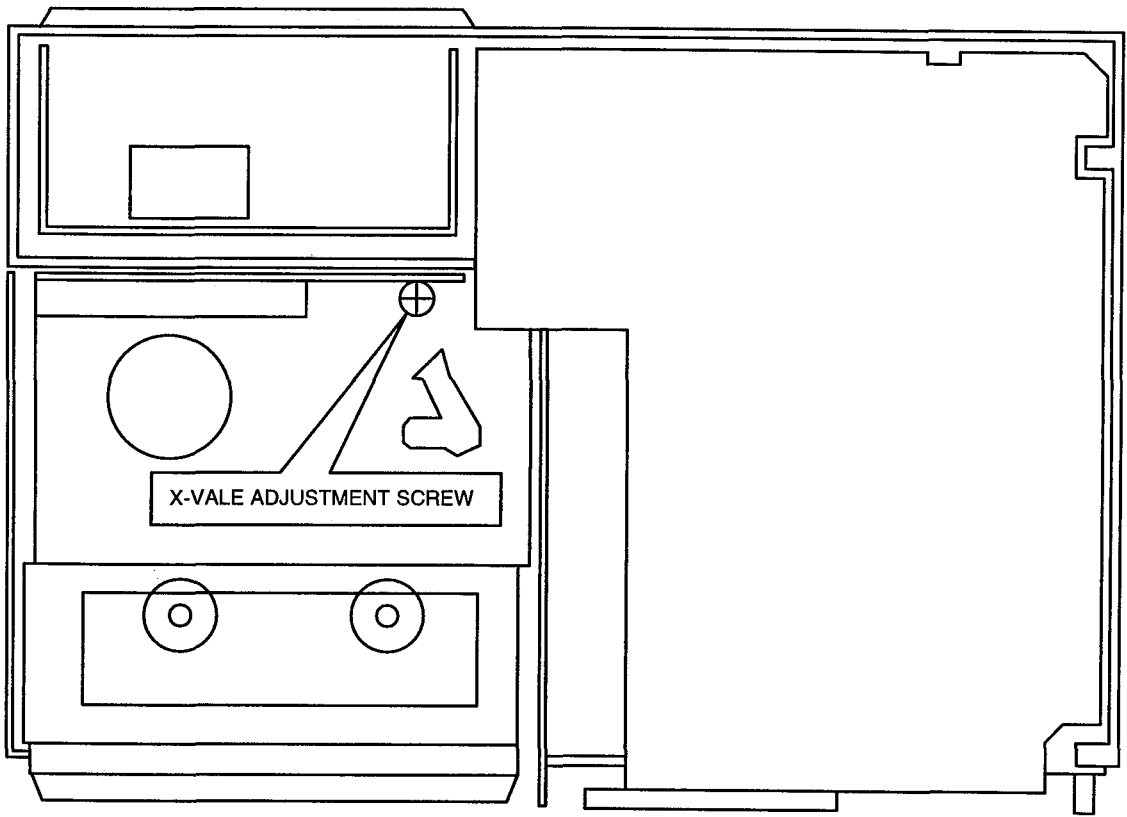


Fig. 4-7 Top View of Unit

## 8. Adjustment Procedure

### 8-1. Servo Circuit Adjustments

#### (1) Head switching point adjustment

Purpose of adjustment and fault occurring if incomplete  
Purpose:

To set the video head switching point during play to approximately the centre where the CH-1 and CH-2 envelopes overlap each other.

Fault:

The vertical sync signal is degraded and vertical jitter occur.

Switching noise appears across the bottom of the screen.

Test Equipment / Jigs and Connection Points

Oscilloscope: CH-1: Video Out  
CH-2: TP1606 [MA board]

State of VCR

- 1) Play alignment tape (03 mode)
- 2) Tracking volume: Centre

Adjustment Point

RT1601 [MA board]

Adjustment Procedure

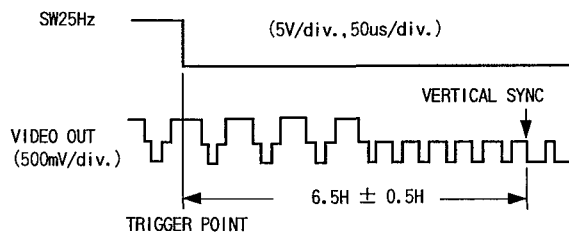
- 1) Vertical sync signal: Set to  $6.5 \pm 0.5H$  from the trailing edge (trigger position) of the SW25Hz pulse.

<Conditions of oscilloscope>

Trigger with CH-2.

Set the sync slope to "-".

Waveforms



#### (2) X-Value adjustment

Purpose of adjustment and fault occurring if incomplete  
Purpose:

To obtain compatibility with other VCRs.

Fault:

Noise occurs when tape recorded by another VCR played back.

Test Equipment / Jigs and Connection Points

Oscilloscope: CH-1: TP1526 [MA board]  
CH-2: TP1606 [MA board]

Alignment tape

State of VCR

- 1) Play alignment tapw (03 mode)
- 2) Tracking volume: Centre

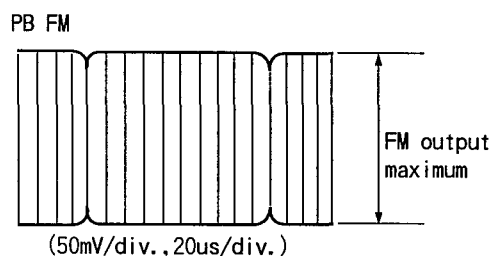
Adjustment Point

X-value adjustment screw

Adjustment Procedure

- 1) Turn the X-value adjustment screw to maximize the FM output.

Waveforms



## 8-2. Video Circuit Adjustment

### (1) AGC video output level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the video output level in the E-E mode to a specified value.

Fault:

The correct tint and brightness cannot be obtained.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: TP1520

State of VCR

1) Receive colour bar signal.

2) E-E mode

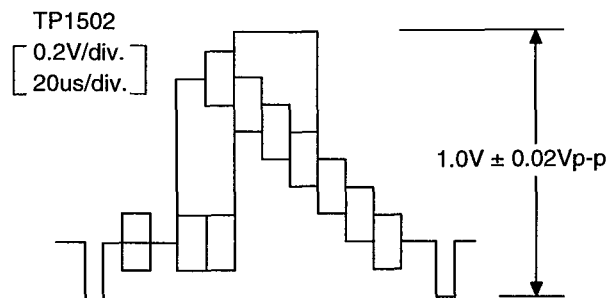
Adjustment Point

RT403 [MA board]

Adjustment Procedure

1) Adjust RT403 so the AGC video output level is  $1.0 \pm 0.02V_{p-p}$ .

Waveforms



### (2) E-E video output level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the video output level in the E-E mode to a specified value.

Fault:

The correct tint and brightness cannot be obtained.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: VIDEO OUT

(75 ohms terminated)

State of VCR

1) Receive colour bar signal.

2) E-E mode

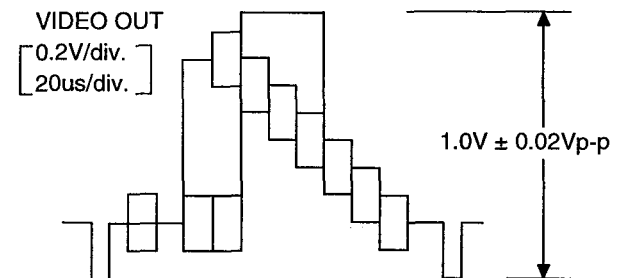
Adjustment Point

RT205 [WYC board]

Adjustment Procedure

1) Adjust RT205 so the E-E video output level is  $1.0 \pm 0.02V_{p-p}$ .

Waveforms



### (3) S-VHS REC-Y level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the recording-Y level in the S-VHS mode to a specified value.

Fault:

Beats occur.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: TP1525

Blank tape (S-VHS)

State of VCR

1) 03-mode record colour bar signal

2) S-VHS mode

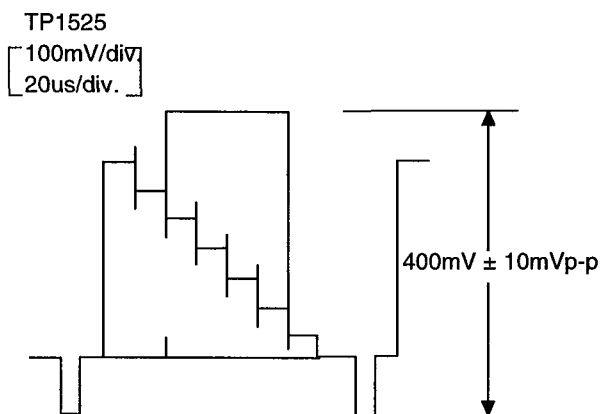
Adjustment Point

RT201 [WYC board]

Adjustment Procedure

1) Adjust RT201 so the recording-Y level is  $400 \pm 10\text{mVp-p}$ .

Waveforms



### (4) S-VHS PB-Y level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the playback-Y level in the S-VHS mode to a specified value.

Fault:

The correct Y level cannot be obtained at the S-Video output.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: TP1525

Blank tape (S-VHS)

State of VCR

1) 03-mode record colour bar signal and play it back with this unit.

2) S-VHS mode

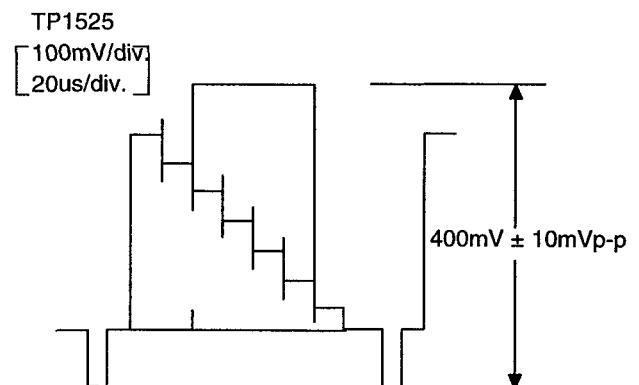
Adjustment Point

RT202 [WYC board]

Adjustment Procedure

1) Adjust RT202 so the playback-Y level is  $400 \pm 20\text{mVp-p}$ .

Waveforms



### (5) S-VHS playback level adjustment

Purpose of adjustment and fault occurring if incomplete  
Purpose:

To set the video output level in the S-VHS mode to a specified value.

Fault:

The correct tint and brightness cannot be obtained.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: VIDEO OUT  
(75 ohms terminated)

Blank tape (S-VHS)

State of VCR

1) 03-mode record colour bar signal and play it back with this unit.

2) S-VHS mode

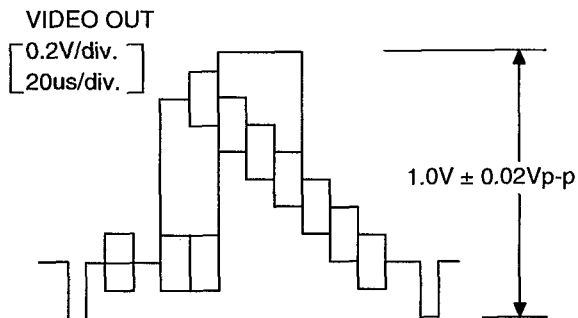
Adjustment Point

RT204 [WYC board]

Adjustment Procedure

1) Adjust RT204 so the S-VHS playback level is  $1.0 \pm 0.02V_{p-p}$ .

Waveforms



### (6) Rec chroma level adjustment

Purpose of adjustment and fault occurring if incomplete  
Purpose:

Set the record chroma levels to the optimum value.

Fault:

Diamond beats occur in the played back picture or colouring becomes poor.

The played back picture becomes dark and noise increases, or the picture glares and becomes whitish.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: TP1524

Blank tape (VHS)

State of VCR

1) 03-mode record colour bar signal.

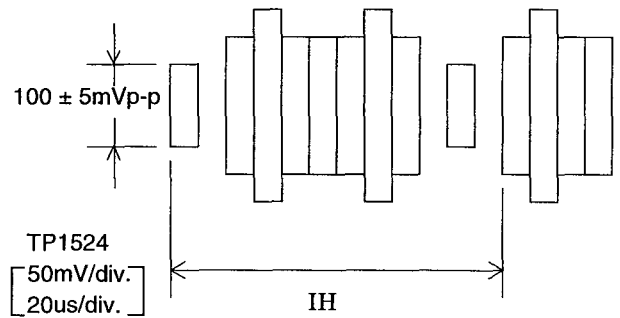
Adjustment Point

RT301 [WYC board]

Adjustment Procedure

1) Adjust RT301 so the buast level is  $100 \pm 5mV_{p-p}$ .

Waveforms





### (7) VHS playback level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

Set the video output level in the VHS mode to a specified value.

Fault:

The correct tint and brightness cannot be obtained.

Test Equipment / Jigs and Connection Points

Colour bar generator: VIDEO IN

Oscilloscope: VIDEO OUT  
(75 ohms terminated)

Blank tape (VHS)

State of VCR

1) 03-mode record colour bar signal and play it back with this unit.

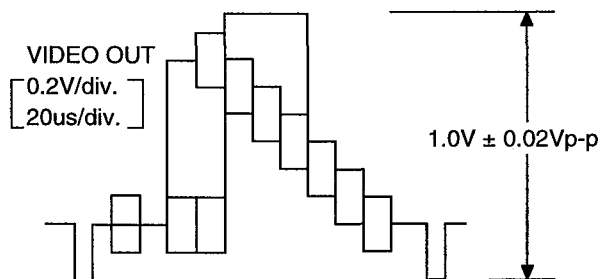
Adjustment Point

RT203 [WYC board]

Adjustment Procedure

1) Adjust RT203 so the VHS playback level is  $1.0 \pm 0.02V_{p-p}$ .

Waveforms



### (8) PAL Jog adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the video output signal to the specified phase position.

Fault:

Colour becomes defective.

Test Equipment / Jigs and Connection Points

Vectorscope: VIDEO OUT  
TP1504 [MA board]  
D1503 (ANODE) [MA board]  
TP1527 [MA board]

State of VCR

1) Play alignment tape. (03mode / 1kHz section)

Adjustment Point

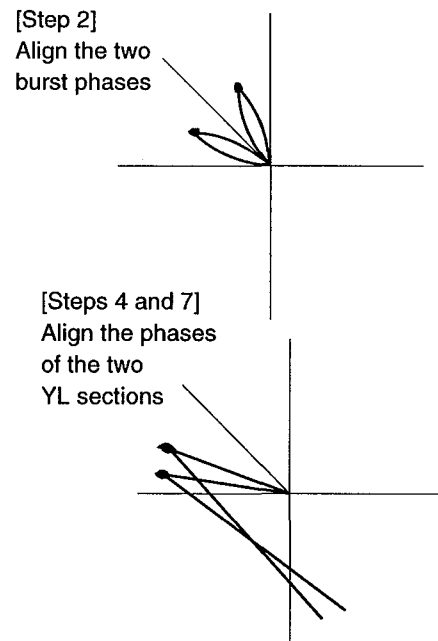
RT206 [WYC board]

RT207 [WYC board]

Adjustment Procedure

- 1) Connect a vectorscope to video out. (Set the vectorscope to the + V mode.)
- 2) Align the two burstphases
- 3) Short-circuit TP1504 and D1503 (anode:5V).
- 4) Adjust RT206 to align the phases of the two vectors in the YL section.
- 5) Release the short-circuit.
- 6) Short-circuit TP1504 and TP1527 (GND).
- 7) Adjust RT207 to align the phases of the two vectors in the YL section.
- 8) Release the short-circuit.
- 9) Repeat steps 3) and 4).

Waveforms



### 8-3. Audio Circuit Adjustment

#### (1) Audio bias level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the recording bias level to the optimum value.

Fault:

High-frequency response deteriorates.

Sound tends to be distorted.

Test Equipment / Jigs and Connection Points

VTVM: TP1401 [MA board]

TP1402 [MA board]

Blank tape

State of VCR

1) No-signal record mode. (03 mode)

Adjustment Point

RT1401 [MA board]

Adjustment Procedure

1) Adjust RT1401 so the VTVM reads  $2.7 \pm 0.1\text{mV}$ .

#### (2) Audio playback level adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose:

To set the audio playback level to the specified value.

Fault:

The correct volume cannot be obtained.

Test Equipment / Jigs and Connection Points

VTVM: AUDIO OUT

Alignment tape

State of VCR

1) Play alignment tape. (03 mode / 1kHz section)

Adjustment Point

RT1402 [MA board]

Adjustment Procedure

1) Adjust RT1402 so the VTVM reads  $-4.8 \pm 0.5\text{dB}$ .

## 9. Trouble Mode Function

This VCR has a function which displays mechanism malfunctions, etc. When the system control  $\mu\text{P}$  (IC1901) detects information on a defect in the mechanism control system, it transfers bit data to the main  $\mu\text{P}$  (IC1701). The trouble memory data written to the EEP ROM can also be displayed on the OSD screen.

### 9-1. Trouble Mode Display

Table. 4-2 Details of Error

	Name of error	Major cause
1	Cylinder Lock	SW30Hz is not normal.
2	Mecha Lock 1	CFG is not detected for more than 400ms during unloading.
3	Mecha Lock 2 ~ 10	The object position cannot be detected within the specified time during operation.
4	Reel.Lock 1	The specified CFG is not input when reel lock has occurred.
5	Reel Lock 2	The specified CFG is input when reel lock has occurred

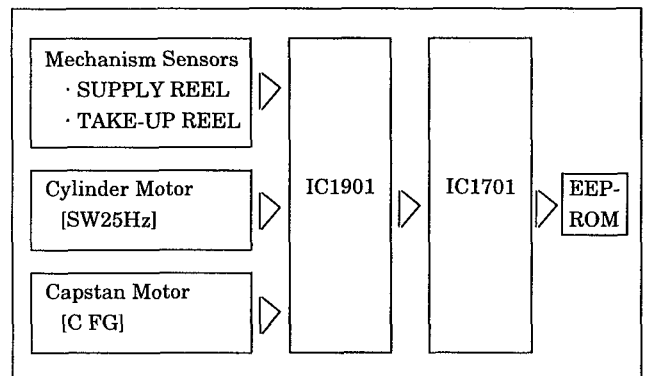


Fig. 4-8 Malfunction Detection

### 9-2. Trouble Memory Data Display

#### (1) Display method

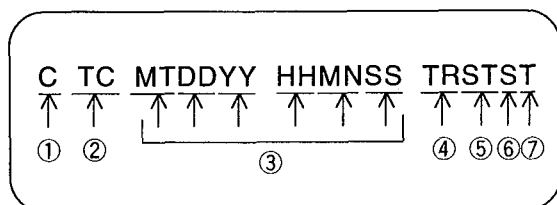


Fig. 4-9 OSD Screen

- Procedure to display the trouble memory  
Press **STOP**, **DOWN** and **H.POS** simultaneously.
- Procedure to erase the trouble memory  
Refer to "5.PROCEDURE TO RESET THE VCR" in this chapter.

(2)Details of display (See Fig.4-9)

1. C : Number of times

Table. 4-3

Display	Details
1	First malfunction
0	Second malfunction

**CAUTION:** When malfunctions occur 10 times or more, the first and the last 8th malfunctions are displayed.

2. T C : Total number of times

3.Data when malfunction occurred

- M T : Month
- D D : Day
- Y Y : Year
- H H : Hour
- M N : Minute
- S S : Second

4. T R : Trouble data

Table. 4-4

Display	Details	Mecha.Position
C Y	CYLINDER LOCK	
M 0	MECHA.LOCK 1	
M 1	MECHA.LOCK 2	FL
M 2	MECHA.LOCK 3	Unload
M 3	MECHA.LOCK 4	Stop
M 4	MECHA.LOCK 5	FF/REW
M 5	MECHA.LOCK 6	Rec/Play
M 6	MECHA.LOCK 7	Slow
M 7	MECHA.LOCK 8	Reverse slow
M 8	MECHA.LOCK 9	Reverse
M 9	MECHA.LOCK 10	Transient
R 1	REEL LOCK 1	
R 2	REEL LOCK 2	

5. S T : Status

Table. 4-5

Display	Details
S T	Normal stop
F 1	FF(when calculating tape remaining)
F 2	FF(when executing soft landing)
F 3	FF(high-speed state)
R 1	REW(when calculating tape remaining)
R 2	REW(when executing soft landing)
R 3	REW(high-speed state)
R S	Rec Pause
R D	Rec
P S	Still
P L	Play
R P	Reverse play
F A	Field Advance
F R	Field reverse
C U	CUE
R V	Review

6. S : Tape speed

Table. 4-6

Display	Details
0	03
1	12
2	A24
3	24
4	48
5	72
6	120
7	168
8	240
9	360
A	480
B	600
C	720
D	960
E	00

7. T : Tape position

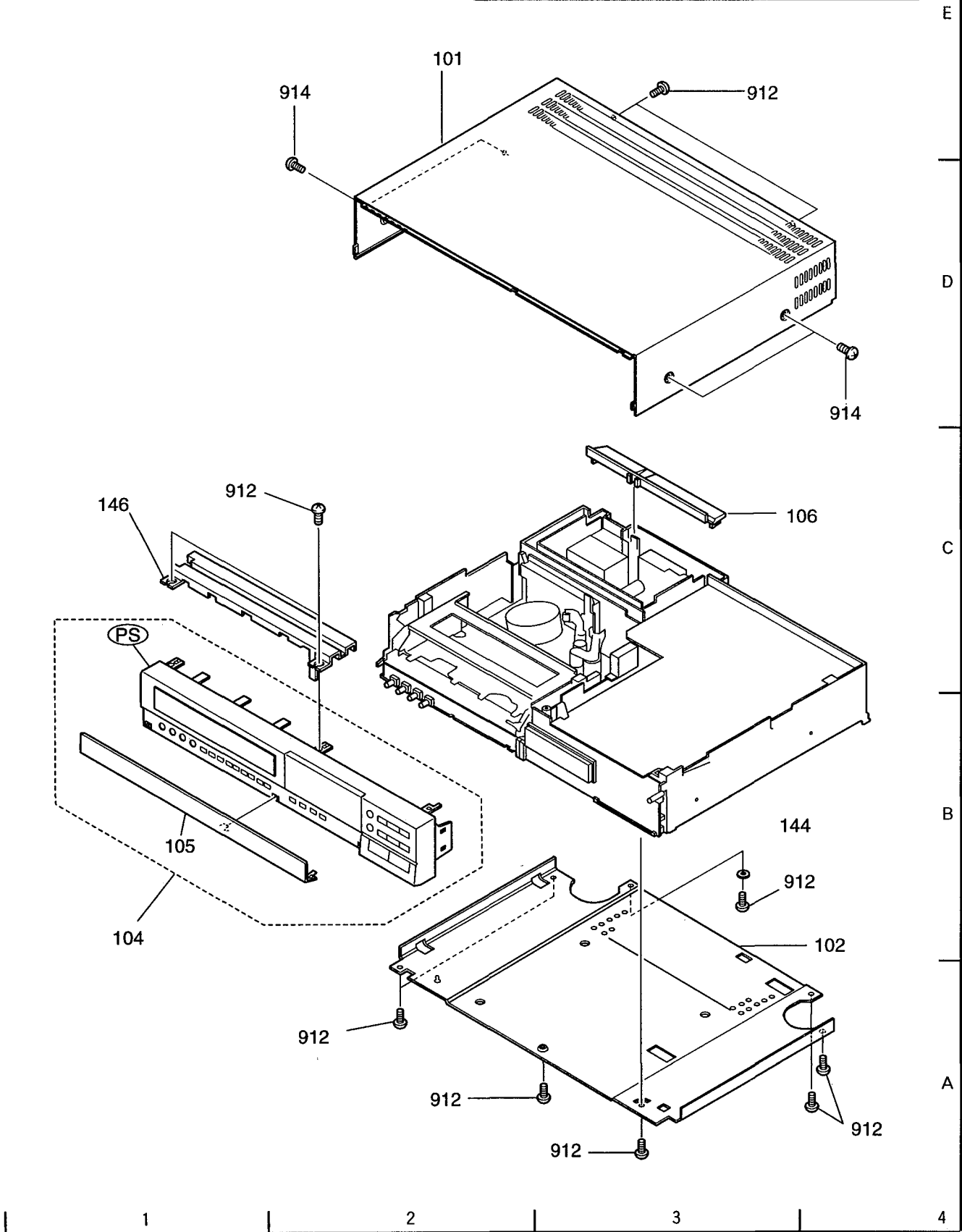
Table. 4-7

Display	Details
-	Remaining tape calculation incomplete
0	Near the end of tape
1	.
2	.
3	.
4	.
5	.
6	.
7	Near the start of tape

# CHAPTER 5 EXPLODED VIEWS

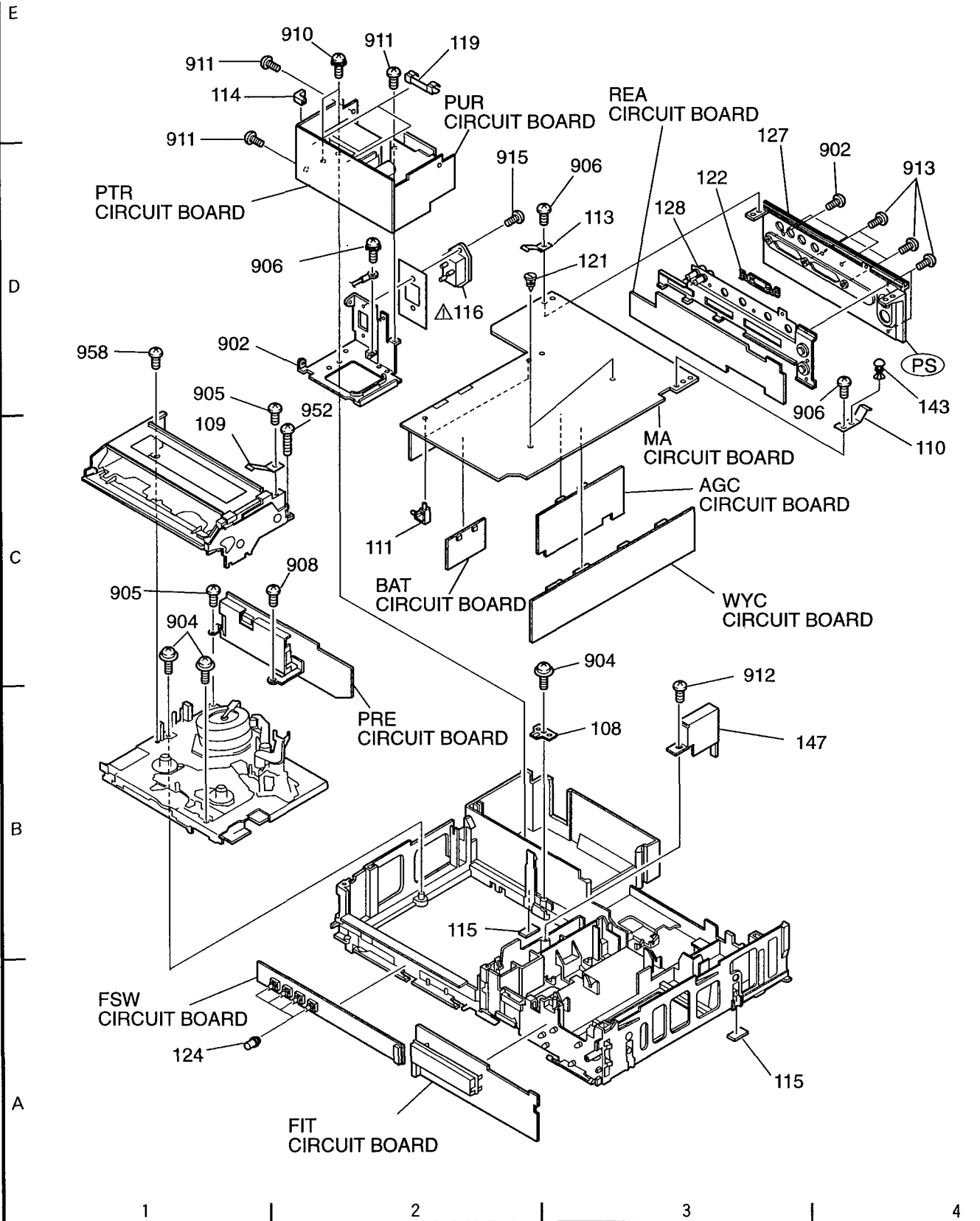
## 1. CABINET (CASES) SECTION

NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.



## 2. CABINET (CIRCUIT BOARDS) SECTION

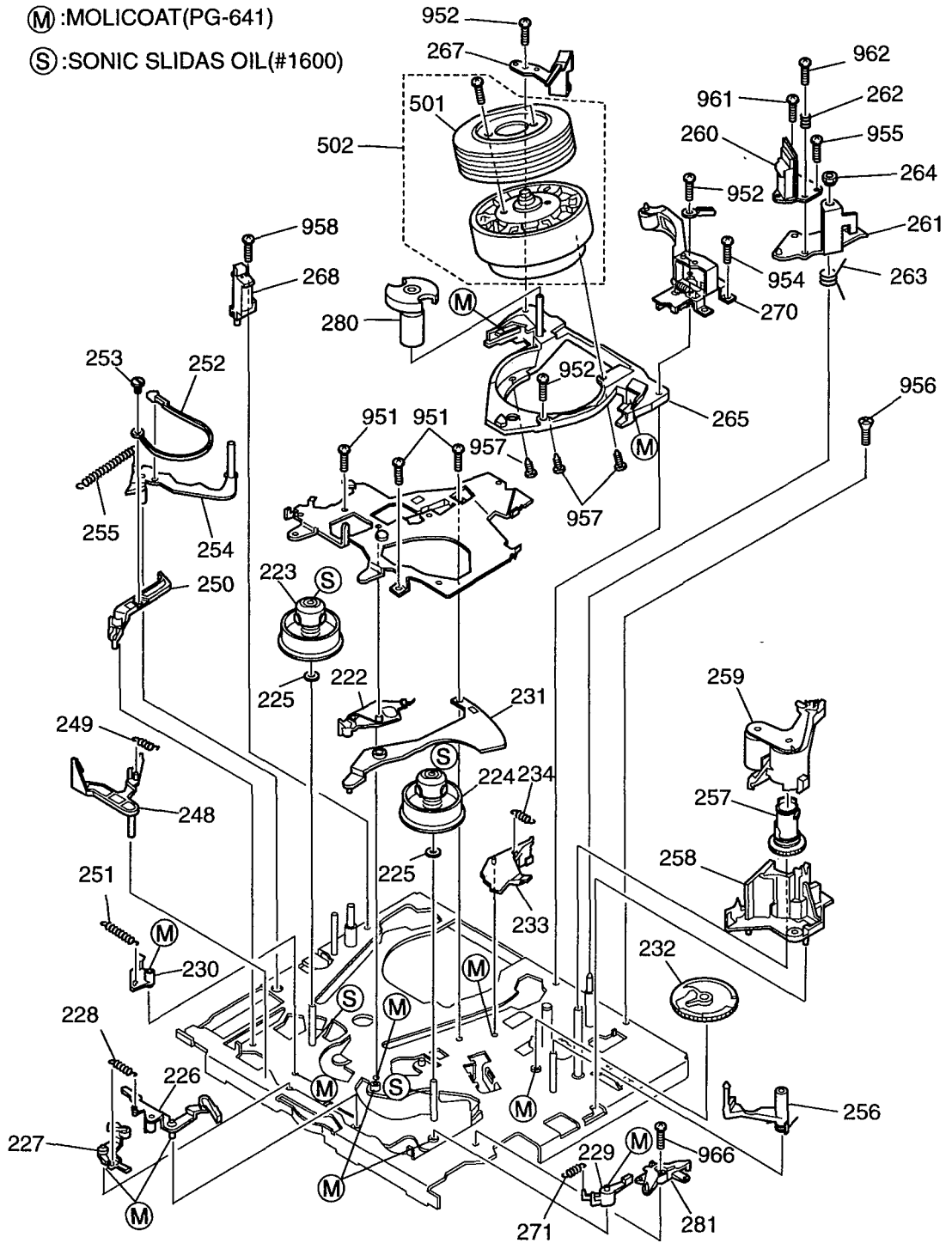
NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.



### 3. CHASSIS (TOP VIEW) SECTION

(M) : MOLICOAT(PG-641)

(S) : SONIC SLIDAS OIL(#1600)



1    2    3    4

E

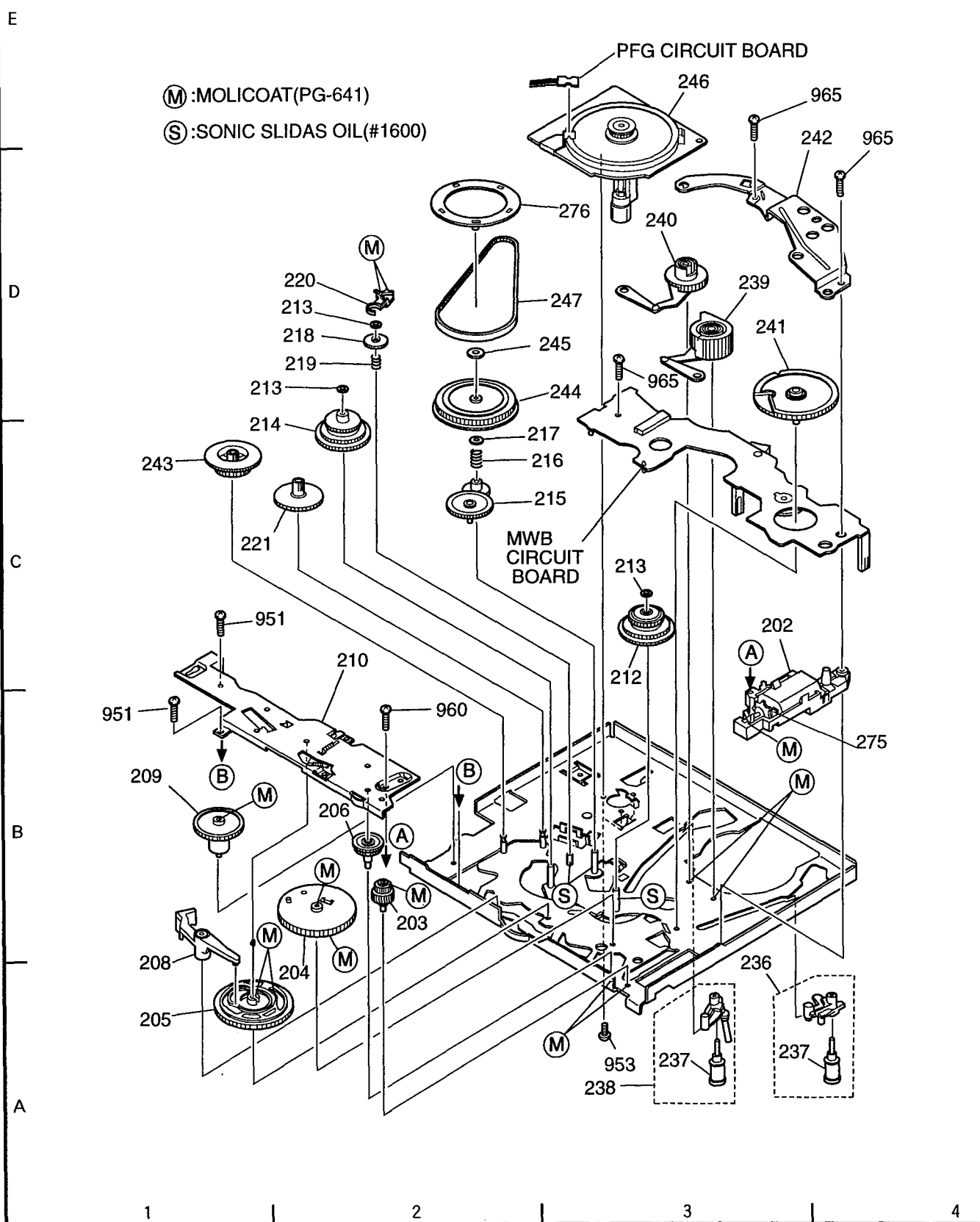
D

C

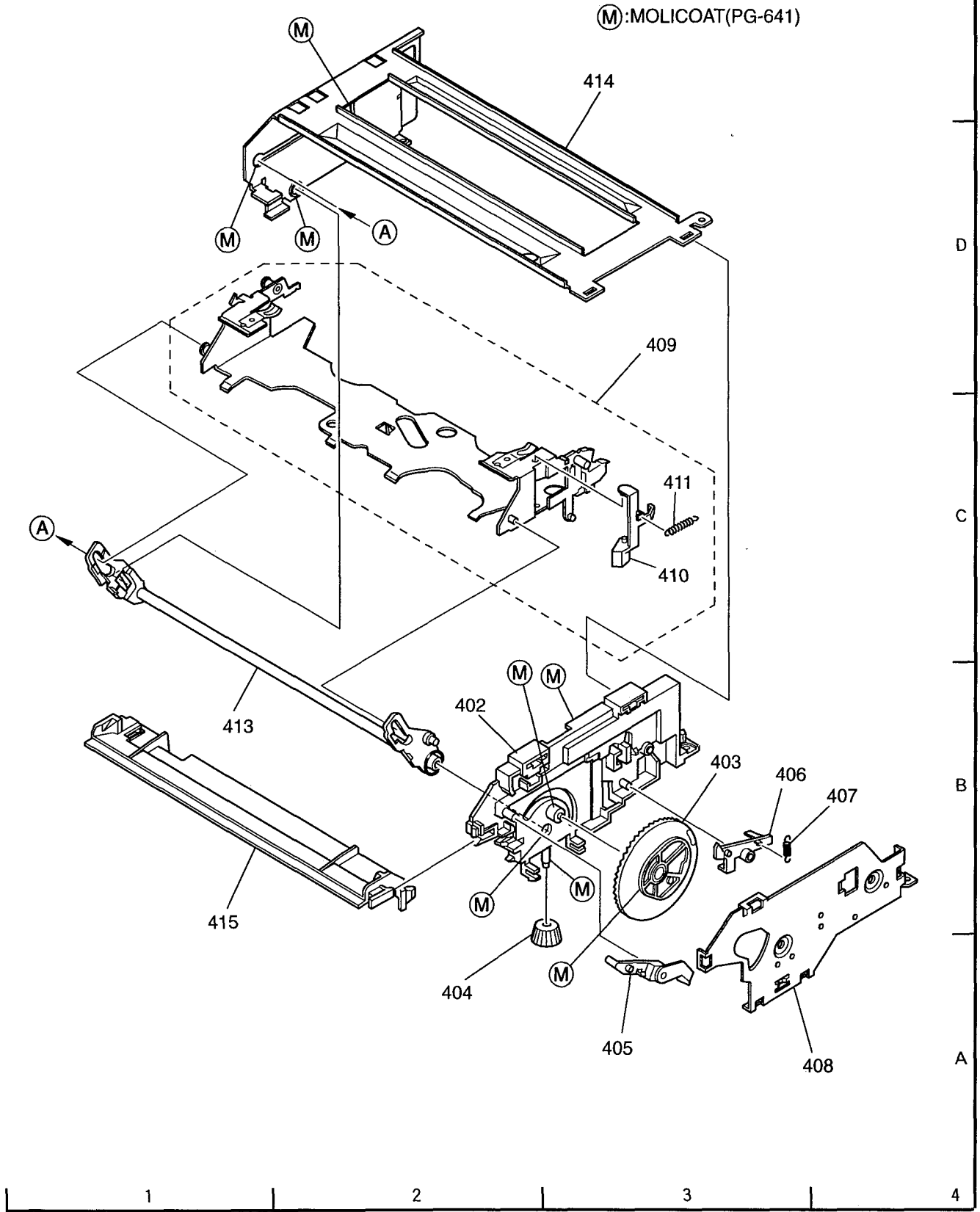
B

A

# 4. CHASSIS (BOTTOM VIEW) SECTION



# 5. CASSETTE LOADING MECHANISM SECTION





## 1. MECHANICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
MECHANISM SECTION			243	6823542	GEAR
			244	6406332	PULLY, TAKE UP
			245	6500841	WASHER
			246	GP10204	MOTOR, CAPSTAN
			247	6358101	BELT
CN0007	5813767	CONNECTOR	248	6823424	ARM
101	QA10955	COVER, TOP	249	6553361	SPRING
102	6008672	COVER, BOTTOM	250	6823437	ARM, OPERATION
104	PH15405	PANEL, FRONT	251	6553301	SPRING
105	PH15908	DOOR, CONTROL	252	6823475	BAND, TENSION
106	6811834	PIECE, REAR	253	6823511	SHAFT
108	7415793	BRACKET	254	4587661	ARM
109	4826831	SPRING	255	6553352	SPRING
110	6529161	PLATE	256	6638936	ARM
111	QX12741	HOLDER, CBA	257	6823521	GEAR, CAM
113	4842811	PLATE	258	6823445	BRACKET
114	6812411	HOLDER	259	6500434	ROLLER, PRESSURE
115	4330291	FELT	260	5434153	HEAD
△ 116	5699151	AC INLET	261	6500593	BASE, AC H6AD
119	5722411	HOLDER, FUSE	262	6554301	SPRING
121	6898241	STUD	263	6553151	SPRING
122	NA13561	PLATE, EARTH(R)	264	7785673	NUT
124	PC11412	KNOB, VOLUME	265	6638895	BASE, CYLINDER
127	PH16463	PANEL, REAR	267	FU10191	BRUSH, CYLINDER
128	NA11361	BRACKET	268	5423081	HEAD, FULL ERASE
143	6714211	NYLON RIVET - 3MMD	270	NA10564	HEAD CLEANING ASSY
144	8815114	WASHER	271	6558502	SPRING
146	NA13841	BRACKET 1	275	6816211	WORM
147	NA13851	BRACKET 2	276	6358591	CAP
202	6500761	MOTOR, LOADING	280	6823452	ROLLER
203	6441371	GEAR	281	4584121	ARM
204	6441392	GEAR	402	6823613	BRACKET
205	6406341	GEAR	403	6823621	GEAR
206	6441381	GEAR	404	6823631	GEAR
208	6823171	ARM, OPERATION	405	6823642	ARM
209	6441421	GEAR	406	6823652	ARM
210	6500321	PLATE	407	6558531	SPRING
212	KF10271	GEAR, TAKE-UP	408	6500612	BRACKET
213	7788347	WASHER	409	6500623	HOLDER
214	6406291	GEAR(R)	410	6823691	ARM
215	6401446	ARM, FR	411	6558541	SPRING
216	6522979	SPRING	413	6823665	ARM
217	6500841	WASHER	414	6500672	BRACKET
218	6441434	GEAR, CHANGE	415	6823701	HOLDER
219	6522978	SPRING	501	HX10462	CYLINDER, UPPER (CY-G4AK)
220	6823183	ARM	502	5436782	CYLINDER, LOWER (CY-G4PK)
221	6441411	GEAR	902	8699408	SCREW
222	6823314	ARM	904	7781138	SCREW (3X10BT)
223	6416632	REEL, TABLE(S)	905	8671305	SCREW (2.6X5)
224	6404141	REEL, TABLE(T)	906	8699412	SCREW (3X12) BLACK
225	4583333	WASHER	908	0711312	PAN HEAD SCREW - 2.6MMD X 12MM
226	4589851	ARM, BRAKE (R)	910	7785351	SCREW (4XL4)
227	6823229	ARM, BRAKE (L)	911	8691408	SXSCREW (3X8)
228	6318613	SPRING	912	8699410	SCREW (3X10)
229	6823272	BRAKE	913	8678410	DT BIND SCREW-3MMDX10MM
230	6823261	BRAKE	914	8698410	BT BIND SCREW-3MMDX10MM
231	4588971	ARM	915	8639408	SCREW (3X8)
232	6823251	GEAR	951	0711304	SCREW (2.6X4)
233	6823296	BRAKE	952	0711312	PAN HEAD SCREW - 2.6MMD X 12MM
234	6558455	SPRING	954	0711306	PAN HEAD SCREW-2.6MMDX6MM
236	6638943	BASE, GUIDE ROLLER(1)	955	7773741	SCREW
237	4589381	GUIDE ROLLER	956	4528181	SCREW
238	6638957	BASE, GUIDE ROLLER(0)	957	8650408	SCREW
239	4587681	GEAR, LOADING(L)	958	0671308	DT SCREW-2.6MMDX8MM
240	4587671	GEAR, LOADING(R)	960	8650914	SCREW (2.6X14S)
241	6823538	GEAR, MODE			
242	KX10181	BRACKET			

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
961	8741306	SCREW (2.6X6)			
962	8741312	SPRING			
965	MJ10251	SCREW (M2.6)			
966	7773761	SCREW			
ACCESSARIES					
	1605323	PWB ASSY 15P ADAPTOR			

## 2. ELECTRICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
CAPACITORS			C0241	0800047	ELECTROLYTIC 100UF 6.3V
C0001	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0242	0209897	CERAMIC CHIP 56PF±5% 50V
C0002	0209892	CERAMIC CHIP 18PF±5% 50V	C0243	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0003	0893013	CERAMIC CHIP 0.22UF±10% 16V	C0244	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0004	0893013	CERAMIC CHIP 0.22UF±10% 16V	C0245	0209879	CERAMIC CHIP 9PF±0.5% 50V
C0005	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0246	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0006	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0247	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0007	0893013	CERAMIC CHIP 0.22UF±10% 16V	C0248	0800041	ELECTROLYTIC 47UF 16V
C0008	0893013	CERAMIC CHIP 0.22UF±10% 16V	C0249	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0009	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0250	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0010	0209892	CERAMIC CHIP 18PF±5% 50V	C0251	0209893	CERAMIC CHIP 22PF±10% 50V
C0011	0893058	CERAMIC CHIP 0.33UF±80-20% 16V	C0252	0209891	CERAMIC CHIP 12PF±5% 50V
C0012	0893014	CERAMIC CHIP 0.01UF±10% 25V	C0253	0209899	CERAMIC DISC 120PF±5% 50V
C0013	0893014	CERAMIC CHIP 0.01UF±10% 25V	C0254	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0014	0800186	ELECTROLYTIC 47UF 16V	C0255	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0015	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0256	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0016	0209891	CERAMIC CHIP 12PF±5% 50V	C0257	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0017	0800186	ELECTROLYTIC 47UF 16V	C0258	0800039	ELECTROLYTIC 47UF 10V
C0018	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0259	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0019	0209849	CERAMIC CHIP 390PF±5% 50V	C0260	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0020	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0261	0893053	CERAMIC CHIP 0.047UF±10% 50V
C0021	0800186	ELECTROLYTIC 47UF 16V	C0262	0209846	CERAMIC CHIP 33PF±5% 50V
C0022	0893091	CERAMIC CHIP 0.022UF±10% 16V	C0263	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0023	0800186	ELECTROLYTIC 47UF 16V	C0264	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0201	0209880	CERAMIC CHIP 10PF±0.5% 50V	C0265	0209847	CERAMIC CHIP 82PF±10% 50V
C0202	0209897	CERAMIC CHIP 56PF±5% 50V	C0266	0209904	CERAMIC DISC 560PF±5% 50V
C0203	0209895	CERAMIC CHIP 39PF±5% 50V	C0267	0209892	CERAMIC CHIP 18PF±5% 50V
C0204	0209853	CERAMIC DISC 68PF±5% 50V	C0268	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0205	0209849	CERAMIC CHIP 390PF±5% 50V	C0269	0209891	CERAMIC CHIP 12PF±5% 50V
C0206	0209852	CERAMIC CHIP 180PF±5% 50V	C0270	0209892	CERAMIC CHIP 18PF±5% 50V
C0207	0209893	CERAMIC CHIP 22PF±10% 50V	C0271	0209856	CERAMIC DISC 220PF±5% 50V
C0208	0893044	CERAMIC CHIP 0.01UF±10% 50V	C0272	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0209	0800011	ELECTROLYTIC 4.7UF 35V	C0273	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0210	0800022	ELECTROLYTIC 22UF 10V	C0274	0209878	CERAMIC CHIP 8PF±0.5% 50V
C0211	0893044	CERAMIC CHIP 0.01UF±10% 50V	C0275	0209904	CERAMIC DISC 560PF±5% 50V
C0212	0800072	ELECTROLYTIC 470UF 6.3V	C0276	0209846	CERAMIC CHIP 33PF±5% 50V
C0213	0800001	ELECTROLYTIC 0.47UF 50V	C0277	0209846	CERAMIC CHIP 33PF±5% 50V
C0214	0893044	CERAMIC CHIP 0.01UF±10% 50V	C0278	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0215	0800015	ELECTROLYTIC 10UF 16V	C0279	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0216	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0280	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0217	0800015	ELECTROLYTIC 10UF 16V	C0281	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0218	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0282	0800039	ELECTROLYTIC 47UF 10V
C0219	0800039	ELECTROLYTIC 47UF 10V	C0283	0893027	CERAMIC CHIP 0.1UF±10% 25V
C0220	0800001	ELECTROLYTIC 0.47UF 50V	C0284	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0221	0800022	ELECTROLYTIC 22UF 10V	C0285	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0222	0209894	CERAMIC CHIP 27PF±10% 50V	C0286	0209875	CERAMIC CHIP 5PF±10% 50V
C0223	0800003	ELECTROLYTIC 1UF 50V	C0287	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0224	0800041	ELECTROLYTIC 47UF 16V	C0288	0893031	CERAMIC CHIP 1000PF±10% 50V
C0225	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0289	0800011	ELECTROLYTIC 4.7UF 35V
C0226	0893053	CERAMIC CHIP 0.047UF±10% 50V	C0290	0893044	CERAMIC CHIP 0.01UF±10% 50V
C0227	0800047	ELECTROLYTIC 100UF 6.3V	C0291	0217841	CERAMIC CHIP 1.0UF±20% 10V
C0228	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0292	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0229	0893027	CERAMIC CHIP 0.1UF±10% 25V	C0293	0893027	CERAMIC CHIP 0.1UF±10% 25V
C0230	0893046	CERAMIC CHIP 0.015UF±10% 50V	C0294	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0231	0800047	ELECTROLYTIC 100UF 6.3V	C0295	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0232	0209896	CERAMIC CHIP 47PF±5% 50V	C0296	0800038	ELECTROLYTIC 47UF 6.3V
C0233	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0297	0893048	CERAMIC CHIP 0.022UF±10% 50V
C0234	0893048	CERAMIC CHIP 0.022UF±10% 50V	C0298	0800039	ELECTROLYTIC 47UF 10V
C0235	0800001	ELECTROLYTIC 0.47UF 50V	C0299	0209896	CERAMIC CHIP 47PF±5% 50V
C0236	0893044	CERAMIC CHIP 0.01UF±10% 50V	C0300	0209848	CERAMIC DISC 150PF±5% 50V
C0237	0800001	ELECTROLYTIC 0.47UF 50V	C0301	0209897	CERAMIC CHIP 56PF±5% 50V
C0239	0893053	CERAMIC CHIP 0.047UF±10% 50V	C0302	0800022	ELECTROLYTIC 22UF 10V
C0240	0800012	ELECTROLYTIC 4.7UF 50V	C0303	0893027	CERAMIC CHIP 0.1UF±10% 25V
			C0304	0893044	CERAMIC CHIP 0.01UF±10% 50V
			C0305	0800003	ELECTROLYTIC 1UF 50V

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
C0306	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0443	0800015	ELECTROLYTIC 10UF 16V
C0307	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0444	0800015	ELECTROLYTIC 10UF 16V
C0308	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0445	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0309	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0446	0800041	ELECTROLYTIC 47UF 16V
C0310	0800015	ELECTROLYTIC 10UF 16V	C0447	0800015	ELECTROLYTIC 10UF 16V
C0311	0893027	CERAMIC CHIP 0.1UF+-10% 25V	C0448	0800015	ELECTROLYTIC 10UF 16V
C0312	0893027	CERAMIC CHIP 0.1UF+-10% 25V	C0449	0800073	ELECTROLYTIC 470UF 10V
C0313	0893027	CERAMIC CHIP 0.1UF+-10% 25V	C0450	0800015	ELECTROLYTIC 10UF 16V
C0314	0893027	CERAMIC CHIP 0.1UF+-10% 25V	C0451	0800073	ELECTROLYTIC 470UF 10V
C0315	0893053	CERAMIC CHIP 0.047UF+-10% 50V	C0452	0800015	ELECTROLYTIC 10UF 16V
C0316	0800079	ELECTROLYTIC 1000UF 6.3V	C0453	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0317	0893053	CERAMIC CHIP 0.047UF+-10% 50V	C0454	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0318	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0455	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0319	0800041	ELECTROLYTIC 47UF 16V	C0456	0800049	ELECTROLYTIC 100UF 16V
C0320	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0457	0800015	ELECTROLYTIC 10UF 16V
C0321	0800009	ELECTROLYTIC 4.7UF 25V	C0458	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0322	0800015	ELECTROLYTIC 10UF 16V	C0459	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0323	0800101	ELECTROLYTIC 0.1UF 50V	C0460	0800041	ELECTROLYTIC 47UF 16V
C0324	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0461	0800015	ELECTROLYTIC 10UF 16V
C0325	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0462	0800015	ELECTROLYTIC 10UF 16V
C0327	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C0463	0800015	ELECTROLYTIC 10UF 16V
C0331	0890065	CERAMIC DISC 22PF+-5% 50V	C0464	0800015	ELECTROLYTIC 10UF 16V
C0332	0890065	CERAMIC DISC 22PF+-5% 50V	C0465	0207446	CERAMIC CHIP 10UF+-20% 16V
C0401	0800048	ELECTROLYTIC 100UF 10V	C0466	0209897	CERAMIC CHIP 56PF+-5% 50V
C0402	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1202	0890026	CERAMIC DISC 220PF+-10% 50V
C0403	0800015	ELECTROLYTIC 10UF 16V	C1206	0800039	ELECTROLYTIC 47UF 10V
C0404	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1207	0880009	POLYESTER FILM 0.01UF+-10% 50V
C0405	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1208	0890045	CERAMIC DISC 0.047UF+-80-20% 50V
C0406	0800103	ELECTROLYTIC 0.22UF 50V	C1404	0880007	POLYESTER FILM 4700PF+-10% 50V
C0407	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1405	0800015	ELECTROLYTIC 10UF 16V
C0408	0893031	CERAMIC CHIP 1000PF+-10% 50V	C1406	0800023	ELECTROLYTIC 22UF 16V
C0409	0893013	CERAMIC CHIP 0.22UF+-10% 16V	C1408	0880016	POLYESTER FILM 0.1UF+-10% 50V
C0410	0800057	ELECTROLYTIC 220UF 10V	C1409	0880017	POLYESTER FILM 0.15UF+-10% 50V
C0411	0209932	CERAMIC CHIP 15PF+-5% 50V	C1410	0800015	ELECTROLYTIC 10UF 16V
C0412	0209932	CERAMIC CHIP 15PF+-5% 50V	C1411	0209942	CERAMIC CHIP 100PF+-5% 50V
C0413	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1412	0800109	ELECTROLYTIC 1.0UF 50V
C0414	0800041	ELECTROLYTIC 47UF 16V	C1413	0800109	ELECTROLYTIC 1.0UF 50V
C0415	0202163	CERAMIC CAPACITOR 560PF+-5% 50V	C1414	0800003	ELECTROLYTIC 1UF 50V
C0416	0800007	ELECTROLYTIC 3.3UF 50V	C1415	0880011	POLYESTER FILM 0.015UF+-10% 50V
C0417	0893037	CERAMIC CHIP 3300PF+-10% 50V	C1416	0800298	ELECTROLYTIC 22UF 10V
C0418	0800003	ELECTROLYTIC 1UF 50V	C1417	0800015	ELECTROLYTIC 10UF 16V
C0419	0209904	CERAMIC DISC 560PF+-5% 50V	C1418	0880004	POLYESTER FILM 1500PF+-10% 50V
C0420	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1419	0800015	ELECTROLYTIC 10UF 16V
C0421	0800048	ELECTROLYTIC 100UF 10V	C1420	0800032	ELECTROLYTIC 33UF 16V
C0422	0209854	CERAMIC DISC 330PF+-5% 50V	C1421	0893037	CERAMIC CHIP 3300PF+-10% 50V
C0423	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1422	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0424	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1423	0209946	CERAMIC CHIP 220PF+-5% 50V
C0425	0800007	ELECTROLYTIC 3.3UF 50V	C1424	0268449	MYLAR 0.047UF+-5% 100V
C0426	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1425	0800015	ELECTROLYTIC 10UF 16V
C0427	0800001	ELECTROLYTIC 0.47UF 50V	C1426	0202159	CERAMIC CHIP 680PF+-5% 50V
C0428	0800015	ELECTROLYTIC 10UF 16V	C1430	0880014	POLYESTER FILM 0.047UF+-10% 50V
C0429	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1431	0880017	POLYESTER FILM 0.15UF+-10% 50V
C0430	0800041	ELECTROLYTIC 47UF 16V	C1432	0880014	POLYESTER FILM 0.047UF+-10% 50V
C0431	0893013	CERAMIC CHIP 0.22UF+-10% 16V	C1433	0880009	POLYESTER FILM 0.01UF+-10% 50V
C0432	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1434	0800003	ELECTROLYTIC 1UF 50V
C0433	0209851	CERAMIC DISC 15PF+-5% 50V	C1437	0880015	POLYESTER FILM 0.068UF+-10% 50V
C0434	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C1439	0800009	ELECTROLYTIC 4.7UF 25V
C0435	0800015	ELECTROLYTIC 10UF 16V	C1440	0800015	ELECTROLYTIC 10UF 16V
C0436	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1441	0800049	ELECTROLYTIC 100UF 16V
C0437	0800041	ELECTROLYTIC 47UF 16V	C1442	0893063	CERAMIC CHIP 0.022UF+-80-20% 25V
C0438	0800015	ELECTROLYTIC 10UF 16V	C1443	0800015	ELECTROLYTIC 10UF 16V
C0439	0800015	ELECTROLYTIC 10UF 16V	C1501	0209946	CERAMIC CHIP 220PF+-5% 50V
C0440	0893048	CERAMIC CHIP 0.022UF+-10% 50V	C1502	0209946	CERAMIC CHIP 220PF+-5% 50V
C0441	0800041	ELECTROLYTIC 47UF 16V	C1503	0209946	CERAMIC CHIP 220PF+-5% 50V
C0442	0800015	ELECTROLYTIC 10UF 16V	C1504	0209946	CERAMIC CHIP 220PF+-5% 50V

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
C1505	0209946	CERAMIC CHIP 220PF±5% 50V	C1711	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1507	0209946	CERAMIC CHIP 220PF±5% 50V	C1712	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1508	0893008	CERAMIC CHIP 0.1UF ±10% 16V	C1713	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1513	0800326	ELECTROLYTIC 100UF 16V	C1714	0800039	ELECTROLYTIC 47UF 10V
C1514	0893048	CERAMIC CHIP 0.022UF±10% 50V	C1715	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1515	0890046	CERAMIC DISC 0.1UF+80-20% 50V	C1720	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1516	0890046	CERAMIC DISC 0.1UF+80-20% 50V	C1852	0800204	CERAMIC CHIP 100PF±20% 25V
C1517	0890046	CERAMIC DISC 0.1UF+80-20% 50V	C1853	0800202	ELECTROLYTIC 10UF 25V
C1518	0893087	CERAMIC CHIP 0.15UF+80-20% 50V	C1855	0890102	CERAMIC DISC 0.022UF+80-20% 50V
C1519	0893087	CERAMIC CHIP 0.15UF+80-20% 50V	C1856	AL10217F	ELECTROLYTIC 1000UF 16V
C1520	0893087	CERAMIC CHIP 0.15UF+80-20% 50V	C1857	0800203	ELECTROLYTIC 100UF 50V
C1601	0880046	POLYESTER FILM 0.015UF±10% 50V	C1858	0800204	CERAMIC CHIP 100PF±20% 25V
C1602	0800005	ELECTROLYTIC 2.2UF 50V	C1859	0800204	CERAMIC CHIP 100PF±20% 25V
C1603	0207444	ELECTROLYTIC 1.0UF 50V	C1867	0255786	ELECTROLYTIC 4700UF 35V
C1604	0880051	MYLAR 0.033UF±10% 50V	△C1891	AJ10294	CERAMIC CAPACITOR 4700PF±20% 125V
C1605	0207453	ELECTROLYTIC 2.2UF 50V	C1902	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1606	0800117	ELECTROLYTIC 4.7UF 25V	C1903	0209942	CERAMIC CHIP 100PF±5% 50V
C1608	0800015	ELECTROLYTIC 10UF 16V	C1905	0800003	ELECTROLYTIC 1UF 50V
C1609	0880019	POLYESTER FILM 0.33UF±10% 50V	C1906	0890035	CERAMIC DISC 1000PF±10% 50V
C1610	0880033	MYLAR 1500PF±10% 50V	C1907	0800032	ELECTROLYTIC 33UF 16V
C1611	0893048	CERAMIC CHIP 0.022UF±10% 50V	C1909	0893031	CERAMIC CHIP 1000PF±10% 50V
C1612	0800022	ELECTROLYTIC 22UF 10V	C1910	0893031	CERAMIC CHIP 1000PF±10% 50V
C1613	0893053	CERAMIC CHIP 0.047UF±10% 50V	C1911	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1614	0893053	CERAMIC CHIP 0.047UF±10% 50V	C1913	0800033	ELECTROLYTIC 33UF 25V
C1618	0890038	CERAMIC DISC 3300PF±20% 16V	C1914	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1619	0893027	CERAMIC CHIP 0.1UF±10% 25V	C1916	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1620	0800032	ELECTROLYTIC 33UF 16V	C1917	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1622	0893048	CERAMIC CHIP 0.022UF±10% 50V	C1918	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1623	0893053	CERAMIC CHIP 0.047UF±10% 50V	C1919	0893053	CERAMIC CHIP 0.047UF±10% 50V
C1624	0209944	CERAMIC CHIP 150PF±5% 50V	C1921	0217841	CERAMIC CHIP 1.0UF±20% 10V
C1625	0890102	CERAMIC DISC 0.022UF+80-20% 50V	C1922	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1627	0209948	CERAMIC CHIP 330PF±5% 50V	C1923	0800039	ELECTROLYTIC 47UF 10V
C1628	0209943	CERAMIC DISC 120PF±5% 50V	C1925	0800003	ELECTROLYTIC 1UF 50V
C1629	0800015	ELECTROLYTIC 10UF 16V	C1926	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1630	0800015	ELECTROLYTIC 10UF 16V	C1927	0800072	ELECTROLYTIC 470UF 6.3V
C1631	0880055	MYLAR 0.068UF±10% 50V	C1928	0893044	CERAMIC CHIP 0.01UF±10% 50V
C1632	0202166	CERAMIC CHIP 820PF±5% 50V	C1954	0893053	CERAMIC CHIP 0.047UF±10% 50V
C1633	0893053	CERAMIC CHIP 0.047UF±10% 50V	C2101	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1634	0800079	ELECTROLYTIC 1000UF 6.3V	C2202	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1635	0893031	CERAMIC CHIP 1000PF±10% 50V	C2203	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1642	0893031	CERAMIC CHIP 1000PF±10% 50V	C2205	0800015	ELECTROLYTIC 10UF 16V
C1643	0800126	ELECTROLYTIC 22UF 6.3V	C2206	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1644	0209893	CERAMIC CHIP 22PF±10% 50V	C2207	0800041	ELECTROLYTIC 47UF 16V
C1645	0893004	CERAMIC CHIP 0.047UF±10% 16V	C2208	0800041	ELECTROLYTIC 47UF 16V
C1649	0800117	ELECTROLYTIC 4.7UF 25V	C2209	0800041	ELECTROLYTIC 47UF 16V
C1650	0207444	ELECTROLYTIC 1.0UF 50V	C2210	0800041	ELECTROLYTIC 47UF 16V
C1651	0207452	ELECTROLYTIC 22UF 10V	C2211	0209903	CERAMIC CHIP 470PF±5% 50V
C1652	0209948	CERAMIC CHIP 330PF±5% 50V	C2212	0209903	CERAMIC CHIP 470PF±5% 50V
C1653	0880012	POLYESTER FILM 0.022UF±10% 50V	C2248	0800041	ELECTROLYTIC 47UF 16V
C1654	0880003	POLYESTER FILM 1000PF±10% 50V	C2249	0893048	CERAMIC CHIP 0.022UF±10% 50V
C1655	0800003	ELECTROLYTIC 1UF 50V	C2851	0880014	POLYESTER FILM 0.047UF±10% 50V
C1656	0893031	CERAMIC CHIP 1000PF±10% 50V	C2852	0207714	ELECTROLYTIC 100UF 63V
C1657	0893044	CERAMIC CHIP 0.01UF±10% 50V	C2853	0207713	ELECTROLYTIC 22UF 63V
C1658	0800003	ELECTROLYTIC 1UF 50V	C2854	0800195	CERAMIC CHIP 1.0PF±20% 50V
C1659	0880057	POLYESTER FILM 0.1UF±10% 50V	C2855	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1661	0890013	CERAMIC DISC 22PF±5% 50V	C2856	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1670	0209898	CERAMIC CHIP 100PF±5% 50V	C2857	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1701	0800373	ELECTROLYTIC 4700UF 6.3V	C2858	0800201	ELECTROLYTIC 33UF 16V
C1703	0880012	POLYESTER FILM 0.022UF±10% 50V	C2859	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1704	0800015	ELECTROLYTIC 10UF 16V	C2860	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1706	0893048	CERAMIC CHIP 0.022UF±10% 50V	C2861	0800202	ELECTROLYTIC 10UF 25V
C1707	0800039	ELECTROLYTIC 47UF 10V	C2865	0890022	CERAMIC DISC 100PF±10% 50V
C1708	0209931	CERAMIC CHIP 12PF±5% 50V	C2870	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1709	0209936	CERAMIC CHIP 33PF±5% 50V	C2872	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1710	0800039	ELECTROLYTIC 47UF 10V	EM0201	0209784	CORE

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
EM0202	0209785	CERAMIC CHIP 270PF+20% 100V	R0239	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
EM0203	0209784	CORE	R0240	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
EM0204	0209784	CORE	R0241	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
EM0205	0209785	CERAMIC CHIP 270PF+20% 100V	R0242	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W
EM0206	0209785	CERAMIC CHIP 270PF+20% 100V	R0243	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
RESISTORS					
R0001	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0244	0103831	CHIP RESISTOR 100 OHM+5% 0.1W
R0002	0103844	CHIP RESISTOR 1.2KOHM+5% 0.1W	R0245	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0003	0103824	CHIP RESISTOR 27 OHM+5% 0.1W	R0246	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
R0004	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0247	0103857	CHIP RESISTOR 15KOHM+5% 0.1W
R0005	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0248	0103841	CHIP RESISTOR 680 OHM+5% 0.1W
R0006	0103824	CHIP RESISTOR 27 OHM+5% 0.1W	R0249	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W
R0007	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0250	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0008	0103844	CHIP RESISTOR 1.2KOHM+5% 0.1W	R0251	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0009	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W	R0252	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0010	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0253	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0011	0103853	CHIP RESISTOR 6.8KOHM+5% 0.1W	R0254	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0012	0103835	CHIP RESISTOR 220 OHM+5% 0.1W	R0255	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
R0013	0103841	CHIP RESISTOR 680 OHM+5% 0.1W	R0256	0103861	CHIP RESISTOR 33KOHM+5% 0.1W
R0014	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0257	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W
R0015	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0258	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0016	0103840	CHIP RESISTOR 560 OHM+5% 0.1W	R0259	0103860	CHIP RESISTOR 27KOHM+5% 0.1W
R0017	0103835	CHIP RESISTOR 220 OHM+5% 0.1W	R0260	0103861	CHIP RESISTOR 33KOHM+5% 0.1W
R0018	0103855	CHIP RESISTOR 10KOHM+5% 0.1W	R0261	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
R0019	0103862	CHIP RESISTOR 39KOHM+5% 0.1W	R0262	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0022	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W	R0263	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0023	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W	R0264	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
R0201	0103859	CHIP RESISTOR 22KOHM+5% 0.1W	R0265	0103861	CHIP RESISTOR 33KOHM+5% 0.1W
R0202	0103871	CHIP RESISTOR 220KOHM+5% 0.1W	R0266	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0203	0103854	CHIP RESISTOR 8.2KOHM+5% 0.1W	R0267	0103845	CHIP RESISTOR 1.5KOHM+5% 0.1W
R0204	0103857	CHIP RESISTOR 15KOHM+5% 0.1W	R0268	0103841	CHIP RESISTOR 680 OHM+5% 0.1W
R0205	0103842	CHIP RESISTOR 820 OHM+5% 0.1W	R0269	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0206	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0270	0103837	CHIP RESISTOR 330 OHM+5% 0.1W
R0207	0103851	CHIP RESISTOR 4.7KOHM+5% 0.1W	R0271	0103841	CHIP RESISTOR 680 OHM+5% 0.1W
R0208	0103845	CHIP RESISTOR 1.5KOHM+5% 0.1W	R0272	0103840	CHIP RESISTOR 560 OHM+5% 0.1W
R0209	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0273	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0210	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0274	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0211	0103860	CHIP RESISTOR 27KOHM+5% 0.1W	R0275	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0212	0103873	CHIP RESISTOR 330KOHM+5% 0.1W	R0276	0103839	CHIP RESISTOR 470 OHM+5% 0.1W
R0213	0103859	CHIP RESISTOR 22KOHM+5% 0.1W	R0277	0103845	CHIP RESISTOR 1.5KOHM+5% 0.1W
R0214	0103857	CHIP RESISTOR 15KOHM+5% 0.1W	R0278	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0215	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0279	0103858	CHIP RESISTOR 18KOHM+5% 0.1W
R0216	0103841	CHIP RESISTOR 680 OHM+5% 0.1W	R0280	0103854	CHIP RESISTOR 8.2KOHM+5% 0.1W
R0217	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0281	0103858	CHIP RESISTOR 18KOHM+5% 0.1W
R0218	0103849	CHIP RESISTOR 3.3KOHM+5% 0.1W	R0282	0103851	CHIP RESISTOR 4.7KOHM+5% 0.1W
R0219	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0283	0103851	CHIP RESISTOR 4.7KOHM+5% 0.1W
R0220	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W	R0284	0103849	CHIP RESISTOR 3.3KOHM+5% 0.1W
R0221	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W	R0285	0103847	CHIP RESISTOR 2.2KOHM+5% 0.1W
R0222	0103879	CHIP RESISTOR 1MOHM+5% 0.1W	R0286	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0224	0103860	CHIP RESISTOR 27KOHM+5% 0.1W	R0287	0103845	CHIP RESISTOR 1.5KOHM+5% 0.1W
R0225	0103838	RESISTOR CHIP 390 OHM+5% 0.1W	R0288	0103841	CHIP RESISTOR 680 OHM+5% 0.1W
R0226	0103855	CHIP RESISTOR 10KOHM+5% 0.1W	R0289	0103839	CHIP RESISTOR 470 OHM+5% 0.1W
R0227	0103867	CHIP RESISTOR 100KOHM+5% 0.1W	R0290	0103841	CHIP RESISTOR 680 OHM+5% 0.1W
R0228	0103859	CHIP RESISTOR 22KOHM+5% 0.1W	R0291	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0230	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W	R0292	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
R0231	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W	R0293	0103850	CHIP RESISTOR 3.9KOHM+5% 0.1W
R0232	0103831	CHIP RESISTOR 100 OHM+5% 0.1W	R0294	0103848	CHIP RESISTOR 2.7KOHM+5% 0.1W
R0233	0103846	CHIP RESISTOR 1.8KOHM+5% 0.1W	R0295	0103855	CHIP RESISTOR 10KOHM+5% 0.1W
R0234	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0296	0103851	CHIP RESISTOR 4.7KOHM+5% 0.1W
R0235	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0297	0103850	CHIP RESISTOR 3.9KOHM+5% 0.1W
R0236	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0298	0103849	CHIP RESISTOR 3.3KOHM+5% 0.1W
R0237	0103843	CHIP RESISTOR 1KOHM+5% 0.1W	R0299	0103859	CHIP RESISTOR 22KOHM+5% 0.1W
R0238	0103861	CHIP RESISTOR 33KOHM+5% 0.1W	R0300	0103843	CHIP RESISTOR 1KOHM+5% 0.1W
			R0301	0103849	CHIP RESISTOR 3.3KOHM+5% 0.1W
			R0302	0103825	CHIP RESISTOR 33 OHM+5% 0.1W
			R0303	0103837	CHIP RESISTOR 330 OHM+5% 0.1W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R0304	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R0422	0104298	CHIP RESISTOR 100KOHM+-0.5% 1/16W
R0305	0103838	RESISTOR CHIP 390 OHM+-5% 0.1W	R0423	0103866	CHIP RESISTOR 82KOHM+-5% 0.1W
R0306	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0424	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0307	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0426	0103873	CHIP RESISTOR 330KOHM+-5% 0.1W
R0308	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0427	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0309	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0428	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0310	0103838	RESISTOR CHIP 390 OHM+-5% 0.1W	R0429	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0311	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0430	0103881	CHIP RESISTOR 2.2KOHM+-10% 0.1W
R0312	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W	R0431	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0313	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0432	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0314	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0433	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0315	0103838	RESISTOR CHIP 390 OHM+-5% 0.1W	R0434	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W
R0316	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0435	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0317	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0436	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0318	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0437	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0319	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0438	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0320	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0439	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0321	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R0440	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0322	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R0441	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0323	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0442	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0324	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0443	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0325	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0444	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0326	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0445	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0327	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0446	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0328	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0447	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0330	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W	R0448	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0331	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W	R0449	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0332	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R0450	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0333	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0451	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0334	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R0452	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0335	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W	R0453	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0338	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0454	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0339	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0455	0103829	CHIP RESISTOR 68 OHM+-5% 0.1W
R0340	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0456	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W
R0341	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R0457	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0342	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R0458	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0343	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0459	0103829	CHIP RESISTOR 68 OHM+-5% 0.1W
R0344	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0460	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W
R0345	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W	R0461	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0346	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0462	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0347	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0463	0103829	CHIP RESISTOR 68 OHM+-5% 0.1W
R0348	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0464	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W
R0349	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0465	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0350	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0466	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0401	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R0467	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0402	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W	R0468	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0403	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0469	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0404	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0470	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0405	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W	R0471	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
R0406	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	R0472	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0407	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0473	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0408	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W	R0474	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0409	0104291	CHIP RESISTOR 430 OHM+-0.5% 1/16W	R0475	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W
R0410	0104261	METAL FILM 2KOHM+-1% 1/10W	R1131	0101718	RESISTOR 75 OHM+-5% 1/6W
R0411	0104274	CHIP RESISTOR 1.5KOHM+-1% 1/10W	R1132	0101718	RESISTOR 75 OHM+-5% 1/6W
R0412	0104113	CHIP RESISTOR 2.2KOHM+-1% 0.1W	R1133	0101718	RESISTOR 75 OHM+-5% 1/6W
R0413	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1201	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0414	0104261	METAL FILM 2KOHM+-1% 1/10W	R1202	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0415	0104274	CHIP RESISTOR 1.5KOHM+-1% 1/10W	R1203	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0416	0104113	CHIP RESISTOR 2.2KOHM+-1% 0.1W	R1204	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0417	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R1206	0700064	CARBON FILM 56KOHM+-5% 1/8W
R0418	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R1207	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0419	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W	R1208	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0420	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R1209	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0421	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R1210	0700063	CARBON FILM 47KOHM+-5% 1/8W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R1211	0101821	CARBON FILM 100 OHM±5% 1/4W	R1417	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1212	0101821	CARBON FILM 100 OHM±5% 1/4W	R1418	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1215	0700061	CARBON FILM 33KOHM±5% 1/8W	R1419	0103879	CHIP RESISTOR 1MOHM±5% 0.1W
R1221	0700043	CARBON FILM 1.5KOHM±5% 1/8W	R1420	0103841	CHIP RESISTOR 680 OHM±5% 0.1W
R1222	0700061	CARBON FILM 33KOHM±5% 1/8W	R1422	0103871	CHIP RESISTOR 220KOHM±5% 0.1W
R1223	0700044	CARBON FILM 1.8KOHM±5% 1/8W	R1423	0103852	CHIP RESISTOR 5.6KOHM±5% 0.1W
R1224	0700027	CARBON FILM 100 OHM±5% 1/8W	R1424	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1225	0700045	CARBON FILM 2.2KOHM±5% 1/8W	R1425	0103835	CHIP RESISTOR 220 OHM±5% 0.1W
R1226	0700036	CARBON FILM 470 OHM±5% 1/8W	R1426	0103864	CHIP RESISTOR 56KOHM±5% 0.1W
R1227	0700048	CARBON FILM 3.9KOHM±5% 1/8W	R1427	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1228	0700027	CARBON FILM 100 OHM±5% 1/8W	R1428	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1229	0700052	CARBON FILM 6.8KOHM±5% 1/8W	R1429	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1230	0700074	CARBON FILM 330KOHM±5% 1/8W	R1430	0103861	CHIP RESISTOR 33KOHM±5% 0.1W
R1231	0700056	CARBON FILM 15KOHM±5% 1/8W	R1431	0103858	CHIP RESISTOR 18KOHM±5% 0.1W
R1232	0700068	CARBON FILM 120KOHM±5% 1/8W	R1432	0101725	CHIP RESISTOR 2.2 OHM±5% 1/4W
R1233	0700062	CARBON FILM 39KOHM±5% 1/8W	R1433	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1234	0700041	CARBON FILM 1.0KOHM±5% 1/8W	R1434	0700045	CARBON FILM 2.2KOHM±5% 1/8W
R1235	0700043	CARBON FILM 1.5KOHM±5% 1/8W	R1435	0700038	CARBON FILM 680 OHM±5% 1/8W
R1236	0700061	CARBON FILM 33KOHM±5% 1/8W	R1436	0103841	CHIP RESISTOR 680 OHM±5% 0.1W
R1237	0700044	CARBON FILM 1.8KOHM±5% 1/8W	R1439	0103862	CHIP RESISTOR 39KOHM±5% 0.1W
R1238	0700027	CARBON FILM 100 OHM±5% 1/8W	R1441	0700059	CARBON FILM 27KOHM±5% 1/8W
R1239	0700045	CARBON FILM 2.2KOHM±5% 1/8W	R1443	0700061	CARBON FILM 33KOHM±5% 1/8W
R1240	0700036	CARBON FILM 470 OHM±5% 1/8W	R1444	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1241	0700043	CARBON FILM 1.5KOHM±5% 1/8W	R1445	0103860	CHIP RESISTOR 27KOHM±5% 0.1W
R1242	0700061	CARBON FILM 33KOHM±5% 1/8W	R1446	0103859	CHIP RESISTOR 22KOHM±5% 0.1W
R1243	0700044	CARBON FILM 1.8KOHM±5% 1/8W	R1447	0103850	CHIP RESISTOR 3.9KOHM±5% 0.1W
R1244	0700027	CARBON FILM 100 OHM±5% 1/8W	R1505	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1245	0700045	CARBON FILM 2.2KOHM±5% 1/8W	R1506	0103850	CHIP RESISTOR 3.9KOHM±5% 0.1W
R1246	0700036	CARBON FILM 470 OHM±5% 1/8W	R1507	0103850	CHIP RESISTOR 3.9KOHM±5% 0.1W
R1247	0700048	CARBON FILM 3.9KOHM±5% 1/8W	R1508	0111276	METAL FILM 100 OHM±5% 2W
R1248	0700027	CARBON FILM 100 OHM±5% 1/8W	R1509	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1249	0700052	CARBON FILM 6.8KOHM±5% 1/8W	R1510	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1250	0700074	CARBON FILM 330KOHM±5% 1/8W	R1511	0700049	CARBON FILM 4.7KOHM±5% 1/8W
R1301	0700048	CARBON FILM 3.9KOHM±5% 1/8W	R1512	0103855	CHIP RESISTOR 10KOHM±5% 0.1W
R1302	0700027	CARBON FILM 100 OHM±5% 1/8W	R1513	0103851	CHIP RESISTOR 4.7KOHM±5% 0.1W
R1303	0700052	CARBON FILM 6.8KOHM±5% 1/8W	R1514	0111276	METAL FILM 100 OHM±5% 2W
R1304	0700074	CARBON FILM 330KOHM±5% 1/8W	R1517	0103855	CHIP RESISTOR 10KOHM±5% 0.1W
R1305	0700049	CARBON FILM 4.7KOHM±5% 1/8W	R1521	0103863	CHIP RESISTOR 47KOHM±5% 0.1W
R1306	0700048	CARBON FILM 3.9KOHM±5% 1/8W	R1522	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1307	0700043	CARBON FILM 1.5KOHM±5% 1/8W	R1523	0700054	CARBON FILM 10KOHM±5% 1/8W
R1308	0700061	CARBON FILM 33KOHM±5% 1/8W	R1525	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1309	0700044	CARBON FILM 1.8KOHM±5% 1/8W	R1526	0700041	CARBON FILM 1.0KOHM±5% 1/8W
R1310	0700027	CARBON FILM 100 OHM±5% 1/8W	R1527	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1311	0700045	CARBON FILM 2.2KOHM±5% 1/8W	R1528	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1312	0700036	CARBON FILM 470 OHM±5% 1/8W	R1529	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1313	0700048	CARBON FILM 3.9KOHM±5% 1/8W	R1531	0700041	CARBON FILM 1.0KOHM±5% 1/8W
R1314	0700027	CARBON FILM 100 OHM±5% 1/8W	R1540	0103847	CHIP RESISTOR 2.2KOHM±5% 0.1W
R1315	0700052	CARBON FILM 6.8KOHM±5% 1/8W	R1541	0700027	CARBON FILM 100 OHM±5% 1/8W
R1316	0700074	CARBON FILM 330KOHM±5% 1/8W	R1601	0103862	CHIP RESISTOR 39KOHM±5% 0.1W
R1317	0700051	CARBON FILM 5.6KOHM±5% 1/8W	R1602	0103879	CHIP RESISTOR 1MOHM±5% 0.1W
R1318	0700047	CARBON FILM 3.3KOHM±5% 1/8W	R1603	0103872	CHIP RESISTOR 270KOHM±5% 0.1W
R1381	0700041	CARBON FILM 1.0KOHM±5% 1/8W	R1604	0103847	CHIP RESISTOR 2.2KOHM±5% 0.1W
R1402	0103862	CHIP RESISTOR 39KOHM±5% 0.1W	R1605	0103856	CHIP RESISTOR 12KOHM±5% 0.1W
R1403	0103857	CHIP RESISTOR 15KOHM±5% 0.1W	R1606	0103861	CHIP RESISTOR 33KOHM±5% 0.1W
R1405	0103837	CHIP RESISTOR 330 OHM±5% 0.1W	R1607	0103843	CHIP RESISTOR 1KOHM±5% 0.1W
R1406	0103835	CHIP RESISTOR 220 OHM±5% 0.1W	R1608	0103879	CHIP RESISTOR 1MOHM±5% 0.1W
R1407	0103868	CHIP RESISTOR 120KOHM±5% 0.1W	R1609	0103879	CHIP RESISTOR 1MOHM±5% 0.1W
R1408	0103852	CHIP RESISTOR 5.6KOHM±5% 0.1W	R1610	0103856	CHIP RESISTOR 12KOHM±5% 0.1W
R1409	0103845	CHIP RESISTOR 1.5KOHM±5% 0.1W	R1611	0103879	CHIP RESISTOR 1MOHM±5% 0.1W
R1410	0103864	CHIP RESISTOR 56KOHM±5% 0.1W	R1612	0103862	CHIP RESISTOR 39KOHM±5% 0.1W
R1411	0103856	CHIP RESISTOR 12KOHM±5% 0.1W	R1613	0103868	CHIP RESISTOR 120KOHM±5% 0.1W
R1413	0103819	CHIP RESISTOR 10 OHM±5% 0.1W	R1614	0103865	CHIP RESISTOR 68KOHM±5% 0.1W
R1414	0103842	CHIP RESISTOR 820 OHM±5% 0.1W	R1615	0103858	CHIP RESISTOR 18KOHM±5% 0.1W
R1415	0103841	CHIP RESISTOR 680 OHM±5% 0.1W	R1616	0103852	CHIP RESISTOR 5.6KOHM±5% 0.1W
R1416	0103855	CHIP RESISTOR 10KOHM±5% 0.1W	R1617	0103865	CHIP RESISTOR 68KOHM±5% 0.1W



SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R1618	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R1706	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1619	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W	R1707	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1620	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1708	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1622	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W	R1709	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1623	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W	R1710	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1624	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1711	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1625	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1713	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1626	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R1714	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1627	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R1715	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1630	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1717	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1632	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W	R1718	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1635	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W	R1719	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1636	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W	R1720	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1637	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W	R1721	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1638	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1722	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1639	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W	R1723	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1640	0103880	CHIP RESISTOR 1.5MOHM+-10% 0.1W	R1724	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1641	0103878	CHIP RESISTOR 820KOHM+-5% 0.1W	R1725	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1642	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1726	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1643	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W	R1727	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1644	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1728	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1645	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1729	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1646	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1730	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1647	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1731	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1648	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1732	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R1651	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W	R1733	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R1652	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W	R1734	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R1654	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R1735	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1655	0103872	CHIP RESISTOR 270KOHM+-5% 0.1W	R1736	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1658	0101391	CARBON FILM 2.2MOHM+-5% 1/8W	R1737	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1663	0101391	CARBON FILM 2.2MOHM+-5% 1/8W	R1738	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1664	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1739	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1665	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1740	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1666	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1741	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1667	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W	R1742	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1668	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1743	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1669	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1744	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1670	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1747	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1671	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1748	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1672	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R1749	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1673	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R1750	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1674	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R1752	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1675	0700063	CARBON FILM 47KOHM+-5% 1/8W	R1753	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1676	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R1754	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1677	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R1755	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1678	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R1756	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1679	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R1757	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1680	0103866	CHIP RESISTOR 82KOHM+-5% 0.1W	R1758	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1681	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R1780	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R1682	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1781	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R1683	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1782	0700058	CARBON FILM 22KOHM+-5% 1/8W
R1684	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1783	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1685	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1784	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1686	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1785	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R1688	AQ10217R	CHIP RESISTOR 390KOHM+-1% 1/10W	R1786	0700058	CARBON FILM 22KOHM+-5% 1/8W
R1690	0105561	CHIP RESISTOR 200KOHM+-1% 1/10W	R1787	0700058	CARBON FILM 22KOHM+-5% 1/8W
R1691	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R1788	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R1693	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W	R1789	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R1695	0103873	CHIP RESISTOR 330KOHM+-5% 0.1W	R1790	0103873	CHIP RESISTOR 330KOHM+-5% 0.1W
R1696	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R1791	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1697	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1792	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1699	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W	R1796	0103875	CHIP RESISTOR 470KOHM+-5% 0.1W
R1701	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W	R1851	0101844	CARBON FILM 8.2KOHM+-5% 1/4W
R1702	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	△R1871	0101712	FUSE RESISTOR 6.8OHM+-5% 1/4W
R1705	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R1884	0700036	CARBON FILM 470 OHM+-5% 1/8W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R1901	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R1983	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R1902	0700049	CARBON FILM 4.7KOHM+-5% 1/8W	R1984	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1903	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R1985	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R1904	0700049	CARBON FILM 4.7KOHM+-5% 1/8W	R1986	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R1905	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1987	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1906	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	R1988	0700054	CARBON FILM 10KOHM+-5% 1/8W
R1909	0700058	CARBON FILM 22KOHM+-5% 1/8W	R1990	0101711	FUSE RESISTOR 2.20HM+-5% 1/4W
R1910	0700066	CARBON FILM 82KOHM+-5% 1/8W	R1993	0103872	CHIP RESISTOR 270KOHM+-5% 0.1W
R1911	0700047	CARBON FILM 3.3KOHM+-5% 1/8W	R1994	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1912	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W	R1995	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1913	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R1996	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1914	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R1997	0103872	CHIP RESISTOR 270KOHM+-5% 0.1W
R1915	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W	R1998	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1916	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R1999	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1917	0700054	CARBON FILM 10KOHM+-5% 1/8W	R2201	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1918	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R2202	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1920	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R2203	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1921	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R2204	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1922	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R2205	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R1923	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R2206	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1924	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R2207	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1925	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R2260	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R1926	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R2851	0700074	CARBON FILM 330KOHM+-5% 1/8W
R1928	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R2852	0700057	CARBON FILM 18KOHM+-5% 1/8W
R1931	0103838	RESISTOR CHIP 390 OHM+-5% 0.1W	R2859	0101756	CHIP RESISTOR 1KOHM+-5% 1/8W
R1932	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R2860	1109024	METAL FILM 294 OHM+-1% 1/8W
R1933	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R2868	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R1934	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R2869	0101944	CARBON FILM 8.2KOHM+-5% 1/4W
R1935	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W	R2870	0101944	CARBON FILM 8.2KOHM+-5% 1/4W
R1936	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R2881	AT10247	RESISTOR 68 OHM+-5% 1W
R1937	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W	R2882	AT10247	RESISTOR 68 OHM+-5% 1W
R1938	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W	R2883	AT10247	RESISTOR 68 OHM+-5% 1W
R1939	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	RT0201	5030089	TRIMMER RESISTOR 47KOHM
R1940	0700034	CARBON FILM 330 OHM+-5% 1/8W	RT0202	5030088	TRIMMER 22KOHM
R1941	0700031	CARBON FILM 180 OHM+-5% 1/8W	RT0203	5030088	TRIMMER 22KOHM
R1942	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	RT0204	5030086	SEMI VARIABLE 4.7KOHM
R1943	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	RT0205	5030085	TRIMMER 2.2KOHM
R1944	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	RT0206	AW10186R	VARIABLE RESISTOR 4.7KOHM
R1945	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	RT0207	AW10187R	VARIABLE RESISTOR 10KOHM
R1946	0700049	CARBON FILM 4.7KOHM+-5% 1/8W	RT0301	5030087	SEMI VARIABLE 10KOHM
R1947	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W	RT0403	5030088	TRIMMER 22KOHM
R1948	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W	RT1301	5002082	VARIABLE 10KOHM
R1949	0700034	CARBON FILM 330 OHM+-5% 1/8W	RT1302	5002082	VARIABLE 10KOHM
R1950	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	RT1303	5009136	VARIABLE RESISTOR
R1953	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	RT1304	5009136	VARIABLE RESISTOR
R1954	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	RT1401	AW10209R	SEMI VARIABLE 47KOHM
R1955	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	RT1402	AW10206R	VARIABLE RESISTOR 4.7KOHM
R1956	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	RT1601	AW10212R	SEMI VARIABLE 220KOHM
R1957	0103935	CHIP RESISTOR 1KOHM+-5%			
R1958	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W			SEMI-CONDUCTORS
R1959	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	D0001	5328301	DIODE MA151WK (MT)
R1960	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	D0002	5328301	DIODE MA151WK (MT)
R1961	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	D0004	5328301	DIODE MA151WK (MT)
R1962	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	D0005	5339131	DIODE 1SS254
R1963	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	D0201	5328321	DIODE MA151K (MH)
R1964	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	D0202	5339141	DIODE 1SS270
R1966	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	D0203	5339141	DIODE 1SS270
R1968	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	D0204	5339551	DIODE SS1J4
R1969	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W	D0205	5339551	DIODE SS1J4
R1970	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	D0206	5328321	DIODE MA151K (MH)
R1975	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W	D0207	5339551	DIODE SS1J4
R1978	0700043	CARBON FILM 1.5KOHM+-5% 1/8W	D0401	5339551	DIODE SS1J4
R1979	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	D1201	5339551	DIODE SS1J4
R1980	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D1301	5339131	DIODE 1SS254
R1982	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W			

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
D1401	5339131	DIODE 1SS254	IC1702	CP10242	IC S-29255ADPG
D1403	5339131	DIODE 1SS254	IC1703	5359903	IC MC14066B
D1405	5328301	DIODE MA151WK (MT)	IC1706	1340002	IC S-8053ALB
D1406	5339131	DIODE 1SS254	IC1901	CK15276	IC MPD75P518GF-SPAL
D1407	5339131	DIODE 1SS254	IC1902	CP10294	IC XLA6209-V3
D1410	5339131	DIODE 1SS254	IC1903	1340112	IC PST520C
D1411	5339131	DIODE 1SS254	IC1904	5364594	IC NJM2903D
D1412	5339131	DIODE 1SS254	IC1905	5364594	IC NJM2903D
D1501	5339231	DIODE 1SR35-100A	IC2101	5327521	PHOTO TRANSISTOR SPI-315-04C
D1502	5339231	DIODE 1SR35-100A	IC2102	5327521	PHOTO TRANSISTOR SPI-315-04C
D1503	1330011	DIODE D1NS4	IC2201	1365841	IC HD74HC74FP
D1601	5339131	DIODE 1SS254	IC2202	1346904	IC M37470M4-733SP
D1604	5339131	DIODE 1SS254	IC2203	1342242	IC UPD4711A
D1605	5339131	DIODE 1SS254	IC2204	CP10313R	IC PST9145
D1607	5339231	DIODE 1SR35-100A	IC2851	1361882	IC PQ30RV21
D1608	5339231	DIODE 1SR35-100A	IC2852	1341956	IC M5278D09
D1609	5339131	DIODE 1SS254	Q0001	5328793	TRANSISTOR DTC144EK
D1612	5328301	DIODE MA151WK (MT)	Q0002	5328972	TRANSISTOR 2SC2412K-BRT
D1614	5328301	DIODE MA151WK (MT)	Q0003	5328972	TRANSISTOR 2SC2412K-BRT
D1619	1330011	DIODE D1NS4	Q0004	5328972	TRANSISTOR 2SC2412K-BRT
D1701	5339551	DIODE SS1J4	Q0005	5328793	TRANSISTOR DTC144EK
D1702	5339551	DIODE SS1J4	Q0201	5328793	TRANSISTOR DTC144EK
D1704	5339551	DIODE SS1J4	Q0202	5328793	TRANSISTOR DTC144EK
D1707	5339131	DIODE 1SS254	Q0203	5328793	TRANSISTOR DTC144EK
D1708	5339131	DIODE 1SS254	Q0204	5328793	TRANSISTOR DTC144EK
△D1851	5333351	DIODE D3SBA20	Q0205	5328793	TRANSISTOR DTC144EK
△D1852	5336371	DIODE RBA406B	Q0206	5328793	TRANSISTOR DTC144EK
D1856	5339231	DIODE 1SR35-100A	Q0207	5328962	TRANSISTOR 2SA1037K
D1857	5339231	DIODE 1SR35-100A	Q0208	5328972	TRANSISTOR 2SC2412K-BRT
D1901	5339551	DIODE SS1J4	Q0209	5328962	TRANSISTOR 2SA1037K
D1918	5339131	DIODE 1SS254	Q0210	5328962	TRANSISTOR 2SA1037K
D1931	5339131	DIODE 1SS254	Q0212	5328793	TRANSISTOR DTC144EK
D1932	5339131	DIODE 1SS254	Q0213	5328793	TRANSISTOR DTC144EK
D2101	5380933	LED GL451	Q0214	5328962	TRANSISTOR 2SA1037K
D2851	5339171	DIODE 1SS130M	Q0215	5328962	TRANSISTOR 2SA1037K
D2852	5339171	DIODE 1SS130M	Q0216	5328972	TRANSISTOR 2SC2412K-BRT
D2853	5339171	DIODE 1SS130M	Q0217	5328962	TRANSISTOR 2SA1037K
D2854	5339171	DIODE 1SS130M	Q0218	5328972	TRANSISTOR 2SC2412K-BRT
IC0001	1362321	IC HA118162NT	Q0219	5328972	TRANSISTOR 2SC2412K-BRT
IC0201	CT10191	MODULE HT7459	Q0220	5328962	TRANSISTOR 2SA1037K
IC0202	1347111	IC M52363SP	Q0221	5328962	TRANSISTOR 2SA1037K
IC0203	1350211	IC NJM2240M	Q0222	5328972	TRANSISTOR 2SC2412K-BRT
IC0204	CK10971	IC MN671921 (JCP0042)	Q0223	5328972	TRANSISTOR 2SC2412K-BRT
IC0205	1373682	IC HT7323A	Q0224	5328962	TRANSISTOR 2SA1037K
IC0206	1350792	IC TC4S66F	Q0225	5328972	TRANSISTOR 2SC2412K-BRT
IC0207	1350792	IC TC4S66F	Q0226	5328972	TRANSISTOR 2SC2412K-BRT
IC0401	1362721	IC UPD6452CS-508	Q0227	5328972	TRANSISTOR 2SC2412K-BRT
IC0402	CP10381	IC MM1109XS	Q0228	5328962	TRANSISTOR 2SA1037K
IC0403	1362401	IC M52096SP	Q0229	5328972	TRANSISTOR 2SC2412K-BRT
IC0404	1341693	IC NJM2233BSA	Q0230	5328972	TRANSISTOR 2SC2412K-BRT
IC0405	1341691	IC NJM2234S	Q0231	5328793	TRANSISTOR DTC144EK
IC0406	1341693	IC NJM2233BSA	Q0232	5328793	TRANSISTOR DTC144EK
IC0407	1341691	IC NJM2234S	Q0233	5328972	TRANSISTOR 2SC2412K-BRT
IC1201	1349041	IC UPD16312GB-3B4	Q0234	5328962	TRANSISTOR 2SA1037K
IC1401	1347091	IC XRA7795LS	Q0235	5328972	TRANSISTOR 2SC2412K-BRT
IC1402	5300641	IC BA7755	Q0236	5328962	TRANSISTOR 2SA1037K
IC1601	CP10501	IC HD49791NT	Q0237	5328972	TRANSISTOR 2SC2412K-BRT
IC1602	5350601	IC NJM4558D	Q0238	5328962	TRANSISTOR 2SA1037K
IC1605	1361821	IC BA860	Q0239	5328962	TRANSISTOR 2SA1037K
IC1606	5350601	IC NJM4558D	Q0240	5328972	TRANSISTOR 2SC2412K-BRT
IC1607	5359901	IC UPD4066C	Q0241	5328972	TRANSISTOR 2SC2412K-BRT
IC1608	5359901	IC UPD4066C	Q0242	5328793	TRANSISTOR DTC144EK
IC1612	1350792	IC TC4S66F	Q0243	5328793	TRANSISTOR DTC144EK
IC1613	1350792	IC TC4S66F	Q0244	5328793	TRANSISTOR DTC144EK
IC1701	CP12019	IC UPD78P014YCW	Q0245	5328793	TRANSISTOR DTC144EK

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
Q0246	5328793	TRANSISTOR DTC144EK	Q1624	5328793	TRANSISTOR DTC144EK
Q0247	5328793	TRANSISTOR DTC144EK	Q1626	5328793	TRANSISTOR DTC144EK
Q0248	5328793	TRANSISTOR DTC144EK	Q1637	5328793	TRANSISTOR DTC144EK
Q0249	5328972	TRANSISTOR 2SC2412K-BRT	Q1702	5328972	TRANSISTOR 2SC2412K-BRT
Q0401	5328972	TRANSISTOR 2SC2412K-BRT	Q1851	CF10311	TRANSISTOR 2SD2398
Q0402	5328962	TRANSISTOR 2SA1037K	Q1901	5328961	TRANSISTOR 2SA1037KERS
Q0403	5328793	TRANSISTOR DTC144EK	Q1902	5328961	TRANSISTOR 2SA1037KERS
Q0404	5328793	TRANSISTOR DTC144EK	Q1903	5328793	TRANSISTOR DTC144EK
Q0405	5328793	TRANSISTOR DTC144EK	Q1904	5328972	TRANSISTOR 2SC2412K-BRT
Q0406	5328972	TRANSISTOR 2SC2412K-BRT	Q1905	5328793	TRANSISTOR DTC144EK
Q0407	5328962	TRANSISTOR 2SA1037K	Q1906	5328795	TRANSISTOR DTA144EK-16
Q0408	5328972	TRANSISTOR 2SC2412K-BRT	Q1913	5328792	TRANSISTOR DTA124K(15)
Q0409	5328972	TRANSISTOR 2SC2412K-BRT	Q1914	5328793	TRANSISTOR DTC144EK
Q0410	5328972	TRANSISTOR 2SC2412K-BRT	Q1919	5328793	TRANSISTOR DTC144EK
Q0411	5328962	TRANSISTOR 2SA1037K	Q1923	5327261	TRANSISTOR 2SB1326(0)
Q0412	5328962	TRANSISTOR 2SA1037K	Q1924	5328791	TRANSISTOR DTC124K(25)
Q0413	5328972	TRANSISTOR 2SC2412K-BRT	Q1925	5328793	TRANSISTOR DTC144EK
Q0414	5328972	TRANSISTOR 2SC2412K-BRT	Q1929	5328793	TRANSISTOR DTC144EK
Q0415	5328972	TRANSISTOR 2SC2412K-BRT	Q1930	5328793	TRANSISTOR DTC144EK
Q0416	5328793	TRANSISTOR DTC144EK	Q1931	5328793	TRANSISTOR DTC144EK
Q0417	5328962	TRANSISTOR 2SA1037K	Q2101	5324661	PHOTO TRANSISTOR PT-483F1H
Q0418	5328962	TRANSISTOR 2SA1037K	Q2102	5324661	PHOTO TRANSISTOR PT-483F1H
Q0419	5328962	TRANSISTOR 2SA1037K	Q2201	5328793	TRANSISTOR DTC144EK
Q0420	5328972	TRANSISTOR 2SC2412K-BRT	Q2851	5327032	TRANSISTOR 2SA673D
Q0421	5328972	TRANSISTOR 2SC2412K-BRT	Q2863	CF10311	TRANSISTOR 2SD2398
Q0422	5328972	TRANSISTOR 2SC2412K-BRT	△QF1201	5721941	IC PROTECTOR
Q1359	5328793	TRANSISTOR DTC144EK	△QF1901	5721941	IC PROTECTOR
Q1403	5328793	TRANSISTOR DTC144EK	ZD0401	5339272	DIODE HZS6-A3
Q1407	5328793	TRANSISTOR DTC144EK	ZD0402	5339272	DIODE HZS6-A3
Q1408	5328793	TRANSISTOR DTC144EK	ZD0403	5339272	DIODE HZS6-A3
Q1411	1320004	TRANSISTOR 2SA854SQR	ZD0404	5339272	DIODE HZS6-A3
Q1412	5328972	TRANSISTOR 2SC2412K-BRT	ZD1202	5339262	DIODE HZS6-C2
Q1413	5323172	TRANSISTOR 2SC1214CD	ZD1601	5339282	DIODE HZS6-B2
Q1414	5328972	TRANSISTOR 2SC2412K-BRT	ZD1602	5339296	DIODE HZS5B2
Q1415	5328793	TRANSISTOR DTC144EK	ZD1701	5339262	DIODE HZS6-C2
Q1416	5328793	TRANSISTOR DTC144EK	ZD1702	5339262	DIODE HZS6-C2
Q1417	5328793	TRANSISTOR DTC144EK	ZD1851	5339482	DIODE HZS15-2
Q1418	5328793	TRANSISTOR DTC144EK	ZD1901	5339478	DIODE HZS11C3
Q1419	5328795	TRANSISTOR DTA144EK-16	ZD1903	5339282	DIODE HZS6-B2
Q1420	5328793	TRANSISTOR DTC144EK	ZD2851	5339254	DIODE HZS30-1
Q1421	5328793	TRANSISTOR DTC144EK	ZD2858	5339274	DIODE HZS15-3
Q1422	5328791	TRANSISTOR DTC124K(25)			TRANSFORMERS
Q1424	5328793	TRANSISTOR DTC144EK			
Q1425	5328793	TRANSISTOR DTC144EK			
Q1504	5328793	TRANSISTOR DTC144EK	T1401	5261533	TRANSFORMER
Q1505	5328793	TRANSISTOR DTC144EK	△T852	5214535	TRANSFORMER, POWER
Q1506	5327031	TRANSISTOR 2SA673(C)			COILS
Q1507	5328793	TRANSISTOR DTC144EK			
Q1508	5328793	TRANSISTOR DTC144EK			
Q1509	5328793	TRANSISTOR DTC144EK	L0001	5159154	CHOKE COIL 100UH
Q1510	5328793	TRANSISTOR DTC144EK	L0002	5159154	CHOKE COIL 100UH
Q1511	5327031	TRANSISTOR 2SA673(C)	L0003	0770057	CHOKE COIL 100UH+-5%
Q1514	5328793	TRANSISTOR DTC144EK	L0004	0770057	CHOKE COIL 100UH+-5%
Q1518	5328793	TRANSISTOR DTC144EK	L0005	0770057	CHOKE COIL 100UH+-5%
Q1519	5328793	TRANSISTOR DTC144EK	L0006	0770057	CHOKE COIL 100UH+-5%
Q1526	5328961	TRANSISTOR 2SA1037KERS	L0007	5159141	CHOKE COIL 10UH
Q1603	5328972	TRANSISTOR 2SC2412K-BRT	L0201	5159154	CHOKE COIL 100UH
Q1604	5328972	TRANSISTOR 2SC2412K-BRT	L0202	5121618	COIL 820UH
Q1605	5328972	TRANSISTOR 2SC2412K-BRT	L0203	5159155	CHOKE COIL 120UH+-10%
Q1607	5328793	TRANSISTOR DTC144EK	L0204	5159153	CHOKE COIL 82UH
Q1609	5328793	TRANSISTOR DTC144EK	L0205	0770048	CHOKE COIL 22UH+-5%
Q1611	5328793	TRANSISTOR DTC144EK	L0206	0770057	CHOKE COIL 100UH+-5%
Q1618	5328793	TRANSISTOR DTC144EK	L0207	0770057	CHOKE COIL 100UH+-5%
Q1619	5328793	TRANSISTOR DTC144EK	L0208	5159113	COIL, CHOKE 8.2MH
Q1623	5328793	TRANSISTOR DTC144EK	L0209	0770048	CHOKE COIL 22UH+-5%

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
L0210	5159152	CHOKE COIL 68UH	CP0204	5165424	FILTER, LC
L0211	0770057	CHOKE COIL 100UH+-5%	CP0205	5165343	FILTER, LOW PASS
L0212	5159115	COIL 2200UH	CP0206	5165343	FILTER, LOW PASS
L0213	5159158	CHOKE COIL 220UH	CP0207	5165343	FILTER, LOW PASS
L0214	5159151	CHOKE COIL 56UH	CP0401	5163372	FILTER
L0215	5159145	CHOKE COIL 22UH	DG1201	DD10131	DISPLAY, FLOURESCENT
L0216	0770057	CHOKE COIL 100UH+-5%	△FU851	5721061	FUSE 1.6A
L0217	5159155	CHOKE COIL 120UH+-10%	△FU852	5720177	FUSE 2A
L0218	5159149	CHOKE COIL 47UH	△FU853	5720174	FUSE 630MA
L0219	5159145	CHOKE COIL 22UH	PG0001	5655102	CONNECTOR
L0220	5159155	CHOKE COIL 120UH+-10%	PG0002	5666569	MINI PLUG
L0221	0770064	CHOKE COIL 330UH+-5%	PG0003	5666149	MINI PLUG
L0222	5159149	CHOKE COIL 47UH	PG0201	5668164	SOCKET
L0223	5159145	CHOKE COIL 22UH	PG0202	5668165	MINI PLUG
L0224	0770057	CHOKE COIL 100UH+-5%	PG0203	5668169	MINI PLUG
L0225	0770057	CHOKE COIL 100UH+-5%	PG0204	5668167	MINI PLUG
L0226	0770057	CHOKE COIL 100UH+-5%	PG0401	5668167	MINI PLUG
L0227	0770057	CHOKE COIL 100UH+-5%	PG0402	5668163	MINI PLUG
L0228	5159145	CHOKE COIL 22UH	PG0403	5668165	MINI PLUG
L0229	5159145	CHOKE COIL 22UH	PG0404	5666572	MINI PLUG
L0230	0770057	CHOKE COIL 100UH+-5%	PG1103	5668178	MINI PLUG
L0401	0770057	CHOKE COIL 100UH+-5%	PG1104	5668178	MINI PLUG
L0402	0770057	CHOKE COIL 100UH+-5%	PG1121	5666587	MINI PLUG
L0403	5159158	CHOKE COIL 220UH	PG1122	5666591	MINI PLUG
L0404	0770057	CHOKE COIL 100UH+-5%	PG1125	5666155	PLUG
L0405	0770057	CHOKE COIL 100UH+-5%	PG1131	5655042	PLUG
L0406	0770057	CHOKE COIL 100UH+-5%	PG1132	5655042	PLUG
L0407	0770057	CHOKE COIL 100UH+-5%	PG1133	5695321	JACK
L0408	0770056	CHOKE COIL 82UH	PG1134	5695321	JACK
L0409	5159153	CHOKE COIL 82UH	PG1135	ED10691	PLUG
L1401	0770057	CHOKE COIL 100UH+-5%	PG1136	ED10692	PLUG
L1402	BH10201	COIL 33MH	PG1201	5665631	MINI PLUG
L1502	0770057	CHOKE COIL 100UH+-5%	PG1202	5665631	MINI PLUG
L1601	0770057	CHOKE COIL 100UH+-5%	PG1203	5669595	CONNECTOR
L1602	0770057	CHOKE COIL 100UH+-5%	PG1303	5668168	MINI PLUG
△L1851	5220381	FILTER	PG1401	5666609	MINI PLUG
△L1852	5220381	FILTER	PG1502	5666569	MINI PLUG
L2204	0770057	CHOKE COIL 100UH+-5%	PG1503	5666149	MINI PLUG
CRYSTALS			PG1521	5668184	MINI PLUG
X0201	BP10221S	CRYSTAL	PG1522	5668185	MINI PLUG
X0401	5784511	CRYSTAL 17.734MHZ	PG1523	5668189	MINI PLUG
X1701	BP10251	CRYSTAL	PG1524	5668187	MINI PLUG
X1702	BP10421R	CRYSTAL	PG1541	5668187	MINI PLUG
X1901	5779191	CRYSTAL	PG1542	5668183	MINI PLUG
X2201	BP10381R	CRYSTAL	PG1543	5668185	MINI PLUG
MISCELLANEOUS			PG1562	5666575	MINI PLUG
BA1101	FS10283	BATTERY	PG1581	5666145	MINI CONNECTOR
CN0001	5813916	MINI CONNECTOR	PG1582	5666151	MINI PLUG
CN0002	5846299	CONNECTOR	PG1603	5666562	MINI PLUG
CN0003	5846952	CONNECTOR	PG1608	5666567	MINI PLUG
CN0004	5842522	CONNECTOR	PG1609	5666566	PLUG
CN0005	5846274	CONNECTOR	PG1701	5665641	MINI PLUG
CN0006	5813733	MINI CONNECTOR	PG1702	5665641	MINI PLUG
CN0008	5846207	CONNECTOR	PG1703	5668198	PLUG
CN0009	5846206	CONNECTOR	PG1704	5668198	PLUG
CN0010	EF10364	CONNECTOR	PG1901	5662853	PLUG
CN0015	1880367	CONNECTOR	PG1907	5666601	MINI PLUG
CN0025	5846302	CONNECTOR	PG2101	5692039	PLUG
CP0201	5165334	DELAY LINE	PG2225	5666142	MINI CONNECTOR
CP0202	5165343	FILTER, LOW PASS	PG2851	5666145	MINI CONNECTOR
CP0203	BJ10122	FILTER, LC	PG2852	5666151	MINI PLUG
			PG2853	5665062	
			RJ1401	ER10181	JACK
			S1201	5634884	SWITCH
			S1202	5634884	SWITCH

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
S1203	5634884	SWITCH			
S1204	5634884	SWITCH			
S1205	5634884	SWITCH			
S1206	5634884	SWITCH			
S1207	5634884	SWITCH			
S1208	5634884	SWITCH			
S1212	5634884	SWITCH			
S1213	5634884	SWITCH			
S1214	5634884	SWITCH			
S1215	5634884	SWITCH			
S1216	5634884	SWITCH			
S1217	5634884	SWITCH			
S1301	5634884	SWITCH			
S1302	5634884	SWITCH			
S1303	5634884	SWITCH			
S1304	5634884	SWITCH			
S1305	5634884	SWITCH			
S1306	5634884	SWITCH			
S1307	5634884	SWITCH			
S1308	5634884	SWITCH			
S1309	5634884	SWITCH			
S1310	5634884	SWITCH			
S1311	5634884	SWITCH			
S2101	5635631	SWITCH			
S2102	5635331	SWITCH			
S2103	5635331	SWITCH			
S2104	5610891	SWITCH			

**Cautions when using schematic diagrams**

**Caution for safety**

The parts marked  $\triangle$  are critical for safety. Be sure to use the specified parts to ensure safety when replacing them.

**1. Values in schematic diagrams**

The values, dielectric strength (power capacitance) and tolerances of the resistors (excluding variable resistors) and capacitors are indicated in the schematic diagrams using abbreviations.

**[Resistors]**

Item	Indication
Value	No indication ..... $\Omega$
	K ..... k $\Omega$
	M ..... M $\Omega$
Tolerance	No indication ..... $\pm 5\%$ (All tolerances other than $\pm 5\%$ are indicated in the schematic diagrams)
	Power capacitance

**[Capacitors]**

Item	Indication
Value	No indication ..... $\mu$ F
	P ..... pF
Dielectric strength	No indication ..... 50V (All dielectric strengths other than 50V are indicated in the schematic diagrams.)

**[Coils]**

Item	Indication
Value	$\mu$ ..... $\mu$ H
	m ..... mH

**2. Markings in schematic diagrams**

- 1) Parts marked "■" with circuit numbers in the schematic diagrams are discrete parts.
- 2) Parts marked "●" with circuit numbers in the schematic diagrams are leadless parts.

**Cautions when using circuit board diagrams**

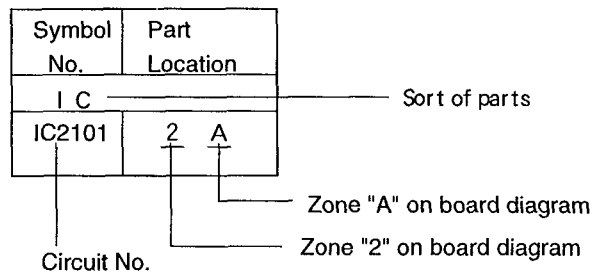
**1. Identifications of sides A/B in circuit board diagrams**

- 1) Board having a pattern on one side and parts on both sides.
  - Side A: Shows discrete parts, viewed from the pattern side.
  - Side B: Shows leadless parts, viewed from the pattern side.
- 2) Board having patterns on both sides and parts on both sides.
  - Side A: Shows parts and patterns which can be seen when the case is opened.
  - Side B: Shows parts and the pattern on the back of side A.

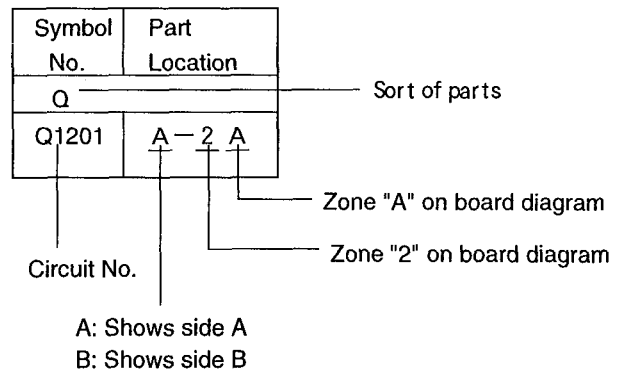
**2. Table for indexing locations of parts**

This table shows locations of each part on the circuit board diagrams. The locations are indicated using the guide scales on the external lines of diagrams

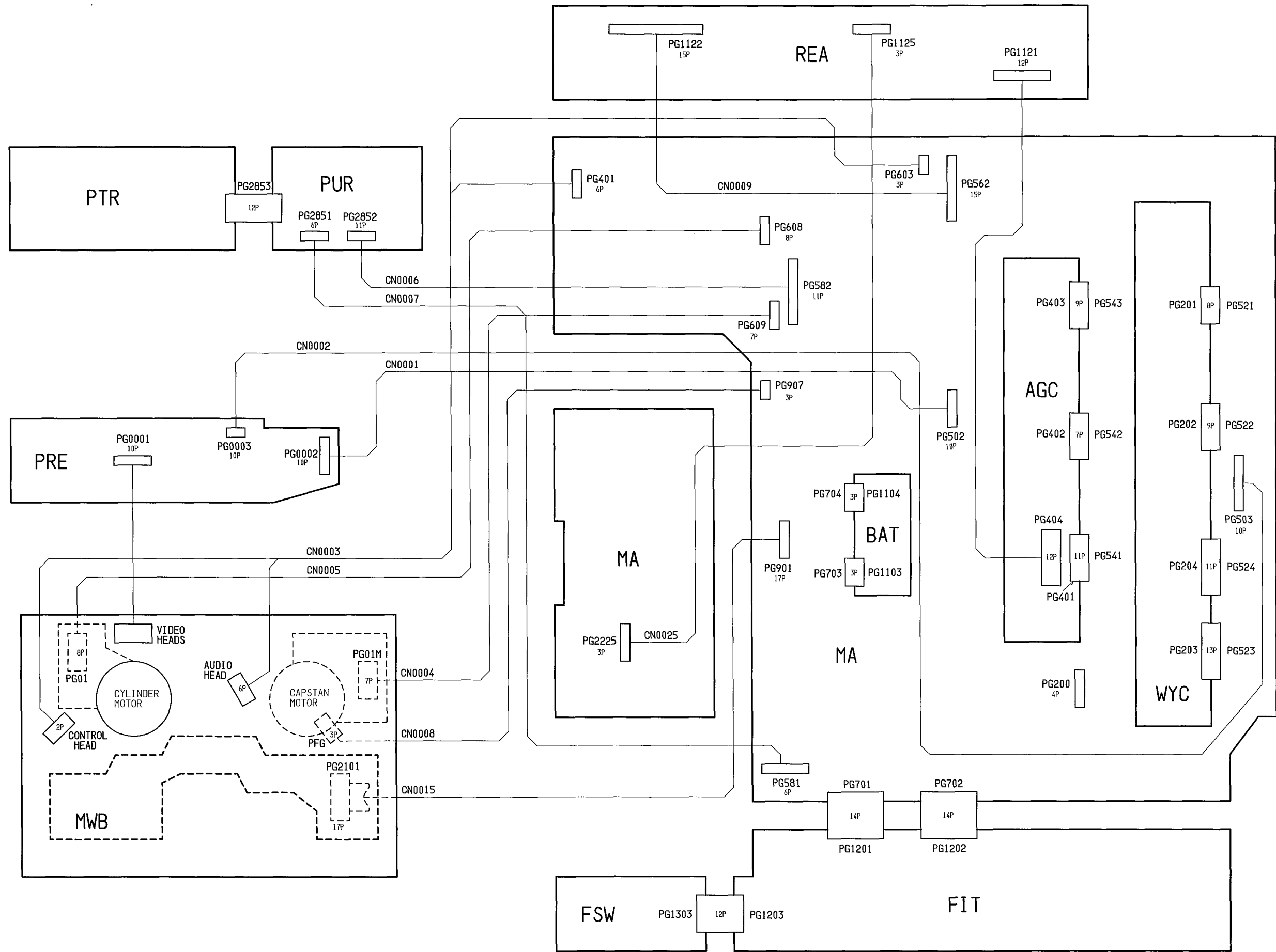
**1) In case of one-layer board**



**2) In case of side A/B indication board**



CONNECTION DIAGRAM



1 2 3 4 5 6 7 8

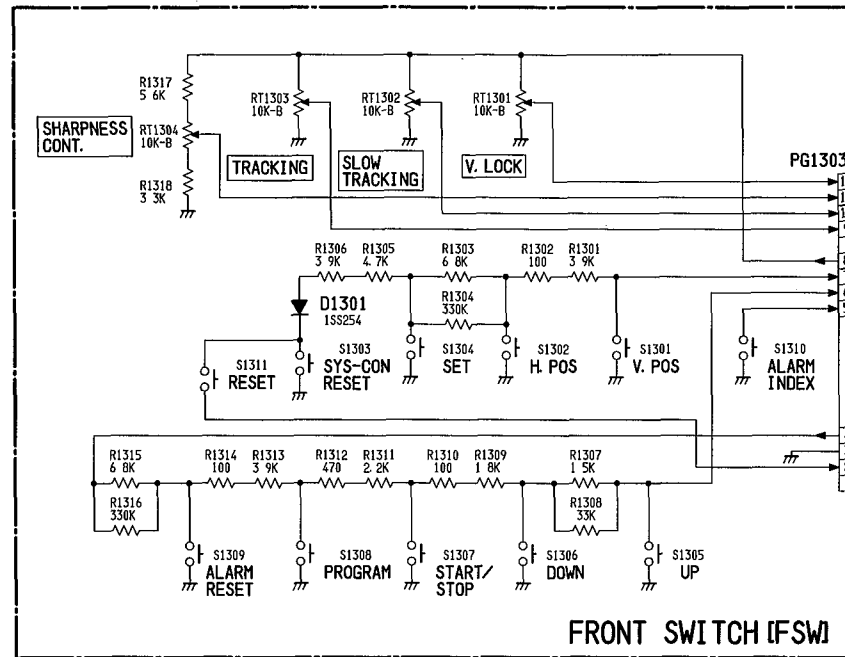
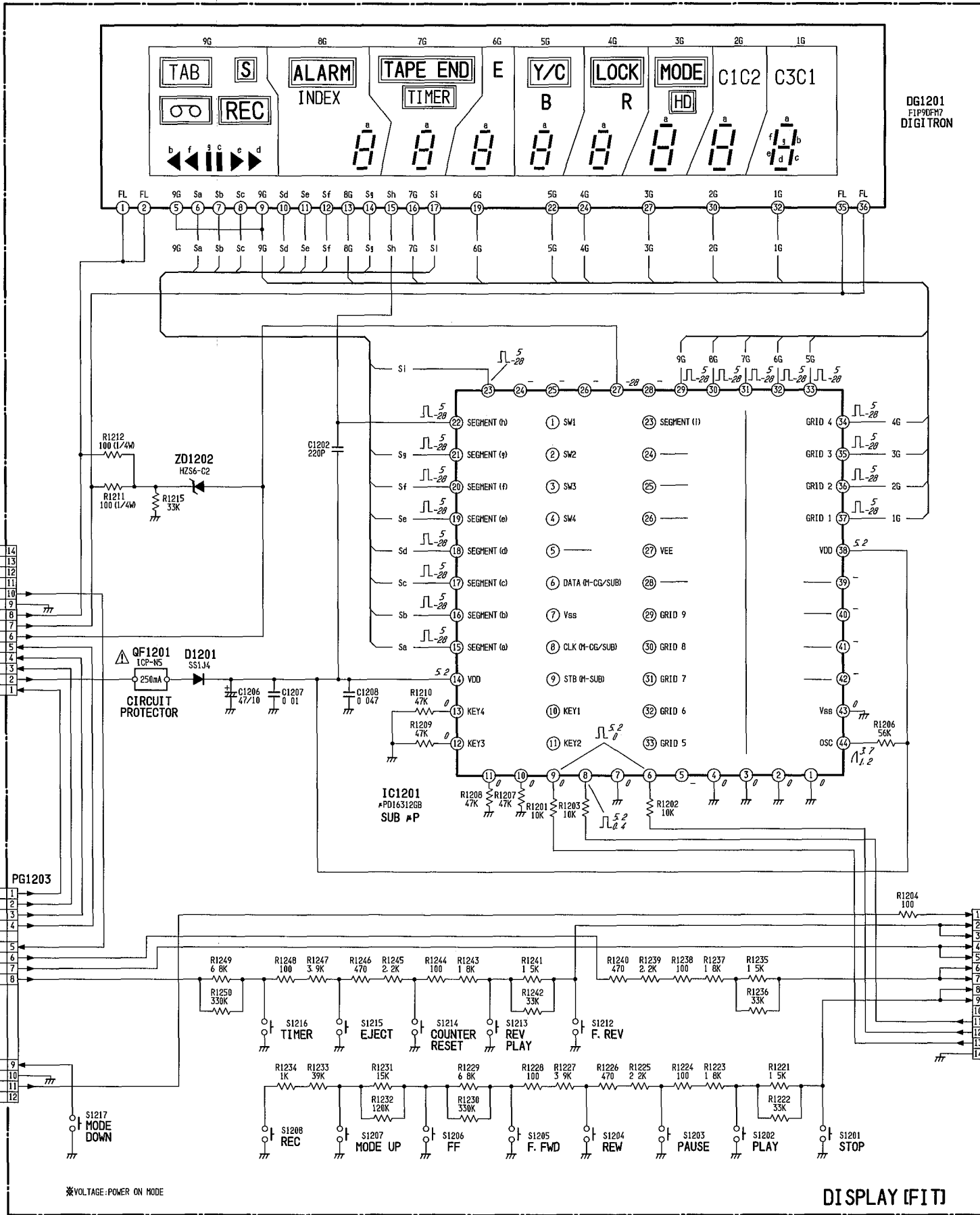
CONNECTION DIAGRAM 7 - 1 7 - 2 CONNECTION DIAGRAM



# FRONT SWITCH [FSW] SCHEMATIC DIAGRAM

# DISPLAY [FIT] SCHEMATIC DIAGRAM

	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	REC	a	a	a	a	a	a	a	a
b	◀ (LEFT)	b	b	b	b	b	b	b	b
c		c	c	c	c	c	c	c	c
d	▶ (RIGHT)	d	d	d	d	d	d	d	d
e	▶ (LEFT)	e	e	e	e	e	e	e	e
f	▶ (RIGHT)	f	f	f	f	f	f	f	f
g	◻	g	g	g	g	g	g	g	g
h	TAB	INDEX	TIMER	E	B	R	HD	C1	C3
i	S	ALARM	TAPE END		Y/C	LOCK	MODE	C2	C4



PG1201

14	ASV
13	GND
12	HEAT. DISP
11	HEAT. DISP
10	A-30V
9	0.3Hz TRACK
8	SLOW TRACK
7	PIC CONT
6	AS 4V
5	V. LOCK

To TIMELAPSE IM1 PG701 IP7-71

PG1303

12	V. LOCK
11	PIC CONT
10	SLOW TRACK
9	0.3Hz TRACK
8	ASV
7	LADDER 2
6	LADDER 3
5	LADDER 4

PG1203

1	V. LOCK
2	PIC CONT
3	SLOW TRACK
4	0.3Hz TRACK
5	ASV
6	LADDER 2
7	LADDER 3
8	LADDER 4

PG1202

1	RESET
2	LADDER 4
3	LADDER 3
4	LADDER 2
5	LADDER 1
6	LADDER 2
7	LADDER 1
8	LADDER 1
9	LADDER 1
10	
11	CLK (F-SUB)
12	DATA (F-SUB)
13	STB (F-SUB)
14	GND

To TIMELAPSE IM1 PG702 IP7-81

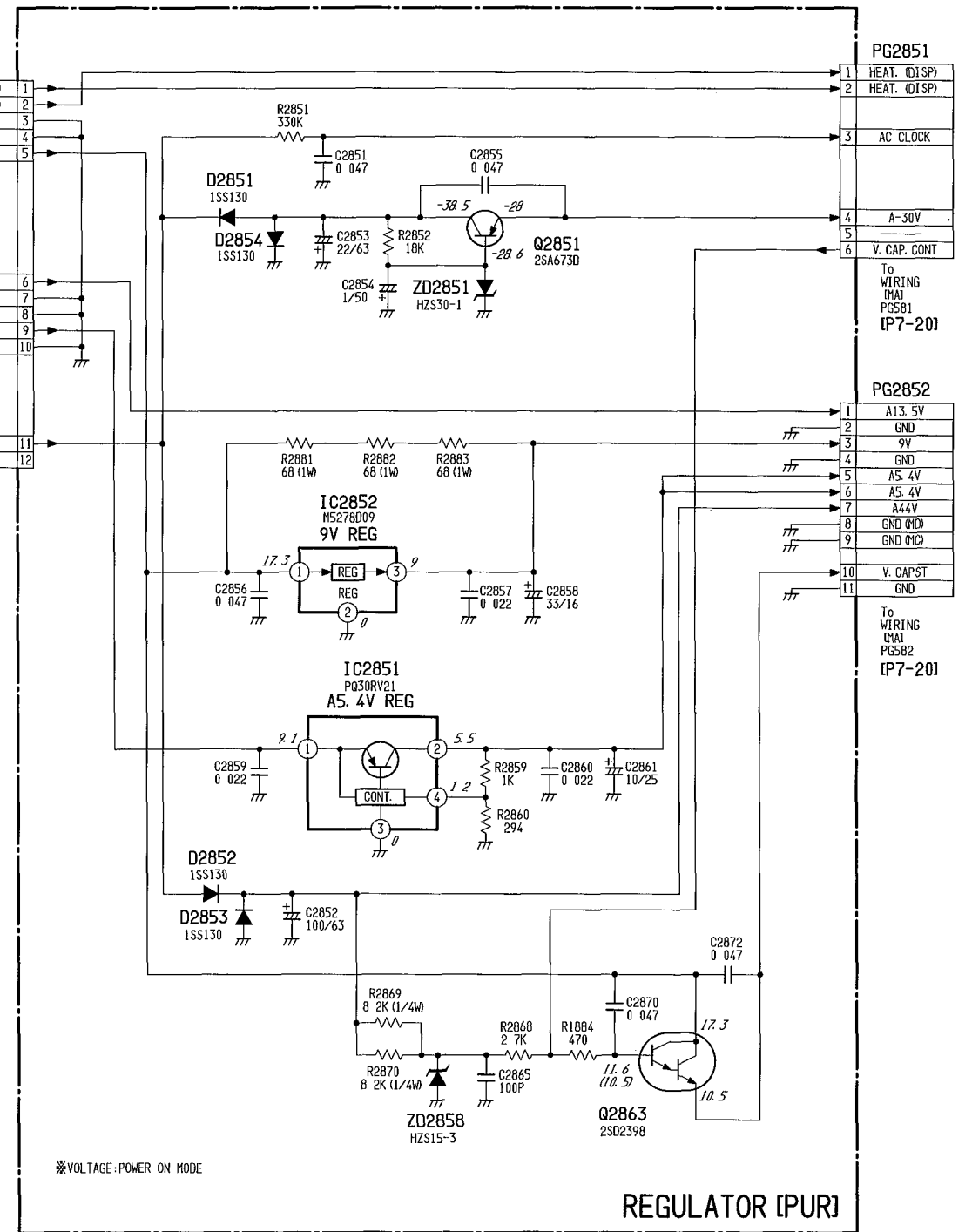
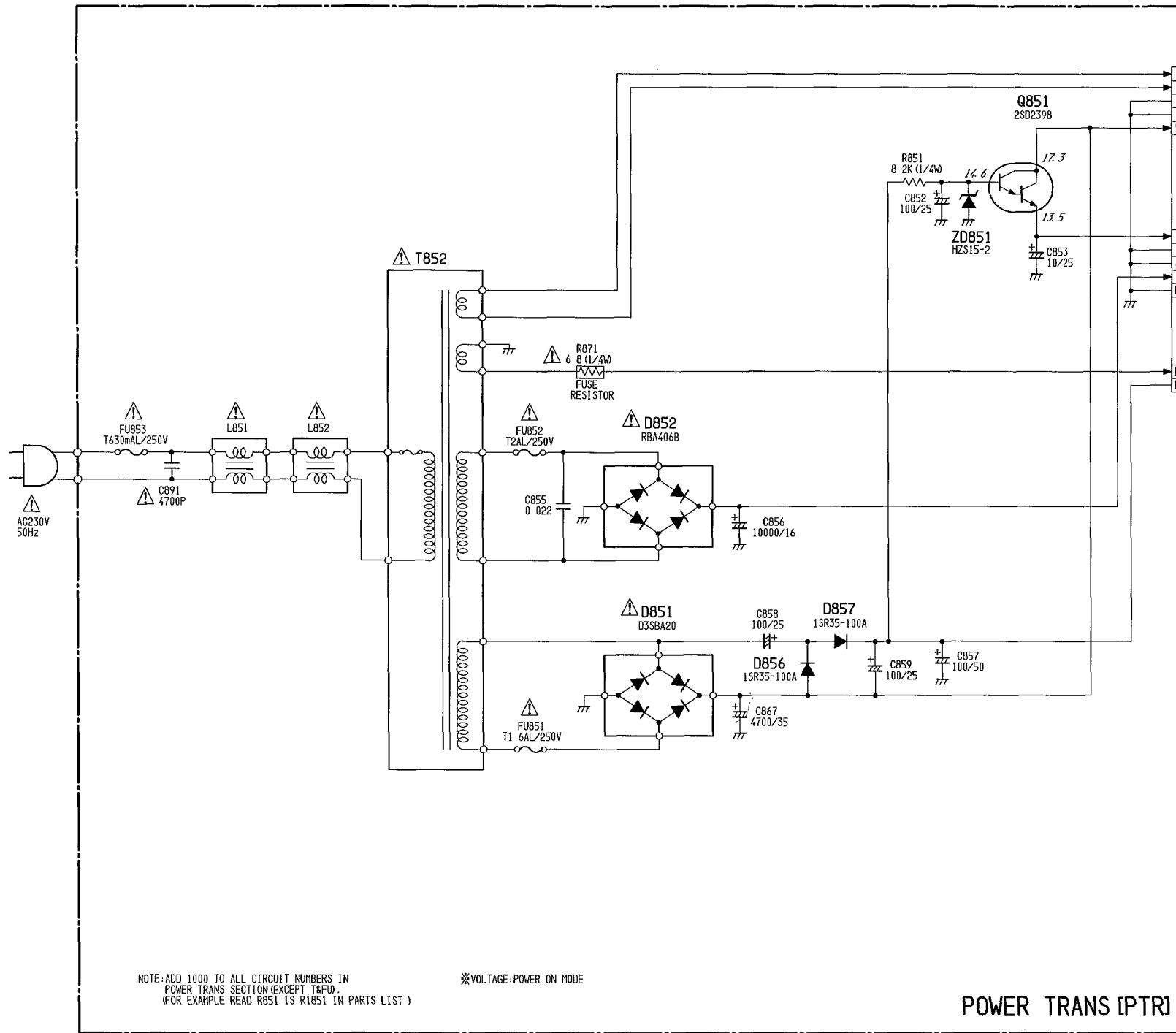
FRONT SWITCH 7 - 3

7 - 4 DISPLAY

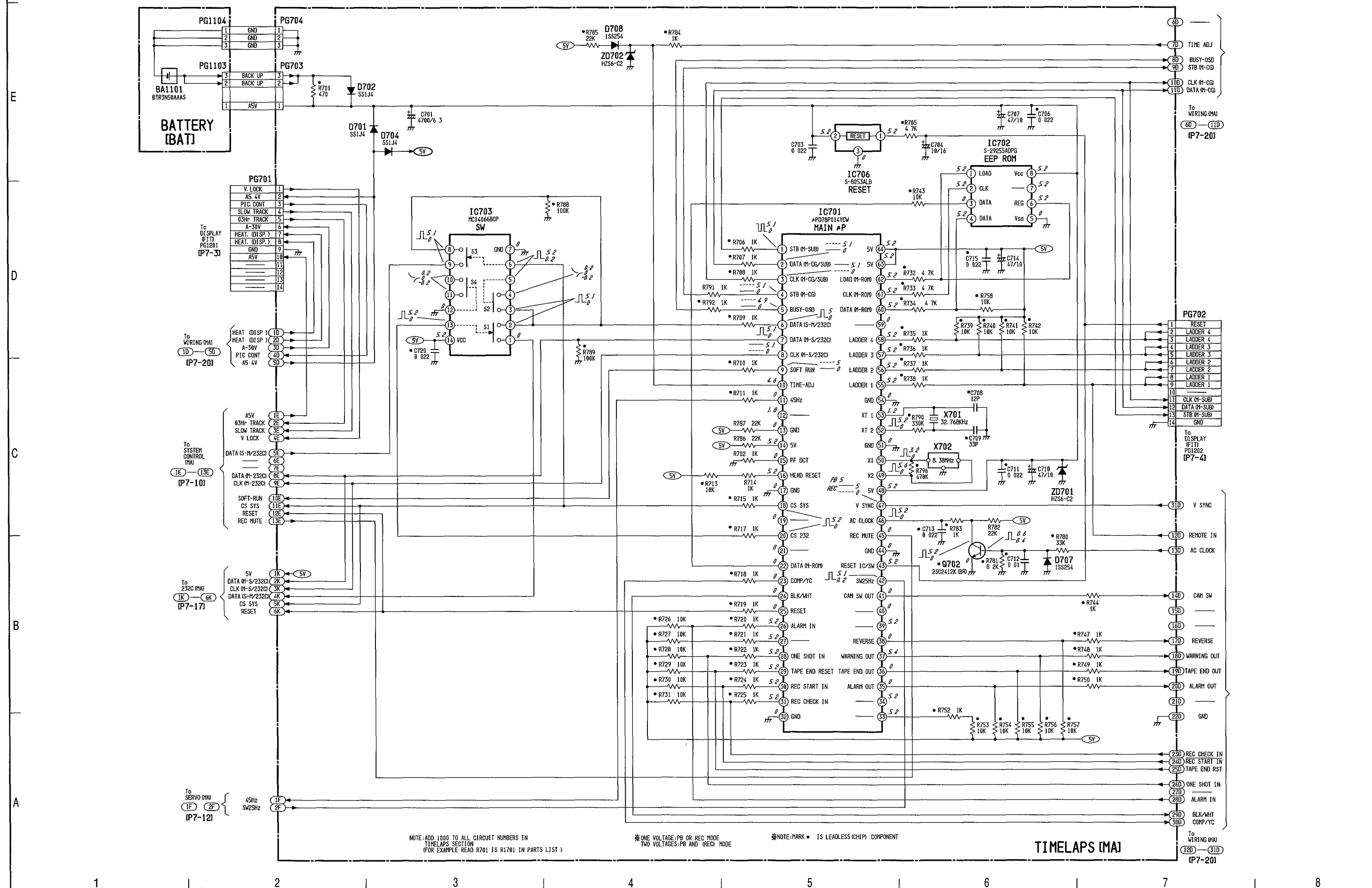
\*VOLTAGE: POWER ON MODE

POWER TRANS [PTR] SCHEMATIC DIAGRAM

REGULATOR [PUR] SCHEMATIC DIAGRAM



# TIMELAPSE [MA], BATTERY [BAT] SCHEMATIC DIAGRAM



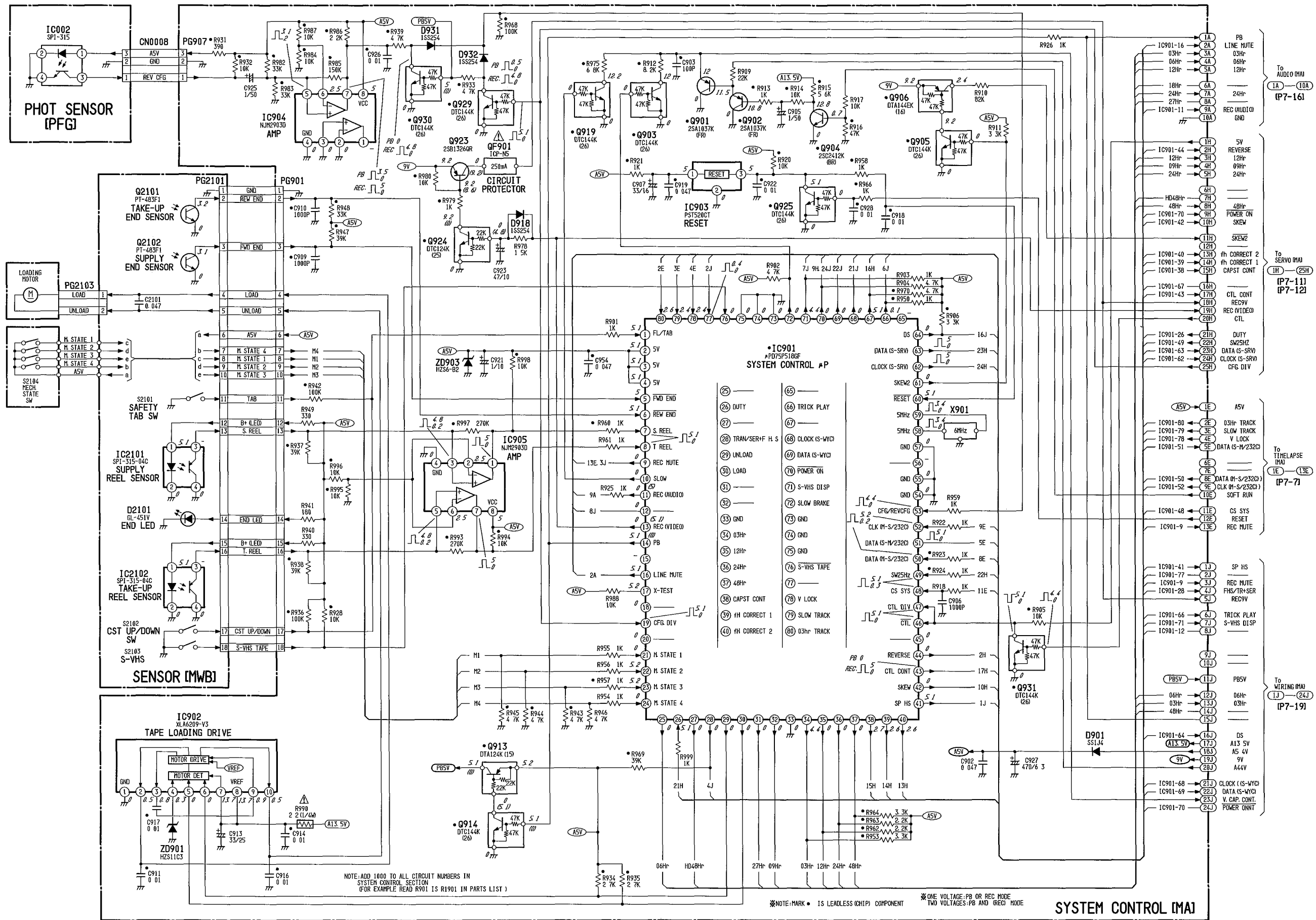
NOTE: ADD 1000 TO ALL CIRCUIT NUMBERS IN TIMELAPSE SECTION (FOR EXAMPLE READ R701 IS R1701 IN PARTS LIST)

\* ONE VOLTAGE: PB OR REC MODE TWO VOLTAGES: PB AND (REC) MODE

\* NOTE: MARK \* IS LEADLESS (CHIP) COMPONENT

TIMELAPS [MA]

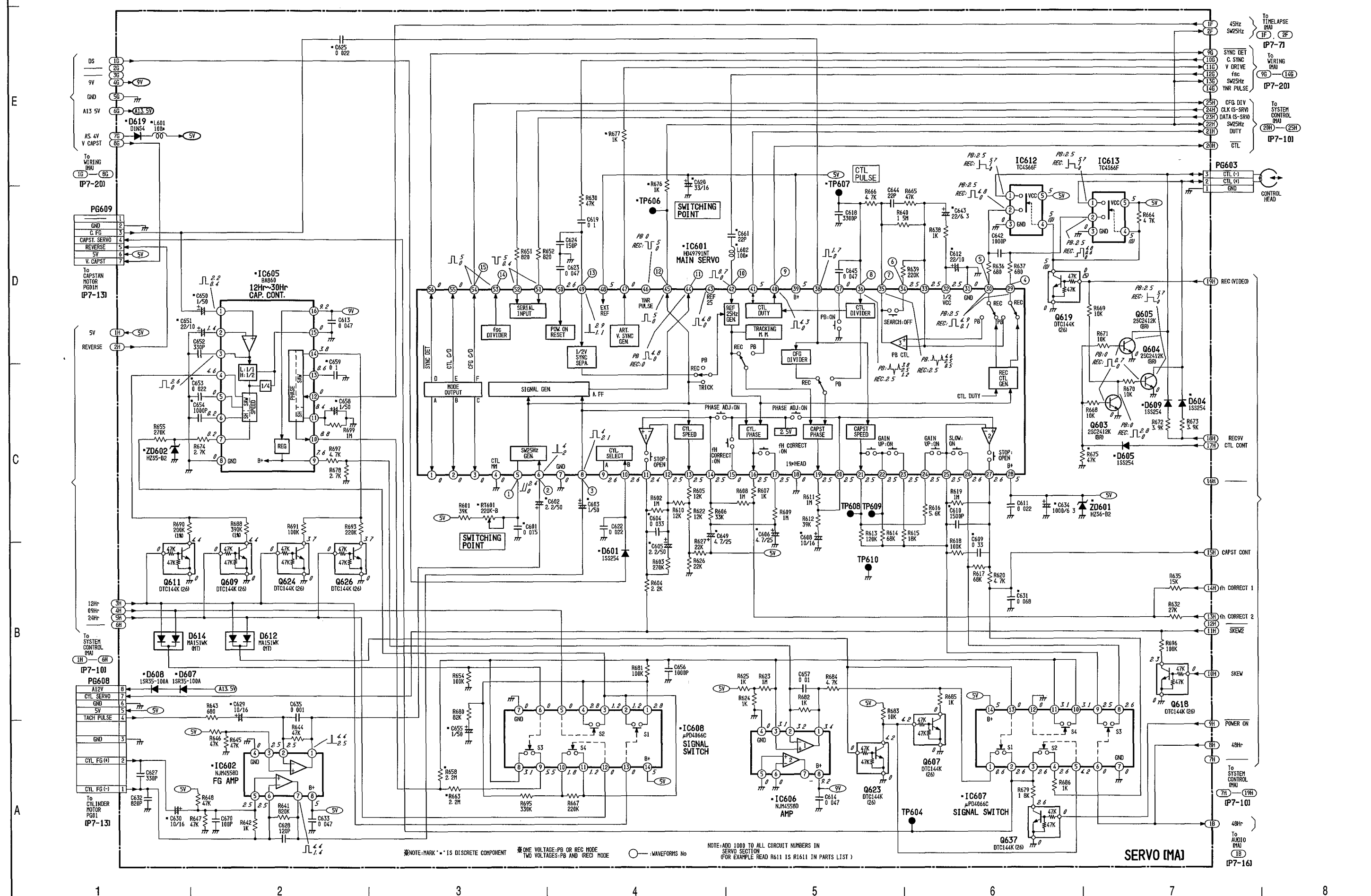
# SYSTEM CONTROL [MA], SENSOR [MWB] SCHEMATIC DIAGRAM



SYSTEM CONTROL, SENSOR 7 - 9

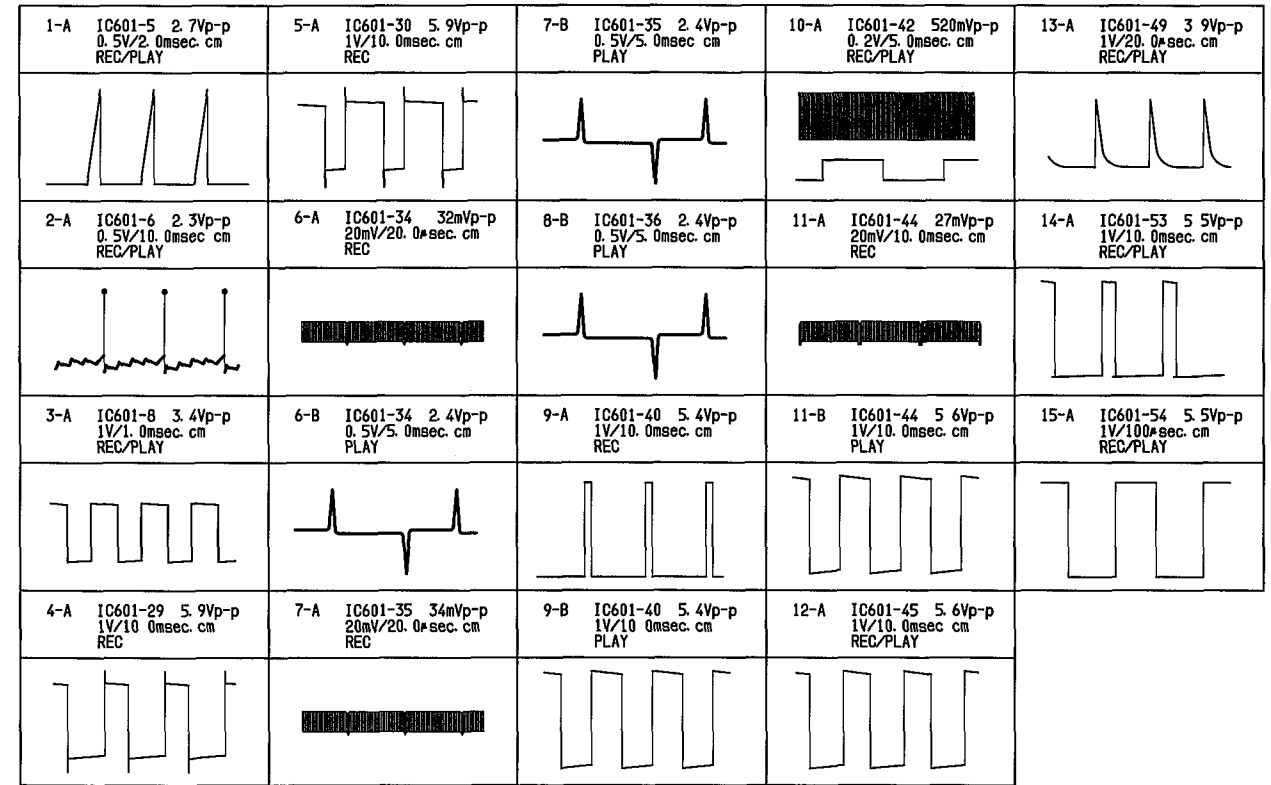
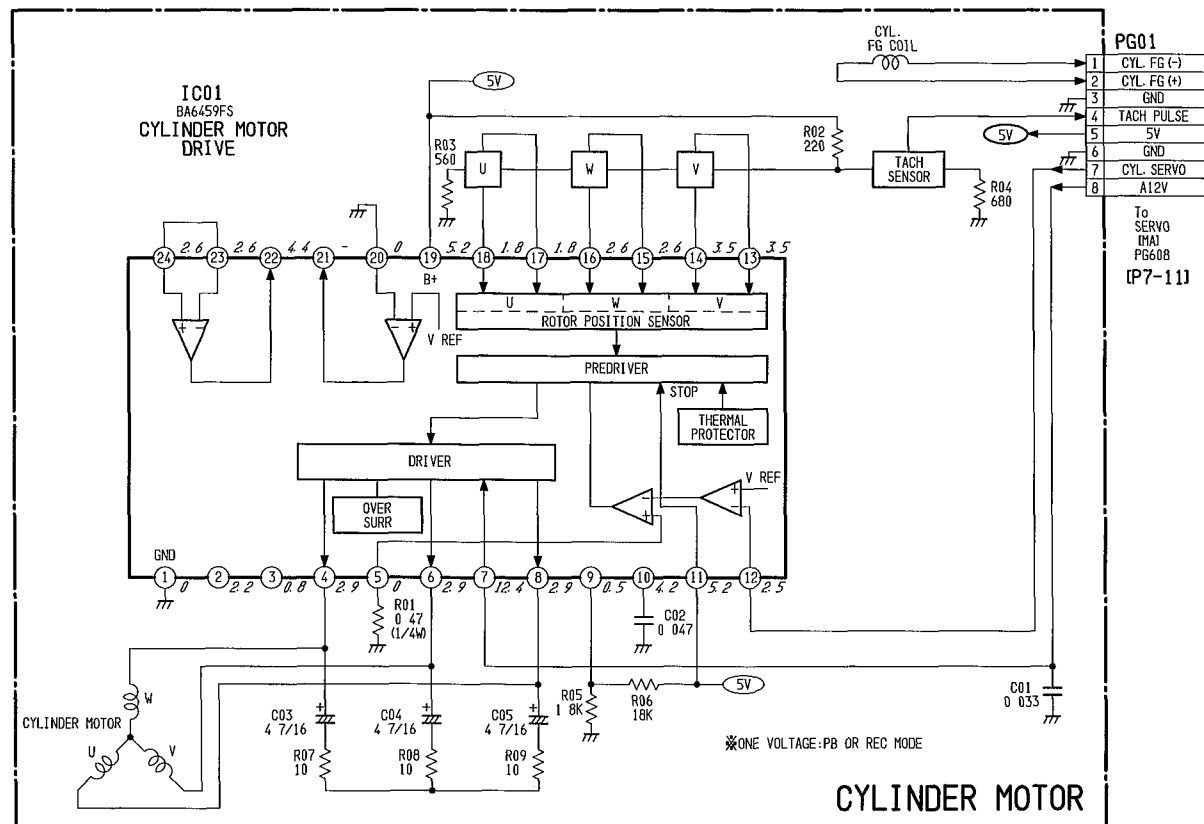
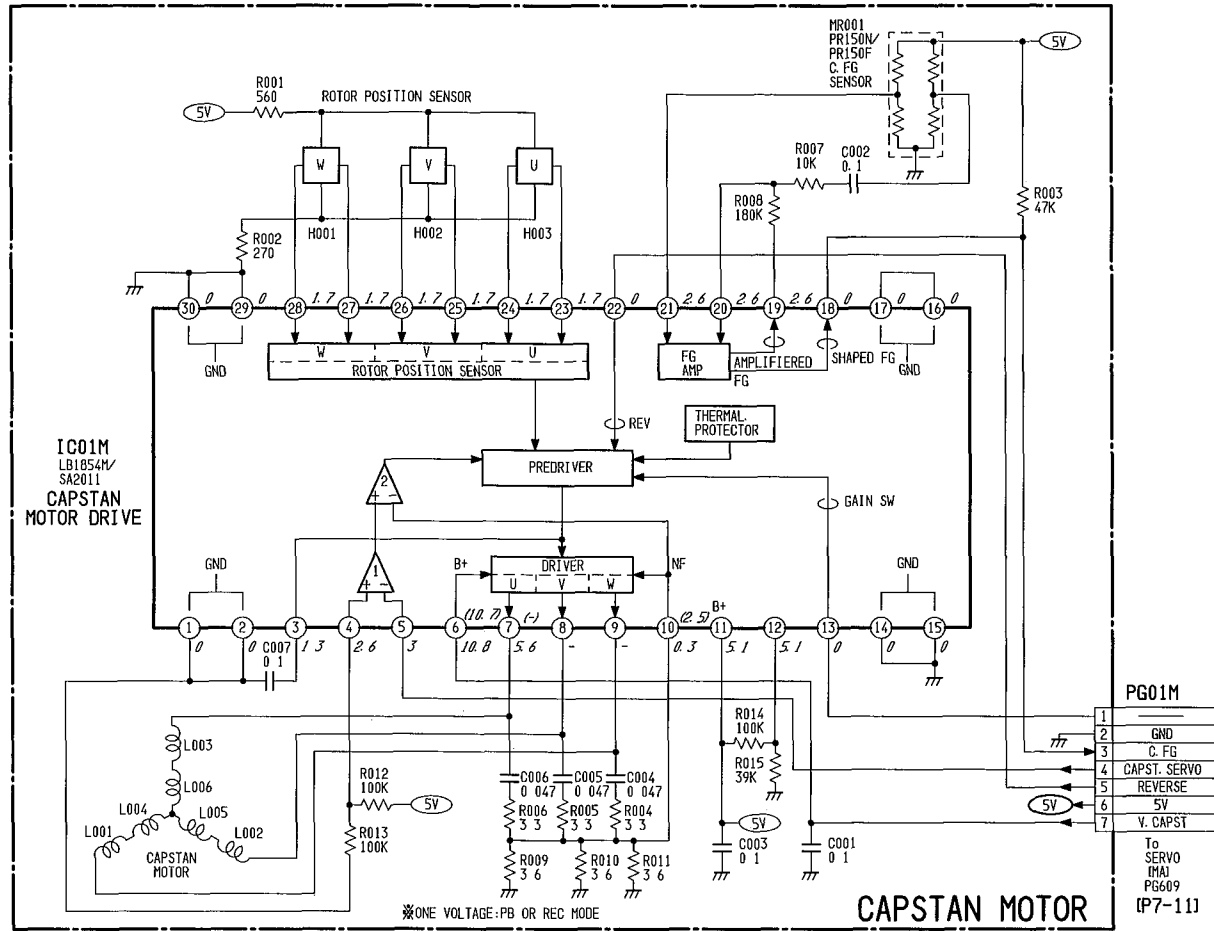
7 - 10 SYSTEM CONTROL, SENSOR

# SERVO [MA] SCHEMATIC DIAGRAM

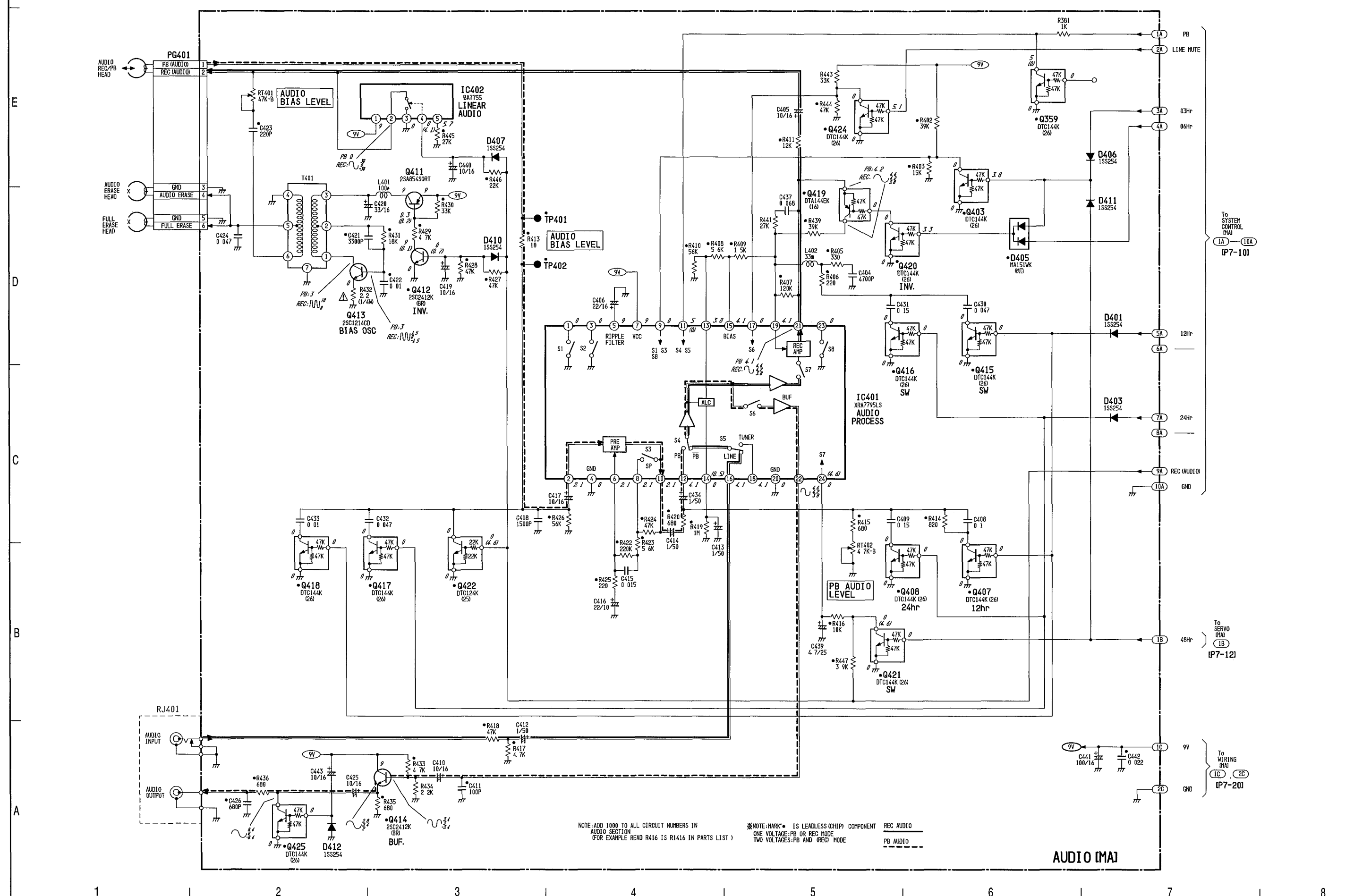


# CAPSTAN MOTOR, CYLINDER MOTOR SCHEMATIC DIAGRAM

# SERVO WAVEFORMS



# AUDIO [MA] SCHEMATIC DIAGRAM



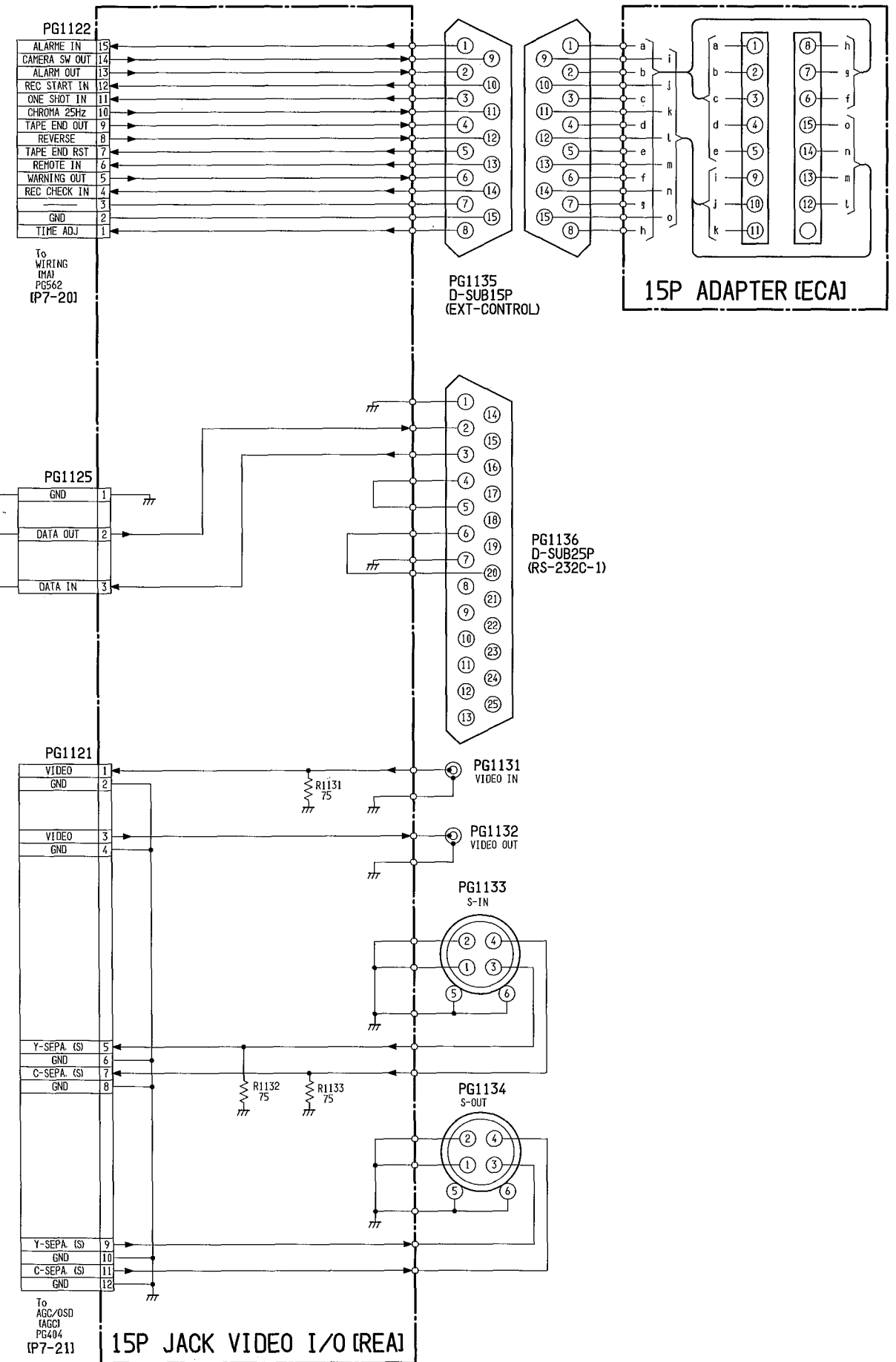
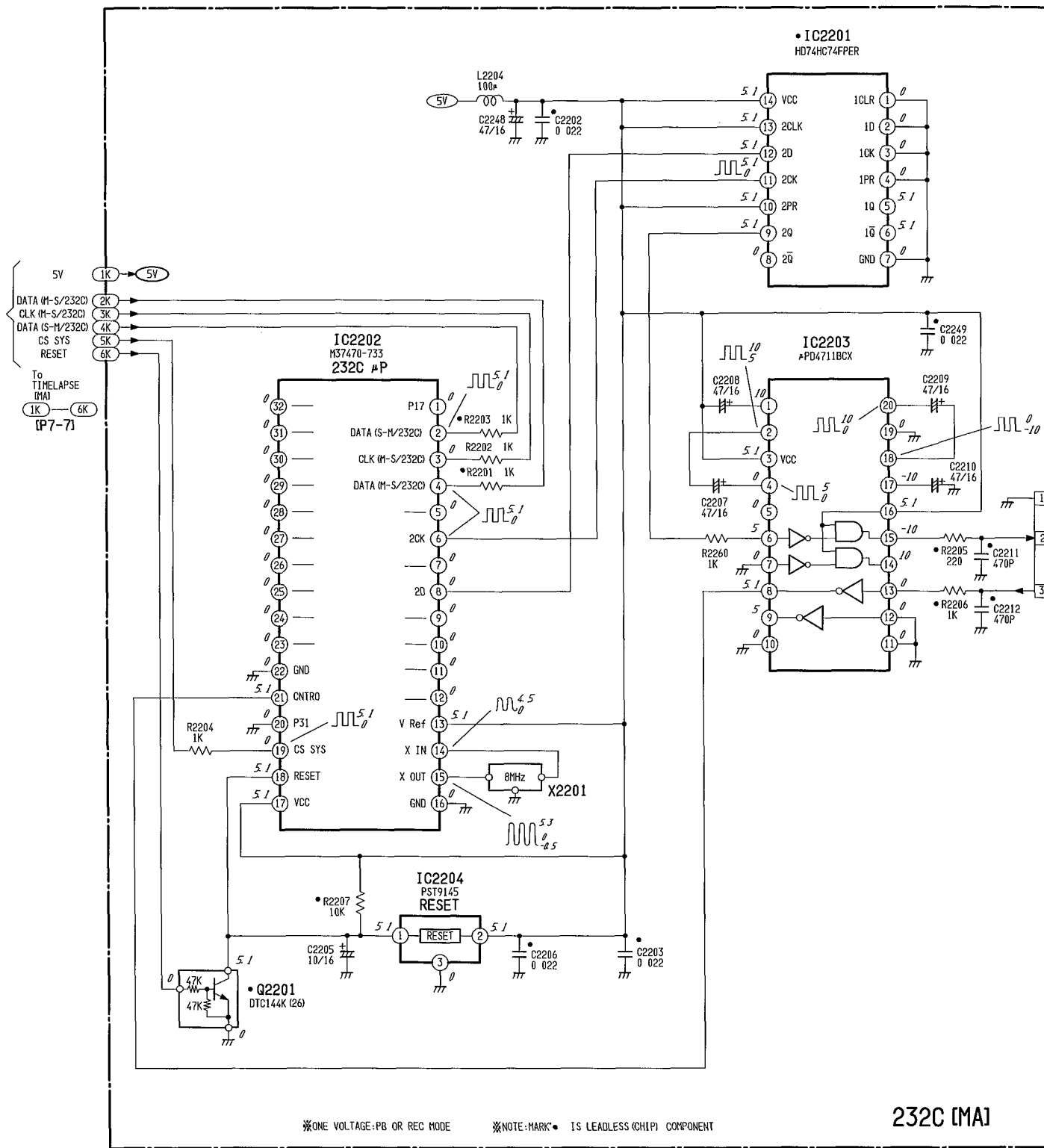
NOTE: ADD 1000 TO ALL CIRCUIT NUMBERS IN AUDIO SECTION (FOR EXAMPLE READ R416 IS R1416 IN PARTS LIST)

NOTE: MARK \* IS LEADLESS (CHIP) COMPONENT  
 ONE VOLTAGE: PB OR REC MODE  
 TWO VOLTAGES: PB AND (REC) MODE

REC AUDIO  
 PB AUDIO

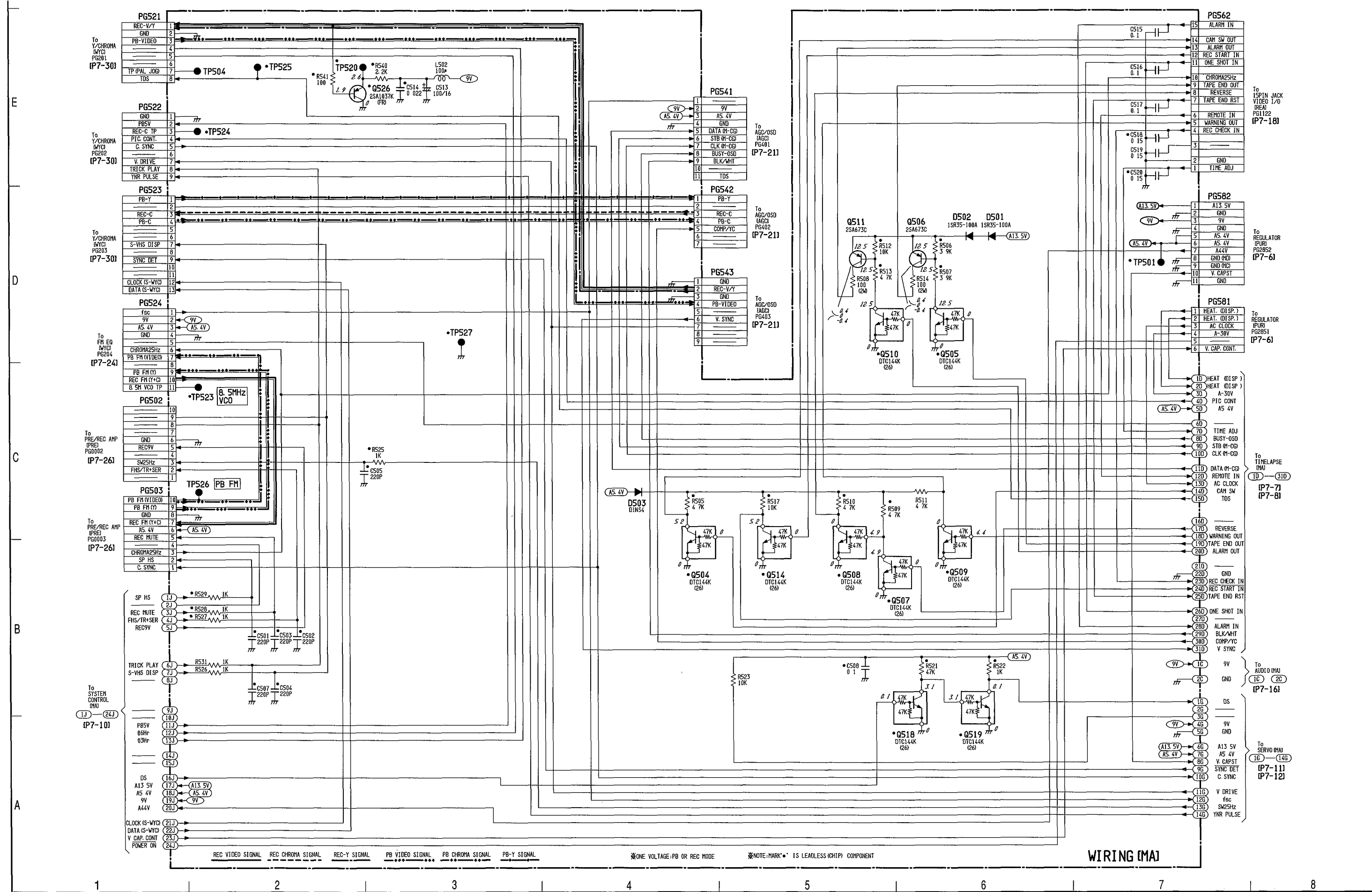
AUDIO [MA]

232C [MA], 15P JACK • VIDEO I/O [REA], 15P ADAPTER [ECA] SCHEMATIC DIAGRAM





# WIRING [MA] SCHEMATIC DIAGRAM



WIRING [MA]

# AGS/OSD [AGC] SCHEMATIC DIAGRAM

PG403

9
8
7
6
5
4
3
2
1

To WIRING HAI  
PG543  
IP7-201

PG402

7
6
5
4
3
2
1

To WIRING HAI  
PG542  
IP7-201

PG401

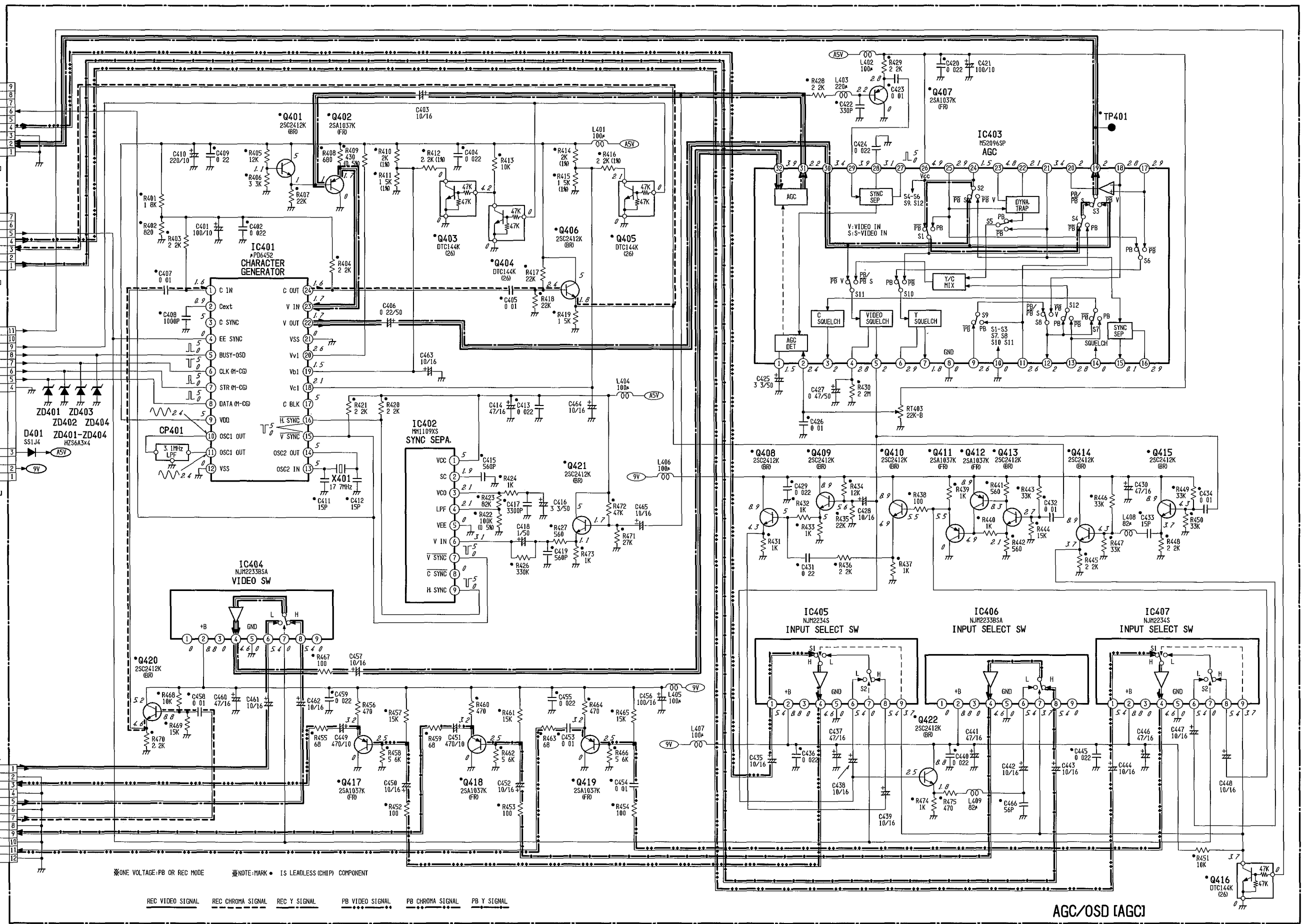
11
10
9
8
7
6
5
4

To WIRING HAI  
PG541  
IP7-201

PG404

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

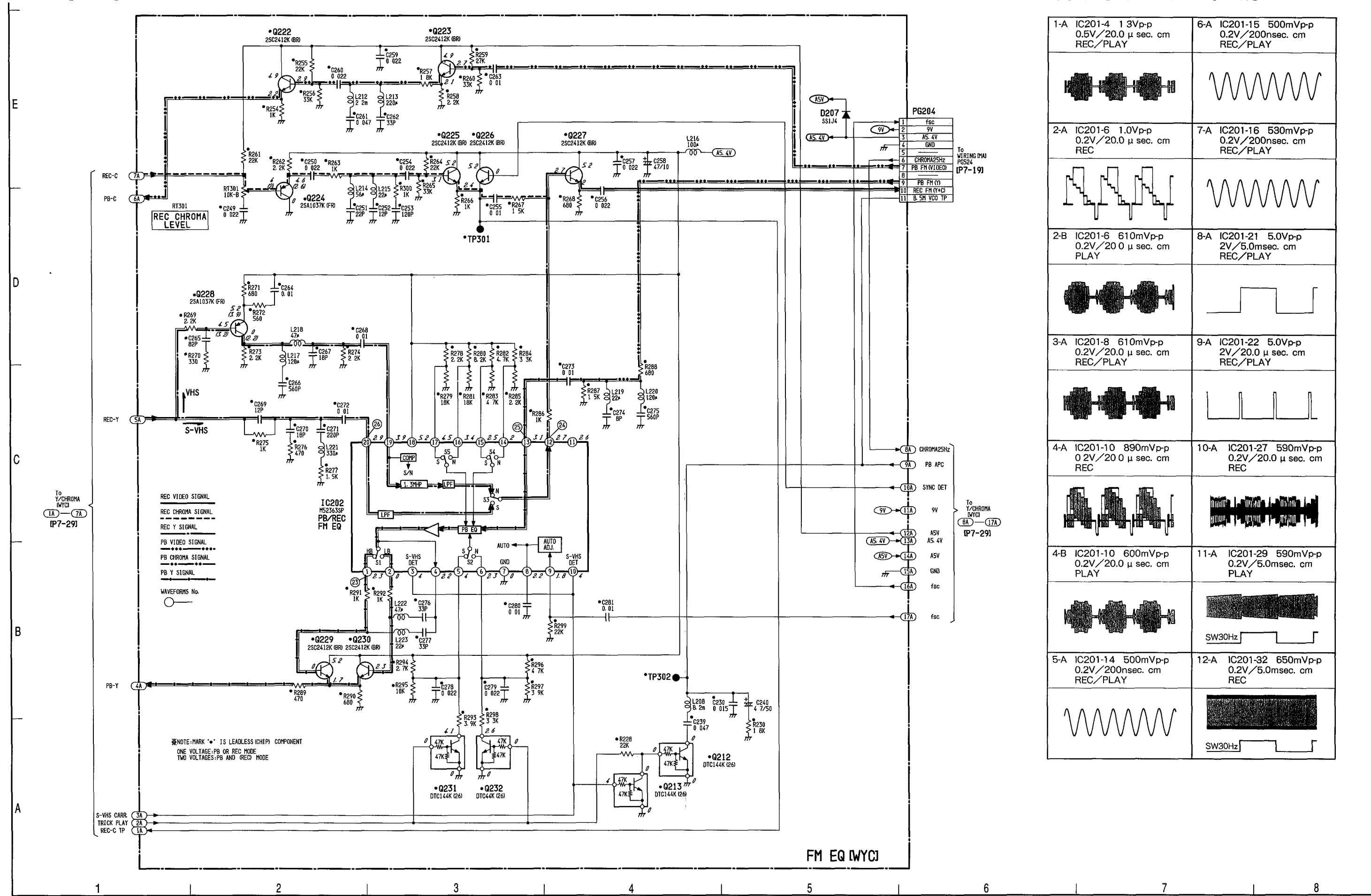
To TSP JACK  
VIDEO I/O  
(REAR)  
PG121  
IP7-181



E  
D  
C  
B  
A

# FM EQ [WYC] SCHEMATIC DIAGRAM

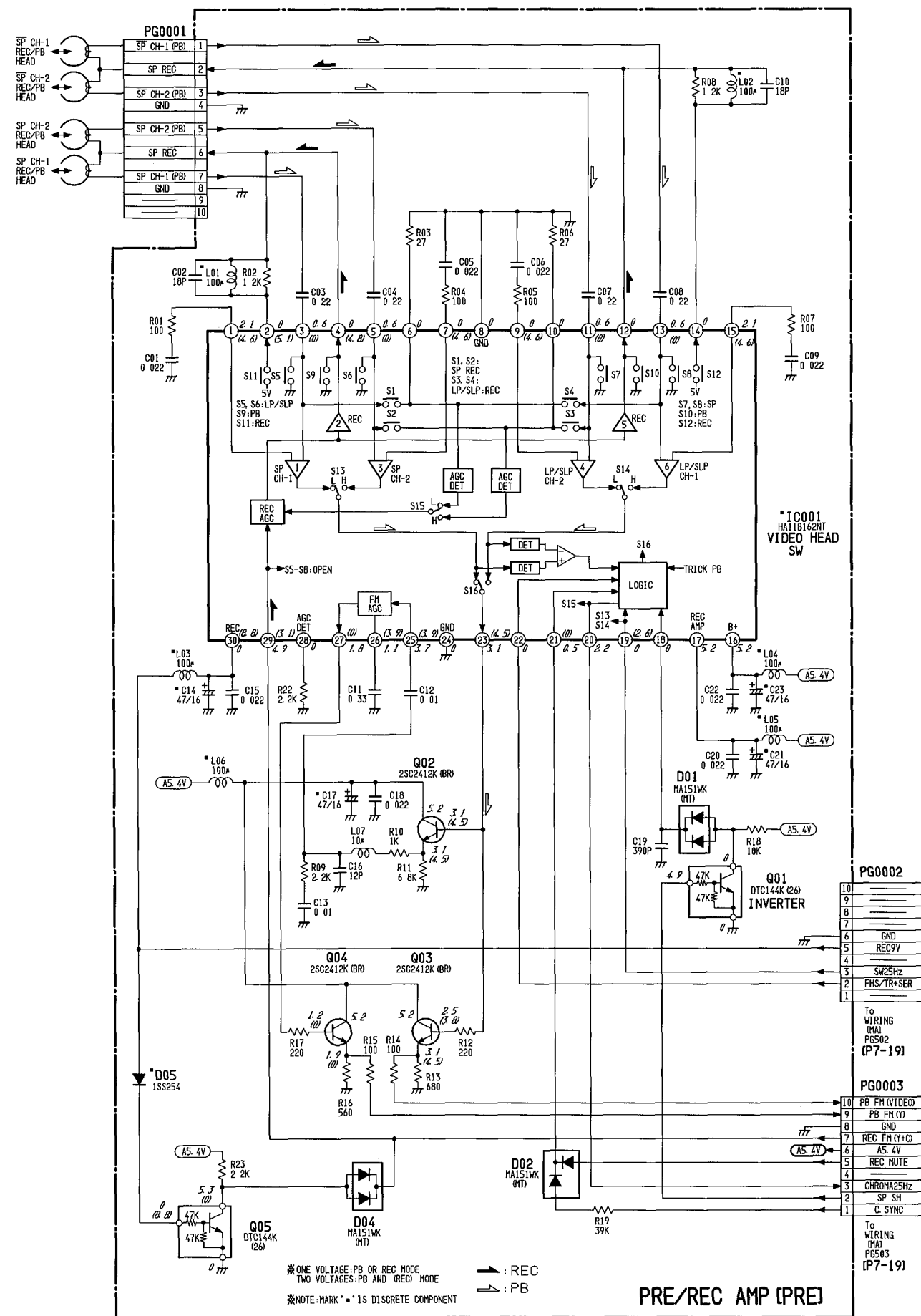
# Y/CHROMA WAVEFORMS



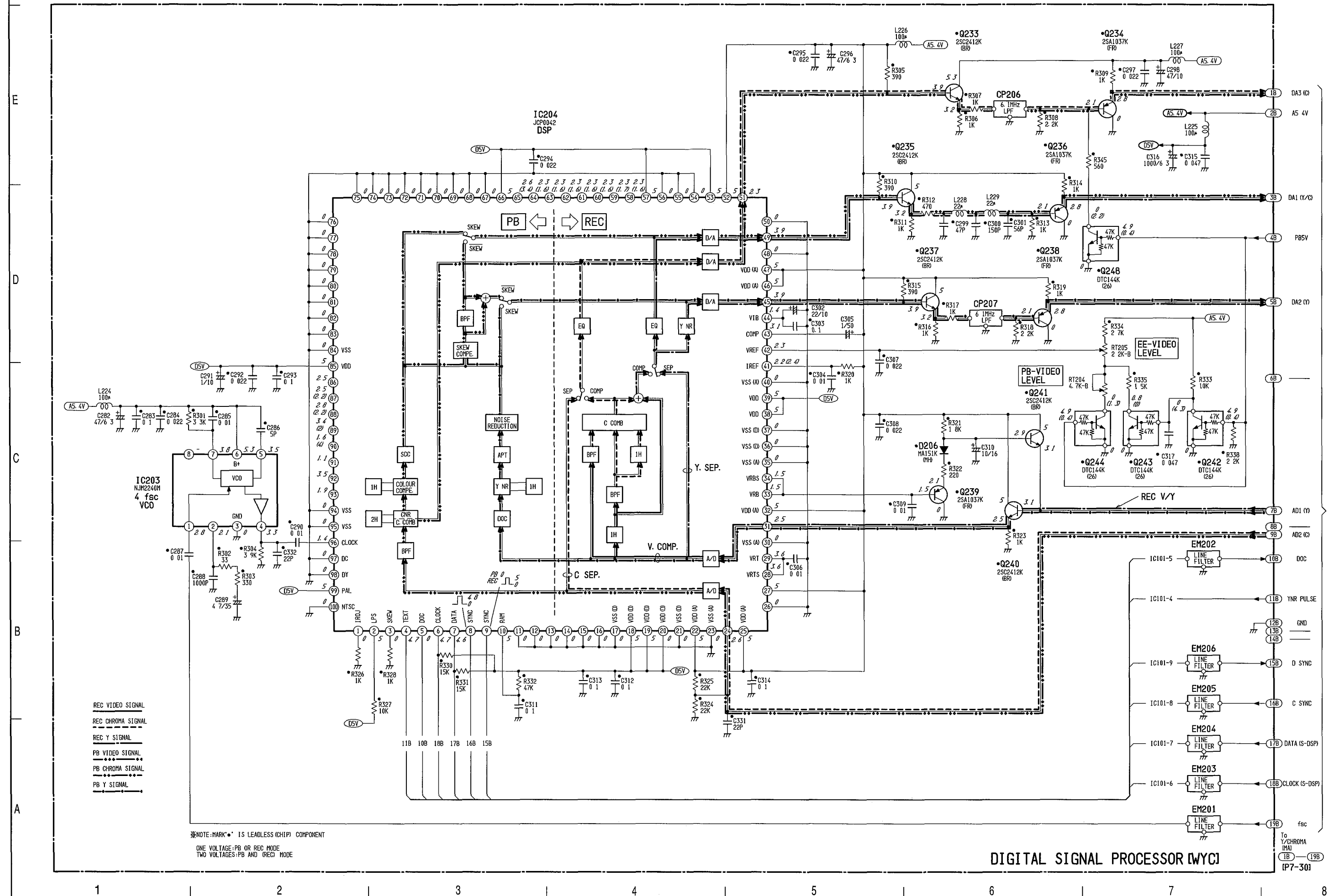
# Y/CHROMA WAVEFORMS

13-A IC201-34 400mVp-p 0.1V/20.0 μ sec. cm REC	17-A IC201-50 940mVp-p 0.2V/20.0 μ sec. cm REC (Y-INPUT)	21-A IC201-58 2.1Vp-p 0.5V/20.0 μ sec. cm REC	26-A IC202-20 230mVp-p 0.1V/5.0msec cm REC
13-B IC201-34 410mVp-p 0.1V/20.0 μ sec. cm PLAY	17-A IC201-50 1.0Vp-p 0.5V/20.0 μ sec. cm REC (VIDEO INPUT)	21-B IC201-58 2.5Vp-p 0.5V/20.0 μ sec. cm PLAY	
14-A IC201-36 430mVp-p 0.2V/5.0msec. cm PLAY	18-A IC201-52 1.1Vp-p 0.2V/20.0 μ sec. cm REC	22-A IC201-60 2.0Vp-p 0.5V/20.0 μ sec. cm REC	
15-A IC201-43 810mVp-p 0.2V/20.0 μ sec. cm REC	18-B IC201-52 1.1Vp-p 0.2V/20.0 μ sec. cm PLAY	22-B IC201-60 2.3Vp-p 0.5V/20.0 μ sec. cm PLAY	
15-B IC201-43 1.0Vp-p 0.2V/20.0 μ sec. cm PLAY	19-A IC201-54 970mVp-p 0.2V/20.0 μ sec. cm REC	23-A IC202-1 430mVp-p 0.2V/5.0msec. cm PLAY	
16-A IC201-45 500mVp-p 0.2V/20.0 μ sec. cm REC	19-B IC201-54 1.3Vp-p 0.2V/20.0 μ sec. cm PLAY	24-A IC202-12 200mVp-p 0.1V/5.0msec. cm REC	
16-B IC201-45 600mVp-p 0.2V/20.0 μ sec. cm PLAY	20-A IC201-56 5.0Vp-p 2V/20.0 μ sec. cm REC/PLAY	25-A IC202-13 320mVp-p 0.1V/5.0msec. cm PLAY	

# PRE/REC AMP [PRE] SCHEMATIC DIAGRAM



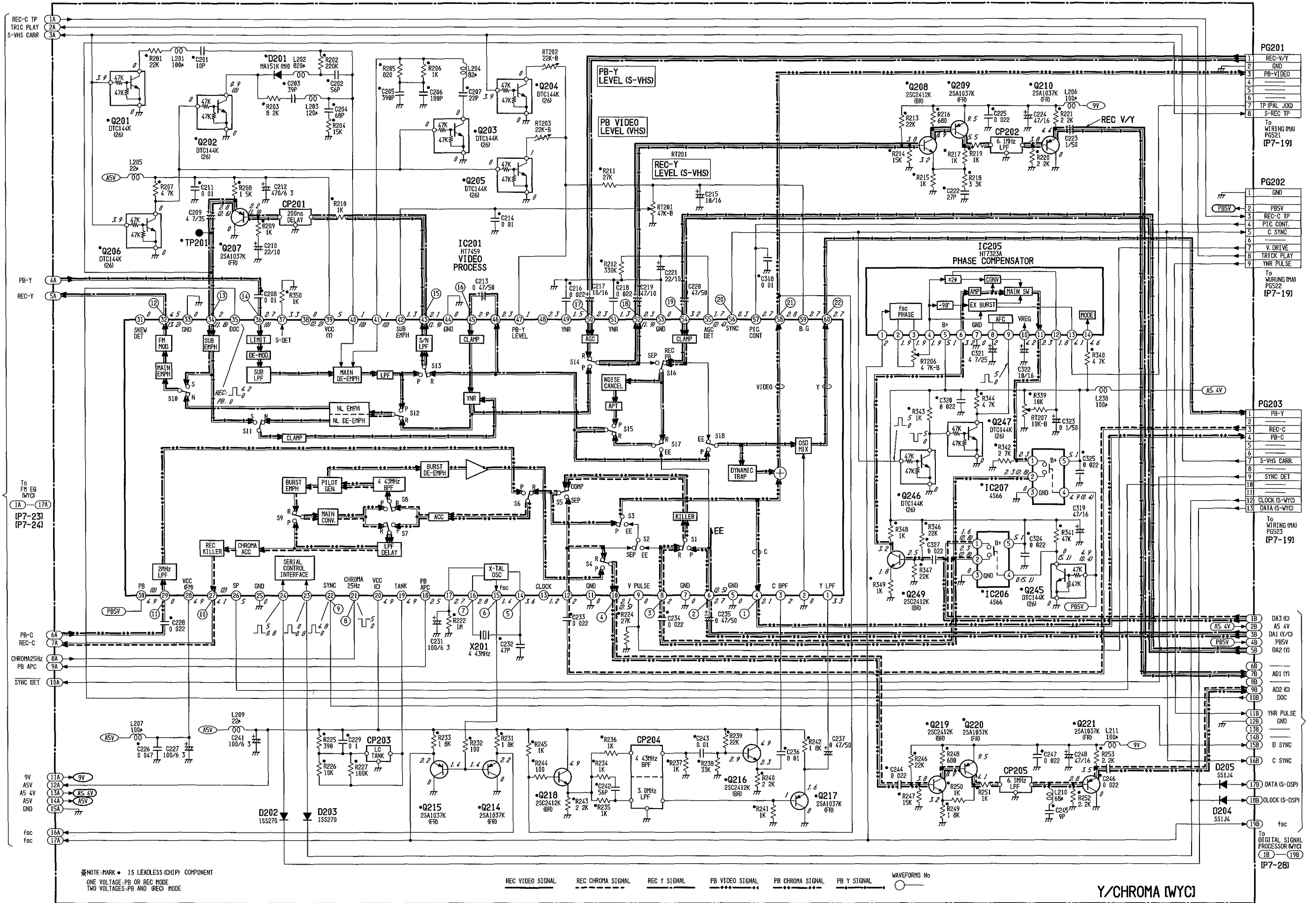
# DIGITAL SIGNAL PROCESS [WYC] SCHEMATIC DIAGRAM



DIGITAL SIGNAL PROCESSOR [WYC]

To Y-CHROMA (MAI)  
18 19B  
[P7-30]

# Y/CHROMA [WYC] SCHEMATIC DIAGRAM



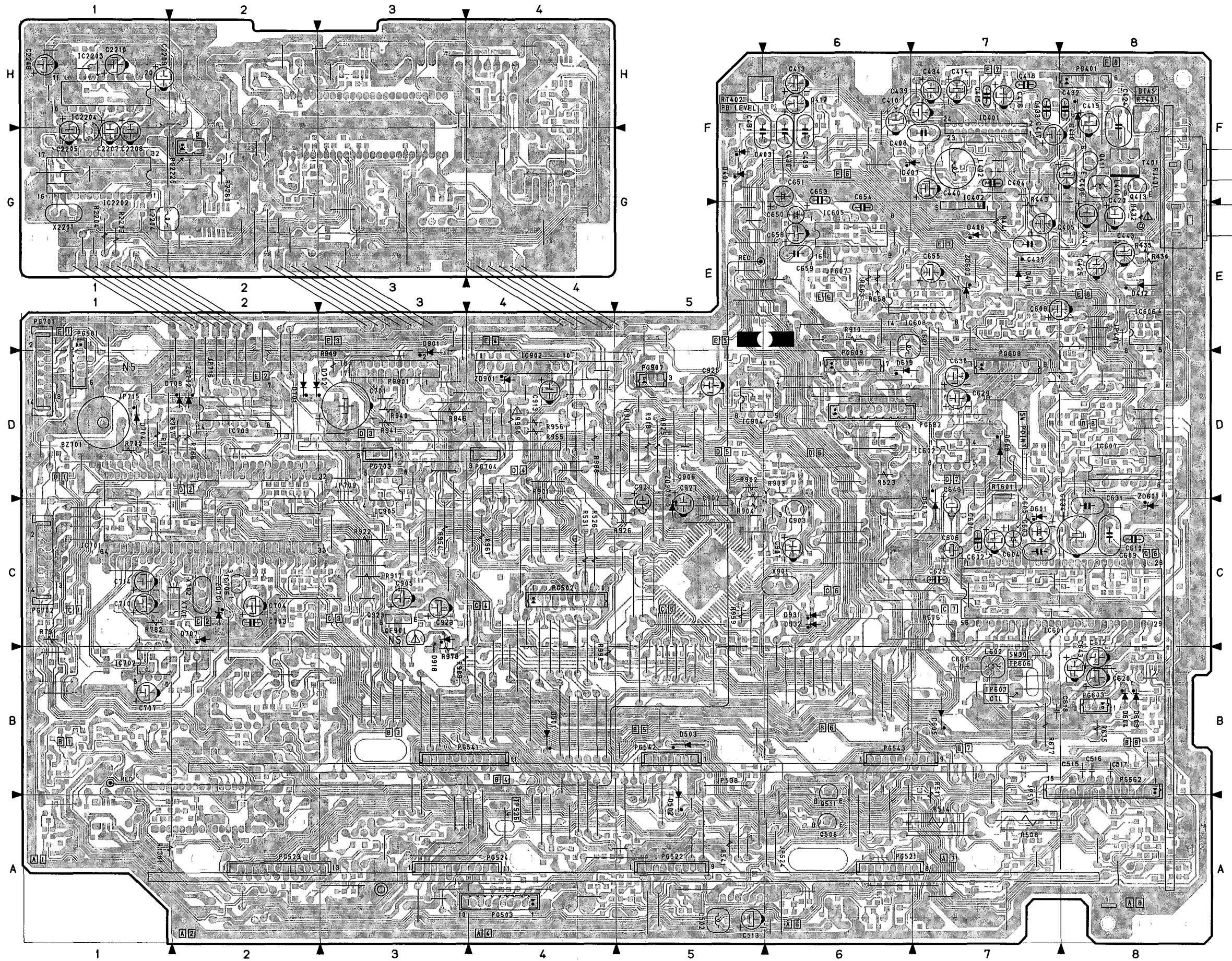
NOTE: MARK \* IS LEADLESS (CHIP) COMPONENT  
 ONE VOLTAGE: PB OR REC MODE  
 TWO VOLTAGES: PB AND REC MODE

REC VIDEO SIGNAL    REC CHROMA SIGNAL    REC Y SIGNAL    PB VIDEO SIGNAL    PB CHROMA SIGNAL    PB Y SIGNAL    WAVEFORMS No

Y/CHROMA [WYC]



MA CIRCUIT BOARD - SIDE A -



NOTE: ADD 1000 TO ALL CIRCUIT NUMBERS.  
 (FOR EXAMPLE READ R511 IS R1511 IN PARTS LIST.)  
 MA - SIDE A- 7 - 31

7 - 32 MA - SIDE A-

MA (MAIN) - SIDE A -  
 [PATTERN No. JA1400-3]

# IDENTIFICATION OF PARTS LOCATION

## MA [MAIN]

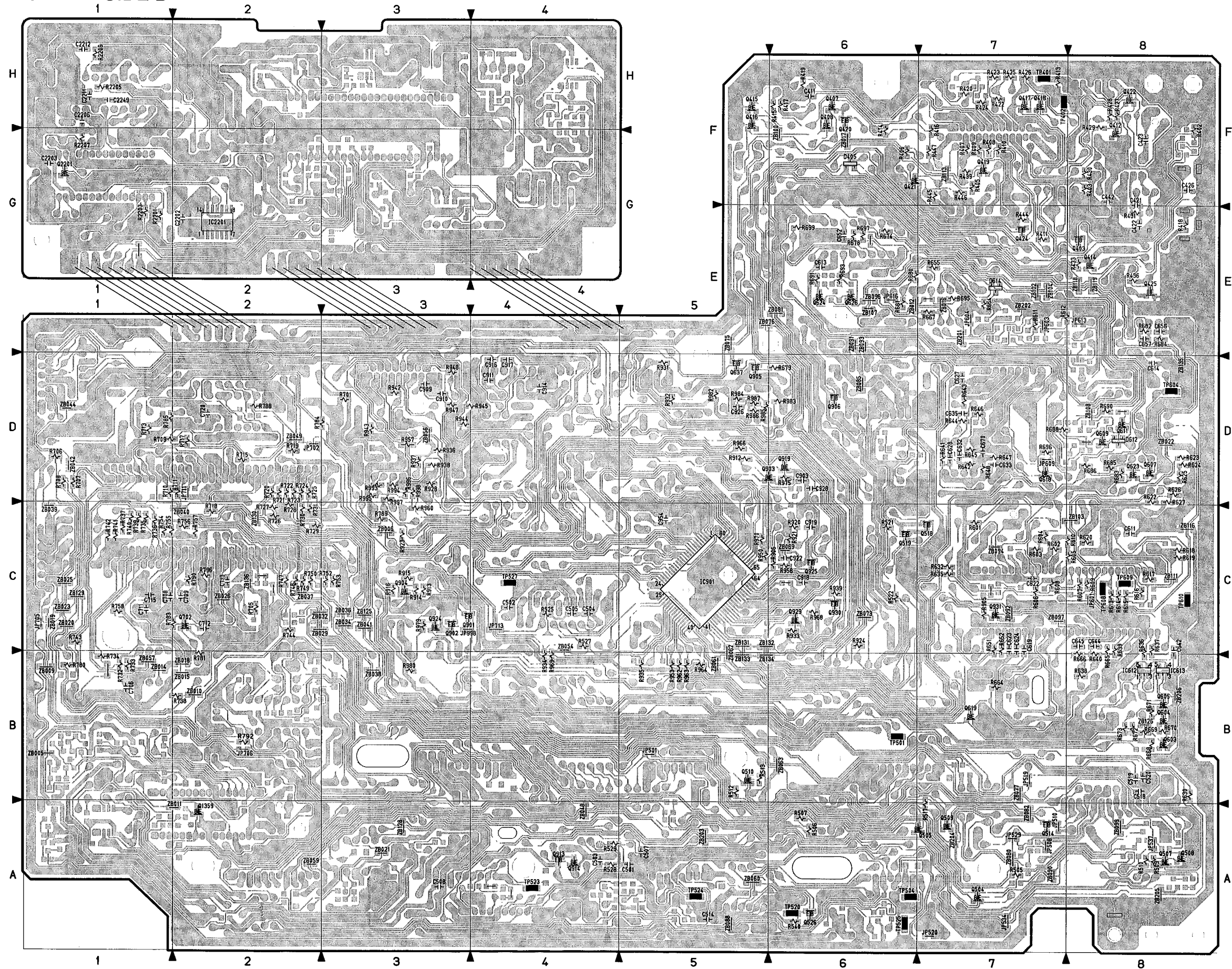
Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location					
<b>BZ</b>		C1609	A-8C	C1909	B-3D	D1932	A-6C	Q1403	B-8E	<b>QF</b>		R1526	A-4C	R1667	B-7E	R1735	B-1C	R1928	B-3D	R2203	B-1G																					
BZ1701	A-1D	C1610	A-8C	C1910	B-3D	<b>IC</b>		Q1407	B-6F	QF1901	A-3C	R1527	B-4C	R1668	B-8B	R1736	B-1C	R1931	B-5D	R2204	A-1G																					
<b>C</b>		C1611	B-8C	C1911	B-4D	IC1401	A-7F	Q1408	B-6F	<b>R</b>		R1528	B-4A	R1669	B-8B	R1737	B-1C	R1932	B-5D	R2205	B-1H																					
C1404	A-7F	C1612	A-8B	C1913	A-4D	IC1402	A-7E	Q1411	A-8F	R1381	A-1A	R1529	B-4A	R1670	B-8B	R1738	B-2B	R1933	B-6C	R2206	B-1H																					
C1405	A-7E	C1613	B-6E	C1914	B-4D	IC1601	A-8C	Q1412	B-8F	R1402	B-8F	R1531	A-4C	R1671	B-8B	R1739	B-1C	R1934	B-4B	R2207	B-1G																					
C1406	A-8F	C1614	B-8D	C1916	B-4D	IC1602	A-7D	Q1413	A-8F	R1403	B-8F	R1540	B-6A	R1672	B-8B	R1740	B-1C	R1935	B-5B	R2260	A-2G																					
C1408	A-7F	C1618	A-7B	C1917	B-4D	IC1605	A-6E	Q1414	B-8E	R1405	B-7F	R1541	A-5A	R1673	B-8B	R1741	B-1C	R1936	B-3D	<b>RJ</b>																						
C1409	A-6F	C1619	B-7C	C1918	B-6C	IC1606	A-8E	Q1415	B-5F	R1406	B-6F	R1601	B-7C	R1674	B-6E	R1742	B-1C	R1937	B-3D	RJ1401	A-8F																					
C1410	A-6F	C1620	A-8B	C1919	B-6C	IC1607	A-8D	Q1416	B-5F	R1407	B-7F	R1602	B-7C	R1675	A-8B	R1743	B-1C	R1938	B-3D	<b>RT</b>																						
C1411	B-6F	C1622	B-7C	C1921	A-5C	IC1608	A-7E	Q1417	B-7F	R1408	B-7F	R1603	B-7C	R1676	A-7C	R1744	B-2C	R1939	B-6C	RT1401	A-8F																					
C1412	A-6F	C1623	B-7C	C1922	B-6C	IC1612	B-8B	Q1418	B-7F	R1409	B-7F	R1604	B-7C	R1677	A-7B	R1747	B-2C	R1940	A-3D	RT1402	A-5F																					
C1413	A-6F	C1624	B-7C	C1923	A-3C	IC1613	B-8B	Q1419	B-7F	R1410	B-7F	R1605	B-8C	R1678	B-6E	R1748	B-2C	R1941	A-3D	RT1601	A-7C																					
C1414	A-7F	C1625	A-7C	C1925	A-5D	IC1701	A-2C	Q1420	B-6F	R1411	B-7E	R1606	B-7C	R1679	B-6D	R1749	B-2C	R1942	B-3D	<b>T</b>																						
C1415	A-7F	C1627	B-7D	C1926	B-5D	IC1702	A-1B	Q1421	B-6F	R1413	B-7F	R1607	B-8C	R1680	B-6E	R1750	B-2C	R1943	B-3D	T1401	A-8F																					
C1416	A-7F	C1628	B-7D	C1927	A-5C	IC1703	A-2D	Q1422	B-8F	R1414	B-6F	R1608	B-7C	R1681	B-6E	R1752	B-3C	R1944	B-3D	<b>TP</b>																						
C1417	A-7F	C1629	A-7D	C1928	B-6D	IC1706	A-2C	Q1424	B-7E	R1415	B-6F	R1609	B-8C	R1682	B-8E	R1753	B-3C	R1945	B-3D	TP1401	B-7F																					
C1418	A-7F	C1630	A-7D	C1954	B-5C	IC1901	B-5C	Q1425	B-8E	R1416	B-7F	R1610	B-8C	R1683	B-8D	R1754	B-1C	R1946	A-3D	TP1402	B-7F																					
C1419	A-8F	C1631	A-8C	C2202	B-2G	IC1902	A-4D	Q1504	B-7A	R1417	B-6F	R1611	B-7E	R1684	B-8E	R1755	B-1C	R1947	B-3D	TP1501	B-6B																					
C1420	A-8E	C1632	B-7D	C2203	B-1G	IC1903	A-6C	Q1505	B-7A	R1418	B-8E	R1612	B-7E	R1685	B-8D	R1756	B-2C	R1948	B-3D	TP1504	B-6A																					
C1421	B-8F	C1633	B-7D	C2205	A-1G	IC1904	A-5D	Q1506	A-6A	R1419	B-6F	R1613	B-8C	R1686	B-8D	R1757	B-2C	R1949	A-3D	TP1520	B-6A																					
C1422	B-8E	C1634	A-8C	C2206	B-1H	IC1905	A-3D	Q1507	B-8A	R1420	B-7F	R1614	B-8C	R1688	B-7D	R1758	B-1C	R1950	B-5C	TP1523	B-4A																					
C1423	B-8F	C1635	B-7D	C2207	A-1G	IC2201	B-2G	Q1508	B-8A	R1422	B-7F	R1615	B-8C	R1690	B-8D	R1780	B-1B	R1953	B-5B	TP1524	B-5A																					
C1424	A-8F	C1642	B-8C	C2208	A-1G	IC2202	A-1G	Q1509	B-7A	R1423	B-7F	R1616	B-8C	R1691	B-6E	R1781	B-2B	R1954	A-3C	TP1525	B-6A																					
C1425	A-8E	C1643	A-8B	C2209	A-1H	IC2203	A-1H	Q1510	B-5B	R1424	B-7F	R1617	B-8C	R1693	B-6E	R1782	A-1C	R1955	A-4D	TP1526	A-4A																					
C1426	B-8F	C1644	B-8C	C2210	A-1H	IC2204	A-1G	Q1511	A-6A	R1425	B-7F	R1618	B-8C	R1695	B-7E	R1783	B-2C	R1956	A-4D	TP1527	B-4C																					
C1430	A-6F	C1645	B-8C	C2211	B-1H	<b>L</b>		Q1514	B-7A	R1426	B-7F	R1619	B-8C	R1696	B-7D	R1784	B-3D	R1957	B-3D	TP1604	B-8D																					
C1431	A-5F	C1649	A-7C	C2212	B-1H	L1401	A-8F	Q1518	B-7C	R1427	B-8F	R1620	B-8C	R1697	B-6E	R1785	B-1D	R1958	B-6C	TP1606	A-7B																					
C1432	A-8F	C1650	A-6E	C2248	A-1H	L1402	A-7F	Q1519	B-6C	R1428	B-8F	R1622	B-8D	R1699	B-6E	R1786	A-2D	R1959	A-5C	TP1607	A-7B																					
C1433	A-7F	C1651	A-6F	C2249	B-1H	L1502	A-5A	Q1526	B-6A	R1429	B-8F	R1623	B-8D	R1701	B-3D	R1787	A-2D	R1960	B-3C	TP1608	B-8C																					
C1434	A-7F	C1652	B-6E	<b>D</b>		L1601	A-6E	Q1603	B-8B	R1430	B-8F	R1624	B-8D	R1702	A-1D	R1788	B-2D	R1961	A-4C	TP1609	B-8C																					
C1437	A-7E	C1653	A-6F	D1401	A-5F	L1602	A-7B	Q1604	B-8B	R1431	B-8E	R1625	B-8D	R1705	B-2C	R1789	B-3C	R1962	B-5B	TP1610	B-8C																					
C1439	A-7F	C1654	A-6E	D1403	A-5F	L2204	A-1G	Q1605	B-8B	R1432	A-8E	R1626	B-8D	R1706	B-1D	R1790	B-2C	R1963	B-5B	<b>X</b>																						
C1440	A-7F	C1655	A-7E	D1405	B-6F	<b>PG</b>		Q1607	B-8D	R1433	B-8E	R1627	B-8D	R1707	B-1D	R1791	A-1C	R1964	B-5B	X1701	A-2C																					
C1441	A-8E	C1656	B-8E	D1406	A-7E	PG1401	A-8F	Q1609	B-8D	R1434	A-8E	R1630	B-8B	R1708	B-1D	R1792	B-2B	R1966	B-5D	X1702	A-2C																					
C1442	B-8F	C1657	B-8E	D1407	A-6F	PG1502	A-4C	Q1611	B-8D	R1435	A-8E	R1632	B-7C	R1709	B-1D	R1796	B-2C	R1968	B-6C	X1901	A-6C																					
C1443	A-8E	C1658	A-6E	D1410	A-8F	PG1503	A-4A	Q1618	B-7D	R1436	B-8E	R1635	B-7C	R1710	B-1D	R1901	A-4C	R1969	B-4B	X2201	A-1G																					
C1501	B-5A	C1659	A-6E	D1411	A-7E	PG1521	A-6A	Q1619	B-7B	R1439	B-7F	R1636	B-8C	R1711	B-2D	R1902	A-5D	R1970	B-5C	<b>ZD</b>																						
C1502	B-4C	C1661	A-7B	D1412	A-8E	PG1522	A-5A	Q1623																																		



MA [MAIN]

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location						
<b>BZ</b>		C1609	A-8C	C1909	B-3D	D1932	A-6C	Q1403	B-8E	<b>QF</b>		R1526	A-4C	R1667	B-7E	R1735	B-1C	R1928	B-3D	R2203	B-1G														
BZ1701	A-1D	C1610	A-8C	C1910	B-3D	<b>IC</b>		Q1407	B-6F	QF1901	A-3C	R1527	B-4C	R1668	B-8B	R1736	B-1C	R1931	B-5D	R2204	A-1G														
<b>C</b>		C1611	B-8C	C1911	B-4D	IC1401	A-7F	Q1408	B-6F	<b>R</b>		R1528	B-4A	R1669	B-8B	R1737	B-1C	R1932	B-5D	R2205	B-1H														
C1404	A-7F	C1612	A-8B	C1913	A-4D	IC1402	A-7E	Q1411	A-8F	R1381	A-1A	R1529	B-4A	R1670	B-8B	R1738	B-2B	R1933	B-6C	R2206	B-1H														
C1405	A-7E	C1613	B-6E	C1914	B-4D	IC1601	A-8C	Q1412	B-8F	R1402	B-8F	R1531	A-4C	R1671	B-8B	R1739	B-1C	R1934	B-4B	R2207	B-1G														
C1406	A-8F	C1614	B-8D	C1916	B-4D	IC1602	A-7D	Q1413	A-8F	R1403	B-8F	R1540	B-6A	R1672	B-8B	R1740	B-1C	R1935	B-5B	R2260	A-2G														
C1408	A-7F	C1618	A-7B	C1917	B-4D	IC1605	A-6E	Q1414	B-8E	R1405	B-7F	R1541	A-5A	R1673	B-8B	R1741	B-1C	R1936	B-3D	<b>RJ</b>															
C1409	A-6F	C1619	B-7C	C1918	B-6C	IC1606	A-8E	Q1415	B-5F	R1406	B-6F	R1601	B-7C	R1674	B-6E	R1742	B-1C	R1937	B-3D	RJ1401	A-8F	<b>RT</b>													
C1410	A-6F	C1620	A-8B	C1919	B-6C	IC1607	A-8D	Q1416	B-5F	R1407	B-7F	R1602	B-7C	R1675	A-8B	R1743	B-1C	R1938	B-3D	<b>RT</b>															
C1411	B-6F	C1622	B-7C	C1921	A-5C	IC1608	A-7E	Q1417	B-7F	R1408	B-7F	R1603	B-7C	R1676	A-7C	R1744	B-2C	R1939	B-6C	RT1401	A-8F														
C1412	A-6F	C1623	B-7C	C1922	B-6C	IC1612	B-8B	Q1418	B-7F	R1409	B-7F	R1604	B-7C	R1677	A-7B	R1747	B-2C	R1940	A-3D	RT1402	A-5F														
C1413	A-6F	C1624	B-7C	C1923	A-3C	IC1613	B-8B	Q1419	B-7F	R1410	B-7F	R1605	B-8C	R1678	B-6E	R1748	B-2C	R1941	A-3D	RT1601	A-7C														
C1414	A-7F	C1625	A-7C	C1925	A-5D	IC1701	A-2C	Q1420	B-8F	R1411	B-7E	R1606	B-7C	R1679	B-6D	R1749	B-2C	R1942	B-3D	<b>T</b>															
C1415	A-7F	C1627	B-7D	C1926	B-5D	IC1702	A-1B	Q1421	B-8F	R1413	B-7F	R1607	B-8C	R1680	B-6E	R1750	B-2C	R1943	B-3D	T1401	A-8F														
C1416	A-7F	C1628	B-7D	C1927	A-5C	IC1703	A-2D	Q1422	B-8F	R1414	B-6F	R1608	B-7C	R1681	B-6E	R1752	B-3C	R1944	B-3D	<b>TP</b>															
C1417	A-7F	C1629	A-7D	C1928	B-6D	IC1706	A-2C	Q1424	B-7E	R1415	B-6F	R1609	B-8C	R1682	B-8E	R1753	B-3C	R1945	B-3D	TP1401	B-7F														
C1418	A-7F	C1630	A-7D	C1954	B-6C	IC1901	B-5C	Q1425	B-8E	R1416	B-7F	R1610	B-8C	R1683	B-8D	R1754	B-1C	R1946	A-3D	TP1402	B-7F														
C1419	A-8F	C1631	A-8C	C2202	B-2G	IC1902	A-4D	Q1504	B-7A	R1417	B-6F	R1611	B-7E	R1684	B-8E	R1755	B-1C	R1947	B-3D	TP1501	B-6B														
C1420	A-8E	C1632	B-7D	C2203	B-1G	IC1903	A-6C	Q1505	B-7A	R1418	B-8E	R1612	B-7E	R1685	B-8D	R1756	B-2C	R1948	B-3D	TP1504	B-6A														
C1421	B-8F	C1633	B-7D	C2205	A-1G	IC1904	A-5D	Q1506	A-6A	R1419	B-6F	R1613	B-8C	R1686	B-8D	R1757	B-2C	R1949	A-3D	TP1520	B-6A														
C1422	B-8E	C1634	A-8C	C2206	B-1H	IC1905	A-3D	Q1507	B-8A	R1420	B-7F	R1614	B-8C	R1688	B-7D	R1758	B-1C	R1950	B-5C	TP1523	B-4A														
C1423	B-8F	C1635	B-7D	C2207	A-1G	IC2201	B-2G	Q1508	B-8A	R1422	B-7F	R1615	B-8C	R1690	B-8D	R1780	B-1B	R1953	B-5B	TP1524	B-5A														
C1424	A-8F	C1642	B-8C	C2208	A-1G	IC2202	A-1G	Q1509	B-7A	R1423	B-7F	R1616	B-8C	R1691	B-6E	R1781	B-2B	R1954	A-3C	TP1525	B-6A														
C1425	A-8E	C1643	A-8B	C2209	A-1H	IC2203	A-1H	Q1510	B-5B	R1424	B-7F	R1617	B-8C	R1693	B-6E	R1782	A-1C	R1955	A-4D	TP1526	A-4A														
C1426	B-8F	C1644	B-8C	C2210	A-1H	IC2204	A-1G	Q1511	A-6A	R1425	B-7F	R1618	B-8C	R1695	B-7E	R1783	B-2C	R1956	A-4D	TP1527	B-4C														
C1430	A-6F	C1645	B-8C	C2211	B-1H	<b>L</b>		Q1514	B-7A	R1426	B-7F	R1619	B-8C	R1696	B-7D	R1784	B-3D	R1957	B-3D	TP1604	B-8D														
C1431	A-5F	C1649	A-7C	C2212	B-1H	L1401	A-8F	Q1518	B-7C	R1427	B-8F	R1620	B-8C	R1697	B-6E	R1785	B-1D	R1958	B-6C	TP1606	A-7B														
C1432	A-8F	C1650	A-6E	C2248	A-1H	L1402	A-7F	Q1519	B-6C	R1428	B-8F	R1622	B-8D	R1699	B-6E	R1786	A-2D	R1959	A-5C	TP1607	A-7B														
C1433	A-7F	C1651	A-6F	C2249	B-1H	L1502	A-5A	Q1526	B-6A	R1429	B-8F	R1623	B-8D	R1701	B-3D	R1787	A-2D	R1960	B-3C	TP1608	B-8C														
C1434	A-7F	C1652	B-6E	<b>D</b>		L1601	A-6E	Q1603	B-8B	R1430	B-8F	R1624	B-8D	R1702	A-1D	R1788	B-2D	R1961	A-4C	TP1609	B-8C														
C1437	A-7E	C1653	A-6F	D1401	A-5F	L1602	A-7B	Q1604	B-8B	R1431	B-8E	R1625	B-8D	R1705	B-2C	R1789	B-3C	R1962	B-5B	TP1610	B-8C														
C1439	A-7F	C1654	A-6E	D1403	A-5F	L2204	A-1G	Q1605	B-8B	R1432	A-8E	R1626	B-8D	R1706	B-1D	R1790	B-2C	R1963	B-5B	<b>X</b>															
C1440	A-7F	C1655	A-7E	D1405	B-6F	<b>PG</b>		Q1607	B-8D	R1433	B-8E	R1627	B-8D	R1707	B-1D	R1791	A-1C	R1964	B-5B	X1701	A-2C														
C1441	A-8E	C1656	B-8E	D1406	A-7E	PG1401	A-8F	Q1609	B-8D	R1434	A-8E	R1630	B-8B	R1708	B-1D	R1792	B-2B	R1966	B-5D	X1702	A-2C														
C1442	B-8F	C1657	B-8E	D1407	A-6F	PG1502	A-4C	Q1611	B-8D	R1435	A-8E	R1632	B-7C	R1709	B-1D	R1796	B-2C	R1968	B-6C	X1901	A-6C														
C1443	A-8E	C1658	A-6E	D1410	A-8F	PG1503	A-4A	Q1618	B-7D	R1436	B-8E	R1635	B-7C	R1710	B-1D	R1901	A-4C	R1969	B-4B	X2201	A-1G														
C1501	B-5A	C1659	A-6E	D1411	A-7E	PG1521	A-6A	Q1619	B-7B	R1439	B-7F	R1636	B-8C	R1711	B-2D	R1902	A-5D	R1970	B-5C	<b>ZD</b>															
C1502	B-4C	C1661	A-7B	D1412	A-8E	PG1522	A-5A	Q1623	B-8D	R1441	A-7E	R1637	B-8C	R1713	B-1D	R1903	A-5D	R1975	B-6D	ZD1601	A-8C														
C1503	B-4A	C1670	B-7D	D1501	A-4B	PG1523	A-2A	Q1624	B-6E	R1443	A-7E	R1638	B-8B	R1714	A-1D	R1904	A-5C	R1978	A-3B	ZD1602	A-7E														
C1504	B-4C	C1701	A-3D	D1502	A-5A	PG1524	A-3A	Q1626	B-6E	R1444	B-7E	R1639	B-8C	R1715	B-2D	R1905	B-7C	R1979	B-3C	ZD1701	A-2C														
C1505	B-4C	C1703	A-2C	D1503	A-5B	PG1541	A-3B	Q1637	B-5D	R1445	B-7F	R1640	B-8B	R1717	B-2D	R1906	B-6C	R1980	B-3B	ZD1702	A-2D														
C1507	B-5A	C1704	A-2C	D1601	A-7C	PG1542	A-5B	Q1702	B-2C	R1446	B-7F	R1641	B-7D	R1718	B-2C	R1909	A-3B	R1982	B-5D	ZD1901	A-4D														
C1508	B-3A	C1706	B-1B	D1604	A-8B	PG1543	A-8B	Q1901	B-3C	R1447	B-7F	R1642	B-7D	R1719	B-2D	R1910	A-6E	R1983	B-6D	ZD1903	A-5C														
C1513	A-5A	C1707	A-1B	D1605	A-7B	PG1562	A-8B	Q1902	B-3C	R1505	B-7A	R1643	B-7D	R1720	B-2D	R1911	A-5D	R1984	B-5D																
C1514	B-5A	C1708	B-1C	D1607	A-7C	PG1581	A-1D	Q1903	B-6D	R1506	B-6A	R1644	B-7D	R1721	B-2D	R1912	B-5D	R1985	B-5D																
C1515	A-8B	C1709	B-2C	D1608	A-7D	PG1582	A-6D	Q1904	B-3C	R1507	B-6A	R1645	B-7D	R1722	B-2D	R1913	B-3C	R1986	B-5D																
C1516	A-8B	C1710	A-1C	D1609	A-8B	PG1603	A-8B	Q1905	B-5D	R1508	A-7A	R1646	B-7D	R1723	B-2D	R1914	B-3C	R1987	B-5D																
C1517	A-8B	C1711	B-1C	D1612	B-8D	PG1608	A-7D	Q1906	B-6D	R1509	B-8A	R1647	B-7D	R1724	B-2D	R1915	B-3C	R1988	A-4D																
C1518	B-8B	C1712	B-2C	D1614	B-7E	PG1609	A-6D	Q1913	B-4A	R1510	B-8A	R1648	B-7D	R1725	B-2D	R1916	B-3C	R1990	A-4D																
C1519	B-8B	C1713	B-2C	D1619	A-6D	PG1701	A-1D	Q1914	B-4A	R1511	A-7A	R1651	B-7C	R1726	B-2C	R1917	A-3C	R1993	B-3D																
C1520	B-8B	C1714	A-1C	D1701	A-2D	PG1702	A-1C	Q1919	B-6D	R1512	B-5B	R1652	B-7C	R1727	B-2C	R1918	A-5D	R1994	B-3D																

MA CIRCUIT BOARD - SIDE B -

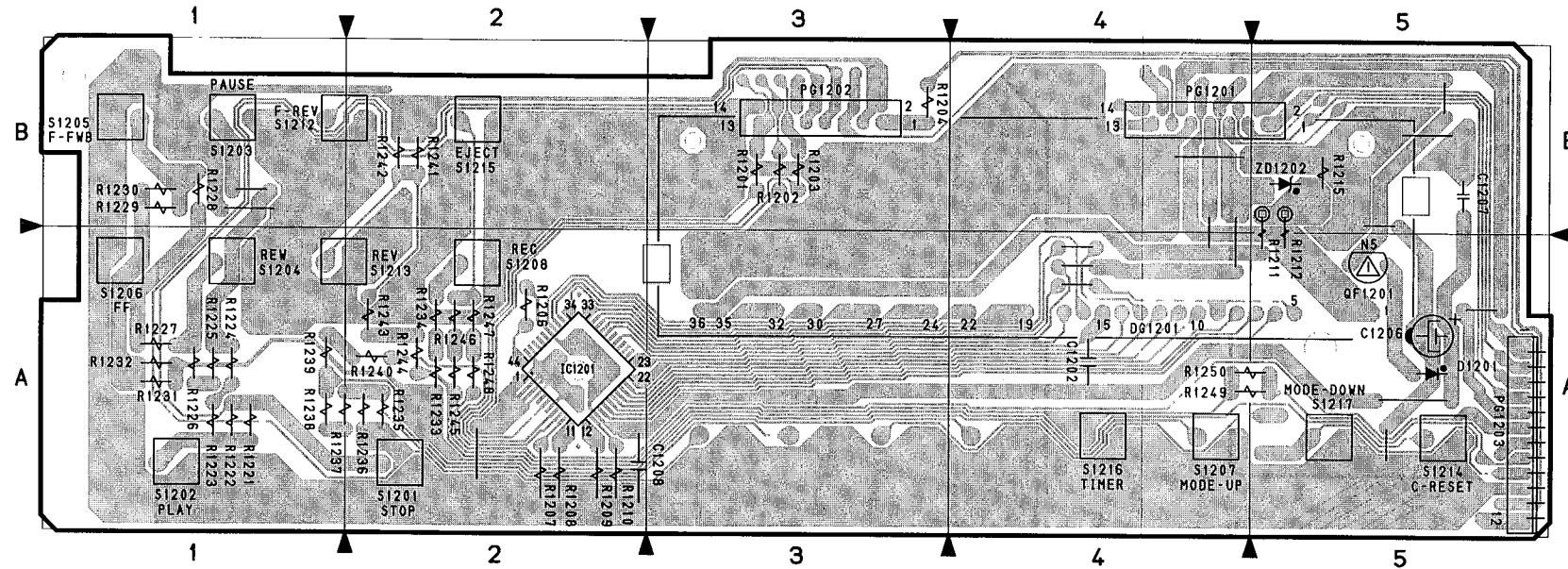


NOTE: ADD 1000 TO ALL CIRCUIT NUMBERS.  
 (FOR EXAMPLE READ R511 IS R1511 IN PARTS LIST.)

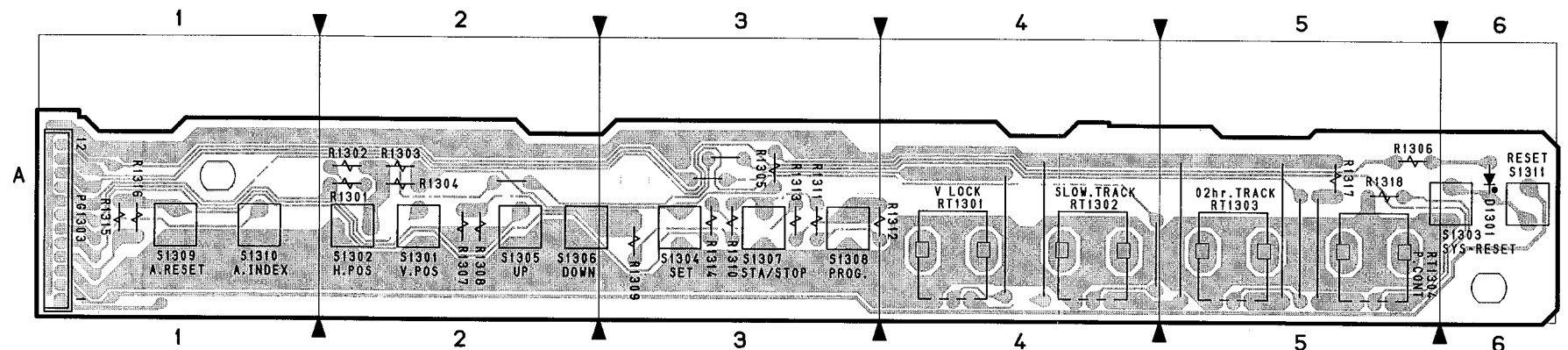
MA (MAIN) - SIDE B -  
 [PATTERN No. JA1400-3]



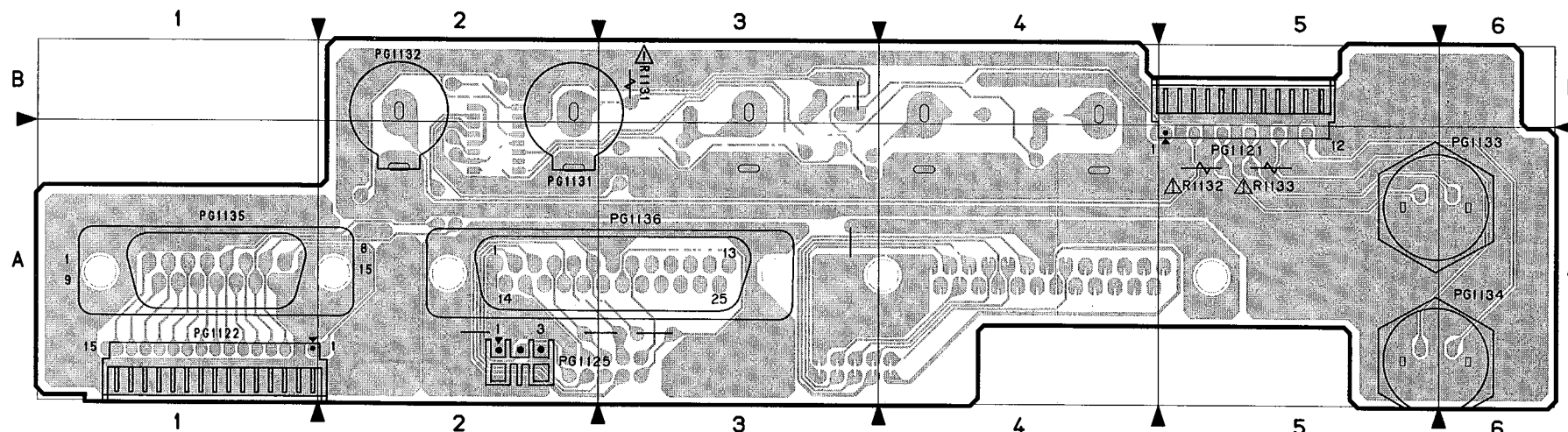
FIT, FSW, REA, MWB CIRCUIT BOARD



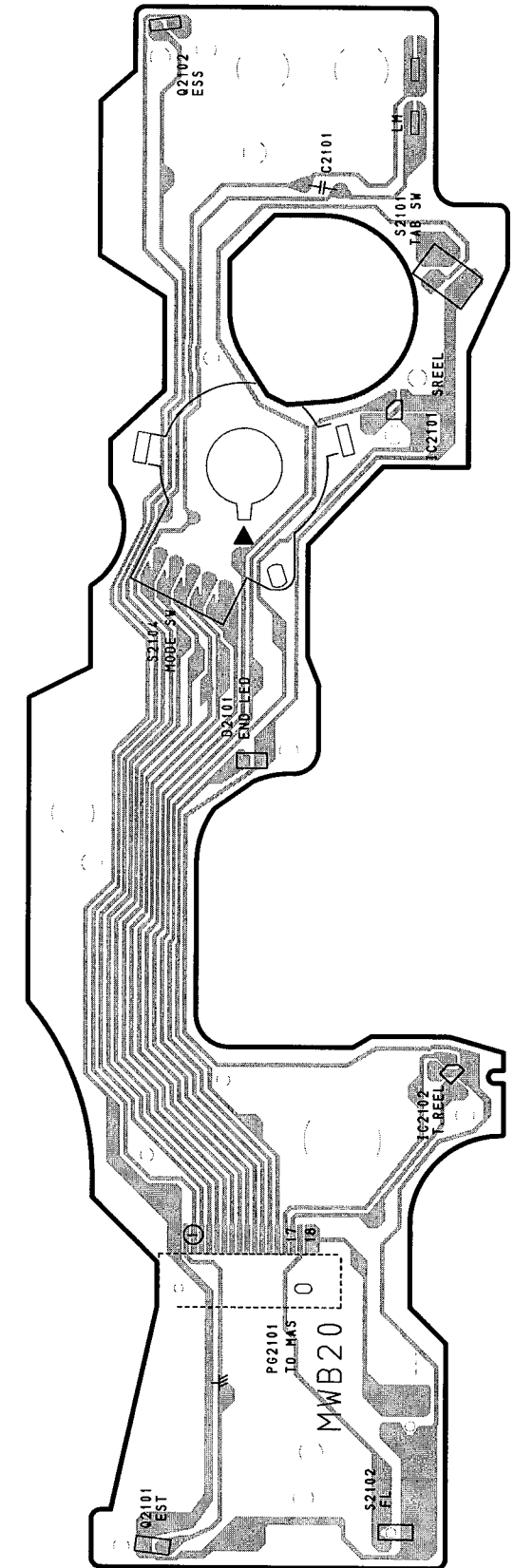
FIT (DISPLAY)  
[PATTERN No. JK1220-4]



FSW (FRONT SWITCH)  
[PATTERN No. JK1220-4]



REA (15P JACK • VIDEO I/O)  
[PATTERN No. JK1220-4]



MWB (SENSOR)  
[PATTERN No. JK1036-5]

# IDENTIFICATION OF PARTS LOCATION

## FIT [DISPLAY]

Symbol No	Parts Location	Symbol No	Parts Location
<b>C</b>		R1249	4A
C1202	4A	R1250	4A
C1206	5A	<b>S</b>	
C1207	5B	S1201	2A
C1208	2A	S1202	1A
<b>D</b>		S1203	1B
D1201	5A	S1204	1A
<b>DG</b>		S1205	1B
DG1201	4A	S1206	1A
<b>IC</b>		S1207	4A
IC1201	2A	S1208	2A
<b>PG</b>		S1212	1B
PG1201	4B	S1213	1A
PG1202	3B	S1214	5A
PG1203	5A	S1215	2B
<b>QF</b>		S1216	4A
QF1201	5A	S1217	5A
<b>R</b>		<b>ZD</b>	
R1201	3B	ZD1202	5B
R1202	3B		
R1203	3B		
R1204	3B		
R1206	2A		
R1207	2A		
R1208	2A		
R1209	2A		
R1210	2A		
R1211	5A		
R1212	5A		
R1215	5B		
R1221	1A		
R1222	1A		
R1223	1A		
R1224	1A		
R1225	1A		
R1226	1A		
R1227	1A		
R1228	1B		
R1229	1B		
R1230	1B		
R1231	1A		
R1232	1A		
R1233	2A		
R1234	2A		
R1235	2A		
R1236	2A		
R1237	1A		
R1238	1A		
R1239	1A		
R1240	2A		
R1241	2B		
R1242	2B		
R1243	2A		
R1244	2A		
R1245	2A		
R1246	2A		
R1247	2A		
R1248	2A		

## FSW [FRONT SWITCH] REA [15P JACK • VIDEO I/O]

Symbol No	Parts Location
<b>D</b>	
D1301	6A
<b>PG</b>	
PG1303	1A
<b>R</b>	
R1301	2A
R1302	2A
R1303	2A
R1304	2A
R1305	3A
R1306	5A
R1307	2A
R1308	2A
R1309	3A
R1310	3A
R1311	3A
R1312	4A
R1313	3A
R1314	3A
R1315	1A
R1316	1A
R1317	5A
R1318	5A
<b>RT</b>	
RT1301	4A
RT1302	4A
RT1303	5A
RT1304	5A
<b>S</b>	
S1301	2A
S1302	2A
S1303	6A
S1304	3A
S1305	2A
S1306	2A
S1307	3A
S1308	3A
S1309	1A
S1310	1A
S1311	6A

Symbol No	Parts Location
<b>PG</b>	
PG1121	5A
PG1122	1A
PG1125	2A
PG1131	2B
PG1132	2B
PG1133	5A
PG1134	5A
PG1135	1A
PG1136	3A
<b>R</b>	
R1131	3B
R1132	5A
R1133	5A

**PRE [PRE/REC AMP]**

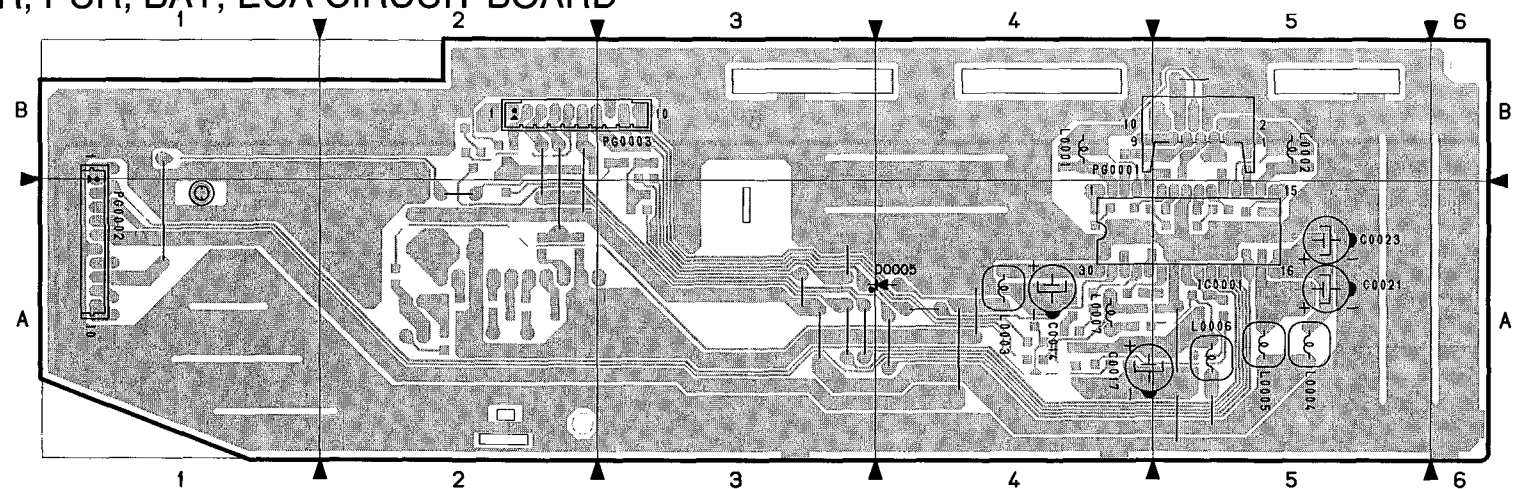
Symbol No	Parts Location	Symbol No	Parts Location
<b>C</b>			
C0001	B-4A	R0009	B-4A
C0002	B-4B	R0010	B-4A
C0003	B-4B	R0011	B-5A
C0004	B-5B	R0012	B-5A
C0005	B-4A	R0013	B-4A
C0006	B-5A	R0014	B-4A
C0007	B-5B	R0015	B-4A
C0008	B-5B	R0016	B-4A
C0009	B-5A	R0017	B-4A
C0010	B-5B	R0018	B-2B
C0011	B-5A	R0019	B-2B
C0012	B-4A	R0022	B-4A
C0013	B-5A	R0023	B-3A
C0014	A-4A		
C0015	B-4A		
C0016	B-4A		
C0017	A-4A		
C0018	B-4A		
C0019	B-5A		
C0020	B-5A		
C0021	A-5A		
C0022	B-5A		
C0023	A-5A		
<b>D</b>			
D0001	B-2A		
D0002	B-2B		
D0004	B-3B		
D0005	A-4A		
<b>IC</b>			
IC0001	A-5A		
<b>L</b>			
L0001	A-4B		
L0002	A-5B		
L0003	A-4A		
L0004	A-5A		
L0005	A-5A		
L0006	A-5A		
L0007	A-4A		
<b>PG</b>			
PG0001	A-5B		
PG0002	A-1A		
PG0003	A-2B		
<b>Q</b>			
Q0001	B-2B		
Q0002	B-5A		
Q0003	B-4A		
Q0004	B-4A		
Q0005	B-3A		
<b>R</b>			
R0001	B-4A		
R0002	B-4B		
R0003	B-4A		
R0004	B-5A		
R0005	B-5A		
R0006	B-5A		
R0007	B-5A		
R0008	B-5B		

**PTR [POWER TRANS] PUR [REGULATOR]**

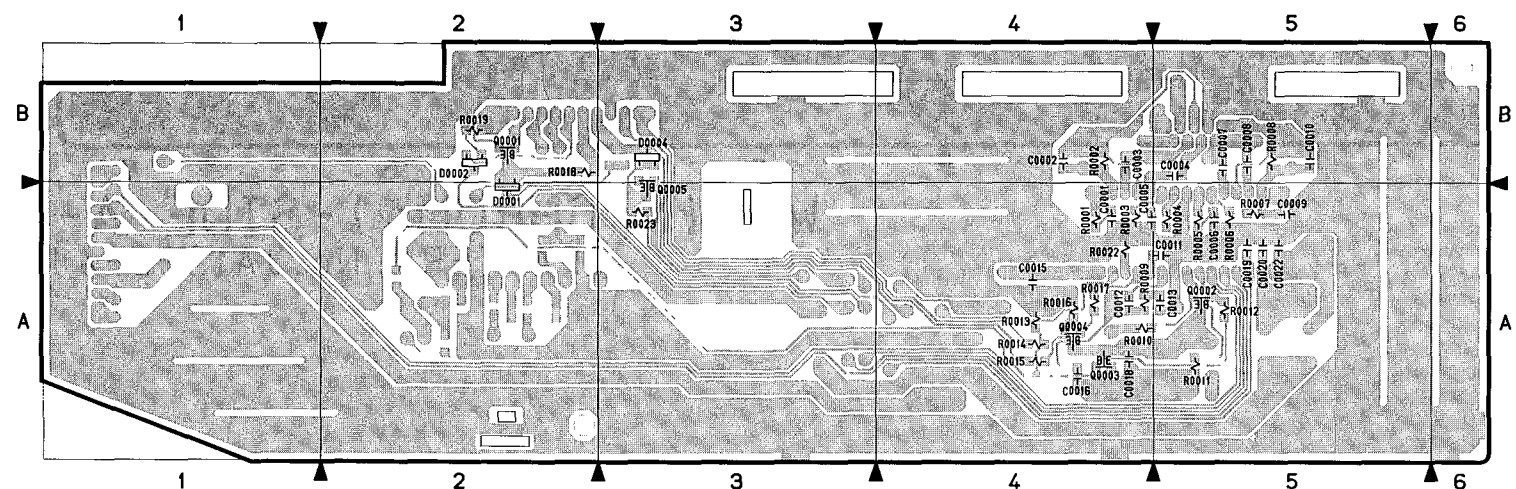
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C1852	6B		
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C1855	5A		
C1856	6A		
C1857	6A		
C1858	6B		
C1859	6A		
C1867	6B		
C1891	1A		
<b>D</b>			
D1851	5B		
D1852	6A		
D1856	6B		
D1857	6A		
<b>FU</b>			
FU0851	4B		
FU0852	4B		
FU0853	2B		
<b>L</b>			
L1851	2A		
L1852	2A		
<b>PG</b>			
PG2853	7B		
<b>Q</b>			
Q1851	6B		
<b>R</b>			
R1851	6B		
R1871	7A		
<b>T</b>			
T0852	4A		
<b>ZD</b>			
ZD1851	6B		

Symbol No	Parts Location	Symbol No	Parts Location
<b>C</b>			
C2851	3A		
C2852	2B		
C2853	2B		
C2854	2B		
C2855	2B		
C2856	1B		
C2857	1B		
C2858	1B		
C2859	1A		
C2860	1A		
C2861	1A		
C2865	1A		
C2870	1A		
C2872	1A		
<b>D</b>			
D2851	3B		
D2852	2B		
D2853	2B		
D2854	3B		
<b>IC</b>			
IC2851	1A		
IC2852	1B		
<b>PG</b>			
PG2851	3A		
PG2852	2A		
PG2853	3A		
<b>Q</b>			
Q2851	2B		
Q2863	1A		
<b>R</b>			
R1884	1A		
R2851	2B		
R2852	2B		
R2859	1A		
R2860	1A		
R2868	1A		
R2869	1A		
R2870	1A		
R2881	1A		
R2882	1B		
R2883	1B		
<b>ZD</b>			
ZD2851	2B		
ZD2858	1A		

PRE, PTR, PUR, BAT, ECA CIRCUIT BOARD



PRE (PRE/REC AMP) - SIDE A -  
[PATTERN No. JA1240-2]







# IDENTIFICATION OF PARTS LOCATION

WYC [Y/CHROMA]

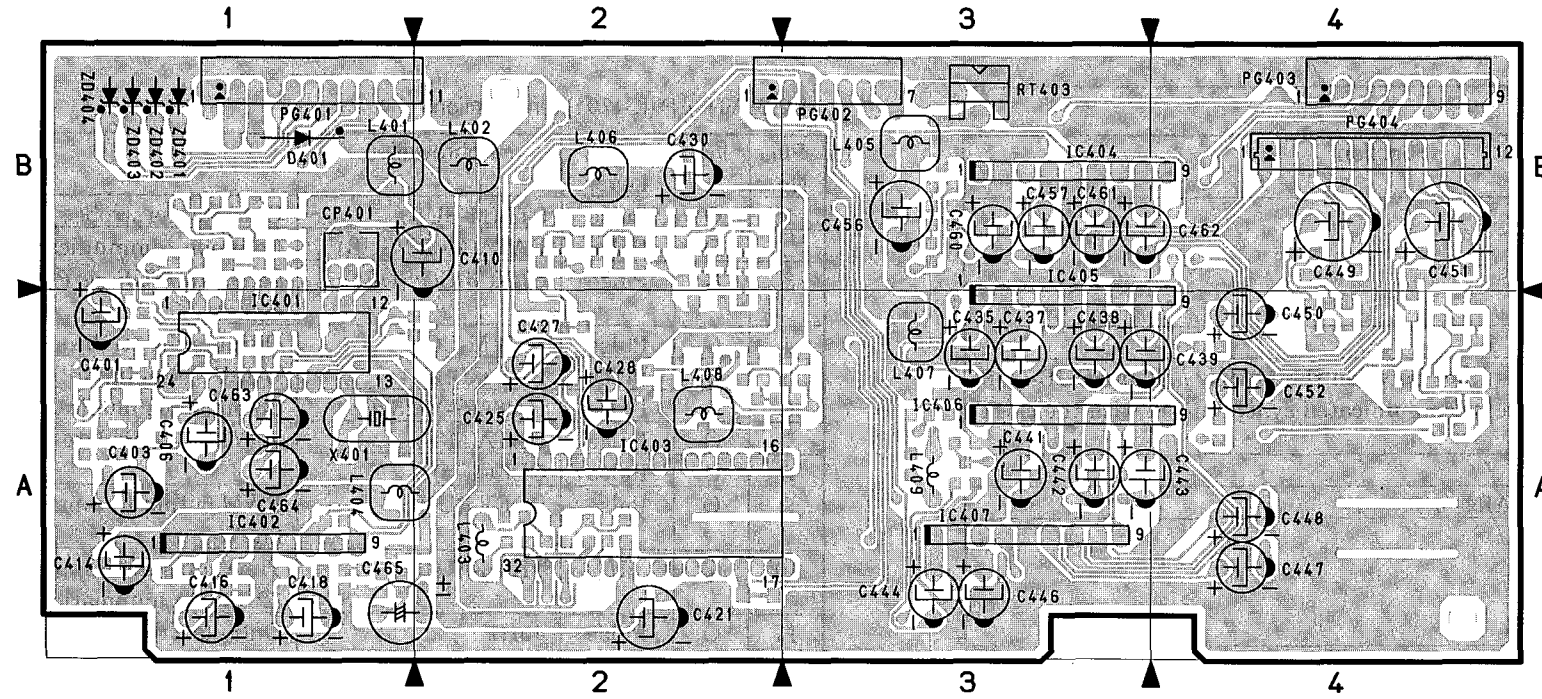
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<b>C</b>		C0259	B-2A	C0317	B-6B	L0215	A-1B	Q0238	B-5A	R0248	B-4A	R0306	B-6B		
C0201	B-3B	C0260	B-2A	C0318	B-4A	L0216	A-1B	Q0239	B-5A	R0249	B-4A	R0307	B-5B		
C0202	B-3B	C0261	B-2A	C0319	A-7A	L0217	A-1A	Q0240	B-5A	R0250	B-4A	R0308	B-5B		
C0203	B-3B	C0262	B-2A	C0320	B-6A	L0218	A-1A	Q0241	B-5A	R0251	B-4A	R0309	B-5B		
C0204	B-3B	C0263	B-2A	C0321	A-7A	L0219	A-1A	Q0242	B-6B	R0252	B-5A	R0310	B-5B		
C0205	B-3A	C0264	B-1A	C0322	A-7A	L0220	A-1A	Q0243	B-7B	R0253	B-4A	R0311	B-5B		
C0206	B-3A	C0265	B-2A	C0323	A-7B	L0221	A-1A	Q0244	B-6B	R0254	B-2A	R0312	B-5B		
C0207	B-3B	C0266	B-1A	C0324	B-7A	L0222	A-1A	Q0245	B-7A	R0255	B-2A	R0313	B-5A		
C0208	B-3A	C0267	B-1A	C0325	B-7B	L0223	A-1A	Q0246	B-6A	R0256	B-2A	R0314	B-5A		
C0209	A-3B	C0268	B-1A	C0327	B-7A	L0224	A-6A	Q0247	B-6A	R0257	B-2A	R0315	B-5A		
C0210	A-2B	C0269	B-1A	C0331	B-5A	L0225	A-6A	Q0248	B-5B	R0258	B-2A	R0316	B-5A		
C0211	B-3A	C0270	B-1A	C0332	B-6A	L0226	A-5A	Q0249	B-7A	R0259	B-2A	R0317	B-5A		
C0212	A-3B	C0271	B-1A	<b>CP</b>		L0227	A-5B	<b>R</b>		R0260	B-2A	R0318	B-5A		
C0213	A-3B	C0272	B-1A	CP0201	A-2B	L0228	A-5B	R0201	B-4B	R0261	B-1B	R0319	B-5A		
C0214	B-3B	C0273	B-1A	CP0202	A-4B	L0229	A-5B	R0202	B-3B	R0262	B-1B	R0320	B-6B		
C0215	A-4B	C0274	B-1A	CP0203	A-3A	L0230	A-6A	R0203	B-3B	R0263	B-1B	R0321	B-5A		
C0216	B-3B	C0275	B-1A	CP0204	A-4A	<b>PG</b>		R0204	B-3B	R0264	B-1B	R0322	B-5A		
C0217	A-4B	C0276	B-1A	CP0205	A-4A	PG0201	A-6B	R0205	B-3A	R0265	B-1B	R0323	B-5A		
C0218	B-3A	C0277	B-1A	CP0206	A-5B	PG0202	A-4B	R0206	B-3A	R0266	B-1B	R0324	B-5A		
C0219	A-4A	C0278	B-1A	CP0207	A-5A	PG0203	A-1B	R0207	B-3B	R0267	B-1B	R0325	B-5A		
C0220	A-4A	C0279	B-1A	<b>D</b>		PG0204	A-3B	R0208	B-2B	R0268	B-1B	R0326	B-6A		
C0221	A-4B	C0280	B-1A	D0201	B-3B	<b>Q</b>		R0209	B-2B	R0269	B-1A	R0327	B-6B		
C0222	B-4A	C0281	B-1A	D0202	A-2A	Q0201	B-4B	R0210	B-2B	R0270	B-2A	R0328	B-6A		
C0223	A-4A	C0282	A-6A	D0203	A-2A	Q0202	B-3B	R0211	B-3B	R0271	B-1A	R0330	B-6B		
C0224	A-4B	C0283	B-6B	D0204	A-6A	Q0203	B-3B	R0212	B-4B	R0272	B-1A	R0331	B-6A		
C0225	B-4B	C0284	B-6B	D0205	A-6A	Q0204	B-5B	R0213	B-4B	R0273	B-1A	R0332	B-6A		
C0226	B-2A	C0285	B-6B	D0206	B-5A	Q0205	B-5B	R0214	B-4A	R0274	B-1A	R0333	B-7B		
C0227	A-2A	C0286	B-6B	D0207	A-2B	Q0206	B-3B	R0215	B-4A	R0275	B-1A	R0334	B-7B		
C0228	B-2A	C0287	B-6A	<b>EM</b>		Q0207	B-2B	R0216	B-4B	R0276	B-1A	R0335	B-7B		
C0229	B-3A	C0288	B-6A	EM0201	A-6A	Q0208	B-4B	R0217	B-4A	R0277	B-1A	R0338	B-6B		
C0230	B-3A	C0289	A-6A	EM0202	A-6A	Q0209	B-4B	R0218	B-4A	R0278	B-1A	R0339	B-7B		
C0231	A-3A	C0290	B-6A	EM0203	A-6A	Q0210	B-5A	R0219	B-5B	R0279	B-1A	R0340	B-7B		
C0232	B-3A	C0291	A-6A	EM0204	A-6A	Q0212	B-4A	R0220	B-5B	R0280	B-1A	R0341	B-7A		
C0233	B-3A	C0292	B-6A	EM0205	A-6A	Q0213	B-3A	R0221	B-5A	R0281	B-1A	R0342	B-7A		
C0234	B-3A	C0293	B-6A	EM0206	A-5A	Q0214	B-3A	R0222	B-3A	R0282	B-1A	R0343	B-6A		
C0235	A-4A	C0294	B-6B	<b>IC</b>		Q0215	B-3A	R0224	B-3A	R0283	B-1A	R0344	B-6A		
C0236	B-4A	C0295	B-6B	IC0201	A-3A	Q0216	B-4A	R0225	B-3A	R0284	B-1A	R0345	B-5B		
C0237	A-4A	C0296	A-5A	IC0202	A-1A	Q0217	B-4A	R0226	B-3A	R0285	B-1A	R0346	B-7A		
C0239	B-4A	C0297	B-5B	IC0203	A-6A	Q0218	B-4A	R0227	B-3A	R0286	B-1A	R0347	B-7A		
C0240	A-3A	C0298	A-5B	IC0204	A-6B	Q0219	B-4A	R0228	B-3A	R0287	B-1A	R0348	B-7A		
C0241	A-3A	C0299	B-5B	IC0205	A-7A	Q0220	B-4A	R0230	B-3A	R0288	B-1A	R0349	B-7A		
C0242	B-5A	C0300	B-5B	IC0206	B-7A	Q0221	B-5A	R0231	B-3A	R0289	B-1A	R0350	B-3A		
C0243	B-4A	C0301	B-5A	IC0207	B-7B	Q0222	B-2A	R0232	B-3A	R0290	B-1A	<b>RT</b>			
C0244	B-4A	C0302	A-6B	<b>L</b>		Q0223	B-2A	R0233	B-3A	R0291	B-1A	RT0201	A-3B		
C0245	B-5A	C0303	B-6B	L0201	A-4B	Q0224	B-1B	R0234	B-5A	R0292	B-1A	RT0202	A-5B		
C0246	B-5A	C0304	B-6A	L0202	A-3B	Q0225	B-1B	R0235	B-5A	R0293	B-1A	RT0203	A-5B		
C0247	B-4A	C0305	A-6A	L0203	A-3B	Q0226	B-1B	R0236	B-4A	R0294	B-1A	RT0204	A-6B		
C0248	A-4A	C0306	B-6A	L0204	A-3B	Q0227	B-1B	R0237	B-4A	R0295	B-1A	RT0205	A-7B		
C0249	B-1B	C0307	B-6B	L0205	A-2B	Q0228	B-1A	R0238	B-4A	R0296	B-1A	RT0206	A-7A		
C0250	B-1B	C0308	B-5A	L0206	A-4B	Q0229	B-1A	R0239	B-4A	R0297	B-1A	RT0207	A-7A		
C0251	B-1B	C0309	B-5A	L0207	A-2A	Q0230	B-1A	R0240	B-4A	R0298	B-1A	RT0301	A-1B		
C0252	B-1B	C0310	A-5A	L0208	A-4A	Q0231	B-1A	R0241	B-4A	R0299	B-1A	<b>TP</b>			
C0253	B-1A	C0311	B-6A	L0209	A-2A	Q0232	B-1A	R0242	B-4A	R0300	B-1B	TP0201	B-3A		
C0254	B-1B	C0312	B-6A	L0210	A-5A	Q0233	B-6B	R0243	B-4A	R0301	B-6B	TP0301	B-1B		
C0255	B-1B	C0313	B-6A	L0211	A-4A	Q0234	B-5B	R0244	B-4A	R0302	B-6A	TP0302	B-3A		
C0256	B-1B	C0314	B-6A	L0212	A-2A	Q0235	B-5B	R0245	B-4A	R0303	B-6A	<b>X</b>			
C0257	B-1B	C0315	B-5A	L0213	A-2A	Q0236	B-5A	R0246	B-4A	R0304	B-6A	X0201	A-3A		
C0258	A-1B	C0316	A-5A	L0214	A-1B	Q0237	B-5A	R0247	B-4A	R0305	B-6B				



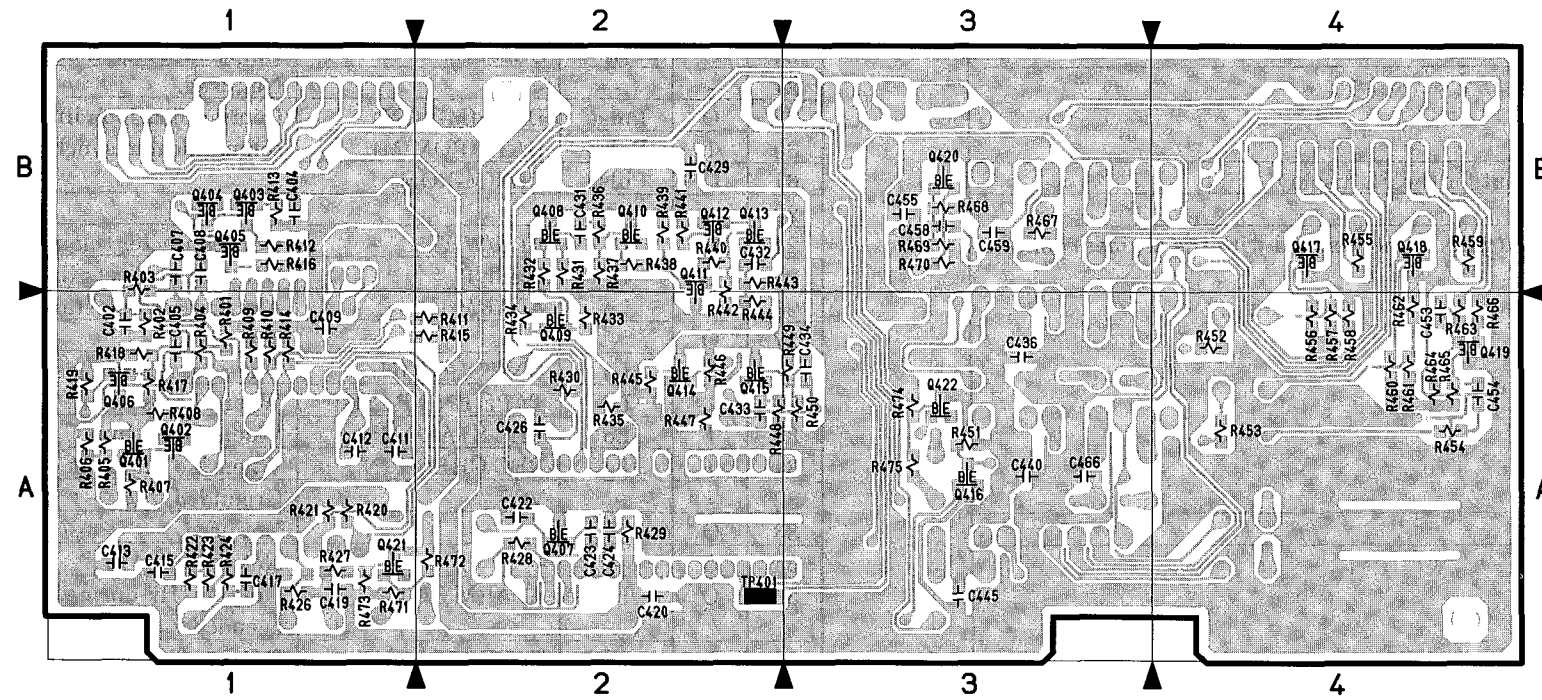
AGC [AGC/OSD]

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
<b>C</b>		C0458	B-3B	Q0422	B-3A	R0458	B-4A
C0401	A-1A	C0459	B-3B	<b>R</b>		R0459	B-4B
C0402	B-1A	C0460	A-3B	R0401	B-1A	R0460	B-4A
C0403	A-1A	C0461	A-3B	R0402	B-1A	R0461	B-4A
C0404	B-1B	C0462	A-3B	R0403	B-1B	R0462	B-4A
C0405	B-1A	C0463	A-1A	R0404	B-1A	R0463	B-4A
C0406	A-1A	C0464	A-1A	R0405	B-1A	R0464	B-4A
C0407	B-1B	C0465	A-1A	R0406	B-1A	R0465	B-4A
C0408	B-1B	C0466	B-3A	R0407	B-1A	R0466	B-4A
C0409	B-1A	<b>CP</b>		R0408	B-1A	R0467	B-3B
C0410	A-2B	CP0401	A-1B	R0409	B-1A	R0468	B-3B
C0411	B-1A	<b>D</b>		R0410	B-1A	R0469	B-3B
C0412	B-1A	D0401	A-1B	R0411	B-2A	R0470	B-3B
C0413	B-1A	<b>IC</b>		R0412	B-1B	R0471	B-1A
C0414	A-1A	IC0401	A-1A	R0413	B-1B	R0472	B-2A
C0415	B-1A	IC0402	A-1A	R0414	B-1A	R0473	B-1A
C0416	A-1A	IC0403	A-2A	R0415	B-2A	R0474	B-3A
C0417	B-1A	IC0404	A-3B	R0416	B-1B	R0475	B-3A
C0418	A-1A	IC0405	A-3A	R0417	B-1A	<b>RT</b>	
C0419	B-1A	IC0406	A-3A	R0418	B-1A	RT0403	A-3B
C0420	B-2A	IC0407	A-3A	R0419	B-1A	<b>TP</b>	
C0421	A-2A	<b>L</b>		R0420	B-1A	TP0401	B-2A
C0422	B-2A	L0401	A-1B	R0421	B-1A	<b>X</b>	
C0423	B-2A	L0402	A-2B	R0422	B-1A	X0401	A-1A
C0424	B-2A	L0403	A-2A	R0423	B-1A	<b>ZD</b>	
C0425	A-2A	L0404	A-1A	R0424	B-1A	ZD0401	A-1B
C0426	B-2A	L0405	A-3B	R0426	B-1A	ZD0402	A-1B
C0427	A-2A	L0406	A-2B	R0427	B-1A	ZD0403	A-1B
C0428	A-2A	L0407	A-3A	R0428	B-2A	ZD0404	A-1B
C0429	B-2B	L0408	A-2A	R0429	B-2A		
C0430	A-2B	L0409	A-3A	R0430	B-2A		
C0431	B-2B	<b>PG</b>		R0431	B-2B		
C0432	B-2B	PG0401	A-1B	R0432	B-2B		
C0433	B-2A	PG0402	A-3B	R0433	B-2A		
C0434	B-3A	PG0403	A-4B	R0434	B-2A		
C0435	A-3A	PG0404	A-4B	R0435	B-2A		
C0436	B-3A	<b>Q</b>		R0436	B-2B		
C0437	A-3A	Q0401	B-1A	R0437	B-2B		
C0438	A-3A	Q0402	B-1A	R0438	B-2B		
C0439	A-3A	Q0403	B-1B	R0439	B-2B		
C0440	B-3A	Q0404	B-1B	R0440	B-2B		
C0441	A-3A	Q0405	B-1B	R0441	B-2B		
C0442	A-3A	Q0406	B-1A	R0442	B-2A		
C0443	A-3A	Q0407	B-2A	R0443	B-2B		
C0444	A-3A	Q0408	B-2B	R0444	B-2A		
C0445	B-3A	Q0409	B-2A	R0445	B-2A		
C0446	A-3A	Q0410	B-2B	R0446	B-2A		
C0447	A-4A	Q0411	B-2A	R0447	B-2A		
C0448	A-4A	Q0412	B-2B	R0448	B-2A		
C0449	A-4B	Q0413	B-2B	R0449	B-3A		
C0450	A-4A	Q0414	B-2A	R0450	B-3A		
C0451	A-4B	Q0415	B-2A	R0451	B-3A		
C0452	A-4A	Q0416	B-3A	R0452	B-4A		
C0453	B-4A	Q0417	B-4B	R0453	B-4A		
C0454	B-4A	Q0418	B-4B	R0454	B-4A		
C0455	B-3B	Q0419	B-4A	R0455	B-4B		
C0456	A-3B	Q0420	B-3B	R0456	B-4A		
C0457	A-3B	Q0421	B-1A	R0457	B-4A		

AGC CIRCUIT BOARD



AGC (AGC/OSD) - SIDE A -  
[PATTERN No. JA1398-4]



AGC (AGC/OSD) - SIDE B -  
[PATTERN No. JA1398-4]

# CHAPTER 8

## MICROPROCESSOR PIN FUNCTION TABLE/ BLOCK DIAGRAMS

### 1. Microprocessor ( $\mu$ P) Pin Function Tables

#### 1-1. SUB- $\mu$ P (IC1201) Pin Functions

Pin No.	I/O	Active Level	Abbreviation	Function
1	-	-	SW1	Grounded.
2	-	-	SW2	
3	-	-	SW3	
4	-	-	SW4	
5	-	-	-	Not used.
6	I	Pulse	DATA(M-CG/SUB)	Common communications lines between the MAIN- $\mu$ P and SUB- $\mu$ P character generator; data is communicated synchronized with the clock signal.
8	I	Pulse	CLK(M-CG/SUB)	
7	-	-	VSS	Grounded.
9	I	Hi	STB(M-SUB)	Strobe signal from the MAIN- $\mu$ P.
10	I	Hi	KEY 1	Key inputs.
11	I	Hi	KEY 2	
12	I	Hi	KEY 3	
13	I	Hi	KEY 4	
14	I	-	Vdd	5V power input.
15	O	Pulse	SEGMENT (a)	FL display segment control outputs. Synchronized with the grid control outputs at pins 29-37.
16	O	Pulse	SEGMENT (b)	
17	O	Pulse	SEGMENT (c)	
18	O	Pulse	SEGMENT (d)	
19	O	Pulse	SEGMENT (e)	
20	O	Pulse	SEGMENT (f)	
21	O	Pulse	SEGMENT (g)	
22	O	Pulse	SEGMENT (h)	
23	O	Pulse	SEGMENT (i)	
24	-	-	-	Not used.
25	-	-	-	
26	-	-	-	
27	I	-	VEE	-30V pull-down power input for the FL display.
28	-	-	-	Not used.
29	O	Pulse	GRID (9)	FL display grid control outputs. Synchronized with the segment control outputs at pins 15-23
30	O	Pulse	GRID (8)	
31	O	Pulse	GRID (7)	
32	O	Pulse	GRID (6)	
33	O	Pulse	GRID (5)	
34	O	Pulse	GRID (4)	
35	O	Pulse	GRID (3)	
36	O	Pulse	GRID (2)	
37	O	Pulse	GRID (1)	
38	I	-	Vdd	5V power input.
39	-	-	-	Not used.
40	-	-	-	
41	-	-	-	
42	-	-	-	
43	-	-	VSS	Grounded.
44	I	Pulse	OSC	Oscillator input.

#### 1-2. MAIN- $\mu$ P (IC1701) Pin Functions

Pin No.	I/O	Active Level	Abbreviation	Function
1	O	Pulse	STB(M-SUB)	Outputs the strobe signal to the SUB- $\mu$ P.
2	O	Pulse	DATA(M-CG/SUB)	Common communications lines between the MAIN- $\mu$ P and character generator/SUB- $\mu$ P; data is communicated synchronized with the clock signal.
3	O	Pulse	CLK(M-CG/SUB)	
4	O	Pulse	STB(M-CG)	Outputs the strobe signal to the character generator.
5	I	Pulse	BUSY-OSD	BUSY signal input from character generator.
6	I	Pulse	DATA(S-M/232C)	Common communications lines between the system control $\mu$ P and MAIN- $\mu$ P/232C- $\mu$ P; data is communicated synchronized with the clock signal.
7	O	Pulse	DATA(M-S)	
8	O	Pulse	CLK(M-S)	
9	O	Pulse	SOFT RUN	PWM output to control the voltage applied to the capstan during soft-landing.
10	I	H	TIME-ADJ	Time adjustment input. When "Lo" is input for 3 seconds, the clock is set to 12:10:00A automatically.
11	O	Pulse	45Hz	Outputs a reference signal to control the capstan phase in the A12 and A24 mode.
12	-	-	-	Not used.
13	I	Hi	GND	Grounded.
14	I	Hi	5V	5V power input.
15	O	-	PF DCT	Grounded.
16	I	Lo	HEAD RESET	When "Hi" is input, the MAIN- $\mu$ P resets the cylinder time of use.
17	-	-	GND	Grounded.
18	O	Hi	CS SYS	Chip select signal between the MAIN- $\mu$ P and SYS.CON- $\mu$ P.
19	O	-	-	Not used.
20	O	Hi	SC232C	Chip select signal between the MAIN- $\mu$ P and 232C- $\mu$ P.
21	-	-	-	Not used.
22	O	Pulse	DATA(M-ROM)	Communications lines between the MAIN- $\mu$ P and EEPROM; data is communicated synchronized with the clock signal
60	I	Pulse	DATA(ROM-M)	
61	O	Pulse	CLK(M-ROM)	
23	-	-	-	Not used.
24	O	Hi	BLK/WHT	OSD character colour control output. (Hi: Black, Lo: White)
25	O	Hi	RESET	"Hi" output resets the SYS.CON- $\mu$ P.
26	I	Lo	ALARM IN	Alarm recording start input.
27	O	-	-	Not used.
28	I	Lo	ONE SHOT IN	One-shot recording start input.
29	I	Lo	TAPE END RESET	When "Lo" is input, TAPE END OUT is stopped.
30	I	Lo	REC START IN	When "Lo" is input, recording is started.
31	I	Lo	REC CHECK IN	When "Lo" in input, recording check is started.
32	-	-	VSS	Grounded.
33	O	-	-	Not used.
34	O	-	-	Not used.
35	O	Hi	ALARM OUT	Outputs "Hi" during alarm recording. Outputs pulses after alarm recording is ended.
36	O	Hi	TAPE END OUT	Outputs "Hi" when the tape reaches its end during recording.
37	O	Lo	WARNING OUT	Outputs "Lo" when an abnormality is detected.
38	O	Hi	REVERSE	Outputs "Hi" during still play and reverse search (when "FS MOSE: on" is specified).
39	-	-	-	Not used.
40	-	-	-	Not used.
41	O	Pulse	CAM SW OUT	Outputs the timing pulse to switch the recording and camera when an auto switcher is connected.

Pin No.	I/O	Active Level	Abbreviation	Function
42	I	Pulse	SW25Hz	Not used.
43	I	Lo	RESET IC/SW	Reset input.
44	-	-	GND	Grounded.
45	I	Hi	REC MUTE	Timing signal input for CAM SW output.
46	I	Pulse	AC CLOCK	Power supply clock signal input. Used to count the clock and detect a power failure.
47	I	Pulse	V.SYNC	Input to detect whether the video signal is input or not.
48	-	-	5V	A5V power input.
49	-	-	X2	System clock signal in modes other than the back-up mode.
50	I	-	X1	
51	-	-	GND	Grounded.
52	-	-	XT2	Clock signal of the clock in the back-up mode.
53	I	-	XT1	
54	-	-	GND	Grounded.
55	I	Hi/Lo	LADDER 1	A/D inputs to detect that buttons on the front panel have been pressed.
56	I	Hi/Lo	LADDER 2	
57	I	Hi/Lo	LADDER 3	
58	I	Hi/Lo	LADDER 4	
59	-	-	-	Not used.
62	O	Pulse	LOAD(M-ROM)	LOAD signal between the MAIN- $\mu$ P and EEP ROM.
63	-	-	5V	5V power inputs.
64	I	-	5V	

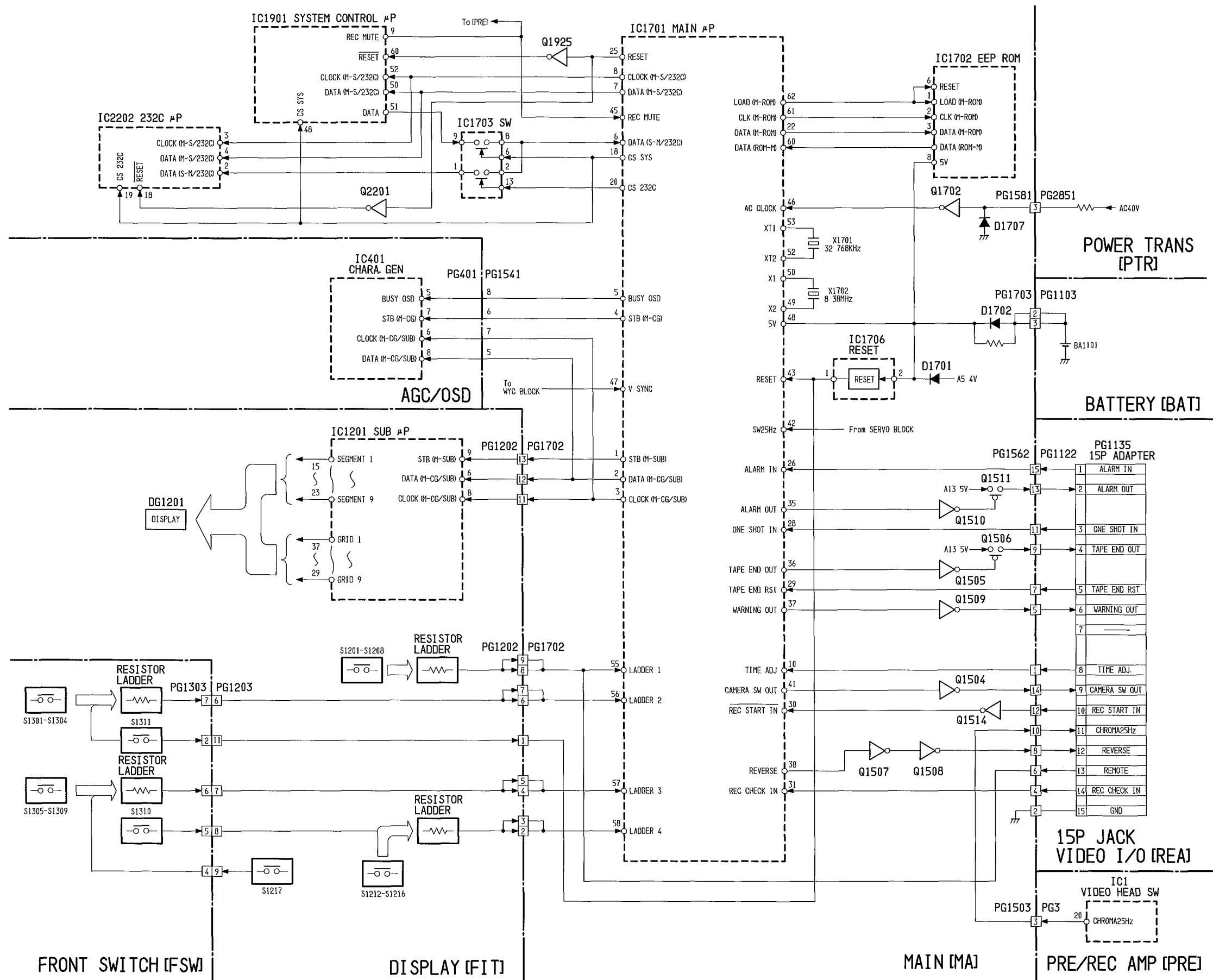
1-3. System Control  $\mu$  P (IC1901) Pin Functions

Pin No.	I/O	Active Level	Abbreviation	Function
1	I	A/D	FL/TAB	Safety tab/cassette position detection input. H: TAB SW OFF (with tab), M: TAB SW ON (without tab), L: When cassette is being inserted/ejected. When a cassette without its safety tab is inserted, recording is inhibited and the cassette is ejected automatically in the timer recording state.
2	I	-	5V	A5V power inputs.
3	I	-	5V	
4	I	-	5V	
5	I	Lo	FWD END	When a "Lo" pulse is input from the sensor in the mechanism, the current mode is released. The end sensors each detect one end of the tape. When "Lo" pulses are input from both sensors, it is detected that a cassette is not inserted.
6	I	Lo	REW END	
7	I	Pulse	S.REEL	The period of the take-up reel pulses is calculated to detect whether slack tape has been taken up or not. When slack tape is detected, the mechanism is stopped. The supply reel pulses are used together with the take-up reel pulses to calculate the tape remaining time in the rewind mode.
8	I	Pulse	T.REEL	
9	O	Hi	REC MUTE	Video signal record muting control. Prevents the signal from being supplied to the video heads.
10	O	Hi	SLOW	Controls the voltage applied to the capstan motor.
11	O	Hi	REC(AUDIO)	Sets the audio circuits to the record mode.
12	O	-	-	Not used.
13	O	Hi	REC(VIDEO)	Sets the video circuits to the record mode and controls the REC9V power supply.
14	O	Hi	PB	Sets the video/audio circuits to the playback mode.
15	-	-	-	Not used.
16	O	Hi	LINE MUTE	Audio signal record and playback muting control. Prevents the signal from being supplied to the audio head.
17	I	-	X-TEST	A5V power input.
18	-	-	-	Not used.
19	I	Pulse	CFG.DIV	CFG divided frequency signal input. Used to detect whether or not the slack tape is taken up onto the supply reel in the eject mode.
20	-	-	-	Not used.
21	I	Hi/Lo	M.STATE 1	Mechanism state detection signal inputs to control the loading motor.
22	I	Hi/Lo	M.STATE 2	
23	I	Hi/Lo	M.STATE 3	
24	I	Hi/Lo	M.STATE 4	
25	-	-	-	Not used.
26	I	Hi	DUTY	Index detection input from the main servo IC.
27	-	-	-	Not used.
28	O	Hi	TRN./+FHS	Output to control the switching of the operation of the double azimuth heads and the head switching control output during slow play.
29	O	Hi	UNLOAD	Signals that drive the loading motor to set the mechanism to the specified mode.
30	O	Hi	LOAD	
31	-	-	-	Not used.
32	-	-	-	Not used.
33	-	-	GND	Grounded.
34	O	Hi	03Hr	Tape speed mode control outputs.
35	O	Hi	12Hr	
36	O	Hi	24Hr	
37	O	Hi	48Hr	
38	O	Hi/Mi/Lo	CAPST.CONT	Selects the capstan motor control mode. H: Reel (voltage control) mode, M (open): Servo output control mode, L: Brake mode
39	O	Hi	fH CORRECT 1	Cylinder speed correction outputs during frame advance. For the correction of horizontal jitter.
40	O	Hi	fH CORRECT 2	
41	O	Hi	SP HS	Video head switching select output.
42	O	Hi	SKEW	Skew correction output during time-lapse recording.
43	O	Hi	CTL CONT	CTL timing output during recording.

Pin No.	I/O	Active Level	Abbreviation	Function
44	O	Hi	REVERSE	Reverse mode control output. Drives the capstan motor in reverse.
45	-	-	-	Not used.
46	I	Lo	CTL	CTL pulse input for the slow play mode. CTL pulse input for the linear time counter.
47	I	Lo	CTL DIV	
48	I	Pulse	CS SYS	Chip select signal between the MAIN- $\mu$ P and SYS.CON- $\mu$ P.
49	I	Pulse	SW25Hz	Monitors the period of the SW25Hz signal to detect an abnormality in the cylinder motor drive. Stops the cylinder motor if an abnormality is detected. This is also used as the head switching signal during playback.
50	I	Pulse	DATA(M-S/232C)	Common communications lines between the MAIN- $\mu$ P and SYS.CON- $\mu$ P/232C- $\mu$ P; data is communicated synchronized with the clock signal.
51	O	Pulse	DATA(S-M/232C)	
52	I	Pulse	CLK(M-S/232C)	
53	I	Pulse	CFG/REV.CFG	The divided CFG pulses are input during playback. The capstan rotation sensor detection signal is input during recording.
54	-	-	GND	Grounded.
55	-	-	GND	
56	-	-	-	Not used.
57	-	-	GND	Grounded.
58	I	-	X1	Inputs to generate the system clock.
59	I	-	X2	
60	I	Lo	RESET	Initializes the SYS.CON- $\mu$ P when power is supplied.
61	O	Lo	SKEW2	Skew correction output during time-lapse recording.
62	O	Pulse	CLK(S-SRV)	Data bus lines between the SYS.CON- $\mu$ P and main servo IC; data is transferred to the main servo IC synchronized with the clock signal.
63	O	Pulse	DATA(S-SRV)	
64	O	Lo	DS	CH-1/CH-2 head switching signal.
65	-	-	-	Not used.
66	O	Hi	TRICK PLAY	Trick play mode signal. The line correlative noise canceller is removed from the video circuit and the peaking frequency of the 4.6MHz peaking circuits changed to 4.2MHz.
67	-	-	-	Not used.
68	O	Pulse	CLOCK(S-WYC)	Serial data transfer lines to video IC.
69	O	Pulse	DATA(S-WYC)	
70	O	Lo	POWER ON	Control signal to prevent the capstan motor from malfunctioning immediately after power is supplied.
71	O	Hi	S-VHS DISP	Outputs "Hi" in the S-VHS mode.
72	O	Hi	SLOW BRAKE	Signal to control the voltage applied to the capstan motor when slow braking is applied.
73	-	-	GND	Grounded.
74	-	-	GND	
75	-	-	GND	
76	I	Lo	S-TAPE	"Lo" is input when an S-VHS cassette is inserted and "Hi" is input when a VHS cassette is inserted.
77	-	-	-	Not used
78	I	0-5V	V.LOCK	Picture control voltage input during still play.
79	I	0-5V	SLOW TRACK	Tracking voltage input during slow play.
80	I	0-5V	03Hr TRACK	Tracking voltage input during playback.



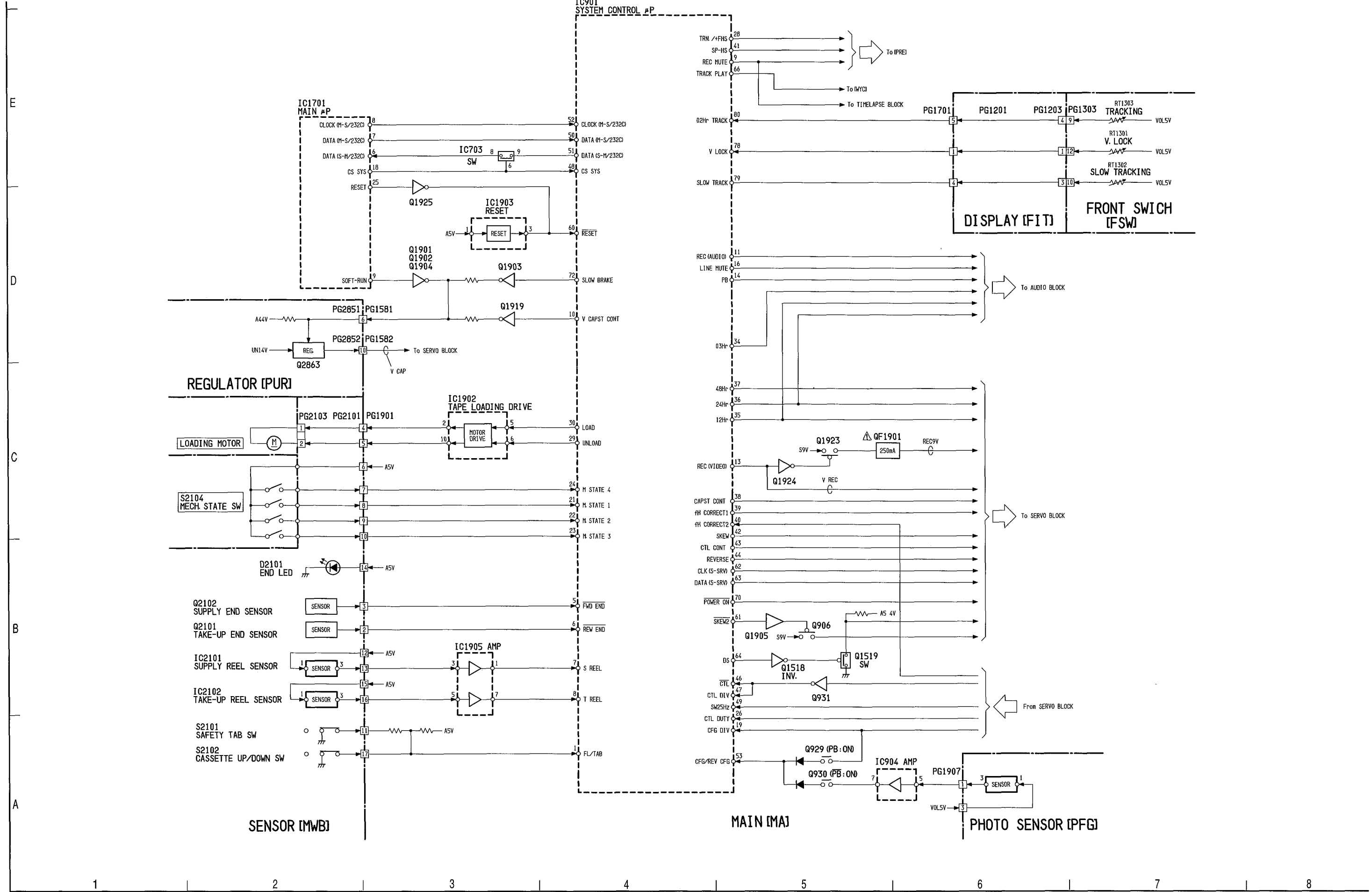
2. BLOCK DIAGRAMS  
1-1. TIMELAPSE



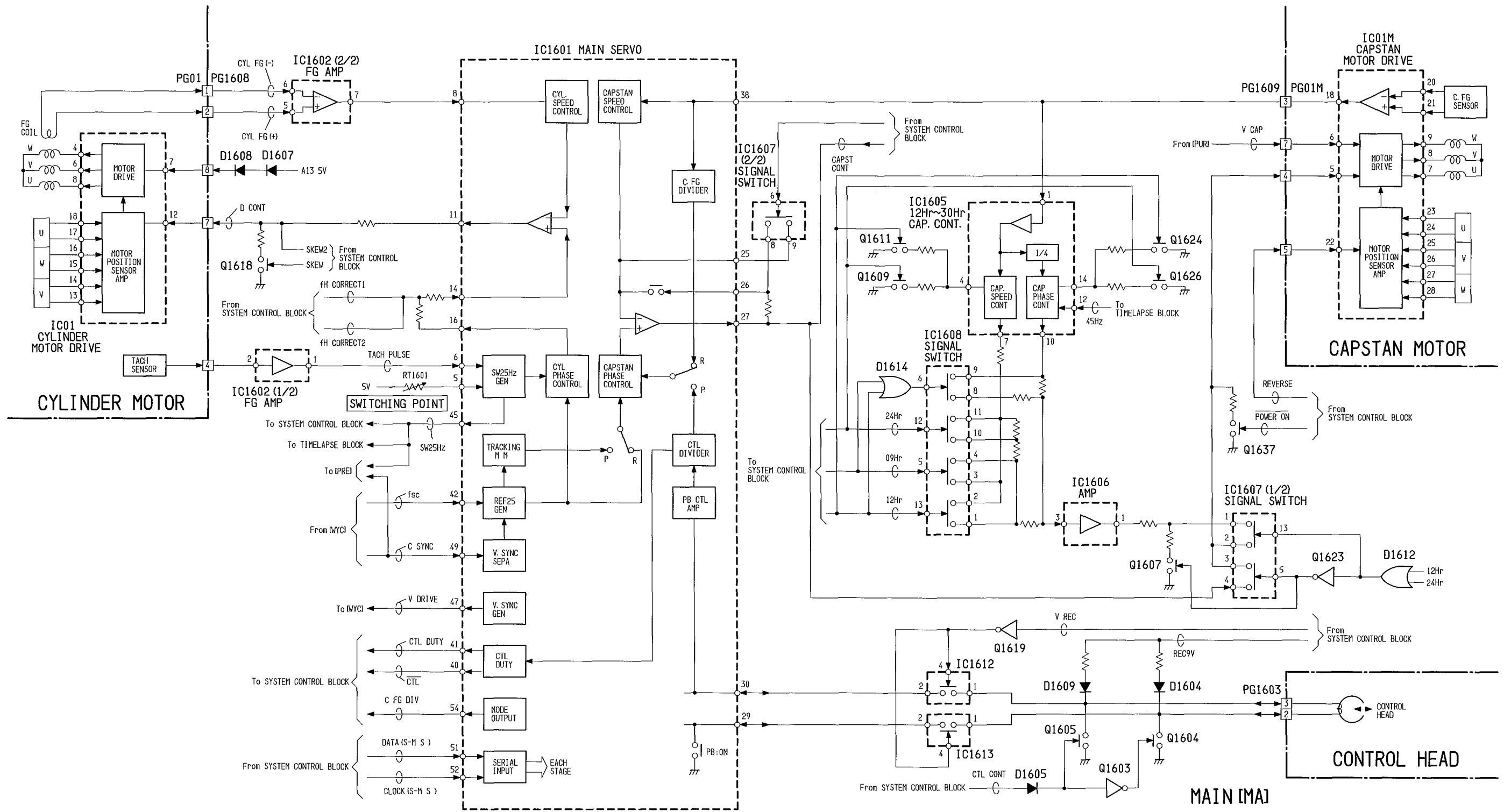
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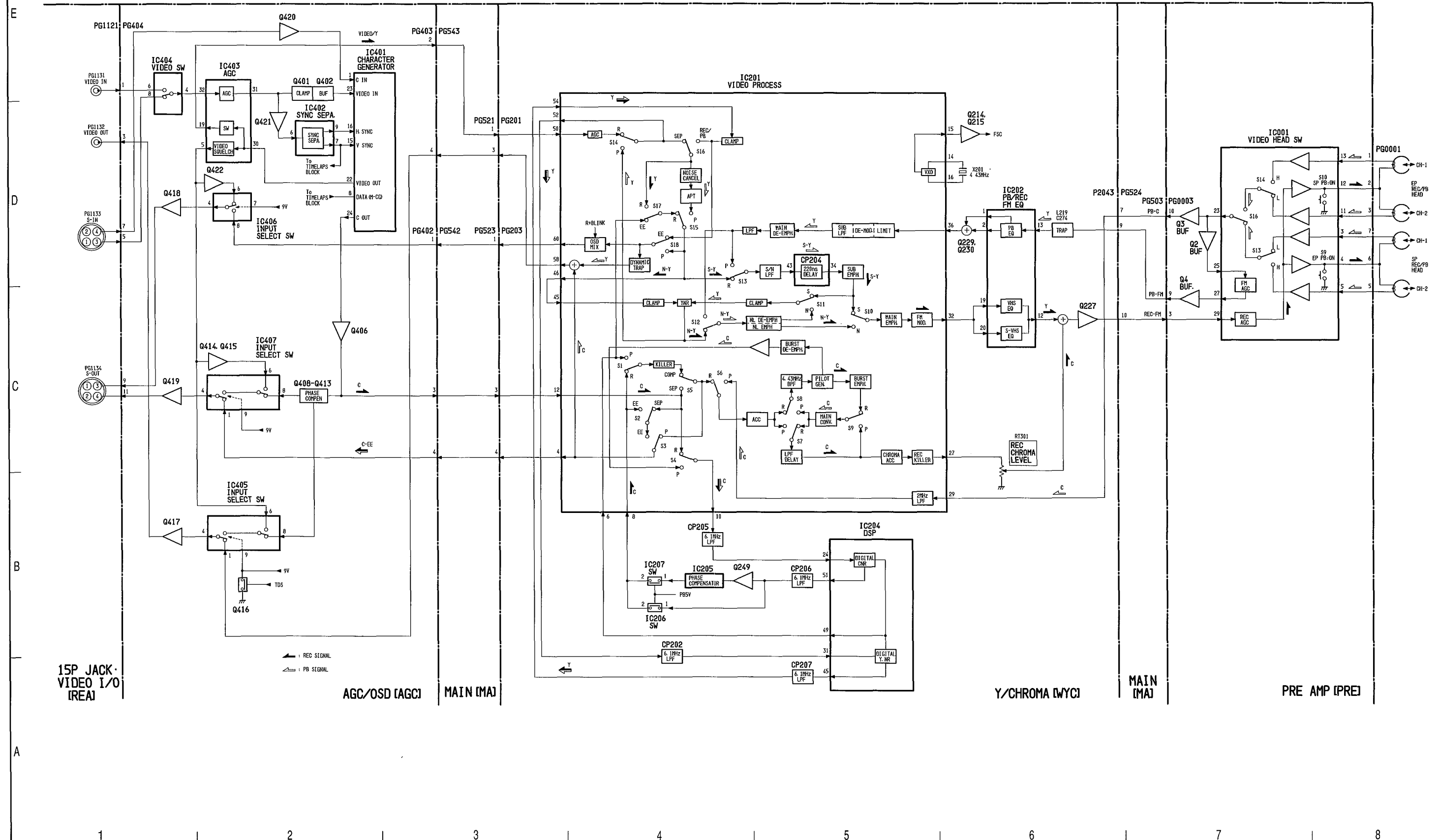
1-2. SYSTEM CONTROL



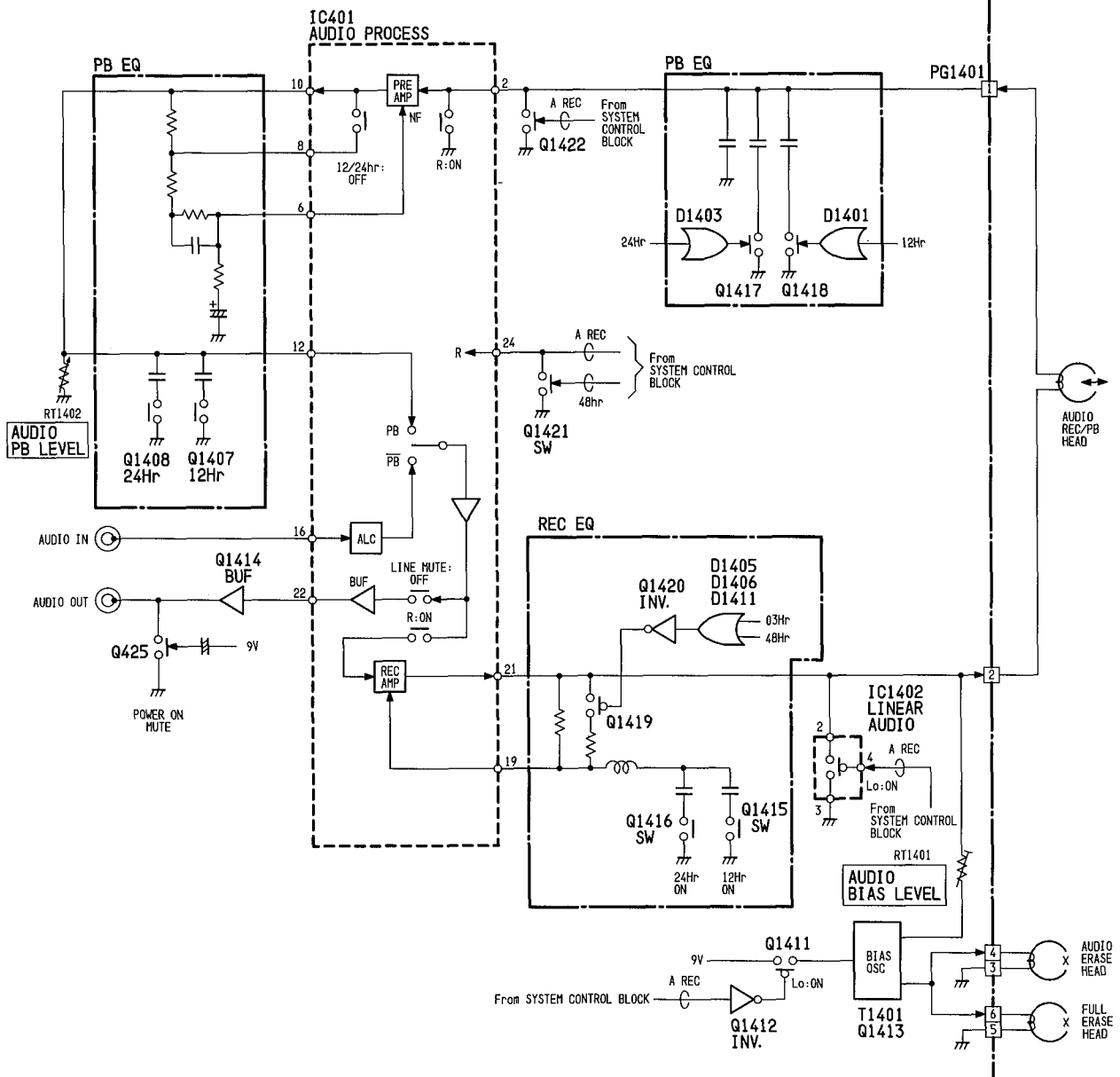
1-3. SERVO



1-4. Y/CHROMA



# 1-5. AUDIO



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