

5) EEPROM

This is a menu used to control EEPROM data in the monitor. Data transfer from monitor to PC, or from PC to monitor, is also possible.

6) Information

This is not a screen for adjustments, but a menu used to display monitor's operating conditions, such as horizontal and vertical frequencies, memory address, etc.

7) Preset editor

This is an adjustment screen of the factory preset mode. The result of adjustments is registered in the address of EEPROM to be exclusively used for factory preset.

8) ADJ video 1.0Vpp

This is a menu intended to adjust the brightness when the video input level is set at '1.0Vpp' in the OSD. This adjustment requires a video signal of 1.0Vpp.

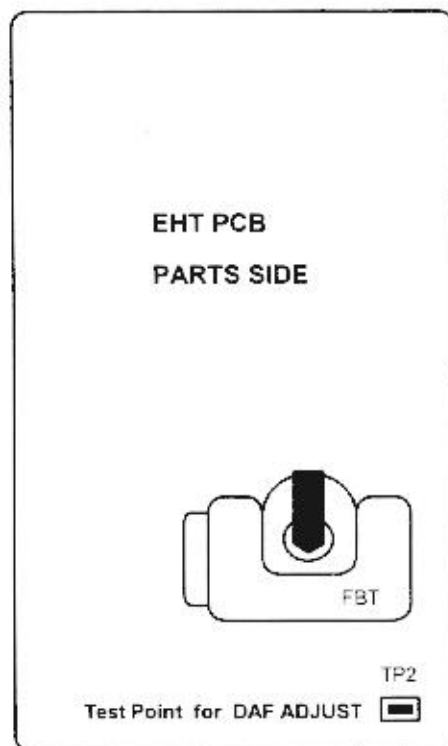
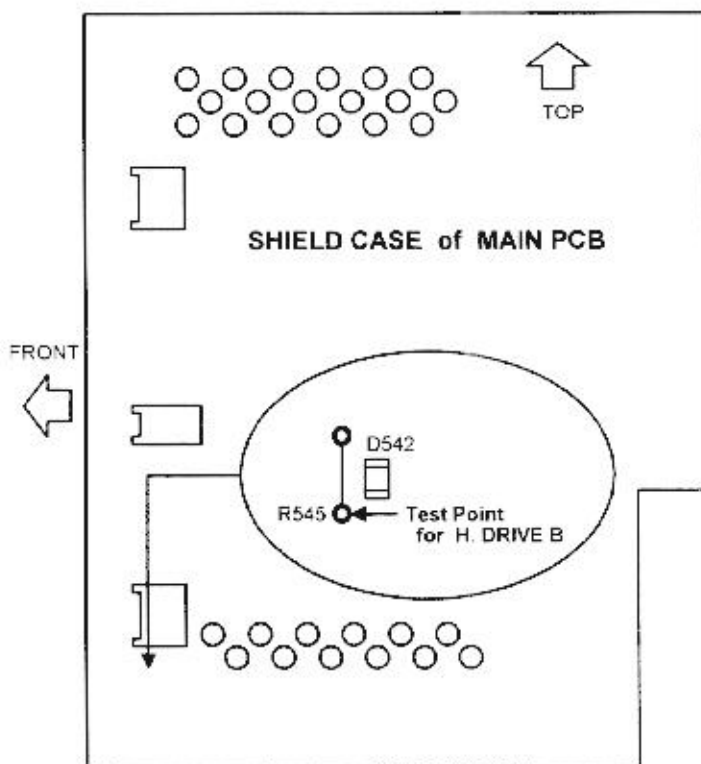
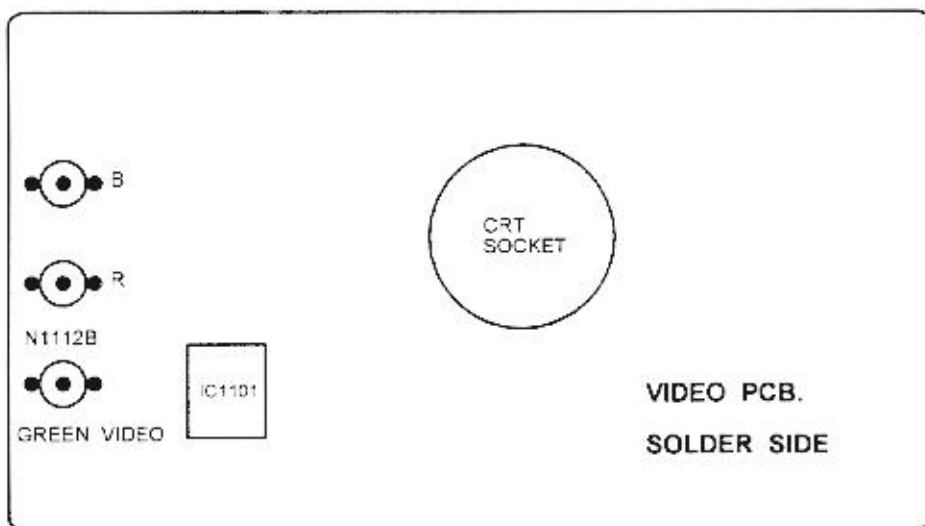
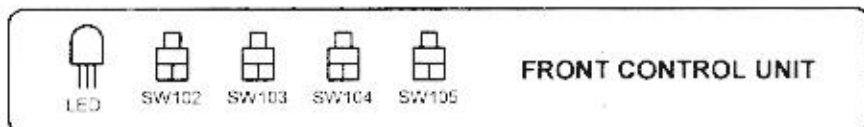
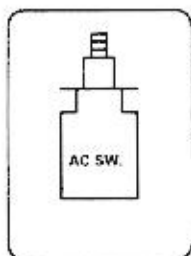
9) Color adjust

This monitor enables three types of color temperature setting. In this case, adjustment of 9300k only is performed with Menu (4) and then automatic setting of the two remaining 6500k and user color is made with this menu, based on the setting data.

10) DAF adjust

This is a menu used for the adjustment of parabolic wave forms for dynamic focusing.

SERVICE ADJUSTMENT CONTROL LOCATION



REQUIRED ADJUSTMENT PROCEDURE AFTER A PARTS IS REPLACED (✓ IS REQUIRED)

ADJUSTMENT ITEM	REPLACED PARTS													
	MAIN P.C.B.	VIDEO P.C.B.	SSP P.C.B.	EHT P.C.B.	CRT DY	IC1001 IC1101 IC1201 Q1021 Q1022 Q1023 Q1121 Q1122 Q1123 Q1221 Q1222 Q1223	IC1341 IC1342 IC351 Q1071 Q1075 Q1076 Q1171 Q1175 Q1176 Q1271 Q1275 Q1276	IC540	IC850 Q873 Q550 Q540 T542	Q604 Q673	T601	IC581	IC302	IC430
A DATA SETTING *	✓		✓											
B H. DRIVE +B	✓		✓					✓						
C OSC DATA SET	✓		✓											
E H. CENTER	✓		✓		✓						✓			
F VSR SETTING	✓		✓		✓				✓	✓			✓	
G FACTORY PRESET	✓		✓		✓				✓	✓			✓	
H DAF ADJUST	✓		✓		✓							✓		
I FOCUS ADJUST	✓		✓		✓							✓		
J CUT-OFF & BRIGHTNESS	✓	✓	✓	✓	✓					✓				
K COLOR DATA SETTING	✓	✓	✓	✓	✓					✓				
L VIDEO 1.0V ADJUST	✓	✓	✓	✓	✓					✓				
M DATA SAVING	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
PURITY & CONVERGENCE					✓									
SCREEN CHECK	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

* DATA SETTING : Do not load standard data except when Main PCB and SSP Card are replaced.

ADJUSTMENT PROCEDURE

Note 1 : Check to be sure that the program disk name is **P815** before making necessary adjustment.

Note 2 : Unless otherwise specified, the monitor state is as given at right.

Note 3 : The underlined places indicate the adjustment items on the screen of the PC.

1. Description of Adjustment Method

Program Menu Item	<ul style="list-style-type: none"> ● Test Meter ↓ Test Point □ Pattern 	JOB CODE	Input Signal	Operation	Adjusting Value		
STANDARD DATA SETTING 1) Load data from FILE		A1	Mode-1	Turn ON the power switch of the monitor.			
		A2		Set the cell to <u>1) Initial Check</u> at the main menu and press [↵], then press [↵] to return to main menu.			
		A3		Set the cell to <u>4) EEPROM</u> at the main menu and press [↵].			
		A4		Set the cell to the menu at left and press [↵].			
		A5		A message FILE → EEPROM FILE NAME (q or Q escape) [] : is displayed. So key in the DACDATA.DAT (when using the standard data) and press [↵].			
		A6		Turn OFF the power switch of the monitor, then turn ON. (To make reset)			
		AE		Set the cell to <u>1) Initial Check</u> at the main menu and press [↵], then press [↵] to return to main menu.			
Do not load standard data except when Main P.C.B. and SSP Card are replaced.							
H. DRIVE +B 3) VSR	<ul style="list-style-type: none"> ◆ Digital voltmeter ↓ R545 - GND Refer to page 22 for the test point. □ Crosshatch 	B1	GV3-1	Set the cell to the menu at left and press [↵].			
		B2		Set the cell to the adjusting mode <u>INTP [0]</u> and press [↵].			
		B3		Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↵].			
		B4		Set the cell to <u>H DRIVE_B</u> and press [↵].			
		B5		Make the adjustment to the value shown at right by using [←] and [→].		24.0V ±0.3V	
		B6		Register by press [↵] and [E] to return to menu of B2.			
		B7		GV3-2		Input signal [fH 54.0kHz] and [fV 77.0Hz]	23.0V ±0.3V
		B8		Select Adjusting mode <u>INTP [1]</u> and repeat above (B4~B6) procedure.			
		B9		GV3-3		Input signal [fH 82.5kHz] and [fV 126.0Hz]	22.0V ±0.3V
		B10		Select Adjusting mode <u>INTP [2]</u> and repeat above procedure.			
		B11		GV3-5		Input signal [fH 115.5kHz] and [fV 165.0Hz]	19.0V ±0.3V
		B12		Select Adjusting mode <u>INTP [3]</u> and repeat above procedure.			
BE	Press [E] to return to main menu.						

Program Menu Item	◆ Test Meter ∨ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value	
C OSC DATA SET 2) OSC DATA SET	□ Crosshatch	C1	Mode-1	Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz]. Set the cell to the menu at left and press [↵]. The screen image is cleared, then press [↵] to return to main menu.		
		C2				
CE						
D FOCUS PRE ADJUST 4) VIDEO	□ G Crosshatch	D1	Mode-1	Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz]. Set the cell to the menu at left and press [↵]. Set the cell to <u>G51</u> and press [↵]. Make the adjustment by using [←], [→] to screen optimum for the Corner Vertical line. Register by pressing [↵]. Set the cell to <u>G52</u> and press [↵]. Make the adjustment by using [←], [→] to screen optimum for the Center Horizontal line. Register by pressing [↵], then press [E] to return to main menu.		
		D2				
		D3				
		D4				
		D5				
		D6				
		D7				
		DE				
E H. CENTER 3) VSR	□ RGB off (Sync only)	E1		Set the Brightness to MAX by using the OSD. Set the cell to the menu at left and press [↵]. Set the cell to the adjusting mode <u>INTP [0]</u> and press [↵].	<div style="display: flex; justify-content: space-between; align-items: center;"> A A-B B </div> <div style="border: 2px solid black; width: 100px; height: 40px; margin: 10px auto; text-align: center; line-height: 40px;">Back raster</div> <p>Set the raster to the center with respect to the bezel.</p>	
		E2				
		E3				
		E4		GV3-1		Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [↵]. Set the cell to <u>H CENTER</u> and press [↵]. Make the adjustment to the value shown at right by using [←] and [→]. Register by pressing [↵] and [E] to return to menu of E3.
		E5				
		E6				
		E7				
		E8		GV3-2		Input signal [fH 54.0kHz] and [fV 77.0Hz]. Select Adjusting mode <u>INTP [1]</u> , and repeat above (E5-E7) procedure.
		E9				
		E10		GV3-3		Input signal [fH 82.5kHz] and [fV 126.0Hz]. Select Adjusting mode <u>INTP [2]</u> , and repeat above procedure.
		E11				
		E12		GV3-5		Input signal [fH 115.5kHz] and [fV 165.0Hz]. Select Adjusting mode <u>INTP [3]</u> , and repeat above procedure.
		E13				
		FE				Press [E] to return to main menu.

Program Menu Item	◆ Test Meter ↓ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value	
VSR SETTING 3) VSR	<input type="checkbox"/> Crosshatch	F1		Set the cell to the menu at left and press [.]		
		F2		Set the cell to the adjusting mode <u>INTP [0]</u> and press [.]		
		F3	GV3-1		Check that the input signal to the monitor is [fH 29.5kHz] and [fV 48.0Hz] and press [.]	H : 380mm ±5 V : 285mm ±5
		F4			Set the cell to following items, press [.] and make the adjustment to the value shown at right by using [←] and [→]. ① <u>H. SIZE</u> ④ <u>V. POSITION</u> ② <u>H. POSITION</u> ⑤ <u>V. PCC</u> ③ <u>V. SIZE(VSR)</u> ⑥ <u>V. LIN(S)</u>	H/V Posi : Center V. PCC : V. LIN : Best point
		F5			Register by pressing [.] at each item, and press [E] to return to menu of F2.	
		F6	GV3-2		Input signal [fH 54.0kHz] and [fV 77.0Hz]	
		F7			Select Adjusting mode <u>INTP [1]</u> and repeat above (F4~F5) procedure.	
		F8	GV3-3		Input signal [fH 82.5kHz] and [fV 126.0Hz]	
		F9			Select Adjusting mode <u>INTP [2]</u> and repeat above procedure.	
		F10	GV3-5		Input signal [fH 115.5kHz] and [fV 165.0Hz]	
		F11			Select Adjusting mode <u>INTP [3]</u> and repeat above procedure.	
FE			Press [E], to return to the main menu.			
FACTORY PRESET 5) Preset Editor	<input type="checkbox"/> Crosshatch	G1		Set the cell to the menu at left and press [.]		
		G2	Mode-1		Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz] and press [.]	
		G3			Set the cell to following items, press [.] and make the adjustment to the value shown at right by using [←] and [→]. ① <u>H. SIZE</u> ⑥ <u>V. PCC BARANCE</u> ② <u>H. POSITION</u> ⑦ <u>PARALLELOGRAM</u> ③ <u>V. SIZE</u> ⑧ <u>TRAPEZOID</u> ④ <u>V. POSITION</u> ⑨ <u>V. LIN (C)</u> ⑤ <u>V. PCC</u>	H : 380mm ±5 V : 285mm ±5 H/V Posi : Center V. LIN(C) : Best point
		G4			Register by pressing [.] at each item, and press [E] to return to the sub menu, then press [Y] go to G5.	
		G5	Mode-2		Check that the input signal to the monitor is [fH 31.5kHz] and [fV 60.0Hz] and press [.]	
		G6			Set the cell to following items, press [.] and make the adjustment to the value shown at right by using [←] and [→]. ① <u>H. SIZE</u> ③ <u>V. SIZE</u> ② <u>H. POSITION</u> ④ <u>V. POSITION</u>	H : 380mm ±7 V : 285mm ±7
- To be continued -						

Program Menu Item	◆ Test Meter J Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
FACTORY PRESET 5) Preset Editor	<input type="checkbox"/> Crosshatch	G7	Mode-3	Input signal [fH 37.5kHz] and [fV 75.0Hz] and repeat above (G2 - G4) procedure.	H : 380mm ±7 V : 285mm ±7
		G8	Mode-4	Input signal [fH 60.0kHz] and [fV 75.0Hz] and repeat above procedure.	H : 380mm ±7 V : 285mm ±7
		G9	Mode-5	Input signal [fH 68.7kHz] and [fV 75.0Hz] and repeat above procedure.	H : 380mm ±7 V : 285mm ±7
		G10	Mode-6	Input signal [fH 80.0kHz] and [fV 75.0Hz] and repeat above procedure.	H : 355mm ±7 V : 284mm ±7
		G11	Mode-7	Input signal [fH 91.1kHz] and [fV 85.0Hz] and repeat above procedure.	H : 355mm ±7 V : 284mm ±7
		G12	Mode-8	Input signal [fH 106.3kHz] and [fV 85.0Hz] and repeat above procedure.	H : 380mm ±7 V : 285mm ±7
		GE		Press [E] to return to the sub menu, then press [N] to return to the main menu.	
DAF ADJUST 10) DAF ADJUST Oscilloscope Range 2µs/div. (for Horizontal) 2ms/div. (for Vertical)	<input type="checkbox"/> White flat field <input checked="" type="checkbox"/> Oscilloscope ↓ TP2-GND 100:1 probe ↓ N112B ~ GND 10:1 probe	H1	GV3-5	Set the cell to the menu at left and press [J].	C-D=410V E-F=190V
		H2		Check that the input signal to the monitor is [fH 93.8kHz] and [fV 75.0Hz]	
		H3		Select the <u>H DAF PHASE</u> and press [.]	
		H4		Adjust as shown at below by using [←] and [→], and press [J] for registration. (Refer to Fig. H4 for adjustment)	
		H5		Select the <u>H DAF GAIN</u> and press [.]	
		H6		Adjust as shown at right by using [←] and [→], and press [J] for registration. (Refer to Fig. H6 on next page for adjustment)	
		H7		Select the <u>V DAF GAIN</u> and press [.]	
		H8		Adjust as shown at right by using [←] and [→], and press [.] for registration. (Refer to Fig. H8 on next page for adjustment)	
		HE		Press [E] to return to main menu.	

Fig. H4

Set position to A=B

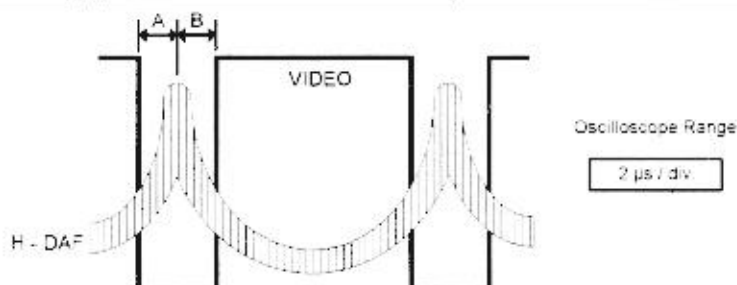
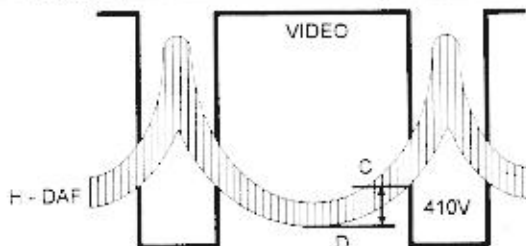


Fig. H6

Set voltage to C-D=410V

C : Closing VIDEO and H. DAF
D : Bottom of H. DAF



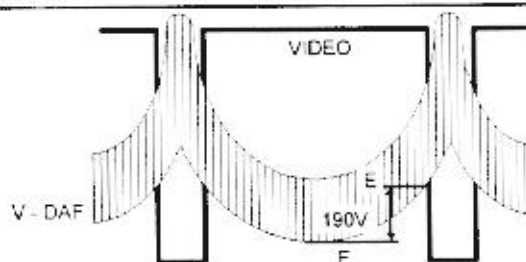
Oscilloscope Range

2 μ s / div

Fig. H8

Set voltage to E-F=170V

E : Closing VIDEO and V. DAF
F : Bottom of V. DAF



Oscilloscope Range

2 ms / div

Program Menu Item	<input checked="" type="checkbox"/> Test Meter <input type="checkbox"/> Test Point <input type="checkbox"/> Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
FOCUS FINAL ADJUST 4) VIDEO	<input type="checkbox"/> G. Crosshatch		Mode-1	The same as item D for adjustment manner. Repeat D1-DE adjustment.	
CRT CUT-OFF 4) VIDEO	<input checked="" type="checkbox"/> TV Color Analyzer II <input type="checkbox"/> RGB Off (Sync only)	J1 J2 J3 J4 ↓ J12	Mode-1	Set the Contrast to MAX, Brightness to Center and Color is 9300k by using the OSD. Check that the input signal to the monitor is [FH 93.8kHz] [fV 75.0Hz] and turn off the RGB signal. Set the cell to the menu at left and press [↵] Make the adjustment <u>R, G and B Low Light 9300k</u> and <u>G2 9300K</u> by using [←], [→] to CRT cut-off. Please refer to flow chart for CRT cut-off adjustment on page 31.	
BRIGHTNESS & COLOR ADJUST	<input type="checkbox"/> White window (5cm×5cm at the center)	J13 J14 J15 J16		Change to the pattern at left. Move the cell to the following items and make the adjustment to the value shown at right by using [←] and [→], then [↵] for registration. <u>SUB CONT (R) 9300K</u> <u>SUB CONT (G) 9300K</u> <u>SUB CONT (B) 9300K</u> Set CONTRAST to MIN by using the OSD. Move the cell to the following items and make the adjustment to the value shown at right by using [←] and [→], then [↵] for registration. <u>LOW LIGHT (R) 9300k</u> <u>LOW LIGHT (G) 9300k</u> <u>LOW LIGHT (B) 9300k</u> Adjust two colors only out of above (RGB) three as shown in J11 on page 31.	Y=105 cd/m ² x=0.283 ±0.015 y=0.298 ±0.015 x=0.283 ±0.015 y=0.298 ±0.015

- To be continued -

Program Menu Item	◆ Test Meter ┆ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
J BRIGHTNESS & COLOR ADJUST ABL 4) VIDEO	□ White window (5cm×5cm at the center)	J17 J18	Mode-1	Set CONTRAST to MAX by using the OSD Check the value shown at right, then If out of range, to repeat J13~J19.	Y=105 cd/m ² x=0.283 ±0.015 y=0.298 ±0.015
	┆ White flat field (full window)	J19 J20 J21		Set CONTRAST to MAX by using the OSD Change to the pattern at left. Move the cell to <u>ABL 930Ck</u> and make the adjustment to the value shown at right by using [←] and [→], then [↵] for registration Press [E] to return to main menu.	Y=97 cd/m ²
K DATA SETTING 9) COLOR ADJUST		K1 K2		Set the cell to the menu at left and press [↵]. Press [Y] and [↵] for following messages. Calculate COLOR 6550K data automatically . OK ? > Calculate USER COLOR data automatically . OK ? > Calculate ABL data automatically . OK ? > finished . (Hit return key) Press [↵] to return to main menu.	
L 1.0V ADJUST 8) ADJ VIDEO 1.0Vp-p	◆ TV Color Analyzer II □ White window (5cm×5cm at center) 1.0V p-p video	L1 L2 L3 L4 L5 LE	Mode-1	Set Input Video Level 1.0V using the OSD of the monitor. Set the cell to the menu at left and press [↵]. Change to the pattern and signal level at left. This messages will appear : Please set video level at 1.0Vpp. then hit return key. Check input signal, then press [↵]. Please adjust CONTRAST (1.0Vpp) using cursor key. Make the adjustment to the value shown at right by using [←] and [→]. Press [↵] for registration and return to the main menu.	Y=105 cd/m ²
M DATA SAVING 2) Save data to FILE		M1 M2			Set the cell to <u>4) EEPROM</u> at the main menu and press [↵]. Set the cell to the menu at left and press [↵] A message EEPROM -> FILE NAME (q or Q escape) []: Use serial number as a file name (EXAMPLE : FF7110001 = "F7110001.DAT")

Conditions

Signal : Turn off the R,G,B (sync signal only)
 Adjust Menu : 4) VIDEO

CRT CUT-OFF ADJUSTMENT

J4 Set G2 9300k value to "00" (Min)

J5 Set data value to "9A" for LOW LIGHT (R),(G),(B) 9300k

J6 Press [→] until the raster appears with any one of three (R,G,B) colors

If Red appears in **J6**
J7 Set Value to "FF" for LOW LIGHT (R) 9300k

J8 Press [→] on G2 9300k until the raster appears with any one of two (G or B) colors.

If Green appears in **J8**

J9 Set Value to "FF" for LOW LIGHT (G) 9300k

J10 Press [→] on G2 9300k until Blue raster appears slightly.

J11 Adjust LOW LIGHT (R) 9300k LOW LIGHT (G) 9300k until these raster appears slightly.

If Green appears in **J6**
J7 Set Value to "FF" for LOW LIGHT (G) 9300k

J8 Press [→] on G2 9300k until the raster appears with any one of two (R or B) colors.

If Red appears in **J8**

J9 Set Value to "FF" for LOW LIGHT (R) 9300k

J10 Press [→] on G2 9300k until Red raster appears slightly.

J11 Adjust LOW LIGHT (R) 9300k LOW LIGHT (G) 9300k until these raster appears slightly.

If Blue appears in **J6**
J7 Set Value to "FF" for LOW LIGHT (B) 9300k

J8 Press [→] on G2 9300k until the raster appears with any one of two (G or B) colors.

If Red appears in **J8**

J9 Set Value to "FF" for LOW LIGHT (R) 9300k

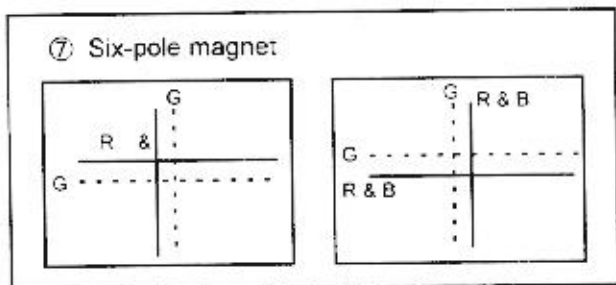
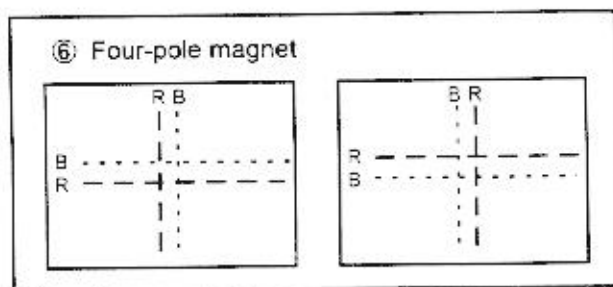
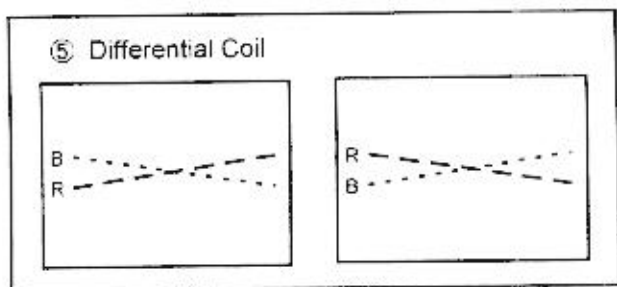
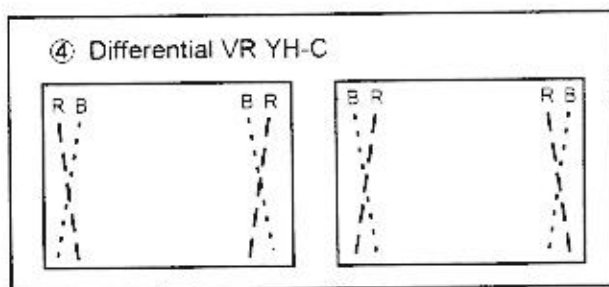
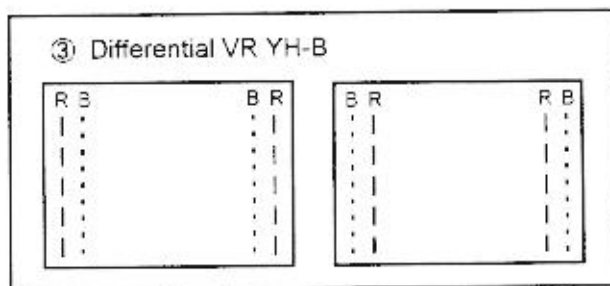
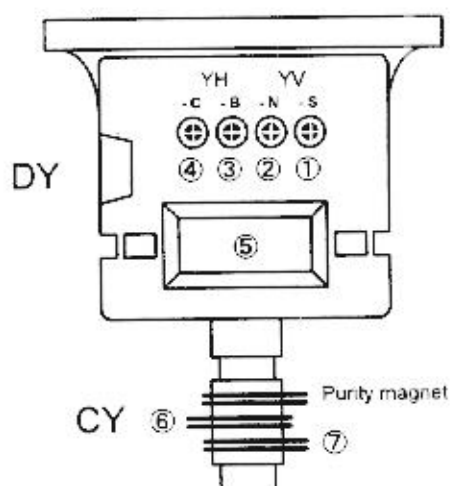
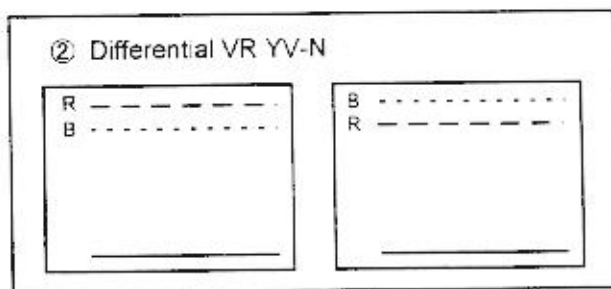
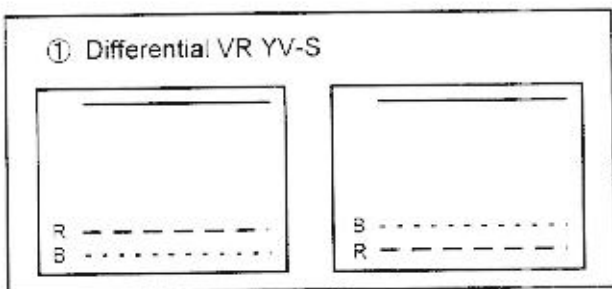
J10 Press [→] on G2 9300k until Green raster appears slightly.

J11 Adjust LOW LIGHT (R) 9300k LOW LIGHT (B) 9300k until these raster appears slightly.

J12

Change 16 gradation grayscale pattern, then adjust G2 9300k so the 2nd level of gray appears slightly.

2. Adjustment Location for Purity and Convergence



TECHNICAL INFORMATION FOR DDC

- It must be noted that this monitor is designed to be applicable to DDC1 communication the following points are different from ordinary monitors.
 1. Use the signal cable, the which is furnished as an accessory (applicable to DDC1) only.
 2. When replacing a PCB or which ROM for DDC1 is mounted, data writing is required.In addition to the above, a computer applicable to WINDOWS and a 5V power supply unit are required.

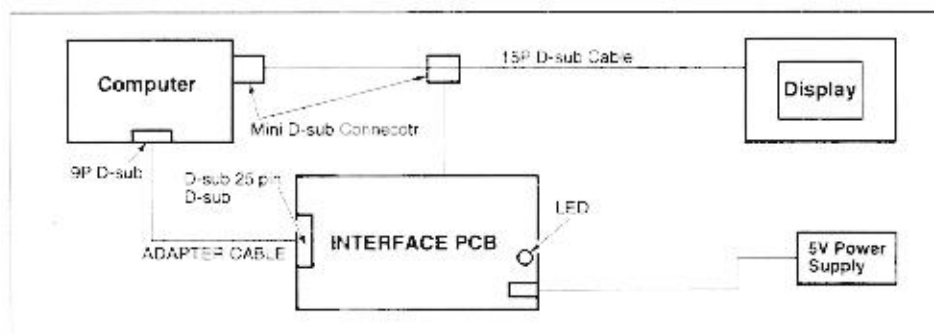
● DDC1 Data Read/write System

1. Communication jig

(1) The composition of Communication jig

- ① Interface PCB
- ② Adapter cable (D-SUB 25P → 9P)
- ③ 15P D-SUB cable

(2) Connection diagram for communication jig.



(3) Procedure to turn on the power:

- ① Make connections as shown above.
- ② Turn on the computer.
- ③ Turn on the power supply of communication jig.
- ④ Turn on the power supply of the MONITOR.

(Note) If the above-mentioned operation is normal, LED of the communication jig turns green after step (4).

If this LED is red, repeat the steps (3) and (4).

(4) Confirmation of DDC mode

LED is mounted on the communication jig. According to its color, the DDC mode can be discriminated

- | | |
|------------------------|---------------------|
| - When LED is green. | DDC1 mode. |
| - When LED is orange | DDC2B mode. |
| - When LED is red. | Transmission error. |
| - When LED is not lit. | Obso etc. |

2. Preliminary arrangements for using DDC data read/write software

(1) Copy DDC WRITE. EXE from floppy disk to hard disk drive (Name: \PanaTool Directory).

(2) Register DDC data read/write software (DDCWRITE. EXE) in the icon.

- ① Click the menu bar "Icon" of the program manager.
- ② Select "register and group create" from the pull-down menu.
- ③ Select "group create"
- ④ Name the group PanaTool and register the group.
- ⑤ Repeat (1) and (2) again and select "icon registration."
- ⑥ Enter "DDC1/2B" for [Title] and "Hard disk drive name: \PanaTool\DDCWRITE. EXE" for [Command line]. Then select [OK].

3. How to use DDC data read/write software.

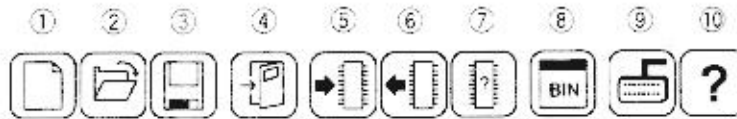
(1) Start of DDC data read/write software.

Double-click the "DDC1/2B" icon in the PanaTool group.

(2) Meaning of a button displayed.

The tool bar indicates the nine icons shown below:

These icons are explained, from left to right :



- Icon ① : Initialization of screen display contents.
- Icon ② : File is opened and displayed on the screen.
- Icon ③ : Data are stored in a file.
- Icon ④ : Finish the DDC data read/write software
- Icon ⑤ : Data displayed on the screen are written in EEPROM.
- Icon ⑥ : Contents of EEPROM are displayed on the screen.
- Icon ⑦ : Contents of EEPROM are compared with the data displayed on the screen.
- Icon ⑧ : Check binary data by text format
- Icon ⑨ : Communication port setting.
Contents of setting : PORT → Using Communication port No.
Baud rate → 9600, Data → 8 bits, Parity → Nil, Stop → 1 bits
- Icon ⑩ : Version information display.

- (3) Using the tool bar explained in (2) above, write data in EEPROM and make operations of reading, etc. A pop-up window may be displayed on the way. In such a case, select a proper one according to the message.

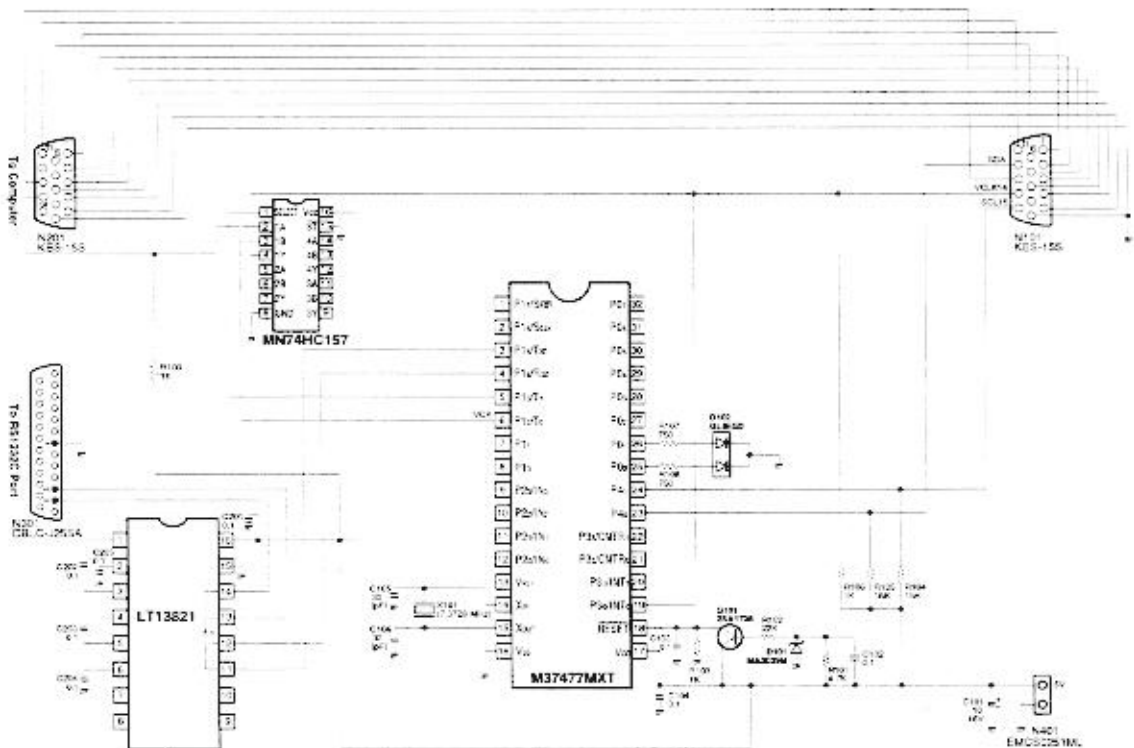
(Example 1) EEPROM data are displayed on the screen.

- ① Click the icon (6th from the left) in the tool bar, with the arrow pointing from the memory chip.
- ② Decided whether reading is started in DDC1 mode or DDC2B mode.
- ③ Select: START.

(Example 2) Data displayed on the screen are written in EEPROM.

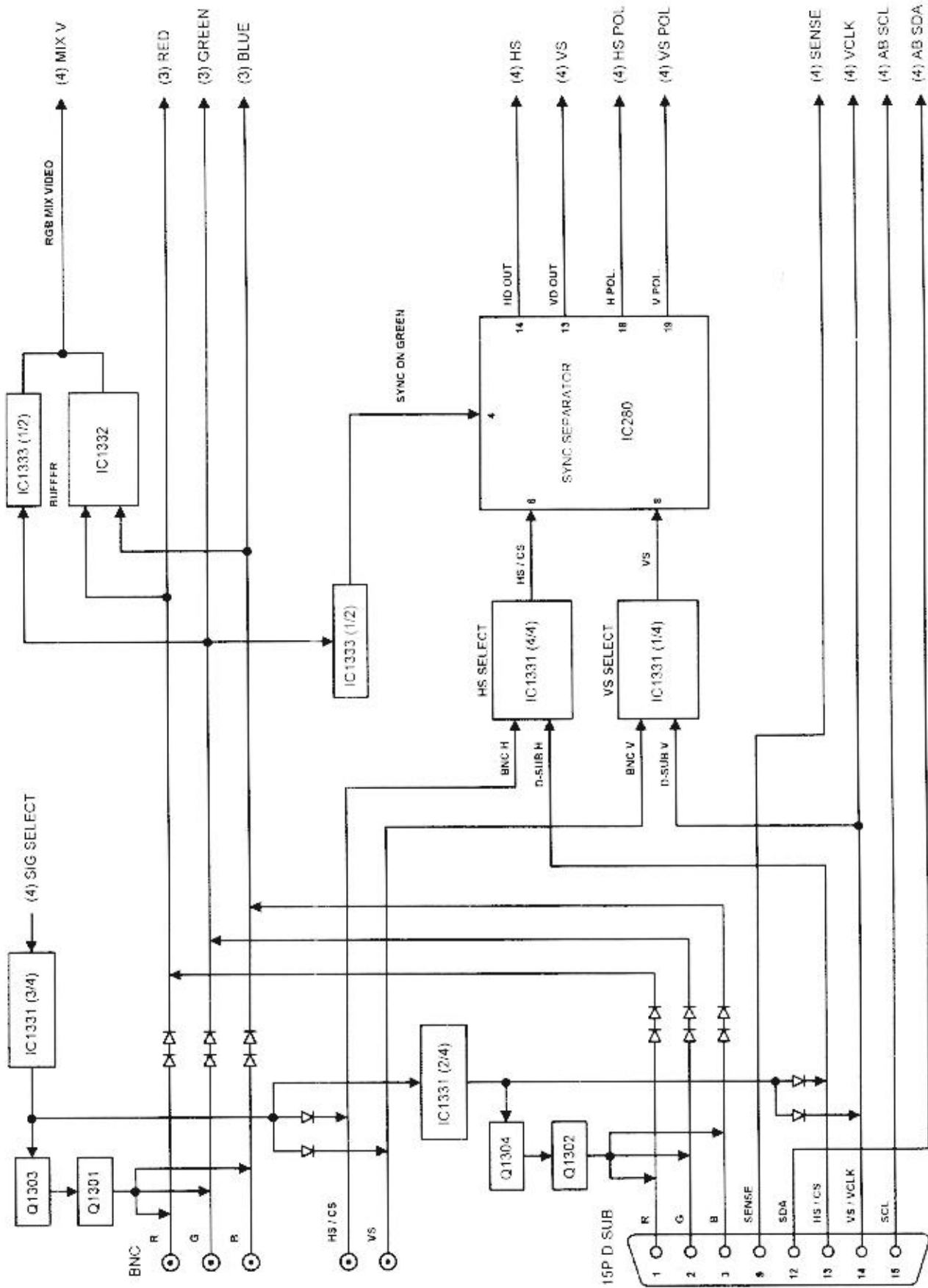
- ① Click the icon (5th from the left) in the tool bar, with the arrow pointing toward in the memory chip.
- ② Select: START.

SCHEMATIC DIAGRAM FOR INTERFACE

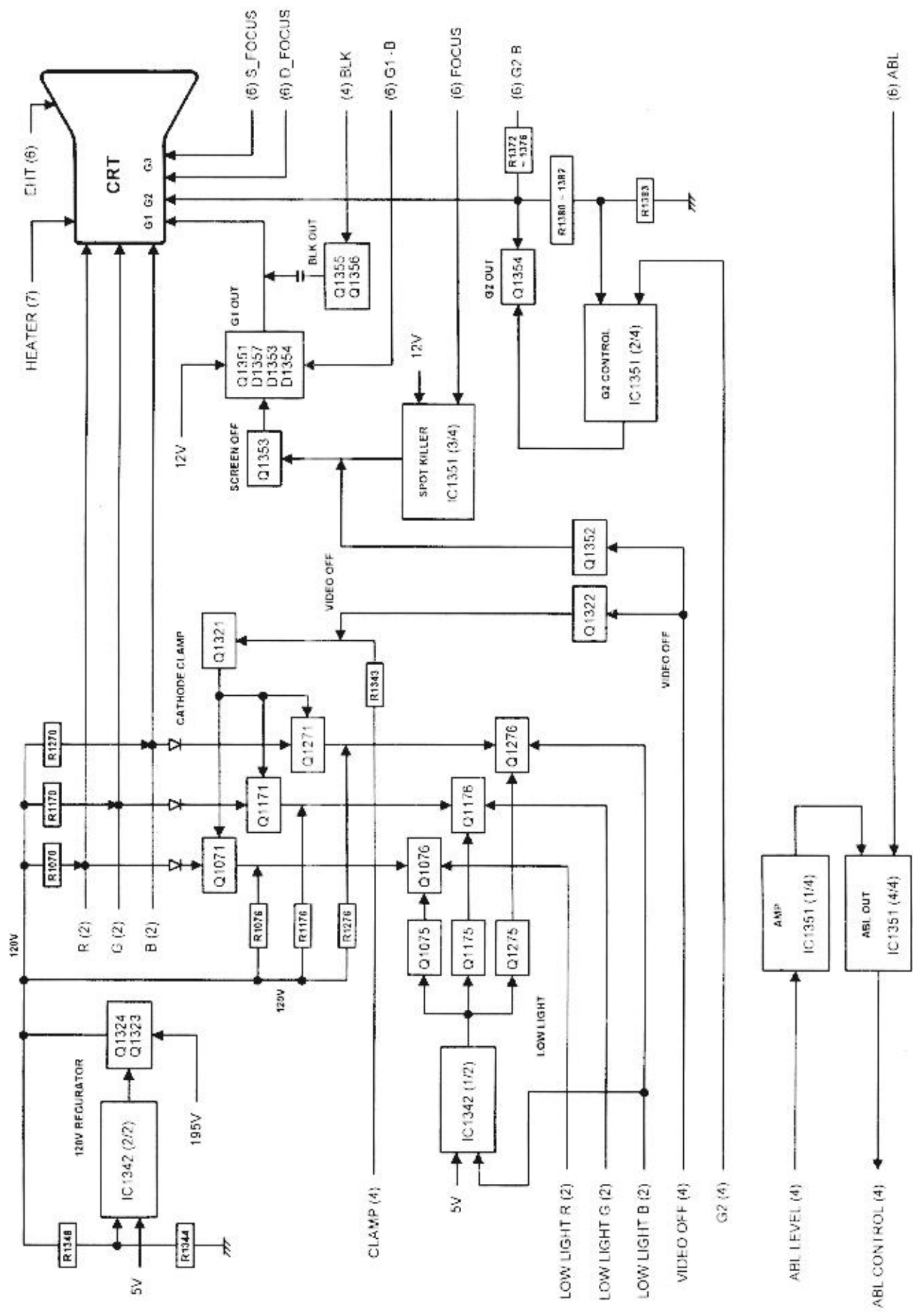


BLOCK DIAGRAM

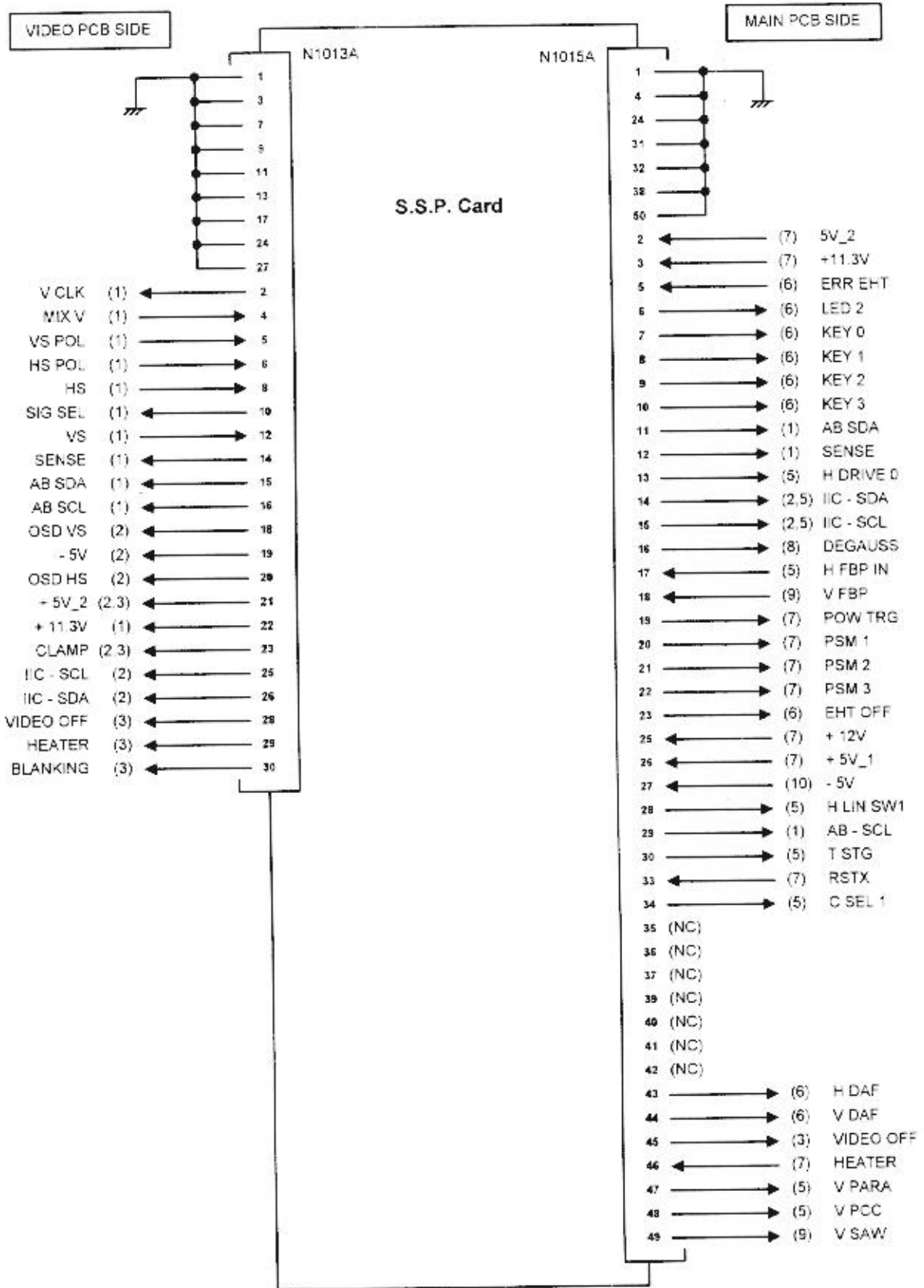
SHEET (1) SIGNAL SELECT / SYNC SEPARATE



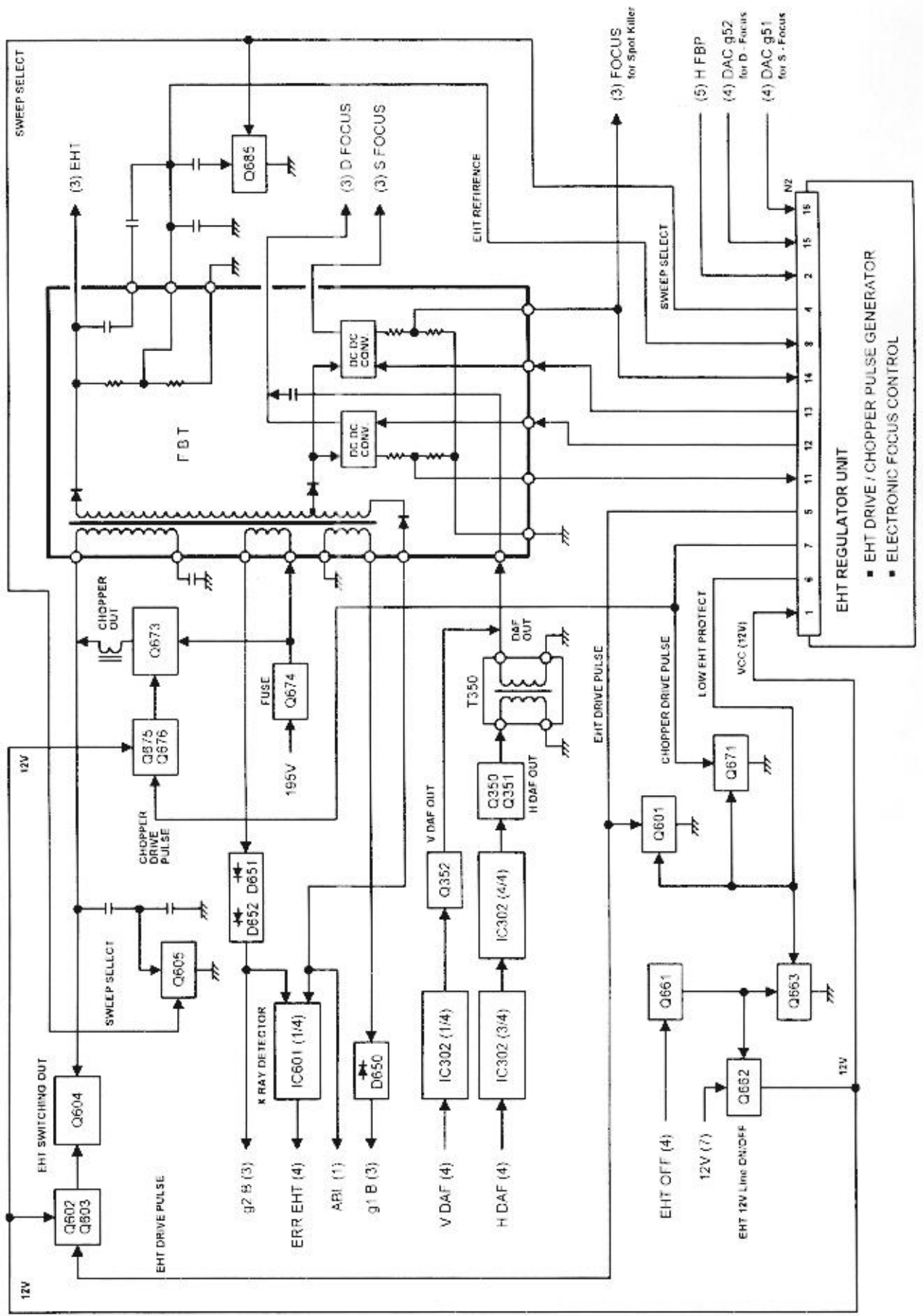
SHEET (3) VIDEO OUT PUT



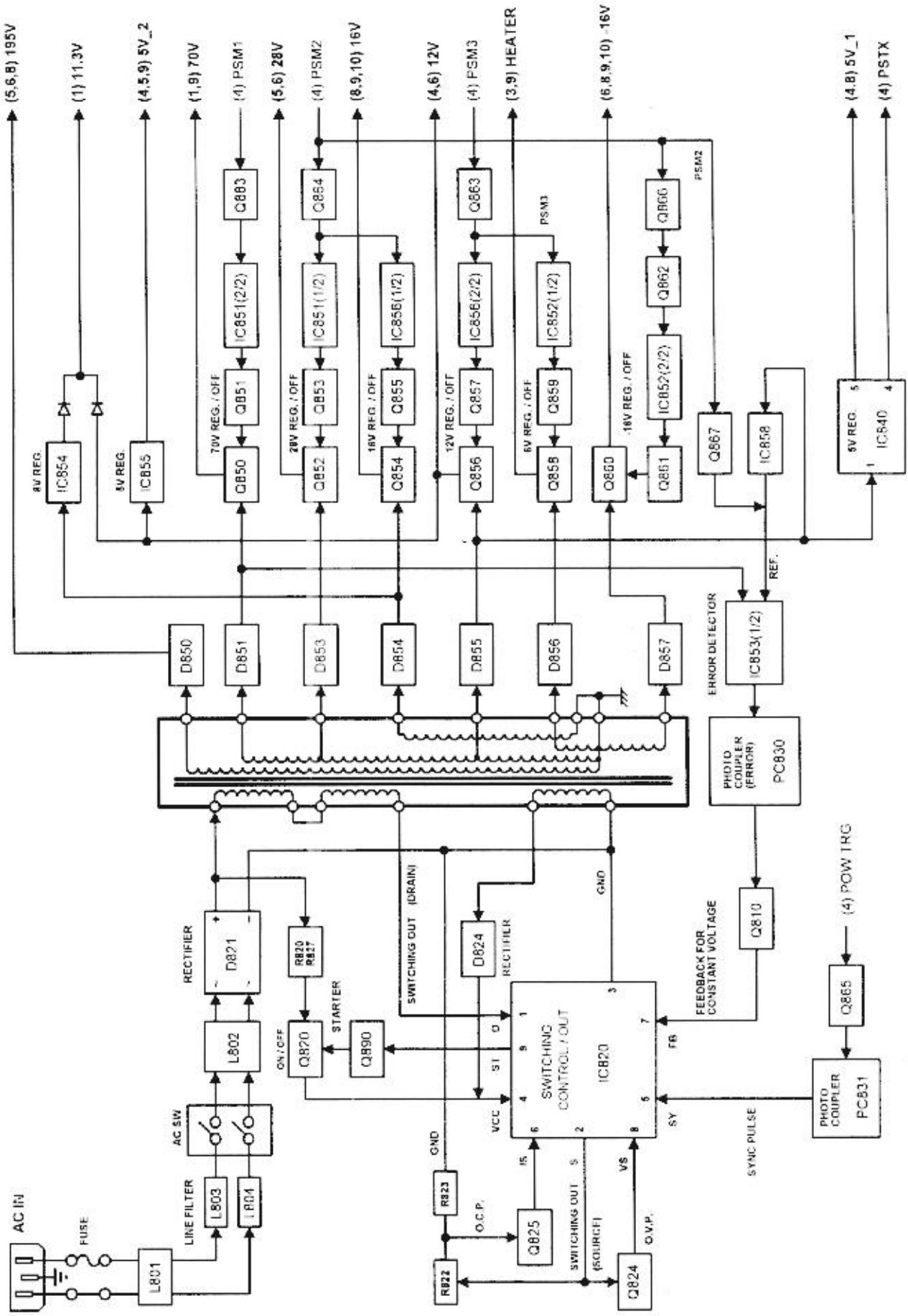
SHEET (4) SUPER SIGNAL PROCESSOR



SHEET (6) EHT OUT



SHEET (7) POWER SUPPLY



SHEET (8) DEGAUSS

