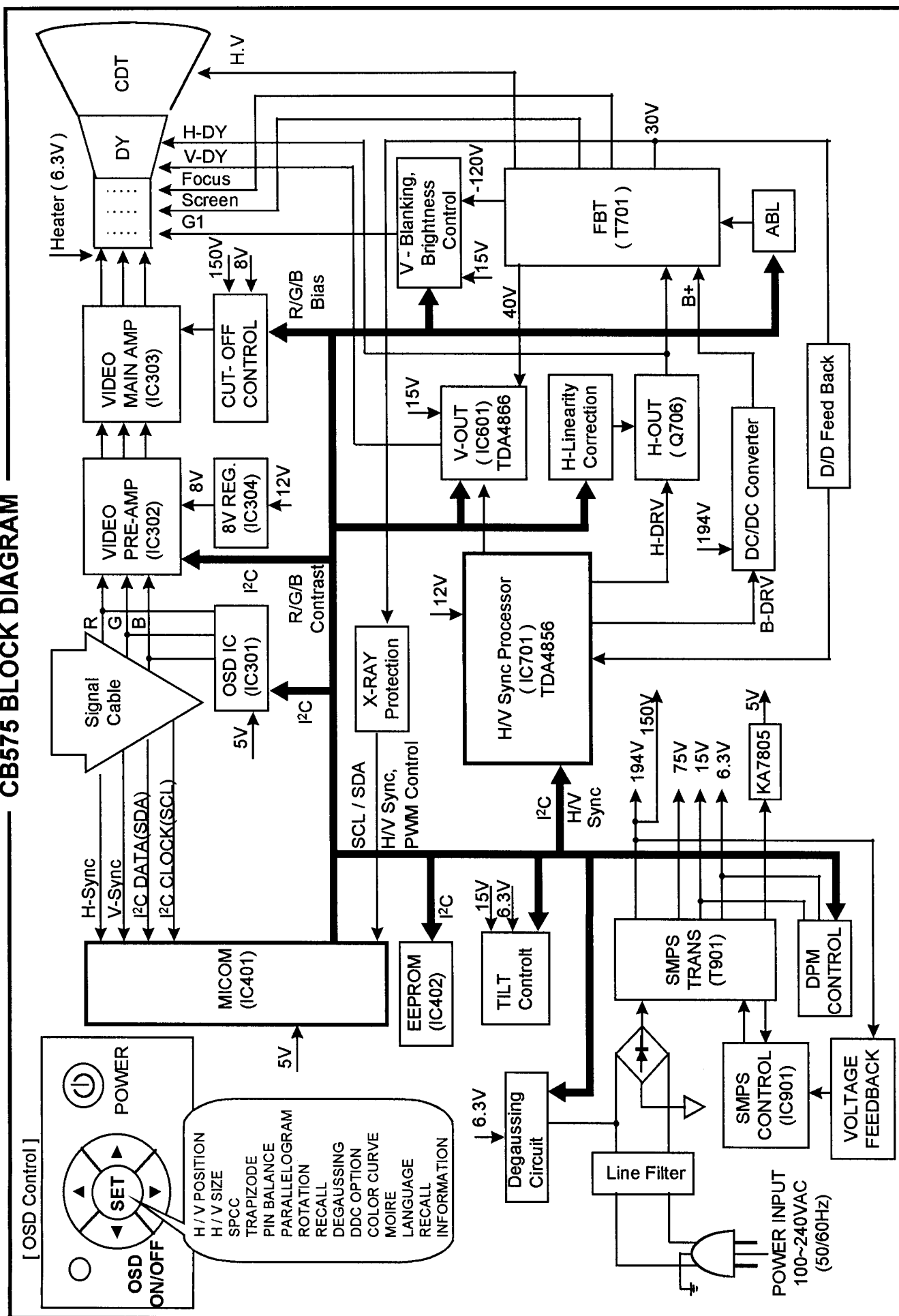


CB575 BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. SMPS(Switching Mode Power Supply)

When you turn on the power switch, the operating procedure is as follows:

- 1) The AC line voltage is rectified by the bridge diodes D901, D902, D903 and D904
- 2) The control IC(IC901) starts switching and generates switching pulses in the primary turns of the SMPS transformer (T901)
- 3) The switching pulses of the primary turns are induced the secondary turns of the transformer by the turn ratio. This pulses are rectified by each diode(D922, D923, D924, D926 and D930)
- 4) Each rectified DC voltage(194V, 75V, 15V, 11V and 6.3V) is supplied to the main circuit.

2. Over Voltage Protection Circuit

When the input voltage of IC901 V_{in} (pin 4) is more than 22.5V(typical), all the secondary voltages of the SMPS transformer (T901) down to low value.

3. Display Power Management Circuit

- 1) Stand-by and Suspend mode.
When no input of horizontal or vertical sync, Q922 and Q923 are turned off and Q920, Q925 and Q926 are turned on. Then input power consumption is below 15 watts
- 2) OFF mode
When no input of horizontal and vertical sync, Q922, Q923, Q925, Q926 are turned off and Q920 is turned on. Then input power consumption is below 5 watts

4. X-ray Protection Circuit

When the high voltage reaches to 29kV in an abnormal case, the high voltage detector circuit, R816, R818, ZD801, C805, Q807 and IC401 start operation to shut down high voltage circuit.

5. Microprocessor Control Circuit.

The operating procedure is as follows :

- 1) Horizontal and Vertical sync signals are supplied to the microprocessor (IC401).
- 2) Microprocessor(IC401) discriminates the operating mode from the sync polarity and resolution.
- 3) After microprocessor reads these adjusted mode data stored at EEPROM, it controls operating mode data through IIC
- 4) Users can control screen condition by the OSD, SET, UP, DOWN, RIGHT and LEFT buttons.

6. D/D Convert Circuit.

To obtain constant high voltage, this circuit supplies controlled DC voltage for FBT and horizontal deflection circuit according to the horizontal sync frequency.

7. Horizontal and Vertical Sync Processor Circuit.

The horizontal and vertical sync processor IC (IC701) has a sync detector, a saw-tooth generator, and drive function. So output horizontal and vertical drive signal control screen distortions.

8. Horizontal S-correction Circuit.

This circuit corrects the horizontal linearity for each horizontal sync frequency.

9. Horizontal drive and Output Circuit.

This circuit is a horizontal deflection amplifier for raster scan.

10. ABL Circuit.

This circuit limits the beam-current for the reliability of the CDT.

11. Vertical Output Circuit.

This circuit takes the vertical ramp wave from the TDA4856(IC701) and performs the vertical deflection by supplying the saw-tooth wave current to the vertical deflection yoke.

12. Blanking and Brightness Control Circuit.

Blanking circuit eliminates the retrace line by supplying a negative pulse wave to the G1 of the CDT. Brightness control circuit is used for control of the screen brightness by changing the DC level of the G1.

13. Video Processor Circuit.

Video processor circuit consists of the video drive output block. The video drive IC(IC302) receives the video signal from PC. The gain of each channel is controlled by the voltage of contrast pin. The cut-off circuit compensate different voltage of each channel between the cathode and the G1 of the CDT.

14. OSD (On-Screen-Display) Circuit.

This circuit displays on the screen information of the monitor's status.