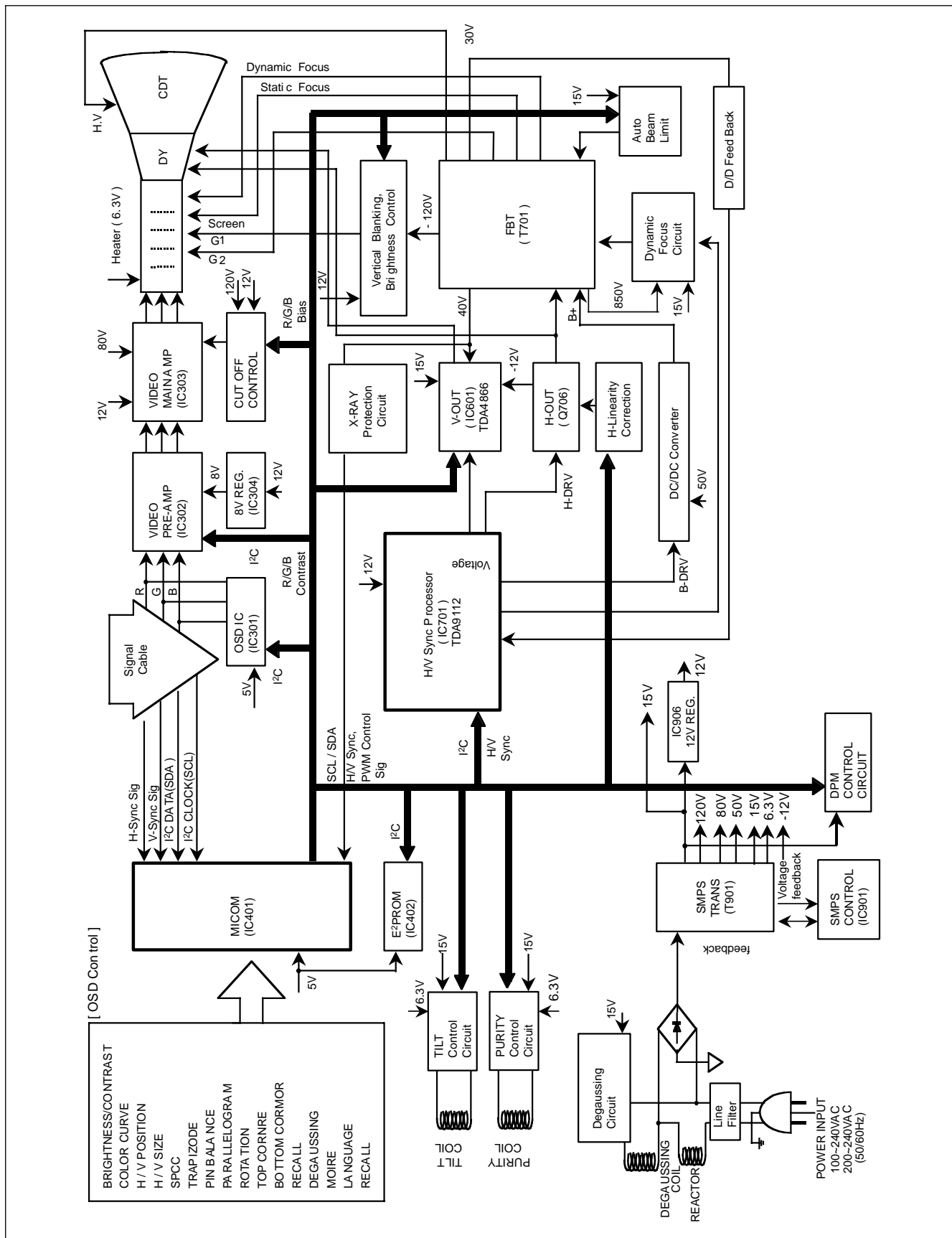


BLOCK DIAGRAM



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 and C908
- 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 pulses of the transformer by the turn ratio. These pulses are rectified by each diode (D971,D961, D951, D931, D941 ,D991)
- 4) Each rectified DC voltage (120V, 50V, 15V, 80V, 6.3V,-12V and 5V) 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, Q951 and Q952 are turned off.
Then input power consumption is below 15 watts
- 2) OFF mode
When no input of horizontal and vertical sync,
Then input power consumption is below 5 watts

4. X-ray Protection Circuit

If the high voltage of the FBT reaches up to 29KV IN an abnormal case, Q807 operates and IC401 pin 41 came to low level, Then IC401 control IC701 to stop Horizontal drive pulse and stop Horizontal Deflection.

5. Microprocessor Control Circuit.

- 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, LEFT, and Audio and Audio Mute 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 linearity 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 TDA9112(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.

15. Dynamic Focus Output Circuit.

This circuit takes the horizontal and the vertical parabola waves from the TDA9112(IC701) and amplifies it to maintain constant focus on center and comers in the screen.

17. Image Rotation (Tilt) Circuit.

This circuit corrects the tilt of the screen by supplying the image rotation signal to the tilt coil which is attached near the deflection yoke of the CRT.

18. Earth Margnetic Correction(Purity) Circuit

This circuit corrects the convergence of screen by supplying the convergence signal to the coil which is attached to the CRT near the deflection.