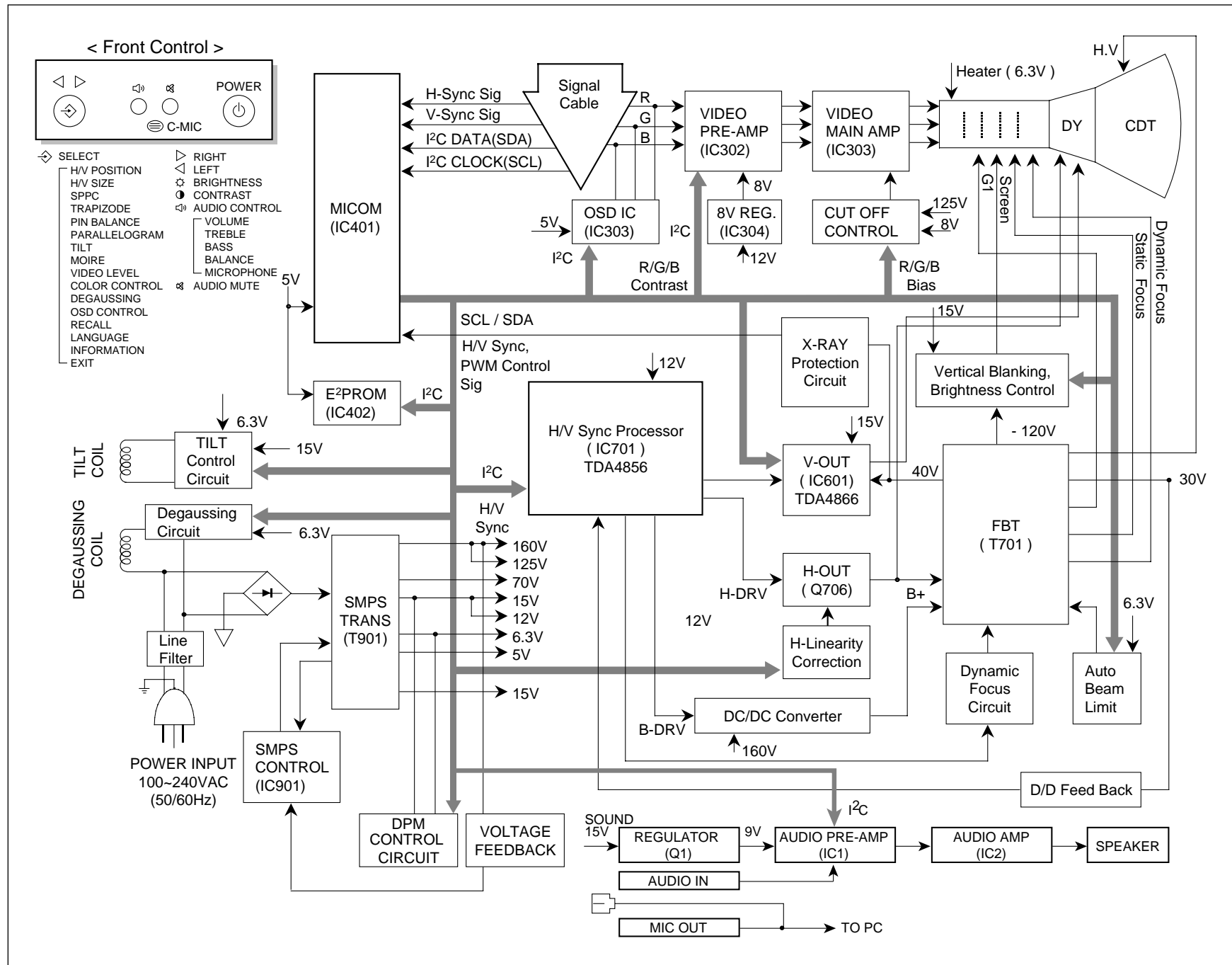


BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Line Filter & Associated Circuit.

This is used for suppressing noise of power input line flowing into the monitor and/or some noise generated in this monitor flowing out through the power input line. That is to say, this circuit prevents interference between the monitor and other electric appliances.

2. Degauss Circuit & Coil.

The degauss circuit consists of the degaussing coil, the PTC(Positive Temperature Coefficient) thermistor(TH901), and the relay(RL901). This circuit eliminates abnormal color of the screen automatically by degaussing the shadow mask in the CRT during turning on the power switch. When you need to degauss in using the monitor, select DEGAUSS on the OSD menu.

3. SMPS(Switching Mode Power Supply).

This circuit is working of 90~264V AC(50/60Hz).

The operation procedure is as follows:

- 1) AC input voltage is rectified and smoothed by the bridge diodes (D901~D904) and the capacitor (C907).
- 2) The rectified voltage(DC) is applied to the primary coil of the transformer(T901).
- 3) The control IC(IC901) generates switching pulse to turn on and off the primary coil of the transformer (T901) repeatedly.
- 4) Depending on turn ratio of the transformer, the secondary voltages appear at the secondary coils of the transformer(T901).
- 5) These secondary voltages are rectified by each diode(D902, D922~D924, D926, D927) and operate other circuit. (horizontal and vertical deflection, video amplifier, sound, ...etc.)

4. X-ray Protection.

If the high voltage of the FBT reaches up to 29kV (abnormal state), Q807 operates and IC401(MICOM) pin 11 come to low level. Then MICOM control IC701 (Deflection controller) to stop Horizontal drive pulse and stop Horizontal Deflection.

5. Micom(Microprocessor) Circuit.

The operating procedure of Micom(Microprocessor) and its associated circuit is as follows:

- 1) H and V sync signal is supplied from the signal cable.
- 2) The Micom(IC401) distinguishes polarity and frequency of H and V sync.
- 3) The Micom sets operating mode and offers the controlled data. (H-size, H-position, V-size, ... etc.)
- 4) The controlled data of each mode is stored in itself.

5) User can adjust screen condition by each OSD function. The data of the adjusted condition is stored in EEPROM(IC402).

6) Users can control screen condition by the OSD, Select, Right, Left, Audio, Audio Mute buttons, and Brightness, Contrast volume.

6. Horizontal and Vertical Oscillation.

This circuit generates the horizontal pulse and the vertical pulse by taking the H and V sync signal.

This circuit consists of the TDA4856(IC701) and the associated circuit.

7. Oscillating Circuit for D/D Converter.

This circuit generates the saw-tooth wave which has the horizontal period by taking output of the TDA4856(IC701).

8. D/D(DC to DC) Converter.

This circuit supplies DC voltage to the horizontal deflection output circuit by decreasing DC 160V which is the secondary voltage of the SMPS in accordance with the input horizontal sync signal.

9. Side-Pincushion & Trapezoid Correction Circuit.

This circuit improves the side-pincushion and the trapezoid distortion of the screen by mixing parabola and saw-tooth wave to output of the horizontal deflection D/D converter which is used for the supply voltage(B⁺) of the deflection circuit.

10. Horizontal Deflection Output Circuit.

This circuit makes the horizontal deflection by supplying the saw-tooth current to the horizontal deflection yoke.

11. High Voltage Output & FBT(Flyback Transformer).

The high voltage output circuit is used for generating pulse to the primary coil of the FBT(Flyback Transformer (T701)). A boosted voltage(about 26kV) appears at the secondary of the FBT and it is supplied to the anode, focus, and screen voltage of the CRT.

12. H-Linearity Correction Circuit.

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

13. Vertical Output Circuit.

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

14. Dynamic Focus Output Circuit.

This circuit takes the horizontal and the vertical parabola waves from the TDA4856(IC701) and amplifies it to maintain constant focus on center and corners in the screen.

15. Audio Circuit

MIC circuit sends the microphone sound to PC.

The sound circuit get to the audio gain with the pre-amp (IC1) and the main amp (IC2).

16. H & V Blanking and Brightness Control.

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

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. Video Pre-Amp Circuit.

This circuit amplifies the analog video signal from 0-0.7V to 0-4V. It is operated by taking the clamp, R, G, B drive and contrast signal from the Micom(IC401).

19. Video Output Amp Circuit.

This circuit amplifies the video signal which comes from the video pre-amp circuit and amplified it to applied the CRT cathode.