

General Information

Also Covers
20 OR & 200 T & 200 R

Electrical
Adjustments

1. BEFORE MAKING ELECTRICAL
ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

Use an isolation transformer when performing any service on this chassis.

Before removing the anode cap, discharge electricity because it contains high voltage.

When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.

Inferior silicon grease can damage IC's and transistors.

When replacing IC's and transistors, use only specified silicon grease (YG6260M).

Remove all old silicon before applying new silicon.

1-1: Prepare the following measurement
tools for electrical adjustments.

- 1. Sweepmarker Generator
- 2. Oscilloscope
- 3. Digital Voltmeter
- 4. Color Bar Generator

2. BASIC ADJUSTMENTS

2-1: AFT

- 1. Connect the AFT adjustment oscillator (39.5MHz) to TP of the tuner pack.
- 2. Connect the digital voltmeter to TP201.
- 3. Adjust L202 until the digital voltage is 3.5V ± 0.1V.

2-2: BRIGHT, AGC, CONTRAST AND COLOR

On-Screen Display Adjustment

Connect the GND through the 6.8k ohm resistor to the point (A) as shown in MAJOR COMPONENTS LOCATION GUIDE. The adjustment mode display will appear as shown in Fig. 2-1.

NOTE

Use the 1 - 7 keys on the remote control to select the options shown in Fig. 2-1. Press the 7 key to end the adjustments.

ADJUSTMENT MODE

- 1. AGC/BRI/COL AUTO
- 2. SUB BRIGHT AUTO
- 3. AGC MANUAL
- 4. COLOR MANUAL
- 5. CONTRAST MANUAL
- 6. BRIGHT MANUAL
- 7. END

Fig.2-1

2-2-A: BRIGHT

- 1. Receive the monochrome pattern.
- 2. Activate the adjustment mode display and press the 6 key.
- 3. Press the VOL. UP/DOWN key on the remote control until 0% of gray scale begins to lighten.

2-2-B: AGC

NOTE

Adjust after performing adjustments in section 2-1.

In case of weak electric field.

- 1. Tune to a noisy channel.
- 2. Activate the adjustment mode display and press the 3 key.
- 3. Press the VOL. UP/DOWN key on the remote control until noise is at minimum.
- 4. Change the channel, confirm that the other channels are normal.

In case of strong electric field.
(Radio frequency interference can cause
diagonal streaks to appear.)

- 1. Activate the adjustment mode display and press the 3 key.
- 2. Press the VOL. UP/DOWN key on the remote control until diagonal streaks are at minimum.
- 3. If there is still a problem after pressing the VOL. UP/DOWN key on the remote control, install an attenuator to the antenna terminals, then repeat step 1.
- 4. Confirm that noise does not appear.
- 5. Change the channel, confirm that the other channels are normal.

2-2-C: CONTRAST

- 1. Activate the adjustment mode display and press the 5 key.
- 2. Adjust the VOL. UP/DOWN key on the remote control until the bar step is set to the "32 "(20") or "0"(14).

2-2-D: COLOR (PAL)

- 1. Receive the color bar pattern.
- 2. Connect the oscilloscope to TP801.
- 3. Activate the adjustment mode display and press the 4 key.
- 4. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 4 scales on the screen of the oscilloscope.
- 5. Press the VOL. UP/DOWN key on the remote control until the red color level is adjusted to 75% of the white level. (Refer to Fig. 2-2)

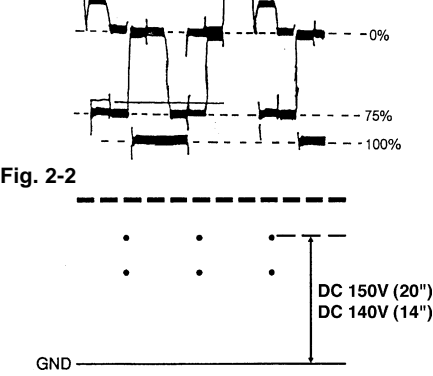


Fig. 2-3

2-3: CUT OFF

- 1. Receive the color bar pattern.
- 2. Set the AFT switch ON position.
- 3. Connect the oscilloscope to TP802
- 4. Adjust VR803 until voltage is 150VDC (20") 140VDC (14") (Refer to Fig. 2-3)

2-4: FOCUS

- 1. Receive the broadcasting signal.
- 2. Adjust the focus control until picture is distinct.

2-5: VERTICAL SIZE

- 1. Receive the crosshatch pattern from the color bar generator.
- 2. Adjust the bright and contrast controls until the crosshatch pattern is distinct.
- 3. Adjust VR401 until the center of crosshatch is square.
- 4. Receive broadcasting signal, then confirm picture is normal.

2-6: VERTICAL POSITION

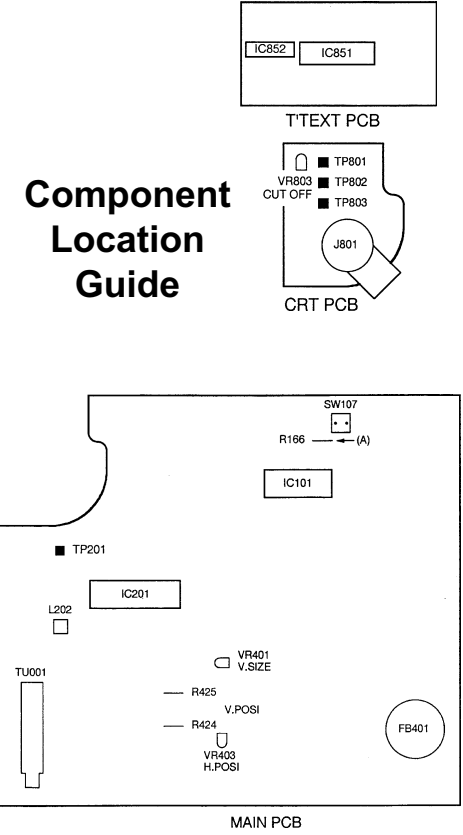
- 1. Receive the color bar pattern.
- 2. Using the remote control, set brightness and contrast to maximum position.
- 3. Adjust the value of R424 and R425 until horizontal line of the color bar comes to approximate center of the CRT.

NOTE

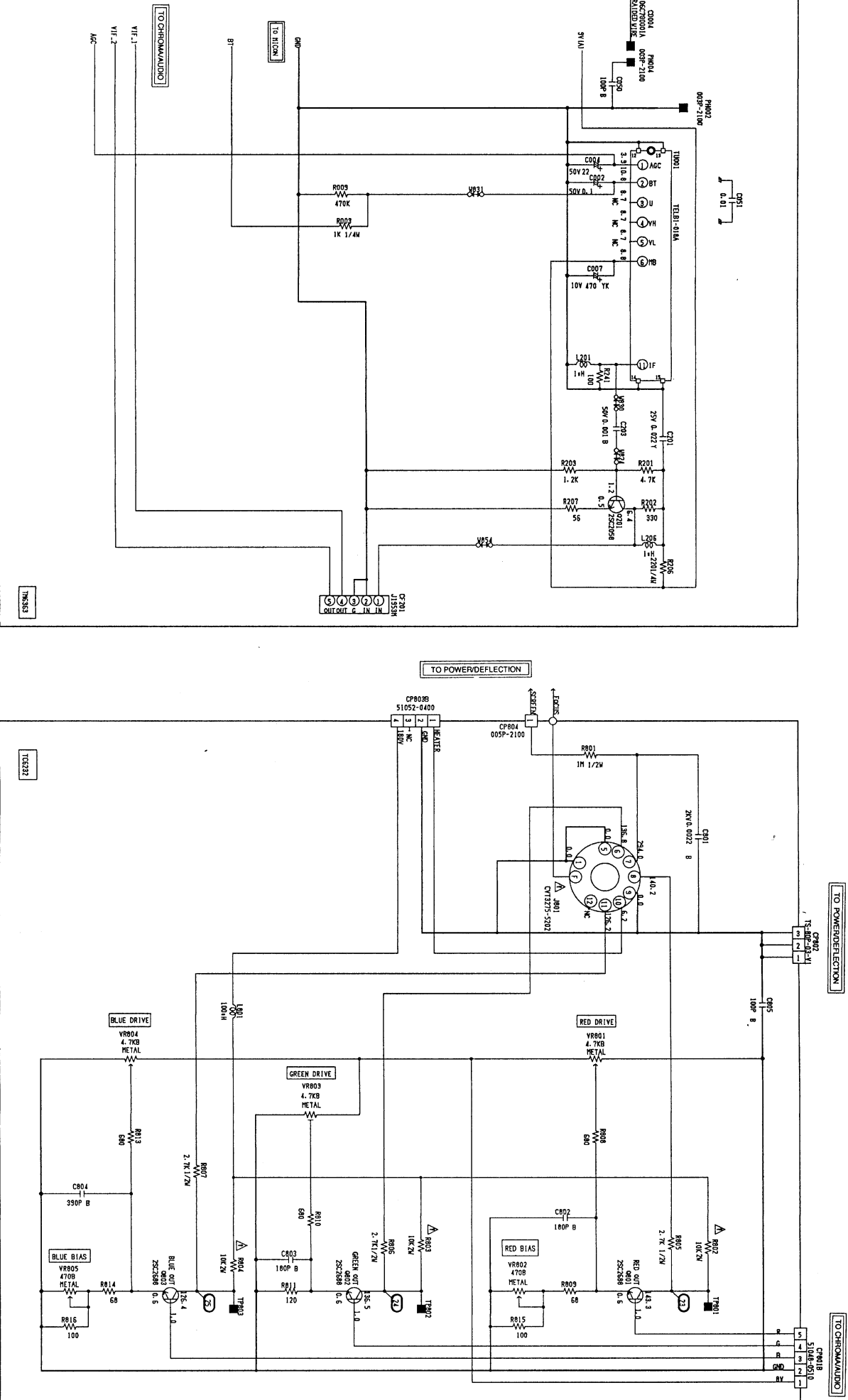
R424 and R425 are fixed components. Use a variable resistor or capacitor to determine the optimal value and insert that value component. Lessen the value of R424. Picture will move 4mm up. Lessen the value of R425. Picture will move 4mm down.

2-7: HORIZONTAL POSITION

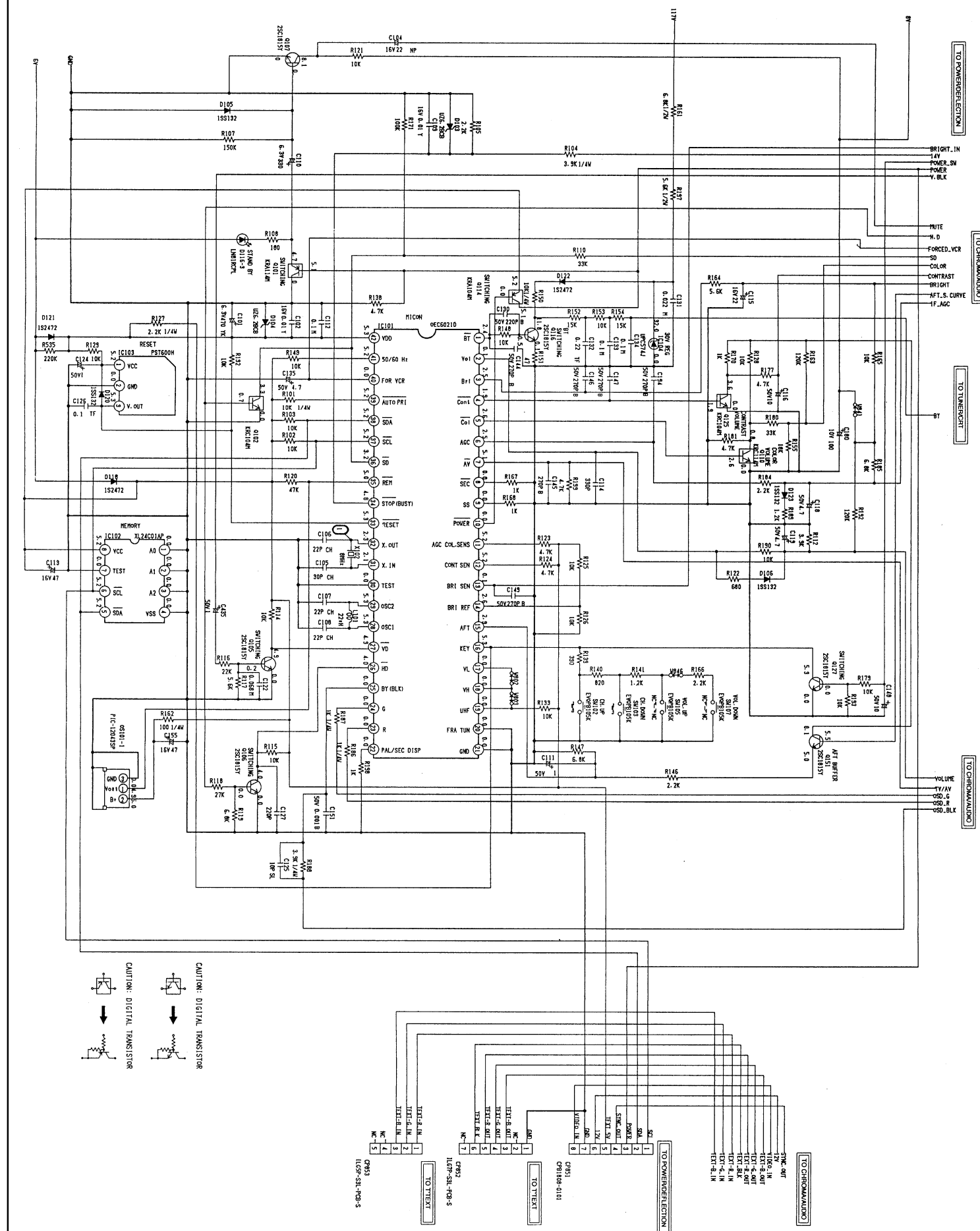
- 1. Receive the color bar pattern.
- 2. Using the remote control, set brightness and contrast to maximum position.
- 3. Adjust VR403 until the color width of both screen edges are equal.
- 4. Receive the broadcasting signal, then confirm picture is normal.



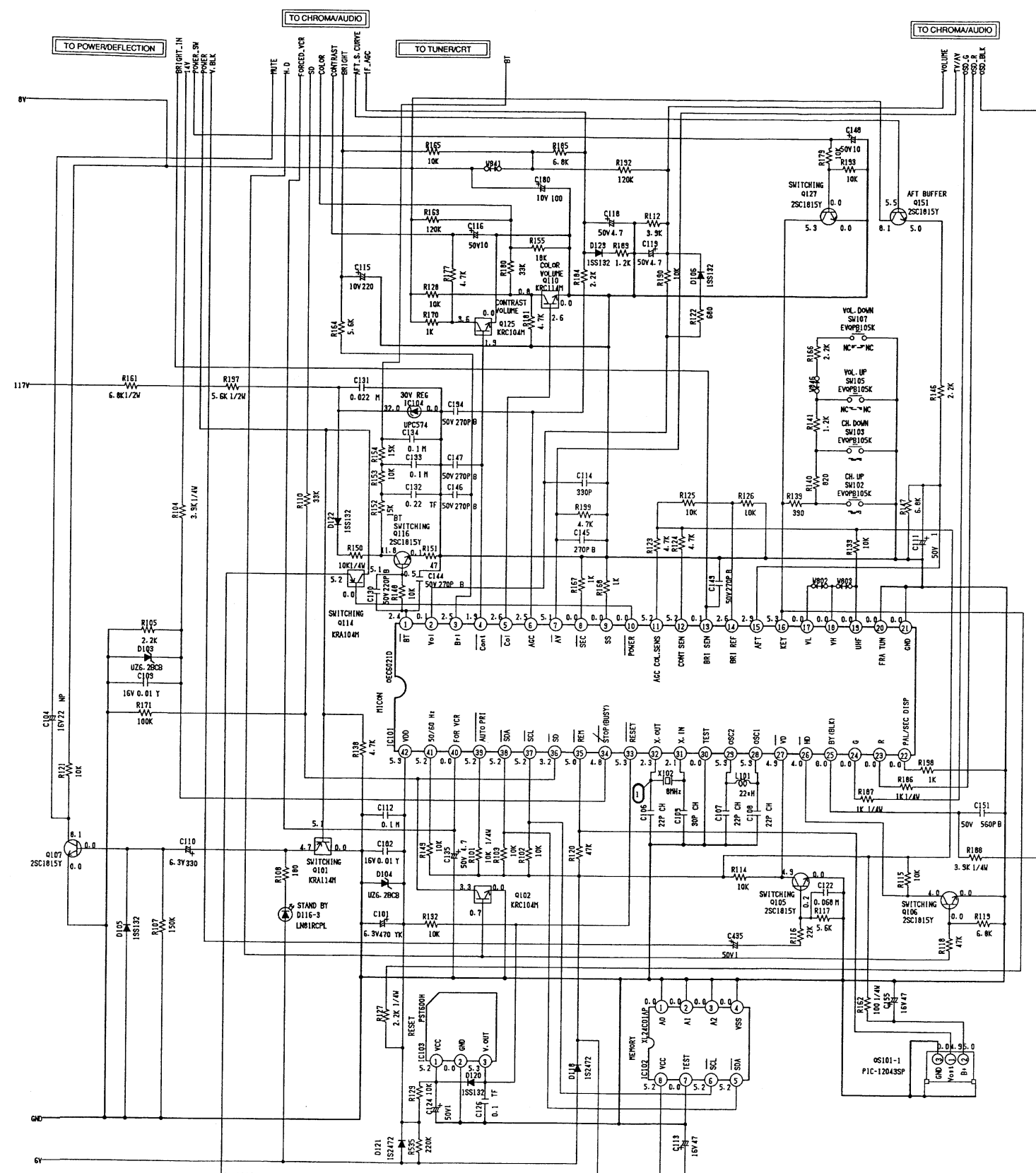
CRT (200R) Diagram



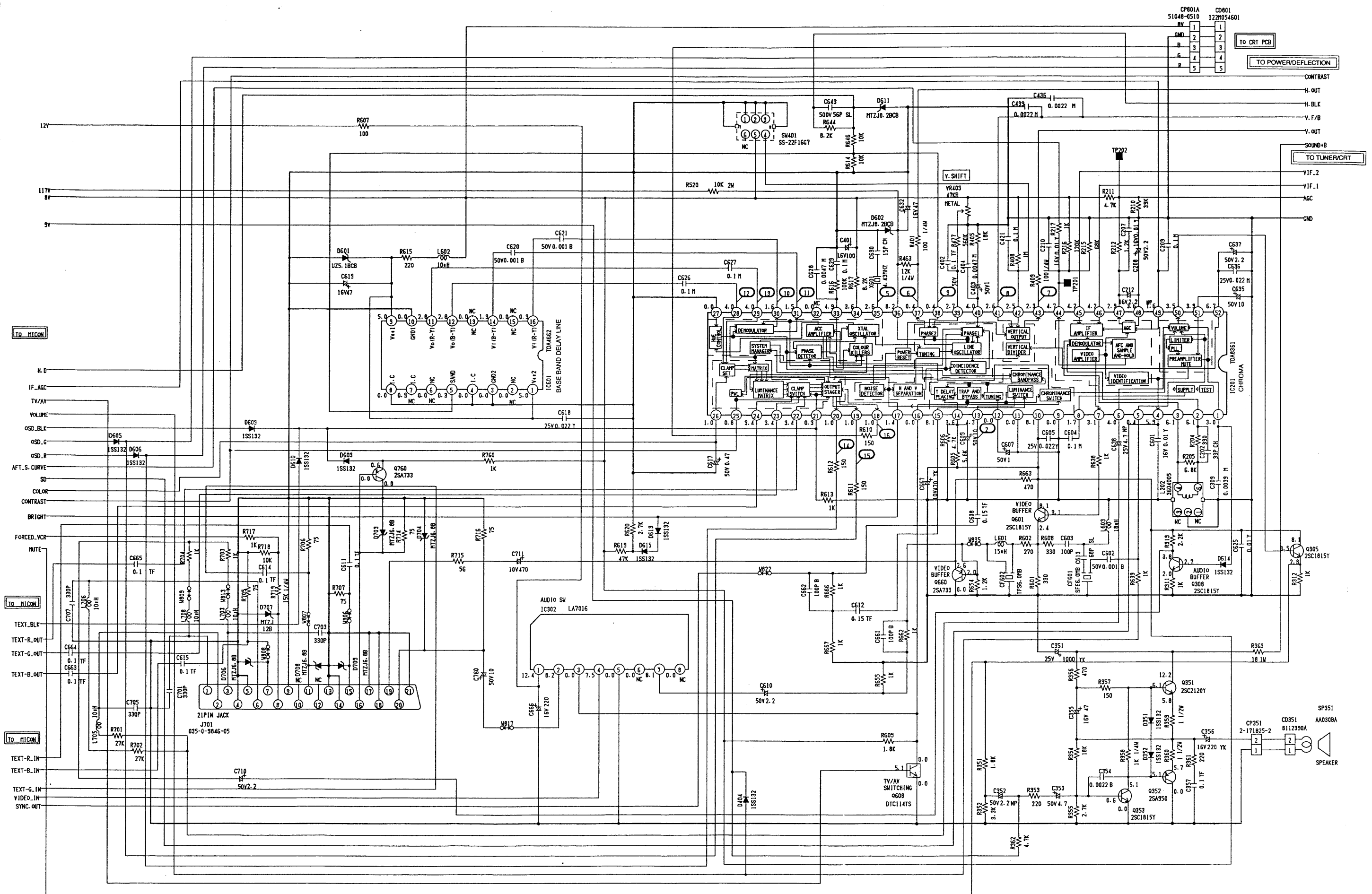
Microcontroller (20 OT) Diagram



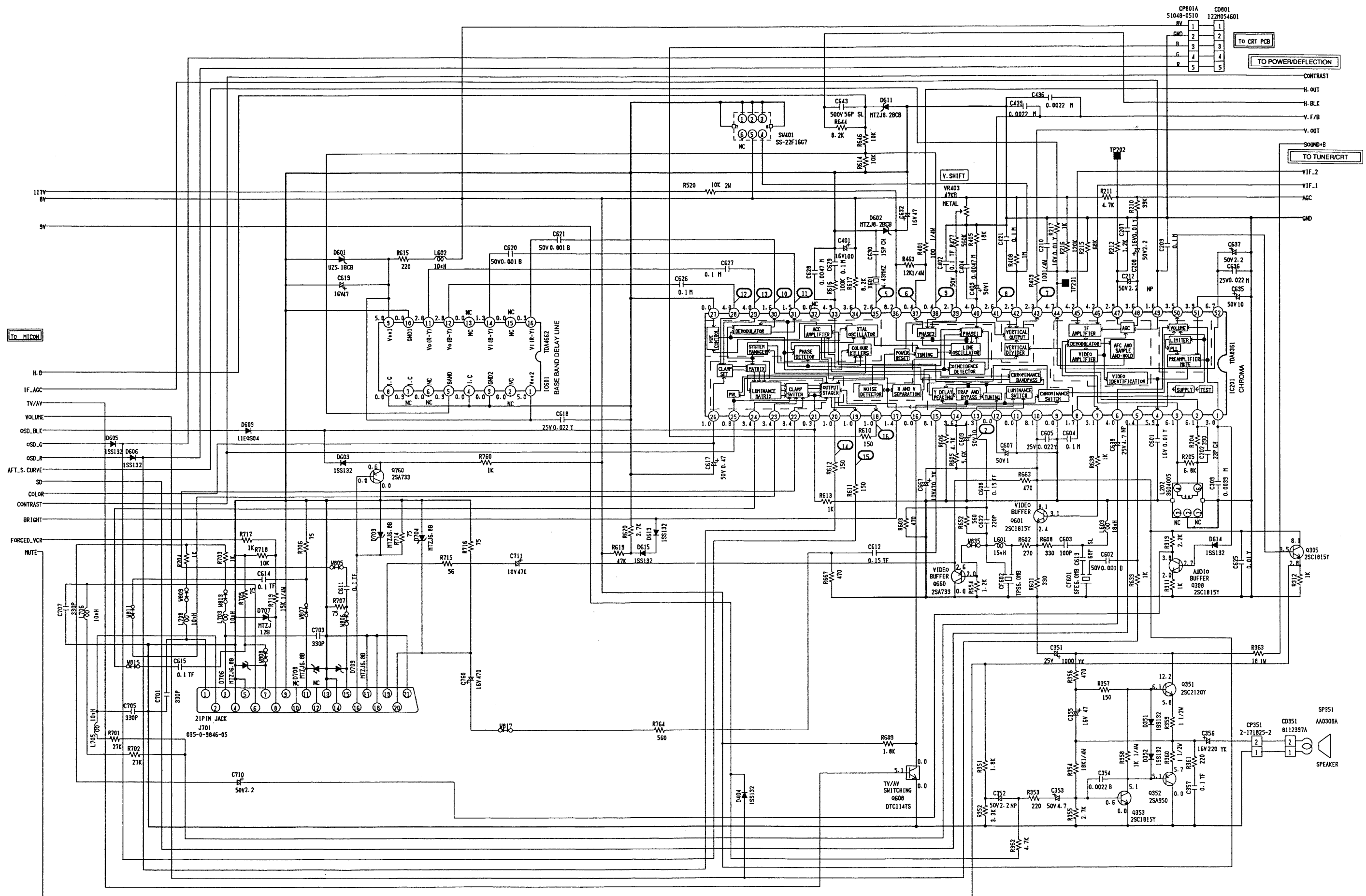
Microcontroller (20 OR) Diagram



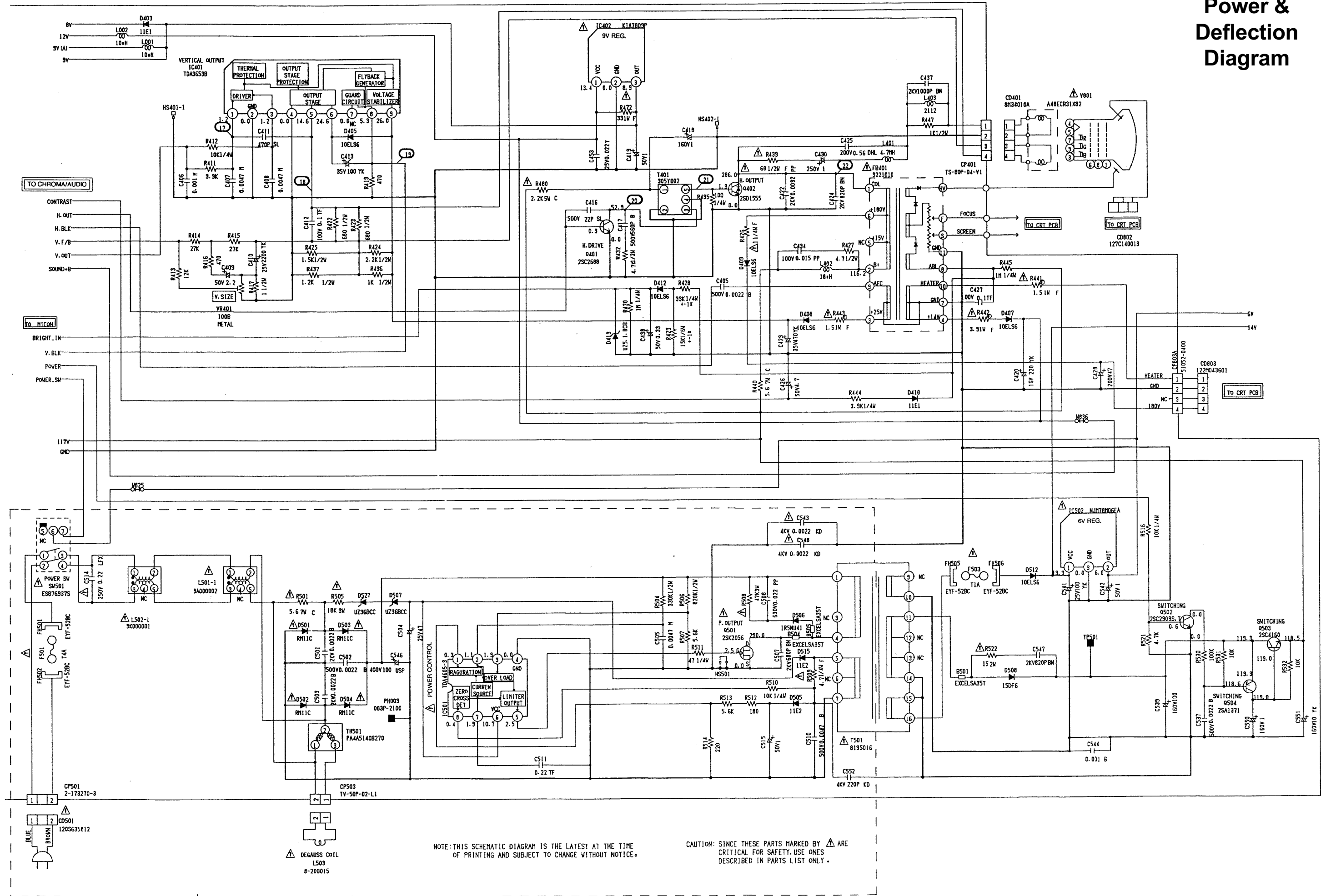
Video Audio (20 OT) Diagram



Video Audio (20 OR) Diagram



Power & Deflection Diagram



Text Diagram

