The Bullet Chart Series
Vol. 1, Number 2, 3/23/94; rev. 11/30/95

AppleColor™ High-Resolution RGB Monitor
WHITE BALANCE PROCEDURE
Quick Reference

Caution: *This is an abbreviated version of other materials. Do not attempt this procedure unless you have first reviewed the CRT safety and discharge instructions located in Bulletins/Safety on Apple's Service Source CD, and have successfully performed at least one detailed video adjustment as described in the High-Resolution RGB Monitor manual in Service Source.*

Perform the White Balance adjustment procedure whenever the CRT assembly, the Deflection board (D-Board), or the video color board assembly is replaced. The White Balance adjustment should only be made when you are certain the Cutoff control is set correctly and the monitor has been on for at least 10 minutes.

1. Turn the monitor power Off, and remove the video cable.

2. Check that all the controls are preset as shown in steps 3-5 for the cutoff adjustment procedure.

3. Connect the video cable, turn the monitor power On, and let the monitor warm up for 10 minutes. Make sure that the Monitor control panel is set to 16 shades of gray.

4. Display the Gray Bars test pattern.

5. Alternately adjust the background controls (B.BKG, G.BKG, and R.BKG) so that:
   - Bars 1, 2, and 3 have no predominant color
   - Bar 1 is completely black (same as border)
   - Bar 2 and Bar 3 are barely visible and dark gray, respectively, as shown in Figure 1.

6. Adjust the G.DRIVE control on the B board until the center of bar 8 (the brightest bar) measures at the mid '9' scale on the light meter (see Figure 1).

7. Adjust the R.DRIVE and B.DRIVE controls until there is no predominant color in the display. You may have to repeat step 6.

NOTE: The White Balance is correct if 1) there is no predominant screen color, 2) bar 8 measures mid '9' on the light meter, and 3) bars 1-3 are adjusted as shown in Figure 1. If minor adjustments are still required, perform steps 8 and 9.

8. Adjust the SUB CONT control until the brightness at the center of bar 8 measures mid '9' on the light meter.

9. Display the Gray Bars and adjust the SUB BRT so that the 1st bar is completely black and the 2nd bar is barely visible.

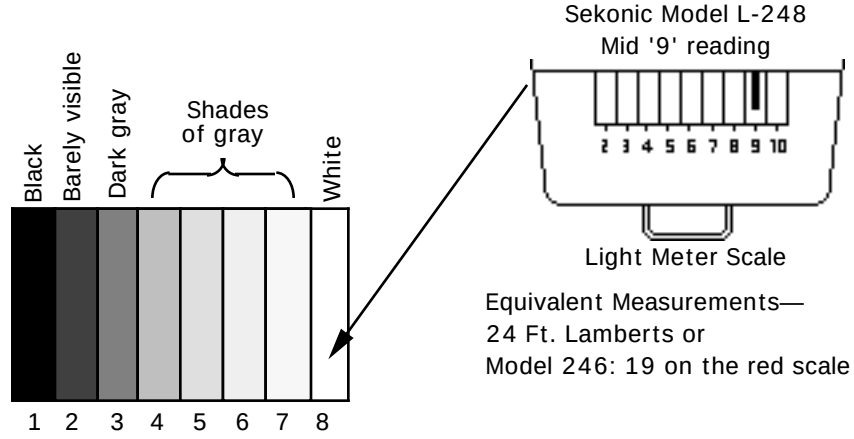

FIGURE 1

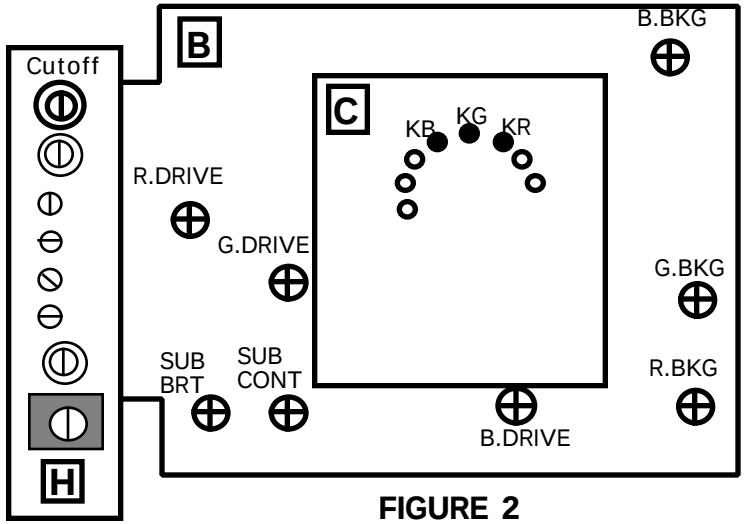

FIGURE 2

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AppleColor™ High-Resolution RGB Monitor
CUTOFF PROCEDURE
Quick Reference

Caution: *This is an abbreviated version of other materials. Do not attempt this procedure unless you have first reviewed the CRT safety and discharge instructions located in Bulletins/Safety on Apple's Service Source CD, and have successfully performed at least one detailed video adjustment as described in the High-Resolution RGB Monitor manual in Service Source.*

Perform the Cutoff adjustment procedure whenever the CRT assembly, the Deflection Board (D board), or the video color board assembly is replaced.

1. Turn the monitor power Off and remove the video cable.

2. Turn the monitor power On and let the monitor warm up for 10 minutes.

3. Preset the Brightness control to its center (detent) position.

4. Preset the Contrast control to maximum (full clockwise).

5. Preset all 8 controls on the B board to midrange. (The B board controls are shown in Figure 1).

6. Set up a voltmeter as shown in Figure 1.

7. Set the red cathode (test point KR on the C board) to 140 volts DC (± 2 VDC) by slowly adjusting the red background (R.BKG) control on the B board.

8. Repeat the previous step for the green and blue cathodes (KG and KB) by adjusting G.BKG and B.BKG controls.

9. Adjust the Cutoff control on the H board until the raster just appears. Then back it off until the raster (just) completely disappears. If you are unable to complete this step successfully, stop the adjustment procedure because a repair is needed!

Important: If the cutoff is set too high, the monitor could automatically shut down. If this happens, turn off the monitor, turn the cutoff control all the way down (ccw), wait 30 seconds, turn on the monitor, and resume the adjustment.

10. Perform the White Balance adjustment listed on the White Balance Bullet Chart.

Caution: The Cutoff control must not be touched again unless all the above steps are repeated. Improper Cutoff adjustment will degrade the monitor performance and severely reduce the life of the CRT.

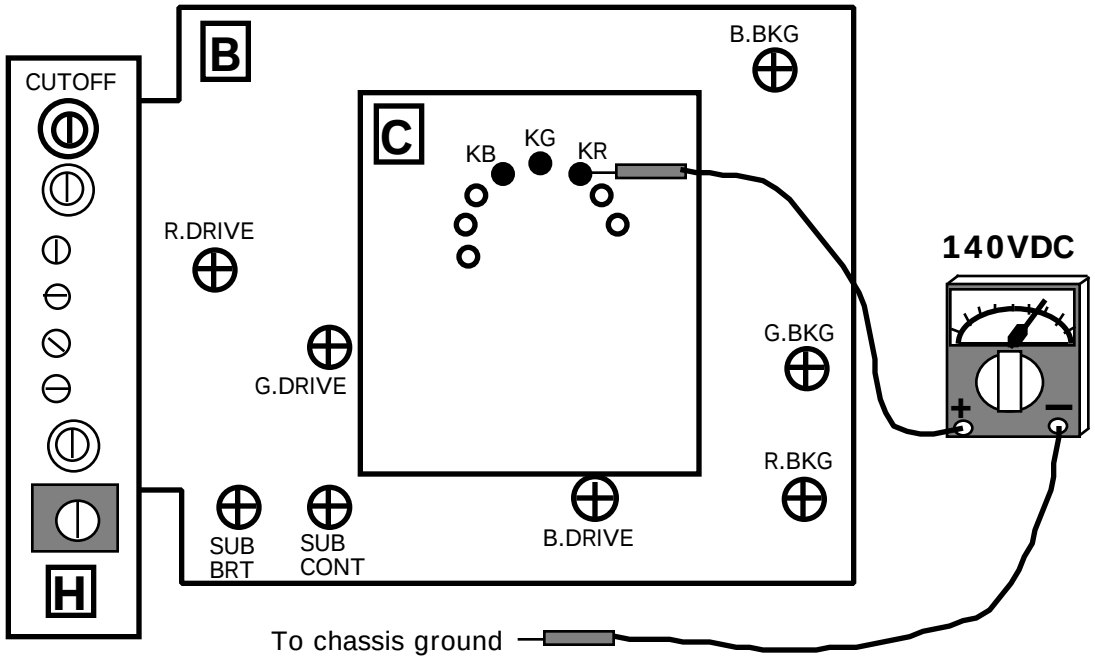

FIGURE 1

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