

Comparison of LP156WF1-TLB1 and B156HW02-V1

ColorDMD Displays LLC

This comparison was done to compare the display performance of two different panels with the ColorDMD display controller.

Side by Side Pictures

The matte-finish LG LP156WF1-TLB1 is shown on the left. The glossy AUO B156HW02-V1 is on the right. The display contrast and power is similar with only a few noticeable differences. The backlight on the LG display has a reddish cast versus a more neutral gray on the AUO (this is difficult to see in the photos).

The chromacity of the BLUE primary color (BX,BY) is also slightly different as described in the manufacturer specifications. With respect to one another, the LG's blue is closer to red and the AUO closer to green. This could also be a function of the backlight color temperature.



As a result, the LG is slightly pinker than the AUO, which can be seen in the flesh tones which are more neutral on the AUO display. The difference is subtle in normal lighting but more visible in dim lighting. This is shown in the following photos comparing the LG display to the AUO display without color calibration.

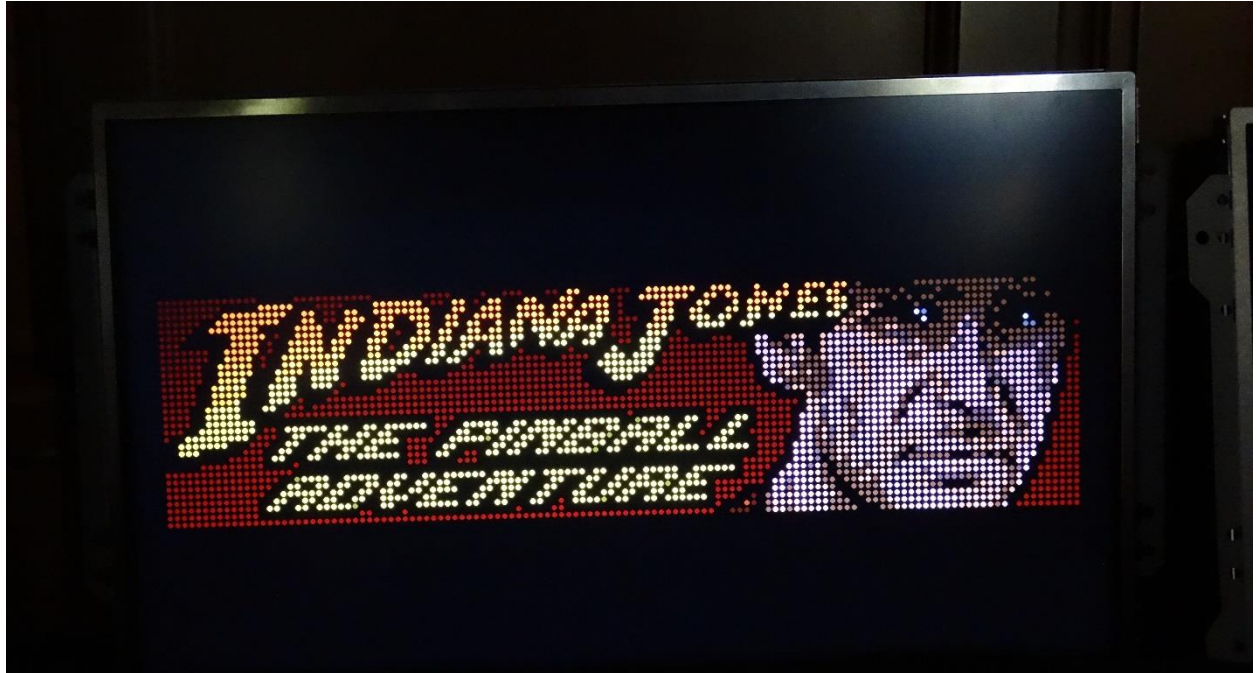
We also experimented with a color calibration to shift the white point slightly toward red and to compensate for the difference in the blue primaries. With the calibration there is very little difference between the two displays (except for the color temperature of the ambient backlight) which is still pinker for the LG.

In the pictures that follow, note that you can differentiate and identify the matte-finish LP156WF1-TLB1 screen from the glossy AUO B156HW02-V1 from the reflections on the screen.

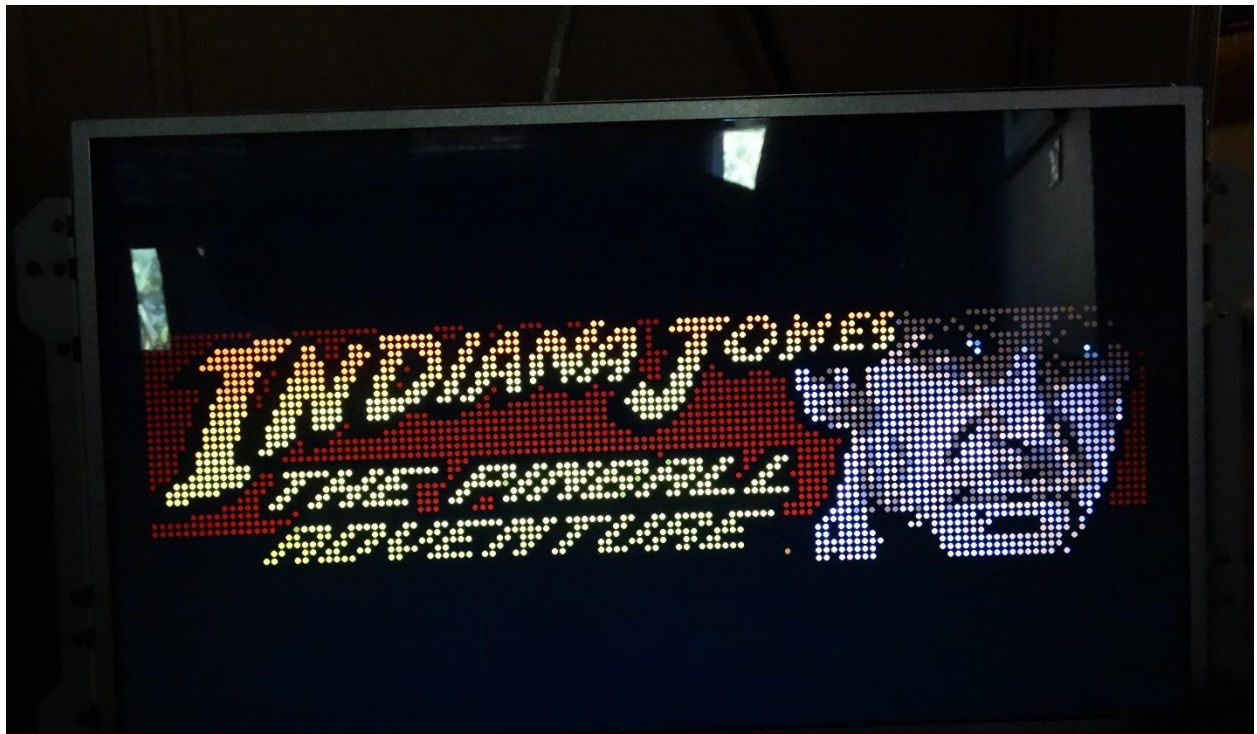
Conclusion

The LP156WF1-TLB1 and B156HW02-V1 are both high quality displays that yield good field of view, offer similar contrast and brightness, and provide similar pictures. The LG panel is shifted slightly toward red when compared the AUO panel (which might be attributable to the backlight source). This effect can be compensated through some color calibration to shift colors slightly toward red.

No calibration for differences between panels is currently implemented by ColorDMD but could be something we consider adding in the future.



LP156WF1-TLB2



B156HW02-V1 (No calibration)



B156HW02-V1 (with color calibration to match LP156WF1-TLB1)



LP156WF1-TLB2



B156HW02-V1 (No calibration)



B156HW02-V1 (with color calibration to match LP156WF1-TLB1)