Quick Guide: Digital Billboard Photocell, Light Sensor, and Webcam Cleaning Procedures

Photocell Cleaning

On older displays, photocells ensure the display is at the appropriate brightness level for the time of the day and for the lighting conditions. Ensuring the photocell is clean and functioning properly is crucial for display performance and also ensures the display complies with local sign codes.

Photocell Inspection

At each visit to the sign, inspect the photocell for excess dirt. Also inspect the flat areas between the photocell plates as this is where dirt is likely to accumulate. Refer to Figure 1 for an example of a dirty photocell.

Required Equipment

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- Dish Soap
- Water
- Clean Rags
- Dry Towel
- Phillips Head Screwdriver
- Pliers
- Alcohol or Lens Cleaning Wipe

Photocell Cleaning

1. Disconnect the photocell cable from the connector on the back of the display.
2. Remove the screws used to mount the photocell to the display.
3. Use pliers to remove the four plate assembly nuts. Refer to Figure 2.
4. Starting from the bottom of the photocell assembly, carefully remove the plates from the plate assembly bolts. Set the plates in the order they were removed so the photocell can be reassembled in the same order. Refer to Figure 2.
5. Using soapy water and a rag, wipe all the dirt and debris from the plate surfaces. Use extreme caution not to damage the Sensor PCB when working on the plate that contains the PCB. Refer to Figure 2.
6. Rinse the clean plates off with clean water.
7. Carefully wipe off the photocell eye with an alcohol wipe or a lens cleaning wipe. Refer to Figure 3.

Figure 1: Dirty Photocell

Figure 2: Photocell Assembly

Figure 3: Photocell Assembly
8. Dry all of the clean components with a clean towel.
9. Reverse Steps 1-4 to reassemble and reinstall the photocell.

**Multi-Direction Light Sensor Cleaning**

The Multi-Direction Light Sensor (MDLS) measures light from the display face, the display back, and ambient light conditions. It is important to keep all three MDLS windows clean to ensure proper display dimming.

**Required Equipment**
- Clean Rags
- Glass Cleaner

**MDLS Cleaning**

1. Spray a small amount of glass cleaner on one of the MDLS windows. Refer to Figure 4.
2. Carefully use a clean rag to clean the MDLS window.
3. Inspect to verify the window in clean and streak free.
4. Repeat Steps 1-3 on all three until all MDLS windows are clean.
Mobotix Webcam Cleaning

**Required Equipment**
- Clean Rags
- Glass Cleaner

**Mobotix Webcam Cleaning**
1. Apply a small amount of glass cleaner to a clean rag.
2. Use the portion of the rag with the glass cleaner to wipe the front of the Mobotix webcam lens clean. Refer to Figure 5.

Panasonic Webcam Cleaning

**Required Equipment**
- Clean Rags
- Glass Cleaner
- Phillips Screwdriver

**Panasonic Webcam Cleaning**
1. Apply a small amount of glass cleaner to a clean rag.
2. Use the portion of the rag with the glass cleaner to wipe the front of the Panasonic webcam case lens clean. Refer to Figure 6.
3. If cleaning the front of the Panasonic webcam case lens does not sufficiently get the lens sufficiently clean, it may be necessary to loosen the two webcam case screws and clean the inside of the lens. If this step is required, use extreme caution so the webcam does not get bumped. Also make sure to close and secure the case when complete.

Figure 5: Mobotix Lens

Figure 6: Panasonic Webcam