# **Work Instructions: Changing Out the Entrance Bay Photo Eyes (Banner Eye)**

**Parts:**

* Emitter: CCS-71559
* Receiver: CCS-71740

**What are Banner Eyes sensors:**

The banner eyes sensors are a very important sensor in the wash. We use them to locate and measure vehicles, along with locating tires and, determining if a truck is going through the wash. They are also used to keep the garage doors open when something is in the way and for anti-collision.

**How does it work:**

The banner eyes work by using a beam of light that it sends from the Emitter and then is picked up by the Receiver, when the Receiver stops seeing the light it activates a relay internal to the banner eye, that we use to send a signal back into our controller as an input.

**Helpful Hints:**

When using multiple Banner Eyes in close proximity make sure that they are running on different frequencies on the side of the banner eyes it shows “A” and “B” lights, whichever one lights up is the frequency that the sensor is running. Be sure that the emitter and the receiver frequency match. In our wash entrance, we have three eyes so from top to bottom we want them to read “ABA” or “BAB” that way they won’t interfere with each other. You change the frequency by changing the way the banner eye is wired.  
  
The gate eyes with the pulse sensor are how we measure and track vehicles through the wash, when the banner eye is blocked, and the PLC sees a 24vdc pulse, The PLC starts measuring the vehicle’s length so that it can turn the wash functions on and off properly.

The lights on the back of the banner eyes labeled “1,2,3,4” represent the signal strengths (“4” being the highest). If you notice that the signal strength is low, you may have to adjust the positioning of the banner eye or clean the lenses, with a microfiber not abrasive cloth

**Tools Needed:**

- Non-abrasive cloth

- Screwdriver

**Parts Needed:**

- Emitter: CCS-71559  
- Receiver: CCS-71740

**Procedure:**

**Cleaning the Banner eyes.**

1. Wipe the Banner eye lenses with a non-abrasive cloth.

**Changing the Banner eyes.**

1. Remove both the emitter and receiver eyes from their mounts.
2. Open the banner eye junction box.
3. Unwire the old banner eyes from the wiring.
4. Wire in the new banner eyes.
5. Install the new Emitter and Receiver eyes.
6. Align the Emitter and Receiver eyes.
   1. We want to see a signal strength of 3 on the receiver for the best results.
7. Verify on the HMI iPad that the desired banner eye is sending a signal to the PLC.

**Video Tutorial:**

# [Change Photo Eyes on Vimeo](https://vimeo.com/552997345?embedded=true&source=vimeo_logo&owner=108168220)