Banner Q-60 Troubleshooting Guide

The Banner Q-60 is one of the bowl level sensors of choice for Feeding Concepts. It is a background suppression sensor, which allows you to set a range that will turn on the hopper when the sensor detects no parts within cutoff distance. While it is a great sensor for bowl level control, it can seem difficult to set properly. This is a brief guide to be used in conjunction with the Banner Info Sheet. (Link Below)

Step 1: Power on (On all controls purchased from FCI, the Q-60 Powers on when the bowl power switch is turned on) Also, ensure that your Q-60 is set to light operate, there are 2 LEDS on the Q-60, one labeled “DO” and “LO”, the “LO” LED should be illuminated, to switch, simply hold down both + and – buttons for 5 Seconds.

Step 2: Position the laser of the sensor to point at the bowl bottom, we usually set the laser just after where the parts would fall out of the hopper and proceed around the bowl.

Step 3: Find the background cut-off distance with the range dial. Start with the dial turned all the way counterclockwise. Slowly start to turn the dial clockwise to increase the range until the sensor signal light illuminates, this means you have hit the cutoff distance. You want to turn the dial slightly back in the counterclockwise direction just until your signal light stops illuminating.

Step 4: Gather some of the parts that you will be feeding in your vibratory bowl, you will use these to set your sensor. You want to place these parts where your Q-60 laser is pointing. When you place the parts in front of the laser, your signal light on your sensor should illuminate. Basically, the goal is to have the signal light not illuminated when no parts are present, meaning the hopper would be on. When parts are present, you want the light to be illuminated, meaning that the hopper would shut off to prevent over filling.

Step 5: Now that you have your cutoff distance set, you want to set your delays on your sensor so that the hopping does not have instant on and off, this can be bad for your hopper. For most parts you only want about 2 seconds of on and off delay. For larger parts, you may want to increase the on delay since the gap in between parts in greater. To set the delays simply just use the 2 buttons present below the range dial labeled “On Delay” and “Off Delay”. Each button also has a + and -. Once you press the button, it will automatically put the sensor into adjustment mode, you will see the LED’s change, you will use the + and – arrow to increase of decreases each delay.

Step #	Delay Time	LED Status
0	No Delay	
8	0.062 second	
24	0.250 second	
40	1.00 second	
56	4.0 seconds	
72	16 seconds	

Banner Info Sheet:
http://info.bannerengineering.com/cs/groups/public/documents/literature/69622.pdf