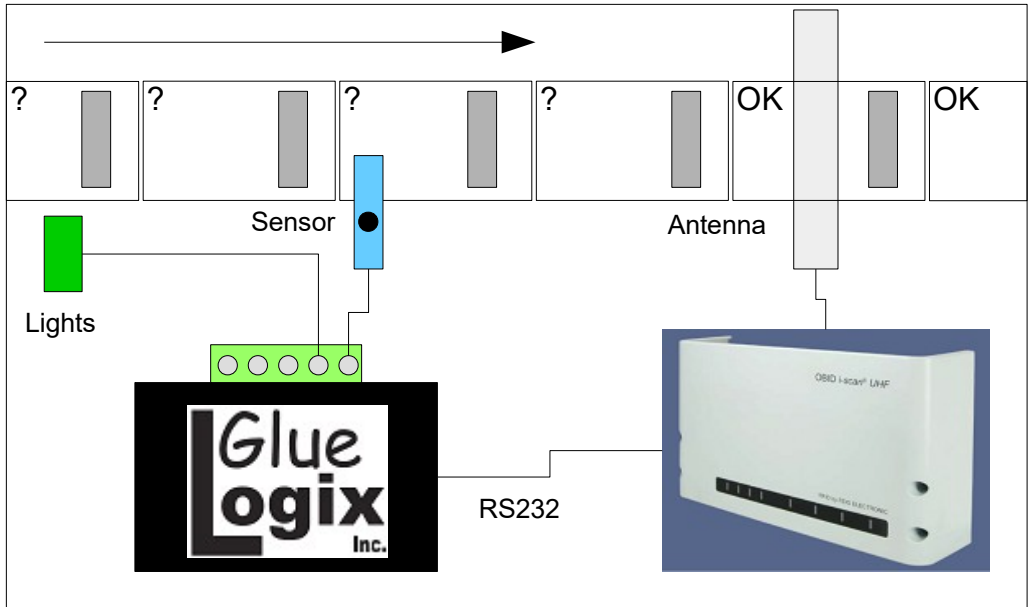


**GlueLogix I/O Box for Feig
Process Example
Larry Martin, GlueLogix Inc.
Larry@GlueLogix.com
USA 919.342.0201
Rev A, 14Jan2019**

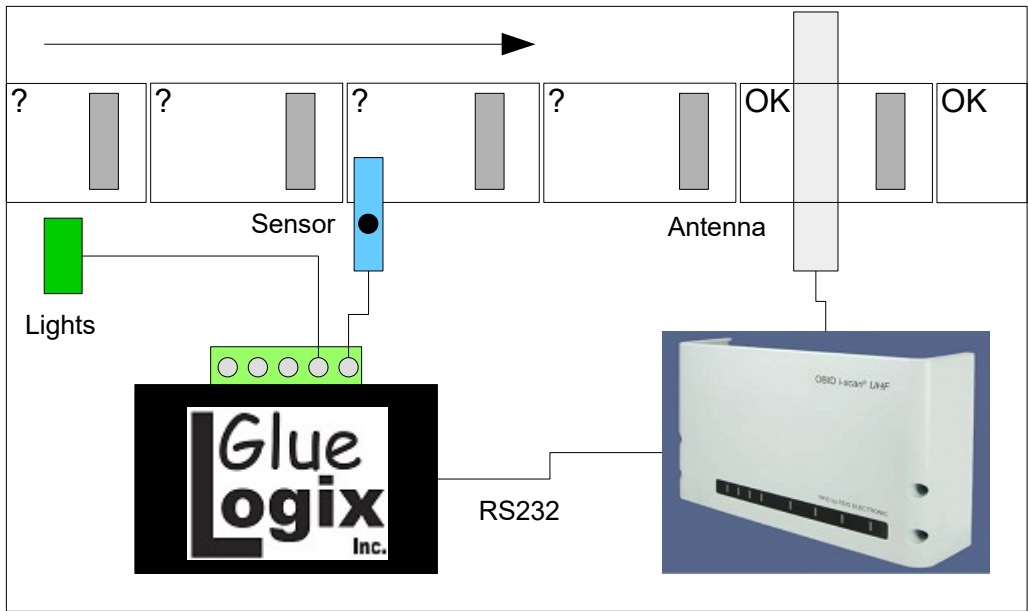




Frame 1:

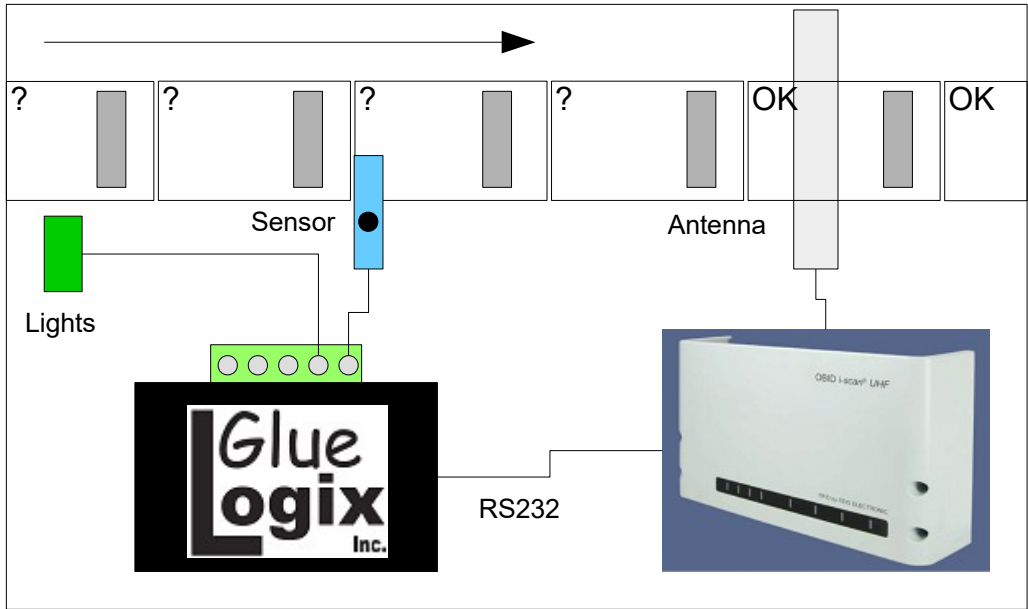
The I/O box (black rectangle) is connected to, from right to left:

- Any RS232 capable FEIG RFID reader
- A label sensor or PLC trigger signal
- Status lights and/or PLC inputs



Frame 2:

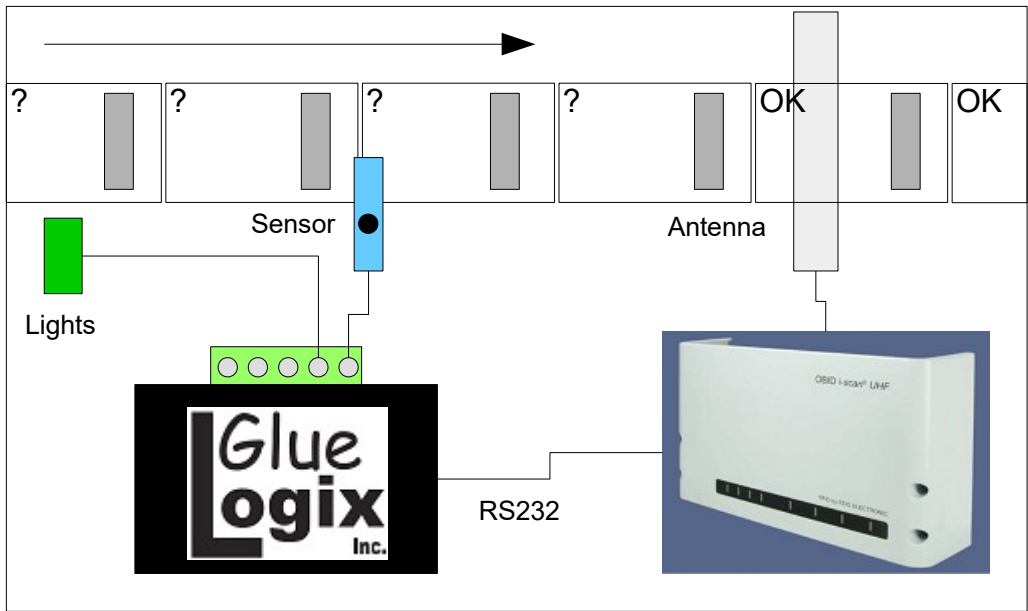
A label web with RFID inlays moves left to right across the sensor and antenna.



Frame 3:

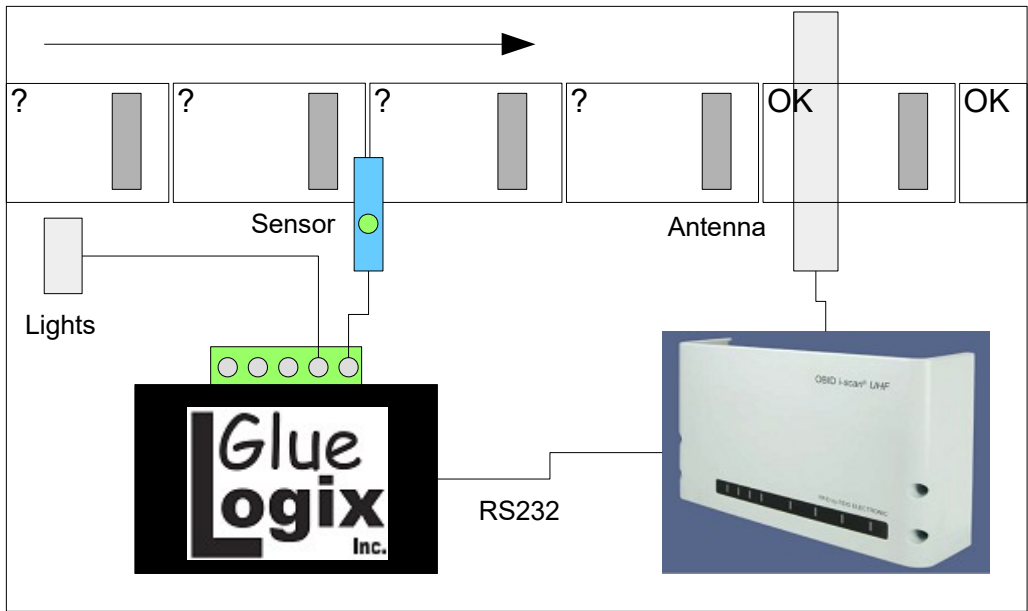
The gap between labels approaches the sensor.

The Green status light is ON from the previous cycle.



Frame 4:

Labels move to the right. Gap approaches sensor.

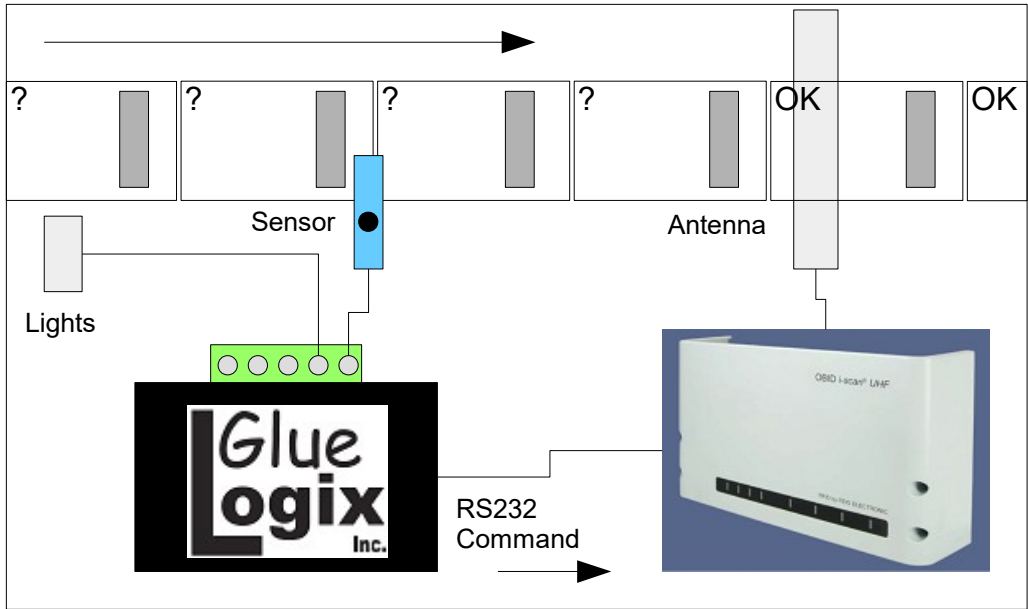


Frame 5:

A gap hits the sensor and the sensor fires, shown by a green circle.

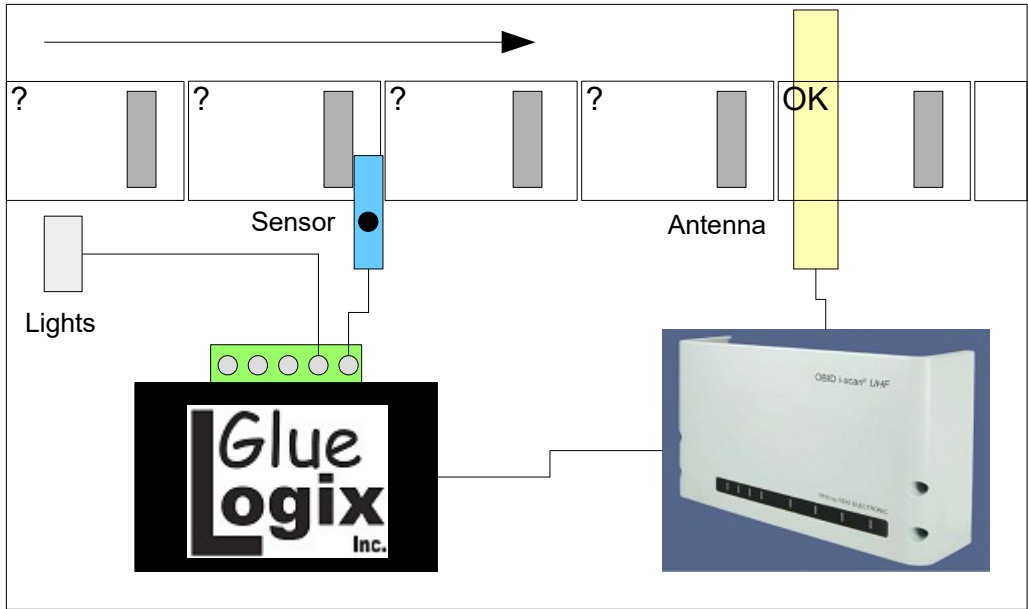
This trigger is the start of a new label cycle.

The status light turns off because both OK and NG outputs are turned off when a trigger arrives. Operators can observe the light blinking as an indication of trigger timing.



Frame 6:

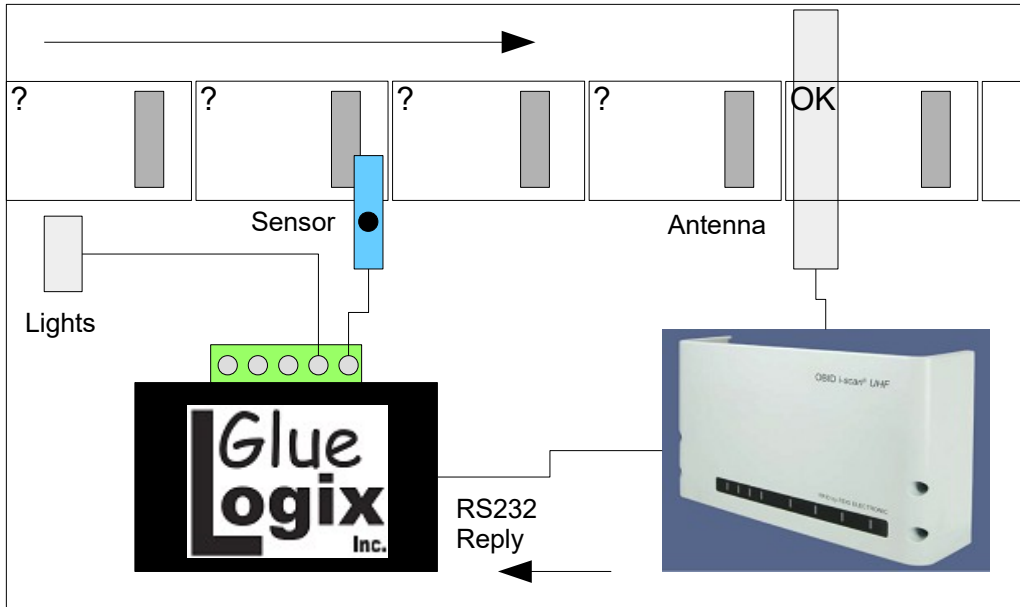
The label web keeps moving. The sensor is no longer activated, but the I/O box is already triggered. It sends a serial command to the FEIG reader.



Frame 7:

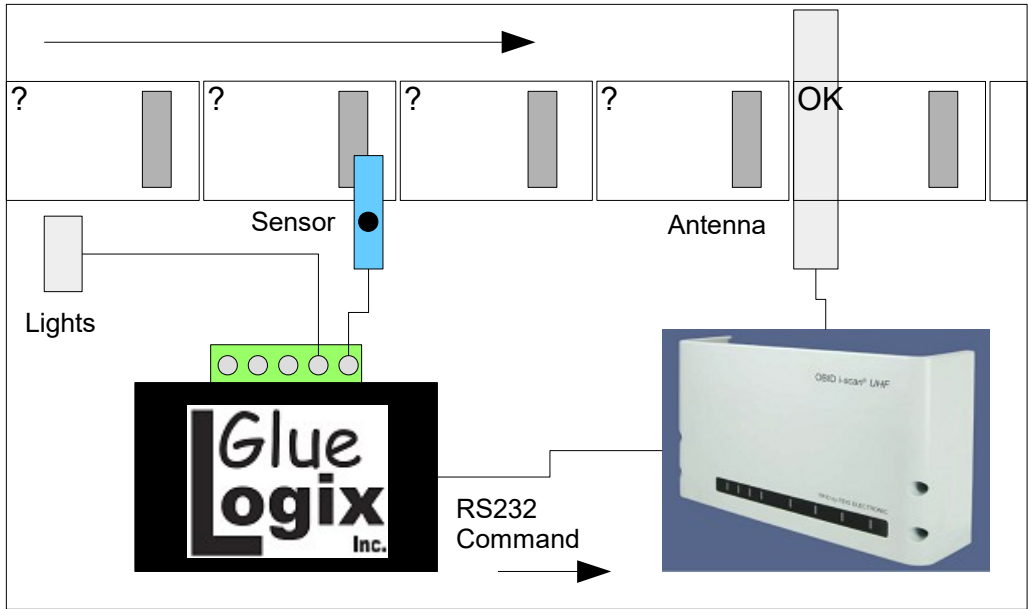
The FEIG reader executes the serial command sent in the last frame. Because the next inlay is still upstream of the Antenna, the command fails, as shown by the yellow color in the Antenna.

This sequence shows retries. Real processes would be tuned to succeed on the first try.



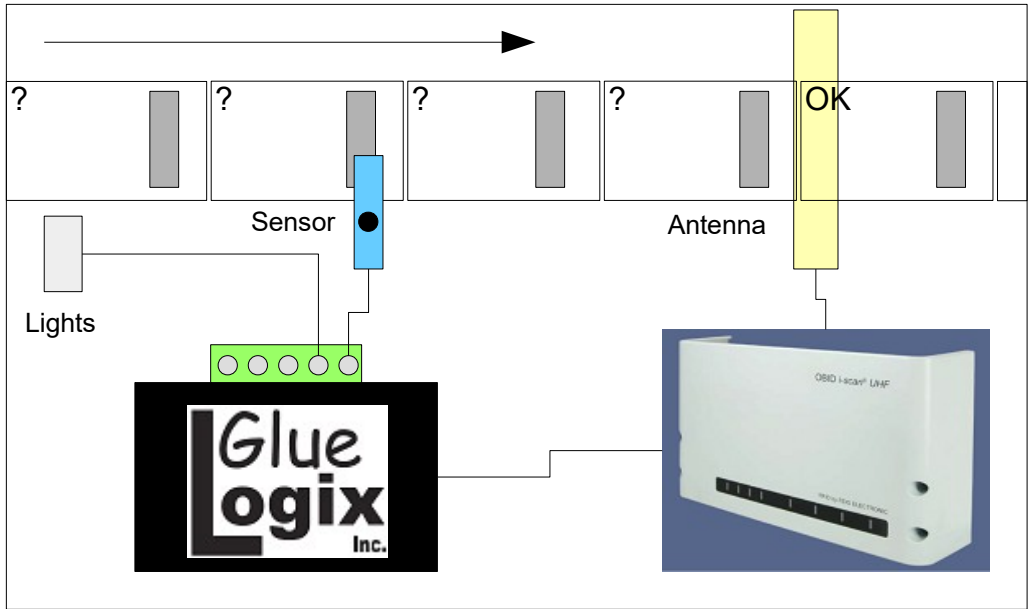
Frame 8:

FEIG sends a failure reply back to the I/O Box.



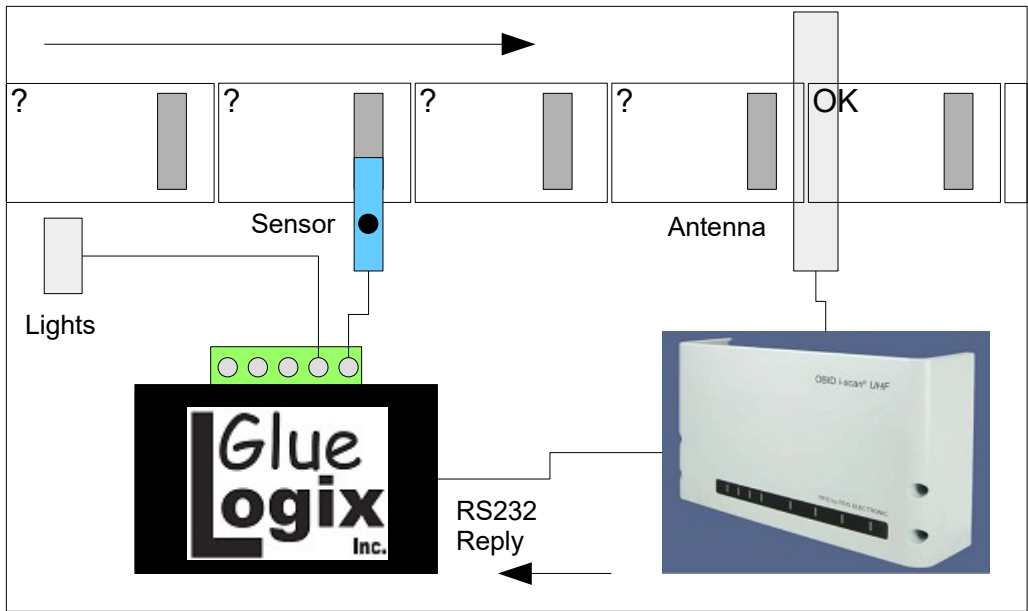
Frame 9:

I/O Box retries the read, sending a new Command to FEIG.



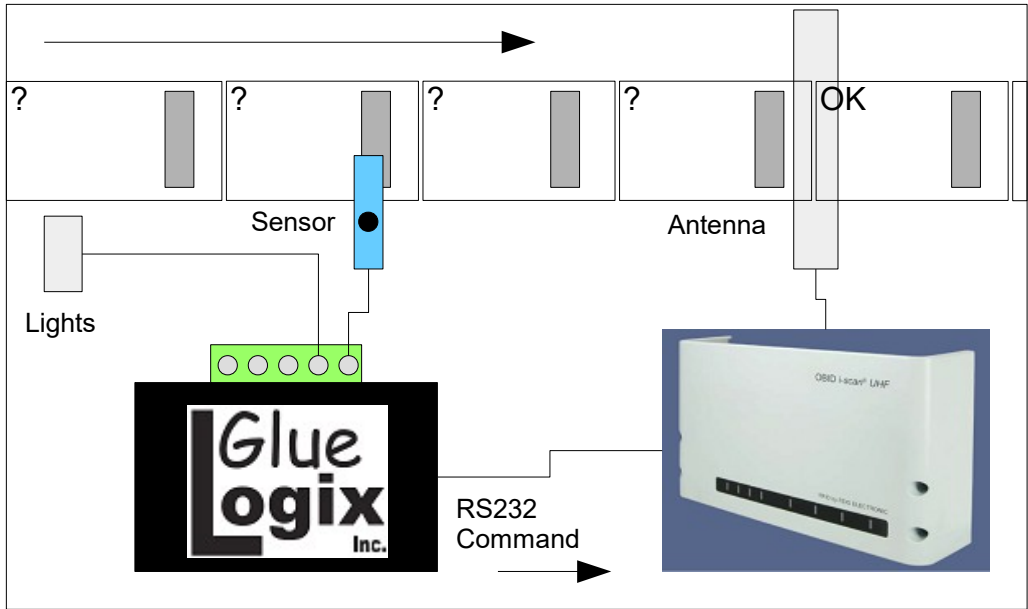
Frame 10:

RFID air interface command fails again, because the inlay is not yet over the antenna.



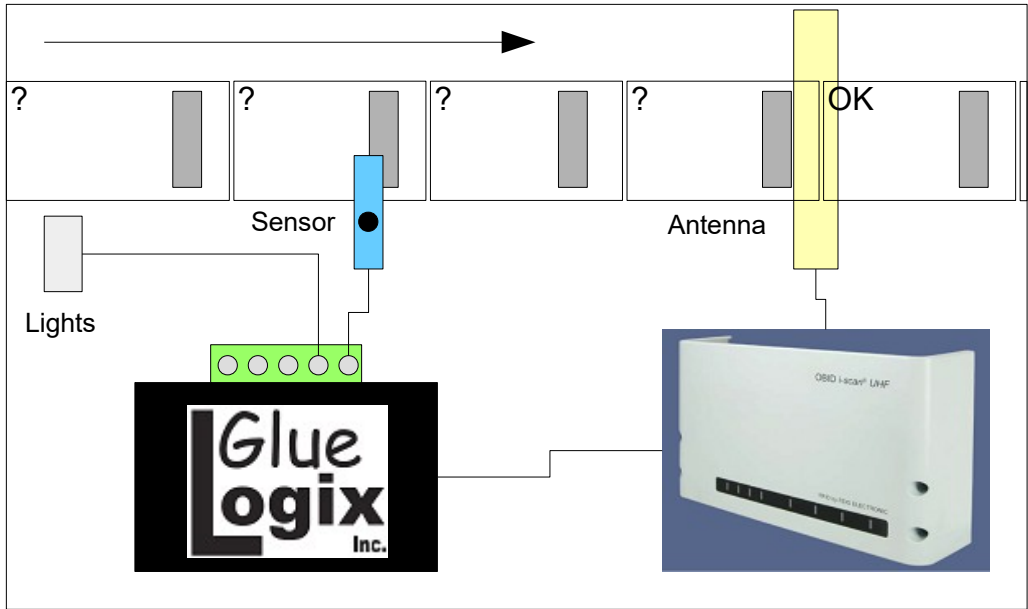
Frame 11:

FEIG sends a second failure reply.



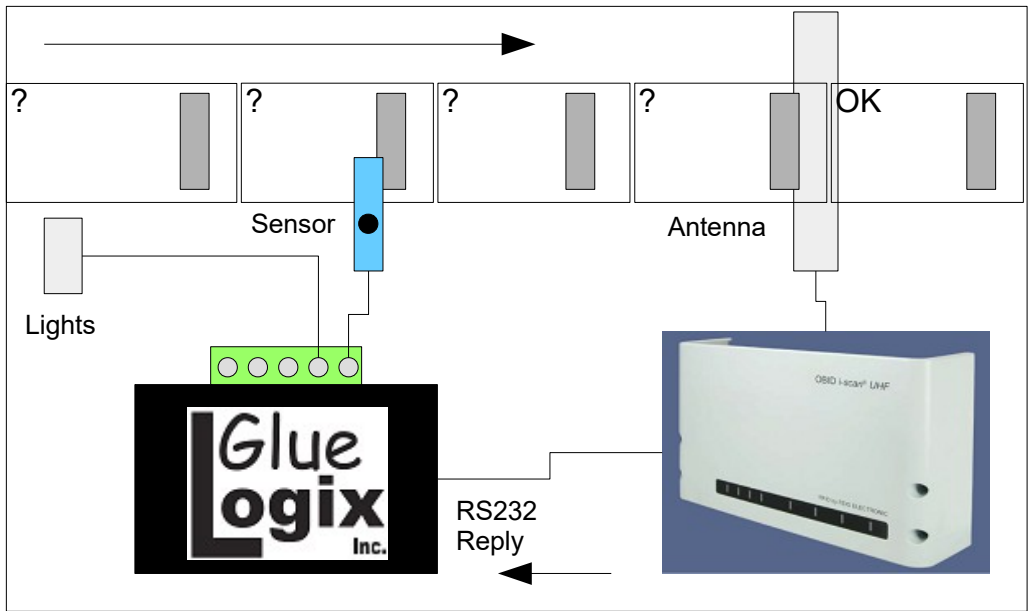
Frame 12:

I/O Box retries.



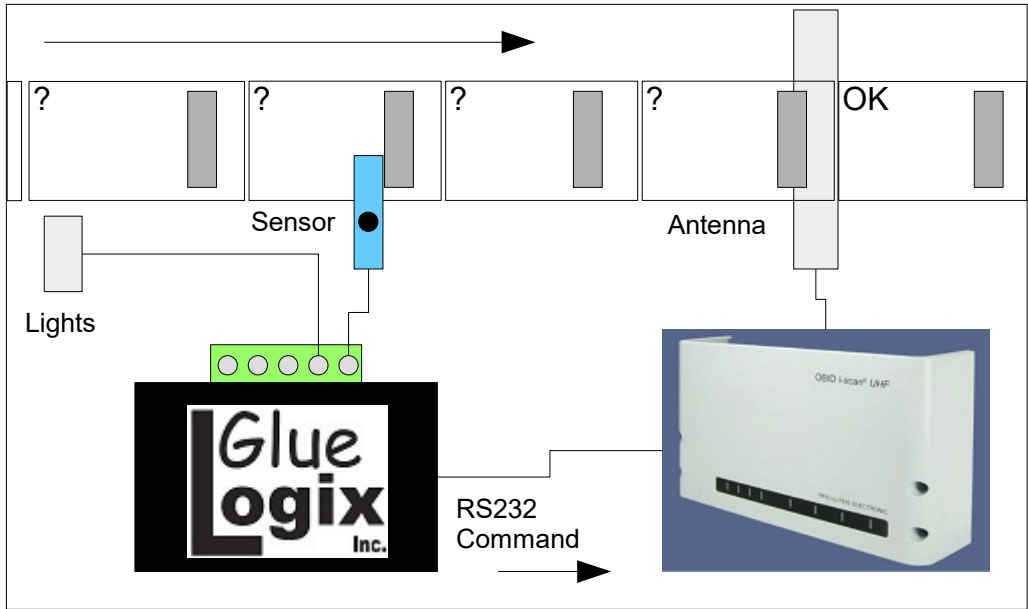
Frame 13:

RFID fails again.



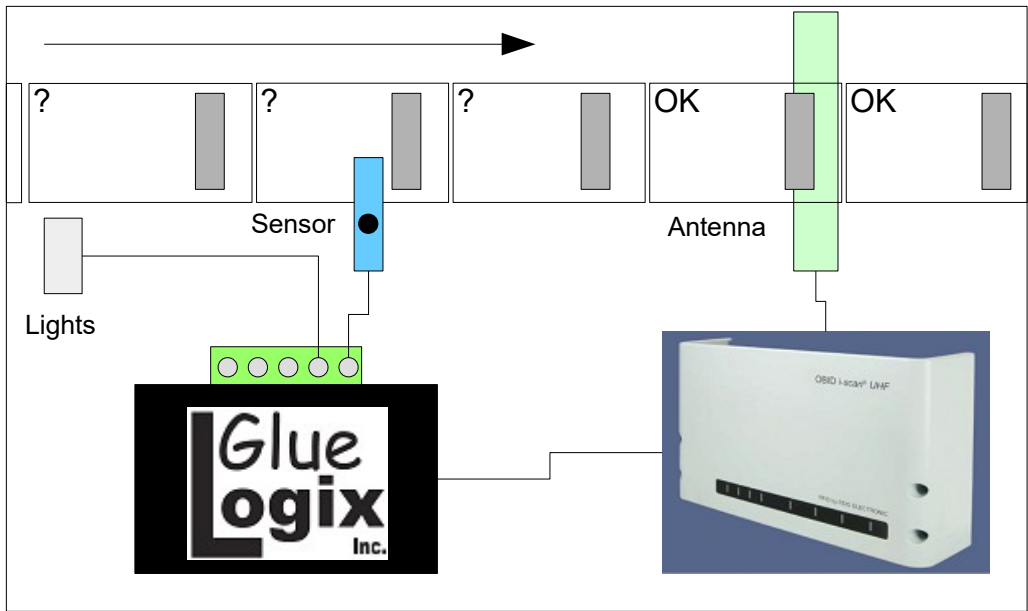
Frame 14:

FEIG Replies again.



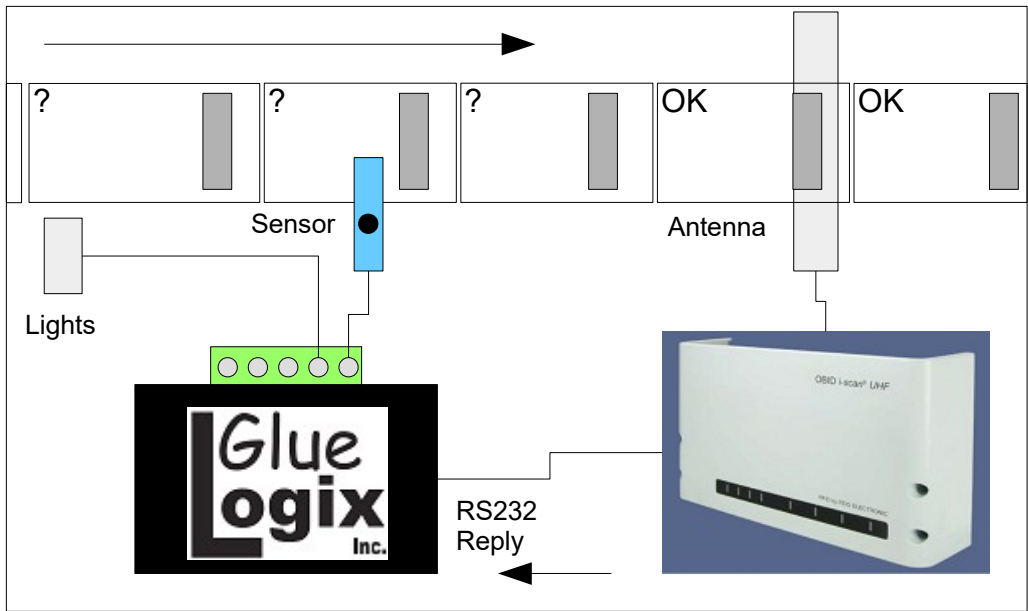
Frame 15:

I/O Box replies one last time.



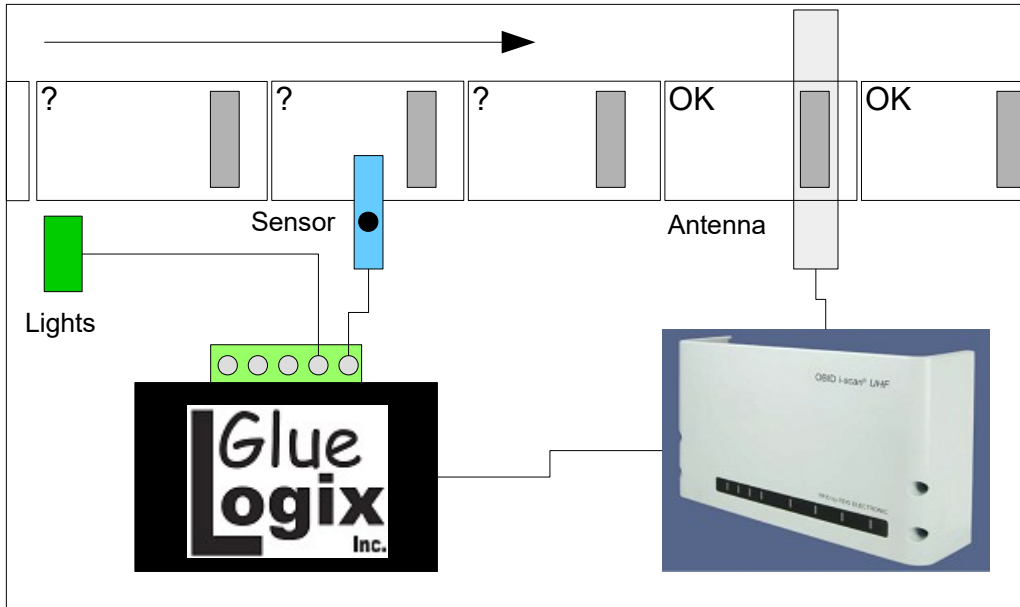
Frame 16:

This time, the inlay is over the antenna so the RFID command works, as shown by the green color of the Antenna.



Frame 17:

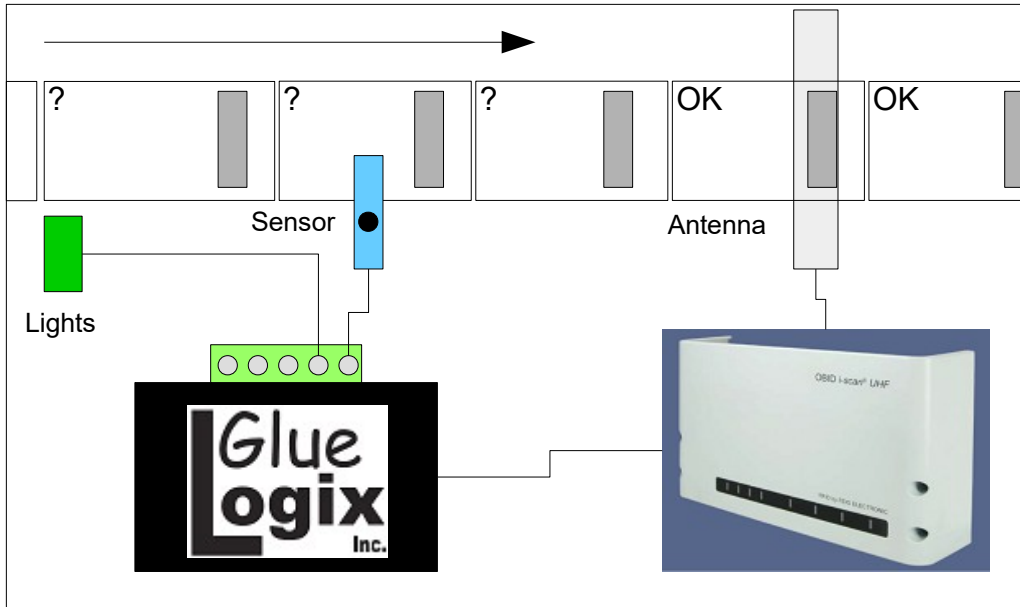
FEIG sends Good reply to I/O Box.



Frame 18:

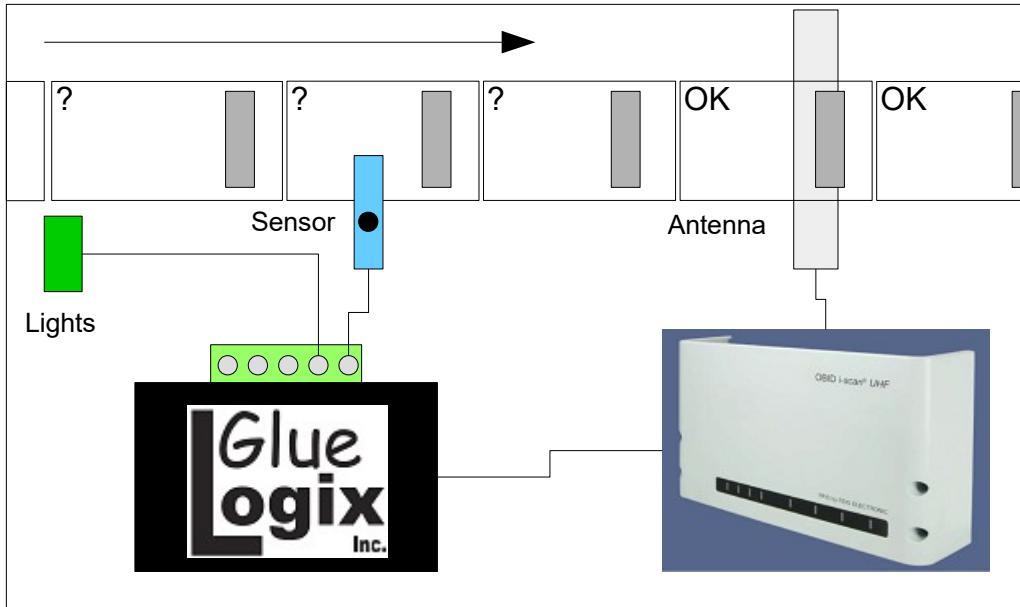
OK Output is set, Green status light is turned ON.

The I/O Box also has NG (No Good or Bad) and Mark outputs.



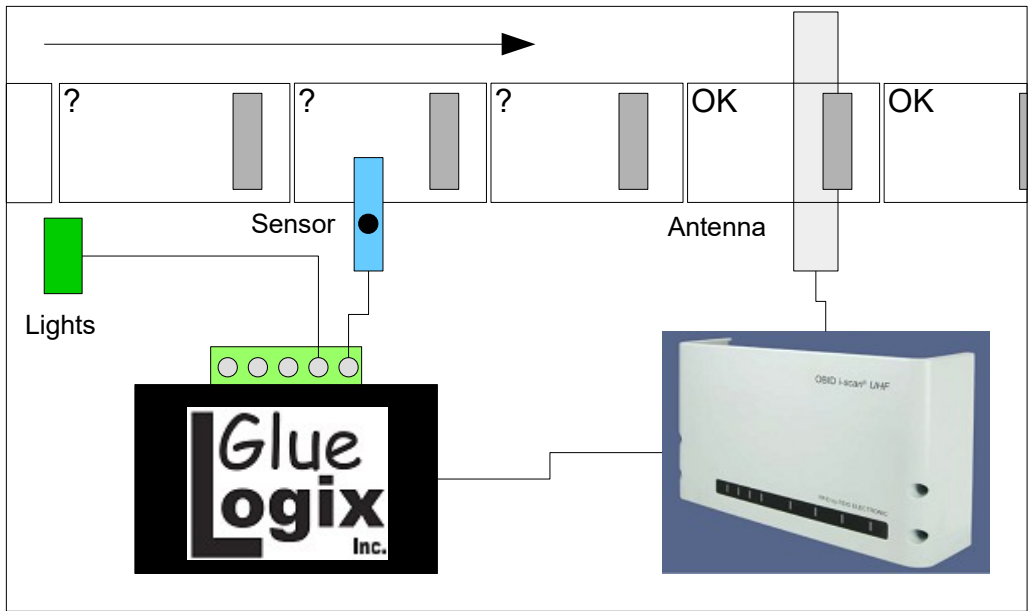
Frame 19:

The system is set up for the next test cycle.



Frame 20:

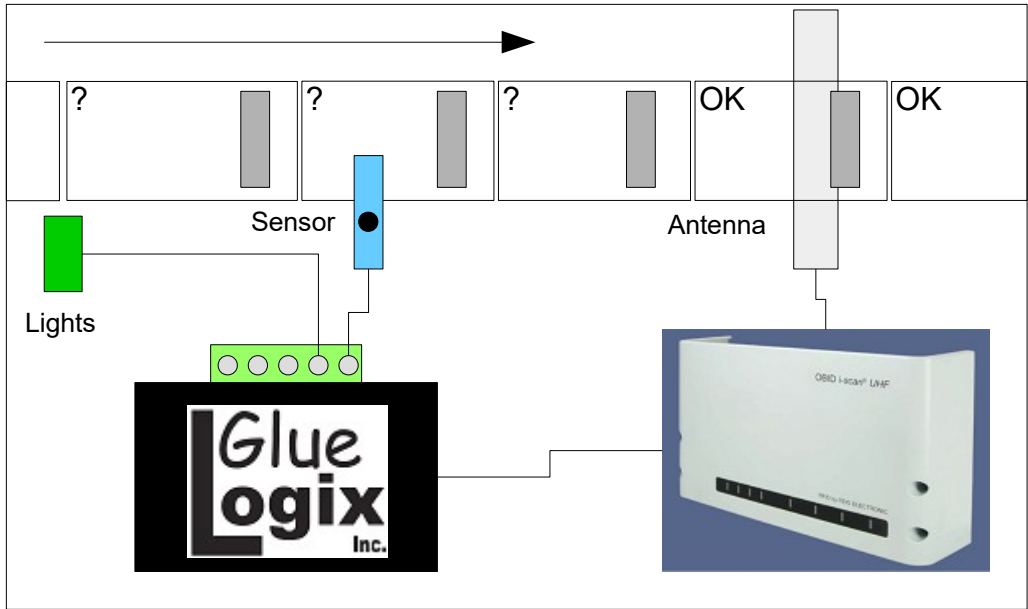
The web moves along.



Frame 21:

The web continues moving to the next trigger event.

Not shown is a second RS232 connection on the left of the I/O Box. This can be used for setup. It also transmits RFID/NFC chip data in ASCII, like a smart camera or barcode reader.



Frame 22:

The reader shown here is a FEIG LRU1002, but this process works with any serial connected FEIG reader. We recommend the LRU1002 at UHF because its timing is good for this kind of application.

At HF, FEIG has a number of RS232 connected RFID/NFC readers. We recommend the FEIG CPR74 reader module in a GlueLogix case that conditions DC power and RS232 signal levels.

GlueLogix I/O Box for FEIG RFID Readers

Copyright (c) 2019 GlueLogix Inc.
All Rights Reserved

www.GlueLogix.com/loBoxForFeig.php