



This document will cover an Add on Instruction (AOI) for the Logix Designer software package from Rockwell Automation. This AOI handles activation of a Virtual Reset or Cancel Delay for a Banner SC10, SC26 FID2, or XS26 FID2 Safety Controller from an Allen Bradley PLC. See the Safety Controller Manual for information on the Virtual Reset or Cancel Delay feature. This document will show you how to install and use the AOI to activate a Virtual Reset or Cancel Delay. Contact Banner Engineering with any questions that you have.

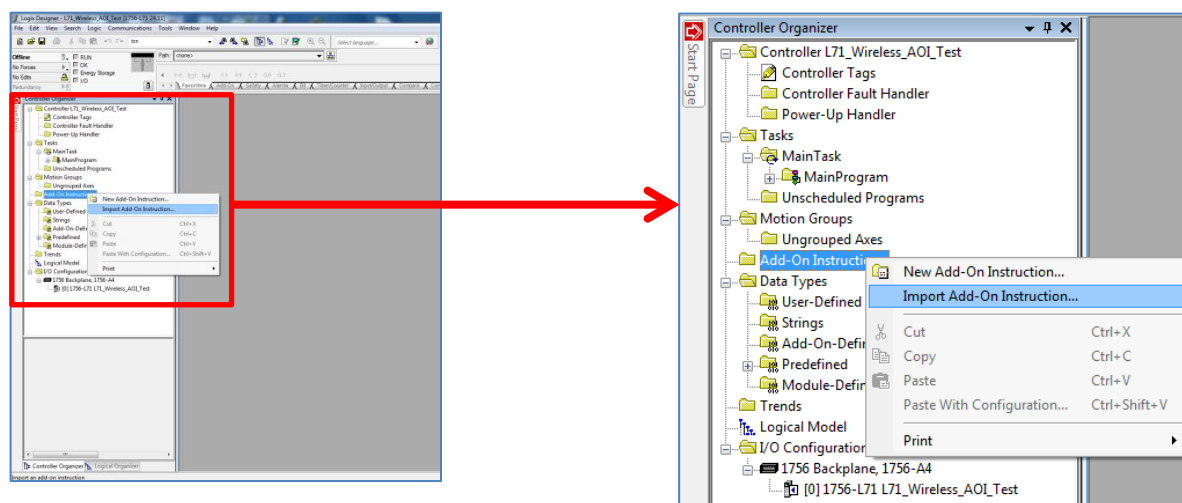
## Components

AOI: Banner\_RCD

## Installation Process

This section describes how to install the AOI into Logix Designer software.

1. Open a project.
2. Right click on the Add-On Instruction folder in the Controller Organizer window. Select the Import Add-On Instruction option.



3. A standard windows selection box will appear. Navigate to the correct file location. Select the Banner\_RCD.L5X. This is for the AOI. Press the Open button to start the AOI import into the Logix Designer software.

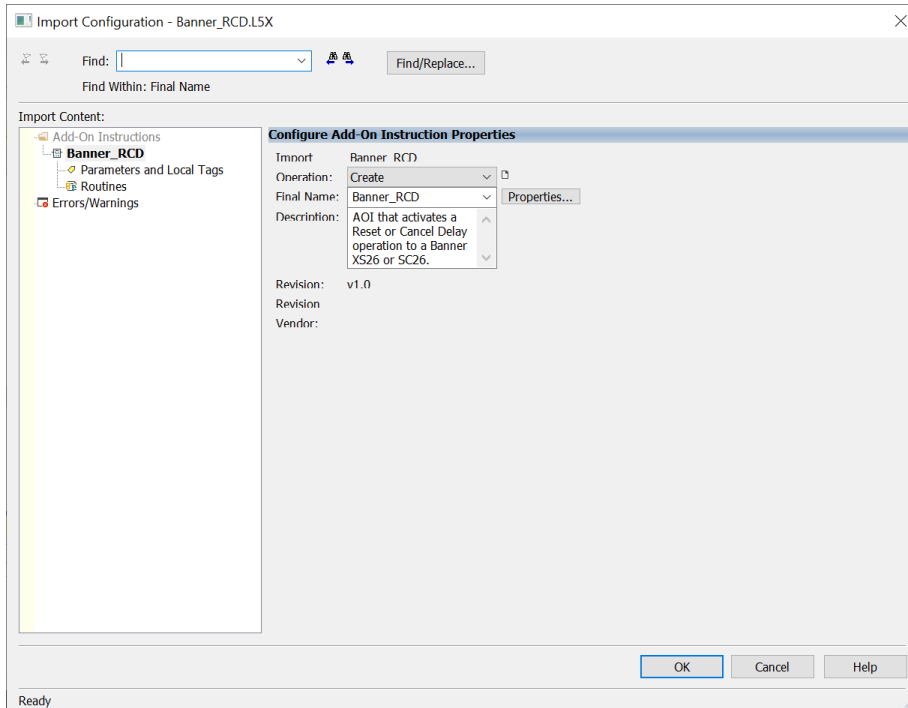


**Banner Engineering Corporation**

9714 Tenth Avenue North • Minneapolis, MN 55441 • Phone 763.544.3164 • Fax 763.544.3213 • [www.bannerengineering.com](http://www.bannerengineering.com)



4. The Import Configuration window will pop up. The default selection will create all of the necessary items for the AOI. In this case a UDT (User Defined Tag) is also created along with the AOI. Press the OK button to complete the import process. Banner\_RCD will now be in the AOI folder for the project.



5. Installation of AOI complete.

**Banner Engineering Corporation**

9714 Tenth Avenue North • Minneapolis, MN 55441 • Phone 763.544.3164 • Fax 763.544.3213 • [www.bannerengineering.com](http://www.bannerengineering.com)



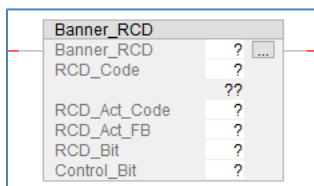
## **Banner RCD – AOI Setup**

The AOI activates the Reset or Cancel Delay (RCD) function in a Banner Safety (SC10, SC26, or XS26) controller. The AOI requires the Actuation Code for the controller. If the Actuation Code is incorrect the RCD will not succeed. This section shows how to use the AOI.

1. Create an Ethernet connection to a Banner Safety Controller. I labeled the connection SC10 in the PLC. If you look in the controller tags you should see an input and output data array associated to SC10. Label the connection as necessary for your system.

▶ SC10:I1	{...}	{...}	_000C:XS26SC26SC10_70BEE038:I:0
▶ SC10:O1	{...}	{...}	_000C:XS26SC26SC10_CAA173C9:O:0

2. Next add an AOI to your ladder logic program.



3. The top variable Banner\_RCD needs to have a tag created. Left click on the question mark. This will select the link. Right click and select the “New Tag” option. A new window will pop up. Enter the name of the tag to create. In this example, we’ll use the name “SC10\_RCD\_Status”.

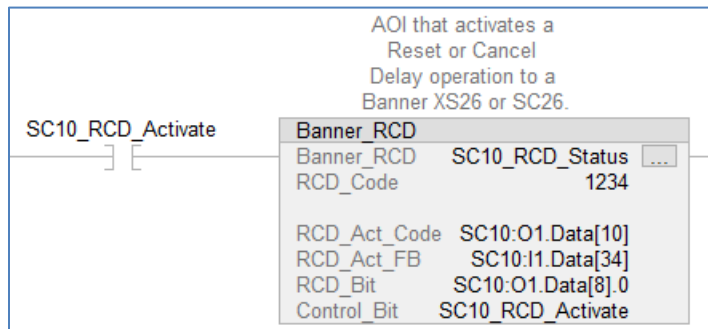
4. Now click on the question mark on the line labeled “Control\_Bit”. Click “New Tag”. Create a tag that will be used to activate or control the Virtual Reset AOI. This example uses the name “SC10\_RCD\_Activate”.

**Banner Engineering Corporation**

9714 Tenth Avenue North • Minneapolis, MN 55441 • Phone 763.544.3164 • Fax 763.544.3213 • [www.bannerengineering.com](http://www.bannerengineering.com)



5. The AOI has several links that need to be connected to controller tags or have data entered manually.
  - a. RCD\_Code should have the actuation code that was entered into the Banner Safety Controller placed into this location. In this example, a value of 1234 is used. This value should match the number that was entered in the controller via the Banner Safety Controller software.
  - b. RCD\_Act\_Code is linked to SC10:O.Data[10]. See SC10 or XS26 Industrial Ethernet for more information.
  - c. RCD\_Act\_FB is linked to SC10:I.Data[34]. See SC10 or XS26 Industrial Ethernet for more information.
  - d. RCD\_Bit is linked to one of the Virtual Reset or Cancel Delay bits. This bit tells the Safety Controller which of the Virtual Reset or Cancel Delay functions to run. There are 16 possible options. The definition for these bits is in the Industrial Ethernet tab under the Virtual Non-Safety Inputs in the Safety Controller software. The below example shows the location for the first Virtual RCD bit which is located at SC10:O.Data[8].0.
6. Finally add an Examine On in front of the AOI. Link the variable created for the Control\_Bit to this Examine On.



7. AOI setup complete. All tags names shown are for reference feel free to change the names as necessary.

### **Banner RCD – AOI Setup**

Activation of the reset is as easy as setting the Control\_Bit (SC10\_RCD\_Activate) tag to a True (1) value. The routine will activate, and the Reset will be done. Use a Latch instruction to turn the Control\_Bit On. This allows the AOI to stay active until the reset has been processed fully.