



Using a PIR with PODULES

To program a Podule you need PodFlow 3.1 installed on the computer to be used. The latest version is available from the downloads page at www.ikonavs.com.

A common problem with projector installations, particularly within the Education sector, is users leaving them on when vacating the room. The installation of a suitable PIR to detect room occupancy will allow the projector to be shut down automatically if the room is not in use.

Before you begin.

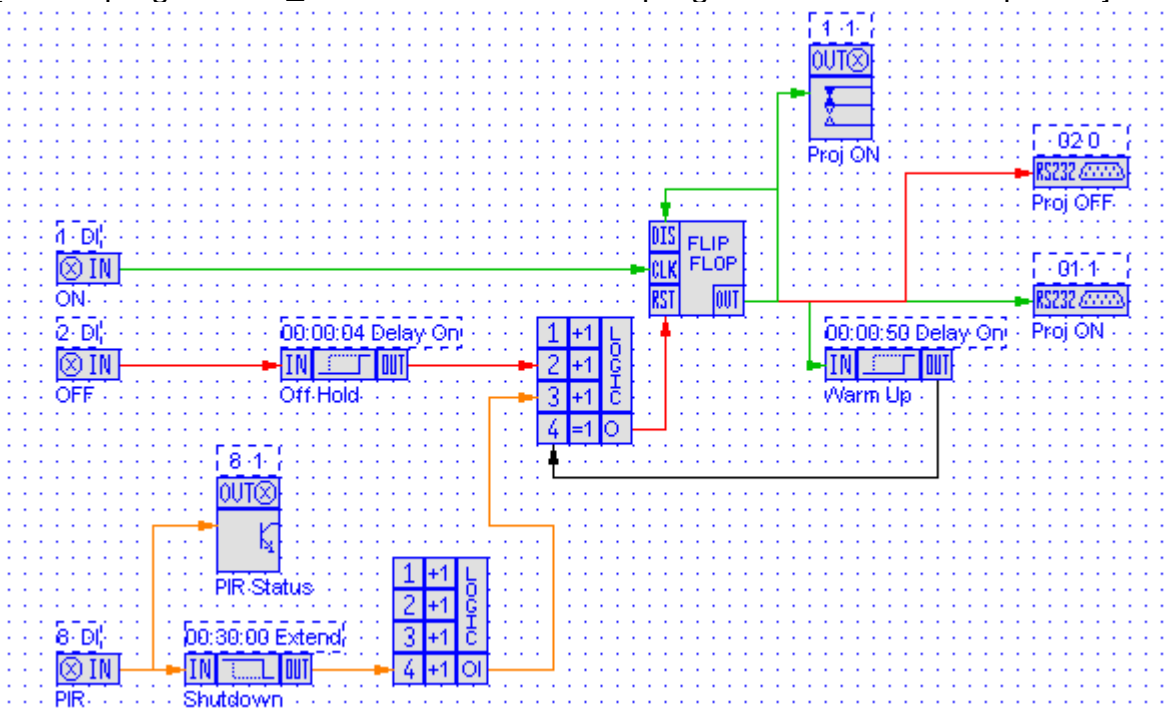
Connect. You need to determine the type of switched output used on the PIR. The most common are:-

- (a). Isolated relay contact,
- (b). Relay contact with one side linked to 0V,
- (c). Open collector transistor.

With (b) and (c) you need to connect the 0V side to 0V on the Podules inputs and the other relay contact or open collector transistor to the Podules Input. With option (a) connect to 0V and In.

Configure the Program.

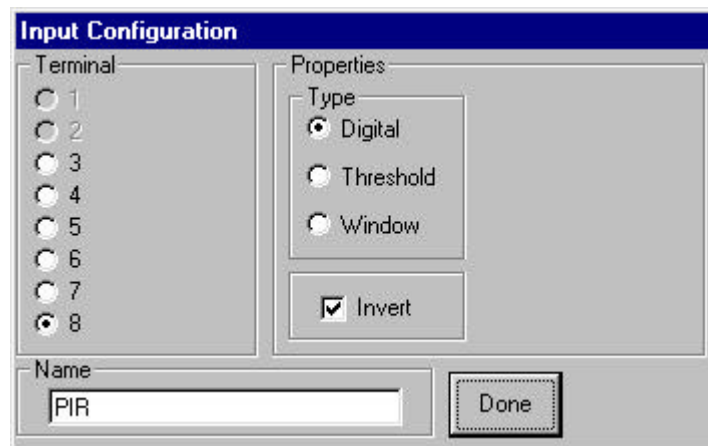
[Demo program PIR_1.PF3 shows a suitable program based on a CIR podule]



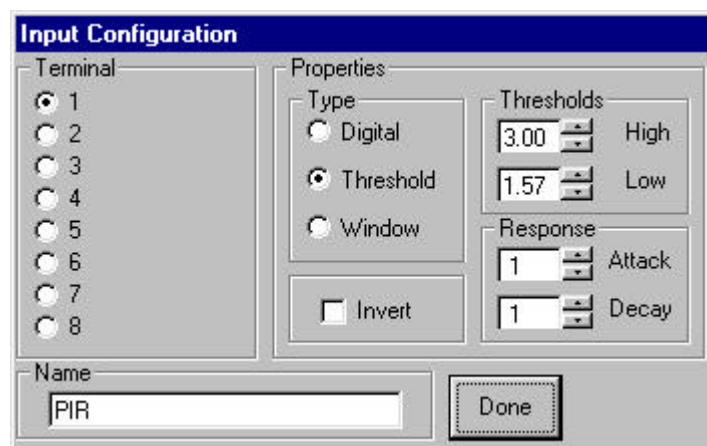
CIR Inputs 1 and 2 have been configured as ON and OFF for the projector. A 50 second delay is included to prevent the projector being turned off until it has completed its warm up cycle. To turn off you need to press and hold the OFF button for 4 seconds, this is to prevent accidental shutdown.

The PIR is connected to input 8 and this has been connected both to an extended on timer set for 30 minutes as well as output 8. Output 8 can be used with an external indicator to confirm when the PIR is triggered, this is a help during set-up and output 8 can be configured for other use once the characteristics of the PIR being used have been ascertained.

The input needs configuring for the PIR. If it is a relay type then setting the input for Digital is OK (as below). If the PIR's relay is closed when triggered then the input can be left with Invert ON (as below). If the relay is open when triggered then Invert should be OFF. Monitoring output 8 with an indicator will assist if the exact state is unknown.



For PIR's that use a transistor as an open collector output the Podule input should be set to Threshold where it is treated as an analogue input. This is because the transistor will not pull down to 0V but possible only as low as 1 volt. In the example below an OFF state is seen if the voltage drops below 1.57 volts and an ON state when the voltage rises above 3.00 volts. These settings have been taken from a working system and are typical. The use of an indicator on output 8 will assist in confirming the required settings.



The configured input is fed into a timer that is set for Extended On that, in this example, is set for 30 minutes. In operation, if the timer input goes low the Extended ON timer is triggered to maintain its output high for 30 minutes. Therefore if people are in the room triggering the PIR, the time keeps getting reset for a 30 minute timing period and only completes the timing if the PIR is not triggered as occurs if the room is empty.

Timer

Mode

Fixed On

Maximum On

Minimum On

Delayed On

Extended On

Minimum Off

Period

Hours

Minutes

Seconds

Name

Done

On the low transition of the timer, the logic gate following is configured as a simple inverter to trigger the projector OFF.

Variations

It is possible that the PIR gives a voltage output rather than a contact. Provided this is 5V or less then it can be directly connected to the Podules input and 0V. Set the input for Threshold and adjust the settings to suit the PIR.

If the voltage is greater than 5V you will need to use a potential divider to reduce the maximum voltage to 5V or less.

IKON AVS LTD

Unit 238 IKON Estate, Droitwich Road, Hartlebury, Worcestershire. DY10 4EU
Tel:- 01299-250991 Fax:- 01299-250983 email:- sales@ikonavs.com