# LANC *Pix*Controller **Overview**



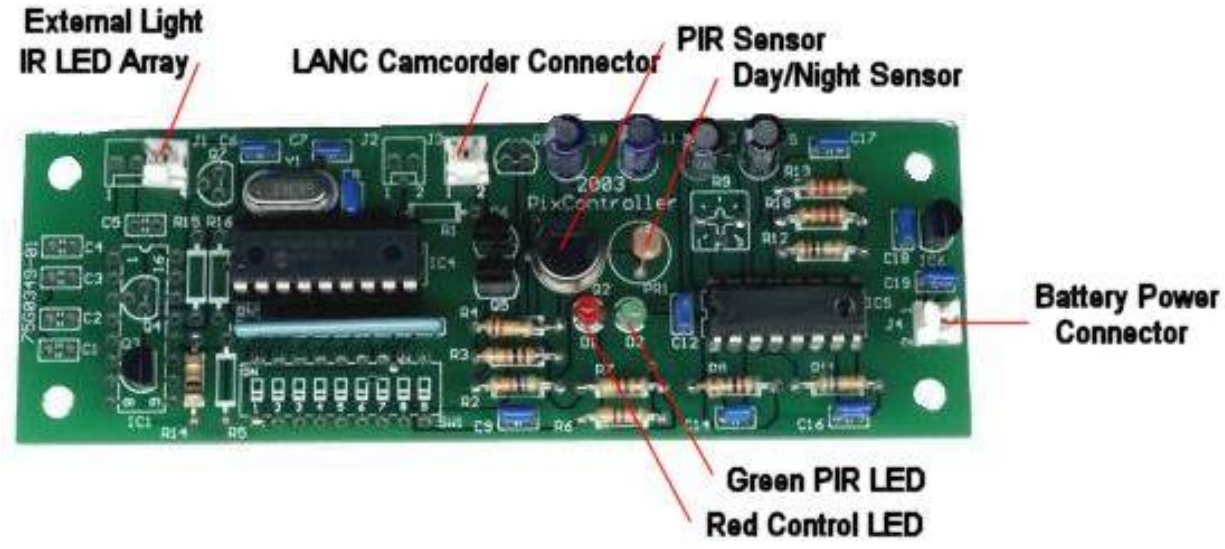



*Figure 1: Control Board Diagram*

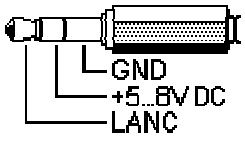
The LANC ***Pix***Controll*er* is a complete electronic kit to construct a Wildlife Video Surveillance Camera System, or Remote Video Security System. The LANC ***Pix***Controll*er* uses an integrated Passive Infrared (PIR) detector, which detects body heat and motion to trigger any LANC compatible Video Camcorder. The LANC ***Pix***Controll*er* will send a command to the attached camcorder to power the camcorder on, record video for a user set amount of time, then power the camcorder off. The advantage of this type of unit is that you simply connect your camcorder to the board with the supplied LANC cable.

The User Switch Settings let you adjust the delay between recording sessions, set the amount of recording time, and setup the Walk-Test PIR mode.

## LANC Connector "J3"

This is where the LANC Cable connects to the PixController board. The 2.5mm Stereo Jack connect to the input of your LANC input on your video camcorder. Use the supplied (white-black) cable with the 2.5mm stereo connector.

*The LANC connector on your camcorder will have this logo near the LANC port.*

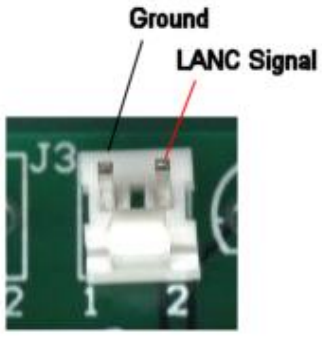




*Figure 2: J1 Camera Connector*

## Power Connector “J4”

This is the connector where the control board is powered. Connect between a 5V to 16V DC Battery Supply. A 4-C Cell battery supply is recommended for longer battery life. Be sure to add a main power switch so you can turn the unit on/off. Add the main power switch on the “red wire” of the supplied (red-black) power cable.

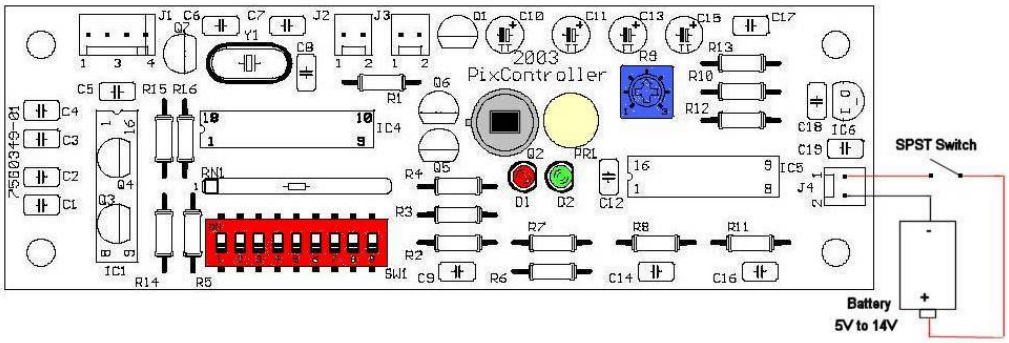



*Figure 3: J4 Power Connector wiring diagram*

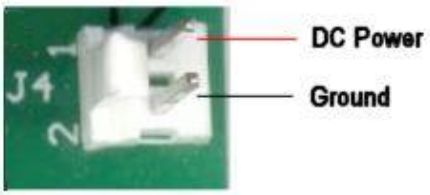



*Figure 4: J4 Power Connector*

## External Light Connector “J1”

With the J2 External Light connector you can connect any external light source to your ***Pix***Controller board. This connector will be active when a photo is shuttered, and only during low light conditions. Any light source can be used if it draws less than 2A, and is under 60V. You can connect any light source such as a floodlight, or an IR LED Array for taking night movies. Use the supplied (white-black) external light cable.

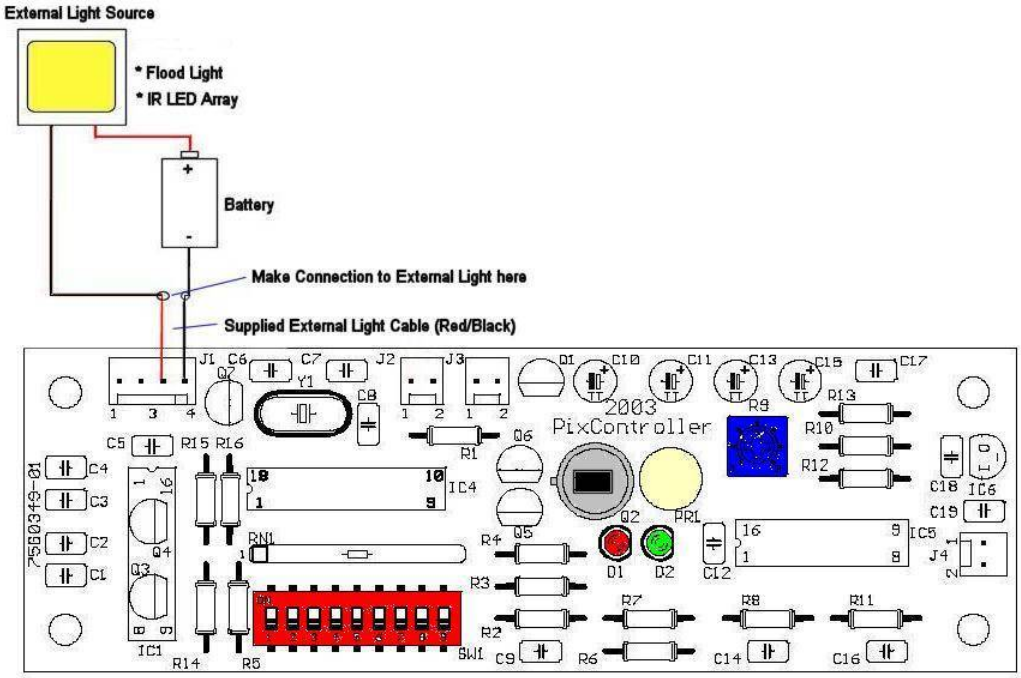



*Figure 5: J2 External Light wiring diagram*

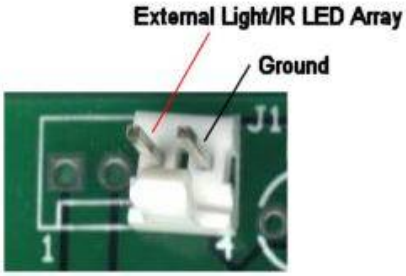



*Figure 6: J1 External Light Connector*

## Sensitivity Adjustment

The detecting distance adjustment allows you to easily set the PIR detecting distance (range). Passive infrared is more sensitive in winter then in summer, be sure to reduce the sensitivity in summer by adjusting the sensitivity knob counter clockwise to avoid false triggering. Reducing the range for night photography will help the problems of your subject being out of the flash range.

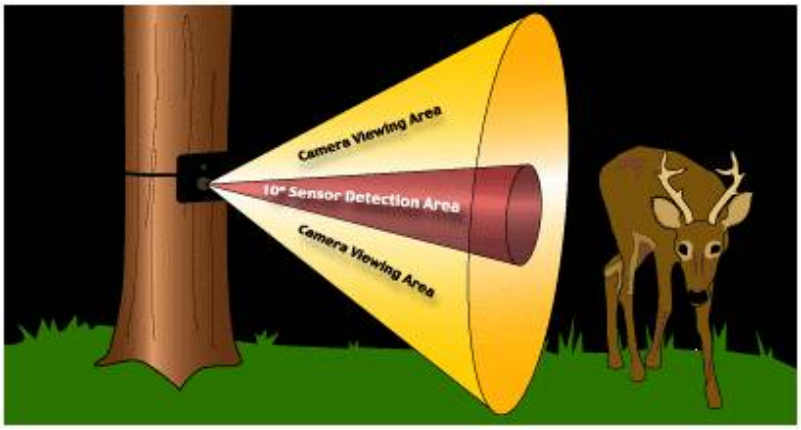



*Figure 7: PIR Sensor Detection Area*

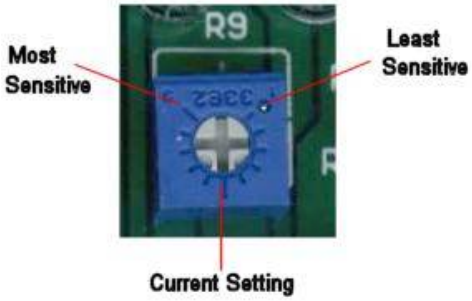



*Figure 8: Front Mounted PIR Sensitivity POT*

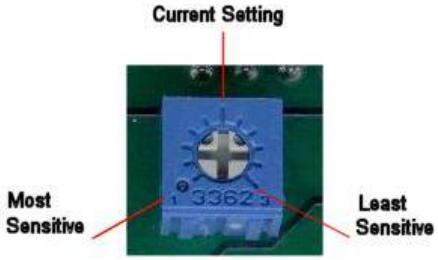



*Figure 9: Back Mounted PIR Sensitivity POT*

## Control (Red LED) and PIR LED (Green LED)

The camera board had 2 LED's, the Control LED (Red LED), and the PIR LED (Green LED). On power up of the system (turning the external power switch to the On position) the Control LED will light up. It will stay lit for about 1 minute to allow the PIR circuit to warm up. In this time the PIR LED will stay lit for about 20-30 seconds then turn off. Once the PIR LED turns off it will only light up once it sees a PIR event. However, if the PIR LED stays lit this means the battery power is too weak to run the system. In this case it will not allow the PIR to trigger the camera controls.

## Camera Cables and PIR Lens

Included with your LANC ***Pix***Controll*er* is a LANC cable (white-black cable w/ 2.5 mm stereo connector), power cable (red-black), external light cable (white-black), and PIR lens. The LANC cable is used to connect your Sony/Canon Camcorder to the board.

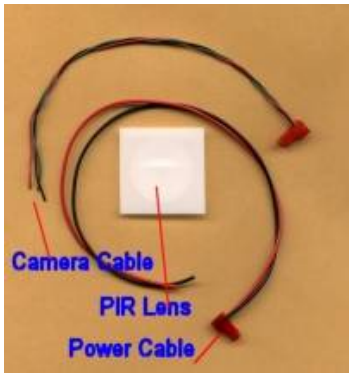
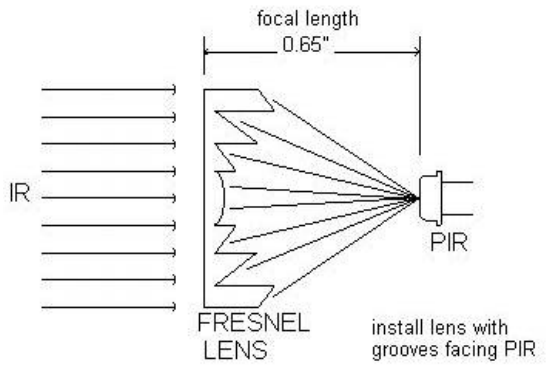
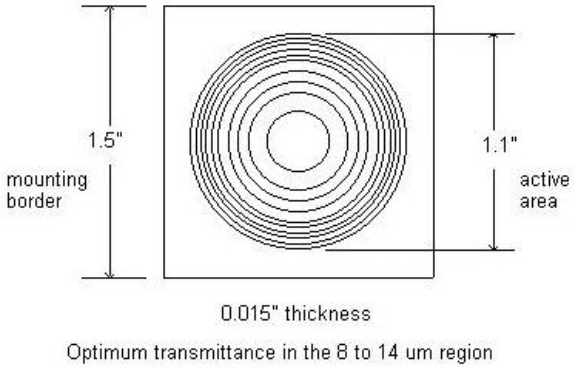



*Figure 10:* ***Pix***Controller *Accessories*




The PIR lens should be mounted to the case you have your board mounted in. The lens should be centered over the PIR Sensor and be 0.65" from the top. Make sure you mount the lens with the "ridges" faces towards the PIR sensor. Do not scratch the lens on either side. Also, do not mount any glass over top of the PIR lens. Glass will not let infrared heat to pass through to trigger your PIR sensor.

To mount the lens to your case drill a 1" hole centered about the PIR sensor. Glue the PIR lens to the inside of the case (lens ridges pointed in, smooth side out), and glue the lens to the case with RTV clear silicon.

## Powering Up your LANC ***Pix***Controller **Board**

When booting up your LANC ***Pix***Controller board the board will warm up the PIR circuit for 1 minute before it will start detecting events. The RED LED will be lit this entire 1-minute period. The GREED PIR LED will be lit for the first 20-30 seconds solid, and then will be lit when it sees motion. If after 3 second upon power up the RED LED starts blinking it means no LANC signal is detected. Make sure the included LANC cable is plugged into the camcorder and ***Pix***Controller board, and the camcorder is powered up to start recording. On booting the PixController board it will power your camcorder down after 3 seconds. Be sure to re-boot the ***Pix***Controller board every time you change the user switch settings.

## Completing your Camera System

The last step in completing your ***Pix***Controller project is to mount all of the hardware into a case. For wildlife systems we suggest mounting the hardware into rugged waterproof case. Please see the "links" section under our website for help in this area.

Here are some examples of a completed LANC Video Camera System:


*LANC Video Trail Camera Interior*

*LANC Video Trail Camera*

*LANC Nanny/Security Camera*