Action Sensor MANUAL

Licensed U.S. Patent 6,768,094

The Action Sensor is a non-contact probe that will detect objects at a distance. The *"active region"* is defined by the operator and it can be a line, a tiny volume or a large region in space.

The Action Sensor is similar to a radar system. The reflection of an invisible infrared (IR) signal is detected by the Signal Sensor when something enters the *"active region".* The Action Sensor can activate cameras, sound alarms or start and stop machinery once detection occurs. The Action Sensor can also operate in a "break the beam" mode, similar to a garage door safety system.

The Action Sensor can operate continuously and without adjustments in bright sunlight, artificial light, darkness, rain, snow, hot, cold and through glass. It is immune to natural IR radiation.

Visit http://www.actionsensor/Manual.pdf

for latest updates and greater assembly details

PhotoCrazy, Inc. Thousand Oaks, CA 91360 - (805) 492-0562 - info@photocrazy.com

Content

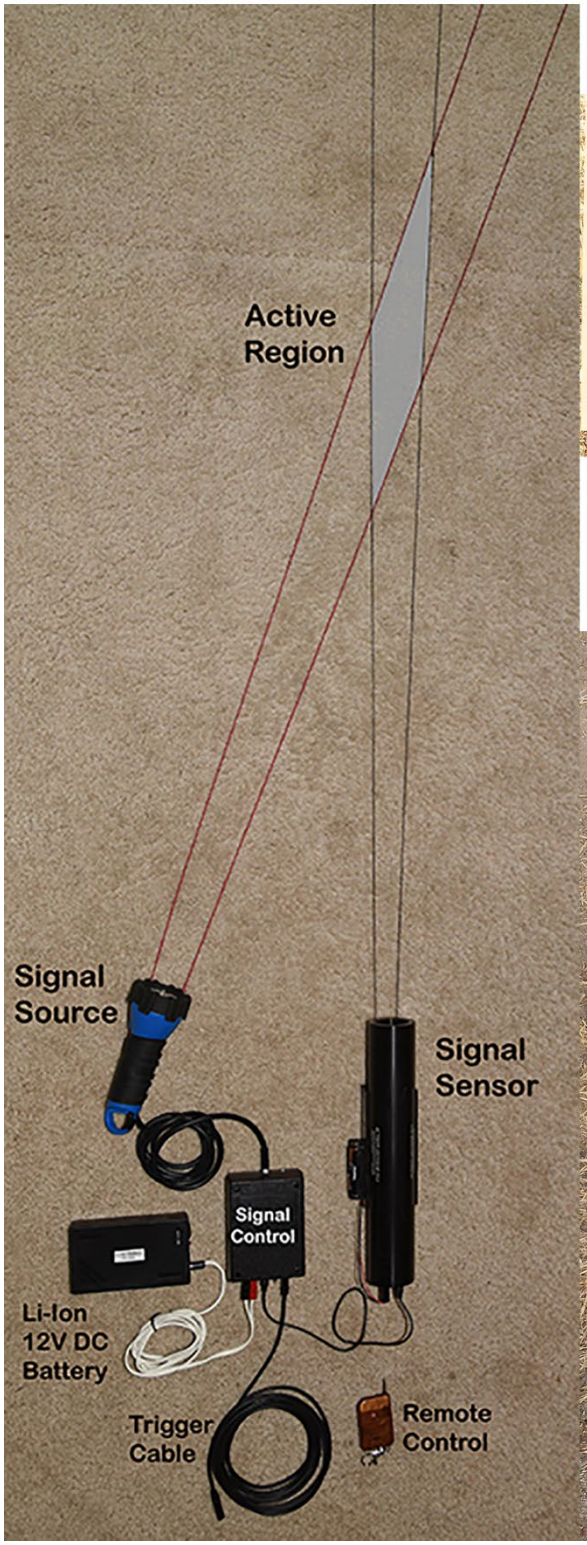
Introduction

The Action Sensor was developed and patented in 2004 (U.S. Patent 6,768,094). Technological advances allow full advantage of the patent claims especially with the use of Infrared Light Emitting Diodes.

Here are some of our favorite action shots captured using the Action Sensor:

Basic Equipment

Principle of Operation



Packaged for Transport

Assembled in the Field

Specifications

	Signal Sensor	Signal Source
Field of View (FOV)	5°	5°
Sensitivity	300 feet (day)	200mW IR Max <1% DC
	1000 feet (night)	550mW/sr Max <1% DC
	940nm	940nm
Response Time	<1 msec	<1 msec
Power Requirements	2 AA (2+ year life)	12V DC (200 hr life)
Operating Modes	Reflect / Beam Break	High / Low
Operating Temperature	-25 to 85 C	-25 to 85 C
Storage Temperature	-30 to 85 C	-30 to 85 C
Weight	3 lbs 2 oz	6 oz
Size (inches)	11.5(L) x 4(H) x 2.25(W)	7(L) x 2.5(Lrg Diameter)
Mounting (Female)	¼ - 20 (Stnd Tripod Mount)	¼ - 20
Output (Max)	5mA	200mA Open Collector

Battery

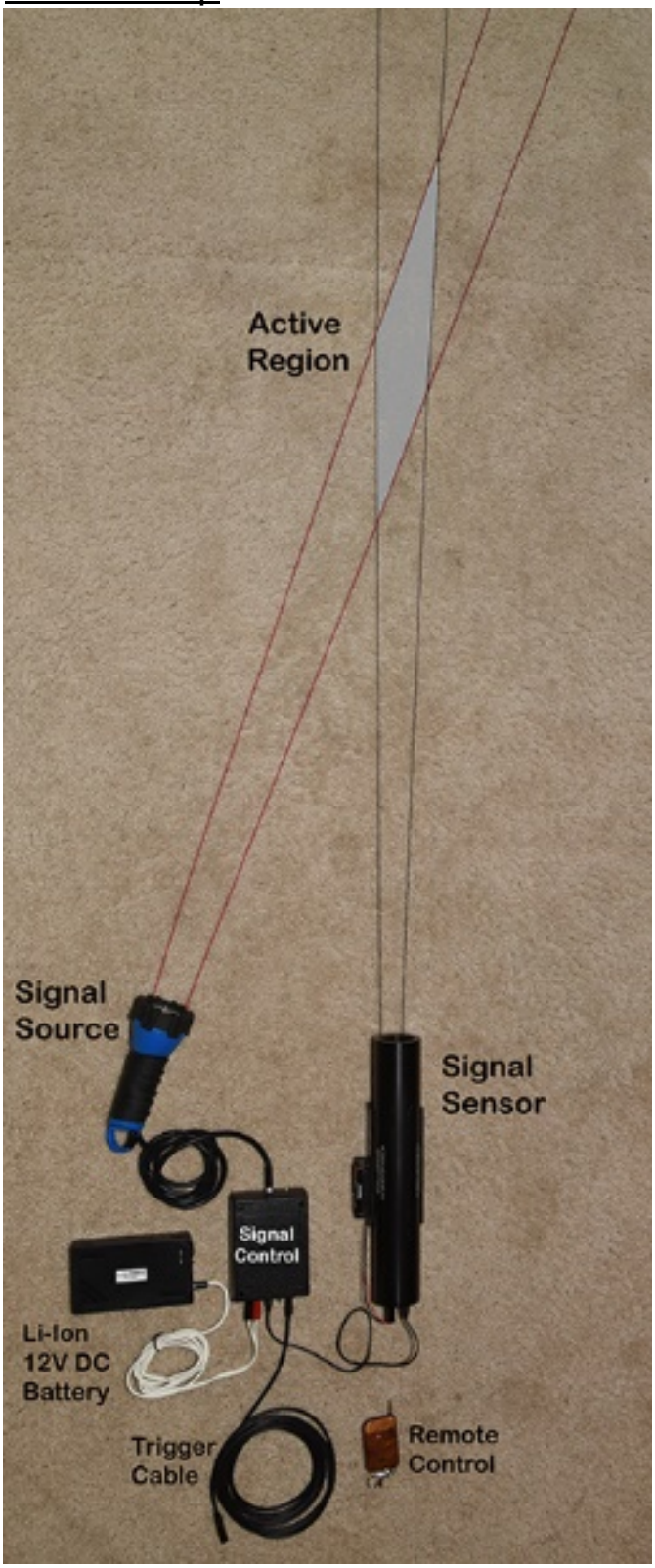
Type	12V DC Li-Ion Rechargeable
Expected Life	4800Ah (200 hours)

NOTES:
None of the equipment is moisture proof but many items are moisture resistant. Common sense precautions will allow operations during rain or snow.

Replacements or substitutions can be made without written notice. Generally such substitutions are made when improved products are available.

Applications

Basic Setup



1. Mount the Signal Sensor, Signal Control Box and Signal Source with ¼ x 20 screws or clamps.

2. Connect Signal Sensor Battery cable.

3. Connect short phono cable from "Sensor In" on Signal Control box to Phono Socket on Signal Sensor.

4. Connect Signal Source to Signal Control Box (Below Signal Control Box LED)

5. Connect 12VDC Battery (switched to OFF) to Signal Control Box.

6. Connect Trigger Cable to Signal Control Box "Trigger".

7. Align Signal Source and Signal Sensor for optimum Active Region

8. Turn 12V Battery ON

9. Observe red LED on Signal Control Box blinking.

   Use Remote Control to enable (green LED off) or disable (green LED on) Action Sensor.

NOTE: The Signal Sensor is extremely sensitive to the Signal Source. It is not effected by other light sources. The Basic Setup in a room will reflect IR from walls and ceilings sufficient to trigger the Signal Sensor. IR Radiation behaves different from visible light and just holding your hand in front of the Signal Sensor may not block the IR from entering it.

CAUTION: Do not bring the Signal Source right in front of your eyes. Use common sense when handling low power IR LEDs. IR is invisible to the human eye.

Congratulations, this completes the Basic Setup. The Action Sensor system is now ready for use in other applications.

Turn the 12VDC Battery Power Switch off when the system is not in use. Then unplug the various connections including the Signal Sensor AA Battery plug. Store the equipment in a safe and dry place or the shipping container it came in.

Trouble Shooting

1. If the red LED on the Signal Control Box is not blinking, reposition the Signal Source and Signal Sensor to avoid reflected IR from entering the Signal Sensor. Trees and shrubs are notorious from reflecting Signal Source even from large distances. Make sure each connector is fully seated.

2. Use only cables and connectors supplied. Other cables may not work properly

3. Verify that the Signal Sensor Mode Switch is properly set (towards the square).

4. Call our friendly technical support team for help (805) 492-0562

Frequently Asked Questions

Is there any software I need to be concerned about?
All software is pre-installed.

Are the accessories really necessary? Can't I use my own?
You can use your own equipment but it may require additional experimentation and trial and error to see what works best and reliably. We have optimized our accessories over the years to be reliable and easy to assemble and disassemble. Our recommended equipment is particular sturdy during unexpected gusts of wind.

Can I use multiple Action Sensors to narrow the Detection Zone?
Yes, multiple Action Sensors can be used to logically AND the Active Regions. A phono splitter jack would be required at the Signal Sensor to connect multiple Action Sensors.