

COGNISYS SCOUT LED



Owner's Manual

Revision 1.0



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1. Safety Instructions


WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.


Follow all CAUTION notices to reduce the risk of personal injury, prevent damage to the Scout equipment, accessories, and devices (computers, cameras, flashes, LED's, etc). Failure to follow all CAUTION notices may void your warranty. CAUTION may also indicate a potentially hazardous situation which, if not avoided, may result in personal injury.

The safety alert symbol  precedes a general CAUTION or WARNING statement.

The electrical hazard symbol  precedes an electric shock hazard CAUTION or WARNING statement.

-  **CAUTION:** Only use approved power sources for Scout equipment. Use of other power adapters or batteries may damage the LED and/or attached equipment.

-  **CAUTION:** Misuse of Scout equipment could potentially damage your equipment. Cognisys, Inc. will not be held liable for damage to your equipment. If you have questions about safety please contact us!

 **WARNINGS:** Follow the warnings below. Otherwise, death or serious injuries may result

- Do not look directly into the LED during operation. Eye damage may result.
- Do not activate the LED in direct contact with your body or other objects. This may result in the risk of burns and fire.
- Do not disassemble or modify the LED. There are no user serviceable parts inside. The LED has internal components that may cause injury.
- Do not submerge the LED in any liquids.
- Do not use the LED in environments with volatile/flammable chemicals or gasses.
- Do not operate the LED without the battery door (and seal) fully installed and tightened.

2. Getting Started

The latest version of this manual is available on our website at:

<https://www.cognisys-inc.com/store/scout-led.html>

The graphics/menus included in this manual may not be identical to the software that you are running. Improvements and adjustments to the software may happen prior to an updated version of the manual.

Not big on reading manuals? (What? No thumbs-up? We worked hard on this you know!) We have a few real world setups in the “5 - Examples” section. You can always come back to the technical details if you get stuck. You really should finish reading this section though – it goes through battery replacement and the basic care of the LED.

2.1 What is the Scout LED?

The Scout LED is an ideal solution for short-term or long-term trail videography. It is designed to be used with the Scout Camera Box but can also be used with the Scout Receiver or Scout PIR.

The Scout LED has several features not available with other lights:

- Weatherproof
- Exceptional battery life (90 – 200 days)
- Wireless
- Ultra-high lumens per watt for excellent battery life
- Easy to use OLED dot matrix display
- All LED's can be controlled wirelessly through the Camera Box app (easy setup)
- Power level adjustments from 1 – 100%
- Time windows of operation – only turn on when desired
- ¼-20 tripod mount ideal for inexpensive ball-heads
- Uses the Scout Li-Ion battery pack
- External sync jack for wired operation
- External power jack
- High performance low power ARM processor
- Wide operating temperature range: -40C – 70C (-40F – 158F)

2.2 What is Included

The Scout LED includes:

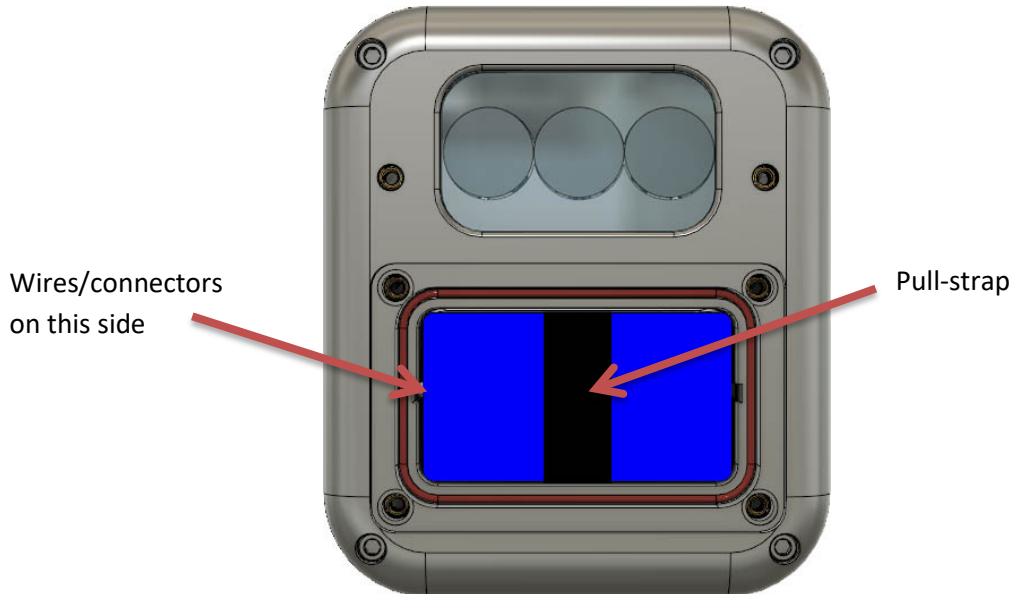
- Scout LED
- Scout 5200mAh battery
- Optional battery charger
- Quick-start guide insert

If you purchased the Scout LED as a kit it may include additional accessories.

2.3 Battery Installation

Battery installation is a simple process and because the Scout LED has excellent battery life – you won't have to do it often!

The LED requires a Scout 5200mAh battery. You can optionally use external power. If using external power be sure to remove the internal battery. For details about maximizing battery life see section "5.3 - Maximum Battery Life".



1. Be sure the LED is clean prior to replacing the battery pack otherwise dirt may compromise the weatherproof seal.
2. Turn off the LED.
3. Remove the four thumb screws from the front of the LED.
4. Remove the battery door.
5. Remove the battery pack and disconnect it from the LED.
6. Install a fresh battery pack. The pull-strap of the battery should be facing out and the battery wires facing to the left side (toward the LED). If the battery wire is facing to the right the battery may not fully install.
7. Make sure the battery is flush with the housing.
8. Verify the orange O-ring is still installed.
9. Install the battery door. The battery door needs to be flush with the housing. If it is not then double-check the routing of the wires under the battery so that it fully sits in the housing.
10. Tighten the four thumb screws.

You can also power the Scout LED with external power using the optional power cable available here:

<https://www.cognisys-inc.com/store/3pin-extpwr-cable.html>

⚠ If using the external power you **MUST** remove the internal battery.

The internal battery should be removed if storing the LED for an extended duration.

2.4 Quick Start Guide

Want to be up and running in two minutes or less? Here's the quick-start guide in case you misplaced it:

SCOUT LED Quick Start



Press to turn on the Scout LED.
Press and hold to turn off.



Enter button - use to change settings or enter menus.



Up and Down buttons - adjust LED brightness and navigate menus.



LED On/Off - use to illuminate LED.

If you are using multiple LEDs at once - make certain each LED wireless ID is different. Press Enter then:

Settings → Wireless Settings → ID

Visit the web address below for the owner's manual.



COGNISYS
Capture the Hidden World
<https://www.cognisys-inc.com/scout-led>



SCOUT LED

2 x #8-32 Threaded Hole
Use for filter or diffuser



2 x 1/4" - 20 Threaded Hole (1" Spacing)
Use for LED Mounting

Please let us know if you have any questions. We're glad to help!

support@cognisys-inc.com
www.cognisys-inc.com

Phone: 231-943-2425

2.5 Cleaning and Care

We want your Scout equipment to last – so here are some brief steps to keep it happy!

2.5.1 Cleaning

Turn off the LED prior to cleaning. For cleaning we recommend a slightly dampened (not wet) micro-fiber cloth. Do not spray water directly into the inside of the equipment. Any liquid that goes into the LED may cause an electrical failure of the device. Do not use a flammable liquid/solvents or cleaning agents on the LED – just a micro-fiber cloth (dampened if needed).

2.5.2 Care and storage

Scout equipment is designed to handle normal wear and tear but there are some things to avoid:

- Do not get the unit wet internally.
- If not using the external connectors be sure to attach the protective cover or water may leak into the controller causing damage.
- Do not drop the unit (the display, much like a cell-phone, is made of glass). The LED lens may be damaged if dropped.
- Protect the unit's display and membrane when packing up your gear. If a tripod fights the display or membrane on the LED – the LED will lose.
- Do not allow dirt to get into the weatherproof seal. This could cause seal failure and damage to the LED.
- **Remove the battery pack prior to long term storage.**

Failure to properly care for the Scout LED could result in a leak that may cause damage. The product warranty does not cover water damage resulting from user error.

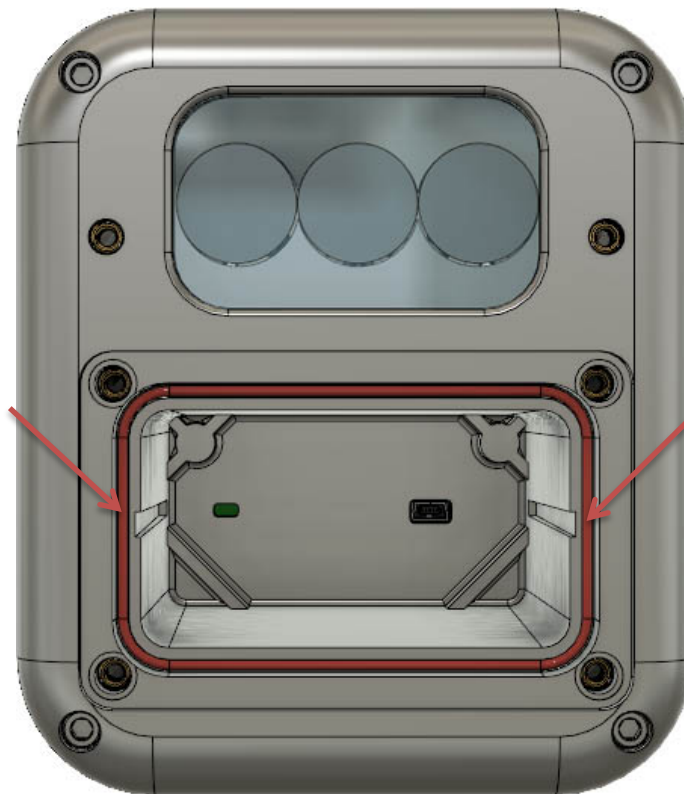
2.5.3 Maintaining Weatherproof Design

Scout equipment is designed to meet the most challenging environmental conditions. It does, however, require some care to maintain its weatherproof sealing.

Prior to opening the equipment turn it off and rinse it under gently running water if it is dirty.

It's very important to keep the housing's battery door silicone seal clean. A single hair or grain of sand could potentially cause the housing to leak and damage the equipment. The goal is to prevent dirt from getting into the seal! If you need to clean the gasket use a pair of tweezers to remove the seal, rinse it under water, allow it to dry, and re-install.

Below is an image indicating the seal location. It is recessed in a groove in the battery compartment.



2.5.4 Painting the housing

Many of our customers will want to paint their housings to help camouflage the equipment for the environment they are shooting in. Good news! Your Scout LED has already been primed for painting!

We recommend a spray paint designed for adhering to plastic such as “Rust-Oleum Painter’s Touch Ultra Cover 2X”. It bonds well and is quite durable. A few notes before you get started:

1. Cover the lens opening with masking tape.
2. Cover the rear membrane with masking tape.
3. Cover the ePTFE vent with a small circle of masking tape. Paint can damage the vent and void your warranty. Here is the location of the vent:



4. Place the dust-caps on prior to painting. The dust caps do not have to be masked.

We also sell a simple masking kit with pre-cut acrylic plugs for the membrane and lens area to simplify the painting process.

2.6 The Scout LED



There are two external connectors on the Scout LED (left to right):

1. External power connector (3-pin)
12-18V external power with optional power cable
2. Sync connector (4-pin)
Wake/ready control for the Scout LED
LED sync from the camera controller/sensor (low = turn on)
Wake from the camera controller
Ready from the LED to the camera controller

The Scout LED uses weather-resistant connectors and cables. If the LED will be used outside during the rain, snow, or condensing humidity be sure to have the connectors locked in place (including the included connector caps).

The small four holes in between the two connectors is a waterproof ePTFE vent.

3. Basic Navigation

In this section we'll go into the basics of adjusting settings for the Scout LED. If you find your eyes glossing over with all the technical discussion you can always skip to the "5 - Examples" section to start using your Scout LED.

3.1 Buttons

There are five buttons on the Scout LED:



This is the power button. Press this button to turn on the Scout LED. You will see the Scout logo at power-on. At the bottom of the screen is the current version of the firmware.

To turn off the Scout LED simply press and hold this button for approximately two seconds.

Note: You can also give the power button a quick press to take you back to the main screen. This is helpful if you're three levels deep in the menus and just want to get going!



This is the enter button. On the main screen this will bring up the various settings. Use this button to select or modify any setting.



and



On the main screen this will adjust the current power level of the LED. If you are in the settings use these buttons to navigate the menus.



Turn on/off the LED. It will use the current power level.

3.2 Main Screen Icons

The Scout LED will display different icons depending on what features you have turned on.

ID: 1,2,3

This is the current wireless ID of the LED. The LED will show up as “LED x” in the app, where “x” is this wireless ID.



Wireless is turned on. If using hard-wired LED's you can turn wireless off to save a small amount of battery life. See section “4.2.2.1 - Wireless Settings” for details.



Displays the current power setting. This affects how long the battery life will be. Currently only low power is supported for the LED.



The LED will not fire because the current time is outside either of the two time windows. See section “4.2.2.2 - Time Settings”.

HOT



The LED has reached its maximum operating temperature. It will resume normal operation as soon as it cools down.

3.3 Menu Icons

Inside the menus you will see the following icons:



This checkmark means the feature is enabled (turned on).



This will take you back to the previous menu. If you would like to go back to the main screen you can also just tap the “power” button.

3.4 The Screen

The Scout LED features an OLED display. Wonderfully readable – but the display is a little power hungry. By default, the LED will turn off the display after 30 seconds of inactivity (You can adjust this though – See section “4.2.2.6 - Screen ”). If the display is off all you need to do to turn it on is tap any button.

How do you know if the LED didn’t just turn off? When you first turn it on you will see a short “splash screen” that shows “Scout LED” and also the current firmware version. If the LED was already on, however, you’ll go right to the last screen you were on.

You probably want the display to turn off anyways – no point in drawing attention to the LED (from either two or four-leggeds!).

As soon as the display goes out the LED indicators will also not light up.

3.5 LED Indicators

The “Red” LED will stay on while the Scout LED is in full power mode. It will go out as soon as low power mode is entered. If LED Debugging is enabled (See section “4.2.2.9 - LED Debug”) the “Green” LED will flash to indicate that the Scout LED is operational.

4. Settings

4.1 Settings Navigation Map

Below is the navigation map for all the settings. The links are “clickable” to get you to the specific details about the setting.

Power Level Adjustment

System Settings →

Wireless Settings →

Enabled
Channel
ID
Auto ID
Scan Channels
Wake Up

Time Settings →

Set current time
Window On
Set Start Time
Set End Time
Window On
Set Start Time
Set End Time

Source →

Receiver
PIR
Any

Source ID →

1 – 4

PWM Frequency →

2.4 kHz
25 kHz
100 kHz

Screen Timeout →
Off
30 Sec
2 minute

Brightness →
High
Low

Lockout →
On/Off
Change PIN
Current PIN

LED Debug

Load Defaults

Delay

On Time

Off Time

Extend On Time

Extend Off Time

Ramp Up

Ramp Down

Statistics

4.2 Setting Descriptions

4.2.1 Power Level Adjustment

On the main screen you can use the “Up” and “Down” buttons to adjust the current power level of the LED. It is adjustable from 1% - 100%.

4.2.2 System Settings

The “System Settings” category contains less frequently adjusted settings.

4.2.2.1 Wireless Settings

Wireless is used by the Scout LED to communicate with other Scout equipment. It uses a 2.4 GHz proprietary RF protocol.

4.2.2.1.1 Enabled

Normally you would leave wireless enabled. It only minimally decreases battery performance if left on.

4.2.2.1.2 Channel

This determines what frequency the LED operates on. All Scout equipment for a given setup must be on the same channel to operate properly.

If using more than one Scout setup in the same area (within 60 meters / 200 feet) you should assign each setup its own unique channel.

The default “channel” is 15 and typically gives the best performance.








4.2.2.1.3 ID

If using multiple LEDs in a setup each LED should have its own ID (1 – 8). Inside the Camera Box app the LED will correspond to its given ID. If this is set to “3”, then the LED will show up as “LED 3” inside the app. Just be sure that each LED is unique – otherwise in the app you won’t know which LED you’re talking to!

4.2.2.1.4 Auto ID

Normally if you have more than one LED at the same location they have to have their own unique ID set or else the app (and you!) won't know how to differentiate between them. The LED's have the ability to automatically assign their own ID. If you wish to override this feature you can turn off the "Auto ID" feature.

4.2.2.1.5 Scan Channels

If selected the LED will scan the current radio frequency environment and display a bar graph showing the "cleanest" channels to operate on. For maximum range you should select the channel with the highest bar on the graph. You can use the  and  buttons to navigate through the channels. If you press the  button while on a channel your settings will be updated to use that channel. To make no changes use the  or  buttons to navigate to the  symbol and then press the  button.

4.2.2.1.6 Wake Up

When a subject is detected, your Scout sensor will send a wakeup signal to the other Scout equipment (Camera Box, Flash(es), LED(s)) to get them ready to take a photo or video (provided Wireless is enabled).

The "Wake Up" setting determines the speed of wireless wakeup. "Normal" works for most applications but if you need a faster response time you can change this setting to "Fast".


Note: All Scout equipment for a given setup must have its wakeup speed set to the same value. Equipment may not wake properly if not set to the same "Wake up" setting.

Battery consumption will increase on all devices when wake-up speed is set to "Fast".

4.2.2.2 Time Settings

The Scout LED can limit when it will activate based on the time of day. If you are only interested in using the LEDs for night video you can use the "time settings" to create a "window" of time. You simply set the current time, a start time, and an end time, and turn on the window.

Two windows are supported. This lets you set up more complex scenarios for triggering (two hours in the morning, two hours in the evening).

If the current time is outside of both of the "windows" then you will see  on the main screen indicating that the LED is sleeping and will not activate (wired or wirelessly).

4.2.2.2.1 Set current time

This will set the current time for the LED. The LED will remember this time even if the batteries are removed (for over 12 hours).

If using the Camera Box app the current time is set automatically using your phone/tablet/computer's current time.

4.2.2.2.2 Window On

A ✓ next to this indicates that the window is enabled. It will use its corresponding "Start Time" and "End Time" for when the LED should be allowed to turn on.

4.2.2.2.3 Set Start Time

The "Start Time" sets when the window begins.

4.2.2.2.4 Set End Time

This will set the end time for the window. Here are a couple of examples:

Start Time: 6:00AM

End Time: 8:00AM

In this case, the LED will only activate for a two hour period in the morning.

The next example is a little different:

Start Time: 6:00PM

End Time: 8:00AM

Since the start time is after the end time (because it is set to **PM**), the LED will activate for 14 hours – starting at 6:00PM and ending at 8:00AM the following day. So please be sure to pay attention to the AM/PM – it could easily get you into trouble!

4.2.2.3 Source

You have the option to have the LEDs only turn on for a specific sensor type – The Scout Receiver or PIR. This lets you have advanced setups where the Receiver is used for still videos (and won't turn on the LED) but the PIR will. The default is "Any" so that any sensor detection will turn on the LED.

4.2.2.4 Source ID

This is also for advanced setups where multiple sensors are co-located. You can have a specific LED (or multiple) only turn on for a specific sensor. By using this feature you could have one group of LEDs turn on for PIR #1, and a separate group turn on for PIR #2. The default is to turn on for "Any" source ID.

4.2.2.5 PWM Frequency

You have an option to select the PWM frequency of the LED's to avoid any banding or aliasing in your videos. There are three options available:

- 2.4 kHz: Ideal for very long ramp up/down durations providing a smooth transition from minimum to maximum power.
- 25 kHz: This is the default. It significantly reduces the chances of any banding or aliasing in the final video.
- 100 kHz: For those ultra-paranoid about banding this frequency will prevent it. The consequence is that ramping the LED will be much more coarse (visual steps).

4.2.2.6 Screen Timeout

There's no hiding it – OLED displays are a little hungry for battery life. They also may draw some unwanted attention to the LED! In this setting you can adjust how long the screen will remain on after a button press:

- 1) Off. Do not turn off the screen.
- 2) 30 seconds (default)
- 3) 2 minutes

The “Lockout” feature (see below) will not function if the “Screen Timeout” feature is turned off.

4.2.2.7 Brightness

The screen has two brightness levels – “Low” and “High”. “Low” is the default.

4.2.2.8 Lockout

“Lockout” is for those paranoid (and rightly so!) people out there who don't want humans stopping by and changing your settings. You've invested in clever ways of securing your camera trapping equipment. That might prevent theft – but it doesn't prevent people from simply turning off your equipment! “Lockout” lets you choose a 4-digit security PIN number that must be entered **any time the screen is turned on**. If you have the “Screen Saver” setting set to “Off”, obviously the “Lockout” feature won't work. Enabling the “Lockout” is straight-forward:

- 1) Select “Change PIN” and choose your PIN number. Do NOT use 0000 as that is the default PIN when the user is prompted.
- 2) Select “Enable”.

Much like your bank card it is best to remember the PIN. The LED will remember the PIN and even if you turn off the power OR even remove the batteries – you will not be able to use the LED until the correct PIN is entered.

4.2.2.9 LED Debug

If “LED Debug” is enabled then the Scout LED will periodically (about 100ms) briefly blink the green LED just to let you know that it is still operating. This can be useful for setups that are close to home. It could, however, attract attention from animals (including two-leggeds!). It defaults to off.

4.2.2.10 Load Defaults

This will load the factory default settings for everything.

4.2.3 Delay

“Delay” is how long after a sensor “detects” something before the LED will light. It is adjustable from 0 – 99 seconds. This delay can be useful to keep the camera and lighting in sync with each other.

4.2.4 On Time

After a sensor detects a subject and the “Delay” time expires (if set), this is how long the LED will stay on.

4.2.5 Off Time

After the “On Time” expires, this is how long the LED will ignore any more detections by sensors. This can be used to avoid turning the LED on over and over again in environments where there are quite a few of false triggers (to conserve battery life).

4.2.6 Extend On Time

If this option is selected any detection signal from a sensor will continue the programmed “on time” if the “on time” is currently active. Here is an example:

The “On Time” is set to 30 seconds. The LED has been on for 20 seconds but then the sensor detects something again. If “Extend On” is selected, the LED will then stay on an additional 30 seconds.

4.2.7 Extend Off Time

Similar to “Extend On Time”, if the sensor detects something and the “Off Time” is currently active, it will extend the “Off Time”. Typically this feature would only be used to ignore noisy environments where you only want to have the LED turn on once and then rest for a while.

4.2.8 Ramp Up

The LED has the capability to ramp up its brightness over a period of time to the selected power level. This ramp can be used to reduce the chance of startling an animal (soft light on rather than an instant flash on).

4.2.9 Ramp Down

Similar to “Ramp Up”, this is how long the LED will decrease its brightness until it is out.

4.2.10 Statistics

The Scout LED keeps track of a handful of items. These can help us track down problems you might be having. They include:

- Maximum battery voltage
- External sync signals
- Min/Max temperature
- Wireless statistics
- Usage statistics

These statistics are in no way wirelessly transmitted to Cognisys, Inc.

5. Examples

In the following sections we will walk you through some real-world setups/examples using your Scout LED. Be sure to check out our website and follow us on YouTube (<http://www.youtube.com/user/CognisysInc/>) for video examples. Sometimes watching a video makes the whole process much easier to understand!

5.1 Wireless LED

This is the ideal setup. The Scout Sensors (Receiver or PIR) will wirelessly wake up and activate the LEDs.

The first step is to make sure that each LED has its own unique “Wireless ID”. On the LEDs go to: Settings->Wireless Settings->ID and change the ID so each LED has its own unique ID.

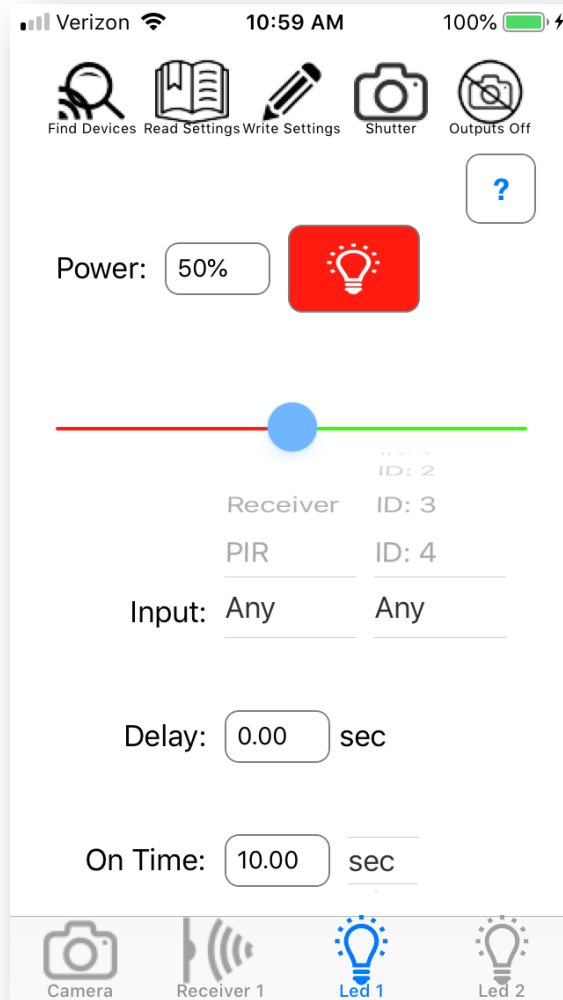
The LED’s “Source” and “Source ID” default to any, meaning that the LED will activate when any sensor detects something.

No changes are required for the Camera Box – since the LED’s are only responding to the sensors.

The system will then follow this process for the Camera Box setup:

1. The infrared beam (or PIR) detects a subject.
2. The Receiver (or PIR) tells the camera box and LED a subject has been detected.
3. The LED starts following its programmed settings (Delay->On Time->Off Time)
4. The Camera Box tells the camera to start video recording.

Inside the Camera Box app the LEDs will show up individually. This makes adjusting lighting for a camera trap incredibly easy – especially if the LEDs are mounted in “difficult” places. Frequently they are mounted in trees to create a more natural moon-light effect.



5.2 Wired LED (3rd party sensors)

Have another sensor you want to use with the Scout LEDs? No problem! Just take your sensors output and connect it to the sync cable:

<https://www.cognisys-inc.com/store/sabre-aux-cable.html>

This cable has an RCA-style connector on it. You may need an adapter to connect to your sensor.

The LED will stay on for the duration that the your sensor activates its output. The LED will still follow it's "Off Time", however, so if you want it to respond exactly like your sensor be sure to set the off time to zero.

5.3 Maximum Battery Life

Battery life is a tricky business. There is some magic chemistry going on inside of those things that can significantly affect the performance of your Scout equipment. Here are some things to consider:

1. Operating temperature – batteries are typically rated at 25C. They lose some of their capacity at warmer temperatures but at cold it's *really* bad. A 5200 mAh battery at -20C (-4 F) could only have 2600mAh of capacity. So if your Scout LED normally had 80 days of battery life it would be cut down to 40 days – a big difference! If you're planning on long-term deployments at cold temperatures you may want to consider an external battery pack.
2. The Scout LED displays the current voltage it is receiving from either the internal or external battery pack. This will help you decide when it is time to replace the battery. The voltage is also reported in the Scout Camera Box app for each LED. For the Scout Li-Ion pack 16.8V is fully charged, 14.8V is middle of the road, and completely empty is around 12V.
3. Only charge Li-Ion batteries at room temperature. Their capacity can be damaged if charged when cold or hot.

Now that we've worked through the battery chemistry here are a few things you can do to extend the battery life of the LED:

1. Leave the Screen Saver at the default 30 seconds (See "4.2.2.6 - Screen Timeout").
2. If possible keep the LED out of direct sunlight. Electronics tend to draw more current when warm.

Following these steps can help you get nearly three months of battery life from the Scout LED!

6. Installing the Reflash software (optional)

What is “reflash”? It’s a small program that allows you to update the firmware on your Scout Products. **You do not need this program to use your Scout equipment.** Rest assured if you just purchased your Scout it ships with the latest software available. If, however, new firmware becomes available you may want to upgrade your controller. Do you have to upgrade your firmware? No. Should I upgrade your firmware? Maybe. We say “maybe” because as new firmware is released we are adding and improving features. This means changes to the user interface and things might not look exactly how they did before you updated the firmware. So if you discover that a new feature is available that you absolutely have to have, then by all means go ahead and reflash your controller. Just keep in mind that things might look and behave a little different! The other consequence to reflashing your controller is that you *may* lose any stored settings.

Scout products can only be updated over USB. The USB connector for the Scout LED is located inside the battery compartment in the back. The reflash process takes a few seconds.

Reflash requires a firmware package (instructions included). You can find the package here: http://www.cognisys-inc.com/products/scout/scout_tech_specs.php

Whether you use Windows or OS X, you will **need** Oracle’s Java installed for Reflash to load. You can download it here: <http://java.com/download>

6.1 Windows Installation

Windows installations should automatically detect and download the USB drivers required. Some operating system settings can prevent automatically downloading the drivers. If that is the case, use the above link in section “6 - Installing the Reflash software

Once the installation is complete you will have a “Start Menu” folder called Cognisys. Underneath that you will find the Reflash icon.



6.2 OS X Installation

Reflash requires Java 1.7 or later from Oracle. This version of Java requires that your OS X version be 10.7.3 (Lion) or above. It has not been tested with older versions of Java or earlier versions of OS X and is not supported.

Use the above link in section “6 - Installing the Reflash software”.

Once installation completes you will have a “Reflash” icon on your Launch Pad:



7. Troubleshooting

Problem	Cause	Solution
Display does not light when power button is pressed.	Battery pack not installed.	Insert battery.
	Battery pack is low.	Recharge the battery pack.
Display keeps turning off	Screen Saver is on	This is normal in order to conserve energy. You can disable the screen saver. See section 4.2.2.6 for details.
LED asks for PIN code every time.	“Lockout” is enabled.	See section 4.2.2.8 for disabling the “Lockout” feature.
LED does not activate when sensor is activated.	LED is turned off.	Press the power button to wake the LED.
	Wrong wireless channel	Make sure that the LED matches the wireless channel of the Camera Box, Receiver, and PIR.
	Wrong source	Go to System Settings->Source and change it to the sensor you are using (or “Any”).
	Wrong source ID	Go to System Settings->Source ID and change it to the sensor’s ID you are using (or “Any”).
	z _z is on the display.	“Time window” is preventing the LED from turning on. See section 4.2.2.2.
	^{HOT} ▲ is on the display.	The LED has exceeded its operating temperature. Allow it to cool down and it will automatically resume operation.
Need to restore factory settings	You just want to start over!	With the LED powered off, press and hold the power button until the red power light goes out. Release the power button. Optionally you can load the defaults from the settings page. See section 4.2.2.10.

If you cannot resolve a problem with your Scout LED, please contact us at support@cognisys-inc.com. We want to make sure that you are completely satisfied!

8. Specifications

Specifications are intended for reference only. The design may be modified to improve features or functionality without notice.

Specifications	MIN	NOM	MAX	UNITS
Input Voltage	12	14.8	18	Vdc
Input Current – Wake, LED off	-	14	-	mAdc
Input Current – Sleep		0.7		mAdc
Input Current – 50 %		0.67		Adc
Input Current – 100%		1.5		Adc
Battery life – 100% Power		4.1		hrs
Color Temperature		5000		k
Luminous Flux		2000		Lumens
Color Rendering Index (CRI)		90		typical
Television Lighting Consistency Index (TLCI)		92		typical
Real-time clock life without batteries	-	16	-	hours
Wireless Range ²		15	30	m
		50	100	feet
Operating Temperature	-40	25	70	C
	-40	77	158	F

- 32-bit high performance low current ARM Processor
- OLED dot matrix display – great readability in direct sunlight!
- Wireless connectivity: Proprietary 2.4GHz
- Real-time clock for time-windowed triggering (two windows provided)
- USB for reprogramming

¹ See section “5.3 - Maximum Battery Life” for additional information on battery life.

² Several factors can affect the wireless range. Congestion, terrain, etc...

9. Warranty

Limited Warranty

The Scout Receiver, Transmitter, Base Transmitter, PIR, Flash, LED, and Camera Controller (hereby referred to as “Scout Equipment”), software, and related equipment is provided by Cognisys, Inc. "as is" and "with all faults." Cognisys, Inc. makes no representations or warranties of any kind concerning the safety, suitability, lack of viruses, inaccuracies, typographical errors, or other harmful components of Scout Equipment and its related software. There are inherent dangers in the use of any product, and you are solely responsible for determining whether Scout Equipment is compatible with your equipment and other software installed on your equipment. You are also solely responsible for the protection of your equipment and backup of your data, and Cognisys, Inc. will not be liable for any damages you may suffer in connection with using or modifying Scout Equipment and/or its related software.

All electronic products are warranted to be free from defects in materials or workmanship for two (2) years from the date of purchase. Within this period, Cognisys Inc. will, at its sole option, repair or replace any components which fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alterations or repairs. This warranty is non-transferable.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL COGNISYS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

Cognisys, Inc. retains the exclusive right to repair or replace the product or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

10. Revision History

Revision	Date	Change
1.0	11/15/2019	Initial Release