

Instructions for Maintaining & Deploying Stairwell Motion-sensor Lights

I. Audience:

AGRC Emergency Committee Captains and Floor Monitors

II. Purpose:

Provide at least 1 foot-candle (fc) of light on stairwell steps with motion-sensor LED lights during extended power outages at Arrowhead Gardens. Each stairwell in Buildings A,C,D require 12 motion-sensor LED lights. An LED light will be attached to the walls at landings and near floor exits with Gorilla Putty. The LED lights should be placed approximately 6 feet above floor level, facing the stairs midway between both flights of stairs.

III. Supplies:

- Received 2/12/2024 from Amazon. Purchased by Shag / Julia Dillon
- Buildings A,C,D each will have 30 [motion-sensor LED lights](#) in 5 boxes.
 - Each box holds 6 lights. One box is used for spares.
 - Building B has backup power and shouldn't need LED lights.
- Buildings A,C,D each will have 6 packets of [Gorilla Putty](#). Each packet has one sheet of 84 squares that can be removed with scissors.
- Each stairwell will have a designated blue tote bag with the above supplies plus a headlamp. (See section X.)
- Each light has a small property tag on the front and an ID tag on a side. A dot under the Building letter indicates where it is deployed.

AGRC Emergency
Committee
Building A B C D



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IV. Motion Sensor Settings:

Starting from the *all modes off* setting, each click of the black button steps through 3 sensor-light modes under dark conditions. To simulate darkness, hold your hand over the light sensor. We will be using **Mode 3** for stairwells.

- All modes off
- Mode 1 in darkness: Always Medium Lighting
- Mode 2 in darkness: Light 50% > Motion Light 100% > Light 50%
- Mode 3 in darkness: Light off > Motion Light 100% > Light off



V. Packing List for LED Lights and Gorilla Putty:

– Purchased by
Shag / Julia Dillon



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VI. Product Features and

[Peasur](#)
[Solar Motion](#)
[Lights Model](#)

PRODUCT FEATURES

EN
Guide:

Energy-saving & Eco-friendly: Skip the higher electricity bills. During the day, the efficient solar panel converts the sunlight into electrical energy stored in the build-in rechargeable battery, light up at night.

Super Bright: The outdoor wall light with super bright LED, it is great to illuminate your outdoor spaces, like your gardens, patio, fence, gate and yard.

PIR Motion Security Light: When motion is detected within 3-5m, the motion sensor lights will turn on the light automatically at night, which provides your illumination, and also security.

3 Working Modes:

Mode 1: Middle brightness mode, keep steady on at night, auto power off during the day.

Mode 2: Dim light Sensor Mode, no motion lights keep dim; motion detected lights turn to full brightness 15 seconds.

Mode 3(Recommended): Sensor light mode, The light is off when there is no movement, full brightness when motion is detected.

Splashing Waterproof: Both the lights and the solar panel are IP65 Waterproof. No worry to use them in the rain.

[Sensor](#)
[TBD-13](#)

ATTENTION

1. To maximize battery capacity, the solar sensor light should be charged by direct sunlight at least for eight hours before initial use.
2. To ensure the normal working of light detector, please install it away from other light sources.
3. When the battery is completely discharged, the solar lamp may not light up after a short charge or charge on cloudy days, the solar lamp must be exposed to direct sunlight for at least 2-3 days to restart.

INSTALLATION GUIDE

1. Tear off the protective film from the solar panel
2. Set Mode. Cover the solar panel with your palm, press the Power button. Click it once, the light on Mode 1 (Middle brightness mode auto power on at night). Click the Power button twice the light on Mode 2 (Dim light sensor mode, Dim light when there is no movement, full brightness when motion is detected). Click the Power button 3 times the light on Mode 3 (Sensor light mode, The light is off when there is no movement, full brightness when motion is detected.) Mode set in cycle (Mode1-Mode2-Mode3-off) Recommend Mode 3
3. Hang the light on desired location. (Try to pick the spot where solar panel will get sufficient direct sunlight throughout the day)

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VII. Charging Solar Powered Lights:

- A) Lights are maintained and deployed by Building Captains & delegates.
- B) Under test conditions in an apartment hallway a light worked for 5 days.
- C) Solar LED Lights can be recharged with sunlight or artificial light. The time required depends on the charge level and the intensity of the light source.
- D) A fully discharged LED light will require 2-3 days of direct sun light to recharge. Completely overcast days could require weeks.
- E) Best practice is to routinely expose the LED lights in windows (or on balconies) to daylight so they receive some charge everyday.
- F) If space is not sufficient for sunlight exposure, all the LED lights should be rotated every few months between storage and sunlight exposure.
- G) The best window and balcony choices can receive direct sunlight for 5-10 hours per day in the summer.
- H) Since we can't measure the remaining battery charges, it will be necessary to charge the LED light batteries as often as possible.
- I) A flood light was purchased to speed up recharging. See Section IX.
- J) LED lights in storage should be fully charged in the summer when sunlight is the most intense.
- K) **Record power outages and charges on PDF document: LED-Charge-Log**
- L) See Wikipedia article in section below concerning light conditions.

VIII. Light Conditions in Foot-candles (fc):

<https://en.wikipedia.org/wiki/Foot-candle#Examples>

Examples

Full, unobstructed sunlight has an intensity of approximately 10,000 fc. An overcast day will produce an intensity of around 100 fc. The intensity of light near a window can range from 100 to 5,000 fc, depending on the orientation of the window, time of year and latitude.

Indoor lighting for residences seeks to provide 5-40 fc for general spaces and 70-90 fc for work spaces.

Lighting requirements for commercial spaces range from 5 fc for storage spaces to 200 fc for visually intensive work.

Light Measurement Notes:

Stairwell steps should receive a minimum of 1 fc during power outages.

One foot-candle (fc) equals 10.7639 lux. Lumens vs Lux.

One lux is equivalent to one lumen per square meter.

Contact John D424 for light level evaluation with a light meter.

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IX. Recharging With Flood Light

A flood light was purchased to speed up the process of recharging LED lights' internal batteries. More flood lights could be purchased.

<https://www.amazon.com/dp/B0BR6GP5F5?th=1>

In a test case with a 4x4 grid layout of 4 lights per row in 4 rows, LED lights exposed to the flood light received an average of 5000 fc when rotated. By rotating rows from front to back and rotating 2 inner lights with 2 outer lights over equal intervals of time, most of the lights will receive an average exposure of about 5,000 fc. In comparison, direct sunlight is about 10,000 fc.

Since the flood light can operate 24/7, it should be possible to recharge all 30 lights for one building in under 48 hours. More testing is needed to workout an optimum grid layout and rotation schedule.

100W 10000LM LED Work Light with small fan to cool the back of the light



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X. Headlamp User Manual

User Manual

This

3-14-2024
USER MANUAL

2 PACK



RECHARGEABLE HEADLAMP

DESCRIPTION

mini smart sensor headlamp is designed for convenient indoor and outdoor activities, such as, camping, night jogging, biking, emergency usage, etc. headlamp has a brand new sensor mode, two tiny sensor bulbs can detect hand waving to turn on/off the light, smart and sensitive.

SPECIFICATION

Waterproof level	IPX4
Battery Capacity	1500MAH
Lumen	1200LM
Charging Time	3H
Discharge Time	4H/8H
Weight	2.08oz
Part Number	H-2002



LONG PRESS FUNCTION & MOTION SENSOR

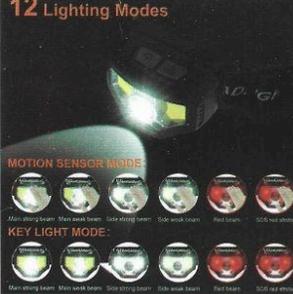


- ① Switch mode
- ② Wave sensor mode

7*24 Hour Service
If you have any questions about the product, please contact us first and we will assist to make everything right.

After-sale contact
CurtsodTeam@outlook.com

12 Lighting Modes



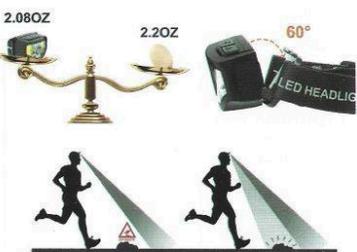
2 mode buttons to control 6 modes for versatile use.

- ① Press the LED key mode button, you can switch the main strong beam, main weak beam, side strong beam, side weak beam, red beam, SOS red strobe.
- ② Press the motion-sensing mode key and wave gestures to turn it on and off

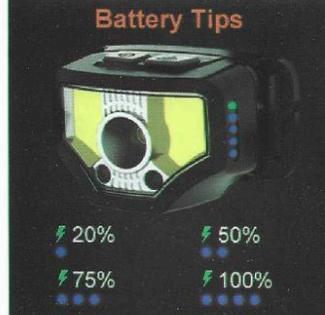
60° Adjustable Head

The hands-free headlamp can be rotated flexibly from 0° to 60°, which makes bright light to reach different angles and ranges. And it can tightly fix at a perfect angle, and won't shake when you're running.

It uses a comfortable elastic head-band, you can adjust the length to perfectly fit your head size, suitable for adults and kids.



Battery Tips



Green light - gesture-sensing mode
Blue light - battery indicator

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document is available for download at

TheGardensGazette.org

Resources > AGRC Committees > [AGRC Emergency Committee](#)