

# STAR 2012™ and 2021 SERIES TRAINMAN'S LANTERNS

## 2012-LED

The 2012-LED is pre-programmed to operate in 6VDC mode and can use any standard 6V lantern battery. For the best performance, the use of an alkaline battery is highly recommended.

## 2012HE-LED

The 2012HE-LED also uses a standard 6V lantern battery, but it has been specially designed to run in a high-efficiency, low power mode resulting in an increased battery life.

## 2012R-LED

The 2012R-LED uses a *rechargeable* 6V lantern battery that can be recharged many times, saving the user considerable cost. To recharge the battery use the CT-101 or CT-105 charger with the rechargeable batteries once they are removed from the lantern.

## 2021-LED

The 2021-LED is identical to the 2012, except that it is shipped with our new CB-101 "C" cell battery cradle (*batteries not included*) and pre-programmed to operate on 4.5 VDC.

## Operation

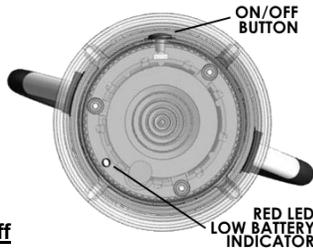
### PUSHBUTTON SWITCH:

A push button switch located on the side of the lantern head will allow you to scroll through three operating modes:

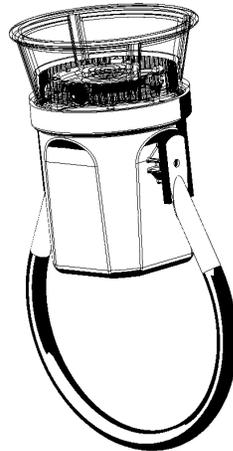
**Spot Only** ➔ **Signal Only** ➔ **Spot and Signal** ➔ **Off**

### LOW BATTERY INDICATOR:

These lanterns are equipped with a Low Battery Indicator LED that will illuminate when your battery power gets low. This provides a warning to you so that you can replace your battery (or recharge it, if applicable) before it shuts down completely.



Model	Low Batt Ind.	Dim/Shut Off
2012-LED	4.1 VDC	3.0 VDC (Dims)
2012HE-LED	5.9 VDC	5.3 VDC (Dims)
2012R-LED	5.9 VDC	5.3 VDC (Shuts off)
2021-LED	3.5 VDC	3.0 VDC (Dims)



## Mode Selection

The 2012-LED and 2021-LED are identical except for the mode they are shipped in:

**2012** - 6V mode for use with standard lantern batteries

**2021** - 4.5V mode for use with the CB-101 (uses 3 "C" cell batteries)

If you have a 2012-LED or 2021-LED, you can change the mode if you would like to use a different power source (i.e. voltage). Follow the steps below to toggle between modes:

1. Turn on the light in spot mode.
2. Press and hold the button (the light will have changed from Spot to Signal mode). After approximately 10 seconds the red Low Voltage LED will begin to flash.
3. Release the button and the new mode will be stored.
4. Repeat Steps 2 and 3 to toggle back to the other mode.
5. When a fully charged battery is used to power up the circuit:
  - If it is in 6V mode, the red Low Voltage LED will "not" flash at startup.
  - If it is in 4.5V mode, the red Low Voltage LED will flash twice at startup.

## Battery Replacement

**Please Note:** *The 2012-LED and 2021-LED lights are not designed to be used with rechargeable batteries. If you wish to use rechargeable batteries, please use the 2012R-LED*

1. To remove the battery, hold the lantern firmly in one hand with the handle facing downward and the head (where the LEDs are) facing upward as shown in the diagram to the right.
2. Using the other hand, unscrew the head in a counterclockwise motion and lift it straight off. Remove the battery and replace it. **Use only the proper battery for the model and mode of your light.**
3. Reinstall the head.



- Batteries contain corrosive material. Exercise caution when handling.
- Lanterns must be regularly inspected and replaced if damaged or malfunctioning.
- Damage due to battery leakage is not covered under warranty. The potential for battery leakage is significantly increased if the battery is subject to deep discharging.
- Star recommends storing the lantern such that the battery springs are upright.