

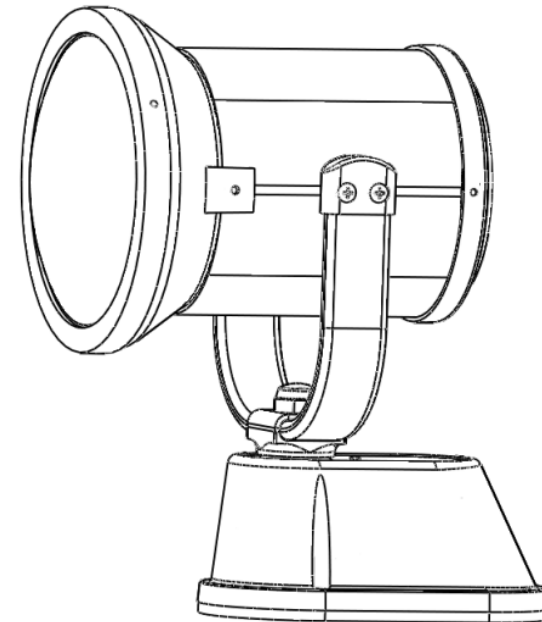


KH INDUSTRIES

The Permanent Name in Temporary Lighting & Power

NightRay® with Wireless Remote

Instructions and Operator's Manual



Contact KH Industries

For questions, sales or service please contact:

Phone: 716-312-0088

Fax: 716-312-0028

Email: sales@khindustries.com

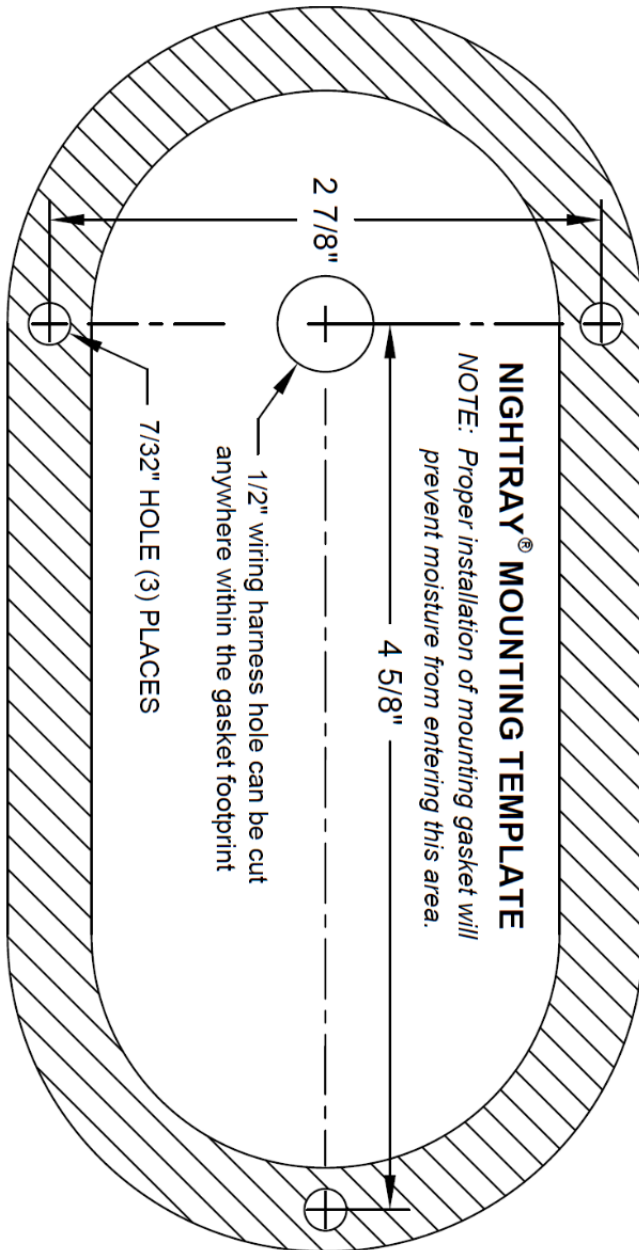
Web: www.khindustries.com

Address: K H Industries

160 Elmview Avenue

Hamburg, New York 14075

USA



Warranty

This product has a three-year limited warranty from any factory defects on parts and labor as per the **KH Industries Terms and Conditions of Sale** distributed with the product invoice. The separate warranty card should be filled out to avoid discrepancies in warranty information. Please contact KH for warranty service (see "Contact" section) if required.

Introduction

Congratulations on the purchase of a new NightRay wireless remote control spotlight. The NightRay has been designed for use in adverse environmental conditions with all corrosion resistant materials. A “slip drive” protects the drive unit from damage should manual positioning of the light be required. A wireless or wired remote controls the power to the spot or spot-flood combination bulb and the vertical and horizontal movement of the beam. With normal care, this light will give many years of service. NightRay is manufactured to exacting standards for performance, convenience and reliable service.

⚠ Warnings

READ ALL WARNINGS BEFORE USING OR INSTALLING THE NIGHTRAY!

IMPORTANT! This light can cause fatalities if shined at a person operating a motor vehicle. Some municipalities require work lights to be covered while vehicle is driven. Consult local laws before placing this light in operation.

DO NOT use light on road or highway. This device is intended for off-road use only.

DO NOT shine light into anyone’s eyes, especially if operating a vehicle or other equipment.

DO NOT use light in explosive atmosphere. This device is NOT explosion proof.

DO NOT touch hot lamp. Allow lamp to cool before replacing.

DO NOT leave light face down on any surface during operation. Fire or surface damage may result.

DO NOT place arms or legs near this device when operating. Observe pinch points and keep clear.

DO NOT submerge the remote in water.

DO NOT attempt to service the NightRay. Return to KH Industries for repairs.

ONLY ELECTRONIC TECHNICIANS (QUALIFIED BY KH INDUSTRIES) SHOULD ATTEMPT TO MAKE REPAIRS TO THE ELECTRONIC CIRCUITRY. IF PROPER TESTS AND REPAIR PROCEDURES ARE NOT FOLLOWED, DAMAGE MAY OCCUR AND WILL VOID THE WARRANTY.

KH INDUSTRIES ASSUMES NO LIABILITY FOR DAMAGES RESULTING FROM MISUSE OR ABUSE OF THIS PRODUCT.

⚠ IMPORTANT INSTRUCTIONS

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one of the following measures:

- Reorient or relocate the receiving antennae.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

⚠ FCC CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment. **K&H INDUSTRIES INC. ASSUMES NO LIABILITY FOR DAMAGES RESULTING FROM MISUSE OR ABUSE OF THIS PRODUCT**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference and*
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.*

Le présent appareil est conforme aux CNR d’Industrie Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes :

- (1) l’appareil ne doit pas produire de brouillage, et*
- (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.*

Pre-Installation

The NightRay package includes the following items:

- NightRay unit
- Adhesive backed mounting gasket
- (3) 8-32x1” mounting screws with nylon insert lock nuts
- (2) Crimp terminals
- Factory pre-programmed wireless remote control and/or wired remote and extension wiring

Important! Read all installation procedures before beginning installation.

- Mount in an upright position only. Select a mounting location that will provide sufficient strength to support the light and provide access to the wiring.
- Protect all wires from sharp edges to prevent chaffing.
- Use 16 AWG wire or larger to extend power wires.

Installation

1. Use the mounting template (located on page 4) to locate and drill three 7/32” diameter holes in the mounting surface.
2. Drill one ½” diameter hole within the inner ring of the template for access to the wiring.
3. Remove protective paper backing from mounting gasket and adhere to bottom of light base.

NOTE: Do not allow corrosive sealants (such as silicone sealant) to come in contact with the housing. Proper installation of the mounting gasket will prevent moisture from entering the housing.

4. Use the crimp terminals to extend the yellow and black wires and route them through the ½” hole to a protected 15 amp 12 volt power source.
5. Secure the light to the mounting surface with the screws and nuts provided.
6. Connect the black wire to the **negative (-12 volt)** supply.
7. Connect the yellow wire to the **positive (+12 volt)** supply.

Maintenance

- The sealed beam lamp can be replaced by sliding a thin screw driver blade under the rim near one of the retaining pins and carefully pushing the rim over the pin.

Wireless Remote

Each remote can control two NightRay units independently, and each NightRay can be controlled by up to six wireless remotes.

- The remote has eight push buttons; OFF, ON, A/B, UP, DOWN, LEFT, RIGHT, and FLASHLIGHT. The ON pushbutton will turn the NightRay bulb on and will cycle between the spot and flood filaments on the dual filament models. The A/B pushbutton changes the transmitter ID code to allow the transmitter to control two lights independently. The current transmitting code is indicated by a red or green light within the NightRay logo. The FLASHLIGHT will shut off after 20 minutes if no pushbuttons are pressed to conserve battery power.
- The wireless remote is powered by three AAA batteries. The batteries in the wireless remote can be replaced by removing the two screws securing the battery cover on the back of the remote.



Programming a Wireless Remote

If your NightRay was ordered with a wireless remote, it is factory preprogrammed to the NightRay. If you wish to add additional remotes or program the remote to additional NightRay units, you can program them using the following procedure:

1. Disconnect power from the NightRay unit.
 2. Press the A/B pushbutton to select either the green or red transmitter code.
 3. Press and hold any UP, DOWN, LEFT or RIGHT pushbutton.
 4. Restore power to the NightRay unit.
 5. Release the pushbutton when the lamp starts to flash indicating the receiver has been programmed.
- The red and green transmitter codes can be programmed to the same NightRay unit.
 - To erase all transmitters from the receiver, press the pushbutton on the receiver board while power is applied. To access to the receiver board, slide a thin screw driver blade under the rim of the rear cover near one of the retaining pins and carefully push the rim over the pin.

Installing a Wired Remote

If your NightRay was ordered with a wired remote, it functions the same as the wireless remote except it will control only one NightRay unit and does not include the flashlight.

1. Connect the 20 foot long extension cable to the connector in the base of the NightRay.
2. Route the extension wire into the cab of the vehicle.
3. Select a mounting location for the remote bulkhead connector and drill a 1” diameter hole.
4. Use the connector to locate and drill two appropriate sized holes to secure the connector to the mounting surface with two #4 flathead thread cutting screws or machine screws and nuts (not provided).
5. Connect the extension cable to the back of the connector and the coil cable to the front.
6. Connect the coil cable to the wired remote.