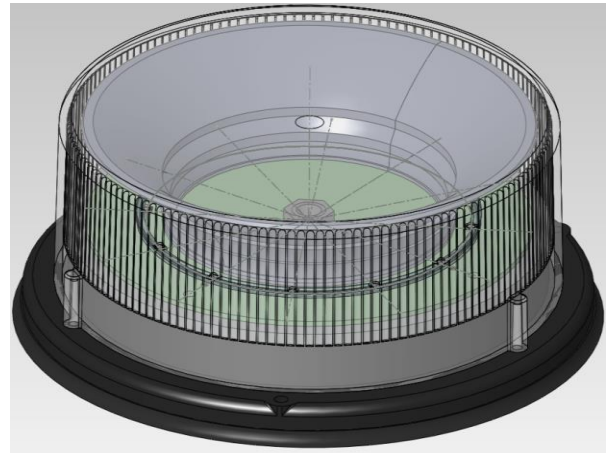


Installation and Operation Manual

BCN24 R1 SERIES HyIntensity LED BEACON



Safety Considerations

The effectiveness of this system is highly dependent upon its proper installation. Please read and follow ALL instructions provided in this manual before attempting the installation.

For proper installation of this product you must have a good understanding of automotive electrical systems and procedures, as well as proficiency in installation and servicing of emergency vehicle sound, lighting and warning equipment. We recommend this equipment be installed by qualified personnel.

- DO NOT connect this system to vehicle battery until all other electrical connections have been completed, and have been checked that no short exists.
- When passing wire through compartment walls and drilling holes is required, the installer MUST check both sides of the drilling surface before drilling. Make sure that no vehicle components could be damaged by the drilling operation. Clean the holes and remove any burrs. Use a grommet of appropriate size and sealants when passing the wires.
- Looms, grommet, cable ties or other installation hardware should be used to anchor and protect wires.
- All wire should conform to the minimum wire size as specified by the manufacturer.
- Splices should be minimized and made in a fashion so as to protect from corrosion to reduce loss of conductivity.
- Be sure to mount unit through the steel of the vehicle. Avoid mounting through plastic or other non-structural materials.
- The point of installation MUST NOT interfere with the deployment of vehicle's air bags in order to not reduce the effectiveness of the air bags system. Also, any device mounted in an air bag deployment area may become airborne and may cause severe personal injury or death. Consult your vehicle owner's manual for the air bags deployment areas. The installer/user assumes full responsibility to determine the proper installation location in order to provide complete safety to all the passengers inside the vehicle.
- A proper ground connection between the system and the vehicle chassis ground must be made in order for the system to function properly. This requires the use of a crimped or soldered ring termination on the negative wire connecting to the chassis. Also it is important to have a clean metal to metal contact between the vehicle chassis and the ring termination. If it is necessary, remove the paint down to bare metal using sandpaper or any other abrasive tool. If a reliable chassis ground connection CANNOT be made then it will be necessary to run a discrete wire directly to the negative battery terminal. The minimum gauge of this wire must be the same as the +12/24VDC feed wire connected to the battery terminal.

- The use of emergency warning devices does not ensure the safety of the operator. The operator is responsible to ensure safe operation of the vehicle regardless of whether the warning device is in operation or not.
- This device contains high-intensity LEDs. To prevent eye damage avoid prolonged exposure to the light source and never look directly into the light.
- If the product will have a temporary installation system, such as: magnetic, suction cup, VELCRO® or tape, the mounting surface has to be cleaned with water mixed with isopropyl alcohol or mild soap.
- Do not use a pressure washer to clean this product. To clean the lens use only water and mild soap. The use of stronger chemicals can affect the physical and optical characteristics of the outer lens, resulting in cracks and/or discoloration/opacity of the lens.
- The device must be installed so as not to reduce the output performance of vehicle systems.
- When in use the operator must ensure that the warning signal is visible and not obstructed by vehicle components (i.e. open trunk lid), people or other obstructions.
- This device is intended for use by authorized personnel only. The user responsibility is to ensure that all local, state/provincial and federal laws are being complied with. D&R assumes no liability for any loss resulting from the use of this device.

Installation:

Permanent Mount

1. Determine the mounting position of the LED beacon
2. Unscrew the 3 #4 stainless steel screws holding the bottom metal base together with the beacon. Keep the screws, washers and lock washers in a secure place as they are needed later in the mounting process.
3. Locate the 2 mounting holes on the beacon metal mounting base and mark their location onto the rubber gasket and onto the mounting surface. Locate and mark also onto the mounting surface the position of the center hole used for the harness passage.
3. Drill the 2 marked mounting holes into the rubber gasket and into the mounting surface using an appropriately sized drill bit. Drill the harness passage hole using a 3/8" drill bit. Clean all the holes from any residues resulted from the drilling process. It is recommended to install a rubber grommet (customer supplied) to protect the beacon harness when is passed through the mounting surface.
4. Place the rubber gasket onto the mounting surface aligning the 2 mounting holes. Place on top of the gasket the metal mounting plate matching the 2 mounting holes with the ones from the gasket and the mounting surface. Make sure that the gasket stays flat on the mounting surface.
5. Secure the metal mounting base and the gasket to the mounting surface with sheet metal screws.
5. Feed the beacon harness through the center hole of the plate, gasket and mounting surface passing hole. Place the assembled beacon onto the mounting base lining up the 3 mounting holes with the holes in the base plate. Secure the beacon to the mounting base with the 3 stainless steel screws removed in step 2.
6. Extend the wire harness to access the power source and refer to the next section in the manual for wiring and operation.

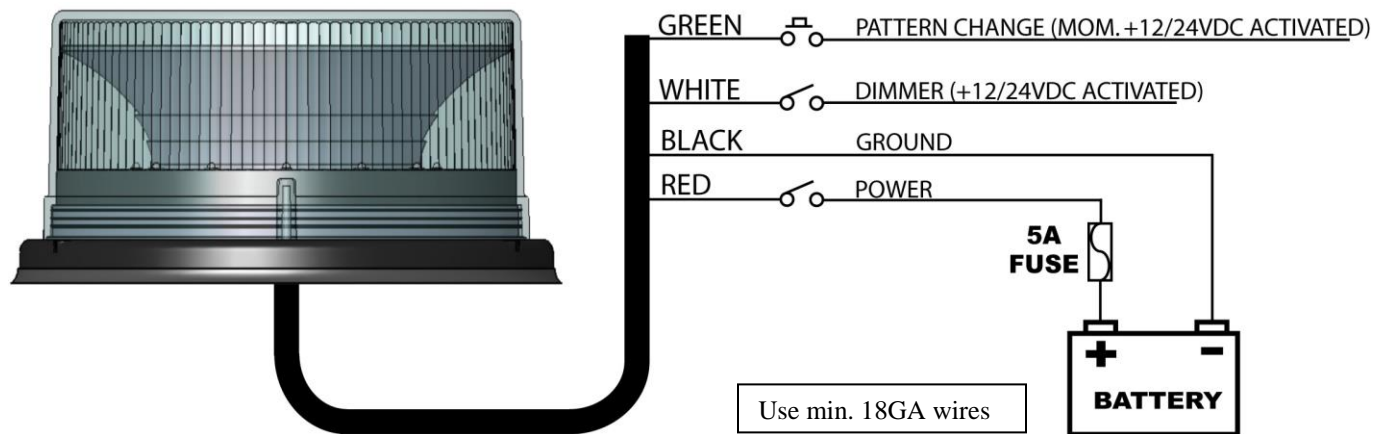
Magnetic Mount

WARNING!

- As with any magnetically mounted warning device, its use on the exterior of a moving vehicle is at the sole discretion and responsibility of the user. Magnetic mount products provide a secure, temporary installation in most circumstances and are recommended for **STATIONARY USE ONLY**.
- Rust stains: Magnetic mounting is not intended as permanent mounting for beacons. The device should be removed when not in used to prevent rust stains.

1. Determine the mounting position of the LED beacon on a flat, metallic surface.
2. Before installing the beacon clean very well the mounting surface.
3. The magnet is factory assembled on the mounting plate. Route the beacon harness through the side slot provided into the beacon's base. Attach the mounting plate to the beacon's base by matching the 3 mounting holes and using the #8-32-3/4" SS screws provided with the unit.
4. Place the beacon with magnet mount on a metal surface and plug it into a cigarette lighter outlet. Check that the beacon device is stable on the mounting surface.

Wiring Connections:



- RED – Connect to POSITIVE terminal of a +12/24V BATTERY through a SPST switch and a 5A fuse
- BLACK – Connect to GROUND terminal of a +12/24V BATTERY.
- WHITE – Connect to +12/24VDC through an ON/OFF SPST switch.
- GREEN – Connect to +12/24VDC through a Normally Open MOMENTARY switch.

WARNING!

- Please note this product has high intensity LED's. To prevent eye damage, **DO NOT STARE** directly into the light.
- All wire should conform to the minimum wire size as specified by the manufacturer.

Technical specification:

- Current draw: 24 LED Beacon – 3 A
- Voltage: 11-30V
- Operating Temperature: -40°C to +65°C (-40F to +149F).
- UV treated polycarbonate lens.
- Screw down lens to base.
- Meets all applicable SAE Class1 and California Title XIII when properly configured.

Operation:

The BCN24 series beacon have high intensity flash (default), low intensity flash (DIMMER) and change pattern features. The operation of these functions is presented below.

HyIntensity: To activate the beacon connect the RED wire to +12/24VDC.

Dimmer: With the HyIntensity function activated (RED wire switch to +12/24VDC), connect the WHITE wire to +12/24VDC to activate the low power mode. To deactivate the DIMMER mode, disconnect the WHITE wire from +12/24VDC. The unit will function with full intensity until the RED wire is disconnected from POWER.

Flash Pattern Change: In Table 1, locate the desired flash pattern and note the position in the list (ex. Double Flash Interlaced has position 14). To change pattern, tap the GREEN wire to +12/24 VDC **for half a second** the same number of times as the pattern's list position. For example, for "Double Flash Interlaced" tap 14 times.

Table 1: List of Available Flash Patterns

Pattern Number	Pattern Description
1	Rotator, 6 LED
2	Rotator, 9 LED
3	Strobe Flash (10 Short)
4	Five Flash All (4 Short + 1 Long)
5	Single Flash All (300 fpm)
6	Single Flash All (60 fpm)
7	Double Flash All
8	Triple Flash All
9	Quad Flash All
10	Five Flash All
11	Single Flash Interlaced (60 fpm)
12	Double Flash Interlaced
13	Triple Flash Interlaced
14	Quad Flash Interlaced
15	Five Flash Interlaced
16	1x Single Flash All (slow) + 1x Double Flash All
17	2x Single Flash All (slow) + 1x Double Flash All
18	1x Double Flash All + 1x Triple Flash All
19	1x Triple Flash All + 2x Single Flash All (slow)
20	Quad Flash All (3 Short + 1 Long)
21	Single Flash Half/Half (60 fpm)
22	Double Flash Half/Half
23	Triple Flash Half/Half
24	Quad Flash Half/Half
25	Five Flash Half/Half

Table 2: Parts List

PART NUMBER	QUANTITY	DESCRIPTION
300-2002	1	BEACON LENS CLEAR
300-2003	1	BEACON LENS AMBER
300-2004	1	BEACON LENS RED
300-2005	1	BEACON LENS BLUE
300-2006	1	BEACON REFLECTOR
300-2007	1	BEACON PLASTIC BASE
300-2008	1	BEACON RUBBER GASKET
823-0121A	1	BEACON METAL BASE BLACK
411-0020	3	#4-40 STAINLESS STEEL MACHINE ROUND PHILIPS HEAD SCREW
403-0037	3	#4 18-8 STAINLESS STEEL FLAT WASHER
403-0038	3	#4 18-8 STAINLESS STEEL LOCK WASHER

WARRANTY

D & R Electronics warrants its new products to be free from defects in material and workmanship, under normal use and service for a period of one year on parts replacement. This warranty applies only to original purchasers acquiring the product directly from D&R Electronics, or its authorized dealers. Warranty will not be recognized without proof of purchase or bill of sale.

This warranty is not transferable. The warranty begins on the date of delivery to the first user/purchaser. This warranty shall not apply to products which must be repaired due to normal wear and tear, negligence, improper installation, abuse, misuse, or which have been altered or modified at a facility other than D & R Electronics, or its authorized depot centers. Units proved to be defective within the warranty period, based on an examination by D&R Electronics, will be replaced or repaired at D & R Electronics' option. This warranty does not cover travel expenses or labor charges for removal or installation. Lamps, flash tubes, batteries or other items considered consumables are not covered under warranty.

This warranty is in lieu of all other express warranties. D&R Electronics makes no warranties, expressed or implied, other than the express warranties contained herein. Any electronic device may create or be affected by electromagnetic interference. After installation of any electronics device operate all equipment simultaneously to insure that operation is free of interference. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. PROPER INSTALLATION COMBINED WITH OPERATION TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.

PRODUCT RETURN POLICY

In order to provide you with faster service, product returns for repair or replacement, must have a **Return Goods Authorization Number (RGA number)**. Please contact our company to obtain a RGA number before you return the product to D & R ELECTRONICS. Write the RGA number clearly on the package. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit. D & R ELECTRONICS assumes no responsibility or liability for expenses incurred for the removal and/or the installation of products requiring service and/or repair. Repairing or replacing product is at the discretion of D & R ELECTRONICS Co. LTD.

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