

CODE 3 Installation and Operation Instructions

CD3801 and CD3802 Directional LED

IMPORTANT! Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



WARNING!

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!

 **Do not install and/or operate this safety product unless you have read and understood the safety information contained in this manual.**

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that they can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
7. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is the vehicle operator's responsibility to be sure they can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
8. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

Specifications:

Input Voltage: 12 - 24VDC

Work Current:	CD3801X	0.8A @ 12VDC
	CD3802XX	0.8A @ 12VDC
	CD3802XXX	0.9A @ 12VDC
	CD3802XXX-S	0.9A @ 12VDC
	CD3802XXXX	0.9A @ 12VDC
	CD3802XXXX-S	0.9A @ 12VDC

Temp. Range: -40°C to 65°C
-40°F to 149°F

Installation and Mounting:

IMPORTANT! This unit is a safety device and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail.

CAUTION! When drilling into any vehicle surface, make sure that the area is free from any electrical wires, fuel lines, vehicle upholstery, etc. that could be damaged.

Note: It is recommended to isolate wires/blunt wires that were cut or not used.

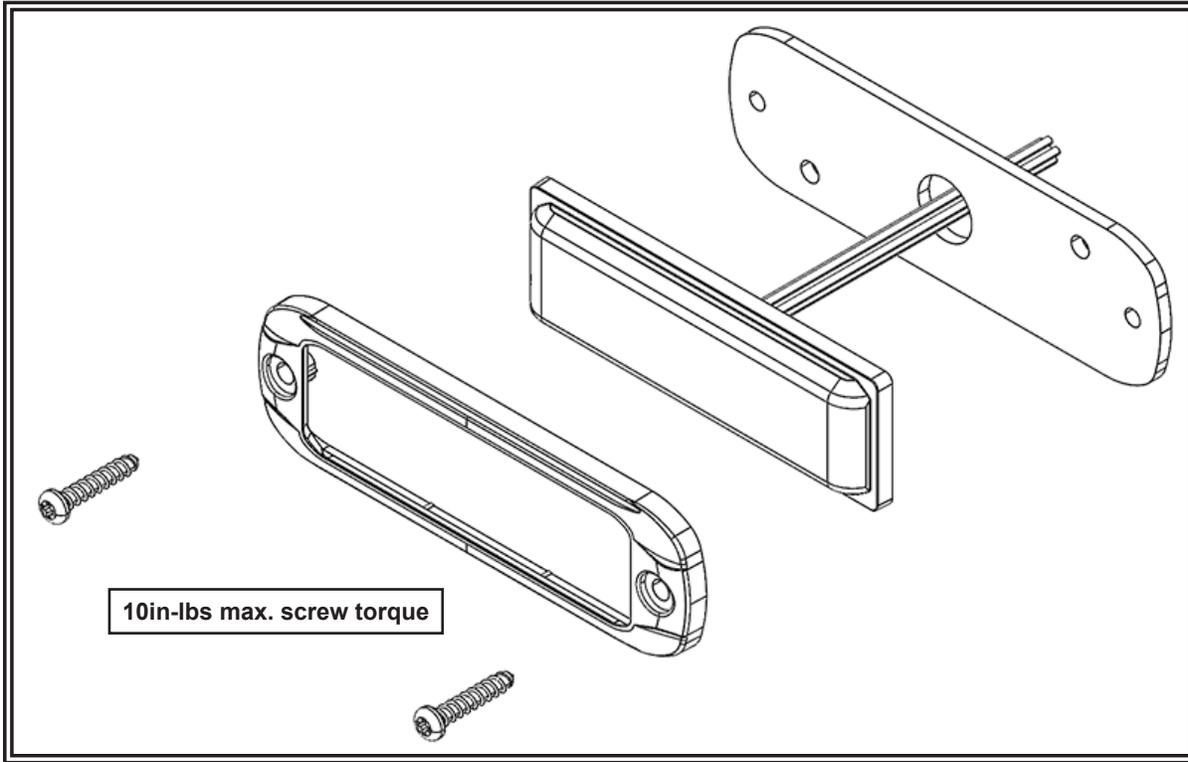


Figure 1

Wiring Instructions:

CD3801X

RED Wire: Positive (need to add 2A fuse)
BLACK Wire: Negative
BLUE Wire: Pattern Select to Negative
YELLOW Wire: Synchronized Function
(Up to 8 units can be Synchronized)

CD3802XX

RED Wire: Positive, Colors 1 & 3 (need to add 2A fuse)
WHITE Wire: Positive, Colors 2 & 4 (need to add 2A fuse)
BLACK Wire: Negative
BLUE Wire: Pattern Select to Negative
YELLOW Wire: Synchronized Function
(Up to 8 units can be Synchronized)

CD3802XXX & CD3802XXX-S

RED Wire: Positive, Group 1 (need to add 2A fuse)
WHITE Wire: Positive, Group 2 (need to add 2A fuse)
RED & WHITE Wire: Positive, Group 3
BLACK Wire: Negative
BLUE Wire: Pattern Select to Negative
YELLOW Wire: Synchronized Function
GREEN Wire: Mode Select
(Up to 8 units can be Synchronized)

CD3802XXXX & CD3802XXXX-S

BLACK Wire: Negative for Ground
RED Wire: Group 1 to positive (need to add 2A fuse)
GREEN Wire: Group 2 to positive (need to add 2A fuse)
ORANGE Wire: Group 3 to positive (need to add 2A fuse)
WHITE Wire: Group 4 to positive (need to add 2A fuse)
BLUE Wire: Pattern select to Negative
Dimming to positive (optional)
YELLOW Wire: Synchronized Function (up to 8 units)
RED & GREEN Wire: Group 5 to positive
RED & ORANGE Wire: Group 6 to positive
RED & WHITE Wire: Group 7 to positive
GREEN & ORANGE Wire: Group 8 to positive
GREEN & WHITE Wire: Group 9 to positive
ORANGE & WHITE Wire: Group 10 to positive
RED, GREEN & ORANGE Wire: Group 11 to positive
RED, GREEN & WHITE Wire: Group 12 to positive
RED, ORANGE & WHITE Wire: Group 13 to positive
GREEN, ORANGE, & WHITE Wire: Group 14 to positive
RED, GREEN, WHITE & ORANGE Wire: Group 15 to positive

Flash Patterns:

Phase Operation:

Phase 1 (Ph1) flashes simultaneously with Ph1
 Phase 2 (Ph2) flashes simultaneously with Ph2
 Ph1 alternates with Ph2
 (Up to 8 units can be Synchronized)

Apply BLUE TO BLACK wire:

-Less than 1 sec. for next pattern
 -Between 1-3 sec for previous pattern
 -Between 3-5 sec. for factory default pattern
 -More than 5 sec. for pattern 12 (CD3802XX, CD3802XXX & CD3802XXX-S) and pattern 13 (CD3801X)

CD3801X Flash Pattern Chart

Pattern	Flash	sim. Phase1	sim. Phase2	Alt.
1	Single Flash 75FPM	S1,C	S1,C	N/A
2	Single Flash 120FPM	S1	S1	N/A
3	Double Flash 75FPM	S1,C	S1,C	N/A
4	Double Flash 120FPM	S1,E1	S1,E1	N/A
5	Quad Flash 75FPM	S1	S1	N/A
6	Quad Flash 150FPM	R/B/A for S1, W for S2	R/B/A for S1, W for S2	N/A
7	Triple 75FPM	S1,C	S1,C	N/A
8	Quint Flash 150FPM	R/A for S1, B/W for S2	R/A for S1, B/W for S2	N/A
9	Steady - Single	N/A		
10	Steady Burn	N/A		
11	Modulation	N/A		
12	2 Double Flash,2 Triple Alt.	N/A		
13	4 Single Flash ,2 Quad Flash Alt.	N/A		

Default Pattern: Steady Burn

REMARK: S1: SAE J595 Class 1 S2: SAE J595 Class 2 C: CA T13 Class B
 E1: ECE R65 Class 1 E2: ECE R65 Class 2

CD3802XXX & CD3802XXX-S Flash Pattern Chart

PATTERN GROUP	Red Wire (Color 1 Default)							FLASH PATTERN	SYNC.	COMPLIES WITH
	White Wire (Color 2 Default)									
	Red + White Wire (Color 3 Default)									
	Mode1 Color1	Mode2 Color2	Mode3 Color3	Mode4 Color 1 & 2	Mode5 Color 1 & 3	Mode6 Color 2 & 3	Mode7 Color 1&2&3			
1	1	1	1	1	1	1	1	Single 75FPM Ph1	yes	S1,C
	2	2	2	2	2	2	2	Single 75FPM Ph2	yes	S1,C
2	3	3	3	3	3	3	3	Single 120FPM Ph1	yes	S1
	4	4	4	4	4	4	4	Single 120FPM Ph2	yes	S1
3	5	5	5	5	5	5	5	Single 375FPM Ph1	yes	
	6	6	6	6	6	6	6	Single 375FPM Ph2	yes	
4	7	7	7	7	7	7	7	Double 75FPM Ph1	yes	S1
	8	8	8	8	8	8	8	Double 75FPM Ph2	yes	S1
5	9	9	9	9	9	9	9	Double 120FPM Ph1	yes	R/A/W for S1, B for S2
	10	10	10	10	10	10	10	Double 120FPM Ph2	yes	R/A/W for S1, B for S3
6	11	11	11	11	11	11	11	Triple 75FPM Ph1	yes	S1,C
	12	12	12	12	12	12	12	Triple 75FPM Ph2	yes	S1,C
7	13	13	13	13	13	13	13	Quad 75FPM Ph1	yes	R/A/W for S1, B for S2
	14	14	14	14	14	14	14	Quad 75FPM Ph2	yes	R/A/W for S1, B for S3
8	15	15	15	15	15	15	15	Quad 150FPM Ph1	yes	S1
	16	16	16	16	16	16	16	Quad 150FPM Ph2	yes	S1
9	17	17	17					CA T13 Single Flash 75FPM	no	S1,C
10	18	18	18					CA T13 Double Flash 75FPM	no	S1,C
11	19	19	19					NFPA-Quad Flash 75FPM	no	S1,C
12	20	20	20					ModuFlash sim.	no	
13	21	21	21					2 Double Flash,2 Quad Flash	no	
14	22	22	22					4 Single Flash ,2 Triple Flash	no	
15	23	23	23					Autorun	no	
16	24-Default	24-Default	24-Default					Steady Burn	no	

REMARK: S1: SAE J595 Class 1 S2: SAE J595 Class 2 C: CA T13 Class B
 E1: ECE R65 Class 1 E2: ECE R65 Class 2

CD3802XXXX & CD3802XXXX-S Flash Pattern Chart

PATTERN GROUP	Group 1 (Red wire)		Group 2 (Green wire)		Group 3 (Orange wire)		Group 4 (White wire)		Group 5 (Red-Green wire)		Group 6 (Red + Orange wire)		Group 7 (Red + White Wire)		Group 8 (Green + Orange wire)		Group 9 (Green + White wire)		Group 10 (Orange + White wire)		Group 11 (Red + Green wire)		Group 12 (Red + Green + White wire)		Group 13 (Red + Orange + White wire)		Group 14 (Green + Orange + White wire)		Group 15 (Red + Green + Orange + White wire)		FLASH PATTERN	SYNC	
	Color 1	Color 2	Color 3	Color 4	Color 1 & 2	Color 1 & 3	Color 1 & 4	Color 2 & 3	Color 2 & 4	Color 3 & 4	Color 1, 2 & 3	Color 1, 2 & 4	Color 1, 3 & 4	Color 2, 3 & 4	Color 1, 2, 3 & 4																		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Single 75FPM Ph1	yes	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Single 75FPM Ph2	yes	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	Single 120FPM Ph1	yes	
2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	Single 120FPM Ph2	yes	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	Single 375FPM Ph 1	yes	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	Single 375FPM Ph 2	yes	
4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	Double 75FPM Ph 1	yes	
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	Double 75FPM Ph 2	yes	
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	Double 120FPM Ph 1	yes	
5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	Double 120 FPM Ph2	yes	
	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	Triple 75FPM Ph1	yes	
	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	Triple 75FPM Ph2	yes	
7	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	Quad 75FPM Ph1	yes	
	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	Quad 75FPM Ph2	yes	
	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	Quad 150FPM Ph1	yes	
8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	Quad 150FPM Ph2	yes	
	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	NEPA-Quad Flash 90FPM	no	
	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	ModuFlash sim.	no	
10	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	2 Double Flash, 2 Quad Flash	no	
	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	4 Single Flash, 2 Triple Flash	no	
	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	Autorun	no	
13	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no
	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no
	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no
14	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no
	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no
	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	steady burn	no

Default Pattern: Steady Burn

Troubleshooting:

The CD3801 and CD3802 series are factory tested and approved. If any of the functions of the device fail to operate, please check the following:

PROBLEM	QUESTION	CAUSE	SOLUTION	
Product does not function when turned on	Are LEDs functioning properly?	Yes	a. Plug is loose or disconnected. b. Poor ground connection	a. Reconnect plug. b. Reconnect ground.
		No	a. Power has been disconnected.	a. Check connections at the battery and plug.

Warranty:

Manufacturer Limited Warranty Policy:

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for Sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

Exclusion of Other Warranties:

MANUFACTURER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE IMPLIED WARRANTIES FOR MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE ARE HEREBY EXCLUDED AND SHALL NOT APPLY TO THE PRODUCT AND ARE HEREBY DISCLAIMED, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ORAL STATEMENTS OR REPRESENTATIONS ABOUT THE PRODUCT DO NOT CONSTITUTE WARRANTIES.

Remedies and Limitation of Liability:

MANUFACTURER'S SOLE LIABILITY AND BUYER'S EXCLUSIVE REMEDY IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR UNDER ANY OTHER THEORY AGAINST MANUFACTURER REGARDING THE PRODUCT AND ITS USE SHALL BE, AT MANUFACTURER'S DISCRETION, THE REPLACEMENT OR REPAIR OF THE PRODUCT, OR THE REFUND OF THE PURCHASE PRICE PAID BY BUYER FOR NON-CONFORMING PRODUCT. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ARISING OUT OF THIS LIMITED WARRANTY OR ANY OTHER CLAIM RELATED TO THE MANUFACTURER'S PRODUCTS EXCEED THE AMOUNT PAID FOR THE PRODUCT BY BUYER AT THE TIME OF THE ORIGINAL PURCHASE. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR LOST PROFITS, THE COST OF SUBSTITUTE EQUIPMENT OR LABOR, PROPERTY DAMAGE, OR OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES BASED UPON ANY CLAIM FOR BREACH OF CONTRACT, IMPROPER INSTALLATION, NEGLIGENCE, OR OTHER CLAIM, EVEN IF MANUFACTURER OR A MANUFACTURER'S REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. MANUFACTURER SHALL HAVE NO FURTHER OBLIGATION OR LIABILITY WITH RESPECT TO THE PRODUCT OR ITS SALE, OPERATION AND USE, AND MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES THE ASSUMPTION OF ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH PRODUCT.

This Limited Warranty defines specific legal rights. You may have other legal rights which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages.

Product Returns:

If a product must be returned for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to Code 3®, Inc. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

*Code 3®, Inc. reserves the right to repair or replace at its discretion. Code 3®, Inc. assumes no responsibility or liability for expenses incurred for the removal and /or reinstallation of products requiring service and/or repair.; nor for the packaging, handling, and shipping; nor for the handling of products returned to sender after the service has been rendered.



10986 North Warson Road, St. Louis, MO 63114 USA
Technical Service USA (314) 996-2800
c3_tech_support@code3esg.com
CODE3ESG.com