



# CW-SYS DUAL-PURPOSE WIRELESS DRIVEWAY SYSTEM

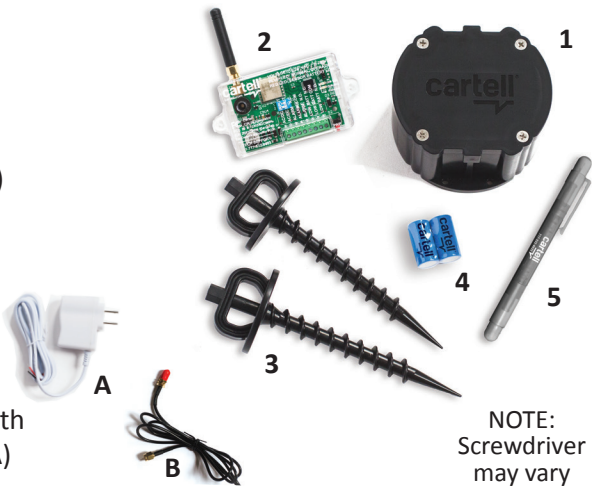
## VERSION 6 - SEPTEMBER 2024

### 1. WHAT'S IN THE BOX

1. SENSOR "PUCK"
2. INTEGRATOR
3. AUGER SCREWS (2)
4. CR123A BATTERIES (2)
5. TERMINAL BLOCK
- SCREWDRIVER

**OPTIONAL**

- (A) 12VDC power supply (Part #CW-PSU)
- (B) Coaxial cable (1M) with grommet (Part #CW-COA)



NOTE: Screwdriver may vary

### 2. SERIAL NUMBER

There is a barcode serial number on the back of Integrator, bottom of puck, and on product box. When calling to talk about your product, please have one of these numbers handy.



PRODUCT CODE      YEAR MADE      SERIAL NUMBER

### 3. INSTALLING BATTERIES/LOW BATTERY

1. Use CR123A batteries and match polarity with battery terminal in puck.
2. If batteries are put in backwards, they will not make contact.
3. Push batteries in place fully to make contact.
4. Sensor will power up automatically when batteries are installed.

**NOTE: battery clips are not needed. Puck lid holds batteries in place**



#### LOW BATTERY

When batteries need replacing in sensor, Integrator will "chirp" and blink its red LED. When hooked to external system's zone inputs (see #10 below), program what you desire in order to indicate low battery.

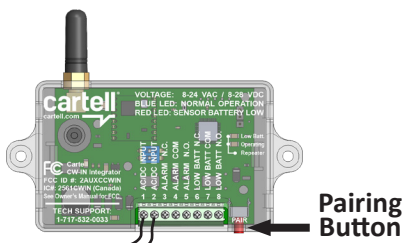
**WARNING: CLEAN SENSOR BRIM, LID, & LID GASKET BEFORE SCREWING LID TO HOUSING.**

REPLACE BOTH BATTERIES AT SAME TIME. DO NOT USE RECHARGEABLE BATTERIES.

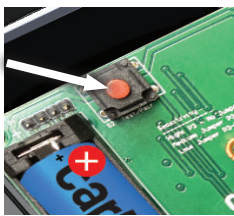
### 4. PAIRING

**YOUR SYSTEM HAS BEEN PAIRED AT FACTORY. THESE DIRECTIONS APPLY WHEN PAIRING ADDITIONAL UNITS**

You can pair up to 30 pucks with an unlimited number of Integrators



3. Power up sensor; press and release red (test mode) button for 1 second to send a pairing message to Integrator (see #5 below).



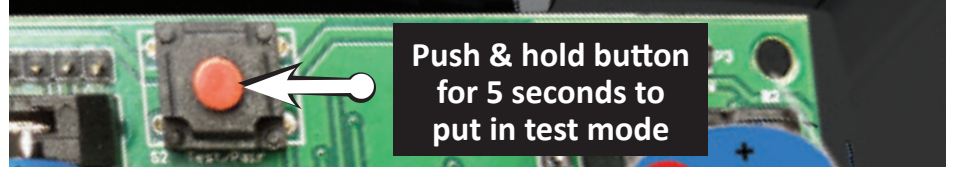
1. Bring sensor close to Integrator and power up both units (#4 above & #10 below).
2. Push pairing button on Integrator (will stay in pairing mode 30 minutes).

4. Integrator will beep 3 times when paired and exit pairing mode automatically.
5. Push red button for one second on sensor to exit pairing mode.

### 5. TEST MODE FOR SENSOR PUCK

Test mode allows the sensor puck to be tripped without a vehicle. This is useful when testing radio range (see #6 below) and solo installations.

1. Press and HOLD button on sensor puck for 5 seconds
2. The red LED will be solid and dim while waiting the 5 seconds
3. Once the 5 seconds has expired, the LED will be bright red
4. Test mode is activated when the button is released
5. The sensor will trip itself every 15 seconds
6. Test mode will be exited when button is pressed again
7. Test mode will automatically be exited after 30 minutes



### 6. TESTING RANGE

Your system has a radio range of at least 350 feet or over 1000' line-of-sight. To determine range in your application, test before final installation.

Radio range depends on several variables:

- How the puck is installed (in ground or above ground on post)
- Obstacles blocking radio signal, such as soil, trees, foliage, buildings, concrete, etc.

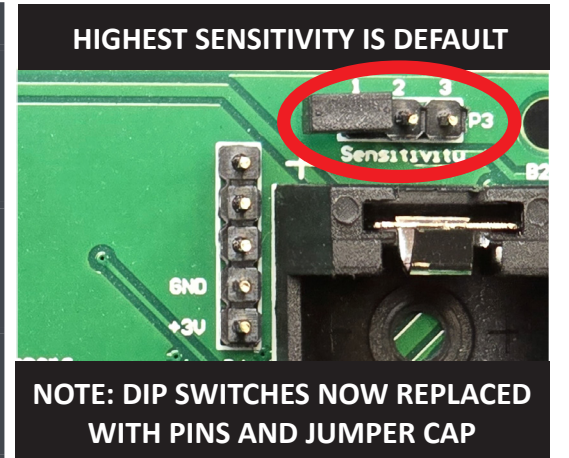
To test range:

1. Put Integrator near its final installation place in the home or gate.
2. You will need to confirm the Integrator is sounding (see #9 below).
3. Put sensor in test range mode (see #5 above).
4. Listen for Integrator to trigger. If it doesn't, move sensor closer to Integrator.
5. Be sure to test again with puck installed in ground (see #8 below).
6. You may need to add a repeater inside the home (see #9 below).

### 7. SETTING SENSITIVITY

**ONLY ADJUST (LOWER) SENSITIVITY IF PUTTING IN MIDDLE OF DRIVEWAY (see #8 below). IN ALL OTHER CASES USE DEFAULT.**

SENSITIVITY ADJUSTMENT	
<b>HIGH (Default)</b> Detects vehicle at 5 MPH 12-14' Jumper on #1	
<b>MEDIUM</b> Detects vehicle at 5 MPH 6-8' Jumper on #1&2	
<b>LOW</b> Detects vehicle at 5 MPH 2-4' Jumper on #2&3	



### 8. INSTALLING SENSOR PUCK

The sensor puck can be installed in the driveway, in the ground, or on an immovable object (post, tree, etc.).

**NOTE: SENSOR PUCK DETECTS A VEHICLE GOING 5 MPH AFTER IT PASSES. THEREFORE, IF POSSIBLE, PLACE SENSOR AT LEAST 50 FT. AWAY FROM GATE OPERATOR FOR OPTIMUM PERFORMANCE.**

**ON AN OBJECT** (see illustration bottom left)

1. Test range (#6 above), then seat lid securely on puck with screws provided, leaving no gap between lid and puck. Do not over-tighten or strip screws.
2. Find a tree, post, or other object directly beside the driveway.
3. Make sure the object is IMMOVABLE or false alarms will occur.
4. Use the holes on the bottom tabs to screw puck to the object.

**IN THE GROUND** (see illustration bottom left)

1. When range has been tested (see #6 above), seat lid securely on puck with screws provided. Be careful not to strip screws with screw gun. There should be no gap between lid and puck.
2. Find a spot directly beside driveway.
3. Dig a hole big enough for puck and auger screws, allowing puck's lid to be level with surface of dirt.
4. Secure puck in ground with auger screws, overlapping bottom tabs of puck.
5. Pack and tamp dirt around puck, ensuring lid is clean of dirt and all debris.

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5. Pack and tamp dirt around puck, ensuring lid is clean of dirt and all debris.



**IN FREE EXIT INSTALLATIONS, IF ANIMALS OR PEOPLE STEP ON SENSOR PUCK INSTALLED IN THE GROUND, IT MAY TRIGGER THE GATE TO OPEN. CONSIDER INSTALLING ON POST OR IN DRIVEWAY INSTEAD.**

**IN THE DRIVEWAY** (see illustration bottom left)

1. When range has been tested (see #6 above), seat lid securely on puck with screws provided. Be careful not to strip screws with screw gun. There should be no gap between lid and puck.

**Note: If close to cross traffic, consider turning sensitivity down (see #7 above)**

2. Use a 4.5" diameter masonry hole saw to bore a hole for puck. Bore at least 2.75" deep so puck lid will be 0.25"-0.50" below driveway surface (so it can't be pulled up by snow plows, graters, etc.).
3. Pour loop sealant in hole, careful not to overfill, and put puck in hole.
4. Hold puck down with weight until sealant becomes firm.
5. DO NOT pour sealant over puck lid or bosses to gain access to batteries.

#### ON AN OBJECT



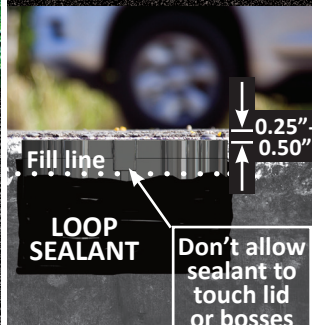
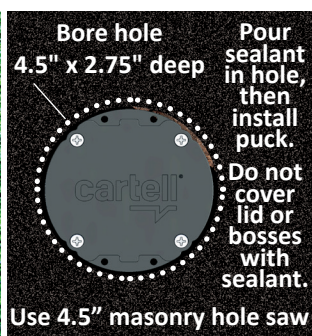
- Use stable object
- Use 4 deck screws for fastening

#### IN THE GROUND



- Put logo parallel to drive
- Put just below surface
- Auger screws secure puck
- Do not cover puck lid
- Pack dirt/grass around puck
- Keep puck lid clean

#### IN THE DRIVEWAY



**NOTE: SENSOR PUCK AND LID ARE KEYED. WIPE SENSOR LID, LID GASKET, AND SENSOR BRIM WITH CLEAN CLOTH AND KEY CORRECTLY BEFORE ATTACHING.**

## 9. INTEGRATOR DIP SWITCHES

Dip switches control sounder and repeater mode on Integrator.

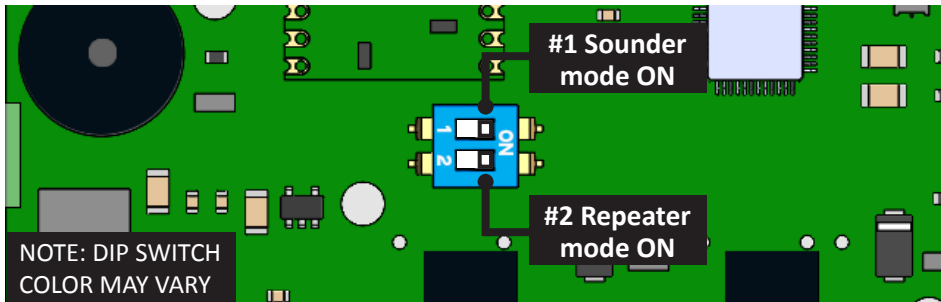
### SOUNDER

Turn dip switch 1 ON to turn sounder on.

Sounder will beep 3 times when vehicle is detected. It will also “chirp” when sensor puck batteries are low and need replacing.

### REPEATER MODE

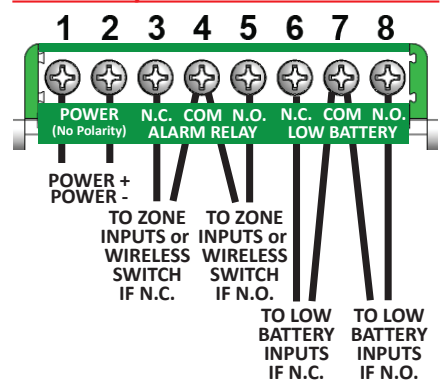
Turn dip switch 2 ON to turn Integrator into a repeater. In repeater mode, the unit will continually receive and repeat any signal from the sensor to the Integrator installed in the home (see #11 below). Red and blue LED will alternately and continuously blink in repeater mode.



## 10. INSTALLING INTEGRATOR

Your system integrates seamlessly with any security/H.A. system or electric gate operator. To integrate, use the following wiring schematics as guides:

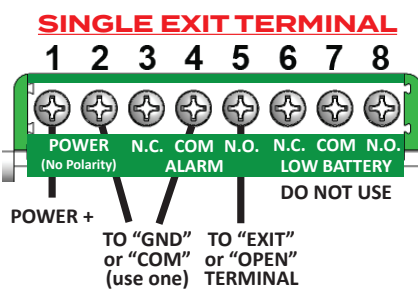
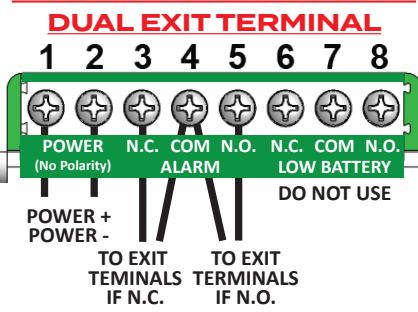
### SECURITY/HOME AUTO SYSTEMS



Integrator uses 8-24 VAC or 8-30 VDC. Use security/H.A. system or gate operator to power or use any 12VDC power supply. Cartell sells optional power supply (Part #CW-PS).

**YOU MUST ADD A SAFETY TO GATE WHEN USING CW-SYS FOR FREE EXIT.**

### AUTOMATIC GATE OPERATORS



## 11. REPEATER MODE

To increase radio range, it may be necessary to make the Integrator a repeater.

If the signal from sensor puck is not reaching the Integrator:

1. Move the sensor closer to the Integrator, and/or
2. Install a repeater in the home between the sensor puck and Integrator connected to the security/home automation system. Do the following:
  1. Purchase an optional Integrator and power supply (Product CW-REP).
  2. Remove enclosure cover by carefully pushing side tabs in.
  3. Connect power supply to terminals 1 & 2 (no polarity).
  4. Turn dip switch 2 ON (see #9 above). This puts the unit in repeater mode. The red and blue LEDs will alternately blink to indicate repeater mode. It will continually receive every signal from the sensor and transmit (repeat) it to the Integrator installed beside the main system.
  5. Install repeater in a window closest to the sensor puck.
  6. Turn dip switch 1 OFF to turn sounder off.

**NOTE: To order repeater kit, use product code CW-REP.**

Technical Specifications		
	Sensor “Puck”	Integrator
<b>Power Required</b>	2 - CR123A batteries (6 V)	8-24VAC; 8-28VDC
<b>Stand-By Current</b>	22 Microamps (µA)	25 Milliamps (mA)
<b>Alarm Current</b>	130 Milliamps (mA)	40-80 Milliamps (mA)
<b>Relay Time</b>	–	2 seconds
<b>Relay Contacts</b>	–	SPDT, N.O. or N.C. (Form C)
<b>Relay Contact Rating</b>	–	2 amp/24 VDC (1 mA at 5 VDC min. load)
<b>Radio Range</b>	Tested above ground, no obstructions, up to 2,500 ft.* Tested flush with ground, no obstructions, up to 1,000 ft.* Use optional Repeater (CW-REP) to increase radio range	
<b>Battery Life</b>	1-3 years*	–
<b>Enclosure Rating</b>	IP68	–
<b>Strength Rating</b>	9.39 ton-force (8514 kgf)	–
<b>Temperature Range</b>	-25° F. – +140° F. (-32° C. – 60° C.)	
<b>Dimensions</b>	4.5" dia. x 2.5" H (11.43 cm x 6.35 cm)	3.25" L x 2" H x .875" D (8.25 cm x 5.08 cm x 2.22 cm)
<b>Weight</b>	2 lbs. (.90 kg)	1 lb. (.45 kg)

\* Estimate only. Radio range & battery life depend on many variables. No guarantees.



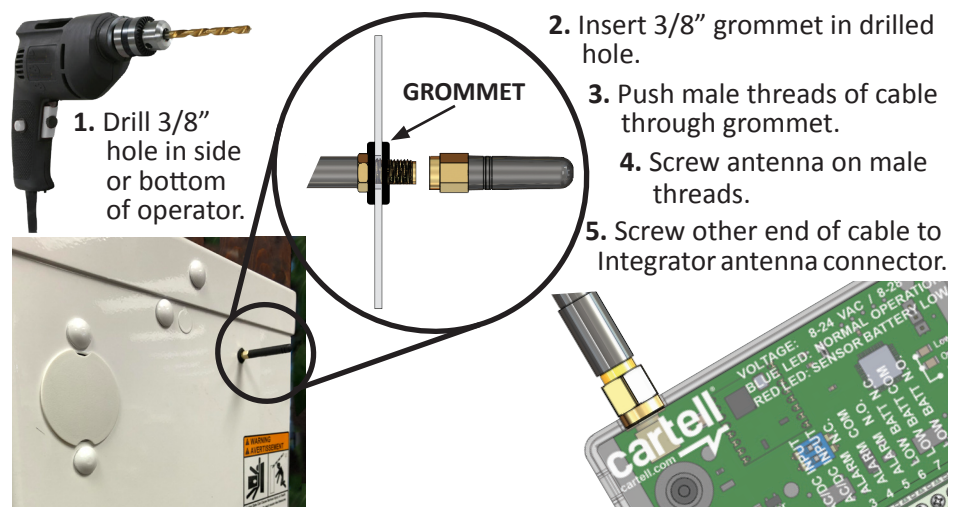
**WARNING:** This product can expose you to chemicals including Acrylonitrile, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



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## 12. OPTIONAL EXTERNAL GATE ANTENNA

In gate operator installations, antenna attached directly to Integrator will work in most cases. The only time it may not work is in a **sealed** metal gate operator that blocks the RF signal. If that is the case, use an optional coaxial cable and 3/8" grommet, and install antenna externally, per the following:



## 13. RETURNING MERCHANDISE

**CONSUMER:** Contact your installer.

**INSTALLER:** CALL BEFORE DIGGING UP OR UNINSTALLING

Call (717) 532-0033, option 1 to troubleshoot and receive a Return Merchandise Authorization (R.M.A.) number. Write R.M.A. number on shipping box and any correspondence included with defective product.

**DISTRIBUTOR:** Send installers directly to Cartell, citing 717-532-0033 (option 1) as phone number.

**WARNING: DO NOT SHIP BATTERIES WHEN RETURNING PRODUCT TO CARTELL.**

## 14. THREE YEAR WARRANTY

All Cartell products are warranted against defects in material and workmanship for three years. This warranty does not cover defects caused by, but not limited to: acts of God, improper installation, abuse, fire damage, electrical surges, integrated system failures, improper lid/gasket/battery installation, over-tightening screws, and stripping screw holes.



## 15. FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** 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 to correct the interference by one or more of the following measures:

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

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

**IC Caution (Canada):** This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference; (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class [B] digital apparatus complies with Canadian ICE-003.

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.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada. L'appareil a été évalué pour répondre aux exigences générales d'exposition RF. L'appareil peut être utilisé dans des conditions d'exposition fixes / mobiles. La distance de séparation minimale est de 20 cm.

The device has been evaluated portable device RF exposure requirements. The device is kept at least 5 mm away from the user's body.



## CONTACT INFORMATION

TECH SUPPORT	717-532-0033, option 1
SALES	717-532-0033, option 2
SHIPPING	717-532-0033, option 3
ACCOUNTING	717-532-0033, option 4
EMAIL	info@cartell.com
ORDERING (Distributors only)	Email POs to orders@cartell.com
ADDRESS	510 West King Street Shippensburg, PA 17257
WEBSITE	www.cartell.com