

CW-ULT WIRELESS DRIVEWAY SYSTEM

VERSION 1 - SEPTEMBER 2025

1. WHAT'S IN THE BOX

1. Sensor "Puck"
2. Sounder
3. Integrator
4. Auger Screws (2)
5. CR123A Batteries(2)
6. Terminal Block
Screwdriver



2. SERIAL NUMBER

There is a bar code serial number on the back of Integrator and sounder, 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

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 as batteries are installed.



LOW BATTERY

When batteries need to be replaced in sensor, the LED on Integrator and sounder will remain a constant RED.

When Integrator is hooked to external system's zone inputs (see #10 below), program what you desire in order to indicate low battery.

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

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

WARNING: CW-SYS CANNOT TO BE USED AS A SAFETY

DISCLAIMER OF LIABILITY: The purchaser acknowledges that automatic gates, while designed for safety and efficiency, may pose inherent risks when used in environments involving larger animals (including, but not limited to, horses, deer, elk, cattle, and other livestock). As such, Cartell expressly disclaims all liability for injuries, damages, or losses resulting from the use of automatic gates when used for the purpose of fencing, enclosing, herding, penning, restricting, capturing, and/or the like, of large animals. The purchaser assumes all risks associated with the installation, use, and maintenance of the automatic gate in environments that include large animals and acknowledges that these risks may include, but are not limited to, property damage, personal injury, harm to animals, and/or the escape or release of animals, due to the unpredictable nature of large animals and their potential interaction with automatic machinery.

To the fullest extent permitted by law, Cartell shall not be liable for any direct, indirect, incidental, or consequential damages arising out of or in connection with the use of automatic gates in areas containing large animals, regardless of how such damages arise. Purchasers are strongly advised to consult with a qualified installer and ensure proper training and safety protocols are followed when using automatic gates around large animals.

Cartell makes no warranties, express or implied, regarding the suitability of automatic gates for use in environments involving large animals.

4. PAIRING INTEGRATOR

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

You can pair an unlimited number of Integrators and sounders to multiple sensors.

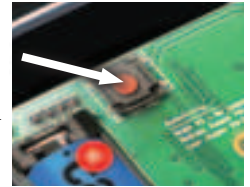


1. Bring sensor close to Integrator and power up both units
2. Push pairing button on Integrator (stays in pairing mode 30 minutes).

Pairing Button

Then the Sensor...

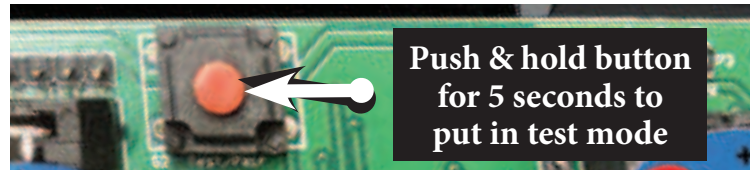
1. Power up sensor
2. Wait for it to boot up
3. Press and release red (test mode) button for 1 second to send a pairing message to Integrator.
4. Integrator will beep 2 times (1 short & 1 long) when paired and exit pairing mode automatically.



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



CONTACT INFORMATION

Tech Support	717-532-0033, option 1
Sales	717-532-0033, option 2
Shipping	717-532-0033, option 3
Accounting/POs	717-532-0033, option 4
Ordering (Distributors)	Send POs to: orders@cartell.com





6. TESTING RADIO RANGE

Your system has a radio range of 350 - 1000 ft. line-of- sight. To gauge range in your application, test before installing:

1. Put Integrator near its installation place in home or gate.
2. 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. Test again with puck installed in ground (see #8 below).
6. You may need to add a repeater inside home (see #9 below).

7. SETTING SENSOR SENSITIVITY

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

SENSITIVITY ADJUSTMENT		DEFAULT IS HIGHEST SENSITIVITY  Jumper color may vary.
HIGH (Default) Detects vehicle at 5 MPH 12-14' Jumper on #1		
MEDIUM Detects vehicle at 5 MPH 6-8' Jumper on #1&2		
LOW 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.).

ON AN OBJECT (see illustration top right)

1. Test range (#6 above), attach lid securely to puck, leaving no gap between lid and puck. Do not over-tighten or strip screws.
2. Find a tree, or post, etc. directly beside the driveway.
3. Choose an immovable tree or post to avoid false alarms.
4. Use the holes in puck's the tabs to screw puck to the object.

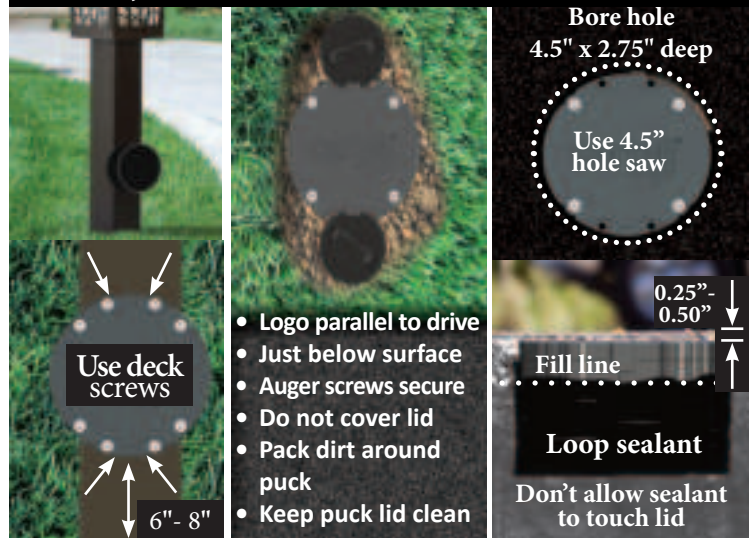
IN THE GROUND (see illustration top right)

1. When range has been tested (see #6 above), attach to the puck. Be careful not to strip screws. 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, leveling puck's lid with surface of dirt.
4. Screw auger screws to puck's bottom tabs. If you fail to secure puck, lawn mowers, etc. will pull/suck it up.
5. Pack dirt around puck. Keep lid & gasket clean.

IN THE DRIVEWAY (see illustration top right)

1. When range has been tested (see #6 above), attach lid to puck. Do not over-tighten or strip screws. There should be no gap between lid and puck.
If close to cross traffic, turn sensitivity down (see #7 above)
2. Use a 4.5" diameter masonry hole saw to bore a hole in driveway. Bore at least 2.75" deep so puck lid will be 0.25" - 0.50" below surface (to keep safe from plows, graters, etc.).
3. Pour loop sealant in hole and drop puck in hole.
4. Hold puck down with weight until sealant becomes firm.
5. To access batteries, DO NOT pour sealant over lid or bosses.

ON OBJECT IN DIRT BESIDE IN DRIVEWAY



- Logo parallel to drive
- Just below surface
- Auger screws secure
- Do not cover lid
- Pack dirt around puck
- Keep puck lid clean

Use deck screws

6" - 8"

Bore hole
4.5" x 2.75" deep

Use 4.5" hole saw

0.25" - 0.50"

Fill line

Loop sealant

Don't allow sealant to touch lid

SENSOR DETECTS A PASSING VEHICLE GOING 5 MPH. PLACE SENSOR AT LEAST 50 FT. AWAY FROM GATE.

9. INTEGRATOR DIP SWITCHES

Dip switches control sounder and repeater mode on Integrator.

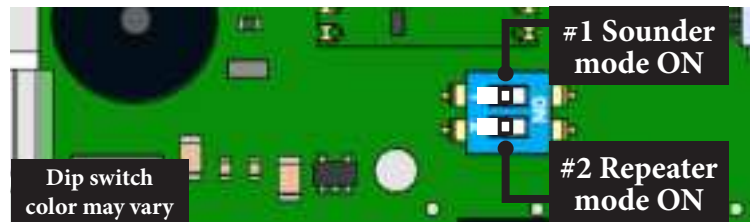
SOUNDER

Turn dip switch 1 ON to turn sounder on.

Sounder will beep 5 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.



#1 Sounder mode ON

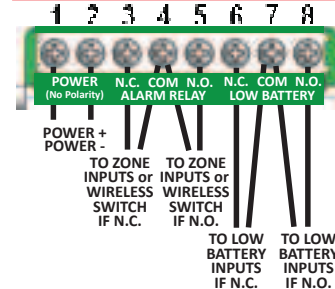
#2 Repeater mode ON

Dip switch color may vary

10. INSTALLING INTEGRATOR

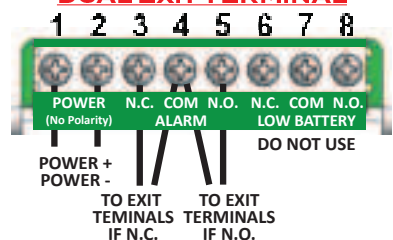
Your system integrates seamlessly with any security/H.A. system or electric gate operator. To integrate, use the following wiring schematics as guides:

SECURITY/HOME AUTO SYSTEMS

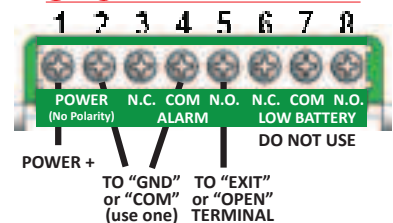


GATE OPERATORS

DUAL EXIT TERMINAL



SINGLE EXIT TERMINAL



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).

11. INTEGRATOR 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:

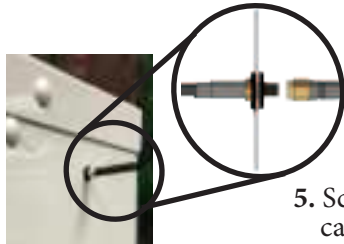
1. Purchase an optional Integrator and power supply (Product CW-REP).
2. Remove enclosure cover by carefully pushing side tabs in.
3. Connect power supply to terminals 1 & 2 (no polarity).
4. Turn dip switch 2 ON (see #9 above). This puts the unit in repeater mode. The red and blue LEDs will alternately 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: Relay will not work in repeater mode.

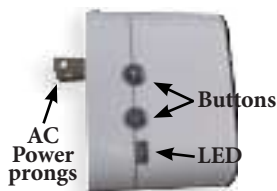
12. OPTIONAL EXTERNAL ANTENNA

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:

1. Drill 3/8" hole in side or bottom of operator.
2. Insert 3/8" grommet in drilled hole.
3. Push male threads of cable thru grommet.
4. Screw antenna onto threads.
5. Screw other end of cable to Integrator antenna connector.



13. SOUNDER INTRODUCTION



The sounder plugs into a standard Type A North American outlet. If part of a system, one sounder comes factory-paired to one sensor. An infinite number of sounders can be paired with up to 30 sensors. A different sound for each sensor can be set by the user.

14. PAIRING SOUNDERS

YOUR SYSTEM HAS BEEN PAIRED AT FACTORY. THESE INSTRUCTIONS APPLY WHEN PAIRING ADDITIONAL SOUNDERS.

You can pair an unlimited number of sounders to sensors

1. Power up sensor by installing both batteries.
2. Use an extension cord to plug sounder into an outlet. The closer you bring sensor to sounder, the better, but it's not necessary.
3. If a sounder has not been paired to a sensor, the sounder automatically enters pairing mode and says, "There are no sensors paired, pairing enabled."
4. Press and release the red test mode button on sensor board (see #4 above).
5. Sounder will pair to sensor and say, "Enrollment, Driveway Sensor 1 (or some other #). Sensor is now paired," and enters normal operation mode.

To pair more than one sensor to a sounder (see #11 below):

1. While sounder is on, press ⊖ ⊕ buttons together to enter menu mode.
2. Use the ⊖ button to scroll to pairing menu. Press ⊕ to select pairing.
3. Sounder will say, "Pairing menu selected. Pair sensor now." Assign and choose the sensor number you want to pair with. Each sensor has a number.
4. Power up sensor to be paired, or if powered, push red test mode button. It will pair automatically with sounder and sounder will exit pairing mode.
5. Scroll to sound menu and choose sound for that sensor.

To Erase all paired sensors from sounder

1. In menu mode, scroll to diagnostics menu. Scroll to "Erase all sensors."
2. Follow the prompts and confirm your request by pushing the ⊕ button.

SOUNDER CONTINUED NEXT PAGE

TROUBLE SHOOTING/TECH SUPPORT

BEFORE CALLING TECH SUPPORT:

1. Be at the installation site
2. Have serial number available
3. Be able to explain symptoms
4. Have Cartell app displayed on your phone (if applicable)
5. Call 717-532-0033, option 1

We will troubleshoot over the phone.

Business hours: Monday - Friday, 8:30 a.m. - 5:00 p.m. (ET)

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 license-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.

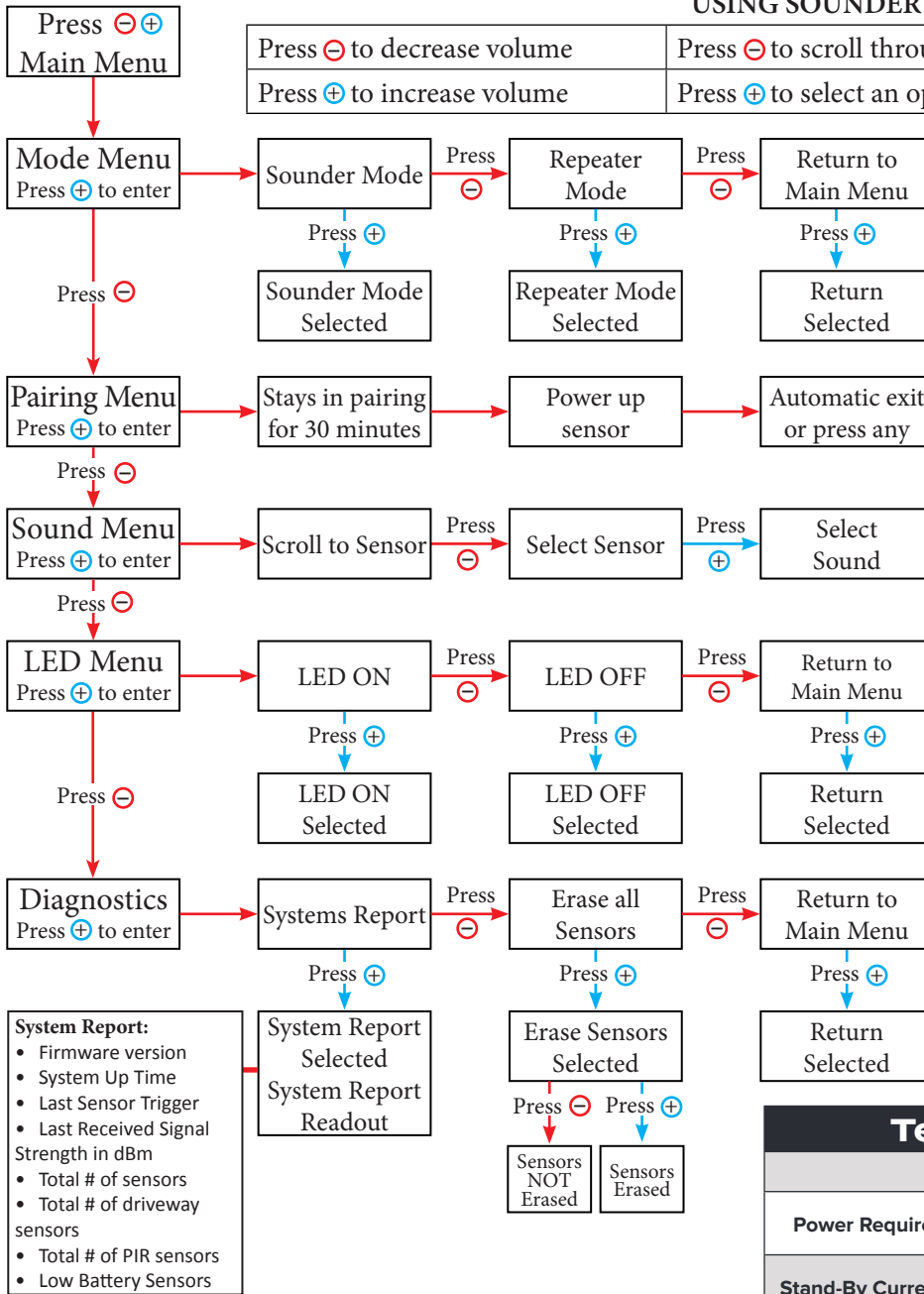
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada. L'appareil a été évalué pour répondre aux exigences générales d'exposition RF. L'appareil peut être utilisé dans des conditions d'exposition fixes / mobiles. La distance de séparation minimale est de 20 cm.

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

15. SOUNDER INTERFACE

USING SOUNDER BUTTONS

Press ⊖ to decrease volume	Press ⊖ to scroll through menu	Press ⊖ ⊕ to enter menu mode
Press ⊕ to increase volume	Press ⊕ to select an option	Press ⊖ ⊕ to exit menu mode



TO ACCESS MENU BUTTONS EASILY, PLUG SOUNDER INTO AN EXTENSION CORD WHILE PROGRAMMING

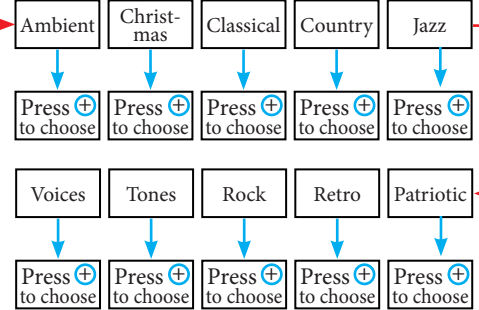
CHOOSING SOUNDS

In each genre of sounds, there are choices you can make.

Press ⊖ to scroll through sounds.

Press ⊕ to select sound.

Then press ⊖ ⊕ to exit menu.



CHOOSE DESIRED SOUND & PRESS ⊖ ⊕ TO EXIT MENU

NOTE: In menu mode, all sensor activity is ignored.

- System Report:**
- Firmware version
 - System Up Time
 - Last Sensor Trigger
 - Last Received Signal Strength in dBm
 - Total # of sensors
 - Total # of driveway sensors
 - Total # of PIR sensors
 - Low Battery Sensors

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. For more information, visit our website.



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



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.



VIDEO



Technical Specifications			
	Sensor	Integrator	Sounder
Power Required	2 - CR123A batteries	8-24VAC; 8-28VDC	Input Voltage Range: 85-230 VAC
Stand-By Current	22 μA	25 mA	Input Voltage Freq.: 47-63 Hz
Alarm Current	130 mA	40-80 mA	—
Relay Time	—	2 seconds	—
Relay Contacts	—	SPDT, N.O. or N.C.	—
Relay Contact Rating	—	2 amp/24 VDC 1 mA at 5 VDC	—
Radio Range	Above ground line of sight up to 2,500 ft. In the ground line of sight up to 1,000 ft.		
Battery Life	1-3 years	—	—
Enclosure Rating	IP68	—	—
Strength Rating	9.39 tons-force (8514 kgf)	—	—
Temperature Range	-25° F. - +140° F. (-32° C. - 60° C.)		-13° F. - +140° F. (-25° C. - 60° C.)
Dimensions	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)	2.5" H x 2.5" W x 2.75" D (6.35 cm x 6.35 cm x 6.99 cm)
Weight	2 lbs. (.90 kg)	1 lb. (.45 kg)	.30 lb. (.14 kg)