

GS² System

SHOPPING CART CONTAINMENT SYSTEM



USER MANUAL



TOMORROW'S TECHNOLOGY FOR TODAY'S RETAILER

Gatekeeper Systems, Inc.
8 Studebaker
Irvine, CA
92618

In the U.S.: 888.808.9433
Outside of the U.S.: 949.453.1940
Fax: 949.453.8148
www.gatekeepersystems.com

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The specifications and information regarding the products in this manual are subject to change without notice. All statements, information, and recommendations in this manual are believed to be accurate but are presented without warranty of any kind, express or implied. Users must take full responsibility for their application of any products.

Gatekeeper Systems GS² Shopping Cart Containment System User Manual

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INTRODUCTION

To Our Valued Customers:

Thank you for allowing us to install the Gatekeeper Systems GS² Shopping Cart Containment System at your store. The GS² System is the most technologically advanced and user-friendly cart containment system on the market. We are confident that it will dramatically improve your store's existing efforts to keep shopping carts on the premises.

In addition to providing the best cart containment system available, it is our aim to provide you with unparalleled customer service. Gatekeeper Systems offers a 24-hour toll-free customer service line as well as a nationwide network of field representatives and service technicians to handle any service issues. Should you have any questions or need to schedule a field service call, please call our toll-free 24-hour customer service number.

**GATEKEEPER SYSTEMS 24-HOUR
CUSTOMER SERVICE HOTLINE
Toll Free (888) 808-9433 Press Option "1"**

**Between the hours of 5PM PST and 7:30AM PST, select Option #5
to activate our emergency dispatch service.**

The GS² User Manual is designed to provide store personnel with a general information source regarding the shopping cart containment system. Making this manual available to all new employees who have not yet worked with the system will help ensure proper operation and added longevity. Properly trained employees are an integral part of the system's operation.

The manual also contains technical information and is a good place to refer maintenance workers and contractors with questions about the system. If questions concerning the system arise and answers are not available in this manual, please call the toll-free number to speak with a Gatekeeper Customer Service Representative. Never hesitate to contact Gatekeeper with your questions about the system.

We encourage your store to designate an employee who can act as a "contact person". Gatekeeper will ask for this person by name when scheduling service or performing routine preventative maintenance calls. Gatekeeper will also train this individual in additional system functions and troubleshooting procedures.

SYSTEM OVERVIEW

According to retail industry research, a shopping cart is stolen, damaged, or destroyed every ninety seconds in the United States, costing retailers approximately \$180 million annually. The GS² System combines a digital locking signal, perimeter antenna, and Gatekeeper's electronically activated self-locking shopping cart wheel to provide the most effective and easy-to-operate cart containment solution available. The system prevents carts from leaving store premises, saving retailers thousands in costs associated with replacing, retrieving, and repairing carts.

GS² System

How It Works

CENTRAL TRANSMITTER

Steel enclosure mounted inside store transmits locking signal to the Perimeter Antenna



STORE

PERIMETER ANTENNA

Cable embedded in parking surface establishes precision boundary

CARTKEY

Carts are quickly and easily unlocked with one press of a button on the remote control CartKey. Carts are back in service in seconds.



GS² WHEEL

Carts equipped with self-braking wheel automatically lock at perimeter boundary. Carts are quickly and easily unlocked with a remote control CartKey.

SYSTEM COMPONENTS

Customer Awareness Component

Every GS² shopping cart containment system includes a Customer Awareness Component. The items included in this package are a critical part of the system's success.

Customer Awareness Inserts

Prior to installation, Customer Awareness Inserts were sent to your store and distributed. These fliers were given to each customer to inform them of the introduction of the new shopping cart containment system. It is important to make sure customers are well informed about the presence of the system.

Cart Signs

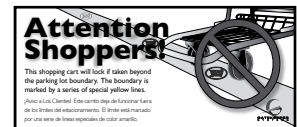
Cart Signs are installed on each shopping cart and serve as a reminder for new and existing customers that carts will lock if they are removed from the premises.

Parking Lot Signs

Large parking lot signs serve as a general reminder that the system is active. Parking lot signs are placed near major lot exits as well as just outside the store.

Perimeter Striping

A 9-inch yellow stripe has been painted along the designated store boundaries. These lines serve as the final reminder to customers that their shopping carts will lock if they attempt to cross the perimeter boundary. The stripe includes distinctive "no-cart" symbols.



SYSTEM COMPONENTS

Equipment

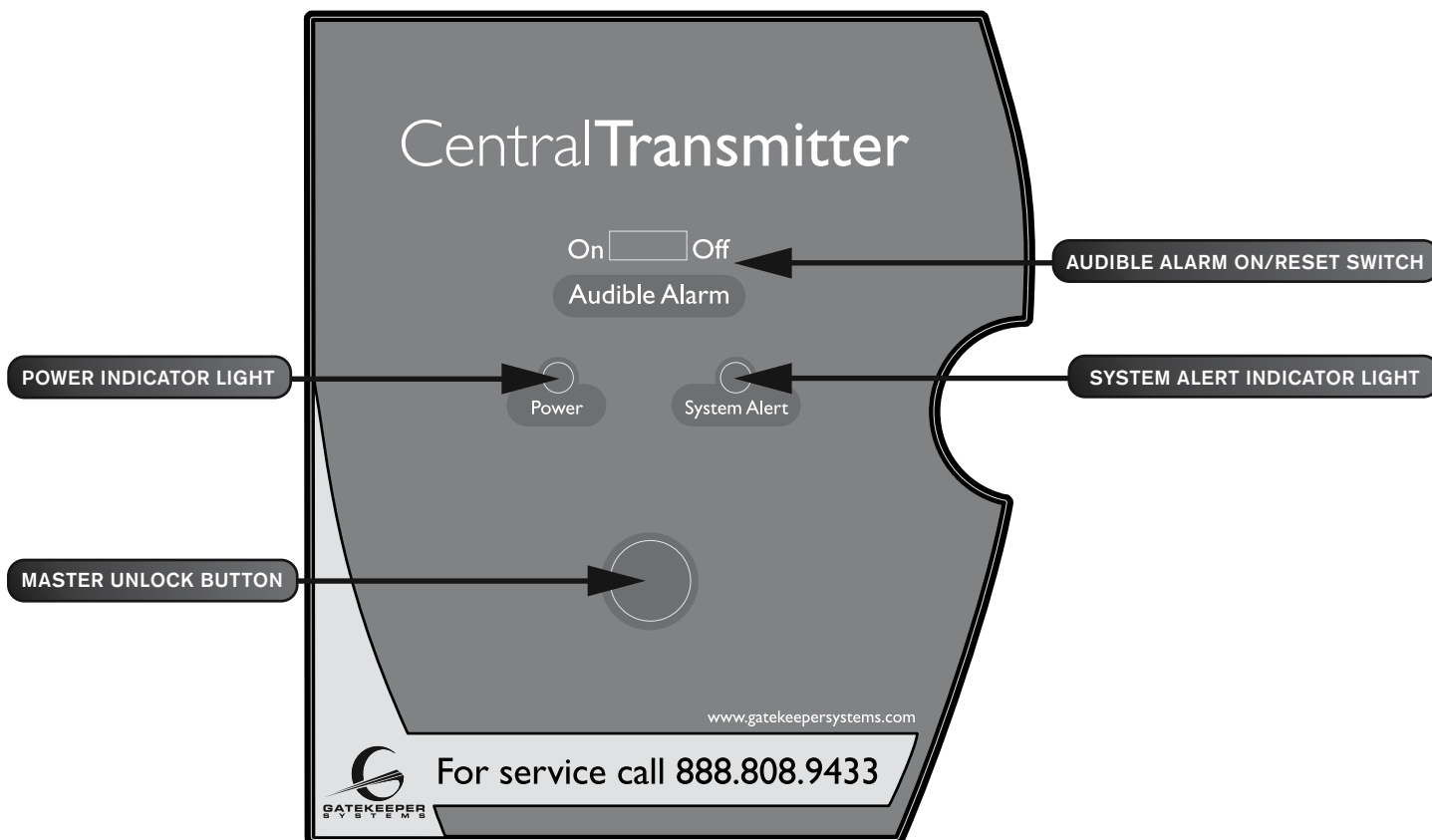
Every GS² shopping cart containment system includes a Customer Awareness Component. The items included in this package are a critical part of the system's success.

CentralTransmitter

The CentralTransmitter is located in an area that is secure, has adequate air flow, is out of harm's way, and accessible for service. Typically, this area is found near the receiving area at the rear of the store. The CentralTransmitter sends the locking signal through the perimeter antenna. Once installed and plugged directly in to a 110-volt outlet or Universal Power Supply (UPS), the CentralTransmitter rarely requires service.



CentralTransmitter front panel detail:



- Please do not open the CentralTransmitter unless you are expressly told to do so by a Gatekeeper representative.
- Never disconnect the power supply. • If you require service, please contact Gatekeeper Systems.

To prevent fire or shock hazard, do not expose the CentralTransmitter to rain or moisture.



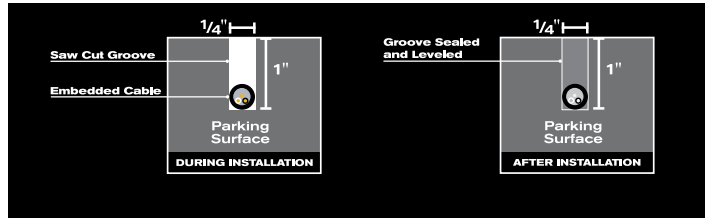
SYSTEM COMPONENTS

Equipment, continued...

Perimeter Antenna

The signal generated by the CentralTransmitter is carried around the designated store perimeter by a small, embedded cable known as the

“Perimeter Antenna”. This antenna is embedded in a 1/4” wide by 1” deep saw cut around the parking lot which is sealed using a weatherproof sealant. The location of the perimeter antenna determines the boundary where carts will lock. The perimeter boundary is typically identified by a thick, painted yellow line found at all parking lot exits.



The GS² Wheel

Each shopping cart is equipped with Gatekeeper's locking GS² wheel. Inside each wheel is a signal receiver and locking mechanism. The receiver is factory programmed to listen for the locking signal emitted from the perimeter antenna. The GS² wheel also accepts a locking or unlocking signal from a CartKey.



Anti-Tilt Bar

Each shopping cart is also equipped with an Anti-Tilt Bar. This is typically installed on the rear wheel on the opposite side of the locking wheel. The Anti-Tilt Bar limits the cart from being tilted back. If the cart is tipped back, the Anti-Tilt Bar will drag on the ground, making the cart extremely difficult to push.



CartKey

The CartKey is a handheld device used by store employees to lock or unlock GS² wheels. The touch pad on the front of the CartKey has two buttons labeled “Lock” and “Unlock”. Use the “Unlock” button to unlock carts that have locked wheels. The “Lock” button can be used for different purposes, such as locking carts stored overnight in outdoor cart corrals, as well as to test wheels for operation. If the battery in the CartKey runs low, the low-battery indicator light (found in the upper left-hand corner on the front panel of the CartKey) will remain lit. Care should always be taken not to drop or otherwise damage the CartKeys. Gatekeeper recommends that you keep at least one CartKey in a secure location at all times in order to avoid losing or temporarily misplacing all CartKeys.



SYSTEM OPERATION

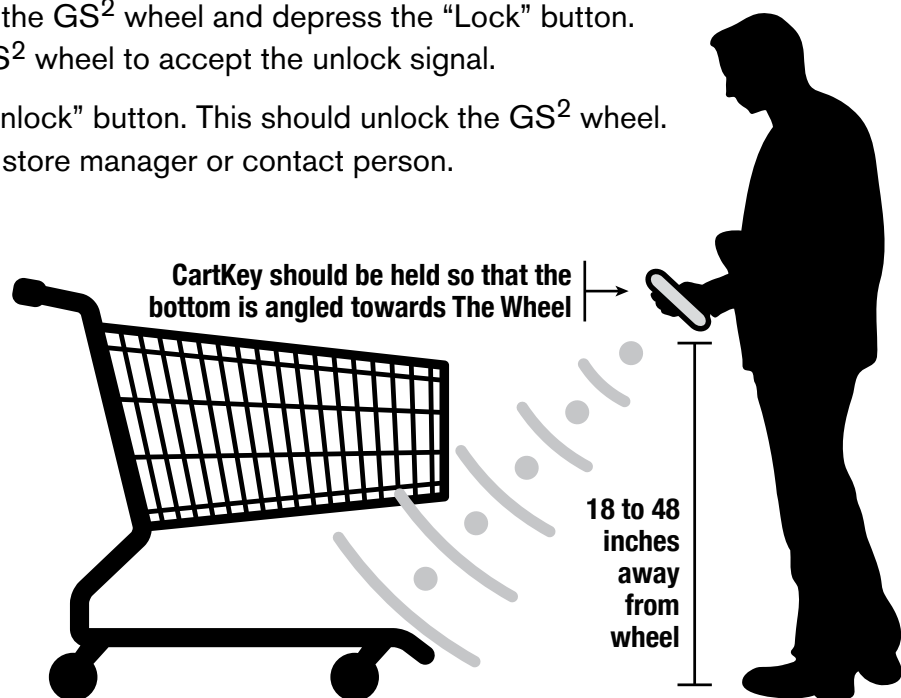
Once installed, the GS² System is easy to operate and requires very little technical maintenance. Shopping carts will perform just as they did before the system was installed unless a customer attempts to go beyond the store perimeter. If a customer pushes a cart to the designated perimeter, the GS² wheel on their shopping cart will lock—making the cart extremely difficult to move. Customers will usually take their merchandise and leave the cart right where it locked. Store employees responsible for retrieving carts should always bring a CartKey with them to unlock any locked shopping carts.

UNLOCKING CARTS

1. Hold the CartKey 18-inches to 48-inches away from the GS² wheel. For best results, angle the bottom of the CartKey so it is oriented towards the GS² wheel (SEE DIAGRAM BELOW).
2. Point the CartKey at the GS² wheel and depress the “Unlock” button. Once unlocked, the GS² wheel will remain unlocked for ten (10) seconds even if left at the perimeter boundary.
3. Roll the cart(s) away from the perimeter boundary within the ten-second period.

TIP: If the GS² wheel does not unlock after depressing the “Unlock” button on the CartKey, you can reset the GS² wheel by performing the following steps:

1. Hold the CartKey 18-inches to 48-inches away from the GS² wheel. For best results, angle the bottom of the CartKey so it is oriented towards the GS² wheel.
2. Point the CartKey at the GS² wheel and depress the “Lock” button. This will reset the GS² wheel to accept the unlock signal.
3. Next, depress the “Unlock” button. This should unlock the GS² wheel. If this fails, notify the store manager or contact person.



SYSTEM OPERATION

MASTER UNLOCK PROCEDURE

If you need to simultaneously unlock numerous carts located near the perimeter boundary, the CentralTransmitter features a master unlock mode to enable unlocking and cart retrieval without the use of a CartKey. When activated, this feature will stay in effect for thirty (30) seconds. After thirty-seconds has passed, normal operation will resume.

This feature requires at least two employees, one on the outer perimeter, and one at the CentralTransmitter. Once the needed personnel are in place, initiate the master unlock mode by depressing the silver button located on the front of the CentralTransmitter panel. All carts in the vicinity of the perimeter antenna will receive an unlock signal and can be retrieved within thirty-seconds. While this is a convenient option, it does present a period during which carts are unprotected. Please remember that the added convenience presents added exposure.

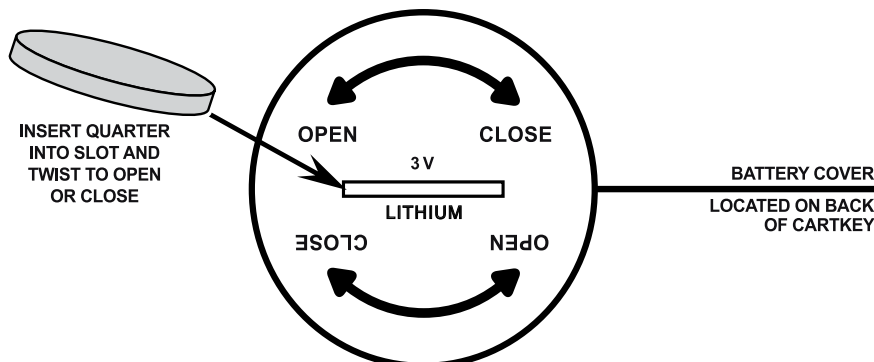
CHANGING CARTKEY BATTERY

CartKey batteries will need to be replaced from time to time during the life of the system. If you are having difficulty unlocking or locking the GS2 wheel you may need to replace the battery.

In order to replace your CartKey battery, perform the following steps. You will need a replacement CR123A 3V lithium battery. These are standard lithium batteries like the kind used in most digital cameras. You will also need a coin in order to open the battery cover (a quarter works best).

STEPS

1. Turn the CartKey over so you are looking at the side opposite the front panel. You will see a circular cover with a slot. Place the CartKey on a flat surface.
2. Insert your coin into the slot and turn counterclockwise until the battery cover pops up.
3. Remove the battery cover and set aside.
4. Inside the CartKey, you will see a nylon strap holding the battery in place. Pull up on the nylon strap until the battery pops out.
5. Insert the new battery so it lies on top of the nylon strap (this will ensure easy removal the next time you need to change the battery). Make sure to align the "+" and "-" connectors on the battery with the "+" and "-" indicators inside the CartKey. Insert the "-" end first and then push down on the battery until it snaps into place.
6. Once the new battery is in place, fold the remaining end of the nylon strap back over the battery.
7. Take the battery cover and place it back on the CartKey, making sure to line up the notches on the battery cover with the notches on the CartKey opening. Push down on the battery cover until it is level with the surface of the CartKey. Turn the battery cover clockwise.
8. Insert your coin into the slot and turn clockwise until the battery cover clicks into place.



SYSTEM MAINTENANCE

In order to ensure that the system is operating at peak performance, we recommend that you implement the following standard practices.

Perform a visual inspection of the perimeter each day.

Gatekeeper recommends walking the perimeter boundary at the opening of each day to identify any parking lot damage or the presence of any potentially damaging activity or objects. Make sure to look for potholes or other parking lot degradation that may require maintenance.

Test the system each day.

Gatekeeper recommends testing the perimeter signal at the opening of each day. To check the perimeter signal, take a CartKey and a shopping cart into the parking lot. Begin at the perimeter antenna's closest point to the store and follow these steps:

1. Roll the shopping cart to the perimeter line. The GS² wheel on the shopping cart should lock.
2. Hold the CartKey 18" to 48" away from the GS² wheel, point the CartKey at the GS² wheel and depress the unlock button. The GS² wheel should roll freely again.
3. Move to another point along the perimeter boundary and repeat steps 1 and 2. Test the cart at four other points along the perimeter.

If during any step the GS² wheel does not lock, repeat steps 1 and 2. If the problem continues after three attempts, immediately notify either the store contact person or the store manager.

Retrieve locked carts regularly.

Throughout the day and particularly toward the close of business, carts should be retrieved from the perimeter and brought to a cart corral or other collection area. If you are unable to unlock any locked wheels, take the locked cart(s) to a secure location until it can be serviced by a Gatekeeper Field Service Representative.

Take a weekly cart count.

A cart count should be conducted at least once a week. Monitoring the total number of carts available on a regular basis makes it easier to gauge the success of the system as well as identify any potential problems. A Cart Containment Log is available at the back of this user manual. *If your store utilizes a cart retrieval service, closely monitor your retrieval numbers and ensure that only carts with GS² wheels are being delivered to your store and that those carts belong to your store.*



Lock carts left outside at closing time.

At the close of your business day, Gatekeeper recommends that carts left outside be secured with a locked chain. In the event that a chain-locking procedure cannot be implemented, carts can be nested and locked using a CartKey. Do not forget to unlock carts before opening the following day.

Never disable the system alarm.

The CentralTransmitter is equipped with an audible alarm. The CentralTransmitter alarm will sound in the event that the perimeter antenna is compromised due to malfunction or physical damage. While you have the option to disable the audible alarm signal via a switch on the front panel of the Central-Transmitter, Gatekeeper highly recommends leaving the audible alarm active at all times. An active audible alarm will ensure prompt notification in the event of any system malfunction.

Perform regular maintenance.

In order to continue to provide the best possible shopping experience, it is important to make sure that your customers remain aware of the system's presence and function. Gatekeeper recommends performing periodic checks to make sure cart signs, parking lot signs, and perimeter boundary stripes are still in place, kept clean, and are clearly visible to customers. If you need to replace any signage, replacement signs are available for purchase from Gatekeeper Systems.

TROUBLESHOOTING

This section will help you solve some of the problems that may occur with the system. It also contains technical information and is a good place to refer maintenance workers and contractors with questions about the system. If questions concerning the system arise and you cannot solve your problem using this manual, call the toll-free number and speak with a Gatekeeper Customer Service Representative. Never hesitate to contact Gatekeeper with questions about the system.

The following chart is organized by system component so you can more quickly diagnose and solve specific problems.

SYSTEM COMPONENT: *CentralTransmitter*

Problem	Possible Cause	Solution
Carts not locking at the designated perimeter line	Undetermined	Try to lock a shopping cart using a CartKey. If the GS ² wheel locks and unlocks properly, check your CentralTransmitter to verify it is plugged in. If you hear the CentralTransmitter alarm, immediately contact Gatekeeper Systems to set-up a service call.
Carts not locking at the designated perimeter line	Power outage	If the GS ² System power is not on, but the store's power is, make sure that the CentralTransmitter power cord is plugged into a live 110 volt AC power outlet. If the store's power is out, the GS ² System will not function unless connected to a universal battery backup. If the CentralTransmitter is plugged into a live outlet and your store's power is on, contact Gatekeeper Customer Service for assistance. NEVER UNPLUG THE SYSTEM.
Audible Alarm sounding	Cut Perimeter Antenna/ Signal frequency out of adjustment	Turn the audible alarm switch to the "Off" position. Contact Gatekeeper Customer Service to schedule a qualified technician to come out and service the CentralTransmitter.
System Alert Light is lit	Cut Perimeter Antenna/ Signal frequency out of adjustment	Contact Gatekeeper Customer Service to schedule a service call.
System is down after power surge	Power surge	CentralTransmitter is plugged into power supply but no lights on front panel are illuminated. Check to ensure power is live at outlet. You can check this by plugging another device into the power outlet and determining whether or not the outlet is live. If the outlet is live, contact Gatekeeper Customer Service to schedule a service call. NEVER UNPLUG THE SYSTEM.



TROUBLESHOOTING

SYSTEM COMPONENT: GS² Wheel

Problem	Possible Cause	Solution
All wheels do not lock at perimeter	Power outage	Check to see if the System Alert light on the CentralTransmitter is illuminated or if an audible alarm is sounding. If not, confirm that the CentralTransmitter power cord is plugged into a live outlet or into a backup power supply. If none of these conditions exists, notify Gatekeeper Customer Service.
All wheels do not lock at perimeter	Damaged Antenna	Check to see if the System Alert light on the CentralTransmitter is illuminated or if an audible alarm is sounding—which indicates that the Perimeter Antenna may have been damaged. If the System Warning light is on and/or you hear the audible alarm, notify Gatekeeper Customer Service.
Wheels will not lock at the perimeter	System failure or certain wheels not working	Check to see if a wheel will lock or unlock using a CartKey. Take a cart to at least two sections of the perimeter to determine if wheel will lock. If wheel does not lock in one area, contact Gatekeeper Customer Service. When contacting Gatekeeper, take note of any construction or anything unusual that may have taken place in the store's vicinity.
Wheels will not unlock using the CartKey	The GS ² wheel needs to be reset	To reset the GS ² wheel, hold the CartKey 18" to 48" away from the GS ² wheel, point the CartKey at the GS ² wheel, and depress the "Lock" button. This will reset the GS ² wheel to accept the unlock signal. Next, depress the "Unlock" button. This should unlock the GS ² wheel. If this fails, notify the store manager or contact person.

TROUBLESHOOTING

SYSTEM COMPONENT: *CartKey*

Problem	Possible Cause	Solution
CartKey is not working	Improper reset distance	Test the CartKey on several shopping carts by alternately pressing and holding the “Lock” and “Unlock” buttons on the CartKey. Attempt to lock and unlock wheels while holding the CartKey at a variety of distances ranging from 18-inches to 48-inches away from the GS ² wheel.
CartKey is not working	Low/Dead Battery	If wheels lock at the perimeter boundary and you are unable to unlock them using the CartKey, it may be necessary to replace the battery in the CartKey. See Page 8 of this manual for instructions on how to replace the CartKey battery.
CartKey is not working	Damaged CartKey	Attempt to lock and unlock a variety of carts using the CartKey. Confirm that the CartKey battery is not low or dead. Contact Gatekeeper Customer Service to have a replacement CartKey shipped to you.

SERVICE

Most field service calls are avoidable. In many cases, a quick call to Gatekeeper Customer Service will solve the problem. If you have done everything you can and you are still experiencing difficulties, please call Gatekeeper and ask to speak with customer service.

GATEKEEPER SYSTEMS 24-HOUR CUSTOMER SERVICE HOTLINE

Toll Free (888) 808-9433 Press Option “1”

In the event that the problem requires onsite service, we will schedule a field service call—usually within 48 hours. 24-hour customer service is available via the toll-free number. If you are calling after our normal business hours (8AM to 5PM Pacific Daylight Time) and reach the automated attendant, press “5” on your telephone keypad to place an immediate service call.



CUSTOMER RESPONSIBILITIES

Gatekeeper Systems will work with you to ensure the success of the GS² System. There are, however, certain responsibilities that the customer accepts.

The CentralTransmitter remains mounted in a safe and secure fashion.

Ensuring that the CentralTransmitter is not damaged or altered in any fashion is the customer's responsibility. If you believe adjustments to the CentralTransmitter are required, please contact Gatekeeper. Adjusting or modifying the CentralTransmitter will void the system warranty.

The Perimeter Antenna remains properly sealed to withstand traffic and weather.

Once installed, the perimeter antenna becomes part of the property and therefore the responsibility of the customer or property owner/manager. In the event that the antenna is damaged for any reason other than an obvious installation error, the customer will be charged for repair. Examples of antenna damage not covered by warranty include: damage due to parking lot repair, deliberate sabotage, unusual forces of nature such as earthquake or flood, or other acts not reasonably considered normal operating characteristics of a retailer's business. You will be supplied with a map of your property showing the location of the antenna so you can perform visual inspections or provide to anyone performing work on your property.

Customer notification components are maintained.

The customer is responsible for making sure that shoppers remain aware of the system's presence and function. Gatekeeper recommends performing periodic checks to make sure cart signs, parking lot signs, and perimeter boundary stripes are still in place, kept clean, and are clearly visible to customers. If you need to replace any signage, replacement signs are available for purchase from Gatekeeper Systems.

Although difficult, a cart that locks as intended can still be physically removed from your premises.

Gatekeeper Systems cannot be held responsible in the event a cart is physically removed from your premises. In addition, while both the GS² wheel and the CartKeys are extremely durable and have been proven to stand up to extreme conditions, obvious tampering, malicious damage, or accidental damage resulting from extreme impact (e.g. collisions between vehicles and system components) are outside the bounds of intended use. Gatekeeper regrets that it cannot replace components, under warranty, for these kinds of occurrences.

TECHNICAL SPECIFICATIONS

The GS² Wheel

Wheel	Standard 5-inch, non-marring, conductive (anti-static) wheel with anti-static, non-marring rubber tread and sealed precision ball bearings.
Power Source	One CR123A, 3-volt lithium battery.
Electronic Components	Programmable CMOS (low power consumption) microprocessor.

Central Transmitter

Microprocessor	Digital circuitry, programmed in the factory and compliant with FCC Part 15 (no testing or certification required).
Power Supply	Utilizes 20 volt Uniform Laboratories (U.L.) approved Alternating Current (A.C.) transformer drawing less than 20 watts.
Signal Output	Signal frequency is below 9 KHZ (VLF) and complies with FCC Part 15.

Perimeter Antenna

Cable	14-gauge, double-insulated wire, embedded directly into the asphalt via 1/4-inch wide by 1-inch deep saw cut.
Lock Signal	The digital signal transmitted is adjustable to be received by all carts within a 3-foot perimeter of the embedded antenna. Signal is adjustable for proper reception at any distance from 2+ feet.

CartKey

Power	Power is supplied via a CR123A, 3 volt, lithium battery identical to the one installed in the GS ² wheel. The battery is easily replaced (see Page 8).
Frequency	Programmed to send a signal below 9KHZ (VLF), to be compliant with FCC Part 15.

INSTRUCTIONS TO THE USER FOR FCC

Each component of the GS² system 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.

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 a 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 or a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced radio/TV technician for help.**

Information for Canadian Users (IC Notice)

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.

Any changes or modifications not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

FCC Declaration of Conformance

Product devices comply with FCC Part 15.



**For immediate assistance please contact Customer Service at
(888) 808-9433 or by e-mail at customerservice@gatekeeper.com.**



Gatekeeper Systems, Inc.
8 Studebaker
Irvine, California
92618

In the U.S.: 888.808.9433
Outside of the U.S.: 949.453.1940
Fax: 949.453.8148
www.gatekeepersystems.com