Bigbelly
All Together Better

6th Generation User Manual

All Component Types

LABBB6UM - Rev. 8
July 2026

Table of Contents

Precautions & Warnings 4

Support & Contact Information 5
- CLEAN Support 5
- Bigbelly Support 5
- Ordering Parts 5

Commonly Used Tools & Materials 6

Introduction 7
- The Bigbelly 6th Generation Product Lineup 8
  - Serial Number Ranges 9
- Main Board Maps 10
- BB6 Product Specifications 12
  - Liner Bags for your 6th Generation Stations 14
- Safety Mechanisms 15
- Bigbelly ACS (Access Control System) 15

Site Selection 16
- Station Protection & Side-Walk Considerations 16

Installation 18
- Receiving the Component 18
  - Component Keys 19
- Transporting the Component 19
- Removing the Component from the Pallet 19
- Transporting the Component Without a Pallet 20
- Installing and Securing the Component 21
  - Install and Secure a Single Component 21
  - Install and Secure a Multi-Bin Kiosk 22
  - Configuring Your Compactor for Indoor Use 29
- Activation: Turning on your Components 32
- Testing Your Component 33
- Removing the Front Door Release Cable Tie 33

CLEAN Mobile Install Procedure 34

Operations 38
- LED Indicators 38
- Compacting Stations (Sense Max and Smart Max) 38
  - Manual Compaction Cycle (Smart Max and Sense Max Only) 38
- Non-Compacting Stations (Sense and Sense Max Only) 40
- Compost Stations 40
- Element Stations 40
- Initiating a Service Visit (Compacting Components Only) 41
- Collections and Fullness 42
  - Fullness Threshold & Age Threshold 42
  - Liner Bags 42
  - Waste Removal & Routine Visual Inspection 44
- Battery Overview 45
  - Rechargeable Battery Overview 45
  - Non-Rechargeable Battery Overview 45
  - Replacing a Battery 45
- Preparing a Component for Storage 45

Routine Maintenance & Cleaning 50

Scheduled Maintenance 50
Third & Sixth Month Maintenance 50
Ongoing Quarterly Maintenance 50
Power Maintenance - As Needed 50
Cleaning 51
Routine Cleaning Maintenance 51
Approved Cleaning Products 52
Cleaning the Height Sensors 53
Graffiti Removal & Cover-Up 54
Tools & Materials 54
Graffiti & Sticker Removal 55
Side Skin Graffiti Cover-Up 55

Troubleshooting 57
Common Troubleshooting: Compacting Components 57
Continuous Compaction Cycles or False Fullness 57
Compaction Error: Solid Red LED (SR) 57
Common Troubleshooting: Components without Compactors 61
False Fullness 61
Solid Red While Front Door is Open 61
Common Troubleshooting: All Components 62
Front Door Does Not Stay Closed or Latched 62
No LEDs Lit 62
Solid Yellow LED While Front Door is Open 63
What to do if Problems Persist 64

Compliance and Certifications 65
Federal Communication Commission Class A 65
Waste Electrical and Electronic Equipment (WEEE) 2012/19/EU 65
EU Declaration of Conformity 65

Revision Block 66

Precautions & Warnings

NOTICE

Before attempting to service or maintain a BB6 Smart/Smart Max, Sense/Sense Max, Element, or Compost the contents of this manual must be read and understood. Failure to follow instructions in this manual could void the warranty on the Component.

Only Bigbelly certified personnel should perform any service or repairs that go beyond the scope of this manual.

The personnel involved in the installation, operation, or maintenance of the Bigbelly system must read and understand all warning labels in addition to the current version of the following applicable standards:

- ANSI Standard No. Z245.2, "Stationary Compactors Safety Requirements." A copy of this standard may be obtained from:

  National Waste & Recycling Association
  1550 Crystal Drive, Suite 804
  Arlington, VA 22202

- OSHA 29 CFR, Part 1910.147, "The control of hazardous energy (lockout/tagout)"
- Products contain the following transmitter modules: FCC ID 2AC7Z-ESP32WROOM32E and FCC ID RI7ME910G1WW.

If further assistance or training is needed, please contact your distributor or Big Belly Solar LLC. You will be asked to provide the Component serial number, location, and installation date.

CAUTION

Do not attempt to run the Smart Max / Sense Max Ram with the Front Door open. This could result in harm to the Component and possible harm to users.

The Bigbelly system is designed with user safety as a top priority. Labels inside the Components indicate potentially dangerous areas and safety hazards. All personnel must familiarize themselves with these labels and locations.

CRUSH HAZARD

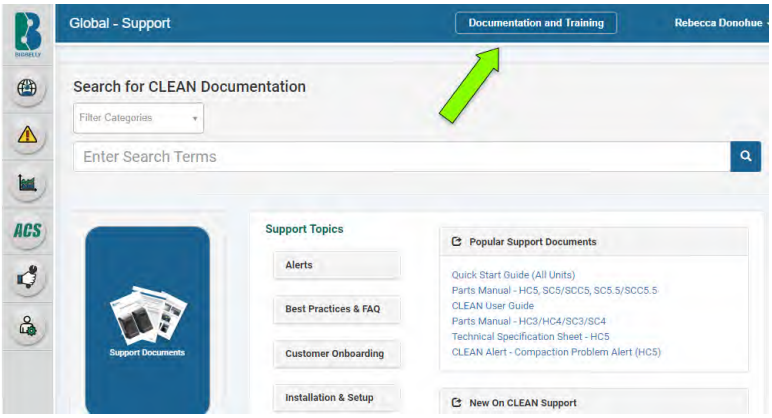
A warning label with this icon appears on the interior of the Smart Max and Sense Max to warn of the Ram.

Support & Contact Information

CLEAN Support

For initial self-help, access the support documentation in CLEAN at any time.

1. Log into CLEAN at clean.bigbelly.com.
2. Navigate to the Support page by selecting "Documentation and Training" in the upper, righthand corner of the website.



Bigbelly Support

For Customer Support, please direct all contact to the Bigbelly Support Team. Please have the serial number of the impacted Component ready for diagnostic purposes.

- Phone: +1.888.820.0300 Ext. 3
- Email: support@bigbelly.com
- Fax: +1.781.444.5651

Ordering Parts

Refer to the Parts Manual, found on the Documentation and Training page, for all part orders. Please direct all spare or replacement part orders through the Bigbelly Support Team using the contact information listed above.

Commonly Used Tools & Materials

Below are the most commonly used tools and materials for installing, maintaining, and servicing Bigbelly Components.

Refer to Approved Cleaning Products (page 52) for a list of cleaning agents that are safe to use on Bigbelly Components.

> It is highly recommended that all servicing technicians wear protective work gloves and safety glasses as minimum PPE.

Installation Tools & Materials

- Power Drill
- Hammer Drill
- Diagonal Cutter
- Utility Knife
- 1/2" Socket (13 mm)
- 5/16" Socket (for multi-bin kiosks only) (8 mm)
- 3/8" Masonry Drill Bit (9.5 mm), at least 5" (12.7 mm) long
- Front Door Key or ACS Key (provided)
- Magnetic Fob (provided) for testing Compaction
- Anchor Screws (provided)
- Mobile Phone (iOs or Android) for adding Stations to CLEAN

Initiating a Service Visit (Max Components Only)

- Front Door Key or ACS Access Key if the Component is ACS-equipped
- Magnetic Fob

Most Commonly Used Tools & Materials for Service & Maintenance

- Power Drill
- 7/16" Deep Socket (12 mm)
- 1/2" Socket (13 mm)
- 5/16" Socket (8 mm)
- 3/16" Drill Bit (5 mm)
- 1/8" Drill Bit (3 mm)
- Power Rivet Gun
- Hand Riveter
- Needle-Nose Pliers
- Socket Wrench
- T45 Pin-In Torx Driver Bit
- T20 Pin-In Torx Driver Bit
- Torque Wrench

Introduction

Thank you for purchasing the Bigbelly system. This product is designed to give years of reliable service and superior performance. To guarantee top performance and safe operation, all personnel involved in the installation, operation, and maintenance of the system should read and understand this manual, and follow all warnings and cautionary notices.

This manual covers the BB6 Smart/Smart Max, Sense/Sense Max, Element, and Compost. It is designed to guide site selection, installation, initial activation, general operations, maintenance, and basic troubleshooting diagnostics.

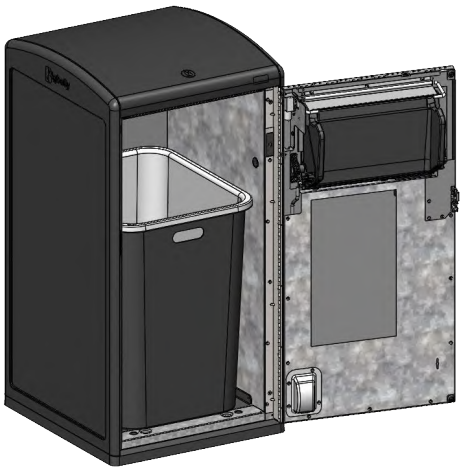
Additional support documents may be downloaded from the CLEAN website, at clean.Bigbelly.com. If log in credentials are needed, contact Bigbelly Support at +1.888.820.0300 for assistance.

The Bigbelly 6th Generation Product Lineup

With our 6th Generation of waste receptacles, there's a solution for every scenario.

Element

The Element provides a sleek, fully enclosed option for keeping waste contained. It can stand on its own or join up to other units to form a double or triple collection Kiosk. This Component type has no electronics.



Sense

Our Sense is a fully enclosed, battery-powered waste receptacle that has a fullness sensor and an LED light to indicate when it's ready to be collected. This allows you to keep the waste contained and your collection team moving.

The Sense contains a Battery and Main Board and can perform on its own, or as the Hub in a double or triple collection Kiosk.

Smart

The Smart includes all of the same features as our Sense, but with the added benefit of real-time fullness and status updates through our CLEAN (Collection, Logistics, Efficiency, and Notification) software, creating the ability to limit unnecessary collections and prevent overflow issues.

Sense Max

Like the Sense, the Sense Max is fully enclosed with a fullness sensor and an LED light to indicate when it's ready to be collected. In addition, this model uses our solar-powered compaction technology, giving it up to five times the capacity of an ordinary waste receptacle, all within the same footprint. The fullness sensor triggers a Compaction Cycle when the Bin begins to fill, creating room for more and making it ideal for high-traffic areas.

The Sense Max contains a Solar Panel, Battery, and Main Board and can perform on its own, or as the Hub in a double or triple collection Kiosk.

Smart Max

Our most intelligent receptacle, the Smart Max includes the same solar-powered compaction technology as the Sense Max, but with the added benefit of real-time fullness and status updates through our CLEAN software, making this a good choice for high-traffic areas where quick response is crucial.

The Smart Max contains a Solar Panel, Battery, and Main Board, and is connected to our CLEAN software. It can perform on its own, or as the Hub in a double or triple collection Kiosk.

Companion

The Companion is intended for deployment as an additional component in a double or triple collection Kiosk.

Fully enclosed with a fullness sensor and LED light to indicate when it is ready to be collected, the Companion draws power from the Battery in the Hub Station and does not contain its own Battery or Main Board, making it a cost-effective choice for high-traffic or multi-stream collection. When linked to a Smart hub, the fullness and status of a Companion unit will appear in the CLEAN software.

Compost

Compost offers convenient, secure drop-boxes that can be placed throughout a community to facilitate the collection and containment of organic matter. Our Compost bins are app-supported, promoting low contamination rates and ease of use for residents. Integration with our CLEAN software provides real-time fullness and status updates.

Our Compost Stations contain a Solar Panel, Battery, Main Board, and Waste Interface Lock and are connected to our CLEAN software and compost app. They can be set up as stand-alone units, or as part of a double or triple collection Kiosk.

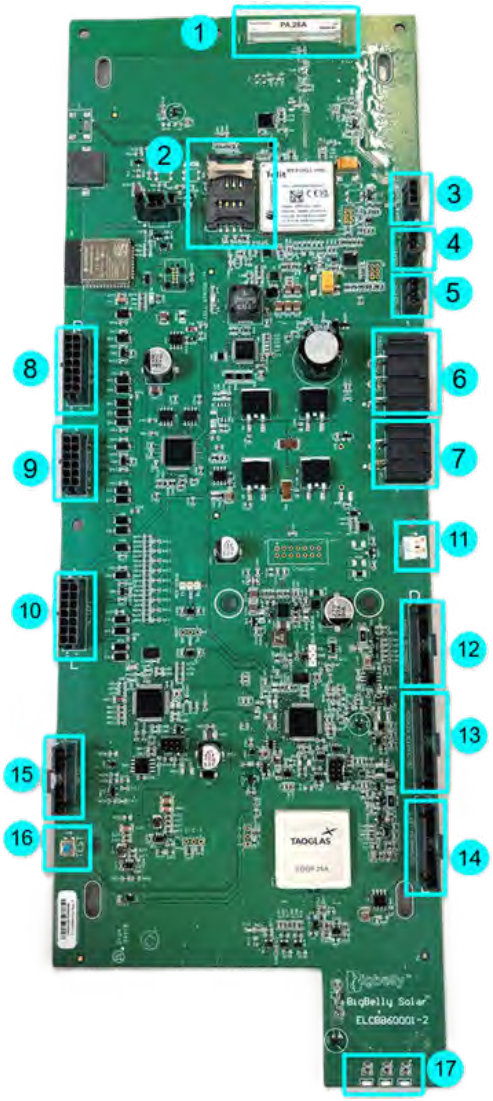
Serial Number Ranges

Component	Serial Number Indicator
Smart Max or Sense Max	600XXXX
Smart or Sense	601XXXX
Companion	602XXXX
Compost	603XXXX
Element	604XXXX

Main Board Maps

The following diagrams will help you understand the electronics in your Bigbelly Component. The ports used by your exact Component will vary based on the configuration.

Table 1. Solar Main Board Map: Smart Max, Sense Max, and Compost

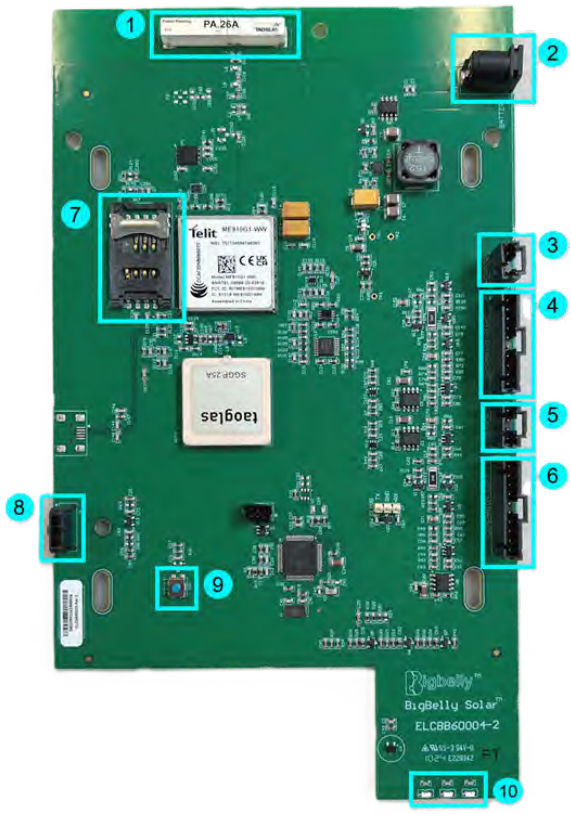


1. Antenna
2. SIM Card
3. End of Drivetrain Sensor Port
4. Waste Interface Sensor Port
5. Auxiliary Port
6. Battery Cable Port
7. Motor Cable Port
8. ACS/Waste Interface Lock - Right Companion Port
9. ACS/Waste Interface Lock - Hub Port
10. ACS/Waste Interface Lock - Left Companion Port
11. Solar / AC Port
12. Right Companion Port
13. Waste Height Sensor Cable Port
14. Left Companion Port
15. ACS Reader Board Cable Port
16. Test Mode Button
17. LED Indicators

NOTE

Smart Max and Sense Max Stations configured for wall charging will still use the Solar-equipped Main Board.

Table 2. Non-Solar Main Board Map: Smart and Sense

	1. Antenna 2. Battery Cable Port 3. Waste Interface Sensor Port 4. Right Companion Port 5. Waste Height Sensor Cable Port 6. Left Companion Port 7. SIM Card 8. Auxiliary Port 9. Test Mode Button 10. LED Indicators

BB6 Product Specifications

Figure 1. Single, Double, and Triple Kiosk

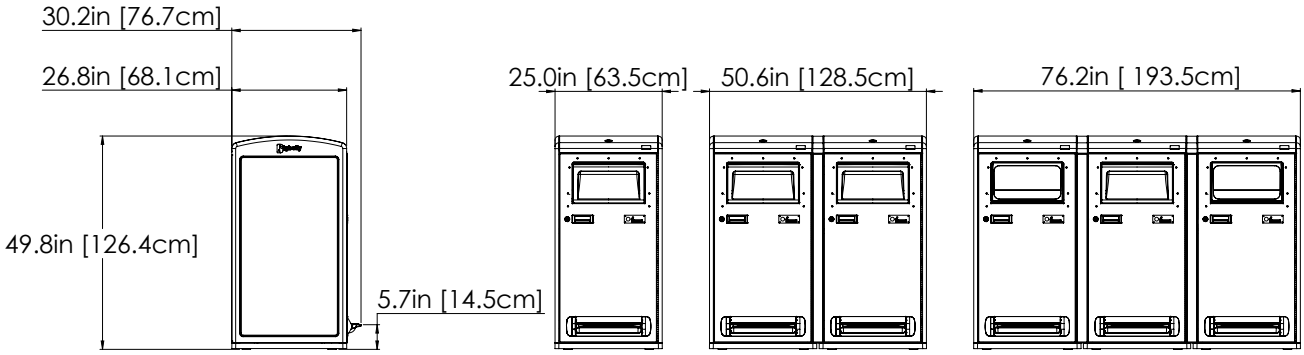


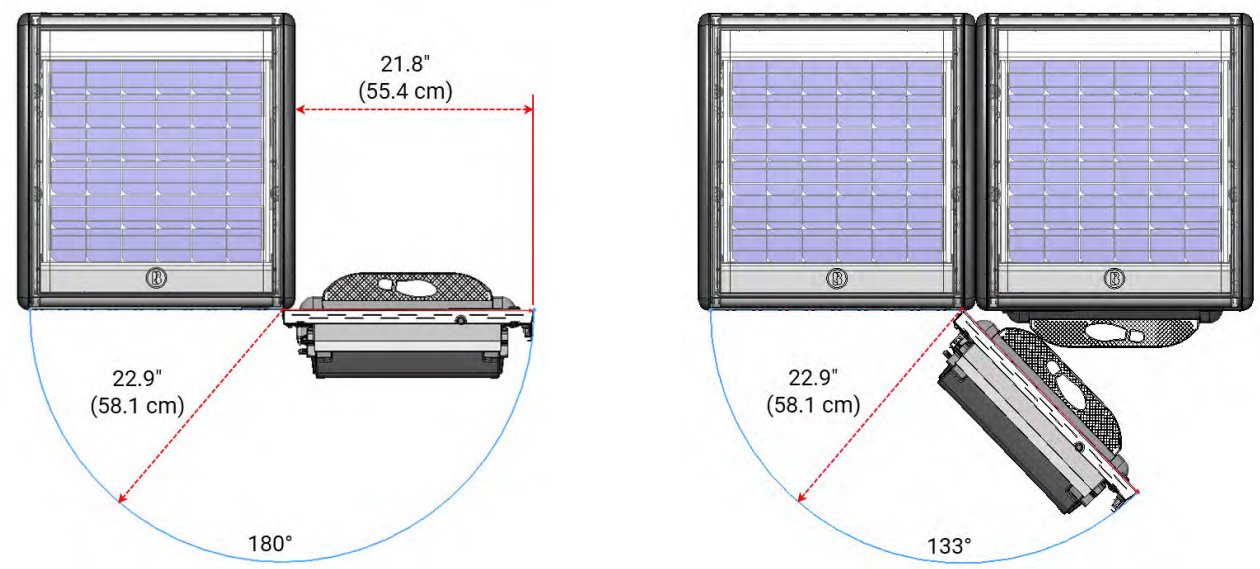
Table 3. Overall Product Dimensions and Specifications

Attribute	Smart Max & Sense Max	Smart & Sense	Element	Compost
Width	25.0" (63.5 cm)	25.0" (63.5 cm)	25.0" (63.5 cm)	25.0" (63.5 cm)
Height	49.8" (126.4 cm)	49.8" (126.4 cm)	49.8" (126.4 cm)	49.8" (126.4 cm)
Depth	26.8" (68.1 cm)	26.8" (68.1 cm)	26.8" (68.1 cm)	26.8" (68.1 cm)
Handle Height	41.8" (106.2 cm)	41.8" (106.2 cm)	41.8" (106.2 cm)	41.8" (106.2 cm)
Weight	260 lbs (118 kg)	170 lbs (77 kg)	160 lbs (73 kg)	195 lbs (88 kg)
Shipping Weight	290 lbs (132 kg)	200 lbs (91 kg)	190 lbs (86 kg)	225 lbs (102 kg)
System Voltage	12V	6V	N/A	12V

Recommended Clearance For Front Door And AC Adapter

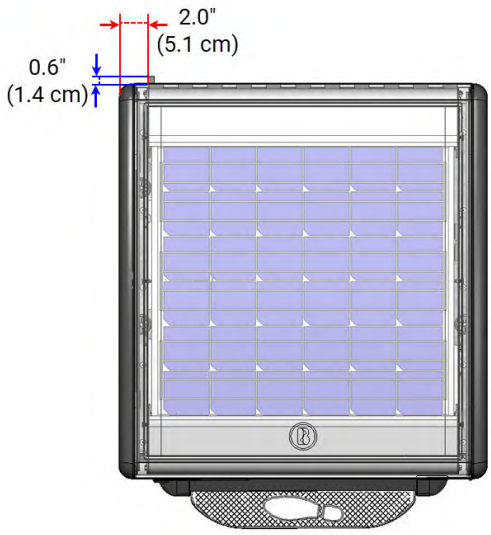
Clearance is required in the front of the Station to allow for the Front Door's path of travel and in the back of the Station to allow for an AC Adapter or AC Adapter Enclosure (if present). The relevant dimensions are listed below.

Figure 2. Front Door Radius and Swing

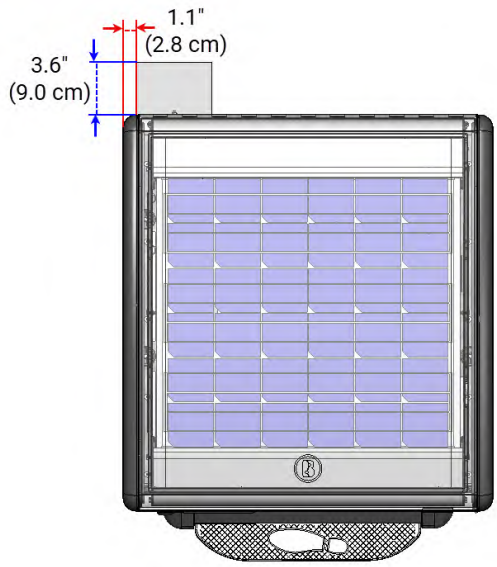


Single Station *Multi-Bin Kiosk*

Figure 3. AC Adapter and AC Adapter Enclosure Depth and Distance from Side Skin Exterior Surface



AC Adapter



AC Adapter Enclosure

Waste Interface Options

The chosen Waste Interface will affect the the overall size and type of waste that can be deposited in a Station. See the chart below to determine the dimensions and compatibility of each type.

Table 4. Waste Interface Dimensions and Compatibility

Waste Interface Type	Disposal Interface Dimensions	Smart Max & Sense Max	Smart & Sense	Element	Compost
Hopper	15"W x 5"H x 6"D (381 x 127 x 152 mm)	Yes	Yes	Yes	Yes
Chute	15"W x 7"H x 15"D (381 x 178 x 381 mm)	Yes	Yes	Yes	Yes
Open Faceplate	15.5"W x 8"H (393 x 203 mm)	N/A	Yes	Yes	N/A
Bottles & Cans Faceplate	5" DIA. (127 mm)	N/A	Yes	Yes	N/A
Paper Faceplate	16.5"W x 3"H (419 x 76 mm)	N/A	Yes	Yes	N/A
Mixed Recycling Faceplate	10.8"W x 8"H (274 x 203 mm)	N/A	Yes	Yes	N/A

Maximum Waste Volume

There are two bin sizes available for use with the Bigbelly system, depending on the Component type. See the chart below to determine what is available for your Component. The size of bin used will affect the overall waste volume.

32 Gal (120 L) "Compactor Bin"

- 24” x 20.4” x 21.65” (609 x 518 x 549 mm)
- Holds up to 32 Gal (120 L) of non-compacted waste, and up to 150 Gal (568 L) of compacted waste

47 Gal (178 L) "Non-Compactor Bin"

- 24.2" x 20" x 27.5" (615 x 508 x 699 mm)
- Cannot be used with Compacting Stations
- Will always hold up to 47 Gal (178 L) of waste

Table 5. Inner Bin Compatibility

Bin Option	Smart Max & Sense Max	Smart & Sense	Element	Compost
32 Gal (120 L)	Yes	Yes, with Hopper	Yes, with Hopper	Yes, with Hopper
47 Gal (178 L)	N/A	Yes, with Chute or Faceplate	Yes, with Chute or Faceplate	Yes, with Chute or Faceplate

Liner Bags For Your 6th Generation Stations

To help maintain a clean and odor-free Component, the use of Liner Bags is highly recommended. Use the chart below to determine which Liner Bag is compatible with your bin type.

These extra-heavy-duty Liner Bags are made of linear low-density polyethylene (LLDPE). They are highly puncture- and tear-resistant and are tall enough to ensure extra material for tying the Liner Bags closed when full.

The following items can be ordered through Bigbelly (support@bigbelly.com; +1.888.820.0300 Ext. 3) using the listed Part ID, or can be sourced through a third party.

TIP

The use of incorrect bags may cause false alerts and lead to inaccurate collection data.

Table 6. Liner Bag Specifications

	Compactor Bin (Short)		Non-Compactor Bin (Tall)	
Part ID	BAGS-BBS-CB4647	RBAGS-BBS-RCB4647	BAGS-BBS-NCB4455	BAGS-BBS-RNCB4455
Thickness	2.5 mil	2.5 mil	1.6 mil	1.6 mil
Width	46" (117 cm)	46" (117 cm)	44" (112 cm)	44" (112 cm)
Height	47" (120 cm)	47" (120 cm)	55" (140 cm)	55" (140 cm)
Circumference	92" (234 cm)	92" (234 cm)	88" (223.5 cm)	88" (223.5 cm)
Color	BLACK	CLEAR	GRAY	CLEAR
Seal Type	Flat	Flat	Star	Star
Qty per Case	50	50	100	100

Safety Mechanisms

Safety mechanisms are in place to keep the user, service personnel, and maintenance personnel safe.

- **Closed Waste Interface (Hopper or Chute)** - Designed to prevent access into the Component. The Closed Waste Interface is sized for small litter to discourage illegal dumping. It is critical that the Closed Waste Interface is kept clear and free of debris to maintain functionality.
- **Waste Interface Lock** - On Sense Max and Smart Max Stations with a Chute, the Waste Interface Lock engages prior to compaction to prevent accidental injury. If the Chute cannot be locked (due to a jam or for any other reason), the system will not allow the Ram to operate.
  In other configurations, the Waste Interface Lock limits who can access the Waste Interface to deposit material. In Compost Stations, it requires an app to unlock. For all other Stations, it serves as an optional security feature for use during security events.
- **Front Door -** Designed with a cut-off switch that prevents the Ram from operating while the Front Door is open.
- **Front Door Release Cable** - Enables release of the Front Door Lock from inside the Station.
- **Front Door Key -** The Front Door has an optional key lock that prevents unauthorized access into the Component.
- **ACS Access Key -** A key-card the size of a credit card that is provided for ACS-equipped Components to prevent unauthorized access into the Component.
- **Top Door -** The Top Door is held closed with two bolts that can only be accessed when the Front Door is open. Only authorized personnel should open the Top Door.

Bigbelly ACS (Access Control System)

Bigbelly ACS is an exclusive cloud-based **Access Control System** for your Bigbelly smart waste deployment. It is **fully integrated** into the system's electronics and the CLEAN Management Console and is **100% Solar-Powered**, requiring no additional batteries. Bigbelly ACS allows you to:

- Grant, revoke, and manage Station access remotely, ensuring only authorized users can open Bigbelly Stations. Access can be managed by groups of Stations, or by each Component individually.
- Achieve unprecedented visibility into your waste collection operation. Increase accountability, improve oversight, and enhance usage analytics.
- Eliminate issues with lost or stolen keys, unauthorized door openings, and vandalized lock cylinders.

Site Selection

To minimize installation time, select a site for the Station prior to delivery. Mark the desired location so it is clear where the installation crew needs to place the Component.

The site for a Bigbelly Station should be selected with five main considerations:

- **Waste Volume:** Each Compacting Component can hold far more waste than a traditional waste receptacle, reducing the burden caused by peak periods of waste accumulation. As a result, the benefits of the Smart Max and Sense Max are maximized in high waste volume locations, or in remote areas. Non-compactor benefits are maximized in locations with lower waste volume.
- **Area Coverage**: Space receptacles out to fully attain the benefits of multiple collection points.
- **A Solid Surface**: Concrete or mortared brick is best. The mounting surface should be as flat as possible for stability. For more information on mounting surfaces, contact your Account Manager, Distributor, or Bigbelly Support.
- **Sunlight Overhead**: Place solar-powered Components with an adequate amount of sky directly above. Do not place Components under overhangs, awnings, heavy tree cover, etc. A site without open sky directly above the Component may decrease battery life.
  Non-Max and Non-Compost Components and indoor Components equipped with an AC Charging do not have this restriction.

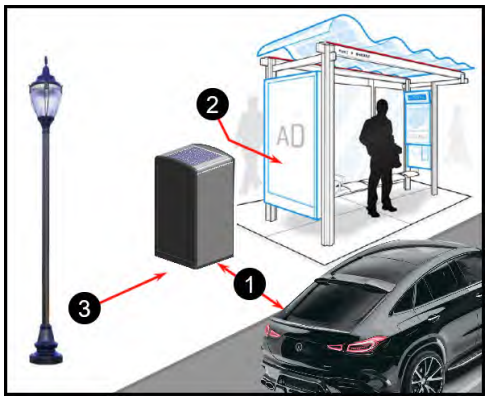
- **Adequate User Access & Clearance**: Leave at least 36 in (92 cm) of clearance in the front, to allow for waste disposal and collection. A clearance of 24 in (61 cm) behind the Component is recommended in most cases, but an indoor Component with an AC Charging Adapter may be installed close to a wall. The recommended curb set-back is 24 in (61 cm).

Please contact Bigbelly Support or your distributor with further questions about site selection.

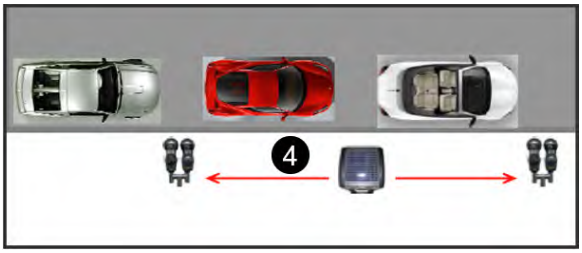
Station Protection & Side-Walk Considerations

Below are a few other considerations to help protect Components from vehicle strikes and to avoid interference with other sidewalk uses.

- **Fire Hydrants**: Fire code regulation (Uniform Fire Code Section 1001.7.2) requires a 36 in (92 cm) clearance around all hydrants.
- **Snow Plows [1]**: Consider installing Components 24 in (61 cm) or more from the curb if the location is frequently plowed and snow banks may be an issue.
- **Bus Shelters [2]**: Bus shelters often provide an excellent installation location. However, be mindful not to block advertisements that appear on the side panels of bus shelters.
- **Pedestrian Flow**: Consider any pedestrian flow that might be hindered or blocked.



- **Handicap Ramps and Crosswalks**: Do not block handicap ramps or crosswalks. Ensure ample wheelchair maneuverability around Stations, especially near ramps and crosswalks.
- **Crosswalk Buttons**: If a Component is installed next to a crosswalk button, ensure there is ample room for wheelchair users to reach the button.
- **Light Poles or Other Structures [3]**: Install Stations downstream of nearby poles or other structures to help protect Components from possible vehicle strikes. Some structure examples are traffic lights, telephone or sign poles, bicycle racks, large cement planters, etc.
- **Parking Meters [4]**: Leave enough distance from parking meters to allow passengers room to open their doors when exiting parked vehicles. If possible, center installations between double meters.



- **Loading Zones**: Avoid installing near loading zones. Large delivery trucks may damage Components as they back into loading zones or driveways.
- **Street Corners**: Some busy street corners may be ideal for waste collection, but keep in mind that trucks may drive over curbs when making turns.
- **Ad & Messaging Panels**: Allow maximum visibility for advertisement and messaging panels.

Installation

Prior to Installation, please see the section regarding Site Selection (page 16) to ensure you are selecting a suitable location for your Bigbelly Components.

It is highly recommended that outdoor Components are mounted to the ground to prevent the Component from being pushed over. The Components should be mounted directly to the ground and must be properly installed for the warranty to be valid. For wooden floor surfaces, 3/8" lag bolts are recommended.

Once installation is complete, the Components must be activated and tested. Refer to Activation (page 32) in this manual and the Test Guide (BB6) in CLEAN after initial installation is complete.

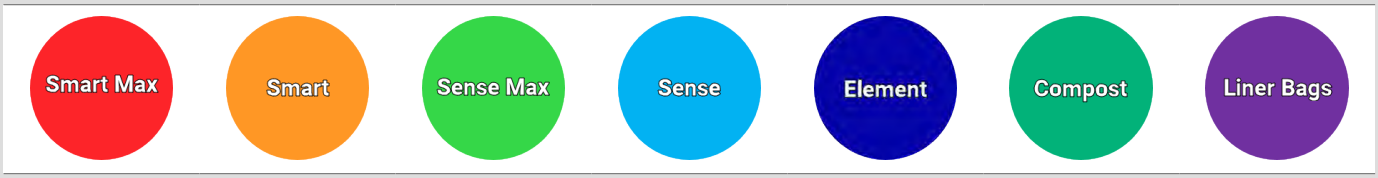
Receiving The Component

Each Component is shipped strapped to a pallet and encased in cardboard. Keys, mounting hardware, and any other accessories, such as liner bags, are stowed in the Inner Bin.

To Identify the Component Type:

Locate the white Component Configuration Label and the colored sticker(s) on the packaging to determine what is inside. Note that the second, purple sticker will only be present on packages containing Liner Bags.

Table 7. Package Contents Color Key



Be sure to fully inspect the packaging before accepting the Component from the shipping company. If the packaging appears to be damaged, unpack the Component and inspect it for damage prior to accepting the delivery. If there is any visible damage, mark “damaged” on the freight bill and unpack the Component with the truck driver present.

Remove the straps, then remove the cardboard sleeve and packaging bag from the top of the Component.

If using a utility knife to remove the straps, be careful not to penetrate the cardboard sleeve.

Ensure that all contents of the Inner Bin are gathered before discarding the packaging materials.

Component Keys

Smart Max and Sense Max	Sense, Smart, and Compost	Element
• One (1) Magnetic Fob • One (1) Front Door Key OR one (1) ACS Key	• One (1) Front Door Key OR one (1) ACS Key	• One (1) Front Door Key

The Component configuration will determine if the Front Door is Front Door Key enabled or ACS enabled.

The Magnetic Fob that arrives with Smart Max and Sense Max Components will be used to initiate Service Visits (Initiate a Service Visit (Compacting Components Only) (page 41)) and to run Manual Compaction Cycles (Initiate a Manual Compaction Cycle (page 39)).

Transporting The Component

Components strapped to a pallet can be moved using a forklift or pallet jack according to the following procedure.

Transport a Component While on a Pallet

1. Adjust the forks of the forklift to as wide as will fit within the pallet.
2. Ensure the forks are completely inserted into the pallet before lifting.
3. Transport the Component to the appropriate location.

   Avoid sudden movements while the Component is lifted. Sudden or jerky moments could cause the Component to fall off the pallet.

4. Once in the desired location, carefully lower the Component completely to the ground.

Removing The Component From The Pallet

Each Component is shipped strapped to a pallet. Once the straps and cardboard packaging have been removed, follow these steps to remove it from the pallet:

1. Open the Front Door by pulling the orange Front Door Release Cable Tie, pictured below, and confirm that the serial number on the packaging correctly matches the serial number on the Component (located beneath the LED lights). Report any errors to your distributor or Bigbelly Support.

Do not remove the orange Front Door Release Cable Tie until installation and testing is complete.

2. Remove the Inner Bin and close the Front Door. Retrieve the keys, mounting hardware, and any other accessories from the Bin. *Note: if Liner Bags were included on the order, these will be inside one of the Bins.*
3. Carefully tilt the Component to the side and walk it off either side of the pallet, then slide or kick the pallet out from beneath. This is easiest with two people.

Do not forget to remove the blue shrink wrap, shown below, from the top of the Component.

Transporting The Component Without A Pallet

Once it has been removed from the pallet, the Component should only be moved with a hand truck. The hand truck must have safety straps and a load capacity of at least 400 pounds (182 kg). To protect the powder coat finish on the Component, use padding between the straps, the Component, and the hand truck. Use the following procedure to transport the Component without a pallet.

Never lift the Component from the front or sides, as this can damage the Waste Interface, Foot Pedal, or Side Skins. Always lift from the back.

Transport a Component (Without a Pallet)

1. If the hand truck does not have a rubber or vinyl protective coating, wrap padding around the Component to prevent it from being scratched during transport.
2. Wrap the hand truck's safety strap around the Component, and tighten until the Component is secured. Be sure to wrap the safety strap below the Waste Interface.
3. Ensure the load plate of the hand truck is completely beneath the Component before lifting.
4. Upon lifting, chock the wheels to prevent the hand truck from rolling prematurely.
5. Transport the Component to the appropriate location.
6. Once the in the desired location, reverse the lifting method to gently lower the Component to the ground.

Installing And Securing The Component

Whenever possible, mount Components directly to the ground. For Components that are to be placed on bricks or on a slab smaller than the base, Mounting Plates are available. Contact your distributor or Account Manager for more information, or reach out to Bigbelly Support at +1.888.820.0300 Ext. 3.

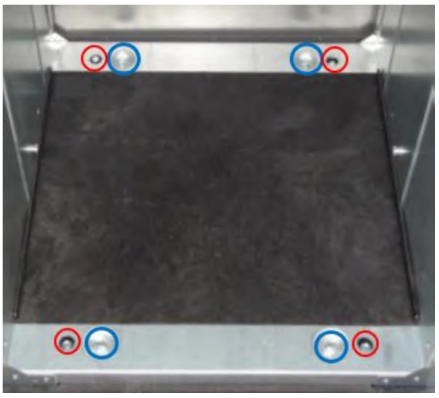
Installation Tools & Materials

- Power Drill
- Hammer Drill
- Diagonal Cutter
- 1/2" Socket (13 mm)
- 5/16" Socket (for multi-bin kiosks only) (8 mm)
- 9/16" Hex Bit Socket (14 mm)
- 3/8" Masonry Drill Bit (9.5 mm), at least 5" (12.7 mm) long
- Front Door Key or ACS Key (provided)
- Magnetic Fob (provided) for testing Compaction
- Anchor Screws (provided)
- Stabilizing Bolts (provided)
- #10 Screws (provided)
- Mobile Phone (iOs or Android) for adding Stations to CLEAN

The following instructions are for the direct-mount method. To install and secure a single Component, see below (page 21). To install and secure a multi-bin kiosk, skip to Install and Secure a Multi-Bin Kiosk (page 22). For a general overview, see the Double Station Installation video.

Install And Secure A Single Component

1. Place your Component where you would like it secured and installed. Remove the blue plastic film from the Top Bubble.
2. Open the front door and remove the Inner Bin if you have not already done so.
3. Tighten/loosen the Stabilizing Bolts (circled in red) with a 1/2" Hex Bit Socket until the Component is leveled and stable.
4. Drill (4) pilot holes through the holes (circled in blue) inside the Molded Base and into the mounting surface using a Hammer Drill and 3/8" Masonry Drill Bit.
   - Minimum hole depth in the concrete is 2" below concrete surface (or roughly 4.75" below the interior floor).
5. Anchor the Component directly to the surface by driving the (4) Screw Anchors provided with the Component into the surface using a Power Drill and 9/16" Hex Bit Socket.
6. Confirm the Screw Anchors are fully seated and not proud of the Component floor.
7. Replace the Inner Bin. Physical installation is complete.



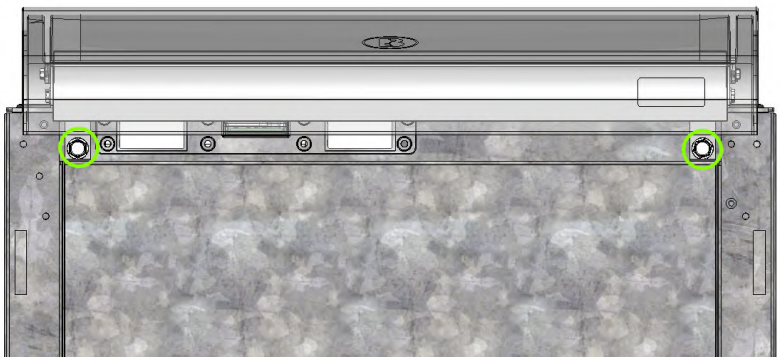
Red = Stabilizing Bolts; Blue = Screw Anchor

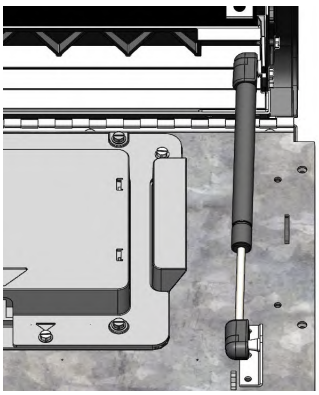
Once the Component is properly installed, it must be activated and tested. Refer to Activation (page 32) and the Test Guide (BB6) for the necessary procedures. **If activation and testing are not performed, the Component may not function.**

Do not remove the orange Front Door Release Cable Tie until installation and testing is complete.

Install And Secure A Multi-Bin Kiosk

1. Place the Components where you would like them secured and installed. Remove the blue plastic film from the Top Bubbles.
2. Open the Top Door.
   a. Open the Front Door by pulling the orange Front Door Release Cable Tie.
   b. Locate the two 5/16" Screws in the Top Door tabs, circled below left. They must be removed with a Power Drill fitted with a 1/2" Socket before the Top Door can be opened.
   Keep these Screws to re-secure the Top Door once the work is completed.



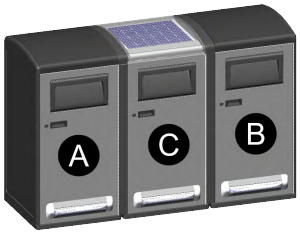


   c. Lift the Top Door open. The door will be propped open by the Gas Spring, pictured above right.
3. Remove the Inner Bins if you have not already.
4. If the Kiosk contains Companions, connect the Companion cabling.
   If the Kiosk does not include a Companion, skip to Step 5.
   How to Connect Companion Components

LEFT VS RIGHT

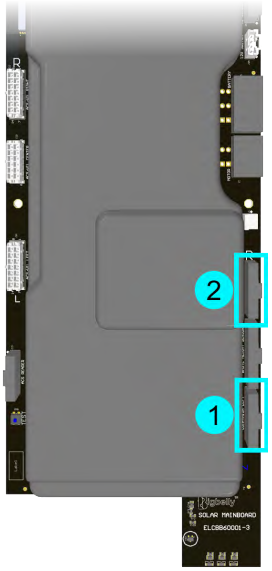
If the Companion Component is placed to the LEFT of the Hub [C], it is a "Left Companion" [A].

If the Companion Component is placed to the RIGHT of the Hub [C], it is a "Right Companion" [B].

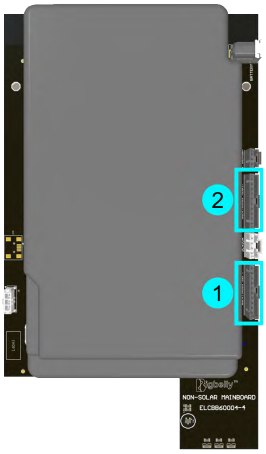


a. Retrieve the Companion Extension Cable (ELCBB60019) from the Component packaging, and plug it into the corresponding Left [1] or Right [2] Companion port on the Main Board.

Solar Main Board

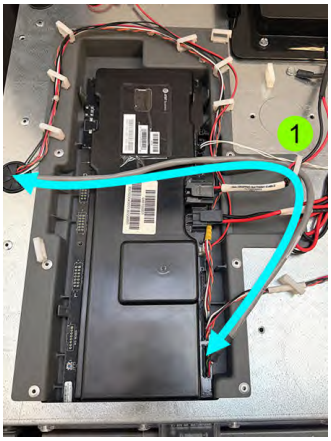
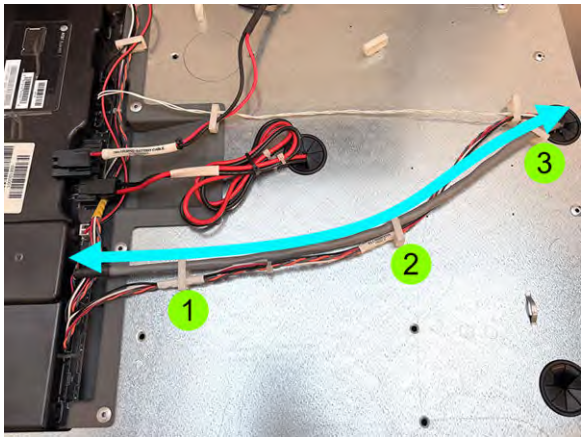
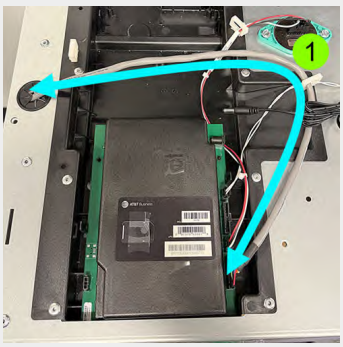
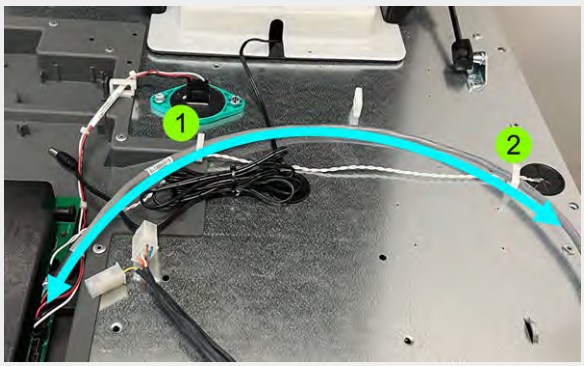


Non-Solar Main Board



b. Route the Companion Extension Cable (ELCBB50019) according to the table (page 23) below. Place it into the indicated Cable Clips. It will be passed through the grommet in the following step.

Table 8. Companion Extension Cable (ELCBB60019) Routing

Main Board Type	Routing for LEFT Companion	Routing for RIGHT Companion
Solar	 *Place in **one** indicated Cable Clip*	 *Place in **three** indicated Cable Clips*
Non-Solar	 *Place in **one** indicated Cable Clip*	 *Place in **two** indicated Cable Clips*

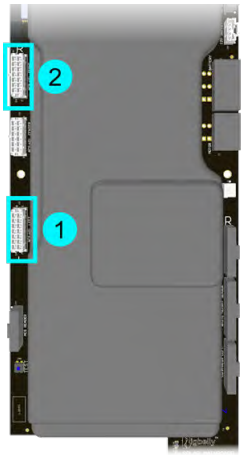
c. Feed the Companion Extension Cable (ELCBB60019) through the grommet, and plug it into the Companion Sensor Cable (ELCBB50010) already protruding from the Companion Component grommet.
Note: example shows connection for LEFT Companion.

Feed Companion Extension Cable (ELCBB60019) through Grommet

Plug into Companion Sensor Cable (ELCBB50010)

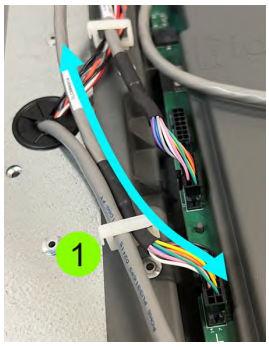
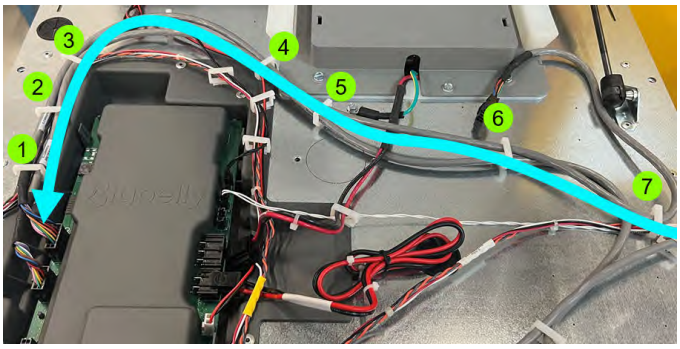
- **If** the Companion Component **does not have** an ACS Door Lock or a Waste Interface Lock, this completes the connection.
- **If** the Companion Component **does have** an ACS Door Lock or Waste Interface Lock, proceed as follows:

d. Retrieve the ACS WIL Extension Cable (ELCBB50014) from Component packaging, and plug it into the corresponding Left [1] or Right [2] ACS/WIL Companion port on the Solar Main Board.

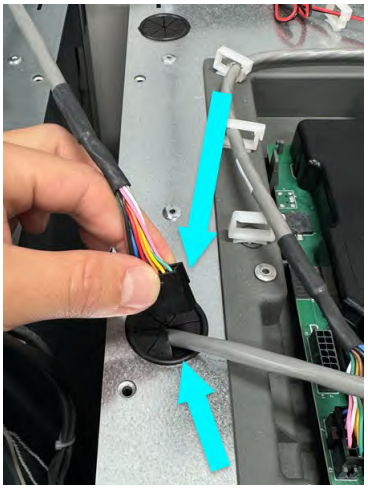


e. Route the ACS WIL Extension Cable (ELCBB50014) according to the table (page 25) below. Place it into the indicated Cable Clips. It will be passed through the grommet in the following step.

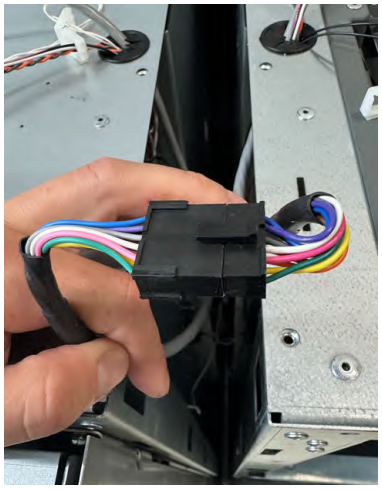
Table 9. ACS WIL Extension Cable (ELCBB50014) Routing

Routing for LEFT Companion	Routing for RIGHT Companion
 *Place in **one** indicated Cable Clip*	 *Place in **seven** indicated Cable Clips*

f. Feed the ACS WIL Extension Cable (ELCBB50014) through the grommet, and plug it into the ACS WIL Cable (ELCBB60013) already protruding from the Companion Component grommet.
Note: example shows connection for LEFT Companion.



Feed ACS WIL Extension Cable (ELCBB60014) through grommet

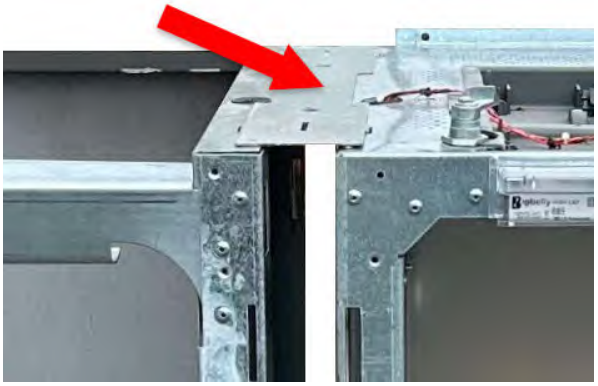


Plug into ACS WIL Cable (ELCBB60013)

This completes the connection.

Verify all connections have been made before proceeding. Doing this later will require disassembly.

5. Install the Connecting Plate via slots in the Top Plate to verify the multi-bin Kiosk is aligned and spaced properly. Adjust as needed. Do not install the screws yet.



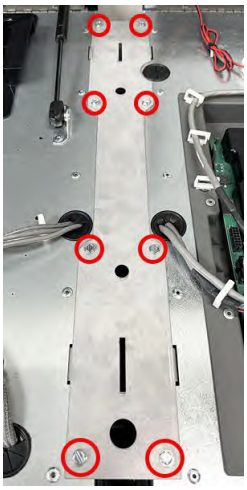
6. Choose a Component to install first. **If this is a three-Component Kiosk, the middle Component should be installed first.** If this is a two-Component Kiosk, the order does not matter.
7. Tighten/loosen the Stabilizing Bolts (circled in red) **on the first Component** with a 1/2" Hex Bit Socket until the unit is leveled and stable.

Red = Stabilizing Bolts; Blue = Screw Anchor

8. Drill (4) pilot holes through the holes (circled in blue) inside the **first** Bigbelly and into the mounting surface using the 3/8" Masonry Drill Bit and your Hammer Drill.
   - Minimum hole depth in the concrete is 2" below concrete surface (or roughly 4.75" below the interior floor).
9. Anchor the **first** Component directly to the surface by driving the (4) Screw Anchors provided with the Station into the surface using the Power Drill and 9/16" Hex Bit Socket.
10. Confirm the following:
    a. Screw Anchors are fully seated and not proud of the Component floor.
    b. The tops of all Components in the Kiosk are aligned with each other.
    c. The Rear Panels of all Components are in plane with each other.

    Tighten/loosen the Stabilizing Bolts as needed to make the Components level and stable.
11. Repeat Step 8 through Step 10 for the **second** unit and **third** unit (if applicable).

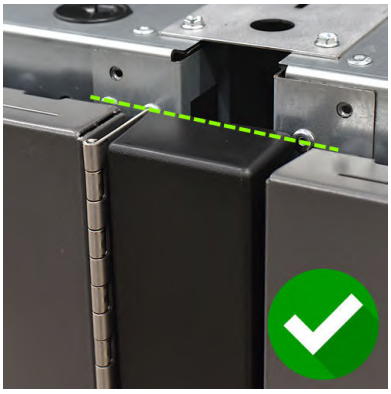
12. Fasten the Kiosk Connectors to the Components using the #10 screws provided (Qty. 8). Install using a Power Drill and 5/16" Hex Bit Socket.

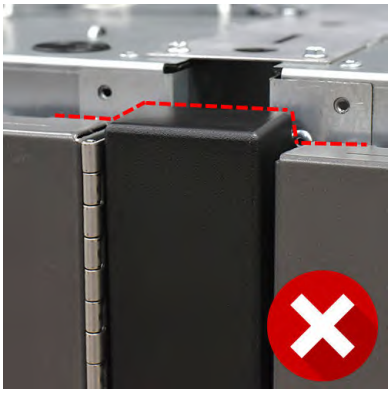


Kiosk Connector secured by screws (circled)

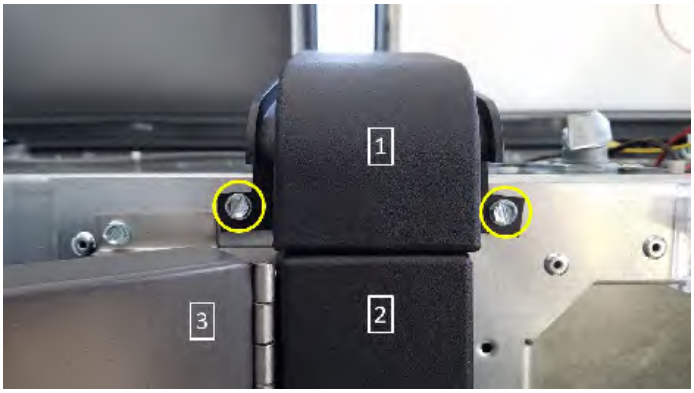
13. Install the front and back Fascia Strips by aligning the strips and then sliding them down to hook into the slots.

Ensure the Fascias are fully seated.



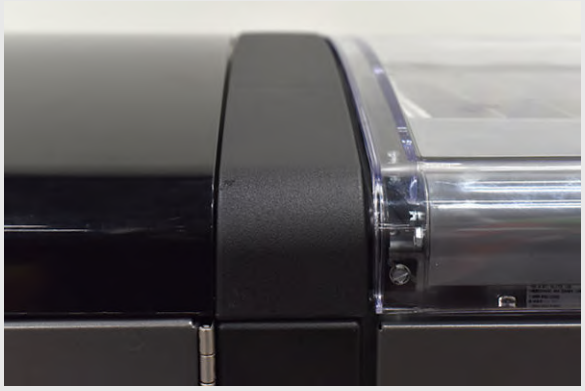


14. Slide the Tombstone into place and fasten it with two #10 Screws. Tighten to 22 in-lbs.



Tombstone [1] and Front Fascia Strip [2] secured by screws (circled)

Close the Top Doors to ensure the Tombstone is fully seated.



15. Replace the Inner Bin. Physical installation is complete.

Once the Component is properly installed, it must be activated and tested. Refer to Activation (page 32) and the Test Guide (BB6) for the necessary procedures. **If activation and testing are not performed, the Component may not function.**

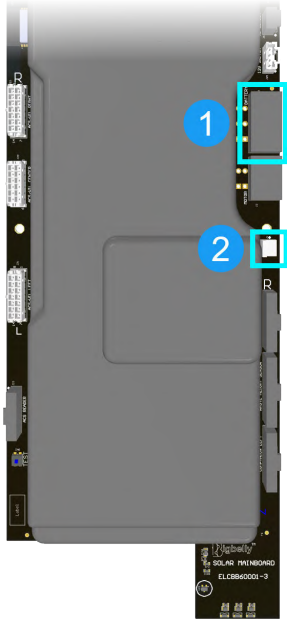
Do not remove the orange Front Door Release Cable Tie until installation and testing is complete.

Configuring Your Compactor For Indoor Use

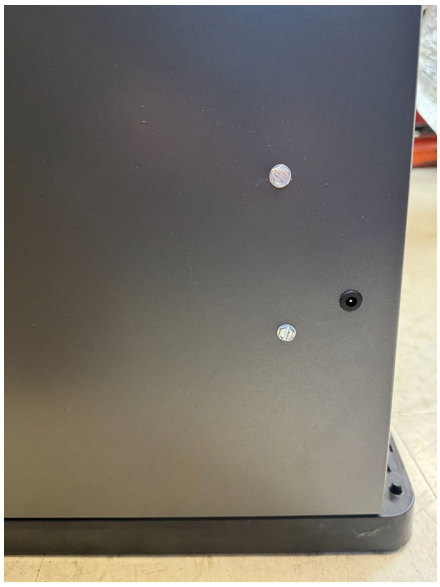
If your Component is dual configured for both indoor and outdoor use, and you would like to use it indoors, follow the steps below:

Install the AC Adapter

1. Unplug the Solar Panel Cable from the "Solar/AC Power" port [2] and connect the AC Adapter Cable instead.

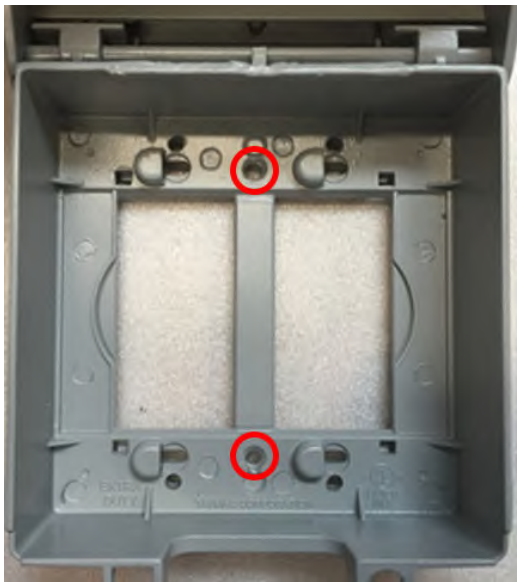


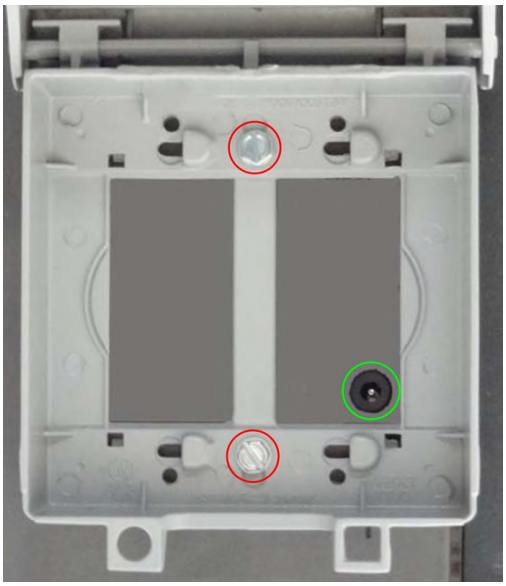
2. Locate the two #10 Screws on the bottom right of the Rear Panel and remove them. Set them aside for use in the next step.



3. Align the AC Adapter Enclosure with the holes left on the rear of the Component, and securely mount the AC Adapter Enclosure using the previously removed #10 Screws through the holes circled in red.

> The AC Adapter Enclosure protects the AC Adapter from damage or inadvertent disconnection from the Component.

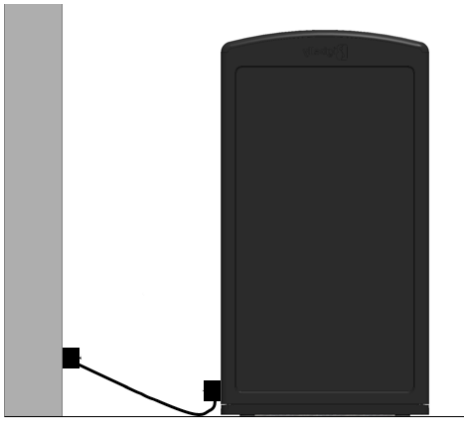




4. Plug the AC/DC Converter into the Cable Jack (circled in green above and below, right). If desired, plug the AC/DC Converter into an extension cord (not included).

> An extension cord is **not** included. The design intention is to plug the AC/DC Converter directly into an outlet. However, an extension cord may be used if desired or needed.

5. Once the AC Adapter Enclosure is securely installed (left image below), the AC/DC Converter or extension cord can be plugged into a power outlet (right image below).



6. If using an extension cord, coil the AC/DC Converter [1] and end of the extension cord [2] up into the Enclosure, as shown below left. Otherwise, simply coil any excess length of the AC/DC Converter into the Enclosure. Latch the AC Adapter Enclosure closed. The latch is located in the blue rectangle, below right. Be careful not to pinch the cables.

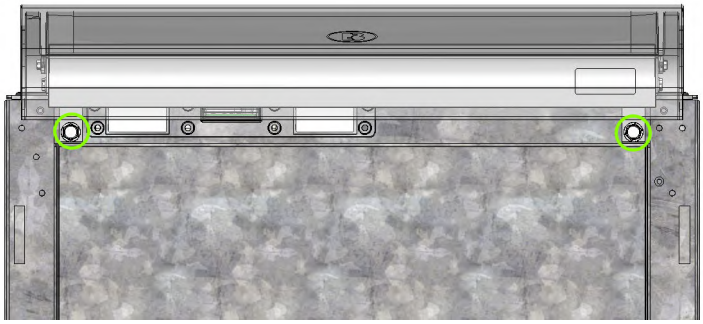
> If desired, secure the AC Adapter Enclosure closed using a padlock or Zip Tie in the hole circled in red, below right.

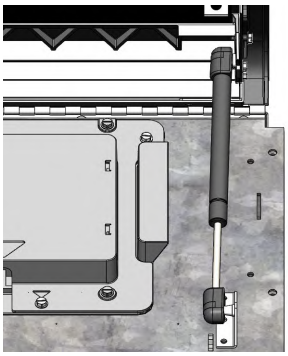
Activation: Turning On Your Components

All Components are shipped with the Battery disconnected. Once the Component has been installed, connect the Battery to the Main Board to power on the Component (does not apply to Companion or Element Components).

Installation should take place soon after receiving the Component. If the Components were shipped more than six months prior to installation, the Battery voltage may drift below a safe operating level. This can shorten the life of the Battery upon installation. The LED Operations Guide can help you determine whether the Battery is low.

1. **Open the Top Door**
   a. Open the Front Door using the Front Door Key or ACS Access Key.
   b. Locate the two 5/16" Screws in the Top Door tabs, circled below left. They must be removed with a Power Drill fitted with a 1/2" Socket before the Top Door can be opened.
   Keep these Screws to re-secure the Top Door once the work is completed.





   c. Lift the Top Door open. The door will be propped open by the Gas Spring, pictured above right.

2. **Connect Power**
   a. Plug the Battery Cable into the "Battery" port on the Main Board.
   b. If the Component has a Solar Main Board, confirm that the Solar Panel Cable or AC Adapter Cable is plugged into the "Solar/AC Power" port.

Figure 4. Solar Main Board Battery Port [1] and Solar/AC Power Port [2]

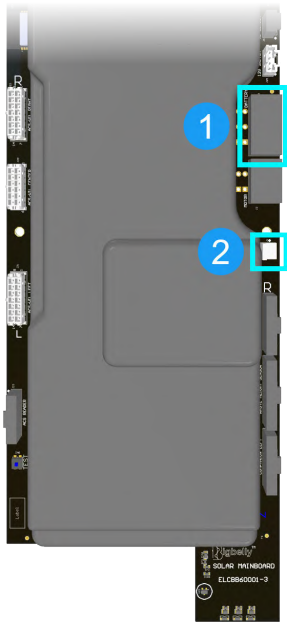
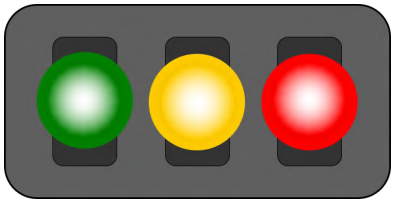
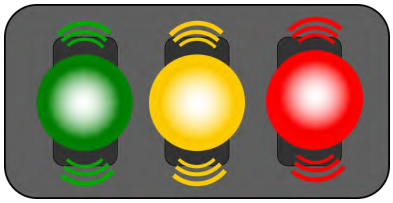


Figure 5. Non-Solar Main Board Battery Port

3. Check the LED indicators at the front of the Component to verify successful power-up. The LED panel will display a solid Green, Yellow, and Red light for 10 seconds before reverting to a flashing Green, Yellow, and Red while the door is open. If the Component is ACS-enabled, a rising, three-tone melody will also sound.



Solid LEDs for the first 10 seconds.



Flashing LEDs after 10 seconds

4. The Component is now powered on and ready for testing.

Testing Your Component

Once the Component has been installed and powered on, run any applicable tests to ensure it is operating as expected. Tests may vary depending on the Component configuration. If the Component has an ACS Front Door Lock, the Lock *must* be tested before the orange Front Door Release Cable Tie is removed.

See the Test Guide (BB6) in CLEAN for a complete set of instructions and for help determining which tests are appropriate. Possible tests are:

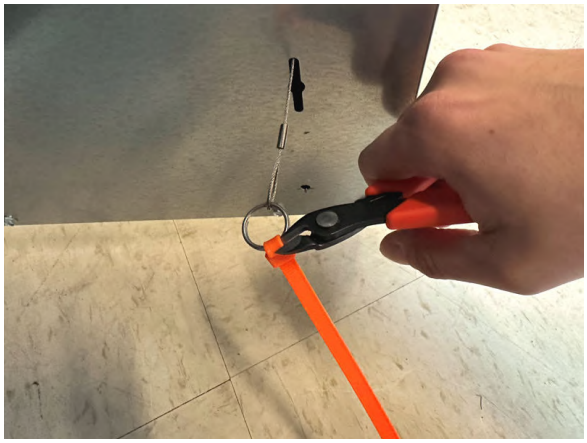
- ACS Front Door Lock Tests
- Various Sensor Tests
- Waste Interface Lock Test
- Manual Compaction Test

Removing The Front Door Release Cable Tie

Once the Component has been installed and successfully tested, **the orange Front Door Release Cable Tie must be removed** before the Component is left unattended. If the Front Door Release Cable Tie is not removed, anyone will have access to the Component at any time.

To Remove the Front Door Release Cable Tie:

1. Open the Front Door with the Front Door Key or ACS Access Key.
2. Locate the orange Front Door Release Cable Tie on the bottom corner of the Front Door.
3. Using Diagonal Cutters (Wire Snips), cut and remove the Front Door Release Cable Tie.



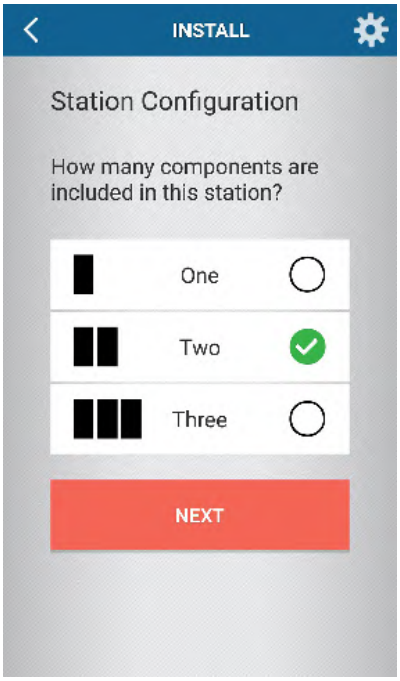
CLEAN Mobile Install Procedure

CLEAN-enabled Stations must be set up in CLEAN before you can begin managing them. This step is most easily performed during physical installation. Prior to installation, ensure you have received a CLEAN username and password, and that the CLEAN Mobile app has been downloaded to your mobile device.

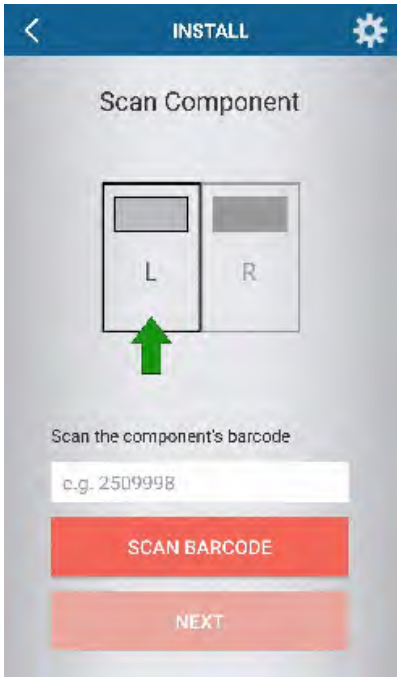
This example shows installation of a double Station, where the leftmost Component is configured for bottles and cans.

> Select the gear icon in the upper right corner to exit the installation at any time. CAUTION: exiting the installation before completion deletes all information entered for that Station.

1. Within the **CLEAN Mobile application**, select the **Install** button (circled in green below left).
2. Select the **number of Components** in the Station, then select **NEXT** to continue.

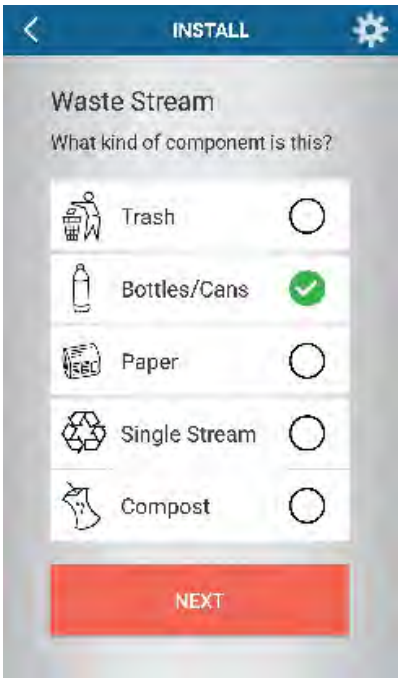


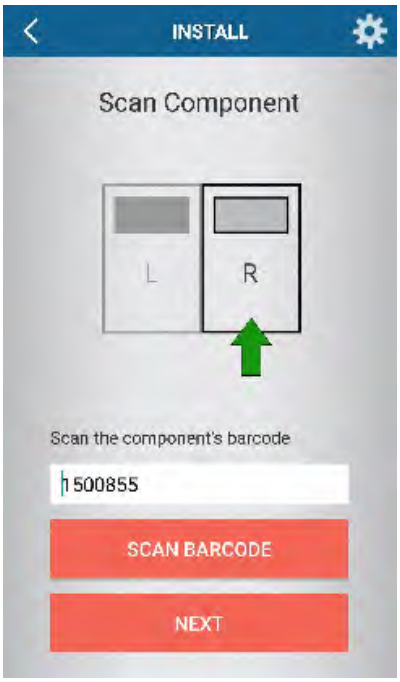
3. Open the Front Door of each Component. Select **SCAN BARCODE**, and scan the barcode of the *left* Component. Once the barcode has been scanned, select **NEXT** to continue.



The barcode is located to right of the LEDs

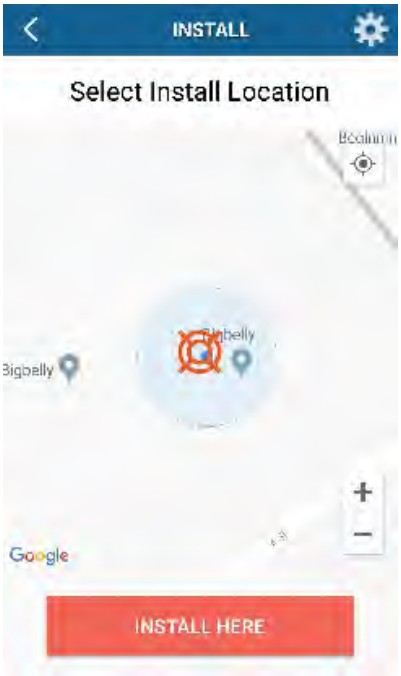
4. Select the intended **Waste Stream** for this Component, then select **NEXT** to continue.
5. Select **SCAN BARCODE**, and scan the barcode of the *right* Component. Select **NEXT**, followed by the intended **Waste Stream** for this Component. Select **NEXT** again to continue.





6. **Configure the location**. The blue area indicates your current GPS location. Use the cross-hairs to select the Station's proper location on the map, then select **INSTALL HERE**.

7. Enter a brief **Station Description** to specify the location. For example, "Main St & 1st Ave" or "Main Street, in front of gas station." Once a description has been entered, select **ADD PHOTO**.



8. **Take pictures** of each installed Component in the Station. Be sure to capture:

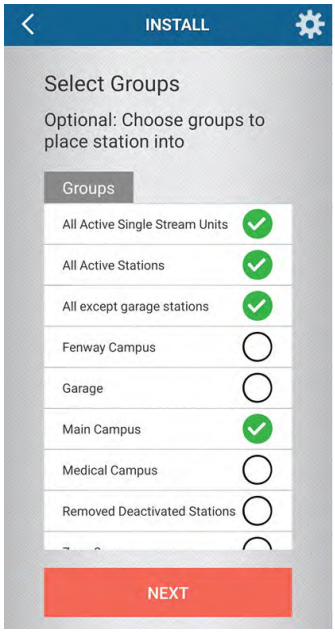
Front	Left Side	Rear	Right Side	Top Open

Note: Once the first photo has been added, additional photos may be taken.

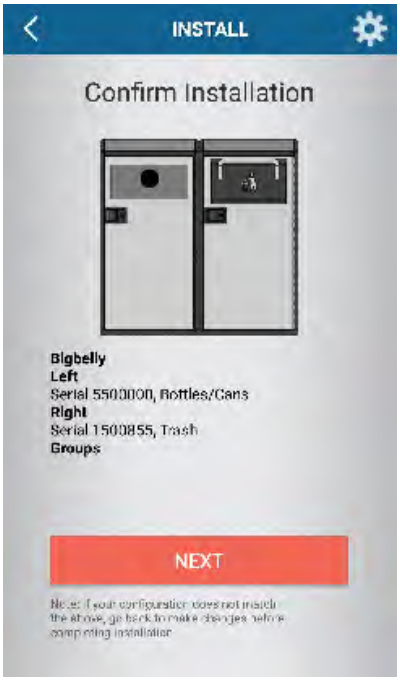
When uploading, label each photo according to its view (*Front, Left Side, Right Side, Rear, Top Open*). After all photos have been added, select **NEXT** to continue.

9. Select which **Groups** the installation should be added to. Multiple groups may be selected as shown below left. Select **NEXT** to continue.

10. A **confirmation** page will appear. Ensure all of the presented information is correct, including the serial numbers, location, and listed groups. Once satisfied, select **NEXT**.



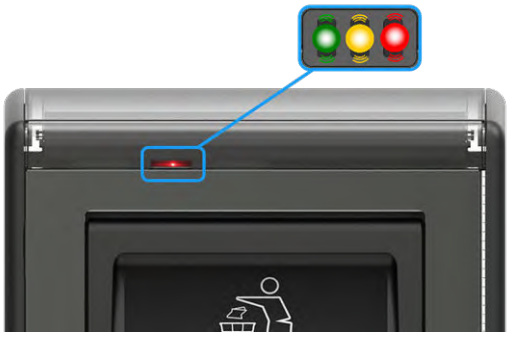
Note: the Groups list has a scrolling function, which may not be immediately apparent



11. Once the installation is confirmed, a **map showing the Station location** will appear. Select the "Add Another Station" button at the bottom of the page to install another Station, or select the gear icon in the upper right corner to be given the choice of exiting the installation.

LED Indicators

All Components except Elements include a set of three LED lights: one green, one yellow, and one red. The pattern of these lights will change to indicate the state of the machine. Both routine states and error states may be indicated by the LEDs.



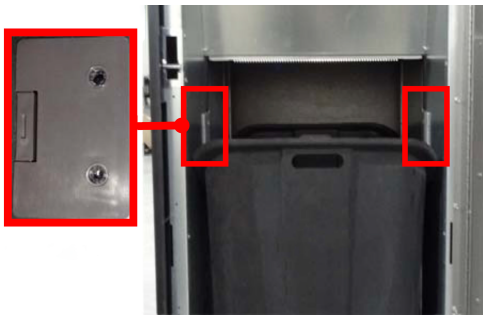
Many LED patterns are described throughout this document. For a centralized list of all possible LED patterns and their meaning, see the LED Operations Guide (BB6) in CLEAN.

Compacting Stations (Sense Max And Smart Max)

Smart Max and Sense Max Components are ready for use once they are properly installed and tested. If the Component is a "Smart," it should also be set up in CLEAN.

Users open the Waste Interface and place their litter into the Component. When the Waste Interface closes, the contents fall into the Inner Bin. When the waste reaches a pre-determined height, a Compaction Cycle is triggered.

During a Compaction Cycle, Smart Max and Sense Max Components activate the motor which lowers and raises the compaction Ram. The Ram moves down to compact the waste, stops, and returns to the raised “home” position. The Ram remains in the raised “home” position until a Compaction Cycle is triggered again.



Trash Height Sensors in the Side Walls detect the level of trash and are responsible for initiating automatic compactions

If the Front Door is opened at any point during a Compaction Cycle, the Ram will immediately stop and will remain stopped until the door is closed. To resume normal operation, close the Front Door.

For Smart Max and Sense Max Stations with a Chute, the Waste Interface Lock will lock the Chute prior to the Compaction Cycle and will release the Chute when the Compaction Cycle is completed.

Once the bin has become full, the LED panel will display a flashing red light to indicate that the waste should be collected. If the Station is active in CLEAN, a fullness notification will also be generated.

Manual Compaction Cycle (Smart Max And Sense Max Only)

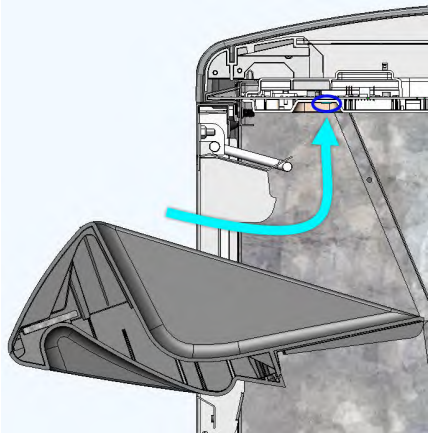
Activate a Manual Compaction Cycle to ensure the Compactor is ready to use.

It takes approximately one minute for the Compactor to complete a Manual Compaction Cycle. If the Height Sensors are blocked by waste, the Compactor may automatically run up to five Compaction Cycles to clear whatever is blocking the Height Sensors.

Initiate a Manual Compaction Cycle

> The Manual Compaction Test can be initiated on the Smart Max and Sense Max at any time, except during Test Mode

1. With the Front Door closed, open the Waste Interface.
2. Locate the recessed area (shown below right) on the left, inner, top surface of the Component. The recessed area (circled in blue in the cross-sectional image below left) is located above the Waste Interface opening and below the Component LEDs.



3. Place the Magnetic Fob against the raised circle until a solid green LED appears, then remove the Magnetic Fob and hand from the Component and close the Waste Interface. During the Compaction Cycle, some noise will be produced by the compactor, and the solid green LED will stay lit.

> Chute-equipped Components are unable to compact if the Chute remains open. Close the Chute within five seconds of initiating the Cycle to allow the Waste Interface Lock to engage. Once the Compaction has begun, pull on the Waste Interface to confirm that it has locked.

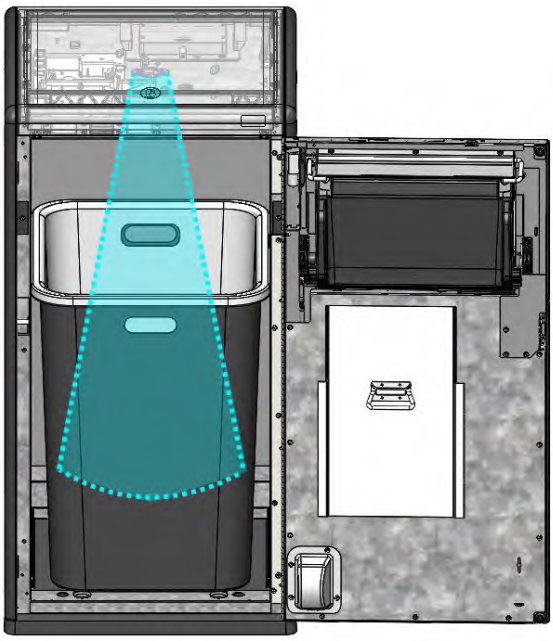
4. Once the Manual Compaction Cycle completes successfully, the solid green LED will transition to a blinking green LED to indicate that it is not full or to a blinking red LED to indicate that it is full.
5. If any of the following occur, check all wiring and connections (including the Fuse) and initiate another Manual Compaction Cycle.
   - The Manual Compaction Cycle does not complete
   - The Waste Interface Lock fails to engage (Chute-equipped Components only)
   - The solid red LED turns on during or after the Manual Compaction Cycle
   - The Component restarts

   If any of these failures persist, contact Bigbelly Support at +1.888.820.0300.

6. If this is a new installation and the Compaction completes successfully, the Component is ready for use.

Non-Compacting Stations (Sense And Sense Max Only)

Non-compacting Stations are ready for use once they have been properly installed and activated in CLEAN (Smart Stations only). Users place litter or recycling material into the Component via the Waste Interface or the Faceplate. The Top-Down Height Sensor in the Component measures the level of waste. Once the bin is full, the LED panel will display a flashing red light to indicate that the waste should be collected. If the Station is active in CLEAN, a fullness notification will also be generated.



The Top-Down Height Sensor in the Top Plate detects the level of waste in the bin

Compost Stations

Compost Stations are ready for use once they have been properly installed and activated in CLEAN. Once active in CLEAN, the Stations will also become available in the end user's Compost app. The default state of the Waste Interface is in the locked position. When a user wants to deposit materials into the Component, they must unlock the Waste Interface via the Compost app. Once the materials have been deposited, the Waste Interface returns to the locked state.

The Top-Down Height Sensor in the Component measures the level of waste. Once the bin has become full, the LED panel will display a flashing red light to indicate that the waste should be collected, and the Component will become unavailable in the Compost app until the bin has been emptied. A fullness notification will also be generated.

Element Stations

Element Stations are ready to use as soon as they have been installed. Users place litter or recycling materials into the Component via the Waste Interface or the Faceplate. Element Stations have no electronics to indicate when they are full and must be physically checked.

Initiating A Service Visit (Compacting Components Only)

A Service Visit may be initiated on any **CLEAN-enabled, Compacting Component** prior to any non-collection visit. This prevents any door openings during the visit from being counted as a collection and impacting the account efficiency rating in CLEAN.

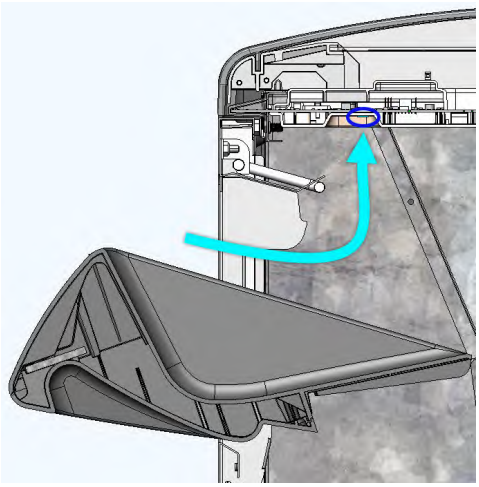
The Service Visit can only be initiated on a Hub, but will include any Companions that are part of the Station Kiosk. The Service Visit will clear automatically once the Front Door has been securely closed.

Follow the procedure below any time a door is opened during a non-collection visit or after the Station has been power cycled to ensure the door opening event is ignored and does not affect collections data.

Initiate a Service Visit (Compacting Components Only)

1. Open the Front Door using the Front Door Key or ACS Access Key. All three LEDs (green, yellow, and red) will flash.
2. Locate the recessed area (shown below right) on the left, inner, top surface of the Component. The recessed area (circled in blue in the cross-sectional image below left) is located above the Waste Interface opening and below the Component LEDs.

> For this procedure, the Front Door must be open.



3. Place the Magnetic Fob against the raised circle (depicted above, right) until only the green and red LEDs flash and the yellow LED stops flashing.
4. Service the Station.
5. To exit Service Mode, firmly close the Front Door.

Collections And Fullness

The following section on Fullness and Age Thresholds applies to CLEAN-Enabled Components only:

Fullness Threshold & Age Threshold

The Component will indicate the waste is Ready to Collect once either the Fullness Threshold or the Age Threshold is exceeded, whichever occurs first.

The **Fullness Threshold** controls how full a bin is allowed to become before the Component indicates it is Ready to Collect.

- The default Fullness Threshold for a Max Component is set to 60%.
- The default Fullness Threshold for a Non-Compacting Component is set to 80%.

The **Age Threshold** controls the maximum time allowed to pass between collections before the Component indicates it is Ready to Collect.

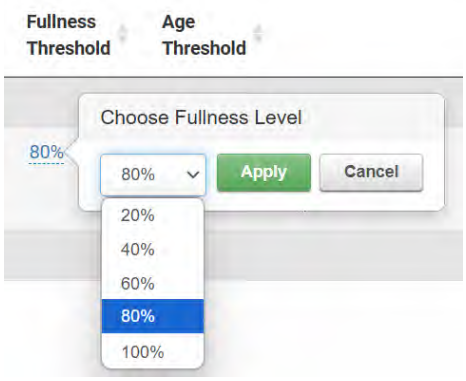
- The Age Threshold is left disabled by default.

Both thresholds can be adjusted in CLEAN by an account Administrator.

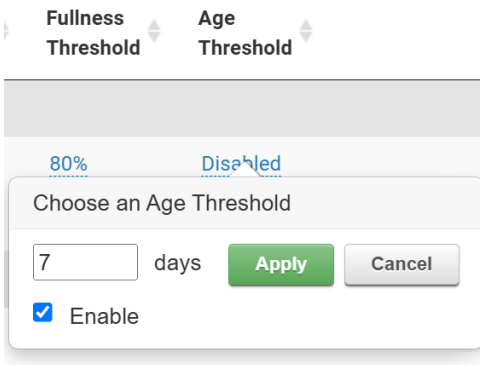
1. Log into CLEAN. Navigate to the Assets Page.

2. On the Assets Page, configure either threshold for the Component. Changes will take effect during the Component's next communication with CLEAN, which may take up to 12 hours.

The **Fullness Threshold** can be adjusted to twenty (20) percentage increments (20%, 40%, 60%, 80%, or 100%).



The **Age Threshold** can be adjusted in daily increments between one (1) and sixty (60) days.



Liner Bags

The use of Liner Bags is highly recommended to keep your Stations fresh. Always ensure that you are using the appropriately sized Liner for your bin. See Liner Bags for your 6th Generation Stations (page 14) in the "Introduction: BB6 Product Specifications" section of this Manual for the appropriate liner specifications.

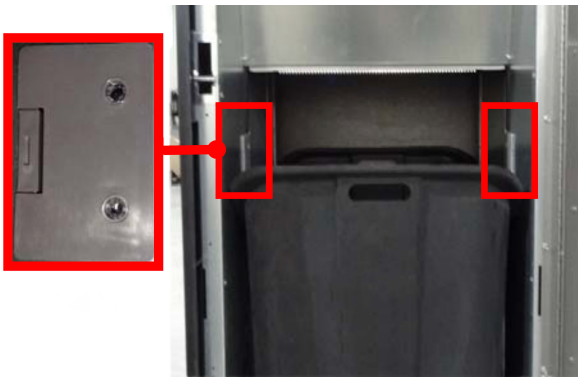
Using incorrect Liner Bags or not using the Inner Bin Sleeve with a Non-Compactor Bin may cause false alerts and lead to inaccurate collection data.

How to Install Liner Bags in Your Components

1. Confirm that you have purchased the correct Liner Bags (page 14).
2. Open the Liner Bag completely by filling it with air.
3. Insert the opened Liner Bag into the Inner Bin.
4. Fold the top of the Liner Bag over the top edge of the Inner Bin while pushing the Liner Bag against the inside of the Inner Bin. This will help keep the Liner Bag away from the center of the Inner Bin.

   Ensure that no air is trapped beneath the Inner Bin. An inflated Liner Bag may be misinterpreted as fullness by Non-Compacting Components.

5. If this is a Compacting unit, confirm that the Liner Bag is not bunched up on the sides, which could block the Height Sensors in the Side Walls.



6. If this is a Non-Compacting Component, proceed to installing the Inner Bin Sleeve.

Installing An Inner Bin Sleeve (Non-Compactor Bins Only)

Non-Compactor Components use a Top-Down Height Sensor to detect the waste fullness level within the Inner Bin. The Inner Bin Sleeve improves the accuracy of Height Sensor readings by holding the Liner Bag flush against the sides of the Inner Bin, eliminating possible interference with the Height Sensor.

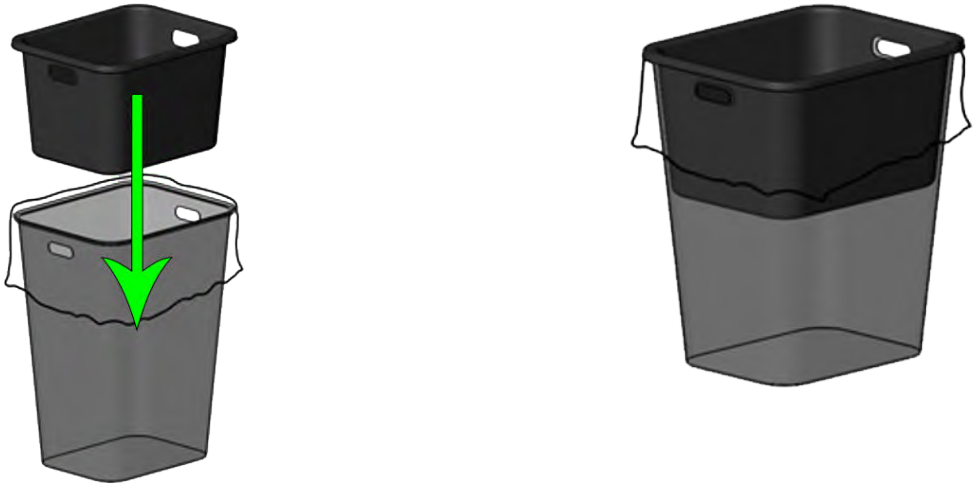
Failure to install the Inner Bin Sleeve in a Non-Compactor Bin may result in inaccurate or premature waste fullness readings. Follow the procedure below to properly install the Inner Bin Sleeve.

Install the Inner Bin Sleeve in a Non-Compactor Bin

1. First install the Liner Bag, taking care to press out as much air from between the Inner Bin and Liner Bag as possible, such that the Liner Bag is flush with the Inner Bin.

2. Align the Inner Bin Sleeve above all four sides of the Inner Bin and carefully slide the Inner Bin Sleeve down into the Inner Bin. The Inner Bin Sleeve should be fully seated in the Inner Bin, as shown below.

> Ensure the Liner Bag does not slip into the Inner Bin while inserting the Inner Bin Sleeve.



Above left shows how to insert the Inner Bin Sleeve. Above right shows the Inner Bin Sleeve properly installed.

Waste Removal & Routine Visual Inspection

A flashing red LED indicates when it is time to remove waste from the Component. Refer to LED Indicators for more information regarding the LEDs.

Always ensure that you are using the appropriately sized liner for your bin. Liner specifications can be found in the Product Specifications (page 12) portion of this Manual.

Waste Removal Procedure

1. Open the Front Door with the Front Door Key or the ACS Access Key.
2. Push any loose waste into the Inner Bin and remove the Inner Bin from the Component.
3. Perform a Visual Inspection. **A Visual Inspection should be performed each time waste is removed.** Refer to the following checklist to ensure an effective inspection:
   - Ensure no debris has fallen behind the Inner Bin
   - Ensure the Height Sensors are clear of debris
   - Remove any debris in or around the Waste Interface or Faceplate area
4. Remove the bag or dump the contents of the Inner Bin directly into the truck. If this is a Non-Compacting Component, remove the Inner Bin Sleeve first.

> Be sure to follow proper ergonomic procedures for waste removal. The average weight of the Inner Bin when full is 25-30 pounds (11-14 kg), but weight may vary depending on the waste mix and the Fullness Threshold or Age Threshold setting (see Fullness Threshold & Age Threshold (page 42) for details).

5. Replace the bag, following the procedures outlined above (page 42). If this is a Non-Compacting Component, ensure that no air has become trapped beneath the Liner Bag and that the Inner Bin Sleeve is re-installed.

6. Clean the Component if necessary. Odors exist when layers of food collect on the Waste Interface and Ram. Keep the Component clean and free of odor by regularly wiping off any buildup with an approved product from Approved Cleaning Products (page 52).

> **TIP**
> An Odor Mask Kit can help with odor. Installation is simple, and the scented discs are easy to replace. Contact your distributor or Bigbelly to order.

7. Return the Inner Bin to the interior of the Component. Push it all the way to the back, and ensure the Liner Bag does not block the Front Door Latch or the Height Sensors in the Side Walls if this is a Compacting Component.

> If the Inner Bin does not slide completely into the Component, check for stray waste that may have fallen behind the Inner Bin.

8. Securely shut and lock the Front Door. Verify operations are normal as indicated by a blinking green LED (Smart Max, Sense Max, and Compost) or by unlit LEDs (Smart and Sense).

> Failure to securely shut and lock the Front Door could result in damage to the component and possible harm to users. If the Front Door is not properly secured, the Component will stop compacting and will generate an alert in CLEAN (if CLEAN-equipped).

Battery Overview

Each powered Component will identify when Battery replacement is required. If the Battery requires a charge (Compacting or Compost Components only) or needs to be replaced, the appropriate alert will be sent to CLEAN. If the Component is not CLEAN-enabled, the LED panel will also indicate whether the battery has become low or needs to be replaced. Reference the LED Operations Guide (BB6) to determine whether the LED panel is reporting a battery-related issue.

Rechargeable Battery Overview

Rechargeable 12V Batteries are used in the Sense Max, Smart Max, and Compost. The Sense Max and Smart Max use a 28Ah Battery while the Compost uses a smaller 18Ah Battery. These Batteries are designed to be charged regularly by either the Solar Panel (outdoor Stations with a clear view of the sky only) or by the AC Adapter (indoor Stations or Stations with poor access to the sun). The Solar Panel or the AC Adapter must be plugged into the Main Board in order to charge the Battery.

> If the rechargeable Battery goes longer than three (3) months without charge from either the Solar Panel or by the AC Adapter, the Battery will lose capacity and may fail at an accelerated rate.

Non-Rechargeable Battery Overview

Non-rechargeable Batteries, made of up to four (4) 6V lantern batteries, are used in the Sense or Smart. The Component slowly draws power from the Battery until it is depleted.

Replacing A Battery

To replace a Battery, refer to the procedural documents hosted on the CLEAN Support Page, or reach out to Bigbelly Support for more information.

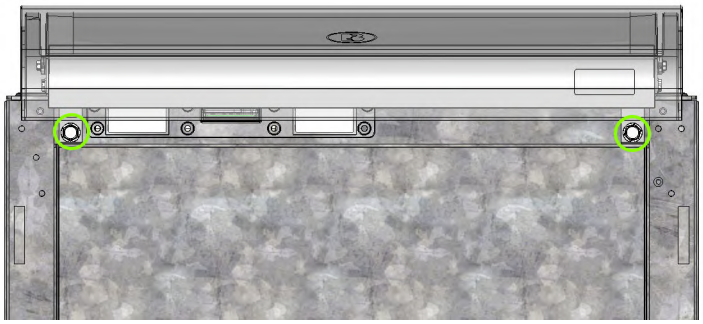
Preparing A Component For Storage

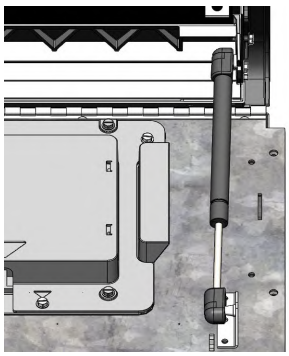
Certain steps must be taken before placing a Component in storage.

1. If this is a CLEAN-enabled Component, log into CLEAN to change the Component's **status** to "In Storage" and update the **location** (an Administrator account is required for this action). The video below provides detailed instructions:

> Failing to update the status or location of a Component prior to removal may result in unwanted CLEAN alerts or may result in the Component becoming "misplaced" over time.

2. Dispose of any waste from the Inner Bin.
3. Shut down the Component.
   a. **Open the Top Door**
      i. Open the Front Door using the Front Door Key or ACS Access Key.
      ii. Locate the two 5/16" Screws in the Top Door tabs, circled below left. They must be removed with a Power Drill fitted with a 1/2" Socket before the Top Door can be opened.
      Keep these Screws to re-secure the Top Door once the work is completed.





      iii. Lift the Top Door open. The door will be propped open by the Gas Spring, pictured above right.

b. **Shut Down the Hub**

i. Unplug the Battery Cable from the "Battery" port on the Main Board.

ii. If the Component has a Solar Main Board, unplug the Solar Panel Cable or AC Adapter Cable from the "Solar/AC Power" port.

Figure 6. Solar Main Board Battery Port [1] and Solar/AC Power Port [2]

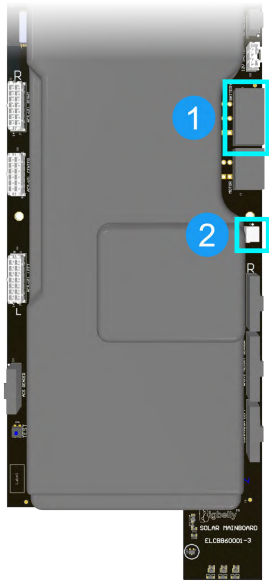


Figure 7. Non-Solar Main Board Battery Port

4. If separating a multi-bin Kiosk, follow this procedure. Otherwise, skip to Step 5.

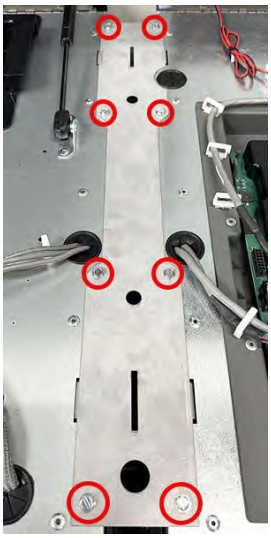
Separate Kiosk Components

a. Detach the Tombstone [1] by removing two #10 Screws (circled in yellow) with a 5/16" Socket. The front Fascia Strip [2] and the Front Door [3] of the left Component are labeled for orientation purposes.

b. Remove the front and back Fascia Strips [2] by sliding them upward and unhooking from the slots.

c. Remove the eight #10 Screws (in red below) securing the Connecting Plate and remove the Connecting Plate.

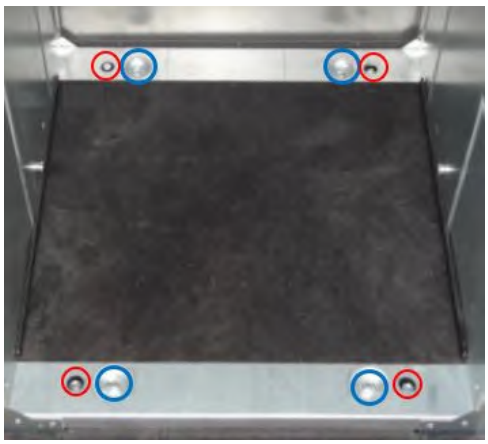
d. Disconnect all cables beneath the Connecting Plate.



5. **Unmount the Component**

a. Remove the Inner Bin.

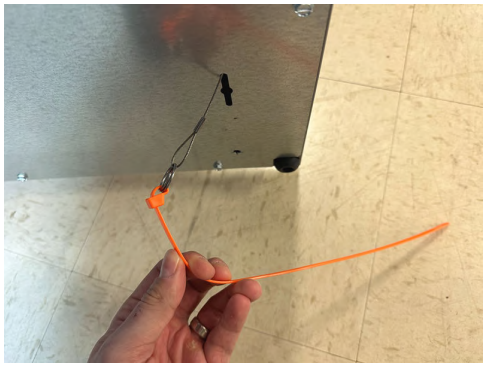
b. Use a Power Drill and 9/16" Hex Bit Socket to remove the four Screw Anchors (circled in blue below) securing the Component to the mounting surface.



c. Remove the Component from the mounting surface.

> Do **not** close the Front Door!

6. Lower the Top Door, and re-install the two 5/16" screws into the Top Door tabs.
7. **If the Component requires an ACS Key to unlock**, install a long Zip Tie to the end of the Front Door Release Cable to allow re-entry to the Component while it is powered down.
   a. **Source** an appropriate Zip Tie. Bright orange, 14.5" long zip ties can be obtained through Bigbelly, or a similar item may be sourced locally.
   b. **Attach** the Zip Tie to the split ring of the Front Door Release Cable and securely tighten it.
   c. **Wrap** the Zip Tie around the bottom edge of the Front Door.
   d. If desired, **crimp** the Zip Tie by pinching it approximately 1.25" from the outer surface of the Front Door with a pair of pliers so that the Zip Tie stands straight up.



Attach

Wrap

Crimp

8. Replace the Inner Bin and securely shut the Front Door. The Component is now ready to be transported as described in Transporting the Component Without a Pallet (page 20)

> **NOTE**
> If planning to store a Component with a rechargeable Battery for an extended period of time, plan to recharge the Battery every three months. **Battery life decreases during extended storage.** The Battery can be placed on a charger or into a Component that has access to Solar or AC power.

Scheduled Maintenance

Scheduled maintenance for all Components should take place once per quarter. Extra maintenance is recommended for the first year, specifically at three (3) and six (6) months, to ensure the Component is running smoothly.

Third & Sixth Month Maintenance

Complete the following steps once a newly installed Component has been installed for three (3) and six (6) months.

1. Complete a detailed visual inspection, including all actions in the checklist below:
   - ☐ Ensure the **Ram and Waste Height Sensors** are clear of debris (Smart Max and Sense Max only)
   - ☐ Check the **Solar Bubble** for damage (Smart Max and Sense Max and Compost only)
   - ☐ Check the **exterior** for any graffiti, scratches, or rust
   - ☐ Ensure any **Waste Interfaces** open and close properly
   - ☐ Ensure any **Foot Pedals** work properly
   - ☐ Open the Front Door, remove the Inner, and clear any debris from **behind the Inner Bin**
   - ☐ Ensure all **Front and Top Doors** close and lock securely
2. Check the **structural stability** of the Component. Check the mounting and leveling of the Component to ensure it is stable. Tighten the bolts or adjust the leveling as needed.

Ongoing Quarterly Maintenance

1. Complete the detailed visual inspection along with the structural stability check, as detailed above in Third & Sixth Month Maintenance (page 50).
2. Inspect the rechargeable **Battery** (if applicable).
   a. Check the Battery terminals for corrosion.
   b. Test the Battery with a battery load tester. The voltage should be above twelve (12) volts. If the voltage is less than twelve (12) volts, replace the Battery.
3. Clean the **Waste Height Sensors** (if applicable). Refer to Cleaning the Height Sensors (page 53) for the detailed procedure.
4. Inspect the **Main Board** (if applicable) for any signs of corrosion.
5. Check for any loose connections in the **electronics** (if applicable). Reattach any loose connections and ensure each plug is firmly connected.

> Companions are not equipped with a Battery or Main Board but do possess other Electronics. Elements do not have any Electronics.

Power Maintenance - As Needed

Check and replace the Battery and Main Board as needed. Refer to the appropriate documents in CLEAN for detailed instructions regarding how to replace the Battery and Main Board.

Cleaning

Routine Cleaning Maintenance

Routine cleaning of Bigbelly Components is required to maintain a high-quality user experience and optimal equipment performance. Routine cleaning includes scraping or removing debris such as gum, dirt, and stickers when needed, in addition to power washing the Components at least twice per year.

TIP
If the Component is located in hot climates or near food vendors, consider cleaning frequently to ensure fresh smelling Components.

Prior To Washing

1. Select cleaning products that are listed in Approved Cleaning Products (page 52). **Do not use any acid-based cleaning products. These will damage the Component**.
2. Open the Front Door using the Front Door Key.
3. Remove the Inner Bin and any of its contents.

IMPORTANT
The electronics under the Top Door are not waterproof and should never be washed!

Power Washing

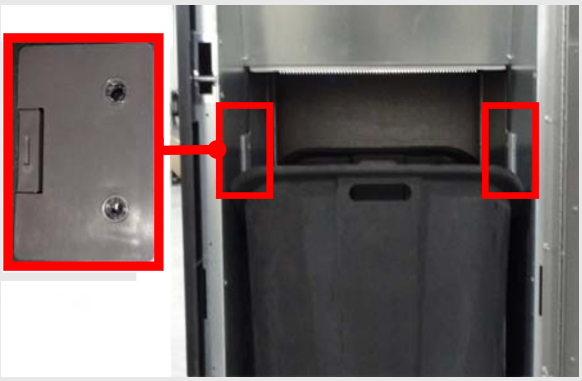
Power washing is the recommended method for deep cleaning Components and should remove normal amounts dirt, grime, and staining.

TIP
Power washing can be performed by EPA/CWA Certified professionals if desired. Verify that the contractor is compliant with all local, state, federal and Clean Water Act regulations.

Power wash the exterior and interior of the Component using high-pressure hot water and cleaning products listed in Approved Cleaning Products (page 52). Direct the power wash nozzle **downward** on all of the exterior and interior sides of the Component and Front Door.

Do not spray upward inside the Component or near the electronics. The electronics are not waterproof and will be damaged by water.

When power washing the interior of Compacting Components, use caution to avoid contact with the Height Sensors located on the left and right sides of the interior.



Cover the Height Sensors to prevent pressurized contact. A highly pressurized water stream may damage the Height Sensors.

When power washing the exterior of a wrapped Component, take caution not to get the pressure nozzle too close to the wrapped surface. Concentrated high pressure at close distance may have the ability to tear or remove the wraps.

Once the Component is cleaned, power washing the surrounding area is recommended to keep the Component clean longer.

Hand Washing

If power washing is not an option, Components may also be washed by hand. Use a non-abrasive sponge and Approved Cleaning Products (page 52) only.

Do not spray water upward inside the Component or use a sponge under the Top Door. The electronics are not waterproof and will be damaged by water.

Once the Component is cleaned, it is recommended to sweep or clean the surrounding area to keep the Component clean longer.

Approved Cleaning Products

Table 10. Approved Applications
Use products only on the surfaces indicated, and always follow the manufacturer's directions for proper use.

Product	Plastic Sides	Powder-Coated Steel	Top Bubble	Decals/ Stickers	Rinse Off After Use
Recommended Product World's Best Sensitive Surface Graffiti Remover	✓	✓	✓	✓	YES
Biodegradable TagAway	✓	✓	✓	x	YES
Ecolab Daily Disinfectant Cleaner[4]	✓	✓	✓	✓	YES
Ecolab Rapid Multi-Surface Disinfectant Cleaner[4]	✓	✓	✓	✓	YES
Facilipro 89 Concentrated Industrial Degreaser[4]	✓	✓	✓	✓	YES
Goo Gone Citrus Solvent[1]	✓	✓	✓	x	YES
Goo Gone Spray Gel[1]	✓	✓	✓	x	YES
Graffiti 'Safewipes'[1]	✓	✓	✓	x	YES
Isopropyl Alcohol[2]	✓	✓	x	x	YES
Mötsenbocker's Liftoff #4[1]	✓	✓	✓	x	YES
NOVUS Polish (1, 2, & 3)[3]	x	x	✓	x	NO
Simple Green	✓	✓	✓	✓	NO
WD-40	✓	✓	✓	x	NO
Windex or Windex with Ammonia	✓	✓	✓	✓	NO

1 Will remove silk-screened graphics, decals, or stickers.

2 Do NOT use on Top Bubble. Use of isopropyl alcohol on the Top Bubble will void the warranty.

3 Use ONLY on the Top Bubble. See "Clean Solar Bubble" instructions on the CLEAN Website.

4 Must be diluted appropriately per manufacturer's instructions.

Table 11. Product Information

Do NOT use products containing Muriatic acid or acetone. Use of these substances or other products not listed may damage the Component and will void the warranty.

Product	Uses/Claims	Manufacturer
Biodegradable TagAway	Graffiti remover for smooth & painted surfaces	Equipment Trade Service
Ecolab Daily Disinfectant Cleaner[4]	One step, low-dilution, multi-purpose disinfectant	Ecolab Inc.
Ecolab Rapid Multi-Surface Disinfectant Cleaner[4]	4-in-1 disinfectant cleaner	Ecolab Inc.
Facilipro 89 Concentrated Industrial Degreaser[4]	Extra heavy-duty degreaser	Ecolab Inc.
Goo Gone Citrus Solvent[1]	All-purpose cleaner	PurposeBuilt Brands
Goo Gone Spray Gel[1]	Degreaser & cleaner	PurposeBuilt Brands
Graffiti 'Safewipes'[1]	For signage; painted & smooth surfaces	Urban Restoration Group
Isopropyl Alcohol[2]	Removes sticky residue, permanent marker	Various
Mötsenbocker's Liftoff #4[1]	Spray paint & graffiti remover	Stoner Inc.
NOVUS Polish (1, 2, & 3)[3]	Cleans & restores plastic	Novus 2 LLC
Simple Green	All-purpose cleaner	Sunshine Makers Inc.
WD-40	Cleans dirt, grime, grease; dissolves adhesives	WD-40 Co.
Windex or Windex with Ammonia	Glass & multi-surface cleaner	S. C. Johnson & Son Inc.
World's Best Sensitive Surface Graffiti Remover	Graffiti remover for multiple surfaces	Urban Restoration Group

1 Will remove silk-screened graphics, decals, or stickers.

2 Do NOT use on Top Bubble. Use of isopropyl alcohol on the Top Bubble will void the warranty.

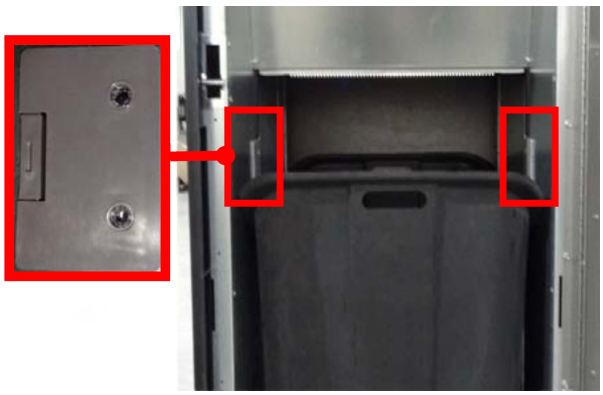
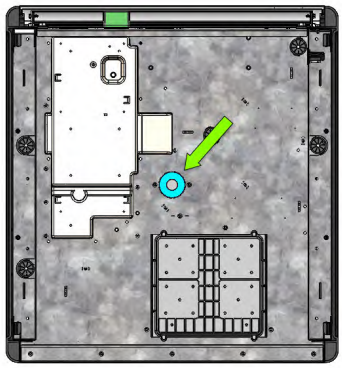
3 Use ONLY on the Top Bubble. See "Clean Solar Bubble" instructions on the CLEAN Website.

4 Must be diluted appropriately per manufacturer's instructions.

Cleaning The Height Sensors

It is important to maintain Height Sensor cleanliness in order to avoid false fullness alerts and unnecessary compactions.

- The Height Sensors in a Compacting Component are on either side of the interior compartment, as shown below left.
- The Top-Down Height Sensor in a Non-Compacting Component is located directly above the Inner Bin, mounted to the underside of the cabinet top.

Compactor Height Sensor Locations	Non-Compactor Height Sensor Location (from below)
	

Cleaning the Height Sensor(s)

1. Open the Front Door using the Front Door Key or ACS Access Key.
2. Remove the Inner Bin.
3. Spray Windex onto the Height Sensor(s) and allow to soak for a moment before wiping the surface of any dirt or residue with a clean paper towel. Repeat as necessary.

> **TIP**
> Use a cotton swab or Q-tip to clean out fine dirt or residue.

4. Without replacing the Inner Bin, securely close the Front Door.
5. Verify that the LED panel is flashing green (Max or Compost) or is unlit (Smart or Sense), to indicate a "not full" status.
   - If the LED panel shows a flashing red light, the Height Sensor(s) may still be dirty, or there may be a problem with the Height Sensor(s).
6. Open the Front Door, replace the Inner Bin and securely close and lock the Front Door.

Graffiti Removal & Cover-Up

Tools & Materials

Sticker Removal

- Plastic Putty Knife
- Cleaning supplies listed below, if required

Graffiti Removal

- World's Best Sensitive Surface Graffiti Remover (all surfaces)
  If World's Best is not available, the following alternative products have also been tested:
  - Krud Kutter Graffiti Remover (for Top Bubble, Front Door, Rear Panel)
  - Goof Off Graffiti Remover (for Waste Interface, Side Skins)
- Clean Shop Rags
- Water
- Scrub Brush

Side Skin Graffiti Cover-Up

- 7" Plastic Paint Tray
- 6" Mini Roller Handle
- 6" x 1/4" Nap Woven Fabric Roller Covers

- SEM 39104-LV Flexible Black Bumper Paint (further referred to as black paint)
- SEM 39293 Honda Black Spray Paint (only to be used after roll-on paint has been applied, and only for smaller areas)
- Simple Green All Purpose Spray (further referred to as Simple Green)
- Flathead Screwdriver
- Rubber Mallet
- Clean Shop Rags
- Water
- "Wet Paint" Signage

Graffiti & Sticker Removal

STICKER REMOVAL
Use a plastic putty knife to aid in the removal of stickers.

Table 12. Graffiti Removal

	Cleaning Product	Surface	Graffiti Removal Procedure
	Preferred World's Best Sensitive Surface Graffiti Remover	ALL surfaces	1. Pour a small quantity of the remover into a small plastic bucket. 2. Apply the remover to the graffiti with the scrub brush. 3. Agitate the graffiti with the brush as if you were writing with it. 4. Wipe the dissolved graffiti away by using a clean, damp rag.
	Krud Kutter Graffiti Remover	[1] Top Bubble [2] Front Door [3] Rear Panel	1. Apply product to the graffiti. Allow the solution to sit on the surface for 5 minutes. 2. Loosen the graffiti using the scrub brush, and wipe with the rag. Repeat as necessary. 3. Wipe the surface clean with water and a clean rag.
	Goof Off Graffiti Remover*	[4] Waste Interface [5] Side Skin (not pictured - BB5 Only)	1. Apply product to the graffiti. Allow the solution to sit on the surface for 30 seconds. 2. Loosen the graffiti using the scrub brush, and wipe with the rag. Repeat as necessary. 3. Wipe the surface clean with water and a clean rag.

***GOOF OFF**
Top Bubble: Do NOT apply to Top Bubble. Damage will result.

Front Door & Rear Panel: Can be used on the Front Door and Rear Panel, but the glossy finish will be removed. The surface must be wiped thoroughly with water and a clean rag to remove any tacky residue.

Side Skin Graffiti Cover-Up

When Side Skin graffiti removal is impossible, paint the Side Skin using the Side Skin Graffiti Cover-Up Painting Procedure (page 56).

The painting procedure can be followed with or without removing the Side Skin from the Component. If the Side Skin must be removed, follow the appropriate Side Skin replacement procedure listed below for the Component:

- Side Skin Replacement: https://clean.bigbelly.com/support.jsp?docId=502

Side Skin Graffiti Cover-Up Painting Procedure

1. Use **Simple Green** to remove debris from the Side Skin. Wipe down the Side Skin surface with water and clean rags, and dry completely.
2. Use rags or drop cloths to protect the Component's other surfaces and the ground from accidental paint spray or dripping.
3. Open the roll-on paint can with a flat head screwdriver. Pour the paint into the paint tray, and install a 1/4" nap roller onto the roller handle.

   TIP
   The coverage rate is approximately 10% of paint can per Side Skin.

4. Roll the black paint onto the entire Side Skin surface using vertical strokes and minimal overlap. Apply the second coat of paint while the first coat is still wet. Cover all graphics entirely. The paint will dry to touch within a few hours and will obtain full hardness within 48 hours (depending on ambient temperature and humidity conditions).

   Use spray paint to cover graffiti only if the Side Skin had previously been covered entirely with the roll-on paint. Spray paint is best used to cover small areas.

5. Clean any paint drip or overspray, and use a rubber mallet to securely close the paint can. Use "wet paint" signage to prevent the public from touching the Side Skin until dry.
6. When completed, the Side Skin should look like the image below, right.

Above left depicts the Side Skin covered in graffiti. Above right depicts the Side Skin after it has been painted to cover up the graffiti.

Troubleshooting

Below are the most common symptoms of a Component that requires attention. For more information, contact Bigbelly Support.

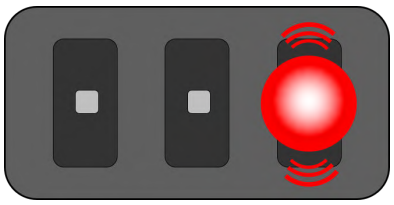
Common Troubleshooting: Compacting Components

The troubleshooting procedures below apply only to Components with a compaction mechanism (Sense Max and Smart Max).

> **REMEMBER**
> Always disconnect the power (page 47) prior to making changes to your Component's electronics and reconnect the power once you are done.

Continuous Compaction Cycles Or False Fullness

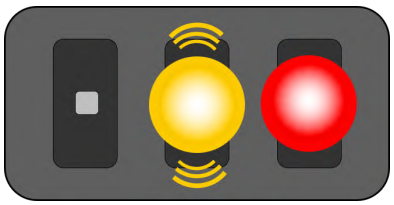
If the Component runs consecutive Compaction Cycles on its own or reports that it is full (flashing red LED) even while empty, the Height Sensors may be blocked, dirty, or damaged.



- **Blocked or dirty Height Sensors -** check for any waste, debris, or residue blocking the sensors. Ensure that the trash bag is not blocking the Height Sensors. Remove any blockage, and clean the Height Sensors. Refer to Cleaning the Height Sensors (page 53) for proper cleaning procedures.
- **Unplugged Connectors -** verify that the Height Sensor Cable is correctly plugged into the Main Board port indicated on the Main Board Maps (page 10).
- **Damaged Height Sensors -** to replace the Height Sensors, refer to the procedural documents hosted in CLEAN, or reach out to Bigbelly Support for more information.

Compaction Error: Solid Red LED (SR)

Compacting Components are equipped with self-diagnostic capabilities to prevent damage to the Component. To determine the system error, open the Front Door and observe the LEDs. The solid red LED will stay lit, and the yellow LED will begin flashing. The yellow LED will flash several times, turn off briefly, and flash again. **Count the number of yellow LED flashes between pauses.**



1-4 Flashes indicate SR Errors that Apply to All Max Components (page 58).

8-11 Flashes indicate SR Errors that Apply to Max Components with a Chute Waste Interface Only (page 58).

SR Errors That Apply To All Max Components

Yellow Flashes	Error	Troubleshooting
1	**Check Ram Travel (Overcurrent During Retraction)** An issue has occurred that is restricting the compaction mechanism from returning up to the home position.	• Check the Component for any obvious signs of internal/external damage. • Check for any obstacles or debris (paint mixing sticks, utensils, etc.) that could jam the Ram, particularly in the Ram guides on the inner side walls. • Test the Battery to check the power output. If output is below 12 volts, the battery may need to be replaced.
4	**Check Drive Chain (Slow Compaction)** The Component cannot run or complete a Compaction Cycle, and the Ram is likely stuck in the down position. This may be caused by a problem with the Motor or Drive Chain but is most often caused by a low battery.	• Test the Battery to check the power output. If output is below 12 volts, the battery may need to be replaced. • Contact Bigbelly Support if the issue persists.
5	**Check Drive Chain (Slow Compaction)** During a compaction, the Component is receiving a signal that the Ram is in its home (upward) position when it should actually be in a state of travel.	• Test the Battery to check the power output. If output is below 12 volts, the battery may need to be replaced.
6	**Check End of Drivetrain Sensor** The End of Drivetrain Sensor cannot be detected while the compactor is in the end position (compactor down).	• Verify that the End of Drivetrain Sensor cable is plugged into the Main Board. • If the cable is plugged in and the error persists, the End of Drivetrain Sensor may need to be replaced, or the End of Drivetrain magnet may be missing. Contact Bigbelly Support for more information.

SR Errors That Apply To Max Components With A Chute Waste Interface Only

If the LED displays eight (8) to eleven (11) yellow flashes, **first confirm that this Component has a Chute.** If the Component has a Hopper, it should not be producing these errors.

Component with Chute

Component with Hopper

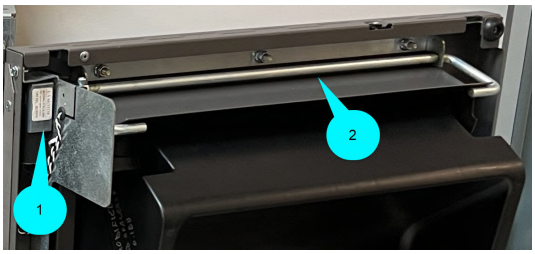
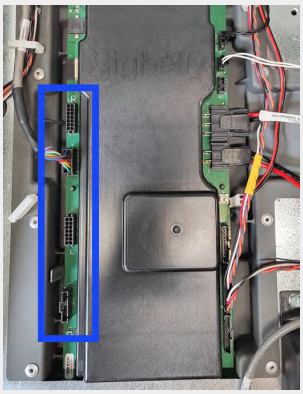
If the Component has a Hopper, check for the presence of a Magnet in the Main Board Tray. The presence of the Magnet determines whether or not the Component enters "Chute mode".

- If there is no Magnet in the tray, a Magnet should be installed.
- If there *is* a Magnet in the Main Board Tray, the Component may be misconfigured in CLEAN. Contact Bigbelly Support to confirm/correct this.

If the Component has a Chute proceed with the troubleshooting below.

Figure 8. Main Board Tray Magnet

Components with a Hopper should have this Magnet. Components with a Chute should not have this Magnet

Yellow Flashes	Error	Troubleshooting
8	**Waste Interface Lock Hardware Not Detected** The Waste Interface Lock could not be detected during a lock attempt prior to compaction.  *Waste Interface Lock Assembly [1] and Lock Bar [2]*	• Confirm that the Waste Interface Lock Assembly [1] and Lock Bar [2] are present. • Confirm that the black and white, twisted Waste Interface Lock Assembly cable is plugged into the gray, mesh-wrapped "ACS, WIL" cable that feeds up through the Top Plate and plugs into the Main Board. • If all hardware is present and connected but the error persists, the Waste Interface Lock Assembly or related cabling may need to be replaced. Contact Bigbelly Support for more information.
9	**ACS Controller Not Communicating** The ACS Microcontroller on the Main Board is missing or could not be detected.  *ACS Ports on Main Board*	• Verify that the Component has the correct Main Board type. Look for four (4) connector ports along the left side of the Main Board, and "ELCBB60002" printed on the surface of the Board, just above the LEDs. • If the Board is correct, confirm that the Microcontroller is programmed by restarting the Component and listening for the beeping on power up. If the Microcontroller does not beep, firmware may be missing. Contact Bigbelly Support to confirm. • If the Microcontroller is present and programmed but the error persists, the Main Board may need to be replaced. Contact Bigbelly Support for more information.

Yellow Flashes	Error	Troubleshooting
10	**Waste Interface Lock Fault** The Waste Interface Lock Assembly is present but is not working.	• Check for and remove any obstructions near the Waste Interface Lock Assembly or Lock Bar. • Perform a Waste Interface Lock Test as outlined in the Test Guide. • If the lock is not functioning, the Waste Interface Lock Assembly, or the gray, mesh-wrapped "ACS, WIL" cable, may need to be replaced. Contact Bigbelly Support for more information.
11	**Board Tray Magnet Error** There is a mismatch between the Station configuration and the presence of the Main Board Tray Magnet.	• Verify that the Component has a Chute (page 58). • Check the Main Board Tray to confirm that there is *no* Magnet present. If there is a Magnet in the Main Board Tray, remove the Magnet. • If there is no Magnet in the Main Board Tray, the Component may be misconfigured in CLEAN. Contact Bigbelly Support to confirm/correct this.

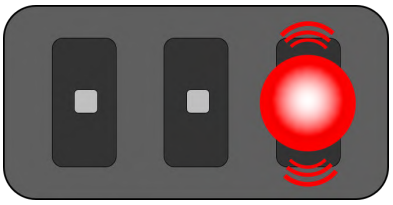
Common Troubleshooting: Components Without Compactors

The troubleshooting procedures below apply only to Non-Compacting Components (Sense, Smart, and Compost).

> **REMEMBER**
> Always disconnect the power (page 47) prior to making changes to your Component's electronics and reconnect the power once you are done.

False Fullness

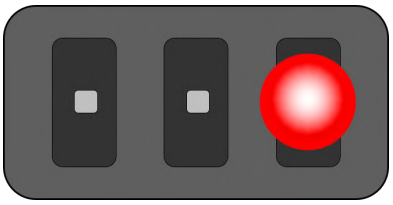
If the Non-Compactor reports that it is full (flashing red LED) even while empty, the Top-Down Height Sensor may be blocked, dirty, or damaged.



- **Blocked or dirty Height -** check for any waste, debris, or residue blocking the Height Sensor. Remove any blockage, and clean the Height Sensor. Refer to Cleaning the Height Sensors (page 53) for proper cleaning procedures.
- **Air trapped under bag -** ensure the Inner Bin Sleeve is installed properly to flatten out large pockets of air in the Liner Bag. A "puffed" or "inflated" bag may block the Height Sensor and trigger false fullness readings.
- If issues persist, open the Front Door to determine whether the Component is exhibiting a Solid Red LED error, explained below.

Solid Red While Front Door Is Open

In Non-Compacting Components, a solid red LED that turns on when the Front Door is open indicates a problem with the Top-Down Height Sensor.



- **Unplugged Connectors -** verify that the Height Sensor Cable is correctly plugged into both the Height Sensor and the Main Board port indicated on the Main Board Maps (page 10),
- **Damaged or Faulty Height Components-** inspect the Height Sensor Cable and Height Sensor for signs of damage. If the issue does not resolve, either of these components may need to be replaced. Refer to the procedural documents hosted in CLEAN, or reach out to Bigbelly Support for more information.

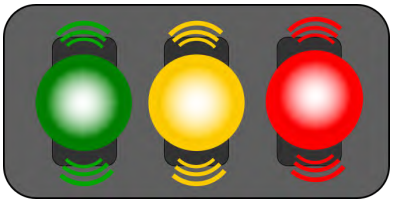
Common Troubleshooting: All Components

REMEMBER

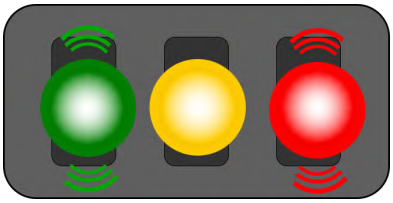
Always disconnect the power (page 47) prior to making changes to your Component's electronics and reconnect the power once you are done.

Front Door Does Not Stay Closed Or Latched

Vandalism or collision may cause the Front Door to not close or latch properly. If this is an electronic Component, the LED panel may flash to indicate that a door is open.



Smart Door Open

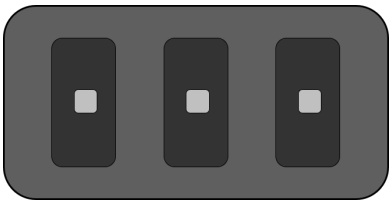


Sense Door Open

- Inspect the Front Door lock and latch, and replace if necessary.
- Ensure that no debris has built up within the LED housing, which could prevent the sensor on the Main Board from detecting the position of the Front Door.
- Confirm that the Front Door Magnet is still in place and that it has not become cracked or corroded.

Refer to the the Support page in CLEAN to find documents outlining replacement kits and procedures. Contact Bigbelly Support for additional support if the problem persists.

No LEDs Lit



While Door is Closed

For a **Sense or Smart**, this is normal behavior for a Component that is not full. These Components only indicate when they are full (flashing red).

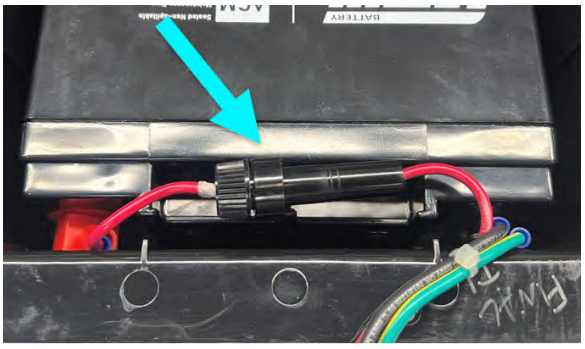
For **Sense Max, Smart Max, and Compost**, the component will stop indicating fullness or availability (flashing red or green) on the LED panel if Battery voltage drops below the normal operating range of 11.3 -13.5 volts. This is to conserve energy for other functions.

- Check the battery voltage and replace the Battery as needed. Refer to the procedural documents hosted in CLEAN or reach out to Bigbelly Support for more information.

While the Front Door is Open (All Electronic Components)

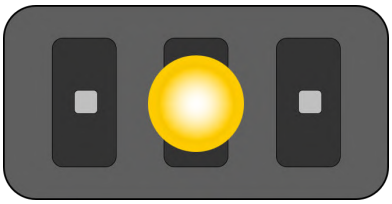
The Component is not getting adequate power. Check the following:

- Ensure the Battery is correctly plugged into the Main Board port indicated on the Main Board Maps (page 10).
- Check the battery voltage. LED activity will stop if the rechargeable Battery drops below seven volts or if the non-rechargeable Battery drops below three volts.
- To replace a Battery, refer to the procedural documents hosted in CLEAN, or reach out to Bigbelly Support for more information.
- For Components with rechargeable Batteries that are reporting adequate voltage (approximately 12 volts), check whether the fuse has blown.



Solid Yellow LED While Front Door Is Open

A solid yellow LED that turns on when the Front Door is opened indicates a low Battery.



If this is **Sense or Smart**, the Battery must be replaced. If this is a **Sense Max, Smart Max, or Compost**, verify the following:

For an indoor Station:

- Verify the AC Adapter is plugged into a working outlet.
- Confirm the Adapter cable, not the Solar Panel, is plugged into the "Solar" port as shown on the Main Board Maps (page 10).

For an outdoor Station:

- Check for obstructions preventing sunlight from reaching the Solar Bubble.
  - Remove any obstructions, or move the Component to a location with better sunlight.
  - Examples of obstructions include trees, awnings, or scaffolding above the Component, or stickers or graffiti directly on the Solar Bubble.

> **NOTE**
> Sunlight from a window will not provide adequate energy to the Solar Panel. Stations that are used indoors must be configured for AC power and plugged into an operating wall outlet.

  - Confirm that power is reaching the Main Board from the Solar Panel.
    - Use a multi-meter to test the voltage coming from the Solar Panel cable. A normal result is approximately 18 volts while unplugged from the Main Board and approximately 13 volts while plugged in.

- Refer to the document in CLEAN titled "CLEAN Alert - Low Battery (Checking the Charging Circuit from the Solar Panel) (HC5)" for the detailed procedure.

What To Do If Problems Persist

If problems persist, contact Bigbelly Support with the following information ready:

☐ Component Serial number (located to the right of the LED panel).

☐ Status of the LEDs

1. Color and status (flashing or solid) while the door is closed.
2. Color and status (flashing or solid) while the door is open.
   For a solid red light with a flashing yellow LED, count the number of flashes.

☐ Location of the Component (city and street address or nearest intersection)

☐ For Components with compactors, the Ram status (upward position, partially lowered, downward position)

For more support information, refer to Support & Contact Information (page 5).

Compliance And Certifications

The products described in this manual meet the follow certifications and compliance standards:

Federal Communication Commission Class A

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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Big Belly Solar LLC could void the user's authority to operate the equipment.

Waste Electrical And Electronic Equipment (WEEE) 2012/19/EU

This symbol indicates that used electrical and electronic products should not be mixed with general household or municipal waste. For proper treatment, recovery and recycling, please contact your dealer or supplier for further information on designated collection points where waste maybe accepted free of charge.

Consumers play a role in re-use, recycling and other forms of recovery of WEEE and are encouraged to return WEEE as designated in order to actively contribute to the success of such collection. Proper collection of this product ensures specific treatment and recycling of WEEE and is necessary to achieve the chosen level of protection of human health and the environment in the Union.

EU Declaration Of Conformity

Big Belly Solar LLC declares that the equipment described in this document complies with the requirements of the following European Union Directives:

- 2006/42/EC Machinery Directive
- 2014/30/EU Electromagnetic Compatibility (EMC) Directive
- 2014/53/EU Radio Equipment Directive (RED)
- 2011/65/EU Restriction of Hazardous Substances (RoHS) Directive

The full EU Declaration of Conformity is available upon request from Big Belly Solar LLC.

Revision Block

Document Version	Date	Changes Made Since Previous Version
Rev. 1	April 2025	Initial Publication
Rev. 2	June 2025	• Added T20 Pin-In Torx Driver Bit to list of Commonly Used Service / Maintenance Tools (used for IR Sensors) • Added metric values for Common Tools • Updated Certifications page • Added revised LED Guide
Rev. 3	July 2025	• Added 9/16" Hex Bit Socket (14 mm) to list of Tools (for bolting Component to ground) • In Install section "Initial Receipt of Component", added information regarding Component Configuration Label and Colored Stickers
Rev. 4	August 2025	• Added revised LED Guide
Rev. 5	January 2026	• Updated list of installation tools and materials. • Added note about utility knife to unpacking instructions and removed all mention of shrink wrap (no longer in use). • Updated activation instructions to reflect that the Solar Panel Cable or AC Adapter Cable is already plugged in upon arrival. • Revised Kiosking instructions. • Added Serial Number Range Scheme to "Product Lineup" section.
Rev. 6	May 2026	• Removed LED Guide and all detailed Test Instructions from this Manual. Replaced with links to the dedicated LED Operations Guide (BB6) and Test Guide (BB6) which reside in CLEAN. • Added explicit instructions for capturing install photos and a link to the BB6 Double Station Install video. • In "How to Connect Companion Components", corrected reversal of conditional instructions indicating whether or not to install the ACS WIL Cable Extension Cable.
Rev. 7	June 2026	• Added three new cleaning products by Ecolab to "Approved Cleaning Products": Daily Disinfectant Cleaner, Multi-Surface Disinfectant Cleaner, Facilipro 89. • Updated "Compliance and Certifications" page. • Added section to "BB6 Products and Specifications" showing recommended clearance for Front Door and AC Adapter. • Added Liner Bag seal type to Liner Bag Specifications table.
Rev. 8	July 2026	• Updated FCC Statement on "Compliance and Certifications" page.